



Long Term Plan

Infrastructure Strategy

2024-2034



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INFRASTRUCTURE STRATEGY

INTRODUCTION

This Infrastructure Strategy (strategy) sets out Ruapehu District Council's (Council) expectations to manage its core infrastructure over the next 30 years. A town's physical infrastructure is the basic foundation upon which its residents can thrive. Good infrastructure is usually taken for granted, poor infrastructure can undermine economic confidence and undermine public health. Thinking ahead and planning for the long term is vital to make sure current and future generations enjoy well-maintained services, that are resilient and fit for purpose.

The strategy lays out the most likely scenarios for how our infrastructure will be managed, and the most important decisions we are likely to face as a community in the future. It should be read in conjunction with the Financial Strategy and is a key part of the Long Term Plan (LTP).

This strategy covers the activities of Land Transport, Water, Wastewater and Stormwater.

PURPOSE OF THIS STRATEGY

The infrastructure strategy has been prepared to meet the requirements of section 101B of the Local Government Act 2002 (LGA) identifying:

- Significant infrastructure issues facing the Council over the next 30 years.
- The principal options for managing these issues and the anticipated implications.

The 2024 Infrastructure Strategy outlines the investment programmes to ensure we are meeting our legislative obligations as well as maintaining service levels to our communities. The scale of capital investment we need to make in our infrastructure is substantial. Large scale investments require a resilient and well-informed strategic planning approach that carefully considers the optimal prioritisation, timing, and financing of these investments. Getting these decisions wrong may have serious consequences for Ruapehu District's (the District) basic infrastructure and future financial sustainability.

STRATEGIC CHALLENGES

The key strategic challenge facing Council is one of affordability. Council has been managing key infrastructure assets within financial constraints for a number of years. There has been a significant increase in costs since the last LTP and this has further constrained the amount of work that is able to be done with existing levels of funding.

Council needs to face the reality of our infrastructure assets and the costs tied to them. At present, the costs necessary to upkeep and renew our infrastructure to acceptable standards are beyond our financial means and the financial means of our community. Opting to delay maintenance to keep our rate increases at what we consider a manageable level for our community will lead to heightened reactive maintenance and the overuse of assets. Trying to catch up on essential maintenance and renewals later will only become more unaffordable in the future. Over the next 2-3 years, we intend to thoroughly assess our infrastructure assets and, in collaboration with our community, make some tough decisions about their future.

During the development of the LTP an alternative level of expenditure was initially proposed in the Land Transport Asset Management Plan, but this would have resulted in an unacceptable level of debt and rates increases in the first 3 years. The plan has been significantly increased from years 3 to 10 of the LTP raising expenditure to that proposed in the initial alternative level of expenditure. This should be affordable due to the increase in the rating base from the proposed 9% rates increases for the first 3 years of the LTP. The level of expenditure which is included in the LTP is based on 2022/23 levels plus inflation, with targeted increases in specific programmes that will help reduce rate of deterioration in those programmes.

With reduced activities being able to be completed over this LTP compared to previous LTPs, there is an increasing risk of assets deteriorating at a faster rate, resulting in decreasing network resilience and reduced customer outcomes. Inflation over recent years has meant that less activities can be completed at the current funding levels.

CURRENT ASSET STATE

We have a sound understanding of the current state of our core infrastructure assets in terms of condition and performance as follows:

- **Land transport** - The average quality of roads is measured in terms of Smooth Travel Exposure. The performance of our primary collector roads in terms of Smooth Travel Exposure is good when compared nationally, regionally and with other rural councils. However, the other road categories of pavement condition and surface condition do not perform or compare as well.
- **Three waters** - The overall condition of the three waters assets has been assessed between good and moderate for some asset classes and townships. The relatively small scale of each of the networks operated by Council means that Council is aware of the critical assets within our network systems. Although formal criticality assessment has not been completed, an assessment has been made of the categories of assets that are critical to the operation of the networks, and a greater level of management is applied to them. Critical asset identification is currently used in decision making with renewals, condition assessments and operational activities. Refining the categorisation of critical water assets at component level to support better decision making is something Council will be working on over the next few years.

With the implementation of the new regulator, Taumata Arowai, some of the compliance criteria changed, meaning that new monitoring parameters need to be added to the treatment plants. Parameters such as conductivity require additional analysers and SCADA outputs that are recorded minute by minute. Veolia operates VAMS (Veolia Asset Management System). This is an Infor product which was developed to customise asset management tools to Council's needs. It provides an opportunity for field staff to enter asset condition information against specific assets as they get worked on. Proactive maintenance tasks are set up as recurring tasks with specific frequencies, allowing condition and performance information to be loaded into VAMS. The system is also designed to incorporate condition rating into the reactive job report, with the capacity to store pictures of the assets worked on. The report provided by field staff is done live through VAMS' portal and gets reviewed by a Coordinator before getting signed off.

SIGNIFICANT ISSUES

In preparing this strategy, we have identified five strategic district infrastructure issues that need to be at the forefront of infrastructure planning and decision making:

1. A higher cost environment with greater funding and capability challenges.
2. Costs of meeting compliance with the new regulator Taumata Arowai able to use legislative powers to enforce compliance.
3. Resilience of infrastructure assets.
4. High deprivation district means limited ability to increase rates to pay for critical infrastructure.
5. Climate change and natural hazards.

STRATEGIC CONTEXT

CHANGING DEMOGRAPHICS

The population in the District in 2023 was 13,000. The resident population is predicted to have a small increase overall between 2023 and 2043 under either of the low, medium, and high growth scenarios as shown in Table 1 below.

| PROJECTED GROWTH: RUAPEHU DISTRICT URP 2020 - 2054 | | | | | | | | |
|--|--------|--------|--------|--------|--------|--------|--------|--------|
| | 2023 | 2024 | 2029 | 2034 | 2039 | 2044 | 2049 | 2054 |
| HIGH | 13,123 | 13,171 | 13,416 | 13,653 | 13,889 | 14,181 | 14,485 | 14,715 |
| MEDIUM | 13,123 | 13,166 | 13,371 | 13,531 | 13,662 | 13,796 | 13,904 | 13,947 |
| LOW | 13,123 | 13,161 | 13,324 | 13,404 | 13,421 | 13,388 | 13,290 | 13,139 |

Table 1: Project Growth Ruapehu

Table 2 shows the District's average age has increased from 2006-2018. An ageing population places greater pressure on the working aged population to generate income, and families and workers will continue to move from rural areas to larger population centres.

| SERVICE AGE GROUP (YEARS) ¹ | 2006 No | 2006 % | 2013 No | 2013 % | 2018 No | 2018 % |
|--|---------------|-------------|---------------|-------------|---------------|-------------|
| Babies and Pre-schoolers (0 to 4) | 1,026 | 8% | 1,002 | 8% | 900 | 7% |
| Primary Schoolers (5 to 11) | 1,653 | 12% | 1,251 | 11% | 1,389 | 11% |
| Secondary Schoolers (12 to 17) | 1,389 | 10% | 1,014 | 9% | 870 | 7% |
| Tertiary education and independence (18 to 24) | 1,149 | 8% | 1,005 | 8% | 918 | 8% |
| Young workforce (25 to 34) | 1,593 | 12% | 1,296 | 11% | 1,557 | 13% |
| Parents and homebuilders (35 to 49) | 2,997 | 22% | 2,205 | 19% | 2,079 | 17% |
| Older workers and pre-retirees (50 to 59) | 1,734 | 13% | 1,767 | 15% | 1,761 | 14% |
| Empty nesters and retirees (60 to 69) | 1,062 | 8% | 1,290 | 11% | 1,647 | 14% |
| Seniors (70 to 84) | 837 | 6% | 852 | 7% | 1,023 | 8% |
| Elderly aged (85 and over) | 132 | 1% | 165 | 1% | 165 | 1% |
| Total population | 13,572 | 100% | 11,847 | 100% | 12,309 | 100% |

Table 2: Service Age Groups

ECONOMIC TRENDS

The economic landscape for asset management within New Zealand's local authorities is undergoing significant shifts, influenced by various factors including global economic uncertainty, fluctuations in tourism, and trends in industry and commercial activities. Volatility in the global economy has created uncertainty regarding the potential economic impacts on the District. Council must navigate this uncertainty as it directly affects its asset management strategies and fiscal planning. Economic instability on the global scale can lead to fluctuations in currency exchange rates, impacting the cost of imported goods and services essential for local infrastructure projects and maintenance.

The tourism sector plays a pivotal role in the District's economy, contributing significantly to Council's revenue. The industry's growth or decline directly impacts Council's asset management plans. For example, during periods of robust tourism growth, there may be increased pressure on local infrastructure, such as roads, public facilities, and waste management systems. A decline in tourism can lead to revenue shortfalls, affecting the budget allocated for asset maintenance and development.

Fluctuations in industry and commercial activities also shape the economic landscape for Council. The District is heavily reliant on the agricultural industry to drive the local economy. Changes in this sector due to the increase in carbon farming, central government policy changes and the effects of the current economic climate are likely to have ripple effects on the local economy. For example, a decline in agricultural exports due to unfavourable market conditions can impact rural communities, affecting Council's revenue and its ability to fund infrastructure projects.

The impact of these economic trends on Council is multifaceted. High inflation can strain local budgets, making it challenging for Council to maintain existing infrastructure, let alone invest in new projects. Rapid cost increases may necessitate prioritisation of essential services over discretionary spending on infrastructure upgrades or renewals.

In summary, economic trends, including global uncertainty, tourism dynamics, and shifts in local industry and commercial activities, significantly influence asset management strategies for local authorities in New Zealand. Navigating these trends requires proactive planning, adaptability, and collaboration between local government, businesses, and communities to ensure resilient and sustainable infrastructure development and maintenance.

INFRASTRUCTURE PLANNING

LEVELS OF SERVICE (LOS)

LOS encompasses parameters or combinations of parameters reflecting social, political, economic, and environmental outcomes delivered by Council. LOS changes could occur from changes in customer needs/wants, or an increase in service standards. Over the past few years Council made significant investments on infrastructure assets, supporting the local economy and well-being. While having affordability issues and with a relatively small number of ratepayers, Council still managed to maintain assets functional and minimising service disruptions. Council is able to reduce the forecast level of renewals, taking a more reactive approach – which means delaying renewals work until it is unavoidable. Reactive maintenance is then the only option. This approach is not sustainable over the long term. If we continue to sweat our assets the required essential maintenance and renewals later on will only become more unaffordable in the future, which may result in drops of levels of service.

There are no major growth areas in the district, however in Ohakune, some subdivision activity has occurred in recent years. Wastewater network modelling was completed in 2022, enabling Council to understand any possible constraints in the Ohakune wastewater network. Four major sections were identified in the report, informing Council of risky areas where the network could be overwhelmed, increasing the possibility of dry weather sewer overflows. Council received four different engineering services proposals from Veolia to implement the network upgrades. The next focus of renewals will be on the wastewater treatment. Discussions are underway to determine the required extent of the improvements and how they will be funded.

Increased numbers of visitors will contribute towards growth in the tourism and hospitality industries, shuttle services, cafes, restaurants, motels, and others. This increase in activity could result in an increased demand for housing. The current Land Transport portfolio is expected to accommodate the increased activity.

An option for Council is to reduce the LOS across the infrastructure activity. This is the least preferred course of action. It would impact current contractual agreements with long term suppliers who have set up their local resources according to contractual arrangements. Instead, Council is looking at efficiencies and opportunities. As an example, the Land Transport Professional Services contract is currently being procured. Substantial changes were made to ensure the new contract improves efficiencies while delivering across the whole infrastructure, not only Land Transport.

With a well-established Infrastructure Group Council is undertaking a progressive change programme that will encompass activities such as:

- Clarifying core capability needs and whether they are provided through established internal roles or outsourced.
- Standardising the approach to project management across the Group.
- Standardising the approach to asset management across the Group.
- Standardising contract and supplier relationship management.
- Increased use of contractors' capabilities and a new inspection led regime to support stronger asset management disciplines (e.g., condition rating, planned maintenance interventions, renewals programmes etc).

The new professional services contract is scheduled to start at 1 July 2024 and cost savings are expected under the new model. One key change Council is seeking is that interactions with physical works contractors will be done in-house, with the professional services provider offering technical support as required.

Council's focus is to maintain the current LOS, fulfilling contractual expectations. Currently the planned changes to LOS relate to the water plant upgrades, and increased focus on effluent quality in wastewater. Council plans to have all six water treatment plants achieving compliance with regulation. This will be noticed by the communities especially through weather events. Currently, some of the water supplies have no ability to remove particles, negatively affecting the treated water. This can be noticed as high turbidity water enters the network. Due to the risk to public health, sometimes the only risk

mitigation factor is to issue a preventative boil water notice. This can be damaging to Council's reputation, affecting the local economy. Council is also undertaking investigations to ensure five (of a total of six) wastewater treatment plants have renewed resource consents. These consents are currently being worked on, providing Horizons Regional Council with regular updates. Collaboration between Council and local hapū and iwi is key for a consenting process. This approach requires time and negotiations to ensure that by the time the application is submitted to Horizons Regional Council, all tangata whenua concerns have been addressed.

Flow rates and daily discharge volume information will allow upgrades to be sized accordingly. These are key pieces of information that will assist with resource consent applications, with the appropriate conditions to be met. Council currently understands the environmental and ecological effects on water quality for the receiving environments. Cultural aspects still need to be understood in order to inform the nature of the future upgrades. The Te awa Tupua legislation requires Council to co-design solutions alongside hapū and iwi which will require engagement and time. All the work above described will be undertaken in the next three years ahead of the next LTP.

For potable water, Council is working through upgrades to water treatment plants, so the current standards are met. This is however still dependant on decisions being made for future legislative requirements. Water abstraction resource consent applications for Ōhura, Ōwhango, Matapuna (Taumarunui) and Ohakune are due in two years. Raetihi is new and current. Upgrades need to be agreed with hapū and iwi so the monitoring of resource consents for water treatment plants can be mutually agreed on.

As mentioned, any changes in legislation could impact current LOS and the full impact of any mandated changes on services will be determined as and when those legislative changes happen. This does pose the risk of expenditure requirements over and above what is currently planned for.

RISK MANAGEMENT

Our risk management approach

Our approach for managing infrastructure, balances risk and performance while providing cost effective services. Infrastructure risks can be considered in terms of global threats (such as climate change), national (legislative changes), corporate and asset risks. At an activity level, these infrastructure risks need to be considered holistically as part of the asset management planning approach and not taken in isolation.

The following sections outline how this is addressed for each activity with the detail provided in the Activity Management Plans.

CLIMATE CHANGE AND NATURAL HAZARDS

Natural hazards pose risks to infrastructure assets, and climate change is expected to increase the frequency and intensity of natural hazard events. Climate change is already causing glaciers and snowlines to retreat, [Stats NZ](#) found that North Island glaciers have declined by 25 per cent since 1988, even moderate increase in average temperature may lead to Mount Ruapehu's glaciers becoming extinct. The loss of Ruapehu's glaciers will negatively affect local hapū and iwi, as well as our local environment. This is a problem that can potentially reduce demand for treated water and the generation of wastewater if the tourism activity reduces. This is a costly trade off as the impact on local businesses would impact the community's affordability to pay rates.

Council has used climate change assumptions provided by Horizons Regional Council [Climate Action Plan 2023](#). Flooding and damage to transport networks are increasing in our region, without action the impacts are likely to worsen. Natural Hazards that will affect our infrastructure are:

- Landslides – Highly likely to impact our roading network that we heavily rely upon to access supply chains, disproportionately effect our agriculture businesses.
- Floods – Infrastructure damage, specifically to roads and bridges, this disrupts transport services. Sediment carrying flood waters, will affect water quality and ecosystems.

- Eruptions – Mount Ruapehu poses a significant risk to all Council infrastructure, ashfall would contaminate our drinking water supplies, our roads, and water treatment plants are at risk of being damaged from a large-scale eruption.
- Erosion – Increased sediment into waterways effect the flora and fauna, reduce land productivity, and undermine infrastructure foundations. This will affect our roading and water utilities.
- Drought – Reduced amounts of water available in rivers can be risky to communities as the storage tanks reach low levels. The impact would be that communities are forced to conserve water.

There is no one size fits all approach to managing hazards and risks, nor is there an agreed upon threshold to determine appropriate risks residents are willing to live with. Modelling for volcanic hazards is not well advanced nationally, which means Council is likely to be reactive in the case of a volcanic eruption.

Focus on preventative maintenance increases the chances of infrastructure handling weather events by addressing asset issues before they arise. Proactive maintenance is preferable over reactive activities. This is not always possible and is largely dependent on funding being available as well as resources. Council relies on contractors to deliver on the Levels of Service within the infrastructure activities. Where applicable, maintenance tasks have been incorporated into contractual deliverables. Some of the proactive maintenance tasks across Council's infrastructure include:

- Proactive tree assessments programme.
- New water treatment plants that can treat high turbidity surface water.
- Increased culvert inspections.
- Open drain maintenance programmes.

Many of the District's rural roads are windy and follow the contour of the nearby rivers. The risk of landslides and washouts due to weather events becomes increased as the large weather events become more frequent. Road drainage plays a key part in mitigating the risk of damage to rural roads. Wet weather can also affect roads by degrading the quality of the pavement. Road maintenance and reseals provide good opportunity to extend asset life.

Currently Council balances the budgets by combining the approach to the maintenance, between reactive and proactive tasks. The proactive work generally requires increased budgets that are not always available, that is when the reactive work becomes the only option.

MANAGING FINANCIAL RISKS

The 2024-34 LTP signals a return to previous levels of investment as shown in the 2018-28 LTP in core infrastructure. The planned step change to increase the delivery of capital works in the last LTP was unable to be delivered due to supply chain issues, cost escalations and financial constraints. The result of this is increased reactive maintenance rather than planned maintenance. These issues have required Council to carefully review and prioritise the capital works programme for this LTP to limit the impact of these cost escalations on ratepayers. This is reflected in the significantly reduced capital works programme compared to the previous plan, especially in the first 3 years of the plan.

To date Council has taken a prudent approach to ensure that the debt levels are kept within its financial benchmarks. This ensures that the ten-year investment programmes are affordable for our community. Council has continued to take this approach in the 2024-34 LTP to minimise rates increases as much as possible. There are areas within Roothing and the 3 Waters where increased expenditure was proposed during the creation of the LTP but was deemed to be unaffordable. This additional expense has now been planned for years 10-20, in a future LTP. The impacts of pushing that spend out is increased reactive maintenance in the short term. The long-term consequence of this approach potentially creates the need for greater capital investment, promoting full replacements rather than minor maintenance, which will likely be unaffordable for our community.

The most significant areas of uncertainty are Council's reliance on grants and subsidies. Waka Kotahi has confirmed an increase in funding from 74% to 75%. The process of agreeing the budget with Waka Kotahi is an established and mature process. There are several steps in the process through which the allocation of funding to different activities can be negotiated.

Other key projects that are to be funded from external funding will be deferred if that funding does not eventuate such as the Horopito cycle trail hub or the Mangateitei bridge. Council is currently negotiating with KiwiRail an alternative option to the Mangateitei bridge replacement. This alternative could be a rail crossing which would have a much lower price tag.

There is limited external funding assumed for the Three Waters. Particularly with regards to Council's wastewater treatment plants, further investment will be required as the regulating agencies issue penalties and abatement notices. Engineering process upgrades at the six wastewater treatment plants will require significant investment to implement. It is understood that future resource consents will require more strict monitoring, while applying more involved treatment processes. Some of the modern wastewater treatment processes require higher power supply which means more upfront investment. Council officers are also working with hapū and iwi, to ensure collaboration towards the resource consent applications and the agreed conditions. The resource consent conditions will inform where the capital investments will need to be concentrated, ensuring the upgrades are fit for purpose.

LAND TRANSPORT

ACTIVITY OVERVIEW

Users

The District's environment has a relatively low number of heavy industries or high intensity residential development. The high quality of the environment makes the District attractive to visitors who seek to visit natural and unspoilt landscapes. The number of visitors continues to grow after the decline during the Covid 19 lockdowns and is expected to return to similar levels from prior to 2020.

Infrastructure Issues

The transport infrastructure of the District is ageing and was not originally built to handle the heavy traffic that the District sees today. Many of the roads are windy, narrow, designed for slow travel speeds, and, together with the ageing infrastructure can create hazardous conditions and serious safety issues.

The number of tourists visiting the rugged natural beauty of the District is increasing, and so too is the amount of forestry log haulage.

Goals

Council desires to build and maintain a safe network that is able to cater for residents, road users, pedestrians, cyclists and tourists and the growing demands of commercial developments such as freight, produce and forestry.

Growth or Decline

In the foreseeable future, growth in visitor numbers will ultimately result in growth in related businesses which may see some flow on demand in residential housing. Such growth is unlikely to put significant additional demand on the Land Transport portfolio. Growth in rural produce is also not expected to put significant additional demand on the network. Carbon farming may see demand decline.

Affordability

As a consequence of the small and dispersed population, large tourism industry and large land area, the District faces many challenges in meeting the current and future service expectations of residents and visitors, in terms of Council's ability to fund the desired service levels at an affordable (sustainable) cost level.

Levels of Service

Maintaining the current levels of service will need significant investment. In October 2022, the majority of roading services were due for tender. Inflation has risen worldwide since 2020, with cost adjustments increasing 22% between July 2020 and July 2022. As part of its tender exercise, Council examined the contract schedules to ensure quantities were sufficient to address need.

Over the 30 years of this strategy, Land Transport funding has been assumed to maintain existing service levels. The initial desired budget option would have been considered to have done this as it is based on the contract schedules from October 2022, but this option was reduced from years 1 to 3 which will result in some deterioration of assets. The 'step up' in Year 4 is to match the desired budget option. A short period of reduction in maintenance and renewals will have less of an impact than longer period of reduction would.

Resilience and sustainability

With the increase in weather events, Council considered a larger focus on drainage infrastructure as a preventative measure to increase resilience. The affordability became an issue as the investment would mean increased rates. Decisions about how to manage infrastructure need to be made in the context Council's financial position. Deferring any preventative maintenance tasks requires accepting another

level of risk. In this case, it is not possible to manage assets and LOS from considerations about funding sources and timing (of funding and asset lifecycles). This is the case Council is currently facing. By delaying maintenance and sweating the assets, it is anticipated that larger levels of investments will likely be required in the next LTP, and those costs are likely to be unaffordable for our community.

Consequences

With the financial constraints preventing resealing programmes from being delivered at the required lengths per year, the quality of the pavement reduces, and the consequence is more interruptions and long-term traffic management in place. This could potentially lead to public frustration, reduction in tourism activity, a decline in community satisfaction and pride.

If year 4 onwards cannot be funded at what is proposed and say years 4 to 10 are constrained to similar levels as years 1 to 3, the assets and network will experience deterioration. The level of service will drop, and it will take significant investment to bring it back to current levels. The cost of that investment is likely unaffordable for our community.

Service Delivery

The majority of roading contracts are for an eight year period in full. As the assumption is to continue existing service levels over the 30 years, the work is mostly ongoing maintenance and renewals for the existing network. There are no major new projects or network growth planned.

STRATEGIC CONTEXT

Strategic Direction

Within the Land Transport activity, the following strategic directions have also influenced the development of this plan.

- To follow national and regional plans and strategies.
- To address the problem statements. The statements were developed in an Investment Logic Mapping workshop by key stakeholders in 2016 and have been reviewed at each LTP for relevance since they were developed.
- To maintain and renew the existing network and assets to ensure that they provide the expected level of service at the lowest whole of life cost.

The Problem Statements:

- **Forestry and Land use** - Changing land uses (i.e. Forestry & Mining) is resulting in (and will increase) the deterioration of the network, causing increased reactive (unplanned, works to maintain the roading environment) maintenance and repair costs.
- **Needs and Expectations** - The needs and expectations of road users (local, freight, events, tourists) is resulting in increased investment to maintain and/or improved the form and function of the road network.
- **Climate Change** - The network is impacted by climate, geography and topography resulting in reactive/unplanned maintenance costs as well as increased safety risk and operation of the network.
- **Safety** - Vulnerable road users are at greater risk due to increasing and changing activity and environmental conditions which is expected to result in increased deaths and serious injuries.

It is expected that key investment objectives over the life of the Strategy will be:

- Providing **sustainable** and **resilient** infrastructure
- Managing the network with a strong focus on **safety**
- Providing an **affordable** transportation network that meets the reasonable needs of the wider community

- Maintaining the network so that **service capacity** and integrity is not reduced

SIGNIFICANT INFRASTRUCTURE DECISIONS THAT ARE ANTICIPATED IN THE STRATEGY PERIOD

Replacement of aging bridge stock

Driver: Renewal

There are 28 bridges that are at or near the end of their useful life, 29 with less than 30 years life remaining and 47 bridges with less than 40 years life remaining. Note that this includes Mangateitei Rail overbridge.

Decision required: 2024 – 2027 for the bridges at or near the end of their useful life and 2028 onwards for the remainder.

Principal options: The principal option will be to restrict each bridge as its condition deteriorates, until it is not possible to do this any further. External funding is usually only available after a restriction is applied, as it begins to meet the required economic testing. In some cases, on low volume roads, bridges will still be uneconomic to replace according to NZ Transport Agency's current funding criteria.

When this occurs, decisions will have to be made as to whether to replace the bridge to full or lower capacity or to remove it.

There is a high degree of uncertainty as many of the bridge ages are not known. Condition assessments and inspections will help to refine options as the time gets closer.

The approximate cost and scope of the decision: \$123,000,000

Old Station Road Bridge replacement

Driver: Level of Service

Old Station Road bridge is a one lane bridge at the intersection of the named road, Thames Street, Ohakune Mountain Road and Mangawhero Terrace. It has been flagged that this could be inadequate if there is future growth in this area of Ohakune.

Decision Required: 2034 – 2038

Principal options: With the replacement driver being growth rather than end of useful life, it will be difficult to get funding from NZ Transport Agency, under the current funding criteria.

An Ohakune Junction Master Plan is in the process of being developed and the options suggested have been to either widen the bridge or close it off to traffic, as there is an alternate route available.

The approximate cost is \$1,380,000

Matahiwi Track Suspension Bridge Replacement

Driver: Level of Service

Matahiwi Track suspension bridge on Matahiwi Track Road provides access for a private forestry block. Although it is not at the end of its useful life, it is unsuitable for hauling logs across. It has been proposed that the bridge be replaced to enable this, in a joint agreement between the landowners, NZ Transport Agency, with Council organising construction and project management.

Decision Required: 2024. This replacement is in the LTP for 2028. However, it does not include any funding from Council. The work will only go ahead if it is fully funded by NZ Transport Agency, as a private agreement between the landowner and the Agency.

Principal options: Full bridge replacement or strengthening the bridge or no action.

Approximate cost: For full replacement, the approximate cost is \$5,200,000 (uninflated)

Horopito Cycle Trail Hub

Driver: Level of Service

This project is to provide a hub for users of the Mountains to Sea cycle trail. Horopito is a natural staging point on the trip and this project would be to install parking, toilets and provide a space for food vendors.

Decision Required: 2024. This replacement is in the LTP for 2028. However, it does not include any funding from Council. The work will only go ahead if funding is available for Economic Development activity from central government.

Principal options: Fully serviced staging area (toilets, car park) or low-cost toilet option only

Approximate cost: \$1,677,000 (uninflated)

Great Rides Story Telling and Art work

Driver: Level of Service

This project is to provide interpretation signage and artwork along the Mountains to Sea Cycle trail to enhance the user experience.

Decision Required: 2024. This replacement is in the LTP for 2028. However, it does not include any funding from Council. The work will only go ahead if funding is available for Economic Development activity from central government.

Principal options: Whether artwork is used to support one or both trails

Approximate cost: \$1,300,000 (uninflated)

Te Hangaruru Cycleway Stage 2

Driver: Level of Service

This is to extend the Mountains to Sea cycleway from Pōkakā north to National Park. This section is stage 2 of Te Hangaruru. Stage 1 is currently underway, extending the cycle trail from Horopito to Pokaka. The cycleway will be developed as a Grade 2 / 3 trail with a metal or natural surface. It will be for families and will extend hub and spoke options to attract usage for those who a multi day ride is not appealing.

Multi day riders will be able to connect through to Whanganui River via existing sections of the Trail.

Decision Required: 2024. This replacement is in the LTP for 2028 and 2029. However, it does not include any funding from Council. The work will only go ahead if funding is available from central government.

Principal options: Principal option is to form it in a metal or natural surface to a grade 2-3 Mountain Biking Trail level.

Approximate cost: \$5,300,000 (uninflated)

Waiouru Truck Park Stop

Driver: Level of Service

Waiouru is a natural overnight stopping place for long haul truck drivers. There are issues with trucks parking on the side of residential streets in Waiouru, the edges of which are not suitable for heavy vehicles. The residents have reported littering as well.

Decision Required: 2034 - 2037

Principal options: The principal options to consider are do nothing, provide a basic parking area with a metal surface, or provide a parking area with conveniences such as litter bins, toilets and a park and ride facility with provision for washing and showering.

Approximate cost: \$2,620,000

Land Transport Infrastructure Assumptions

The life cycles for assets are as per those in the Activity Management Plan (AMP). Total Useful Lives developed through the 2015 valuation were still viewed to be appropriate.

The AMP identifies the data confidence for each asset type, as many have unknown dates of construction.

The potential effects of this are that forecasts can only be high level and need to be verified through condition and structural inspections.

Growth and Decline assumptions can be seen in the Growth section of the AMP, along with the Council's Growth Planning Assumptions.

It has been assumed that Council will continue to maintain assets at the current level of service. This has a high degree of uncertainty and will need to be adjusted if populations decline, or affordability of maintaining level of service is unsustainable.

ASSET OVERVIEW

Land Transport covers the following infrastructure operated by Council. Details of the assets are contained in the AMP.

| Asset Group | Asset Type | Quantity | Replacement Cost(\$) |
|-----------------------------|---|-------------------|----------------------|
| Pavement | Road Formation | 1,344 km | 96,712,893 |
| | Pavement Layers | 1,344 km | 134,478,036 |
| | Sealed Road Surface | 496 km | 25,107,514 |
| Structures | Bridge | 258 number | 93,574,630 |
| | Large Culverts | 99 number | 11,792,414 |
| | Retaining Walls | 6 number | 8,328,932 |
| | Minor Structures | | |
| | <ul style="list-style-type: none"> • Pedestrian Footbridge • Bluff Safety Netting | 1 number 150 m | 577,271 822,608 |
| Drainage | Kerb and Channels | 1,525 km | 42,589,104 |
| | Small Culverts | 93 km | 34,778,207 |
| | Other Drainage | 1,475 number | 1,625,322 |
| Traffic Services | Street lighting | 1,497 lights | 4,977,373 |
| | Road markings | 399 km | 480,793 |
| | Road signs and Other | 5,666 number | 1,331,178 |
| | Crossings | 450 number | 3,567,743 |
| | Islands | 32 number | 322,697 |
| | Railing | 19,137 m | 2,832,326 |
| | Traffic Facility | 1,345 number | 3,572,990 |
| | | | |
| Footpaths | Footpaths | 71 km | 13,837,258 |
| Cycleways | Cycleways | 369 km | included above |
| Bus shelters | Bus shelters | 24 number | not valued |
| Facility roads and carparks | Facility roads and carparks | 38,432 m2 | included above |
| | | 56 number | |
| Total | | | 481,309,288 |

STRATEGIC LAND TRANSPORT CHALLENGES

Impacts of forestry on roading network

Harvesting of the surrounding forests is having a significant adverse impact on both our unsealed and sealed roads. Weak pavement strength due to the local geology of the District and pavement that have not been designed for the quantity and loading associated with logging haulage are becoming major challenges. Higher carrying loads of forestry trucks are accelerating damage to rural roads, consuming budgets, and generating levels of frustration from local residents. The weight allowances for HPMV (High Productivity Motor Vehicles) was increased, adding pressure to the networks. Also, some of the logging trucks are using the roads within the District as shortcuts to the Taranaki region, this is ongoing. As these logging activities are undertaken in different regions, this is difficult for Council to monitor.

Transport legislation and strategy changes

There are changes to legislation that are either planned or underway that could impact the delivery of infrastructure over the coming years. The key changes to legislation that impacts the Land Transport activity includes the Government Policy Statement on Land Transport (2024), replacing the Road to Zero Strategy, and responding to any government direction regarding the Climate Change Response (Zero Carbon) Amendment Act.

Investment sustainability

Identified in the last Waka Kotahi audit, Council spends what it can afford rather than what the network needs. This is more noticeable when considering pavement reseals, drainage and grading of rural roads. Undersized culvert replacements cannot be undertaken to the required levels. The risk of this

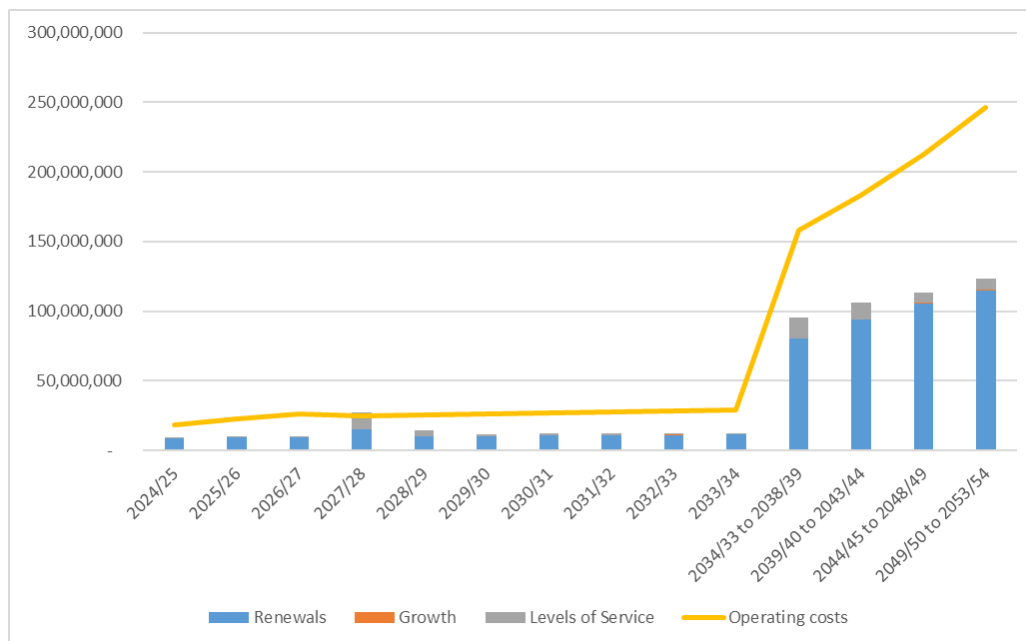
approach is that the maintenance becomes reactive due to weather events causing loss of network. Performance of our primary collector roads is good however the other roads do not perform or compare to the same level of quality as the primary collector roads. Ideally this LTP would include significant budget increases to improve our other roads but that has been assessed as unaffordable for our community. Council relies on a high NZ Transport Agency subsidy rate (75%) to manage the network in a fiscally responsive manner. In the LTP we have budgeted on a 75% FAR with our local share being 15%. The final approved roading programme has however not yet been agreed with by NZ Transport Agency. If our FAR is less than expected there is a risk we could not afford to deliver all planned works and the network condition could deteriorate over time.

LAND TRANSPORT FINANCIALS

The financials are based on the following assumptions:

- NZ Transport Agency will continue to provide us with subsidised funding at 75% for the road network over the next 30 years.
- We will continue to fund at the level's forecasts stated in our LTP.
- We will provide services at the levels forecast in our Land Transport Activity Management Plan and LTP.
- Asset Condition Assessments will continue to inform the needs for investment, enabling us to allocate budgets and prioritise programs of work.

Land transport expenditure forecast (including inflation)



THREE WATERS CAPEX PROGRAMME

CAPEX PROGRAMME

Council developed a Capex programme in 2023 summarising the importance of an elevated expenditure to bring three waters related infrastructure up to better standards. In April 2023, the Government announced a major overhaul of the Three Waters programme, renaming it the Water Services Reform Programme. At that time, the National Transition Unit (NTU) was going to compile a Regional Entity overall Capex programme including Council's forecasts.

The funding mechanism was to be developed by the NTU as part of the Three Waters Reform. Council developed an unconstrained programme of works. The table below shows the level of investment initially proposed for each year of the LTP on three waters assets:

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Total 10 years |
|-----------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| | 2024/25 | 2025/26 | 2026/27 | 2027/28 | 2028/29 | 2029/30 | 2030/31 | 2031/32 | 2032/33 | 2033/34 | |
| | 000's | 000's | 000's | 000's | 000's | 000's | 000's | 000's | 000's | 000's | 000's |
| Water | 7,800 | 11,150 | 13,050 | 14,150 | 14,150 | 16,850 | 12,100 | 9,850 | 9,600 | 7,600 | 112,550 |
| Wastewater | 7,100 | 8,900 | 9,650 | 7,050 | 2,350 | 3,350 | 3,350 | 3,350 | 3,350 | 3,350 | 51,800 |
| Stormwater | 1,301 | 1,238 | 2,464 | 2,470 | 2,595 | 1,094 | 2,094 | 2,085 | 1,960 | 1,960 | 19,260 |
| Total per year | 16,201 | 21,288 | 25,164 | 23,670 | 19,095 | 21,294 | 17,544 | 15,285 | 14,910 | 12,910 | 183,610 |

Note: Table above excludes inflation

Council liaised with Veolia's asset management team and engineering department to develop a substantial ten-year programme of works. Post general election in 2023, the new government was elected, and the Three Waters Legislation repealed.

Early in 2024, Council redeveloped a more realistic programme of works from a financial perspective, with only must-do projects to keep the infrastructure functional, taking a different approach which included a considerable reduction in Capex expenditure. The table below summarises the proposed investment.

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | Total 10 years |
|-----------------------|----------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| | 2024/25 | 2025/26 | 2026/27 | 2027/28 | 2028/29 | 2029/30 | 2030/31 | 2031/32 | 2032/33 | 2033/34 | |
| | 000's | 000's | 000's | 000's | 000's | 000's | 000's | 000's | 000's | 000's | 000's |
| Water | 4,150 | 150 | 1,600 | 2,600 | 3,950 | 2,200 | 2,200 | 2,000 | 2,000 | 2,000 | 22,850 |
| Wastewater | 2,100 | 2,300 | 1,050 | 2,300 | 3,950 | 2,550 | 2,300 | 2,250 | 1,750 | 1,750 | 22,300 |
| Stormwater | - | 50 | 50 | 400 | 400 | 400 | 400 | 150 | 150 | 150 | 2,150 |
| Total per year | - | 2,500 | 2,700 | 5,300 | 8,300 | 5,150 | 4,900 | 4,400 | 3,900 | 3,900 | 47,300 |

Note: Table above excludes inflation

The new programme is more achievable based on Council's affordability and Veolia's existing resources. The main changes are shown below.

Water

The main change between the two Capex programmes is that for the 2024-34 LTP Council's focus of expenditure is on existing schemes. The previous legislation required Council to invest in additional schemes within the District, supporting smaller communities in bringing their infrastructure to a better standard. These are currently operated by community groups and are not included in the Operations and Maintenance Contract with Veolia.

Places like Raurimu, Matiere, Kakahi, Ōngarue and Horopito are examples of small communities where Council was required to invest in infrastructure under the previous Government's rules. Some of these supplies would require new underground reticulated networks, treatment plants and storage reservoirs. All these projects would have to be delivered in parallel with Council's existing infrastructure issues, a

massive undertaking when considering that Council's current infrastructure also needs significant investment.

Wastewater

Council and Veolia developed a programme of works that considered upgrades at all six wastewater treatment plants across the District. Unlike the water supplies, Council was not legislatively required to expand into other schemes that are currently outside Council's umbrella. The activities considered in the unconstrained programme were to ensure every wastewater treatment plant removed sludge from the oxidation ponds, aerators were installed, filtration and ultraviolet treatment added. This would be a significant step change in the quality of effluent produced. Currently, all oxidation ponds are low-technology plants demanding very low inputs to operate. The proposed upgrades required higher power supplies, which are currently not available.

The main issue when it comes to upgrading Council's wastewater treatment plants is that resource consents are still being renewed so the conditions to be met are still unknown. The financial forecasts developed by Council and Veolia aimed for theoretical industry best practice high standards with no knowledge of what Horizons Regional Council's consent conditions would be. The information provided was based on Council's best knowledge at the time. The reduced capex programme Council is proposing in the 2024-34 LTP has a conservative approach which aims at understanding constraints together with any requirements from hapū and iwi, before agreeing on a solution for the future.

Stormwater

A similar approach was taken towards reducing the stormwater budgets to maintain the existing LOS provided, with some investigation work such as network and flood modelling. The main difference is that the capex unconstrained programme submitted to the NTU was ambitious and aimed at replacing assets that are reaching end of service life. These were provisional sums and required validation.

When the capex reduction took place, Council's objective was to maintain existing assets and to address minor network problems causing nuisance flooding events in certain circumstances. Nuisance flooding can result in two types of loss: damage to property, or personal discomfort, so Council allocated small budgets to ensure adequate levels of system resilience can be achieved. Council is proposing network modelling to be done within the first three years of the current LTP, which will enable better decision making in future years.

WATER SERVICES

ACTIVITY OVERVIEW

Council is responsible for providing infrastructure services to the District which includes the water supply activity. The first principle of water use is Te Mana o Te Wai. Council ensures that this is taken into consideration for all their water supplies across the District. Veolia holds the Operations and Maintenance contract, with the provision of capital works upgrades added to the scope. The contract was signed in 2021 under NZS 3917:2013 for a 5+5 term, with the success of the contractor relying on Key Result Areas and Key Performance Indicators.

The purpose of the water supply activity is to supply safe drinking water to the communities of the District. Water supply is essential to run households, maintain public health and sustain economic development. Council is committed to providing a water supply service that meets the needs of the community. Council is responsible for the provision and management of six water supply schemes at National Park, Ohakune, Ōhura, Ōwhango, Raetihi and Taumarunui.

The water supply assets had a depreciated replacement cost of \$40.0 million (as at 1 July 2022). The water supply network includes 6 water treatment plants, 11 treated water storage reservoirs, 4 pump stations, 210 km of water reticulation mains and associated hydrants (831), valves (1,148) and meters (459).

Council also purchases potable drinking water for the Waiōuru township from the New Zealand Defence Force. The New Zealand Defence Force supplies the bulk water to Waiōuru and Council distributes it to the end customers.

STRATEGIC CHALLENGES

| Focus Area | Key Issues |
|------------------------------------|---|
| Governance model | Uncertainty with changes to legislation resulting from new Government policies and initiatives and how this impacts service delivery. The previous 3 waters reforms have been repealed. The expectation is that Councils will establish joint CCOs (Council Controlled Organisations) for future management of at least water and wastewater. |
| 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. The District has a small rating base to share the costs of providing water services to meet the minimum standards. |
| Resource constraints | Delivering water services is constrained by supply chain issues and staffing levels. |
| Regulatory standards | There are multiple regulatory and compliance requirements to meet including the new Drinking Water Assurance Rules and duty to supply a sufficient quantity of drinking water as defined in the Water Services Act. |
| People: skills and capacity | Inadequate internal resourcing for the water supply 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 also increase the challenges of making potable water from high turbid waters. |

SIGNIFICANT ISSUES AND OPTIONS FOR WATER SUPPLY

Water Treatment Plants

The recent and current focus has been on upgrading the water treatment plants, which should all be completed by year 5 of the LTP. Taumarunui and Raetihi have been upgraded in the last 10 years. Ohakune and Ōwhango are currently in progress, Ōhura is planned in year 1 of the LTP, and National Park in year 5. Once these have been completed, there will be no need for significant upgrades over the 30 years of the Infrastructure Strategy.

Network Assets

While the main focus has been on the water treatment plants efforts have also been directed towards maintaining and upgrading the network assets. The weak links in the network have been investigated based on asset failure. The oldest network in the district is in Taumarunui where there have been a number of upgrades completed in over the last 2 years, including Hakiaha Street, Golf Road, Kururau Road (Hospital Hill) and around the Ongarue bridge.

Pipes are being replaced with high density polyethylene pipes (HDPE) using directional drilling techniques rather than open cut. Condition assessments are currently being prepared for all above and below the ground assets and this information will be available in October 2024 which will highlight assets that should be scheduled for replacement. For the next LTP a programme will be completed for that replacement. \$2million (uninflated) per year has been allowed for those replacements.

Resource Consents

New resource consents are required for Ohakune in 2025, National Park in 2026 and Raetihi in 2039. Application for renewed consents for Ōhura, Ōwhango and Taumarunui have been lodged.

Water allocation reviews may mean that environmental protection will have priority over water intakes for public drinking water purposes. The potential reduction in water intakes may impact our existing treatment plant capacity. Currently, it is unclear what the new government intends to do in relation to the National Environmental Standards for Freshwater Management. Changes to the RMA will also have an impact, which is currently unclear.

Funding and resourcing have been allocated to secure new resource consents and regarding the monitoring of those consent conditions.

CURRENT STATE

The current state of the water supply assets is assessed in terms of asset condition and performance. A summary of the condition for the below ground assets is shown below. This shows that only 1% has been assessed in poor condition.

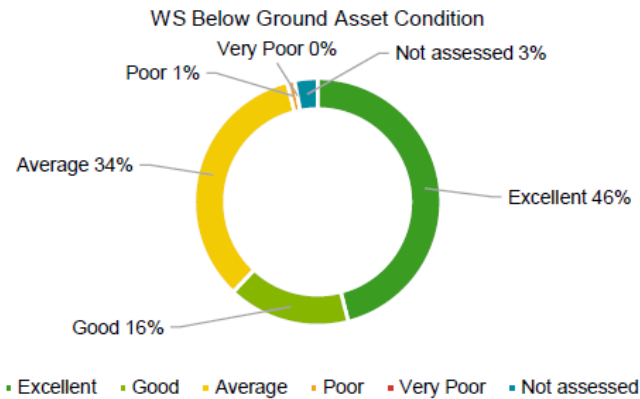


Figure 1 Water supply asset condition
Source: Veolia (August 2020)

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). In the 2021 contract renegotiations, Council and Veolia agreed to include Asset Condition Assessments to be undertaken in a cyclic rotation. Three yearly condition assessments of these assets are recommended to gain a better understanding of current state, ideally sequenced with the LTP cycle. This would help identify trends and ensure the poor performing assets are scheduled for renewal.

Despite the gap in time for the assessments, ongoing asset performance is carried out through the reactive activities and the records obtained while in the field. Over the recent years, the performance of known problematic areas was addressed via network modelling of all water supplies Council is responsible for. The Taumarunui water network received substantial upgrades in recent years, based on asset failure rates. Several kilometres of new water mains were replaced with the addition of a ring feed through Simmonds Road.

- Intakes, headworks, and treatment assets – intake assets and water treatment plants are in good condition.
- Storage and pump station assets – pump stations assets are in average condition, while treated water storage assets are generally in good condition.
- Network assets – water supply network assets are generally in good condition, particularly the hydrants, valves, and meters. The watermains overall are in average to poor condition, depending on their age and remaining useful life.

Veolia also records asset condition as reactive work is carried out, by utilising VAMS (Veolia Asset Management System) as the interfacing tool to keep records.

Asset performance is summarised below for:

- Headworks and treatment assets – treatment performance is generally good as compliance with Taumata Arowai regulations for drinking water are working towards fully being met. A key performance area is renewal of resource consents for intakes.

- Storage and pump stations – performance of pump stations has been poor, however with increased connection to the SCADA network performance is expected to increase when next assessed.
- Network – the water supply network performance has generally been considered average over recent assessments (which are regular and ongoing) because we have not found any significant issues in the network with ongoing leakage. However, water loss has been above the 40% target so we need to do further work in assessing commercial usage and possible historical unauthorised network extensions.

FUTURE DIRECTION

The future direction for the water supply activity is:

Compliance – We intend to fully meet the Drinking Water Assurance Rules (2022) for bacteria and protozoa compliance for all water supply schemes in the next two years. This will be achieved through strengthening our quality assurance processes.

Asset performance – It is important that the water supply network is managed sustainably so that wastage is minimised. We intend to strengthen our water demand management programme, so leakage is reduced to acceptable industry level which can be as low as 15% - as per Non-Financial Performance Measures for water supplies from the Department of internal Affairs (our 40% target for water losses is considered too high). We will explore the feasibility of universal metering which will help with identifying leaks on the private systems (those on individual properties which are outside Council's responsibility but connect to our network) and defer the need for additional water sources.

Network resilience – Work towards investigating technical solutions to make potable water from high turbid waters. Explore alternative / supplementary water sources to increase security and future quantities of supply.

Financial sustainability – It is an ongoing challenge to ensure that the level of investment in renewing the water supply assets and meeting legislative obligations is sustainable long term. There is pressure to minimise water rates increases so they are affordable for our community.

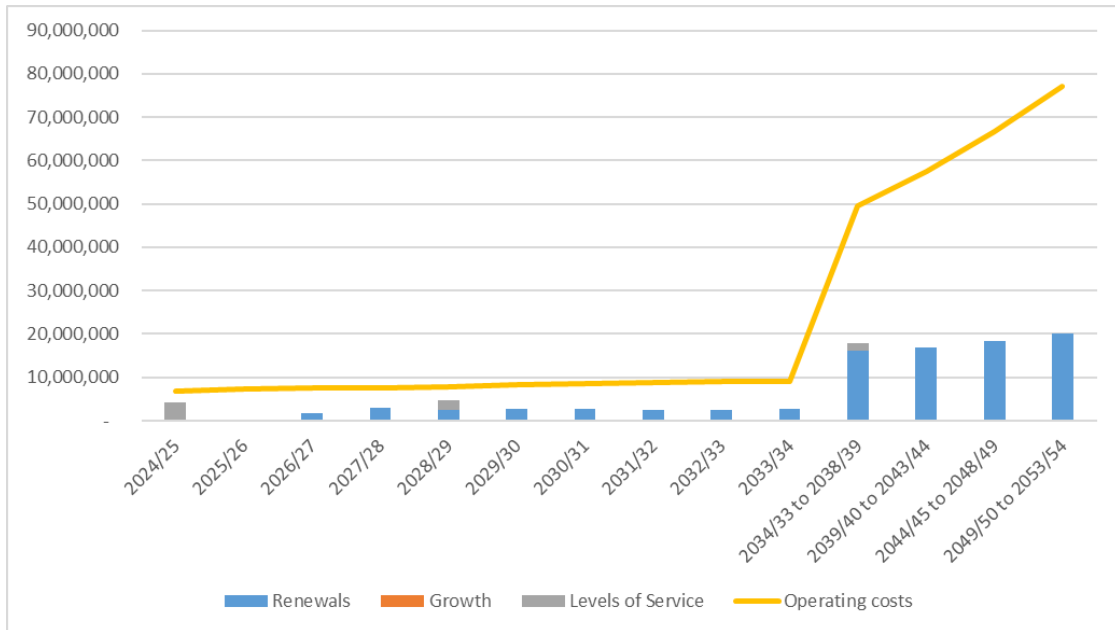
KEY IMPROVEMENT ACTIONS

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

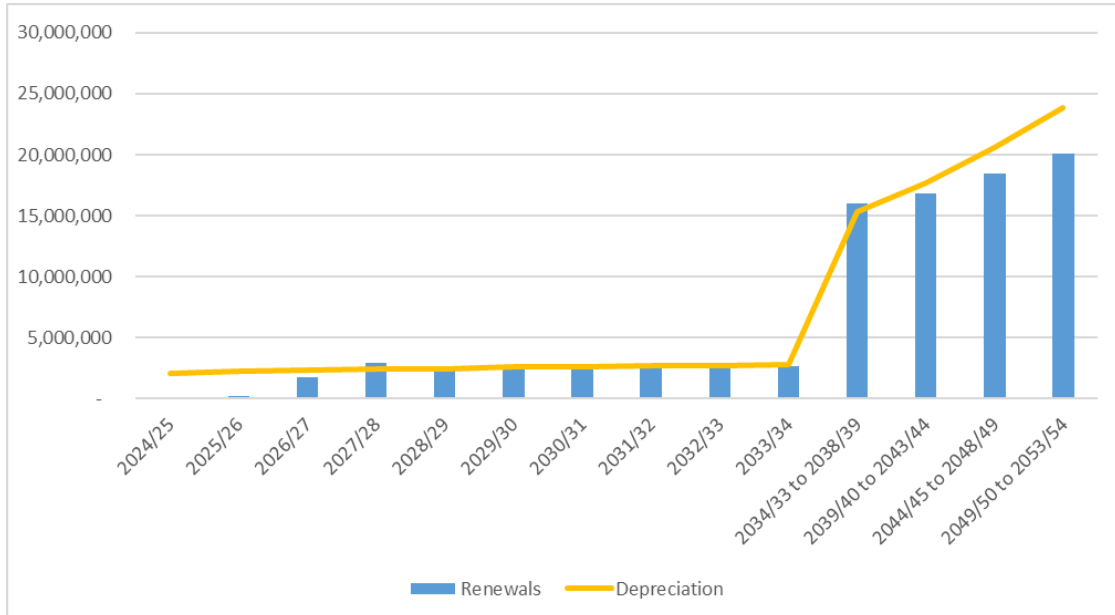
| AM element | Proposed actions |
|--------------------------|---|
| Forecasting demand | Develop a water supply demand management roadmap including the feasibility of universal metering. |
| Asset condition | Undertake 3 yearly condition assessment of the above and below water supply assets. |
| Strengthening resilience | Improving the resilience of the network in relation to climate change impacts including exploring alternative water sources to increase security and future quantities, and challenges of making potable water from high turbid waters. |
| Financial planning | Continue to review the level of investment in water supply assets to ensure that the network is being renewed sustainably long term, and legislative compliance is being met balanced against community affordability and asset risk. |

WATER FINANCIALS

Water expenditure forecast (including inflation)



Water renewals versus depreciation (including inflation)



WASTEWATER

ACTIVITY OVERVIEW

Council is responsible for providing infrastructure services to the District which includes the wastewater supply activity. The purpose of the wastewater activity is to provide efficient and safe wastewater collection and disposal in an effective and environmentally acceptable manner. A safe and efficient wastewater network is essential as the basis for maintaining public health in the communities and protecting the environment. Veolia is the contractor in charge of the Operations and Maintenance for wastewater activities, including capital works.

Council owns treatment plants at Taumarunui, National Park Village, Ohakune, Pipiriki, Raetihi and Rangataua. In addition, Council co-operates with the New Zealand Defence Force in Waiōuru to provide wastewater services for the town.

The wastewater assets had a depreciated replacement cost of \$30.3 million (as at 1 July 2022). The wastewater network includes six wastewater treatment plants, 19 pump stations, 110 km of pipes and 1,461 manholes.

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 wastewater activity are summarised in the table below.

| Focus Area | Key Issues |
|------------------------------------|--|
| Governance model | Uncertainty with changes to legislation resulting from new Government policies and initiatives and how this impacts service delivery. The previous 3 waters reforms have been repealed. The expectation is that Councils will establish joint CCOs (Council Controlled Organisations) for future management of at least water and wastewater. |
| Funding constraints | Increasing cost challenges with expenditure and associated debt required to bring the district's three water systems in line with Government legislation and debt allowance standards. The District has a small rating base to share the costs of providing water services to meet the minimum standards. |
| Regulatory standards | Upgrading wastewater treatment plants to meet higher environmental standards and future growth pose significant and complex challenges. Four of the six wastewater plants are under the resource consent renewal process. Council recognises and is managing increasing stakeholder expectations, localised areas of increased demand and provincial commercial limitations. |
| People: skills and capacity | Inadequate internal resourcing for the wastewater supply 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 wastewater network capacity resulting in overflows. |

SIGNIFICANT ISSUES AND OPTIONS FOR WASTEWATER SUPPLY

Wastewater Treatment Plants

Five of our treatment plants are low-technology plants demanding very low inputs to operate through the use of oxidation ponds. Currently resource consents for these 5 have expired. Pipiriki has a current resource consent and treatment is through sand filters. Currently, all five facilities continue to legally operate under provision of Section 124 of the RMA (1991). This means the previous consents remain current until new consents have been granted.

The resource consents are currently being renewed. Discussions with both Horizons Regional Council and iwi have continued with a variety of reasons for the consents to have been on hold while more information has been gathered. This includes information around ammonia effects on periphyton growth, what land passage is culturally acceptable. It is intended that over the next 3 years detailed options for each treatment plant will be identified and considered. Indicative budgets of \$2m (uninflated) have been included in years 10-30.

CURRENT STATE

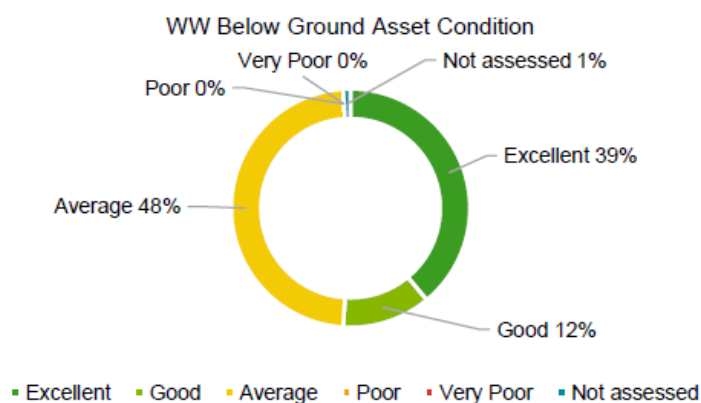


Figure 1 Wastewater asset condition
Source: Veolia (August 2020)

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 LTP cycle. This would help identify trends and ensure the poor performing assets are scheduled for renewal.

- Wastewater pump stations - Overall, pump stations condition is good.
- Manholes - Overall, the integrity of the manholes in the District is good with manhole chambers and benching in good condition.
- Wastewater treatment plant – Overall the plant condition is good.

Asset performance is summarised below for:

- Resource Consents - Renewing the resource consents for four of the six wastewater plants is main driver for the wastewater activity and a significant challenge.

- Dry weather overflows - A dry weather overflow is an uncontrolled wastewater discharge that is not associated with a rain event. All pump stations are connected to a monitoring system so we can monitor and report failures. This helps us to effectively mitigate dry weather overflows from entering the environment and for reporting to Horizons Regional Council. We have achieved the mandatory performance measure for the number of dry weather wastewater overflows from Council's system for the last two financial years.
- Inflow and infiltration - We know operationally that some of our catchments are leaky. This is the term used to describe groundwater and stormwater entering into dedicated wastewater system resulting in the system becoming overloaded and overflows occurring. The stormwater inflows also add load onto our wastewater treatment plants.
- Wastewater network modelling informed recent years' upgrades in the wastewater networks. Ohakune and Taumarunui have received upgrades in recent years. The entire Main Street of Taumarunui had its underground sewer systems relined by utilising Spiral Wound Pipeline rehabilitation technology. In the Ohakune network, four sections of pipe within the network were upgraded in material and diameter as per recommendations from the modelling report completed in 2022.

FUTURE DIRECTION

The future direction for the wastewater activity is:

Compliance – We will continue to work through the resource consent processes for upgrading our wastewater treatment plants as consents expire. It is recognised that this is a lengthy and difficult process to navigate with changing legislation, policy, and regulations.

Asset performance:

- We intend to develop a cost-effective inflow and infiltration programme with a focus on the highest leaky sub catchments. This will help us to mitigate the impacts of wastewater overflows to an acceptable level.
- We will develop a long-term vision for our wastewater treatment plant sites in partnership with hapū and iwi.

Network resilience – Work towards our larger wastewater pump stations having backup generators to ensure service continuity during power outages and minimise environmental risk.

Financial sustainability – It is an ongoing challenge to ensure that the level of investment in renewing the wastewater assets and meeting legislative obligations is sustainable long term. There is pressure to minimise rates increases so they are affordable for our community.

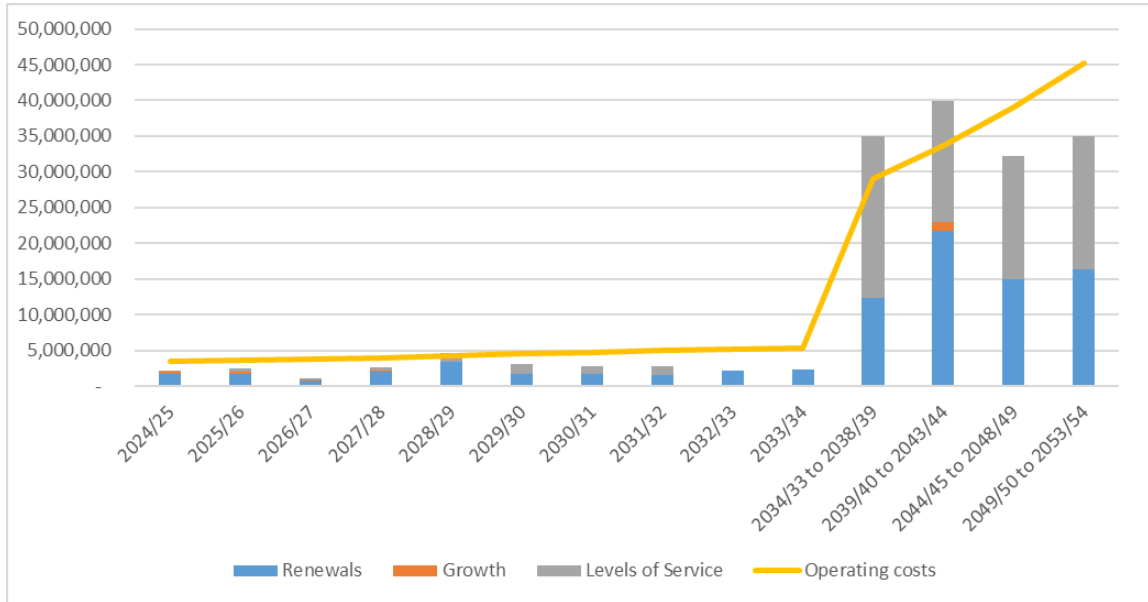
KEY IMPROVEMENT ACTIONS

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

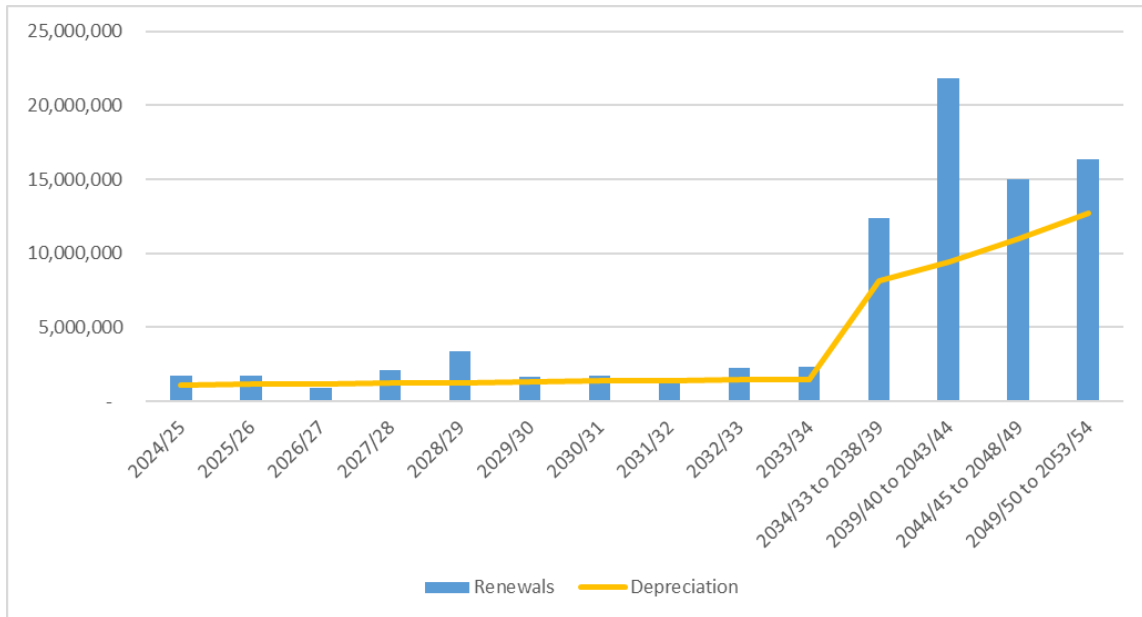
| AM element | Proposed actions |
|--------------------------|---|
| Asset performance | <p data-bbox="523 239 1262 293">Develop and implement a cost effective inflow and infiltration rolling programme to target the highest leaky sub catchments.</p> <p data-bbox="523 300 1385 383">Continue to work with iwi to understand the long term vision for the wastewater treatment plant sites. The objective is to use technology to treat wastewater to a high level.</p> |
| Asset condition | Undertake 3 yearly condition assessment of the above and below wastewater 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 wastewater assets to ensure the network is being renewed sustainably long term, and legislative compliance is being met balanced against community affordability and asset risk. |

FINANCIALS - WASTEWATER

Wastewater expenditure forecast (including inflation)



Wastewater renewals versus depreciation (including inflation)



STORMWATER

ACTIVITY OVERVIEW

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. Stormwater maintenance is performed by Veolia under the Operations and Maintenance contract, including capital works upgrades.

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).

The future focus for stormwater management includes enhancing compliance through better stormwater quality management aligned with Horizon Regional Council's freshwater initiative, requiring a shift to more proactive practices.

Additionally, there's a need to develop a stormwater hydraulic model to better understand and plan for future capacity and performance issues. Financial sustainability is also key, with emphasis on balancing investment in stormwater infrastructure renewal and legislative compliance against the need to keep rate increases affordable for the community.

Capital expenditure across the next 30 years is forecast at \$8.7m. This only includes renewals. There is no expenditure planned for levels of service or growth.

Operational expenditure is forecast at \$67.5m over the next 30 years.

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.

| Focus Area | Key Issues |
|---------------------------------------|--|
| Governance model | Uncertainty with changes to legislation resulting from new Government policies and initiatives and how this impacts service delivery. The previous 3 waters reforms have been repealed. The expectation is that Councils will establish joint CCOs (Council Controlled Organisations) for future management of at least water and wastewater. It is likely that Stormwater will remain the responsibility for Council. |
| 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. The 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 |

| | |
|------------------------------------|---|
| | <p>Statement for Freshwater Management (NPS-FM) 2020. Oranga Wai Our Freshwater Future is the way Horizons is applying the National Policy Statements for Freshwater Management (NPS-FM) 2020 to the region.</p> <p>This will direct territorial authorities including Ruapehu District Council through Plan Changes which 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.</p> |
| People: skills and capacity | Inadequate internal resourcing for the wastewater supply 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 wastewater network capacity resulting in overflows. |

SIGNIFICANT ISSUES AND OPTIONS FOR STORMWATER

Stormwater Modelling

We have completed modelling in Ohakune for the impact of flooding but still need to complete this for our other stormwater networks in National Park, Ōhura, Ōwhango, Raetihi, Taumarunui, and Waiōuru. It is intended to do this work over the next 3 years to be able to develop an investment programme to maintain stormwater assets. The investment programme will be expected to be adopted by Council in 2025/26. \$500,000 has been allowed for renewals from years 11 to 30. This spend will be prioritised as per the investment programme.

Renewal of assets

Currently pipes are being replaced when they fail. If the budget has been exhausted in the current year, then the pipes are patched as a dayworks job. There are limited renewals budgeted for in the first 3 years of the LTP so there will be increased patching required. Once the investment programme has been adopted, renewals will be prioritised with \$400,000 budgeted from 2027-28.

Resource consents

We currently do not have a resource consent for Stormwater although it has been a requirement. With the new regulator Taumata Arowai it is expected that there will be increasing pressure to apply for a consent which will require us to negotiate with Horizons Regional Council to ensure the conditions are pragmatic and affordable for our community. Council will have to make decisions at that time regarding what changes will be required. It is assumed that we will need to install treatment devices to minimise any solid materials does not make it into stormwater runoff which has been budgeted in years 14-18, and new sustainability initiatives such as bunds to minimise the runoff from roads for which \$100,000 is budgeted each year from 2039.

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 below. This shows that no underground stormwater assets have been assessed in poor condition.

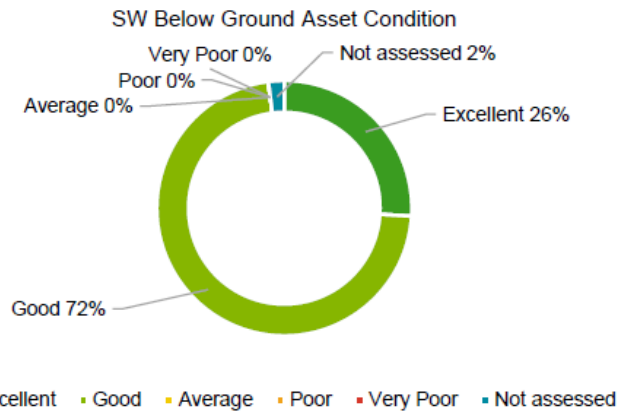


Figure 1 Stormwater asset condition
Source: Veolia (August 2020)

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 LTP 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.

The underground stormwater infrastructure at the main street of Taumarunui was entirely relined using Spiral Wound Pipeline rehabilitation technology.

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 us 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 supply assets and meeting legislative obligations is sustainable long term. There is pressure to minimise rate increases so they are affordable for our community.

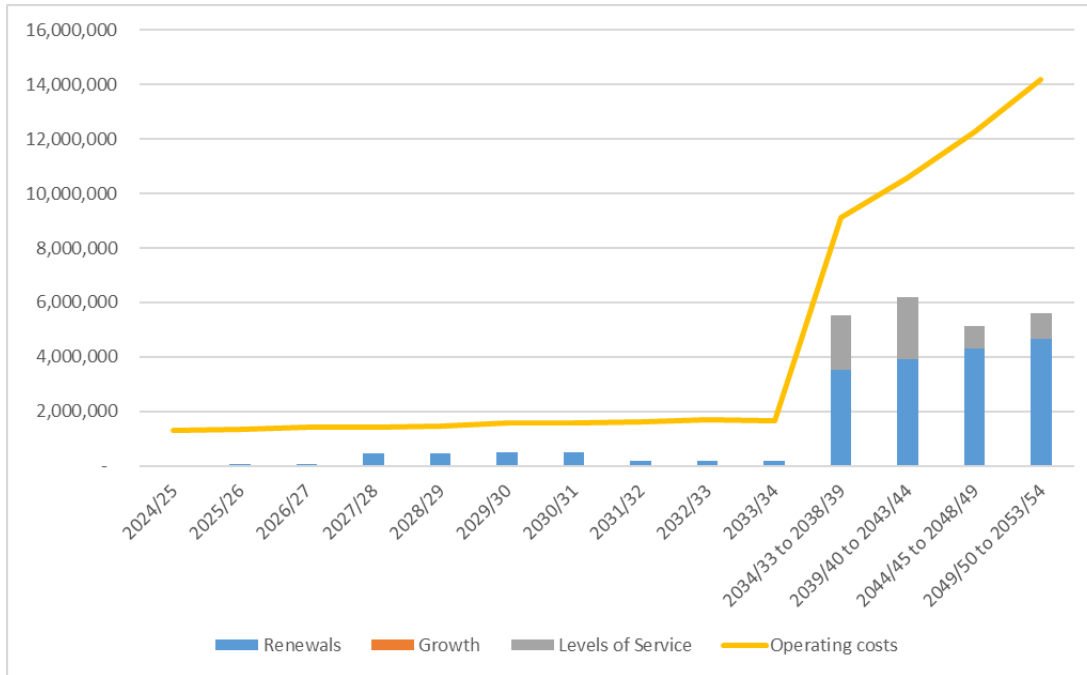
KEY IMPROVEMENT ACTIONS

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

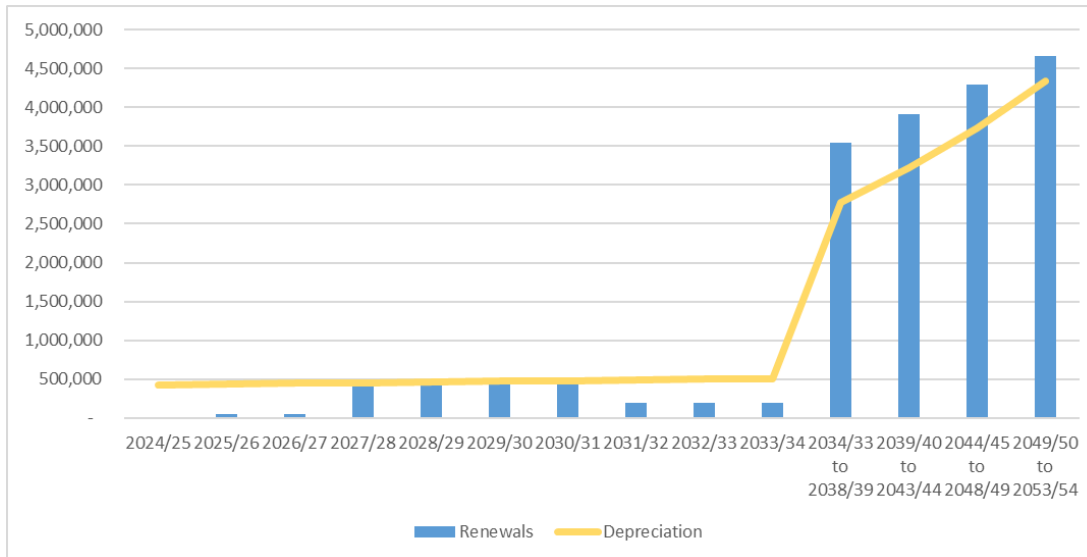
| AM Element | Proposed Actions |
|--------------------------|---|
| Forecasting demand | Develop a Stormwater Master Plan as an overarching framework to guide our long-term planning and capital works programmes. Stormwater infrastructure will need to support growth in housing requirements, particularly 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. |

FINANCIALS - STORMWATER

Stormwater expenditure forecast (including inflation)



Stormwater renewals versus depreciation (including inflation)



FLOOD PROTECTION ASSETS

Council has flood protection assets in the form of stop banks. There has been discussion as to whether these should be managed by Horizons Regional Council, and this is currently being investigated.

KEY FINANCIAL ASSUMPTIONS

The financial assumptions for the most likely scenario for the district are as follows:

- There will be increased costs for the acquisition, implementation compliance and monitoring of resource consents.
- Waka Kotahi will continue to provide subsidised funding to Council for the road network over the next 30 years. From 1st of July 2024, this rate will be 75%.
- Limited provision for growth across the portfolio at present.
- All financial information presented in our strategy includes inflation.

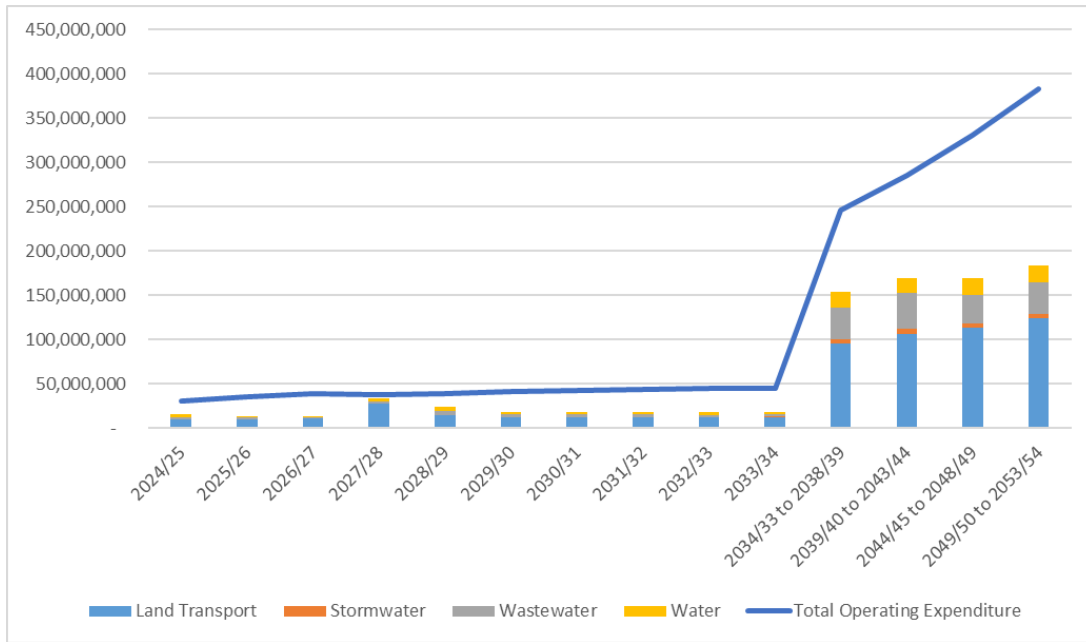
Overall Financial Summary

The table below shows the total expenditure capital (broken down into renewals, growth, and levels of service) and operational expenditure of the 30-year period (2024-2054).

Expected total operating and capital expenditure (inflated)

| Activity | Capital Expenditure (30 year totals) | | | Operational Expenditure (30 year totals) |
|-----------------------|--------------------------------------|------------------|--------------------|--|
| | Renewals | Growth | Levels of Service | Operating |
| Water Supply | 92,104,850 | \$0 | 8,091,500 | 331,416,532 |
| Wastewater | 84,917,750 | 2,080,700 | 81,344,200 | 191,103,702 |
| Stormwater | 18,990,350 | \$0 | 6,062,005 | 61,144,792 |
| Land Transport | 500,611,501 | 2,549,705 | 65,826,888 | 1,056,490,926 |
| Sub Total | 696,624,451 | 4,630,405 | 161,324,593 | 1,640,155,952 |
| Total | \$2,502,735,400 | | | |

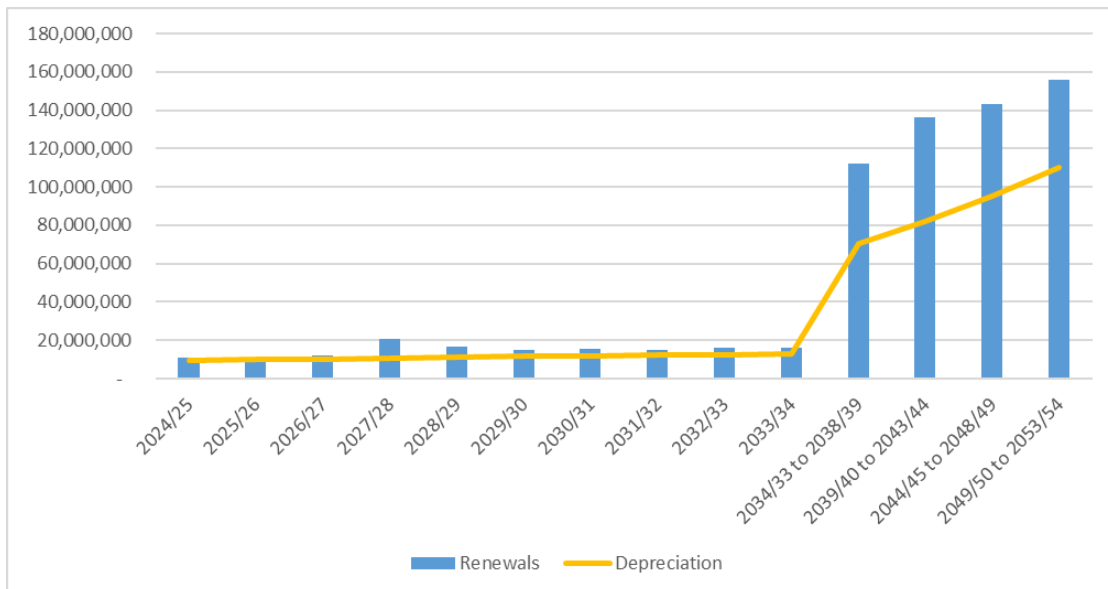
Combined infrastructure operation and capital forecasts 2024-54 (including inflation)



RENEWAL DEPRECIATION COMPARISON

The Figure below shows the annual renewal versus annual depreciation. This shows that the forecast of renewals expenditure is higher than the depreciation over the 30-year period.

Combined renewal and depreciation 2024-2054 (including inflation)



ASSUMPTIONS AND UNCERTAINTY

UNCERTAINTY AND IMPLICATIONS

In developing this strategy, we have identified a few things that we do not know. This uncertainty has a flow on effect on the identification of issues, options for dealing with issues, and how we can best respond. This impacts the Financial Strategy.

The identified areas of uncertainty are:

- The most significant area of uncertainty is Council's reliance on grants and subsidies. There is less risk with Waka Kotahi continuing to provide us with subsidised funding for the land transport network over the next 30 years at current levels. This is an established and mature process that involves plenty of opportunities to negotiate.
- Some of Council's infrastructure assets are located on land that is currently part of Treaty Settlement Legislative changes.
- National Policy Statements and National Environmental standards that may require significant changes to the way we plan, manage, and fund our infrastructure.
- The effect of climate change on Council's core infrastructure. As Council develops its understanding of the impact from climate change, the long-term response will need to be adapted for how to manage those effects on the infrastructure.

RELIABILITY OF INFORMATION

Quality data is important for end users so that they can have confidence in making an analysis using that data. Data is currently collected into the databases in real time, rating the assets worked on, with pictures attached as evidence. This information can be used for decision making, budget allocation and future upgrades. One limitation is that some of the historical information can be inaccurate, and it is taking time to work through them.

KEY PLANNING ASSUMPTIONS

This strategy is based on the following assumptions:

- We will continue to proactively involve Māori participation in local government decision-making including Māori Electoral Wards and through Treaty Settlement Legislative requirements.
- Levels of service are defined in the relevant Activity Management Plans, to meet legislative requirements and agreed to / accepted by the communities. Given financial pressures and the challenges faced by Council, there is no intention to increase levels of service.
- Council will maximise the useful and economic lives of our assets by monitoring the performance of assets. The assumption is that assets will be renewed when they reach the end of the expected useful life, but this is a theoretical estimate of how long it can reasonably be expected to be used. Monitoring actual performance means that assets are replaced at the optimum time.
- Council will use risk management practices to maximise assets. Visual inspections provide valuable evidence of condition, allowing budgets to be stretched based on priorities. Availability of critical spare parts where applicable allows Council to reduce risk of downtime.
- Climate change will affect the District over the medium to long term in line with projections provided by the Ministry for the Environment.