Asset Management Plan
Executive Summary

Stormwater

PAPAIOEA
PALMERSTON
NORTH
CITY

Our Asset Management Plans for water were created prior to the October 2023 Government election. We will follow government guidance as it is released

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Stormwater

Manaaki whenua, manaaki tangata, haere whakamua. Tihei mauri ora!

No reira, e te haukainga Rangitāne, nei rā te mihi nui ki a koutou e pupuri nei i te mauri o te whenua me ngā wai e rere atu e rere mai.

Tēnā koutou, tēnā koutou, tēnā tātou katoa.

The purpose of the stormwater system is to protect public health and assets by mitigating the level of flooding during significant rainfall events. Sediment and other contaminants are also to be managed to reduce the impacts on our streams and rivers.

With the effects of climate change projected to become more apparent over the next 30 years, our stormwater network has never been so important.

Long-term forecasts of more intense rainfall means our network will need to be adapted to better cope with these increased risks.

Taumata Arowai became New Zealand's dedicated regulator in 2023. Upon its establishment it released the Drinking Water Quality Assessment Rules that set standards for water supplies. In 2024, it will also assume responsibility for wastewater and stormwater networks, becoming the three waters regulator for Aotearoa.

The previous Government had been progressing Three Waters Reform so that three water services would be provided by ten publicly-operated water services entities by July 2026. With the change in Government in October 2023 the legislation has been repealed. The new government intends to introduce new legislation by mid-2024 in line with its Local Water Done Well proposal.

Under the National Policy Statement for Freshwater Management 2020, we must give effect to the hierarchy of obligations and six principles of Te Mana o te Wai.

Rangitāne O Manawatū expresses this in their Te Mana o te Wai statement and objectives. The Te Mana o te Wai statement is:

The most significant quality that flows through wai is mauri. The mauri is generated throughout the catchment and is carried through the connected tributaries, groundwater, wetlands and lagoons. It is the most crucial element that binds the physical, traditional and spiritual elements of all things together, generating, nurturing and upholding all life, including that of Rangitāne o Manawatū. The health and well-being of Rangitāne is inseparable from the health and well-being of wai. The Manawatū Awa, its catchment, tributaries and connections, wetlands and lagoons are taonga and valued for the traditional abundance of mahinga kai and natural resources.

This Asset Management Plan outlines how we plan to manage and invest in our stormwater assets for the next 30 years

Scope of this plan

This Plan informs our 10 Year Plan, Financial Strategy and 30 Year Infrastructure Strategy. It supports us in the management of our stormwater assets to:

- Achieve our strategic outcomes as set by Goal 4: A sustainable and resilient city
- Meet the agreed levels of service
- Plan for growth and adjust to other drivers such as climate change and new legislation
- Improve asset knowledge and monitor performance
- Minimise risk
- Plan operations

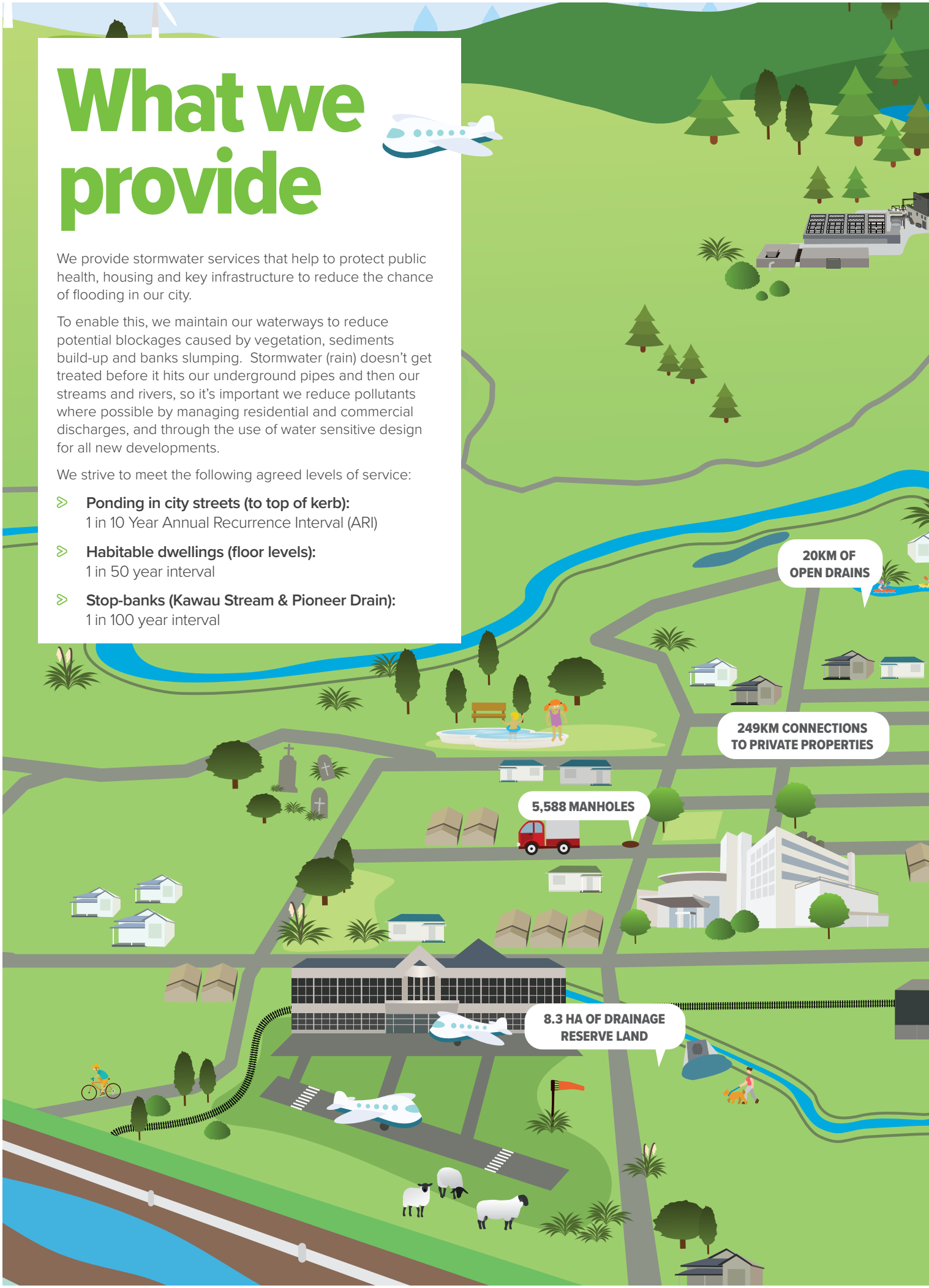
What we provide

We provide stormwater services that help to protect public health, housing and key infrastructure to reduce the chance of flooding in our city.

To enable this, we maintain our waterways to reduce potential blockages caused by vegetation, sediments build-up and banks slumping. Stormwater (rain) doesn't get treated before it hits our underground pipes and then our streams and rivers, so it's important we reduce pollutants where possible by managing residential and commercial discharges, and through the use of water sensitive design for all new developments.

We strive to meet the following agreed levels of service:

- **Ponding in city streets (to top of kerb):** 1 in 10 Year Annual Recurrence Interval (ARI)
- **Habitable dwellings (floor levels):** 1 in 50 year interval
- **Stop-banks (Kawau Stream & Pioneer Drain):** 1 in 100 year interval




305KM OF PIPED DRAINS
14KM OF STOPBANKS
18 PUMP STATIONS

Everyone is a customer

Residential

Visitors

Industrial

Rural

Education sector

Fire and Emergency New Zealand

Healthcare

Council

Developers

Commercial

Our focus is to raise the profile and quality of city urban streams, as tributaries of the Manawatū River, acknowledging their cultural significance to residents, including Rangitāne. Stormwater quality can be an issue in some parts of the city due to contaminants. We are working with Horizons Regional Council as we have some overlapping responsibilities.

People expect their properties to be safe from flooding. We aim to reduce the potential for habitable floors to be flooded in a 50-year incidence. To achieve this, we set minimum floor levels on new houses where deemed to be necessary. Some property flooding has been recorded in recent years and we are in the process of upgrading the network to help mitigate these issues.

Complaints and the overall satisfaction of residents about stormwater and urban waterways have increased since maintenance budgets and associated activities were reduced in recent years.

We have some challenges + risks

Our city is growing

In most areas where the City is growing there are existing sensitive receiving environments such as urban streams and remnant oxbows. Many of these have been significantly modified over time or they are degrading. As further development occurs (urbanisation) there is an opportunity to improve water quality and ecology by applying water sensitive design which helps reduce the risk of flooding. A significant increase in sub-division activities, especially where properties are being subdivided to create more homes is continuing. Existing levels of service must be maintained or improved, through low impact and water sensitive design, to manage the amount of land being coverted into concrete or other hard surfaces that don't absorb rain.

Water quality is poor in our urban streams

Cultural health monitoring of the urban streams is carried out in conjunction with Rangitāne o Manawatū under the joint programme Hei Manga Oranga. Water quality monitoring indicates that urban streams have unsatisfactory levels of contamination.

There are on-going issues with managing excess vegetation in our open drains and streams, as well as sedimentation, which often results in capacity issues for these streams. More appropriate plant species are needed to improve capacity, water quality and amenity.

Climate change will have an impact

Climate change will see more heavy rainfall events throughout the year, but more than we're used to over summer. The impacts of climate change on the stormwater network are expected to be an overall increase in rainfall and greater frequency of more intense rainfall events. The 2022/23 summer with Cyclone Gabrielle has demonstrated these type of events and impacts for our community. Changes in weather patterns could increase both nuisance surface water ponding and flood events.

Understanding Flood Risk

We now have better modelling and GIS tools to manage overland flow paths (where rain flows over land) and understand flooding impacts in different scenarios. However, there are some historic low-lying areas that need to be addressed. In addition, some urban streams are only accessible through private property, preventing us from providing effective management.

Council owns and manages 14km of stop-banks and other flood protection assets. These help to control flows in two streams (the Kawau and Mangaone) protecting the community, buildings and other key infrastructure assets. Modelling and on-going discussions are held with the Regional Council to share information, including district wide advice for flooding. There is keen interest to collaborate by both parties to ensure the right advice is given to the ratepayers regarding minimum floor levels and flooding extent, especially for future planning purposes.

Freshwater regulation

Central government has signalled its desire to improve freshwater quality. Ultimately this will be reflected in higher quality standards for discharges to rivers and streams. The urban streams and waterways of Palmerston North have been heavily urbanised and many are degraded due to overgrowth of exotic vegetation, with some litter and other contaminants entering, including through the stormwater network.

Asset condition knowledge is limited

While the risk profile of our stormwater pipes is acceptable as they tend to have a long asset life, we have limited knowledge of the condition of the majority of the piped network. Condition assessments have been undertaken on the critical pump stations, with work programmed to rectify issues.

What's our plan?

Partnership with Rangitāne and the community

Applying water sensitive design to any upgrades or projects will be a key change in the medium to long term. This approach will help to improve outcomes for water quality, hydraulic capacity and amenity.

Our approach is to fund a clean-up and vegetation removal-programme for all the urban streams with a five-year period. As sections are cleared, they will be planted with appropriate species in conjunction with Rangitāne and with support from community groups and businesses.

Respond to growth

We will continue to work proactively with property owners and developers to mitigate the quality and quantity effects of the stormwater runoff from new land development, and to provide growth infrastructure connections into our systems. Ensuring that there continues to be a portion of land that can absorb rain (known as hydraulic neutrality) will be one key response to managing growth but some capacity upgrades of existing infrastructure will also be required.

We are expecting increased operational costs to maintain stormwater treatment devices that will be vested to Council by developers.

As the city grows, we will need to continue to also maintain and update our stormwater model to reflect the changes.

Design for climate change

We will continue to consider climate change when we are designing and constructing new infrastructure. Where infill (the subdividing of property) is occurring, the impacts of heavier, more frequent rainfall can be mitigated by developers adopting rainwater tanks for storage and minimising the area of surfaces that can absorb water.

Improve resilience and reduce risk

We have several key ongoing programmes focussed on improving resilience.

- **Stormwater Pump Stations Improvement** – significant upgrades or addition to mechanical/electrical equipment in stormwater pump stations and associated outlet works to ensure levels of service are improved; including providing backup for some pump stations that are only equipped with one pump (i.e. no standby).
- **Flood Mitigation** – targeting larger/big scale mitigation projects required to alleviate and minimise flooding on catchment wide basis. These projects include diverting or upgrading the network and storing stormwater to reduce discharge rates to the pre-development level
- **Land purchase** – acquire drainage reserves for waterways that are currently flowing through private Lots and do not have designated drainage reserves.

Use condition data to prioritise replacements

New condition assessment data will help to confirm our service failure risk profile and inform a prioritised programme of pipe defects to be rectified. This will help us maintain our level of service by planning and optimising future pipe replacements.

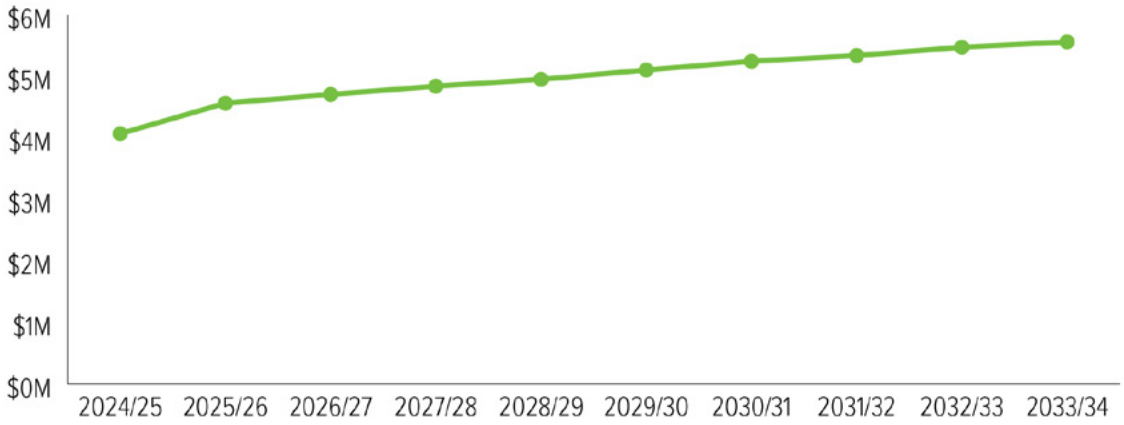
Continue to monitor waterway health

Our partnership with Rangitāne on Hei Manga Ora has provided us with invaluable information on the cultural health of our waterways. This information combined with the roll out of an improved water quality monitoring programme will inform future discharge consent applications.

How much will it cost?

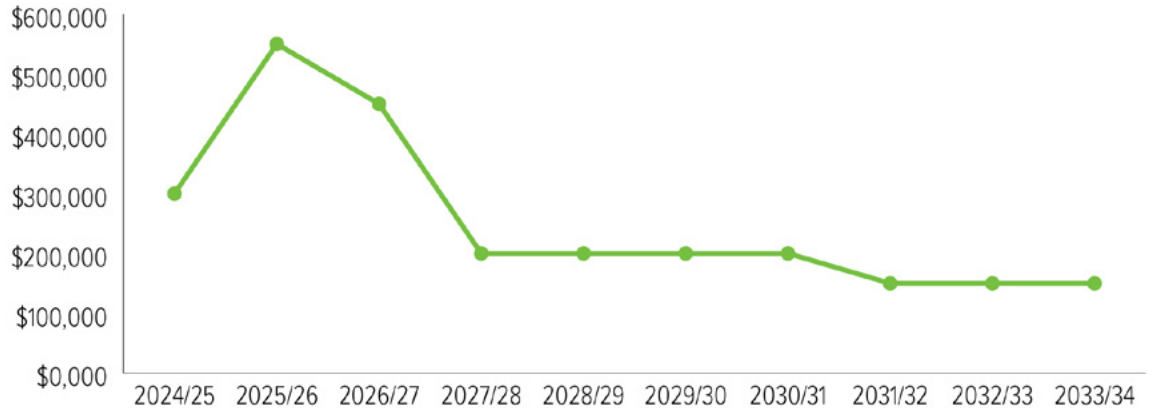
Operations and Maintenance

The largest proportion of operational expenditure is spent operating and maintaining our existing assets. Overall operations and maintenance expenditure is proposed to trend slightly upwards with most costs in maintaining service levels. There is a gradual rise in the consequential Opex from 2024/25 onwards due to increasing maintenance associated with new assets in growth areas.



Consequential operational expenditure (from the creation of new assets) increases steadily over the next decade due to the high volume of projected growth.

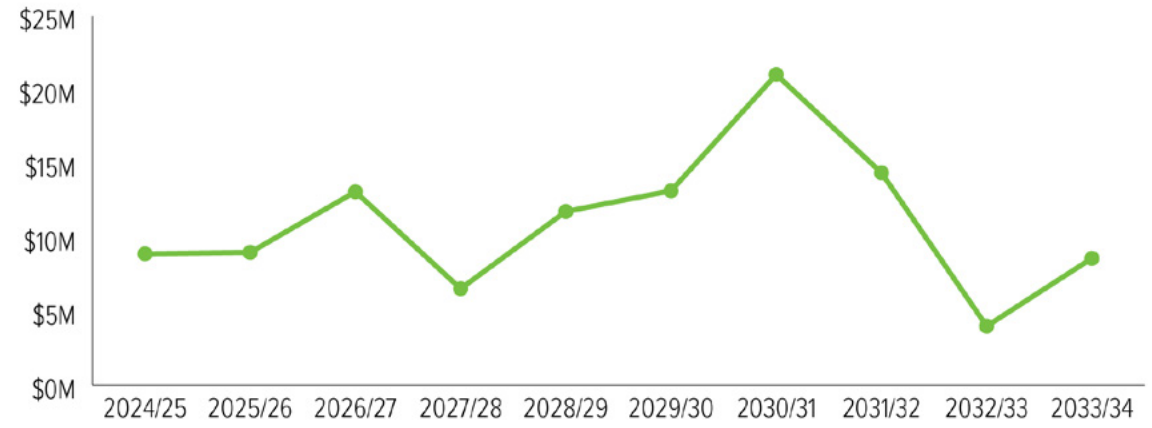
Renewals



The proposed renewal budget is similar to annual depreciation values. We propose to have fairly low renewals over the next 10 years. Over time as assets get older, our renewal costs should gradually increase.

However, that's not the case in our plan. As we need to do more work to develop the condition-based renewals programme, especially for 2027/28 onwards. Our renewals budget is lower as we anticipate to complete upgrades to increase levels of service across the stormwater network.

Capital new



Capital investment is mainly required to meet Council levels of service and growth demands. Actual service growth is dependent on timing of developments. The increase from 2028/29 to 2031/32 for stormwater pipes and treatment is to provide for growth in new residential and industrial developments e.g., Kakatangiata and Aokautere, as well as general network improvement works.

There are two major capital programmes intended to increase capacity and resilience of the existing network, totalling $27M over the next 10 years, and two major growth programmes totalling $30M over the next 10 years.

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