Activity Management Plan 2025-34
STORMWATER

May 2025

www.waitaki.govt.nz
t. 03 433 0300 e. service@waitaki.govt.nz
20 Thames Street, Private Bag 50058, Oamaru 9444

Waitaki
DISTRICT COUNCIL
TE KAUNIHERA Ā ROHE O WAITAKI

Prepared by:
Waitaki District Council
20 Thames Street
Private Bag 50058
OAMARU 9495

Revision history

Revision number/date	Descriptions
A: March 2024	Preliminary reviewed draft AMP for Waters Services Team review
B: September 2024	Revised draft AMP for Water Services Team review
C: October 2024	Revised draft AMP for Audit NZ review
D: May 2025	Final AMP for review

Document acceptance

Action	Name	Position	Signed	Date

Table of contents

1 Executive Summary

Introduction

This Activity Management Plan (AMP) provides an overview of how the Waitaki District Council (Council) intends to manage the Stormwater activity and associated assets in an efficient, cost effective and sustainable manner.

The plan:

- outlines key issues, goals, objectives, and the levels of service that the Council will provide to its communities.
- provides information on any new projects and expenditure that are required to meet future demand as well as detail about life cycle management and maintenance.
- provides an overview of costs and how the Stormwater activity is funded, the risks and uncertainties involved in undertaking the activity, and how we manage those.

What we do

Council operates stormwater systems in eight community areas in the Waitaki District which provide a degree of protection against rainfalls of a moderate intensity. These stormwater systems are spread across two regions and located at:

- Otago region
    - Ōamaru
    - Weston
    - Moeraki
    - Palmerston
- Canterbury region
    - Lake Ōhau
    - Ōmārama
    - Ōtematatā
    - Kurow

Of the eight public stormwater systems, only the Ōamaru, Ōtematatā, Palmerston and Weston systems are considered substantial. The remaining four systems of Ōmārama, Kurow, Lake Ōhau and Moeraki are small, consisting of a single pipe each.

The stormwater systems contribute to:

- The safe and effective collection, diversion and control of moderate intensity rainfall
- Protect property from damage
- Aid the health and safety of the community

Council supports this service by:

- Providing, operating and maintaining of the stormwater infrastructure
- Responding to call outs and service disruptions quickly and efficiently
- Planning for future development and needs

The stormwater activity excludes roads, kerb and channels, catchpits and the infrastructure necessary to connect these items to the stormwater drains, as these form part of the Roading activity.

Key components of our stormwater system

Overall, the system comprises **58** kilometres of reticulation and **1015** manholes. The reticulation varies from 100mm to 1,350mm in diameter.

Total operating costs are budgeted at $737,000 in 2024/25. The replacement value of treatment plants, pump stations and reticulation is approximately **$57.5m** as at June 2024.

The Stormwater Systems are tabled below:

Table 1.1-1: Public stormwater systems summary

Supply	Population	Length of Reticulation (km)	Manholes	Replacement Value
Ōamaru	15,561	49.25	825	$32,910,912
Kurow	330	0.15	1	$84,071
Lake Ōhau	36	0.06	2	$55,266
Moeraki	117	0.02	1	$24,336
Ōmārama	270	0.43	9	$324,220
Ōtematatā	195	6.00	112	$1,059,010
Palmerston	948	0.98	27	$1,399,764
Weston	1050	2.24	38	$2,214,747
Stormwater Total	**18,507**	**58.36**	**1015**	**$57,550,017**
Source – *Population – Taumata Arowai Registered Pop., Census 2018, & 2024 Asset Valuation*				

Why we do it

Council is legally obliged under the Health Act 1956 to improve, promote and protect public health within the District. This includes identifying the need for stormwater services and either providing these directly or to oversee the service if it is provided by others.

Council's stormwater infrastructure enables the safe and efficient conveyance and disposal of stormwater from the urban drainage areas, improving the economic and social well-being of the District by protecting people and property from surface flooding.

Council has a duty of care to ensure that the effects of any runoff from its own properties is remedied or mitigated. Because most of our property is in the form of impermeable roads in developed areas, this generally means that some level of reticulation system is constructed in larger township areas. The presence of this system means it also becomes the logical network for dealing with private stormwater disposal.

The Local Government Act 2002 requires ongoing stormwater services, unless specific approval is sought to withdraw from this. Council-issued building consents require that plans comply with the Building Regulations for drainage, which specify standards for protection of buildings against flood inundation. Council owned stormwater assets in urban areas must also comply with the Building Regulations.

Council's Strategic Framework was adopted in 2023. It guides Council decision-making, providing a focus for staff and elected members for all activities and service delivery.

Council's Stormwater activity contributes primarily to the following outcomes:

Prosperous district:

- Attractive to new opportunities
- Support local businesses

Valued environment:

- Protecting our diverse landscapes and water bodies
- Meeting environmental and climate change challenges

Quality services:

- Robust core infrastructure and services

Strong communities:

- Enable safe and healthy communities

Council has identified some significant negative effects the stormwater activity may have on the wellbeing of the community and the environment and has developed appropriate mitigation measures to eliminate or minimise these effects.

Levels of service

Council's overarching goal for Stormwater over the next nine years is to take all practicable steps to comply with the New Zealand legislation and standards and report on the following performance measures.

In accordance with 261B of the Local Government Act 2002, Council adopted the Non-Financial Performance Measures on 12 November 2013. These require local authorities to report on the performance of the key activities of water supply. Since 2015, Council has only reported on these mandatory performance measures as these were considered to cover key expectations in terms of the delivery of the service.

It should be noted that in the context of the requirements under the Non-Financial Performance Measures:

Flooding event means an overflow of stormwater from a territorial authority's stormwater system that entered a habitable floor.

Habitable floor means a floor of a building (including a basement) but does not include ancillary structures such as stand-alone garden sheds or garages.

Stormwater system means the pipes and infrastructure (excluding roads) that collect and manage rainfall runoff from the point of connection to the point of discharge.

However, it is important to note that:

- The definition of stormwater system - which excludes streets - means that most (if not all) flooding in this district is not required to be reported as it is caused by runoff from the roads themselves and not the stormwater pipes.
- Council, along with many others, does not know how many properties are connected to the stormwater system as they are not separately rated.
- The inclusion of basements (and attached garages) as a habitable floor is at variance with the NZ Building Code which does not regard these as habitable areas, so Council is unable to prevent their being constructed below a floodable level.

Overview of levels of service framework for stormwater

Community outcomes	How this activity contributes	Levels of service	Performance measures/(targets)*
Strong Communities Enable safe and healthy communities	Manage flooding events in urban areas	Council will provide affordable, reliable and efficient stormwater disposal systems	The number of flooding events that occur within the District (Nil) The number of habitable floors affected by the flooding event per 1,000 connections (Nil)
Valued environment Protecting our diverse landscapes and water bodies Meeting environmental and climate change challenges	Acknowledging and incorporating protection of the natural environment in the design, construction, operation and maintenance of stormwater infrastructure	Council will provide stormwater systems that protect the natural environment	Compliance with Council resource consents for discharge from its stormwater system measured by the number of abatement notices, infringement notices, enforcement orders and convictions (Nil)
Quality services Robust core infrastructure and services	Timely response to service requests and system failures	Council will respond to problems in a timely manner	Response to a callout (median of 2 hours)
Prosperous district Attractive to new opportunities Foster a diverse and resilient economy	Maintaining quality and continuity of stormwater services	Community perceives the stormwater service is reliable and safe	Stormwater complaints (< 8/1,000)

*Detailed performance measures, including compliance, are outlined on the following pages.

How well are we doing?

Performance Measure 1 – system and adequacy

a) The number of flooding events that occur in Council's systems
b) For each flooding event, the number of habitable floors affected (expressed per 1,000 properties connected to Council's stormwater systems).

Measure	Current performance 2023/24 (22/23)	Target	
		2024-25	2026-34
Number of flooding events	Nil (Nil)	Nil	Nil
Number of habitable floors affected – event 1	Nil (Nil)	Nil	Nil
Number of habitable floors affected – event 2	Nil (Nil)	Nil	Nil
Number of habitable floors affected – event 3	Nil (Nil)	Nil	Nil

Performance Measure 2 – discharge compliance

Compliance with Council's resource consents for discharge from its stormwater system measured by the number of:

a) Abatement notices
b) Infringement notices
c) Enforcement orders, and
d) Convictions received by Council in relation to those resource consents.

Measure	Current performance 2023/24 (22/23)	Target	
		2024-25	2026-34
Number of Abatement notices	Nil (Nil)	Nil	Nil
Number of Infringement notices	Nil (Nil)	Nil	Nil
Number of Enforcement orders	Nil (Nil)	Nil	Nil
Number of Convictions	Nil (Nil)	Nil	Nil

There were no resource consents for stormwater until November 2019. From December 2019 Council must meet the conditions of Resource Consent CRC186252, a global consent for the urban stormwater drainage areas in the Waitaki Valley, Canterbury Region.

Performance Measure 3 – fault response times

The median response time to attend a flooding event, measured from the time that Council receives notification to the time that service personnel reach the site.

Measure	Current performance 2023/24 (22/23) (median)	Target (median) - hours	
		2024-25	2026-34
Attendance time	NA (NA) no flooding events	2hrs	2 hours

Performance Measure 4 – customer satisfaction

The total number of complaints received by Council about the performance of the stormwater system, expressed per 1,000 properties connected to Council's stormwater system.

Measure	Current performance 2023/24 (22/23)	Target	
		2024-25	2026-34
Total number of complaints about stormwater system*	6/1,000 (10/1,000)	< 8/1,000	< 8/1,000

**Stormwater system considered to be from the Council owned main to the point of discharge.*

Key AMP changes and additions since the 2021 AMP

Key changes to the Stormwater activity since 2021 include:

- In 2023/24, we commenced some CCTV condition assessment of Oamaru's stormwater mains. This highlighted some instances where private wastewater pipes have been connected into a stormwater pipe instead of a sewer pipe. These issues are being worked through.
- Detailed scheme-specific data from the AMP has been removed and will be transferred to a new Stormwater Supply Network Manual which will be developed in the next 12 months

Where we are headed

Government reform

Following the change of Government in 2023, Council is required to implement the "Local Water Done Well" reforms, which will require us to reconfigure our water service delivery in a financially sustainable way. This will require Council to investigate collaborative models and partnerships that could support efficient and cost-effective water service management.

Under the new Local Government (Water Services Preliminary Arrangements) Act 2024, we must then produce a water service delivery plan by September 2025 detailing how water will be delivered in a financially sustainable way by 2028. This will require Council to decide how much and when to invest in stormwater infrastructure. The budgets for the AMP have been informed by the early development of this plan.

Council's implementation of the water services delivery plan will be monitored by the Department of Internal Affairs or the new economic regulator.

Compliance

Council's focus for nearly two decades has been achieving compliance. The stormwater assets are fundamental to Council's statutory responsibilities and strategies for conserving public health in pursuit of its mission to enhance the quality of life of residents in the District.

The legislative, policy and planning framework for stormwater is complex and Council operates its stormwater system under the rules of two separated regional councils:

Canterbury Regional Council (Environment Canterbury or Ecan)

Historically, Council operated the stormwater systems as permitted activities. Increased environmental standards within the Canterbury Region required Council to obtain a global resource consent for stormwater systems within the Canterbury Region. This consent applies to stormwater collection and discharge. This consent requires:

- an approved Stormwater Management Plan
- stormwater discharges to meet regional rules and water quality parameters
- appropriate Erosion and Sediment Control measures
- minimising adverse effects of stormwater discharges on the environment
- increased asset data information, catchment boundaries, flood data and overland flow paths
- increased community consultation

Otago Regional Council

The Otago Regional Plan Water is under review and a likely outcome is requirement for resource consent application/s and Stormwater Management Plan/s

Asset planning

In addition to the need to comply with water services legislation, there is an ongoing need to improve the quality of stormwater asset information to support maintenance and renewal planning and development of the network to meet compliance requirements and new environmental standards. The continued development and implementation of a robust asset renewal programme is an ongoing area of focus.

The paradigm shift in stormwater management is moving from "to collect, convey, discharge" to a more integrated approach of "slow it down, spread it out, and soak it in". This approach includes quantity and quality considerations, multiple use facilities, riparian corridors, recreation, wetland preservation and groundwater recharge. This introduces a range of issues, including changes in stormwater planning, design, operation and maintenance, construction, and financing.

Summary of key challenges for stormwater:

The following issues, if not addressed, are likely to impact on Council's ability to meet service levels for stormwater over the next 9 years:

- **Balancing spending and funding** – including the increasing costs Council is facing for stormwater along with an historic underspend on stormwater infrastructure, increasing compliance requirements and community expectations for Council to deliver more for less, and the community's ability to pay water supply (property owners contributing to stormwater rates have an increased expectation on Council's responsibility to provide adequate protection on properties through improved infrastructure)

- **Compliance and reform** – including meeting new regional Council rules, resource consent compliance and the requirements of the new Local Water Done Well legislation

- **Ageing infrastructure** - the average age of our stormwater assets is increasing, which may affect levels of service and the resilience of stormwater system.

- **Climate change and increasing magnitude of storm events** - this is having a notable impact on the Waitaki district. Greater intensity and frequency of events are expected, and an appropriate response is to be developed for stormwater. The potential impacts and the appropriate mitigation measures are yet to be defined.

- **Coastal erosion** – puts some of our coastal stormwater assets at risk**.**

How we will meet the challenges

Council plans to maintain current levels of service for the life of this plan, unless legislation, consent conditions, or community expectations change. Over the next nine years we plan to:

- Continue collecting, treating, and disposing of stormwater
- Comply with Regional Council rules and national environmental standards
- Plan for future development and needs
- Consult with the community on issues such as health and legislative compliance issues.

Significant projects and their funding sources are summarised in the following tables.

Funding

This activity is funded by amenity rates in the areas where stormwater systems are available. Further information is contained within Council's Revenue and Financing Policy.

An overview of planned expenditure is outlined in the following tables and charts.

Planned operational expenditure – 2025 to 2027

The operations and maintenance programme covers all day-to-day activities that are required to manage the stormwater activity.

Due to impending changes to service delivery under the Local Water Done Well reforms, Council is only including operational budgets for three waters activities for years 2025-26 and 2026-27 within this Activity Management Plan and the Long Term Plan:

Operational budget	LTP Budget (000's)	
	2025/26	2026/27
Payments to staff and suppliers	122	122
Finance costs	156	155
Internal charges and overheads applied	1,765	1,905
TOTAL	**2,043**	**2,182**

Capital programme summary 2025-34

Project & Description	Year	Amount
New Capital Works – funded from loan, development contributions and reserves to create new assets or improve service levels		
Oamaru Stormwater Upgrades - Identifying and resolving existing system deficiencies	2029-34	$10,000,000
Oamaru Stormwater Structure Improvements - Replace/upgrade screens and the like at stormwater inlets/outlets to make them safer	2025	$250,000
Stormwater Main Inspection & Cleaning Programme - District wide cyclic stormwater main inspection and cleaning	2025/26	$1,150,000
	Total	**$11.4m**

Renewals – funded from depreciation reserves to renew assets and maintain current service levels		
Stormwater main renewals	2026 - 34	$2,850,000
Otago Stormwater Management Plan and resource consent application	2025/26 and 2027/28	$260,000
	Total	**$3.1m**

Operational – funded from operational budgets to help maintain current service levels		
Oamaru stormwater capacity study - design basis	2027/28	$100,000
Oamaru stormwater capacity study	2028/29	$100,000
Stormwater Bylaw (new)	2028/29 and 2032/33	$90,000
	Total	**$0.3m**

Key Projects

Stormwater upgrades and main renewals to ensure aging stormwater infrastructure in Oamaru is fit for the future

Stormwater structure improvements to ensure stormwater inlets and outlets are secure and safe for contractors and the public.

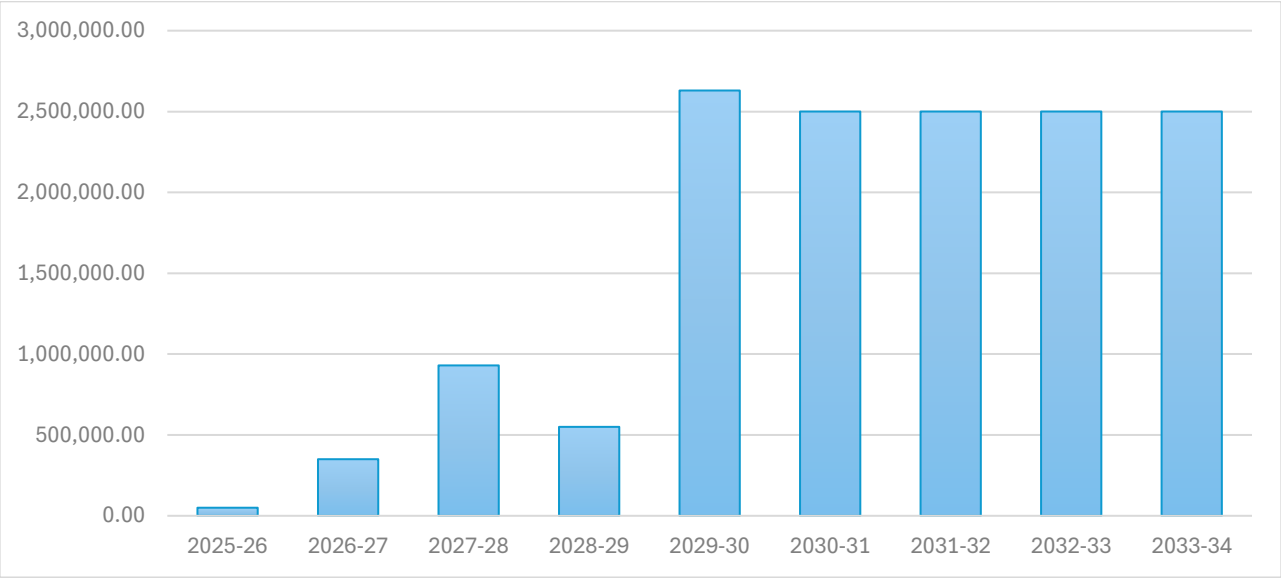
Otago Stormwater Management Plan reflects the need to comply with new regional rules.

Capacity study design basis and study to understand the future capacity requirements of the Oamaru stormwater system and what needs to be done to meet these.

Inspection and cleaning programme – this is an ongoing CCTV programme of inspections and cleaning to ensure the stormwater mains can operate at full capacity.

The significant jump in renewal project budgets in the following graph reflects expected investment required for Oamaru's stormwater mains following completion of the Capacity Study in 2029.

Stormwater renewal projects 2025-34



What we cannot do

There are some operations and maintenance activities and capital projects that are required but are lower in priority and unable to be undertaken within the next nine years due to affordability and Council borrowing limits.

Council has been through an extensive process of ranking the most critical aspects of the three waters programme (water, wastewater and stormwater) and only including work that is considered critical to meeting service levels – or improving service levels to meet compliance requirements - now and over the next nine years. These are intended to be included in our Water Service Delivery Plan, required as part of the under the Local Government (Water Services Preliminary Arrangements) Act 2024.

The remainder of the work has either been deferred, reduced in scope or removed from the programme.

Funding impact statement

Council's Funding Impact Statement (FIS) for this activity is included in Appendix 1. This summarises in one place how this activity will be funded and how those funds will be applied over the next 10 years.

Risk, assumptions and uncertainties

Our present budget levels are generally sufficient to continue to manage risks in the medium term albeit with a focus on the most essential areas of the programme. However, if there is forecast work (operations, maintenance, renewal, acquisition or disposal) that cannot be undertaken due to available resources, there will be consequences to the levels of service for users.

There are also factors outside of the Council's control that can change and have an impact on Council's ability to achieve what it planned. The key risks and assumptions that relate to this

activity include the impact of Government changes to water legislation, climate change impacts and the impact of growth.

The following uncertainties and key assumptions are specific to the water supply activity:

- Local Water Done Well: The nature of service delivery in response to these changes is uncertain. For the development of this plan, the service delivery model for the stormwater activity has changed under Council's Transformation and will change again within the next few years under Local Water Done Well. Furthermore, there are complexities around the management of stormwater due to the linkage between the water service and roading assets, budgets and service delivery.

- We cannot be certain about the quantity of water that industrial users will require into the future. We have assumed that future use by existing industries will be in line with historic use. We have not planned for additional wet industries. If consumption of water is significantly different to what we have assumed, it may have an impact on our future programme and budgets.

- Due to the uncertainty of how long each asset will last, to assist with renewal planning an average expected life is assigned for types of assets. Some assets will fail before reaching the end of their expected useful life, and some will last longer. We have assumed we will be able to manage this variance within set budgets by prioritising renewals annually.

2 Introduction

The purpose of this Activity Management Plan is to outline, and summarise in one place, the Council's strategic management and long-term approach for the provision and maintenance of its stormwater activity. This is achieved through the planned management of assets, compliance with regulatory requirements, and the funding needed to provide the appropriate levels of service.

2.1 Rationale for Council involvement

Territorial authorities have numerous responsibilities relating to the provision of stormwater services. One such responsibility is the duty under the Health Act 1956 to improve, promote, and protect public health within their districts. This implies that, in the case of the provision of stormwater services, councils have the obligation to identify where such a service is required, and to either provide it directly, or to maintain an overview of the service if it is provided by others.

Council's stormwater assets contribute to conserving public health and therefore enhance the quality of life of residents in urban areas of the District.

In terms of the Local Government Act 2002, the ongoing operation of stormwater services is required unless specific approval is sought to withdraw from the activity in whole or part.

The focus for the Three Waters activity is to ***Protect Public Health and the Environment***, while also continuing to support growth and economic development.

2.2 Goal and principal objectives for stormwater activity

The stormwater services activity goal is:

"To provide for the collection and disposal of stormwater to acceptable environmental standards."

In providing the stormwater service, key customer service delivery aspects are:

- Roads are not flooded, and stormwater does not cause subsidence of the road
- People and property are protected from flooding
- The natural environment is not polluted
- Problems are resolved promptly
- Council manages the stormwater service wisely

2.3 Strategic alignment

In 2023, Council adopted a strategic framework for Waitaki, as outlined on page 10 of this document. This framework guides Council's decision-making, providing a focus for staff and elected members for all activities and service delivery.

The Waitaki District Council vision for the future is:

Waitaki, the Best Place to Be / Waitaki – Whenua taurikura

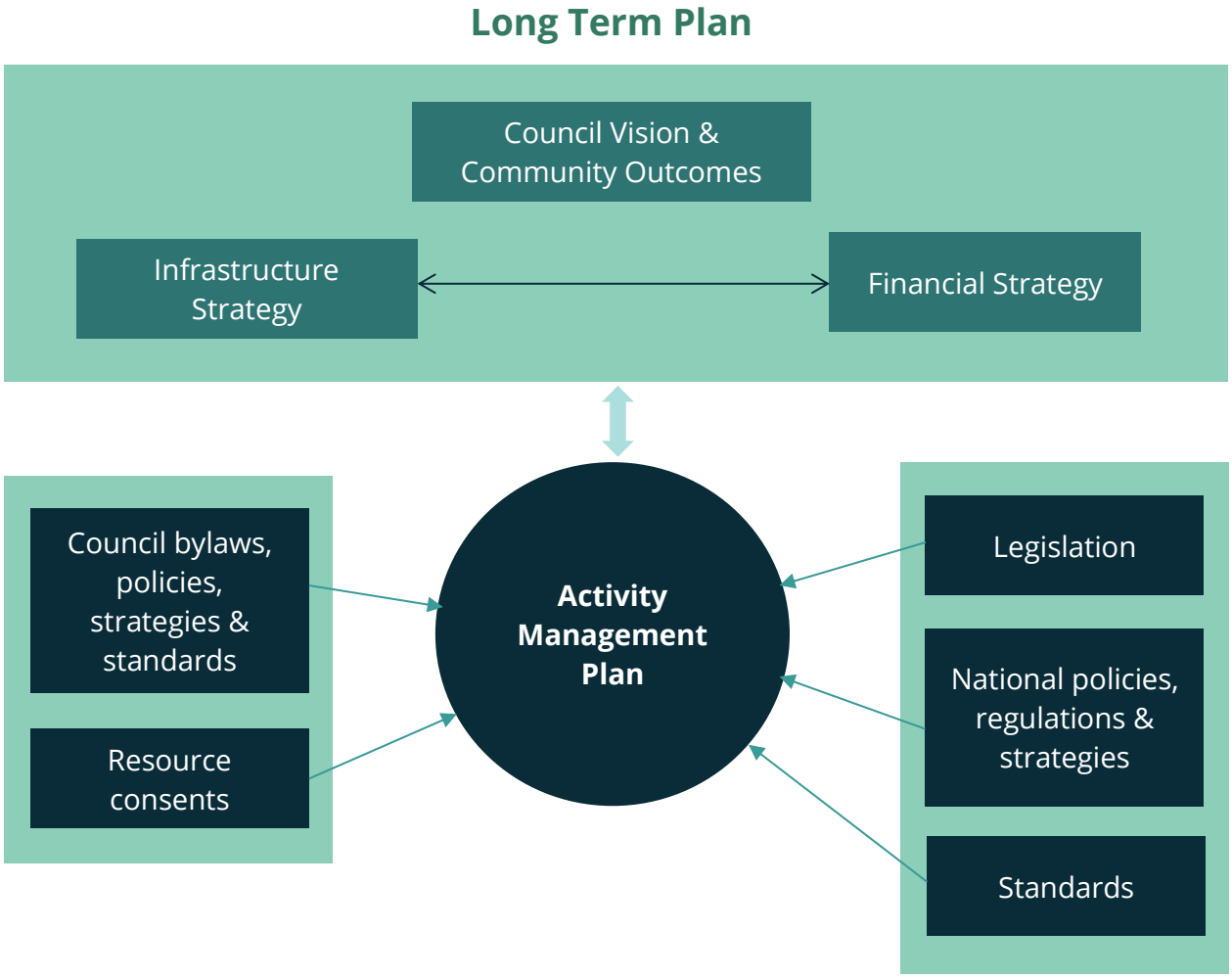
The following key objectives (community outcomes) will contribute to achieving this vision:

- Strong Communities
    - Enabling safe, healthy communities
    - Connected, inclusive communities
    - Promoting a greater voice for Waitaki
    - Celebrating our community identity
- Valued Environment
    - Protecting our diverse landscapes and water bodies
    - Meeting environmental and climate change challenges
- Prosperous District
    - Attracting new opportunities
    - Supporting local businesses
    - Fostering a diverse and resilient economy
- Quality Services
    - Robust core infrastructure and services
    - Community facilities and services we are proud of

To deliver the vision there must be a clear 'line of sight' between the high-level organisation policy, strategic plan and objectives, and the daily activities of managing our assets.

This Activity Management Plan (AMP) is a key part of the planning process and is guided by the framework. It supports and underpins the financial forecasts and work programmes contained in documents like Council's Long Term Plan and Annual Plans.

The drivers and constraints that influence how Council manages its activities are both internal and external and include legislations, policies, strategies and standards:



2.4 Long Term Plan

The Long Term Plan sets Council's strategic direction and work programme for the 10 years ahead. It outlines the services we will provide, the projects we will undertake, the cost of doing this work, how it will be paid for and how we will measure quality and our effectiveness.

The issues we face and the context within which we work are continually evolving. For this reason, a Long Term Plan is produced every three years.

Council resolved to defer the 2024 Long Term Plan for a year, meaning that Council produced an enhanced 2024-25 Annual Plan and will now produce a nine-year Long Term Plan for 2025-34. There will only be two years between the next two Long Term Plans to bring the three-yearly planning cycle back into line.

The decision comes after the Government gave local authorities the flexibility to defer their Long Term Plans amid uncertainty around the future of three waters service delivery in 2023.

2.5 Infrastructure Strategy

Council's Infrastructure Strategy informs this Activity Management Plan. The strategy takes a 30-year view, laying out the most likely scenarios for how our critical infrastructure will be managed, and the important challenges and decisions we are likely to face as a community.

Stormwater delivery has been included in this Infrastructure Strategy for years 1 and 2 only, with the assumption that Council will continue to deliver the activity over this time. Following recent Government reform, Council must reconfigure its water service delivery in a financially sustainable way. By September 2025, Council is required to document through a water service delivery plan how water can be financially sustainably delivered for the district by 2028. This may include a joint Council delivery model or a Council Controlled Organisation.

The Infrastructure Strategy has identified the following key issues affecting Council's infrastructure in the next 30 years: Compliance and reform; Climate change and resilience; Growth and demand; Ageing infrastructure; Meeting community needs and expectations.

2.6 Financial Strategy

The primary purpose in the Local Government Act 2002 (LGA) is to promote prudent financial management. Our Financial Strategy, which must address the nine years of the Long Term Plan, needs to consider all relevant aspects of the LGA including the need to balance current and future needs of the community. This is particularly relevant to the Strategy as it sets out Council's approach to how it intends to allocate levels of spending over the short and medium term and how it will use the funding options available to it to share the funding between the current and future residents and ratepayers.

The Strategy must provide a context for consultation on Council's proposals for funding and expenditure by making transparent the overall effects of those proposals on the local authority's services, rates, debt, and investments.

Among other things, it must also outline the expected capital expenditure on network infrastructure required to maintain existing levels of service, quantified limits on rate increases and borrowing, and an assessment of our ability to provide and maintain existing levels of service and to meet additional demands for services within those limits.

More information about the Strategy is included under **Section 9: Financial summary**.

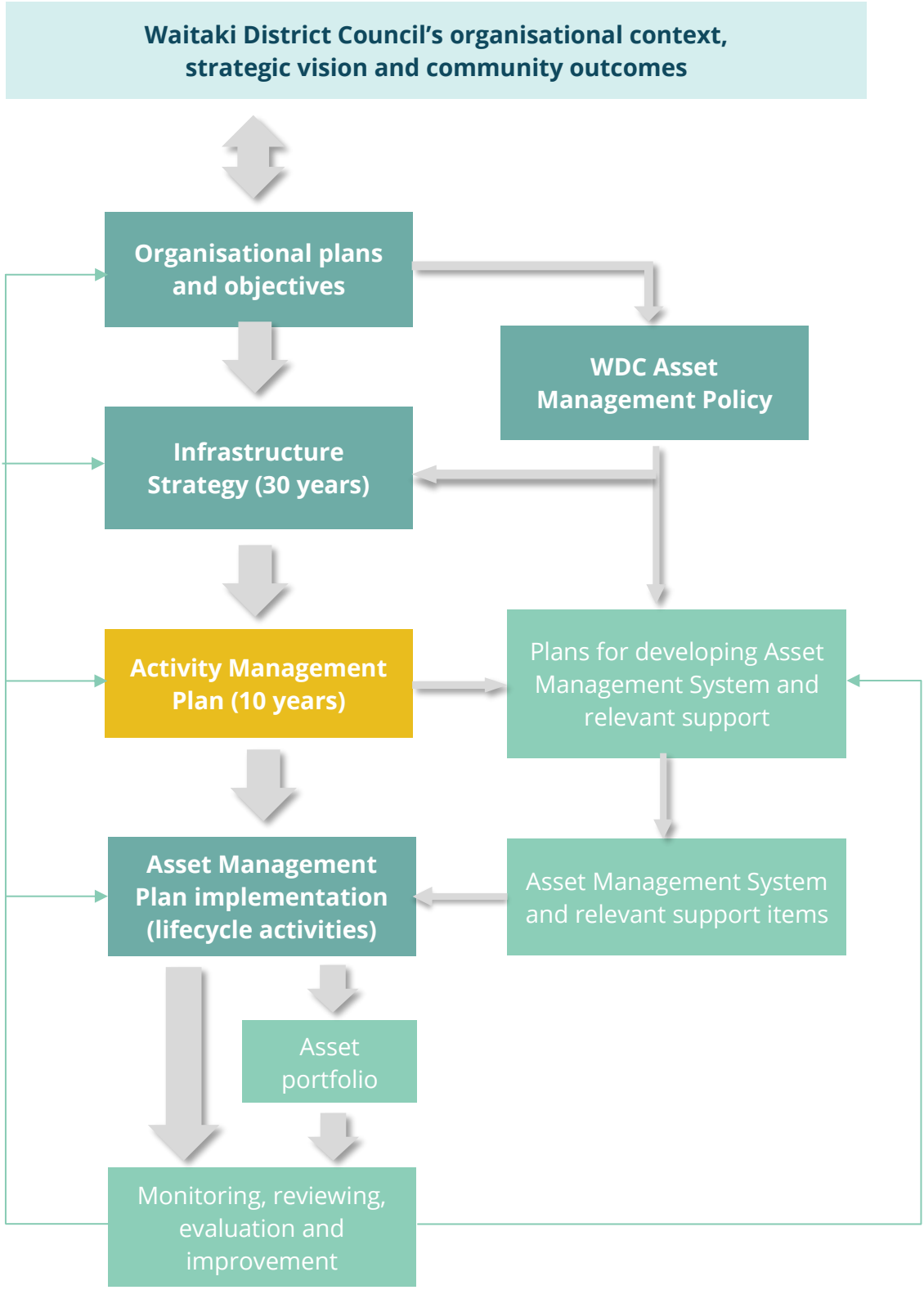
2.7 Key Council stormwater documents

The following Council-adopted documents are key to this activity:

- Infrastructure Strategy 2025-54
- Asset Management Policy 2010

Appendix 4 in this plan provides further details and outlines all other key legislation and regulation, and other Council plans and policies with linkages to the stormwater activity.

The diagram below outlines this connectivity between the asset planning cycle for stormwater, and Council's broader planning context:



2.8 Community outcomes and the four well-beings

The Local Government (Community Well-being) Amendment Act 2019 resulted in a change in the purpose of local government, which is to promote community wellbeing.

This means local authorities are again responsible for improving the social, economic, environmental and cultural wellbeing of our communities.

Council's supply of reliable, quality drinking water contributes to all four well-beings to varying extents through alignment to its strategic framework and meeting the levels of service outlined in this Activity Management Plan.

Community outcomes	Levels of service	Community wellbeing contribution
Strong Communities Enable safe and healthy communities	Council will provide affordable, reliable, and efficient stormwater disposal systems	**Economic** – properties are protected from flooding and a safe roading network is provided **Environmental** – the stormwater system protects the environment **Social/cultural** – community and cultural resilience through better health outcomes
Valued environment Protecting our diverse landscapes and water bodies Meeting environmental and climate change challenges	Council will provide stormwater systems that protect the environment	**Environmental** – the environment is protected and will have significant long-term benefits (all wellbeings) **Economic** – the cost to the community will be minimized by protecting public health and the environment **Social/cultural** – protecting the environment recognises and supports the social and cultural value of the environment and its contribution to health and wellbeing
Quality services Robust core infrastructure and services	Council will respond to problems quickly	**Environmental** – quick response times help protect the environment **Economic** – reduces costs associated with protracted resolution issues **Social/cultural** – supports quality of life through resolving issues quickly and minimising disruption or any adverse effects
Prosperous district Attractive to new opportunities Foster a diverse and resilient economy	Community perceives the stormwater system as reliable and safe	**Economic** – properties protected from flooding and a safe roading network **Social/cultural** – effects of flooding and any associated impacts minimised

2.9 Engagement on strategic direction

Council has determined customer expectations for water services through formal and informal consultation with the community over many years, although the stormwater activity has a significantly lower public profile than water supply or wastewater and therefore less specific engagement.

Appropriate community participation in Council decision-making is desirable and enhances the quality of decision-making for the district, and we are committed to the principle of consultation with or without the specific legislative requirements.

Council adopted its first Significance and Engagement Policy in 2014, and in August 2023, a new Significance and Engagement Policy was adopted. The policy provides a procedure to determine the significance of any decision and provides a community engagement guide.

Long Term Plan engagement

This Activity Management Plan informs and is informed by Council's Long Term Plan – which includes a review and update of its Financial Strategy and Infrastructure Strategy.

Council consults with the community during every three yearly Long Term Plan process and has engaged with the community to develop the 2025-34 Long Term Plan in a variety of ways – both to meet statutory requirements and in accordance with its Significance and Engagement Policy 2023.

This engagement included:

- Pre-engagement activities to develop aspects of the draft plan.
- A one-month consultation period through a Consultation Document identifying Council's key proposals for progressing its strategic vision and framework for the Waitaki District for the next nine years.
- A targeted social media campaign.
- Drop-in sessions at various locations around the district.

Fostering Māori Contribution to Council's decision-making process

Iwi-Council partnership is a key driver for achieving long term success and equitable outcomes within the Waitaki District.

Council is committed to strengthening its relationships with mana whenua and continuously fostering the development of Māori capacity to contribute to local decision-making processes, through giving effect to the principles of Te Tiriti o Waitangi and by participating in genuine and meaningful engagement with mana whenua.

Council acknowledges Te Rūnanga o Ngāi Tahu is the representative of Ngāi Tahu Whānui and that where any enactment requires engagement with any iwi or any iwi authority, that engagement shall, with respect to matters affecting Ngāi Tahu Whānui, be held with Te Rūnanga o Ngāi Tahu.

Council endeavours to engage genuinely and meaningfully with mana whenua.

A Partnership Agreement between Te Rūnanga o Moeraki and Council is under development.

Te Mana o te Wai refers to the vital importance of water. When managing freshwater, it ensures the health and well-being of the water is protected and human health needs are provided for before enabling other uses of water.

The National Policy Statement NPS-FM 2020 intends for tangata whenua to be involved in the management of freshwater (including decision-making processes). Giving effect to Te Mana o te Wai requires local authorities to actively involve tangata whenua (to the extent they wish to be involved) in freshwater management.

To further foster the development of Māori capacity to contribute to local decision-making, Council is actively taking steps towards developing Council's internal capability for engaging with mana whenua, by investing in opportunities for both the Governance Team and Council staff to develop their knowledge of Te Ao Māori and build their cultural competency.

2.10 Monitoring and Reporting

Measuring and reporting on customer levels of service is achieved through the customer satisfaction survey.

The customer satisfaction survey is undertaken annually and is used as a benchmark for the following year. The trend across the results of each year's survey provides a long-term view of Council's performance.

Reporting on the achievement of customer levels of service can be compared across different activity groups to provide internal benchmarking within Council and combined to provide an indication of the contribution towards community outcomes and wellbeing.

Measurement and reporting of technical service standards is essential for the prudent management of the stormwater activity. Measures reported on in our Annual Report are mandated by the Department of Internal Affairs.

Regarding stormwater in particular, reporting on compliance with consent requirements will become an increasing focus as rules for regional council plans requires stormwater discharges to be consented (Ecan) or will require reporting on new consents (ORC).

2.11 Asset Management Policy

Council's 2010 Asset Management Policy sets the appropriate level of asset management practice for Council's Water Activity as 'Core Plus'.

'Core Plus' (now referred to as 'Intermediate') asset management practice is undertaken at a level between 'Core' and 'Comprehensive' practice. The focus is to build on the basic technical activity management planning of 'Core' practice by introducing improved maintenance management and more advanced asset management techniques (as appropriate). Further use is made of risk management, asset lifecycle management, and service standard optimisation techniques.

3 Strategic challenges and responses

In developing the Infrastructure Strategy in advance of the 2025-24 Long Term Plan, Council identified key issues specific to the stormwater activity, which are summarised below. Council's general responses to these issues are also included.

Government reform

Following a change of Government in 2023, Council is required to implement the "Local Water Done Well" reforms, which will require us to reconfigure our water service delivery in a financially sustainable way.

This will require Council to investigate collaborative models and partnerships that may support efficient and cost-effectiveness water service management and produce a water service delivery plan by September 2025 detailing how water supply, wastewater and stormwater activities can be delivered in a financially sustainable way by 2028.

When, how much to invest, and what to charge in three waters will not be just for Councils in the future. A decision on the water services model for the Waitaki district will be required within 1-2 years of this strategy being in place. A water services delivery plan is required to be developed by September 2025 documenting how affordable water can be delivered by Council. Council will be required to follow these plans, and they will be monitored by Department of Internal Affairs or the economic regulator.

The capital expenditure budgets for the water, wastewater and stormwater AMPs have been informed by the early development of the water services delivery plan.

Compliance

Council's focus for nearly two decades has been to improve water treatment and wastewater treatment and disposal throughout the district to comply with new legislation, consent requirements and environmental standards.

To date, the focus for the stormwater activity has been on maintaining service levels, however, new regional council plans and requirements are shifting our focus to compliance. Currently, we have a global discharge consent for Waitaki Valley (covering the Lake Ohau Village, Omarama, Otematata, Kurow, and Duntroon stormwater networks), which was issued by Environment Canterbury in December 2019. This requires an annual report to be submitted, comprising information mainly provided from Council's Roading team. A resource consent will also be required by Otago Regional Council for Waitaki stormwater systems sitting within the Otago region, once their plan is finalised.

Asset planning

In addition to the need to comply with new regional consents, there is a need to improve the quality of stormwater asset information to support maintenance planning and development of the stormwater network to meet future demand. The development and implementation of a robust asset renewal plan is an area of focus for this activity. As climate change increases the

frequency and severity of flood events, the need to ensure our stormwater networks are able to cope with this additional demand has become more pressing.

Overview of key challenges

Challenge	Impacts	Response
Balancing spending and funding	Council is continuing to face increasing costs to manage three waters infrastructure and services– including inflation, interest rates, insurance. There are also increasing compliance requirements and community expectations for Council to deliver more for less. While inflationary pressures in the procurement of materials have eased, cost increases are still being experienced across the board. This has had an impact on the cost of delivering projects. The Waitaki community also has a relatively low discretionary income and population density relative to many parts of New Zealand which can result in a reduced willingness / ability to pay.	In general Council will seek to: ○ Use appropriate funding mechanisms. ○ Fund growth-driven capital expenditure through development contributions. ○ Fund capital expenditure to increase levels of service through borrowing ○ Fund renewals from revenue sources e.g. rates and charges ○ Fund depreciation on most infrastructural assets. Council will also consider the following measures to address the issue of affordability over the lifetime of this plan: ○ Appropriately prioritising Council work programmes. ○ Scaling the size of Council's capital programme to ensure that it's deliverable. ○ Deliver a new water service delivery model in accordance with "Local Waters Done Well" requirements.

Challenge	Impacts	Response
Compliance and reform	Council will be required to implement the "Local Water Done Well" reforms, and to reconfigure its water service delivery in a financially sustainable way. This will require Council to investigate collaborative models and partnerships that may support efficient and cost-effectiveness water service management. Over the next 9 years new consents will be required for our stormwater systems located within the Otago Regional Council area.	Maintain a close watching brief and be open to finding optimum solutions that meet the requirements of central and regional government. Produce a water service delivery plan by September 2025 detailing how water can be delivered in a financially sustainable way by 2028. Meet our consent requirements for current and new stormwater discharge consents. Communicate with both regional councils - Environment Canterbury and Otago Regional Council on Regional Policy Statement changes and development and regional plan changes.
Ageing infrastructure	Although in generally functional condition, the average age of our stormwater network is increasing. This means service interruptions or failure may become more likely, potentially impacting property and the environment during flood events and causing issues for our wastewater network through inflow.	Greater investment in stormwater main inspection and cleaning through an annual programme. A programme of investment into Oamaru stormwater main renewals from 2029 onwards (following the Capacity Study – refer below).
Stormwater capacity and resilience	Over the coming decades, it is expected that our stormwater networks will come under pressure from climate change and may not have the capacity to manage large scale events, placing people, property and the environment at risk.	A Capacity Study Design basis and Capacity Study are planned 2027/28 and 2028/29 respectively in the Long Term Plan to better understand the likely demand and impacts on Oamaru's stormwater systems and what is needed to ensure they have sufficient capacity to meet future demand and compliance requirements.

Challenge	Impacts	Response
Climate change and resilience - general	The changing climate is having a notable impact on the Waitaki district. Consequently, the resilience of Council's key infrastructure is being increasingly challenged. Climate change may mean that the lifespan of our assets is shorter than planned, or that maintenance costs increase. It may also mean that repairs are needed more frequently or that materials deteriorate more quickly.	Council's ongoing response to climate change is influenced by central and regional government direction. One challenge in this space is that the Waitaki district spans across two regional council boundaries – Canterbury and Otago. A Canterbury Climate Partnership Plan has been developed with input from all Canterbury councils, including Waitaki, and shows how councils will work together on specific climate actions to help minimise the impacts of climate change on Canterbury's communities and ecosystems. The plan includes ten primary actions focused on addressing key gaps, priority risks, and opportunities. Otago Regional Council has also prepared an Otago Climate Change Risk Assessment summarising the key risks that the Otago region is facing due to climate change. Council has developed high level climate change projections for the Waitaki District as part of phase 1 of its Climate Change Risk Framework. A Council Climate Strategy is currently being developed, which will identify how Council will respond to climate change both within the organisation and across the district, and document Council's roles and responsibilities to meet climate adaptation and mitigation goals. In the absence of a climate strategy, to address the impacts of a changing climate, Council will: ○ Apply national and regional directives and relevant legislation ○ Initiate conversations and planning with climate-impacted communities ○ Allocate adequate funding in current and future long-term plans to address the implications of climate change

Challenge	Impacts	Response
		○ Increase knowledge, data and capability in understanding the effects of climate risks and to make decisions based on the effects of climate risks ○ Apply climate risk into design of long-life infrastructure ○ Embed prioritisation of investment decisions in a way that improves infrastructure resilience
Increasing magnitude of storm events	Storm events can significantly impact our stormwater networks and the associated environment and wastewater networks, causing a range of issues, including flooding, contamination and overflows.	Council is undertaking a programme of renewal work to increase the resilience of existing stormwater infrastructure in the short and longer terms.
Coastal erosion	Coastal stormwater infrastructure is potentially at risk from increasing coastal erosion.	Council will continue monitoring coastal mains and planning for future relocation, if required.
Growth and demand	Population and economic growth may create additional demand on stormwater systems over the coming decade – notably for Ōamaru.	Council will plan for additional infrastructure capacity to cope with increased demand for the service due to population growth or increased usage. We are committed to sustainable growth and effective demand management. We will invest in water infrastructure strategically. We will also: • Prioritise investment in compliance-driven water supply infrastructure. • Ensure existing commitments are completed before investing in new initiatives.

Challenge	Impacts	Response
Meeting social and cultural needs and expectations	There is increasing recognition of the significance and cultural value of water to Mana Whenua, which may impact existing stormwater discharges.	Council will continue to ensure that the social and cultural expectations and needs of our communities are well considered for current and future generations. This will include continuing to provide reliable and resilient waters infrastructure, while seeking to balance the needs and views of different interests. Overall, we will: • Engage with community, where appropriate, to understand local priorities. • Review activities where ratepayers are subsidising private or commercial benefit.
Recruitment and retention	Recruitment and retention of suitably qualified and experienced water engineers will be an ongoing challenge for the sector, as uncertainty around the direction of the Government's Local Water Done Well continues.	Council's Transformation project has created a new organisational design to foster a more integrated approach to all its activities, including asset planning and compliance. The programme also seeks to make Council an employer of choice by providing greater opportunities for staff to diversify their roles. This model is expected to remain in place for the first few years of the plan until Council's Water Services Delivery Plan is confirmed and fully implemented.

4 Our stormwater assets

4.1 Overview

The stormwater assets are fundamental to Council's statutory responsibilities and strategies for conserving public health in implementing its vision for the District and supporting strategic framework.

Council owns eight separate stormwater systems consisting of Ōamaru and seven smaller urban areas. The management and operation of the stormwater systems are via Council organisation and Council's contractor.

Going forward the stormwater activity will need an increased focus on quality and quantity of discharge in consideration of an integrated approach of "slow it down, spread it out and soak it in".

4.2 Waitaki's stormwater systems

Overall, the stormwater systems in Waitaki comprise **58** kilometres of reticulation and **1015** manholes. The reticulation varies from 100mm to 1,350mm in diameter.

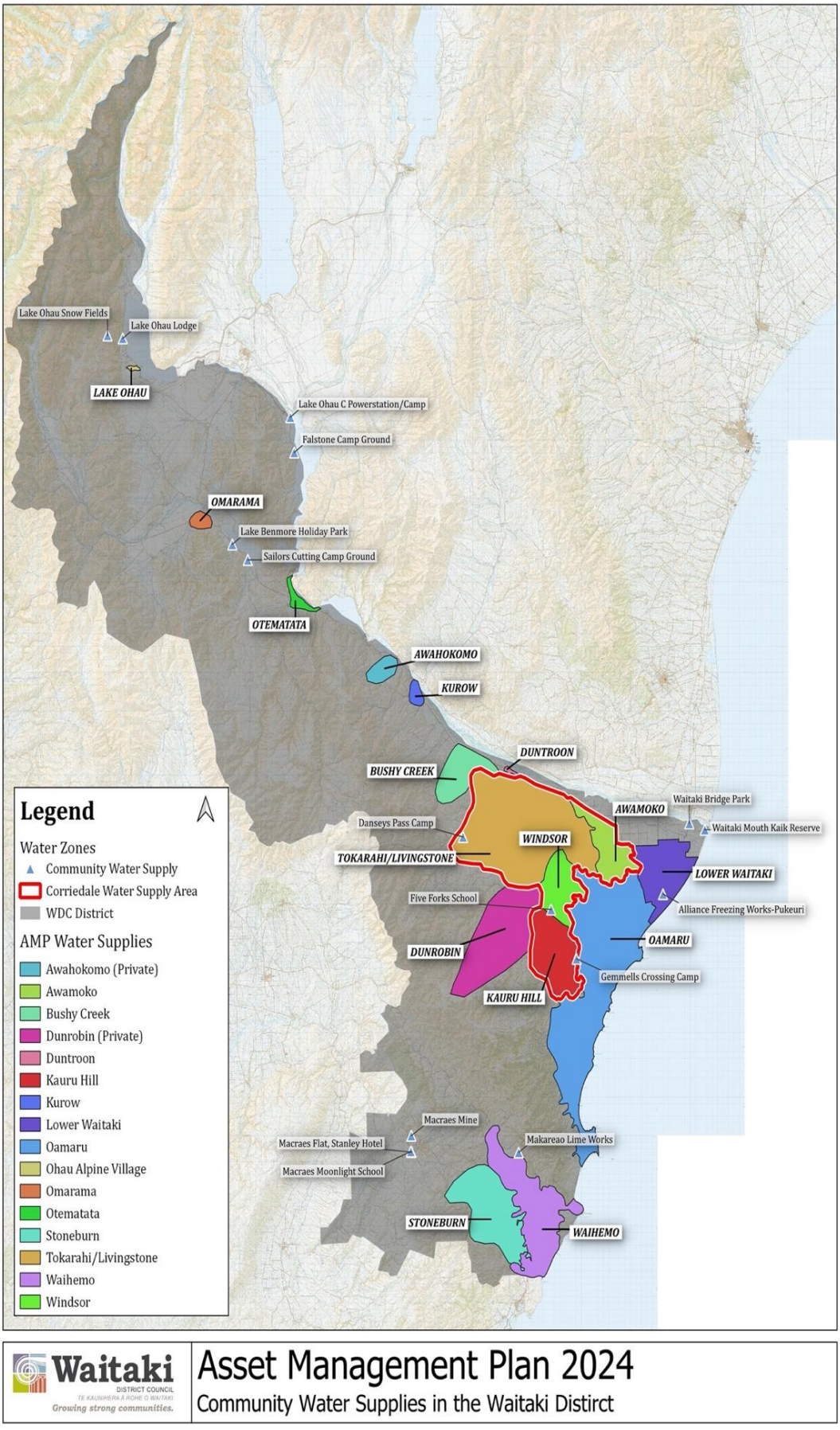
Total operating costs are budgeted at $2.043m in 2025/26. Replacement value of treatment plants, pump stations and reticulation are approximately **$57.5m** as of June 2024.

Table 1.1-1: Public stormwater systems summary

Supply	Population	Length of Reticulation (km)	Manholes	Replacement Value
Ōamaru	15,561	49.25	825	$32,910,912
Kurow	330	0.15	1	$84,071
Lake Ōhau	36	0.06	2	$55,266
Moeraki	117	0.02	1	$24,336
Ōmārama	270	0.43	9	$324,220
Ōtematatā	195	6.00	112	$1,059,010
Palmerston	948	0.98	27	$1,399,764
Weston	1050	2.24	38	$2,214,747
Stormwater Total	**18,507**	**58.36**	**1015**	**$57,550,017**

Source **–** *Population – Taumata Arowai Registered Pop., Census 2018, & 2024 Asset Valuation*

There have been no significant changes to the public stormwater systems over the past 10 years. However, the resource consent for the collection and discharge stormwater from the urban drainage areas in the Waitaki Valley issued in December 2019 was a significant change for the stormwater activity.


Lake Ohau Snow Fields
Lake Ohau Lodge
LAKE OHAU
Lake Ohau C Powerstation/Camp
Falstone Camp Ground
OMARAMA
Lake Benmore Holiday Park
Sailors Cutting Camp Ground
OTEMATATA
AWAHOKOMO
KUROW
DUNTROON
BUSHY CREEK
Waitaki Bridge Park
AWAMOKO
Waitaki Mouth Kaik Reserve
Danseys Pass Camp
WINDSOR
TOKARAHI/LIVINGSTONE
LOWER WAITAKI
Five Forks School
Alliance Freezing Works-Pukeuri
DUNROBIN
OAMARU
Gemmells Crossing Camp
KAURU HILL
Macraes Mine
Macraes Flat, Stanley Hotel
Makareao Lime Works
Macraes Moonlight School
STONEBURN
WAIHEMO
Legend
Water Zones
Community Water Supply
Corriedale Water Supply Area
WDC District
AMP Water Supplies
Awahokomo (Private)
Awamoko
Bushy Creek
Dunrobin (Private)
Duntroon
Kauru Hill
Kurow
Lower Waitaki
Oamaru
Ohau Alpine Village
Omarama
Otematata
Stoneburn
Tokarahi/Livingstone
Waihemo
Windsor
Waitaki
DISTRICT COUNCIL
Growing strong communities.
Asset Management Plan 2024
Community Water Supplies in the Waitaki Distirct

Private stormwater systems

In addition to those areas that are served by public schemes, private stormwater systems serve some areas. It is estimated that 65% of the Districts population have access to a public reticulated stormwater system with the remainder being served by individual soak pits and associated disposal systems.

Within the communities that are not served by Council infrastructure there have been no significant known changes since the 2005 Water and Sanitary Services Assessment.

The private stormwater systems within the Waitaki District are tabled below.

Figure 4.2-1: Private stormwater systems

Community Area	Stormwater disposal
Dunback	Individual soak pits
Duntroon	
Gemmells Crossing Camp	
Hampden	
Herbert	
Kakanui	
Maheno	
Moeraki	
Reidston	
Waitaki Bridge Park	
Waitaki Mouth Kaik Reserve	

4.3 Stormwater reticulation

The objective of a stormwater drainage system is to regulate stormwater surface runoff and groundwater levels to the degree that agreed levels of service are maintained and any adverse effects on the environment are not more than minor.

Remedial work or improvement works often need to be incorporated within the stormwater drainage system to achieve the agreed levels of service. Potential adverse effects include flood damage, surface and channel erosion and sedimentation, water pollution, and damage to aquatic ecosystems.

The stormwater system consists mainly of a primary and secondary system where:

- **Primary** is the piped system catering for the frequent rainfall events
- **Secondary** is the open channels and controlled flow paths catering for the higher intensity events or where blockages occur in the primary system

Council's stormwater assets are owned and maintained under two asset groupings. These are:

- Roadway drainage assets
- Stormwater disposal assets

Roadway Drainage Assets include kerb and channel works, formed water tables, mud tanks and connecting leads, and under road culverts. All roadway drainage assets are owned and maintained as 'Roading' assets.

Stormwater Disposal Assets collect runoff from roadway assets and adjacent land, and catchments generally upstream of a stormwater disposal asset, and convey it downstream to a natural water course, sea or lake.

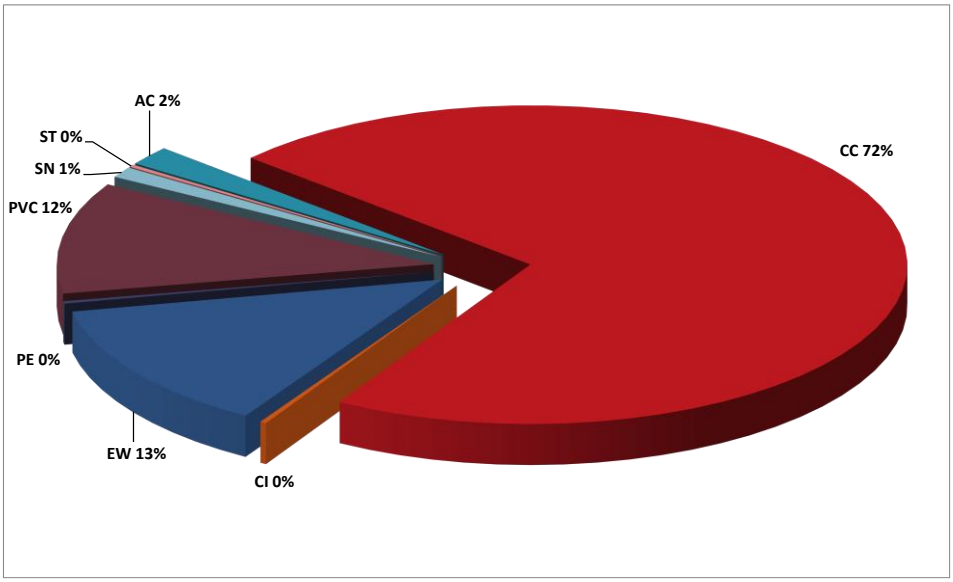
Individual properties that are connected to the stormwater service are responsible for their service laterals, up to and including the service lateral connection at the stormwater main.

Main stormwater lines constructed to service more than one property are a Council asset.

The scope of this Plan includes only the 'Stormwater disposal' group of Council's stormwater assets.

All of the reticulation is via gravity with pipes ranging from 100mm to 1,350mm diameter.

Figure 4.3-1: District wide stormwater main material distribution



- 97% of the reticulation consists of three materials: CC (72%), EW (13%) and PVC (12%)
- The remaining 3% is made up of five materials – CI, AC, PE, Steel & Stone

Pipe materials:

CC = concrete
EW = electric welded steel
PVC = polyvinyl chloride
CI = cast iron
AC = asbestos cement
PE = polyethylene

4.4 Pump Stations

There are no stormwater pump stations.

4.5 Stormwater Facilities

There are no retention ponds or stormwater treatment facilities.

Discharge/Disposal

An important aspect of the stormwater system is to ensure that the district's natural water sources are managed responsibly.

Council holds one resource consent for the collection and discharge of stormwater in the Waitaki Valley. This is a global resource consent and covers the urban drainage areas of Lake Ōhau Village, Ōmārama, Ōtematatā, Kurow and Duntroon. These urban drainage areas are located within the Canterbury Region. Implementation of the Resource Consent Conditions (CRC 186252) and Stormwater Management Plan for the Waitaki Valley commenced during 2020.

Within the Otago Region, Council held a resource consent for the discharge of tracer dye. This resource consent expired in 2018, and the activity was initially deemed a permitted activity. However, under Rule 12.B.2.1 the discharge of tracer dye to water is a controlled activity, providing it is chemically inert, non-radioactive, and non-toxic.

Discharge/disposal of stormwater is generally to a natural water course, sea or lake.

4.6 Buildings

There are no buildings associated with the Stormwater activity.

4.7 Criticality

Critical assets are considered those assets in which failure would result in a major disruption to the stormwater disposal system or levels of service. Criticality is best defined as assets which have a high consequence of failure (not necessarily a high probability of failure).

Due to the limited and basic asset set the stormwater assets were not included in the district wide criticality assessment. However, the review of the 2011/12 criticality assessment needs to be progressed to ensure the criticality assessment is considered in prioritising inspections, investigations, maintenance and renewal strategies (IP **3W3**). This review will consider inclusion of stormwater assets.

5 Levels of service

Levels of service:

- Define explicitly the standards required from the stormwater system
- Are an expansion of Council's Strategic Framework (as outlined in the pervious section)
- Largely shape Council's detailed planning

In providing stormwater services to the community, Council must balance the standard of service desired with the cost of providing the service. The Levels of Service are designed by Council to represent the best level of service possible for a cost that the community can afford and is willing to pay.

5.1 Determining levels of service

Levels of service for the Stormwater activity are determined by taking into consideration the needs of the community at both a general population level and individual property level.

Ultimately, determining levels of service goes beyond affordability. It is also about balancing the social, cultural and economic needs and aspirations of consumers with environmental sustainability, affordability and our ability provide services for current and future generations in an equitable, safe and consistent manner.

The following inputs used as a basis for these considerations:

- Council's vision and community outcomes
- Feedback from the community by way of consultation and engagement processes, and resident surveys
- Statutory requirements – including relevant legislation, regulations, environmental standards and Council bylaws that impact the way assets are managed
- The non-financial performance measures (Department of Internal Affairs), which came into force on 30 July 2014 following an amendment to the Local Government Act

The Stormwater activity also takes guidance from documents such as *Developing Levels of Service & Performance Management Guidelines: Creating Customer Value from Community Assets* produced by the National Asset Management Steering Group. This manual develops methods for organisations providing local government infrastructure services to establish their levels of service and what their customers value. It explores balancing the levels of service provided against the associated costs and then benchmarking the service levels provided.

5.2 Measuring and monitoring performance

In 2010 the Local Government Act 2002 was amended, requiring local authorities to use non-financial performance measures when reporting to their communities, with the aim of encouraging greater public participation in decision-making processes.

The performance measures do this through providing better information about the actual levels of service. The non-financial performance measures came into force on 30 July 2014 and Council has reported against these since the 2015/2016 Annual Report (noting that performance measure 1 has been updated and must be reported on from 1 July 2025).

Council had developed their own Performance Measures in the past, but because the mandatory measures cover key expectations in terms of service delivery, Council now only uses the Levels of Service statements aligned with the new mandatory performance measures.

To enable this, Council reviewed the customer service requests system to align it with the mandatory performance measures and ensured the Contractor reporting aligned with the 'tasks'. Council's AMIS and CRM database have been programmed to allow reporting aligned with the non-financial performance measures and to ensure consistency and accuracy of reporting.

Definitions for reporting:

Since 2015/16 Council have reported on the NFPM as follows. However, it should be noted that in the context of the requirements under the NFPM:

"**Flooding event**" means an overflow of stormwater from a territorial authority's stormwater system that entered a habitable floor.

"**Habitable floor**" means a floor of a building (including a basement) but does not include ancillary structures such as stand-alone garden sheds or garages.

"**Stormwater system**" means the pipes and infrastructure (excluding roads) that collect and manage rainfall runoff from the point of connection to the point of discharge.

However, it should be noted that:

- The definition of stormwater system which excludes streets, means that most (if not all) flooding in this district is not required to be reported as it is caused by runoff from the roads themselves and not the stormwater pipes.
- This Council, along with many others, does not know how many properties are connected to the stormwater system as they not separately rated.
- The inclusion of basements (and attached garages) as a habitable floor is at variance with the NZ Building Code which does not regard these as habitable areas, so Council is unable to prevent their being constructed above a floodable level.
- Most properties discharge to road rather than the stormwater system. Generally, connection to the stormwater system is not permitted and only considered under extreme circumstances and with specific conditions (flap valves, etc.)

The following table provides an overview of the levels of service, performance measures and targets:

Levels of service	Performance measures	Performance targets
Council will provide affordable, reliable and efficient stormwater disposal systems	The number of flooding events that occur within the District	Nil
	The number of habitable floors affected by the flooding event per 1,000 connections	Nil
Council will provide stormwater systems that protect the natural environment	Compliance with Council resource consents for discharge from its stormwater system measured by the number of abatement notices, infringement notices, enforcement orders and convictions	Nil
Council will respond to problems in a timely manner	Response to a callout	Median 2 hours
Council's customers perceive the stormwater service is reliable and safe	Stormwater complaints	< 8/1,000

For linkages between these measures and Council's Strategic Framework, refer to page 10 in the Executive Summary.

5.3 Level of service changes

Council reviews its levels of service every three years, as part of the Long Term Plan process. While we have not formally explored service level options with the wider community as part of this AMP, it considered that we generally have a good understanding of the community's needs through a variety of consultation processes and feedback and have a good understanding of industry standards and expectations.

For this reason, the Levels of Service from the previous Long Term Plan have been retained. However, as part of Council's Transformation project, further changes to service levels, performance measures and targets may be made over the life of this plan.

5.4 Service level improvements

Balancing the need to maintain or improve service levels with affordability is a key issue for our community over the coming nine years. Council plans to undertake a range of projects over this period driven by the need to ensure we can meet all Level of Service targets in the short and longer terms. These projects are included in Section 8.6: Future Capital Programme.

Council is focused on investment to maintain or meet current service levels over the next 9 years. No service level improvements are planned.

5.5 Monitoring of service levels

Council undertakes specific activities and monitoring protocols to ensure levels of service can be measured and reported on:

Levels of service	Related activities	Monitoring tools
Council will provide affordable, reliable and efficient stormwater disposal systems	Network capacity is adequate for documented 'design storm' Network upgrades focus on areas where flooding occurs Areas prone to flooding and no mitigation are identified on District Plan maps	Records are kept of rainfall figures and flooding incidents Contract performance monitoring Maps updated as part of District Plan review
Council will provide stormwater systems that protect the natural environment	Discharge of litter, sediments and pollutants are minimised Compliance with Regional Council requirements Environmental education – no discharging of pollutants into stormwater network Enforcement of Trade Waste Bylaw	Cleaning programme (Roading) No abatement notices, infringement notices, enforcement orders etc. CRM database
Council will respond to problems in a timely manner	Response and completion times specified are included in O&M Contract	Contract performance monitoring
Council's customers perceive the stormwater service is reliable and safe	Customer queries replied to within CRM timeframe	Contract performance monitoring CRM database

5.6 Service level performance

During 2021/22 and 2023/24 Council met all but one of its service level targets for stormwater. The expectation was the receipt of 10 complaints per 1000 residents regarding the stormwater network (the target being 8 complaints per 1000 residents).

Council will continue to monitor service level trends and respond to any ongoing trends where deemed necessary and appropriate.

5.7 Risks to service levels

The most significant risks to maintain service levels for the stormwater activity are:

- Increasing rainfall events as a result of climate change
- Lack of resources to implement work programmes

Design capacity

The key issue for Levels of service with regard to the stormwater activity is the “design storm”.

Generally, stormwater systems are designed to handle a ‘one-in-a-number of years storm’. One-in-ten years is commonly used throughout New Zealand. In recent years the definition and derivation of these ‘design storms’ has been questioned following flooding in urban areas (e.g. Dunedin and Tauranga).

The effects of climate change are anticipated to result in an increase in frequency and intensity of severe weather events such as severe droughts and floods. It is extreme events that cause damage, and proactive adaptation requires more conscious action. A small shift in the average climate is expected to lead to much more significant changes in the occurrence of extremes. It is expected that the design storm can be increased by 5%-15% due to the effects of climate change. It is essential that Council is aware of the anticipated effects of climate change and to integrate these into the standard council considerations to ensure the stormwater collection services meet the future demands.

6 Demand and planning for the future

The ability to predict future demand for services enables the Council to plan and identify the best ways of meeting that demand. That may be through a combination of demand management and investing in developing or improving the supply network.

This section provides an overview of key drivers of demand and what demand management measures the Council has planned to implement.

6.1 Demand drivers

The future demand for reticulated stormwater services in the Waitaki District will be driven by:

- Growth in the District
- Legislative changes
- Changes in customer expectations
- Climatic changes
- The extent of stormwater entry to the wastewater system (inflow/infiltration)
- Extensions to the stormwater system to service currently un-reticulated areas

The following table indicates how these factors are expected to be reflected in changes in the stormwater system.

Water Demand Drivers	Domestic	Commercial	Industrial
Growth	Population changes in reticulated areas Change in per dwelling population	Expansion of commercial areas	Expansion of industrial areas
Legislative change	Legislative change can significantly affect the Council's ability to meet minimum Levels of Service and may require improvements to infrastructure assets. Changes in environmental standards may affect stormwater disposal options.		
Changes in Customer Expectations	Customer expectations are increasingly tending towards higher Levels of Service, both the extent and frequency of stormwater flooding and ponding on property and roads during and after storms, as well as enhanced stormwater quality		
Climatic changes	In recent years, there has been an increase in the incidence of extreme weather events around the world. Although future projections have not yet been made specifically within the Waitaki district, it is likely that there will be even more frequent and intense rainfall over the next 50 years		
Infiltration & Inflow	Infiltration & Inflow – reducing inflow into the wastewater system will divert the stormwater to the stormwater system and increase the volume. This may result in capacity issues not previously identified		
Extensions to service un-reticulated areas	All areas		

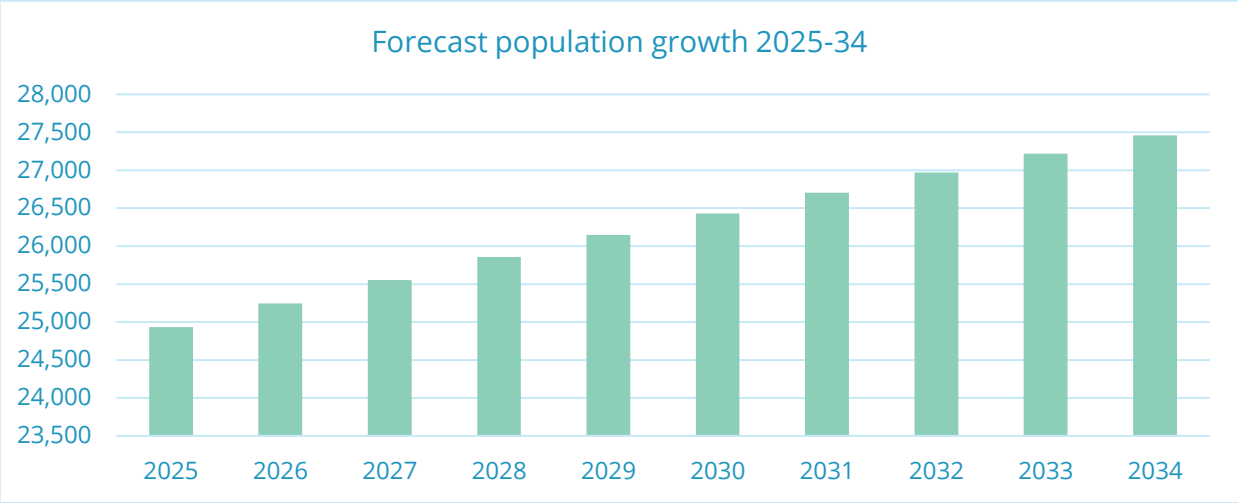
Increasing demand for a service may generate a requirement for the development of additional infrastructure. Expenditure programmes need to be planned to fund the capital works and associated on-going operational expenditure. Alternately, it may be possible to manage demand within the existing system capacity.

Where a reduced demand is forecast it may be appropriate to renew assets with a lesser capacity, operation expenses may decrease, or an asset may become surplus to requirements.

In considering requirements for the Long Term Plan, there is no anticipated demand for stormwater disposal assets beyond the catchments already served and it is expected that minimal new asset creation will be initiated within the time of this Plan.

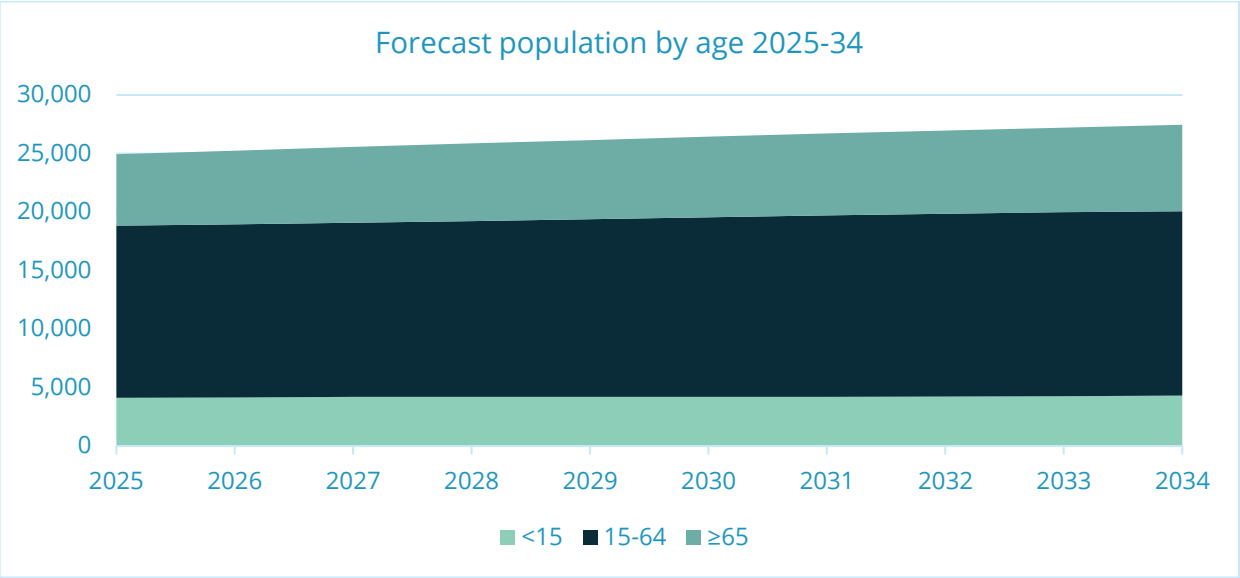
Population Growth

Waitaki's total population is forecast to increase by 10.1% by 2034 and by 22.1% by 2054. These estimates are based on high growth-rate forecasts prepared for Council by Infometrics in 2024.



High growth-rate forecasts prepared for Council by Infometrics in 2024 indicate Waitaki will continue to be an ageing population over the next 10-30 years, with increasing numbers of individuals aged 65 years and above (≥65), and relatively stable numbers of individuals aged under 15 years (<15).

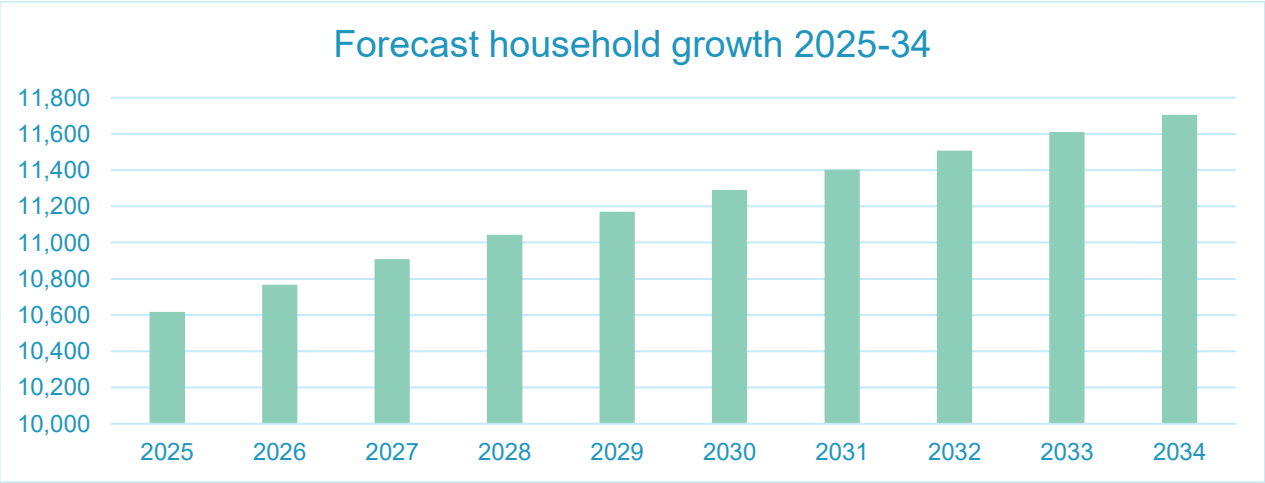
- The total number of individuals aged under 15 years in the Waitaki District is forecast to increase by 4.6% by 2034 (to form 15.7% of Waitaki's total forecast population in 2034)
- The total number of individuals aged between 15 and 64 years in the Waitaki District is forecast to increase by 7.1% by 2034 (to form 57.3% of Waitaki's total forecast population)
- The total number of individuals aged 65 years and above in the Waitaki District is forecast to increase by 21.1% by 2034 (to form 26.9% of Waitaki's total forecast population in 2034)



Increasing numbers of individuals aged 65 and above in the district, and relatively stable numbers of individuals aged under 15 years, mean a high proportion of the district will likely be on fixed incomes. This will make affordability of services a more pressing issue.

Residential growth

The total number of household units in Waitaki District is estimated to increase by 11.9% by 2034 (1,242 household units). These estimates are also based on high growth-rate forecasts prepared for Council by Infometrics in 2024.



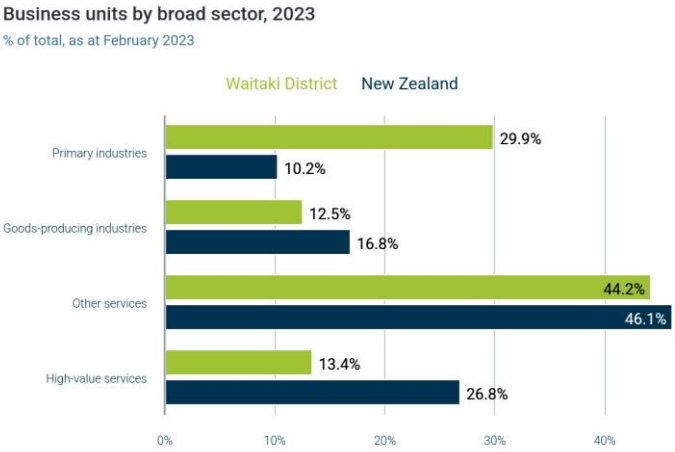
The rate of sub-divisional and infill housing development can result in a significant impact on the quantity and pattern of stormwater run-off due to the increasing proportion of 'hard' area, and the quality of the downstream receiving waters. This will be monitored, and improvements and extensions will be made to existing systems affected as required.

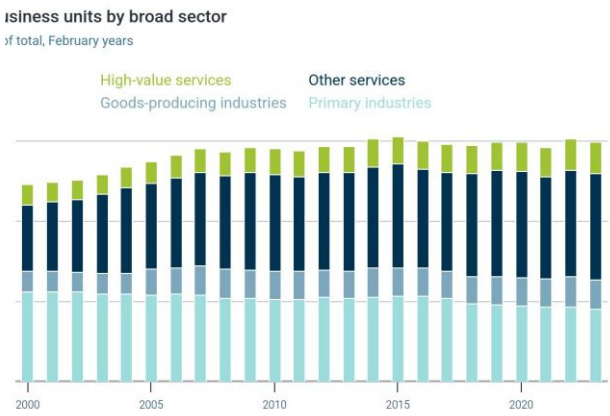
A general increase in population is expected to have only a minor effect on the demand for stormwater services. Increases in demand due to subdivision and land development can be managed through construction standards and financial contributions.

It is difficult to measure the volume of stormwater that is collected and disposed of by the system, but we can track and assess the rainfall patterns and use this to give some indication of the frequency of use of the system and the amount of stormwater collected and disposed of. Council will monitor rainfall patterns and consider trends as potential triggers to improvements and extensions to existing systems.

Economic growth

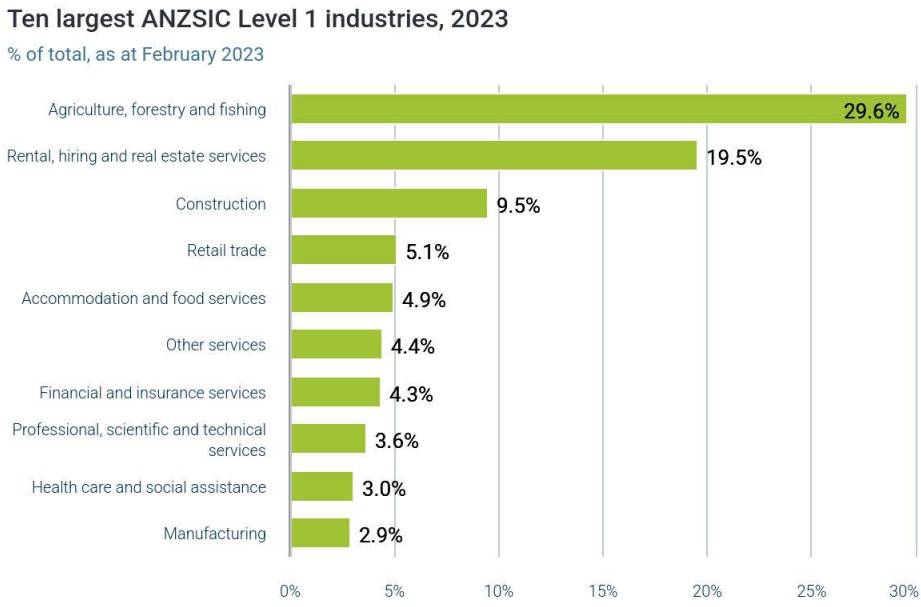
In 2023, primary industries and 'other services' continued to dominate Waitaki's economy, continuing a trend that has continued for more than two decades (Source: Infometrics).





'Other services' accounted for the largest proportion of business units (44.2%) in Waitaki District, which was lower than in New Zealand (46.1%).

Goods-producing industries accounted for 12.5% in Waitaki District, compared with 16.8% in New Zealand and accounted for the smallest proportion in Waitaki District (12.5%) compared.



Intensive developments in the commercial and industrial sectors are more likely to create demand for stormwater services and the potential for inflow into the wastewater system (refer

below). Council will monitor this and consider commercial development trends as potential triggers to improvements and extensions to existing systems.

Stormwater entry to the wastewater system (inflow/infiltration)

Inflow is the term used to describe water that enters the wastewater system through direct connections such as roof downpipes, yard drains, catch basins, sump pumps, manhole covers and frame seals or indirect connections with stormwater pipes. Any extra water flowing into wastewater collection system from above ground sources, either intentionally or unintentionally, is referred to as inflow.

The rate of inflow and infiltration (I/I) of rainwater into the wastewater network is a key factor in future wastewater demands. Most urban systems across New Zealand experience inflow/infiltration with stormwater making up between 20% to 40% of wastewater volumes.

Any sources of inflow identified will be diverted to the stormwater system. This will increase the volume of stormwater in the system and may identify previously unknown capacity issues.

Inflow/infiltration into the wastewater system reduces capacity, increases potential for overflows, increases power consumption at facilities and treatment costs. A district wide inflow/infiltration programme to ensure the collection system is maintained to operate at optimum capacity is included as a project in the 2025-34 Long Term and is covered in the Wastewater AMP.

Climate change

The Waitaki district, like many other places, will be experiencing the threat of a changing climate. Increasing significant weather events will put pressure on our stormwater infrastructure and we need to adapt and find sustainable solutions. The way we build our infrastructure and cater for demand will need to reflect this new reality.

Given the increasing challenges posed by climate change, we anticipate that Council will need to invest heavily in resilience measures. This could include infrastructure upgrades to withstand extreme weather events, moving infrastructure away from the coast, and initiatives to mitigate the impacts of flooding.

Technology

Over the coming years, technology will provide new opportunities that have strong potential to positively affect the management of water supply infrastructure. Technology may make network inspections and monitoring easier, quicker and cheaper, and enable to address issues more efficiently.

Environmental awareness

Consumers are becoming more aware of the environmental impacts of stormwater discharges into water bodies and land. These changes in attitudes and behaviours will impact on how Council manages the stormwater network in the future.

Legislative and regulatory changes

There are two Regional Councils that have authority within the Waitaki District. The northwest of the district (including all of the Waitaki River) is under the authorisation of Environment Canterbury, with all the area to the south under the authorisation of the Otago Regional Council. This mixture of Regional Authorities results in two different sets of rules and multitude of plans.

Section 10.7 Environmental Management details the impact of Regional Plans on the Stormwater Activity. Any changes to the current plans can result in a significant impact on the Stormwater Activity in the district.

6.2 Planning to meet demand

Previous assessments

The 2005 Water and Sanitary Assessments stated:

- Ōamaru is the only community that has a stormwater system that serves the majority of the community
- The assessment of risk to the communities in the absence of a reticulated stormwater system has shown to be moderate but mitigated by ensuring secondary flow paths are known and functional
- Current and estimated future demands for stormwater are well catered for in communities that are served by a reticulated system and those that rely on individual property disposal

The assessment concluded that there was adequate capacity within the existing Kurow, Ōamaru, Ōmārama, Ōtematatā, Palmerston and Weston stormwater systems and that changes in demand would not affect public health and would only have a minor effect on the environment. It was suggested to continue with existing disposal methods with ongoing assessment of any improvements or enhancements required.

New direction

In recent years, there have been consistent signals from central government that business as usual within the Three Waters sector is no longer acceptable practice.

There has been underinvestment in three waters infrastructure in parts of the country and persistent affordability issues; along with the need for additional investment to meet improvements in freshwater outcomes, increased resilience to climate change and natural hazards, and enhanced community wellbeing.

This has seen the establishment of Taumata Arowai, Water Services Regulator, and development of new legislation. This includes:

- Obligations for stormwater network risk management plans
- Monitoring and reporting requirements for stormwater networks including prescribed environmental performance measures, and compliance with national standards

Stormwater management now considers slowing flows, storage and soakage as appropriate practice and includes quantity and quality considerations, multiple use facilities, riparian corridors, recreation, wetland preservation and groundwater recharge. This introduces a range of issues including changes in stormwater planning, design, operation and maintenance, construction, and financing.

Add to this climate change impacts, such as greater intensity and more frequent events, and there is a significant body of work within the stormwater activity with a need to reconsider the adequacy of existing systems. It is important to find the optimum balance of maximising the results through the investments made including appropriate life cycle costs and consideration for the four wellbeings (social, economic, cultural and environmental considerations).

Ōamaru stormwater network capacity study

A Capacity Study Design Basis in 2027/28 (**IBIS# 4589**) and Capacity Study in 2028/29 (**IBIS# 4590**) for Ōamaru's stormwater network are included in the 2025-34 Long Term Plan. The outcomes of this will be used to inform planned renewals which are budgeted for years 2029 to 2034 of the Long Term Plan and will be included in future Activity Management Plans.

Background

The key issue for Levels of Service with regard to the stormwater activity is the "Design Storm". Generally, stormwater systems are designed to handle a 'one-in-a-number of years storm'. One-in-ten years is commonly used throughout New Zealand. In recent years the definition and derivation of these 'design storms' has been questioned following flooding in urban areas (e.g. Dunedin)

The effects of climate change are anticipated to result in an increase in frequency and intensity of severe weather events such as severe droughts and floods. It is extreme events that cause damage, and proactive adaptation requires more conscious action. A small shift in the average climate is expected to lead to much more significant changes in the occurrence of extremes. It is expected that the design storm can be increased by 5%-15% due to the effects of climate change. It is essential that Council is aware of the anticipated effects of climate change and to integrate these into the standard council considerations to ensure the stormwater collection services meet the future demands.

It is believed there is adequate capacity within the existing Kurow, Ōamaru, Ōmārama, Ōtematatā, Palmerston and Weston stormwater systems. There has been no rigorous study undertaken yet to confirm this. It is proposed that a hydraulic model of the Ōamaru network be established to ascertain current capacity and identify constraints on future development. Preliminary investigations indicate that there are network capacity problems. However, localised capacity problems are addressed as they are identified. The networks serving the rural communities are relatively minor in nature and hydraulic modelling is not deemed necessary.

A general increase in population is expected to have only a minor effect on the demand for stormwater services. Intensive developments in the commercial or industrial sectors are more likely to create a demand for stormwater services. Increases in demand due to subdivision and land development can be managed through construction standards and financial contributions.

6.3 Demand Management Plan

The Demand Management Plan involves implementing strategies to reduce effluent flows and promote more efficient network operations. These strategies involve altering or repairing the asset to achieve the target. The effluent flow reduction strategies used by Council are outlined in the table below:

Figure 6.3-1 Flow Management Strategies

Strategy	Description
Stormwater Separation	Removal of stormwater ingress into the wastewater system through upgrading of the stormwater system (**LTP WW3**)
Response Time	Prompt response and rectification of reported leaks
Replacement/ Rehabilitation Programme	The Renewal Programme to ensure assets are not utilised beyond their useful life when the risk of unidentified failure is greatly increased
Codes of Practice	Enforcement of appropriate Engineering Codes of Practice to ensure all maintenance is carried out to the relevant standard
Technical Standards	Ensuring new assets are constructed to the correct standards and tested appropriately before being commissioned
Standard Materials	The use of standard (high quality) materials
Quality Audits	To ensure all standards are being met

The Demand Management Plan also involves implementing non-asset strategies to manage the demand for a service. Non-asset solutions for current and future use by Waitaki District Council are outlined in the table below:

Figure 6-1-2: Demand Management – Non Asset Strategies

Strategy	Description
Public Education	Encouraging and understanding the issues concerning the stormwater and wastewater system through public education and advertising campaigns
Property Inspections	Encouraging property owners to comply with Council's Bylaws and stormwater discharge requirements

6.4 Maintaining current capacity

Council has budgeted over the next nine years to undertake a stormwater main inspection and cleaning programme to ensure sufficient capacity is retained within the existing networks.

Table 6.4-1: Stormwater capacity

IBIS#	Project	Description	Year/s	Budget
2466	**Stormwater main inspections and cleaning programme**	An annual programme to inspect the condition of the network and cleaning to ensure the capacity of the current network is maximised to meet demand	2027-34	$10,000,000

7 Risk and resilience

7.1 Introduction

A systematic and consistent approach to risk assessment improves Council's ability to manage its assets within resource limitations and to prioritise expenditure and actions that can avoid or mitigate the effects of an identified event.

Risks can be grouped into financial, operational, or organisational categories. Their negative consequences can seriously impact public health and safety, incur financial loss or adversely affect public image. The risks identified might be relevant to many activities and be of concern at corporate level, or they might be localised, at an asset-specific level.

This section describes the risk management processes used for the water supply activity. Assessment and management of risk provides defensible tools for the communities and Council to develop prudent work programmes that support sustainable development.

7.2 Corporate risk management approach

Council adopted a new Risk Management Policy in February 2023. It recognises that sound risk management is a function that will support better decision-making, increase awareness of potential issues, and strengthen the organisation's capability and maturity.

The new policy is aligned to the principles of the ISO31000:2018 Risk Management Standard. It contains details of the risk management approach to be followed by Council and details the methods used to identify, assess, manage, and report on risk. It references the different types of risk and details the differing approach to the management of each.

This policy applies to all employees and governing body members of Council.

WDC's Risk Management Framework comprises five main elements:

- Operational Risk Management
- Project Risk Management
- Key Risk Management
- Issue Management
- Operational Risk Event Management

Council aims to identify and manage all types of risk faced by the organisation. Risks are documented in one of three ways:

1. Key Risk Register
2. Operational Risk Register
3. Project RAIDD (Risks, Assumptions, Issues, Dependencies, Decisions) Log

Council will identify Operational Loss Events and report financial losses to the Performance, Audit, and Risk Committee.

Issues, whether because of a known risk crystalising, or identified through other means, will be managed appropriately through to resolution.

Risks are categorised and documented in the appropriate format, as show in the table below.

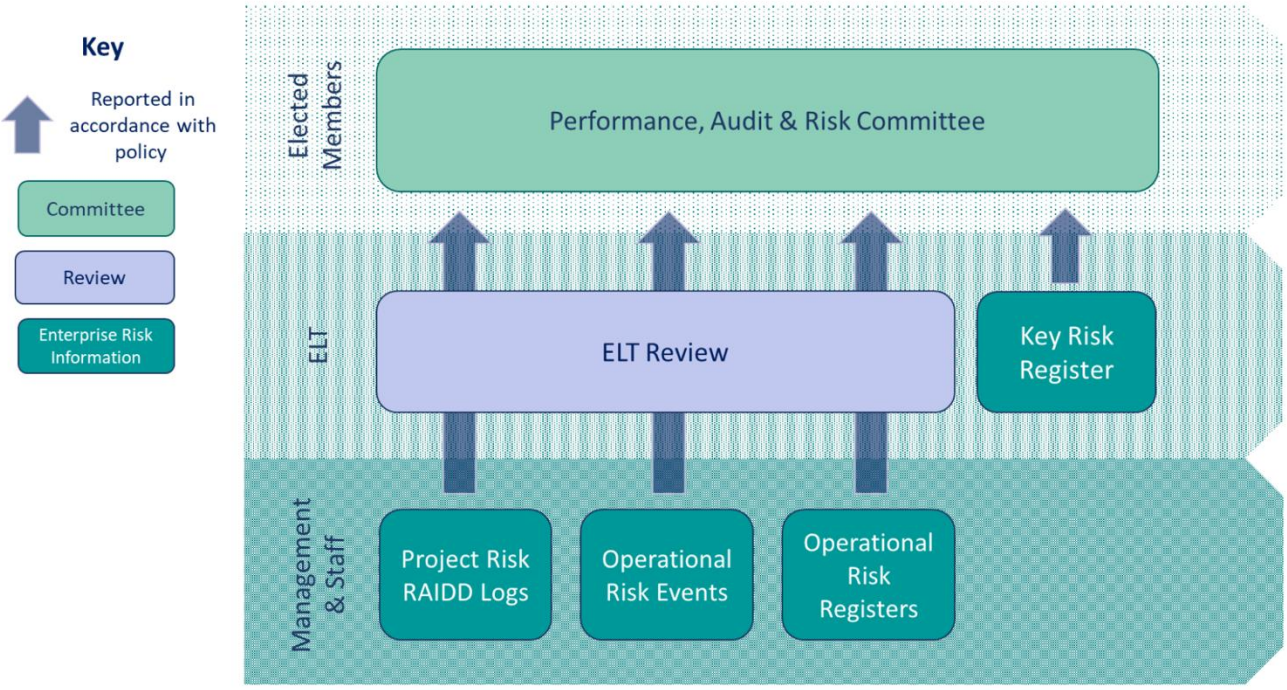
Risk categorisation

Risk Type	Sub-category	Description	Document
Financial	Credit	The risk that a counterparty may default of their obligations (a given financial claim is not paid in full) or have their credit rating downgraded.	Key Risk Register
	Liquidity	The risk that an organisation is unable to meet its financial liabilities as they fall due.	
	Market	The risks that arise due to fluctuations in the value of, or income from, the assets of an organisation.	
Operational	People	Loss resulting from inadequate or failed internal people.	Operational Risk Register or
	Process	Loss resulting from inadequate or failed internal processes	
	Systems	Loss resulting from inadequate or failed internal systems.	
	External	Loss resulting from an external event.	
Strategic	N/A	Risks that are created or affected by the chosen strategy of an organisation.	Key Risk Register
Project	N/A	Risks associated with the design, implementation, and delivery of a project. Most of these risks should close with the project, but some may be transferred to Business-as-Usual dependent on what is being delivered by the project.	Project RAIDD Log

Corporate risk management framework

The diagram below shows ownership of sources of risk information and how these are connected and reported to the Performance, Audit, and Risk Committee (PAR).

Risk Management Framework Diagram



7.3 Key risks and management approaches for stormwater

Council has identified the following strategic risks and control measures for stormwater:

Strategic risk	Description	Controls/future controls
Affordability and financial sustainability	Risk that service needs outweigh available budget, due to ongoing external cost increases or increased regulatory requirements, resulting in rates becoming unaffordable, or Council's financial position becoming unsustainable.	Working together with other Councils and agencies to share knowledge and ideas. Prioritisation tool will focus resources when undertaking Annual and Long Term Planning New Financial Strategy
3 Waters Management	Risk that Council is unable to effectively deliver 3 Waters activity, due to increasing regulatory standards and changes or changes in central government expectations, resulting in increased financial outlay, reduction in service levels, significant rate increases, community dissatisfaction, and non-compliance with revised standards.	Multi-council potential responses being developed Engaging with other Councils to share information External resourcing to assist with Water Services Delivery Plan development Re-prioritising work programme to reflect changed environmental and financial regulatory environment

Strategic risk	Description	Controls/future controls
Political Uncertainty	Risk that Council's priorities and actions are not aligned with central government expectations or reform activity due to political uncertainty, or lack of external consideration in decision-making, resulting in inefficient use of time, resources, and funds, public dissatisfaction, and reputational damage.	• Central government decisions and updates are monitored and discussed as a standing agenda item at ELT meetings • When submitting Annual Plan Projects, managers must state where decisions and direction have the potential to be impacted by central government decisions and direction • Modelling of impacts of reforms • Membership of networks across regions and local government LTP forecasting assumptions
Climate Change	Risk that the negative impacts of Climate Change are more severe or difficult to manage as a result of Council inaction and lack of understanding or strategy, resulting in environmental harm, an inability of Council to effectively respond to weather events or coastal erosion, loss of key income streams for the district, breach of legislation, and increased financial burden.	• Newly created Climate Change role (this control will develop further as the role becomes more established) • Climate Change declaration agreed • Water sensitive urban design principles incorporated into District Plan (partially implemented) • Design/placement of new infrastructure considers climate change vulnerabilities
Critical Asset/Infrastructure Failure or Damage	Risk that a critical asset or infrastructure fails or is damaged, due to a one-off incident, failure to identify ongoing deterioration, or maintenance/ oversight processes not being followed or not being fit for purpose, resulting in critical services/infrastructure being unavailable to the community, financial loss, and potential reputational damage.	• Water maintenance contract in place and performance regularly monitored • Water assets managed via AMPs • Assets valued on a 3-yearly basis and insured as appropriate

7.4 Key operational risks and management approaches

Table 7.4-1: Operational risks and management approaches

Risk	Description	Management approach
Resource consents	Risk that resource consent requirements are breached due to lack of knowledge or understanding, sites not performing to design standards, resulting in abatement notices, infringement fines, reputational damage, environmental harm, and damage to relationship with regional councils.	• Non-compliance is investigated and either resolved or a project proposal completed • Ongoing review of site performance against design and consent requirements • Relationship management with the regional council • Requirements documented to be referred to as necessary • Staff training on resource consents undertaken
Lack of formal agreement for Council owned assets on private property	Council's current approach to seeking agreement from private landowners to have Council owned assets installed on their property is via a brief signed written agreement as opposed to a legal easement or purchase of the land. While we have rights under the LGA, once the assets are installed ongoing efficient operation of the site and future upgrades are dependent upon a good relationship with the landowner.	• Consider land purchase or legal easements on a case-by-case basis • Legal review of current written agreements to ensure fit for purpose • Relationship management with landowners • Staff understanding of current agreements and terms
Health and Safety	Risk that a member of staff, the public, an on-site worker, or elected member has an accident or incident on Council premises or whilst conducting activities on behalf of Council, resulting in potential fine, breach of legislation, reputational damage, personal injury, illness, or death.	• All contracts state contractors must adhere to H&S requirements • Contractor risk assessments prior to activity being undertaken • Formalise agreements with external organisations • H&S meeting held weekly • Open bodies of water fenced (some locations - all wastewater) • H&S meeting held weekly • Site hazards identified and documented, signed by contractors on site
Resource Capacity	Risk that Council resource staffing capacity is exceeded due to an inability to retain or recruit staff, leading to service degradation, loss of key knowledge and capabilities, staff dissatisfaction, and reputational damage.	• Flexible working to increase staff satisfaction and improve retention • Salary benchmarking to enable market-rate for new employees • Seconding consultant resource for operational work • Staff pay reviews - internal benchmarking

Risk	Description	Management approach
Training and Development	Risk that Waters Team members are not able to adequately perform required duties due to a lack of training or development opportunities, resulting in service degradation, reputational damage, staff dissatisfaction.	• Attendance at regional and national forums/ conferences • Budget increase and/or review for appropriateness • Ongoing professional development undertaken • On-going training is available for staff involved in infrastructure asset management and contract management includes attendance workshops, seminars, and conferences • Regular open and transparent conversations around industry changes and the implications • Specific course or seminar attendance • Training needs identified in 1-1s with managers
Contractor Management	Risk that contractor performance is unsatisfactory due to contract management activities not being effectively defined or undertaken, resulting in service degradation, inability to achieve value for ratepayers, consent non-compliance, and reputational damage.	• Contract / relationship owners in place • External consultant support • Formal escalation process in place • Improved contactor relationship • Performance report actioning • Performance reporting undertaken • QA / audits • Staff training on contract management • Weekly meetings with contractors
Contractor Capacity and Costs	Risk that contractors are unable to provide services within expected budgets due to capacity issues or cost increases, resulting in increased financial outlay, reduction in successful delivery of planned projects, and reputational damage.	• Alliancing • Continue building relationships with existing and potential contractors, to expand and retain contractor pool • Maintaining competition between local contracting firms to support achievement of best value • Situation reports to ELT and Council via Activity updates • Supplier Agreements/panels
Weather Events	Risk that drinking water, wastewater, or stormwater provisions or infrastructure are compromised due to a severe weather event, resulting in remediation requirements, reputational damage, financial loss, and breach of legislation.	• AMPs document measures in place to protect infrastructure • Checks completed on vulnerable infrastructure ahead of and following events • Completion of the wastewater overflow mitigation project, including upgrades • generators for water facilities and sewers • Relationship with Network Waitaki (in the event of lost power) • stormwater capacity study with follow-up actions e.g., S/W Doda pumps • Water Safety Plans documented with responses to events detailed • Water storage to allow for selective abstraction • Waters Business Continuity steps documented

Risk	Description	Management approach
Process Documentation	Risk that critical institutional knowledge is lost due to processes not being documented or documented inaccurately or securely, resulting in customer harm, financial loss, reputational damage, and staff dissatisfaction.	• Knowledge sharing/shadowing - institutional knowledge held • Processes Promapped • Succession planning in place
Decision-making alignment	Risk that decisions made outside Council negatively impact Council team activity due to lack of consideration or engagement, resulting in unplanned activity requirements, undefined responsibilities, and staff dissatisfaction.	• Engagement approach - feeding into reforms and central government initiatives
Procurement Processes	Risk that inappropriate suppliers are awarded work because of procurement processes and practices not being aligned with policy or best practice, resulting in reputational damage, financial loss, and potential service delivery impacts.	• Audits of procurement activity • External support and resource • Institutional knowledge utilised • Procurement Policy compliance • Senior Team Review/approval of procurement approaches • Use of the non-standard procurement/policy exemption requests reviewed by GM
Budget Management	Budget holders not signing off invoices due to management line changes and Authority system restrictions for approval.	• To be addressed in the context of Council's Transformation organisational design changes.

7.5 Risk management approaches for other key risks

In addition to the highest risks and management approaches outlined in table 7.4-1 in the previous section, Council also manages other key risks, including:

- Renewal of aging water assets

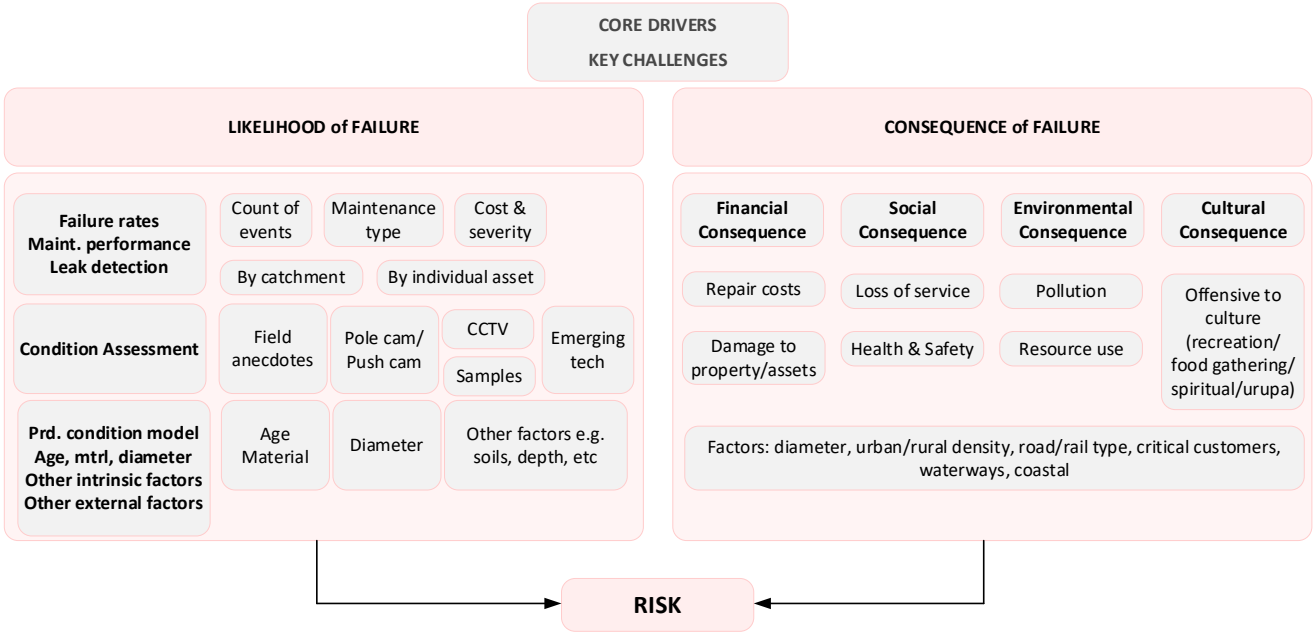
Renewal of aging stormwater assets

Risk assessment for our water assets is the combination of:

- Likelihood
- Consequence

The following diagram provides a snapshot of the components considered under 'likelihood of failure' and 'consequence of failure' i.e. the renewals risk assessment.

Figure 7.5-1: Renewal risk assessment



This guides the intervention strategy of 'when to':

- Renew
- Assess condition
- Validate data

Criticality

The criticality of an asset reflects the consequence (not the probability) of the asset failing. High criticality assets are best defined as assets which have a high consequence of failure (not necessarily a high probability of failure).

Criticality of assets is used within the water service to enable clear identification of critical assets, enabling these assets to be managed more proactively to mitigate the risk associated with their failure. This proactive management includes:

- Prioritising condition assessments
- Adjusting economic lives with respect to renewal profiles
- Prioritising/deferring renewals
- Prioritising expenditure
- Operation and maintenance planning
- Priorities for collecting asset information to the required level of confidence

Conditions assessments were previously performed on an ad-hoc basis due to lack of capacity within the Waters team. This has improved in recent years, with a more formalised assessment programme and budget now in place.

7.6 Climate change

Projected changes

Climate change is an important consideration in the Council's Long Term Planning. Guidance from the New Zealand government based on the best available climate science is used to support the planning.

The Ministry for the Environment information on: https://www.mfe.govt.nz/climate-change/likely-impacts-of-climate-change/how-could-climate-change-affect-my-region/otago provides a summary of projected climate changes over the periods 2031–2050 (referred to as 2040) and 2081–2100 (2090) compared to the climate of 1986–2005 (1995).

Temperature - Compared to 1995, temperatures are likely to be 0.6˚C to 0.9˚C warmer by 2040 and 0.6˚C to 2.8˚C warmer by 2090. By 2090, Otago is projected to have from 4 to 25 extra days per year where maximum temperatures exceed 25˚C, with around 13 to 45 fewer frosts per year.

Rainfall - will vary locally within the region. The largest changes will be for particular seasons rather than annually. Otago is expected to become wetter, particularly in winter and spring.

According to the most recent projections, extreme rainy days are likely to become more frequent in Otago by 2090 under the highest emissions scenario.

Snowfall - the Otago region is likely to experience significant decreases in seasonal snow. By the end of the century, the number of snow days experienced annually could decrease by as much as 30-40 days in some parts of the region. The duration of snow cover is also likely to decrease, particularly at lower elevations.

Less winter snowfall and an earlier spring melt may cause marked changes in the annual cycle of river flow in the region. Places that currently receive snow are likely to see increasing rainfall as snowlines rise to higher elevations due to rising temperatures. For rivers where the winter precipitation currently falls mainly as snow and is stored until the snowmelt season, there is the possibility for larger winter floods.

Wind – the frequency of extremely windy days in Otago by 2090 is likely to increase by between 2 and 5 per cent. Changes in wind direction may lead to an increase in the frequency of westerly winds over the South Island, particularly in winter and spring.

Storms - future changes in the frequency of storms are likely to be small compared to natural inter-annual variability. Some increase in storm intensity, local wind extremes and thunderstorms is likely to occur.

Sea level rise - New Zealand tide records show an average rise in relative mean sea level of 1.7 mm per year over the 20th century. Globally, the rate of rise has increased, and further rise is expected in the future.

Climate change and stormwater

The changing climate is having a notable impact on the Waitaki district. Consequently, the resilience of Council's key infrastructure is being increasingly challenged.

Climate change may mean that the lifespans of our assets are shorter than planned, or that maintenance costs increase. It may also mean that repairs are needed more frequently or that materials deteriorate more quickly.

Council's climate projections report (2023) provides a current summary of climate change risks the Waitaki District will be facing, now and into the future. Council's *Overview of Coastal Hazards Report 2024* provides evidence of the coastal hazards that the district faces, many which will affect our water infrastructure.

We are anticipating advances in coastal erosion along the district's coastline – particularly in North Oamaru and south of Kakanui.

Storm events are anticipated to become more frequent and result in a higher magnitude of impact in the future.

We are also anticipating ongoing issues associated with increases in high intensity storm events in Kakanui, Otematata, Omarama, Kurow and Oamaru North - including Muddy Creek.

To provide appropriate solutions to the anticipated challenges, Council will need to address community concerns and expectations and clarify its role in the protection of private property. Additionally, it must have a clearer picture of the value of the assets at risk, determine the beneficiaries of any proposed solutions, and assess the cost and liability to Council.

Moeraki is subject to ongoing landslip issues primarily caused by large, slowly creeping movements in the underlying mudstone. This geological instability poses a high risk of damage to water network assets in certain parts of Moeraki.

Specifically for stormwater systems, we anticipate climate change will result in:

- A shift in demand profiles
- Increased pressure on water treatment and aquifers

Our response

In 2022, Waitaki District Council created a new role of Climate Change Advisor to bring a focus to ensuring that climate change and its implications are planned for and dealt with, and to lead the understanding and awareness of organisational and local climate risk and vulnerability.

Council's ongoing response to climate change is influenced by central and regional government direction. One challenge in this space is that the Waitaki district spans across two regional council boundaries – Canterbury and Otago.

Council is a partner to the Canterbury Climate Partnership Plan showing how councils will work together on specific climate actions to help minimise the impacts of climate change on Canterbury's communities and ecosystems. The plan includes ten primary actions focused on addressing key gaps, priority risks, and opportunities.

Otago Regional Council has also prepared an Otago Climate Change Risk Assessment summarising the key risks that the Otago region is facing due to climate change.

Council has developed high level climate change projections for the Waitaki District as part of phase 1 of its Climate Change Risk Framework.

Council has identified high risk coastal locations (Waitaki Coastal Hazard Strategy - High Risk Sites Options Assessment, September 2024) that are likely to need to be managed in the next 50-100 years. Sites relevant to water supply infrastructure include:

- Beach Road North - 2.8km from where Beach Road reaches the coast down to Gardiners Road
- Beach Road South - 2.5km along the coastline from the intersection of Seadown Road and Thousand Acre Road to 190m north of the intersection of Beach Road and Fortification Road
- Waianakarua Road - 3.5km from Bridge Point down to the northern end of Waianakarua River mouth
- Katiki Beach North - runs from the north of Katiki and extends to around 4.5km in the centre of the beach
- Katiki Beach South - extends around 3km from Squire Road along the south of Katiki Beach
- Shag Point Road.

Council's overall strategic direction

When responding to the effects of climate change, Council will prioritise the protection of Council assets over private assets and plans to:

- Build resilience into our core infrastructure to cater for future demand and other risks.
- Develop a Climate Change Strategy.

Approach to coastal erosion

Key options identified to address the coastal erosion issue in central Oamaru and on the Katiki coastline include:

- Status quo (emergency rock added on a needs basis)
- Managed retreat.

Council's preferred approach to is to co-operate with external agencies to support the ongoing erosion protection of their assets currently being undertaken by Kiwi Rail and NZTA to protect their assets.

7.7 Emergency management and business continuity

Note: Due to changes to the structure of the team and roles delivering Council's water supply through Council's Transformation Project, the following documents will require review and changes to align with the new structures and roles.

Business Continuity Plan – water supply

Since the last AMP, a Business Continuity Plan has been drafted for the Water Supply activity following the methodology detailed in AS/NZS Handbook 221:2004 – Business Continuity Management.

The plan aims to identify risks and impacts that cannot be managed as business as usual and require a corporate response to ensure that the risks and impacts on the affected customers are minimised.

The draft plan:

- Undertakes a risk management assessment of the water supplies operations.
- Defines and prioritises the critical business functions and incidents for water supplies.
- Details the immediate responses to a critical incident or disruptions.
- Details actions to be taken to enable the water supplies activity to continue to function during and after a critical incident or disruption.
- This disruption category includes Natural Disasters, Pandemics and drought.
- Details actions to be taken to return water supplies to normal, pre-disruption service.

A copy of the draft plan can be viewed here.

Emergency response plan – water supply

Council drafted an Emergency Response Plan for Water Supply (Natural Disaster Management) in February 2024.

The triggers for the use of this plan are natural disasters which impact the Waitaki District Council Water Supplies, and which undermine the infrastructure and short to long term supply of water and safe drinking water.

The SAFER Framework will be activated by all South Island CDEM groups, their member local authorities, regional and national partner organisations immediately when any of the following triggers occur:

- A strongly felt earthquake with shaking continuing for longer than two minutes.
- Confirmation from GeoNet/GNS Science, MCDEM, or other sources that a severe Alpine Fault earthquake has occurred.
- Community-wide electricity or telecommunications failure following a severe earthquake.
- Reports of significant damage following a severe, long duration earthquake.

A copy of the draft plan can be viewed here.

Lifelines Management Plan – Civil Defence

The Civil Defence Emergency Management (CDEM) Act 2002 requires local authorities to coordinate Plans, Programmes and Activities related to CDEM across the areas of Reduction, Readiness, Response and Recovery, and encourages cooperation and joint action with regional groups. Activities required are Risk Reduction, Readiness, Response and Recovery.

The following table indicates the required activities for the Water Operations in the areas of Risk Reduction, Readiness, Response and Recovery.

Table 7.7-1: Risk Reduction, Readiness, Response and Recovery

Activities required	Description	Include
Risk Reduction	Identifying hazards, describing risks, and taking actions to reduce the probability or consequences of potential events	Identify hazards
		Describe risks
		Reduction or Consequences
Readiness	Planning and preparation required to equip agencies and communities to respond and recover	Planning
		Preparation
Response	Address immediate problems after an emergency	Address immediate problems
Recovery	Addressing the long-term rehabilitation of the community	Addressing long term rehabilitation of community

Activity management planning and contractual arrangements are in place to provide some measure of Risk reduction, Readiness, Response and Recovery.

A representative of Council meets with the Otago Lifelines Group monthly and keeps Council staff informed on key information. Organisations represented on the Lifelines include Otago Regional Council, Local Authorities, utility providers, fuel providers, etc.

Waitaki Civil Defence Emergency Management

Waitaki District Council is part of the Otago Civil Defence Emergency Management (CDEM) Group which includes four other local authorities within the Otago region.

For information on hazards, emergency planning advice and resources, including Community Response Guides please visit the Waitaki District page on the Otago Civil Defence and Emergency Management Group website.

Project AF 8

Project AF8 is a risk scenario-based earthquake response planning project, informed by thorough earthquake source, expression, and consequences science. The focus of the project is New Zealand's South Island Alpine Fault. Project AF8 commenced in July 2016 with funding from the Ministry of Civil Defence & Emergency Management's Resilience Fund and is managed by Emergency Management Southland on behalf of all South Island CDEM Groups.

Project AF8 has been initiated to introduce outline planning for response actions, resources, and overall coordination within and between CDEM Groups across the South Island.

The South Island Alpine Fault Earthquake Response (SAFER) Framework provides a concept for coordination of response and priority setting across all six South Island Civil Defence

Emergency Management (CDEM) Groups and their partner organisations in the first seven days of response. It is not intended to replace existing plans within agencies but to provide a coordinated picture of response across the South Island.

The SAFER framework includes:

- Scenarios
- Response assumptions
- Secondary and compounding risks such as:
- Aftershocks
- Ongoing structural failure
- Cascading landscape effects
- Tsunami
- Severe weather
- Communicable human diseases
- Impacts on response operations
- Consolidated response framework

Council will keep a keen eye on the response actions and resources from the AF8 project and work with CDEM Groups.

7.8 Infrastructure resilience

Council customers have a high expectation of continuing functionality and service delivery. Resilience is based on a design philosophy which acknowledges that failure will occur. Resilience requires early detection and recovery, but not necessarily through re-establishing the failed system.

The Waitaki CDEM office has identified public education as the foundation for improving levels of community resilience. Some collaborative work has already occurred locally but lacks an overall strategy in conjunction with the Group. Recent high profile natural disasters have raised public awareness, but there is still a significant need to increase actual preparedness – both in general (e.g. household plans and emergency supplies) and for specific circumstances (e.g. tsunami preparedness in coastal communities).

However, resilience is not only applicable to natural hazards but also needs consideration at an operational level where an asset failure is not necessarily a service failure.

Redundancy (duplication) does not provide Resilience. Resilience requires early detection and recovery, but not necessarily through re-establishing the failed system. Robust systems are designed to prevent failure. Resilience is about the ability to plan and prepare for adverse events, the ability to absorb the impact and recover quickly, and the ability as a community to adapt to a new environment.

We need to consider managing and mitigating the risks to our infrastructure assets from natural disasters, as well as enhancing their resilience. Council acknowledges that resilience is not only about physical assets, it is also about the people. It includes but is not limited to:

- Connecting people and communities (neighbour to neighbour, education, access to household resilience items, etc.)
- Supporting community organisations
- The built environment and asset systems which are robust

Adverse events/natural disasters/climate change and the related impacts cannot be avoided. As a result, Council must factor this into Long Term Planning, civil defence planning, and in determining the infrastructure requirements moving forward to ensure the community's expectations are met with regard to safe and reliable services and general wellbeing.

To improve resilience Councils approach will be to:

- Actively participate in CDEM planning and activities, at both regional and local levels
- Investigate options for alternative service provision and system redundancy
- Identify critical assets and ensure mitigation methods are developed
- Obtain insurance where this is deemed to be the most cost-effective approach

As part of Council's approach to improved resilience, work has been undertaken to ensure appropriate spares and generators are available during emergencies to quickly and efficiently restore service interruptions.

7.9 Designations for facilities

In 2023, as part of Council's District Plan review, we reviewed current designations. A designation is a planning instrument that provides long term authorisation under the District Plan for certain activities to occur at a designated site. Designations are recorded on the District Plan Maps. A designation enables the ongoing operation, installation, maintenance, replacement, alteration, upgrading and removal of infrastructure at the site without the need for a resource consent, provided the activity is consistent with the purpose and conditions of the designation.

A designation makes any work needed on the infrastructure more efficient and cost-effective, while also providing clarity to landowners around what activities relating to the infrastructure can be carried out by Council on their property, and exactly where. It also ensures adequate protection for the infrastructure under the Resource Management Act 1991.

7.10 Insurance

Council's Insurance Policy covers the following Stormwater Infrastructural Assets:

- Intakes

Policy exclusions include:

- Underground services i.e. reticulation and associated fittings

All contractors undertaking work, including professional services or advice, for Council or on behalf of Council are required to produce evidence that they hold as a minimum adequate insurance covering:

- Public liability
- Professional indemnity
- Contract works

Local Authority Protection Programme Disaster Fund

Council is a member of the Local Authority Protection Programme Disaster Fund (LAPP), a cash accumulation mutual pool. Civic Assurance is the Fund's Administration Manager. The LAPP Fund was established in 1993, to help its New Zealand local authority members pay their share of infrastructure replacement costs for water, sewage and other uninsurable essential services damaged by natural disaster.

Central government's Disaster Recovery Plan states that beyond a threshold, central government will only pay 60% of restoration costs. Local government is responsible for the remaining 40% thus effectively moving part of the onus from the taxpayer to the ratepayer. Central government will only provide their 60% following a major catastrophe provided that the local authority can demonstrate it can meet the remaining 40% through:

- Proper maintenance
- The provision of reserve funds
- Effective insurance, or
- Participation in a mutual assistance scheme with other local authorities

Of the 78 local authorities in New Zealand, 22 are currently Fund members. Since the Canterbury earthquakes the Fund has rebuilt to more than $21m in reserves (2016) and provides protection (combined with Central Government funds) which caters for up to three events - at a value of up to $75M, $115M and $170M respectively. A third event will only be covered if one of the first two was an earthquake claim.

The number of members has reduced, resulting in less contributors, but it also means a lower reinsurance cost and the value of the Fund per member is higher.

The Fund is designed to cover local authority owned infrastructural assets which are considered generally uninsurable. These include:

- Water reticulation, treatment and storage.
- Sewage reticulation and treatment.
- Storm water drainage.
- Dams and canals.
- Flood protection schemes including stop banks, and
- Floodgates, seawalls and harbour risks such as buoys, beacons and uninsurable foreshore lighthouses

- Roads and bridges are not covered by the Fund as local authorities have access to New Zealand Transport Agency subsidies.

The Fund is designed as catastrophe protection only, covering serious disruptive loss or damage caused by sudden events or situations which may or may not involve the declaration of a Civil Defence Emergency. Perils include but are not necessarily limited to earthquake, storms, floods, cyclones, tornados, volcanic eruption, tsunami and other disasters of a catastrophic nature such as a major gas explosion.

Risk Pool

Risk Pool is a mutual fund created by New Zealand Local Authorities to provide long term, affordable legal and professional liability protection. The Fund was founded on the premise that historically the insurance industry has demonstrated inconsistency with the scope of cover, pricing, claims handling and capacity. Risk Pool commenced in 1997 and currently has 78 local authority members. Membership of Risk Pool is open to all local authorities. Contributions are levied according to each member's actual risk profile, claims experience.

Insurance Summary

Council's insurance summary is tabled below:

	Risk Pool		LAPP	AON Insurance (Agent)	
Components / Items	**Public Liability**	**Professional Indemnity**		**Buildings & Contents**	**General Insurance**
Reticulation			✓		
Treatment Plants and Pump Stations					✓
Electrical					✓
Mechanical					✓
Structural					✓
Staff	✓	✓			
Council Vehicles				✓	✓
Private property damage related to Wastewater damage	✓				

8 Lifecycle management

8.1 Overview

The way we manage stormwater has and continues to change. Traditionally, the stormwater systems were built to collect and convey. The mindset was to get it out quickly. This has changed to a more integrated approach with a focus of slow it down, spread it out, and soak it in. This new approach to stormwater management includes quantity and quality considerations, multiple use facilities, riparian corridors, recreation, wetland preservation and groundwater recharge.

The contemporary approach requires nothing short of a complete paradigm shift on how we think about managing runoff from rain events. This has introduced a whole new array of issues that has resulted in basic changes in stormwater planning, design, operation and maintenance, construction, and financing. Now we must find the resources to effectively satisfy the changes as well as meet the regulatory requirements.

As the move into the new stormwater paradigm occurs, it is also important to remember that the focus also needs to be on minimising costs and maximising the results achieved through the investments made. Analysis of alternatives should include life cycle cost estimates and consideration for the four wellbeings.

Lifecycle management categories

Lifecycle asset management focuses on management options and strategies from initial planning through to disposal, while considering all relevant economic and physical consequences.

Effectively applying asset management principles will ensure reliable service delivery, reduce long-term ownership costs, and consequently lower service costs. A well-structured lifecycle management plan will reduce the long-term costs of ownership and in so doing reduce the service cost.

The Lifecycle Management Programme covers five key categories of work necessary to achieve the required outcomes.

These key categories and goals are:

Table 8-1: Lifecycle Categories

Key Lifecycle Categories	Goal
Management Plan	
Management functions required to support the other Programmes	
Operations and Maintenance Plan	**To maintain the service potential of the assets and ensure that the assets achieve that potential**
To ensure efficient operation and serviceability of the assets so that they achieve their service potential over their useful lives. This includes the day-to-day work to keep the assets operating	
Renewal Plan	
To provide for the progressive replacement of individual assets that have reached the end of their useful lives (restores the original capacity)	
Development Plan	**Meeting future demand**
To improve parts of the system currently performing below target service standards and to allow development to meet future demand requirements	**Closing service gaps**
Disposal Plan	
To better plan for disposal of assets through rationalisation of asset stock or when assets become uneconomic to own and operate	**Appropriate disposal of assets**

8.2 Management

Management and monitoring strategies set out the activities required to support the maintenance, operations, cyclic renewal and asset development programmes. These activities include:

- Strategic planning
- Data management and evaluation
- Business processes
- Monitoring
- Financial management.

The following management activities are used to achieve the desired outcomes.

Table 8.2-1: Management activities

Activity	Objective
Strategic Planning	
Strategic alignment	This AMP supports the achievement of the relevant Waitaki Community Outcomes
Service Levels	To develop Levels of Service aligned with Community Outcomes for community consultation
Human Resources	To develop the professional skills of the staff through adequate training and experiences
Data Management	
Asset Management	To optimise Asset Management Systems and develop functionality in line with business needs
Data Collection	Data collection programmes (condition, performance, asset registers) closely aligned with business needs and metadata standards implemented in accordance with documented quality processes
Quality Assurance	To ensure the GIS & AMS data subject of defined quality assurance processes
Network Modelling	Development of computer-based hydraulic models of the water, and wastewater systems as required
Business Processes	
AMP Updates	To ensure the AMP is a strategic 'living' document through regular updating and 3 yearly reviews
Risk Management	Risk Management is an essential part of Asset Management and will be managed by the implementation of risk mitigation measures to maintain risk exposure at acceptable levels including but not limited to maintaining appropriate insurance cover, emergency response planning, condition monitoring of critical assets, preventative maintenance, and operations manuals and implementation of council's standards
Asset Valuation	To lay the foundation for several key asset management processes including asset renewal modelling and financial risk assessments
Statutory compliance	To identify legal obligations and ensure compliance
Quality Assurance	To document, review and implement quality processes
Monitoring	
Performance Measures	To ensure monitoring of the Levels of Service and reporting on mandatory Non-Financial Performance Measures
Compliance	To ensure stormwater discharges are within consent limits
Financial	
Budgeting	To ensure all expenditure programmes are in accordance with Council funding and budget preparation policies and procedures
Sustainable funding	To ensure the systems are managed in a financially sustainable manner over the long term

8.3 Operations and maintenance

The objective of maintenance and operational strategies is to maintain existing assets economically to:

- Achieve their service potential through efficient operation
- Achieve customer levels of service
- Achieve health and safety standards
- Reduce Council's exposure to risk due to unforeseen failure of assets

The operations and maintenance expenditure for assets is a significant proportion of the total lifecycle cost. Therefore, efficiencies in these day-to-day activities must be identified and

implemented to lower the overall lifecycle cost. Council is committed to optimising the operation, maintenance and management of these assets.

Strategies have been adopted which are classed as "Non-Asset Strategies" that involve:

- Assessment of operation and maintenance vs replacement
- Review of service where it is more than the agreed Level of Service
- Demand management
- Policy
- Quality assurance
- Supervision
- Specifications
- Holding records

Maintenance work is defined as "all actions necessary for retaining an asset as near as practicable to its original condition but excluding rehabilitation or renewal". Maintenance strategies which apply to Council owned assets are classed as "Asset Strategies" and are divided into:

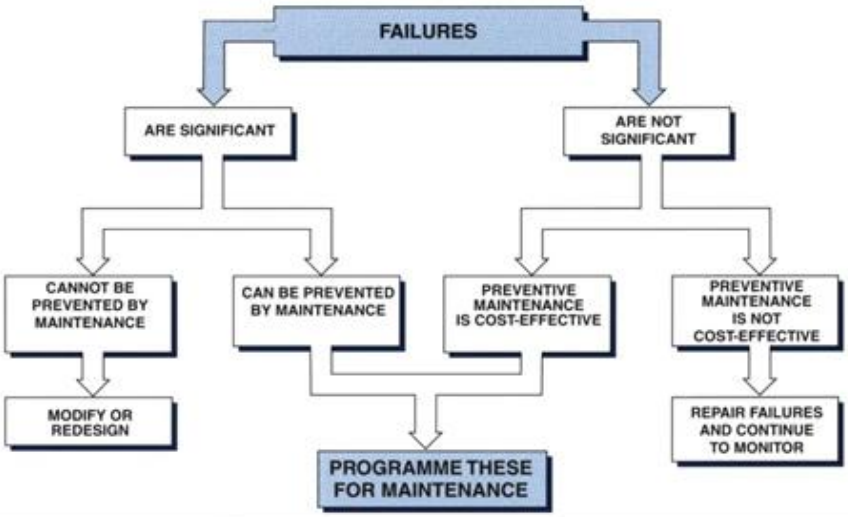
- Unplanned maintenance strategies
- Planned maintenance strategies

Unplanned maintenance includes all reactive maintenance such as repairs and modifications usually following a reported fault or failure reported by the public, or which is obvious through an overflow or other issue.

Planned maintenance includes preventive maintenance, servicing and condition monitoring. Planned maintenance is usually carried out at a given frequency either at fixed intervals or 'on condition' to preserve the required levels of service at a minimum cost. 'On condition' means that once an asset has degraded to a certain condition (detected through condition monitoring) a decision as to the most appropriate maintenance must be made. This does not mean once an asset has failed.

The process for the identification of whether planned maintenance strategies will be effective for an individual asset is as per the chart below (extracted from IIMM):

Figure 8.3-1: Maintenance Engineering Analysis Process



A recent development in maintenance planning is the Reliability Centred Maintenance approach which can be very effective for plant/equipment assets but not as effective for reticulation assets. Council is aware of this trend in maintenance planning and has applied this approach occasionally for facilities (reservoirs, treatment facilities, pump stations, SCADA).

Maintenance and operational strategies

Figure 8.3-2: Non asset strategies

Strategy	Description
Alternative Technologies	Alternative technologies are considered as appropriate
Approved Materials	Only approved materials shall be used in the water supply to ensure the quality and longevity of the asset
Health and Safety Audits	Audits undertaken randomly to ensure all work completed by Council and Contractor staff complies with the Health and Safety in Employment Act and Traffic Management Regulations
Monitoring Planned vs Unplanned Maintenance	The mix of Planned vs Unplanned Maintenance will be analysed periodically to allow optimising of the activities
Stormwater quality	Investigation into whether stormwater quality is an issue surrounding state highways or arterial roads (completed).
Secondary Overland Flow Paths	Secondary overland flow paths will be investigated and recorded and appropriate to allow sustainable management of these and ensure development is controlled in these areas (IP PSW 13 discontinued)
Flooding history	Flooding history with severity (property, basement, house) and rainfall indicator will be recorded against the relevant property for future analysis of stormwater network needs (IP 3W9)
Inflow/Infiltration	Inflow surveys have been carried out in the past to assess the number of cross connections between the stormwater and wastewater networks. This shall continue to ensure that both these networks are used appropriately (IP 3W9)

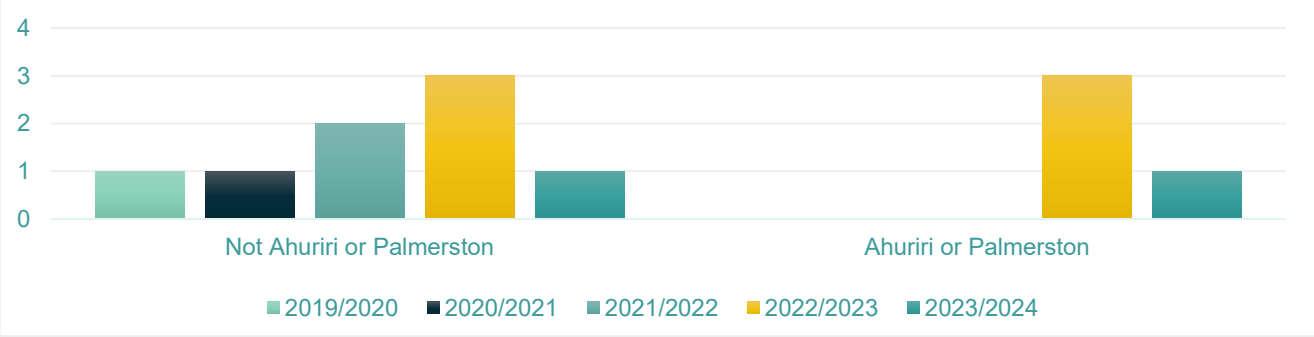
Figure 8.3-3: Asset Strategies

PLANNED MAINTENANCE	
Reticulation	There is currently no Planned Maintenance carried out on the Stormwater network.
UNPLANNED MAINTENANCE	
All	When a defect has been identified, remedial work is programmed before the risk and consequence of failure become unacceptable
All	Priority is given to defects which are a safety hazard, likely to cause premature failure or severe economic deterioration
All	Remain alert and prepared for emergency situations
All	Respond to and repair failures by the most economic method available, making temporary repairs if major repairs or renewals are required

8.4 Current Performance

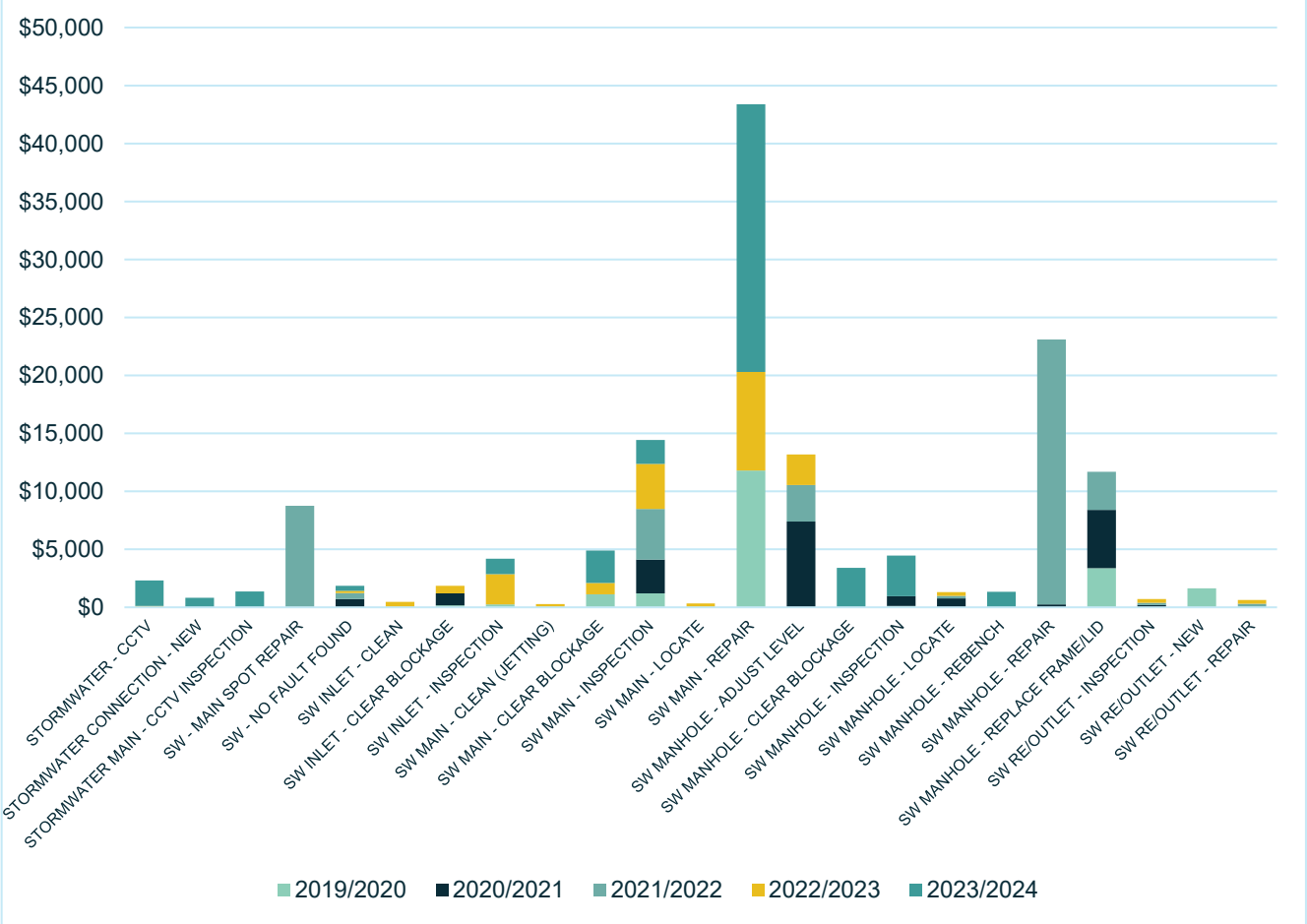
Following are graphs trending the current performance of the Waitaki District Council for the stormwater systems over the past five years.

Figure 8-4.1: Urgent Faults Reported (Authority) 2019/20 to 2023/24



The CRM categories were changed during 2016/17 to Urgent (Ahuriri or Palmerston) and Urgent (Not Ahuriri or Palmerston). There were no CRMs in the Ahuriri or Palmerston area for several years, before both areas peaked in 2022/23. However, recent data suggests a reduction in these types of CRMs back to earlier levels.

Figure 8-4.2: Maintenance by activity (IPS WO) 2019/20 to 2023/24



The graph above shows the cost associated with each activity (source: IPS work orders). It clearly shows that the main costs are associated with 'main repair' and 'manhole repair'.

Figure 8.4-3: Maintenance by asset and activity (IPS WO) 2017/18 to 2023/24

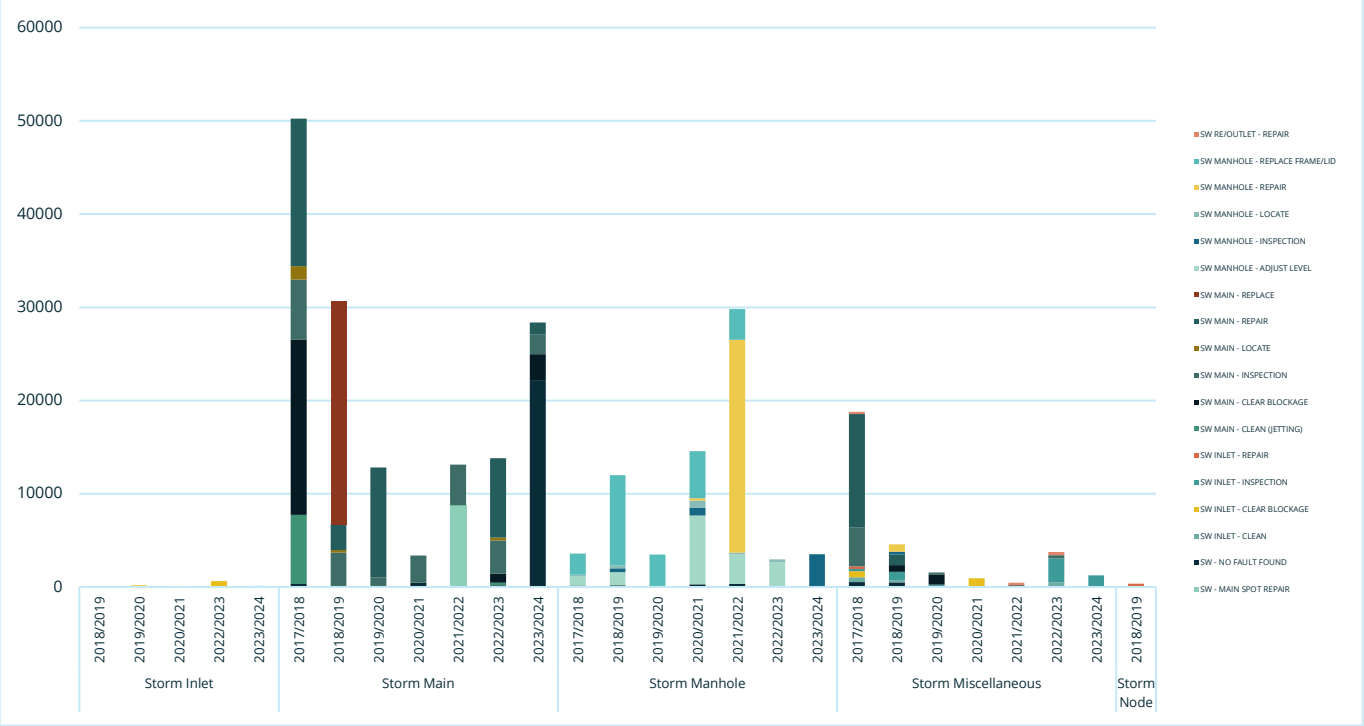
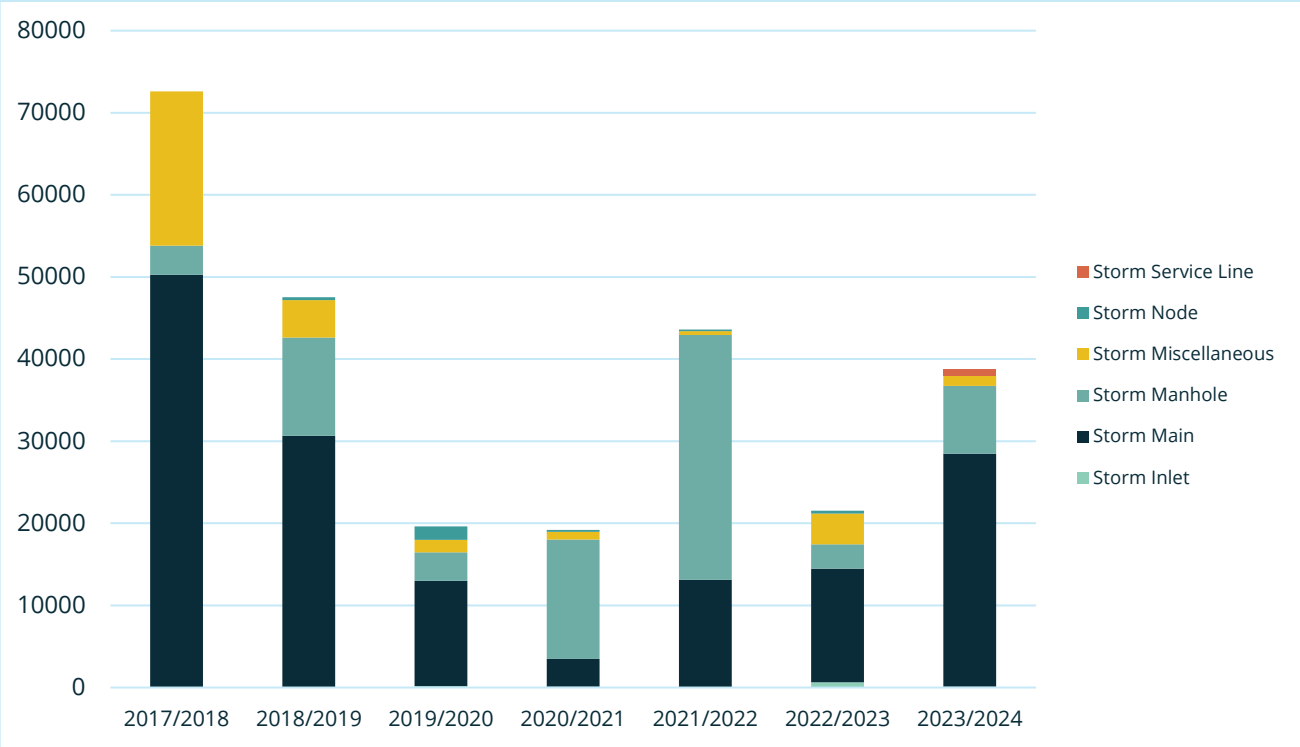


Figure 8.4-4: Maintenance by asset (IPS WO) 2017/18 to 2023/24 - summary



It is evident that there was a downward trend in maintenance for stormwater mains, but this appears for be reversing over the past few years.

Non-financial performance measures

Performance Measure 1 – system and adequacy

a) The number of flooding events that occur in Council's systems
b) For each flooding event, the number of habitable floors affected (expressed per 1,000 properties connected to Council's stormwater systems).

Measure	Current performance 2023/24 (22/23)	Target	
		2024-25	2026-34
Number of flooding events	Nil (Nil)	Nil	Nil
Number of habitable floors affected – event 1	Nil (Nil)	Nil	Nil
Number of habitable floors affected – event 2	Nil (Nil)	Nil	Nil
Number of habitable floors affected – event 3	Nil (Nil)	Nil	Nil

Performance Measure 2 – discharge compliance

Compliance with Council's resource consents for discharge from its stormwater system measured by the number of:

a) Abatement notices
b) Infringement notices
c) Enforcement orders, and
d) Convictions received by Council in relation to those resource consents.

Measure	Current performance 2023/24 (22/23)	Target	
		2024-25	2026-34
Number of Abatement notices	Nil (Nil)	Nil	Nil
Number of Infringement notices	Nil (Nil)	Nil	Nil
Number of Enforcement orders	Nil (Nil)	Nil	Nil
Number of Convictions	Nil (Nil)	Nil	Nil

There were no resource consents for stormwater until November 2019. From December 2019 Council must meet the conditions of Resource Consent CRC186252, a global consent for the urban stormwater drainage areas in the Waitaki Valley, Canterbury Region.

Performance Measure 3 – fault response times

The median response time to attend a flooding event, measured from the time that Council receives notification to the time that service personnel reach the site.

Measure	Current performance 2023/24 (22/23) (median)	Target (median) - hours	
		2024-25	2026-34
Attendance time	NA (NA) no flooding events	2hrs	2 hours

Performance Measure 4 – customer satisfaction

The total number of complaints received by Council about the performance of the stormwater system, expressed per 1,000 properties connected to Council's stormwater system.

Measure	Current performance 2023/24 (22/23)	Target	
		2024-25	2026-34
Total number of complaints about stormwater system*	6/1,000 (10/1,000)	< 8/1,000	< 8/1,000

**Stormwater system considered to be from the Council owned main to the point of discharge.*

Generally, the network appears to be performing well in terms of service delivery, however, an increase in complaints in 2023/24 indicates an area for further monitoring and review.

8.5 Renewal and replacement

Renewal is defined as the group of activities which renew, restore, rehabilitate or replace an existing asset to extend its economic life or service potential, and which does not increase the design capacity of the asset. Work which increases the design capacity of the asset is upgrade/development work.

Renewal strategy

Currently, Council's renewal approach for stormwater mains is performance-based, not condition based, with a priority weighting for critical assets. Typically, this resulted in an asset only considered for renewal after failure, especially low criticality assets.

A more sophisticated Renewal Planning Process is now undertaken. This identifies the core drivers and key challenges while considering likelihood of failure and the consequence of failure to determine the risk of failure. This guides the intervention strategy of 'when to':

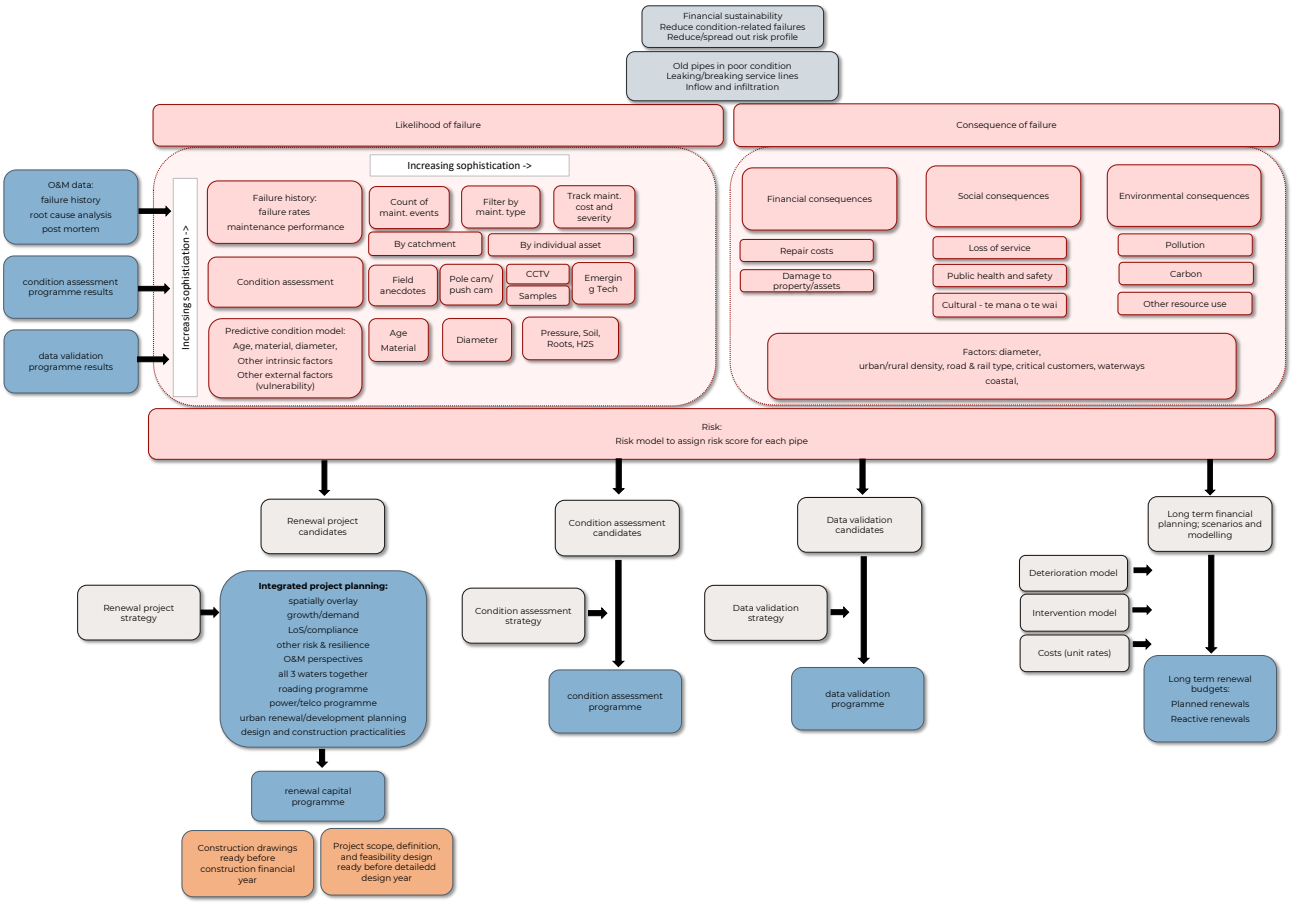
- Renew
- Assess condition
- Validate data
- Refer to Section 7.5 for the renewal risk assessment.

Mains identified for renewal will be assessed against:

- A spatial overlay of Three Waters assets
- Growth and demand
- Levels of service, risk and resilience
- Operation and maintenance perspectives
- Roading programme of works
- Utilities programme (Power/Telco)
- Land development planning
- Design and construction practicalities

This process enables the prioritisation and finalisation of the renewal programme. The Renewal Planning Process is graphically represented below.

Figure 8.5-1: Renewal Planning Process



The Renewal Planning Process now includes a Condition Assessment Strategy (to be developed **IP 3W17**) which will consider methods/techniques, strategies for economical assessments and risk and prioritisation.

Information on the condition of the pipe networks has been based on:

- 2024 Asset Valuation
- Councils engineering staff knowledge
- Maintenance contractors staff knowledge

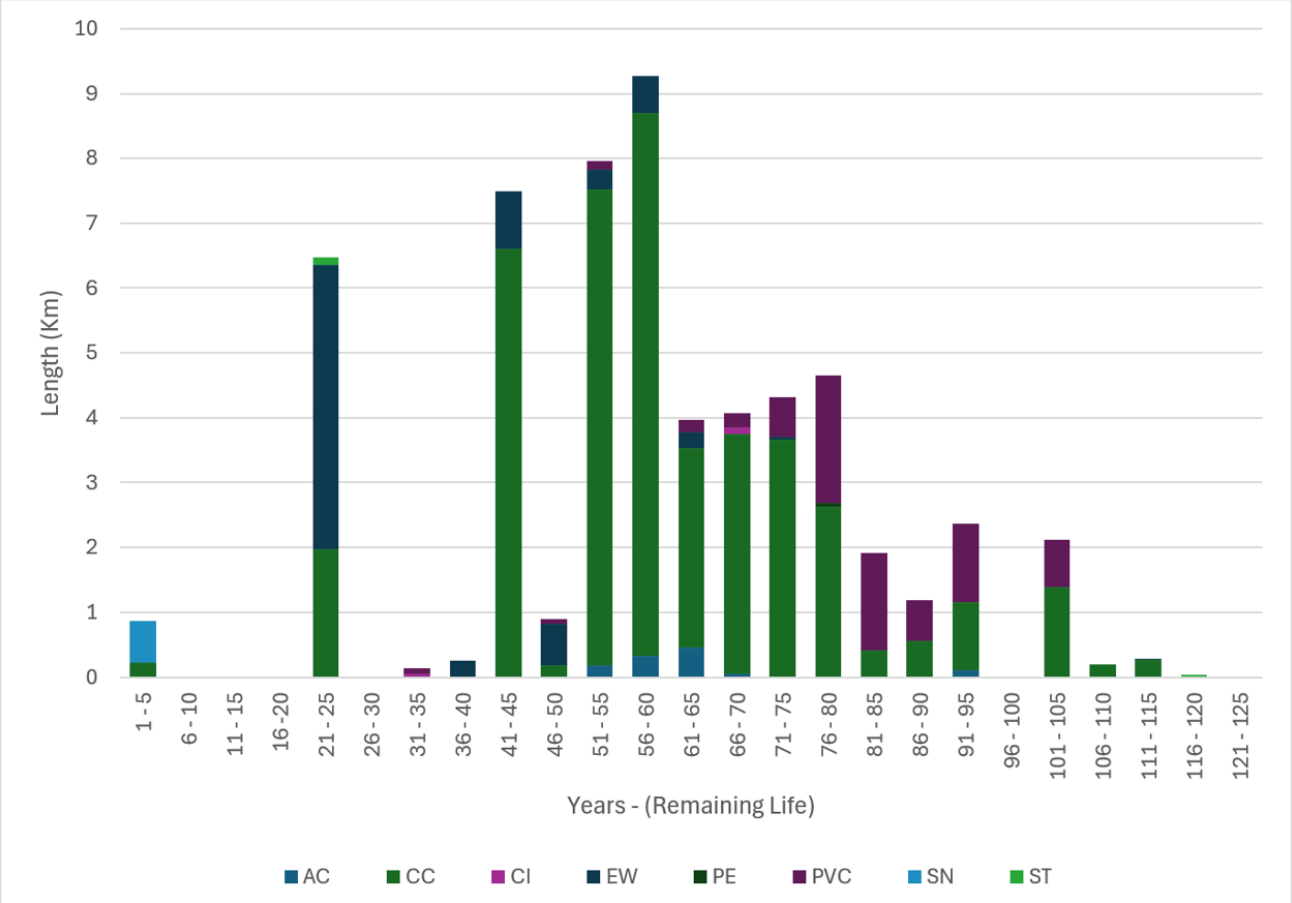
To date there has been no formal condition monitoring programme for stormwater assets. It is proposed that monitoring to determine the levels of deterioration through CCTV inspection be undertaken as assets approach 80-90% of their expected life. Inspections of a sample of similar assets will provide an adequate indication of the level of deterioration and enable the expected asset lives to be reviewed. A cyclic CCTV inspection programme to assess pipe condition, identify faults, initiate repairs, and determine rehabilitation requirements is programmed from 2025 (**IBIS# 2466**). This will include investigation into roading chip, which has been observed within the piped network, specifically along State Highway 1 in Ōamaru, during pipe inspections and the removal of gravel/silt.

For assets that are presently at or beyond their expected life, renewals are proposed, or inspections are to be undertaken to determine if the asset life should be further reviewed.

Based on the 2024 Asset Valuation, only 16 Stormwater assets, (1 percent of the network) are deemed to have extended past their remaining useful life (install date + expected life).

The following graph clearly shows that based on asset lives there is 600m of Stone mains that will reach the end of their expected lives in the 1-5-year window. There are 4.4Km of Earthenware mains that will reach the end of their expected lives in the 21-25-year window. Most of the reticulation will reach the end of its expected useful lives from 41 years onwards. The expected base lives were reviewed as part of the valuation.

Figure 8.5-2: Stormwater Renewal Profile- Material Type



Pipe Network Performance

Performance of the pipe network is generally based on council staff knowledge with low performance areas highlighted from operational difficulties and customer complaints.

A hydraulic analysis, including calibration of the reticulation, is considered essential to allow robust conclusions and aid the prioritisation of the renewal programme. Hydraulic analysis will aid in identifying the capacity of the pipe network. Previously, capacity issues have been identified when problems arise. The Oamaru Capacity Study work scheduled from 2027-2029 will inform the renewals for that system.

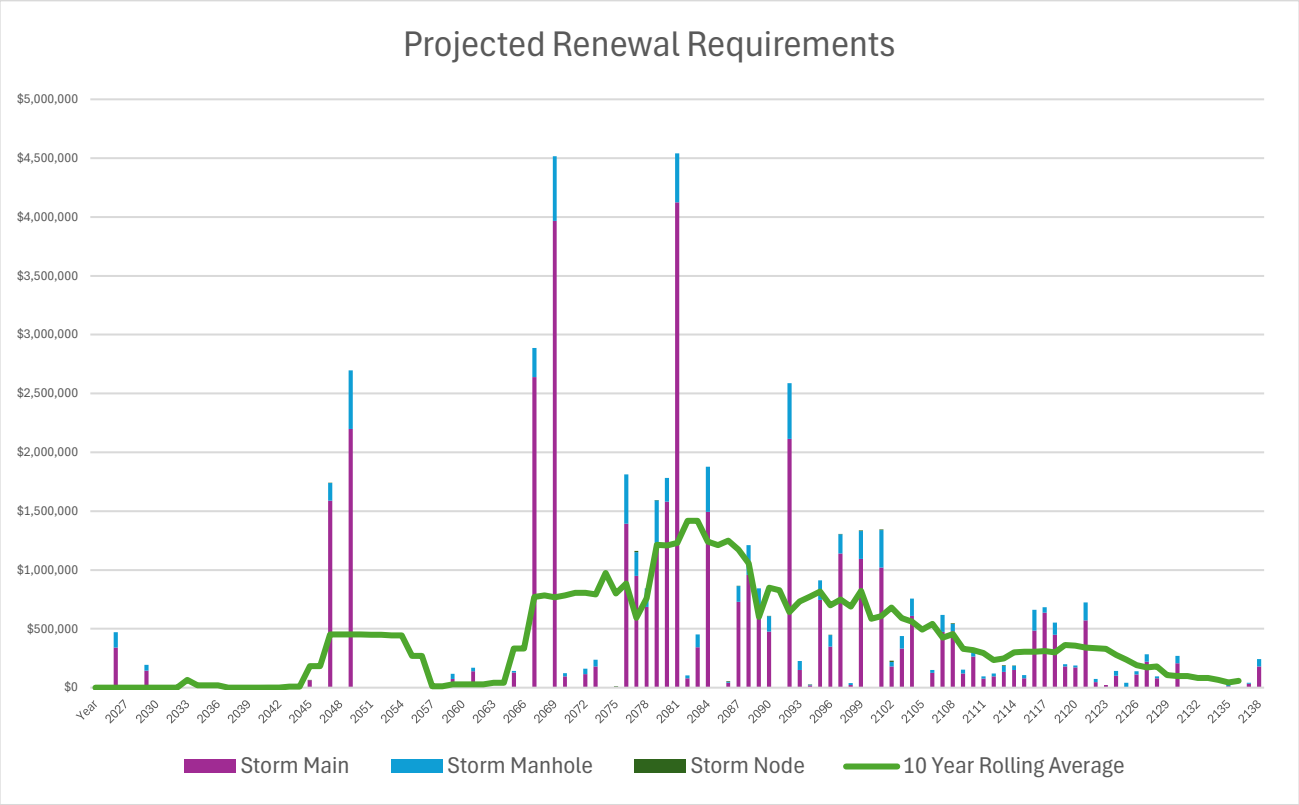
Projected Renewal Requirements

Currently the primary driver for replacement of an asset is the remaining economic life of the asset. It is intended to develop a more robust and repeatable method for the identification of assets due for renewal based on Optimised Decision Making (ODM). This will be developed for future revisions of this Activity Plan.

The figure below shows the district wide expenditure required per year based on asset age and consequential theoretical replacement year. There are no assets that have reached the end of their useful lives (year 0), but from year 2 there are assets which will reach the end of their expected lives.

A run to failure strategy is applied to most of these assets as the consequence of failure is not major and the costs of ongoing condition monitoring may outweigh the costs of failure. This strategy is applied to all low criticality assets.

Figure 8.5-5: Yearly Renewal Requirements and 10 Year Rolling Average



Deferred renewals

There are no significant deferred renewals associated with the reticulation. Minor deferrals were caused in most cases by insufficient engineering resources within Council focused on Water Supply upgrades.

Planned renewals

As demonstrated in Sections 8.4 Performance and 10.2 Data Confidence it is evident that Council has a significant amount of real data with a high level of confidence. This, and other information, is used continually to guide decision-making to ensure new capital and renewal projects are identified based on real and current data. It is acknowledged that renewal decision making can be refined, and this is included as a Renewal Plan (**IP 3W16**). Refer to Section 8.5.

Council has budgeted the following renewal projects for the next nine years:

IBIS #	Project	Budget	Timing
4429	Oamaru Stormwater Structure Improvements	$250,000	2025/26
4568	Stormwater Main Renewals	$2,850,000	2025-34

8.6 Future capital programme

Stormwater assets are only required to perform during times of rainfall. Therefore, although the stormwater asset may technically reach the end of its expected life it may well be performing well.

Deterioration levels for gravity stormwater assets are different to the deterioration levels for gravity sewer assets and pressurised water assets. Therefore, renewal should be triggered by a failure or rapid decline in service performance.

There are no capital projects planned for the Stormwater activity. Work in the Three Waters area remains focussed on the Water and Wastewater activities. Some minor renewal work will be undertaken on stormwater structures (including inlets and outlets) in 2026/27 based on criticality and level of risk (**IBIS# 4492**).

There are other minor projects being considered within the Ōamaru Township. These projects relate to occasional surface flooding within the road, and should the projects proceed, they are likely to be predominantly funded from the Roading budgets.

Future capital projects may be an outcome of the Oamaru Capacity Study work planned for 2028/29. Budgets for this will be included in future Annual Plans or Long Term Plans.

Future project identification and prioritisation

Projects are identified through various processes including but not limited to:

- Legislative compliance
- Levels of service
- Growth
- Renewal
- Operation and maintenance

Projects are then assigned to the individual staff to complete depending on their association or main project criteria. Most projects sit within multiple categories and responsibility is assigned based on the primary category and individual workloads.

All capital projects are subject to an 'Issues and Options' report. Development of new or updating existing tools and systems are included as improvement items in the AMP.

8.7 Asset disposal

All pipeline renewals have a corresponding disposal either through the pipes being removed and disposed of at the landfill, or being left in the ground if the water services are renewed using 'no-dig' techniques, or the asset is replaced in a new location. A work order report records each disposal, and the details are entered into the IPS database. Similarly, replacement of components at treatment plants and pumping stations usually involves disposal of those items being renewed/upgraded.

Buried assets remain in the ground unless it is economic to remove them, or they pose a potential hazard. Council adopted a policy specifically for Asbestos Cement Pipe in 2023, which can be viewed here.

In all cases, asset disposal processes must comply with Council's legal obligations under the Local Government Act 2002, which covers:

- Public notification procedures required prior to sale
- Restrictions on the minimum value recovered
- Use of revenue received from asset disposal

Under the Water Activity no assets for disposal are eligible for sale.

When considering disposal options all relevant costs of disposal will be considered, including:

- Evaluation of options
- Consultation/advertising
- Obtaining resource consents
- Professional service, including engineering, planning and legal survey
- Demolition/making safe
- Site clearing, decontamination, and beautification

Actual disposals 2019-24

The following table lists the water assets abandoned between 2019 and 2024 and shows the detail for 2023.

Figure 8.6-1: Additions and disposals since 2019/20

Disposal	2019/20	2020/21	2022/23	2023/24
Stormwater assets	$38,427.94	$0	$ 87,693.69	$0

Asset	2023/24 ($)	% of total
Stormwater main	$0	NA
Manhole	$0	NA
Total	**$0**	**NA**

The above assets are actual disposals because of renewals/replacements and not due to changes within the GIS or valuation data and was extracted from the IPS AMIS database.

9 Financial summary

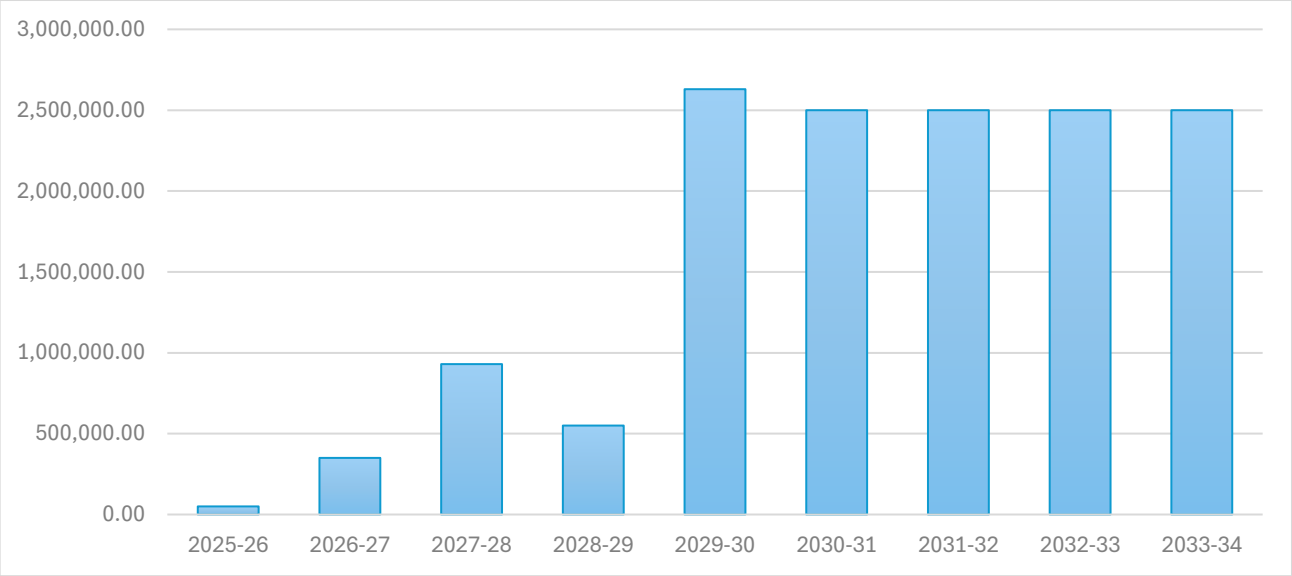
Council has planned a prudent financial approach to managing its assets and services. This section provides a summary of the total value of the activity and the investment that the Council has planned to make over the next 10 years.

Note that budgets for Operations and Maintenance will remain as for 2024/25 and are only planned out to 2027 while Council considers options for the future delivery of Water Services as part of the Government's *Local Water Done Well.*

9.1 Summary of CAPEX and renewals

A full outline of all of Council's capital and renewals projects for stormwater is included as Appendix 2.

Figure 9.1-1: Total stormwater capital and renewal project budgets 2025-34



9.2 Statement of operational and maintenance budgets

Operational budget	LTP Budget (000's)	
	2025/26	2026/27
Payments to staff and suppliers	122	122
Finance costs	156	155
Internal charges and overheads applied	1,765	1,905
	2,043	**2,182**

9.3 Summary of projected revenue and funding sources

Sources of operating funding	LTP Budget (000's)	
	2025/26	2026/27
Targeted rates	1,981	2,177
	1,981	**2,177**

Sources of capital funding	LTP Budget (000's)	
	2025/26	2026/27
Increase (decrease) in debt	112	355
	112	**355**

9.4 Funding details

Financial Strategy

Council drafted its new Financial Strategy in September 2024, and it was adopted by Council in December 2024.

Overall, within the Strategy, Council's focus is on delivering good quality services that meet the changing needs of the community, while at the same time ensuring rates affordability and financial flexibility by focusing on efficiency and effectiveness to maximise value for money and limit the use of debt.

This will be achieved by a variety of measures with the heart of the financial strategy being:

- Reviewing what is required to deliver Council's existing services, with the aim of achieving better value for money.
- Using Council's assets for their maximum possible life, but also appreciating that community needs, safety, and legal requirements are not compromised.
- Deciding on any new initiatives or increased levels of service in a very selective way, with a focus on delivering core services and infrastructure.

This is a continuation of the key features of the previous strategy. However, there is now a much greater need to achieve these to ensure affordability and sustainability over the life of the Long Term Plan and beyond.

Funding Impact Statement

The Council's Funding Impact Statement (FIS) for this activity is included in the executive summary of this AMP. It summarises in one place how this activity will be funded and how those funds will be applied over the next 10 years. The Funding Impact Statement is included in Appendix 1.

Project Drivers

All expenditure must be allocated against at least one of the following project drivers:

- Operation and Maintenance: operational activities that do not involve the renewal or upgrade of assets, or work that is necessary to provide on-going services at the agreed levels.
- Renewals: significant work that restores or replaces an existing asset towards its original size, condition or capacity.
- Increase Level of Service: works to create a new asset, or to upgrade or improve an existing asset, beyond its original capacity or performance.
- Growth: works to create a new asset, or to upgrade or improve an existing asset, beyond its original capacity or performance to provide for the anticipated demands of future growth.

This is necessary for two reasons as follows:

1. Schedule 13(1) (a) and section 106 of the Local Government Act require the Council to identify the total costs it expects to have to meet relating to increased demand resulting from growth when intending to introduce a Development Contributions Policy.
2. Schedule 10(2)(1)(d)(l)-(iv) of the Local Government Act requires the Council to identify the estimated costs of the provision of additional capacity and the division of these costs between changes to demand for, or consumption of, the service, and changes to service provision levels and standards.

All new works have been assessed against these project drivers. Some projects may be driven by a combination of these factors and an assessment has been made of the proportion attributed to each driver.

Rating

The general approach to funding of the annual costs of stormwater starts from the premise that those who benefit (either directly or indirectly) should pay – termed targeted rating.

Council set targeted rates for local amenity based on the land value of each rating unit in the defined area. The rates will be set as separate targeted rates for each township that has agreed to establish a local amenity rate. The targeted rates will be set at uniform rate in the dollar.

The separate targeted rates are:

Duntroon	Lake Ōhau	Ōtematatā
Herbert	Maheno	Palmerston
Hampden	Moeraki	Shag Point
Kakanui	Ōamaru	Weston
Kurow	Ōmārama	

The targeted rates will contribute to the funding of new footpaths, kerb and channel, off-street carparks, street lighting, stormwater and other improvements, within these boundaries. These activities are funded from a variety of funding sources.

Harmonisation

Council is aware that upgrading and maintaining the infrastructure assets will come at a significant cost. There are concerns that people relying on fixed incomes, such as a pension, might not be able to afford the spikes in rates that may happen in future, especially those serviced by smaller systems. One way of addressing this is to spread the cost of each utility across all the systems so that all users pay the same for each utility service. Thus, every town will have the same level of service and rate for that service. This will spread the costs smoothly over time and insulate the towns from sudden costly rate increases when capital work is needed. It also ensures the sustainability of the district in the future.

Price level changes & Forecast Financial Statements

Accounting rules require that Council adjust its forecast financial information to take account of the impact of inflation. This should more fairly indicate rates movements, particularly in the first three years of the Plan. Council has used forecast price level changes for key categories of expenditure as they affect local government.

These price level adjustments have been applied to all core budgets and projects. To take account of the impact of revaluation movements, these have also been applied to depreciation expenses.

The forecast financial statements have been prepared in accordance with the Local Government Act 2002. In accordance with the Act, the first 3 years have been prepared in detail and the following 7 years in outline.

The LTP is based on current Council policies. The forecast financial statements are prospective information. Actual results are likely to vary from the information presented, and the variations may be material.

Lifecycle funding

It is critical that equity of funding for renewals between current and future (intergenerational) users occurs. While it is possible that some original supply members will stay for 20 or more years having contributed to both the original capital costs and 20 years renewals, this will only account for the lower cost, high wear and tear items renewals. Pipes, reservoirs, wells and the like have comparatively higher costs and would be renewal funded intergenerational e.g. 50-100 years away.

The closer a supply gets to large infrastructure renewals the more it should focus on confirming the remaining useful life. Criticality (renewal strategy) assessment is the cornerstone of this programme. The renewal value is reviewed on a 3-yearly basis at the time of asset revaluation.

9.5 Financial Forecasting

Council holds actual and budget figures for a number of years. These historical figures provide a robust basis for calculation and estimating future costs.

Renewals

Renewal costs are funded through targeted rates (depreciation component), which provides for the upkeep of the asset.

Capital Projects

Capital projects are funded from:

- Loans (internal or external)
- Depreciation
- Financial contributions (development)
- Government subsidies (where appropriate)

Sensitivity

A sensitivity analysis is done with every capital project by the Finance unit to determine the rates impact. The sensitivity analysis tests the robustness of the results while considering the uncertainties. This provides improved understanding of the inputs and outputs while identifying potential errors.

Internal analysis is performed by Council during facility equipment renewals e.g. pumps, etc. Pipe renewals are depreciation funded and therefore have no direct rates impact.

Development Contributions

Development Contributions are collected by Council to ensure roads, water supply and wastewater disposal infrastructure can continue to support the needs of the community as it grows, and that it is paid for by those that generate the additional demand.

Development contributions are used to fund new or additional infrastructure, or to increase the capacity of existing infrastructure.

The current policy was adopted on 15 June 2021 and is included with Council's Funding and Financial Policies and can be viewed here.

Development Contributions are reviewed regularly and subject to change on 1 July each year. The current policy allows Council to require contributions of money when applicants are granted resource consents or building consents, or when service connections are approved.

Council does not currently charge Development Contributions for Stormwater Infrastructure. They may initiate them in the future if projects dictate the need.

No connection charge exists. Connections are not permitted to the stormwater network, only the roadside kerb.

Notes:
Development Contributions are contributions defined by the provisions of Part 8 Subpart 5 and Schedule 13 of LGA 2002. Contributions are assessed based on the fiscal implications of growth.
As the sequence of development is not always consistent, development contributions shall be required at the first available opportunity. At each and every subsequent opportunity the development will be reviewed and additional contributions required if the units of demand assessed for the development exceed those previously paid for.

Development contributions are triggered on the granting of:

- A resource consent
- A building consent
- An authorisation for a service connection for sewer or stormwater
- An authorisation for a service connection for water, including additional units of water by volume supplied to existing consumers
- An application for a Certificate of Acceptance

The development contributions for the amalgamated water schemes are based on a weighted average approach, and on the premise that 1 HEU is equivalent to 1 Unit (1 point), except where otherwise stated

Council applies a differential system to ensure that different types of development, such as rural residential, commercial, accommodation, primary industry/dairy contribute fairly to capital expenditure for growth.

Connection costs and annual rates charges also apply. Remissions apply in some cases.

Note that Development Contributions differ from Financial Contributions. Financial Contributions can be charged as a condition of a resource consent under Section 108 of the Resource Management Act 1991. They contribute towards the expansion of the District's reserves, community facilities and other infrastructure where additional demand is created, and Development Contributions don't apply.

Financial Contributions		
Water Supply	**Wastewater**	**Stormwater**
Financial contributions where appropriate. Environmental effects – Chapter 14 District Plan. Environmental Considerations	Financial contributions where appropriate. Environmental effects – Chapter 14 District Plan. Environmental Considerations	Financial contributions where appropriate. Environmental effects – Chapter 14 District Plan. Environmental Considerations

Notes:

Financial Contributions are defined by Section 108 of the Resource Management Act (RMA) 1991 and collected using the provisions of the District Plan. Contributions are assessed based on the environmental effects of growth. These are defined in Chapter 14 of the Waitaki District Plan. Chapter 14 of the District Plan is particularly relevant for contributions of a non-fiscal nature. These will generally be of an environmental nature, including public access, provision of parking and protection of environmentally sensitive sites

9.6 Vested assets

The Council receives assets that are vested in it, but there has been no direct exchange of funds. In the case of infrastructural assets, the value of exchange is deemed to be at the current valuation at time of issue of the 224 Certificate. For all donated and subsidised assets, the initial value recorded is the current valuation at the date of acquisition

9.7 Asset valuations

Councils are required to value and depreciate their assets regularly. The most recent full valuation of the treatment facilities and reticulation systems for the Three Waters was carried out for 30 June 2024.

	2013/14	2018/19	2019/20	2020/21	2022/23	2023/24
All Water Assets	$466,002.39	$595,752.21	$125,040.71	$150,681.07	$1,100,422.64	$846,652.15
Only Storm Assets	$29,346.20	$160,075.09	$0	$0	$404,406.09	$0

This revaluation was undertaken by Waitaki District Council and Peer Reviewed by WSP.
We certify that the valuations summarised below have been completed in accordance with the following:

- NZ Infrastructure Asset Valuation and Depreciation Guidelines Second Edition
- Public Benefit Entity International Public Sector Accounting Standard 17 Property, Plant and Equipment (PBE IPSAS17) (Replacement for NZ IAS 16) and;
- The Local Government Act 2002

Table 9.7-1: Summary asset valuation results for 2024

	Replacement Cost ($)	Depreciated Replacement Cost ($)	Annual Depreciation ($)
Wastewater	282,749,279	183,289,906	2,720,268
Stormwater	57,550,017	29,871,276	493,445
Water	272,042,498	164,007,210	4,424,119
Total Utilities	**612,341,795**	**377,168,392**	**7,637,832**

The valuation is based on an accurate and substantially complete asset register with appropriate replacement unit rates and effective lives.

The lives are generally based on NZ Infrastructure Asset Valuation and Depreciation Guidelines, or where appropriate, a new life is adopted.

The component level of the assets is appropriate to calculate depreciation separately for those assets that have different useful lives and the unit rates for these reflect the current market value for the district conditions.

Valuation comparison

Following are tables detailing the movement in valuation from 2021 to 2024. The following table is the overall summary of the Total Utilities followed by the individual Utilities with explanations of the reason for the movement.

Table 9.7-2: Overall valuation comparison

	2024			2021			Movement		
Asset type	Replacement cost	Depreciated replacement cost	Annual Depreciation	Replacement Cost	Depreciated Replacement Cost	Annual Depreciation	Replacement Cost	Depreciated Replacement Cost	Annual depreciation
Sewer	282,749,279	183,289,906	2,720,268	189,226,962	129,341,036	1,693,194	49%	42%	61%
Storm	57,550,017	29,871,276	493,445	38,535,147	20,719,505	327,745	49%	44%	51%
Water	272,042,498	164,007,210	4,424,119	176,556,717	104,065,115	2,698,500	54%	58%	64%
Total	612,341,795	377,168,392	7,637,832	404,318,826	254,125,656	4,719,439	**51%**	**48%**	**62%**

Asset lives and assumptions

The base life of an asset is set during the valuation process to identify what is believed to be the average length of time that the asset will be capable of providing the required level of service. The setting of the base life is the factor in the valuation process that directly affects the annual depreciation requirement for the asset.

The expected base lives in the reticulation for water, sewer and stormwater are reviewed as part of each valuation to align the expected lives, and the method of setting these with the renewal decision making practice.

The review process and assumptions are detailed within the 2024 Asset Valuation.

Table 9.7-3: Asset base life for stormwater

Pipe material	Base life 2024	Assumptions
PVC pipe	100	
PE pipe	80	
AC pipe	120	100mm and greater AC pipe is proving to perform well in the Waitaki environment where there is low ground water and nonaggressive water
Concrete pipe	120	
Steel pipe	80	
Cast iron pipe	150	
Earthenware pipe	120	
Manhole	80-150	Manholes take the life of the main they are attached to as they are managed as part of the main for renewal
Rodding eye	80-150	Rodding Eyes take the life of the main they are attached to as they are managed as part of the main for renewal

Asset valuation

The following table reflects the adopted General Ledger Component hierarchy that is utilised for managing the assets.

Table 9.7-4: Asset valuation by stormwater area 2024

Scheme	Asset Type	Count of Assets	Length (m)	Replacement Cost	Depreciated Replacement Cost	Annual Depreciation
Kurow Stormwater Scheme	Storm Main	3	145	75,821	59,768	702
Kurow Stormwater Scheme	Storm Manhole	1	1	8,250	5,672	69
Kurow Stormwater Scheme Total		**4**	**146**	**84,071**	**65,440**	**770**
Lake Ohau Stormwater Scheme	Storm Main	2	55	35,765	28,583	358
Lake Ohau Stormwater Scheme	Storm Manhole	2	2	19,500	15,584	195
Lake Ohau Stormwater Scheme Total		**4**	**57**	**55,266**	**44,167**	**553**

Moeraki Stormwater Scheme	Storm Main	1	23	16,086	14,638	161
Moeraki Stormwater Scheme	Storm Manhole	1	1	8,250	7,506	83
Moeraki Stormwater Scheme Total		**2**	**24**	**24,336**	**22,145**	**243**
Oamaru Stormwater Scheme	Storm Main	940	48771	40,796,013	20,180,628	347,191
Oamaru Stormwater Scheme	Storm Manhole	825	825	7,853,098	4,134,676	68,548
Oamaru Stormwater Scheme	Storm Node	46	46	74,251	46,813	680
Oamaru Stormwater Scheme Total		**1811**	**49642**	**48,723,363**	**24,362,117**	**416,418**
Omarama Stormwater Scheme	Storm Main	7	419	249,970	183,304	2,339
Omarama Stormwater Scheme	Storm Manhole	9	9	74,251	52,821	710
Omarama Stormwater Scheme Total		**16**	**428**	**324,220**	**236,126**	**3,049**
Otematata Stormwater Scheme	Storm Main	118	5901	3,652,092	2,065,309	30,878
Otematata Stormwater Scheme	Storm Manhole	112	112	1,059,010	615,831	9,273
Otematata Stormwater Scheme	Storm Node	4	4	6,750	3,628	56
Otematata Stormwater Scheme Total		**234**	**6017**	**4,717,852**	**2,684,768**	**40,207**
Palmerston Stormwater Scheme	Storm Main	29	977	1,162,012	788,122	10,151
Palmerston Stormwater Scheme	Storm Manhole	27	27	237,752	150,280	3,160
Palmerston Stormwater Scheme Total		**56**	**1004**	**1,399,764**	**938,402**	**13,311**
Waitaki District Stormwater Scheme	Resource Consent	1	1	6,398	5,830	142
Waitaki District Stormwater Scheme Total		**1**	**1**	**6,398**	**5,830**	**142**
Weston Stormwater Scheme	Storm Main	53	2242	1,872,744	1,281,480	15,868
Weston Stormwater Scheme	Storm Manhole	38	38	342,003	230,803	2,882
Weston Stormwater Scheme Total		**91**	**2280**	**2,214,747**	**1,512,283**	**18,750**
Stormwater Total		**2219**	**59597**	**57,550,017**	**29,871,276**	**493,445**

9.8 Depreciation

Background

Section 100 subsection 1 of the LGA 2002 states: "A local authority must ensure that each year's projected operating revenues are set at a level sufficient to meet that year's projected operating expenses."

This requirement to set operating revenues at a level sufficient to meet operating expenses includes depreciation, as Section 111 obliges councils to follow generally accepted accounting practice (GAAP) which includes a definition of "operating expenses." As depreciation is defined as an operational expense it must be included with other operational costs, including interest, when a council sets its operating revenue.

GAAP defines depreciation as follows:

Depreciation is the systematic allocation of the depreciable amount of an asset over its useful life.

Therefore, deprecation measures the annual consumption of an asset so that the reduction in its value is accounted for as it is consumed. The purpose of depreciation is not to provide for

the replacement of the asset, although this is a consequence of depreciation. Deprecation ensures that each year's ratepayers pay their way for the consumption of the assets. For example, if an asset will last for 10 years, the annual depreciation charge is 1/10th of the value of the asset.

The basic value of an asset reduces in accordance with the wearing out or consumption of benefits over the asset's life arising from use, the passage of time, or obsolescence. This reduced value is called the depreciated value. It is accounted for by the allocation of the cost (or revalue amount) of the asset less its residual value over its useful life.

The decline in service potential is thus provided on a straight-line basis on all fixed assets. Therefore, Council complies with the requirements of FRS3 and NZIAS 16 and calculates depreciation for assets.

Asset lives

Asset expected lives are tabled in the Asset Valuation. Assets are installed and maintained to Council standards and specifications. These standards are relevant New Zealand and Australian Standards and included in Construction, Operation and Maintenance Contracts e.g. NZS4404 Land Development and Subdivision Infrastructure. This ensures the relevance of industry standard expected lives. Depending on the criticality of the asset, when an asset is nearing its expected useful life, the asset is assessed and its remaining useful life determined. A run to failure strategy is applied to low criticality assets as the consequence of failure is not major and the costs of ongoing condition monitoring may outweigh the costs of failure. A risk and condition-based strategy is applied where there is a significant implication due to failure, such as a major health and safety risk, significant reliability of supply consequence or significant expense in repair. This risk and condition-based strategy will be refined upon completion of the Criticality project currently under development and will guide the future.

Council engineers know the consequences of their decisions and acknowledge that there is a potential for decline in service, although it is not permanent or significant. Where an asset needs replacement, it is done to the appropriate Council standards and specifications, prioritised on criticality and funding available from depreciation funds. In years of high depreciation renewals, with insufficient depreciation reserves, loan funding may be used.

In 2015 it was identified that adding 10% onto short life assets (typically Plant Equipment), did not always achieve a remaining useful life of greater than 3 years. And therefore, the asset would depreciate to zero value before the next revaluation even though it was still in service. Therefore, the policy was altered for assets past their base life, and these now have an additional 3.5 years added onto their current age to ensure they do not depreciate to zero. This also gets the extended life asset to the next triannual valuation where it will have another 3.5 years added to the current age if it is still in service. If such an extended life asset is no longer fit for service prior to the next revaluation, it is disposed of like any other disposal, with the replacement asset depreciation taking over from the disposed asset.

In the 3.5 years extended life scenario; the calculation would now be:

Replacement Cost / (Current Age +3.5) = Annual Depreciation

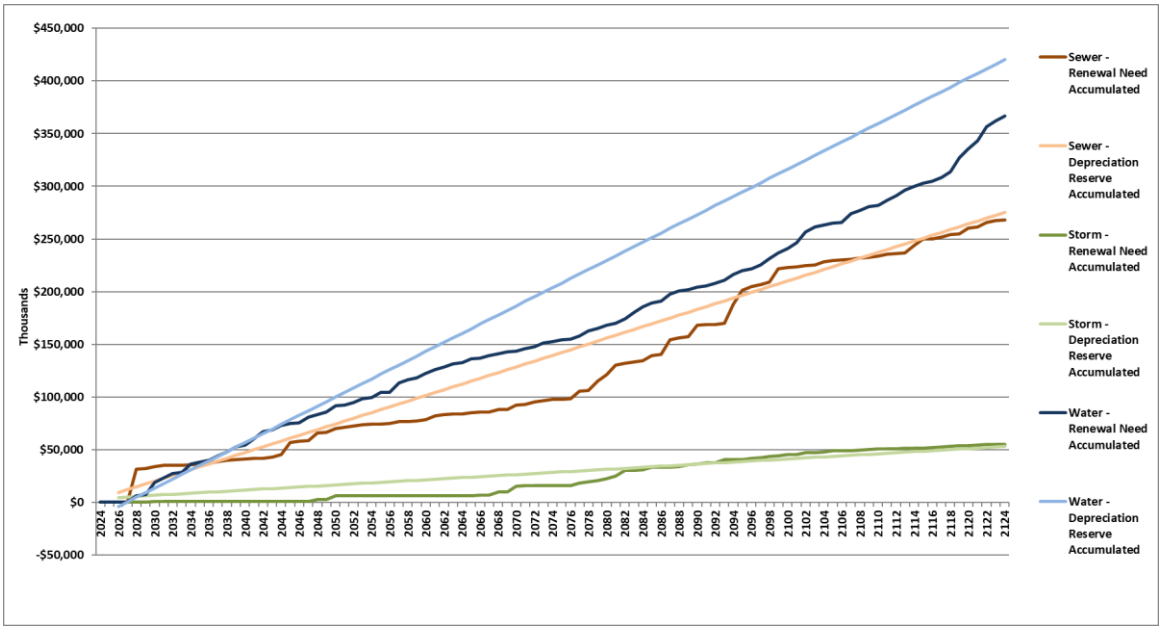
Annual Depreciation = 10,000 / (55 +3.5) = $170.94

The total annual depreciation figure for all Water asset components amount to $2.7m. The valuation schedules itemised the water assets to such a level that the calculated depreciation is unlikely to materially differ from actual loss of value.

Depreciation Projections

The intention of depreciation is to maintain the stormwater infrastructural assets in a serviceable condition for the future and to achieve this, individual components need to be replaced from time to time.

Figure 9.8-1: Depreciation versus renewals 2024-2124

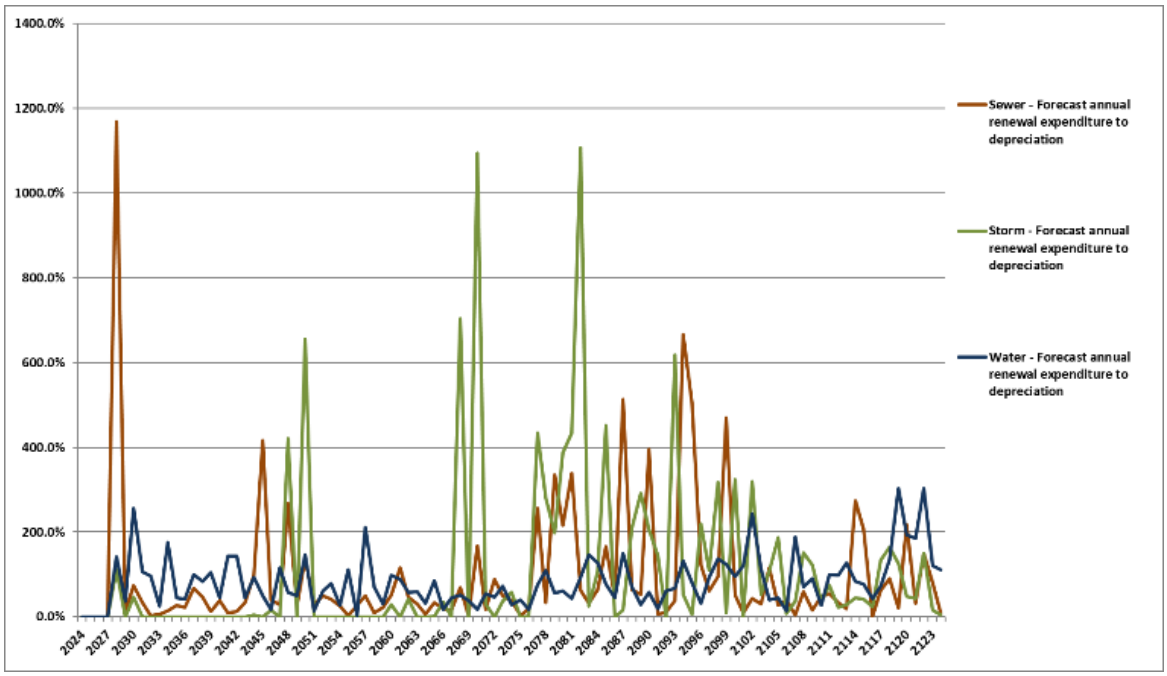


The chart above compares the projected accumulated renewal need versus the accumulated depreciation reserves. This represents:

- The projected renewal need based on the replacement value required as assets reach the end of their expected lives over the next 100 years.
- The current available depreciation reserves plus the current annual depreciation charge accumulating over the next 100 years

It shows that depreciation funds for stormwater are generally consistent with the renewal need over the next 100 years. This will be reviewed over time as more assets reach the end of their expected lives to ensure available depreciation funds match the renewal needs.

Figure 9.8-2: Three Waters depreciation versus renewals



The lines in the graph above represent the percentage of forecast annual renewal expenditure related to the annual depreciation.

There are numerous spikes (for example, in 2027-30 for Wastewater the forecasted renewal requirement is nearly 1200% of the annual depreciation and for Stormwater in 2069-72 the forecasted renewal requirement is around 1100% of the annual depreciation). Annual accumulation of depreciation will smooth these spikes to achieve affordable funding over extended periods.

Summary

The focus for the Three Waters activity is to ***Protect Public Health and the Environment***. For water supply this includes an increased focus on compliance with the Health Act and new drinking water regulatory framework.

Over time, the focus will shift from 'new capital projects' to maintaining the existing asset set from available depreciation funds. This will build on the existing asset base by provision of focussed renewal and development plans ensuring the needs of the community are well catered for into the future with ongoing affordability in mind.

Council will continually review the information that supports this graph through regular asset valuations, auditing of asset registers and prudent asset management.

9.9 Key assumptions

In developing its Significant Forecasting Assumptions for the Long Term Plan 2024-25, the Council has identified several key assumptions relevant to water supply. Key relevant assumptions include:

Capital delivery				
Key assumption Council's capital programme will be delivered on time and within budget. Capital project projections Timing of capital expenditure See Auckland for example	**How sure are we about this assumption?** Low	**What are the potential effects of this uncertainty on our financial estimates?** The deliverability of the works programmes could be affected by the availability from the contractor market as well as the Council's ability to deliver the higher programme of works. Actual costs may vary from estimates resulting in budget shortfall. Projects may be carried forward if not completed as planned, and if the work is still considered to be needed. Any consistent backlog of work will have an impact on levels of service. This may result in increased costs due to inflation, possible reduction in levels of service, possible additional reactive operational expenditure.	**If this assumption turned out to be incorrect, what level of impact would the potential effects have on Council and the district?** High	**What measures do we have in place to mitigate the level of uncertainty associated with this assumption?** Projects may be carried forward if not completed as planned, and if the work is still considered to be needed. Any consistent backlog of work will have an impact on levels of service. This may result in increased costs due to inflation, possible reduction in levels of service, possible additional reactive operational expenditure.

Water infrastructure & services				
Key assumption Council will continue to deliver Water Supply, Stormwater, and Wastewater infrastructure and services until year 2027/28 of the 2025-34 LTP and has budgeted accordingly.	**How sure are we about this assumption?** Medium	**What are the potential effects of this uncertainty on our financial estimates?**	**If this assumption turned out to be incorrect, what level of impact would the potential effects have on Council and the district?** High	**What measures do we have in place to mitigate the level of uncertainty associated with this assumption?**

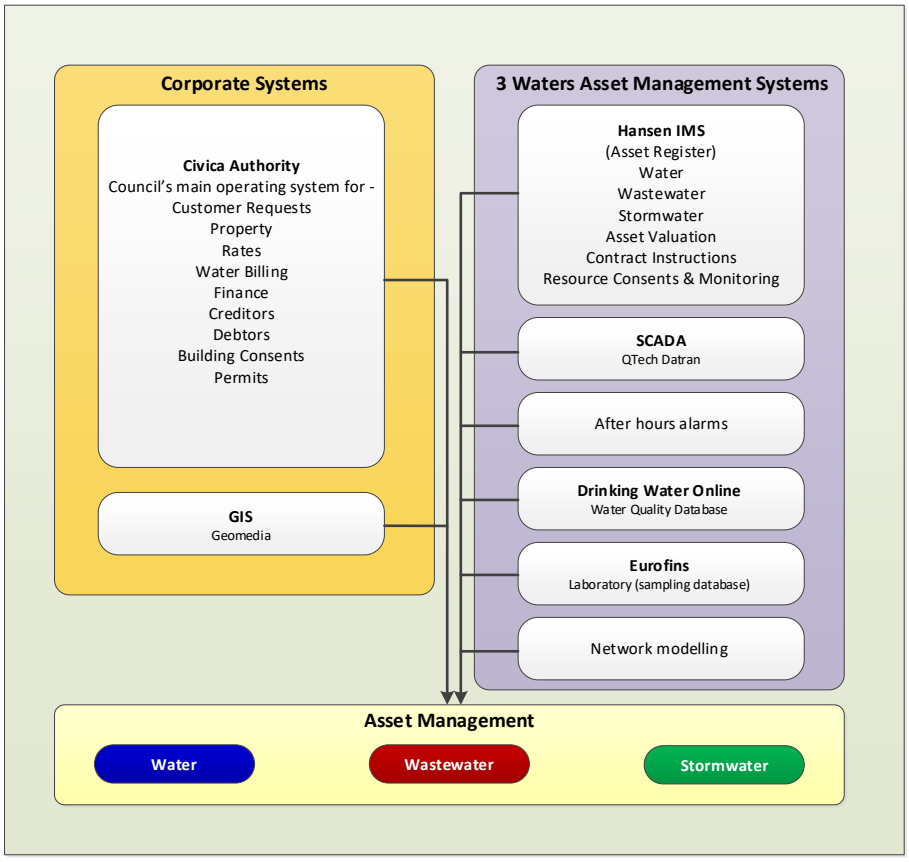
10 Asset management practices

This section covers the available asset information, information systems used, and processes used to manage the asset, and an overview of our organisational structure and people.

10.1 Information and data systems

Information and Data Systems provide Council staff with the ability to obtain, store, analyse and report on the significant quantities of data that is associated with the Water Supply activity. The information and data systems available to Council staff are shown below and discussed within this section.

Figure 10.1-1: Existing information and data systems



Asset Management Information System

The Council uses IPS (Infor Public Sector) as its Asset Management Information System (AMIS). IPS includes modules for wastewater, stormwater, water, plant, customer service, parks and work management.

The system records:

- Maintenance records
- Service failures, type of failure

- Cost to repair
- Operating data
- Rehabilitation & renewal works
- Condition data
- Performance data
- CCTV data
- Resource Consents and their supporting compliance information and results
- Asset valuation and depreciation
- Hierarchy of assets - parent/child configuration (where necessary)
- All maintenance data is recorded within the AMIS. This includes systematic collection of asset attributes, location, etc., through completing all relevant information on the appropriate work orders and then capturing this into IPS.
- IPS allows manipulation of historical and current maintenance data, recording and analysis of information including pipe size, material, and grading of faults. The system produces work orders i.e. fault repair, routine work, programmed and cyclic work and can confirm work completed (time and cost). Maintenance and operational activities can be reviewed and compared with the associated costs.
- Council has componentised the assets within IPS. Work orders are applied at an asset component level but aggregated for Asset Management reporting.
- IPS is integrated with the GIS system to allow for spatial analysis of assets and their performance such as condition and failures.

Geographic Information System

The Geographic Information System (GIS) holds and displays the water, wastewater and stormwater asset information in relation to each other and referenced to earth. Council replaced Geomedia with ESRI ArcGIS in February 2025 as its GIS system. The GIS supports IPS by providing spatial representation of the water, wastewater and stormwater assets. The GIS system is available to all Council Staff (at all Service Centres) and used extensively through all Councils activities.

Civica Authority

Council uses Civica Authority as its corporate operating system for:

- Customer requests
- Property
- Rates
- Water Billing
- Finance
- Creditors/Debtors
- Consents/Permits

This system is available to all Council Staff (at all Service Centres) and used extensively through all Councils activities.

Ibis

Council uses Ibis Information Systems (designed for local government and water authorities) to enhance revenue management, improve their operational productivity and reduce their planning risk.

GoGet

Council uses GoGet software for processing and inspecting building consents.

Network Modelling

Network modelling is an effective tool to assist in the secure and sustainable supply of water to consumers. Network modelling software aids Council staff in effectively managing the stormwater network distribution system through simulation of the existing and future networks.

There are different models developed and used based on the requirements at the time i.e. operational model and design upgrade model.

Council uses the Infoworks WS Pro network model simulation programme for managing the network and identifying network inefficiencies.

10.2 Data management

Key information comes into Council through work reports, as-builts, SCADA, consumers and contractors. Other information comes via emails, journals, Government publications and the media.

Decisions on activity management, renewals and acquisitions are made in consultation with staff, council and the public as appropriate. Staff meetings are held regularly to discuss current and future plans and decisions.

Asset data integrity audits are ongoing, and data is checked on a continual basis by various stakeholder groups within Council and the contractor. As work orders are completed, and submitted to be captured within the asset register, the data recorded on site is compared with the asset register data. This is an ongoing process of ensuring a high level of data integrity. Monthly auditing of work orders against as-built data is performed by the GIS Analyst.

Data confidence and accuracy (quality)

Data confidence grades are held against each individual asset within the IPS asset register. These grades indicate the type of data source and the confidence in the specific data source. A summary of the confidence levels in the attributes of the assets within water utility are detailed in the following table.

Table 10.2-1: Data confidence

Asset Group	Component	Quantity	Attributes	Cost	Life	Condition	Performance
Reticulation	Mains	A-B	B	A-B	C	C	C

Table 10.2-2: Data confidence score descriptors

Confidence Grade	Description
A – Highly reliable	Data based on sound records, procedures, investigations and analysis, documented properly and recognised as the best method of assessment. Dataset is complete and estimated to be accurate ±2%
B – Reliable	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings for example some data is old, some documentation is missing and/or reliance is placed on unconfirmed reports or some extrapolation. Dataset is complete and estimated to be accurate ±10%
C - Uncertain	Data based on sound records, procedures, investigations and analysis, which is incomplete or unsupported, or extrapolated from a limited sample for which grade A or B data are available. Dataset is substantially complete but up to 50% is extrapolated data and accuracy estimated ±25%
D – Very Uncertain	Data based on unconfirmed verbal reports and/or cursory inspection and analysis. Dataset may not be fully complete and most data is estimated or extrapolated. Accuracy ±40%
E - Unknown	None or very little data held

Metadata standards

A Central Government funded project is the 'Metadata Standards' which sets national metadata standards for Three Waters (potable, waste and storm) networks, and for residential and light commercial buildings. This is to ensure the correct asset data is collected and in the correct manner. The roll out of these data standards started in mid-2017.

Going forward Council will continue aligning its data collection and recording with the Metadata Standards, as there may be minor discrepancies. However, the existing data will be held and only aligned with the standards over time as more current information is captured.

It is important to ensure data collection is performed consistently and to set standards. As a result, the development of Asset Management Information Guidelines to ensure consistency in asset data collection is included as an improvement item.

As-built information

Clear, defined documented procedures exist for as-builts and associated data transfer into information systems.

A Capital work order request is issued upon approval of a capital project. The capital work order request records:

- Utility type
- Initiated date and due date
- Project type (new contract, operation and maintenance contract, quoted works, etc.)
- Description
- Budget number
- Contractor name
- Estimated costs

Status of capital work orders are tracked during monthly meetings. Upon completion of the project and the capital work order request the data is captured into IPS. IPS contains additional fields to be completed i.e. as-built and GIS. This requires acknowledgement as to whether the as-built information has been received and entered into IPS and GIS.

Contract 613 (*Section 5.4 Knowledge Creation*) acknowledges the importance of each party i.e. the Principal, the Engineer, and the Contractor in asset data (knowledge creation). How each party's role compliments and increases the value of the other party's efforts is tabled below:

System	What	Who	How
Records	AMIS & GIS records, hard copy records, files and report forms of accumulated knowledge	Principal	Owns current and learnt knowledge
		Engineer	Collects, stores, maintains and reference
		Contractor	Collects and reference
Planning documents	Annual & Long Term Plans AMPs Infrastructure Strategy	Principal	Sets service provision requirements in consultation with the community
		Engineer	Develop & maintain
		Contractor	Implement
Operational documents	O&M Manuals Codes of Practice	Principal	Owns current and learnt knowledge
		Engineer	Develop & maintain
		Contractor	Implement & reference
CRM	Customer Request Management system (CRM) records service performance	Principal	Monitors and reports to on performance achievement to elected members and Audit
		Engineer	Analyses compliance with performance objectives
		Contractor	Completes and updates CRM to capture the action undertaken to provide the service
AMIS (IPS)	Holds asset data and maintenance records (work orders)	Principal	Owns current and learnt knowledge
		Engineer	Undertakes quality auditing of provided information
			Undertakes assessment and reporting on quality of completed works and reporting
			Determines and approves work completed, performance achieved and certified payment due
		Contractor	Completes Work Order (WO) information collection forms to record executed works and build and confirm asset knowledge
Audit	Provides independent verification that actions are consistent and appropriate for the sought outcome	Engineer	Engineer initiated and undertaken audits of works, processes, documentation, actions and the like undertaken by the Contractor
	Provides confidence that actions are consistent and appropriate for the sought outcome	Contractor	Contractor initiated and undertaken audits of technical and management performance

Major capital works have an as-built process specification within the formal contract documents. Operation and maintenance works, small asset renewals and quoted works need

a formal documented process and specification. This needs to include closing the loop from design to final GIS record i.e. auditing of GIS data capture.

Upon completion and receipt of as-built data, the assets are captured within the IPS AMIS. This process needs to be reviewed, and improvement implemented to ensure consistency in naming convention, level of detail and assigned maintenance frequencies.

10.3 Information Technology (IT)

The responsibility for asset information security rests with the IT department administrators. The data is backed up daily and backup files are stored in a secure place. Data manuals are available that explain the various procedures.

10.4 AMP preparation

A process has been established over several LTP periods whereby a review of the AMPs is conducted. Reviews focus on improvements to existing AMPs without attempting to acknowledge good features or accentuate any positives.

Following the review Council engineers consider review recommendations and use these as guidance where appropriate. The AMPs are then updated through a process of regular meetings between Council engineers and consultants to identify:

- Status and changes, including but not limited to:
  - Legislation
  - Levels of Service
  - Assets
  - Processes & Systems
  - Population
  - Demand
  - Organisation
  - Asset Values
  - Projects
  - Council direction
- Self-assessment of the current AMP

This information is then used to ensure the AMP demonstrates:

- All asset-based activities of Council are supported through the AMP
- Three Waters AMPs are easy to read, and follow the same agreed format
- The underlying activity management planning processes occurring for each activity, including improvements, are made because of the review
- Levels of service, and show linkages to other Council planning documents
- A robust reflection of the future intentions of Council with respect to Three Waters activities
- The financials arising from the plans reliably forecast the lowest lifecycle cost to deliver agreed levels of service for a period of no less than 10 years.

10.5 Delivering water services – our people

In managing seven public stormwater systems, the Waitaki District Council utilises the skills of a combination of in-house staff, contractors, and consultants.

Organisational structure

Through Q4 2024 and Q1 2025 Council underwent a Transformation Process whereby management of 3 Waters Assets was shifted from a stand-alone Water Services Team to a cross-Council delivery model whereby water is delivered across multiple teams. Those teams most involved in the various aspects of water delivery are shown below:

Strategy, Performance & Design

- Asset Planning

Community Engagement & Experience

- Customer Experience
- Customer Services
- Strategic Communications & Engagement

Support Services

- Finance
- Project Management Office
- People and Capability
- Digital Services

Natural & Built Environment

- Regulatory and Compliance
- Infrastructure

Contractors

Council utilises contractors to maintain, renew, and construct assets through various contractual agreements. Council augments its skill base through the engagement of specialist consultants as required to undertake specific projects and works.

It is likely that a shortage of technically skilled people to design, construct and manage water assets will continue to have an impact on this activity in future years. This is a global issue which is also affecting other local authorities.

Suitably qualified and trained persons

An important measure of this Plan's quality is the ability, experience and qualifications of the individuals and companies involved in its preparation. The Council employs staff appropriately qualified to carry out the asset management function. Formal qualifications range from New

Zealand Certificate in Engineering to Registered Engineer. Specialised external support is available as the need arises.

On-going training is available for staff involved in infrastructure asset management and includes attendance of:

- IPWEA sponsored workshops on Asset Management
- NAMS seminars
- Annual Water NZ conference
- Asset Management conferences
- Water Managers (NZ wide) quarterly meeting

Council staff have a reasonable record of attendance at these seminars, conferences and workshops.

10.6 Sustainability

Sustainability can be defined as meeting the needs of the current generation without compromising the ability of future generations to meet their own needs.

Sustainability and lifecycle

Asset management is designed to improve decision-making about assets to enable the better management of existing and future assets. Effective asset management ensures that agreed levels of service are met and risks, including public health, financial and environmental, are minimised, while costs are optimised. Improved decision-making is crucial to achieve asset management and sustainability goals. Therefore, having the correct asset information available is important to support the decision-making process. This makes it clear that lifecycle costs are part of, and support, asset management and sustainability.

Asset management practices include action that recognise the need for environmental, economic, social and cultural sustainability.

Activity response to sustainability

Council will continue to:

- Protect the environment
    - Water takes are consented
    - Discharges are consented
    - Improving effluent quality and/or improved disposal methods
- Provide reliable and safe drinking water to the community
    - Compliant with the legislation and appropriate standards
    - Optimal decisions based on least capital and lifecycle cost solution satisfying the requirements of the Drinking Water Standards
    - Managing risks in accordance with approved Water Safety Plans
    - Pipe size and materials – appropriate for now and the future
- Increase efficiency at facilities
    - Use of VFDs

- Night pumping to take advantage of lower electricity rates
- Duty/assist pump arrangements
- More efficient aeration
- Pump selection

- Within Council:
  - Staffing levels
  - Skills
  - Training
  - Succession planning
- Collaborate with other Councils

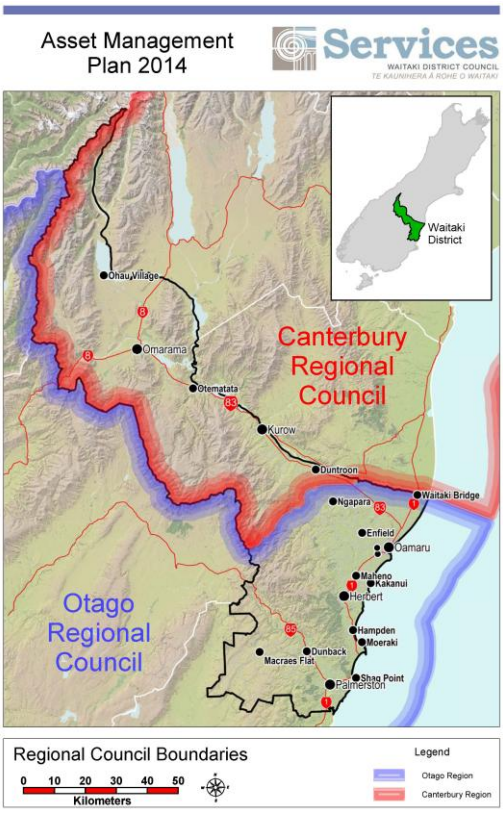
10.7 Environmental management

A very important aspect of the water supply authority's function is to ensure that the District's natural water sources are managed responsibly. Resource consents are held for various activities relating to the water activity, such as abstraction, treatment and the disposal of treated water at the water treatment plants.

There are two Regional Councils that have authorisation within the Waitaki District. The northwest of the district (including all of the Waitaki River) is under the authorisation of Environment Canterbury, with all of the area to the south under the authorisation of Otago Regional Council. This mixture of Regional Authorities results in two different rules and multitude of plans which impacts on staff time.

The boundaries of the two Regional Councils are graphically represented in the figure below.

Figure 10.7-1: Regional Council Boundaries



Schedule of Resource Consents

Council has the following consent for stormwater consent with Environment Canterbury (Ecan):

Record number	CRC186252
Consent location	Lake Ohau Village, Omarama, Otematata, Kurow, & Duntroon, Waitaki District
To	To discharge contaminants to land and water.
Commencement date	05 Dec 2019
Date this record number was issued	05 Dec 2019
Permit type	Discharge Permit (s15)
Record type	New Consent
Expiry date	05 Dec 2044

Consent monitoring and reporting

Consent monitoring and reporting within Council for Water Services is the responsibility of the Compliance Analyst.

The current stormwater consent with Ecan (refer above) requires an annual report to be submitted, which mainly consists of information from Council's Roading team.

Regional Plans

Under Section 30 of the Resource Management Act of 1991, Regional Councils are required to provide policies and methods to achieve integrated and sustainable management of the regions natural and physical resources. The Regional Plans of Otago and Canterbury provide a framework for the sustainable management of the regions water resources. These resources include groundwater, rivers, lakes and wetlands.

Catchment Management Plans are expected to be a requirement under increased Regional Council rules and will be prepared once the regional rules come into effect.

Otago Regional Plan – Water

Otago Regional Council has a Regional Plan - Water, which provides a framework for the integrated and sustainable management of Otago's water resources including lakes, rivers groundwater and wetlands. It sets out the issues relating to protection and enhancement of the region's water resources. The Otago Water Plan is under review to align with the NPSFM.

Environment Canterbury – Land and Water Regional Plan

The Canterbury Land and Water Regional Plan (LWRP) identifies the resource management objectives for managing land and water resources in Canterbury to achieve the purpose of the Resource Management Act 1991. It identifies the policies and rules needed to achieve the objectives and provides direction in terms of the processing of resource consent applications.

Energy

The three water activities are energy intensive, accounting for a significant portion of Council's total electricity consumption. The major power demands are from water and wastewater pumping stations and treatment facilities. The direct use of fossil fuels is generally limited to emergency power generation equipment, but the indirect use of transportation fuels for operation and maintenance activities should also be considered when planning changes to energy management. Energy, in varying forms, is used during the construction and renewal of assets and the manufacture of materials used in construction, operation and maintenance of assets. Carbon emissions for many current energy sources contribute to climate change.

Energy prices have increased significantly over recent years, impacting on operational costs for the water service. This trend is expected to continue.

Alternative Energy Sources

No formal study has been conducted, but solar energy is used to power telemetry at remote rural reservoir sites.

Small solar/wind energy systems are not suitable for higher power demand sites such as UV water treatment plants and water/wastewater pumping stations.

The Waitaki District Council is committed to implementing environmental best practices. This includes being more energy efficient. Where technologies exist that allows Council to operate in a more energy efficient manner it will be investigated and if there is a significant cost and environmental benefit it will be considered for implementation.

Remote Monitoring

The Council operates a SCADA system that allows remote monitoring of the facilities (WWTP and majority of wastewater pump stations) increasing efficiency and reducing the frequency of site visits, which reduce the facility's carbon footprint.

Greenhouse gas emissions

The Waitaki District Council Greenhouse Gas emissions report for 2018/19 shows Council at significantly negative net emissions, with the Council removing more greenhouse gases than it emits. The report found the total gross carbon dioxide equivalents for Waitaki District Council are 2,876 tonnes. The report found wastewater treatment (36% of all emissions), electricity consumption (30%), and the Palmerston landfill emissions (13%) as the main contributors to the council's carbon footprint.

Waitaki District Council has a total of 165 hectares of forest. Emissions under the Land Use and Land use Forestry sector total -4,902 tonnes. Considering Waitaki District Council's gross emissions of 2,876 tonnes and removals of -4,902 tonnes results in net emissions of -2,026 tonnes. This means that the Council is making a positive contribution overall towards climate change

Report recommendations include:

- Encourage staff to use alternative, low carbon, transport options for travelling to work and for work journeys, where appropriate. This may include cycling, walking and public transport, pool cars, installation of bike racks, route optimisation, teleconferencing, and wherever possible moving away from single occupancy vehicle journeys.
- Develop a strategy for transitioning the fleet to small engine vehicles, electric cars and hybrids.
- Introduce electric bikes/scooters for staff members to use for appropriate local journeys.
- Undertake energy audits across different parts of the Council's operations.
- Determine which energy providers have the least Green House Gas intensive sources of electricity.
- Develop awareness raising initiatives to make staff and the public more energy aware, including training, communication and general encouragement.
- Supporting energy efficiency in community housing, including the installation of insulation and ensuring that boilers are energy efficient, and raising awareness amongst tenants.
- Develop a strategy for lowering energy requirements from buildings, street lighting, and other facilities that are within the Council's control/ownership.
- Use video conferencing as an alternative to face-to-face meetings whenever possible.
- Evaluate and where possible reduce the number of staff that need to travel to meetings in other parts of the country.
- Ensure that staff members coordinate travel and share taxis whenever possible.

10.8 Managing potential negative effects

The negative effects for the Waitaki Community that the stormwater activity may have on the social, economic, environmental or cultural wellbeing of the community is tabled below. It indicates how the existing approach or proposed action to address these in the future.

Table 10.8-1: Potential negative effects and management measures

Negative Effect	Impact on wellbeing				Comment
	Economic	Social	Environmental	Cultural	
Drains					
Use of chemical sprays	None	Minor	Minor	Minor	Compliance with consent conditions
Sediment and vegetation build up	None	None	Minor	Minor	Removal by mechanical/spraying. Plantings and screening where appropriate
Reticulation					
Discharge of contaminated stormwater to water	None	Minor	Minor	Minor	Very low quantities and not deemed to be significant. If contamination levels increase onsite treatment systems may be considered, but this will be a roading function as kerb inlets are roading assets.
Pollutants originating from industry	Minor	Minor	Minor	Minor	Very low quantities and not deemed to be significant. Controls can be applied through District Plan process. If volumes increase onsite treatment systems may be considered

11 Improvement plan

11.1 Quality assurance

Audits

To establish and ensure the ongoing improvement of the quality of this Plan a series of audits are planned and includes Financial, Systems, Technician and Performance Audits.

Financial audits - the Local Government Act requires that independent annual financial audits be undertaken on the operations of Council; such audits may include all significant activities such as activity management planning. The auditor's opinions will be included in the Annual Report.

System audits - are continuous and ongoing and incorporated in operational practices. However, as part of the LTP process, systems are discussed and reviewed every 3 years. This audit identifies the status of asset management processes, systems and data and produces targets for Asset Management practices to be achieved in following years. A programme of recommended actions will be developed for Asset Management processes, systems and data. Future regular system audits will measure progress against targets and the development programme.

Technical audits - peer reviews will be undertaken at regular intervals to assess and identify compliance with statutory accounting requirements:

- The quality of the Plan in terms of completeness, objectivity, logic, technical content and presentation
- Perceived strengths and weaknesses for Plan improvement
- Recommended specific areas for Plan improvement
- Technical audits may be undertaken using external or internal reviewers

Performance audits - will establish whether the stated objectives for the operation of the asset have been achieved. Measurement of the success of the operation of the asset will be assessed using the results of:

- Customer satisfaction surveys
- Key Service Criteria objectives compliance (e.g. NFPM)
- Benchmarking surveys.

These measurements will determine the public view of how well the levels of service have been achieved, an objective measure against stated Key Service Criteria and national measures of relative performance. The performance audits will also be used in ongoing customer consultation regarding future standards and requirements of the customers in the provision of the service.

AMP reviews

The following table lists the past AMP Reviews:

Table 11-1: AMP Reviews

Date	LTP	Description
2008	2009 - 19	Review 2006 AMPs including GAP analysis based on the Core and Advanced Asset Management criteria used by the Office of the Auditor General
2011	2012 - 22	Review 2009 AMPs including a formal review for "Selecting the Appropriate AM Level" which is fundamentally based on the IIMM Section 2.2.4. and built on the previous review and the OAG AMP criteria for core and advanced Asset Management. The outcome of this was that Water and Wastewater section of Council has been assessed as Core Plus.
2013	2015 - 25	To reflect on the recommendations from the Office of the Auditor General, previous AMP review items and developing a 30-year Infrastructure Strategy a new direction was implemented for the 2015-25 Utilities Activity management plans. This included a change to the document structure used since 2006. The new template incorporates the seven areas of asset management i.e. Description of Assets, Levels of Service, Growth/Demand, Sustainability, Lifecycle, Risk, and Financials
2017	2018-28	Formal documented assessment of the Water and Wastewater AMPs undertaken.
2020	2021-31	No formal review was undertaken and AMP development built on previous AMP reviews. The 2017 AMP Assessment provided valuable guidance for continuous improvement to achieve appropriate practice. It is expected that the remaining gaps identified will be closed during subsequent reviews and updates. A consistent and project-based approach has been evidenced in the approach taken to develop the AMPs.
2024	2025-34	A review of the AMPs structure using the Āpōpō Guide has been undertaken to achieve a more logical structure and flow. Data and other information have also been reviewed and updated to reflect changes since the previous AMP. This work will be ongoing by the Asset Planning team to ensure the AMP is relevant and always fit for purpose.

2017 AMP Review –Waugh Infrastructure Management was engaged to perform a formal documented assessment of the Water and Wastewater AMPs.

The AMP shows the traditional seven areas of asset management (Description of the asset, Levels of Service, Growth, Risk Management, Lifecycle, Sustainability and Financials) well laid out, easily accessible, clear and concise.

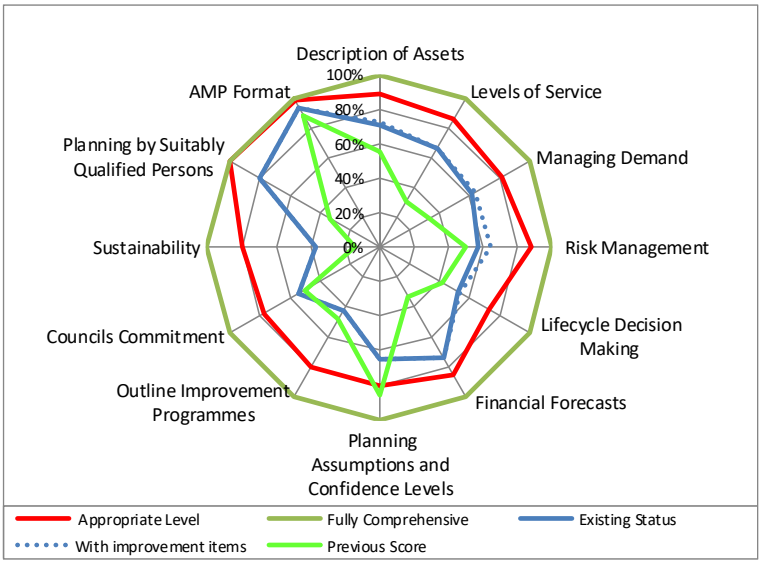
Overall, the assessment indicates the AMPs assessed are improving over time and moving closer to the target appropriate practice level. It is expected that many of the remaining gaps identified will be closed during subsequent reviews and updates. A consistent and project-based approach has been evidenced in the approach taken to develop the AMPs.

The result of this self-assessment is tabled and graphically represented below:

Table 11.2: 2017 Assessment

AMP Content Area	Percentage		
	Assessment Scores	Appropriate AMP Level	Gaps
Description of Assets	70	89	**19**
Levels of Service	66	86	20
Managing Growth	62	82	20
Risk Management	57	88	**31**
Lifecycle Decision making	53	73	20
Financial forecasts	75	86	13
Planning Assumptions and Confidence Levels	65	80	15
Outline Improvement Programmes	42	80	**38**
Councils Commitment	54	78	24
Sustainability	37	80	43
Planning by qualified Persons	80	93	13
AMP format	93	98	5

Figure 11-1: 2017 AMP Assessment



In general, the AMPs are complete documents with minor areas for improvement. The identified gaps will form the basis of discussion for a prioritised improvement programme.

11.2 Asset management development

The objective of the Council's Asset Management Policy is to ensure that service delivery is optimised to achieve agreed community outcomes and levels of service. It aims to manage related risks and optimise expenditure over the entire life cycle of service delivery, using appropriate assets as required.

The Asset Management (AM) Policy requires that management of assets be in a systematic process to guide planning, acquisition, operation and maintenance, renewal and disposal of the required assets. Delivery of service is required to be sustainable in the long term and deliver on Council's economic, environmental, social, and cultural objectives.

The AM Policy sets the appropriate level of asset management practice for Council's Water, Wastewater, Roading, Rubbish and Recycling, Aquatic Centre, Gardens, Recreation and Community services.

Council has undertaken a structured assessment of the appropriate level of asset management practice for the Water services. This structured assessment follows the guidance provided in Section 2.2.4 of the 2006 International Infrastructure Management Manual (IIMM).

The 2010 AM Policy sets the appropriate level of asset management practice for Council's Water and Wastewater Activity as 'Core Plus' practice (now also referred to as 'Intermediate).

Definition: 'Core Plus' asset management practice is undertaken at a level between 'Core' and 'Comprehensive' practice. The focus is to build on the basic technical activity management planning of 'Core' practice by introducing improved maintenance management and more advanced asset management techniques (as appropriate). Further use is made of risk management, asset lifecycle management, and service standard optimisation techniques.

Current appropriate practice levels have been expanded and as a proxy 'Core Plus' is linked with Intermediate level. To ensure this aligns with the latest appropriate practice asset management levels the AM Policy will be reviewed (**IP 3W1**).

Council's AM Policy is scheduled for review, and the need for an AM Strategy has been identified. This strategy will provide a roadmap, linking the AM Policy, which sets the appropriate level of asset management, with the AMP, which demonstrates the current level of asset management.

Improvement Plan Focus

The Council Water Services Asset Management Improvement Plan will be focused on the following key areas:

- Water treatment improvements
- Supply knowledge update
- Renewals
- Human resources/customer services
- Enhanced maintenance
- Asset management

The full Improvement Plan is included as Appendix 3.

11.3 Reporting on improvement plan progress

Currently all projects in the Long Term Plan 2021-31 and Annual Plan are recorded in Authority and reported quarterly. It is proposed that this frequency of reporting continue. It is acknowledged that the management and completion of improvement items will contribute to

the achievement of Community Outcomes, and regular reporting on activity items will assist to ensure that achievement towards each outcome.

11.4 AMP review and monitoring

This AMP will continue to be developed over time to incorporate further advanced asset management techniques, make use of improved data collection and management systems, respond to legislative and policy changes, and address evolving issues. It is anticipated that the sustainability themes introduced in this Plan will be further tested and developed with ongoing focus on legislative compliance, planning for climate change, environmental management, and improving efficiency. A future review of charging mechanisms may be warranted to ensure inter- and intra-generational equity.

This AMP is the responsibility of the Asset Planning Manager.

Due to the impending changes from the Government's Local Water Done Well reforms, the Council will likely remain responsible for delivering and funding water services during the first two years of the 2025-34 Long Term Plan until a decision is made on water service delivery. This AMP captures the operational budget detail for the first two years but also includes the programme of works for 9 years.

Appendices

Appendix 1: Funding Impact Statement – Stormwater

Waitaki District Council : Funding Impact Statement for 2026 - 2035 for Stormwater

	2024/25 Annual Plan (000's)	2025/26 LTP (000's)	2026/27 LTP (000's)	2027/28 LTP (000's)	2028/29 LTP (000's)	2029/30 LTP (000's)	2030/31 LTP (000's)	2031/32 LTP (000's)	2032/33 LTP (000's)	2033/34 LTP (000's)	2034/35 LTP (000's)
Sources of operating funding											
Targeted rates		1,981	2,177								
TOTAL OPERATING FUNDING (A)		1,981	2,177								
Applications of operating funding											
Payments to staff and suppliers		122	122								
Finance costs		156	155								
Internal charges and overheads applied		1,765	1,905								
TOTAL APPLICATIONS OF OPERATING FUNDING (B)		2,043	2,182								
SURPLUS (DEFICIT) OF OPERATING FUNDING (A - B)		(62)	(5)								
Sources of capital funding											
Increase (decrease) in debt		112	355								
TOTAL SOURCES OF CAPITAL FUNDING (C)		112	355								
Application of capital funding											
- to replace existing assets		50	350								
Increase (decrease) in reserves		-	-								
TOTAL APPLICATIONS OF CAPITAL FUNDING (D)		50	350								
SURPLUS (DEFICIT) OF CAPITAL FUNDING (C - D)		62	5								
FUNDING IMPACT STATEMENT			0								

Appendix 2: Stormwater projects (operational, renewal)

Project Number	Name	CapEx/OpEx	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34
1038	LTP Adjusted 2025: Oamaru Stormwater Upgrades	Capital	-	-	-	-	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
1214	LTP Adjusted 2025: Otago Stormwater Management Plan & Resource Consent Application	Capital	-	-	130,000	-	130,000	-	-	-	-
2466	Stormwater Main Inspection & Cleaning Programme	Capital	-	-	200,000	200,000	150,000	150,000	150,000	150,000	150,000
4492	Oamaru Stormwater Structure Improvements	Capital	-	-	250,000	-	-	-	-	-	-
4568	Stormwater Main Renewals	Capital	50,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000
4589	Oamaru Stormwater Capacity Study - Design Basis	Operational	-	-	100,000	-	-	-	-	-	-
4590	Oamaru Stormwater Capacity Study	Operational	-	-	-	100,000	-	-	-	-	-
4605	LTP Adjusted 2025: Stormwater Bylaw (New)	Operational	-	-	-	60,000	-	-	-	30,000	-

Appendix 3: Asset management improvement plan

The following table lists the improvement items over the LTP period (X denotes year of activity).

#	Description (Responsibility)	Funding	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
IP SW1	Water Supply Bylaw (Review) Review of the existing Water Bylaw. This should include a new process for enforcement of illegal connections and the like.	AM		X							
IP SW2	Stormwater Management Plan Review the management plan for the Waitaki Valley and implement the plan as per ECAN consent	AM	X								
IP SW3	Oamaru Creek Flood Mitigation Undertake modelling to develop improvement options to mitigate flooding of the Oamaru Creek	Capital			X						
IP SW4	Identify Storm Water Issues Improve understanding of stormwater issues across the district (catchments, overland flow paths, flooding hot spots, etc.)	AM	X	X	X	X	X	X	X	X	X
IP SW5	Stormwater Supply Network Manual Develop new Stormwater Supply Network Manual, building on detailed scheme-specific data from the AMP	Operational	X								
IP SW6	Asset Data Validation Reviewing and updating the information held in GIS and IPS	AM	X	X							
IP SW7	Alignment of roading and stormwater assets Ensuring that there is no duplication and no gaps, and data for both is visible together	AM	X	X							

#	Description (Responsibility)	Funding	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
IP 3W1	Asset Management Policy (Review) Review of the existing Asset Management Policy. The current policy sets the asset management maturity level we should be aiming for.	AM	X								
IP 3W2	Critical Asset Criteria Review existing criteria for classification of critical assets.	AM		X			X			X	
IP 3W3	Activity management plan Reviews 3 yearly reviews of the Water, Wastewater and Stormwater Activity management plans including adoption by Council.	AM		X			X			X	
IP 3W4	Asset Revaluation 3 yearly revaluation of assets including peer review.	AM		X			X			X	
IP 3W5	Service Level Review and Community Engagement Review of existing service level statements and engagement with the community to determine new and amended service levels.	AM		X			X			X	
IP 3W6	Renewal Planning Tools and Systems Development Develop new or update existing tools and systems used for forward renewal planning.	AM	X	X	X	X	X	X	X	X	X
IP 3W7	Condition Assessment Tools and Systems Development Develop new or update existing tools and systems used for asset condition assessment.	AM	X	X							
IP 3W8	Strategic Planning Tools and Systems Development	AM	X	X							

#	Description (Responsibility)	Funding	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34
	Develop new or update existing tools and systems used for strategic planning such as business cases and project prioritisation.										
IP 3W9	Field Equipment Renewal Replacement of field equipment used by Three Waters Officers such as dataloggers, drones and other monitoring equipment).	Depreciation	X	X	X	X	X	X	X	X	X
IP 3W10	Visibility of facility assets in GIS Develop greater visibility of linear and point assets within facilities in our GIS	AM	X	X							

Appendix 4: Legislative context for stormwater

Key Legislation	Relationship to Water Supply Activity
The Health Act 1956	The Council have the responsibilities under the Health Act 1956 to improve, promote, and protect public health within the district. Some Councils uses provisions in the Health Act as legal bases to issue I/I defect notices to property owners. I/I problems lead to sewer overflows which in turn poses a risk to public health. The Health Act includes some specific and some implied references to wastewater services including: Section 23 grants powers to local authorities to protect public health. Section 25 gives powers to the Ministry of Health to order local authorities to provide sanitary works for the benefit of the district. Section 39 requires all dwelling houses and commercial businesses to provide sanitation facilities. Section 60 makes it an offence to cause the pollution of a water supply. This may be invoked if wastewater is allowed to get into a source of water used as a water supply.
Local Government Act 2002	The Local Government Act requires local authorities to prepare a ten-year Long Term Plan and 30-year Infrastructure Strategy, which are to be reviewed every three years. The Act requires local authorities to be rigorous in their decision- making by identifying all practicable options and assessing those options by considering the benefits and costs in terms of the present and future well-being of the community. This activity management plan provides information to support the decisions considered in the Long Term Plan. The Local Government Act includes some specific and some implied references to wastewater services including: Section 11A states local authorities are required to provide 'core services. Network services are listed as a core service. Section 125 requires the local authority to undertake an assessment of the water and sanitary services within its area. Section 126 states the purpose of an assessment is to assess the "adequacy of water and other sanitary services available to communities…" in terms of the quality of the service currently available; the potential

Key Legislation	Relationship to Water Supply Activity
	health risks from the absence or deficiency of the service; the current and estimated future demand; and the potential consequences of discharges of sewage and stormwater. Section 146 and 148 give powers to territorial authorities to make bylaws for the control of waste, on-site wastewater systems and trade waste.
Water Services Act 2021	Established drinking water standards and regulates all persons and organisations that supply drinking water.
Taumata Arowai—the Water Services Regulator Act 2020	The bill establishes Taumata Arowai - the Water Services Regulator as a new Crown Agent and provides for its objective's general functions operating principles, and governance arrangements. Taumata Arowai is responsible for a small number of complementary functions relating to improving the environmental performance of wastewater networks.
Infrastructure Funding and Financing Act 2020	Provides a new legislative tool to enable private capital to support the provision of new infrastructure for housing and urban development. The Act provides opportunities for local councils, Māori and iwi, and developers to partner and deliver infrastructure, free of the council's debt limits or from charging high upfront costs to developers.
Covid-19 Recovery (Fast-track Consenting) Act 2020	This Act shortcuts the current resource consent process under the RMA to support New Zealand's recovery from the impacts of Covid-19. The Act's purpose is to urgently promote employment to support New Zealand's recovery and the certainty of ongoing investment across New Zealand, while continuing to promote the sustainable management of natural and physical resources.

Key Legislation	Relationship to Water Supply Activity
Resource Management Act 1991	The Resource Management Act 1991 (RMA) is the principal legislation that sets out how we manage our environment sustainably. As well as managing air, soil, freshwater and the coastal marine area (and the effects of human activity on these resources), the RMA regulates land use and the provision of infrastructure, which are integral components of New Zealand's planning system. Many sections of the Act are relevant to the control of wastewater discharges and the process for seeking consent to undertake the activity. Specific sections include: Section 13 places restrictions on certain uses of the beds of lakes and rivers, which can affect maintenance of wastewater reticulation located near watercourses. Section 15 does not allow the discharge of any contaminant into water or allow a contaminant to enter water unless the discharge is expressly allowed for by a national environmental standard or other regulations, a rule in a regional plan or a resource consent. Part 6 (sections 87A–165) describes the requirements for applying for resource consents and implementing resource consent processes.
Civil Defence Emergency Management Act 2002	Sets an expectation that the Council's lifeline utilities (which includes wastewater service) to prepare to function at the fullest possible extent during and after an emergency, even though this may be at a reduced level of service.
Health and Safety in Employment Act 1992 and 2015	Health and Safety legislation requires that staff and contractors are kept safe at work. New legislative changes to the act will mean improved health and safety measures will be required.
Utilities Access Act 2010	The processes and rules for coordinating work done in transport corridors by utility operators, or that affects utility operators' assets.

Key Legislation	Relationship to Water Supply Activity
Te Tiriti o Waitangi – Treaty of Waitangi	The Treaty of Waitangi is an agreement between Māori and the Crown. Under Section 4 of the Local Government Act 2002, local authorities are required to 'recognise and respect the Crown's responsibility to take appropriate account of the principles of the Treaty of Waitangi and to maintain and improve opportunities for Māori to contribute to local government decision-making processes. Sections 77 and 81 detail the scale of requirement for local authorities to seek contributions and involvement from Māori in consultation and decision-making processes.
Climate Change Response Act 2002	The Climate Change Response Act 2002 puts in place a legal framework to support New Zealand to respond to climate change and meet its international obligations. It also establishes the New Zealand Emissions Trading Scheme.