


Wastewater Asset Management Plan

2025 - 2034

Waimate District Council

Waimate
District Council

Quality Record Sheet

Waimate District Council

Wastewater AMP

2025-2034

Issue Information	
Issue Purpose	Final
Issue Date	22 January 2025
Version Number	4

Authorisation	
Waimate District Council	Dan Mitchell
Updated by	Waugh Infrastructure Management Limited Dan Mitchell (Waimate District Council) Paul Roberts (Waimate District Council)
Update reviewed by	WDC & Waugh Infrastructure Management
Date	22 January 2025
Report Number	64-073-1032

Quality Information	
Document	Wastewater Asset Management Plan
Ref	Version 4
Date	22 January 2025
Prepared by	Waimate District Council
AMP Development Process	
Project Sponsor:	Dan Mitchell (Water & Waste Manager)
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Project Team:	
Lifecycle:	Dan Mitchell
Population Projections:	Rationale Consultants Limited
Financial:	Dan Mitchell
Date Adoption by Council: 15 October 2024	
Copies	

Revision History				
Revision	Revision Date	Details	Authorised	
			Name/Position	Signature
2.0	16/3/18	Full Update of AMP	Dan Mitchell	
2.1	20/3/18	Updated financials	Dan Mitchell	
3.0	30/11/20	Updated draft AMP		
3.2	24/04/21	Finalise draft AMP	Paul Roberts / Dan Mitchell	
3.3	20/09/24	Working Version Update for 2024 LTP	Dan Mitchell	
3.4	25/09/24	Final Draft for 2024	Dan Mitchell	
3.5	09/10/24	Final Draft for Approval	Dan Mitchell	
3.6	15/10/24	Final Adopted	Dan Mitchell	
4	22/01/2025	Final Adopted (Inflated Budgets)	Dan Mitchell	

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1 EXECUTIVE SUMMARY

WASTEWATER 	The wastewater activity is a core Council activity that contributes towards the provision of good quality infrastructure and helps ensure public health and safeguards the environment. The wastewater system comprises pipes, pump stations, treatment facilities and other assets that represent a significant council investment over many years.
FOCUS 	**New Capital and Growth** – to improve wastewater collection, treatment and disposal across the district and comply with the ever-increasing environmental compliance framework -to provide capacity to meet the required standards, future demand and support the expansion of development areas as identified by Council. **Renewals** – develop and implement a renewals strategy; including condition and criticality assessments. Ensure appropriate budgets are available to replace aging and/or deteriorating assets and align renewals with other infrastructure upgrades/renewals. **3 Waters Reform** - Ongoing response to Government Water Services reform programme - 'Local Water Done Well'.
COMPLIANCE	**Resource Consents** - Council has a number of wastewater related resource consents and aims to achieve compliance with all resource consent conditions. Regular compliance monitoring and reporting is undertaken
SERVICE DELIVERY 	**Service Delivery** - the wastewater activity is delivered via a combination of in-house resources and contracted services with the operation and maintenance activities undertaken by inhouse resources. Operation and maintenance costs will increase due to: • separation of stormwater and wastewater • increased environmental compliance requirements, • expanding asset base, • increased community expectations
PERFORMANCE	**Performance** - a comprehensive performance monitoring and reporting framework ensures that legislative requirements and other KPIs are regularly assessed and reported on.
RISK & RESILIENCE	The ability to deliver capital projects on time may be affected by the skills shortage and availability of construction contractors. **Understand** our communities, the hazards and risks and acknowledge that failure will occur. **Ensure** early detection and recovery through connecting communities, supporting community organisations and robust infrastructure assets

1.1 What are we doing

We protect public health and the environment by providing two wastewater systems that collect, treat and dispose of liquid waste to acceptable environmental standards. These wastewater systems are located at:

- Waimate (Reticulated)
- St Andrews (Managed on-site systems)

Council supports this service by:

- Providing, operating and maintaining wastewater infrastructure in compliance with New Zealand legislation, standards and resource consents
- Responding to call outs and service disruptions quickly and efficiently
- Planning for future development and needs.

1.2 Why are we doing it?

Council has a legal obligation under the Health Act 1956 to improve, promote, and protect public health within the District. This includes identifying the need for Wastewater activity and either providing these directly or overseeing the service if it is provided by others. The Council sees the provision of reliable wastewater collection and treatment services to the community as a major contribution to the District's economy and to resident's wellbeing. The Local Government Act 2002 requires ongoing Wastewater activity unless specific approval is sought to withdraw from this.

Council's wastewater activity contributes primarily to the following community outcomes:

Table 1-1:WDC Community Contributions

Community outcome	How it contributes
Thriving Community – A District that provides infrastructure for economic activity	The timely provision of utility services is essential to supporting growth
Safe and Healthy People A place where people are safe in their homes, work and public spaces Our services, infrastructure and environment enhance quality of life	Protects public health by ensuring a safe and viable wastewater disposal system We have reliable, efficient and well planned infrastructure that meet the needs of residents A resilient and adaptive community in a changing environment
Sustainable District and Environment We value the natural environment, biodiversity and landscapes	We preserve the receiving environment by ensuring the quality and quantity of discharges to the environment

Council identified a number of significant negative effects that the wastewater activity may have on the wellbeing of the community and the environment. Council developed appropriate mitigation measures to eliminate or minimise these effects.

1.3 Where are we headed?

Council's strategic goals for wastewater over the next ten years is:

- To ensure that adequate Wastewater activity are provided and maintained for the wellbeing of the public both now and in the reasonably foreseeable future.

- To ensure that the long-term operation and maintenance of the wastewater treatment plant is environmentally sustainable, including planning for future resource consents.
- To demonstrate responsible management in the operation, maintenance, renewal and disposal of Waimate District Council (Council) owned assets.

There are a number of key issues facing Council over the next ten years and beyond:

- Environmental compliance – Council operates the wastewater systems under resource consents granted by the Canterbury Regional Councils (ECan). These consents apply to wastewater collection and discharge. These consents require significant sampling, monitoring, operation and maintenance methodologies and regular reporting.
- Separated wastewater and stormwater systems
    - Inflow – through illegal connections such as roof downpipes, yard drains, or indirect connections with stormwater pipes
    - Infiltration –through joints, cracks and misaligned pipelines
    - Exfiltration - escape of wastewater from the wastewater collection system into the surrounding soil via cracks or malfunctioning pipe joints
- Central Government's 3 Waters Review and reform programme which has changed from 'Affordable Water' to 'Local Water Done Well' focussing on:
    - Repealing Water Services Entities legislation
    - Water quality i.e. safe, reliable drinking water
    - Water Services Infrastructure investment including Water Infrastructure Regulator
    - Improved management of wastewater and stormwater services
    - Financially sustainable water services
- Development of a plan on how Council will transition to a new water services model that meets water quality and infrastructure investment rules, while being financially sustainable in the long term
- Sludge management
- Increased focus on ageing and failing infrastructure
- Maintaining appropriate data and monitoring systems
- Ensure adequate in-house staff resource capacity and capability
- Investigating and implementing improved efficiencies
- Ongoing affordability of the wastewater system

The wastewater system represents a significant community investment. With age, asset condition and service potential reduce, and an important aspect of asset management is determining the right time and right level of renewals investment in order to maintain the agreed levels of service over the long term. Council will continue implementing the appropriate intervention strategies i.e. a combination of maintenance, repair and renewal activities to maintain the service.

1.4 How will we get there?

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 ten years Council plans to:

- Continue to collect, treat, and dispose of wastewater
- Separate stormwater and wastewater systems
- Upgrade systems to meet the environmental standards
- Develop Risk Management Plans (MfE - Action for Healthy Waterways)
- Plan for future development and needs
- Protect the environment through resource consent compliance
- Consult with the community on issues such as health and legislative compliance issues

This vision is supported by a detailed wastewater asset management plan.

1.5 What will it cost?

The table below summarises the wastewater 2024-2034 budget forecasts:

Table 1-2: 2024-2034 Budget Forecasts

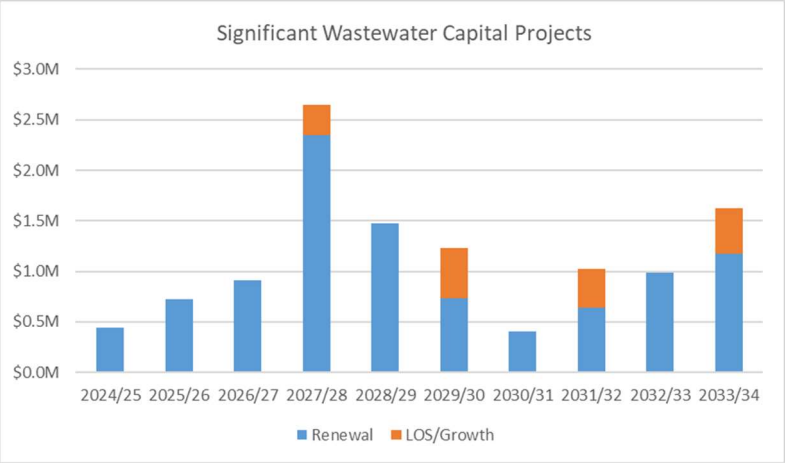
Values	Opex	Capex	Total
Enhanced AP 2024/25	933,590	444,880	1,378,470
2025/26	869,590	835,033	1,704,623
2026/27	905,098	1,006,774	1,911,871
2027/28	1,047,703	2,646,158	3,693,861
2028/29	1,093,888	1,494,076	2,587,965
2029/30	1,164,500	1,233,418	2,397,918
2030/31	1,324,052	410,195	1,734,248
2031/32	1,267,795	1,067,740	2,335,534
2032/33	1,311,321	1,011,498	2,322,818
2033/34	1,387,104	1,650,211	3,037,315
10 Year Total	**11,304,641**	**11,799,982**	**23,104,623**

Significant projects (>$300,000) and their funding sources are summarised in the following table and chart:

Table 1-3: Significant Wastewater Projects

Significant Capital Projects	Year	Inflated Amount
New Capital works (Growth & LOS)		**$1,633,632**
Edinburgh, Victoria & Nelson Sewer Fill in	2027/28	$300,305
Allan Street Sewer Extension	2029/30	$493,785
Manchester Street Sewer Extension	2031/32	$388,178
Hunts Rd Sewer Extension	2033/34	$451,364
Renewals		**$9,842,067**
Mains & Plant Renewals	2025 - 34	$ 9,842,067
Total		**11,475,699**

The chart below provides an overview of the 2024 LTP Significant Capital Projects:



To ensure ongoing affordability of the wastewater service Council will continue to consider options in delivering the wastewater service.

1.6 How well are we doing and how well do we measure progress?

Council will continue to report on the non-financial performance measures, in accordance with 261B of the Local Government Act 2002, as this covers the key expectations in terms of the delivery of the service.

Council have reviewed and updated its systems and processes to ensure alignment and compliance with these rules.

The linkage between community outcomes, levels of service and performance measurement is shown in the following table.

Table 1-4: Performance Measures

Community outcome	Level of Service	Performance Measure
Thriving Community – A District that provides infrastructure for economic activity	Council responds to problems quickly	Response & Resolution times (NFPM3)
Safe and Healthy People A place where people are safe in their homes, work and public spaces Our services, infrastructure and environment enhance quality of life	Council provides reliable and effective wastewater systems while complying with environmental standards	Number of complaints (NFPM4)
		Number of dry weather overflows from Council's sewerage system (NFPM1)
Sustainable District and Environment We value the natural environment, biodiversity and landscapes	Council provides wastewater systems that protect the natural environment	Compliance with Resource Consent conditions (NFPM 2)

1.7 What resources do we have and what resources do we need?

People –
The Water and Wastes Unit has 13 staff (12 full time equivalents), including (6) operational staff. The Water and Wastes Unit provides management and engineering expertise to the Asset Group. The Unit utilises Council inhouse unit and contractors to maintain, renew, and construct assets through various contractual agreements. The Unit augments its skill base through the engagement of specialist consultants as required to undertake specific projects and works. The Waters and

Wastes Unit is adequately resourced but the outcomes of the new regulatory framework and Government 3 Waters Review will place even greater demands on already stretched resources.

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.

Physical Assets

Council manages two wastewater systems. These systems consist of pipes, pump stations, treatment facilities and other assets.

Table 1-5: Wastewater Asset Summary

Item	Units
Length of wastewater mains	43.7km
Length of wastewater laterals	18.7km
Number of manholes	322
Number of pump stations	2

The latest valuation, June 2024, estimates the replacement value of the wastewater system to be $42.3m.

1.8 Who pays for it?

This activity is funded by targeted rates from properties that have access to wastewater systems.

2 INTRODUCTION

This section sets out the scope and objectives of this Asset Management Plan (AMP), describes the interrelationships with other planning documents of the Council and shows the AMP framework and describes the asset management progress over the last 15 years.

2.1 Purpose of the Asset Management Plan

The purpose of this AMP is to outline and to summarise in a coordinated manner the Council's long-term management approach (more commonly called Asset Management) for the provision and maintenance of Wastewater activity throughout the District.

This AMP demonstrates how Council will:

- Detail the extent and quality of services demanded (or required) by the community and legislation now and in the future.
- Have clear linkage to community agreed outcomes and the agreed Levels of Service.
- Prudently manage the acquisition, maintenance, operation, renewal and disposal of wastewater assets in ways that optimise the value of services delivered to the community.
- Assess the risks of failing to deliver Levels of Service for its activities and provide appropriate means of mitigating those risks.
- Justify short, medium and long term funding requirements.
- Manage the risk of asset failure.
- Provide adequate funding to manage the assets according to assessed priorities.
- Proactively improve knowledge of its assets.

This AMP is intended to be read in conjunction with the enhanced 2024/25 Annual Plan and 2025-34 LTP and fulfils requirements of the Local Government Act 2002 (and amendments), Schedule 10.

Asset Management
The overall objective of Asset Management is to:

Deliver the required level of service to existing and future customers in the most cost effective manner

2.2 Time Period of this Plan

This Plan unusually covers a nine year period 2025-2034 due to the following:-

The Water Services Acts Repeal Act was enacted in February 2024, and includes a number of transitional arrangement(s) for local authorities. The Act will include transitional arrangements for local authorities to include water services provision in their 2024-34 long-term plans, including:
an
…provisions allowing local authorities to defer their 2024-2034 long-term plan by a year, replaced by an 'enhanced' annual plan for the 2024/25 financial year. A council must make a decision to do so by 30 April 2024, and if it does not, it may be authorised to defer its plan by Order in Council.

Based on this, Council decided to defer the 2024-34 Long-term Plan for one year and consult on a 2024-25 Enhanced Annual Plan with the additions laid out in the new legislation and adopts a Long-Term Plan (2025-34) by 30 June 2025.

The financial budget forecasts in this AMP cover:

- 2024/25 Enhanced Annual Plan budgets
- 2025/26 -2033/34 LTP budgets

2.3 Assets Included in This Plan

The Council is responsible for the Waimate urban wastewater system.

The Council also holds a resource consent for the St Andrews wastewater system. A replacement consent was granted on 24 August 2017 that closely replicates the original consent. This consent has a duration of 15 years. This is a private system consisting of individual private septic tanks on each property. Council engage a septage disposal contractor to maintain each septic tank to meet the requirements of the consent. Additionally, staff visually monitor for other conditions of the consent.

The inventory of public wastewater assets owned by the Council and managed by the Wastewater activity is shown in the table below:

Table 2-1: Summary of Wastewater Assets Owned by WDC

Asset Type	Length/Number	Replacement Cost
Reticulation		
Pipe	43.7 km	$23.0m
Laterals (*estimate only– mapping incomplete*)	18.7km	$10.8m
Manholes	322	$3.9m
Plant		
WWTP		$4.5m
Milford Pump Station		$0.12m
Total		**$42.3m**

Asset quantities from Univerus Assets and Replacement costs from 3 Waters Infrastructure Valuation as at 30 June 2024

2.4 Relationship with Other Plans

The AMP relates to the LTP and other key Council plans, documents, policies and processes. These are mainly driven by legislation and obligations that central government, through legislation, assign to local authorities. The community outcomes guide the strategic and day-to-day decision making for the Council.

2.5 How This Plan will be Used

2.5.1 Development of an Asset Management Culture

The ongoing development and successful implementation of asset management requires an organisational culture of asset management from both 'bottom-up' and 'top-down'. To be successful the asset management culture needs to be consistently modelled and supported by the Chief Executive and senior managers in conjunction with the elected Council.

It also needs to align with and reflect the Council's LTP and strategies. These requirements are supported in the new ISO 55000 standard for asset management. This process has been reinforced

by the establishment of the Council's Asset Management Policy in 2009 and the AMP policy process included in Section 2.7.

2.5.2 Roles and Responsibilities of Council Staff

The roles and responsibilities of Council staff have been defined in respect to the ongoing to enable the AMP to remain relevant and current. The following table details how this is and will be carried out within Council:

Table 2-2: Activity Management Plan Enactment

	Item	How is this Done
1	Organisational culture of asset management developed	Asset Management Policy 2009
2	Council Staff understand the reasons for the plans and the implications for the long term use of them	On department basis
3	The AMPs are adopted/accepted by staff	Adopted by Council
4	Council staff understand what is in the plans and how it could affect their day to day work including their responsibilities and reporting requirements as detailed in the different sections within the AMP	Training Programme / inputs required to develop and update the AMP's
5	Understand all the reporting requirements for Levels of Service and Internal Benchmarking	Training Programme and Implementation of LGA 2002 amendments

2.5.3 Resourcing of Asset Management Programmes

To be effective asset management programmes must be adequately resourced and therefore require ongoing budget to deliver identified improvements and keep plans and processes current with evolving practice. For asset management to be successful in Waimate District there must be a commitment recognised across the organisation. This commitment must translate into budget, human resources, and management accountability.

2.5.4 Implementation

This AMP includes improvement and expenditure programmes that will be implemented with the objective of achieving community outcomes and delivering the stated Levels of Service for this Activity.

2.6 Wastewater Activity Outcomes

The Council provides Wastewater activity for the following reasons:

- Protects public health by ensuring a safe and viable wastewater disposal system. The provision of Wastewater Activity enables properly treated wastewater discharges to the environment thereby promotes the protection of the environment.
- We have reliable, efficient and well planned infrastructure that meet the needs of residents.
- The timely provision of utility services is essential to supporting growth.
- We preserve the environment by ensuring the quality and quantity of discharges to the environment.

2.7 Council's AM Policy – Appropriate Level

The WDC has an adopted Asset Management Policy. The purposes of the policy are to:

- satisfy the requirements outlined in the 2020 IIMM, Section 2.1.5

- determine the appropriate level of sophistication for asset management of infrastructure activities (Roading, Utilities – (Water, Stormwater & Wastewater), Solid Waste, Community Property, and Parks & Reserves) to be managed.
- ensure that Council's service delivery is optimised to deliver the purpose of local government (as defined in the Local Government Act 2002), agreed community outcomes and levels of service, manage related risks, and optimise expenditure over the entire lifecycle of the service delivery, using appropriate assets and non-asset solutions as required.

This asset management plan and related activities have been prepared within this policy framework.

2.7.1 Objective of the Asset Management Policy

The objective of the Council's Asset Management Policy is to ensure that Council's service delivery is optimised to deliver agreed community outcomes and Levels of Service, manage related risks, and optimise expenditure over the entire life cycle of the service delivery, using appropriate assets and levels of management as required. The delivery of service is required to be sustainable in the long term and deliver on Council's economic, environmental, social, and cultural objectives.

The Asset Management Policy requires that the management of assets be in a systematic process to guide planning, acquisition, operation and maintenance, renewal and disposal of the required assets.

The Councils Asset Management Policy sets the appropriate level of asset management practice for Council's Utilities, Community Facilities and Transportation.

2.7.2 Asset Management Policy Principles

The following principles will be used by Council to guide asset management planning and decision making:

- Effective consultation to determine appropriate Levels of Service.
- Ensuring service delivery needs form the basis of asset management.
- Integration of asset management within and across Council utilising corporate, financial, business and budgetary planning using activity management plans and Council's LTP to demonstrate this.
- Integration of asset management within Council's strategic, tactical and operational planning frameworks.
- Informed decision making taking a lifecycle management and inter-generational approach to asset planning.
- Transparent and accountable asset management decision making.
- Sustainable management providing for present needs whilst sustaining resources for future generations.

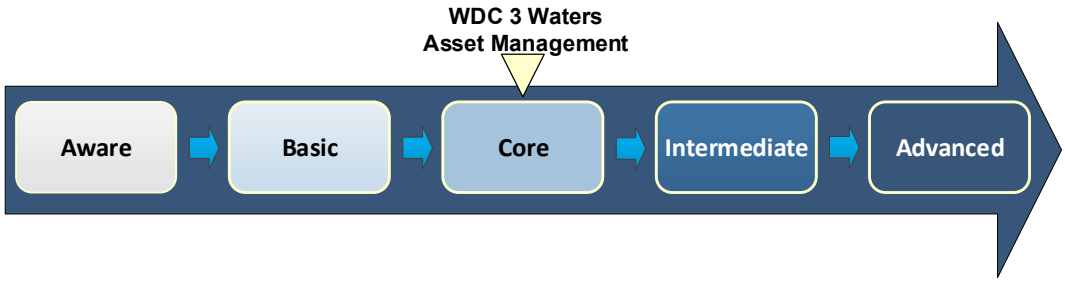
2.7.3 Policy Linkages to Other Plans

This Asset Management Policy links to Council's LTP and the Wastewater activity asset management. An approach where planning is based around communities of interest is favoured, as this aims to promote an integrated management regime and encourage efficiencies across the District's Wastewater activity.

2.7.4 Structured Assessment of Asset Management Practice

Council has undertaken a structured assessment of the appropriate level of asset management practice for the Wastewater assets in August 2009. This structured assessment followed the guidance provided in Section 2.2.4 of the International Infrastructure Management Manual (IIMM) 2006. The results of this assessment were that the Wastewater was considered Core.

Figure 2-1: Level of Asset Management



Future structured assessment should be carried out with reference to Section 2.1.3 of the International Infrastructure Management Manual (IIMM) 2011

2.7.5 Review of Policy

This Asset Management Policy -316 has been adopted by Council on 15 August 2023.

2.7.6 Asset Management Implementation Strategy

Council staff has completed a detailed analysis of appropriate asset management practice within the guidance offered by this Policy. This analysis has examined asset description, Levels of Service, managing growth, risk management, asset lifecycle decision making, financial forecasts, planning assumptions and confidence levels, improvement programmes, use of qualified persons and Council commitment to asset management planning.

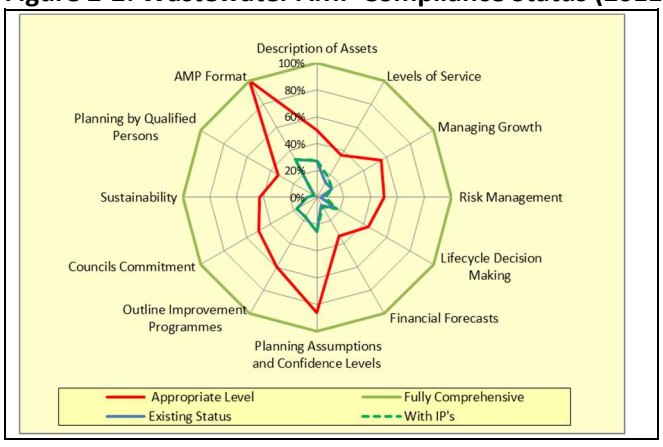
2.7.7 Appropriate Practice Policy

Develop long term improvement programme to achieve the Council's appropriate practice policy.

2.7.8 Wastewater AMP Compliance Status

The assessment on the Wastewater AMP in 2014 indicated an increase in the level of sophistication of the AMP and management of the assets since 2012. A long term programme to achieve the appropriate AM level is required. The improvements shown in Section 12 will assist in this process.

Figure 2-2: Wastewater AMP Compliance Status (2011 & 2014)



Key Stakeholders

Key stakeholders are those who have significant specific involvement with the assets and/or the service facilitated by the assets and describes their particular main interests and is limited to the main issues for key stakeholder groups. 'Public Service providers' include schools, dentists, doctors, hospitals, and other government organisations. 'Asset Managers' are those District Council staff (engineers and others) whose responsibility it is to manage the services made possible by the assets covered in this AMP.

The key stakeholders and the outcomes that they require for the Wastewater Activity are detailed in the table below. Different issues will require different levels of consultation; from a broad approach to specific and limited to those directly affected. This is indicated under Consultation Range (Broad ***, Moderate **, Limited *).

Table 2-3: Waimate District Stakeholders

	Key Stakeholder	Consultation Range	Desired Stakeholder Outcome(s)
External	Council customers and resident population	***	Reliable service that meets strategic and sustainable drivers
	Canterbury Regional Council	**	Resource use is sustainable as directed in the RMA 1991
	Local Government New Zealand or Central Government	*	Ensure that Local Government Act is complied with (via Auditor-General)
	Department of Conservation	*	Enhance conservation value of natural waterways (i.e. rivers/streams)
	Local Iwi/Ngai Tahu	*	Enhance waterways for Mahinga kai, cultural/spiritual values
	Taumata Arowai	**	Compliance with regulator requirements
	Local Businesses/Industries	**	Wastewater activity to suit commercial needs and expansion, at affordable cost
	Wider Community	*	Enhance landscape and aesthetic values of farmland and plains.
	Ministry of Health	*	Wastewater effluent quality is suitable, consistently assured, does not spread diseases
Internal	Waimate District Council	***	Maximise the four aspects of well-being through provision of the Wastewater activity Activity
	Elected Officials	***	Owner of assets, responsible for sustainable service levels under the LGA 2002 (2012 amendment)
	Council committees	*	As per delegated authority from Council
	Executive	***	Compliance with regulations, service reliability, quality and economy
	Asset Managers	*	As above plus policy, planning and implementation of infrastructure and service management activities (e.g. operations, demand management, maintenance, construction). Safety. Effective corporate support for decision-making, service management, procurement, finance, communications, I.T., staff and other resources
	Planners	*	AMP support for Long-term Community Plans. Infrastructure support for current/future district activities

Key Stakeholder		Consultation Range	Desired Stakeholder Outcome(s)
	Finance	**	Proper accounting for assets and for services consumed by asset management activities
	Customer Services	*	Systems which minimise and resolve complaints/enquiries about service
	Information Services	*	Clarity of technical and budget requirements for systems and support

2.7.9 Relationships with Other Bodies and Organisations

Tangata Whenua - Kaitaikitanga, tikanga

For Maori, linking the past, present and the future is an important concept of life. There is much value in learning from the past in planning for the future. Kaitiakitanga – safeguarding our future (guardianship) and Tikanga (protocols) are two powerful concepts embodied in Maori culture.

Council will seek to understand and exercise the principles of Kaitiakitanga so those who follow can enjoy what we enjoy today and seek to establish the right Tikanga that will enable us to deliver water services in an integrated and sustainable way.

Canterbury Regional Council - Environment Canterbury (ECan)

Environment Canterbury is delegated responsibility for management of the water resources within the District and achieves this through Regional Plans. These plans provide a framework for the sustainable environmental management of Canterbury's physical and natural resources. The change of use of land, taking of water, diverting of water, disposal of water, and discharge to air, require resource consents. Council engages with Environment Canterbury and submits on the various Regional Plans, Frameworks and regulations to ensure that the interests of Waimate District are adequately represented and considered. Council must liaise with Environment Canterbury in obtaining and complying with consents in relation to the Water services Activity.

Water New Zealand

The WNZ provides a forum for the exchange of ideas between those involved in the 'water industry'. The WNZ also manages projects such as the development of national codes of practice. In recent times, the WNZ has taken on the role of lobbyist to Government on water issues.

Engineering New Zealand, IPWEA, Āpōpō LGNZ, Taituarā

Each of these organisations provides peer support and exchange of information to foster appropriate practice and share/manage issues that arise.

2.7.10 Community and Public Health

Community and Public Health (CPH) have an interest in ensuring the public health of communities on behalf of the Ministry of Health. With respect to the Wastewater activity this role is predominantly concerned with the disposal of wastewater effluent where this could compromise community health.

2.7.11 Other Organisations

Council has a consultative relationship with other organisations including:

- Fish and Game, Central South Island

- Irrigation New Zealand
- Meridian
- Federated Farmers

2.8 Progress Since Last AMP

2.8.1 Background

Asset management in New Zealand has developed over the last 20 years in response to the requirement to justify and improve the level of investment in and management of community driven infrastructure. Council asset management has mirrored this development to the point that it will be at the appropriate level within six to nine years.

2.8.2 Key Advances in the 2024 AMP

The following matters represent the most significant changes to this Wastewater AMP, over the period 2011 to 2023:

  - Data – Systems and Quality
  - Asset Data Capture
  - Asset Data Quality
  - Complaints resolution
- Criticality Assessments
- Government and Industry direction

2.9 AMP Information

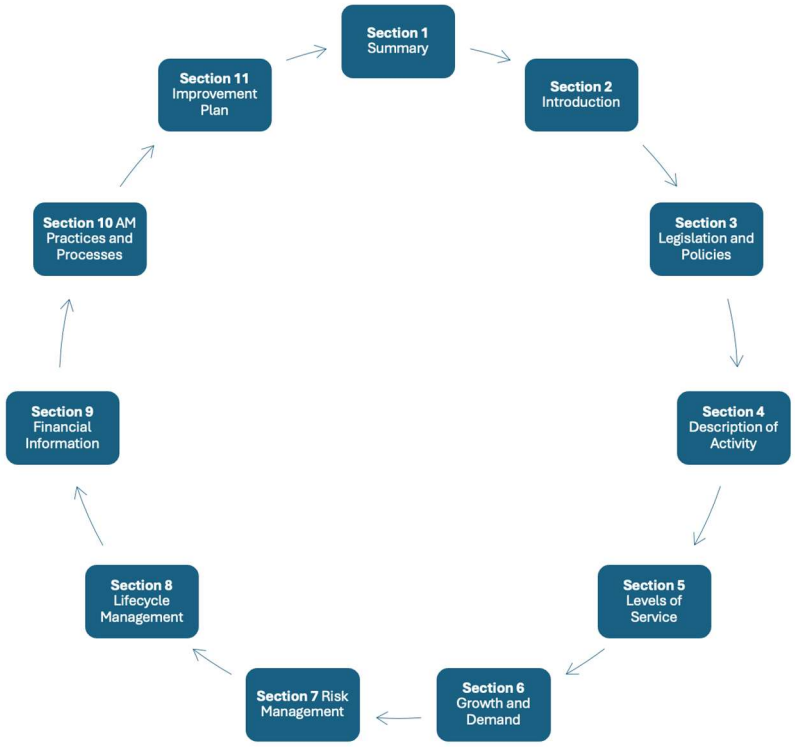
The information for this Wastewater AMP has been derived from the following sources:

  - 2024 Valuation
  - 2021 AMP
  - Council reports and staff knowledge

2.10 AMP Format

A top down approach has been taken to develop the AMP, using existing data followed by data improvement. The structure of this plan mirrors the logical process followed for asset management planning as shown in the figure below:

Figure 2-3: Asset Management Process



2.10.1 Key Elements of this Asset Management Plan

The key elements of this AMP are shown in the table below

Table 2-4: Key Elements of this AMP

Section	Content
Section 1: Summary	Describe the challenges and aspirations faced by the wastewater activity and inform of the strategic direction for the short term and long term.
Section 2: Introduction	Sets out the purpose of this AMP, indicates the key stakeholders, describes the asset management progress over the last 15 years and shows the plan framework.
Section 3: Legislation and policy	Details the legislative, policy and planning environment
Section 4: Description of the Water Services Activity	Covers the rationale for ownership of the wastewater assets and the description of assets covered under this AMP.
Section 5: Levels of Service	The Levels of Service for wastewater are defined and the performance measures by which the service levels will be assessed.
Section 6 Growth and Demand	Provides details of growth forecasts, which affect the management, and utilisation of the wastewater assets.
Section 7: Risk Management	Details the Risk Management Processes utilised by Council for assessing and managing risk within the wastewater activity.
Section 8: Lifecycle Management	Outlines what is planned to manage and operate the assets at the agreed levels of service while optimising lifecycle costs.
Section 9: Financial	Identifies the financial requirements resulting from all the information presented in the previous sections.
Section 10: AM Practices and Processes	Outlines the information available on the assets, information systems used, and process used to make decisions on how the asset will be managed. It also provides details on planning for monitoring the performance of the AMP.
Section 11: Improvement Plan	This section details the improvements to Asset Management within Council that will lead to an increase in confidence in the management of the assets.

3 GUIDING PRINCIPLES, LEGISLATION, POLICY AND RELATIONSHIPS

3.1 National Strategies and Plans

3.1.1 3 Waters Reform - Local Water Done Well

"Local Water Done Well" is the Coalition Government's plan for managing water services delivery and infrastructure following the repeal of Water Services Reform legislation (3 Waters) in February 2024. The "Local Water Done Well" policy framework aims to address concerns about New Zealand's water quality and water services' infrastructure investment, while keeping control over water services and assets local.

Following the 2023 elections, the new Government repealed legislation relating to 3 Waters service delivery, replacing it with its Local Water Done Well policy. Local Water Done Well policies include:

- Establishing a regulator to oversee water infrastructure, ensuring sustainability, fair pricing, and quality standards,
- Implementing new financial rules, requiring self-funding water services, revenue to cover maintenance, and sufficient borrowing for growth, and
- Within a year of repealing the 10-entity model, councils have to submit alternative service delivery models (Water Service Delivery Plans) to the Minister for approval. There is flexibility for councils to choose a model and governance structure that works best for them.

The new water services legislation includes:

- The **Water Services Acts Repeal Act (enacted in February 2024)** repealed the previous Government's water services legislation and restored continues council ownership and control of water services.

- The **Local Government Water Services Preliminary Arrangements Act** was enacted on 2 September 2024. Key areas included in this Act are:
  - Requirements for councils to develop Water Services Delivery Plans (within 12 months of the Bill being enacted).
  - Requirements for those councils to include in those Plans baseline information about their water services operations, assets, revenue, expenditure, pricing, and projected capital expenditure, as well as necessary financing arrangements, as a first step to future economic regulation.
  - Streamlined consultation and decision-making processes for setting up council-controlled organisations that deliver water services, and joint local government arrangements, both of which are currently provided for in the Local Government Act.
  - Provisions to enable new, financially sustainable model for Watercare
  - Interim changes to the Water Services Act that means the Te Mana o te Wai hierarchy of obligations in the National Policy Statement for Freshwater Management (NPS-FM) will not apply when Taumata Arowai sets wastewater standards.

- The proposed **Local Government Water Services Bill** will establish the enduring settings for the new water services system.

At this time Council is responding to the new legislative requirements, and is in the process of investigating water service delivery options and preparing a Water Service Delivery Plan. Council will continue to monitor and respond to further development with the Government's Local Water Done Well programme.

3.1.2 Other Government/Industry Direction

The table below summarises other key government and industry direction:

Table 3-1: Other Key Government/Industry Direction

Source	Direction
Matters arising from our audits of the 2021-31 long-term plans OAG July 2022	Councils are moving to address historical underinvestment in their infrastructure. Many councils made tangible progress in collecting better condition and performance information about their critical assets. Councils set rates at higher levels than they may have previously to fund the increasing costs that they expect to face. Councils provided more discussion about climate change in their long-term plans, including what they were doing to adapt to, and mitigate the risks from, the impacts of climate change on their communities. Councils discussed the uncertainty created by the current significant reforms – 3 Waters reforms, the reform of the Resource Management Act, and the future for Local Government review. These reforms are making the operating context for councils challenging.
Consulting matters: Observations on the 2021-31 consultation documents (OAG December 2021)	Waimate District Council was part of 31 Council who received an unmodified audit opinion with "emphasis of matter" paragraph in respect of the uncertainty over the 3 Waters reforms only
Local Government NZ	In recent years LGNZ have been working on a number of projects and released a number of related papers: **Housing** is a significant issue for our communities' social and economic futures. Unaffordable housing is having a negative impact on local economies, discretionary household expenditure and social well-being. 'The case for councils being community housing providers' - a background paper outlining options to support councils playing more of a role in meeting social housing needs **Climate change** - leading and championing policy to deal with the impacts of climate change is a key policy priority for LGNZ. Climate change poses an unprecedented level of risk and adapting to and mitigating the impacts of climate change is a new priority focus for councils. The report 'Community engagement on climate change adaptation (Case Studies) documents the challenges three Councils faced and focus on the process of engagement itself. **Localism** - Local government is calling for a shift in the way public decisions are made by advocating for greater self-government at the local and an active programme of devolution and decentralisation.

Source	Direction
Vulnerable: the quantum of local government infrastructure exposed to sea level rise Local Government NZ January 2019	This project has two intended outputs. • The first is to research the current quantity and value of infrastructure (roads, 3 Waters and buildings) exposed to sea level rise at four increments; 0.5, 1.0, 1.5 and 3.0 metres, and to quantify replacement value. The second and more important output of this research is to provide responses to rising sea levels. This study intentionally avoids specific and local costs, and targets discussion at a regional and national level in order to highlight trends and general areas of high and low priority. It raises questions about how to improve procurement, appropriately share management of risk, and communicate with stakeholders about priorities.
Water NZ Competency Framework Water NZ	This document explores the workforce skills and capabilities for an effective, efficient, accountable and resilient 3 Waters sector in New Zealand. It describes what people should be able to do and what they need to know to competently undertake their work. It is a work in progress and includes the following roles. • Drinking Water Treatment Operators • Wastewater Treatment Operators • Drinking Water Distribution Operators (to be developed) • Wastewater Network Operator (to be developed)

3.1.3 Infrastructure Commission, Te Waihanga

The New Zealand Infrastructure Commission – Te Waihanga – was established in 2019 as an Autonomous Crown Entity to carry out two broad functions – strategy and planning and procurement and delivery support on infrastructure investment.

InfraCom - Te Waihanga will work with central and local government, the private sector, iwi and other stakeholders, to develop a 30-year infrastructure strategy to replace the National Infrastructure Plan.

'Rautaki Hanganga o Aotearoa 2022 – 2052 New Zealand Infrastructure Strategy' was published during 2022. The strategy is focused on five objectives i.e. the things we need to do as a nation to achieve the vision of a thriving New Zealand.

1. Enabling a net-zero carbon emissions Aotearoa through rapid development of clean energy and reducing the carbon emissions from infrastructure.
2. Supporting towns and regions to flourish through better physical and digital connectivity and freight and supply chains.
3. Building attractive and inclusive cities that respond to population growth, unaffordable housing and traffic congestion through better long-term planning, pricing and good public transport.
4. Strengthening resilience to shocks and stresses by taking a coordinated and planned approach to risks based on good-quality information.
5. Moving to a circular economy by setting a national direction for waste, managing pressure on landfills and waste-recovery infrastructure and developing a framework for the operation of waste-to-energy infrastructure.

3.1.4 National Policy Statement for Freshwater Management (NPSFM)

The Government has commenced the process to replace the National Policy Statement for Freshwater Management This process is expected to take between 18 to 24 months.

Te Mana o te Wai

The NPSFM gave effect to *Te Mana o te Wai*, this is a concept that refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. Notwithstanding the changes to the NPSFM, the concept of *Te Mana o te Wai* remains relevant to all freshwater management as it helps underpin underpins the protection and improvement of our rivers, streams, lakes and other waterbodies and aims to ensure:

- Te Hauora o te Wai - the health and well-being of the water
- Te Hauora o te Tangata - the health and well-being of people
- Te Hauora o te Taiao - the health and well-being of the environment

Changes to the Water Services Act that means the Te Mana o te Wai hierarchy of obligations in the National Policy Statement for Freshwater Management (NPSFM) will not apply when Taumata Arowai sets wastewater standards.

3.1.5 National Policy Statement on Urban Development Capacity

The National Policy Statement on Urban Development Capacity 2020 (NPS-UDC) sets out the objectives and policies for providing development capacity under the Resource Management Act 1991.

The amended NPS-UDC came into effect on 20 August 2020 and has been described by the government as “the core issue of increasing land supply”.

The NPS-UDC directs local authorities to provide sufficient development capacity in their resource management plans for housing and business growth to meet demand.

Development capacity refers to the amount of development allowed by zoning and regulations in plans that is supported by infrastructure. This development can be “outwards” (on greenfield sites) and/or “upwards” (by intensifying existing urban environments).

Development infrastructure means the extent they are controlled by a local authority or council-controlled organisation, network infrastructure for water supply, wastewater, or stormwater, and land transport.

3.2 Key Legislation and Regulation– Implications for Asset Management

Level. Significant legislation and regulations affecting the Waters activities are provided in Table 3-2 below. Council must comply with any relevant legislation enacted by Parliament. Commentary related to some of the key legislation is provided below.

Different legislation has differing levels of impact on the Water Services activities; this is indicated under the Impact Range (Broad ***, Moderate **, Limited *).

Table 3-2: Legislation and Regulation Affecting the Water Services

Legislation and Regulation	Wastewater activity Range
Building Act 2004 (and amendments)	*
Civil Defence Emergency Management Act 2002	***
Climate Change (Emissions Trading and Renewable Preference) Act 2008	*
Climate Change Response Act 2002 (and amendments)	**
Energy Efficiency and Conservation Act 2000	*
Environmental Protection Authority Act 2011	*
Epidemic Preparedness Amendment Act 2010	*
Fire and Emergency New Zealand Act 2017	**
Health (Drinking Water) Amendment Act 2007	***
Health Act 1956	***
Health and Safety at Work Act 2015	***
Heritage New Zealand Pouhere Taonga Act 2014	*
Infrastructure (Amendments Relating to Utilities Access) Act 2010	**
Local Government Act 2002 (and amendments)	***
Local Government Act 1974 (and amendments)	**
Local Government Rating Act 2002 (and amendments)	**
Local Government Rating Act 1979	*
Ngai Tahu Claims Settlement Act 1998	*
Public Works Act 1981 (and amendments)	*
Reserves Act 1977 (and amendments)	*
Resource Management Act 1991 (and amendments)	***
Taumata Arowai – the Water Services Regulator Act 2020	***
Water Services Act 2021 (parts repealed and updated in 2024)	***
Water Services Acts Repeal Act 2024	***
Local Government Water Services Preliminary Arrangements Act 2024	***
Local Government Water Services Bill	***
Utilities Access Act 2010	***
Water Services (Drinking Water Standards for New Zealand) Regulations 2022	***
Drinking Water Quality Assurance Rules 2022	***

See Appendix D for more information.

3.2.1 Major Legislation Details

The legislation that has or will have the most effect on the Water services is expanded in **Error! Reference source not found.**.

3.2.2 Relevant Regulations Affecting this Activity

Local Government (Financial Reporting) Regulations 2011

3.3 Standards, Codes of Practice and Guidelines

National environmental standards, design standards (AS/NZS ISO), Codes of Practice and Guidelines provide technical direction. National Standards must be complied under the direction of relevant legislation.

3.3.1 National Environmental Standards

National environmental standards are regulations issued under the Resource Management Act 1991 (RMA). They prescribe technical standards, methods and other requirements for environmental matters.

Local and regional councils [or local government] must enforce these standards (or they can enforce stricter standards when the standard provides for this). In this way, national environmental standards ensure consistent minimum standards are maintained throughout all New Zealand's regions and districts.

3.3.2 AS/NZS Standards

The Code for Subdivision and Development AS/NZS 4404 is the principle document defining design requirements. Wherever possible, relevant AS/NZS standards are used as the basis for determining standards of design and construction.

Standards and guidelines relevant to the Wastewater activity are shown in the table below.

Table 3-3: National Environmental Standards and Guidelines

Year Released	Technical Discipline: Asset Management
2023	Āpōpō Guide
2020	NAMS International Infrastructure Management Manual
2015	NAMS International Infrastructure Management Manual
2011	NAMS International Infrastructure Management Manual
2014	ISO 55000, ISO 55001 and ISO 55002 - Asset Management
2007 v2.0	NAMS Developing Levels of Service and Performance Measures Guidelines
2004 v1.0	NAMS Optimised Decision Making Guidelines
2006 v2.0	NAMS Infrastructure Asset Valuation and Depreciation Guidelines
2006	NZWWA New Zealand Pipe Inspection Manual
1999	NZWWA The New Zealand Infrastructural Asset Grading Guidelines
	Technical Discipline: National Environmental Standards
2006	NES Sources of Human Drinking-Water
2008	Code of Practice for Fire Fighting Water Supplies NZS PAS 4509:2008 set the minimum flow rates and pressure that must be obtainable from fire hydrants and spacing's.

3.3.3 NAMS International Infrastructure Management Manual

This AMP refers to both the 2011 and 2015 guidelines, with significant improvements made in areas including sustainability and Asset Management Policy.

3.3.4 ISO 55000 Asset Management 2014

This international standard was released in January 2014 and makes the previous BSI PAS55 Asset Management (2008) standards redundant. The new standard outlines the requirements for a management system for achieving a balance between cost, risk and performance in asset management to help guide asset related decision making and activities.

At the time of writing this Water Services AMP Council has yet to review whether current Council asset management practices will be changed to seek conformance with ISO 55000. However, improvement areas have been identified in this AMP which will assist in the move towards aligning with the requirements of ISO 55000 if this is the direction Council decide to take in the future.

3.3.5 ĀpōpōGuide

The Āpōpō Guide is an online resource for those practicing infrastructure asset management in Aotearoa New Zealand.

The Āpōpō Guide is more than just a guide - it is a comprehensive compilation of best practices, expert insights, and te ao Māori principles - tailored specifically to the unique context of Aotearoa New Zealand. It brings together internationally sourced practices (such as ISO 55000) with locally developed guidance (including the Āpōpō digital badges) to provide a holistic approach to infrastructure asset management.

3.4 Regional Plans

3.4.1 Natural Resources Regional Plan (NRRP)

The NRRP was revoked during February 2017 and replaced with the LWRP.

3.4.2 Land and Water Regional Plan (LWRP)

The Land & Water Regional Plan is a new planning framework for Canterbury and aims to provide clear direction on how land and water are to be managed and help deliver community aspirations for water quality in both urban and rural areas.

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.

This LWRP is made up of 16 sections and a map volume:

- the first describes Canterbury's land and water resources, interrelated issues that need to be managed, the key partnerships, relationships and processes already underway, including the Canterbury Water Management Strategy (CWMS).

- The second section describes how the Plan works and contains the definitions used in the Plan.
- The subsequent three sections cover the region-wide objectives, policies, and rules.
- Sections 6 to 15 inclusive contain sub-region catchment specific policies and rules, and
- Section 16 contains the schedules.
- The maps referred to in the rules are in a separate map volume.

Rule 5.7 to 5.9 address on-site wastewater. Rule 5.84 to 5.88 address sewerage systems (community wastewater). The existing discharge for Waimate is a discretionary activity and operated under current consents.

3.4.3 Regional and Iwi Plans

Regional and Iwi Plans affecting the Wastewater Activity are listed in the table below. Each of these is a significant document.

Table 3-4: Regional and Iwi Plan Documents

Canterbury Regional Council Plans	Key Impacts on Wastewater activity
Canterbury Land and Water Regional Plan (LWRP)	Compliance through existing resource consents
Regional Coastal Environment Plan 2011: Covers coastal marine area and the coastal environment and its integrated management.	Nil
Regional Policy Statement: Sets the framework for resource management in Canterbury for the next 10 to 15 years	Became operative on 15 January 2013 and has undergone minor amendments since.

3.4.4 Canterbury Mayoral Forum

The Waimate District Council is part of the Canterbury Mayoral Forum (11 member Councils) consisting of:

- Kaikōura District,
- Hurunui District,
- Waimakariri District,
- Christchurch City,
- Selwyn District,
- Ashburton District,
- Timaru District,
- Mackenzie District,
- Waimate District,
- Waitaki District (part of which lies within the Canterbury Regional Council area), and
- Environment Canterbury

Region wide issues identified by the Joint Working Group include:

- a need for more effort in compliance, monitoring and enforcement
- a greater focus on biodiversity outcomes monitoring and reporting
- opportunities for councils to share approaches and share resources
- addressing scale and complexities of issues, recognising the size of rating bases and capacities of councils.

Key work by Council supporting ecosystem health and biodiversity, drinking water and water use efficiency targets include:

- ecosystem health and biodiversity
  - restore Wainono lagoon
  - District Plan
- 3 Waters
  - Major drinking water upgrades including Hook-Waituna, , Waihaorunga and Waikakahi
  - Water safety plans in place and implemented
  - Global stormwater discharge consent in place
  - 3 Waters infrastructure renewals
- water use efficiency
  - water savings through upgrade of ageing infrastructure
  - water conservation measures in place
  - urban toby replacement with manifold meters (complete)

Key actions to meet 2025 Goals are tabled below:

Table 3-5: Key Actions to meet 2025 Goals

Ecosystem Health
Biodiversity **Lowland Stream health** Fulfil requirements to obtain and comply with stormwater consents for townships by 2025. Progress improvement to stormwater infrastructure to reduce ecological damage to lowland streams from sediment and contaminants. Continue regular community education/behaviour change campaigns on stormwater issues and management.
Lowland Stream health Review the state and operation of the district's wastewater treatment plant infrastructure to address and reduce potential impacts on the district's highly valued rivers.
Biodiversity **Drylands** Identify and map SNAs on private land. Review status of SNAs listed in District Plan in line with NPSIB criteria and requirements by 2026. Implement system to actively protect SNAs and maintain indigenous vegetation. Work with Environment Canterbury to develop a biodiversity monitoring strategy. Secure funding for shared biodiversity role to undertake compliance monitoring. Advocate for indigenous biodiversity through regular education/behaviour change campaigns to improve understanding of the importance of protecting and conserving indigenous vegetation.
Biodiversity: **Drylands / Hill and High country streams** Review vegetation clearance rules as part of District Plan review to protect indigenous vegetation. Advocate for indigenous biodiversity through regular education/behaviour change campaigns to improve understanding of the importance of protecting and conserving indigenous vegetation.
Source Water Quality
Priority planning for water supply wells and new treatment plants, including rural water schemes (Waihaorunga, Cannington-Motukaika, and Waikakai). Review the state and operation of the district's wastewater treatment plant infrastructure to address and reduce potential impacts on the district's highly valued rivers and source groundwater Raise awareness of health impacts from high nitrate in drinking water. Run campaigns to recommend regular testing of private bores and consider options for secure water supply
Water Use Efficiency
Improve compliance with national regulations on the measurement and reporting of water takes.

Ecosystem Health
Manage water demand through meeting requirements under LWRP. Run local public relations education/behaviour change campaigns on water use efficiency to raise awareness and reduce usage.

Environment Canterbury provides quarterly updates to the Chief Executives Forum and Mayoral Forum on the regionwide progress towards implementing the CWMS. These quarterly reports provide a summary of the last three months' progress of zone committee projects and provide information on the latest freshwater related policy and RMA planning.

As work progresses on implementing the Fit for Future work programme, future quarterly reports to the Mayoral Forum will focus on reporting on the delivery of the CWMS Targets and review of the Canterbury Biodiversity Strategy in line with national direction.

3.5 Council's Strategies, Plans and Bylaws

3.5.1 Council Strategies

The following Council Strategies have impacts and are considered as part of the Stormwater services Activity

- District Wide Strategy
- Economic Development Strategy
- Procurement Strategy
- Infrastructure Strategy

3.5.2 Council Planning Documents

The following Council Planning Documents have impacts and are considered as part of the Water Services Activity

- Waimate District Long Term Plan 2021-31 (current)
- Waimate District Long Term Plan 2025-34 (proposed)
- Waimate District Plan
- Waimate District Council Engineering Design Standards for Subdivisions and Development
- Structure Plans
- Waimate District Council AMPs

3.5.3 Council Bylaws

Section 146 of the Local Government Act 2002 provides for a Territorial Authority to make Bylaws in its district for the purposes of managing, regulating against, or protecting from damage, misuse, or loss, or for preventing the use of; the land, structures, or infrastructure associated with the Wastewater activity.

Waimate District Council Consolidated Bylaw 2018, Chapter on Water Services consist of six parts:

- Part 1 General Conditions, applicable to all Network Infrastructure Services.
- Part 2 Urban Water Supply
- Part 3 Rural Water Supply
- Part 4 Stormwater Drainage
- Part 5 Sewerage
- Part 6 Trade Waste

The bylaw defines standards and obligations for the discharge, conditions of connection and infringements.

3.5.4 Council Policies

Significance and Engagement Policy

Waimate District Council developed the Significance and Engagement Policy to determine the significance of issues within the District, and how to align Council engagement with the public based on the degree of significance of the issue.

This policy exists to:

- Inform the public can expect from the Waimate District Council regarding community engagement and the ways you can influence and participate in the decision-making of the Council.
- To provide Council with a tool that guides the assessment of significance during decision making. A decision on significance and engagement provides direction on the level of community engagement that might be desirable to enable Council to develop a clearer understanding of community views and preferences on an issue or proposal.

This Policy identifies the following Strategic assets:

- Regent Theatre
- Waimate Public Library - building and collections
- Resource Recovery Park
- Parks and Reserves
- Public Toilets
- Cemeteries
- Roading Networks and connected infrastructure
- **Sewerage Networks and Treatment Plants**
- Norman Kirk Memorial Pool
- Stormwater Networks
- Water Treatment, Storage and Supply Networks
- Community Housing
- Local Government Centre
- Waimate Event Centre

Earthquake Prone Buildings

Earthquake Prone Buildings are no longer included in a Council Policy but are now included in the Building Act 2004 under Subpart 6A Building (Earthquake-prone Buildings) Amendment Act 2016. These new provisions came into effect on 1 July 2017.

Council is required to identify potential earthquake prone buildings or parts of Earthquake Prone Buildings and advise building owners that they are required to provide an Engineering Assessment that has been undertaken in accordance with the Earthquake Prone Buildings Methodology.

The Waimate District is designated as being in a Low and Medium Seismic Risk Areas the Council has until 1 July 2032 to identify potential earthquake prone buildings in the district. Council also has the ability to identify potentially Earthquake Prone Buildings at any time if they have reason to suspect it may be Earthquake Prone Building.

This Engineering Assessment is required to be provided by the building owner to the Council within 12 months of the building owner being notified by the Council of their building being considered to be an Earthquake Prone Building.

In the case where a building owner has had an Earthquake Prone Building Assessment undertaken prior to 1 July 2017, then this assessment is to be provided to the Council for review against the Earthquake Prone Building Methodology. The Council will assess these reports against the Earthquake Prone Buildings Methodology and decide whether the report is acceptable or may request either additional information or a new report to be provided.

The Council will also assign the Earthquake Prone Building rating and if it is less than 33% then the rating will be entered into the MBIE National Earthquake Prone Buildings database. The building owner will be required to erect and maintain the prescribed placards in the building in the prescribed locations indicating what the Earthquake Prone Building Rating of their building is until such time as the building is strengthened or demolished. These placards are required to be displayed where they will be clearly visible, so members of the public are aware of the Earthquake Prone Rating of the building.

The period for building owners to undertake strengthening of buildings in the Waimate District is 35 years from the date when the Council advises the building owner of its decision that the building is an Earthquake Prone Building.

Dangerous and Insanitary Buildings

Council has revoked the Earthquake Prone Buildings, Dangerous and Insanitary Building Policy and separated the Dangerous Buildings and Insanitary Buildings into two individual policies to make easier for staff when dealings with these buildings. These new policies were adopted by Council in December 2017 and reviewed in August 2023.

When either a Dangerous or an Insanitary Building are brought to Councils attention an assessment will be undertaken by staff to establish whether they are either Dangerous or Insanitary.

Council staff will work with the building owner to make the building safe and to remove or reduce the danger in the case of both dangerous building and insanitary buildings.

4 DESCRIPTION OF THE WASTEWATER ACTIVITY

This section of the AMP covers the rationale for ownership of the Wastewater activity assets and the description of assets covered under this AMP. This section also highlights the critical Wastewater activity assets.

4.1 Waimate District Overview

The Waimate District is located at the southern end of the Canterbury Region. The Canterbury Region has an estimated population of approximately 666,300 as of the 2023 Census.

The Waimate District is bounded by the Waitaki and Pareora Rivers to the south and north respectively, the Hakataramea Valley and mountains of Mackenzie District to the West and the Pacific Ocean to the East.

The main centre of population is the town of Waimate itself, a town housing a population of some 3,590 people. This represents approximately 44% of the total population of the district of 8,121 (source 2023 census). Other centres of population include the coastal townships of Glenavy, Willowbridge, Makikihi, Morven and St Andrews. The Waimate District community profile is presented in the table below:

Table 4-1: Waimate Community Profile

Area	3,582 km^2		
Population (2023 census)	8121	Households (occupied dwellings)	3,409
Employees	60.11 FTE's (as at 30 June 2023)	Rating system: Mix of General Rates and Targeted Rates	
Infrastructure (as at 30 June 2024):		Total rateable properties	4,145
Length of roads/streets	1,325 km	Average total rates per property	$3,928 inc. GST
Length of wastewater network (mains and laterals)	62.4 km	Council external debt	$3.50m
Length of stormwater network (mains, laterals and drains)	14.0 km	**Climate:**	
Length of water network (mains and laterals)	932.3 km	Mean Annual Rainfall	600 mm

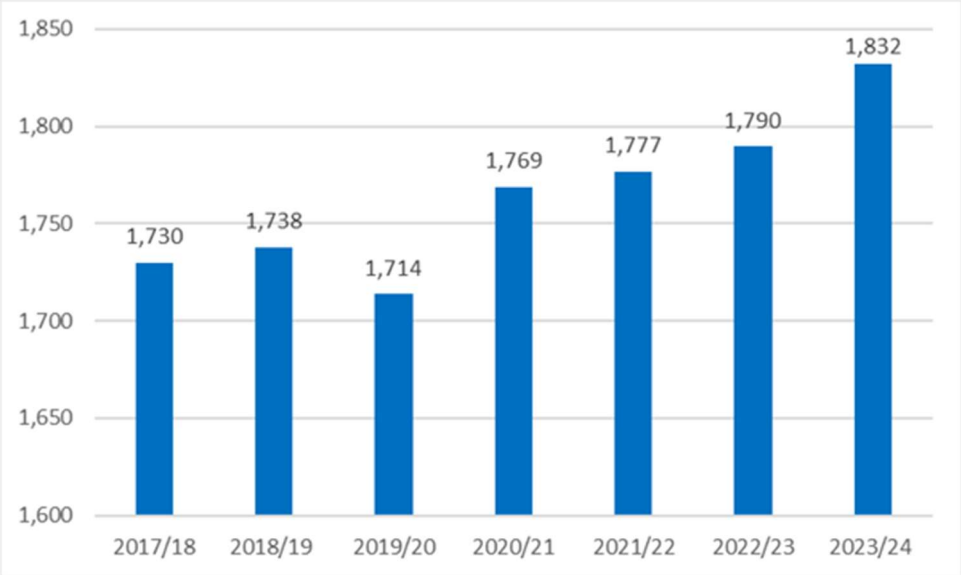
4.2 Description of Activity

The Council collects wastewater from approximately 1,832 connected properties in the Waimate urban wastewater system. Customers include residential, community and industrial/commercial.

The Council also holds a resource consent for the St Andrews wastewater system. A replacement consent was granted on 24 August 2017 that closely replicates the original consent. This consent has a duration of 15 years. This is a private system consisting of individual private septic tanks on each property. Council engage a septage disposal contractor to maintain each septic tank to meet the requirements of the consent.

4.3 Summary of the Wastewater Assets

Figure 4-1: Waimate Urban Wastewater System Connections

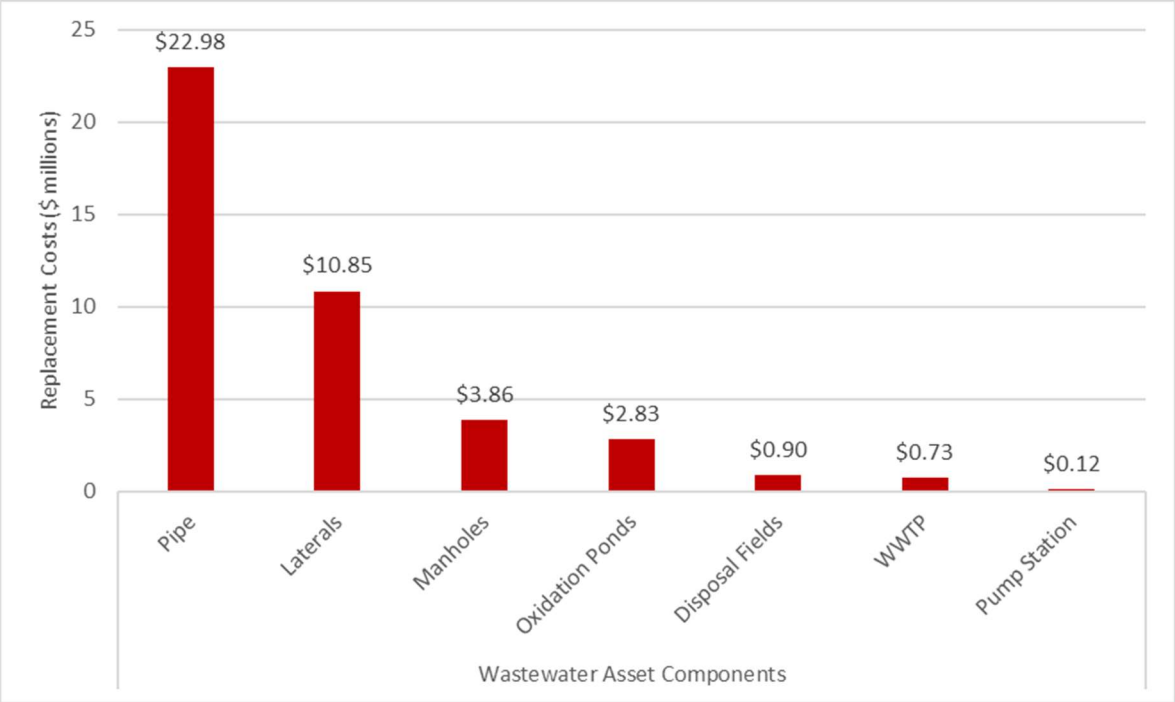


The chart above graphically represents the wastewater connections for the Waimate urban wastewater system.

Table 4-2: Summary of Wastewater Assets

Asset Description	Units	Quantity
Reticulation:		
Gravity pipes	m	35,798
Rising mains	m	4,782
Laterals *(estimate – mapping is incomplete)*	m.	18,710
Inspection Pits / Poo Pits	No.	30
Cleaning Eyes	No.	50
Valves	No.	42
Capped Ends	No.	34
Manholes	No.	322
Plant:		
Wastewater Treatment Plant	No.	1
Pump Stations	No.	2
Asset values are from Univerus Assets		

Figure 4-2: Waimate Urban Wastewater System Asset Components (Asset Valuation 2024)



In the chart above the Replacement Cost for Laterals ($10.8m) is currently an estimate as the spatial data for laterals is incomplete. An Improvement item is underway to map all Laterals in Univerus Assets.

The wastewater system is made up of the following components:

- Wastewater pipes (rising mains, gravity pipes)
- Wastewater laterals
- Wastewater point assets (inspection pits, poo pits, cleaning eyes, valves and capped ends)
- Wastewater manholes
- Pump stations
- Wastewater treatment plant (ponds, screening, irrigation) and associated buildings

4.4 Wastewater Pipes

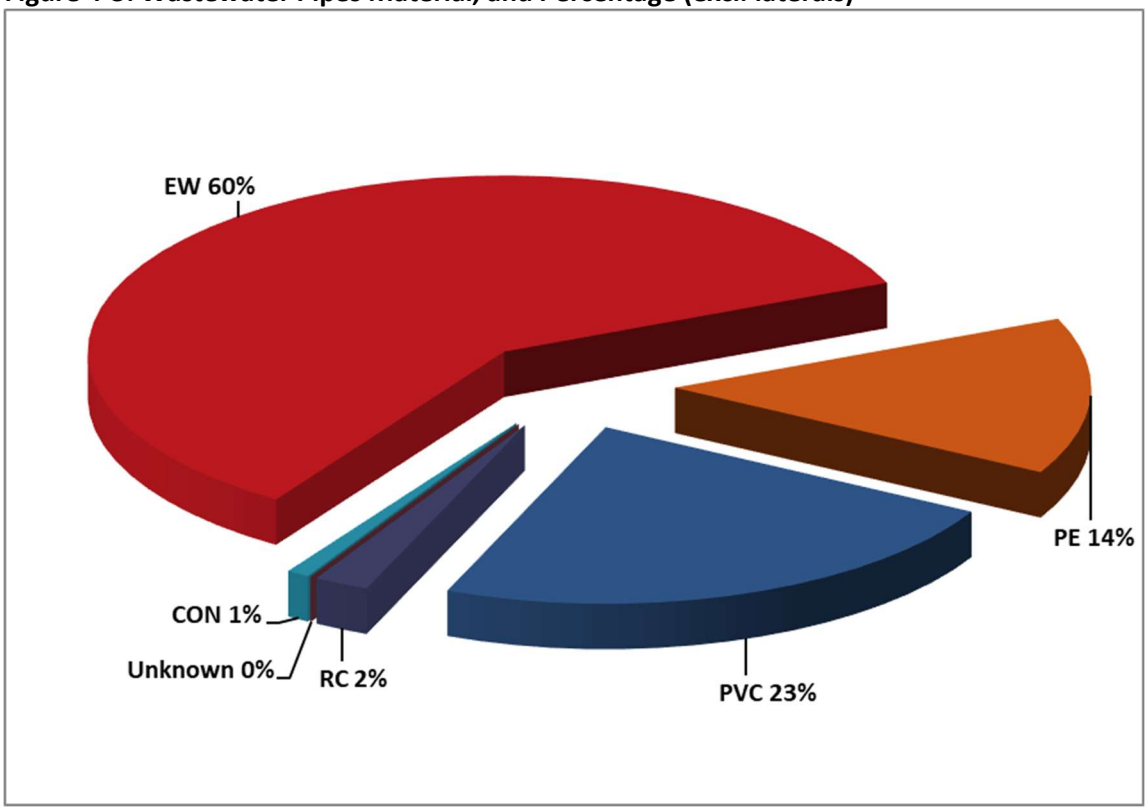
4.4.1 Asset Description

The total length of gravity pipes and rising mains is 43.7 km (not including laterals). The main purpose of the wastewater pipes is to take sewerage from the customer's point of discharge (normally property boundary) and transport to the wastewater treatment plant.

Pipe Material

The predominant pipe material is earthenware (EW) making up 26km (60%) of the wastewater mains in the reticulation network.

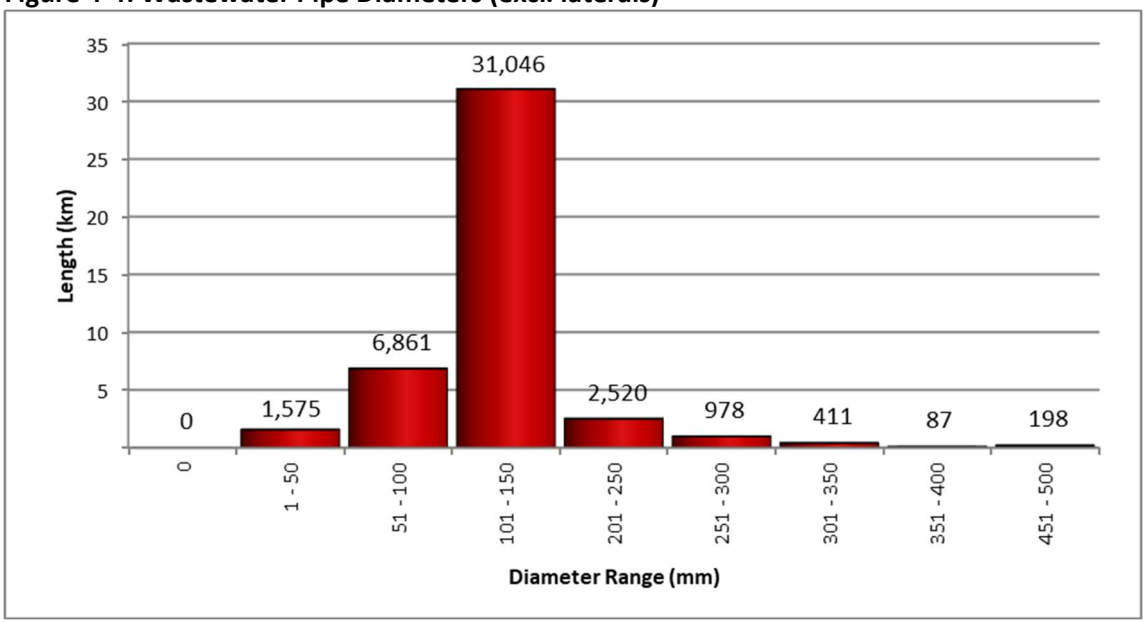
Figure 4-3: Wastewater Pipes Material, and Percentage (excl. laterals)



Pipe Diameters

As shown in the chart below, the majority of the wastewater pipes are of 101-150 mm diameter (31km, 71%).

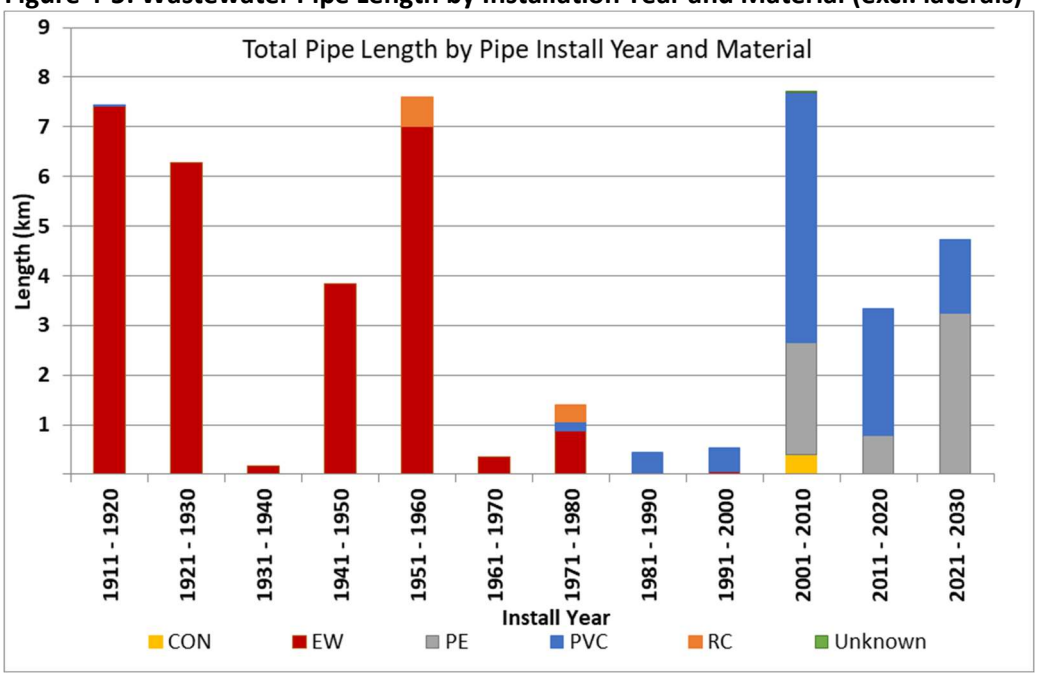
Figure 4-4: Wastewater Pipe Diameters (excl. laterals)



Pipe Age

The wastewater pipe assets range from new to 109 years of age. The distribution of wastewater pipe material length versus installation year can be seen in the chart below:

Figure 4-5: Wastewater Pipe Length by Installation Year and Material (excl. laterals)



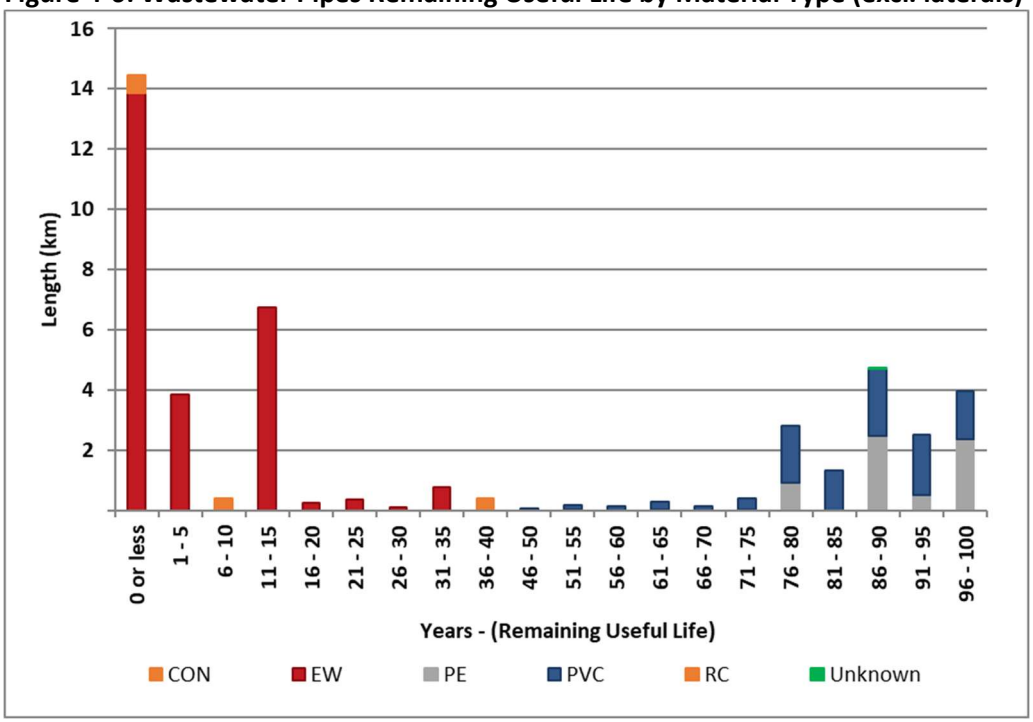
It is evident from the above that the available and preferred pipe material was earthenware (EW) during the development and construction of the scheme. However, during the 1950's to 1960's other materials such as reinforced concrete (CON) was trialled. From the 1970's onwards Polyvinyl Chloride (PVC) became the material of choice.

The base lives of pipe materials as stated in the 2024 valuation are shown below.

Table 4-3: Economic Lives of Wastewater Pipe Materials

Material	Base Lives (Years)
EW	80-90
PVC	100
MDPE	100
PE	80
CON	60

Figure 4-6: Wastewater Pipes Remaining Useful Life by Material Type (excl. laterals)



The chart above shows the remaining useful life by material type. From this it can be seen that:

- Approximately 14 km of earthenware pipe and 0.6 km of concrete pipe have reached the end of its expected economic life
- Approximately 3.8 km of earthenware pipe will reach the end of its expected economic useful life within the first 5 years of this Plan.
- Approximately 7 km of earthenware pipe will reach the end of its expected economic useful life within the 11 to 15 year window.

4.4.2 Condition of Reticulation

Pipe condition ratings for all pipe assets are stored in Univerus Assets. These condition ratings have historically been based on pipe age, material and some field inspection. There are areas of the network that are showing signs of end of life (increase in blockages etc). Over the next three years additional condition assessment will be instigated to provide greater confidence in the condition. Generally, pipe renewals are programmed initially using age and then refined on the frequency of blockages or other maintenance activities.

4.5 Wastewater Laterals

Council is responsible for the laterals from the wastewater pipe to the property boundary when the main is within a road reserve. The property owner is responsible for the lateral from the house to the Council pipe when the pipe is not on road reserve or Council property.

There are approximately 18.7km laterals in the urban wastewater system. These laterals are mainly 100 mm diameter.

Currently the spatial data for laterals is incomplete. A project is programmed to ensure that drainage plans from each respective property file (when available) are transposed into Univerus Assets.

4.6 Wastewater Manholes, Point Assets and Pump Stations

The table below details the extent of the wastewater manholes, 'point' assets (cleaning eyes, inspection pits, poo pits, capped ends and valves) and pump stations:

Table 4-4: Wastewater Manholes, Point Assets and Pump Stations

Community	Capped End	Cleaning Eye	Inspection Pit	Manhole	Poo Pit	Pump Station	Valve
Waimate Urban	34	50	19	322	11	2	42

4.6.1 Condition

There is no CCTV data recorded for the condition of the laterals. Council Engineers have assumed that the condition of each lateral is consistent with the adjacent pipes. The spread of the condition grades for laterals across the Waimate urban wastewater system is therefore assumed to be the same as for the pipes. This is a significant assumption, and future consideration should include obtaining information on lateral condition. However, when a pipe is replaced the laterals are replaced as well.

CCTV records indicate that the manholes are in good condition (condition grade 2).

The general condition of the point assets are considered by Council's engineers as good to excellent. There are no condition ratings within the asset valuation data. However, the total replacement value is small and doesn't represent a large financial risk to justify individual condition assessments.

4.6.2 Performance and Capacity

Council engineers consider that generally the laterals, manholes and other point assets perform well and there no known performance or capacity issues within the points assets.

4.7 Wastewater Treatment Plant

4.7.1 Asset Description

The components of the Waimate Wastewater Treatment Plant (WWTP) and design data is presented in the table below.

Table 4-5: Wastewater Treatment Plant

Treatment	Disposal	Septage Disposal	Recorded ADWF & PWWF (2017)	Design ADWF & PWWF	Consented Flows
5mm Screen 2 oxidation ponds (total 4.6 ha) Rock filter 2 aerators 3 maturation ponds	2 border dyke disposal areas (total 27.7 ha) 1,985 m irrigation pipe	Yes	ADWF = 761 m^3/day PWWF = 2,527 m^3/day	ADWF = 1,200 m^3/day PWWF = 6,000 m^3/day	4,300 m^3/day 13,300 m^3/day in emergencies

Wastewater from the Waimate urban wastewater system is received at the WWTP pump station. The sewerage is pumped through the screen into the primary oxidation ponds. Historically this was one pond, but upgrades undertaken during 2003 split the oxidation pond into two. The upgrades were associated with new consent conditions to provide for future population growth, improve effluent quality and replacement of the discharge to water with a disposal to land system.

The oxidation ponds have a total area of approximately 4.6 ha. Effluent flow between the ponds is over a 20 m long rock filter wall or through a 300 mm diameter transfer pipe. Four aerators are located within the first pond. From the oxidation ponds the effluent flows to the three tertiary/maturation ponds in series. From the maturation ponds the effluent flows through the pond outlet to the irrigation field, 360 m east of the ponds. The irrigation consists of 27.7 ha of border dykes and 1,985 m of irrigation pipes.

Estimates of flows received by the WWTP are in the order of 600 m^3/day, well within the ADWF design flows of 1,200m^3/day.

4.7.2 Condition of Wastewater Treatment Plant

As most of the WWTP is relatively new, Council engineers consider the condition of the WWTP assets to be excellent. It should be noted that some erosion of the rock filter walls occurred historically but has been rectified in recent years.

4.7.3 Performance of Wastewater Treatment Plant

The performance of the WWTP is considered to be very good. The WWTP has been designed for high flows and 20 years of expansion, being able to deal with 6,000 m^3/day maximum. The design flow rates were measured during the early 1990's. Peak flows of 850 to 1,300 m^3/day were commonly experienced, generally for 1 to 2 hours in duration. A 2 hour peak flow of 5,000m^3/day, and heavy rain event flows with a peak flow of 3,200 m^3/day and low flow of 1,800 m^3/day were also experienced.

High flow events such as heavy rain are likely to be sporadic and can be handled effectively by the WWTP, or a separate consent to discharge directly into the Waimate Creek. Impacts of these events can be further reduced over time by diversion of roof water and surface flooding around gully traps.

Organic Loading

Primary ponds are designed on the basis of organic (BOD) and hydraulic loading. As treatment pond performance is temperature dependent, the worst case conditions for Waimate will be in winter when mean temperatures can be below 10°C. The primary pond has an area of 2.01 ha. Assuming a sustainable design BOD loading of 100 kg/ha/day (Mara, 1998), the ponds have an estimated winter treatment capacity of 201 kg/day of BOD. As each kW of mechanical aeration can remove an additional 24 kg/day of BOD, the existing aerators increases the winter capacity of the pond to 489 kg/ha/day (assuming three 4KW aerators running concurrently).

The current population is estimated to be in the order of 3,500 people. Assuming that all 3,500 persons are connected and each has a BOD loading of 70g/day the existing loading on the primary pond is estimated to be 245kg/day. As a result, it is estimated that there is sufficient capacity in the primary pond (with one aerator operating) to cope with estimated current loadings, plus an estimated 740 additional persons under winter conditions. The inclusion of three aerators would increase the available loadings with an additional 3,500 persons during winter.
There is enough capacity in the ponds during summer, without aeration, to cater for the current and foreseeable future connected population as the allowable BOD loadings increase due to warmer conditions and longer sunshine hours.

Hydraulic Loading

The WWTP has an estimated storage volume based on ADWF of 1,200m^3/day of 52 days. Estimated wet weather storage is 15 days. The total available extreme rainfall storage based on peak wet weather flow is 3 days. Given the relatively dry climate of the area, these storage capacities are considered appropriate for the WWTP. A water balance model was prepared as part of the 2000 AEE and was used to predict a minimum storage requirement of 11 days (based on 25 years of daily rainfall records).

The 2001 Beca Steven report indicated that, based on the 1997-98 data, peak wet weather flows (PWWF) reached about 2,750 m^3/day, which is about three times the average daily flows. However, the report also noted that, as the recording location was downstream of some potential overflow points, the peak storm flows may have been under recorded. Raw sewage flows into the ponds are monitored to allow ongoing assessment of pond capacity, as well as the impacts of future inflow/infiltration reduction work within the catchment.

Sludge Levels

An essential treatment mechanism in a pond is to settle solids, where they accumulate on the base of the pond and form a sludge layer in which Volatile Suspended Solids (VSS), the organic component of the solids, is decomposed by anaerobic digestion. Over a long period of time, the depth of the sludge layer may accumulate to a level where there is insufficient volume in the overlying algae-rich layer for effective treatment. When the depth of sludge is significant, it can potentially impact treatment performance, and sludge depth profiling should be undertaken more frequently.

During 2020 Council engaged a contractor to undertake a sludge survey of pond 1 and 2. The survey found the average water depth to top of sludge to be 1.3m (pond 1) and 1.45m (pond 2), with areas

in pond 1 where sludge levels were in the range of 0.75 - 1.0m. The total volume of sludge is estimated to be 5,182m^3 in both ponds.

Desludging of the ponds occurred in 2021 with 650 dry tonnes of sludge removed. The sludge is currently dewatering in "Geobags" for future disposal to landfill.

Septage Disposal

Council accepts septage at the WWTP from local tankered waste contractors. The septage is discharged to a manhole near the WWTP. Contractors are charged per cubic metre of septage discharged and based on an honesty system. Staff are currently investigating the use of WasteTrack as a waste management system.

4.8 Pump Stations

4.8.1 Asset Description

There are two pump stations within the Waimate wastewater network, the Milford pump station and the WWTP pump station. The WWTP pump station is located at the WWTP and lifts the wastewater received from the Waimate wastewater system into the ponds, via the milliscreen, at the WWTP.

There are three private pump stations within the network, located at the Sawmill, Slink skin factory and the showgrounds.

4.9 Buildings

There is one building individually valued with a replacement cost of $36,265. It has an equivalent base life of 80 years and is 25% through its life. The Building assets are contained within Univerus Assets and are included in the Plant Asset Register.

4.10 Asset Data Confidence and Integrity

A data confidence and integrity review was undertaken as part of the 2024 Valuation. The report extract on data confidence and integrity follows:

The assets recorded in Univerus are based on hierarchical assets with reliable attribute information. Data accuracy is rated using a five-grade excellent to very poor matrix.

In terms of general context, nearly 100% of the data was rated as average and above.

For valuation data confidence, the five-grade rating principle is applied across condition, quantity, unit cost, and base life attributes that are essential for a valuation. These attributes are rated as below:

Level	Description	Accuracy	Condition	Quantity	Unit Cost	Base Life
A	Highly Reliable and Accurate	100%				
B	Reliable with Minor Inaccuracies	± 5%		B	B+	B+
C	50% estimated	± 20%	C			
D	Significant data estimated	± 30%				
E	All data estimated	± 40%				

Condition was rated C as most condition data is anecdotal. However, this rating has not been taken into the overall data confidence grade as condition was not used to adjust remaining lives.

Quantities across the assets are reliable as they have been captured using GIS with linear measurements for lines and nodes for points. This may be lifted to a level B+ when all manholes have highly reliable depths.

Unit cost have been assessed from both observed contract (purchase costs) and 2022-unit cost escalations. As it is not possible to observe contract unit costs for all assets, escalations make up a large proportion of the unit costs. Unit costs can be made even more reliable if backed up by using bottom-up engineering costing techniques.

Base lives mostly conformed with the guidelines apart from stormwater culverts, manholes and pipes where base lives up to 150 years were observed. This extension was justified however as inspections have confirmed that these assets with installation dated prior to 1920 were in good condition.

A minor Asset ID duplication issue for 1,047 assets was noted in the renaming (numbering) of the Univerus generated Asset IDs cross the ws_line and ws_point asset classes, whereas the (text) renaming of ws_plant and ww _plant assets did not result in any duplicate IDs for the 51 applicable assets. However, unique Asset IDs for analysis are achievable by concatenating the Asset Class and Asset ID, although this is best avoided.

4.10.1 Asset Condition Assessments

Condition assessments have been completed for a number of the 3 Water's assets and include, but are not limited to:

i. NDT of AC Water Mains

ii. CCTV of Sewer Mains (Inc. those programmed for renewal)

iii. Visual inspections during maintenance activities

The results of these condition assessments have been applied to similar, uninspected assets to provide more reliable condition assessment of the whole asset base. For example, smaller diameter Asbestos Cement water mains are known to be in poorer condition than their larger

counterparts, and smaller diameter AC mains in the northern extents of the urban area are failing due to ground conditions and pipe material combination.

Condition ratings do exist within the AMIS on an equivalent scale of 1 to 5.

Renewal works are prioritised based on criticality (assessed), empirical knowledge of failure rates / historic maintenance activity, other unrelated (and concurrently programmed) capital works. It should be noted that predictive models being used are age based in the first instance.

An improvement item (IP 34) will be noted in the improvement plans to produce a second predictive model which includes weighting on Condition and Performance gradings held within Univerus Assets.

4.11 Environmental Effects

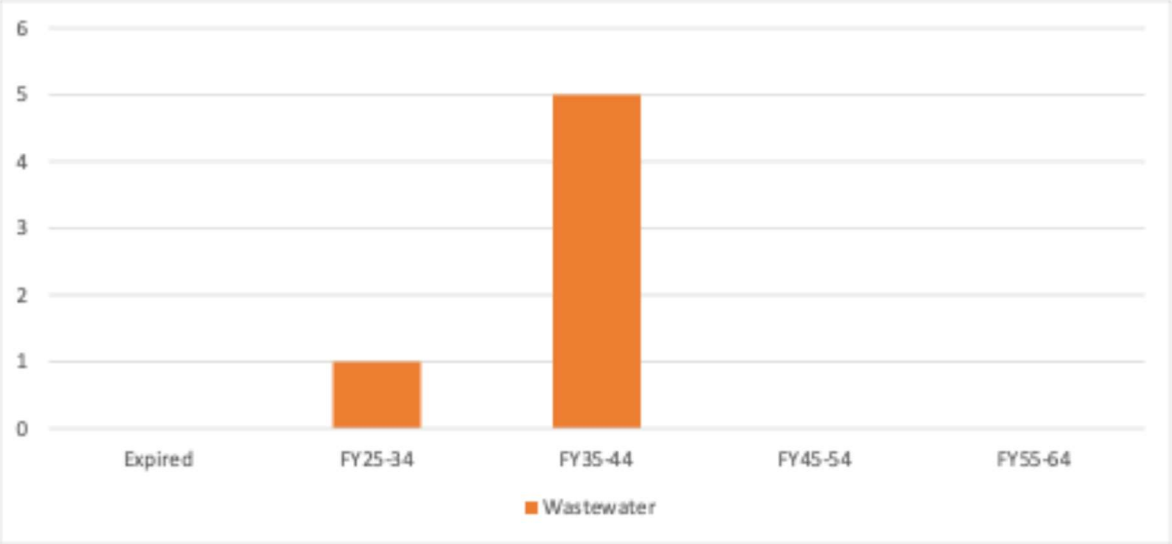
4.11.1 Resource Consents

There are seven resource consents held for the Wastewater Activity. These range from permission to construct a pipeline, to construct a bore and discharge to air, land and water.

One resource consent, CRC180377 - St Andrews, expires during the term of this Plan .

This is summarised in the chart below:

Figure 4-7: Wastewater Resource Const Expiry Summary Chart



The resource consents associated with wastewater are detailed in the table below:

Table 4-6: Resource Consents – Wastewater

Consent Number	Status	Activity	Correct issue date	Expiry Date	Comment	Volume
CRC00167	Current	Install a structure in Bed	15/10/2001	10/10/2036	Construct a pipeline under the bed of Waimate Creek	
CRC000168.1	Current	Discharge Contaminant into Air	31/08/2009	10/10/2036	To discharge contaminants to air	
CRC000169.1	Current	Discharge Contaminant into Land to Water	31/08/2009	10/10/2036	To discharge secondary treated effluent to land	Max 4,300m^3/day; average 1,200m^3/day
CRC000170	Current	Discharge Contaminant into Water	08/10/2001	10/10/2036	To discharge secondary treated effluent to Waimate Creek (in emergencies)	Volume shall not exceed 13,300m^3/24 hours
CRC120234	Current	To use land to install, use and maintain a sewerage network	11/08/2011	n/a	Compliance certificate - subject to further conditions – annual report, triennial report, etc.	-
CRC180377	Current	To discharge on-site domestic wastewater into land.	24/08/2017	24/08/2032	To discharge on-site domestic wastewater into land. St Andrews Township.	-
CRC243005	Current	Land Use	20/03/2024	10/10/2036	To use land for a municiple wastewater treatment plant	

Consent CRC 000169.1

Council is experiencing difficulty meeting the requirements of Condition 6a of the Waimate Wastewater Treatment Plant (WWTP) discharge consent (CRC000169.1) relating to wastewater faecal coliform concentration limits. WDC engaged specialist consultants to investigate:

1. the reasons for this noncompliance, including any modifications to current management practices at the WWTP (including monitoring) that would result in this condition being met.
2. the rationale behind Condition 18c(vii), requiring measuring denitrification enzyme activity (DEA) in soils within the irrigation area.

Condition 6a - Effluent faecal coliform concentrations exceeded the annual median consent limit in 2014/15 and 2015/16. Investigations indicate that these exceedances are not a result of sampling timing, e.g. following high inflows, or other factors such as low pond DO concentrations.
Variations in the upgradient C Slinks well results were greater than at other monitoring wells suggesting other sources of contamination.

As a result, the exceedance of the faecal coliform consent limit is considered a "technical non-compliance" and relaxing this limit would have no consequent effect on downgradient groundwater quality. It is also noted that the existing consent limit is considerably more stringent than the current NZ guidelines for safe application of effluent to land.

Condition 18c(vii) - The inclusion of denitrification enzyme activity (DEA) testing as a consent condition was likely based on giving added "reassurance" to the Regulatory Authority (ECan) and other stakeholders that the application of treated effluent to land would not adversely affect downgradient groundwater quality (in regard to nitrate concentrations).

However, literary review has not found any support for assessing DEA in the disposal area soils. Groundwater results, at up and downgradient wells were similar to the effluent quality and showed that the existing monitoring programme is sufficient to establish whether nitrate from effluent application is adversely affecting groundwater quality. The investigation did not find any other consent that requires soil DEA testing and most laboratories do not offer the DEA analysis as a standard test.

In view of the above Council plan to submit an application to vary the consent conditions [6a and 18c(vii)].

The Council also holds a resource consent for the St Andrews wastewater system. A replacement consent was granted on 24 August 2017 that closely replicates the original consent. This consent has a duration of 15 years. This is a private system consisting of individual private septic tanks on each property. Council engage a septage disposal contractor to maintain each septic tank to meet the requirements of the consent.

The consented limits are tabled below:

Table 4-7: Consented Peak Flows

Scheme	Maximum Allowable Flows	Design ADWF	Current (2020) ADWF
Waimate Urban	4,300m^3/day	1,200 m^3/day	699m^3/day (Annual Median Flow)
	13,300m^3/day in emergencies		
St Andrews	None	None	None

It can be seen that the current flows are well within consented and design flows.

4.11.2 Environmental Monitoring and Reporting

Consent reporting within Council for Wastewater is the responsibility of the 3 Waters Manager and is carried out by the Compliance Team. Information for consent compliance is provided by the Council's Water and Waste Group and forwarded to Environment Canterbury.

4.12 Assessment of Wastewater activity

Central Government is continuing water services delivery reform. The current 'Local Water Done Well' legislation places the responsibility for Water and Sanitary Services assessments back with Councils.

The aim is to assess the adequacy of these services both now and in the future. It considers the risks that these services, or lack of these services, may pose to health and wellbeing of the community.

Table 4-8: Public Wastewater Systems

Public Wastewater Systems Managed by Council	
Waimate Urban	St Andrews
Camping Grounds:	
Briars Gull Camp Site	Fisherman's Bend Camp Ste
Te Akatarawa Camping Ground	Waitangi Reserve Camp Ground

4.12.1 Risks and Issues

The assessment of Water and Sanitary Services (June 2011) noted the following:
The risk to the community emanating from properly maintained septic tanks and disposal fields located sensibly and on properties of adequate size to deal with the discharges are low. The risk to the community in more populous areas can rise to extreme.

4.13 Criticality Assessment

During 2017 Council performed a criticality assessment on 3 Waters assets (reticulation) by using the New Zealand Asset Metadata Standards (NZAMS) methodology and criticality ranking. This including consideration of GIS, population, key facilities and hydraulic model data. The NZAMS defines criticality as "the significance of any individual component or asset to the ability of any part of a network or portfolio to deliver the service it was designed to perform". The methodology considered:

- residential population rating – the number of people affected by the removal of the asset
- facility importance rating – the importance of the facility based on the role the facility play in enabling the community to function.

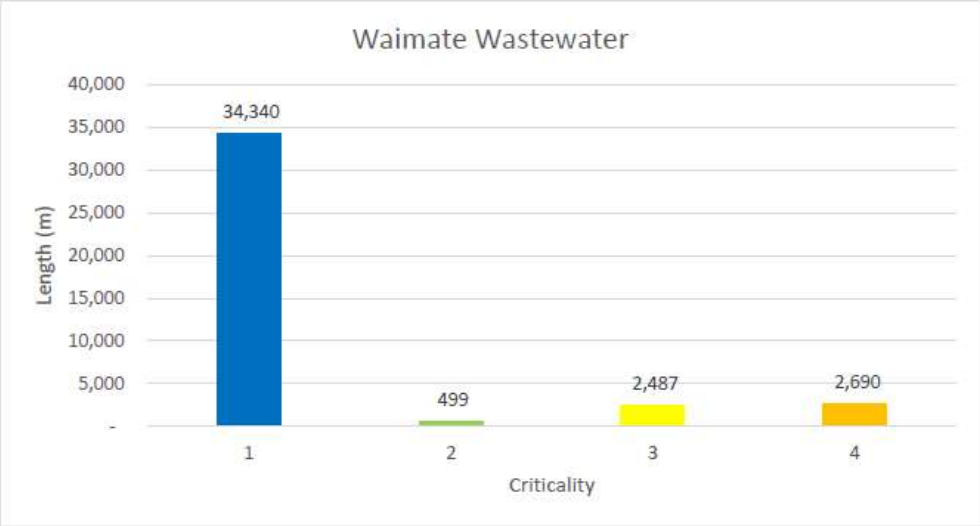
The global criticality ratings are:

1. very low
2. low
3. medium
4. high
5. very high

An additional diameter based component was included for water supply assets.
The criticality assessment provided the following results.

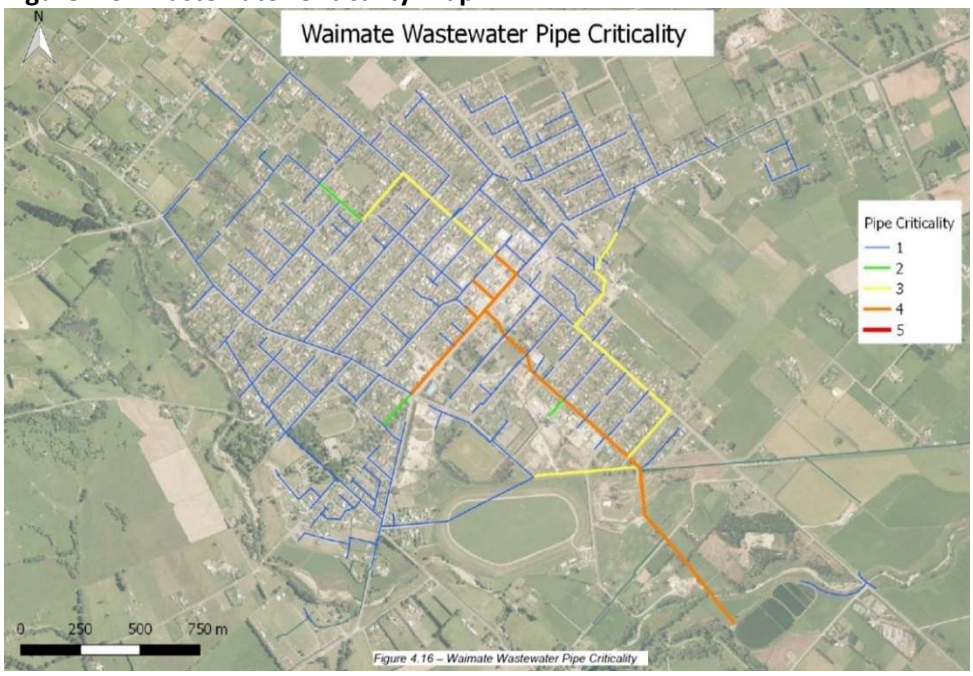
The chart below shows the pipe length distribution across the different criticality categories for the wastewater system.

Figure 4-8: Wastewater Criticality and Lengths Distribution



The map below shows an overview plan of the criticality rating for the wastewater system.

Figure 4-9: Wastewater Criticality Map



The criticality assessment provides Council engineers the ability to clearly identify the assets of highest importance and the greatest value. This ensures the asset can be managed more proactively in order 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

It is important to align the asset data in Univerus Assets with the criticality assessment ratings (**IP 31**).

The criticality assessment report made the following recommendations (**IP 32**):

- Plan a renewals program supported by a condition management program for critical infrastructure
- Plan around supplying critical customers and key facilities following a critical asset failure
- Identify sensitive customers (for example: dialysis patients) for a more detailed criticality assessment
- Update and maintain the water supply models, especially where new assets have been added (new bore and pump station in the Otaio rural water supply). The Water hydraulic models were updated during 2022.
- Expand the stormwater model for a better understanding of stormwater flows and populations served by WDC's assets. The Stormwater hydraulic model was updated during 2022.
- Maintain the GIS data, especially for the stormwater assets

5 LEVELS OF SERVICE

The Levels of Service for the Wastewater activity are defined in this section and the performance measures by which the service levels will be assessed. The service levels are aimed at supporting and meeting the strategic goals. It also contains information on the customer research undertaken and the legislative requirements adhered to in arriving at the service levels.

5.1 Community Outcomes

5.1.1 Revision of Community Outcomes

2012/22 Long Term Plan

In 2011 the Council amended the community outcomes and these were subsequently reassessed for the 2015-25 Long Term Plan. The Council has indicated that there will be no significant change to the community outcomes for the 2018/2028 LTP. Changes relate to alignment with the Council Vision. These outcomes and linkage of the Wastewater levels of service are provided in Table 4-1 below.

2015/25 Long Term Plan

In 2017 the Council amended the community outcomes. These outcomes and linkage of the Water Services Levels of Service via the Rationale are shown in the table below

There are no changes to the Community Outcomes for the 2025-34 LTP.

Table 5-1: Waimate District Council Community Outcomes 2018-28 and Wastewater activity Rationale

COMMUNITY OUTCOMES				
	Thriving Community	**Safe and Healthy People**	**Sustainable District and Environment**	**Active, Diverse and Supportive Community**
	Economic Wellbeing	**Social Wellbeing**	**Environmental Wellbeing**	**Social Wellbeing**
	A District that encourages development	A place where people are safe in their homes, work and public spaces	The Waimate District is enhanced through sustainable and diverse development	All people are encouraged to participate in our democratic process
Rationale		***Wastewater*** *- Protects public health by ensuring a safe and viable wastewater disposal system*		
	A District that provides infrastructure for economic activity	Our services, infrastructure and environment enhance quality of life	Our heritage is valued and protected	District assets that provide recreation and leisure choice
Rationale	***Wastewater*** *– The timely provision of utility services is essential to supporting growth*	***Wastewater*** *- We have reliable, efficient and well planned infrastructure that meet the needs of residents*		
	A District that actively promotes itself and its businesses	A resilient and adaptive community in a changing environment	We value the natural environment, biodiversity and landscapes	We celebrate and support the good things about our community
Rationale		***Wastewater*** *– Infrastructure is designed and located accounting for the impact of climate change over the life of the asset*	***Wastewater*** *– We preserve the environment by ensuring the quality and quantity of discharges to the environment*	

5.2 Level of Service Consultation

5.2.1 Consultation Processes

Community Outcomes for the Long Term Plan

The Council has carried out significant consultation to establish the Community Outcomes for the LTP; these were reviewed in 2011 following the changes to the Local Government Act in 2010. For the 2025/34 LTP the Community Outcomes retain the essence of those included in previous Waimate Community and Long Term Plans and were tested against the Waimate District Council vision statement.

Community Consultation

The Council has undertaken a range of consultation processes over the past few years specifically targeted at gathering information on preferred Levels of Service or the extent of infrastructure that Council will be required to install, future vision or how we manage the service. The extent of the historical and proposed consultation is detailed in the table below:

Table 5-27: Wastewater activity Consultation Processes (Historical and Proposed)

Consultation Processes	Key Stakeholders Involved	Date	Reasons for Consultation	Extent of Consultation
Historical				
2012-2022 LTCCP process	All	2012	Legislative requirement criteria of LGA 2002	In accordance with the LGA 2002 consultation requirements
2015-2025 LTP process	All	2015	Legislative requirement criteria of LGA 2002	In accordance with the LGA 2002 consultation requirements
2018-2028 LTP process	All	2015	Legislative requirement criteria of LGA 2002	In accordance with the LGA 2002 consultation requirements
2021-2031 LTP process	All	2021	Legislative requirement criteria of LGA 2002	In accordance with the LGA 2002 consultation requirements
Bylaws	All	2018	Review of Bylaws	Public and Industry submissions requested
District Plan Review	All	2024	Legislative requirement criteria of LGA 2002	In accordance with the LGA 2002 consultation requirements
Water Safety Plan (Waimate Urban and Rural)	Urban and Rural customers	2013 and ongoing		
Proposed				
Enhanced 2024/25 AP and 2025-34 LTP	All	2024	Legislative requirement criteria of LGA 2002 and RMA	In accordance with the LGA 2002 consultation requirements

5.3 Wastewater Levels of Service

In 2011 the levels of service were reviewed and modified to take into account feedback from various parties including Audit New Zealand, industry best practice and ease in measuring and reporting. These were further reviewed in 2014, 2017 and 2021. Only the Customer Levels of service are reported in the LTP.

5.3.1 Rules for Performance Measures

In 2010, the Local Government Act 2002 was amended to require the Secretary for Local Government to make rules specifying non-financial performance measures for local authorities to use when reporting to their communities. The aim was to help the public to contribute to discussions on future Levels of Service for their communities and to participate more easily in their local authority's decision-making processes.

Performance measure rules come into force on 30 July 2014. Local authorities were required to incorporate the performance measures in the development of the 2015-2025 LTP. The performance measures were reported against for the first time in the 2015/2016 annual reports. The performance measures are:

- Performance measure 1 – System and Adequacy
- Performance measure 2 – Discharge Compliance
- Performance measure 3 - Fault Response Times
- Performance measure 4 - Customer Satisfaction

5.3.2 2025-2034 Wastewater activity: Levels of Service

In 2023 the 2024 Customer Levels of Service were reviewed. The table below details the results of this review.

Council reviewed the customer service requests system to ensure they align with the Mandatory Performance Measures and ensured the internal and Contractor reporting aligns with the Mandatory Performance Measures 'tasks'. Council's AMIS (Univerus Assets) and associated Service Request module have been programmed to allow reporting aligned with the NFPM and to ensure consistency and accuracy of reporting.

Table 5-38: LTP 2025 – 2034 Water Services Levels of Service

What we do	**Council provides a piped wastewater collection system, a sewerage treatment plant and disposal system that safety removes sewage from urban homes in Waimate. It is Council policy to implement programmes for the relocation of wastewater disposal areas from riverbeds, wetlands or the margins of rivers, lakes and the coast and to implement programmes to reduce, and eventually cease the discharge of waste from the Council's sewage reticulation and treatment systems into natural waterways.**			
1. Maintain reliable sewerage network services				
How we do it	• Maintain wastewater schemes and respond to service failures • Monitor demand and manage growth of network • Monitor condition and performance of wastewater reticulation and assets • Ongoing pipe investigation programme • Public education (ie wipes disposal)			
How we measure performance		**Actual**	**Years 1 – 3 Target**	**Years 4 - 10 Target**
	Number of dry weather overflows from the sewerage system (**M**)	2 Achieved (2023/24)	≤2 per 1000 connections	≤2 per 1000 connections
	Number of blockages in Councils urban sewer transmission reticulation ***	4 Achieved (2023/24)	≤10	≤6

2. Deliver sewer services according to required environmental standards				
How we do it	• Manage and monitor sewerage treatment and disposal system under conditions of resource consent • Monitor quality of effluent • Monitor ongoing regulatory change for wastewater activities • Treatment and disposal of domestic and industrial wastewater via the wastewater schemes • Update and review Risk Management Strategy			
How we measure performance		**Actual**	**Years 1 – 3 Target**	**Years 4 - 10 Target**
	Compliance with Resource Consents for discharge from sewerage system (**M**)	0 Achieved (2023/24)	No abatement notices, infringement notices, enforcement orders and convictions	No abatement notices, infringement notices, enforcement orders and convictions

3. Maintain excellent customer service for sewerage system				
How we do it	• Provide a customer service request system 24 hours a day, 7 days a week • Investigate and rectify sewer services and wastewater odour complaints • Maintain wastewater schemes and respond to service failures or faults • Manage the collection, treatment and disposal of domestic and industrial • wastewater			
How we measure performance		**Actual**	**Years 1 – 3 Target**	**Years 4 - 10 Target**
	Median attendance and resolution times to sewerage overflows resulting from blockages or other faults* (**M**)	0:22 and 4:52 (h:m) Achieved (2023/24)	Median attendance time ≤60 minutes Median resolution time ≤12 hours	Median attendance time ≤60 minutes Median resolution time ≤12 hours
	Total complaints received about: 1. Sewer odour 2. Sewerage system faults 3. Sewerage system blockages 4. The WDC response to sewerage system issues (**M**)	3.4 Not achieved (2023/24)	≤3 complaints per 1,000 connections	≤3 complaints per 1,000 connections
	People receiving the service are satisfied with sewerage services	Not measured (2023/24)	≥90%	≥90%

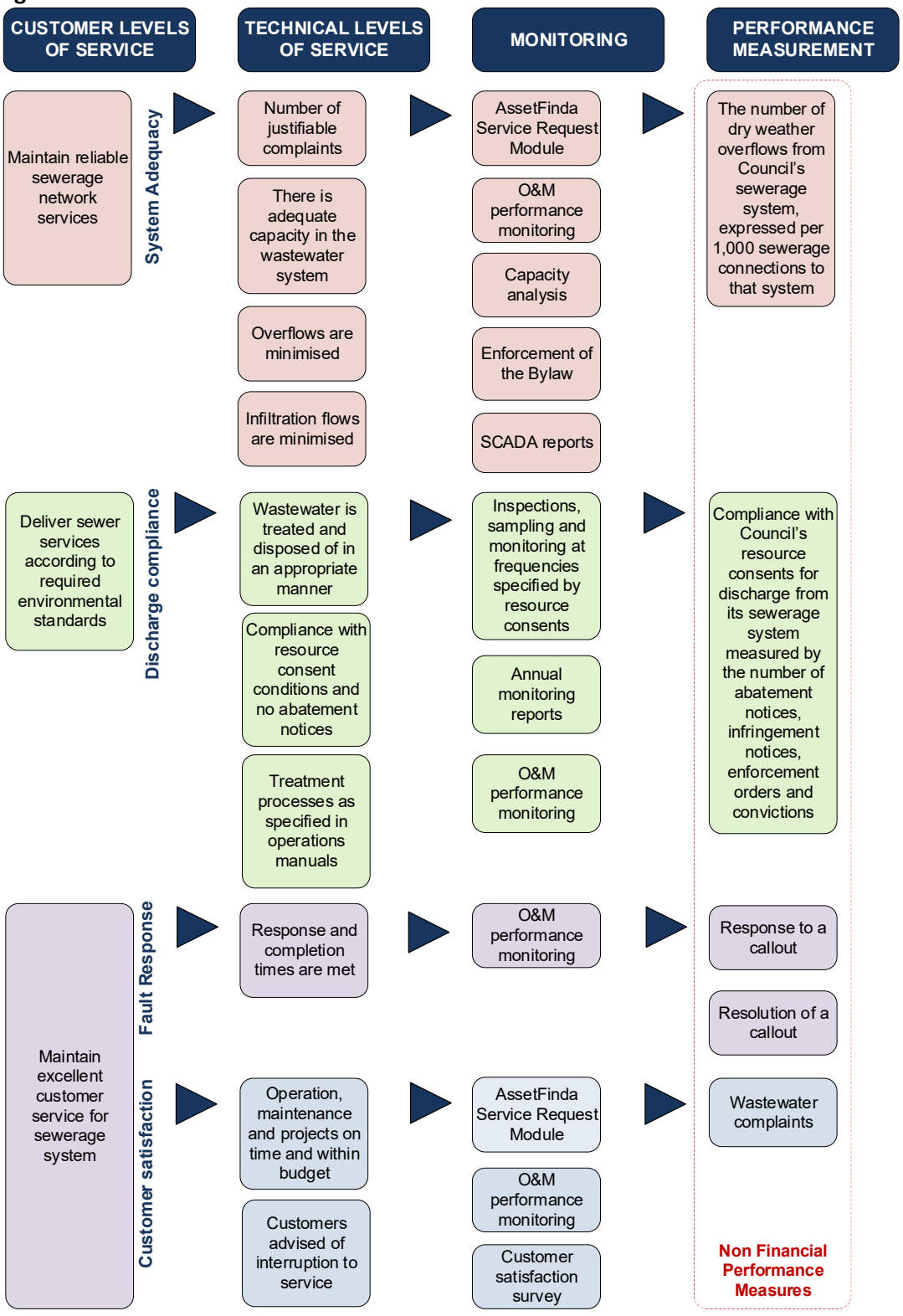
* Attendance: from the time Council receives notification to the time that service personnel reach site
**Resolution: from the time Council receives notification to the time that service personnel confirm resolution of the fault or interruption.
***New Measure: The purpose of the new performance measure is to provide some separation from the NFPM. There has traditionally been some difficulty in understanding whether a blockage was a private issue, or one within council's control. The downward trend in the target is reflective of a continued asset renewal programme and therefore there would be an expectation that blockages would reduce over time as aged earthenware pipes are replaced with uPVC. The target has been set based on an expectation that blockage rates may increase in the short term as the asset ages further (and flushing flows decrease with a reduction in inflow) and reduce in the longer term as the effect of renewals becomes more pronounced.

The interpretation of the Non-Financial Performance Measures Rules are shown in http://www.dia.govt.nz/diawebsite.nsf/wpg_URL/Resource-material-Our-Policy-Advice-Areas-Local-Government-Policy?OpenDocument#ElectoralAct

5.3.3 Customer and Technical Levels of Service

The Technical Service Standards for each Customer Levels of Service, along with linkages to the monitoring and Performance Measurements is described below:

Figure 5-1: Customer and Technical Levels of Service



5.4 Customer Survey

The results for the April 2023 Key Research customer satisfaction survey as shown below. The results from the survey report that:

- 90% of residents are satisfied with the sewerage system and service in the District, including 53% who are very satisfied (60% in 2021).
- A small percentage (6%) are unable to comment, which could be related to people not connected to a sewerage system.
- 1% of residents overall say they are not very satisfied with the sewerage system.

The reasons (multiple responses allowed) residents are not very satisfied with the sewerage system and service are:

- "*We live 50 metres from where we used to live. We had a septic tank prior to this home and the cost to connect to sewerage was huge".*
- *"The actual service of the system is good where I live but the sewerage ponds at Knottingley were a stinking disgrace and were out of action for a long time."*

Figure 5-2: Community Survey Trends

The chart above shows the satisfaction levels have increased considerably over the period 2019 to 2023 with a slight reduction in satisfaction levels over the last two years.

6 GROWTH AND DEMAND MANAGEMENT

Provides details of growth forecasts, which affect the management, and utilisation of all Waters assets and details demand management strategies.

6.1 Waimate District Growth

Population growth (or decline), age structure and distribution (spread), and the number and type of households and families in our district affects:

- Demand for local services
- The willingness and ability of ratepayers to pay for them
- Representation and participation in local democracy
- Interactions between human activity and the environment.

It is therefore an essential for asset management planning that sound information is used regarding population, demographic and geographic change.

Council continues to model and track changes in district growth to ensure infrastructure planning remains well informed about growth impacts.

Expected growth impacts are beyond the 10-year LTP planning period.

Capital programme network extensions included in this Asset Management Plan allow for the currently modelled growth.

Methodology

Rationale developed the previous set of growth projections for Waimate District Council (WDC) in 2020. These projections were developed using a using a bottom-up approach. Individual growth drivers for each Statistical Area 2 (SA2) were developed using migration for employment and lifestyle as the basis of the modelling. The modelling was based off 2019 data, which was the most up to date at the time.

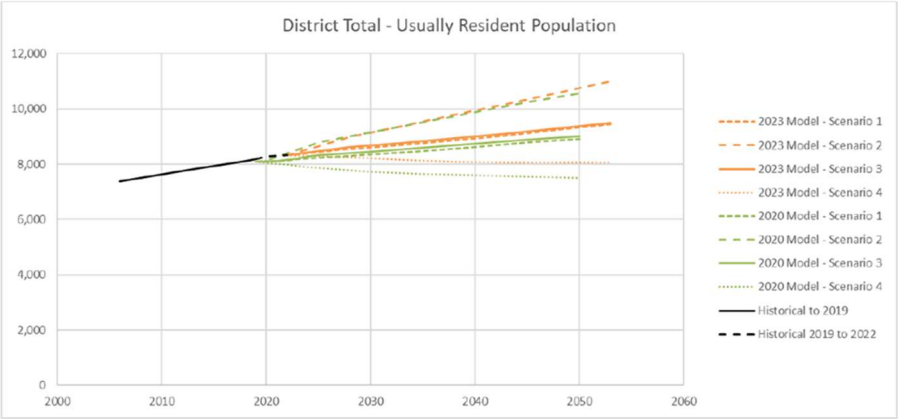
WDC approached Rationale to update the projections to ensure their continued relevance, check for any significant changes including the actual impact of COVID-19, and to inform the 2024 to 2034 Long Term Plan. Rationale and WDC completed a review of the 2020 projections, comparing the forecast growth to 2022 with the actual growth that has occurred. The 2020 projections generally tracked the actual growth, and it was decided that a "light update" of the projections was appropriate.

For the light update, the following items were updated.

- Historical usually resident population estimates to 2022.
- Historical filled jobs to 2022.
- Current number of rating units.
- Removal of any assumptions relating to the Covid-19 pandemic.
- Migration and growth assumptions for the Morven-Glenavy-Ikawai SA2.

All other assumptions and inputs remain unchanged from the 2020 projections.

Figure 6-1: Comparison between the 2020 projections and the 2023 predictions.



Growth Scenarios

Four growth scenarios have been modelled for each parameter representing different levels of ambition in terms of the district's growth over the next thirty years.

Table 6-1: Summary of the Four Growth Scenarios

	Scenario	Description
Scenario 1	Baseline	Used as a baseline to build the other three scenarios. It is derived from historical migration and employment trends
Scenario 2	High	Migration drivers and assumptions are increased by 20% above the baseline which means more people will move to Waimate and less people will leave. Employment levels are increased by 10% above the baseline by 2053. Investment in the town centre of Waimate is expected to generate an additional 20 long term jobs per year, from 2023 to 2028 (120 total). The Oceania Dairy plant continues to employ people at a rate of 4% (twice the MBIE forecast for food productions) through to 2053.
Scenario 3	Medium	Migration drivers and assumptions are set to the baseline. Employment levels are set to the baseline, with the exception of Waimate Town Centre. Investment in the town centre of Waimate is expected to generate an additional 10 long term jobs per year, from 2023 to 2028 (60 total). The Oceania Dairy plant continues to employ people at a rate of 2% (matching the MBIE forecast for food productions) through to 2053
Scenario 4	Low	Migration drivers and assumptions are reduced by 20% which means less people will move to Waimate and more people will leave. Employment levels are decreased by 10% below the baseline by 2053. The Oceania Dairy plant stops expanding and ceases to employ people from now until 2053.

Recommendation – Growth Scenario 3

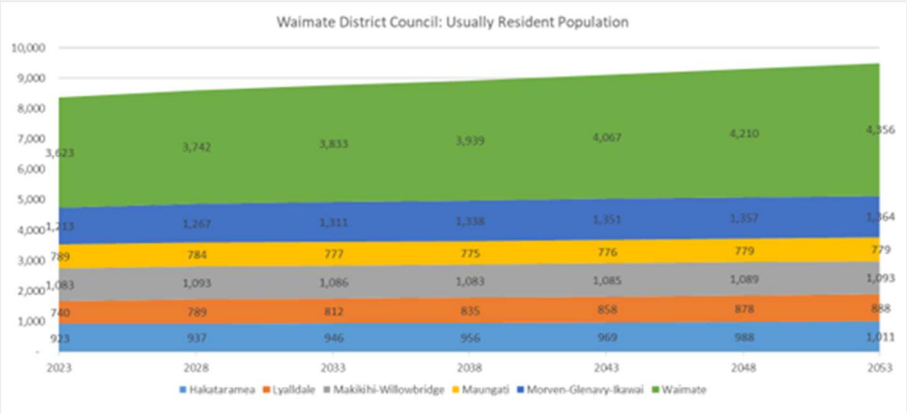
It is recommended that WDC adopt Scenario 3, medium growth. Unless otherwise stated, all charts and tables in this report refer to Scenario 3.

6.2 Population Demographic Changes

Over the next thirty years, the usually resident population of Waimate District is predicted to increase.

The average age of Waimate District's population is 44.9 years, this is older than the national average of 39.4 years (Stats NZ). Looking across the district, Waimate township has a significantly older average age of 49.7 years in 2022 when compared to the outlying rural areas. This suggests that people are living and working on farms then moving into Waimate for retirement later in life.

Figure 6-2: Population Projections (Usually Resident Population)



The 2018 Census population of Waimate District was 7,815[1]. The recommended medium growth scenario projects the District's population to increase to 9,500 by 2053.

Based on the medium projection, the population of the Waimate District is projected to grow by, on average, 0.4% a year between 2023 and 2053.

The high projection would see Waimate District population reach close to 11,000 by 2053. This is not the recommended growth scenario but does demonstrate the upper bound of modelled growth.

With a low base population, significant industrial projects are capable of having an impact of the District's population. Expansions of both Oceania and Fonterra Dairy Factories in the next ten years could increase job opportunities in the District.[2] Should all of these projects proceed the District may see population growth trending more towards the high projection. While this may appear conservative, it is important that Council does not overestimate population growth and the associated infrastructure provision required. Also reflects that a considerable number of employees from both dairy factories live in either the Waitaki or Timaru Districts.[3] Given the close proximity of both Timaru and Oamaru to these sites, increased job opportunities may not necessarily equate to comparable population increase in the Waimate District. Growth over the next 30 years of between 1,000 and 2,000 people is likely.

Natural Decrease

[1] Statistics New Zealand, 2018 Population Usually resident population counts)

[2] Oceania anticipate an additional 67 jobs in the next twelve months though a number of expansion projects and a further 43 jobs in two or three years with the addition of another dryer. Fonterra estimates a sizeable expansion of its Studholme factory should plans proceed - 70-80 new jobs on site with potentially 500 persons involved in the construction.

[3] Employment data provided by Fonterra shows approximately a third of staff live in the Timaru District. Oceania Dairy report that 79% of their staff live outside of the Waimate District.

As New Zealand's population continues to age, more and more areas will consistently experience a natural decrease, i.e. more deaths than births (3 territorial authorities experienced this between 2010-2014). For areas that have traditionally relied on a natural increase for population growth (including Waimate), a natural decrease will mean a shrinking population unless offset by net migration gains. Within the Waimate District, natural decrease is projected to occur around 2040. Without net migration gains, the population proper will decrease.

Table 6-2: Average age of District Population

	2022	2023	2033	2043	2053
District wide	44.9	44.9	44.5	44.2	44.6
Hakataramea	41.9	41.9	41.8	40.8	40.6
Lyalldale	42.5	42.8	44.5	45.2	46.3
Makikihi Willowbridge	44.0	44.1	43.9	43.3	43.7
Maungati	39.0	39.2	40.3	40.5	41.8
Morven Glenavy Ikawai	38.6	39	42.2	44.1	45.1
Waimate	49.7	49.5	46.9	45.8	45.7

Higher Median Age

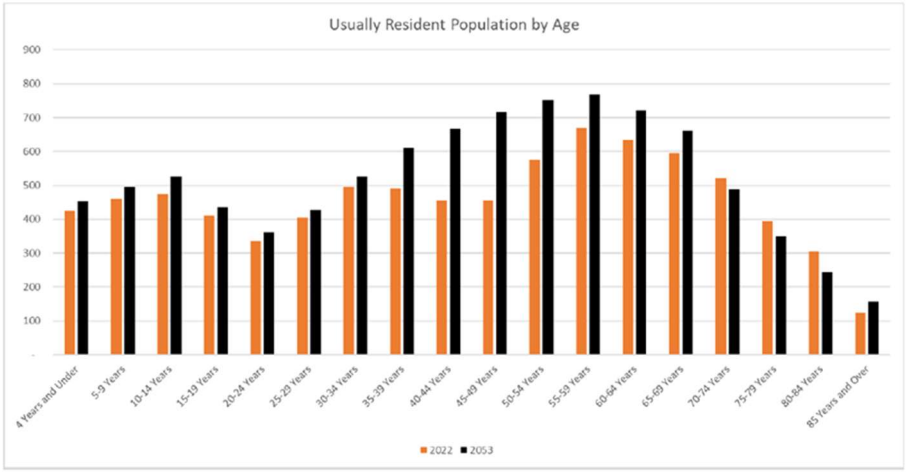
The median age for the Waimate District population is set to remain steady at about 45 years through to 2053.

Larger proportion of older people

Under all projection series (high, medium and low), all 67 territorial authorities in New Zealand are projected to have a higher proportion of older people (aged 65 and over) in 2053 compared with 2022.

In 2013 19.5% of the Waimate District population was aged 65 and older. Using the medium projection series, by 2043 29.6% of the Waimate District population will be aged 65 and over.

Figure 6-3: Age distribution of Waimate District's population in 2053



Urban Rural Split

Projections also suggest a change in the age composition of the urban and rural populations. While the 0-14 years, 15-39 years' age brackets remain relatively stable across the 25-year period in all areas, there is a considerable increase in the number of residents over the age of 65 living in the rural areas of the District and a decrease in the number of residents aged 40-64 years. The proportion of people aged over 65 living in the Waihao area unit is projected to nearly double, from 8.7% to 16.4% of the total district population. While the number of residents over the age of 65 living in urban Waimate is also projected to increase over the 25 years, by 2038 it is projected there will be more over 65s living rurally than in the urban centre of Waimate.

Key migration drivers

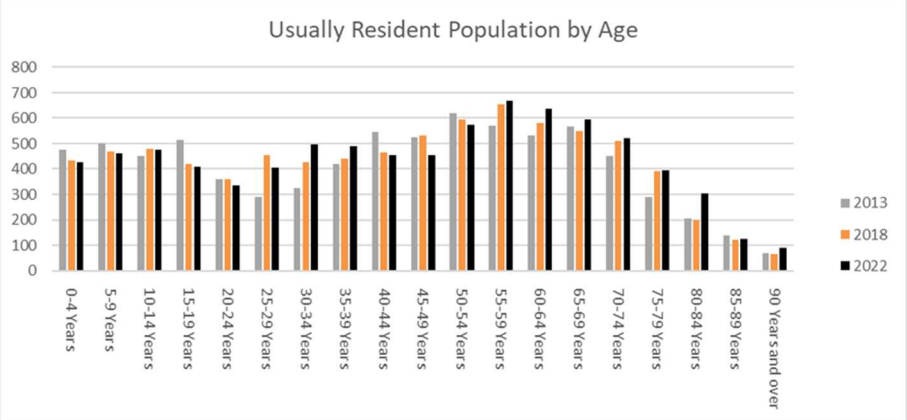
The key characteristics of Waimate District's population are:

- Younger people leave the area for education and employment opportunities.
- People later in their working lives or early retirement are moving to the area for the lifestyle, affordability and/or retirement.
- Older people (over 70) are moving from the rural areas of the district to Waimate or leaving the area, likely in search of better healthcare or to be closer to family.

Growth story from 2019 to 2022

WDC has experienced steady population growth over the past three years with an average yearly growth of 50 people per year. This is similar to long term historical trends. The average age in WDC has increased from 43.8 to 44.9, and there is now a larger population in both the 30 to 39 year and 60 to 84 year age groups.

Figure 6-4: Waimate District's population by Age – 2013, 2018, 2022 (Source: NZ Stats)



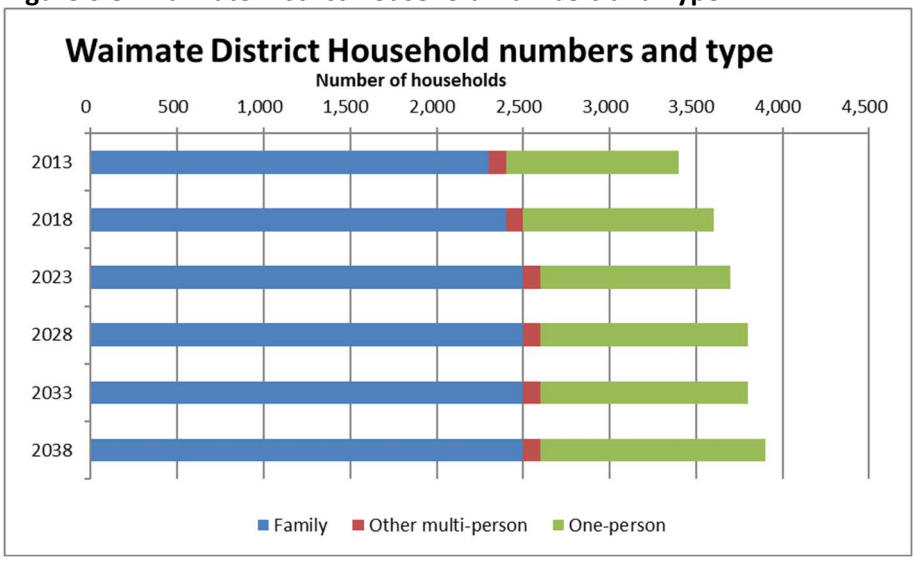
Households

The number of households in the District is projected to increase by an average of 0.4% a year between 2023 and 2053.

The average household size in the Waimate District is set to decline from 2.3 people in 2013 to 2.1 people by 2038. This will follow the national and regional trends (NZ – decrease from 2.64 people to 2.50 people. Canterbury - decrease from 2.4 to 2.3 people). Smaller households may contribute to demand for housing over and above the impact of population growth.

Dwelling numbers have also increased. While detailed dwelling information will not be readily available until the 2023 Census data is released (the first tranche of data is expected to be released late 2023 or early 2024), consent records provided by WDC indicates that on average around 30 new dwellings have been constructed each year since 2019. This is similar to long term trends and aligns with expectations considering the levels of population growth.

Figure 6-5: Waimate District Household Numbers and Type



The number of one person households is the fastest growing household type in the Waimate District, increasing by an average of 1.2% per year. By 2038 33% of Waimate households will be one-person households and over 15% of Waimate residents will be living alone.

The number of families in the Waimate District is projected to increase by an average of 0.34% per year between 2013 and 2038.

Employment

WDC is a mostly rural district with agriculture being the prominent employer. The number of agriculture jobs has dropped since 2019, with a decline in orchards and livestock farms in Makikihi-Willowbridge, and dairy farm jobs in Morven-Glenavy-Ikawai.

The fastest growing sector is food manufacturing, driven by the expanding Oceania Dairy plant in Morven.

The other prevailing sectors are secondary supporting services including education, construction, and retail. These industries have remained relatively steady.

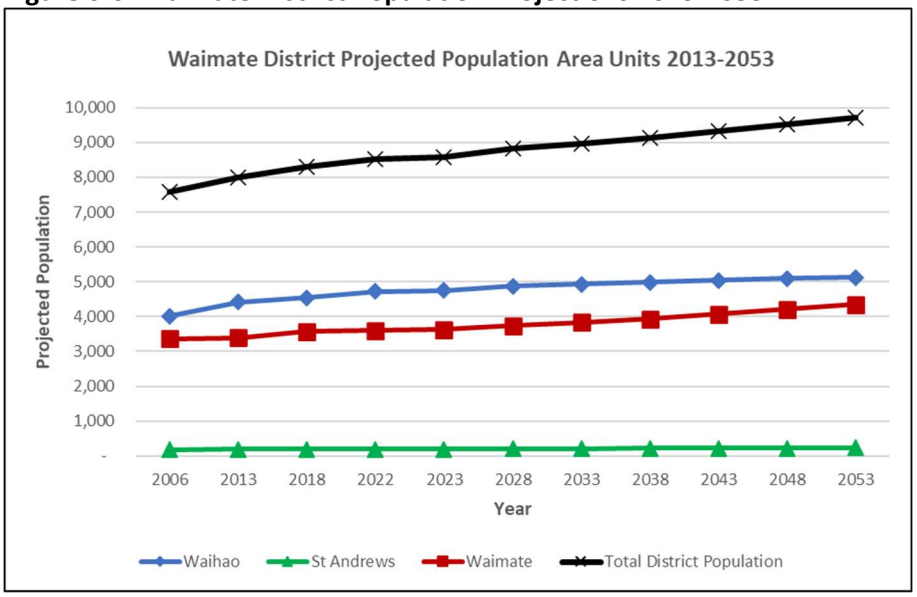
Whilst jobs have decreased since 2019, it is not believed that this is a long-term trend.

Population Location

Statistics New Zealand provides population breakdowns for area units within territorial authority boundaries for the period 2013-2043. For the Waimate District the area units provided are for urban Waimate, St Andrews township, and Waihao (covering the rest of the district).

The graph below shows gradual growth in the Waimate and Waihao areas, with growth flattening from 2038 onwards. Waimate DC will continue to monitor growth trends though subsequent census periods to confirm these trends.

Figure 6-6: Waimate District Population Projections 2013-2053



6.3 Projects That Will Have An Impact On District Population

There are a number of projects that will or have had an impact on the districts population:

- Hunter Downs Irrigation Scheme – Did not proceed (2020)
- Waihao Downs Irrigation scheme (Commissioned)
- Oceania Dairy Factory
- Expansion of the Fonterra Dairy Factory
- Alps to Ocean Cycle Track (Commissioned)

Details of these projects are presented below.

Hunter Downs Irrigation Scheme

The Hunter Downs Irrigation Scheme was to be a community irrigation proposal developed originally by the South Canterbury Irrigation Trust (SCIT) and Meridian. The scheme would have potentially irrigated up to 40,000 ha of land from the Waitaki River stretching as far north as Otipua. The scheme was reduced to just 12,000 ha of irrigated land with construction supposed to start mid-2018. At the time of writing this AMP, the consent has lapsed, and the project did not proceed.

Waihao Downs Irrigation Scheme

The Waihao Downs Irrigation Scheme irrigates 6,800 ha of farmland within a larger command area of 14,000 ha in the Waihao basin. The scheme involves taking water from the Waitaki River which is then distributed through a piped network to farms. There are a few potential farm conversions left.

Kurow Duntroon Irrigation Scheme

The Kurow Duntroon Irrigation Scheme, within the neighbouring Waitaki district, was developed by the Ministry of Works during 1965.

The original system consisted of a siphon drawing water from the Waitaki Dam into a 35 kilometres long open water race delivering water via a gravity fed system of manually operated gates.
This system was replaced during 2018/19 by installing 76 kilometres of pipelines from Waitaki Dam to Duntroon on the west bank of the Maerewhenua River. The system will ultimately enable irrigation of 5,500 hectares.

The Kurow Duntroon Irrigation Company (KDIC) is a community owned irrigation scheme, and holds a resource consent (CRC163429) from Ecan that expires in 2048, for an annual water take of 26.3 million litres. The scheme will increase activity in the rural service industries (on farm contractors and farm supplies) and processing companies (milk companies and vegetable processing).

Oceania Dairy Factory

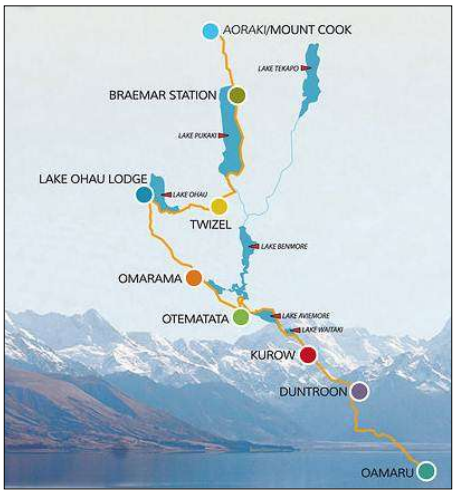
Oceania Dairy Limited is a wholly-owned subsidiary of Inner Mongolia Yili Industrial Group (Yili), and is China's largest dairy producer. The state-of-the-art Glenavy processing plant has been designed for the production of milk powder for export to China where it will be used by Yili to produce infant formula. Stage Two is now complete and further development is anticipated.

Alps to Ocean Cycle Track

This is a cycle track from Aoraki/Mt Cook to Oamaru and is now fully complete.

Given central Otago Rail Trail didn't have real impact until a number of years later, Council has assumed that any impact will be similar for Waimate District.

With the Waihao Downs Irrigation project there is a high chance that Waimate will experience slight increases in population with changes in socio-economic structure and changes in land use.



6.4 Wastewater Usage Trends in Waimate District

Table 6-3: Wastewater Loading Projections below the current flows received by the WWTP is well within consented and design flow limits.

Table 6-3: Wastewater Loading Projections

	Waimate Urban
ADWF (m^3/day)	699
PWWF (m^3/day)	3458
Treatment Capacity (m^3/day)	1,200
Resource Consent Allow. (m^3/day)	Average 1,200
	Max 4,300
	Emergencies 13,300m^3/24 hours
Service Connections (as at July 2024)	1832

The Waimate urban wastewater system was designed and constructed during the period from 1915 through to 1964 and based on a population of 4,000. The existing WWTP has sufficient capacity to serve a connected population of about 5,640 persons. With the current population estimated at 3,576 persons (2020 growth projections) it is currently serving 63% of the total population based capacity. The capacity of the current wastewater system network has not been accurately modelled but based on a flow loading rate of 312 L/person/day.

In the past lifestyle properties on the boundaries of the Waimate serviced by private septic tanks experienced failures of the septic tank systems. This posed significant health and environmental risks. During the past five years the wastewater system was expanded through connecting some of these properties to the wastewater system.

Wastewater intensive industries can have a large impact on the total daily wastewater consumption for small wastewater schemes. The impact of wastewater intensive industries would need to be assessed as they arise and their effect on the scheme assessed at that time. Currently there are no wastewater intensive industries connected to the scheme.

6.4.1 Inflow/Infiltration

The rate of Inflow and Infiltration (I&I) of rainwater and ground water into the wastewater system is a key factor in future wastewater demands. Stormwater inflow is caused by rainwater entering the wastewater system through house downpipes that have been incorrectly (illegally) piped into the sewer. Infiltration results from groundwater seeping into the wastewater system through broken pipes or joints. The result is that this I&I puts an unnecessarily large effluent load into the pipes and the WWTP.

Because I&I is such a large factor affecting the performance of the Waimate urban wastewater system, there is a need for Council to investigate the current extent of stormwater I&I into the wastewater system, identify those areas in Waimate where the effects are greatest and focus on reducing I&I in these areas. Council will employ the following strategies to minimise I&I:

- Investigate I&I and develop programmes to reduce the entry of stormwater to the wastewater system in private properties.
- Repair or renew pipes where there is excessive entry of stormwater and or groundwater through defects in the pipes.
- Ongoing CCTV survey works.

6.4.2 Management of Future Demand for Wastewater activity

Whilst a process is now in place for assessing population projections across the District, this has yet to be formally adopted by Council. A continuous watching brief on population changes is required.

Council will actively review existing infrastructure and the Wastewater activity to ensure Levels of Service will continue to be met as new population figures, demographics and development information becomes available.

6.4.3 Legislative Changes

The legislative framework and government and industry direction is discussed in Section 3.

New Zealand Waste Strategy 2023

The NZWS sets out the long-term policy priorities for waste management and minimisation and has a vision for 2050:

By 2050, New Zealand is a low-emissions, low-waste circular economy. We cherish our inseparable connection with the natural environment and look after the planet's finite resources with care and responsibility.

Waimate District Council, through the 2024-30 Waste Management and Minimisation Plan, has set aspirational targets:

Table 6-4: Waste Management and Minimisation Plan Targets

NZWS target	Local annual target (kg per capita, tonnes, %)	WDC	
		Baseline 2022	Target 2030
10% reduction in waste generation	Total kerbside material	431 kg per capita[1]	388 kg per capita
	Total material received RRPs	1,400 tonnes	<1,400 tonnes
30% reduction in final disposal	Kerbside refuse collection	112 kg per capita[2]	78 kg per capita
	% contamination in kerbside organics, glass, and recycling	Organic <1% Glass <1% Recycling 3%	Organic <1% Glass <1% Recycling <10%
	Redruth Landfill disposal from RRPs[3]	360 tonnes	250 tonnes
30% reduction in biogenic methane emissions	% total organics in kerbside rubbish collection	40%	25%

Whilst the target for biogenic methane relates to organic content in kerbside residual waste, one of the major sources is from wastewater treatment plants. This will need to be actively considered when reconsenting the WWTP prior to 2036.

6.5 Demand Management

Demand Management strategies are used as alternatives to the creation of new assets. They are aimed at modifying customer demands to achieve:

- Social, environmental and legislative objectives for Waimate District.
- The delivery of cost-effective services.
- Defer the need for new assets and optimise the performance/utilisation of the existing assets.

This involves implementing strategies to reduce flows into the WWTP 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.

Table 6-5: Flow Reduction Strategies

Strategy	Description
Stormwater Separation	Removal of stormwater ingress into the wastewater system through upgrading of the stormwater system
Response Time	Prompt response and rectification of faults
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
Infiltration Reduction	Developing an ongoing infiltration reduction programme
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 the Council and scheme committees are presented in the table below:

Table 6-6: Effluent Flow Reduction Non-Asset Strategies

Strategy	Description
Water Conservation/ Public Education	Encouraging water conservation (within the household) and understanding the issues concerning the wastewater system through public education and advertising campaigns
Property Inspections	Encouraging property owners to comply with Council's Bylaws and stormwater discharge requirements
New Domestic Technology	Encouraging the adoption of new technologies in the home such as low-flow showerheads and dual flush toilets

7 SUSTAINABILITY WITHIN COUNCIL

In addition to managing the assets in an economically sustainable way, Council will also manage its internal operations to optimise their cost, efficiency and effectiveness. This is to ensure that in the long term the costs of administering the infrastructure are sustainable.

While the overall view of this is not a subject for this AMP, the management of the asset services delivery unit is relevant.

7.1.1 Staffing Levels

Currently the Water and Wastes Group has twelve full time equivalent employees. This includes the role of Asset Manager which encompasses a wider footprint of activities and the Utilities Business unit of six FTE

The greater emphasis being placed on the responsible management, distribution, operation and maintenance of existing and future resources will add to the tasks of the Water and Wastes Group. Compliance with the requirements of the Health Act 1956, Water Services Act 2021, Water Services (Drinking Water Standards for New Zealand) Regulations 2022, Drinking Water Quality Assurance Rules and increased Regional Rules (LWRP) will ask a great deal of effort and prudent decision making from the Water and Wastes staff.

Compliance with the associated Act's and Rules places a significant demand on existing resources. The current staffing levels are supplemented by outsourcing. However, outsourcing still requires scoping, input and supervision from Council staff and does not exonerate staff from outsourced work.

Staff changes have impacted on the Univerus Assets/GIS data acquisition, capturing, trending and analysis. It is proposed as part of future improvements in the management of Univerus Assets/GIS - to ensure sufficient resources are available (both internal and external) to enable the full use of Univerus Assets/GIS for the operation, management and administration of the utility services

Because of the above, assessment of staffing requirements will be required on an annual basis to ascertain the appropriate requirements for the increased workload. Assessment needs to consider the level of staffing coverage required to implement all of the Water and Wastes Group functions including internal management, compliance, information systems management, project management, design, supervision, construction, operations and maintenance.

7.1.2 Skills

In addition to staffing numbers, assessment of staffing levels needs to consider the skill requirements to meet the demands of the infrastructure that Council does and will own and operate.

Increases in the complexity of facilities such as water treatment plants and pump stations are occurring. This will require skilled and trained staffs for operation, maintenance and supervision. A review of Council policy on resourcing the operations and maintenance is required to ascertain the most appropriate method for delivery of the required Levels of Service should be considered.

7.1.3 Training

Training of staff is presently on an ad-hoc basis with no structured long term development plans for the individual staff members in the asset management field. The link between asset life, and the ability to deliver of Levels of Service with the skills of the people who plan, design, install, operate and maintain the assets is inevitable. It is crucial that the skill gaps of staff, contractors and service providers are identified; that there are structured training programmes to close these gaps; and that the effectiveness of the training provided is evaluated. Training programmes should be designed and reviewed for each individual – not for a business unit, contractor or service provider as an entity. Refer to Section 9.4.6

7.1.4 Succession Planning

Succession planning within any business is considered necessary to reduce the risk associated with staff leaving the organisation. Succession planning allows institutional knowledge to be passed on, and assists in ensuring continuity of organisational culture.

Local Authorities have traditionally not been particularly successful at implementing succession planning techniques and practices. In previous decades the pool of experienced local authority and ex-public service engineers available meant that the negative effects of poor succession planning were not experienced. With a shrinking pool of experienced engineers, and near full employment these effects are now being experienced by more local authorities. Whilst there is always potential for staff in key positions to move on to further their careers, succession planning can help to mitigate the effects of this. Succession planning techniques can include:

- Sourcing replacement staff from within the organisation wherever possible
- Comprehensive personal career development plans in place for all relevant staff. This can include identifying weaknesses in training and experience and attempting to address those weaknesses by use of mentoring, relevant projects and continuing professional development programmes etc.
- Identifying likely staff retirements, promotions, resignations or position changes on an annual basis. Identifying potential internal staff to fill those positions, providing those staff with projects that extend them, and giving them relevant experience for filling the positions

No formal succession planning is implemented at present by Council. It is important that the current knowledge of existing staff on the Wastewater activity is continuously captured within Univerus Assets and supporting asset management tools. This will reduce the risk to service continuation as a result of unplanned staff absences and any future retirements or resignations.

7.1.5 Efficient Use of Energy within Councils 3 Waters Facilities

The 3 Waters uses a significant proportion of the Council total energy consumption via their extensive range of facilities. Instigation of energy management through the use of the Energy Efficiency and Conservation Authority (EECA) methodologies and subsidies will assist in reducing total energy consumption. Where new plant is to be installed, Council staff take the opportunity to use modern energy efficient devices such as variable speed drives, soft starters.

Efficient Operation of Facilities

The Council operates a SCADA system that allows the operation of the facilities (WTP's, WWTP and majority of pump stations) remotely allowing efficiency monitoring and running the plant in off peak situations where it is practical to do so.

8 RISK MANAGEMENT

This section looks at the Risk Management Processes utilised by Council for assessing and managing risk within the Wastewater activity.

8.1 WDC Risk Management Framework

Council has a Risk Management Policy, 2022 that provides a policy framework for risk management across council. The policy states that WDC recognises that early and systematic identification, analysis and assessment of risks, and the development of plans for controlling and mitigating risk, are necessary to achieve its desired objectives

8.1.1 Risk Management Objectives and Principles

Key WDC risk management objectives are:

- The implementation of a comprehensive Risk Management Framework;
- Identifying, analysing, assessing and appropriately managing the risks to its objectives;
- An open and receptive approach to solving risk problems;
- Ensuring that risk management is integrated into normal business processes and is aligned to the strategic outcomes of the WDC.

The WDC key principles in its approach to risk management:

a. Risk management creates and protects value.
b. Risk management is an integral part of all organisational process.
c. Risk management is a part of decision making process.
d. Risk management explicitly addresses uncertainty.
e. Risk management is systematic, structured and timely.
f. Risk management is based on the best available information.
g. Risk management is tailored.
h. Risk management takes human and cultural factors into account.
i. Risk management is transparent and inclusive.
j. Risk management is dynamic, iterative and responsive to change.
k. Risk management facilitates continual improvement of the organisation.

8.1.2 WDC Approach to Risk Management

WDC approach to risk management recognises that Business-as-usual procedures encompass a number of elements that together facilitate an effective and efficient operation, enabling the WDC to respond to a variety of risks. These elements include:

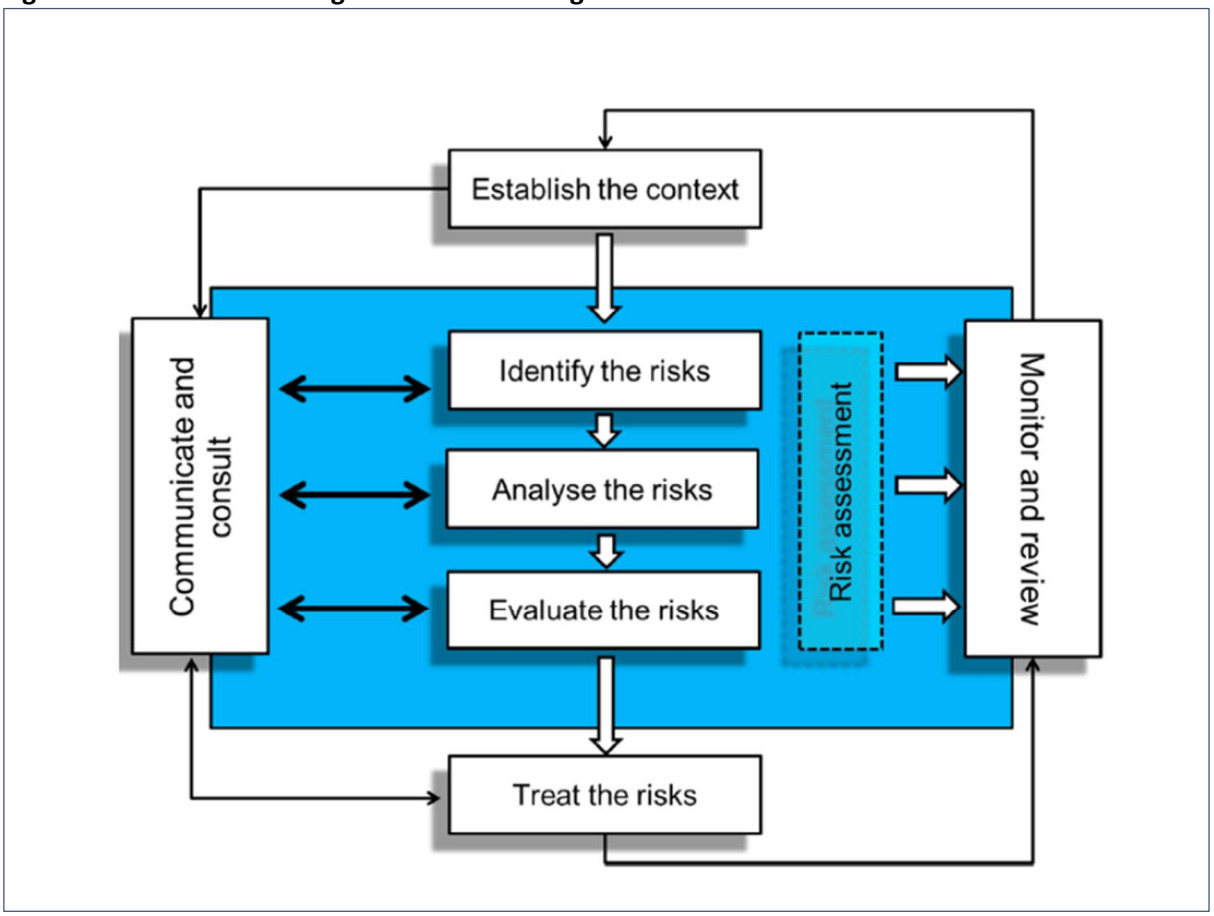
a. Operational awareness: keeping ourselves updated on changes or issues within our operating environment.
b. The process of tracking progress towards achievement of the strategic outcomes defined in the Long Term Plan, Annual Plan, Financial Strategy, and 30-year Infrastructure Strategy.
c. Unit planning and budgeting – the unit planning and budgeting process is used to set actions and allocate resources. Progress towards meeting unit plan targets is monitored regularly.
d. Major projects - risk assessment and mitigation strategies are essential elements.
e. Risk Register – to identify, assess, and monitor risks significant to the WDC. The risk register is reviewed quarterly and emerging risks are added as required.

f. Assurance measures (internal reporting and internal audit where appropriate).

8.1.3 WDC Risk Management Process

The Risk Management Process comprises the activities described in the diagram below. It should be embedded in the culture and practices of the organisation and tailored to its business processes.

Figure 8-1: WDC Risk Management Process Diagram



The process diagram highlights the following important risk management actions:

- **IDENTIFICATION OF RISKS**

All staff members are empowered, and expected, to identify and communicate risks.
Identified risks will be recorded in a risk management plan.

- **ANALYSIS OF RISKS**

Risks will be analysed to determine potential causes, the likelihood of occurrence, and the potential consequences if they do occur.
The causes, likelihood and consequence will be recorded in a risk management plan (risk register).

- **EVALUATION OF RISKS**

Analysed risks will be evaluated against criteria to determine whether a risk is tolerable in its current state or whether further action is required. The evaluation of risks will consider established risk tolerances for such risks, as well as any risk-specific factors. In the first instance, the evaluation of risk will include reference to the WDC Risk Response table

- **TREATMENT OF RISKS**

Where residual risk is considered to be too high, risk treatments will be applied to reduce the residual risk to an acceptable level.

In considering risk treatments, consideration will be given to both the costs and effort involved in the treatment and the potential benefit from the risk reduction. Key
Risk treatment can involve:

a. Avoiding a risk by deciding not to start or continue with the activity that gives rise to the risk.
b. Removing the risk source
c. Changing the likelihood of the risk occurring
d. Changing the consequence if the risk occurs
e. Sharing the risk with another party or parties, or
f. Retaining the risk by informed decision.

- **RECORDING OF RISKS**

Risks, controls and mitigations will be recorded in a risk management plan (risk register).
8.15 A high-level organisation-wide 'corporate risk management plan' (risk register) will be maintained to record and report on risks of WDC-wide significance. Subsidiary risk management plans will be prepared as appropriate throughout the organisation.

These may include, but will not be limited to:

a. Group risk management plans
b. Activity risk management plans (within Activity Management Plans)
c. Asset risk management plans (if appropriate to be separate from Activity Management Plans)
d. Specialists risk management plans (for example, health and safety)
e. Project risk management plans, and
f. Any other risk management plan relevant to helping the WDC achieve its objectives.

- **REPORTING OF RISKS**

Identified risks, and the associated controls, mitigations and accountabilities, will be reported in accordance with the Risk Response table included as Appendix 2. Risk management plans (risk registers) will be reported regularly to both the Leadership Team and the Committee responsible for risk.

- **ACCOUNTABILITY OF RISKS**

Specific accountability for each risk, control and mitigation will be identified and recorded in a risk management plan (risk register).

8.1.4 Audit & Risk Committee

Audit & Risk Committee to provide direction for the WDC's risk management and to ensure that appropriate risk mitigation activities are functioning effectively. Subject to the governing body's delegated authority, the Committee responsible for risk has responsibility to:

- Review the risk management framework
- Consider the robustness of mechanisms adopted by management to
- mitigate key risks, including the adequacy of internal controls
- Advise the governing body on matters of risk and provide objective advice
- and recommendations for the governing body's consideration
- Review disaster management and business continuity plans.
- Review the Risk Register at each quarterly meeting.

8.1.5 Risk Roles and Responsibilities

Detailed roles and responsibilities of council staff are detailed in the Risk Management Policy.

8.1.6 Risk Audits

The use of internal audit is an important tool to assess the effectiveness of the internal control environment. The Audit and Risk Committee are responsible for approving the appointment of the internal auditor and overseeing their programme of work. From time to time, external Third Party Audits may be appropriate. The use of specialist third parties for auditing and reporting may be used to increase the reliability of the internal control system.

8.2 Wastewater Risk Assessments

There are essentially three levels of risk assessment that should be considered for each activity within Council:

- Level 1 - Organisational Risk Assessment
- Level 2 - Activity Management Risk Assessment
- Level 3 - Critical Asset Risk Assessment.

Level 1 - Organisational Risk Assessment

Organisational Risk Assessment focuses on identification and management of significant operational risks that will have an impact beyond the activity itself and will affect the organisation as a whole. This approach allows the Integrated Risk Management framework to address risks at the organisational level, as well as at both the management and operational levels within the particular Council activities. The decision to implement the treatment measures identified will be at an organisational level, not activity level. Organisational risks are monitored in accordance with the risk policy and regularly presented to the Audit and Risk Committee.

Level 2 - Activity Management Risk Assessment

Activity Management Risk Assessment uses the same principal and consequence tables, but the focus has been at more detailed level. During this process, specific risk events were identified which would affect the operational ability or management of the activity as a whole. If an individual system within the activity was identified as being at a greater risk or would need to be managed in a different way to the rest of the systems, then it was highlighted for separate consideration.

A Risk Summary Table was established in 2011 (refer Appendix C), which identifies risk management strategies to minimise risks associated with the provision of the Water, wastewater, stormwater and solid wastes services. It is considered that the risks, mitigations and improvements have not changed markedly since the risk summary table was established in 2011. Notwithstanding this, specific risks associated with water quality are documented within the Water Safety Plans for each water scheme.

The risk profile will be extended to encompass assets down to a component level in a Risk Management Plan. In the absence of component level assessments, the risk summary table will be used to provide guidance for mitigation steps.

The risk management plan will be designed to ensure that:

- All significant operational and organisational risks are understood and identified

- The highest risks that should be addressed within a 10 year planning horizon are identified
- Risk reduction treatments which best meet business needs are applied

The risks assessed are given a ranking as follows:

- Low Risk: Managed by routine procedures
- Moderate: Managed responsibility specified and risk controls reviewed annually
- Significant: Management attention required to reduce risk
- High: Immediate action required to reduce risk

Table 8-1: Risk Summary Table (showing Significant or high Risks only)

No.	Weakness or Vulnerability	Risk	Gross Risk	Mitigation Strategies	Residual Risk	Improvement Required
1	**Higher Level Policies, Procedures and Controls**					
1.5	The Council does not have an acceptable position on the impact of climate change on service delivery	Financial loss due to liability for property damage, loss of asset. Not able to provide service.	Significant	Council has developed a Climate Resilience Strategy, March 2024.	Low	Continued implementation o Councils Climate Resilience Strategy on the effects of climate change
2	**Financial**					
2.1	Lack of long-term financial planning	Higher than necessary financial costs	Significant	Existing network models are up to date and available	Low	
2.2	Service levels vs funding and works not clear	Service levels not being met due to lack of funding as decision makers not aware of implications for Service Levels.	Significant	Set performance targets for next 10 years and monitor and report on performance. Impacts of delayed capital works reported to Council.	Low	
2.3	Assumptions for financial forecasting not always understood	Additional costs incurred because assumption/uncertainties not accounted for i.e.: asset valuations, depreciation	Significant	Finance/managers need to be aware of assumptions and uncertainties behind financial forecasting information.	Moderate	Improvement of quality of information
2.4	Unforeseen Additional Costs	Reputation of Council detrimentally affected	Significant	Ensuring AMPs and asset information up to date and accurate.	Low	
2.8	Insurance cover needs review	Insurance not adequate and unnecessary costs incurred	High	Insurance cover reviewed to ensure adequate cover on annual basis.	Low	
3	**Organisational Management**					
3.3	Lifelines Plan not up to date or implemented	Large scale asset failure due to a naturally occurring event resulting in prolonged and substantial loss of service to District	Significant	Ensure Lifelines Plan up-to-date and recommendations implemented that includes having a high level of risk reduction, readiness, response and recovery during and following Civil Defence Emergency.	Significant	Update lifelines plan
4	**Human Resources**					
4.3	Information in people's heads or inappropriate recording of information	Organisational knowledge lost with staff leaving	Significant	Ensure staff document and appropriately file everything that is relevant. Ensure	Moderate	Formalise and update maintenance schedules and procedures, contingency and

No.	Weakness or Vulnerability	Risk	Gross Risk	Mitigation Strategies	Residual Risk	Improvement Required
				good management succession when existing staff leave.		operation and maintenance manuals.
4.4	Insufficient staff or not appropriately skilled	Programmed work not completed due to insufficient staffing or skill levels, having negative impact on service levels and creating public health risk.	High	Skill levels are appropriate	Low	Formal training programme required that includes the use of activity management plans.
4.5	Inadequate attention to staff succession	Organisational knowledge lost with staff leaving	High	Implement good staff/management succession plan and document procedures. Address imminent risks associated with staff retirements.	Moderate	Ensure staff are appropriately trained and have a good understanding of the requirement for written procedures and manuals (inc. AMP's)
6	**Asset Management**					
6.1	Network modelling, condition assessments not undertaken.	Capital Works programme not optimised. Renewal works not completed due to lack of knowledge causing failure of assets. Future forecasting not accurate.	Significant	Undertake formal condition assessments of network and develop robust renewals programme based on sound knowledge.	Moderate	Network model informed by the ongoing assessment programme of condition and performance data.
6.2	As-built information can be slow or incorrect coming from maintenance staff, Contractors, Consultants	Council faces legal action because of incorrect information provided (particularly with regard to LIMS)	Significant	Ensure As-builts up to-date and on record promptly. Ensure GIS capability. Better define as-built requirements for internal staff and external contractors.	Low	
6.3	Criticality assessment not undertaken	Failure of critical assets resulting environmental damage or not meeting service levels	Significant	Criticality assessment of assets have been undertaken. implementation strategy for managing critical assets is ongoing	Low	Continue to Incorporate criticality assessment of assets and implement strategy for managing critical assets.
6.5	Asset management systems not up-to-date or completed	Failure to of utility systems because maintenance work not completed or management system not operational.	Significant	Asset Management System in place and updated as required	Low	Continuous improvement required to retain appropriate level of sophistication. Provide dedicated resource to managing asset data flows.

No.	Weakness or Vulnerability	Risk	Gross Risk	Mitigation Strategies	Residual Risk	Improvement Required
6.8	Capital works delayed due to unforeseen circumstances	Programmed Capital Works not completed. Target Service Levels not met	Significant	Staff held accountable for delays & Staff trained in project management.	Moderate	Develop projects process that provides for project plans to be prepared for every approved renewal and capital development item.
6.9	Deferred renewal and maintenance not recorded or not done	Deferred maintenance not recorded causing unexpected, additional costs from asset failure	High	Record all deferred maintenance and renewals	Moderate	Ensure all deferred renewals work recorded and management aware of impact on service levels if not funded.
6.10	Not all easements recorded or obtained	Council faces legal action or cannot carry out its activities because it does not have legal right to cross a property	Moderate	Keep up-to-date record of easements. Establish clear policy for processes to be followed when easements are required.	Low	Easement information needs to be improved with all identified easements provided with details of interested part. Legal situation to be clarified.
6.11	Insufficient documentation of escalating process decision making	Response to emergency situations reduced, higher expenditure	Significant	Employment of staff with the appropriate qualifications and skills	Low	
10	**Asset Risks - Stormwater**					
10.5	Insufficient overland flow paths	Flooding of houses and properties	Significant	Modelling of system will ascertain flow path requirements	Moderate	
10.6	Overland Flow Paths located on private property - no maintenance (overgrown/built upon)	Flooding of houses and properties	Significant	Council staff have good maintenance and monitoring provisions	Moderate	
10.7	Overland Flow Paths Located on Councils property or roads - no maintenance (overgrown etc.)	Flooding of houses and properties	Significant	Council staff have good maintenance and monitoring provisions	Moderate	
11	**Asset Risks - Wastewater**					
11.1	SCADA Failure	No alarm available	Significant	Back-up systems and procedures	Moderate	

Level 3 - Critical Asset Risk Assessment

Critical assets are considered those assets in which failure would result in a major disruption to the drainage of wastewater or Levels of Service. Usually the identification of critical assets is based on pipe diameter or population served.

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

A criticality assessment has been carried out in 2017. See Section 3.11.

8.3 Risk Management Focus Areas Within Council

8.3.1 Business Continuity

Business Continuity is a progression of disaster recovery, aimed at allowing an organisation to continue functioning after (and ideally, during) a disaster, rather than simply being able to recover after a disaster.

It is proposed to develop Business Continuity and Emergency Management Plan (for rapid and structured response to emergency failures and significant hazards) and ensure review control process is carried out.

8.3.2 Succession Planning

Succession planning within any business is considered necessary to reduce the risk associated with staff leaving the organisation and forms part of the business continuity process. Succession planning allows institutional knowledge to be passed on, and assists in ensuring continuity of organisational culture. To this end the Wastewater AMP is quite detailed to ensure all relevant documents and information required for appropriate decision making are recorded and knowledge transfer can occur even in the absence of key staff.

8.3.3 Health and Safety

Council is responsible for providing a safe work environment for its staff and public. A Health and Safety committee meets regularly, and provides information to all council staff on their obligations in this matter. The Councils Utilities staff, by the nature of their work are exposed to risks outside the office environment that are associated with the utilities services (reticulation and facilities). Council provides training in general and specific safety areas as required, examples for the utilities services are:

- Confined space requirements for supervisors and engineering staff that are associated with reticulation.
- Traffic control at work sites via the code of practice.
- Facilities Health and safety register and associated sign in/out procedures.
- Providing access to appropriate vaccinations to protect both the employee and consumers of the service.

8.3.4 Pandemic Response – COVID 19

The 2019–20 coronavirus pandemic had a significant impact on this activity. The timeline of events are as follows:

Table 8-2: COVID 19 Chain of events

Date	Event	NZ Government Response	Waimate DC Response
11/02/2020	World Health Organisation declares an official pandemic		
28/02/2020	NZ first reported case		
21/03/2020		Alert Levels (1-4) announced	
23/03/2020			Temporary closure of Council facilities
24/03/2020		Move to Alert Level 3	
25/03/2020		State of Emergency declared	Refuse services continue. Recycling services cease
26/03/2020		Move to Alert Level 4	
27/03/2020			Notice of Essential Services
24/04/2020			Notice of Building Control Services under Alert Level 3
27/04/2020		Move to Alert Level 3	
30/04/2020			Emergency budget response
13/05/2020		State of Emergency lifted	
14/05/2020		Move to Alert Level 2	
10/06/2020		Move to Alert Level 1	

The impacts have been wide ranging and have included a significant and protracted recession. Council received funding through the following central government initiatives, with some related to the pandemic and others related to the Three Waters Reform programme(s):

- Covid Stimulus Funding ($3,360,000)
- Transition Funding ($350,000)
- Better-Off Funding ($2,420,000)

The response to COVID 19 provided a snapshot of how quickly our environment can change and how quickly we can adapt. People working from home. The uptake of technology. Change in transportation patterns. Online sales and deliveries. Outdoor activities. Socio economic impacts and response.

8.3.5 Operation & Maintenance

In the daily operation and maintenance of the wastewater system Council employ a range of risk management procedures including but not limited to:

- Prevention of contamination of treated water
    - Minimum requirements for disinfection of existing water mains and fittings during planned and reactive maintenance
    - Separate vehicles and tools for water and wastewater/stormwater
    - Best appropriate practices for staff including contractors and materials
    - Illegal connections
    - Appropriate use of backflow preventers
- Critical consumers
- Shutdowns
- Health and Safety
- Asbestos handling

- Traffic control and management
- Overflows and Clean up

Council also has the following agreements in place with local contractors in relation to Civil Defence Emergency expectations:

- Provide plant and personnel on site to enable the emergency work to be undertaken
- Advise the Engineer immediately if unable to either commission sufficient resources or undertake the emergency work
- Co-operate with the appropriate authorities i.e. Police, Civil Defence
- Carry out emergency work immediately if such work is essential to ensure the health and safety of the community or to protect the environment
- Prioritise emergency work to reduce the risk to the community and environment to acceptable levels
- Advise the Engineer immediately of any situation where the emergency is likely to continue and affect the health and safety of the community and the environment

8.3.6 Government Review of 3 Waters Services

During 2017 the Minister for Local Government initiated a review of 3 Waters services to assess whether current local government practices and the system oversight are 'fit for purpose'. This acknowledge that effective 3 Waters services are essential for communities as:

- Health and safety - depends on safe drinking water, safe disposal of wastewater and effective stormwater drainage
- Prosperity - depends on adequate supply of cost effective 3 Waters services for housing, businesses and community services
- Environment - depends on well managed extraction of drinking water, and careful disposal of wastewater and stormwater

A series of events indicated there are system-wide performance challenges and supported the perception that service failure is the only indicator that service delivery is not in accordance with the expected outcomes.

On 8 July 2020 the Government announced a funding package of $761m to provide immediate post COVID 19 stimuli to local authorities to maintain and improve 3 Waters infrastructure, support reform of local government water services delivery arrangements, and support the operation of the Water Quality Regulator.

During 2021 to 2023 the Government introduced a range of Water Services legislation which will have a significant impact on the 3 Waters services. This included legislation with a staggered approach to establishing the water services entities, and proposed all entities going live between 1 July 2024 and 1 July 2026.

However, during the 2023 Government election a new coalition government was formed which put immediate sop work orders to 3 Waters (with assets returned to council ownership).

In 2024 the new Government introduced the 'Local Water Done Well' legislation with two of the three Bills enacted at the time of the updating of this AMP. This legislative change requires Councils to consider the sustainability of their water services provision and consider service delivery mechanisms. Detail of this legislation is provided in **Error! Reference source not found.**.

8.3.7 Insurance

The Council has a variety of insurance policies including cover for the water network; property, plant and equipment; motor vehicles and moving plant. The insurance cover is updated on a regular basis to ensure the cover is appropriate. Land is not insured and there are no self-insurance funds currently maintained by council.

Insurance cover for the 3 Waters network is provided through a mix of material damage policies and through the Local Authority Protection Programme (LAPP).

- LAPP is a mutual pool created by local authorities to cater for the replacement of 'below ground' infrastructure following catastrophic damage by natural disaster. LAPP provides cover for 40% of relevant assets (with central government liable for the remaining 60%). Of the 78 local authorities in New Zealand, 22 are currently Fund members. Civic Financial Services is the Fund's administration manager.

- Material Damage and related policies provide for 'above ground' asset replacement cover.

dditionally, Council holds Public Liability and Professional Indemnity insurances.

8.3.8 Emergency Management

Background

Waimate district is subject to a wide range of natural hazards. Several significant natural events have been recorded which have caused damage to property and the environment with no one hazard being the "standard" event. The district has suffered five main events over the last 45 years:

- Snowstorms: in 1967, 1992 and 2006 blanketed a large part of the Waimate district cutting road access causing power outages and stock deaths.
- High Winds: in 1975 damaged trees blocking roads and bringing down power wires.
- Floods: in 1986 and more recently have badly eroded land adjacent rivers damaging bridges and roads. Water supplies with surface water intakes were blocked with sediment. Power cuts also disrupted supply of water to consumers.
- Rural fire: Caused disruption to power in Waimate and the surrounding rural margins.
- High Winds: in 2014 damaged trees blocking roads and bringing down power wires.

Council has subsequently modified pumps stations to enable operation using standby generators (both permanent and mobile).
Critical pipeline crossings over bridges have been strengthened or alternative pipe routes have been provided.

The impact of the Christchurch earthquake has served to further highlight the importance of adequate emergency planning.

Civil Defence and Emergency Response Plans

The Civil Defence Emergency Management (CDEM) Act 2002 requires Local Authorities to coordinate Plans, Programmes and Activities related to CDEM across the areas of Risk Reduction, Readiness, Response and Recovery. It also encourages cooperation and joint action within regional groups. Management systems for civil defence emergencies are detailed in the Council's CDEM plan.

The Lifelines Response Plan details the hazards, possible cascading effects and the interventions that may be applicable. It does not consider the effect on any individual community as these will change with the extent of the hazard i.e. the depth and extent of snow and the extent and makeup of that utility i.e. if the water supply has a standby generator.

Disaster Resilience Summary Report

In 2006 the Disaster Resilience Summary Report (DSR) was commissioned. The DRS is designed to:
-

- Create an understanding of the Utilities Lifeline services and operation.
- Provide a clear summary of facts to assist CDEM undertake their role.
- Provide each Utility with a simple method for providing the only information that is required by the CDEM Groups.
- Increase CDEM Group knowledge of each Utility's organisation and operations in order to significantly increase the efficiency of future CDEM/Utility contact.

The hazards identified that might affect the networks were:
Snow, earthquake, floods (after most floods there is a re-think of how the planning and network is managed), river change/management, rain, wind (trees falling across roads), electricity failure, networks weakness, tsunami, telecommunications and Pandemic planning.

Items requiring further works in progress include:

- Hazardous substance spill
- Fire
- Dam failure
- Drought/climate change
- Fuel supply failure
- Tsunami

8.3.9 Infrastructure Resilience

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. 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.
Council acknowledge that resilience is not only about physical assets. It is about the people. It includes but are not limited to:

- connecting people and communities (neighbour to neighbour; educate; 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 and as a result Council have to factor this into long term planning, civil defence planning and determining the infrastructure requirements moving forward to ensure the community's expectations are met with regard to safe and reliable services and general wellbeing.
In order to improve resilience Council 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
- Promote design and construction standards (where cost effective) that ensure infrastructure is able to withstand natural hazards and long-term changes in circumstances such as those resulting from climate change
- Identify critical assets and ensure mitigation methods are developed
- Obtain insurance where this is deemed to be the most cost effective approach
- Invest in business continuity succession planning and training

Council will take guidance from 100Resilient Cities website http://www.100resilientcities.org/. This includes the strategies of Greater Christchurch and Wellington.

8.3.10 Project AF8

Project AF8 is a cutting edge 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 of 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.

8.3.11 Climate Change

It is now generally accepted worldwide that human activities have accelerated climate change, and that further future climate change is unavoidable. The effects of climate change include both effects on our climate (such as temperature increases or flooding), and a wide range of secondary effects (such as damage to strategic infrastructure). The following details climate change projections for the Canterbury region.

In response to the challenges associated with climate change Council has developed a Climate Change Resilience Strategy, March 2024. Work to date in developing the resilience pathway have included:

- Appointing a part-time Climate Change Office to oversee the development of the strategy
- Consulting, informing and engaging with district communities, neighbouring councils and the Canterbury Climate Partnership Plan
- Completing the second council carbon footprint assessment in 2022/23

As Councils Climate Change Resilience Strategy and associated pathway continues to develop and mature this AMP will be updated as necessary with actions, responses and budgets required to meet the Strategy requirements.

The National Climate Change Risk Assessment (MfE August 2020) identifies 43 priority risks across five value domains (natural environment, human, economy, built environment and governance) and highlights 10 risks considered to be the most significant. This MfE report highlights, among

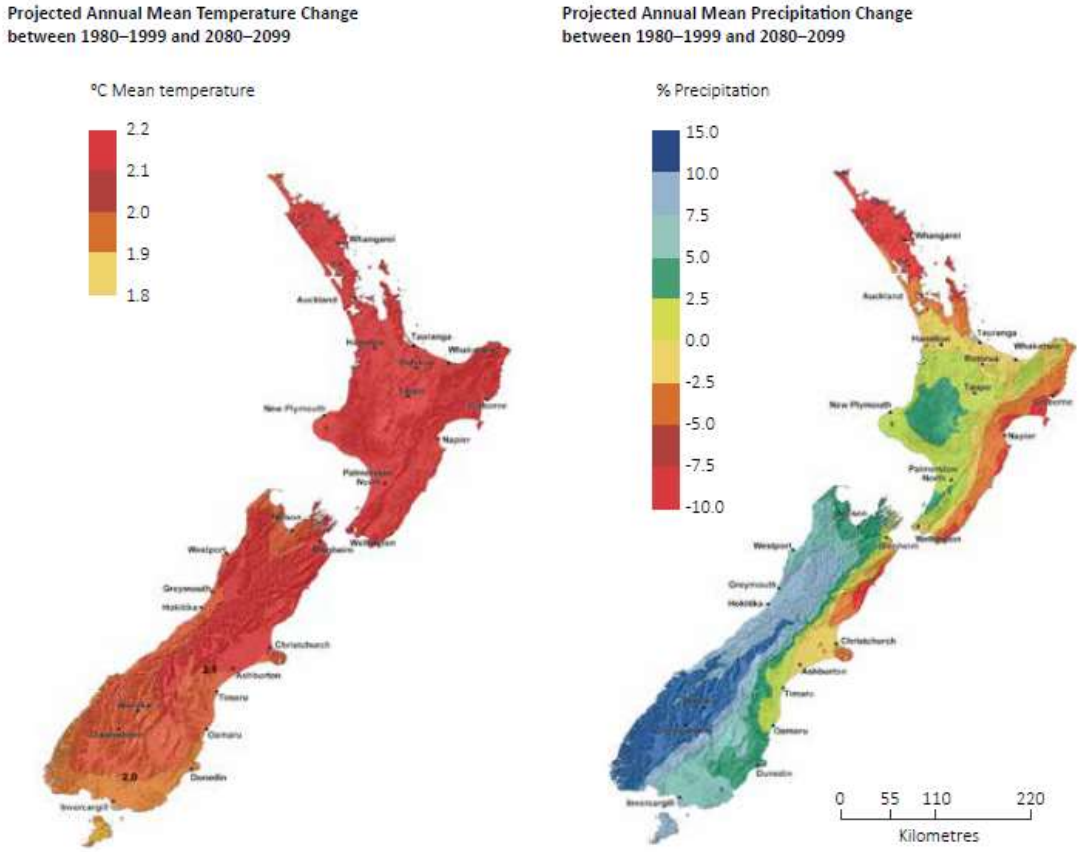
others, the following two domains (particularly applicable to Council infrastructure) as extreme risks:

Table 8-3: Climate Change Risk to Council

Domain	Risk	Consequence
Economy	Risks to governments from economic costs associated with lost productivity, disaster relief expenditure and unfunded contingent liabilities due to extreme events and ongoing, gradual changes.	Extreme
Built environment	Risk to potable water supplies (availability and quality) due to changes in rainfall, temperature, drought, extreme weather events and ongoing sea-level rise.	Extreme
	Risks to buildings due to extreme weather events, drought, increased fire weather and ongoing sea-level rise.	

Waimate District is expected to experience two of the main impacts of climate change – sea level rise and more extreme weather patterns.
Sea level rise is considered the lesser of the influences as much of our coastline is elevated above MSL. Modelling of associated inundation, as a result of tsunami, is known to affect very few council controlled assets.
What is understood is that climate change associated risks will increase in time.
Waimate mayor Craig Rowley said climate change was a priority.
"As far as doing the work on something, we always take it into account looking at the of risk of climate change."
Rowley said it was a hectic time of the year with budgeting and planning, but climate change was something we certainly do recognise" (Timaru Herald 13/9/2017)
Council recognised the roles of Local Government, NZ, the Ministry of Primary Industries, and the Ministry for the Environment and the Royal; Society of NZ in researching and guiding a pragmatic response.

Figure 7: Average changes in annual mean temperature (left, degrees Celsius) and precipitation (right, percent) during 2080–2099 compared to 1980–1999, for a climate change scenario midway between low- and high-carbon futures.



Source: Climate change: implications for New Zealand (Royal Society of New Zealand, April 2016)

The local government position statement on climate change (2017) states

Climate change actions have three components:

1. actions to reduce emissions (mitigation);

2. planning and actions at the national and local level to support public safety and effective adaptation; and

3. limiting or removing pressure on systems affected by climate change.

All local authorities (city, regional, district and unitary) are at the frontline of climate change adaptation and have a role to play in mitigation.

The role of Council is key in delivering the outcomes sought by the community. Key drivers to support and manage the challenges are the National Climate Risk Assessment for New Zealand (Ministry for the Environment, 2020) and the Climate Change Projections for the Canterbury Region (NIWA, 2020).

Projections for Canterbury

Climate Change Projections for the Canterbury Region have considered the following scenarios, which take into account either cutting greenhouse gas emissions over time from 2019 levels – or not curbing emissions during the life of this Asset Management Plan.

Average Temperatures

- Increase with time and greenhouse gas concentrations.
- By 2040, annual mean temperature up 0.5 to 1.5°C.
- By 2090, up 0.5 to 2°C (if we cut emissions) or up 1.5 to 3.5°C (if we don't).

Maximum Daytime Temperatures

- By 2040, annual mean maximum temperature up 0.5 to 2°C.
- By 2090, up 1 to 3°C (if we cut emissions) and up 2 to 5°C (if we don't).
- By 2090, western Canterbury's alpine and sub-alpine areas could be 5 to 6°C warmer in spring and summer (if we don't).

Maximum Night-time Temperatures

- By 2040, annual mean minimum temperature up zero to 1°C.
- By 2090, up 0.5 to 1.5°C (if we cut emissions) and up 1 to 2.5°C (if we don't).
- The difference between a day's high and low increases with time and greenhouse gas concentrations.

Hot Days (25°C or more)

- By 2090, expect 20 to 60 more hot days in most of Canterbury (if we don't cut emissions).
- Inland areas feel it the most, particularly the southern Mackenzie Basin, which could have 60 to 85 more hot days.
- Most of these hot days would happen in summer.
- Our warmer season could get longer in relatively low-elevation areas, with 5 to 10 more hot days in autumn and spring.
- Increased fire risks.

Cold Days (Frosts)

- Expect fewer frost days throughout the region.
- Inland areas and higher elevations warm the most, with 10 to 30 fewer annual frost days by 2040, and 20 to 50 fewer by 2090.
- The frost season (the time between a year's first and last frost) will likely get shorter.

Rainfall

There is likely to be increased rainfall depth and intensity associated with climate change. In addition, the heat that comes from the condensation of this increased moisture will make storms more intense. These extreme events may exacerbate flooding risks for Waimate District.

- Most of the region can expect small changes in annual rainfall, up or down 5%.
- By 2040, autumn might be dryer in the Mackenzie Basin, with up to 10% less rain.
- By 2090, winters could be wetter in many eastern, western and southern parts of the region, with 15 to 40% more rain.
- By 2090, Banks Peninsula and many inland areas might get 5 to 15% less rain (if we don't cut emissions).

Snow

- Expect fewer snow days everywhere, especially in the mountains.

Drought

The modelling indicates that by the 2080s, there will be a significant increase in the average water deficit across Canterbury, with increases of between 2 weeks and over 6 weeks of pasture deficit as an average climate condition. By the 2030s, current drought events that are so severe that they only occur in 1 out of 20 years are projected to occur more frequently. Increased fire risks.

Windspeed

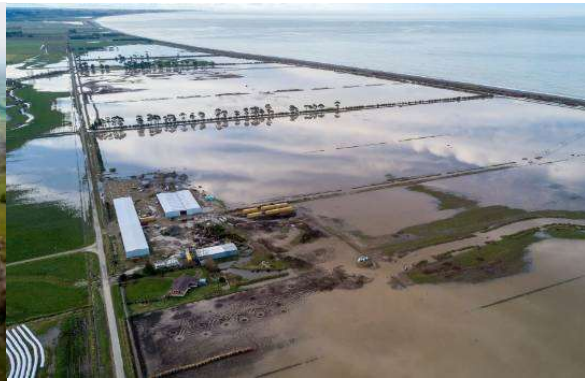
- Annual mean wind speeds up slightly, by nil to 5%.
- By 2090, winter and spring could be windier (up 5 to15%, if we don't cut emissions).
- That seasonal change might be more keenly felt in inland areas north and west of Rangiora (up 15 to 25%).
- Increased fire risks.

Sea Level Rise

Climate Change Projections for the Canterbury Region have identified worsening impacts over time at a regional and national level:

- Sea level rise projections for Canterbury are the same as for New Zealand.
- Up by 0.4m in the next 50 years and up 0.6 to 0.7m in 100 years (if we cut emissions).
- Up 0.5m in 50 years and up 1.2 metres in 100 years (if we don't).
- High tides get higher. At 0.65 metres of sea level rise, every high tide is above the spring tide mark (compared to 10% now).

Source: www.wetlandtrust.org.nz



Source: Stuff 24 July 2017

Climate Change Effects

The major effects that may impact on the Council's Infrastructure activities are set out below, along with potential mitigation options and an analysis of when the effects may occur. It should be noted that further work is required to understand how these effects will impact the Waimate District, but the collection and monitoring of data will be used to inform a more robust climate change response.

Dust from Unsealed Roads: Hotter temperatures and associated drought conditions could have detrimental effects in terms of increased dust from unsealed roads. This may mean that in future areas of unsealed roads need to be sealed, particularly close to residential properties. Council currently allows for $50k to part fund "dust seals" via policy. Road classifications and traffic volumes on our low use roads dictate the overall level of service. Individuals are able, with part funding by Council, to increase the level of service adjacent to their property to mitigate adverse effects associated with dust.

Council will continually monitor demand for this service and provide increased funding as required.

Hotter temperatures potentially have an impact on the timing of both grading and metalling activities which will need to be monitored over time.

In the shorter term this approach is considered appropriate but as the effects of drought conditions become more prevalent, Council may need to consider a revision of the level of service relating to unsealed rural roads which, in turn, will adversely affect funding requirements (increased).

- Likelihood - Possible (25 – 50%)
- Location - District Wide
- Timeframe - 2030 onwards
- Mitigation - Monitor

Changes in Demand: An overall decrease in the mean rainfall for the district could impact on land use and in turn change demand on certain areas of the Council's infrastructure networks. More intense rainfall events have the ability to damage crops, and this may manifest in changing farming practices. These changes in farming practices could result in changing traffic volumes for particular areas, changes in demand from our water networks, and requirements for higher levels of service to mitigate the risks associated with nuisance flooding, to name the major impacts.

Council will need to monitor and understand these requirements to inform future work programmes. This is achieved through regular traffic counts, up-to-date hydraulic modelling of our water schemes and optimised renewal of drainage assets.

Council is mindful that changes in demand with manifest as changes to LoS, geographic demand and overall demand. In order to cater for this, underlying data is important to plan appropriate renewals in the future.

Council is also installing water metering within the urban water network as a means to manage demand, manage water losses and to increase the availability of potable water.

- Likelihood - Likely (50 – 70%)
- Location - District Wide
- Timeframe - 2030 onwards
- Mitigation - Monitor

Drainage Capacity: Extreme rainfall events in a generally dry region may cause surface flooding affects due to poor capacity of drainage assets. The cost of upgrading drainage assets for these extreme events is likely to be prohibitive for Council. Whilst, as a district, council is unable to build infrastructure to deal with these extreme flows and volumes, it is able to define the levels of service (20% and 2% annual exceedance probability) and therefore the level of protection that ratepayers and users can expect.

Mitigation of events outside of these parameters are dealt with through the protection and definition of overland flow paths, defined areas for detention and improved stormwater management practices. These practices (in an urban sense) are defined in Waimate District Councils draft Stormwater Management Plan which is an underpinning document for the global consent that is currently being sought through Environment Canterbury Regional Council. For example, Council defines on-site management of stormwater as the preferred solution up to a 1 in 50 year event. The defined 1 in 50 year design event takes into account climate change factors defined by NIWA.

Extreme rainfall events have a detrimental impact on council's wastewater network where inflow of stormwater presents several challenges in terms of conveyance capacity and surcharging of manholes. In 2021, council is undertaking an inflow investigation to identify which areas are affected and formulating appropriate responses to mitigate the effects. Left unchecked, climate change impacts would adversely affect this activity. When addressed, this will lead to increased levels of service, allow for future growth by increasing available capacity and reduced compliance risks.

- Likelihood - Almost certain (70 – 99%)
- Location - District Wide

- Timeframe - 2021 onwards
- Mitigation - Design, planning, and policy

Increased Flood Damage Repair Work: Extreme rainfall events in a generally dry region may cause surface flooding affects and in turn increase requirements for flood damage repair works. Consideration will need to be given to design and location aspects for Council's assets to reduce the risk of damage or loss of service due to extreme weather events. There is no provision (currently) to fund these repairs and they are typically funded via existing budgets and often with co-funding from Waka Kotahi.

Council is continually monitoring the financial effects associated with flood events (and the diversion of existing budgets) and has considered (in the past) developing a "flood event" fund. This monitoring will continue with intervention likely if existing programmed work begins to be adversely affected. Potentially this issue will need to be consulted on as increased costs will result in increased rate requirement. Resultantly the community will receive a higher level of service than currently experienced.

Furthermore, storm events can impact on raw water quality from streams and bores used for water supply. This presents challenges associated with the provision of potable water in terms of reliability, treatability and therefore compliance with the Drinking Water Standards for New Zealand

- Likelihood - Almost certain (70 – 99%)
- Location - District Wide
- Timeframe - 2021 onwards
- Mitigation - Monitor and adapt funding if required

Water availability for Construction: Increasing demand for water is currently an important issue for Canterbury. This increased demand is likely to become increasingly critical in a future characterised by drier average conditions, and an associated increase in both drought frequency and intensity. This may mean, as an example, that it will be more difficult to obtain the required water to complete construction works.

Updating of hydraulic models for the council water supplies allows for optimised future renewals that address the location of demand within the schemes (up or down). They also allow Council to plan for growth and increased demand as a result of changes to legislation e.g. the Water Services Bill and its potential impact on water suppliers outside of the current reform programme.

- Likelihood - Almost certain (70 – 99%)
- Location - District Wide
- Timeframe - 2025 onwards
- Mitigation - Monitor and adapt future programmes as required (LoS, additional demand, changing demand)

8.4 Taumata Arowai

The Water Services Regulator Act 2020 established a new regulatory body, Taumata Arowai, to oversee, administer and enforce a new and strengthened drinking water regulatory system. Taumata Arowai also have a national oversight role to improve the environmental performance of stormwater and wastewater networks.

The role and operating regulations of the water services regulator are under review by the government at the time of the writing of this AMP. Council will continue to monitor changes and interact with Taumata Arowai in accordance with this requirements.

Taumata Arowai's role is to:

- Oversee and administer an expanded and strengthened drinking-water regulatory system, to ensure all New Zealand communities have access to safe drinking water. That includes holding suppliers to account, if need be.

- Oversee from a national perspective the environmental performance of drinking-water, wastewater and stormwater networks. (Regional councils will remain the primary regulators of wastewater and stormwater).

8.5 Significant Negative Effects

The table below identifies the negative effects for the Waimate Community that the Wastewater Activity may have on the social, economic, environmental or cultural well-being of the community. It indicates how the existing approach or proposed action to address these in the future. There are no significant negative effects shown to occur for the Wastewater activity.

Table 8-4: Negative Effects – Wastewater Activity

Effect	Status of Effect		Impact on Well-Being (existing situation)				Existing Approach or Proposed Action to Address
	Existing	Potential	Social	Economic	Environmental	Cultural	
Wastewater Treatment Plant							
Discharge of treated backwash water to rivers	⇔	⇧	Minor	Mod	Mod	Minor	Maintain current consents for WWTP discharge. WWTP maintained to ensure continued compliance with resource consents
Biosolids discharge to land	⇔	⇧	Minor	Minor	Mod	Minor	Emphasise social responsibility (sustainable resources)
Discharge of odour	⇔	⇩	Nil	Nil	Nil	Nil	Maintain odour control by ensuring staff are appropriately trained
Pump Stations							
Noise	⇔	⇔	Minor	Nil	Minor	Nil	Have a high degree of noise mitigation
Overflows	⇔	⇔	Mod	Minor	Minor	Minor	Pump station overflows are reported and resolved within a short space of time.
Visual	⇔	⇔	Minor	Minor	Nil	Minor	Aesthetics are considered during design and existing facilities are maintained to ensure minimum visual impact
Discharge of odour	⇔	⇩	Nil	Nil	Nil	Nil	Reported and resolved within short period

⇧ Increasing ⇔ Remaining the same ⇩ Decreasing

8.6 Capital Programme Delivery Risks

Council has an ambitious capital programme driven by a number of factors:

- Continuation (and acceleration) of the active renewal programmes;
- Capital works needed to meet the requirements of the Water Services Act and associated secondary legislation / rules; and
- Capital works associated with compliance through the Water Services Act.

Particular pressure is exerted over the first three years of the 2025-34 Long Term Plan. In order to mitigate risks associated with programme delivery, Council has implemented a number of tactical responses:

i. Additional staff have been engaged to ensure with timely delivery of proposed LTP projects through procurement assistance.
ii. Council has provided procurement assistance through both training and implementing software assistance (Cotiss)
iii. All capital works have been programmed for 2024/25 and 2025/26 and local contractors have been made aware of the timing. Where possible the programme has been modified to ensure successful and cost-effective procurement can be realised.
iv. Whenever possible council is providing materials for projects to ensure timely delivery.
v. Procurement is now completed through the Government Electronic Tenders System (GETS). This affords the ability to notify the wider contracting / consulting market of upcoming projects and will undoubtedly maximise submissions received once projects are tendered.

The Waimate district is fortunate to have significant contracting resource located within the boundaries and at varying scale. In fact, one of the largest contractors in the South Island has its head office located within the Waimate town. Further afield, council is able to draw on further resource located to the North in Timaru and to the South in Oamaru.
As with any capital programme risks will always remain, even if mitigation has been employed. Known risks include:

- Dependent projects – Some proposed capital works are dependent on either technical investigations or other capital works. Delays in the latter could impact deliverability.
- Material Sourcing – Whilst proactive in sourcing materials, the risk associated with slow supply chains remain. There is also a risk associated with elevated pricing that could modify the scope of some projects.
- Delay in increased levels of service associated with the upgrade of individual water schemes for compliance with the both the Quality Assurance Rules and the Drinking Water Standards. Whilst it is unlikely that the level of service will reduce, the current LoS will be extended until upgrades are commissioned.

9 LIFECYCLE MANAGEMENT PLAN

This section applies the risk polices described in Section 6 to develop the broad strategies and specific work programmes required to achieve the goals and standards outlined in Sections 3 and Section 4. It presents the lifecycle management plan for the wastewater assets, and includes:

- A description of the trends and issues.
- Detailed management, operations and maintenance, renewal and development strategies.
- Work programmes and associated financial forecasts.
- Improvement activities.

9.1 Asset Lifecycle

Assets have a life cycle as they move through from the initial concept to the final disposal. Depending on the type of asset, its lifecycle may vary from 10 years to over 100 years. Key stages in the asset life cycle are outlined in the diagram below:

Figure 9-1: The Asset Lifecycle

- Asset planning - when the new asset is designed. Decisions made at this time influence the cost of operating and maintaining the asset, and the lifespan of the asset. Alternative, non-asset solutions should also be considered at this time.
- Asset creation or acquisition - when the asset is purchased, constructed or vested in Council. Capital cost, design and construction standards, commissioning the asset, and guarantees by suppliers influence the cost of operating the asset and the lifespan of the asset.
- Asset operations and maintenance - when the asset is operated and maintained. Operation relates to a number of elements including efficiency, power costs and throughput. This is

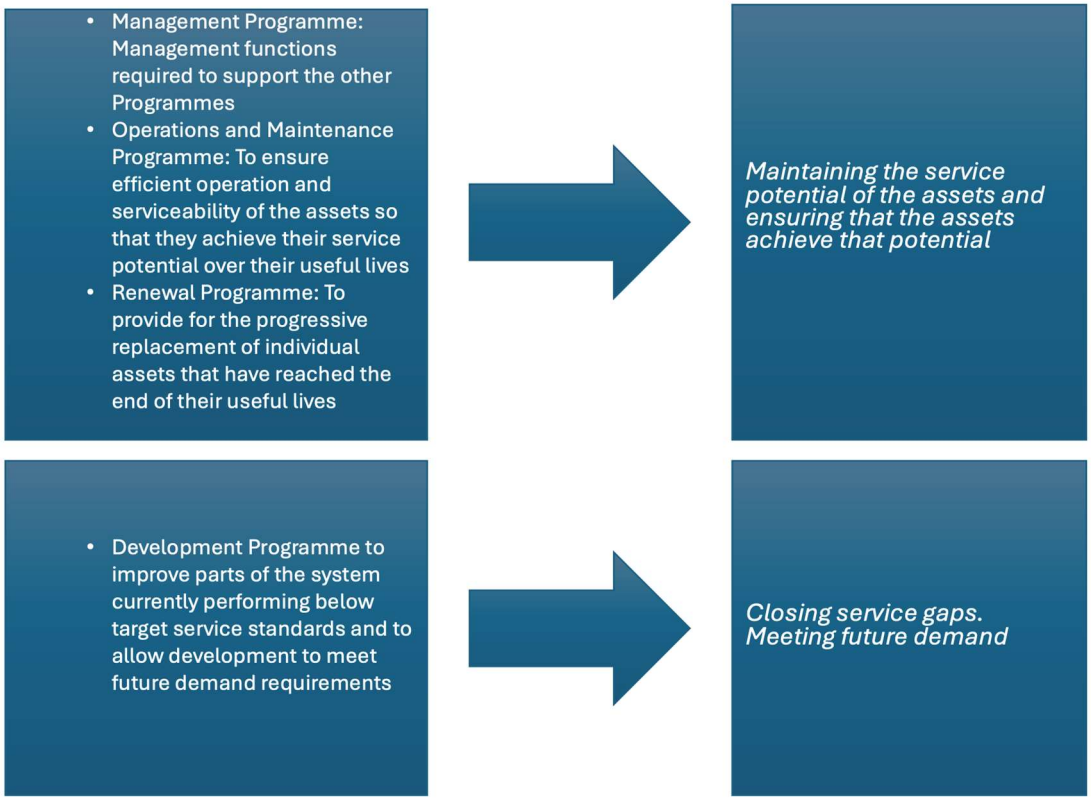
usually more applicable to mechanical plant rather than static assets such as pipes. Maintenance relates to preventative maintenance where minor work is carried out to prevent more expensive work in the future, and reactive maintenance where a failure is fixed.

- Asset condition and performance monitoring - when the asset is examined and checked to establish the remaining life of the asset, what corrective action is required including maintenance, rehabilitation or renewal and within what timescale
- Asset rehabilitation and renewal - when the asset is restored or replaced to ensure that the required level of service can be delivered.
- Asset disposal and rearrangement - When a failed or redundant asset is sold off, put to another use, or abandoned.

9.2 Lifecycle Management - An Overview

The Lifecycle Management Programmes cover the four key categories of work necessary to achieve the required outcomes from the wastewater supply activity. These programmes are:

Figure 9-2: Lifecycle Management Programmes



The Operations & Maintenance and Renewal Programmes are focused on maintaining the current service potential of assets, and are primarily driven by the condition of assets although asset performance is often an indicator of asset condition.

The Development Programme is focused on closing service gaps by increasing the service potential of the wastewater supply system and is primarily driven by the performance of assets and the need to accommodate growth in the District.

9.3 Management Programme

9.3.1 Introduction

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

Strategic planning and a focus on meeting the needs of wastewater customers drives the design of management processes which in turn are reflected in the level of performance that is achieved. Collection of data necessary to manage the wastewater system effectively and processes for the analysis and interpretation of this data support all management activities.

9.3.2 Management Strategies

The following table sets out each strategy in this category.

Table 9-1: Management Strategies

Strategy	Objective/ Description
Strategic Planning	
Human Resources	Developing the professional skills of the staff through adequate training and experience. Personal Development Plans will be agreed with staff each year and a register maintained to record training history. Staff are encouraged to belong to appropriate professional bodies and to attend appropriate conferences, seminars and training courses.
Strategic Alignment	This Asset Management Plan will support the achievement of relevant Community Outcomes for Waimate District. Community Outcomes for Waimate District are set out in the Long Term Plan. The intended contribution of the Council's wastewater system to the achievement of Community Outcomes will be clearly set out in this Asset Management Plan.
Service Levels	Clear statement of Wastewater activity provided and standards to be achieved as a basis for future consultation with the Community. In the first instance customer service standards have been developed as part of a wider performance management framework for the wastewater activity. This performance management framework incorporates: – Customer Service Standards – Standards for the Wastewater Service from the end users perspective – Activity Service Standards – Key high level standards which reflect the Waimate District Community Outcomes and which enable the overall performance of the wastewater activity to be monitored – Technical Standards – More detailed standards that can be used by the Council to monitor the performance of aspects the wastewater activity on an "as required" basis
Sustainable Management	Ensure all planning for the management, operation, maintenance, renewal and development of the wastewater systems is compatible with sustainable management principles. The Council will pursue ways of limiting the use of natural resources including energy, valued landscapes (and other natural heritage) and adverse effects on waterways. This will involve auditing the systems and materials used, and developing ways to incorporate sustainable operation and development principles into its activities. For example, auditing power usage in pump stations, and using non-asset based solutions where possible.

Strategy	Objective/ Description
Data Management and Evaluation	
Asset Management Systems	Optimise the application of Asset Management Systems over the short to medium term and develop functionality in line with business needs. Staff changes in the past resulted in the neglect of this area. Refinement of asset data requirements will occur as staff identify management applications for data and refine reporting capacity. The Council will review the adequacy of the systems for future asset management purposes and proactively introduce enhanced system functionality as justified by business needs to support a high standard of decision-making.
Network Modelling	Hydraulic network models exist. These models is operated by external consultants and are based in the Infoworks modelling software. Computer models of the wastewater network and utilities enables the Council to: – Determine accurately the existing capacity of the system – Identify inadequate sections of the system – Operate the system in the most efficient manner – Determine the impact of further development on the system – Identify system upgrading requirements – Compare options for upgrading the wastewater system.
Data Collection	Data collection programmes (condition, performance, asset registers) closely aligned with business needs will be implemented in accordance with documented quality processes Data collection, maintenance and analysis is expensive, and it is important that programmes and techniques are cost effective and consistent with business needs. Systematic processes will be further developed for the collection and upgrading of essential/critical data including: – Asset attribute information – Asset performance data – Asset condition data Staff changes have had a positive impact on the Univerus Assets/GIS data acquisition, capturing, trending and analysis. This will increase as new assets are acquired through upgrades/renewals and will require improvement and refinement. Going forward Council will align its data collection and recording with the Metadata Standards.
GIS Data Quality Assurance	GIS data will be the subject of defined quality assurance processes The Council will introduce quality processes intended to: ensure that all future data entered to the GIS system meets defined quality standards. Support the progressive and systematic review of existing data on the GIS system.
Business Processes	
Asset Management Plan Updates	This Asset Management Plan remains a strategic 'living' document and will be updated annually and reviewed at three yearly intervals or more frequently as necessary to incorporate significant improvements to asset management practices (as proposed in the improvement plan). The scope of the review will be influenced by changes in Community Outcomes for Waimate District, service standards, improved knowledge of assets, introduction of Asset Management improvements and corporate strategy/ policy and process.
Risk Management	Risk Management is an essential part of Asset Management. Wastewater activity risks will be managed by developing a Risk Management Plan for the wastewater activity and the implementation of risk mitigation measures to maintain risk exposure at acceptable levels. Risk mitigation measures will include maintaining appropriate insurance cover, emergency response planning, condition monitoring of critical assets, preventative maintenance, use of telemetry, implementation of operations manuals, review of standards and physical works programmes.
Infrastructure Asset valuation	Continue to perform valuations in a manner that is consistent with national guidelines and Council's corporate policy. Asset valuations are the basis for several key asset management processes including asset renewal modelling and financial risk assessments. Valuations of the wastewater system will be carried out based on data from the GIS and AMS systems to ensure auditability and alignment with other processes.

Strategy	Objective/ Description
Statutory Compliance	Implement quality plans that identify legal obligations and processes adopted to achieve statutory compliance. Section 4.3 of this plan sets out the legislative environment for the Wastewater Activity.
Quality Assurance	Document, review and implement quality processes for all key business activities in accordance with standard practices. Quality processes will cover activities such as reporting, data collection and management, contract monitoring, risk management, economic analysis, performance monitoring, strategic planning, customer contact, asset valuation, asset operation, work specification, etc.
Monitoring	
Asset Performance	The Council will continue to monitor the performance of the wastewater assets as an input to asset renewal and asset development programmes. This monitoring includes: – Customer service requests – Asset failure records – Asset Maintenance records – Compliance with Resource Consents – Wastewater Treatment Plant effluent quality – Critical asset audits
Financial Management	
Budgeting	Prepare all expenditure programmes for the wastewater activity in accordance with Council funding and budget preparation policies and procedures. The different categories of expenditure within the financial programmes will be identified to enable the funding to be allocated in accordance with the Council's policies.
Financial management	Manage the wastewater activity budget in accordance with statutes and corporate policy. This will involve: – Economic appraisal of all capital expenditure – Annual review of Asset Management Plan financial programmes – Recording of significant deferred maintenance and asset renewals – Continuous monitoring of expenditure against budget
Sustainable Funding	Ensure the wastewater system is managed in a financially sustainable manner over the long term. The financial requirements for the provision of the Wastewater activity sustainably and to acceptable standards over the long term will be identified and provided for in draft budgets. These requirements include: – Management of the Wastewater activity – Operation and maintenance of the wastewater systems – Asset replacement – Asset development to ensure that the ability of the wastewater systems to deliver an acceptable level of service is not significantly degraded by growth in Waimate District

9.3.3 Management Standards

The Council's Wastewater activity are managed in accordance with the following standards:

- Generally accepted accounting practice (GAAP) and more specifically with NZ IAS 16)
- The International Asset Management Manual
- Resource Consent Conditions for the Waimate District Wastewater Activity
- Council's Health and Safety Plan
- Council's Quality Assurance Documents
- Operations Manuals

9.4 Operations and Maintenance Plan

9.4.1 Introduction

Operations and Maintenance strategies set out how the Wastewater activity will be operated and maintained on a day-to-day basis to consistently achieve the optimum use of assets. Operations and Maintenance activities fall into the following categories, each having distinct objectives and triggering mechanisms:

Operations - Activities designed to ensure efficient utilisation of the assets, and therefore that the assets achieve their service potential. Operational strategies cover activities such as energy usage, control of mechanical and electrical plant, inspections and service management.

Maintenance - Maintenance strategies are designed to enable existing assets to operate to their service potential over their useful life. This is necessary to meet service standards, achieve target standards and prevent premature asset failure or deterioration. There are three types of maintenance:
Programmed maintenance - A base level of maintenance carried out to a predetermined schedule. Its objective is to maintain the service potential of the asset system
Condition maintenance - Maintenance actioned as a result of condition or performance evaluations of components of the water supply system. Its objective is to avoid primary system failure
Reactive maintenance - Maintenance carried out in response to reported problems or system defects. Its objective is to maintain day-to-day Levels of Service

9.4.2 Method of Delivery

The operation and maintenance of the Wastewater activity is carried out using a combination of Council's staff and external contractors. Council staff generally carry out operational activities and maintenance of a routine nature with external contractors being used for specialist activities such as electrical work, laboratory testing and major overhauls of mechanical equipment. From time-to-time Council may use the services of local drain layers, earthworks contractors or plant hire. This is done through a mix of quotations and tendering with Council staff overseeing works.

9.4.3 Operations and Maintenance Strategies

The following table sets out operations and maintenance strategies:

Table 9-2: O&M Strategies

Strategy	Objective/ Description
Routine Maintenance	Routine Maintenance is carried out, supervised and monitored by Council's in house operational unit
Repairs and Corrective Maintenance	Reactive maintenance is undertaken as quickly as practically possible to restore an asset to a satisfactory condition after a failure or an unsatisfactory condition has been detected that is likely to fail in the short term. Council provides customer support for any associated requests for work related to the assets.
Redesign and Modification	Redesign may be necessary if an asset or system does not meet its operational objective. Similarly, modifications may be necessary to improve the operating characteristics. Redesign and modifications will be undertaken in a methodical manner to ensure alternative options are considered and optimum decisions made
Operations	Operational activities are undertaken by Council in house operational unit unless specialised advice is required. Council staff are responsible for the determination and optimisation of planned and unplanned works, work methods and maintenance scheduling to achieve the target service standards. Work is performed to Council's standards and specifications

Strategy	Objective/ Description
Physical Works Monitoring	The operational unit consist of skilled staff that are well versed on Council standards and specifications. Work is managed and overseen by the Utilities Supervisor. Weekly meetings are held to ensure work are completed on time and to Council standards
Operation of Utilities	Utilities such as the treatment plant and pump stations are operated in terms of defined parameters and standards set out in quality system manuals. Wastewater systems will be operated in terms of these quality manuals
Incident Management	Council approach is an escalation process from minor to major, all incidence is managed by the Council staff. Involvement is also judged by the potential consequences or asset criticality
System Control and Monitoring	Where available, the SCADA system provides surveillance of the Treatment Plant and Pumping station in the wastewater system and will provide alarms when equipment fails or when operating parameters are exceeded. The SCADA system also records operational data
Key Manhole Inspection	Council staff inspect approximately 20 manholes within the network on a weekly frequency. These key manholes provides a good indication that the network is performing well and provides for early warning if any problems exist

9.4.4 Priority Response times

The Priority Response times targets for the Wastewater activity are as follows.

Table 9-3: Priority Response Times

Priority	Response	Completion
P1	1 Hour	24 Hours
P2	4 Hours	48 Hours
P3	1 Day	5 Days
P4	5 Days	10 Days
P5	Projects	Specific Dates

The following details the priority for the individual utilities alarms and callouts.

Table 9-4: Alarm Priority

Utility	Description	Priority
Wastewater	Alarm	As recorded
	Blockage	P1
	Maintenance Urgent	P1
	Health Issues	P1
	Odour	P1
	Overflow	P1
	Locate Asset	P2
	Maintenance	P3
	General Enquiry	P3

9.4.5 Operations and Maintenance Standards

The following standards are applicable to the operation and maintenance of the Wastewater system:

- NZS4404: 2010 Land development and subdivision infrastructure adopted by Council as its Engineering Code of Practice (which provides standards for materials and construction of piped water supply systems).
- Relevant Resource Consents and the Resource Management Act 1991.
- WorkSafe – Keeping healthy and safe while working on the road or roadside.

- Health and Safety Plans.
- Electrical Regulations 1993.
- Waimate District Council quality assurance processes, including contract management procedures.

9.4.6 Council Utilities Staff Qualifications

The following table details the utilities staff qualifications as at January 2018.

Table 9-5: Utilities Staff Qualifications

Position	Water Treatment	Wastewater Treatment	Reticulation Maintenance (Water & Waste)	Drain Laying & Plumbing	Backflow Prevention	Traffic Management		Confined Spaces	Heights	Asbestos	Chlorine	Chemical Handlers
						STMS	TC					
3 Waters Manager	NZCE	C Grade Wastewater Treatment Cert.	-	-	-	-	-	-	-	-	-	-
Utilities Supervisor	Level 4. Diploma Level 5 (incomplete)	-	Level 3	-	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes
Utilities Technician	Level4	Level 4	Level 3	-	-	Yes	-	Yes	Yes	Yes	Yes	Yes
Utilities Technician	Level 4	Level 4	Level 3	-	-	-	Yes	Yes	Yes	Yes	Yes	Yes
Utilities Technician	-	-	Level 3 (Incomplete)	-	-	-	-	-	-	-	Yes	-
Utilities Technician	Level 4 (Incomplete)	Level 4	Level 3	-	-	-	-	-	-	-	Yes	Yes

Position	Water Treatment	Wastewater Treatment	Reticulation Maintenance (Water & Waste)	Drain Laying & Plumbing	Backflow Prevention	Traffic Management		Confined Spaces	Heights	Asbestos	Chlorine	Chemical Handlers
						STMS	TC					
Utilities technician	-	-	-	-	-	-	-	-	-	-	-	-
Three Waters Administration Technician	-	-	-	-	-	-	-	-	-	-	-	-

NZ Water Competency Framework

Assessment of staffing levels needs to consider the skill requirements to meet the demands of the infrastructure that Council does and will own and operate.

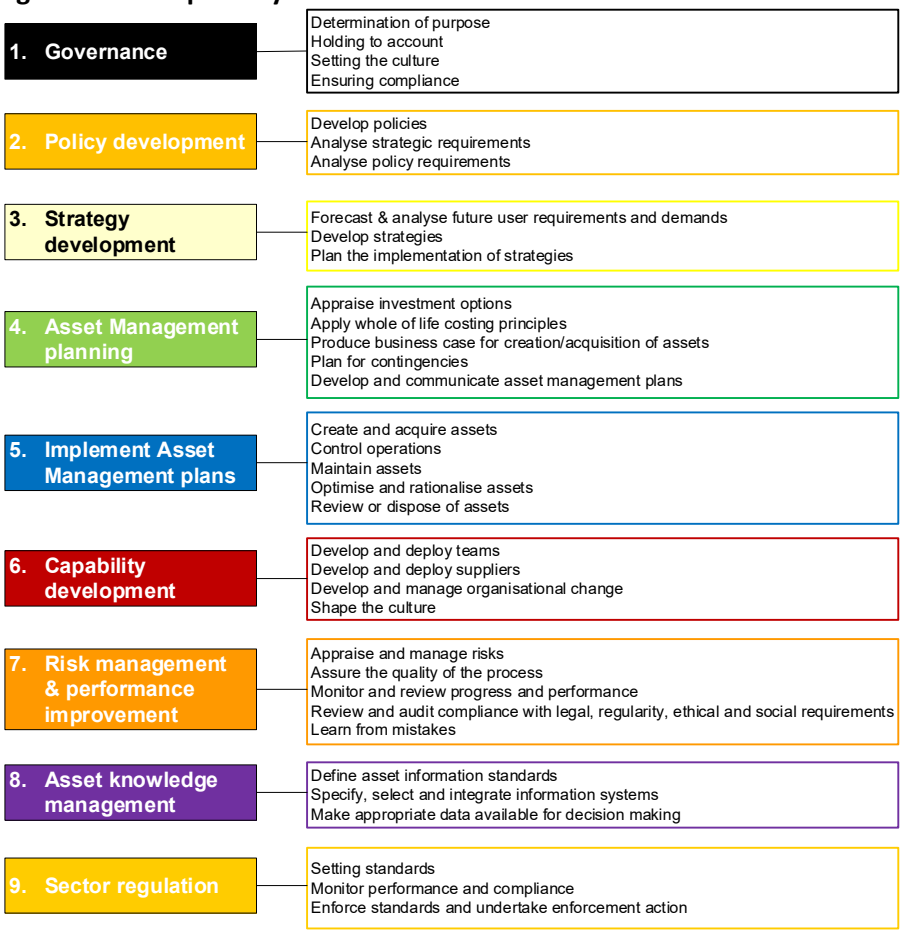
Increases in the complexity of water and wastewater treatment plants will occur as drinking water and environmental standards increase. The complexity of these plants and their associated resource consent compliance will require skilled and trained engineers for their operation, maintenance and supervision. Council needs to stay abreast of any resource requirements and qualifications to ensure the most appropriate method for delivery of the required levels of service.

During 2020 Water New Zealand released its draft Competency Framework which describes what people should be able to do and what they need to know to competently undertake their work. The Competency Framework use treatment operator roles, the people who operate, monitor and maintain water and Wastewater activity, as a starting point. Network/Distribution operators are still to be developed.

The Water Industry Professionals Association (WIPA) was jointly established by the Water Industry Operations Group and Water New Zealand to provide a system of recording the professional development of people working in the water and wastewater industry to ensure a high level of competency within the industry was maintained. At the time of writing this Plan registration is voluntary but may become compulsory under the new regulatory framework.

The Competency Framework identifies nine areas as shown below.

Figure 9-3: Competency Framework



(*Source: Water NZ – Competency Framework*)

It documents core skills and knowledge needed by operators to competently undertake work within the water industry. It is envisaged that the industry will be able to use the final document as a guide to:

- assess levels of staff training,
- develop training programmes,
- determine the knowledge and skills required by a workforce, or
- other matters related to staff competence.

Council will keep abreast of developments in this area to ensure staff training meets industry best practice and standards.

The following competency framework documents are available from- https://www.waternz.org.nz/competence

- Competency Framework – Overview
    - Purpose statement
    - Key roles
    - Framework map and units of competence
    - Each document records what staff should be able to do and what they need to know to competently undertake their work
- Competency Framework – Drinking Water Treatment Operator
- Competency Framework – Drinking Water Distribution Operator
- Competency Framework – Small Water Supplies
- Competency Framework – Wastewater Network Operator
- Competency Framework – Wastewater Treatment Operator

9.4.7 Summary of Ten Year Operations and Maintenance Budget Forecasts

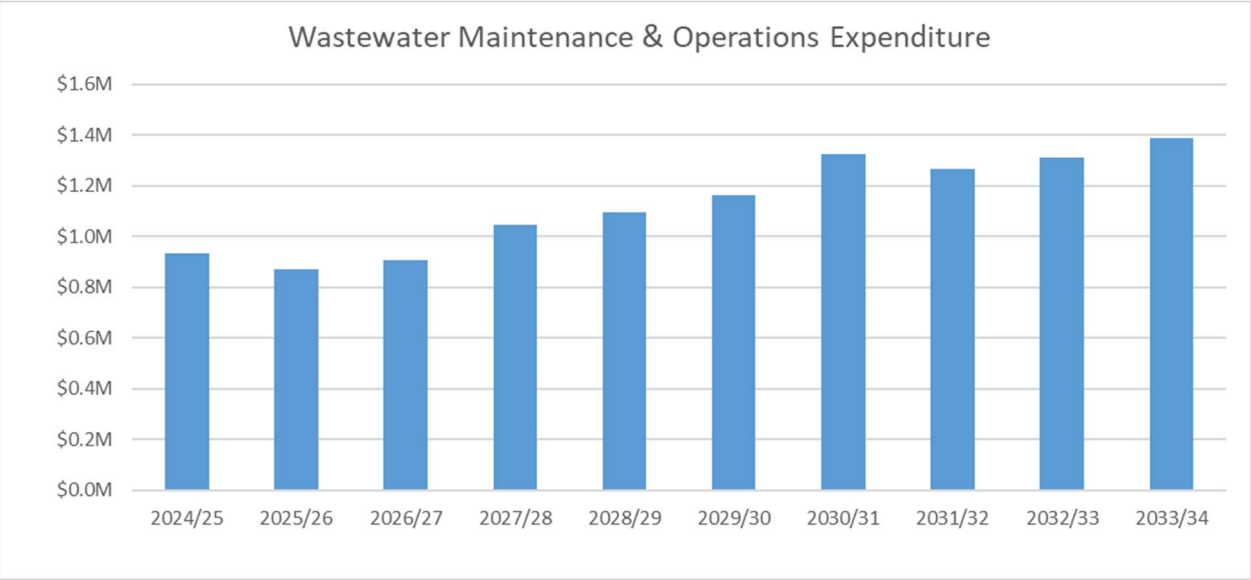
Wastewater Activity annual maintenance and operations costs are projected to increase from $933,590 (2024/25) to $1,387,104 (2033/34) over the 10 year period. There is no deferred maintenance scheduled over the period.

Table 9-6: Operations and Maintenance Budget Forecast Summary

O&M Costs	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	10 Year Total
	Enhanced AP 2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	
Operating Expenditure	933,590	869,590	905,098	1,047,703	1,093,888	1,164,500	1,324,052	1,267,795	1,311,321	1,387,104	11,304,641

Detailed budget information is located in Section 8.6.

Table 9-7: Wastewater Operations and Maintenance Summary Chart



9.5 Renewal and Replacement Plan

9.5.1 Introduction

Cyclic renewal strategies are intended to provide for the progressive replacement of individual assets that have reached the end of their useful life. The rate of asset renewal is intended to maintain the overall condition of the asset system at a standard, which reflects its age profile, and ensures that the Community's investment in the Waimate wastewater system is maintained.

The level of expenditure on cyclic asset replacement varies from year to year, reflecting:

- The age profile of the system.
- The condition profile of the system.
- The ongoing maintenance demand.
- Customer service issues.
- The differing economic lives of individual assets comprising the overall asset system
- Failure to maintain an adequate renewal programme will be reflected in a greater decline in the overall standard of the system of assets than would be expected from the age profile of the asset system.

Cyclic renewal works fall into two categories:

- **Rehabilitation:** Involves the major repair or refurbishment of an existing asset. An example is the relining of an existing pipeline. Rehabilitation produces an extension in the life of an asset. It does not provide for a planned increase in the operating capacity or design loading

- **Renewal:** Does not provide for a planned increase to the operating capacity or design loading (i.e. renewal is 'like for like'). Some minor increase in capacity may result from the process of renewal, but a substantial improvement is needed before system development is considered to have occurred.

For the purpose of developing asset renewal programmes the wastewater system assets have used the following components consistent with the asset valuation process:

- Lines (gravity pipes, rising mains, laterals)
- Points (manholes, inspection pits, poo pits, capped ends, cleaning eyes, valves)
- Plant (WWTP, pumping stations, building)

9.5.2 Renewal and Replacement Strategies

The following table sets out the wastewater cyclic renewal and replacement strategies:

Table 9-8: Renewal Strategies

Strategy	Objective/ Description
Identification of renewal needs	Renewal and replacement needs are identified by analysing; – Condition reports, maintenance records (asset failure and expenditure history), wastewater blockages, wastewater overflows, complaints records, and observations of the councils engineering and maintenance staff and contractors that they employ – Records of breakages are recorded in Univerus Assets that allows an overview of the short term issues – Customer feedback is essential for monitoring asset performance and achieving Levels of Service. The feedback is quite often the early warning system that a problem maybe developing and can lead to more formal investigations The short-term asset renewal programmes have been prepared from specific renewal needs identified from information received by Council maintenance staff. The long-term asset renewal forecasts are based on an assessment of remaining asset lives (from the 2024 valuation process) and use industry base lives as a default position where condition or maintenance records are lacking. Future renewal programmes will use the data obtained in the pipe condition assessments proposed in Section 0 and the updated Univerus Assets data. The future renewals strategy will incorporate a process that uses the numbers of blockages/collapses in a main as an indicator for inserting onto short term renewal programme.
Prioritisation of renewal projects	Decisions on renewal works consider the short and long-term effects on the operating and structural integrity of the system. Renewal works are designed and undertaken in accordance with industry standards (or known future standards) and system design loadings. Short-term renewal priorities are reassessed annually taking account of additional information that becomes available via breakage reports etc.
Deferred renewals	The quantity and impact of deferred renewals will be tracked. The Council recognises that although the deferral of some items on cyclic renewal programmes will not impede the operation of many assets in the short term, repeated deferral will create a future Council liability.
Inspections prior to major road works	The condition of wastewater pipelines is inspected prior to major road works to identify the risk of the road being damaged by pipeline failure or the need for pipeline replacement in the short/medium term. Pipelines in poor condition may be programmed for replacement prior to or in conjunction with the road works or reseal programme subject to funding.

9.5.3 Cyclic Renewal Standards

The following standards are applicable to the renewal of water schemes assets:

- NZS4404: 2010 Land development and subdivision infrastructure adopted by Council as its Engineering Code of Practice (which provides standards for materials and construction of piped water schemes).
- Relevant Resource Consents and the Resource Management Act 1991.
- WorkSafe – Keeping healthy and safe while working on the road or roadside. Health and Safety Plans.
- Electrical Regulations 1993.
- Council quality assurance processes, including contract management procedures.

The Standards will be reviewed regularly and updated to incorporate relevant experiences, legislative requirements and changes in best practice.

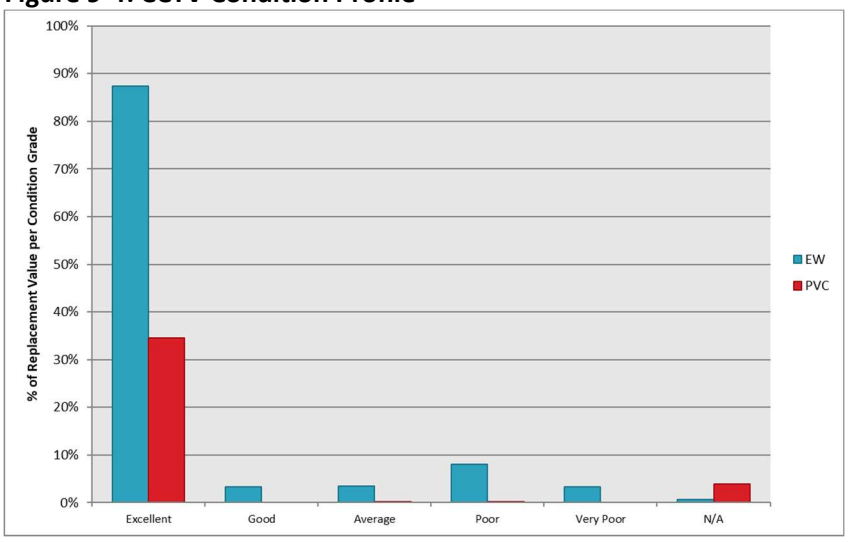
9.5.4 Wastewater Asset Condition

Wastewater Pipe CCTV Surveys

The condition of the wastewater pipes relates to the structural integrity of the pipes. Council undertook an extensive CCTV recording and grading programme in 1997 and has obtained survey data for 66% of the pipes contained within the reticulation network. The CCTV structural mean scores were converted into 1 to 5 ratings (as described in the NZIAM methodology) using the New Zealand Pipeline Inspection Manual (NZWWA, 1999) comparison tables. Pipes with no condition grade data were assigned condition grade of 3 (moderate condition).

Condition grading from the 1997 CCTV results is shown below.

Figure 9-4: CCTV Condition Profile



The PVC pipes are in very good structural condition.

Over the next ten years considerable budget has been set aside to collect CCTV information to better understand remaining useful lives and to create a more robust renewal profile. Some piped assets are currently indicating zero remaining useful life but are technically performing adequately.

Development of a Condition Assessment Strategy to identify which, where and when condition assessments will be performed is include as an Improvement item. This will be done in consideration of criticality, LoS, asset records, Council engineers visual assessment of failures and

specialists assessments as required. Implementation of the Condition Assessment Strategy and resulting information collected will then inform the renewal plan.

9.5.5 Evidence Base

The 2024 asset valuation identified the accuracy of most roading asset data as "B" or "Reliable" (Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some data is old).

The 2024 valuation has indicated the following data confidence for 3 Waters:

Table 9-9: 3 Waters Asset Data Confidence

Confidence Level	Description	Accuracy	Condition	Quantity	Unit Cost	Base Life
A	Highly Reliable and Accurate	100%				
B	Reliable with Minor Inaccuracies	±5%		B	B+	B+
C	50% estimated	±20%	C			
D	Significant data estimated	±30%				
E	All data estimated	±40%				

From a valuation perspective the data reliability is considered (for all assets covered by the IS) to be "B" or +/- 5%. Council acknowledges that the reduced reliability associated with less accurate condition ratings (+/- 20%) could impact future financial forecasting. However, this is currently mitigated by empirical assessment of assets proposed for renewal.

Council acknowledges there are limitations with its data that affect decision-making. A commitment to improving data collection and analysis is indicated below. Additional part-time and full time roles have been added to the Council team to address data limitations and accuracy.

9.5.6 Base Life of Wastewater Supply Assets

The 2024 valuation used the base life for Wastewater pipes as shown in the table below.

Table 9-10: Wastewater Pipes Base Life Information

Material	Base Life
CON	60
EW	80 - 90
PVC	100
MDPE	100
PE	80
Unknown	100

A comprehensive asset base life record is kept in the council asset data system, Univerus Assets.

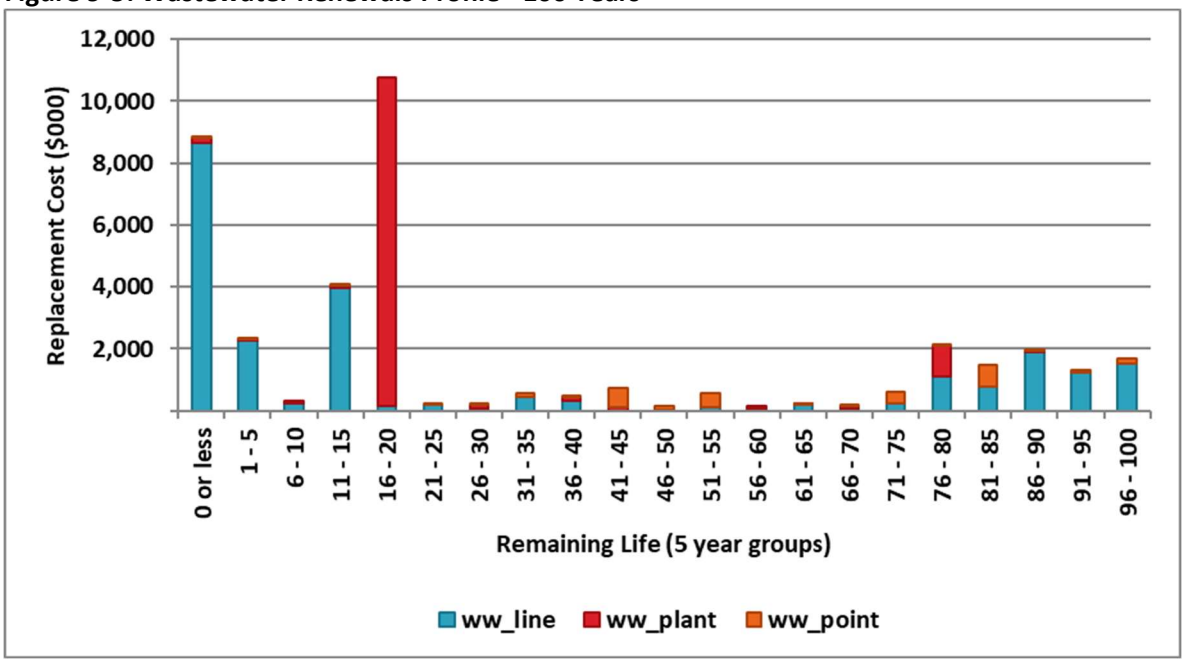
9.5.7 Long Term Watewater Renewal Requirements

The wastewater renewal profiles are based on an asset useful life in Univerus Assets. At present asset useful lives are based primarily on book values with some adjustment for known risk factors. These will be refined over time by determining evidence-based useful lives using a combination of condition and performance data.

Long Range 100 Year Renewals Forecast

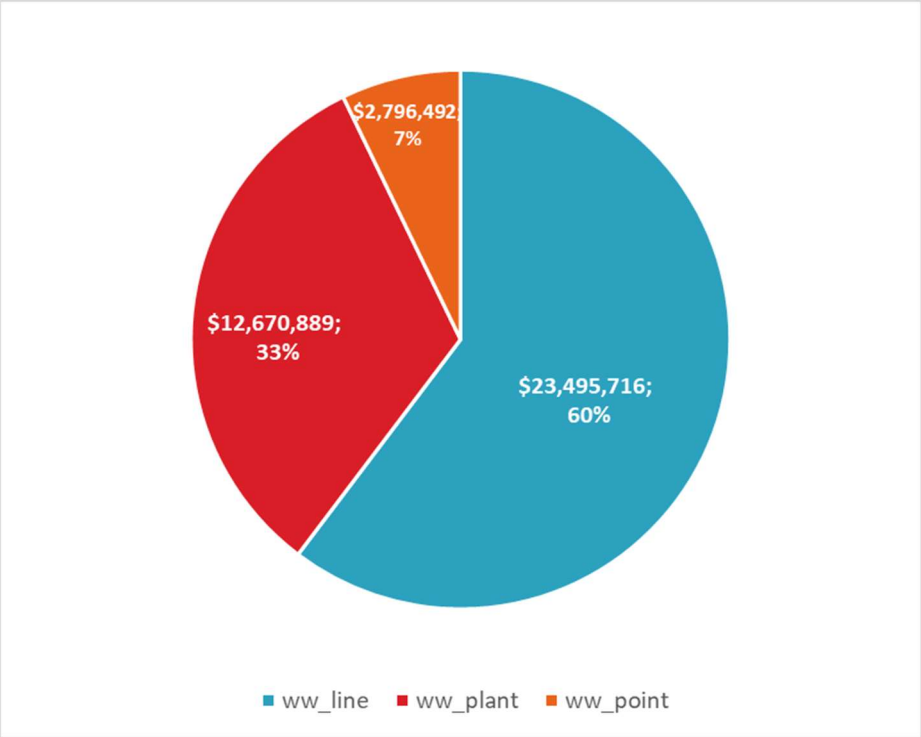
The chart below provides an overview of the long range one hundred year wastewater renewals profile, based on the WDC Univerus Assets asset information. This information indicates a $39.0 million renewals investment over the hundred year period 2024-2125

Figure 9-5: Wastewater Renewals Profile - 100 Years



The Univerus Assets information indicates a theoretical backlog based on base life. For the purposes of renewals planning this is smoothed over the ten year period as shown in the chart below.

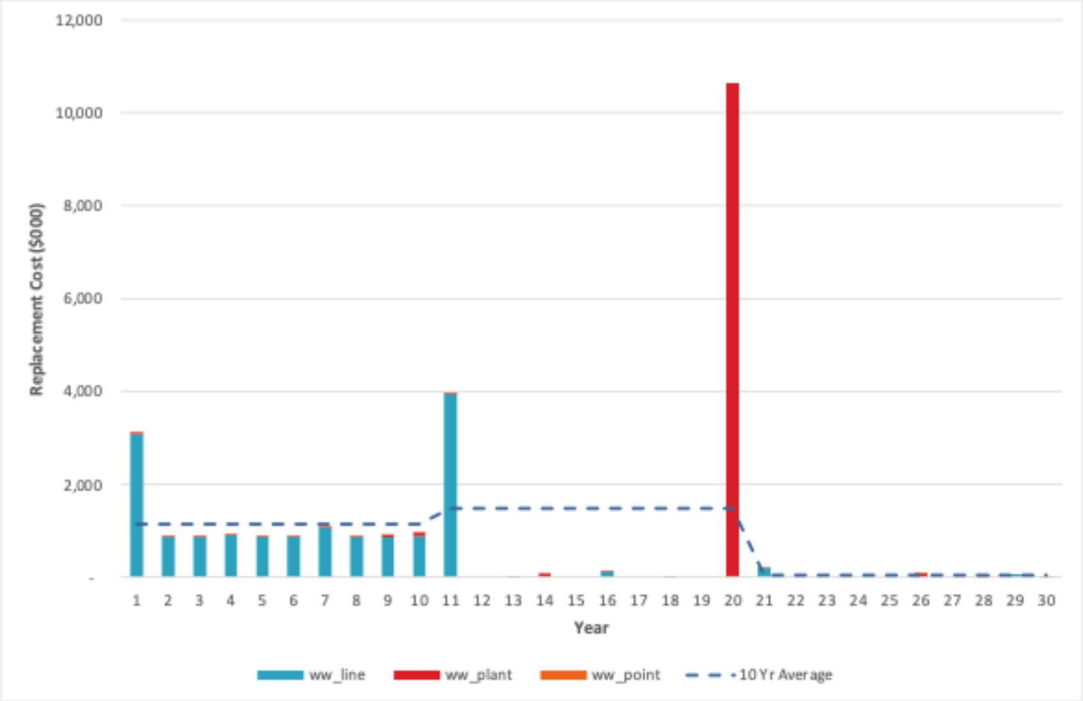
Figure 9-6: 100 Year Wastewater Renewals by Asset Component Type



Thirty Year Renewals Forecast

The chart below provides an overview of the thirty year wastewater renewals profile based on WDC Univerus Assets asset information. This information indicates a $26.75million renewals investment over the thirty year period 2024-2034.

Figure 9-7: Wastewater Renewals - 30 Year Profile



The chart above has spread the theoretical backlog over the first 10 years and the dashed line represents the 10 year average renewal requirement. This 10 year spread of renewals backlog is

based on analysis of the earthenware pipe condition informed by network modelling, inflow area analysis and CCTV/ Inflow Infiltration studies undertaken.

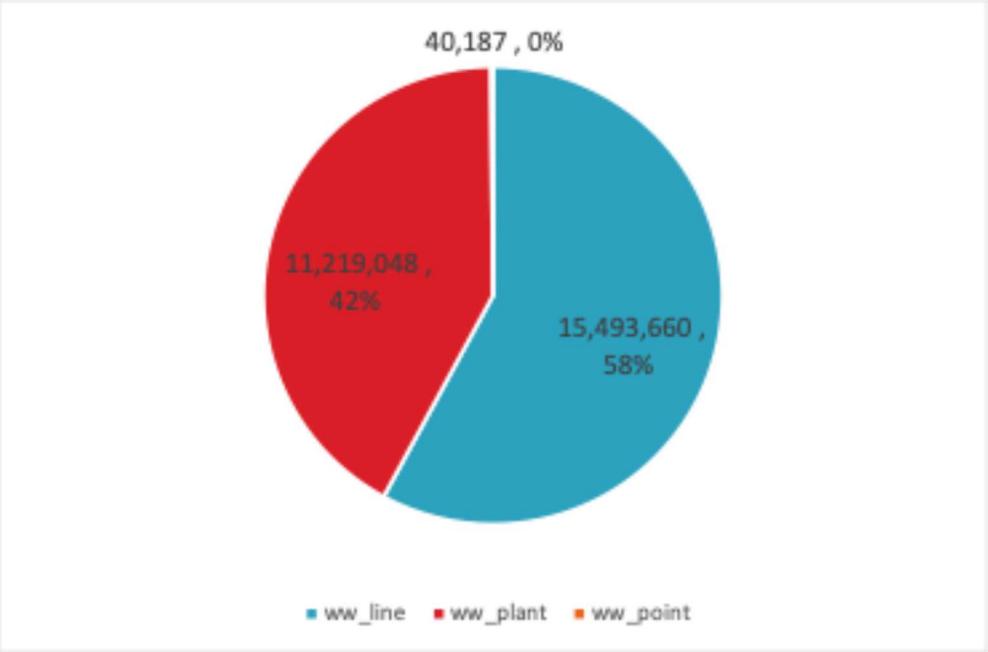
The table below details the thirty year wastewater renewals profile, based on the WDC Univerus Assets asset information.

Table 9-11: 30 Year Wastewater Renewals Forecasts – All Assets

Remaining Useful Life Group	Utility Type			
	ww_line	ww_plant	ww_point	Total
0 or less	$8,636,310	$183,627	$5,443	$8,825,380
1 - 5	$2,257,904	$38,695	$10,540	$2,307,139
6 - 10	$224,015	$107,391	$-	$331,406
11 - 15	$3,961,478	$108,008	$17,936	$4,087,422
16 - 20	$137,689	$10,635,242	$-	$10,772,931
21 - 25	$209,829	$-	$5,125	$214,954
26 - 30	$66,436	$146,086	$1,143	$213,665
Grand Total	$15,493,660	$11,219,048	$40,187	$26,752,896

The chart below summarises the thirty year wastewater renewal requirement:

Figure 9-8: 30 Year Wastewater Renewals by Asset Group



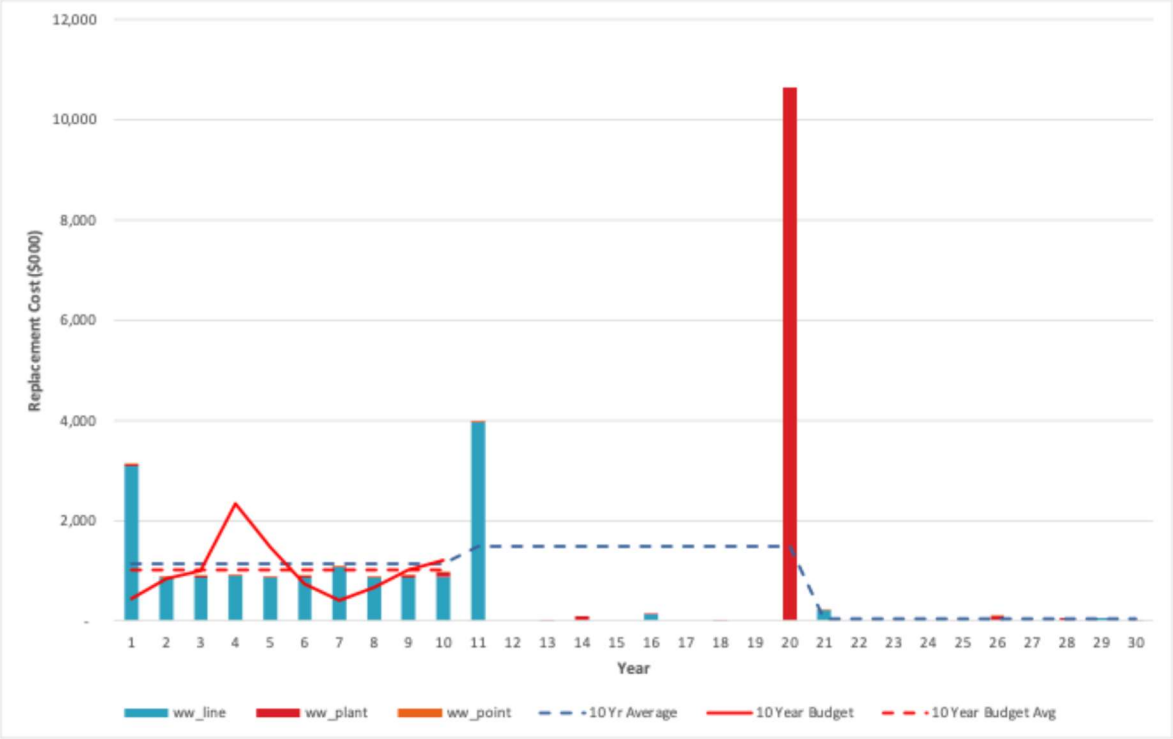
9.5.8 Ten Year Wastewater Renewals Planning

As noted in Section 7.5.1, the following key asset components listed below. These components are consistent with the asset valuation process:

- Lines (gravity pipes, rising mains, laterals)
- Points (manholes, inspection pits, poo pits, capped ends, cleaning eyes, valves)
- Plant (WWTP, pumping stations, building)

The asset renewal planning analyses the asset data by these three asset groups. The charts below provide an overview of the wastewater renewals planning and analysis of the asset data system replacement costs, average replacement costs and LTP budgets over the 30 year horizon

Figure 9-9: Wastewater Renewals Planning Chart



- The chart indicates a predominant wastewater reticulation renewals requirement over the 10 year horizon. The spike in year 20 indicates the wastewater treatment plant renewal.
- The wastewater asset data indicates a theoretical renewals backlog of approximately $8.8 million. The chart shows this smoothed over the next ten years.
- The asset information indicates a $11.5 million renewals requirement over the next ten years.
- The 2024-2034 renewals budget is $10.2 million. This is adequate to cover the immediate known renewals priorities and retain rates increases to an acceptable level.
- Future renewals forecasting in subsequent LTPs will be refined based on ongoing asset condition assessments, data improvement and fault trending.

The renewals profile is based on an asset useful life. At present asset useful lives are based primarily on book values with some adjustment for known risk factors. These will be refined over time by determining evidence-based useful lives using a combination of condition and performance data.

The following section covers the ten year renewals budget.

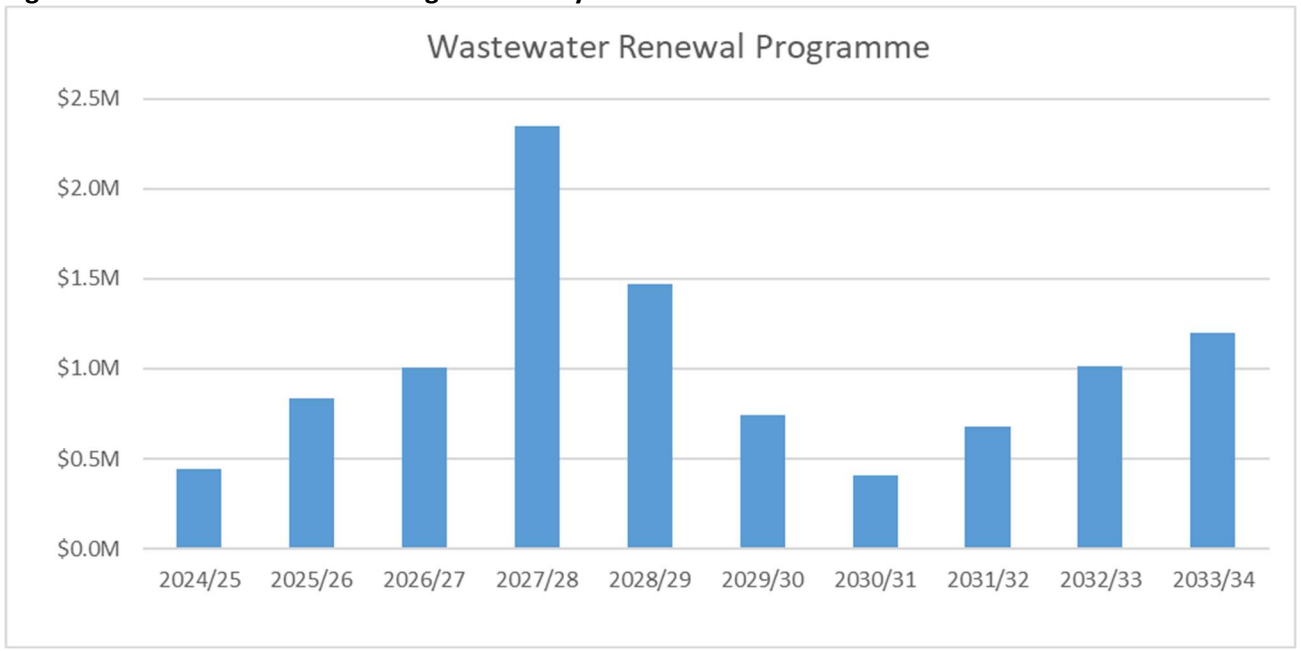
9.5.9 Summary of Ten Year Wastewater Renewals Budget Forecast

The following table and chart details the ten year wastewater renewal programme. Detailed budgets are included in Section 8.6.2.

Table 9-12: Ten Year Wastewater Renewals Budget Forecast Summary

	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	10 Year Total
	Enhanced AP 2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	
Renewals	$444,880	$835,033	$1,006,774	$2,345,853	$1,472,560	$739,633	$410,195	$679,562	$1,011,498	$1,198,847	$10,144,835

Figure 9-10: 10 Year Renewals Budget Summary Chart



9.6 Asset Development Plan

9.6.1 Introduction

Asset development provides for a planned increase in the service capability of the wastewater collection and treatment system to:

- Close gaps between the current capability of the wastewater system and target service standards.
- Accommodate growth.

Asset development and asset renewal can occur simultaneously. The purpose of asset renewal is to prevent a decline in the service of the assets whereas, asset development is the service improvements, measured by asset performance.

9.6.2 Asset Development Strategies

Table 9-13 below sets out the strategies used for developing capital development programmes for the urban wastewater system. These strategies are intended to progressively close gaps between target service standards (taking account of demographic and economic growth projections) and the current service capability of the asset system.

Table 9-13: Development Strategies

Strategy	Objective/ Description
Identification of development needs	Asset development needs are identified from analysis of; Demand forecasts, System performance monitoring (flows, blockages, etc.), Network modelling, Risk assessments (Risk Management Plan), Customer service requests, and planning designations. A provisional forward capital works development programme is maintained and updated in in conjunction with updates of the Asset Management Plans
Development Project Categorisation	Development Projects will be separated into projects to close service gaps and projects required to accommodate growth Development projects to close service gaps are generally funded entirely by Council. Development projects to accommodate growth may be partly or wholly funded through Development Contributions or Capital Contributions
Prioritisation of Development Projects	Development projects are justified and prioritised using a risk based process Decisions on development works consider the short and long-term effects on the operating and structural integrity of the wastewater system In determining the requirement for capital or asset development works the short and long-term effects on the operating and structural integrity of the system are considered, together with any forecast increase in loading upon the system All feasible options, including non-asset demand management options and the use of second-hand plant, are considered. Development works are designed and undertaken in accordance with industry standards (or known future standards) and system design loadings
Project Approval	A long-term development programme is prepared from projects meeting the assessment criteria, and all projects are approved through the Long Term Plan and/or the Annual Plan process The actual timing of asset development works will reflect the community's ability to meet the cost, as determined through the Annual Plan process Scheduled projects meeting assessment criteria not funded are listed on the forward works programme for the following year
Project Design	All asset development works will be designed and constructed in accordance with current adopted industry standards (or known future standards) and system design loading

Strategy	Objective/ Description
	In determining capital or asset development work requirements the short and long term effects on the operating and structural integrity of the system are considered, together with the demands of any forecast increase in loading upon the system The system will be designed to minimise supply disruptions as far as practically possible by building in an appropriate level of redundancy The standardisation of designs and specifications will be considered in the interest of facilitating replacement and operational simplicity
Vested Assets	The risk, cost and benefits of accepting any new privately funded assets constructed in association with property development will be considered on a case by case basis in approval decisions Such assets will be accepted into public ownership when satisfactorily completed in accordance with approvals given. Council will generally not contribute to the cost of such work unless there are exceptional service standard or equity issues

9.6.3 Development Standards

The following standards are applicable to the renewal of wastewater assets:

- NZS4404: 2010 Land development and subdivision infrastructure adopted by Council as its Engineering Code of Practice
- Relevant Resource Consents and the Resource Management Act 1991
- WorkSafe – Keeping healthy and safe while working on the road or roadside. Health and Safety Plans
- Electrical Regulations 1993
- Council's quality assurance processes, including contract management procedures

The Standards will be reviewed regularly and updated to incorporate relevant experiences, legislative requirements and changes in best practice.

9.6.4 Summary of Ten Year Capital Budget Forecast

The following table and chart details the ten-year wastewater capital programme. Detailed budgets are included in Section 8.6.1.

Table 9-14: 10 Year Capital Budget Forecast Summary

Capital - LOS & Growth	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	10 Year Total
	Enhanced AP 2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	
552074534 - Sewer - Edinburgh, Victoria and Nelson Streets infill	-	-	-	300,305	-	-	-	-	-	-	300,305
552074535 - Sewer - Allan Street extension	-	-	-	-	-	493,785	-	-	-	-	493,785
552074536 - Sewer - Manchester Street extension	-	-	-	-	-	-	-	388,178	-	-	388,178
552074537 - Sewer - Hunts Road extension	-	-	-	-	-	-	-	-	-	451,364	451,364
552074538 - Sewer - Glenavy consenting	-	-	-	-	21,516	-	-	-	-	-	21,516
Total	**-**	**-**	**-**	**300,305**	**21,516**	**493,785**	**-**	**388,178**	**-**	**451,364**	**1,655,148**

Figure 9-11: 10 Year Capital Budget Forecast Summary

9.7 Disposal Plan

9.7.1 Introduction

The development of Asset Management Systems and use of Asset Condition / Performance data allows better planning for the disposal of assets through rationalisation of asset stock or when assets become uneconomic to own and operate.

All pipeline renewals identified in this Lifecycle Management Plan have a corresponding disposal either through the pipes being removed and disposed of at the landfill, or being left in the ground if the wastewater assets are refurbished using 'no-dig' techniques or the asset is replaced in a new location. Disposals are recorded within Univerus Assets and the GIS. Buried assets remain in the ground unless economic to remove or they pose a potential hazard.

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

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

9.7.2 Asset Disposal Strategies

The following table details the disposal strategies

Table 9-15: Disposal Strategies

Strategy	Objective/ Description
Asset Disposal	Assess each proposal to dispose of surplus or redundant assets on an individual basis, subject to the requirements of the relevant legislation Asset disposal will comply with the requirements of the Local Government Act 2002 and in particular the requirement for councils to retain a capability to provide water supply services Redundant pipes are removed where their alignment clashes with replacement pipelines or where their existence is considered dangerous. Abandoned wastewater supply pipelines have possible future value for other purposes (such as ducting for cabling). As the extent of this value (if any) is uncertain it is not recognised in the asset valuation When a wastewater supply asset is abandoned or replaced the Geographic Information System and fixed asset register are updated. A system of job number creation and asset identification is used to document this process.
Residual Value	The residual value (if any) of assets, which are planned to be disposed of, will be identified and provided for in financial projections

10 FINANCIAL SUMMARY

This Section sets out financial statements, funding strategy, depreciation forecast and charges for the Wastewater activity in Waimate District.

10.1 Financial Strategy

This plan will provide the substantiation for budget forecasts put forward in the LTP (2025-34) for Wastewater activity assets. Council will:

- Implement an improvement approach to asset management planning in the short term. A 10 year improvement plan is included in each AMP. Improvement projects will be monitored monthly by the Asset Group Manager.
- Prepare, maintain and periodically review a Plan outlining sustainable long-term asset management strategies. The Plan will typically be reviewed three-yearly in advance of the LTP. Annual amendments or updates may be undertaken if significant asset management changes occur.
- Report variations in the adopted annual plan budgets against the original asset management plan forecasts and explain the level of service implications of budget variations.

10.2 Development Contributions

Please refer to Financial Policy 404 - Financial Contributions Policy.
Council has expressed a desire to rationalise capital contributions across the three waters activities. A number of discrete “connection fees” currently exist with some at a level that discourage growth. With the proposed ring-fencing of the three waters activities, opportunities exist to review pricing structures and methodologies to ensure equity across the activities.

10.3 Depreciation

10.3.1 Background

The introduction of accrual accounting during the early 1990’s changed the way in which local authorities accounted for their assets, particularly long life assets i.e. pipes and roads. This meant that instead of cash based accounting where the replacement/renewal cost of an asset is recognised only when it wears out, local authorities were required to spread the cost, and any reduction in the value of these assets over its useful life.

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.[4] Therefore, depreciation 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.

The basic value of an asset reduces in accordance with the wearing out or consumption of benefits over the assets 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 funds asset depreciation (or part thereof).

The Council revalues its assets at least every three years to keep them up to date and this means that depreciation charge reflects the cost of replacing the asset. It is the valuer's role to appropriately identify the level of depreciation, though this will be better achieved through more robust data e.g. condition assessment. Intermediate fair value assessments are made in non-valuation years.

Annual depreciation is calculated by Council on a straight line basis – i.e. the replacement cost of the asset less its residual value over its useful life.

The Council has previously consulted with the Community and decided to fund depreciation via rates. However, Council does not fully fund depreciation where it is considered prudent to do so e.g. in roading or where affordability becomes an issue.

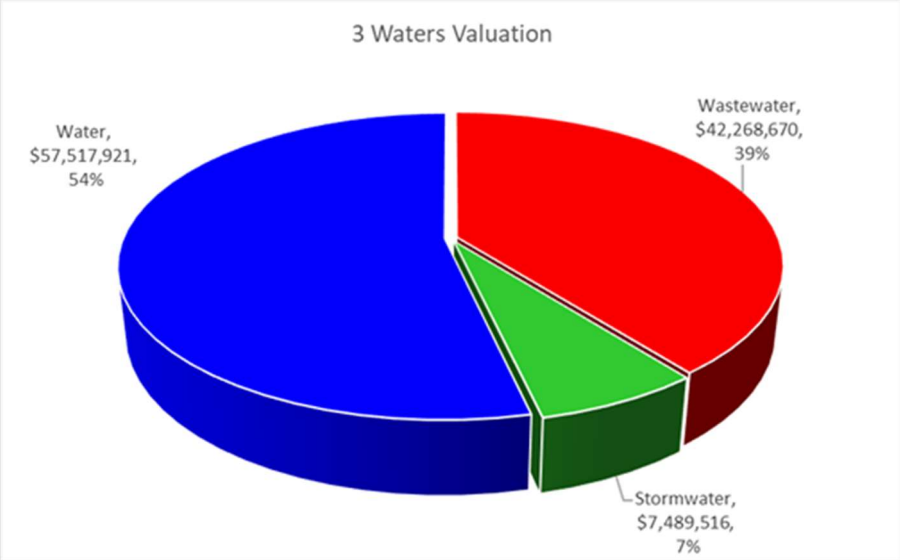
10.4 Valuations

10.4.1 2024 Valuation Summary

Valuations of the 3 Waters infrastructure were carried out in June 2024 and is summarised in the chart below. The chart provides an overview of the valuation per Water activity, with Water having the largest asset value of $57.52 million followed by Wastewater with $42.27 million and then Stormwater with a value of $7.50 million:

[4] Source: Depreciation in the local government context, July 2011. Local Government New Zealand

Figure 10-1: 3 Waters 2024 Valuation



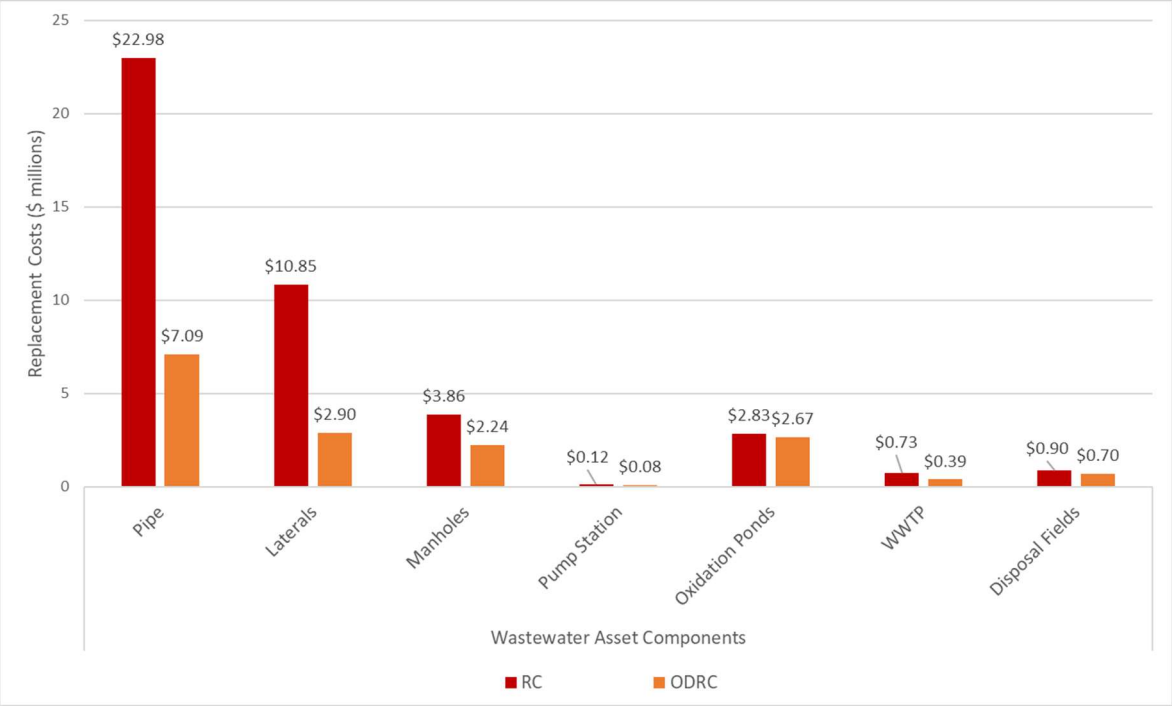
2024 Wastewater Valuation Information

A summary of the 2024 Wastewater valuation is presented in the table and chart below.

Table 10-1: 2024 Wastewater Valuation Summary

Asset Type	ORC	ODRC	Annual Deprecation
Reticulation			
Pipe	$22,975,636	$7,094,478	$22,975,636
Laterals	$10,847,080	$2,903,035	$10,847,080
Manholes	$3,864,058	$2,238,238	$3,864,058
Plant			
WWTP	$727,068	$388,030	$19,460
Oxidation Ponds	$2,832,336	$2,672,375	$10,269
Disposal Fields	$898,307	$697,861	$9,189
Pump Stations	$124,185	$84,756	$2,793
Total	**$42,268,670**	**$16,078,773**	**$371,195**

Figure 10-2: 2024 Wastewater Valuation Summary Chart



Change in Water Optimised Replacement Cost (ORC) from 2022 to 2024

The ORC increase from the 2022 valuation to 2024 was $4,831,219 or 12.9%.

Revaluation movements are attributed to inflationary factors, unit rate reviews, additions and deletions to the network, values of renewals, amendments, and depreciation of asset values that existed as of 30 June 2022.

2024 Valuation Improvements Identified

Based on Beca's observations from completing the 2024 valuation, they recommend that WDC review the following:

Higher priorities are:

- Capture and verify stormwater and wastewater manhole diameters and depths to replace the unknowns.
- Further explore the use of engineering estimating cost build-up techniques to support unit cost reviews.
- Set one base life for lines, plant, and points with similar attributes then remove the duplicate base lives.

Lesser priorities are:

- Set a minimum RUL of 1 so when the 2.5% Base Life Adjusted RUL < 1 it prevents AFD exceeding DRC.
- Capture and verify laterals with install dates, materials, and diameters to replace the lateral plant valuation.
- Use CCTV condition data to estimate remaining lives for poor or very poor condition assets for valuations.
- When entering new assets into Univerus, avoid numbering and/or text renaming of the otherwise uniquely identified Univerus generated Asset IDs.

10.4.2 Data Confidence Levels

The quantity and quality of the data for the 2024 valuation is shown in the table below.

Table 10-2: Valuation Confidence Levels

Asset	Quantity	Replacement Cost	Life Expectancy	Condition
Wastewater assets	B	B^+	B^+	C

Where:

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

(*Source – IIMM 2015*)

It is accepted that most condition data across the data is anecdotal hence the C rating, however, it has not been taken into the overall data confidence grade as condition was not used to adjust remaining useful life. Taking condition out of the assessment, we consider a data confidence of B (reliable) is appropriate for this valuation.

10.5 How We Fund Our Activity

The following table summarises the ways in which the wastewater activity is funded:

Table 10-3: Water Funding

Activity	Funding method
Operations and Maintenance	• Individual scheme rates • Water usage via water meters
Renewals	• Depreciation • Loans (either internal or external
Capital	• Development/Financial contributions • Private or Community contributions • Government Subsidies / Funding initiatives • Loans (either internal or external)

10 Year Financial Budget Forecasts

10.5.1 Background

The Water Services Acts Repeal Act was enacted in February 2024, and includes a number of transitional arrangement(s) for local authorities. The Act includes transitional arrangements for local authorities to include water services provision in their 2024-34 long-term plans, including:
an

…provisions allowing local authorities to defer their 2024-2034 long-term plan by a year, replaced by an 'enhanced' annual plan for the 2024/25 financial year. A council must make a decision to do so by 30 April 2024, and if it does not, it may be authorised to defer its plan by Order in Council.

Based on this, Council decided to defer the 2024-34 Long-term Plan for one year and consulted on a 2024-25 Enhanced Annual Plan with the additions laid out in the new legislation and adopts a Long-Term Plan (2025-34) by 30 June 2025.

The financial budget forecasts in this AMP cover:

- 2024/25 Enhanced Annual Plan budgets
- 2025/26 -2033/34 LTP budgets

The longer range renewals profiles are included in Section 7.5 to highlight any major expenditure likely to occur in the next planning horizon.

The financial budget forecasts for the Wastewater Activity are detailed under the following:

- Operations and Maintenance
- Capital Works – Growth
- Capital Works – Increased Level of Service
- Capital Works – Renewals
- Capital Works – Vested Assets

10.6 10 Year LTP Financial Projections and Budget Forecasts

10.6.1 Background

The Water Services Acts Repeal Act was enacted in February 2024, and included a number of transitional arrangement(s) for local authorities. The Act will include transitional arrangements for local authorities to include water services provision in their 2024-34 long-term plans, including: an

…provisions allowing local authorities to defer their 2024-2034 long-term plan by a year, replaced by an 'enhanced' annual plan for the 2024/25 financial year. A council must make a decision to do so by 30 April 2024, and if it does not, it may be authorised to defer its plan by Order in Council.

Based on this, Council decided to defer the 2024-34 Long-term Plan for one year and consulted on a 2024-25 Enhanced Annual Plan with the additions laid out in the new legislation and adopts a Long-Term Plan (2025-34) by 30 June 2025.

The financial budget forecasts in this AMP cover:

- 2024/25 Enhanced Annual Plan budgets
- 2025/26 -2033/34 LTP budgets

The budgets are based on financial projections covering the lifecycles of the assets. The longer-range renewals profiles are included in Section 7.5 to highlight any major expenditure likely to occur in the next planning horizon.

The financial budget forecasts for the Water Services activity are detailed under the under the following:

- Operations and Maintenance
- Capital works – Growth
- Capital Works – Increased Level of Service
- Capital Works – Renewals
- Capita Works – Vested Assets

It needs to be noted that the Wastewater capital budgets do not exactly match the predicated capital expenditure from the 2024 valuations (book value) in Section 8.4.1. This is due to the following reasons:

- Assessment of pipe, adjustment for known risk factors, and actual number of faults
- Positive impacts of the renewal work already done
- The ability to all do the physical works required (staffing)
- The ability to finance all assets that have that fallen due for renewal, which includes those assets that have well past their useful lives and were not renewed at time of expiry

The budgets in the following sections are the inflated budgets as per the inflation indices in the LTP Assumptions.

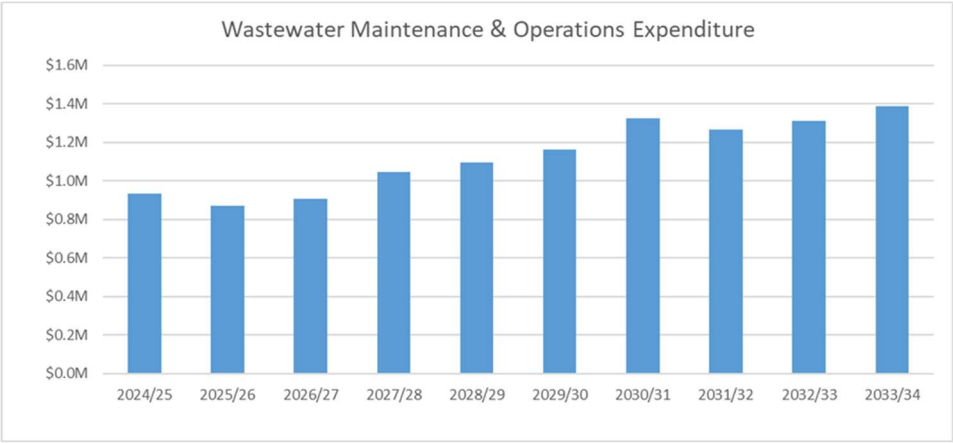
10.6.2 10 Year Budget Forecast Summary

The table and charts below summarise the Wastewater 2024-2034 Budgets:

Table 10-4: 2024 - 2034 Summary Budget Forecasts

	Enhanced AP 2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	10 Year Total
Operating Expenditure	933,590	869,590	905,098	1,047,703	1,093,888	1,164,500	1,324,052	1,267,795	1,311,321	1,387,104	11,304,641
Capital (LOS/AD/REN)	444,880	835,033	1,006,774	2,646,158	1,494,076	1,233,418	410,195	1,067,740	1,011,498	1,650,211	11,799,982
Total	**1,378,470**	**1,704,623**	**1,911,871**	**3,693,861**	**2,587,965**	**2,397,918**	**1,734,248**	**2,335,534**	**2,322,818**	**3,037,315**	**23,104,623**

Figure 10-3: Summary of 10 Year Maintenance & Operations and Capital (Including Renewals) Forecasts



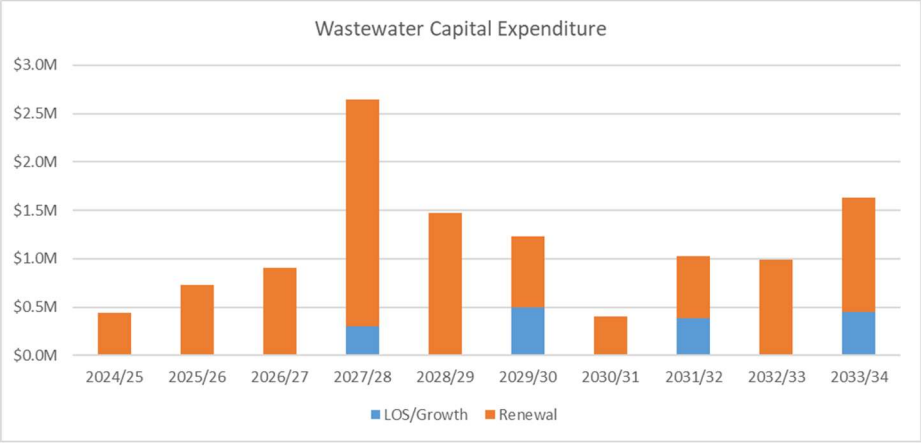
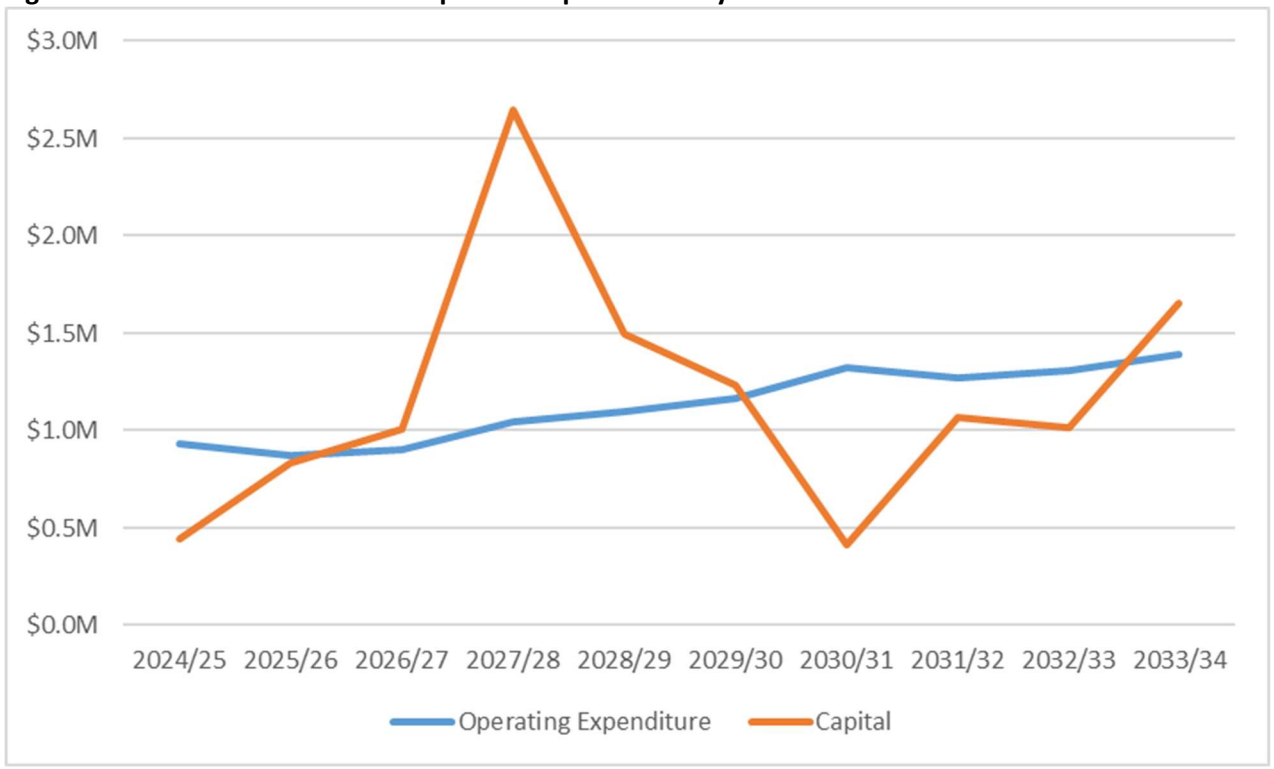


Figure 10-4: 10 Year Wastewater Capex and Opex Summary



10.6.3 10 Year Operations and Capital Financial Statements

The budget tables below detail the ten year Wastewater 2024-2034 Operations and Capital forecasts, including inflation.

Table 10-5: Detailed Maintenance & Operational Expenditure (figures are inflated)

5520 - Sewer Maintenance	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	10 Year Total
Operating Revenue	**-933,212**	**-961,680**	**-1,000,353**	**-1,077,495**	**-1,194,121**	**-1,266,598**	**-1,356,716**	**-1,375,081**	**-1,420,441**	**-1,498,087**	**-12,083,784**
552001504 - Targeted Rate - Sewer	-849,100	-886,381	-922,989	-998,238	-1,113,233	-1,184,126	-1,272,622	-1,289,335	-1,333,015	-1,408,943	-11,257,983
552001505 - Targeted Rate - St Andrews Sewer	-9,577	-9,577	-9,801	-10,007	-10,183	-10,355	-10,531	-10,711	-10,893	-11,079	-102,715
552002501 - Works - Application fee	-651	-651	-669	-686	-700	-714	-729	-743	-758	-773	-7,075
552002502 - Works - Connection Fees	-55,895	-25,000	-25,700	-26,343	-26,895	-27,433	-27,983	-28,543	-29,113	-29,695	-302,598
552005101 - Recoveries - General	-7,918	-30,000	-30,840	-31,611	-32,274	-32,919	-33,579	-34,251	-34,935	-35,634	-303,961
552007101 - Dividend - SC Power	-486	-486	-500	-512	-523	-533	-544	-555	-566	-577	-5,282
552007305 - Internal Interest Income	-	-	-	-	-	-	-	-	-	-	-
5520081 - Capital Contributions - Sewer	-17,360	-17,360	-17,846	-18,292	-18,676	-19,049	-19,431	-19,820	-20,216	-20,620	-188,670
552041203 - Rates Remissions	7,775	7,775	7,993	8,193	8,364	8,532	8,703	8,877	9,054	9,235	84,499
Operating Expenditure	**933,590**	**869,590**	**905,098**	**1,047,703**	**1,093,888**	**1,164,500**	**1,324,052**	**1,267,795**	**1,311,321**	**1,387,104**	**11,304,641**
5520302 - ACC	1,800	1,800	1,858	1,913	1,965	2,016	2,064	2,112	2,158	2,204	19,891
5520333 - General Expenses	3,000	3,000	3,084	3,161	3,227	3,292	3,358	3,425	3,494	3,563	32,604
5520336 - LAPP Disaster Fund	21,023	24,845	25,541	26,179	26,728	27,262	27,809	28,366	28,932	29,511	266,196
5520349 - Repairs and Maintenance	-	-	-	-	-	-	-	-	-	-	-
5520356 - Telephone Expenses	900	900	925	948	968	988	1,007	1,028	1,048	1,069	9,781
5520357 - Utilities charges	61,500	73,800	75,215	76,660	78,080	79,458	82,349	82,170	83,499	84,852	777,581
552040302 - Depreciation - Buildings	460	595	595	685	685	685	787	787	787	905	6,971
552040303 - Depreciation - Plant & Machinery	1,103	959	836	731	641	563	496	438	387	342	6,497
552040305 - Depn - Office Equipment	62	50	40	32	26	20	16	13	10	8	278
552040310 - Depreciation - Revaluation	375,937	374,622	374,622	407,531	409,029	413,967	446,265	450,717	450,866	490,414	4,193,971
552040405 - Internal Interest	21,593	-91	1,304	1,155	638	2,590	3,155	1,869	1,278	6,774	40,266
552040406 - Waimate Urban Sewer - Internal Loan interest	38,700	50,176	65,216	91,197	197,695	251,945	296,534	300,896	334,434	355,768	1,982,560
5520405 - Insurance	33,797	25,439	26,151	26,805	27,367	27,914	28,474	29,044	29,624	30,216	284,832
5520422 - Electricity	14,000	14,000	14,392	14,752	15,061	15,362	15,670	15,984	16,303	16,629	152,153
552042405 - Internal Rent	23,714	28,321	29,082	31,220	31,807	31,825	34,074	33,359	33,071	35,986	312,459

5520 - Sewer Maintenance	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	10 Year Total
5520425 - Rates	18,557	20,042	21,839	22,385	22,854	23,311	23,778	24,254	24,739	25,234	226,993
5520501 - Asset Mgt Plan	4,145	4,145	4,261	4,368	4,459	4,548	4,640	4,732	4,827	4,923	45,048
5520504 - Consultants	1,500	1,500	1,542	1,581	1,614	1,646	1,679	1,713	1,747	1,782	16,302
552050403 - Consultancy - CCTV investigations	65,000	2,000	2,056	68,491	2,152	2,195	72,755	2,283	2,329	2,376	221,635
5520506 - Contractor	6,500	6,500	6,682	6,849	6,993	7,132	7,275	7,421	7,569	7,721	70,643
552050601 - Contractor - St Andrews Sewer	8,000	8,000	8,224	8,430	8,606	8,778	8,954	9,134	9,316	9,502	86,945
5520508 - Line Maintenance	10,000	10,000	10,280	10,537	10,758	10,973	11,193	11,417	11,645	11,878	108,681
5520510 - Operational Maintenance	5,000	5,000	5,140	5,269	5,379	5,487	5,597	5,709	5,823	5,939	54,341
5520511 - Pump Maintenance	2,000	2,000	2,056	2,107	2,152	2,195	2,239	2,283	2,329	2,376	21,736
5520512 - Water Testing	3,400	3,400	3,495	3,583	3,658	3,731	3,806	3,882	3,959	4,039	36,952
5520516 - Operational Contractor system support	10,800	11,400	12,439	12,750	13,017	13,277	13,544	13,815	14,090	14,372	129,504
5520517 - Monitoring consents and compliance	5,000	5,000	5,140	5,269	5,379	5,487	5,597	5,709	5,823	5,939	54,341
5520601 - HR Costs - 8125	4,922	5,356	7,242	8,329	7,676	8,094	8,055	9,188	8,405	8,834	76,101
552060101 - 8126 - Health & Safety O/H Recoveries	4,667	4,757	4,908	5,055	5,189	5,322	5,448	5,573	5,695	6,010	52,623
5520602 - Corporate Services Costs - 8120	20,886	20,853	23,362	24,241	24,635	25,170	25,605	25,953	26,572	26,698	243,977
5520604 - Utilities Costs - 8140	71,393	49,075	50,505	55,397	53,880	55,812	56,396	57,095	60,683	59,269	569,505
5520606 - Asset Management Unit Costs - 8160	31,238	47,372	49,611	50,641	51,414	53,325	54,247	54,821	55,441	57,378	505,489
5520608 - Network Costs	23,740	26,353	27,393	28,312	27,434	26,434	26,724	27,337	28,349	27,601	269,678
5520609 - CEO & Finance Costs - 8110	13,971	14,021	14,720	15,152	15,508	16,036	16,387	16,683	16,986	17,326	156,792
5520611 - Support - Asset Manager	25,281	24,400	25,340	25,992	27,213	27,660	28,076	28,587	29,104	29,665	271,319
Operating (Surplus) / Deficit	**378**	**-92,090**	**-95,255**	**-29,793**	**-100,232**	**-102,099**	**-32,663**	**-107,286**	**-109,120**	**-110,983**	**-779,143**

Table 10-6: Detailed Capital Expenditure Forecasts (figures are inflated)

Capital	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	10 Year Total
Level of Service	**-**	**-**	**-**	**-**	**21,516**	**-**	**-**	**-**	**-**	**-**	**21,516**
552074538 - Sewer - Glenavy consenting	-	-	-	-	21,516	-	-	-	-	-	21,516
Level of Service/Growth	**-**	**-**	**-**	**300,305**	**-**	**493,785**	**-**	**388,178**	**-**	**451,364**	**1,633,632**
552074534 - Sewer - Edinburgh, Victoria and Nelson Streets infill	-	-	-	300,305	-	-	-	-	-	-	300,305
552074535 - Sewer - Allan Street extension	-	-	-	-	-	493,785	-	-	-	-	493,785
552074536 - Sewer - Manchester Street extension	-	-	-	-	-	-	-	388,178	-	-	388,178
552074537 - Sewer - Hunts Road extension	-	-	-	-	-	-	-	-	-	451,364	451,364
Renewal	**444,880**	**835,033**	**1,006,774**	**2,345,853**	**1,472,560**	**739,633**	**410,195**	**679,562**	**1,011,498**	**1,198,847**	**10,144,835**
552074501 - Sewer - Waimate Urban renewals	444,880	726,533	908,600	2,345,853	1,472,560	735,134	405,606	639,602	988,208	1,175,091	9,842,067
552074518 - Sewer - WWTP out flow meter renewal	-	-	5,654	-	-	-	-	-	-	-	5,654
552074525 - Sewer - Milford pump renewal	-	-	-	-	-	4,499	4,589	2,283	2,329	2,376	16,076
552074526 - Sewer - WWTP Electrical/control renewal	-	100,000	-	-	-	-	-	18,267	18,632	19,005	155,904
552074527 - Sewer - WWTP various equipment	-	8,500	-	-	-	-	-	2,283	2,329	2,376	15,488
552074529 - Sewer - Septic waste receival unit	-	-	92,520	-	-	-	-	-	-	-	92,520
552074537 - Sewer - St Andrews consenting	-	-	-	-	-	-	-	17,126	-	-	17,126
Total Capital Expenditure	**444,880**	**835,033**	**1,006,774**	**2,646,158**	**1,494,076**	**1,233,418**	**410,195**	**1,067,740**	**1,011,498**	**1,650,211**	**11,799,982**

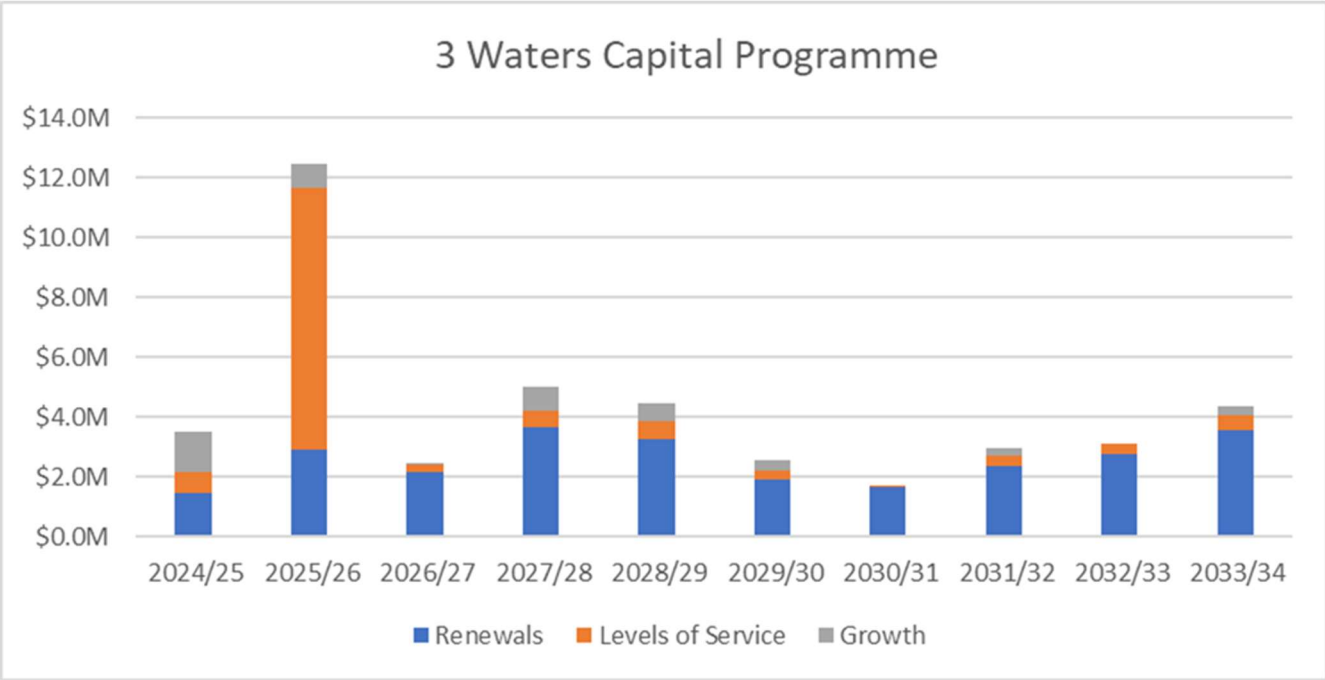
10.6.4 3 Waters 2024-34 Renewals and Capital Summary

The following details the summary of new capital and renewals for all three services for the 2024/25 Enhanced Annual Plan and the 2025-34 LTP period.

Table 10-7: 3 Waters 2024-2034 Renewals and Capital Summary

3 Waters	2024/25 Enhanced AP	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	Total
Renewals	1,446,045	2,881,576	2,146,752	3,641,146	3,238,516	1,889,401	1,651,904	2,339,109	2,781,108	3,550,499	25,566,056
Levels of Service	685,835	8,781,498	235,415	563,948	609,055	301,237	28,045	364,817	300,506	508,065	12,378,420
Growth	1,350,050	783,000	25,700	808,715	611,054	345,650	-	271,725	-	315,955	4,511,848
Total	**3,481,930**	**12,446,073**	**2,407,867**	**5,013,809**	**4,458,625**	**2,536,288**	**1,679,949**	**2,975,650**	**3,081,614**	**4,374,518**	**42,456,324**

Figure 10-5: 3 Waters 2024-2034 Renewals and Capital Projects

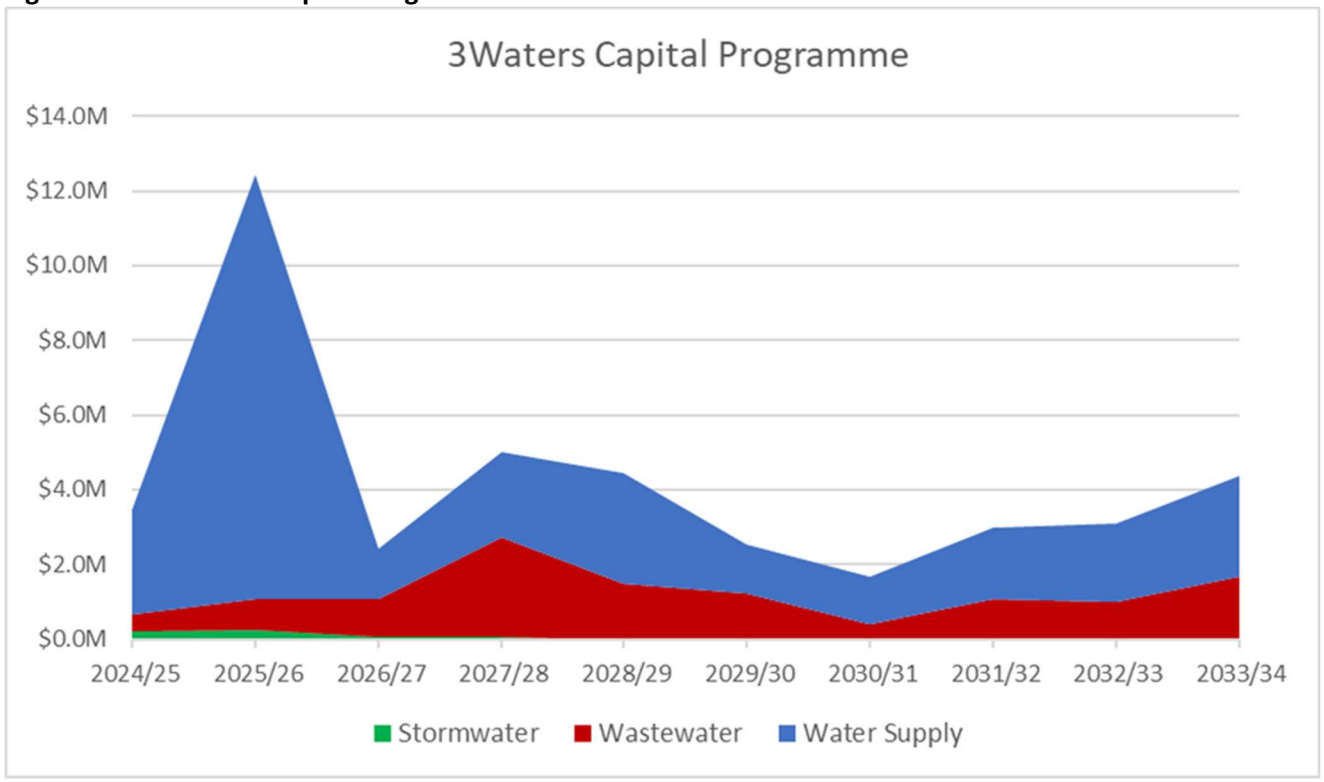


The 2025/26 increase in expenditure is related to sewer extensions and is considered deliverable within the current South Canterbury market.

Table 10-: 3 Waters 2024-34 Capital Programme

Utility	Enhanced AP 2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	Total
Water	2,823,950	11,361,040	1,349,693	2,304,429	2,964,549	1,302,870	1,269,754	1,905,627	2,067,788	2,704,115	30,053,815
Wastewater	444,880	835,033	1,006,774	2,646,158	1,494,076	1,233,418	410,195	1,067,740	1,011,498	1,650,211	11,799,982
Stormwater	213,100	250,000	51,400	63,222	-	-	-	2,283	2,329	20,193	602,527
Total	**3,481,930**	**12,446,073**	**2,407,867**	**5,013,809**	**4,458,625**	**2,536,288**	**1,679,949**	**2,975,650**	**3,081,614**	**4,374,518**	**42,456,324**

Figure 10-6: 3 Waters Capital Programme



10.7 Key Financial Forecasts Assumptions

10.7.1 Overview

Forecasting assumptions and uncertainties are essential in the operation of Council's assets to indicate the levels of risks associated with those assumptions. Where necessary additional strategies can be implemented to reduce the risk.

The LGA 2002 - Schedule 10, Part 1 (11) requires the Council to clearly define all the significant forecasting assumptions and risks that underlie the financial estimates, assumptions concerning the useful life of significant assets and an estimate of the potential effects of the uncertainty on the financial estimates provided.

Appendix B details the significant forecasting assumptions for the utilities.

10.7.2 Financial Forecast

The following table provide an assessment of the confidence in, and the accuracy of the 20-year financial forecast and supporting asset data. Table 10-9 and Table 10-10 detail the general meaning of the grades:

Table 10-8: Financial Forecast Confidence Level

Activity	Confidence Grade	Accuracy
Operations/Maintenance	B	2
Depreciation	B	2
Overheads		2
Funding Costs	C	3
Capital Expenditure	B	3
Debt Repayment	C	3
Overall	B	3

The overall confidence level is 'B' or reliable. Data is based on sound records, procedures, investigations and analysis which is documented but has some shortcomings and gaps that may impact on the confidence of long term financial forecasts.

The overall accuracy is 3 indicating that the accuracy of the financial forecasts is +/- 20%.

Table 10-9: Confidence Grades

Confidence Grade	General Meaning
A	Highly Reliable Data based on sound records, procedures, investigations and analysis, which is properly documented and recognised as the best method of assessment
B	Reliable Data based on sound records, procedures, investigations and analysis which is properly documented but has minor shortcomings for example the data is old, some documentation is missing and reliance is placed on unconfirmed reports or some extrapolation
C	Uncertain Data based on sound records, procedures, investigations and analysis which is incomplete or unsupported, or extrapolation from a limited sample for which grade A or B is available
D	Very Uncertain Data is based on unconfirmed verbal reports and/or cursory inspection and analysis

Accuracy ratings are made using the criteria outlined in:

Table 10-10: Accuracy Ratings

Grade	Description	Accuracy
1	Accurate	100%
2	Minor inaccuracies	+ / - 5%
3	50% estimated	+ / - 20%
4	Significant data estimated	+ / - 30%
5	All data estimated	+ / - 40%

11 PROCESSES AND ASSET MANAGEMENT PRACTICES

This section outlines the information available on the assets, information systems used and process used to make decisions on how the asset will be managed. It also provides details on planning for monitoring the performance of the AMP.

11.1 Organisation Structure

The organisation structure is presented in the figure below:

Figure 11-1: Council Management Structure

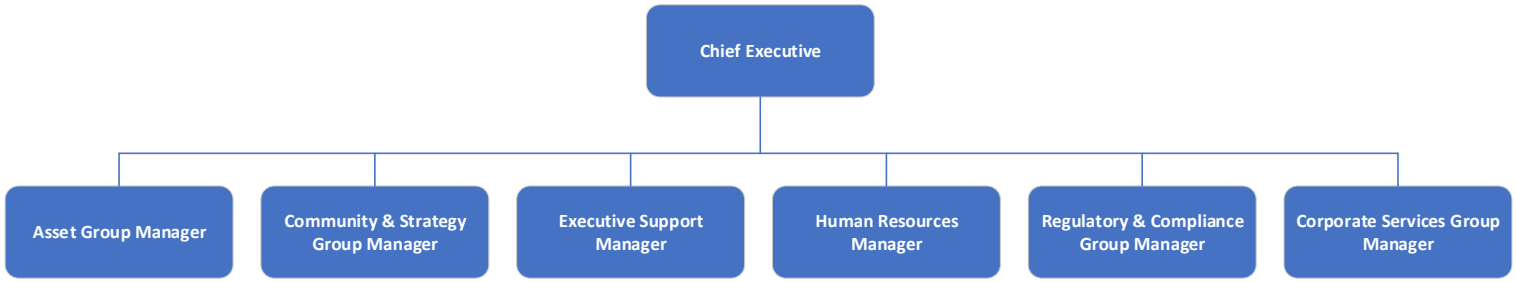
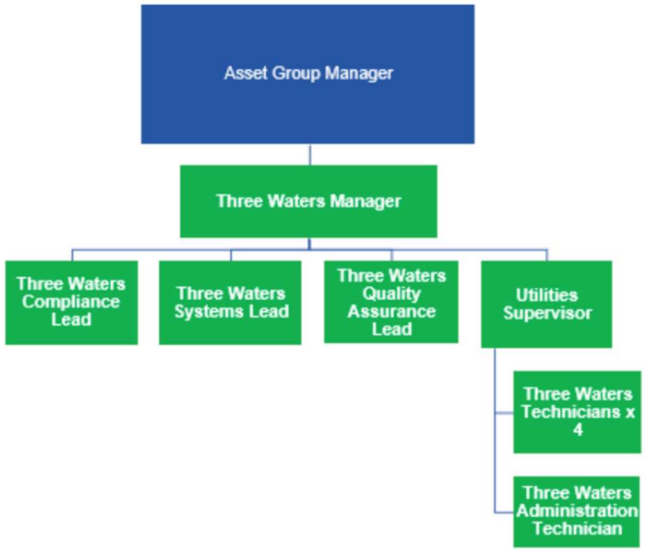


Figure 11-2: Water and Waste Unit Structure



11.2 Plan Review and Monitoring

11.2.1 Monitoring Approach

Council has developed this AMP based on its current knowledge of customer requirements, the configuration of the existing and future network to meet customer requirements, current asset information and the strategies to achieve customer requirements.

To further develop a meaningful AMP, including supporting processes, systems and data, Council recognise the need for a more structured approach. This approach includes:

- Council's firm commitment to implement and develop the AMP.
- Incorporate this AMP as a tactical plan within Council's planning framework.
- Review of the plans by internal staff and suitably qualified external consultants.
- Aiming to produce an AMP that meets the requirements of the community.
- Benchmarking key performance indicators against similar external TLAs.
- A corporate commitment to implementing and maintaining suitable AM information systems.
- Adopting a team approach to the preparation of future AMPs in order to maximise the buy-in of internal staff and sharing of specialised knowledge.

11.2.2 Timetable for Audit and Review

The programme for future AM reviews of this plan is in the table below:

Table 11-1: Timetable for Audit and Review

Activity	Target Date
Improvement Plan reviewed annually by all staff directly involved and focusing on key business issues	30 June each year
Report on Improvement Plan	30 June each year
AMP updates involving members of staff involved in preparing specific aspects of the AMP	30 June each year
Internal AMP peer review by staff not directly involved in preparation of AMP	30 June each year
Adoption of AMP by Council	30 June every 3 years
External benchmarking by internal staff	Annually
Audit NZ external audit	As required by Audit NZ

11.2.3 Utilisation of AMPs

Historically Asset Management Plans have been carried out for regulatory requirements and not used on an ongoing basis. The table below details the methodologies for the ongoing implementation and updating of AMPs within Council to ensure the 3 Waters AMPs are used to their full potential.

Table 11-2: Methodologies for the Ongoing Implementation and Updating of AMPs

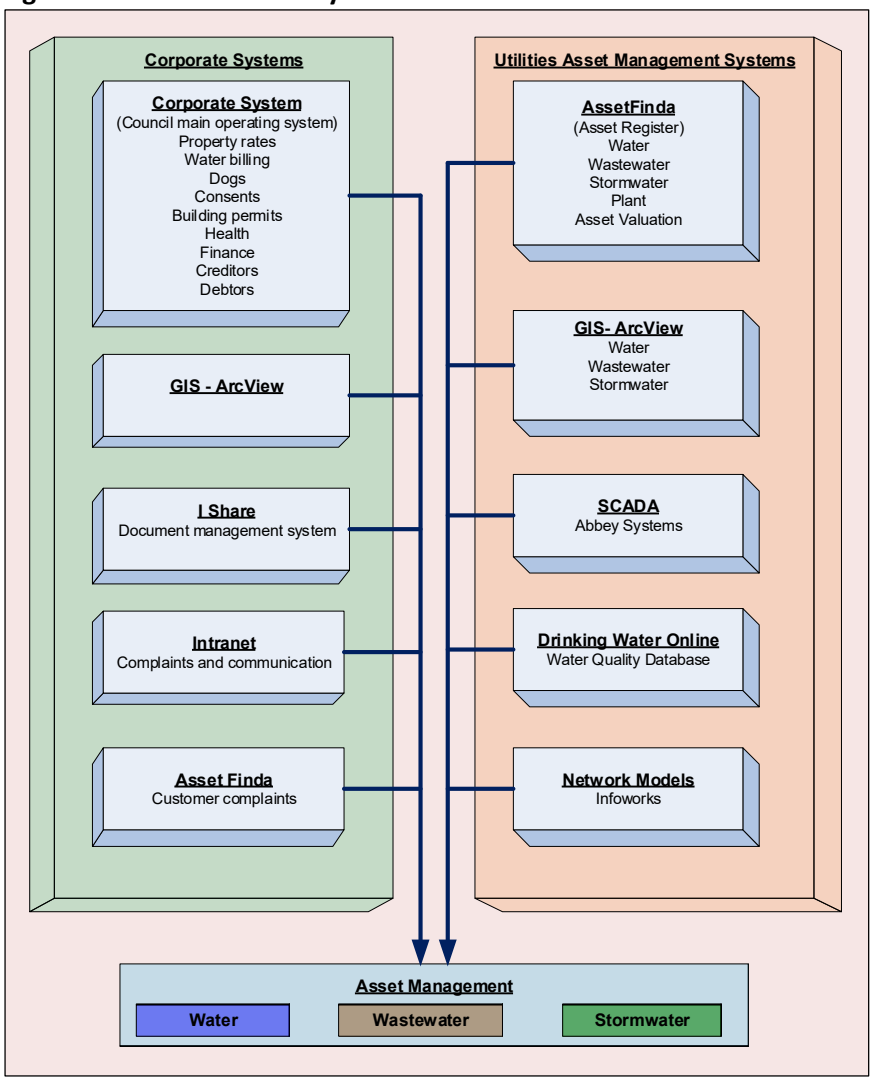
Methodologies	Output
Continuation of the organisational culture of asset management	The asset management culture needs be supported by the Chief Executive and senior managers in conjunction with the elected Council Effective stewardship and management of Council major investment (assets) will not occur in the long term without a culture of asset management
Resourcing of Asset Management Programmes	Asset management programmes must be adequately resourced

Methodologies	Output
Roles and Responsibilities of Council Staff	The roles and responsibilities of Council staff as they relate to the AMP's implementation need to be defined in respect to the ongoing use of the plans as this will assist the Plan to remain relevant and current. To enable this to occur the following is required - The Asset Management Plans adopted/accepted by staff down to a defined level - Council Staff to know what's in the plans and how it could affect their day to day work - Council Staff to understand the reasons for the plan and the implications for the long-term use of them - Understand all the reporting requirements for Levels of Service and Internal Benchmarking - Training required in the use of the Plan (what's in it, how work is done, ongoing requirements for monitoring, review and updating) - Instigation of processes to encourage Council Staff to use the Plan

11.3 Business Processes

The chart below details the data systems that are presently used within Council and their relationship with other systems.

Figure 11-3: Council Data Systems



11.3.1 Univerus Assets

Council uses Univerus Assets for its Asset Information System. Univerus Assets has been used since 2005 and is a web/GIS based asset management system. This has greatly improved the information on the scheme assets and enhance the future AMP and Asset Valuations. Some of the outputs from Univerus Assets includes:

- Complete asset register for the scheme.
- Completion of asset valuations.
- Maintenance can be entered into the database. Cumulative costs of maintenance on each asset can be assessed.
- Predictive analysis to indicate when assets should be replaced.
- Condition monitoring of assets.
- Complete "what if" scenarios to determine the optimal time to replace assets.

Table 11-3: Univerus Assets Functionality and Utilisation by Council

Register Functions	Utilisation
Property Services	
Utilities, Roading, Parks & Reserves	Works Requests

Register Functions	Utilisation
Water	Water lines, points and plant details
Wastewater	Wastewater lines, points and plant details
Stormwater	Stormwater lines, points and plant details
Maintenance History	Cumulative maintenance costs of an asset. Maintenance history is also linked to the asset in GIS
Valuation	Used on an annual basis (Fair Value checks or Valuations)
Criticality	For horizontal in-ground assets
Condition & Performance	Scores held in register

Data will be collected continually throughout the year and entered into Univerus Assets.

Metadata Standards

A Central Government funded project is the 'Metadata Standards' which sets national metadata standards for the 3-waters (potable, waste and storm) network, 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 mid-2017.

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

11.3.2 GIS

Plans for reticulation and facilities for the three utilities are entered into Univerus Assets as they are received. Where information is received from contractors on the utilities services then ArcView is updated. Council does not have a robust system of ensuring that all subdivision plans are of the required standard prior to importing into ArcView. In more recent times council has prescribed what as-built information is required.

Asset Data

The majority of asset quantity, location and pipe size data are held in the GIS system. There are a number of quality assurance processes are used to ensure the reliability of the data recorded. These processes include:

Table 11-4: GIS Data

Item	Details
Sampling of assets contained in the GIS / AMS	Using field tests to check the reliability of pipe capture, pipe quantities and pipe size within the GIS/AMS
Coverage testing	Checks by Asset Managers that assets captured in particular areas reconcile with the services known to be provided
Continuity checks	These are carried out in GIS to identify breaks in the piping networks and gaps in the data. This is particularly pertinent when the data is used for hydraulic modelling.
Historical and new data	GIS capture of historical data has been derived from professional engineering and survey plans, from Council record sheets or Council staff knowledge. The ongoing capture of asset data is derived from engineering as-built plans. All As-Built plans received by Council are required to comply with strict specifications and all data entered into the GIS/AMS is the subject of quality assurance processes

11.3.3 Network Modelling

Computer models (Infoworks) of the wastewater network exist. This enables Council to:

- Determine accurately the existing capacity of the system.
- Identify inadequate sections of the system.
- Operate the system in the most efficient manner.
- Determine the impact of further development on the system.
- Identify system upgrading requirements.
- Compare options for upgrading the System.

The network models are operated and maintained by external consultants, One Water Modelling.

11.3.4 Complaints Database

The Council operates a complaints database through a 'Request for Service System' via Univerus Assets. This records all complaints associated with the 3 Waters, Parks and Reserves and Roading activities and provides useful information for trending and analysis of system performance and highlights issues.

The database has now been updated such that service requests can now be analysed by relevant performance measures (Levels of Service) and priority response times included within Univerus Assets.

11.3.5 SCADA System

Background

Council operates an Abbey Systems Telemetry or SCADA (Supervisory Control and Data Acquisition) system. The system is used to monitor and control critical aspects of treatment plants and pump stations, 9 sites are presently monitored that include:

- 1 WWTPs
- 2 wastewater pump stations
- 5 water intakes and treatment plants (WTP)
- 2 water pump stations
-
- The following table details the extent of SCADA within the Wastewater activity.

Table 11-5: SCADA within the Wastewater Activity

FACILITY	SCADA REPORT												ALARMING	
	Accumulator reset	Pump (I/O, hours)	Milliscreen (I/O, hours)	kW	Current	Power failure	Actuated Valves	Level (high/low)	Flow	Aerator (I/O, hours)	UV system	Intruder/ Operator	Outgoing alarms (high/low & fail)	Flashing Light
Treatment Plant	-	✓	✓	-	-	✓	-	✓	✓	✓	-	-	✓	-
Milford PS	-	✓	-	-	-	✓	-	✓	-	-	-	-	✓	✓

The system is used for:

- Monitoring the operation of sites.
- Reporting, trending and analysing historical data.
- Alarm monitoring (operators are informed of alarms via text messages to mobile phones).
- Some control functions.

Monitoring of Water and Wastewater Schemes by the Council's SCADA system has grown to the point that without the current SCADA system, maintaining the existing Levels of Service would be difficult. SCADA has given the ability for Council to ascertain faults and instigate repairs without affecting the service to the consumer has significantly increased efficiency and reliability of the utility schemes. The SCADA system is a critical system in Councils operation and service delivery.

The system is now supported by Lutra ID which has been deployed as a compliance monitoring and reporting tool.

Future Strategy for Council's SCADA

Council's strategy for the ongoing use of SCADA is:

- Maintain a SCADA system at a high level to ensure system reliability and ongoing reporting ability.
- Increase availability of information to the Engineering staff in a format that will enable increased efficiencies in operation and management, in part achieved through Lutra ID
- The development of the reporting functions of the system and
- Develop further use of the system to control plants.

12 IMPROVEMENT PLAN

This section details the improvements to AM systems that will increase the level of confidence in the AMP.

12.1 Asset Management Improvement Process

Background

Council is committed to ongoing improvement in the quality of its Wastewater activity management practices. This is reflected in the implementation of asset management systems and associated data collection and maintenance requirements.

This Improvement Plan is integral to that approach, quantifying current business practice and measuring progress toward an identified future position. The Improvement Plan is focused on the key areas of:

- Information Management
- Scheme Knowledge
- Renewals, Risk and Criticality assessments

Purpose of the Improvement Plan

The purpose of the Improvement Plan is to:

- Identify, develop and implement AM planning processes.
- Identify and prioritise ways to cost-effectively improve the quality of the AMP.
- Identify indicative time-scales, priorities, and human and financial resources required to achieve AM planning objectives.

The Improvement Plan is subject to constant reappraisal and change. While reappraisal is an ongoing process, the Improvement Plan will form the basis of the Wastewater activity annual business planning.

12.2 Improvement Programme

Council is committed to ongoing improvement in the quality of its asset management practices until appropriate practice levels are achieved. This is reflected in the current improvement programme detailed in this section.

Recent AM Improvements Completed

Recent AM improvement items completed are detailed in the table below:

Table 12-1: Recent AM Improvements Completed

Water Activity	AM Area	No	Improvement Item	Completed	Comment
All	Level of Service (LOS)	1	Improvements to Council's Request for Service System via Univerus Assets, to enable interrogation of service request system to analyse customer complaints and identification of problem area	Y	Service requests can now be analysed by relevant performance measure and priority response times included within the Univerus Assets set-up.
All	Growth	6	Continue to develop the existing population projections process that is Council approved and used across all areas of council	Y	Process in place (yet to be formally adopted by Council).
All	Financial	23	Review asset materials codes and size ranges to see if there is scope for rationalising the information, both to assist with valuation and for general asset management purposes	Y	Completed
All	AM Practices	26	It is proposed as part of future improvements in the management of Univerus Assets/GIS - to ensure sufficient resources are available (both internal and external) to enable the full use of Univerus Assets/GIS for the operation, management and administration of the utility services	Y	Occurred during the 2014 / 15 Financial Year

AM Improvement Priority

The improvement priority was carried out using the key areas of:

- Legislative requirements
- LOS achievement
- Where the assessed risk was considered high

Table 12-2: AM Improvement Programme

Water Activity	AM Area	No	Improvement Item	Completed	Comment	2025-2034 Improvement Plan	Year(s)
All	Level of Service (LOS)	2	Review and evaluate LOS Options by investigating the effects of varied LOS (financial, environmental etc.) as part of next LTP process	N	Levels of service to be reviewed as part of next LTP process	Monitoring	2024/25-2027/28
All	Demand	4	Review if increased demand (population/demographics effects etc.) can be provided by existing infrastructure or addition assets/upgrades required (a watching brief)	N	As new population figures / demographics / development information becomes available, Council is actively reviewing existing infrastructure / services to ensure LOS are met.	Ongoing	2024/25-2027/28
All	Sustainability	9	Assess staffing levels to ensure sufficient resources to meet demand	N	Ongoing work	Currently there are major changes in water legislation, regulation and potentially standards and solutions. These changes will impact the way 3 water services are managed and operated their supplies and networks. Increase compliance and greater expectations around levels of service will mean reviewing staffing levels on a regular basis until July 2024, to be assured of meeting legislation, regulation requirements.	2024/25-2027/28
All	Risk	10	A Council wide risk policy to be developed	N	Risks have been identified in a methodical manner through the Audit Committee.	Ongoing risk reviews	2024/25-2027/28

Water Activity	AM Area	No	Improvement Item	Completed	Comment	2025-2034 Improvement Plan	Year(s)
All	Risk	13	Develop Business Continuity and Emergency Management Plan (for rapid and structured response to emergency failures and significant hazards) and ensure review control process is carried out	N	Major developments in communication of significant issues have been made.	Ongoing	2024/25-2027/28
W and WW	Lifecycle	14	To better understand the different AC pipe life a programme of assessing the condition of the pipes in all the schemes that contain AC pipe will occur	N	Ongoing work with A number of samples taken and analysed	Ongoing	2024/25-2027/28
All	Lifecycle	17	Continue condition assessment of plant assets to better understand future renewals programme for above ground assets	N	Condition assessments to be carried out	Ongoing	2024/25-2027/28
WW	Lifecycle	18	CCTV of the condition 4 and 5 grade pipes are required to be carried out again to ascertain the decrease in condition and assist in the renewal programme	N	CCTV is utilised as a maintenance activity currently. Information yielded from these surveys, and future surveys will inform the renewal programme.	Ongoing	2024/25-2027/28
All	Lifecycle	19	Develop a Condition Assessment Strategy		To identify which, where and when condition assessments will be performed in consideration of criticality, LoS, asset records, Council engineers' visual assessment of failures and specialists assessments as required.	Ongoing – Staff training has occurred in condition assessment.	2024/25-2027/28

Water Activity	AM Area	No	Improvement Item	Completed	Comment	2025-2034 Improvement Plan	Year(s)
All	Lifecycle	20	Develop a comprehensive renewal programmes based on analysis of condition and capacity once condition assessments have been carried out	N	Condition assessments to be carried out as part of the improvement of data quality	Ongoing – Staff training has occurred in condition assessment.	2024/25-2027/28
All	Lifecycle	21	Review and document operations and maintenance strategies based on criticality and risk	N	Ongoing work	Ongoing	2024/25-2027/28
All	Lifecycle	22	Formalise and update the existing maintenance schedules and procedures quality procedures, contingency and operation and maintenance manuals	N	Utilisation of Univerus Assets to Schedule maintenance alongside formalising by means of manuals is required	Carry over – issues with implementation of Univerus Assets Version 4. Schedule still to be	2024/25-2027/28
All	Lifecycle	31	Align the asset data in Univerus Assets with the criticality assessment ratings	N	Ongoing work	Carry over – Complete with urgency to enable comparison of age predicted model with condition and performance weightings.	2024/25-2027/28
All	Lifecycle	32	Consider and implement recommendations from criticality assessment	N	Ongoing work	Ongoing	2024/25-2027/28
All	Lifecycle	33	Revisit criticality assessment	N	The Havelock North Water Enquiry and 3 Waters review may require a review of the criticality assessment to ensure the focus remains correct.	Maintain a watching brief on recommendations and legislation to ensure criticality assessments remain pertinent.	2024/25-2027/28

Water Activity	AM Area	No	Improvement Item	Completed	Comment	2025-2034 Improvement Plan	Year(s)
All	Lifecycle	34	N/A	N	Systematically assess 3W's data reliability and present in a table	Complete systematic reliability analysis for 3W's assets. Once established utilise predictive modelling with condition and performance weightings to better understand longer term renewal requirements.	2024/25-2027/28
All	Financial	24	Continue to keep good records of construction costs, especially for rural pipelines, to provide better information for future valuation updates.	N	Ongoing work	Ongoing	2024/25-2027/28
All	Financial	25	Updating asset inventory to reflect changes resulting from capital works and continue to do so.	N	Ongoing work	Ongoing	2024/25-2027/28
All	AM Practices	27	Council continues to maintain the Univerus Assets asset database and improve accuracy of data through review and modification of collection, storage, and auditing with prioritising on criticality including the development of Data management standard	N	Ongoing work	Ongoing	2024/25-2027/28

Water Activity	AM Area	No	Improvement Item	Completed	Comment	2025-2034 Improvement Plan	Year(s)
All	AM Practices	28	Complete data capture and update records for underground assets - to the asset management systems and ensure adequate resources are available for data entry and ongoing data maintenance	N	Ongoing work	Ongoing	2024/25-2027/28
All	AM Practices	29	Continue to and complete data capture and update records for all facilities assets - to asset management systems	N	Ongoing work	Ongoing	2024/25-2027/28
All	Improvement Programme	30	Develop long term improvement programme to achieve the Council's appropriate practice policy	N	Ongoing work	Asset Management sophistication and Maturity Index assessments need to be completed prior to next generation 2024	2024/25-2027/28
All	Legislation/Policy	35	Continue to monitor and resond to Government 3 Waters reform programme-Local Water Done Well	N	Ongoing work	Ongoing	2024/25-2027/28

12.2.1 Monitoring Approach

Council has developed this AMP based on an integrated asset management planning approach that includes:

- The configuration of networks to meet customer requirements, now and in the future.
- Current asset information.
- Well-developed strategies to achieve customer requirements.

The further development of Council's asset management approach including supporting processes, systems and data will be needed to meet the appropriate level of asset management practice as set out in Council's Asset Management Policy. This Policy will be reviewed periodically to take into account legislative and other national practice changes.

12.2.2 Timetable for Audit and Review

The programme for future AM reviews of this plan is presented in the table below:

Table 12-3: Timetable for Audit and Review

Activity	Target Date
Improvement Plan reviewed annually by all staff directly involved and focusing on key business issues	30 June each year
Report on Improvement Plan	30 June each year
AMP updates involving members of staff involved in preparing specific aspects of the AMP	30 June each year
Adoption of AMP by Council	30 June every 3 years
Audit NZ external audit	As required by Audit NZ

Appendix A: Individual System Description & Overview

Waimate Urban Wastewater Scheme

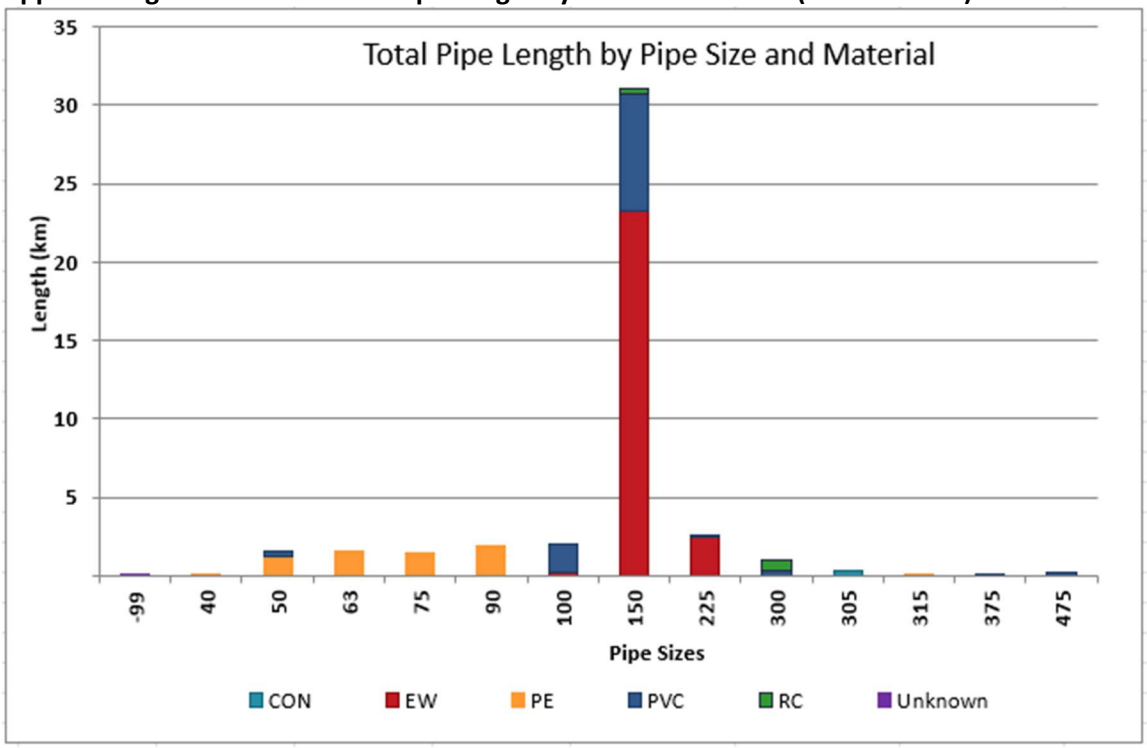
The Waimate wastewater system was designed and constructed during the period 1915 through to 1964 and originally based on a population of approximately 4,000 people. The existing wastewater treatment plant has sufficient capacity to serve a connected population of 5,640 people.

During 2003 significant upgrades were undertaken at the treatment plant in accordance with increased resource consent conditions. These upgrades provided for future population growth, improved effluent quality and replacement of the discharge to water system with a disposal to land system.

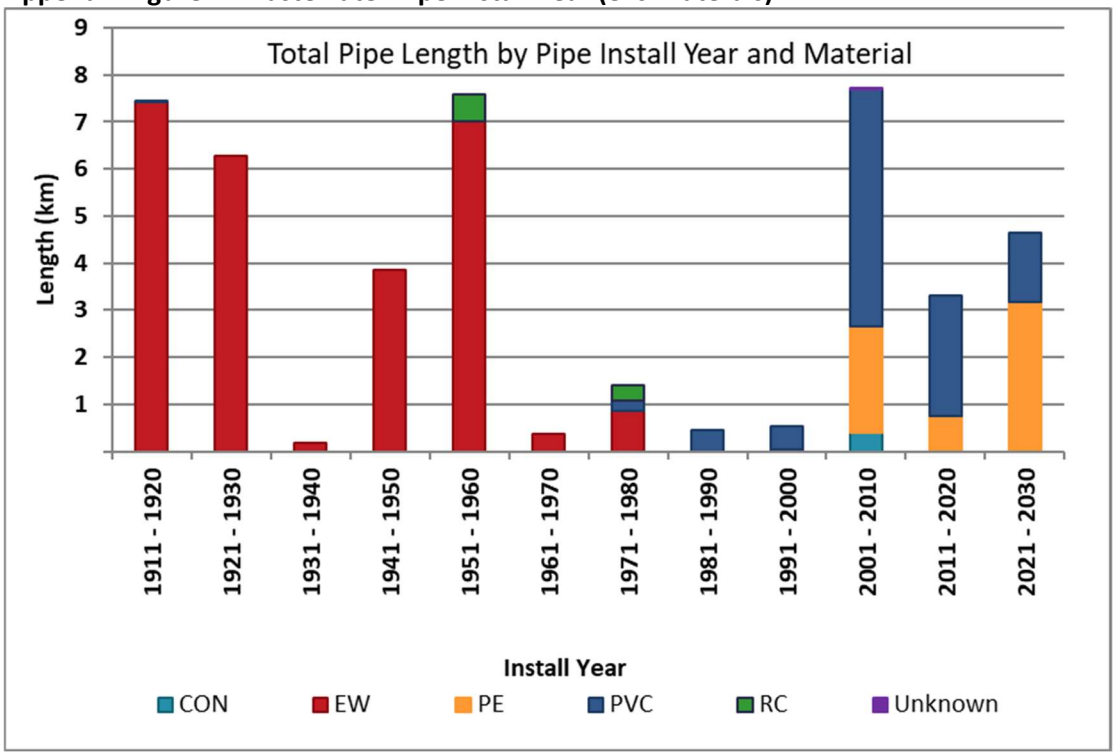
System Information

System Information			
Connections	1,832	**Treatment Plant**	
- Domestic	-	Oxidation ponds	2
- Trade waste	-	Rock filter	1
- Business	-	Aerators	4
- Industrial	-	Maturation ponds	3
		Design ADWF	1,200m^3/day
		Current flows (median)	761m^3/day
Pump Stations	2	Milford PS	
		WWTP PS	
Resource Consent	**Expiry Date**	**To**	
CRC000169.1	10/10/2036	Discharge effluent to land	4,300m^3/day
CRC000170	10/10/2036	Discharge effluent to Waimate Creek	13,300m^3/day in emergencies
Replacement Cost		**Reticulation (Mains) Length**	**Manholes**
Total Scheme	$42.3m	43.7km	322

Appendix Figure 1: Wastewater Pipe Length by Size and Material (excl. Laterals)

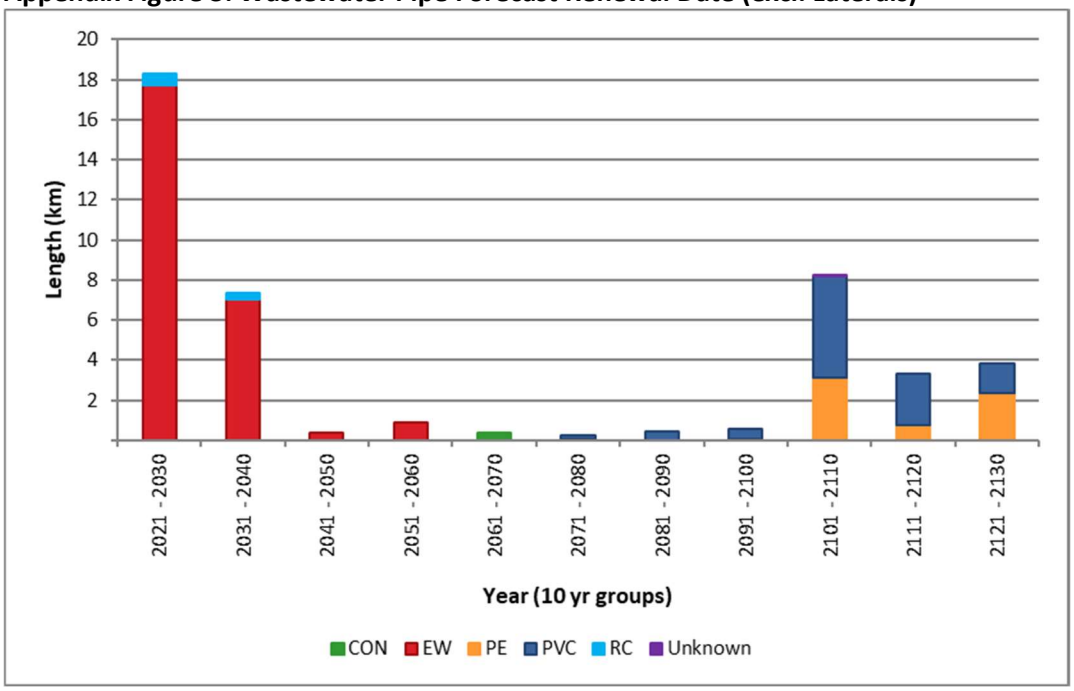


Appendix Figure 2: Wastewater Pipe Install Year (excl. Laterals)

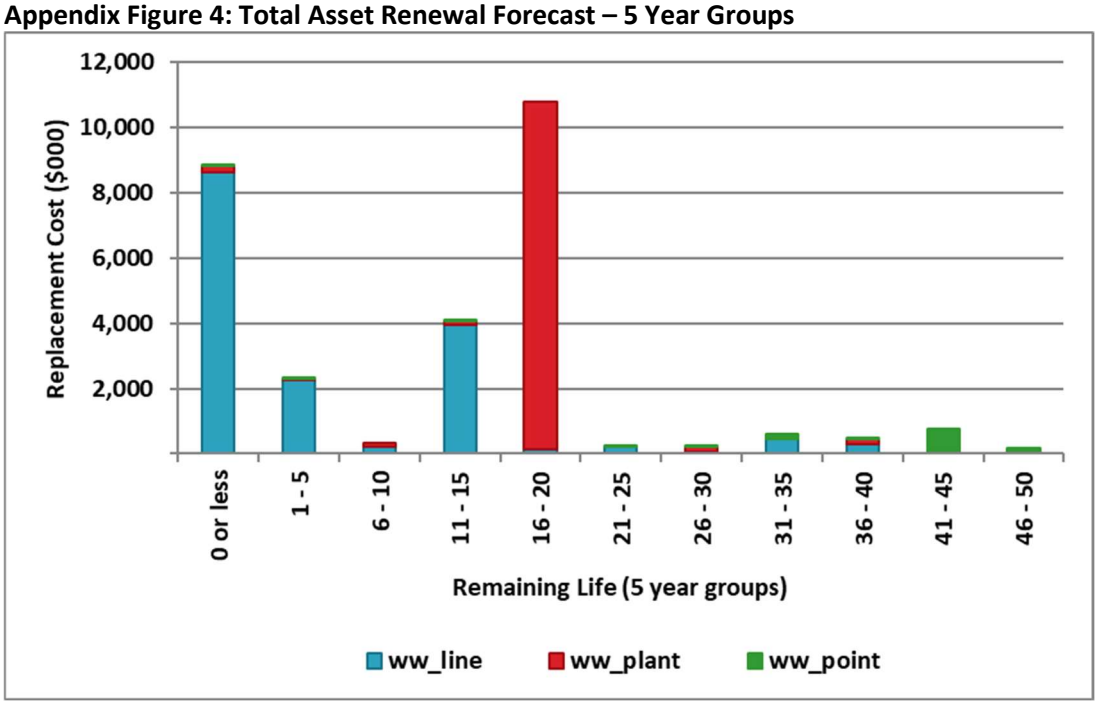


31% of the reticulation was installed during the period 1911 to 1930, and a further 26% installed during 1941 to 1960.

Appendix Figure 3: Wastewater Pipe Forecast Renewal Date (excl. Laterals)



Appendix Figure 4: Total Asset Renewal Forecast – 5 Year Groups



Appendix Figure 5: Waimate Urban Wastewater System

Appendix B: Significant Forecasting Assumptions

The following table details the significant forecasting assumptions for the 2025-2034 period.

Appendix Table 1: Significant Forecasting Assumptions 2025-2034

ASSUMPTION	SOURCE	RISK	LEVEL OF UNCERTAINTY	IMPACT OF VARIATION	MANAGEMENT OF RISK	ACTIVITY
POPULATION CHANGE						
The Waimate District population will observe a gradual increase by 4.7% between 2023-2033. It is assumed that this increase will generate a relative impact on population-related metrics, such as the quantity of rateable properties.	Rationale Ltd.	Population growth either significantly exceeds that of the projected percentage or is significantly below the projected percentage.	Low	If population accelerates significantly above the given assumption, existing infrastructure may not be suitable to cope with the extra demand.	Council will monitor population measures provided for the district, and will respond to significant variations to assumptions, where possible.	All activity groups
DEMOGRAPHIC CHANGES						
Between 2020-2030, the district's population retains its comparatively high mean age, while observing a gradual and mild reduction in the mean age level, with the age group of 45-49 years likely to be the most frequent by 2030.	Rationale Ltd.	The demographic make-up of the Waimate District changes significantly.	Low	If the district's demographic changes significantly from the predicted range, the existing infrastructure and services may not meet the needs of the relevant demographic classes.	Council will monitor demographic measures provided for the district and respond to significant variations to assumptions, where possible.	All activity groups
OIL PRICE						
Oil prices are increasingly volatile and more likely to be influenced by global political and economic events. Prices are unlikely to reliably stabilise for any extended length of time.	WDC	There is a risk that fuel demand will be different to that assumed, and that significant changes in market price occur with greater frequency and/or greater severity.	Moderate	Increased fuel costs would have a particular impact on the costs of road maintenance, renewal, and improvement. This may affect Council's ability to carry out planned work without additional funding. It may also increase demand for alternative methods of transport.	Council will monitor the impact of fuel price on spending and aim to optimise spending.	All activity groups

ASSUMPTION	SOURCE	RISK	LEVEL OF UNCERTAINTY	IMPACT OF VARIATION	MANAGEMENT OF RISK	ACTIVITY
CLIMATE CHANGE						
Changes in our climate are projected to continue into the future. Projections indicate that Canterbury should expect warmer temperatures, an increasing number of hot days, and wider temperature ranges. The frequency of extreme weather events is projected to increase along with associated costs to economic, community wellbeing and environmental sustainability as a result.	WDC Ministry for the Environment National Institute of Water and Atmospheric Research Environment Canterbury	Environmental changes may accelerate at a rate higher than predicted, and/or the socio-economic consequences of adaptation measures may exceed the anticipated range.	Moderate	If environmental changes were to accelerate, Council's infrastructure assets would be significantly impacted. This would result in further modifications or more regular repairs to relevant assets.	Council is currently undertaking the development of a climate resilience strategy aimed at consistent monitoring, active mitigation, and pre-emptive adaptation efforts. This strategy is being built on the foundation of extensive engagement, education, and feedback to address the unique challenges faced by Waimate. This engagement includes seven community workshops based on key economic, social, environmental, and cultural activities relevant to Waimate's future.	All activity groups
EMISSIONS TRADING SCHEME (ETS)						
The Emissions Trading Scheme (ETS) and the price of New Zealand Units (NZU) will remain relatively stable in response to changes in legislation that affect price certainty and unit limits.	Ministry for the Environment	There is a risk of legislative change, which could result in costs being higher or lower than assumed.	Low	Should the impact of the scheme exceed significantly from the given assumption, budget for additional cost may need to be considered.	Council will monitor the development of relevant legislation and review the impact of any significant changes in the Annual Plan.	Investments and Finance

ASSUMPTION	SOURCE	RISK	LEVEL OF UNCERTAINTY	IMPACT OF VARIATION	MANAGEMENT OF RISK	ACTIVITY
NEW ZEALAND TRANSPORT AGENCY (NZTA) WAKA KOTAHI REVENUE						
Roading expenditure comprises a significant portion of Waimate District Council's total expenditure, therefore using a significant portion of Council's overall rate take. The majority of Council's expenditure on the district's roads is eligible to attract an assistance rate from the Waka Kotahi New Zealand Transport Agency (NZTA). The funding assistance rate received by Council for qualifying roading expenditure for maintenance and improvement projects is set at 68% for 2024-27.* It is further assumed that this funding assistance rate will remain unchanged over the life of the Long Term Plan as there is no indication that NZTA will modify the criteria used to establish these rates. Council also assumes that funding priorities indicated in Government Policy Statements on Land Transport will remain consistent through future bids during the life of the plan.	Waka Kotahi NZTA	The subsidy rate may be subject to change, along with any variation in criteria for inclusion in subsidized works programmes.	Moderate	Changes to the funding priorities of NZTA remain outside Council control. Minor variations would impact significantly on forecasted financials.	Any impact of changes to the NZTA funding assistance rate will be applied to the relevant Annual Plan.	Roading and Footpaths
*Normal funding assistance rates | Waka Kotahi NZ Transport Agency (nzta.govt.nz)						
EMERGENCY EVENT						
Disruptive or destructive emergency events such as earthquakes, extreme weather events, and pandemics may occur to damage, disable, or destroy community infrastructure (for example, district roads, bridges, water supplies, among others), or community activities. It is further assumed that the cost of correcting such damage is met either by Council or its insurance providers, or by possible special government grants.	WDC NEMA National Emergency Management Advisor Ministry for Environment	Inability to recover or continue business following a major event. Inability to provide intended level of service to affected areas.	Moderate	If a major emergency event did occur, Council have some insurance for its infrastructure, and assistance would be offered from Central Government. To pay for additional emergency work not covered by the above, Council would increase internal/external borrowings.	Council undertakes business continuity plans for its own operation and coordinates Civil Defence planning for the district. In doing so, Council attempts to prepare itself and the district for such events.	All activity groups

ASSUMPTION	SOURCE	RISK	LEVEL OF UNCERTAINTY	IMPACT OF VARIATION	MANAGEMENT OF RISK	ACTIVITY
LEGISLATION CHANGES						
Council's operations are guided by central government legislation and policy directives that set the framework for decision making and service delivery. Council operates under the assumption that while minor legislative changes and evolving policy guidance are expected, major changes that could significantly alter Council operations are infrequent. When such changes do occur, they are typically communicated well in advance, allowing time for necessary adjustments.	Central Government Taituarā	That major legislative changes are introduced on short notice or due to an unforeseen event that would require Council to alter its existing business operations.	Low	Council would need to implement changes at a pace faster than anticipated. Accelerated timeframes would likely result in increased costs of implementation.	Council maintains consistent communication with central government, regulatory bodies, and local government support organisations to ensure that proposed changes that may impact Council operations are identified and anticipated at the earliest stage.	All activity groups
NEW ZEALAND WATER SERVICE DELIVERY						
Delivery of 3 waters assets and infrastructure (water, sewer, and stormwater) remain under Council ownership for the life of the plan.	WDC Central Government	Legislation changes under urgency in Parliament that must be implemented immediately.	High*	Changes are required to be implemented more quickly than anticipated.	Council closely monitors any and all developments and responds accordingly.	Rural Water Supply, Urban Water Supply, Sewer, Stormwater
* While the uncertainty of this assumption is high, the potential impacts of this uncertainty on financial estimates cannot yet be determined until further information becomes available through the production of a water service delivery plan. The development of a Water Services Delivery Plan and its submission to DIA may provide additional clarity; however, aspects of this uncertainty regarding implementation are likely to continue into the development of the LTP 2027-2037.						
RESOURCE CONSENTS						
The conditions of resource consents held by Council may be changed, and that Council will obtain the necessary resource consents for planned projects.	WDC	There is a risk that resource consent conditions are altered significantly.	Moderate	Advanced warning of likely changes is expected. The financial effect of any change to resource consent requirements would depend on the change.	Council will monitor the development of relevant standards and review the impact of any significant changes.	Roading and Footpaths, Sewerage, Stormwater, Waste Management, Urban Water Supply, Rural Water Supply

ASSUMPTION	SOURCE	RISK	LEVEL OF UNCERTAINTY	IMPACT OF VARIATION	MANAGEMENT OF RISK	ACTIVITY
WATER SCHEMES VIABILITY						
Elevated pricing for rural water schemes, and particularly the stock water element, may result in the relinquishment of water allocations. Sourcing of stock water from existing irrigation schemes may mean that pricing within individual supplies increases as a result.	WDC	Increased cost associated with water allocations under existing and proposed service delivery models	Moderate	No new irrigation schemes are currently planned within the district and the existing command areas only cover a small proportion of the overall footprint of the Waimate District Council Rural Water Supplies.	Council will monitor sold volumes (allocations) and review charging structures if necessary to mitigate the overall risk for the district. Council is actively engaging with central government to mitigate the impact of this risk.	Rural Water Supply
USEFUL LIVES OF SIGNIFICANT ASSETS AND DEPRECIATION						
The useful lives of significant assets are based on the useful lives as identified in the Statement of Accounting Policies. It is assumed that these useful lives are retained for the nine year period covered by this Long Term Plan. In practice useful lives are re-assessed at a minimum of every three years in line with asset revaluations.	New Zealand Asset Management Support WDC asset revaluations	There is a risk that assets will wear out more quickly than forecasted and require replacement earlier than planned	Moderate	If assets require replacement earlier than first considered, capital expenditure projects may need to be brought forward.	Regular review of the useful life of each asset category reduces the risk of significant inaccuracies.	Roading and Footpaths, Rural Water Supply, Urban Water Supply
REVALUATION OF NON-CURRENT ASSETS						
Council conducts asset revaluations every three years. The Long Term Plan assumes the following percentage increases to book value, for each of the following class of assets: Land: +10% Buildings: +15% Utilities (Water Schemes, wastewater, stormwater, Sanitation): +8% Roading: +6%	WDC	Revaluations will somewhat differ from those projected carrying values of the assets and depreciation expense.	Moderate	Variation in values is expected to be low unless the valuation methodology changes.	Regular revaluation of non-current assets reduces the risk of significant valuation shifts.	Roading and Footpaths, Rural Water Supply, Urban Water Supply, Sewerage, Property

ASSUMPTION	SOURCE	RISK	LEVEL OF UNCERTAINTY	IMPACT OF VARIATION	MANAGEMENT OF RISK	ACTIVITY
FUNDS FOR FUTURE REPLACEMENT OF SIGNIFICANT ASSETS						
In general, councils have some flexibility in the policies they may set with regard to sources of funds for the future replacement of significant assets. Council's flexibility centers on whether we should collect depreciation monies from ratepayers during the lifetime of the asset to build up a reserve that can fund the replacement of the asset when it comes to the end of its useful life, or when the asset comes to the end of its useful life which would compel Council to rely on borrowed money to replace it. Council considers that the most sensible approach is to collect depreciation during the life of an asset, therefore having reserve funds on hand at the time replacement is needed. See Council's 'Revenue and Financing Policy' and the 'Financial Strategy'.	WDC	Sufficient funds may not be available to pay for planned asset replacement.	Low	Funds may need to be borrowed or rated for, which may be a burden to either the Council or ratepayers in the future.	Council develops Asset Management Plans that determine the timing of asset replacements. Council uses these to forecast and prepare for future funding requirements.	Property, Roading and Footpaths, Rural Water Supply, Urban Water Supply, Sewerage
RETURN ON INVESTMENT- ALPINE ENERGY						
Alpine Energy's FY2025-2027 Statement of Corporate Intent includes a Dividend Policy whereby the Directors are not indicating any dividends to shareholders for the 3 years of the SCI. It is therefore assumed that the company will not provide a return to shareholders for the duration of the 2025-34 Long-Term Plan.	WDC Alpine Energy	There is a risk that returns on investments will be higher than forecasted.	Low	Should dividends be received, Council finances will be more favourable than anticipated to the extent of that dividend. This unanticipated income would contribute to the activity reserve balance and may result in positive cash-flow enabling consideration of higher levels of service	No management of this risk is required as any variation will be favourable to Council.	Investments and Finance

ASSUMPTION	SOURCE	RISK	LEVEL OF UNCERTAINTY	IMPACT OF VARIATION	MANAGEMENT OF RISK	ACTIVITY
FORESTRY ASSETS VALUES						
It is assumed that the forestry asset values will increase annually over a rotation cycle of 30 years.	WDC Laurie Forestry Limited	The value of forestry assets may sharply increase or decrease.	Low	A change in the value of the forestry asset will change Council's financial performance in the year of change occurring. However, it will not have a direct impact on the level of rates or expenditure.	Annual revaluation of forestry reduces the risk of significant valuation shifts.	Investments and Finance
CAPITAL DELIVERY						
Council plan to deliver 100% of all capital projects over the life of the Long-Term Plan. The financial model was developed based on this assumption.	WDC	There is a risk that improved levels of service in the Water Supply area will be delayed. There is a risk that the capital projects will not be completed in any given year and carried over to subsequent years.	Moderate	Variation to planned improved levels of service for the Water Supply area, where any delay in projects relating to Drinking Water Standards New Zealand compliance will result in maintaining current levels of service. If projects are not completed on time, or are deferred, there may be reduced operational costs and depreciation expense impacts. There could also be an increase in required budget to complete the project if delayed.	Council is aware of material sourcing and has addressed this issue by sourcing materials early and maintaining stock levels. Procurement is now completed through the Government Electronic Tenders System (GETS), notifying the wider contracting / consulting market of upcoming projects. In anticipation of a large capital programme in Year 1 (2026), a portion of these projects are likely to be tendered by 30 June 2025, or very early in the 2025/26 financial year. Due to the nature of the rates smoothing profile for the Water Supply activity, any delay in project completion will have no effect on the funding and rates required as planned.	Water Supply & all other activities

ASSUMPTION	SOURCE	RISK	LEVEL OF UNCERTAINTY	IMPACT OF VARIATION	MANAGEMENT OF RISK	ACTIVITY
RETURN ON INVESTMENTS - OTHER						
It is assumed that Council's cash investments will generate returns from 2.38% - 3.77% based on the current economic climate. It is further assumed that the returns from Council's forestry investments for the duration of the Long Term Plan will be reflective of market conditions present at the time of preparation of this document.	Bancorp Laurie Forestry Limited WDC	Returns on investments will be higher or lower than forecasted.	Moderate	Higher interest rates received on cash investments or increased investment income could result in positive cash-flow enabling consideration of higher levels of service or reduced expenditure. Council does not heavily rely on interest revenue for running its operations, therefore the impact of lower investment returns on delivery of Council services would be minimal. Similarly, Council does not use its forestry investment returns to fund other Council operations or activities.	Council will manage its external investments to optimise returns (as described in the Council's Investment Policy). Council will monitor the forestry market's conditions and review the impact of any significant change in forecasted returns through each subsequent Annual Plan process.	Investments and Finance

<table>
<tr><th>ASSUMPTION</th><th>SOURCE</th><th>RISK</th><th>LEVEL OF UNCERTAINTY</th><th>IMPACT OF VARIATION</th><th>MANAGEMENT OF RISK</th><th>ACTIVITY</th></tr>
<tr><td colspan="7">INFLATION</td></tr>
<tr><td>Council, along with many other New Zealand Councils, calculates and applies inflation factors to its Long-Term Plan budget forecast, using predictions of future inflation levels from New Zealand [economic research company] Business and Economic Research Ltd (BERL).
<table>
<tr><th>Year</th><th>Roading
%</th><th>3 Waters
%</th><th>Other Operational Expenditure
%</th><th>Capital Expenditure
%</th></tr>
<tr><td>June 2026</td><td>3.0</td><td>2.5</td><td>3.2</td><td>3.4</td></tr>
<tr><td>June 2027</td><td>3.1</td><td>2.8</td><td>3.2</td><td>3.3</td></tr>
<tr><td>June 2028</td><td>3.0</td><td>2.5</td><td>3.0</td><td>3.2</td></tr>
<tr><td>June 2029</td><td>2.7</td><td>2.1</td><td>2.7</td><td>2.9</td></tr>
<tr><td>June 2030</td><td>2.6</td><td>2.0</td><td>2.6</td><td>2.8</td></tr>
<tr><td>June 2031</td><td>2.5</td><td>2.0</td><td>2.4</td><td>2.5</td></tr>
<tr><td>June 2032</td><td>2.4</td><td>2.0</td><td>2.3</td><td>2.4</td></tr>
<tr><td>June 2033</td><td>2.4</td><td>2.0</td><td>2.2</td><td>2.2</td></tr>
<tr><td>June 2034</td><td>2.2</td><td>2.0</td><td>2.1</td><td>2.1</td></tr>
</table></td><td>Business and Economic Research Ltd.</td><td>Inflation will be higher or lower than anticipated.</td><td>Moderate</td><td>A difference between the inflation rates experienced and those assumed will change the cost base of Council, and therefore impact funding requirements.</td><td>Council has endorsed the rates produced by BERL as the most appropriate basis for accounting for the impact of inflation and preparing the Long Term Plan.

In the event of significant changes to the underlying costs supporting work in the activity areas, mitigation planning will feature in the Annual Plan. Activity areas, mitigation planning will feature in the Annual Plan.</td><td>All activity groups</td></tr>
<tr><td colspan="7">BORROWING COSTS</td></tr>
<tr><td>Interest costs are estimated to range between 3.09% - 5.24% This refers to the expected external cost of debt facilities where costs are not known and are required to be projected. Loan repayments are forecast to be repaid on the last day of the financial year, therefore interest is incurred for the full year.</td><td>WDC

Bancorp

Local Government Funding Agency</td><td>Interest rates will differ significantly from those estimated.</td><td>Moderate</td><td>If borrowing costs are greater than those assumed, Council may need to increase its rates or reduce its expenditure. Conversely, lower costs may mean rates required to fund Council operations are lower than they would otherwise have been.</td><td>Council will monitor its applicable interest rates and adjust through the Annual Plan process to reflect a level best aligned to its actual anticipated external borrowing rate, utilizing the advice of its Treasury Advisors.</td><td>Investment and Finance</td></tr>
<tr><td colspan="7">UNIDENTIFIED LIABILITIES</td></tr>
<tr><td>It is assumed that Council does not have any unidentified liabilities.</td><td>WDC</td><td>There is a risk of an unexpected liability occurring. For example, a claim against Council.</td><td>Low</td><td>If an unidentified liability arises it may increase Council’s expenditure. This risk is mitigated by the Council’s Risk Management and Insurance Policies.</td><td>Regular review of liabilities reduces against the risk of items being unidentified.</td><td>All activity groups</td></tr>
</table>

Appendix C: Risk Summary Table

The following table details the Risk Summary Table that was first established in 2011, which identifies risk management strategies to minimise risks associated with the provision of the Water, Wastewater, Stormwater and Solid Wastes services.

Appendix Table 2: Risk Summary Table – all Services

No.	Weakness or Vulnerability	Risk	Gross Risk	Mitigation Strategies	Residual Risk	Improvement Required
1		Higher Level Policies, Procedures and Controls				
1.1	Subdivision Code, District Plan not up to date	Inappropriate development and/or poor design of assets.	Moderate	Subdivision and Development Code up to date and activity to have input to District Plan.	Low	
1.2	Operations Manuals not up-to-date	Failure to supply water or cause adverse health effects due to poor operation of assets.	Moderate	Operating Manuals substantially complete and ensure staff comply with requirements.	Low	The existing operation and maintenance manuals are to be updated where required. Particularly when treatment processes are updated. New compliance framework is driving improvements in this area.
1.3	Not having clear direction on public consultation	Council in breach of LGA2002 with respect to Public Consultation.	Low	Need ability to get advice from specialist council staff on consultation plan for each project.	Low	
1.4	Districts Bylaws not up to date	Inability to properly control inappropriate behaviour by others.	Low	Bylaws up to date	Low	Bylaws adopted 4 December 2018
1.5	The Council does not have an acceptable position on the impact of climate change on service delivery	Financial loss due to liability for property damage, loss of asset. Not able to provide service.	Significant	Council develops a Climate Resilience Strategy and associated Action Plans	Low	Climate Resilience Strategy to be completed in 2025.
1.6	Inaccurate growth information or growth not considered	Inappropriate decisions made about development.	Moderate	Growth developed by Council. Hydraulic modelling maintained to identify risks.	Low	
2		Financial				
2.1	Lack of long-term financial planning	Higher than necessary financial costs	Significant	Existing network models are up to date and available	Low	
2.2	Service levels vs funding and works not clear	Service levels not being met due to lack of funding as decision makers not aware of implications for Service Levels.	Significant	Set performance targets for next 10 years and monitor and report on performance. Impacts of delayed capital works reported to Council.	Low	

No.	Weakness or Vulnerability	Risk	Gross Risk	Mitigation Strategies	Residual Risk	Improvement Required
2.3	Assumptions for financial forecasting not always understood	Additional costs incurred because assumption/uncertainties not accounted for i.e.: asset valuations, depreciation	Significant	Finance/managers need to be aware of assumptions and uncertainties behind financial forecasting information.	Moderate	
2.4	Unforeseen Additional Costs	Reputation of Council detrimentally affected	Significant	Ensuring AMPs and asset information up to date	Low	
2.5	Valuations not accurate for asset facilities	Fixed Asset Register not reconciling with existing assets causing incorrect valuations and affecting true financial requirements	Low	Asset register reviewed and updated	Low	
2.6	Development Contributions policy not implemented and/or do not have robust system for calculating contributions from developers	Adequate contributions for development not obtained costing the Council more than it should. Council faces legal action if contributions not in line with Section 199 of the LGA 2002.	Moderate	Contributions Policy implemented.	Low	Review of contributions to be completed by Council.
2.7	All potential sources of Government and other external funding (Third Party funding) not appreciated or obtained	Higher cost to Council than should have been	Moderate	Identify potential availability of third-party funding and apply / take advantage of it.	Low	
2.8	Insurance cover needs review	Insurance not adequate and unnecessary costs incurred	High	Insurance cover reviewed to ensure adequate cover on annual basis.	Low	Some older assets are unlikely to covered by our material damage policy. A stocktake of assets is required and a risk assessment made.
3		Organisational Management				
3.1	Lack of Strategic Thinking/ Long-Term planning	Inefficient use of time and money.	Moderate	Implementation of AMP and undertake condition assessments.	Low	
3.2	Failure to act on identified risk - e.g. Water Safety Plans	Possible legal action against Council if event occurs which Council knew about. Public Health adverse affected.	Moderate	WSP's have been carried out and recommendations being implemented	Low	Review feedback from Taumata Arowai and implement recommendations.

Appendix C:

Risk Summary Table

No.	Weakness or Vulnerability	Risk	Gross Risk	Mitigation Strategies	Residual Risk	Improvement Required
3.3	Lifelines Plan not up to date or implemented	Large scale asset failure due to a naturally occurring event resulting in prolonged and substantial loss of service to District	Significant	Ensure Lifelines Plan up-to-date and recommendations implemented that includes having a high level of risk reduction, readiness, response and recovery during and following Civil Defence Emergency.	Significant	Update lifelines plan, engage with regional lifelines group
3.4	Legislative requirements not understood	Council faces legal action because legal requirements are not met	Moderate	Annual reviews	Low	
4		Human Resources				
4.2	Accountabilities not clear	Staff not accountable for actions allowing apparent problems to continue	Moderate	Up-to-date job descriptions. Staff performance monitored and dealt with if not performing.	Low	Implement a performance framwork across the organisation.
4.3	Information in people's heads or inappropriate recording of information	Organisational knowledge lost with staff leaving	Significant	Ensure staff document and appropriately file everything that is relevant. Ensure good management succession when existing staff leave.	Moderate	Formalise and update maintenance schedules and procedures, contingency and operation and maintenance manuals. Ensure documentation is added to the corporate document management system.
4.4	Insufficient staff or not appropriately skilled	Programmed work not completed due to insufficient staffing or skill levels, having negative impact on service levels and creating public health risk.	High	Skill levels are appropriate	Low	Formal training programme required that includes the use of activity management plans
4.5	Inadequate attention to staff succession	Organisational knowledge lost with staff leaving	High	Implement good staff/management succession plan and document procedures	Moderate	Implement good staff/management succession plan and document procedures
5		Health and Safety				
5.1	Do not have a good health and safety culture	High accident rate	Moderate	Council health and safety procedures implemented, appropriate training undertaken and manuals up-to-date.	Low	

No.	Weakness or Vulnerability	Risk	Gross Risk	Mitigation Strategies	Residual Risk	Improvement Required
5.2	Health and Safety Risks not identified or managed appropriately	Council faces legal claims for not meeting health and safety obligations	Moderate	Health and Safety manuals up to date and be effectively managed.	Low	
6		Asset Management				
6.1	Network modelling, condition assessments not undertaken.	Capital Works programme not optimised. Renewal works not completed due to lack of knowledge causing failure of assets. Future forecasting not accurate.	Significant	Undertake condition assessments of network and develop robust renewals programme based on sound knowledge.	Moderate	Development and maintenance of network model. Targeted investigation of critical assets with a remaining useful life <1 year.
6.2	As-built information can be slow or incorrect coming from maintenance staff, Contractors, Consultants	Council faces legal action because of incorrect information provided (particularly with regard to LIMS)	Significant	Ensure As-builts up to-date and on record promptly. Ensure GIS capability	Low	Continue to specify as-built requirements for all future works.
6.3	Criticality assessment not undertaken	Failure of critical assets resulting environmental damage or not meeting service levels	Significant	Undertake criticality assessment of assets and implement strategy for managing critical assets	Low	Incorporate criticality assessment of reticulated assets, undertake criticality assessment of plant assets and implement strategy for managing critical assets
6.4	Asset Risk Register and Asset Risk Plan not implemented	Council faces legal action because of asset failure or unnecessary costs incurred due to asset failure	Moderate	Maintain Asset Risk Register and Asset Risk Plan	Moderate	Improve risk plan to reduce residual risk
6.5	Asset management systems not up-to-date or completed	Failure to of utility systems because maintenance work not completed or management system not operational.	Significant	Asset Management System in place and updated as required	Moderate	Review AM system practices and processes. Increase resourcing to achieve this.
6.6	Performance monitoring of service levels not completed	Target Service levels not met resulting in customer dissatisfaction.	Moderate	Monitoring programme established and reviewed regularly.	Low	
6.7	Poor standards of constructed assets due to design and/or construction of infrastructure	Substandard physical works resulting in poor asset performance	Moderate	NZS4404 is updated regularly and Contractors & Consultants are familiar with this. Contractors/Consultants take responsibility for work done.	Low	Implement Engineering Design Standards when finalised.

Appendix C:

Risk Summary Table

No.	Weakness or Vulnerability	Risk	Gross Risk	Mitigation Strategies	Residual Risk	Improvement Required
6.8	Capital works delayed due to unforeseen circumstances	Programmed Capital Works not completed. Target Service Levels not met	Significant	Staff held accountable for delays and Staff trained in project management.	Moderate	Develop projects process that provides for project plans to be prepared for every approved renewal and capital development item.
6.9	Deferred renewal and maintenance not recorded or not done	Deferred maintenance not recorded causing unexpected, additional costs from asset failure	High	Record all deferred maintenance and renewals	Significant	Ensure all deferred renewals work recorded and management aware of impact on service levels if not funded.
6.10	Not all easements recorded or obtained	Council faces legal action or cannot carry out its activities because it does not have legal right to cross a property	Significant	Keep up-to-date record of easements. Establish clear policy for processes to be followed when easements are required.	Significant	Easement information needs to be improved with all identified easements provided with details of interested part. Legal situation to be clarified.
6.11	Insufficient documentation of escalating process decision making	Response to emergency situations reduced, higher expenditure	Significant	Employment of staff with the appropriate qualifications and skills	Low	
7		Resource Consents and Designations				
7.1	Review of Designations required	Council faces legal action because water assets have not been designated in the District plan	Moderate	Designations reviewed every three years to ensure these are appropriate.	Low	
7.2	Resource Consents	Council faces legal action because resource consents not applied for, or conditions not met. Public dissatisfaction with environmental damage being caused.	Moderate	All consents that are required are obtained and consents monitored and reported on as required.	Low	
8		Asset Risks - Water				
8.1	Some treatment plants not capable of meeting the Drinking Water Quality	Dissatisfaction of customers from not meeting with the DWQAR and / or the drinking water standards.	Significant	Upgrade of water supplies to meet DWQAR requirements and the drinking water standards underway with monitoring programme in place.	Low	Continue to refine recording systems to ensure compliance with the DWQAR.

No.	Weakness or Vulnerability	Risk	Gross Risk	Mitigation Strategies	Residual Risk	Improvement Required
	Assurance Rules 2022 (DWQAR)					
8.2	Reticulation - Inaccurate and/or unknown location of main	Asset broken - inability to supply service	Low	Maintain good as-builts that are current via GIS	Low	Update locations as and when data becomes available
8.3	Insufficient reticulation capacity	Low pressure	Low	Maintain reticulation model with updates as required	Low	
8.4	Poor reticulation condition - reduced flows	LoS not achieved	Low	Maintain reticulation model with updates as required. Good renewals programme that understands the issues with the network	Low	
8.5	Insufficient reservoir storage	Firefighting Code of practice not achieved	Moderate	Maintain reticulation model with updates as required	Low	
8.6	Insufficient Operational Pump Station Capacity	Low pressure/insufficient flow	Low	Good understanding of schemes capacities and ongoing monitoring of usage	Low	
8.7	SCADA Failure	No alarm available, no water	Significant	Backup systems and procedures	Low	Review current systems and ensure they are adequate for future requirements.
8.8	Treatment Plant - Equipment/component Failure	Failure to meet consent conditions, reduced water pressure	Moderate	Early warning via SCADA & site monitoring by staff	Moderate	
8.9	Vandalism at facility	Reduced LoS	Significant	Warning via SCADA of any issue at facilities	Moderate	
8.10	Rising Mains - Insufficient Capacity	Insufficient water during peak usage periods	Significant	Good understanding of schemes capacities and ongoing monitoring of usage	Moderate	
8.11	Operator Error	Failure to achieve consent conditions or facility failure	Significant	Employment of staff with the appropriate qualifications, skills and training	Moderate	Upskill staff when new training becomes available.
8.12	Power failure for extended periods	No water - reservoirs run dry	Significant	Standby generators made available in an event of extended power failure	Moderate	Implement site based power generation.
8.13	Fire at facility	Control equipment failure with resulting lack of ability to supply demand	Moderate	Management and operational staff have the skills to manage natural events	Moderate	Ensure relevant protection is provided when capital upgrades occur.

Appendix C:

Risk Summary Table

No.	Weakness or Vulnerability	Risk	Gross Risk	Mitigation Strategies	Residual Risk	Improvement Required
8.14	Movement failure caused by, Earthquake, landslide or settlement.	Inability to supply all or majority of demand	Moderate	Management and operational staff have the skills to manage natural events	Moderate	
8.15	Snow and wind	Power failure - see power failure	Significant	Standby generators made available in an event of extended power failure	Moderate	Implement site based power generation.
8.16	Flooding	Intakes flooded - poor water quality or inability to pump water	Significant	Management and operational staff have the skills to manage natural events	Moderate	Flood risk to be assessed when capital upgrades occur.
9		Asset Risks Wastewater				
9.1	Blocked mains occurring on frequent basis	Flooding of roads, health risk	Moderate	Cleaning (via water blasting) those areas most effected on an annual basis	Low	
9.2	Manholes - Insufficient maintenance	Failure leading to blockages - Flooding of roads, health risk	Low	Inspections of key points within network during high rainfall periods	Low	Document and schedule manhole inspections in Univerus Assets
9.3	Reticulation - Inaccurate and/or unknown location of main	Asset broken - inability to supply service	Low	Maintain good as-builts that are current via GIS	Low	
9.4	Insufficient reticulation capacity	Surcharging in wet weather - health issues	Low	Maintain reticulation model with updates as required	Moderate	Address known surcharging.
9.5	Poor reticulation condition (blockages)	Failure leading to blockages - Flooding of roads, health risk	Low	Maintain reticulation model with updates as required. Good renewals programme that understands the issues with the network	Low	Log all blockages in Univerus Assets
9.6	Insufficient grades or flow to achieve self-cleansing velocities	Build-up of fats - blockages - Flooding of roads, health risk, increased costs for cleaning	Low	Maintain reticulation model with updates as required. Good renewals programme that understands the issues with the network. Known areas within network that have issues are inspected on regular basis	Low	
9.7	Chemical damage of pipes	Decreased asset life - premature replacement	Moderate	Inspections of network CCTV, cleaning etc	Moderate	
9.8	Pump Stations - Equipment or component Failure	Wastewater discharges to the environment having an impact on environmental, cultural and health	Moderate	Early warning via SCADA & site monitoring by staff	Moderate	

No.	Weakness or Vulnerability	Risk	Gross Risk	Mitigation Strategies	Residual Risk	Improvement Required
		issues. Customer complaints				
9.9	Pump Stations - Insufficient Wet Weather Storage Capacity	Insufficient storage or capacity resulting in wastewater discharges to the environment having an impact on environmental and cultural issues	Moderate	Good understanding of schemes capacities and ongoing monitoring of flows	Moderate	
9.10	Pump Stations - Corrosion and sulphur attack of electrical/control equipment	Surcharging in wet weather - health issues	Low	Monitoring of facilities on a regular basis	Low	
9.11	Insufficient Operational Pump Station Capacity	Surcharging in wet weather - health issues	Low	Good understanding of schemes capacities and ongoing monitoring of flows	Low	
9.12	SCADA Failure	No alarm available	Significant	Backup systems and procedures	Low	Ensure future sites have the capability to operate independently.
9.13	Treatment Plant - Equipment/component Failure	Failure to meet consent conditions.	Moderate	Early warning via SCADA & site monitoring by staff	Moderate	
9.14	Ponds - Overloading of Components Treatment Capacity	Failure to comply with resource consents and Customer complaints.	Moderate	Good understanding of treatment capacities and ongoing testing and monitoring of flows	Moderate	
9.15	Odours at treatment plant, or reticulation		Moderate	Good understanding of treatment capacities	Moderate	
9.16	Vandalism at facility		Moderate	Warning via SCADA of any issue at facilities	Moderate	Consider security when developing new sites / renewals.
9.17	Overloading of Components Treatment Capacity	Discharge of Biosolids to environment. Failure to comply with resource consents. Customer complaints	Moderate	Good understanding of treatment capacities and ongoing testing and monitoring of flows	Moderate	

Appendix C:

Risk Summary Table

No.	Weakness or Vulnerability	Risk	Gross Risk	Mitigation Strategies	Residual Risk	Improvement Required
9.18	Rising Mains - Insufficient Capacity	Wastewater discharged to the environment at pump stations having an impact on environmental and cultural issues.	Moderate	Good understanding of scheme capacities and ongoing monitoring of flows	Moderate	
9.19	Operator Error	Failure to achieve consent conditions or facility failure	Moderate	Employment of staff with the appropriate qualifications and skills	Moderate	
9.20	Power failure	Treatment capacity diminished	Low	Standby generators will be made available in an event of power failure if required	Low	Consider fixed generation at WWTP
9.21	Fire at facility	Control equipment failure with resulting lack of ability to continue service	Moderate	Management and operational staff have the skills to manage natural events	Moderate	Future upgrades to consider suppression systems
9.22	Movement failure caused by, Earthquake, landslide or settlement.	Inability to supply all or majority of demand	Moderate	Management and operational staff have the skills to manage natural events	Moderate	
9.23	Snow and wind	Power failure - see power failure	Low	Standby generators will be made available in an event of power failure if required	Moderate	Consider fixed generation at WWTP
10		Asset Risks Stormwater				
10.1	Mains - Blocked mains prior to storm events	Flooding of houses and properties	Moderate	Council staff have good maintenance and monitoring provisions	Moderate	
10.2	Manholes - Insufficient maintenance	Flooding of houses and properties	Moderate	Council staff have good maintenance and monitoring provisions	Moderate	
10.3	Outlets, culverts, Blocked & erosion with insufficient cleaning	Flooding of houses and properties	Moderate	Council staff have good maintenance and monitoring provisions	Moderate	
10.4	insufficient cleaning	Flooding of houses and properties	Moderate	Council staff have good maintenance and monitoring provisions	Moderate	
10.5	Insufficient overland flow paths	Flooding of houses and properties	Significant	Modelling of system will ascertain flow path requirements	Moderate	Complete modelling area to reduce risk and identify overland flow paths to protect.

No.	Weakness or Vulnerability	Risk	Gross Risk	Mitigation Strategies	Residual Risk	Improvement Required
10.6	Overland Flow Paths located on private property - no maintenance (overgrown/built upon)	Flooding of houses and properties	Significant	Council staff have good maintenance and monitoring provisions	Moderate	
10.7	Overland Flow Paths Located on Councils property or roads - no maintenance (overgrown etc.)	Flooding of houses and properties	Significant	Council staff have good maintenance and monitoring provisions	Moderate	
10.8	Power failure	Nil	Low	Management and operational staff have the skills to manage natural events	Low	
10.9	Fire	Nil	Low	Management and operational staff have the skills to manage natural events	Low	
10.10	Movement failure caused by, Earthquake, landslide or settlement.	Inability to supply all or majority of demand	Low	Management and operational staff have the skills to manage natural events	Low	
10.11	Snow and wind	Possible flooding	Moderate	Management and operational staff have the skills to manage natural events	Moderate	
10.12	Hail	Possible flooding	Moderate	Management and operational staff have the skills to manage natural events	Moderate	Utilise good design parameters on pipe entry structures.
11		Asset Risks - Solid Wastes				
11.1	Landfills - Non-compliance of consents	Attention by Ecan	Low	Defined post closure procedures	Low	
11.2	Landfills - Erosion of closed landfills by streams or rivers	exposure of old wastes to the environment	Moderate	Watching brief	Moderate	
11.3	RRP (resource Recovery Park): Power failure	Nil	Low	Management and operational staff have the skills to manage natural events	Low	Consider site generation in the future
11.4	Fire	Emergency closure	Low	Redirect to temporary site or TDC	Low	
11.5	RRP - Movement failure caused by, Earthquake, landslide or settlement.	Inability to carry out service	Low	Management and operational staff have the skills to manage natural events	Low	

Appendix C:

Risk Summary Table

No.	Weakness or Vulnerability	Risk	Gross Risk	Mitigation Strategies	Residual Risk	Improvement Required
11.6	Snow and wind	Disruption of collection cycle	Low	Management and operational staff have the skills to manage natural events	Low	
11.7	RRP - Major Flood	Short term closure	Low	Redirect to temporary site or TDC	Low	
11.8	RRP - Chemical spill	Short term closure	Moderate	Redirect to temporary site or TDC	Low	
11.9	RRP - Dust & noise nuisance	Reputation of Council detrimentally affected	Low	Good practices and processes carried out on site	Low	Consider extending sealing of unsealed and trafficked areas.
11.10	RRP - Loss of market for recyclables	Build-up of recyclables	Significant	Different Markets for each recyclable	Low	Contractor wears this risk
11.11	Kerbsidecollection - spillage	Litter over wide area	Moderate	Contract processes	Low	
11.12	Kerbside collection -Loss of contractor providing service	Collection disruption	Low	Management and operational staff have the skills to manage contractual issues and resolution	Low	

Appendix D: Major Legislation Details

The legislation that has or will have the most effect on the water services is outlined in detail in this Appendix.

Civil Defence Emergency Management Act 2002

The expectation under the CDEM Act 2002 is that Council's services will function at the fullest possible extent during and after an emergency, even though this may be at a reduced level. In addition, Council has established planning and operational relationships with regional CDEM groups to deliver emergency management within our boundaries.

Water and Wastewater activity are regarded as critical services and are given special consideration within Council emergency management procedures. Every effort will be given to restore services immediately after an event to at least provide adequate water for sanitation and health albeit supply quantity may be limited.

Climate Change Response (Zero Carbon) Amendment Act 2019

The Climate Change Response (Zero Carbon) Amendment Act 2019 provides a framework by which New Zealand can develop and implement clear and stable climate change policies that:

- contribute to the global effort under the Paris Agreement to limit the global average temperature increase to 1.5° Celsius above pre-industrial levels
- allow New Zealand to prepare for, and adapt to, the effects of climate change.

The amendments establish four key items.

1. set a new domestic greenhouse gas emissions reduction target for New Zealand to:
    a. **reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050**
    b. reduce emissions of biogenic methane to 24–47 per cent below 2017 levels by 2050, including to 10 per cent below 2017 levels by 2030
2. establish a system of emissions budgets to act as stepping stones towards the long-term target
3. require the Government to develop and implement policies for climate change adaptation and mitigation
4. establish a new, independent Climate Change Commission to provide expert advice and monitoring to help keep successive governments on track to meeting long-term goals. See the Climate Change Commission website.

The original proposal was for a separate piece of legislation called the Zero Carbon Bill to be passed into law. In May 2019, the Government decided to introduce it as an amendment to the Climate Change Response Act 2002. The objective was to ensure that all key climate legislation is within one Act.

Health Act 1956

The Health Act 1956 places an obligation on Council to improve, promote and protect public health within the District. The provision of water and Wastewater activity conserves public health and helps to protect land and waterways from contamination.

Fire and Emergency New Zealand Act 2017

The Fire and Emergency New Zealand Act repeals the 2 Acts governing fire services, the Fire Service Act 1975 and the Forest and Rural Fires Act 1977, to give effect to a single, unified fire services organisation for New Zealand.

The Act establishes Fire and Emergency New Zealand (FENZ) and combines urban and rural fire services.

The Act introduces a range of changes and new measures for the detailed design and operational policy of FENZ, including the following:

- an updated offences and penalties regime, including a new infringement offence scheme
- removal of powers to recover the cost of rural fires
- new powers for managing hazardous substances incidents
- new measures to encourage compliance among levy-payers and to protect the integrity of the levy
- new powers for firefighters to enter premises to investigate the causes of fires and to take a sample or samples of objects for analysis.

The Fire and Emergency New Zealand (Levy) Amendment Act 2019 was passed into legislation on 7 May 2019. The legislation changes the commencement date for new levy provisions in the Fire and Emergency Act 2017 (Sections 80 to 140) to 1 July 2024.

In addition, two new exemptions will be put into force from 1 July 2019. New Zealand Defence Force property and Art and items in collections of cultural heritage bodies. Fire and Emergency New Zealand have prepared a guideline for the new exemptions which can viewed at https://www.fireandemergency.nz/assets/Documents/About-FENZ/Levy-and-payment-forms/Guideline-on-additional-exemptions-from-1-July-2019.pdf.

Health and Safety at Work Act 2015

The Health and Safety at Work Act 2015 (HSWA)was enacted on 4 April 2016 and is part of "Working Safer: a blueprint for health and safety at work" and reforms New Zealand's health and safety system following the recommendations of the Independent Taskforce on Workplace Health and Safety. Working Safer is aimed at reducing New Zealand's workplace injury and death toll by 25 per cent by 2020.

The HSWA:

- reinforces proportionality – what a business needs to do depends on its level of risk and what it can control
- shifts from hazard spotting to managing critical risks – actions that reduce workplace harm rather than trivial hazards
- introduces the "reasonably practicable" concept – focusing attention on what's reasonable for a business to do
- changes the focus from the physical workplace to the conduct of work – what the business actually does and so what it can control
- supports more effective worker engagement and participation – promoting flexibility to suit business size and need.

A guiding principle of the HSWA is that workers and other persons should be given the highest level of protection against harm to their health, safety, and welfare from work risks as is reasonably practicable. The HSWA shifts the focus from monitoring and recording health and safety incidents to proactively identifying and managing risks so everyone is safe and healthy.
The HSWA identifies four duty holders:

persons conducting a business or undertaking (PCBUs) – these may be individuals or organisations	have the primary responsibility for the health and safety of their workers and any other workers they influence or direct. They are also responsible for the health and safety of people at risk from the work of their business
officers	(company directors, partners, board members, chief executives) must do due diligence to make sure the business understands and is meeting its health and safety responsibilities
workers	must take reasonable care for their own health and safety and that their actions don't adversely affect the health and safety of others. They must also follow any reasonable health and safety instruction given to them by the business and cooperate with any reasonable business policy or procedure relating to health and safety in the workplace
other persons at workplaces	who come into the workplace, such as visitors or customers, also have some health and safety duties to ensure that their actions don't adversely affect the health and safety of others

Heritage New Zealand Pouhere Taonga Act 2014

Describes an archaeological site as "Any place in New Zealand that:

- Was associated with human activity that occurred before 1900
- Is the site of the wreck of any vessel where that wreck occurred before 1900
- Is or may be able through investigation by archaeological methods to provide evidence relating to the history of New Zealand"

It is unlawful to modify, damage or destroy any archaeological site – recorded or not – without an authority from the New Zealand Historic Place Trust.

Local Government Act 2002

Defines the purpose of local authorities as enabling local decision-making by and on behalf of the community and allows local authorities the power of general competence. This Act specifically requires Councils to continue to provide water and Wastewater activity if they do so already.
AMPs are the main method of demonstrating Schedule 10 requirements.

In addition to the general requirements of the Local Government Act there are some specific clauses that apply to water services.

Appendix Table 3: Water Services LGA 2002 Clauses

Section	Details	Applies to
S10	Restores the four aspects of community well-being by requiring local authorities to promote the social, economic, environmental, and cultural well-being of communities in the present and for the future	Water and Waste Services
S17A	Requires that Councils review the cost effectiveness of the way they deliver their services to ensure they meet the needs of communities	All services

Section	Details	Applies to
S101B	Requires a 30 Year Infrastructure Strategy	Core Services
S130	Imposes an obligation to maintain water services and places limitations on the transfer or selling of assets	Divestment of services
S 136	Empowers Councils to enter into Contracts relating to provision of water services for periods not exceeding 35 years whilst maintaining control over the pricing of the service, retain legal responsibility for the service and being responsible for the development of policy related to the water services	Utilities Contract
S 137	Empowers Councils to enter joint local government arrangements and joint arrangements with other entities for the provision of water services, with the same constraints as S136	Utilities and Professional Services provision and procurement
Pt 1 -2 Pt 3 - 23	Council provides groups of activities for financial, performance and negative effects reporting purposes. The Water and Waste unit will provide Group summaries for water (urban & rural), sewerage and stormwater	Water and Waste Services

Local Government Act 2002 – Section 17A

To date a formal, documented Section 17A review has not been completed for 3W's service delivery. Council informally reviewed 3W's service delivery in 2016/17.

Waimate, whilst not unique, is one of few councils that continues to provide maintenance operations "in-house" and resultantly did not have contractual arrangements in place to trigger a review between 2014 and 2017 (the statutory deadline for completing the first round of reviews).

At this point in time, with indications that sector reforms are continuing meant that the desire to change service delivery arrangements was low. Furthermore, Council was effectively comfortable that the potential benefits of performing a review did not justify the time and expense of completing the exercise. Subsequent acceleration of the reforms has bolstered this position in so far as service delivery is being addressed during the current calendar year (2021) and the impacts for 2021/22 are as yet unknown. Based on Councils decision regarding "opting in or out", this may trigger a Section 17A review (or not).

Local Government (Rating) Act 2002

In deciding whether to proceed with universal metering, it is worth noting the flexibility that Councils have under this Act to determine an appropriate water charging mechanism. Targeted water rates may be fixed charges per unit of water sold or according to a scale of charges.

Resource Management Act 1991

Governs all water takes and discharges. Water takes and discharges to waterways and land occur through the extraction of water from waterways and land. Resource consents obtained for water takes and discharge activities require parameters such as volume and quality to be monitored as well as taking steps to mitigate any adverse effects that may occur through the activity.

There have been numerous amendments to the Resource Management Act over the years with reform a key priority.

Resource Management (Natural and Built Environment and Spatial Planning Repeal and interim Fast-track Consenting) Act 2023

This act commenced on 23 December 2023 and repeals the Natural and Built Environment Act 2023, the Spatial Planning Act 2023 and the Natural and Built Environment (Forms and fees) Regulations 2023

Taumata Arowai–the Water Services Regulator Act 2020

Taumata Arowai – the Water Services Regulator Act establish Taumata Arowai–the Water Services Regulator and provide for its objectives, functions, and governance arrangements.

This Act creates a new regulatory body to oversee, administer and enforce a new and strengthened drinking water regulatory system. It also provides a national oversight role to improve the environmental performance of stormwater and wastewater networks.

The Government is proposing changes to how Taumata Arowai regulates drinking water suppliers. The changes will remove barriers to Taumata Arowai taking a proportionate, cost effective and efficiency approach in its functions and duties. In turn this will reduce the financial burden on both councils and consumers.

Water Services Act 2021

The Water Services Act 2021 commenced 15 November 2021. This Act is part of the previous governments 3 Waters Reforms. It establishes drinking water standards and regulates all persons and organisations that supply drinking water.

The Water Services Act also establishes a framework to provide transparency about the performance of drinking water, wastewater and stormwater networks and network operators; and establishes a framework for the continuous and progressive improvement of the quality of water services in New Zealand.

The Water Services Act was amended in 2023 and 2024 to align with the new governments Local Water Done Well legislative initiatives.

Local Government Water Services Preliminary Arrangements Act 2024 clauses:

Appendix Table 4: Water Services LGA 2002 Clauses

Section	Details	Applies to
S8	(1) Territorial authority must prepare a water services delivery plan within 12 months after Royal assent of the Bill. The plan must: a) Identify the current state of the authorities' water services; b) Demonstrate publicly its commitment to deliver water services in a way that – i. Ensures that the territorial authority will meet all relevant regulatory quality standards for its water services; and ii. Is financially sustainable for the territorial authority; and iii. Ensures that the territorial authority will meet all drinking water quality standards; and Supports the territorial authority's housing growth and urban development as specified in the territorial authority's long-term plan.	All water services

Section	Details	Applies to
S9	Territorial authorities may submit a joint plan with 1 or more other territorial authorities, in relation to delivering water services in the joint service area covered by a joint arrangement.	All water services
S9A	Explains the extent of a joint arrangement must relate to the delivery of: a) All water services for all of the territorial authorities; or b) All water services except for some or all services relating to all the territorial authorities' stormwater networks; or All water services for some of the territorial authorities, and all water services except for some or all services relating to stormwater networks for the other territorial authorities.	All water services except Stormwater services
S11(1)	Stipulates the contents required in the territorial authorities' water services delivery plan: a) A description of the current state of the water services network; b) A description of the current levels of service relating to water services provided; c) A description of: i. The areas in the district that receive water services (including a description of any areas in the district that do not receive water services; and ii. The water services infrastructure associated with providing for population growth and development capacity; d) Whether and to what extent water services – i. Comply with current regulatory requirements ii. Will comply with any anticipated future regulatory requirements; da) if any water services do not comply with current regulatory requirements or will not comply with any anticipated future regulatory requirements - a. A description of non-compliance; and b. A description of how the anticipated or proposed model or arrangements provided under paragraph (j) will assist to ensure water services will comply; e) Details of the capital and operational expenditure required – i. To deliver the water services; and ii. To ensure that water services comply with regulatory requirements f) Financial projections for delivering water services over the period covered by the plan, including – i. The operating costs and revenue required to deliver water services; and ii. Projected capital expenditure on water services infrastructure; and iii. Projected borrowing to deliver water services; g) An assessment of the current condition, lifespan, and value of the water services networks; h) A description of the asset management approach being used , including capital, maintenance, and operations programmes for delivering water services; i) A description of any issues, constraints, and risks that impact on delivering water services;	All Water Services

Section	Details	Applies to
	j) The anticipation of proposed model or arrangement for delivering water services (including whether the territorial authority is likely to enter into a joint arrangement under section 9 or will continue to deliver water services in its district alone); k) An explanation of how the revenue from, and delivery of, water services will be separated from the territorial authority's other functions and activities; l) A summary of any consultation undertaken as part of developing the information required to be included in the plan under paragraph (j); m) An explanation of what the territorial authority proposes to do to ensure that the delivery of water services will be financially sustainable by 30 June 2028; ma) An implementation plan - i. for delivering the proposed model or arrangements described under paragraph (j); and ii. if a territorial authority is proposing to deliver water services itself and not as part of a joint arrangement for delivering water services, that sets out the action that the territorial authority will take to ensure it delivery of water services will be financially sustainable by 30 June 2028; n) Any other information prescribed in the rules made by the Secretary under section 14	
S12	Stipulates the contents of a joint water services delivery plan	All services
S13	Stipulates that a water services delivery plan – a) Must cover a period of not less than 10 consecutive financial years, starting with the 20245-25 financial year; and b) May include information that covers an additional 20 consecutive years, if the information identifies investment requirements – i. For water services infrastructure; or ii. To support future housing growth and urban development. A water services plan must provide the required information – a) In detailing relation to each of the first 3 financial years covered by the plan; and In outline in relation to each of the subsequent financial years covered by the plan.	All Water Services
S14	The Secretary of Local Government may make rules in relation to the water services delivery plans – a) Specifying additional information that must be included in a plan; b) Specifying the manner and form in which information must be included in a plan A rule made by the Secretary may require the inclusion of information that – a) Improves accountability to a territorial authority's community; b) Provides a basis for regulating the delivery of water services; c) Relates to 1 or more of the following: i. Financial matters (including, for example, revenues, equity levels, debt arrangements, and expenses);	All Water Services

Section	Details	Applies to
	ii. The assets involved in delivering water services (including, for example, asset management plans and asset replacement policies); iii. Financial and non-financial performance measures; iv. The relevant performance measures and statistics relating to water quality; Pricing practices, assumptions, policies and methodologies used in the delivering water	
S15	Sets out the process to prepare and adopt water services delivery plan: • Must adopt by resolution • Must undertake consultation	All Water Services
S16	Water Services delivery plan must be submitted to Secretary for acceptance not later than 1 year after date of: • On which section comes into force • On or before a later date specified by the Minister under section 17 • Must include certification of compliance to Act and that information in plan is true and accurate.	All Water Services
S17	The Minister may grant extension to deadline for submitting water service delivery plan.	All Water Services
S18	The Secretary must as soon as reasonably practicable consider and accept a water services delivery plan if it is satisfied that it complies with this Act.	All Water Services
S19	When the Secretary accept the territorial authority's water services delivery plan, the territorial authority must publish the plan on its internet site;	All Water Services
S19A	A territorial authority must give effect to its water services delivery plan;	All Water Services
S19B	A territorial authority may amend and resubmit its water services delivery plan to the Secretary.	All Water Services
S19C	The secretary may require a territorial authority to provide information for monitoring purposes.	All Water Services
S20	The Minister may appoint a Crown Facilitator for water services delivery plans to a territorial authority or a group of territorial authorities that is proposing to submit, or that has submitted a joint water services delivery plan.	All Water Services
S22	Describes the role of the appointed Crown facilitator.	All Water Services
S23	The Minister may appoint a Crown water services specialist for water services delivery plans to a territorial authority or a group of territorial authorities that is proposing to submit, or that has submitted a joint water services delivery plan.	All Water Services
S25	Describes the role of the appointed Crown water services specialist.	All Water Services
Pt5	Sets out the amendments to the Water Services Act 2021 and consequential amendments	All Water Services
S101	Amends Section 138 of the Water Services Act 2021 – (Wastewater environmental performance standards)	All Water Services

Section	Details	Applies to
S102	Inserts a new section 138A into the Water Services Act 2021 (Repeal of provisions relating to National Policy Statement for Freshwater Management)	All Water Services

Local Government Water Services Bill

This bill is expected to be introduced to Parliament in December 2024.

Local Water Done Well is the Coalition Government's plan to address New Zealand's long-standing water infrastructure challenges. It recognizes the importance of local decision making and flexibility for communities and councils to determine how their water services will be delivered in the future. It will do this while ensuring a strong emphasis on meeting economic, environmental and water quality regulatory requirements.

The proposed Local Government Water Services Bill will establish the enduring settings for the new water services system. Changes are proposed to the water service delivery system and to the water services regulatory system. This is the third piece of legislation in the Government's three-stage process for implementing Local Water Done Well.

The Bill will provide an expanded range of water services delivery models for councils to choose from. This includes new water organisations that can be owned by councils and/or consumer trusts. They are intended to have the flexibility to be financially independent from their council owners from a credit rating perspective. Councils may design their own alternative arrangements, as long as te arrangements meet minimum requirements.

The Bill also provides new financing options for councils and /or CCO's.

The bill has a new approach for managing urban stormwater and Councils will retain legal responsibility and control of stormwater services but will have flexibility to choose the arrangements that best suit their circumstances.

Changes are proposed to improve the management of overland flow paths and watercourses in urban areas (an urban area's natural drainage system). This includes clarifying council and private landowner roles and responsibilities, enabling new planning and regulatory tools, and enabling 'service agreements' to support the integrated management of stormwater networks.

There will be new mechanisms for the Minister of Local Government to address issues with local government water service providers. The Minister will be able to appoint a Crown facilitator – water services, and /or Water Services Commissioners, if problems (or potential problems) arise in councils or water organisations.

The legislation will also enable the Minister of Local Government's powers to be used to help address significant or persistent non-compliance with the economic regulation regime. This would be a last resort option, in situations where the regulatory tools available to the Commerce Commission are insufficient or high cost, and alternative options are required.

There will be a new economic regulation regime for local government water service providers, implemented by the Commerce Commission. The Commerce Commission will have a range of regulatory tools, including mandatory information disclosure, to promote efficient practices and protections for consumers.

The regime will ensure that revenue collected by local government water services providers through rates and water charges is being spent on the level of water infrastructure needed.

The Government is proposing changes to how Taumata Arowai regulates drinking water suppliers. The changes will remove barriers to Taumata Arowai taking a proportionate, cost effective and efficiency approach in its functions and duties. In turn this will reduce the financial burden on both councils and consumers.

Utilities Access Act 2010.

The Utilities Access Act 2010 provides for a coordinated approach to management of the road corridor. The Act requires the Corridor Managers to undertake a planning and access management role, and Utility operators to comply with an approved code of practice. It is an expected that the requirements detailed in the act will be carried out as described in the Code of Practice developed by the New Zealand Utilities Access Group, should it be approved by the relevant Minister of the Crown.

The Code is a mandatory requirement for all road and rail controlling authorities and utility network operators under the Utilities Access Act 2010, and came into effect on the 1st January 2012. The Code was reviewed during 2016.

The initial KPI data identified several issues including a lack of consistency, along with the fact that not all reporting entities had sent in their returns, meaning that any comparisons were incomplete. The situation was exacerbated by the fact that only 1 year's results are available, with any real value to come from analysis of changing trends over time. Refining of the data collection requirements will be a major focus moving forward, resulting in a more comprehensive reporting and analysis to be provided following the receipt of 2016-17 KPI data.

Appendix E: References

The following details reports and other significant reference areas associated with the four utilities

Appendix Table 5: References

#	Title	Issue Date	Sector	Author /Consultant
1	Water Safety Plans - Cannington-Motukaika - Hook Waituna - Lower Waihao - Otaio-Makikihi - Waihaorunga - Waikakahi - Waimate Urban	 2022 2022 2022 2022 2022 2022 2022	Water	Paul Roberts Three Waters Manager
2	Waimate Stormwater Investigation – Study Report	May-09	Stormwater	Opus
3	Queen Street Stormwater Issues and Options Report	Jul-17	Stormwater	Opus
4	Cast Iron Pipe Assessments	Mar-11	Water	Opus
5	AC Pipe Evaluation Reports	Ongoing	Water	Opus
6	Pressure Management Study	Jul-09	Waimate Water	Opus
7	Capital Assistance Programme Funding – Otaio-Makikihi	Complete	Water	Dan Mitchell Asset Group Manager
8	Capital Assistance Programme Funding – Lower Waihao	Complete	Water	P Roberts Water & Waste Manager
9	Capital Assistance Programme Funding – Hook Waituna	Complete	Water	P Roberts Water & Waste Manager
10	2020 Valuation	Sep-17	3 Waters	In-house / BECA
11	Disaster Resilience Summary Report	2006	All	COUNCIL Asset Management Group
12	Stormwater AMP 2014	2015	Stormwater	Opus
13	Solid Waste AMP 2014	2015	Solid Waste	Opus
14	Water AMP 2014	2015	Water	Opus
15	Parks and Recreation AMP 2014	2015	Parks and Reserves	Opus
16	Wastewater AMP 2014	2015	Wastewater	Opus
17	Leak Detection programme	Jul-05	Water	Detection Services

Appendix E:

References

#	Title	Issue Date	Sector	Author /Consultant
18	Waimate Water Supply Leakage Detection and Analysis Study	Jul-09	Water	Opus
19	Council's Assessment of Water & Sanitary Services	Jun-11	All	M McTigue Water & Waste Manager
20	Leak Detection Programme	Oct-98	Water	Opus
21	Issues & Options for Universal Water Metering	Oct-98	Water	Opus
22	Waimate AMP Compliance Status	Feb-11	All	Waugh Infrastructure Management Ltd