Te Kaunihera-ā-Rohe Ruapehu
Ruapehu District Council

Storm Water & Flood Protection

Asset Management Plan

2024-2034

Quality Information

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Revision History

Version 1 (Draft for Audit)						
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Activity overview

Ruapehu District Council (RDC / Council) is responsible for providing infrastructure services to the district which includes the stormwater activity. Stormwater is rainwater that runs over the ground on its way to a natural watercourse. When rain falls on buildings, carparks, roads, driveways and gardens, but does not soak into the ground, it will pond or follow a natural path downhill until it reaches a watercourse or is collected by a pipe system.

Efficient and effective stormwater and flood protection infrastructure is a key element in the sustainable and healthy development of a community. A developed network of pipes, culverts to drains, and water courses, provides a safe and efficient means of collecting and conducting stormwater through townships.

The Stormwater and Flood Protection assets had a depreciated replacement cost of $17 million (as at 1 July 2022) across 11 townships. The network includes 50 km of stormwater reticulation mains (within the 50 kms town zones), public drains (12.3 km), watercourses (32.9 km), open drains (19.1 km) and associated culverts (1,149 m), manholes (629) and sumps (878).

All stormwater discharges go to rivers, streams or creeks (awa) and Council will need to ensure that any future work on the stormwater system is in partnership with local iwi / hapū.

Strategic challenges

Key issues were identified for the 2024 Asset Management Plan development through Council's knowledge and asset planning. The key issues Council is managing as part of the stormwater activity are summarised in the table below.

Table 1 Summary of key issues – stormwater.

Focus area	Key issues
Governance model	Uncertainty with changes to legislation resulting from new Government policies and initiatives and how this impacts service delivery.
Funding constraints	Increasing cost challenges with expenditure and associated debt required to bring the districts three waters systems in-line with Government legislation and debt allowance standards. Ruapehu District has a small rating base to share the costs of providing water services to meet the minimum standards. The stormwater network has historically been under invested.
Resource constraints	Delivering water services is constrained by supply chain issues and staffing levels.
Freshwater legislation changes	Horizons Regional Council is reviewing their Regional Freshwater Management Plans and the Regional Plan (One Plan) to give effect to the National Policy Statement for Freshwater Management (NPS-FM) 2020. Oranga Wai | Our Freshwater Future is the way Horizons is applying the National Policy Statement for Freshwater Management (NPS-FM) 2020 to the region. This will direct the territorial authorities including RDC through Plan Changes.
People: skills and capacity	Inadequate internal resourcing for the stormwater activity. It is costly for a small rural district council to have sufficient staffing for managing the three water assets.
Resilience	Increasing extreme weather patterns with storms of increasing intensity and frequency will impact the capacity of the existing stormwater network.

Current state

The current state of the stormwater assets is assessed in terms of asset condition and performance. A summary of the asset condition is illustrated in Figure 1 below. This shows that no underground stormwater assets have been assessed in poor condition.

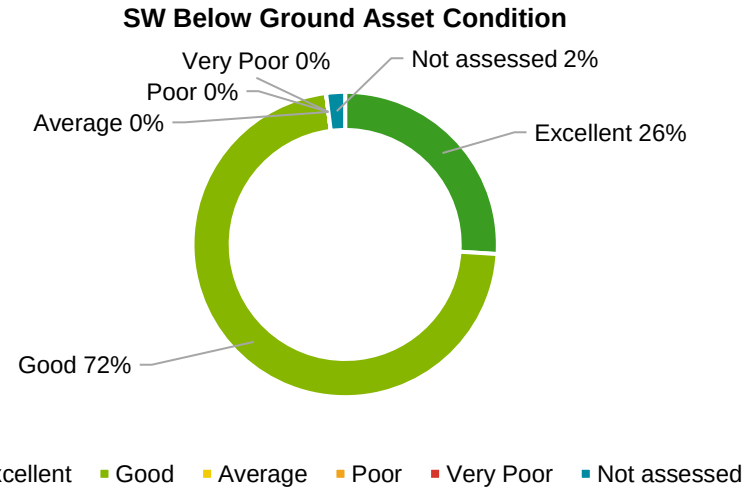


Figure 1 Stormwater asset condition.
Source: Veolia (August 2020).

Asset condition is usually assessed during asset valuation audits. Council's three waters contractor updated the three waters asset valuation in July 2022, however this did not include assessment of the asset condition, which was last updated in August 2020 (listed as a key improvement action). Three yearly condition assessments of these assets are recommended to gain a better understanding of current state ideally sequenced with the Long Term Plan cycle. This would help identify trends and ensure the poor performing assets are scheduled for renewal.

The condition of the stormwater pipework, manholes and kerbside sump stormwater entry pits is generally good.

Asset performance of our stormwater network is assessed in terms of capacity constraints (flood protection) and stormwater quality. There were no flood events reported in 2022/23 as a mandatory performance measure.

Future direction

The future direction for the stormwater activity is:

- **Compliance** – We will develop our understanding in stormwater quality management to give effect to Horizon Regional Council's Oranga Wai | Our Freshwater Future. This will require is to be more proactive than our current practices, particularly for existing stormwater networks.
- **Future demand** – We have developed hydraulic model for the water supply and wastewater networks to understand asset performance and capacity. We now need to develop a stormwater hydraulic model so we can assess pipe sizes to provide for future capacity and understand performance issues better.
- **Financial sustainability** – It is an ongoing challenge to ensure that the level of investment in renewing the stormwater assets and meeting legislative obligations is sustainable long term. There is pressure to minimise rate increases so they are affordable for our community.

Financial summary

The total amount of expenditure for operations, maintenance and capital for the stormwater activity over the next ten years is $15.5.0 million. Operational expenditure is forecast at $13.4 million over ten years, or around $1.28-1.42 million per year. The capital expenditure across the 10 year expenditure period is forecast at $2.15 million which is exclusively allocated to renewals. Of the ten-year forecast, operating costs make up 86%, and capital expenditure on renewals accounts for the remaining 14%. There is no capital expenditure forecast identified for levels of service or growth in the ten year period. Table 2 lists a summary of the ten year forecast, which is then illustrated in Figure 2.

Table 2 Summary of stormwater ten year expenditure forecast

Description	Projected Expenditure				
	Year 1	Year 2	Year 3	Year 4-10	Ten year
	2024/25	2025/26	2026/27	2027-34	Total
Operational expenditure	1,279,490	1,287,145	1,319,350	9,503,408	13,389,393
Capital expenditure	-	50,000	50,000	2,050,000	2,150,000
Renewals	-	50,000	50,000	2,050,000	2,150,000
Levels of Service	-	-	-	-	-
Growth	-	-	-	-	-
Total	**1,279,490**	**1,337,145**	**1,369,350**	**11,553,408**	**15,539,393**

Source: Council's LTP budget (uninflated as at June2024).

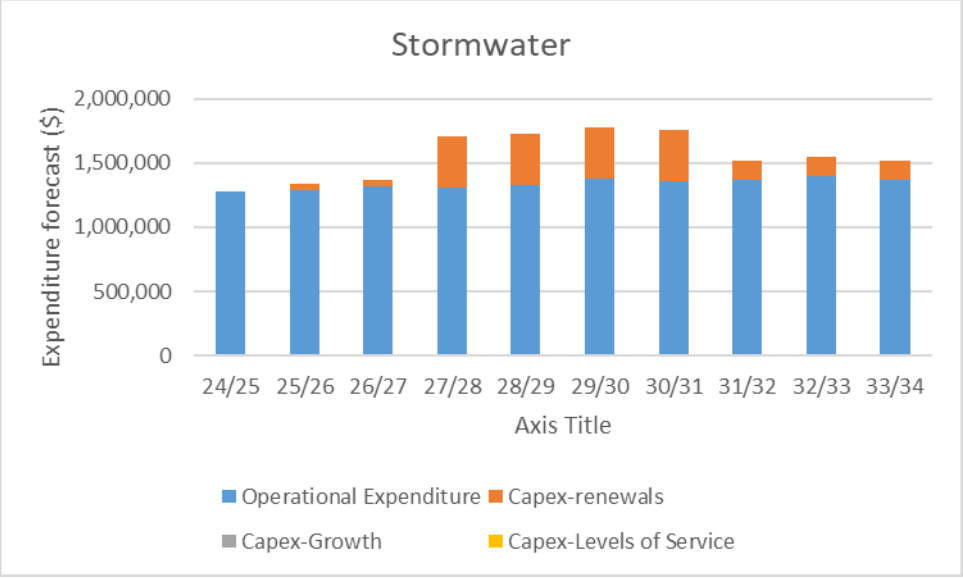


Figure 2 Summary of stormwater ten year expenditure forecast.
Source: Council's LTP budget (uninflated as at June 2024).

Key Improvement Actions

The key high priority actions for improving the asset management practices in the next three years are summarised in the following table.

Table 3 High priority actions – stormwater.

AM element	Proposed actions
Forecasting demand	Develop a Stormwater Master Planning as an overarching framework to guide our long term planning and capital works programmes. Stormwater infrastructure will need to support growth in housing requirements, particularly for Ohakune.
Asset condition	Undertake 3 yearly condition assessment of the stormwater assets.
Strengthening resilience	Improving the resilience of the network in relation to climate change impact.
Financial planning	Continue to review the level of investment in stormwater assets to ensure the network is being renewed sustainably long term and legislative compliance is being met balanced against community affordability and asset risk.

1 INTRODUCTION

1.1 Activity overview

Ruapehu District Council (RDC / Council) is responsible for providing infrastructure services to the district which includes the stormwater activity. Stormwater is rainwater that runs over the ground on its way to a natural watercourse. When rain falls on buildings, carparks, roads, driveways and gardens, but does not soak into the ground, it will pond or follow a natural path downhill until it reaches a watercourse or is collected by a pipe system.

Efficient and effective stormwater and flood protection infrastructure is a key element in the sustainable and healthy development of a community. A developed network of pipes, culverts to drains, and water courses, provides a safe and efficient means of collecting and conducting stormwater through townships.

The Stormwater and Flood Protection assets had a depreciated replacement cost of $17 million (as at 1 July 2022) across 11 townships. The network includes 51.6 km of stormwater reticulation mains (within the 50 kms town zones), public drains (12.3 km), watercourses (32.8 km), open drains (19.2 km) and associated culverts, manholes (618) and sumps.

The stormwater and flood protection activity are achieved through:

- Piped networks including manholes, sumps, inlets and outlets.
- Open drain networks.
- Flood alleviation networks including stopbanks and flood detention systems.
- Treatment in new subdivisions with high quality environmental discharges or high-volume traffic parking areas.
- Built environment effects by having stormwater neutrality designs, peak flow retention and greenfield discharges such as rain gardens.

All stormwater discharges go to rivers, streams or creeks (awa) and Council will need to ensure that any future work on the stormwater system is in partnership with local iwi / hapū.

1.2 Purpose of this Plan

The Stormwater Asset Management Plan (AMP) details how Council will manage these assets now and into the future. The AMP is a tactical, infrastructural plan that gives effect to a range of other Council strategies and tactical planning documents. It provides a means through which Council can demonstrate responsible management of its stormwater assets.

The key objective of asset management (AM) is to provide levels of service (LOS) in a cost-effective manner while also demonstrating responsible stewardship of resources for present and future customers. AMPs are a significant component of the strategic planning and management of Council, with links to the LTP, 30 Year Infrastructure Strategy and service delivery plans including service contracts.

The plan covers a period from 1 July 2024 to 30 June 2034, with a particular focus on the work programmes planned for the next three to five years. It reflects Council's focus on achieving an optimal balance between the key elements of asset management (AM), which are service levels, cost, and risk.

This AMP covers the financial and technical aspects of providing and managing the assets. This AMP also covers the risks of ownership and how these might be addressed through removal or mitigation of risk.

This AMP is written in accordance with good AM planning and practice as set out in:

- Āpōpō / International Infrastructure Management Manual (IIMM).
- ISO 55000 (international standard covering management of physical assets).
- Office of the Auditor General industry notes and reports.
- LGA 2002 Schedule 10 and amendments.

The new Government is implementing its Local Water Done Well policies. This will be achieved through legislative amendments in a staged approach. A framework and transitional arrangements for the new water services system will be established. Alternative models include regional / sub regional Council Controlled Organisations. This AMP will be updated as required as the Government implements its repeals of the legislation and preferred model for three waters.

1.3 Assets at a glance

Council is responsible for the provision and management of stormwater in urban environments (the 50km road speed advice notices are the delineation points). This is most of our large communities: Ohura, Matiere, Taumarunui, Kakahi, Ōwhango, National Park, Raetihi, Ohakune, Rangataua and Waiōuru. In Waiōuru, Council owns and operates the stormwater system outside the army base and the New Zealand Defence Force owns and operates the system within the military base.

A summary of stormwater assets is presented in the table below by township (refer to Section 4.2 Asset Summary for detail). This shows that Taumarunui and Ohakune are the main serviced townships. Kakahi, Raurimu and Matiere also have very small stormwater networks and have not been included in this table. Most of the stopbanks are owned by Horizons Regional Council (HRC).

Table 4 Stormwater asset summary.

Township	Rateable properties connected	Stormwater Pipeline Length (km)	Culverts (m)	Watercourses (km)	Manholes	Sumps
Kakahi	52	0.32	0	2.4	2	0
Matiere	-	0.13	72	0.0	0	0
National Park	313	2.92	50	0.9	37	38
Ohakune	1,700	12.10	350	10.8	166	242
Ohura	-	0.51	74	2.4	0	0
Ōwhango	148	0.14	68	0.3	2	1
Pipiriki	-	0.00	0	0.0	0	0
Raetihi	565	3.98	116	4.7	21	51
Rangataua	214	2.30	0	1.1	42	23
Raurimu	-	0.00	12	0.0	0	0
Taumarunui	2,315	26.48	407	10.2	350	496
Waiōuru	85	1.25	0	0.0	9	27
Total	**5,392**	**50.12**	**1,149**	**32.9**	**629**	**878**

Source: Veolia Infrastructure Asset Valuation (July 2022).

The Upper Whanganui River Control Scheme and associated rockwalls within Taumarunui are operated by Horizons and are excluded from Council's Stormwater AMP. Horizons owns the main stopbank through the flood scheme and Council owns some smaller rockwalls in side streams and infrastructure protection rock walls. Horizons also manage other schemes within our district but are located outside the urban zones.

HRC provides flood warning alert service (Waterline) as part of their role in keeping communities safe. This information is used by Ruapehu District in helping our communities remains safe.

Customer / Council ownership

Council is responsible for maintenance of the stormwater system from the property boundary in pipe connections. All pipes and drains beyond the property boundary are owned by, and are the responsibility of, the property owner. Property owners cannot gather and divert stormwater onto their neighbours' section, nor can they stop the natural drainage pathways from the land.

1.4 Strategic context

1.4.1 Strategic overview

The stormwater activity supports Council's vision and four Community Outcomes as set out in parts 1 and 2 of this AMP. The Community Outcomes are Council's true north for planning and decision making. The stormwater activity contributes to the following two Community Outcomes:

- Our infrastructure assets and services are resilient and fit for purpose.
- Our natural and built environment is healthy strong, and safe.

1.4.2 Contribution to well beings

Council has developed a Wellbeing Framework to guide its decision making. It aligns Council's values, purpose, vision, Community Outcomes (external facing) with its organisational outcomes, goals and roles (internal facing). Te Tiriti o Waitangi is the pou in the framework and is at the heart of everything Council does, as shown conceptually below.

Figure 3 Wellbeing framework relationship.

The stormwater activity influences the wellbeing by:

- Social:
  - Quality regulation, regulatory services, and infrastructure.
  - Core infrastructure endeavours to keep pace with changing demand.
  - Excellent standards of safety and welfare are promoted and respected.
  - Preparation, planning, and timely responses protect people and property from natural hazards.
- Cultural - Working together with tangata whenua to achieve common goals.

- Environmental - Our environment is accessible, clean and safe and our water, soil and air meets required standards.
- Economic - Regulatory services and reliable infrastructure help the economy prosper.

1.4.3 Stormwater activity objectives

Council's objectives for the stormwater activity are:

- Provide efficient and safe stormwater collection and disposal and flood protection in an effective and environmentally acceptable manner.
- Plan for resilience to flooding and safeguard the lives and property of communities during flood events.
- Deliver stormwater neutral developments.
- Develop stormwater treatment systems which reduces degradation and contamination of receiving for greenfield developments and then progressively with built infrastructure.

1.5 Key achievements

There have been a number of key achievements for the stormwater activity since the 2021 LTP. These are summarised in the table below.

Table 5 Summary of key achievements.

Asset class / AM element	Key achievements since 2021
Piped network	• Totara Crescent received a new 40-metre stormwater main extension. • Culvert replaced under Plunket Street, Raetihi, to alleviate surface water laying at the 8 Plunket Street property. • Subsoil Drain Replacement and Drainage Channel at Tay Street, Ohakune. • The stormwater system at Hikumutu Wastewater Treatment Plant improved to protect the new building and inlet screen.
Stormwater channel and drain	Multiple drains and channels were cleared and improved including: • Lairdvale Road, Taumarunui. • Maata Street, Taumarunui. • Taumarunui Domain (BMX track). • Hikumutu Road. • A problematic SW drain, culvert and parallel drain in Totara Crescent and Tuku Street has been cleared.

1.6 Key issues

Key issues were identified for the 2021 AMP development through Council's knowledge and asset planning. The key issues Council is managing as part of the stormwater activity are summarised in the table below.

Table 6 Summary of key issues – stormwater.

Focus area	Key issues	Implications / management response	Refer to AMP section
Governance model	Uncertainty with changes to legislation resulting from new Government policies and initiatives and how this impacts service delivery.	Maintain a watching brief on the changes of Government's Local Water Done Well policies and evaluate other options as information becomes available.	Section 2.3 Legislative framework
Funding constraints	Increasing cost challenges with expenditure and associated debt required to bring the districts three waters systems in-line with Government legislation and debt allowance standards. Ruapehu District has a small rating base to share the costs of providing water services to meet the minimum standards. The stormwater network has historically been under invested.	The proposed 10 year capital works programme has been prioritised as part of the LTP process. Many important projects have been discounted through this process. The Stormwater AMP shows the important but unfunded projects for completeness. Council will continue to seek external funding where appropriate to reduce the impact on Ruapehu's ratepayers.	Section 4.19 Asset Creation Plan; Section 6.4 Capital Expenditure Summary
Resource constraints	Delivering water services is constrained by supply chain issues and staffing levels.	Sourcing plant and equipment can be challenging particularly from overseas with ongoing geopolitical issues, less locally now. Work programme certainty allows adequate lead in times Council's service provider Veolia NZ and capital works contractors.	Section 4.19 Asset Creation Plan
Freshwater legislation changes	Horizons Regional Council is reviewing their Regional Freshwater Management Plans and the Regional Plan (One Plan) to give effect to the National Policy Statement for Freshwater Management (NPS-FM) 2020. Oranga Wai | Our Freshwater Future is the way Horizons is applying the National Policy Statement for Freshwater Management (NPS-FM) 2020 to the region. This will direct the territorial authorities including RDC through Plan Changes.	This will require Council to be more proactive in stormwater quality management than our current practices, particularly for existing stormwater networks. Stormwater treatment will also be required with global consents.	Section 4.3 Asset performance
People: skills and capacity	Inadequate internal resourcing for the stormwater activity. It is costly for a small rural district council to have sufficient staffing for managing the three water assets.	AM planning is not undertaken or ad hoc resulting in assets being managed reactively.	Section 7.4 AM Practices; Section 7.5 Improvement Plan
Resilience	Increasing extreme weather patterns with storms of increasing intensity and frequency will impact the capacity of the existing stormwater network.	Continue to look for opportunities to strengthening infrastructure resilience at scoping design stage for renewals and new works projects.	Section 5.4 Climate change and resilience

1.7 Potential effects

There is recognition of the potential effects both positive and negative resulting from the stormwater activity which Council manages as outlined in the table below. Any improvement or changes made to the stormwater network must take cultural and water quality effects into consideration. These negative effects are managed through a variety of processes, summarised in the table below and in Section 4 Lifecycle Management Plan and Section 5 Risk Management.

Table 7 Summary of effects – stormwater.

Wellbeing	Positive	Negative	Mitigation
Social	Provides infrastructure to protect habitable areas from flooding.	Existing stormwater networks may not have adequate capacity during major storm events potentially impacting property and habitable floors.	Council's facilities maintenance contractor responds to flooding events in reasonable time. Existing system constraints are investigated to understand the cause. Capital works are scheduled where public assets need to be upgraded in urban areas.
	Instream effects are minimised.	Watercourses become degraded and not recommended for recreational use.	Treatment of stormwater to remove gross and other pollutants.
Economic	Provides infrastructure to support businesses in the urban areas.	There is high capital cost of investment in the stormwater infrastructure.	Council is committed to implementing cost-effective solutions as part of its asset management approach.
		Significant costs and time to implement new stormwater treatment projects across multiple townships.	Council is committed to improving the natural environment but acknowledges that it takes time to make significant improvements.
Cultural	Community and iwi consultation in urban is effective for the decision-making process.	Reduced water quality will result in iwi disengaging with Council.	Council has communication with iwi and are working towards ways of meeting its legislative obligations.
	Improving water quality will enhance Councils relationship with tangata whenua.	Increased stormwater runoff into waterways is unacceptable to tangata whenua.	Any improvement or changes made to the stormwater network must take cultural and water quality effects into consideration.
Environmental	Potential environmental impact from construction of infrastructure.	Environmental damage during construction of new works.	Environmental damage is mitigated through resource consent conditions which are specified into the contract document and monitored closely during the implementation of physical works.
		Environmental degradation of receiving water from stormwater discharges.	Council continues to improve the planning of new subdivisions and high volume parking areas to improve the quality of discharges.
		Waterways with no vegetation management has resulted in changes to water courses, reducing riverbed capacity and creating bank erosion.	Partnership with Horizons to control vegetation around communities.
		The stormwater and flood protection runoff naturally contains debris and chemicals that are present in the catchment area.	Stormwater and flooding runoff are monitored by HRC for water quality and other effects.

2 THE SERVICES WE PROVIDE

2.1 Introduction

Council aims to provide safe and affordable water services to deliver the levels of service (LOS) in a sustainable manner over the long term. This section defines the LOS or the qualities of the service that the Council intends to deliver, and the measures used for monitoring. The adopted LOS supports the Council's strategic goals and is based on user expectations and statutory requirements as well as integration with national and regional strategies. Council's LTP is the primary document for determining and agreeing LOS and costs with the community and stakeholders.

2.2 Customers and stakeholders

There is a wide range of customers and stakeholders with an interest in how the Council recognises there is a wide range of customers and stakeholders with an interest in how the stormwater activity and wider three waters activities are managed, including landowners, the resident community, visitors, specific interest groups within the community, iwi/hapū, and other regional and central government agencies.

Good knowledge of stakeholder values and drivers is essential for providing effective, efficient, and safe assets and services. The key customers and the main stakeholders involved in the stormwater activity and their specific areas of interest are summarised in the table below.

Table 8 Key customers and stakeholders.

Segment	Area of interest
Customers	
The community – ratepayers, residents and tourists	Safe, effective, reliable, and affordable stormwater services.
Local industrial and business users	
Institutional customers such as health and education institutions, and emergency services	
External stakeholders	
Local iwi / hapū	New governance models and participating in decision making process.
	Public land settlement with cultural redress.
	Te Mana o te Wai – all water to be respected and mauri of water to be protected and enhanced. Iwi & Hapū cultural heritage.
	Mana whenua to be involved in management of water supply, used water and stormwater issues.
Post-settlement Governance Entities (PSGEs) i.e., Ngā Tāngata Tiaki o Whanganui	New governance models and participating in decision making process.
	Mana whenua to be involved in management of water supply, used water and stormwater issues.
	Public land settlement with cultural redress.
Horizons Regional Council	Environmental protection and regulation: Quality of receiving environments and compliance with consents for abstraction and discharge.
Government agencies including Office of the Auditor General, Audit New Zealand, Te	Interested in the prudent management of the stormwater activity and compliance.

Segment	Area of interest
Whatu Ora, Fire and Emergency New Zealand, Ministry of Local Government, Department of Internal Affairs, National Emergency Management Agency, Taumata Arowai, Climate Change Commission.	
Department of Conservation, Ministry of Agriculture and Fisheries	Interested in providing a sustainable service that does not negatively impact on the environment, promotes good practices, and meets legislative requirements.
	Environmental protection – Prevention of harm to flora and fauna which may be negatively impacted by the operation of three waters services.
Government service providers / customers: e.g. New Zealand Defence Force, Department of Conservation (DOC)	Council provides services on behalf of DOC and pays the Defence Force for the provision of services. There are contractual relationships established which are linked to performance and obligations.
Ministry of Business Innovation and Employment (MBIE) and other funding partners	External funding partners for capital upgrade works.
Other external stakeholders including environmental groups	Interested in improvement to the natural environment and efficiency initiatives.
Internal stakeholders	
Elected members: Mayor and Councillors	Interested in strategic outcomes, rates impact and customer satisfaction. Working with iwi and community groups.
Executive team	Accountable for strategic outcomes and user satisfaction.
Management, Corporate, Finance and Planning Teams	Ensuring the assets are meeting the expectations and the agreed levels of service. Activities are managed financially sustainably.
Land Transport and Recreation and Community Facilities Teams	Strong coordination with work programmes, planning and budgets. Managing water services assets along roads and public parks and reserves.

2.3 Legislative requirements

Statutory requirements have an impact on how Council operates to meet its stakeholder obligations. Key legislation affecting the stormwater activity are summarised in the following table.

Table 9 Main legislation influencing stormwater activity.

Legislation	Requirement
The Treaty of Waitangi / Te Tiriti o Waitangi	The Treaty of Waitangi / Te Tiriti o Waitangi is New Zealand's foundational document. It outlines the relationship between the New Zealand government and Māori and influences how local government engages with and manage assets that are significant to Māori.
Local Government Act (LGA) 2002	This Act requires local authorities to: • describe the activities of the local authority • provide a long-term focus for the decisions and activities • prepare an LTP, at least every three years. A key purpose of the LGA is the role of local authorities in meeting the current and future needs of communities for good-quality local infrastructure, local public services and performance of regulatory functions in a way that is most cost-effective for households and businesses. AMPs are the main method of demonstrating Schedule 10 requirements.
Health and Safety at Work Act 2015	The Health and Safety at Work Act 2015 (HSWA) is New Zealand's workplace health and safety law. The Act sets out the principles, duties and rights in relation to workplace health and safety.

Legislation	Requirement
Resource Management Act (RMA) 1991	The RMA is an established planning framework covering land designation processes and resource consents for activities that affect the environment. Horizons is responsible for monitoring compliance with the environmental provisions of this Act that relate to earthworks, sediment control, work within watercourses etc. This Act ensures compliance with Resource Consents issued for water taken from natural water resources. The new Government intends to repeal the Resource management system reforms - Spatial Planning and Natural and Built Environment Acts. The Natural and Built Environment Act 2023 is being repealed and the Government is now working on fast-track consenting.
	There are new requirements with the National Policy Statement (NPS) for Freshwater Management 2020 including giving effect to Te Mana o to Wai, improving degraded water bodies, and maintaining or improving all others using bottom lines, and an expanded national objectives framework.
Te Awa Tupua (Whanganui River Claims Settlement) Act 2017	The Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 imposes certain requirements on local government bodies in relation to the Whanganui River. Specifically: • Recognising the Whanganui River as a Legal Entity: RDC must acknowledge the Whanganui River as Te Awa Tupua, a legal entity with its own rights and interests. • Guardianship Responsibilities: RDC shares guardianship responsibilities with Whanganui iwi over the river's health and wellbeing. This includes actively participating in the river's environmental, cultural, and spiritual stewardship. • Collaboration and Cooperation: RDC is required to work collaboratively with Whanganui iwi, other stakeholders, and government agencies to manage the river sustainably and in accordance with the principles outlined in the Act. • Implementing Management Plans: RDC may be involved in developing and implementing management plans for the Whanganui River, ensuring that these plans align with the Act's provisions and uphold the river's status as a legal person. These requirements reflect a unique legal and cultural approach to environmental management, emphasising partnership, stewardship, and indigenous rights within the framework of New Zealand legislation.
Ngāti Rangi Claims Settlement Act 2019	The Whangaehu River is subject to the Ngāti Rangi Claims Settlement Act 2019, which has established the Te Waiū-o-Te-Ika framework for the catchment.
Taumata Arowai Water Services Regulator Act (2020)	Taumata Arowai administers the Water Services Act 2021 for ensuring safe drinking water. The standalone Crown entity Taumata Arowai has been created to regulate drinking water. The objectives of Taumata Arowai are to: • Protect and promote drinking water safety and related public health outcomes • Effectively administer the drinking water regulatory system • Build and maintain capability among drinking water suppliers and across the wider industry • Give effect to Te Mana o te Wai, to the extent that Te Mana o te Wai applies to the functions and duties of Taumata Arowai • Provide oversight of, and advice on, the regulation, management, and environmental performance of wastewater and storm water networks • Promote public understanding of the environmental performance of wastewater and stormwater networks.
Water Services Act (2021)	The Water Services Act 2021 is as part of the Three Waters Reforms. It established the drinking water standards and regulates all persons and organisations that supply drinking water. The main purpose of this Act is to ensure that drinking water suppliers provide safe drinking water to consumers by:

Legislation	Requirement
	• Providing a drinking water regulatory framework that is consistent with internationally accepted best practice. • Providing a source water risk management framework that, together with the Natural and Built Environment Act 2023, regulations made under that Act, and the relevant part of the national planning framework under that Act, enables risks to source water to be properly identified, managed, and monitored. • Providing mechanisms that enable the regulation of drinking water to be proportionate to the scale, complexity, and risk profile of each drinking water supply. The new Government is implementing its Local Water Done Well policies. This will be achieved through legislative amendments in a staged approach. A framework and transitional arrangements for the new water services system will be established.
Climate Change Response (Zero Carbon) Amendment Act	Climate Change Response (Zero Carbon) Amendment Act includes a target of reducing methane emissions by 24 to 74% below 2017 levels by 2050, and an interim target of 10% by 2030. It also has a target of reducing net emissions of all other greenhouse gases to zero by 2050. This will impact our asset portfolios including stormwater. The Government's first National Adaptation Plan to build resilient infrastructure was released in 2022 and focuses on getting the foundations right.
Civil Defence Emergency Management Act 2002 (CDEM)	The CDEM requires lifeline utilities to function at their fullest possible extent during and after an emergency and to have plans for such functioning (business continuity plans). This is being reformed as part of the Government's Emergency Management Trifecta Programme. This will impact how National Emergency Management Agency and Local Civil Defence Emergency Management Groups interact during emergencies.
Hazardous Substances and New Organisms Act 1996 (HSNO)	The purpose of the HSNO Act is to protect the environment and health and safety of people and communities by preventing or managing the adverse effects of hazardous substances and new organisms. The HSNO legislation takes a life-cycle approach to the management of hazardous substances, including their disposal, when such substances are no longer wanted and become waste. The disposal of waste hazardous substances is controlled through the Hazardous Substances (Disposal) Regulations 2001. These regulations provide for the treatment of the different classes of hazardous waste substances before disposal so that the substances are no longer hazardous.
Utilities Access Act 2010	The Utilities Access Act 2010 requires utility operators and corridor managers to comply with a national code of practice that regulates access to transport corridors. This impacts the stormwater network as these assets are sometimes located in the road corridor.

2.4 Policies, standards and guidelines

The primary documents that link and guide the stormwater activity are summarised in the following table.

Table 10 Key stormwater standards and guidelines.

Standard / Guideline	Description
Asset Management Policy (2024)	This policy defines the principles and responsibilities that Council applies when managing the infrastructure assets that Council is responsible for. It sets the strategic objectives for the management of assets and outlines the Council's commitment to continually improve the way it manages its infrastructure assets. The policy covers land transport, three waters, community facilities, community property, and solid waste.
Water New Zealand Best Practice	Water New Zealand is a national not-for-profit sector organisation that provides best practice guidelines in the provision of water services. The guidelines include (but are not

Standard / Guideline	Description
Guidelines and Technical Documents	limited to) modelling, standards for treatment plants and water loss calculations, guides for occupational health and safety and underground utilities-seismic assessment and design guidelines.
Standards Association of New Zealand	The Standards Association of New Zealand provides a range of standards covering required or recommended practice and which may impact directly on assets or management of contracts, e.g. NZS4404 Code of Practice for Urban Subdivision provides a range of water standards. Council has produced Subdivisions Policy (2014) on the standards required for subdivisions to further clarify information.

2.5 LOS linkages to well beings

The iterative process to set service levels, engage with the community and linkages to the Wellbeing Framework is shown below. The Living Ruapehu Portal Pūwhenua ki Ruapehu is a powerful new online portal designed to help local government lift community wellbeing. It brings together hard data with unique insights into people's actual lived experience through narrative.

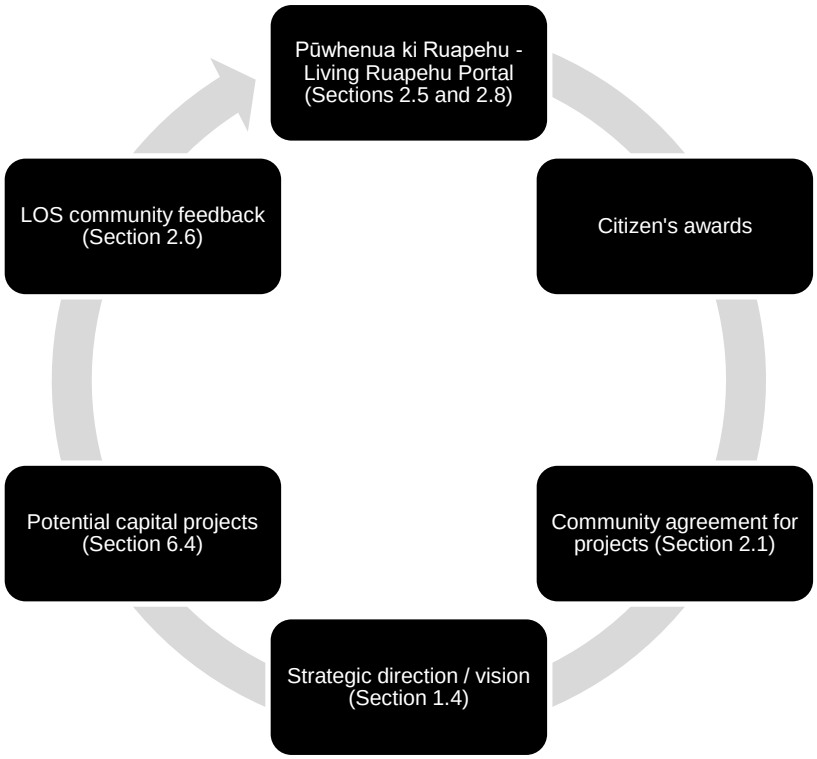


Figure 4 LOS linkages to wellbeing.

2.6 Community engagement

2.6.1 Engagement approach

Community and key stakeholder engagement on developing levels of service for water services used the following main consultation initiatives:

- Consultation with community groups for Annual Plan and LTP.
- Service request response levels (refer below).
- Treaty settlement co-governance groups Te Awa Tupua (Wanganui River).

Ongoing community engagement is outlined in Part 1, 2024 LTP. Extensive consultation is undertaken as part of the LTP process including localised community meetings, iwi, youth engagement, and Facebook. This covers levels of service as well as understanding local issues.

2.6.2 Customer service data

There has been a historic trend of five to ten jobs per month for stormwater service calls. In the last three years, there is a trend of increasing calls in the range of 10 to15 calls per month as shown in the figure below. Stormwater generally has low level number of calls per month compared to water supply and wastewater activities, except in major storm events.

Over the previous four years, 55% of requests for services have been for Council to investigate a stormwater network-related matter, followed by 26% for blockages in the stormwater network, 16% for assistance with information related to stormwater, and 3% for new connections.

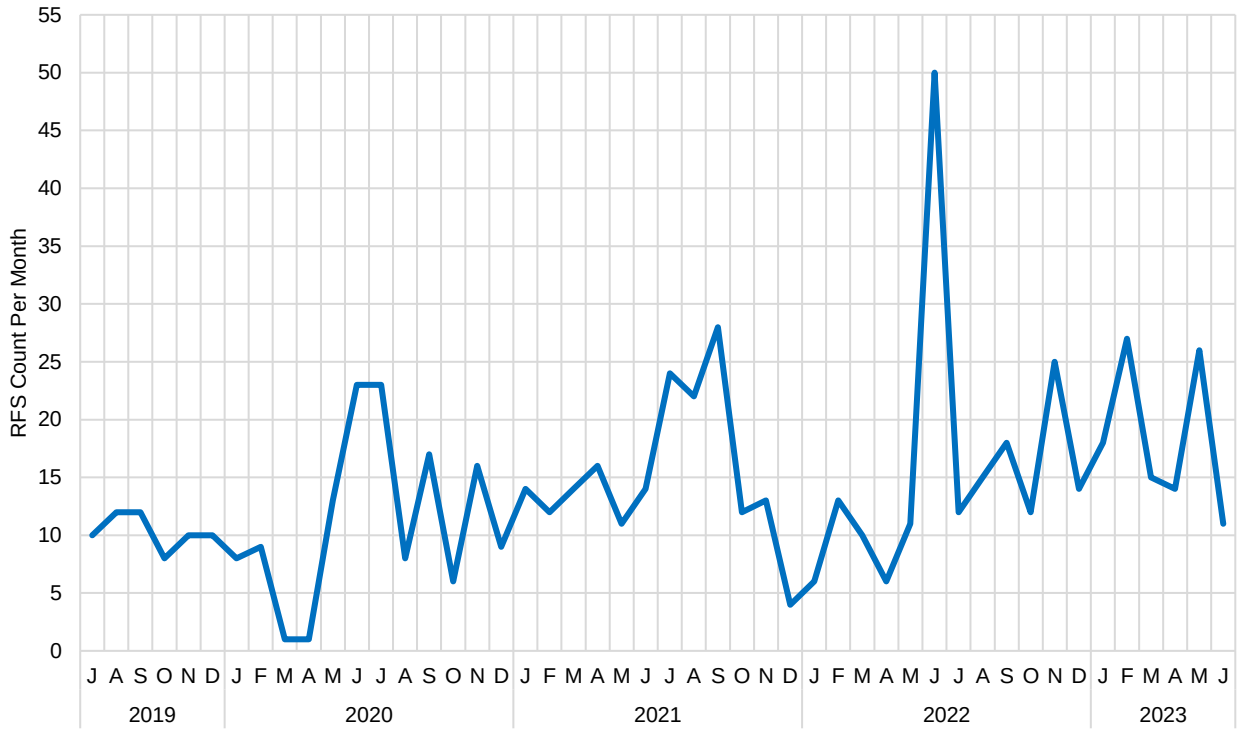


Figure 5 Number of stormwater service calls per month.
Source: Council data (February 2024)

Additional to the request for service calls above, Council tracks and reports on fault response times in the stormwater levels of service. Figure 6 to Figure 7 illustrates recent performance for responsiveness of services which includes median response time to attend a flooding event, and the number of complaints received (mandatory performance measures).

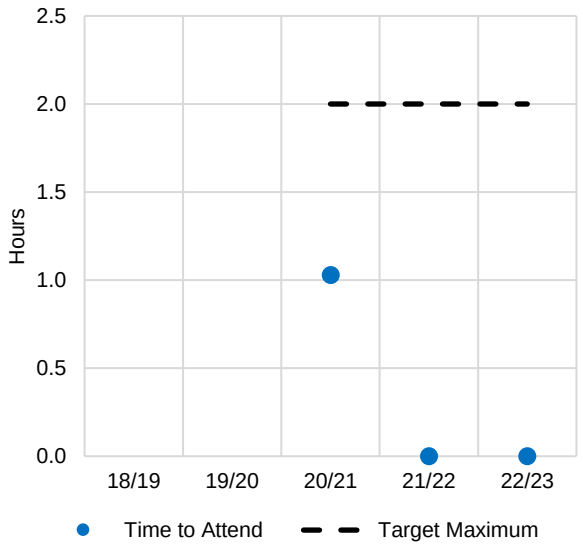


Figure 6 Urgent call-out fault response times.

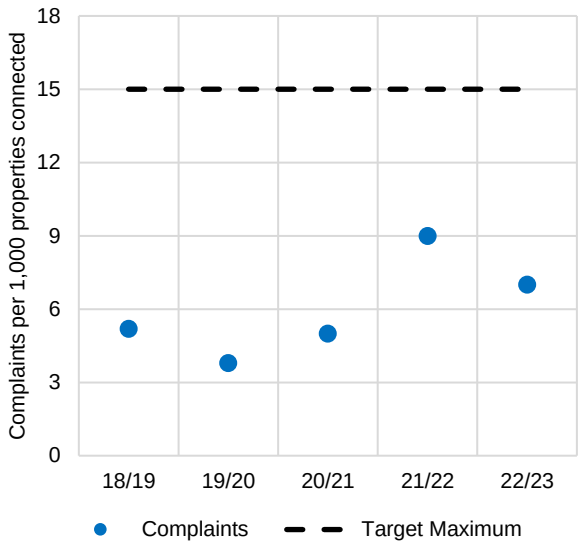


Figure 7 Non-urgent call-out fault response times.

2.6.3 Customer and resident surveys

Council conducted a customer satisfaction survey conducted in 2022 of resident and non-resident ratepayers. The summary included aspects for water supply and wastewater (detailed in their respective AMPs). No stormwater specific questions were asked as part of this most recent survey.

2.7 Service level summary

This section defines the levels of service that Council intends to deliver and the measures used for monitoring its performance. The LOS and performance measures for the stormwater activity are summarised in the table below.

The LOS statements are aligned to the Community Outcomes and categorised by Customer Outcomes. The performance measures are reported in the LTP and AMP. The full LOS table including future year targets are detailed in Appendix 8.2.

Key:

No data, new measure	Improvement/Achieved	Needs attention	Not achieved

Table 11 Service level summary – stormwater

Community Well Being Outcomes	Key service attribute	Levels of Service Statement	How we will measure our performance	Reported in	Current performance 2022/23	Current Year 2023/24 Target	2024/25 Target (year 1)
Our infrastructure assets and services are resilient and fit for purpose 	Safety – flood protection	Capacity / degree of protection	The number of flooding events that occur in a territorial authority district. For each event, number of habitable floors affected (per 1,000 properties connected to system).	LTP / mandatory	0	≤ 3 per 1,000 properties	≤ 3 per 1,000 properties
	Quality - reliability	To provide reliable stormwater networks	The number of complaints received by Council about the performance of its stormwater system (per 1,000 connections to Council's stormwater system)	LTP / mandatory	7	≤15 per 1,000 properties	≤15 per 1,000 properties
			Percentage of stormwater assets in satisfactory condition (condition grades 1,2 or 3)	AMP	Not measured for 2022/23	85%	85%
	Responsiveness	To provide prompt responses for service	The median response time to attend a flooding event, measured from the time that Council receives notification to the time that service personnel reach the site	LTP / mandatory	0	≤2 hours	≤2 hours
Our natural and built environment is healthy, strong and safe 	Sustainable - Environmental performance	Environmental impacts are managed, and resource consents complied with	Compliance with the Council's resource consents for discharge from its stormwater system. Measured by the number of:	LTP / mandatory			
			a) abatement notices		0	≤ 2	≤ 2
			b) infringement notices		0	≤ 1	≤ 1
			c) enforcement orders		0	≤ 1	≤ 1
			d) prosecutions received by Council in relation those resource consents		0	0	0

2.8 Service gaps

Overall, Council achieved the mandatory performance measures for 2022/23 covering flood protection, responsiveness to faults, customer complaints, and full compliance with the consent requirements. The current LOS are broadly meeting the mandatory performance measures. It is expected that capital improvements will be required to meet the new comprehensive stormwater consent, NPS for Freshwater Management 2020, and stormwater quality management.

The mandatory performance measures for flood protection does not always reflect the flood risks to our urban areas and communities. Known flooding issues are discussed in Section 4.3 Asset Performance. Planned expenditure to close the service gaps over the next ten years are summarised in Section 6.4

2.9 What does this tell us?

Measuring the level of service performance against the well beings for informing our community is described in the table below.

Table 12 Describing service and well beings

Levels of Service Statement	Link between the service and wellbeing
Capacity / degree of protection.	The number of habitable floors affected by flooding as expressed per 1,000 properties connected to Council's stormwater system.
Environmental impacts are managed, and resource consents complied with.	The degree to which Council complies with resource consents for discharges from the stormwater system.
Responsiveness of service. Continuity of service.	The time it takes for service providers to attend a flooding event. Timely responses protect people and property from natural hazards.
	The number of complaints received by Council about the performance of its stormwater system gives us an indication of the quality of service provided to the community.

3 MANAGING GROWTH AND DEMAND

3.1 Growth and demand overview

With the change in District growth and / or change in residential use comes an increase in stormwater volumes from hard surface areas in newly developed urban areas. The level of surface imperviousness and the frequency and intensity of rainfall events are the two main parameters impacting future stormwater flows and demands.

This section describes how the Ruapehu district is developing, and the approach Council will take to manage the effects of demand and growth for the stormwater activity and the impacts on stormwater. With an increased demand for housing means increased demand for stormwater infrastructure capacity.

Council is responsible for the provision and management of stormwater in urban environments. HRC is responsible for the river control schemes. Managing stormwater runoff between these two systems is sometimes not clear for our communities.

3.2 District growth at a glance

A snapshot of Ruapehu's current population and demographics is shown below.

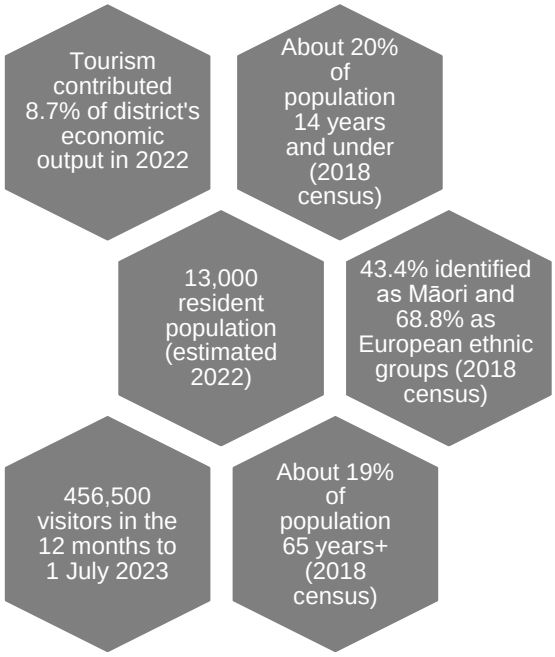


Figure 8 Snapshot of Ruapehu's population profile

3.3 Demand factors

3.3.1 Population growth

Ruapehu District's resident population has been relatively constant at about 13,000 people. It is only projected to increase to 13,800 by 2048 (based on 2018 census) under the high growth scenario and decline under the medium and low scenarios. This impacts the stormwater assets as there is a limited ratepayer base to share the financial load to contribute to this activity.

Council's growth planning analysis for the 2024 LTP has assumed that all identified communities within the district will experience an increase in usually resident population over the next 10 years, experiencing a mixture of low, medium, and high growth levels. The total District usually resident population is expected to increase by up to 3.5% between 2024 to 2034.

3.3.2 Existing stormwater challenges

Existing stormwater demand management challenges include:

- Existing stormwater systems at the bottom of the catchments are unable to cope with the effects of growth.
- Much of Ruapehu's urban developments are built in flood plains including Ohakune and Taumarunui (about half of the township for both).
- Ohura township is built in a flood plain.
- Mountain storms and flooding risk.

Measures put in place by RDC to manage existing stormwater demands include:

- Ruapehu District wide River Management Scheme.
- Flood protection scheme.
- Auxiliary rock works at the front and around the Victory Bridge on the Whanganui River.
- Horizons Regional Council has an Upper Whanganui River Flood Control Scheme.

3.4 Future capacity

3.4.1 Stormwater capacity

There is a general trend of stormwater produced by increasing impervious areas, larger roof areas and reduced green spaces across the district which implies growing demands on infrastructure capacity. Currently, the proportion of the district that is impervious is unknown. It is acknowledged that this may increase with growth, especially in the development area of Ohakune. The Flood Modelling and Mapping produced in 2023 provides a sound basis for planning and looking at current and future capacity requirement for Ohakune.

The capacity demand on stormwater and flood protection infrastructure will be significant, particularly in the Waimarino area (inclusive of Ohakune, Raetihi and Rangataua) which, with National Park, is the area in the district that is expected to continue to experience positive growth.

3.4.2 Flooding impacts on District

Council has experienced intense mountain storms that are very localised and sometimes only affect one or two townships. They have affected habitable floors and inundated wastewater systems. Council works with HRC to capture data and validate their flood modelling in Ohakune and then project out the future risks and mitigation measures. HRC has introduced a flood protection scheme for Ohakune. This scheme is in its infancy and a formal strategy to manage the risks, and mitigation measures that may still be required such as raising houses, relocation and bunds, covenants on land titles and minimum floor heights will also have yet to be considered.

HRC has several rural schemes in the rural zone such as Pakihi. In addition to the Ohakune scheme, a Ruapehu District Wide scheme was formed to help manage the rivers or sections of rivers that do not fall into the scheme.

Taumarunui township is protected from the Whanganui River flooding via the Upper Whanganui River Flood Control Scheme owned and operated by HRC. Council has its own auxiliary rock works at the front, and around the Victory Bridge on the Whanganui River, but it was considered prudent that this be developed and managed by the Regional Council who have expertise in this area.

Taumarunui township has an internal risk of a localised storm event creating flooding within the township because water cannot get through the stop bank and into the Whanganui River. This can be alleviated by increasing the outlet structures, allowing more drainage water to flow into the river before it rises. However, when the river is in full flood, the water will no longer discharge through the outlet structures as the flood flaps will shut. The only option is then for the water to move out of its channels into alternative paths and form a pond in the Taumarunui Domain. Pumping over the stopbank into the Whanganui River may also be considered but the size and volume that must be pumped may not be achieved any return on investments for intense rainfall events.

These works were summarised and prioritised into a programme of works to deliver the best outcome for the resource effort and to protect the greatest number of properties in a storm event. Any works near the stopbank requires resource consent under the One Plan. Council has lodged an application after iwi and public consultation for an infrastructural consent for works near a stop bank. This consent will enable all Council works including drainage works to be undertaken. Councils have an ongoing work programme to resolve this issue in conjunction with HRC.

Raetihi township - drain clearance within the township has significantly enabled water to release to the river. River modelling at the township will provide an understanding of the Makotuku flow levels that affect the township. This is around the rise of the river height preventing the township draining into the river. Some willow clearance work has been undertaken to increase the river capacity, but the actual effect has not yet been quantified. Horizons have installed a hydrological site just upstream from the township to provide more detailed information.

Ohura township is built in a flood plain and remains the most at risk community but rejected Horizon's proposal to develop a flood management scheme for the township. Council purchased flood damaged buildings and placed building restrictions on floodable land. The remaining community has adopted adaptive management approach through resilience planning; being prepared and enacting their response regularly. In 2017 Council contributed to Horizons flood warning system (rain gauges and river heights) by adding more data connectivity and sirens throughout the town. Council's Civil Defence Officer and Horizons continue to work with the community.

Drainage and stream channel integrity remain the best mechanism to maintain low impacts on our other small communities. At the District Plan review more work will be done on minimum floor heights in green field builds to reduce the risk of their flood vulnerability.

3.5 Demand management programme

Managing Council's stormwater demand is not only about managing increasing future needs and expectations but is also about changes in behaviours and philosophy. Council's current stormwater demand management programme is summarised in the table below.

Table 13 Current stormwater demand management programme.

Programme	Description
District Plan	The District Plan is the legal framework that Council uses for land use planning. The management of imperviousness areas is promoted along with appropriate stormwater management. It contains provisions governing stormwater and flood protection management, including implementing planning controls to limit future development in known problem areas that are too costly to solve.
Request for Service (RFS)	The Council provides on-going operational and maintenance support to properties within the stormwater areas of service. This helps reduce the amount of flooding and inundation.
Public education and awareness	Education and awareness encourage sustainable stormwater management including: • rain gardens, pervious pavements and storage of peak volumes in high-risk areas. • minimisation of rainwater into the wastewater network through faulty private drains and illegal stormwater connections. • promoting environmental awareness and the effects of activities such as car washing, where contaminants may enter the stormwater system through sumps.
Sustainable development	Developers are encouraged to use best practice guidelines for water sensitive development as bio retention and low impact design. Opportunities are to be sought to regenerate existing urban areas by improving amenity values for the community. Stormwater neutrality required for urban development and upgrade works though the bylaw.
Climate change planning	Councils' response to climate change includes building our knowledge based on latest thinking nationally and participating in forums where appropriate. Councils developing an adaptation approach to climate change in collaboration with Regional Council. Refer to Section 5.4 Climate Change and Resilience for further details. Pipe sizes are increased during replacement supports achieving climate resilience.

3.6 Growth and demand assumptions

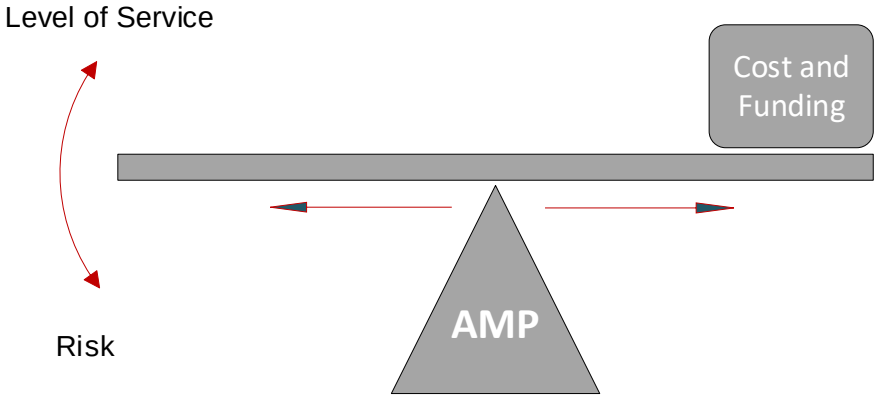
The key growth and demand assumptions are as follows:

- Population forecasts based on Statistics New Zealand 2018 census data.
- Council's growth planning analysis for the 2024 LTP has assumed that:
  - The total district peak population is set to decrease by up to -2.66% between 2024 to 2034.
  - The total District usually resident population is expected to increase by up to 3.5% between 2024 to 2034.
- Food production and tourist demand will continue in the district.
- Ohakune will continue to experience significant population growth driven by new land developments.

4 LIFECYCLE MANAGEMENT

4.1 Lifecycle management overview

The objective of lifecycle management is the management of assets from conception to disposal whilst meeting levels of service, minimising risk and whole of life costs. Council delivers stormwater and flood protection services to deliver the LOS defined in Section 3 in the most cost-effective way over the life of the asset. Council's AM approach is the appropriate balance between LOS, risk and cost as shown below.



Council's lifecycle management strategy is to maximise the useful and economic lives of its assets in order to reduce the cost of the stormwater service to the community. The primary factors considered in managing the district's assets to maximise their service lives are:

- The consequential risks of an asset failing.
- The extent, duration and frequency of interruption to the stormwater service due to repair or replacement of an asset.

4.2 Asset summary

Council provides stormwater and flood protection services within the District to approximately 5,392 rateable properties via the following eleven Council-owned stormwater networks: Kakahi, Matiere, National Park, Ohakune, Ohura, Ōwhango, Raetihi, Rangataua, Raurimu, Taumarunui, and Waiōuru.

Each of these stormwater networks comprises an integrated system of stormwater pipelines, culverts, manholes, sumps and watercourses. District-wide overview information on Council's stormwater systems and assets is provided in Table 14 with township specific information provided in Part 4 Appendix B and C. Additional detailed information on each individual asset with respect to type, location, size, material, installation year, is stored in Council's GIS and (Universus asset management system).

Table 14 Stormwater asset summary

Township	Rateable properties connected	Stormwater Pipeline Length (km)	Culverts (m)	Watercourses (km)	Manholes	Sumps
Kakahi	52	0.32	0	2.4	2	0
Matiere	0	0.13	72	0.0	0	0
National Park	313	2.92	50	0.9	37	38
Ohakune	1,700	12.10	350	10.8	166	242
Ohura	0	0.51	74	2.4	0	0
Ōwhango	148	0.14	68	0.3	2	1
Pipiriki	0	0.00	0	0.0	0	0
Raetihi	565	3.98	116	4.7	21	51
Rangataua	214	2.30	0	1.1	42	23
Raurimu	0	0.00	12	0.0	0	0
Taumarunui	2,315	26.48	407	10.2	350	496
Waiōuru	85	1.25	0	0.0	9	27
Total	**5,392**	**50.12**	**1,149**	**32.9**	**629**	**878**

Source: Veolia Infrastructure Asset Valuation (July 2022).

* Rateable properties served are the total number of connections including all residential dwellings, commercial pans and properties charged for stormwater (provided by Council as at February 2024 as recorded in the financial system).

The stormwater assets had a gross replacement cost of $33.8 million and depreciated replacement cost of $17.0 million (as at 1 July 2022). The value by the major asset class is summarised in Section 6.5 with the full valuation in Appendix E, Part 4.

4.2.1 Stormwater pipelines

Stormwater is collected via 50.1 km of stormwater pipelines in total (including small communities) of various sizes and materials and is summarised in Table 15 following tables and figures. Most of the stormwater pipe network is 160-375mm diameter in size, and concrete material. By age, 58% of the network was laid after 1980, with 30% laid from 1950-1969.

Table 15 Stormwater pipeline details.

Diameter (mm)	Length (km)	%
<=150mm	4.4	8.8%
160-280mm	15.3	30.6%
300-375mm	17.9	35.7%
400-750mm	11.3	22.5%
>750mm	1.2	2.4%
Unknown	0.0	0.0%
Total	**50.1**	**100.0%**
Material	**Length (km)**	**%**
AC	0.3	0.5%

PVC/uPVC	2.9	5.8%
GEW	0.8	1.6%
HDPE	1.8	3.5%
STEEL	0.7	1.3%
CONC/RCRRJ	42.6	84.9%
Unknown	1.2	2.4%
Total	**50.1**	**100.0%**

Date laid	Length (km)	%
Pre 1950's	1.3	2.6%
1950-59	5.6	11.2%
1960-69	9.6	19.2%
1970-79	4.4	8.8%
1980-89	18.6	37.1%
1990-99	1.8	3.6%
2000-09	6.9	13.8%
2010-19	1.7	3.3%
2020 onwards	0.1	0.3%
Total	**50.1**	**100.0%**

Source: Veolia Infrastructure Asset Valuation (July 2022)

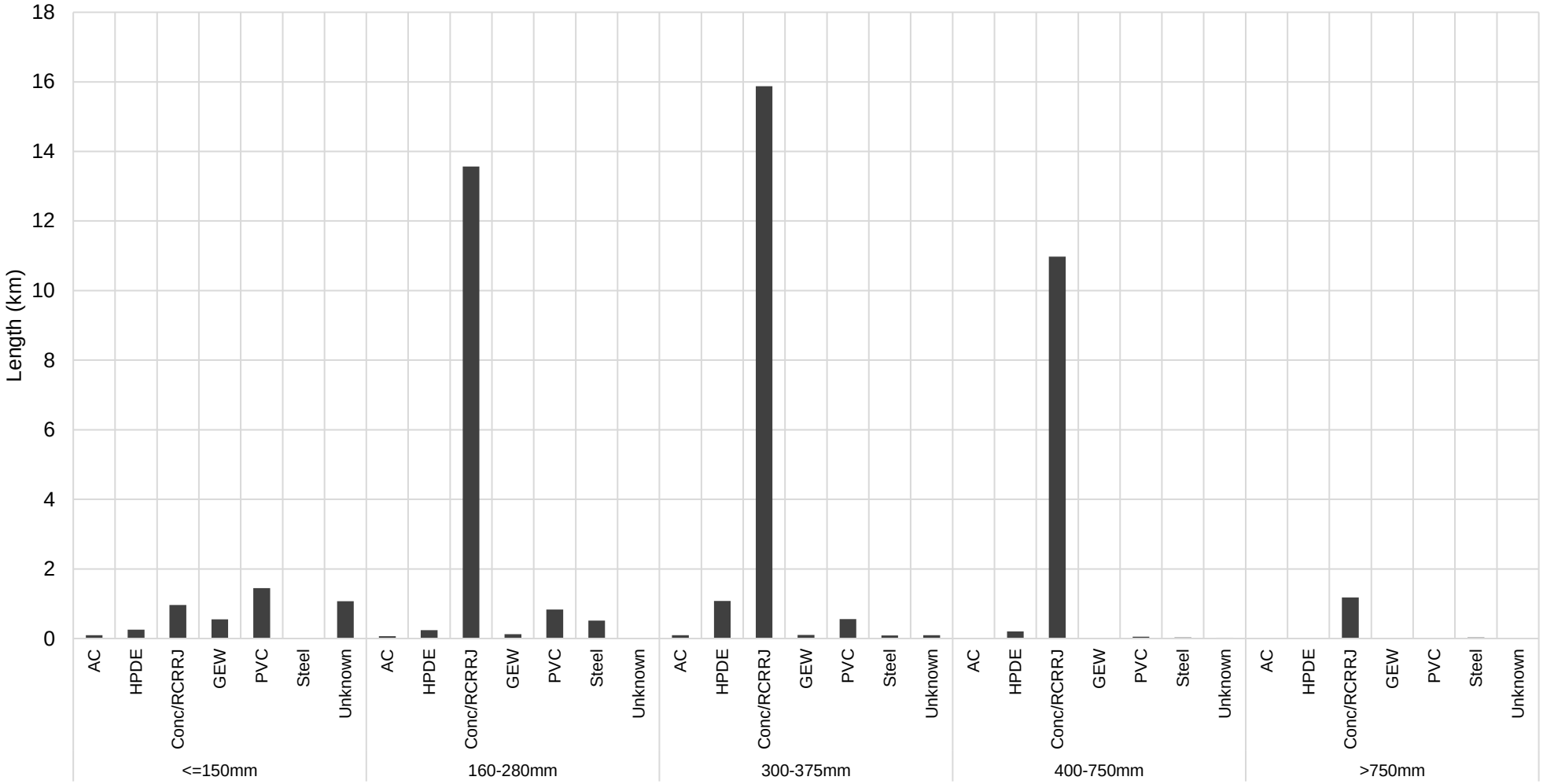


Figure 9 Stormwater pipeline material and diameter

Source: Veolia Infrastructure Asset Valuation (July 2022).

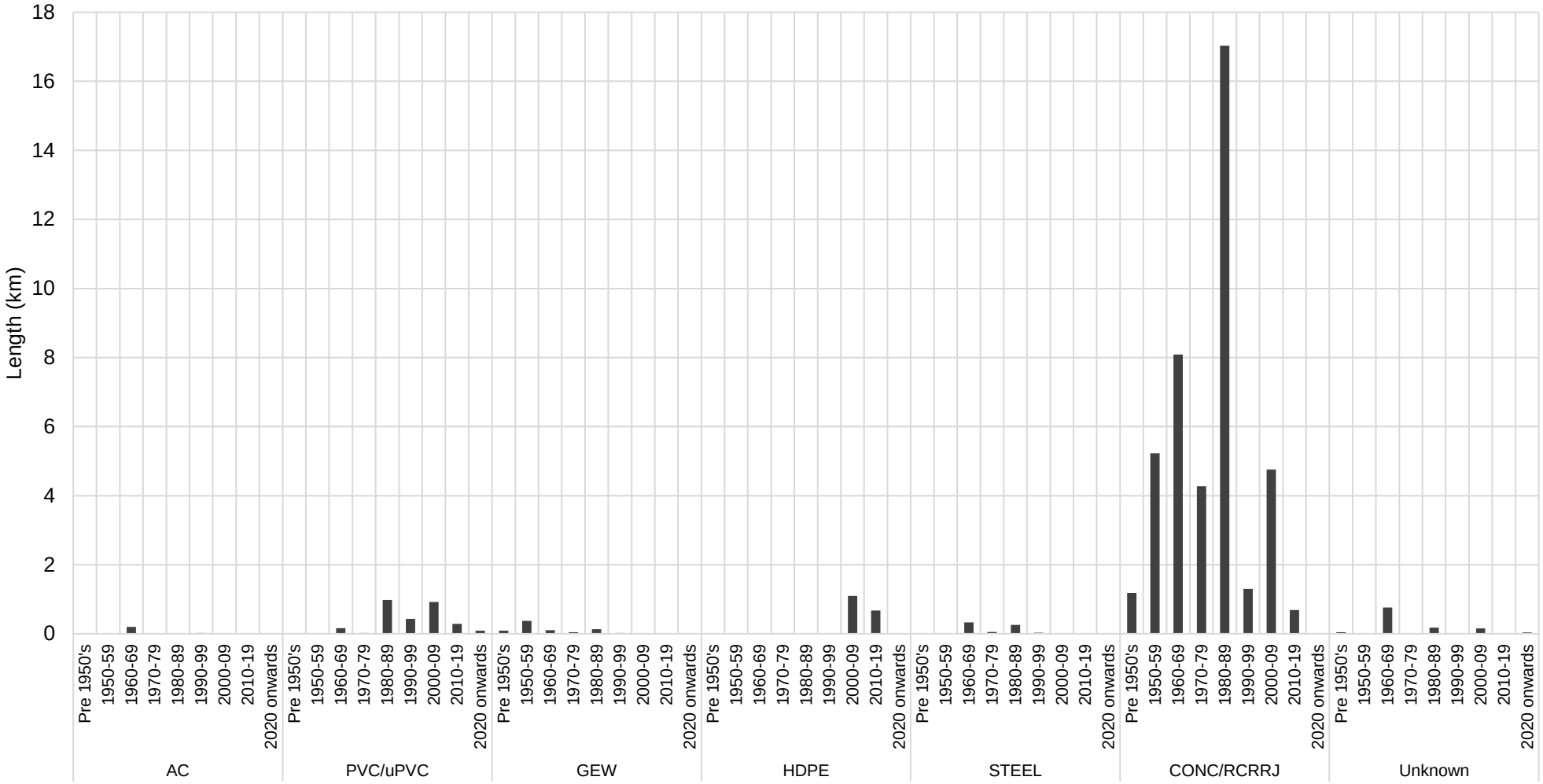


Figure 10 Stormwater pipeline material and decade installed

Source: Veolia Infrastructure Asset Valuation (July 2022).

4.2.2 Watercourses

Approximately 32.9km of watercourse, 12.3km of public drains and 19.2 km of open channel also collects and transports stormwater generated within the district.

Ohakune has a number of watercourses flowing through the township which have been maintained periodically. The Mangawhero River and Mangateitei Stream are the major waterways running though Ohakune. There are significant esplanade reserves that from time to time requiring erosion maintenance through rock wall development. This work is undertaken by Council's Community & Recreational Facilities in conjunction with HRC.

Where watercourses and open drains flow through private property, maintenance has generally been left to the owner's discretion. In future, a co-ordinated effort will need to be made to remove vegetation which is restricting flow under structures through the township.

Choke in Miro Street watercourse - tributary in Ohakune

4.2.3 Manholes and sumps

There are 629 manholes in total across the network that provide access to stormwater pipelines for inspection and maintenance. There are 878 sumps across the network that collect stormwater and direct it to the stormwater pipelines.

4.2.4 Critical assets

The criticality of the asset is an indicator of the consequence of asset failure with respect to how its failure will impact overall operational performance, operator and customer safety, and the environment. The criticality of assets is assessed using the criteria below.

Table 16 Asset criticality assessment criteria.

Criticality Index	Criticality	Criteria
1	Non-critical	Failure will not have an adverse impact on safety, performance or the environment, e.g., sample valve.
2	Low criticality	Failure would have an adverse impact, but protection such as redundancy protects against it, e.g., pumps in duty-standby.
3	Critical	Failure will have an adverse impact on safety, performance or the environment, e.g., pump with no standby.

The criticality of assets is assessed using the criteria in the following table. Critical asset identification is currently used in decision making with renewals, condition assessments and operational activities. The categorisation of critical stormwater assets at component level has been completed as part of the condition assessments.

The following assets have been identified in the table below as being critical based on operational knowledge and studies completed to date, with a greater level of management applied to them. It was also reviewed as part of the National Transition Unit (NTU) process in 2023.

Table 17 Critical assets by township

Township	Asset category	Description
District-wide	• Stormwater pipe • Culverts • Watercourses • Manholes • Sumps	
	Flood Management Scheme	It has been established with Horizons as the lead authority. Horizons are now seeking a resource consent for the management in the waterways in the scheme.
Ohakune	Open channel	Miro Street channel – this channel is full and is unable to take any further increases without causing the likelihood of flooding.
		Most channels passing through urban Ohakune, excluding Mangawhero and Mangateitei Rivers, are unable to take additional runoff from development without the likelihood of flooding.
Taumarunui	Stopbank drainage	Internal drainage release through the stopbanks during storm events which do not coincide with the Whanganui River in flood.
	Pipework and open channels	Investigate the pipe capacity and channel system through the township.
Raetihi	Drainage network	Continued improvement of the drainage networks through willow clearance.
	River scheme (managed by HRC)	Understanding the river capacity issues and river flows which will affect the township.

4.3 Asset performance

Asset performance of our stormwater network is assessed in terms of capacity constraints (flood protection) and stormwater quality. There is now greater emphasis on environmental and cultural outcomes with the additional oversight of stormwater services by Government and Regional Councils as well as the suite of legislative and regulation changes to improve freshwater ecological health. Historically, we have been more reactive than proactive with managing the performance of the stormwater network particularly stormwater quality. This section sets outs out the key initiatives that we intend to undertake, recognising that this takes time.

4.3.1 Performance by asset class

The overall performance of Council's stormwater and flood protection assets is summarised in the table below. Specific information on asset performance for each of the individual stormwater networks is provided in Appendix C, Part 4.

Table 18 Asset performance summary by asset class.

	Asset Capacity/ Performance Grading	Comment/Substantiation
Network		
Stormwater and Flood Protection	2	The operation of the stormwater and flood protection assets is typically satisfactory provided ongoing maintenance is undertaken to ensure sumps and stormwater pipes are kept free of debris and open drains are sprayed and kept clear of vegetation.

Performance grading scale: 1 = very good; 2 = good; 3= moderate; 4= poor; 5 = very poor.

Although Council is monitoring the stormwater pipeline blockages as a technical LOS for asset performance, the public stormwater network is mainly open drains, so blockages are less relevant compared with wastewater.

4.3.2 Performance by township

Overall asset performance grades by township are provided in the table below. Minor stormwater improvement works were undertaken by Council which, along with regular ongoing maintenance, have had a positive impact upon asset performance.

Table 19 Performance of individual township systems

Stormwater System	Asset Capacity/Performance Grading
National Park	2
Ohakune	3
Ohura	2
Ōwhango	3
Raetihi	2
Rangataua	2
Raurimu	3
Taumarunui	2
Waiōuru	2

Performance grading scale: 1 = very good; 2 = good; 3= moderate; 4= poor; 5 = very poor.

4.3.3 Consent conditions

Historically Council has not applied for resource consents to discharge stormwater from its townships. The towns are largely built in high alpine swamp plains with limited drainage. There are numerous drains and streams through these townships with numerous short drainage pipes to the streams. Global consents will be required for these communities across the Ruapehu District, and this is identified as a future improvement project.

The preparation for the stormwater discharge consent still needs to be undertaken. A significant amount of work will be required to prepare the consent application and supporting technical information. The One Plan has stringent conditions regarding discharges of water to the receiving environment as well as the considerations of the NPS for Freshwater Management 2020. Consents are subject to requirements that restrict the quality of water that can be discharged, the main purpose of this is environmental protection.

Council anticipates that we will likely need to improve the quality of our stormwater that is discharged. This will require a proactive approach to retrospectively fit infrastructure that assists with improving stormwater quality as opportunities arise.

4.3.4 Drainage performance

In general, stormwater and wastewater networks in Aotearoa New Zealand are separate systems. However, stormwater inflow and infiltration (I&I) into the wastewater network is a significant problem. Inflow is used to describe direct flows of stormwater into the wastewater network – and can arise from issues such as illegal connections of stormwater into the wastewater network or from surface water flowing into gulley traps in residential properties.

Infiltration refers to stormwater or groundwater flowing into the pipes or manholes where they have cracked – which happens due to ground movement. This means that during rainfall, the wastewater network can be prone to overflowing. Generally, the wastewater network has been designed so that, in the event of an overflow from the wastewater network, it is able to discharge into the stormwater network or the nearest stream or estuary. The reason for this was flooded streams can assimilate the wastewater without causing environmental harm. Public health is safeguarded with the wastewater not being in contact with the general population.

Refer to the 2024 Wastewater AMP for the details on the current I & I programme.

Other asset performance issues are:

- Raetihi - One of the major gaps in level of service identified is the potential for flooding in Raetihi. Flood water in the Makotuku River can prevented the drains and streams which flow through the town entering the main water body. Horizons and Ruapehu District Council have cleared willows from the Makotuku riverbank thought to be reducing the stream capacity. Work now needs to assess the effectiveness of increasing the channel capacity which will help. Adaptive management and mitigation options will need to be considered in the future.
- Ohakune flood model has been validated since the 2013 flood. Currently Horizons are undertaking consultation with the public to assess the interest in the development of a flood management scheme on the Mangawhero River and its tributaries around Ohakune township down to the current private stopbank. Should the Community reject the development of a scheme Council will need to do more works.
- Operations - A Memorandum of Understanding between HRC and Ruapehu District Council to clarify works and responsibilities needs to be developed and identified as an improvement project. The ratepayer is the same and needs to see efficient and effective collaboration of works.
- Horizons have now developed a Ruapehu District Scheme for vegetation management planning for other rivers outside the main schemes. Willows and other vegetation need to be managed to prevent the development of islands, reduce riverbed capacity and ultimately result in altering of the water course. This has been experienced in Raetihi, Ohura, Kakahi and Taumarunui.

4.4 Asset condition

4.4.1 Condition by asset class

The overall asset condition of Council's stormwater asset classes is summarised below by major asset class. This shows that all asset classes are considered in good condition. Specific information on asset condition for each of the individual stormwater networks is provided in Part 4, Appendix D.

Table 20 Asset condition by asset class.

Asset Category	Asset Condition Grading	Comment/Substantiation
Network		
Stormwater and Flood Protection	2	The condition of the stormwater pipework, manholes and kerbside sump stormwater entry pits is generally good.

Performance grading scale: 1 = very good; 2 = good; 3= moderate; 4= poor; 5 = very poor.

Table 21 Condition of individual township systems

Stormwater System	Asset Condition Grading
National Park	2
Ohakune	3
Ohura	2
Ōwhango	3
Raetihi	2
Rangataua	2
Raurimu	3
Taumarunui	3
Waiōuru	2

Performance grading scale: 1 = very good; 2 = good; 3= moderate; 4= poor; 5 = very poor.

Minor stormwater renewals / improvement works have also been undertaken by Council which have had a positive impact upon asset condition. Indicative projects are shown in below.

Improving Outfall of Stormwater

State Highway 4, Raetihi
New Stormwater Line

Installing a New Wing Wall, Taumarunui

Figure 11 Minor stormwater renewals and improvement works.

4.4.2 Condition assessments

Asset condition and performance monitoring is undertaken to identify under-performing assets and those about to fail on a day to day basis. The formal asset condition monitoring utilises asset capacity/performance information and asset condition information collected during routine system operation and maintenance. This includes:

- Physical condition inspection assessments.
- Resource consent discharge compliance.
- Request for service numbers.
- Customer interruptions – blockage numbers.
- Customer satisfaction.
- Asset failure work order records.

The assessments of capacity / performance and condition is undertaken on a rolling basis. It is intended to re start the condition assessment of stormwater assets in 2025/26.

4.5 Lifecycle management decision making

Lifecycle management activities are categorised based on expenditure category, lifecycle management plan categories and activity categories as shown in the table below. The decision-making process for the determination between maintenance, renewals and creation is shown in the figure below. This decision-making tree is used by Veolia in their daily operation activities.

Table 22 Lifecycle management activities

Expenditure Category	Related AMP Lifecycle Management Plan	Activity Category	Description
Operations	Routine Maintenance Plan	Operations	Operations incorporate all expenditure necessary for day to day operation and also includes for asset management planning activities.
		Maintenance	Maintenance incorporates all expenditure necessary to ensure ongoing operability of the asset, but which does not extend the overall asset life. Includes planned maintenance (preventative and corrective) and unplanned maintenance (breakdown).
Capital	Renewals/ Replacement Plan	Renewals	Renewals incorporate all expenditure necessary to overhaul/rehabilitate an asset where this expenditure extends the overall asset life or completely renew/replace the overall asset.
	Creation/Acquisition/ Augmentation Plan	Growth	Growth incorporates all expenditure to add infrastructure/infrastructure capacity in order to expand services (provide service to future customers).
		LoS	Levels of service incorporates all expenditure to improve performance/achieve (existing customer) LoS.

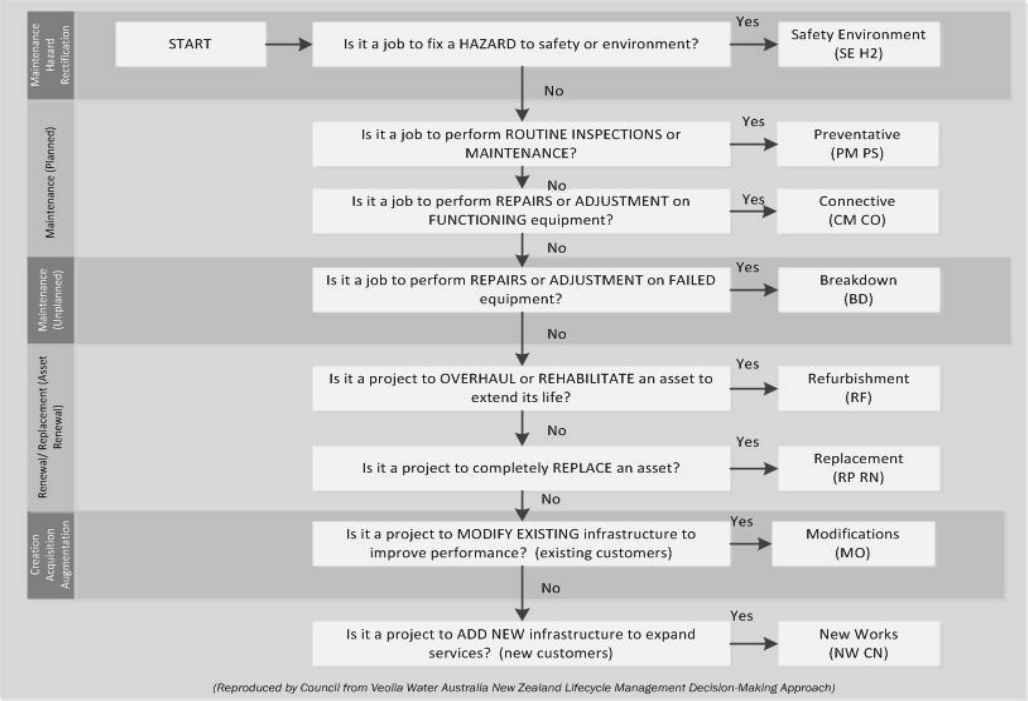


Figure 12 Asset maintenance, renewals and creation decision making.

4.6 Service delivery arrangements

Council has engaged a Facilities Management Contractor (Veolia) to undertake day to day operation and maintenance works and, in a partnering arrangement, assists Council with asset renewals, upgrades and improvements and long-term asset management planning activities.

Planned maintenance is scheduled by Veolia according to contract specified requirements and maintenance schedules. Planned maintenance schedules are driven by factors such as legislative requirements and historical failure frequencies (preventative maintenance) and SCADA trends (corrective maintenance).

Unplanned maintenance relating to the stormwater networks within the district is typically generated by customer notification to the Council customer service centre. The work request is entered into the Council RFS system and forwarded to the facilities management contractor for action within the KPI timeframes existing under the Facilities Management Contract.

The current contract has been in place for approximately 25 years and is generally seen as successful arrangement for a small Council with remote communities. Rolling the contract over, rather than developing new contracts and going to the market, has been the preferred approach as the Government's approach was to form regional water entities (subsequently abandoned). A Section 17A service delivery review was completed in November 2020, with the outcome to continue to outsource the service delivery.

External specialist consultants are used periodically for activities such as consenting and flood modelling.

4.7 Operations and maintenance plan

Asset operations and maintenance tasks relate to the day to day running and upkeep of assets and their associated costs. The objective of the operation and maintenance activities is to maintain and operate the system such that the performance and reliability targets within the stormwater LOS are met. Council keeps the stormwater facilities suitable, accessible, safe, and well maintained by carrying out planned and reactive maintenance.

A breakdown of Council's operation and maintenance activities is included in the following table.

Table 23 Operation and maintenance activities

Plan Component	Description	Specific items
Operations	Work conducted for the operation of Council's Stormwater and Flood Protection systems to ensure optimal performance and quality control to meet regulatory and level of service requirements. Includes for Council corporate overhead costs, day to day operational costs and long term planning and asset management costs.	Council labour, corporate systems and overhead costs providing for the following services required to deliver stormwater services to the Ruapehu District: • Operations services • Customer services • Operations (facilities management contractor). • Operator labour for stormwater reticulation operation. • Facilities management contractor depot, vehicle and overhead costs. • Insurance. • Consultants/testing/software/other services.
Hazard Management (Safety or environmental)	Work undertaken by the Facilities Management Contractor to fix a hazard which is affecting safety or the environment.	Replacement of stormwater manhole lids or sump grates.
Preventative Maintenance *(Planned)*	Periodically scheduled inspections and maintenance scheduled by the Facilities Management Contractor according to established maintenance schedules within the contractor's CMMS.	Facilities management contractor costs associated with undertaking ongoing planned maintenance items including: • Stormwater manhole inspections. • Open channel/watercourse inspection and cleaning/spraying (where required). • Stormwater network sumps and mains cleaning.
Corrective Maintenance *(Planned)*	Planned maintenance, typically identified from preventative maintenance tasks, scheduled by the Facilities Management Contractor, to return an asset to its required LoS.	• Haunching of manhole lids • Relining of pipe
Breakdowns Maintenance *(Unplanned)*	Reactive maintenance, typically as a result of a RFS call to Council's call centre, required to be undertaken by the Facilities Management Contractor to return a failed asset to its required LoS.	Facilities management Contractor costs associated with undertaking reactive maintenance items including: • Cleaning of stormwater blockages. • Repair of collapsed gravity stormwater mains. • Repair of manholes. • Replacement of stolen manhole lids • Inspection and problem remedy in response to stormwater flooding complaints.

4.8 Asset renewals plan

Asset renewals do not increase the asset design capacity but restore, rehabilitate, replace or renew existing assets to their original capacity. Council strategy with respect to asset renewal is that they will rehabilitate or replace assets when justified by the factors in the table below.

Table 24 Asset renewal factors.

Factor	Description
Risk	The risk of failure and associated financial and social impact justifies action (e.g., probable extent of damage, safety risk, community disruption).
Asset performance	Renewal of an asset when it fails to meet the required level of service. Non-performing assets are identified by the monitoring of asset reliability, efficiency and quality during routine inspections and operational activity and through performance and condition assessments. Indicators of non-performing assets include repeated and/or premature asset failure, inefficient energy consumption, and inappropriate or obsolete components.
Economics	When it is no longer economic to continue repairing the asset (i.e. the annual cost of repairs exceeds the annualised cost of renewal).
Efficiency	New technology and management practices relating to increased efficiencies and savings will be actively researched, evaluated and where practical, implemented.

Renewals are prioritised and programmed in accordance with the following criteria, or in urgent cases undertaken immediately:

- Public safety risk.
- Environmental risk.
- Criticality of asset to operation.
- Criticality of asset to achievement of service standards and outcomes.
- Financial risk of deferring work.
- Intensity of usage.

Renewal identification process:

The renewals programme is planned for the assets nearing the end of their useful life. This plan is then validated against the actual pipeline condition / performance before it is renewed.

Comparison with annual depreciation, historical and forecast expenditure at major asset class level is shown below. This shows that historical expenditure has been much less than annual depreciation (except in 2021/22). The ten-year renewal forecast is still less than the annual depreciation. This will need to be monitored to ensure existing levels of service are not impacted and that the asset is preserved long term with the investment level.

Table 25 Renewal expenditure versus annual depreciation comparison.

Asset class	Annual depreciation (2022)	Actual renewals (2020/21)	Actual renewals (2021/22)	Actual renewals (2022/23)	Ten-year renewals forecast (average per year)
All	410,280	38,000	486,000	58,181	215,000

Key renewal projects:

Key stormwater renewal projects for the district are indicated in the following table. The investment levels in stormwater renewals over the ten years are relatively low and needs to be monitored as noted above. Majority of the renewal investment is in Taumarunui. Project specific details by township and project relating to renewal plan works are shown in Part 4 Appendix F.

Table 26 Key stormwater renewal projects

Township	Renewal project	Justification
District-wide	Stormwater Asset Renewals	Based on asset condition and maintenance records (estimated at $1.05 million across years four to ten of the current LTP period).
	Stormwater District Wide Renewals	Based on asset condition and maintenance records (estimated at $1.10 million across years two to seven of the current LTP period).

4.9 Asset creation plan

Asset creation is the process driven by consumer growth or LoS. This involves the design and construction of new assets which increase the capacity or performance of the system. Asset creation is necessary to accommodate growth, changes in LOS or customer demand.

Council will continue to invest in stormwater infrastructure with the main drivers being:

- To meet legislative compliance.
- To meet the demands of growth by stormwater provision to Council's customers through efficient utilisation of natural resources
- To meet the LoS with respect to safe and effective stormwater in main townships where applicable

Council growth and LoS activity categories are shown in the following table.

Table 27 Asset creation sub-activities.

Creation Plan Activity Category	Creation Plan Sub-Activity Category	Description
Growth	Network	Growth expenditure on Stormwater and Flood Protection network (pipework) assets.
	Pump Station/Storage	Growth expenditure on Stormwater pump station/storage assets.
	Vested Assets	Accounting related category for vested Stormwater and Flood Protection assets from new developments.
LoS	Compliance	Replacement, upgrading or installation of new assets to achieve compliance with statutory obligations and Health and Safety compliance.
	Customer	Replacement, upgrading or installation expenditure to achieve (existing) customer LoS. Also includes expenditure to improve asset operability

Creation Plan Activity Category	Creation Plan Sub-Activity Category	Description
		and reliability to ensure LoS are achieved.
	Service Extensions	Expenditure on new assets to provide stormwater servicing to existing ratepayers who do not receive reticulated services.
	System Information	Expenditure on activities acquiring system information to enable informed investment decisions and support asset operations and the provision of Stormwater and Flood Protection services.

There are no stormwater asset creation projects identified in the ten year period.

There are several small towns in the District that are currently unserviced or have limited stormwater servicing. The current status of these unserviced townships is shown in table below. There will be pressure for a Council reticulated stormwater system as these townships grow but this is not expected to be within the next ten years.

Development has historically resulted in the piping of watercourses and drains, which is no longer considered good practise. The One Plan has restricted the piping of waterways and drains to endorse good practise. Council must balance the ability of the district to fund such a reticulated scheme with the social good which arises from a public stormwater and flood protection scheme.

Table 28 Status of development in un-serviced townships.

Township	Water Service Status	Comments
Horopito	No formal Stormwater and Flooding system. The sections are large and subdivision was for self-sufficient servicing.	Development is occurring now but is slow.
Kakahi	Only roadside drains (3km in total).	Development is slow.
Matiere	Only a partial Stormwater and Flooding system (1.4km in total).	Development is slow.
Raurimu	Only a partial Stormwater and Flooding system.	Development is occurring now but relatively slow.

4.10 Asset disposal plan

Asset disposal occurs when an asset is no longer required or becomes uneconomical to maintain or rehabilitate. Asset disposal involves activities associated with disposal of decommissioned stormwater and flood protection assets, including their sale, demolition or relocation.

Assets may become surplus to requirements for reasons such as:

- Under-utilisation.
- Obsolescence.

- Provision exceeds required LoS.
- Asset no longer provides the service or fulfils the purpose for which it was intended.
- Uneconomic to upgrade or operate.
- Policy change.
- Service provided by other means.

There are no stormwater or flood protection assets of significant value that have been identified for decommission.

5 RISK MANAGEMENT

5.1 Risk management approach

5.1.1 Risk management framework

This section covers the risk management implemented by Council and how it applies to current and future stormwater activities. Council's corporate risks are covered in Part 1 of the AMP and this section looks at activity specific risks. Our approach to risk management is defined in our Risk Management Policy (2017). The objective of this policy is to ensure that Council effectively and systematically manages risk.

RDC has a risk management framework simplified from the AS/NZS ISO 31000:2009. Risk evaluation involves evaluation the consequence and likelihood scores for each of the identified risks. Based on the results, Couuncil has adopted the following broad treatment strategy for the levels of risk:

- Extreme risk – treat risk. Risk Manager keeps Management Team informed.
- High risk – treat risk. Risk Manager keeps Chief Executive informed.
- Medium risk – Risk Manager monitors with annual review.
- Low risk – Risk Manager monitors with review every two years.

Risks are recorded in the risk register and include analysis of the treated risk. Risk Action Plans record additional management options. Main risks are listed in order of severity as assigned in consultation with key Council officers.

Council's Risk Management System relies on input from its many contractors and service providers which is appropriate for a small rural district council. Further to Council's Risk management framework, Veolia is required to manage risk and produce their own risk management procedures to describe the responsibilities, authorities and processes across their international business. Their system uses slightly different descriptors to assess risk but overall the assessment method obtains similar outcomes. Their assessment method is utilised as part of their daily services to deliver their operations, maintenance and capital works programmes. It is utilised in the production of method statements for new works or high-risk situations.

5.1.2 Risk register

The Ruapehu risk context has been developed from Council examining each of the elements that define the context for risk management applicable to the stormwater activity. The activity has been examined and full results are summarised in Part 4, Appendix H. The stormwater activity risk register is due for updating and is scheduled for 2024/25.

Risks associated with the stormwater activity have been identified, described, classified, analysed, evaluated and rated. The resulting risk matrix below shows six risks identified as high treated risk, with no extreme risks.

Table 29 Risk matrix – stormwater

Likelihood	Consequence				
	Insignificant (1)	Minor (2)	Significant (3)	Major (4)	Catastrophic (5)
Almost Certain (5)	0	0	0	0	0
Likely (4)	0	0	0	0	0
Possible (3)	0	0	6	0	0
Unlikely (2)	0	0	6	0	0
Rare (1)	0	0	0	0	0

Low Medium High Extreme

5.1.3 Risk action plan

Additional management options have been identified for specific risks rated as Medium, High or Extreme to treat the present risk. These are recorded in the Risk Action Plan (Part 4, Schedule 3, Appendix H). The main risks are listed in order of severity as assigned in consultation with key Council officers. Actions that are required to achieve the desired improvements are indicated along with how progress on these actions will be monitored and reported. Where applicable, action tasks will detail timeframes for achievement, and responsibility for these actions.

5.2 Main stormwater activity risks

The main stormwater activity risks identified through the 2023 AMP process for transitioning to the new Entity (now abandoned) are summarised in table below.

Table 30 Main stormwater risks

High level risk / issue title	Caused by	Impacts	Current controls and mitigation	Proposed further response
Failure of a critical pipeline	Failure, third party damage, natural disaster, sabotage.	Environmental concerns, loss of services, health concerns, consent compliance issues.	Condition monitoring, maintenance history analysis, targeted renewal programmes, response plans.	Hydraulic modelling, pressure monitoring, leak detection, metering rural connections and extraordinary users.
Extreme rainfall event exceeds pipe capability	Insufficient design and extreme rainfall events.	Environmental concerns, health concerns, flooding, discharge consent breaches.	Condition monitoring, overflow monitoring, response planning, preventative maintenance, flood modelling, emergency response plan.	Develop flood model overlay with houses for Ohakune and Taumarunui, CCTV network, re-run models.

High level risk / issue title	Caused by	Impacts	Current controls and mitigation	Proposed further response
Extensive damage to piped network inlets and outlets	Volcanic eruption or other natural hazard.	Unavailability of urban roads, flooding, danger, environmental concerns, discharge consent breaches, health concerns.	Response planning, emergency planning, lifelines.	

Source: Ruapehu Addendum (October 2023)

5.3 Emergency risk planning

Business Continuity Plans (BCP) are developed to coordinate efforts for keeping Council business operating through high risk events such as pandemics, staff death, terrorism and natural hazards. At a corporate level, RDC has a BCP for response processes to be implemented for any major interruption to business operations and service delivery. This was tested with the recent global pandemic event with people working at home (except for essential workers).

Stormwater emergency risk events occur when they escalate from a routine event affecting an isolated network and before it is declared needing Civil Defence control. Veolia's Emergency Response Plan (ERP) is used as the key guiding operational plan for these events.

5.4 Climate change and resilience

5.4.1 Climate change impacts

Climate change is a major management issue facing all infrastructure providers and the built environment. Ruapehu District is tested further as it has physical constraints / natural hazards including the Mountain and is subject to intense weather events that need to be considered in the context of climate change impacts. It is also exposed to a variety of natural hazards including earthquakes and volcanic eruptions.

Changes in climate such as rainfall, temperature and wind are already occurring and impacting regions differently. Climate change predictions for the western lower North Island include:

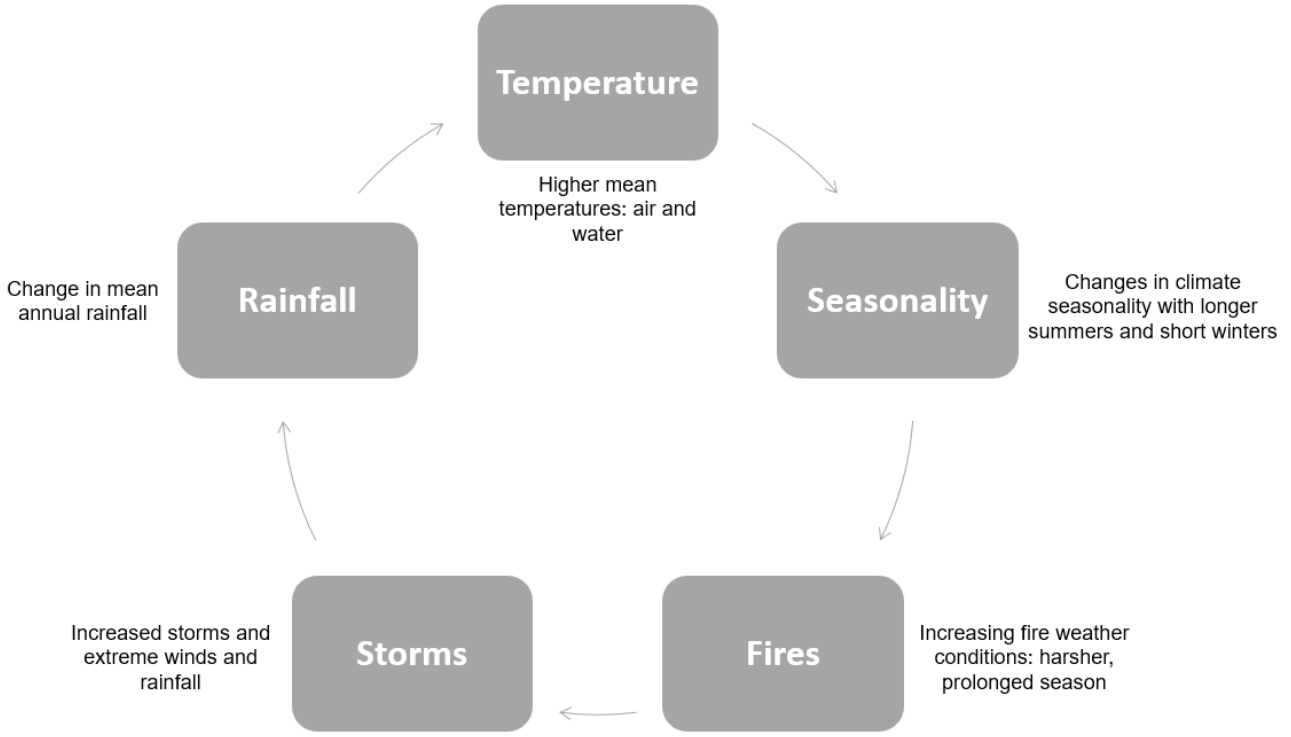


Figure 13 Climate change predictions for western lower North Island

Source: NIWA's snapshot for Zone 2

5.4.2 Where we are at

Council has adopted a sustainable management approach in the way it manages its stormwater activity. Current sustainable practices to reduce our carbon emissions are:

- Baseline reporting – Horizon Regional Council has provided the regional impact of climate change, see Part 1, and are partnering with district councils in community engagement. They have developed a greenhouse gas footprint for the region and each territorial authority in the Region.
- Strategic planning:
  - The Manawatū Whanganui Climate Action Plan (June 2023) was developed by the region's eight councils and iwi. This action plan draws on both Māori and Western worldviews to work together in response to climate change.
  - RDC has developed a draft Climate Action Strategy.
- Policy – Council's Procurement Policy (2020) includes social procurement, sustainability and whole of life.
- Asset management planning:
  - We will continue to seek new technology and opportunities to reduce our carbon footprint where appropriate for our district size, learning from other water utilities in New Zealand and internationally.
  - Continue to measure carbon footprint as part of the Climate Change Regional Group.
  - Reduce flood risk for urban stormwater systems and where cost effective.

5.4.3 Management response to climate uncertainty

The likely effect on the stormwater activity due to climate change and Council's proposed actions are outlined in the table below.

Table 31 Likely climate change impacts – stormwater

Most likely effect due to climate change	Proposed actions
• Changes in the intensity and duration of rainfall events beyond the capability of the primary stormwater network. • Vulnerability of critical pipelines to land slips.	• The development flood modelling and mapping that takes into consideration climate change modelling and levels of uncertainty for infrastructure design. Ohakune is the only township modelled to date. • Continue to use seismically resistant materials for critical assets.

5.4.4 Building resilience and adaptation

Resilience refers to the capacity to recover quickly from difficulty; the concept applies to major disruption events including those associated with climate change. The concept applies to major disruption events including those associated with climate change. Resilience is important for all water operators and is essential for remote communities like Ruapehu. Infrastructure resilience is tested further in Ruapehu as it is influenced by the Mountain and subject to intense weather events. It is also exposed to a variety of natural hazards including earthquakes and volcanic eruptions.

We are undertaking adaptation planning for our infrastructure assets aligned with the Government's objectives to build resilient infrastructure as set out in the National Adaptation Plan (2022). Strengthening our infrastructure resilience is a key focus. Specific actions include:

- Specify more resilient design and materials for replacement programmes, particularly for critical assets. Factors that are considered include location and consequences. We undertake a pragmatic evaluation at the renewal planning stage on a case by case basis.
- Enhanced collaboration with Veolia to have robust communication protocols and procedures for keeping the network resilient.
- Strengthening our infrastructure resilience in our townships with more built infrastructure such as Raetihi, Ohakune and Taumarunui.
- Work towards using green infrastructure for managing stormwater than traditional hard assets such as pipes and manholes. This slows down the stormwater flows as well as providing quality treatment, rather than the hard engineered assets.
- Require new developments to allow for peak attenuation and stormwater neutrality for (i.e. detention and retention).

6 FINANCIAL SUMMARY

6.1 Financial overview

This section summarises the financial requirements to achieve the defined levels of service and provide for future demand needs. The financial forecasts within this section are for the ten-year forecast period from 2024/25 to 2033/34 (subject to adoption of the LTP by Council). The financial forecasts are considered draft and will be finalised as part of the LTP process.

Detailed financial tables are also provided which indicate by township the forecast expenditure within each category and subcategory for each year in the ten-year forecast period. Detailed tables linking individual projects with associated financials are shown in Part 4, Appendix F.

The total amount of expenditure for operations, maintenance, and capital for the stormwater activity over the next ten years is $15.4 million, as shown in the figure and table below. This shows that the average annual activity costs are about $1.5 million per year. Of the ten-year forecast, operating costs make up 86%, and capital expenditure on renewals making up the remaining 14%. No capital expenditure on levels of service or growth are forecast in the ten year period.

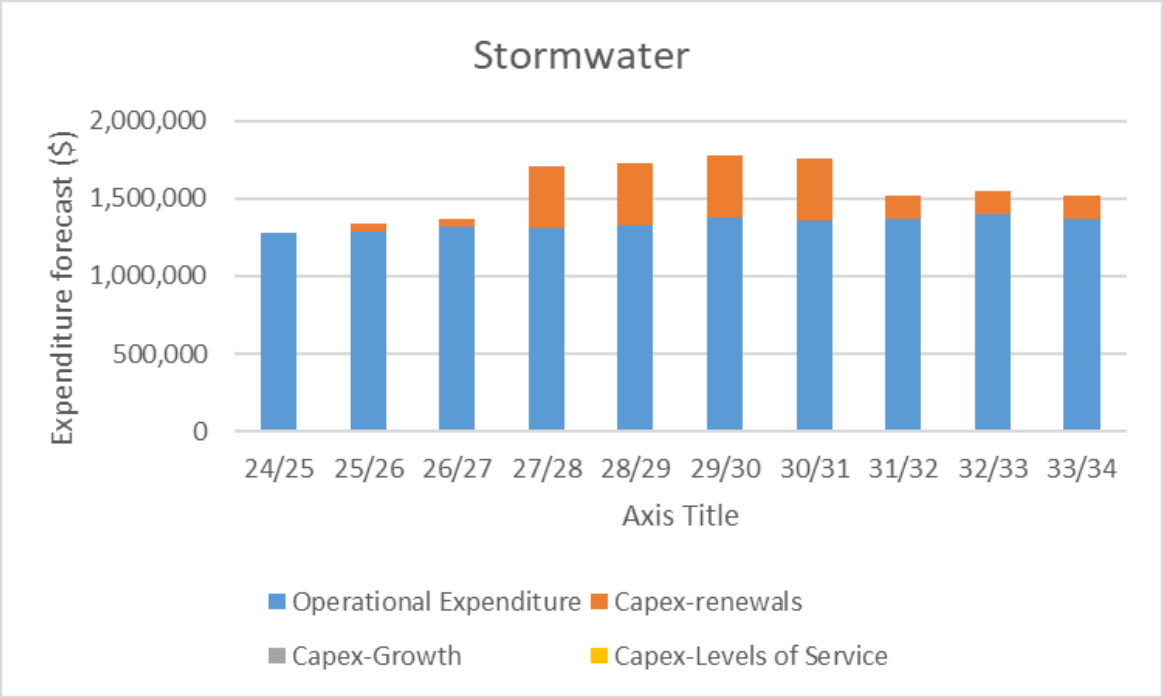


Figure 14 Financial summary for the stormwater activity.

Source: Council's LTP budget (uninflated as at February 2024).

Table 32 Financial summary for the stormwater activity.

Description	Projected Expenditure

	Year 1	Year 2	Year 3	Year 4-10	Ten-year
	2024/25	2025/26	2026/27	2027-34	Total
Operational expenditure	1,279,490	1,287,145	1,319,350	9,503,408	13,389,393
Capital expenditure	-	50,000	50,000	2,050,000	2,150,000
Renewals	-	50,000	50,000	2,050,000	2,150,000
Levels of Service	-	-	-	-	-
Growth	-	-	-	-	-
Total	**1,279,490**	**1,337,145**	**1,369,350**	**11,553,408**	**15,439,393**

Source: Council's LTP budget (uninflated as at February 2024)

6.2 Expenditure categories

Expenditure types are defined and reported as follows:

- Operating expenditure is used to fund the ongoing day to day activities and services of the Council. It is expensed (not capitalised) work that continues the provision of services and services provided by assets.
- Capital expenditure is used to replace existing deteriorated assets or components of assets to restore their remaining life and service potential.

The Council has three categories of capital expenditure spread across its activities:

- Renewals – Defined as capital expenditure that increases the life of an existing asset with no increase in service level. It replaces existing deteriorated assets or components of assets to restore their remaining life and service potential.
- Level of Service – Defined as capital expenditure that increases the service level delivered by the asset.
- Growth – Defined as capital expenditure that is required to provide additional capacity in whole or part.

For operating expenditure, the following definitions apply:

- Direct costs include administration expenses, finance costs, maintenance and operations expenses, staff costs and utilities.
- Indirect costs include depreciation, interest costs and overheads.

6.3 Operational expenditure summary

The table below outlines the ten-year operations and maintenance expenditure for the stormwater activity. The annual operational expenditure ranges from $1.28 million to $1.42 million per annum, with indirect costs accounting for 62% and direct costs 38% of the of the ten-year operational expenditure budget. Within the indirect costs, depreciation accounts for 35% and internal costs 22% of the 62% total.

Table 33 Summary of stormwater operation and maintenance expenditure

Description	Projected Operational Expenditure				
	Year 1	Year 2	Year 3	Years 4-10	Ten-year
	2024/25	**2025/26**	**2026/27**	**2027-34**	**Total**
Direct costs	504,922	504,922	524,922	3,574,454	5,109,220
Indirect costs	774,568	782,223	794,428	5,928,954	8,280,173
Total	**1,279,490**	**1,287,145**	**1,319,350**	**9,503,408**	**13,389,393**

Source: RDC's LTP budget (uninflated as at February 2024).

6.4 Capital expenditure summary

6.4.1 Ten year capital forecast

The table below outlines the ten-year capital expenditure for the stormwater activity. Capex (renewals and new works) expenditure across the ten-year expenditure period is forecast at $2.15 million. Renewals make up all the capital expenditure budget for the 2024 LTP, with no budget set aside for levels of service or growth projects.

Table 34 Summary of stormwater capital expenditure.

Description	Projected Capital Expenditure				
	Year 1	Year 2	Year 3	Years 4-10	Ten-year
	2024/25	**2025/26**	**2026/27**	**2027-34**	**Total**
Renewals	-	50,000	50,000	2,050,000	2,150,000
Levels of Service	-	-	-	-	-
Growth	-	-	-	-	-
Total	**-**	**50,000**	**50,000**	**2,050,000**	**2,150,000**

Source: RDC's LTP budget (uninflated as at February 2024).

6.4.2 Unfunded capital projects

Capital projects were identified through the LTP and National Transition Unit (NTU) processes are shown for completeness as follows. These projects have a high priority but are currently not included in the ten-year plan because of budget constraints. Additionally, there is currently no budget allocated for when resource consent applications are required for stormwater discharges.

LTP process - During the development of the capital expenditure budgets for this LTP period, projects were prioritised with four stormwater projects removed. These four capital projects identified that are currently not budgeted for totalling $3.65 million unfunded, these include:

- District-wide sustainability initiatives within the stormwater network, estimated at $600,000 from 2028/29 to 2033/34.
- New stormwater treatment devices in Taumarunui, estimated at $1,000,000 from 2027/28 to 2030/31.
- Stormwater network upgrades in Ohakune and Raurimu, estimated at $1,500,000 and $550,000 respectively.

NTU process - Further projects identified by the NTU in 2023 include projects identified in the following table. Some of these projects will be included in the current capital works budgets, particularly those at the execution stage, but the majority are unfunded.

Table 35 Key stormwater projects identified in the Entity E 3W Addendum.

Project	Primary Driver	Year/s	Costs ($M)	Financial Data Confidence	Description and Objectives of the project	Project Stage
Stormwater network upgrades	Level of service / resilience	2026-2035	$9.6	Engineers estimate	Investigate and upgrade stormwater network to resolve flooding issues at Raetihi ($3M) and Owhango ($3M), and add capacity at Ohakune ($1.5M), Raurimu ($500k), Taumarunui ($3M), and Ohura ($1M).	Initiation
Asset renewals	End of service life	2024-2054	$2.13	Engineers estimate	Provisions for asset renewals district wide	Initiation
District Wide Stormwater (Renewal)	End of service life	2024-2030	$1.68	Contract unit rate	2021 LTP project	Execution
Stormwater treatment devices	Level of service	2027-2028	$1.0	Engineers estimate	Installation of stormwater treatment devices before discharging to Whanganui River.	Initiation
District Wide Stormwater (LOS)	Level of service	2024-2030	$0.769	Contract unit rate	Stormwater upgrade.	Execution
Sustainability initiatives	Level of service	2028-2054	$0.600	Engineers estimate	Capital works associated with improving community environment.	Initiation
District Wide Stormwater (Growth)	Growth	2024-2030	$0.485	Contract unit rate	Stormwater upgrade.	Execution
Total			**$16.25**			

6.5 Asset valuation summary

Replacement cost, depreciated replacement cost and annual depreciation figures from Council's 2020 asset valuation are shown below. This is based on Council's asset lives and current equivalent asset replacement,

calculated as per the asset data in Section 6. A percentage breakdown of replacement cost by asset class is shown below. A full breakdown of replacement cost, depreciated replacement cost and annual depreciation for each of Council's stormwater schemes is contained within Part 4, Appendix E.

Audit New Zealand has recommended that Council's asset valuations should be sufficiently external from its main contractor. Therefore, the next valuation will be undertaken by Beca from 1 July 2024.

Table 36 Asset valuation by asset type

Stormwater Asset Group	Replacement Cost ($)	Depreciated Replacement Cost ($)	Accumulated Depreciation ($)	Annual Depreciation ($)
Network	33,372,550	16,569,918	16,802,631	403,754
Pump stations	-	-	-	-
Treatment and disposal	463,866	435,263	28,603	6,526
Total	**33,836,416**	**17,005,181**	**16,831,234**	**410,280**

Source: Veolia Infrastructure Asset Valuation (July 2022).

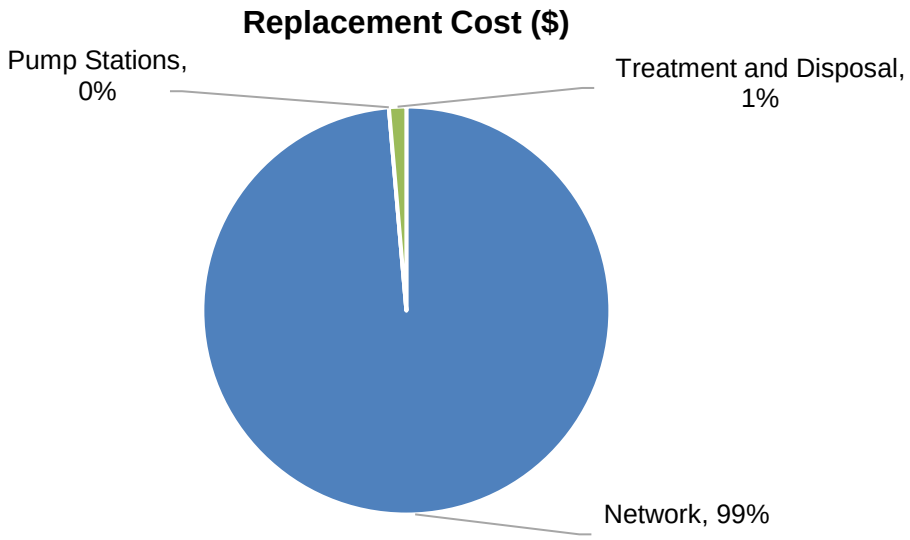


Figure 15 Valuation breakdown by major asset class.

6.6 Financial performance

The actual achievements against the LTP budgets for the stormwater capital programme for 2020/21, 2021/22 and 2022/23 are presented in the following figure. Although the stormwater capital programme is not large within the three waters activities, achievement was variable with under achievement across all three years. Although resource consent consultation, and agreement on works have also detained the addition of a culvert through the Upper Whanganui River Scheme stopbank.

Failures to deliver capital works has mainly been due to the time to get projects procured and approved to start. was addressed with a S17A review, update of the Contract with Veolia and setting up of a streamlined process for procuring capital projects (refer to Section 4.6 Service Delivery Arrangements).

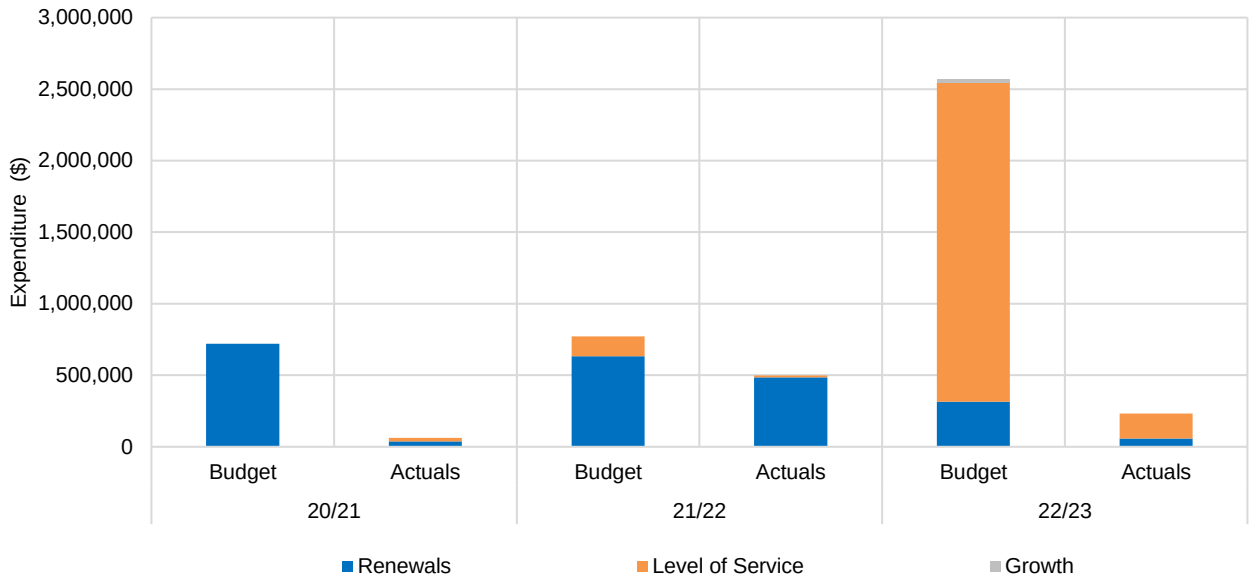


Figure 16 Capital expenditure performance.

Source: Council's Annual Reports

6.7 Funding strategy

The stormwater activity will be funded in accordance with the financial policies of Council as indicated below.

Table 37 Funding strategy for stormwater activity.

Programme	Funding mechanism
Operational	Funded through general and targeted rates and fees and charges
Renewal	Provided through rates
LOS	Loan funded
Growth	Loan funding and development and financial contributions

6.8 Key financial forecast assumptions

6.8.1 Financial assumptions

The assumptions upon which the financial needs are based on the following:

- Forecasts are uninflated.
- Based on draft LTP budget as at February 2024.
- Based on existing information available.
- Based on existing legislation and service levels.
- The order of priority or call on funds by Council is generally:
  - operations and maintenance
  - renewals
  - new works for increased service level improvement
  - new works for growth

- The application and level of user charges are all determined by the Council's Revenue and Financing Policy.

6.8.2 Confidence levels

Considering the assumptions made in deriving the future financial needs of the service, asset needs and the historical levels of expenditure for the stormwater activity, the reliability of the financial forecast to deliver the current level of service is assessed as follows:

Table 38 Confidence in financial forecasts

Information type	Degree of confidence	Comments
Expenditure projections	Medium	• The operational projections are largely based on historical operational budgets and asset condition surveys where this is available. • Renewals are based on preliminary analysis, but further asset analysis is required to develop a risk based renewal programme as identified in the Improvement Programme. • There is a degree of confidence that the projections are based on appropriate budgeting and approval processes and represents the best available information.
Asset values	High	• Asset values are based on the asset valuation as at 30 June 2022. These are revalued every three years.
Depreciation	Medium	• The assessment of useful lives and the calculation of depreciation expense are undertaken every three years with the valuation.
Funding sources	High	• Capital expenditure will be funded by loans.

7 ASSET MANAGEMENT PRACTICES

7.1 Overview

Council is committed to continue with good practice AM as a sustainable standard for its community activities. A key feature in Council's AM framework is to continue to improve practices, processes, and tools. This is essential to ensure the asset system and services are effectively managed. Through the initiatives presented in this section, Council is committed to appropriate AM practices. This practice is being developed in keeping with IIMM / Āpōpō. Council is committed to delivering the most appropriate levels of service balanced with affordability and good industry practice.

7.2 AM Policy

Council's AM Policy (2024) formalises its commitment to delivering the most appropriate levels of service balanced with affordability and good industry practice. The objectives of the AM Policy are to ensure adequate provision is made for the long-term management of Council's assets.

The policy covers land transport, three waters, community facilities, community property, and solid waste.

7.3 AM maturity

Council's Three Waters Asset Management Team completed a self-assessment using the IIMM framework in 2022 to determine current and aspirational level of maturity across the three activities. The results are shown in the figure below for the sixteen areas for water supply, wastewater, and stormwater totalling to 45. The average result for wastewater and water supply was 46, and 42 for stormwater.

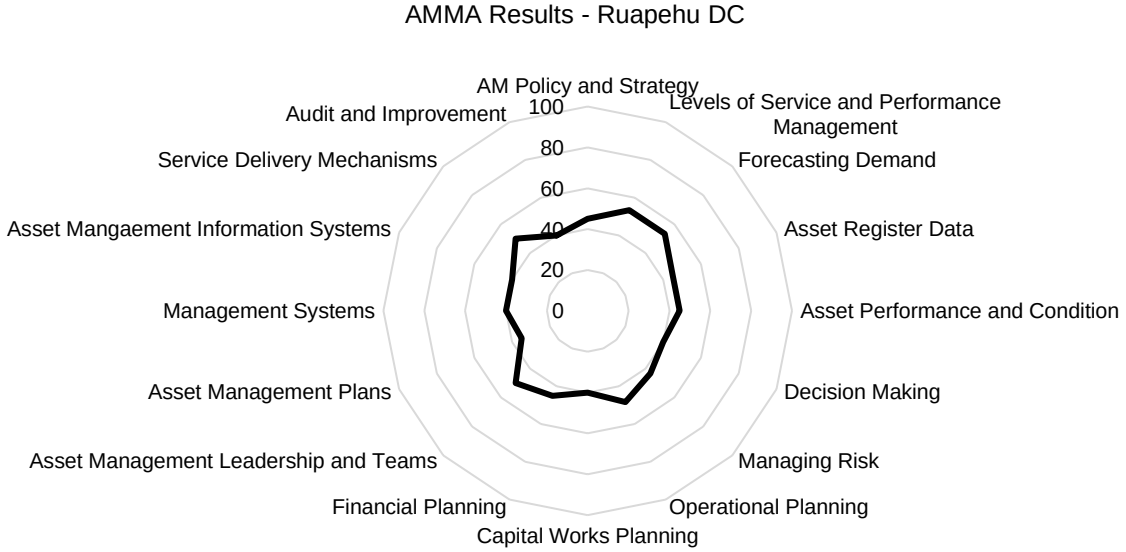
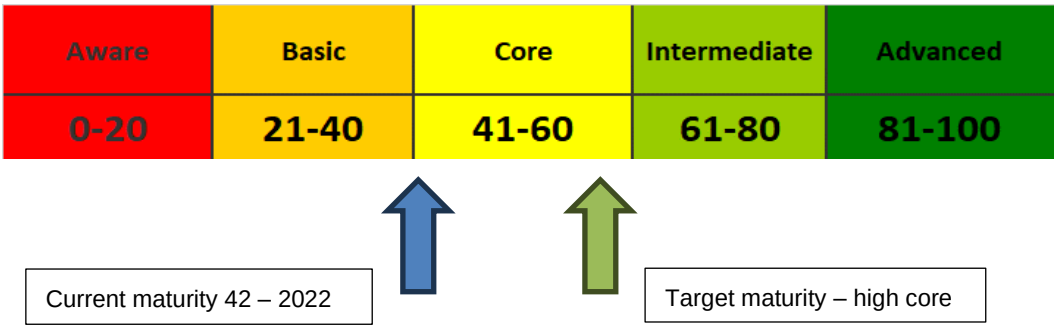


Figure 17 Asset Management Maturity Assessment (2022).

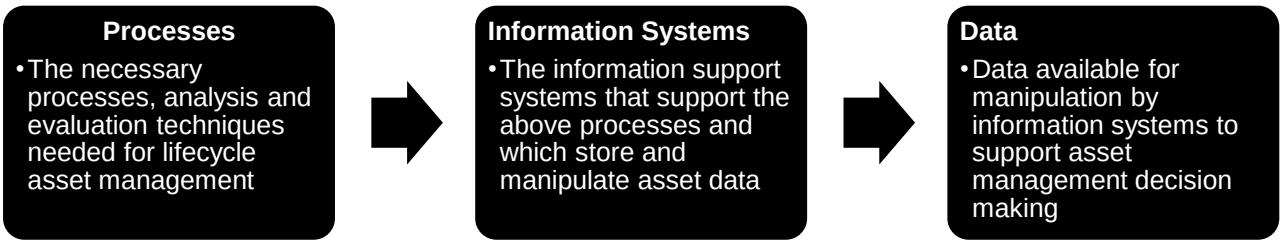
The current score of 42 for the stormwater activity represents core maturity level. A maturity target of high level of core is appropriate reflecting the scale, value and risk for this activity, as shown below in the figure below.

Figure 18 AM maturity – stormwater.



7.4 AM Practices

This section discusses the status of Council's current AM practices and identifies practices Council wishes to use. The key AM practices can be grouped into the following three broad areas.



Providing adequate capability and capacity is a challenge for Ruapehu District Council as a remote community. The approach taken to ensure adequate resources for managing the stormwater activity is a mixture of in-house resources, long term service provider Veolia, Horizon Regional Council providing river management and external specialists as required.

7.4.1 Data

Data quality is important for end users so that they can have confidence in making an analysis using that data. Ongoing data collection and validation, in terms of the physical attribute accuracy and spatial data, are part of Council's ongoing improvement programme. The overall data confidence has been assessed as reliable for the stormwater activity as shown in the table below.

Table 39 Data confidence summary.

Activity	Asset register	Asset condition	Overall
Stormwater	B	B	B

Source: RDC Addendum (2023).

Key:

- A: the data is accurate (±5%) and based on reliable documentation.
- B: data is based on some supporting documentation but is less certain (±15%).
- C: uncertain data, fair amount of assumptions and local knowledge used to reach the conclusions (±30%).
- D: very uncertain data where there is no formal documentation to base an assessment on (±40%)
- E: Unknown.

7.4.2 Processes

The key AM processes for the stormwater activity are summarised in the table below.

Table 40 Asset management processes.

AM Process Area	Purpose	Status/enhancements
Risk management framework	Enterprise wide approach to ensure a comprehensive review of all potential risks across the whole Council.	Council uses its own system described in Part 1 for corporate risks but uses Veolia for the operation and maintenance items. The activity risk register for three waters is overdue for review.
Project Management Framework	All projects must follow the guidance in the Project Management Framework. A project brief is prepared for all projects and a business case dependent on the level of complexity and risk. Projects are reported on a monthly basis.	None identified at this stage.
Asset data collection (including condition)	Asset data including inventory measure, material type and condition is collected to ensure the asset inventory is complete and accurate for AM decision making.	Assessment of the asset condition, which was last updated in August 2020. Three yearly condition assessments of these assets are recommended to gain a better understanding of current state, ideally sequenced with the Long Term Plan cycle.
Asset valuations	Asset valuations are coordinated by Council Finance Department.	Future asset valuations should be sufficiently external from Council's main contractor, with initial plans for Beca to provide the next valuation from 1 July 2024.
Mandatory performance data and reporting	Providing data and reporting to meet the requirements of the Department of Internal Affairs mandatory performance measures for three waters. Reports are generally a summary of performance against conditions and spreadsheet data	None identified at this stage.
Compliance and quality management requirements	Requirements for meeting resource consent compliance reporting for HRC (noting RDC does not have a global stormwater consent at this stage).	Council meets the annual compliance reporting requirements and undertakes any improvements as part of the formal approval process.
Standard Operating Procedures	Stormwater SOPs provide guidance on the requirements for the management and monitoring of the stormwater assets.	Veolia operate and maintain the stormwater assets under there SOPs in accordance with their ISO 9001 certified Quality Management System.

7.4.3 Systems

Information systems are essential for storing and analysing asset information to make good asset management decisions. The main asset management information systems for three waters are summarised in the table below.

Table 41 Asset management systems

System	Purpose	Status / enhancements
Intramaps	GIS system for Council to access information using network's maps and aerial photographs.	No changes proposed at this stage.
Datacom Ozone	The financial system used throughout Council.	No changes proposed at this stage.
Ozone – Contact Centre module	This module allows for the recording of RFS from internal and external customers. This is the channel for customer queries and complaints which require remedy. The system enables a RFS to be categorised depending on the response required and is either automatically emailed through to the appropriate contractor on confirmation of the call. The system has built in timeframes for escalation which ensures that the call is followed up in a timely manner, or a series of notifications are sent through Council's management. Resolution of the RFS enables notes to be entered on what actions were completed and the date on which the call was resolved.	This system is proposed for upgrading.
AssetFinda (Universus) VAMS	AssetFinda is Council's asset management system. VAMS is Veolia's asset management system.	No changes proposed at this stage.
Consent information collated in spreadsheets and folders	Stores the resource consent data and provide for compliance monitoring with Horizon's Resource Consents. Also holds consent compliance and abstraction reports. Veolia provides consent compliance information to Council for issue to HRC.	Review the need for a dedicated consent system for holding consent compliance information.

7.5 Improvement Plan

Key improvement programmes and associated projects have been developed through a review of the gaps in developing this AMP and issues identified. These have been prioritised for action over the next three years to support the increased maturation of the AM practices.

The key high priority actions for improving the AM practices in the next three years are summarised in the following table with the full three-year AM Improvement Programme detailed in the Appendix, Part 4 of this AMP.

Table 42 High priority actions – stormwater

AM element	Proposed actions
Forecasting demand	Develop a Stormwater Master Planning as an overarching framework to guide our long term planning and capital works programmes. Stormwater infrastructure will need to support growth in housing requirements, particularly for Ohakune.
Asset condition	Undertake 3 yearly condition assessment of the stormwater assets.
Strengthening resilience	Improving the resilience of the network in relation to climate change impact.
Financial planning	Continue to review the level of investment in stormwater assets to ensure the network is being renewed sustainably long term and legislative compliance is being met balanced against community affordability and asset risk.

7.6 Improvement Monitoring

The AMP is a living document and needs to be kept current and relevant. It is recognised that priorities will change which makes review activities even more important to ensure this plan is a live document. The following review activities will be undertaken:

Table 43 Improvement monitoring activities

Frequency	Review Task	Action	KPI	Report Name	Audience
Three yearly	AMP Development	Formal adoption of the plan by Council.	100% Achievement	Council AMP Report	Council and Audit New Zealand
Annually	AMP Review (internal)	Revise plan annually to incorporate new knowledge from the AM improvement programme.	100% Achievement	Internal Report	Three Waters Management
Three Yearly	AMP Peer Review	The plan will be formally reviewed three yearly to assess adequacy and effectiveness.	100% Achievement	External Consultant Report	Three Waters Management, LTP team, and Audit New Zealand
Annually	Monitoring and Reporting	The KPIs identified in this table will be monitored and reported on annually through Business Plans.	100% Achievement	Business Plan Report	Three Waters Management and LTP team
Annual	Implementation of the Improvement Programme	Tracking the progress of implementing the improvement programme annually particularly of projects in the short-term improvement programme.	100% Achievement	Quarterly Reports	Three Waters Management and LTP team

8 APPENDICES

8.1 Acroynms

Table 44 Summary of acronyms

Acronym	Description
AM	Asset Management
AMP	Asset Management Plan
BCP	Business Continuity Plan
CDEM	Civil Defence Emergency Management
DoC	Department of Conservation
EOC	Emergency Operations Centre
ERP	Emergency Response Plan
LGA	Local Government Act 2002
LTP	Long Term Plan
HSWA	Health and Safety at Work Act
HRC	Horizons Regional Council
I&I	Inflow and infiltration
IIMM	International Infrastructure Management Manual
IP	Intellectual Property
LOS	Level of Service
NPS	National Policy Statement
NTU	National Transition Unit
RFS	Request for Service
RDC	Ruapehu District Council
WOL	Whole of Life

8.2 Full levels of service summary

Table 45 Full LOS summary – stormwater

Community Well Being Outcomes	Key service attribute	Levels of Service Statement	How we will measure our performance	Reported in	Current performance 2022/23	Current Year 2023/24 Target	2024/25 Target (year 1)	2025/26 Target (year 2)	2026/27 Target (year 3)	2027/28 to 2033/24 Target (years 4 to 10)
Our infrastructure assets and services are resilient and fit for purpose	Safety – flood protection	Capacity / degree of protection	The number of flooding events that occur in a territorial authority district. For each event, number of habitable floors affected (per 1,000 properties connected to system).	LTP / mandatory	0	≤ 3 per 1,000 properties	≤ 3 per 1,000 properties	≤ 3 per 1,000 properties	≤ 3 per 1,000 properties	≤ 3 per 1,000 properties
	Quality - reliability	To provide reliable stormwater networks	The number of complaints received by Council about the performance of its stormwater system (per 1,000 connections to Council's stormwater system)	LTP / mandatory	7	≤15 per 1,000 properties	≤15 per 1,000 properties	≤15 per 1,000 properties	≤15 per 1,000 properties	≤15 per 1,000 properties
			Percentage of stormwater assets in satisfactory condition (condition grades 1,2 or 3)	AMP	Not measured for 2022/23	85%	85%	85%	85%	85%
	Responsiveness	To provide prompt responses for service	The median response time to attend a flooding event, measured from the time that Council receives notification to the time that service personnel reach the site	LTP / mandatory	0	≤2 hours	≤2 hours	≤2 hours	≤2 hours	≤2 hours
Our natural and built environment is healthy, strong and safe	Sustainable - Environmental performance	Environmental impacts are managed, and resource consents complied with	Compliance with the Council's resource consents for discharge from its stormwater system. Measured by the number of:	LTP / mandatory						
			a) abatement notices		0	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2
			b) infringement notices		0	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1
			c) enforcement orders		0	≤ 1	≤ 1	≤ 1	≤ 1	≤ 1
			d) prosecutions received by Council in relation those resource consents		0	0	0	0	0	0

8.3 Detailed financial tables

Table 46 Stormwater *operational expenditure ten-year budget.*

Description	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32	2032/33	2033/34	Ten year total	%
Disposal of Assets	-	-	-	-	-	-	-	-	-	-	**-**	**0.0%**
Impairments	-	-	-	-	-	-	-	-	-	-	**-**	**0.0%**
Cost of Funds	60,017	49,261	42,169	45,319	59,282	72,252	87,537	94,648	92,663	92,629	**695,777**	**5.2%**
Depreciation	429,743	440,487	448,856	457,833	466,532	474,929	483,478	491,697	500,056	508,557	**4,702,168**	**34.9%**
Direct Cost	504,922	504,922	524,922	504,922	504,922	524,922	504,922	504,922	524,922	504,922	**5,109,220**	**37.9%**
Internal Costs	284,415	291,741	302,450	295,734	296,301	307,377	292,480	292,137	303,160	291,253	**2,957,048**	**22.0%**
Non Cash Items	-	-	-	-	-	-	-	-	-	-	**-**	**0.0%**
Remissions	-	-	-	-	-	-	-	-	-	-	**-**	**0.0%**
Total	**1,279,097**	**1,286,411**	**1,318,397**	**1,303,808**	**1,327,037**	**1,379,480**	**1,368,417**	**1,383,404**	**1,420,801**	**1,397,361**	**13,464,213**	**100.0%**

Source: RDC's LTP budget (uninflated as at February 2024).

Table 47 Stormwater capital expenditure forecast ten-year budget.

Project Description	Asset Category	Expenditure Category	Funding Source	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2032	2033	2034	Total	%
Stormwater Asset Renewals	Network	Renewal	Reserves-Depreciation	-	-	-	150,000	150,000	150,000	150,000	150,000	150,000	150,000	**1,050,000**	**48.8%**
Stormwater District Wide Renewals	Network	Renewal	Reserves-Depreciation	-	50,000	50,000	250,000	250,000	250,000	250,000	-	-	-	**1,100,000**	**51.2%**
Total				**-**	**50,000**	**50,000**	**400,000**	**400,000**	**400,000**	**400,000**	**150,000**	**150,000**	**150,000**	**2,150,000**	**100.0%**

Source: RDC's LTP budget (uninflated as at February 2024).

8.4 Three year Improvement Programme

Table 48 Three year improvement programme activities

No.	AM Improvement Area	Project no	Action	Responsibility	Priority (High / Medium / Low)	Status	Indicative Timeframe			
							2024/25	2025/26	2026/27	2027/28
1	AM Strategy	1.1	Prepare the comprehensive resource consents to discharge stormwater from RDC's urban stormwater systems in the townships.	Three Waters Manager	Medium	To start				
2	Levels of Service and Performance Management		None identified at this stage.							
3	Forecasting Demand	3.1	Develop a Stormwater Master Planning as an overarching framework to guide our long term planning and capital works programmes. Stormwater infrastructure will need to support growth in housing requirements, particularly for Ohakune. Noting that Flood Modelling and Mapping has been completed for Ohakune in 2023.	Three Waters Manager	High	To start				
4	Asset Register Data		None identified at this stage.							
5	Asset Performance and Condition	5.1	Undertake 3 yearly condition assessment of the stormwater assets. Align with asset management plan cycles going forward.	Three Waters Manager / Veolia	High	To start				
6	Decision Making	6.1	Undertake annual capital works planning together with Veolia.	Three Waters Manager / Veolia	High	To start				
		6.2	Council will partner with local iwi / hapu on the long term design for any future work on the stormwater system.	Three Waters Manager	High	To start				
7	Managing Risk	7.1	Update the stormwater activity risk register in collaboration with Veolia before the 2024 AMP is finalised.	Three Waters Manager / Veolia	Medium	To start				
		7.2	Improving the resilience of the stormwater network in relation to climate change impacts.	Three Waters Manager / Veolia	High	To start				
8	Operational Planning	8.1	On-going assessment of changes in legislation and what impacts those will likely have on operational costs.	Three Waters Manager	High	To start				
9	Capital Works Planning		None identified at this stage.							
10	Financial Planning	10.1	Continue to review the level of investment in stormwater assets to ensure the network is being renewed prudently long term and legislative compliance is being met balanced against community affordability and asset risk. Ensure investment decisions made are affordable for the community and does not burden future generations.	Finance Team and Strategic Planning	High	Underway				
		10.2	Undertake the next asset valuation sufficiently external from Council's main contractor. The next valuation will be undertaken by Beca from 1 July 2024.	Three Waters Manager / Three Waters Manager	Medium	To start				
11	Asset Management Leadership and Teams		None identified at this stage.							
12	Asset Management Plans		None identified at this stage.							
13	Management Systems		None identified at this stage.							
14	Asset Management Information Systems	14.1	Review the need for a dedicated consent system for holding consent compliance information.	Three Waters Manager	Medium	To start				
		14.2	Undertake planned upgrades to the Ozone system	Information Management Team	Medium	To start				
15	Service Delivery Mechanisms		None identified at this stage.							
16	Audit and Improvement		None identified at this stage.							