

Te Kaunihera-ā-Rohe o Ruapehu
Ruapehu District Council



INFRASTRUCTURE STRATEGY

2021-2051



Contents

| | |
|--|----------|
| INFRASTRUCTURE STRATEGY | 2 |
| EXECUTIVE SUMMARY | 2 |
| INTRODUCTION..... | 6 |
| STRATEGIC CONTEXT..... | 13 |
| INFRASTRUCTURE PLANNING | 16 |
| INFRASTRUCTURE OVERVIEW..... | 25 |
| SIGNIFICANT INFRASTRUCTURE ISSUES..... | 25 |
| FINANCIAL SUMMARY..... | 57 |
| ACTIVITY EXPENDITURE HIGHLIGHTS..... | 60 |
| ASSUMPTIONS AND UNCERTAINTY | 66 |

INFRASTRUCTURE STRATEGY

EXECUTIVE SUMMARY

INTRODUCTION

Ruapehu District Council (Council) is responsible for the provision of core infrastructure that is essential for the health, safety and economic wellbeing of our District. The core infrastructure that we provide our community to function includes our water supply, wastewater, stormwater, and land transport activities (roading and footpaths). These activities support economic activity, protect private property and the environment, and ensure public health.

Our 2021 Infrastructure Strategy (strategy) provides us and our communities, with our strategic direction for the provision of core infrastructure over the next 30 years. The strategy outlines the investment programmes to ensure we are meeting our legislative obligations as well as maintaining service levels to our communities. We also need to consider how the national, regional and local economies are changing with the impact of the global pandemic.

The purpose of an Infrastructure Strategy is to identify significant infrastructure issues for a council during the period covered by its strategy, the principal options for managing those issues and the implications of those options. This strategy includes the core infrastructure assets identified in section 101B (6) of the Local Government Act being:

- Water supply
- Sewerage and the treatment and disposal of sewage (wastewater)
- Stormwater drainage (stormwater)
- Roads and footpaths (land transport).

ASSET OVERVIEW

We own and manage \$607 million (replacement value as at 30 June 2021) of infrastructure assets which can be summarised as follows:

TABLE 1 ASSET SUMMARY

| ACTIVITY | ASSET DESCRIPTION |
|-----------------------|--|
| Water supply | <ul style="list-style-type: none">• 6 water treatment plants• 17 reservoirs• 191km of waterpipes |
| Wastewater | <ul style="list-style-type: none">• 6 wastewater treatment plants• 104km of pipelines• 18 wastewater pump stations |
| Stormwater | <ul style="list-style-type: none">• 50km piped drains• 32km watercourse |
| Land transport | <ul style="list-style-type: none">• 848km unsealed roads and 496km sealed roads• 1,548 streetlights• 341 bridges and larger culverts• 286 retaining walls• 70km footpaths• 16km of Council maintained cycleways |

Sources: Three waters asset valuation Veolia (1 July 2020) and GHD Transport Revaluation report 2019/20 (excluding land value)

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:

- **Three waters** - The overall condition of the three water assets has been assessed between good and moderate for most asset classes and townships.
- **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 district councils. However, the other road categories do not perform or compare that well.

Asset condition and performance has been assessed at a high level for each activity and is covered in the Significant Infrastructure Issues Section of this strategy.

SIGNIFICANT ISSUES

There are significant infrastructure issues that we are faced with. This is challenging with being a remote community and with small rating base to share the burden. 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:

- Impacts of the Government's Three Water Reforms
- Meeting future demands on water and wastewater infrastructure to service Ohakune
- Significant and complex challenges with upgrading wastewater treatment plants to meet higher environmental standards
- Poor quality housing provision in the district to support population growth
- Community affordability to pay for core infrastructure

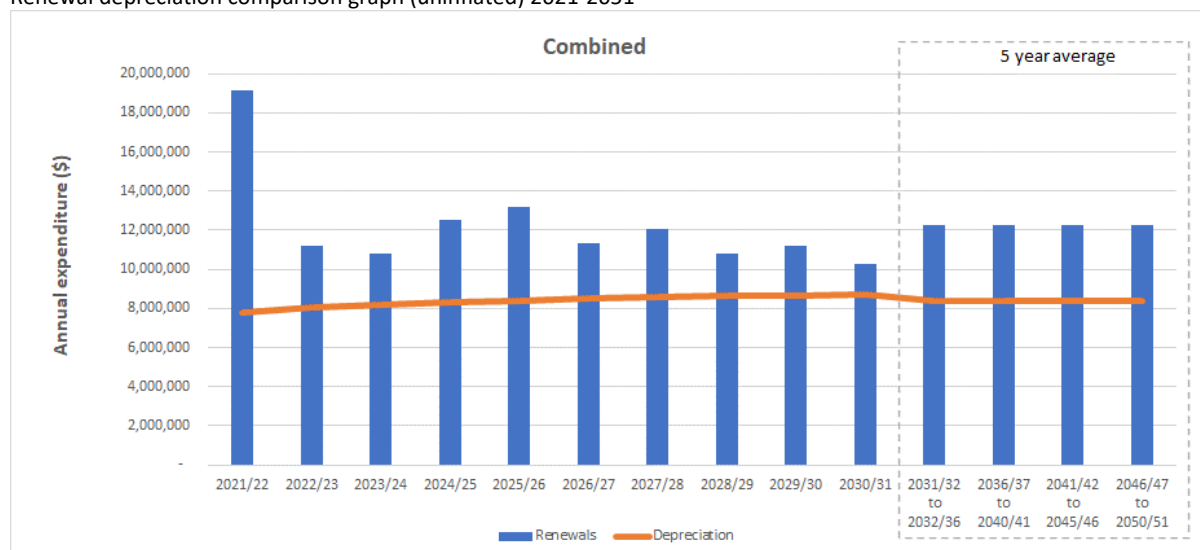
The Introduction Section of this strategy details the actions we will take to respond to the key strategic issues at district level as these are common to all activities.

RENEWAL DEPRECIATION COMPARISON

The below graph shows the combined annual renewals of \$12 million (average) versus annual depreciation \$8 million for the core assets. This shows that the forecast of renewals expenditure is higher than the depreciation over the 30-year period.

This is mainly due to the higher renewal investment in land transport than funded depreciation, and that gap is funded by Waka Kotahi NZ Transport Agency (Waka Kotahi). Three waters capital works are classified levels of service due to legislative and environmental requirements. Most projects are a combination of levels of service and renewals (i.e. like for like scenario).

Renewal depreciation comparison graph (uninflated) 2021-2051



Councils draft LTP budget (as at June 2021)

OVERALL FINANCIAL SUMMARY

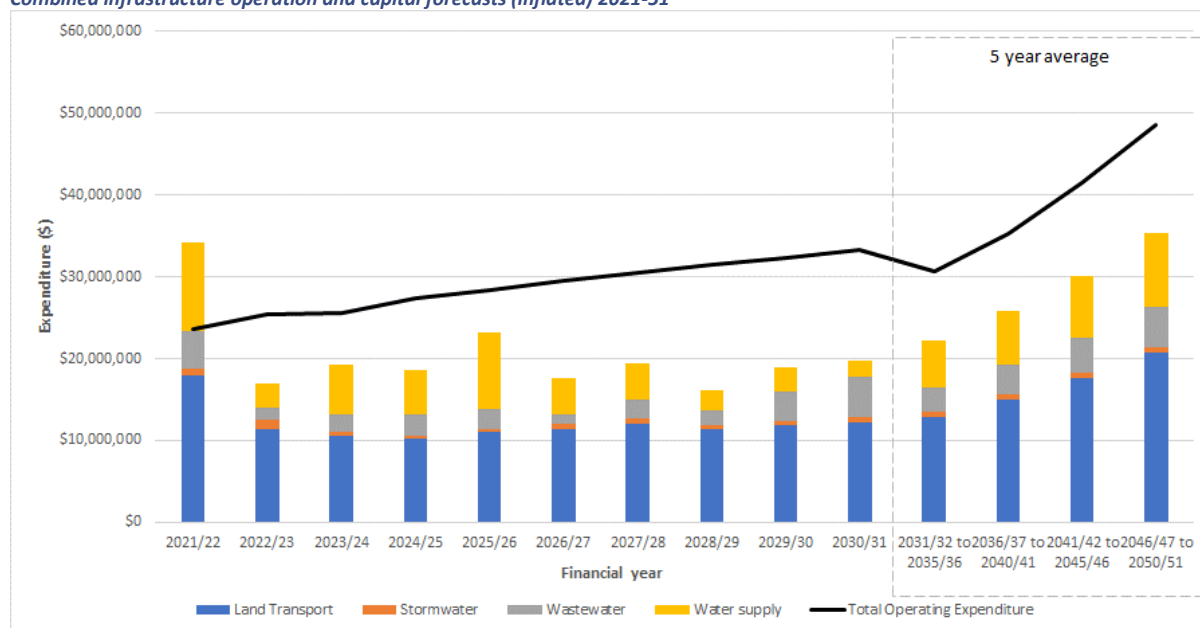
The table below shows the total expenditure capital (broken down into renewals, growth and levels of service) and operational expenditure of the 30-year period (2022-2052).

Expected total operating and capital expenditure (inflated)

| Activity | Capital Expenditure (30 year totals) | | | Operational Expenditure (30 year totals) Operating |
|-----------------------|--------------------------------------|---------------------|----------------------|--|
| | Renewals | Growth | Levels of Service | |
| Water Supply | \$113,363,409 | \$7,583,482 | \$73,739,476 | \$211,576,385 |
| Wastewater | \$62,310,489 | \$9,007,844 | \$33,943,726 | \$127,985,933 |
| Stormwater | \$10,816,331 | \$2,398,700 | \$9,723,614 | \$47,353,183 |
| Land Transport | \$338,819,031 | \$3,507,736 | \$108,507,561 | \$688,361,818 |
| Sub Total | \$525,309,260 | \$22,497,762 | \$225,914,378 | \$1,075,277,318 |
| Total | \$1,856,305,886 | | | |

Source: Council's LTP budget (as at June 2021)

Combined infrastructure operation and capital forecasts (inflated) 2021-51



Source: Council's LTP budget (as at June 2021)

Over the next 30-years it is expected that:

- Renewal expenditure across all the infrastructure activities is generally constant, water supply and wastewater have high capital programmes in 2021/22
- Limited provision for growth across the portfolio at present, except in wastewater
- Significant level of service investment in water supply treatment plants to comply with the Drinking Water Standards in the initial years than larger investment in wastewater to meet higher environmental standards
- Land transport focus is on maintaining and strengthening resilience of existing assets.

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 also impacts the Financial Strategy.

The most significant areas of uncertainty are Council's reliance on grants and subsidies and the ability to deliver the three waters capital programme. Waka Kotahi has indicated a reduction in funding within the first three years of the Long Term Plan 2021-31. However it is expected this will revert to current level of funding from year four onwards. This is an established and mature process and plenty of opportunities to negotiate.

There is a level of uncertainty with successfully gaining the full amount from the Government's three waters stimulus grant applied for upgrading water standards and wastewater assets across the district. We are planning to undertake these upgrades regardless of Government funding being successful or not (a portion of this funding has already been secured through a signed funding agreement and has been included in our financial projections). It is untenable for Council not to comply with the Drinking Water Standards. This will mean that the debt projections will be unaffordable for our community. Council will be exploring alternative funding options and investigate opportunities to alter scope and timing to reduce this risk. We therefore expect that we likely need to consult with the community through exceptions to future Annual Plans.

There has been a strong achievement on delivering the land transport capital works programme in the past three years. However, there has been under achievement in delivering the three waters capital programme. This has mainly been due to the time to get projects procured and approved to start. This is being addressed with a Section 17A review (requirement under the Local Government Act), update of the Contract with our service provider and to set up a streamlined process for procuring capital projects. Our discussions with potential suppliers have indicated that there is sufficient market capacity to respond to our current and future delivery programme.

Council wishes to accelerate the water supply capital programme to improve drinking water compliance. This acceleration requires a step change in programme delivery. External specialist consultants will also be used to deliver a proposed larger capital programme, particularly the upfront planning and bedding in good programme management disciplines.

In summary, Council's approach to mitigating the impacts of not securing Government funding is:

- Adopt an agile approach and closely monitor the delivery of our capital programme and identify changing priorities and consult with the community through exceptions to future Annual Plans
- Actively manage the scope and timing of investment to minimise the debt burden on ratepayers, to the extent that it is able to do so while still meeting regulatory and legislative requirements.

INTRODUCTION

This Infrastructure Strategy (strategy) sets out how Ruapehu District Council expects to manage its core infrastructure over the next 30 years. This strategy outlines a 30-year view of strategic issues, expenditure requirements and significant decisions that will need to be made. The core infrastructure that we provide our community to function includes our water supply, wastewater, stormwater, and land transport activities. These activities support economic activity, protect private property and the environment, and ensure public health.

It is very difficult to make firm plans beyond the 30-year timeline. Some assets such as bridges and water pipelines will probably be in existence after 30 years and the technical works that need to be done are reasonably predictable. The use that society will put them to is the most unpredictable aspect. Will users need bridges built to current standards? Will current water, stormwater and wastewater standards be acceptable? Will tomorrow's tourists accept the same levels of physical commitment that today's tourists accept? It is hard to predict with any certainty.

The Infrastructure Strategy is a high-level strategic overview of the issues involved with providing services for the next 30 years. It should be read in conjunction with the Financial Strategy and feeds into the Long Term Plan and its Consultation Document. The Activity Management Plans are detailed documents that form the basis of this overall strategy.

The 2021 Infrastructure Strategy outlines the investment programmes to ensure we are meeting our legislative obligations as well as maintaining service levels to our communities. We also need to consider how the national, regional and local economies are changing with the impact of the global trends (due to the pandemic).

In 2018, the Infrastructure Strategy covered core and non-core assets including community property and solid waste. The 2021 Infrastructure Strategy covers only core assets to focus on the significant issues, particularly for three waters.

There are significant infrastructure issues that we are facing as outlined in the following section. These issues are contemplated through the lens of the challenge of being a remote community with a small rating base to share the burden.

PURPOSE OF THIS STRATEGY

The strategy is a component of the Long Term Plan. It identifies what we are going to do to provide our services, manage our infrastructure, grow our District sustainably, care for our environment, and overcome our issues and challenges. It aligns with our Financial Strategy, in which we determine what we can afford to do, when we can afford to do it and how we will fund it.

This strategy has been prepared in accordance with the requirements of section 101B of the Local Government Act 2002. This strategy includes the core infrastructure assets identified in section 101B (6) of the Local Government Act being:

- Water supply
- Sewerage and the treatment and disposal of sewage (wastewater)
- Stormwater drainage (stormwater)
- Roads and footpaths (land transport).

The purpose of an infrastructure strategy is to identify significant infrastructure issues for a council during the period covered by its strategy, the principal options for managing those issues and the implications of those options. This strategy also outlines the most likely scenario for the management of a council's infrastructure assets during its 30-year period, the estimated costs of managing those assets, the nature and timing of expected significant capital expenditure decisions and the assumptions on which the scenarios are based.

KEY THEMES

We have decided to focus on core assets in this strategy due to the significant issues, particularly for three waters. Council wishes to make a step change in investment in core infrastructure, particularly for water supply and wastewater activities.

We must undertake the work to provide safe drinking water and public health to our community and the environment. We cannot deliver the required programme of capital investment and keep debt at levels that are affordable to our community.

The key themes are summarised in the following table.

Summary of key themes

| KEY THEME | WHAT IS THE KEY THEME? |
|--|---|
| Key Theme 1 Providing safe drinking water is a high priority | We must provide safe drinking water for communities connected to the public systems. We intend to accelerate the investment programmes, so our public water supplies are fully compliant with the Drinking Water Standards. This is the highest priority of the three water activities. This accelerated programme will impact our debt levels and therefore community affordability (refer to Key Theme 4 below). |
| Key Theme 2 Must address public health and safety impacts from three water activities | Although providing safe drinking water is a high priority, we must always address public health and safety concerns, particularly from the wastewater impacts. Wastewater overflows are unacceptable to our community and impacts the waterways. |
| Key Theme 3 Decisions on critical bridge replacement | Critical bridges in our District have been identified for replacement or urgent strengthening have been brought forward in our investment programme. We have accelerated the funding with our partner Waka Kotahi and is also high safety risk for Council. Decisions need to be made on other bridges on whether to retain or divest. This will impact local communities as the alternative route will create longer journey times in most cases and the current restrictions limit the class of vehicles that can use them. In the past these bridge works have been deferred due to affordability but has now reached a critical stage where the work must be undertaken. |
| Key Theme 4 Investment programmes will be unaffordable for our community | Accelerating the investment programmes, particularly for providing safe drinking water, means the debt levels will not be affordable. We are seeking Government funding where possible. However, if we are unsuccessful, we intend to still undertake these programmes as public safety is a must do (ie non- negotiable) and cannot be deferred. |
| Key Theme 5 Rapidly changing priorities | The 2021 Long Term Plan including this strategy is based on the best information available. Many of the key inputs, legislative changes and decisions to be made are changing at a rapid pace. We therefore expect that we likely need to further consult with the community through exceptions to future Annual Plans as the uncertainty with the information reduces. |
| Key Theme 6 Township revitalisation for District's prosperity | It is important that our town centres are vibrant and attractive for our community for our district to thrive and prosper. This is also important to keep existing residents but also to attract people moving from the large metropolitan cities to the regions. We also need to be attractive to domestic tourist and have to compete with other districts offering similar outdoor activities. |
| Key Theme 7 Increased operational obligations | There is new monitoring and stringent enforcement of the existing wastewater resource consents. This means Council will expect an increase in the number of non-compliances issued by the Regional Council until new / upgraded treatment plants are completed. We will continue to investigate short to medium term solutions until permanent solutions are agreed and funded. Wastewater solutions are more complex compared to water supply and stormwater. It is also likely that Taumata Arowai will also have higher expectations for drinking water compliance from local authorities that current practices. |

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:

- Impacts of the Government's Three Water Reforms
- Meeting future demands on water and wastewater infrastructure to service Ohakune
- Significant and complex challenges with upgrading wastewater treatment plants to meet higher environmental standards
- Poor quality housing provision in the district to support population growth
- Community affordability to pay for core infrastructure.

The following table summarises key strategic issues, implications and Council's response as these are common to all activities. The significant issues for each activity are covered in later sections.

Significant district issues

| SIGNIFICANT DISTRICT ISSUE | DISCUSSION AND IMPLICATION | COUNCIL'S RESPONSE |
|---|--|--|
| Impacts of the Government's Three Water Reforms | The water reforms will be the most significant issue Council will need to consider with the 2021 Long Term Plan. It will impact the way we deliver three waters to our communities and the cost of providing these services. Taumata Arowai Water Services Regulator Act has been passed and the complementary Water Services Bill is expected to be passed in mid-2021. The standalone Crown entity Taumata Arowai is being created to regulate drinking water. The Government's Three Waters Reform Programme is strongly encouraging councils to consider changes to their delivery methods with the preferred outcome being semi regional / regional / multi-regional or national suppliers. | Council's management response to the change in legislation has been to collaborate with the other councils in the Manawatu-Whanganui Region to identify a preferred three waters management option. The councils located in the region undertook a collaborative study in 2018 to identify a preferred three waters management option. The study involved an asset stocktake, analysis of resources and funding, and engagement with Council local representatives. A regional agreement has been formed for a staged approach to increasing regional coordination to build a strong alliance and maximise benefits for the region's communities. |
| Meeting future demands on water and wastewater infrastructure to service Ohakune | Ohakune is experiencing significant population growth based on large number of building consents received for new subdivisions. The main drivers for the rapid growth in Ohakune are: <ul style="list-style-type: none"> • Popular cycleway track round the mountains creating all year round tourist demand • Commercial growth such as new industry and Turoa gondola • Affordable housing required for workers to meet the tourist demand and new industries (mainly short term rental accommodation) • Continuing to be a popular holiday house destination. Peak population is the key tool to plan for core infrastructure particularly water supply and wastewater. These seasonal peaks have a large impact on demand for water services. The Ohakune Water Treatment Plant is nearing capacity. The existing Ohakune Wastewater Treatment Plant largely meets the Regional Council's One Plan (single resource management planning document for the Horizons Region). Future growth will produce a tipping point where the treatment technology will need to change. | Council have implemented the following initiatives to address these challenges: <ul style="list-style-type: none"> • Completion of the Raetihi Water Treatment Plant Upgrade in 2018 • Initiating the planning and design of the Ohakune Water Treatment Plant capacity upgrade in 2020 • Undertake modelling for Ohakune township for water supply and wastewater to understand and plan for the rapid population growth • Start investigations for a new Wastewater Treatment Plant to service Ohakune and Raetihi that will address future growth, as well as the long-standing issue of non-compliance at the Ohakune Wastewater Treatment Plant (related to ammonia and suspended solids) and strengthen resilience |
| Significant and complex challenges with upgrading wastewater treatment plant to meet higher environmental standards | Taumata Arowai will provide oversight of wastewater and stormwater networks and administer the drinking water regulatory system for drinking water safety. Together with the Government's suite of proposed legislation and regulation changes to improve the freshwater ecological health, as well as the Regional Council's One Plan, these significant national and regional changes will impact the cost of upgrading our wastewater treatment plants and may not be affordable for our community or provide the desired environmental outcome. | We will continue to work collaboratively with iwi, Regional Council and stakeholder groups as the platform for co-management for a holistic and integrated wastewater management approach. We need to identify long term sustainable solutions that are affordable for our community. |
| Poor quality and affordable housing provision in the District to support population growth | Housing is one of the biggest issues the Ruapehu community faces. Identified issues include a shortfall of quality houses, changing demographics and increasing waiting list for social housing. | As part of the Government's response to help offset the economic and social impacts of COVID-19, Council has been granted about \$1.4 million for a small pilot build (Moore Street, Ohakune) as part of the Social and Affordable Housing project (subject to negotiation between |

The housing stock in the Ruapehu District is dominated by older family homes with a general lack of affordable new homes and homes fit for purpose outside the traditional family unit. Modest sized, new, affordable, and fit for purpose homes are in short supply in the Ruapehu District. Accessible homes suited to age in place and disability are also in limited supply.

Ohakune is experiencing significant population growth, greater than expected as noted above. Although Taumarunui has been identified as the main town for providing quality and affordable houses to meet the future needs, providing core infrastructure to enable growth in Ohakune is the priority in the short to medium term.

Taumarunui is a centrally located town in the North Island for different industries including forestry and Ruapehu Alpine Lifts. It is attractive for permanent residents moving out of the large cities to the regions.

Community affordability to pay for core infrastructure

Community affordability to pay for core infrastructure is a challenge for Ruapehu District with the small rating base as well as higher levels of deprivation compared to other parts of the country (when using the New Zealand Deprivation Index). On a scale of 1 to 10 (least to most deprived scores, the main townships are assessed individually ranging from 6 to 10 (based on 2018 Deprivation Index).

Council needs to think more broadly about how to fund its infrastructure programme. This will therefore challenge Council to look for alternative funding sources.

Over the life of this strategy Council needs to understand the funding options available, including Waka Kotahi NZ Transport Agency subsidies, other Government funding, other grants and subsidies, user fees and charges, potentially development contributions, and partnerships to deliver services to the district. Alternative funding sources will enable Council to reduce the financial impact of increased infrastructure costs to our ratepayers.

Council and Crown Infrastructure Partners). This grant has been a catalyst for Council to reconsider the scope of its role in helping to address Ruapehu's growing housing issues. Currently this is limited to a small number of social housing units. The rate of new housing provision will be determined by the available external capital and suitable land for reconfiguration. The housing provision may trigger services upgrades including water services. It is expected that there will be an agreement in place to share upgrade costs attributed to each new development.

The Social and Affordable Housing project is still in the early stage, so any upgrade costs have not been allowed for in this strategy and expected to be provided in the 2024 Infrastructure Strategy.

The focus is on providing quality and affordable houses in Taumarunui and providing core infrastructure to enable growth in Ohakune. Council's three waters and land transport asset groups need to be aligned to the Social and Affordable Housing project for future demand planning.

Overall, Council needs to make sure its infrastructure is well maintained to avoid future unexpected costs for repair or replacement, and to prevent unexpected disruption of services to the community.

Our key initiatives include:

- Revitalising our housing portfolio, working with partners and seeking Government funding through the Social and Affordable Housing project (as noted above)
- Maintaining relationships with Waka Kotahi to ensure Council's proposed land transport programmes are fully funded
- Continuing engagement with funding sector through alignments and programmes such as Road Efficiency Group.
- Set priorities based on alignment with our vision, community feedback and economic development aspirations as set out in Council's Ruapehu Economic Development Strategy 2018-2028 and the Recovery Programme
- Seek Government funding for the significant costs of treatment plant upgrades (water supply and wastewater) to meet increased demand more affordable to the local community

STRATEGIC LINKAGES

The document is part of a suite of documents including the Financial Strategy, Consultation Document, Long Term Plan, Activity / Asset Management Plans and associated policies. This Infrastructure Strategy supports Council's Vision, Focus Areas and Outcomes.
Council's Future Vision is to:



Drive and support the development of safe, prosperous rural communities that are able to thrive and capitalise on our agriculture, business and tourism sectors while sustaining our beautiful environment

Council's Focus Areas are inspired by and support the Vision:

Council Focuses

Improve the well-being and quality of life for our communities by:

Creating and retaining jobs

Growing incomes and opportunities

Increasing the ratepayer base

Providing sustainable infrastructure

Providing value for money in all we do

Ensuring the people who benefit from council spending contribute their fair share of the costs

Working with government and others to gain funding for key projects so as to reduce the financial burden on Ruapehu ratepayers

Creating collaborative partnerships with tangata whenua

Council has stated its core priorities in the form of Community Wellbeing Outcomes:

These Outcomes are Council's true north for planning and decision-making. Every project that Council undertakes links back to at least one of the wellbeing outcomes. These are a key way we measure success. The specific ways that infrastructure contributes to the Vision, Mission and Community Outcomes are best thought about by noting the following Outcomes:

Community Wellbeing Outcomes



Social – Safe, Healthy Communities

- Quality regulation, regulatory services and infrastructure
- Reduce the volume of waste to the landfill
- Core infrastructure endeavours to keep pace with changing demand
- Excellent standards of safety and welfare are promoted and respected
- Preparation, planning and timely responses protect people and property from natural hazards



Cultural – Vibrant and Diverse Living

- Traditions, values and history of all ethnic groups are respected
- Activities, facilities and opportunities for youth are provided and supported
- Excellence and achievement in sport, arts / cultural pursuits, community service and business is supported
- Events and festivals are encouraged and supported
- Working together with tangata whenua to achieve common goals



Environmental – Sustaining Beautiful Environments

- Our environment is accessible, clean and safe and our water, soil and air meets required standards
- The promotion of our District includes focus on our natural rivers, bush and mountains, as well as the built heritage, agriculture and railways



Economic – Thriving Economy

- Regulatory services and reliable infrastructure help the economy prosper
- Our transportation network is reliable, safe and endeavours to meet the needs of users
- Economic diversity and core economic strengths are encouraged in partnership with others
- Planning and regulatory functions balance economic growth and environmental protection



Strong Leadership and Advocacy

- Council advocates strongly for the provision of, and access to, affordable and effective health, welfare, law enforcement and education services
- Council is proactive, transparent and accountable

LEGISLATIVE CHANGES

The key legislative changes that are either planned or underway that will impact the delivery of core infrastructure are summarised in the following table including Council's response to these changes.

Summary of legislative changes

| LEGISLATIVE CHANGES | IMPLICATIONS | COUNCILS RESPONSE |
|--|---|---|
| Water Reforms | The pending water reforms will impact the way we deliver three waters to our communities and the cost of providing these services. The Government's latest Three Waters Reform Programme is strongly encouraging Councils to aggregate at regional / sub regional level to be considered for the funding package. Regional approaches will be favoured for the funding with conditions attached. | Three waters - We are collaborating with the other councils in the Manawatu-Whanganui Region to identify a preferred three waters management option. Refer to Significant Issues Section for further discussion. |
| Zero Carbon | The Climate Change Response (Zero Carbon) Amendment Act includes a target of reducing emissions of biogenic methane within the range of 24 to 47% below 2017 levels by 2050, and an interim target of 10% by 2030. It also has a target of reducing net emissions of all other greenhouse gases to zero by 2050. | All activities - The Zero Carbon Act will impact Council's asset portfolios including three waters and land transport. The Act does not explicitly exclude any activities such as methane produced at wastewater treatment plants. Council will consider Zero Carbon Act with its decision making and is still to develop formal strategy / action plan in response. |
| Road to Zero | The Government has recently released its proposal for the new road safety strategy, Road to Zero. The proposed Vision Zero is based on a world leading approach that says no death or serious injury while traveling on our roads is acceptable. | Land transport - Safety has been incorporated into Council's Programme Business Case for the land transport activity. This includes: <ul style="list-style-type: none"> • Use of Low Cost Low Risk Programme to address safety issues. • Safety audit and inspections. • Investigation of all serious and fatal crashes. • Increase driver education and safety campaigns. |
| Government Policy Statement on Land Transport | The Government Policy Statement on Land Transport (2021) (final September 2020) signals Government's shift to investing in improving people's wellbeing and the liveability of places. This recognises the importance of society. Modal shift, freight connections and urban form are major issues to address. | Land transport - The district seeks to achieve the Government Policy Statement strategic priorities through maintenance and renewal, minor safety work and a Walking and Cycling Strategy. |
| Freshwater Management | The Action for Healthy Waterways package sets higher standards around the cleanliness of swimming spots, includes a new bottom line for nitrogen toxicity, sets controls for farming practices like winter grazing and how much synthetic fertiliser is used and requires mandatory and enforceable farm environment plans. There are new requirements with the National Policy Statement for Freshwater Management 2020 including giving effect to Te Mana o to Wai, improving degraded water bodies, and maintaining or improving all others using bottom lines, and an expanded national objectives framework. | Stormwater We need to develop evidence based strategy and programmes to be more proactive in stormwater quality than our current practices, aligned with the new requirements. Refer to Significant Issues Section for further discussion. |

STRATEGIC CONTEXT

RUAPEHU DISTRICT

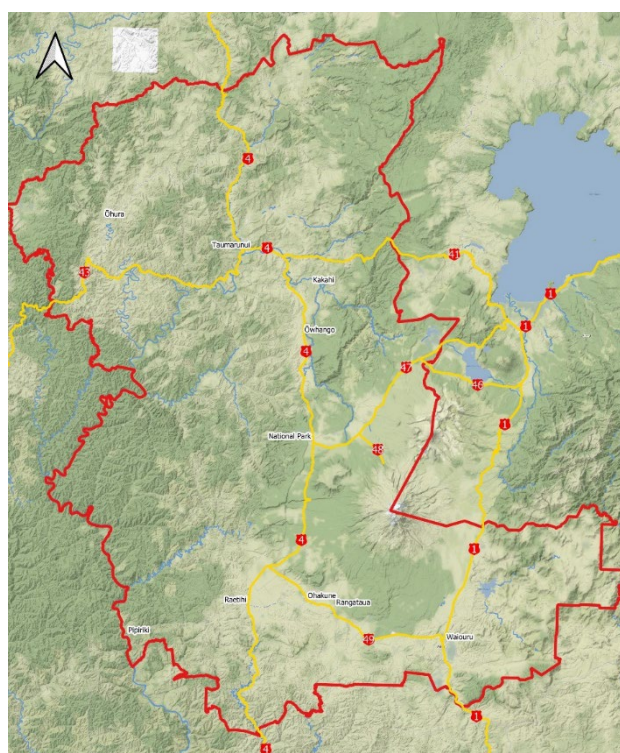
Ruapehu District Council was established on 1 November 1989 by a merger of the former Taumarunui Borough Council, Taumarunui County Council, Waimarino District and part of the Rangitikei County Council.

Historically, the Taumarunui County included the Ohura Town Board, Ohura County and Kaitieke Councils. Waimarino included Ohakune and Raetihi Boroughs. Ruapehu is consequently diverse.

The District comprises 6,700km² (673,019ha) of land bordered by the Whanganui River in the west and the Hauhungaroa Range in the north-east. It stretches towards the peaks of Tongariro, Ngauruhoe and Ruapehu.

There are two large National Parks in the District, Tongariro (which has dual World Heritage status for culture and landscape) and Whanganui. The Tongariro National Park is the largest park in the Region and is the oldest national park in the country, established in 1887. The volcanoes Tongariro, Ruapehu and Ngauruhoe are sacred to Māori and were gifted to the nation by Te Heuheu Tukino IV, paramount chief of Ngāti Tuwharetoa. Pureora Forest Park, Tongariro Forest and Waitaanga Forest are also significant areas of indigenous vegetation.

Abundant natural resources and world-renowned scenery are defining characteristics of our District. The rural landscape sustains large farming, forestry, horticulture industries and reserve land. Nearly 90% of land value is in the rural sector.



District Boundary

The information provided is an indication only and should be verified in the field. The RDC accepts no responsibility for errors or omissions due to use or misuse of the information. Copyright information is derived from LINZ. Data collected from various sources is shown. Copyright reserved.

0 10 20 km

The largest township is Taumarunui, which sits in the north of the District at the confluence of the Whanganui and Ongarue Rivers. Taumarunui has a rich history of Māori settlement. Recent activity includes farming, sawmilling, railway and river Tourism. In recent years, the town's economy is being boosted by new tourism business, a new industrial business, river tourism and the nearby Timber Trail Cycleway.

To the south lies Ohakune, a tourist hotspot situated at the southern gateway to Tongariro National Park. Raetihi in the south west has positioned itself as a gateway to tourism around the Whanganui River and the nearby Mountain to the Sea Cycleway. Waikaremu is the southern-most town in the District which borders New Zealand Defence Force land and largely serves the military training area.

OUR COMMUNITY

Ruapehu District is home to a stable resident population of around 13,000 (12,309 with 2018 census). The district experienced population decline between 2001 and 2016 and began to show signs of recovery in 2017. The resident population is predicted to steadily increase overall between 2021 and 2043 under either of the low, medium and high growth scenarios.

Population growth is expected to slow due to the impacts of COVID-19, at least in the short to medium term, given the region's reliance on net migration. The Region's economic performance comparative to other regions may lead to increased inward internal migration.

At the township level, Ohakune is experiencing significant population growth based on the large number of resource and building consents received for new subdivisions (as noted under Significant Issues). Taumarunui is also experiencing growth but not as rapid as Ohakune.

The District's population increases dramatically with visitor numbers. The main holiday towns are National Park, Ohakune, Raetihi and Rangataua. Peak population is the fundamental tool we use to plan for the expected demand placed on our key infrastructure assets in the District.

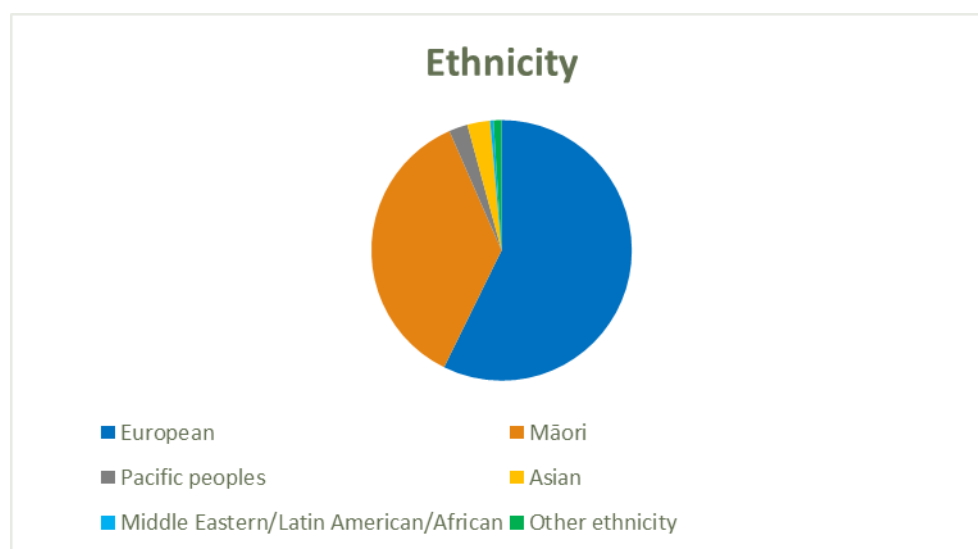
The recommended growth projection scenarios to be used for this strategy and for infrastructure planning purposes are:

- High growth for the tourist towns of Ohakune and National Park village
- Medium growth for the other townships (Raetihi, Taumarunui, Waiouru and Tangiwai)
- Low growth for the small rural townships of Otangiwai-Ohura.

This population profile of residents, tourists and holiday homeowners creates challenges to balance between residents and non-resident ratepayers and holidaymakers' changes.

There is 43.4% of our district's population that identifies as Māori as shown below. The Māori ethnicity is significantly more dominant in the Ruapehu compared to the national rate of 16.5%.

Ethnic composition of Ruapehu District



Source: New Zealand Census (2018)

The District's age distribution is skewed reflecting residents, tourists and holiday homeowners' profile. Key trends in service age groups that need to be considered with our infrastructure planning are:

- The District continues to have a higher proportion of children aged 0 to 11 when compared nationally.
- The 18 to 24 age group continues to decline and remain lower than the national average and is expected to continue to do so.
- The young workforce aged 25 to 34 proportion of the population is expected to remain

- constant.
- The population is aging and expected to continue:
 - Empty nesters and retirees (aged 60 to 69) significantly increasing in number and this trend is expected to continue
 - Seniors (aged 70 to 84) are steadily increasing in number and following the significant increase of empty nesters and retirees, is expected to continue to slowly, yet steadily, increase.
 - The number of elderly (aged 85 and over) is expected to remain steady.

NATURAL HAZARDS

Ruapehu District has many physical attractions such as Mount Ruapehu and two national parks, which also could negatively impact the infrastructure and townships. The major natural hazards that affect Ruapehu District are earthquakes, volcanic activity, landslides and river flooding.

The District encompasses some of the most seismically active parts of New Zealand. Mount Ruapehu has erupted at least 18 times since 1861 and has produced numerous lahars. The most recent lahar occurred on 18 March 2007.

Taumarunui is located at the confluence of the Whanganui and Ongarue Rivers. Whanganui River is the largest river system in the Region, and it drains a significant proportion of the land area within the Ruapehu and Whanganui districts. The primary area of risk is Whanganui, with some risk also present at Taumarunui.

The Region is susceptible to various types of landslide events over a significant proportion of the Region, and in particular the hill country within Ruapehu District. The most hazardous events are debris flows associated with lahars from Mount Ruapehu.

TANGATA WHENUA

Increasingly, legislation is requiring that iwi have a greater role in the governance or decision making for key assets such as water. Major infrastructure projects require significant input from iwi to ensure cultural considerations are understood and provided for.

The Water Services Bill states that all persons and functions in the three waters activity must give effect to Te Mana o te Wai. This includes suppliers, territorial authorities, and regional councils, and Taumata Arowai.

Along with Māori and the wider community, Council has been reviewing the best way Māori participation in decision making can continue. This included looking at a wide number of options, such as the Ruapehu District Māori Council and Māori Electoral Wards.

The Ruapehu District Māori Council was established by Council to help encourage greater participation by Ruapehu Māori in local government decision-making. A Memorandum of Understanding was signed on 15 February 2013 at Morero Marae and sealed a partnership between the Ruapehu District Māori Council and Council. The Ruapehu District Māori Council comprises a collective of nine representatives from the following iwi within the Ruapehu District:

- Tuwharetoa
- Maniapoto
- Southern Iwi

TREATY SETTLEMENT

The Government is actively engaged in treaty settlement with claimants recognised as large natural groupings. However, the mechanism of delivering settlement and governance has been left to regional and local government to consider delivery, which are being progressed alongside other changes.

Some Council infrastructure assets are located on land that currently are part of the Treaty Settlements. There is uncertainty with this current state and a pragmatic mechanism is required for dealing with these assets. The location of these assets may need to be considered in future as they are replaced / upgraded.

TOURISM TRENDS

Tourism is a significant industry in the District. It is a well-known gateway to Tongariro and Whanganui National Parks and located at the base of the western side of Mt Ruapehu is Ohakune, a popular tourist destination because of its access to Turoa ski field. Another popular tourist stop is National Park, located between Tongariro and Whanganui National parks, well known for its hiking and biking trails, as well as access to Whakapapa ski field. The District's cycleways have created a summer tourist attraction.

If COVID-19 border restrictions remain in place for an extended period (up to 18 months), then it is expected that (based on Waka Kotahi's study October 2020 on the potential implications of):

- Greatest impact on tourist gateways (Christchurch and Auckland), and districts that rely on tourism
- Significant drop in revenue in tourist areas and associated service industries
- Potential offset from Trans-Tasman bubble
- Significant drop in revenue in tourist areas and associated service industries
- Potential offset from Trans-Tasman bubble.

The Manawatū-Whanganui Region is expected to be less impacted as it is also the country's least reliant on international tourism. There is only 17% of tourism spend in the Region coming from international visitors.

ECONOMIC TRENDS

There is much uncertainty about the potential economic impacts on the Region as the global COVID-19 pandemic unfolds. The potential economic impacts on the Region have been considered by various independent sources.

Potential impacts on key sectors are (based on the Waka Kotahi study October 2020 on the potential implications of COVID-19):

- Manawatū-Whanganui Region economy is forecast to perform better than most during the economic slowdown
- Significant levels of primary production outside of the main urban centres are also expected to help mitigate the impacts of the economic slowdown on the region
- Ruapehu District's forecast fall in employment to 2021 (relative to BAU) is 7.9% and to be impacted harder than the rest of the region due to its greater reliance on tourism.

Infometrics suggest that the economic hit to Ruapehu will be smaller than that of many other districts. The Ruapehu District economy relies heavily on primary production and tourism. The global pandemic event has disrupted the national and local economies with the national lockdown and closing of international borders. This will mainly impact on the demand for infrastructure and the community's ability to pay in an economic recession.

Council's response is to develop the Recovery Programme including rethinking the shape of future tourism. Ruapehu Economic Development Strategy 2018-2028 and Ruapehu Recovery Thought Leaders Group will provide strategic direction for the District's recovery. This will help rebuild domestic tourist demand and encourage trans-Tasman international tourism.

INFRASTRUCTURE PLANNING

LEVELS OF SERVICE

The high-level customer levels of service for the infrastructure are set out in the table below with the detail provided in the Activity Management Plans.

The level of service framework provides alignment and strategic linkages between:

- Our Vision
- Community Outcomes
- Infrastructure Strategy
- Activity Management Plans
- Activities of Council (Land Transport etc.)







Levels of service for infrastructure include customer outcomes (i.e. responding to unplanned water interruptions) as well as meeting legislative requirements (i.e. compliance with resource consents).

Any major service level changes and implications long term are identified for each activity. Generally any significant service level will be consulted with the community through the Long Term Plan process.

Community and key stakeholder engagement on developing levels of service for water services and land transport uses the following main consultation initiatives (with further detail provided in each Activity Management Plan):

- Resident satisfaction surveys
- Consultation with community groups for Annual Plan and Long Term Plan
- Service request response levels
- Joint governance catchment groups for shared values related to water including Whangaehu River Catchment project.
- Treaty settlement co-governance groups Te Awa Tupua (Wanganui River)
- Liaise with road user stakeholder groups including freight and ski operators.

CUSTOMER LEVELS OF SERVICE

| COMMUNITY OUTCOMES | CUSTOMER OUTCOMES | CUSTOMER LEVELS OF SERVICE- ACTIVITY OUTCOMES | | | |
|---|---------------------------------|---|--|---|--|
| | | WATER SUPPLY | WASTEWATER | STORMWATER | LAND TRANSPORT |
| Safe, Healthy Communities  | Safety | Providing quality and safe drinking water to applicable community areas | Provide public safety through continuous of wastewater collection system | Stormwater systems protect houses from flooding in urban areas | How users experience the safety of the road |
| Thriving Economy  | Quality / amenity / reliability | To provide reliable water networks | To provide reliable wastewater networks and treatment | To provide reliable stormwater networks and treatment | The level of travel comfort experienced by the road user and the aesthetic aspects of the road environment that impact on the travel experience of road users in the road corridor Travel time reliability – the consistency of travel times that road users can expect |
| Thriving Economy  | Accessibility / Availability | Safe water pressure and flow is supplied to consumers | All urban residents are provided with adequate wastewater provision | All urban residents are provided with adequate stormwater provision | The ease with which people are able to reach key destinations and the transport networks available to them, including land use access and network connectivity |
| Safe, Healthy Communities  | Resilience | Water supply disruption during natural disaster events is minimised | Wastewater disruption during natural disaster events is minimised | Stormwater disruption during natural disaster events is minimised | The availability and restoration of each road when there is a weather or emergency event, whether there is an alternative route available and the road user information provided |
| Thriving Economy  | Responsiveness | To provide prompt responses for service | To provide prompt responses for service | To provide prompt responses for service | To provide prompt responses for service |
| Thriving, Natural Environment  | Environmental Sustainability | To promote the efficient and sustainable use of water | Environmental impacts are managed and resource consents complied with | Environmental impacts are managed and resource consents complied with | Effects on the natural environment are minimised |

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 IMPACTS AND ACTIONS

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

Projections: Climate change will affect our district over the medium to long term in line with projections provided by the Ministry for the Environment for the Manawatu-Whanganui Region (as at May 2018). The major trends expected for the Region are summarised in the table below (with the full projections list detailed in the 2021 Long Term Plan), with rainfall expected to have the largest change particularly for Taumarunui:

Climate change predictions for the region

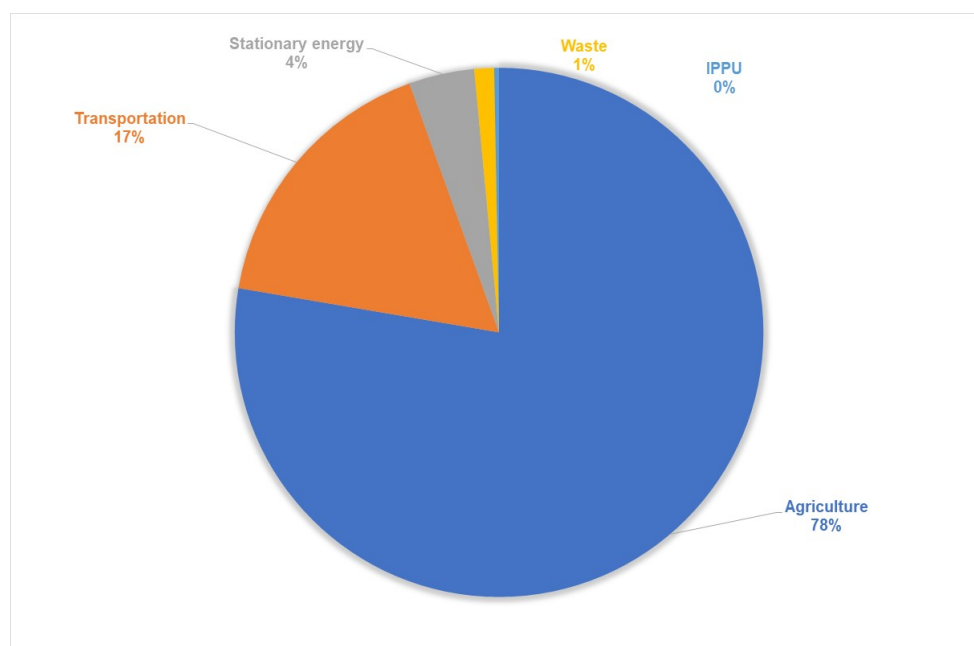
| WEATHER ASPECT | 2040 | 2090 |
|--------------------|---|--|
| Temperature | Compared to 1995, temperatures are likely to be 0.7°C to 1.1°C warmer by 2040 | 0.7°C to 3.1°C warmer by 2090 |
| Rainfall | The largest changes will be for particular seasons rather than annually | Seasonal projections show winter rainfall increasing 7 to 16% in Taumarunui by 2090. Region is not expected to experience a significant change in the frequency of extreme rainy days as a result of climate change |
| Wind | | The frequency of extremely windy days in the region is not likely to change significantly by 2090 |
| Storms | | Future changes in the frequency of storms are likely to be small compared to natural inter-annual variability. Some increase in storm intensity, local wind extremes and thunderstorms is likely to occur. |
| Snowfall | | A reduction in the number of snow days experienced annually is projected throughout New Zealand, including the Central Plateau. |

The reduction in snow days may impact winter tourism at Mt Ruapehu, although this is a long term projection.

We follow Horizon Regional Council lead in preparing for climate change. Horizon Regional Council has provided the regional impact of climate change (see Asset Management Plan Part 1) and are partnering with district councils in community engagement.

Carbon footprint: Horizon Regional Council have developed a greenhouse gas footprint for the region and each territorial authority for 2018/19. Ruapehu emitted gross 1,203,611 and net 191,684 tonnes of Carbon Dioxide Equivalent emissions in 2018/19. The population in 2019 was approximately 12,700 people, resulting in per capita gross emissions of 94.8 tonnes of Carbon Dioxide Equivalent per person. Agricultural emissions were the largest contributor to the inventory for Ruapehu, followed by transport as shown in the Figure below

Ruapehu greenhouse gas emission (gross) by sector for 2018/19



Source: HRC Ruapehu Community Carbon Footprint 2019 (AECOM August 2020)

The stationary energy sector covers the consumption of electricity and natural gas. The Industrial Processes and Product Use (IPPU) sector covers emissions associated with the consumption of greenhouse gas for refrigerants, foam blowing, fire extinguishers, aerosols, metered dose inhalers and Sulphur Hexafluoride for electrical insulation and equipment production.

Ruapehu contributed to 14% of the Region's total gross emissions for 2018/19. Ruapehu had the fourth highest emissions in the region, predominantly due to particularly large agricultural emissions. With a small population and high gross emissions, Ruapehu has extremely high per capita gross emissions (over nine times higher than Palmerston North).

The greenhouse inventory provides information for decision-making and action by Council, our stakeholders, and the wider community. Sector-level data allows the council to target and work with those sectors which contribute the most emissions to the footprint.

Climate change actions: Our specific proposed climate change actions including indicative timeframes are outlined in the following table at activity level with further detail in the Activity / Asset Management Plans.

Proposed climate change actions

| Activity | Most likely effects due to climate change | Proposed actions |
|---------------------|---|--|
| Water supply | <ul style="list-style-type: none"> Increasing extreme weather patterns with storms of increasing intensity and frequency will also increase the challenges of making potable water from highly turbid waters | <ul style="list-style-type: none"> Chlorination at all water treatment plants provides for bacterial (E.coli) protection and ensures network disinfection residual Linking reticulation networks where possible (Ohakune and Raetihi Treatment Plants) |
| | <ul style="list-style-type: none"> Increasing dry periods (droughts) are reducing the recharge zones in the river so they have less flow which can extend for longer periods of time | <ul style="list-style-type: none"> Upgrade treatment plants / reconfigure supply areas to address reduction in demand due to restrictive consent conditions for water takes from rivers and streams |
| Wastewater | <ul style="list-style-type: none"> Inflow and infiltration increase and reduces pipeline capacity during storm | <ul style="list-style-type: none"> Continue with implementing targeted infiltration and inflow programme to |

| | | |
|-----------------------|--|---|
| | events resulting in more frequent wet weather overflows | prioritise the catchments for remedial works |
| | <ul style="list-style-type: none"> Pump station vulnerability due to flooding inundation | <ul style="list-style-type: none"> Identify wastewater pump stations at risk due to flooding inundation |
| Stormwater | <ul style="list-style-type: none"> More frequent flooding may increase with more intense and frequent storms | <ul style="list-style-type: none"> Continue to monitor flooding risk to residential properties with the more intense and frequent storms |
| | <ul style="list-style-type: none"> In the longer term the townships protected by the regional stopbanks such as Taumarunui may be at risk | <ul style="list-style-type: none"> Developing a process with Horizons to capture stormwater culvert changes over time to provide inputs into modelling of flooding capacity and map updates |
| Land transport | <ul style="list-style-type: none"> Road slips / under slips Limited access to communities with single road | <ul style="list-style-type: none"> Identification of the critical roads (such as the Ohakune Mountain Road and Raetihi-Ohakune Road) with more frequent inspections and management strategies Increased inspection / maintenance of road drainage systems Long term maintenance contract to have suitable resources keeping land transport network resilient |

KEY NATIONAL RISKS

The key national risks that we are managing are mostly related to legislative changes and summarised for each activity. It is expected that these risks will increase with the proposed three waters reforms and Action for Healthy Waterways as there will be increased compliance and quality management requirements. The Government Policy Statement on Land Transport (2021) signals the Government's shift to investing in improving people's wellbeing and the liveability of places.

MANAGING FINANCIAL RISKS

The 2021 Long Term Plan signals a step change in Council's investment in core infrastructure. This will allow for providing safe drinking water and public health to minimise adverse wastewater impacts to our community and environment.

To date Council has taken a prudent approach to ensure that the debt levels were kept within the financial benchmarks. This ensured that the ten year investment programmes were affordable for our community.

Council now wishes to accelerate the investment programmes, mainly in water supply and wastewater, to ensure that we are meeting our legislative obligations to our community and key stakeholders. The proposed debt projections are detailed in the Financial Strategy.

The most significant areas of uncertainty are Council's reliance on grants and subsidies and the ability to deliver the three waters capital programme. Waka Kotahi has indicated a reduction in funding within the first three years of the Long Term Plan 2021-31. However it is expected this will revert to current level of funding from year four onwards. This is an established and mature process and plenty of opportunities to negotiate.

There is a level of uncertainty with successfully gaining the full amount from the Government's three waters stimulus grant applied for upgrading water standards and wastewater assets across the district. We are planning to undertake these upgrades regardless of Government funding being successful or not (a portion of this funding has already been secured through a signed funding agreement and has been included in our financial projections). It is untenable for Council not to comply with the Drinking Water Standards. This will mean that the debt projections will be unaffordable for our community. Council will be exploring alternative funding options and investigate opportunities to alter scope and timing to reduce this risk. We therefore expect that we likely need to consult with the community through exceptions to future Annual Plans.

Council's ability to deliver the three waters capital programme is outlined in the section below and in the Financial Strategy.

A high level assessment of the levels of uncertainty for gaining external funding and delivering the capital programmes is summarised in the following table (and detailed in the Financial Strategy).

| Activity | Is the required (ie must do) | Grant funding Source | Third party investment certainly | Potential debt impact | Chance of practical delivery | Comments |
|----------------|------------------------------|----------------------|----------------------------------|-----------------------|------------------------------|--|
| Water Supply | Yes | DIA / MIBE | Moderate | High | Moderate | There is a strong chance that funding support from Central Government will be available to fast track drinking water reform changes. However, this Long Term Plan cannot include this possibility with key assumptions due to timing of any such announcements. |
| Wastewater | Yes | DIA / MIBE | Low | High | Moderate / low | There is also support for the idea that drinking water outcomes will be prioritised, and immanent funding support announcements for wastewaters appear a little further off |
| Stormwater | Yes | DIA / MIBE | Low | Moderate / low | Moderate | Long Term Plan does not make any assumptions around possible funding opportunities in support of Stormwater. Environmental standards continue to shift the focus and outcome requirements in this space, and planning with certainty is quite challenging |
| Land Transport | Yes | Waka Kotahi | Very high | Limited | High | Well established supply chain and committed funding. There is potential that some bridge work not covered by Waka Kotahi will require Council to fund which it would do through debt. These are one off items in what is otherwise a very stable work programme. |

As part of our Financial Strategy, Council will continue to pursue all available opportunities to receive grant funding to minimise the burden on ratepayers. Where grant funding is not forthcoming, Council will seek to actively manage the scope and timing of investment to minimise the debt burden on ratepayers, to the extent that it is able to do so while still meeting regulatory and legislative requirements.

We recognise that we need to be agile to change and the three yearly Long Term Plan cycle may be too long for changes in investment priorities and the ability to deliver our larger capital programme. We intend to closely monitor the delivery of our capital programme and identify changing priorities through exception to the Annual Plan (refer to Key Theme 5 in Introduction Section).

In summary, Council's approach to mitigating the impacts of not securing Government funding is:

- Adopt an agile approach and closely monitor the delivery of our capital programme and identify changing priorities and consult with the community through exceptions to future Annual Plans
- Actively manage the scope and timing of investment to minimise the debt burden on

ratepayers, to the extent that it is able to do so while still meeting regulatory and legislative requirements.

EMERGENCY READINESS

Council maintains a Civil Defence Readiness Plan which lists many risks inherent in our area. These include volcanic, geological, earthquake, weather, civil unrest and technological failure risks. The same basic Civil Defence responses will mitigate the effects of any of these risks.

Critical assets are defined in Council's lifelines and Civil Defence documents. The Council asset seen as most critical for life and limb is the roading asset. Once communication and access is restored, other services can follow. In order to keep roads open, Council contracts for remotely located subcontractors, including heavy machinery response and staff.

There is a possible threat to public safety if water and wastewater assets do not operate within legislated limits. To this end we have identified critical assets in each AMP. Extra steps are taken to protect these critical assets and to provide for spares where possible.

There are no significant concentrated centres of population within the District and hence it is likely that there is an ability for the population to sustain itself for a significant period following an emergency. The farming community is relatively self-sufficient.

Council could lower its state of readiness for Civil Defence or increase the state of readiness. At present Council supports one staff member who encourages community groups and trains all Council staff for Civil Defence emergencies. This works well for relatively small events. In larger events Council relies on support from Central Government. The status quo is Council's preferred option.

CAPITAL DELIVERY

It is important that we deliver the planned capital works programme for our core infrastructure to ensure service continuity for our communities. We know it is important to deliver our planned capital works programme, particularly for the three waters. We wish to increase the investment levels over the next 30 years to address the key issues such as meeting the Drinking Water Standards and higher environmental standards. We recognise that we need to increase our capability to deliver the current levels to ensure we are successful on delivering a higher level of investment.

When there is an under achievement of the capital works programme, this means our ratepayers pay for work that has not been performed. Potentially there is a reduction in service levels when necessary renewals are not completed.

There has been a strong achievement on delivering the land transport capital works programme in 2018/19 and 2019/20 at 107% and 102%. There has been under achievement in delivering the three waters capital programme, mostly under 50% for the last three years and wastewater has been less than 20%. Capital delivery improved in 2019/20 for the water supply activity at 71% of the budgets. Failures to deliver capital works has mainly been due to the time to get projects procured and approved to start. This is being addressed with a Section 17A review (requirement under the Local Government Act), update of the Contract with our service provider Veolia and to set up a streamlined process for procuring capital projects.

Council wishes to accelerate the water supply capital programme to improve drinking water compliance. This acceleration requires a step change in programme delivery. External specialist consultants will also be used to deliver a proposed larger capital programme, particularly the upfront planning and bedding in programme management disciplines. Our discussions with potential suppliers have indicated that there is sufficient market capacity to respond to our current and future delivery programme.

Due to the increase in the capital works programme, there are unknown certainties beyond Councils control, such as demand and pressures on contractors market, availability of raw materials and the potential impacts of Covid-19 on the supply chain. If a project is affected by this, it could see our levels of service not improve as fast as Council had originally planned as well as the potential for risk of asset failure.

MANAGING CAPITAL DELIVERY

Council will make a step change in capital investment being \$16.7m (75.3% more) –\$39m in 2021/22 vs \$22.2m in 2020/21 in core infrastructure spend. The total capital works programme in the Long Term Plan is \$234m. This is driven in particular by the water supply and wastewater activities. Council has confidence in its ability to deliver its capital works programme because of the following:

- Significant effort has been put into ensuring we are able to deliver the planned network and capital works programme.
- A strategic reorganisation of Council. This has seen the creation of a dedicated Infrastructure Manager position with responsibility of overseeing all major capital work delivery.
- Council works closely with contractors and funders to ensure we have the financial, human, technical and other resources required to successfully deliver the accelerated programme.
- This has included a revision of our contracts with key suppliers Veolia who has employed an additional 24 FTEs to support the programme.
- Land Transport we have maintained relationships with Waka Kotahi NZ to help ensure Councils land transport and bridge renewal programme. We have maintained on-going engagement with programmes such as Road Efficiency Group.

INFRASTRUCTURE OVERVIEW

ASSET OVERVIEW

We own and manage \$607 million (replacement value as at 30 June 2020), of infrastructural assets which can be summarised as follows. Details of the assets are contained in each individual Activity / Asset Management Plans.

Asset summary

| Activity | Asset description |
|-----------------------|---|
| Water supply | <ul style="list-style-type: none">• 6 water treatment plants• 17 reservoirs• 191km of waterpipes |
| Wastewater | <ul style="list-style-type: none">• 6 wastewater treatment plants• 104km of pipelines• 18 wastewater pump stations |
| Stormwater | <ul style="list-style-type: none">• 50km piped drains• 32km watercourse |
| Land transport | <ul style="list-style-type: none">• 848km unsealed roads• 496km sealed roads• 1,548 streetlights• 341 bridges and larger culverts• 286 retaining walls• 70km footpaths• 369km cycleways |

Sources: Three waters asset valuation Veolia (1 July 2020) and GHD Transport Revaluation report 2019/20 (excluding land value)

SIGNIFICANT INFRASTRUCTURE ISSUES

Significant infrastructure issues for the activities and principal options for managing these issues are detailed in the following sections for core infrastructure.

WATER SUPPLY

BACKGROUND

The water supply activity provides safe and secure drinking water to the communities in the District in an environmentally sustainable manner. We are responsible for the provision and management of six water supply schemes at National Park, Ohakune, Ohura, Owhango, Raetihi and Taumarunui. The water supply network includes six water treatment plants, 16 water storage reservoirs, four pumping stations and nearly 200km of water reticulation mains. The water assets had a gross replacement cost of \$72.1 million (as at 1 July 2020).

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

Council works closely with District Health Boards in relation to public health of our community, particularly drinking water but also the wellbeing of our community. Drinking Water Assessors will be moving to Taumata Arowai with the new legislation. Ruapehu District is split between two District Health Boards, Whanganui in the southern half and Waikato in the northern half. This can make strategic relationships and decision making more complex to manage dealing with two agencies with sometimes different approaches.

STRATEGIC WATER SUPPLY CHALLENGES

Providing for growth and meeting levels of service

Meeting Drinking Water Standards

Council is continually working towards improving its water supply schemes and their ability to comply with the Drinking Water Standards to ensure that we provide safe drinking water to our customers.

It is a challenge for the treatment plants to comply with the Drinking Water Standards for protozoan compliance criteria. Ohakune, Ohura, National Park and Owango Treatment Plants currently do not comply. Raetihi Water Treatment Plant was upgraded in 2018 and is now fully compliant. Ohakune Treatment Plant is being upgraded in the next two years. The Matapuna Water Treatment Plant (for Taumarunui) has achieved protozoal compliance for the first time in 2019/20. There have been historical issues around water quality compliance and the provision of data by the minute to meet the requirement.

The remaining plants (ie Ohura, National Park and Owango) require upgrades as detailed in this strategy. Council will continue to seek external funding to accelerate the upgrade programme to provide safe drinking water for residents and visitors.

SERVICING GROWTH AREAS

Peak population is the key tool to plan for core infrastructure including water supply. Peak population is used to plan for the absolute peak population the district might experience on any given day. For water supply planning purposes, peak population needs to be considered at township level as it will differ throughout the district.

There is significant growth occurring in Ohakune and the provision of core infrastructure is required to enable suitable housing to support the influx of people into the district. The timing and investment in core infrastructure including water supply needs to be planned to support this growth.

Ohakune and National Park Treatment Plants are nearing capacity. Ohakune is scheduled for upgrade in the next two years which will address Drinking Water Standards compliance issues as well as providing for additional capacity.

Strategic planning is important to guide long term infrastructure planning. A key planning initiative is undertaking modelling for the Ohakune township for water supply and wastewater to understand and plan for the population growth.

MANAGING RISK AND ASSET PERFORMANCE

Network resilience

Resilience is important for all water operators and essential for remote communities like Ruapehu. Infrastructure resilience is tested further in Ruapehu as it is influenced by the Mountain and subject to intense weather events. It is also exposed to a variety of natural hazards including earthquakes and volcanic eruptions.

A key focus is strengthening our infrastructural resilience as there are six treatment plants at significant distances from one another to serve our communities. It also does not provide for economies of scale. Joining plants may provide economies of scale but they reduce the resilience in having a second supply. In the future it is expected that ribbon development will see the township of Ohakune and Raetihi join with enough ratepayers to make it cost effective to develop a watermain between the townships.

Most of the District's water supply network is plastic (newer pipe material) and asbestos concrete pipe material (53% and 33% respectively). Asbestos concrete pipe material is a brittle material and known to break frequently causing outages. To mitigate this vulnerability with our water supply network, we have implemented an active watermain renewal programme. This has resulted in the renewal of approximately 6.2% of the watermains by length since 2010, mainly to replace asbestos concrete pipe material. These renewals have taken place primarily in Ohakune, Ohura, Raetihi and Taumarunui.

PREPARING FOR CLIMATE CHANGE

We are preparing for the impacts of climate change on the water supply activity as we are already experiencing impacts such as prolonged droughts and intense storm events.

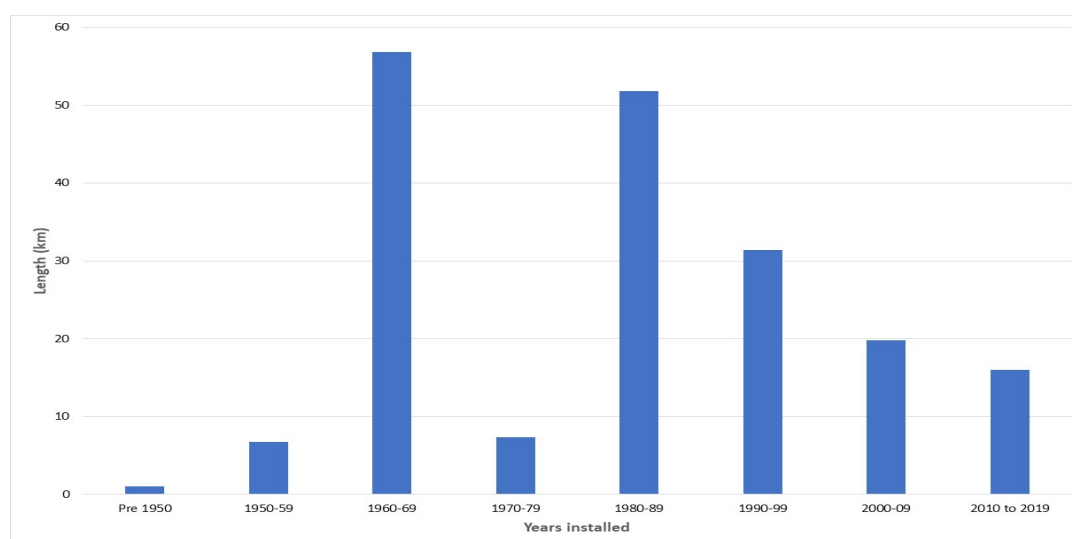
Increasing extreme weather patterns with storms of increasing intensity and frequency will also increase the challenges of making potable water from highly turbid waters. Chlorination at all water treatment plants provides for protection against bacteria (*E.coli*) and ensures network disinfection residual. Inversely increasing dry periods (droughts) are reducing the recharge zones in the river so they have less flow which can extend for longer periods of time. This drives demand from connections across the district.

Climate change may also impact the catchments used for drinking water with more intense storms predicted. This will likely be a focus for Taumata Arowai in relation to providing safe and secure drinking water. The potential reduction in water intakes may impact our existing treatment plant capacity and management of the reticulation service.

ASSET CONDITION AND PERFORMANCE

Most of the network (62.4%) was constructed after 1980, with a further 29.8% constructed during the period 1960 to 1969 period, as shown in the figure below. Most pipeline assets are about one third through their asset lives.

Water supply pipes by age



Source: Asset Finda (as at 30 June 2019)

The overall condition of the water supply assets is summarised in the table below by major asset class and township (by Veolia as at 2020). This shows that most asset classes and townships have been assessed between good and moderate.

Asset condition by major asset class and township

| MAJOR ASSET CLASS | CONDITION GRADING | WATER SUPPLY SYSTEM | CONDITION GRADING |
|-----------------------|-------------------|---------------------|-------------------|
| Intake | Moderate | National Park | Good |
| Water treatment plant | Good | Ohakune | Good |
| Treated water storage | Good | Ohura | Moderate |
| Water pump stations | Moderate | Owhango | Moderate |
| Watermains | Moderate | Raetihi | Good |
| Hydrants | Good | Taumarunui | Moderate |
| Valves | Good | Waiouru | Good |

Source: Veolia (August 2020)

Asset condition and performance monitoring is undertaken to identify under-performing assets and those about to fail. Ongoing asset capacity / performance assessment and asset condition assessment is undertaken by Council's Facilities Management Contractor (Veolia) on a rolling basis township by township (this applies to wastewater and stormwater as well).

The asset assessments cover critical and non-critical assets at the same time as undertaken at township level. This is the most practical method (this applies to wastewater and stormwater as well). Asset performance of Council's water supply network is assessed in terms of water leakage and water quality as follows:

- **Water leakage** - Water loss can happen for a range of reasons, including leaks and breaks in the network and this results in Council treating more water than is needed. Council assesses its water losses through targeted surveys. Water loss surveys were completed in Ohakune and Raetihi in 2019 using night usage surveys. Night-time flow monitoring was undertaken at Taumarunui in 2019 as part of the network modelling project. Areas of high usage were identified and targeted for further investigation.
Council intends to move to using Infrastructure Leakage Index as a water loss performance indicator which is consistent with industry best practice. It has been used for the Taumarunui water loss survey to identify the leaky zones. Preliminary results for the largest part of town were assessed with an Infrastructure Leakage Index of 1.2. This index indicates further loss reduction may be uneconomic unless there are shortages, careful analysis needed to identify cost-effective improvement.
- **Water quality** - Council has a suite of plans and processes to provide assurance that it is providing safe drinking water. These include Water Safety Plans, operating procedures, and operations and maintenance manuals for the treatment plants. Council's water quality is measured monthly against the mandatory performance measures and reported in the Annual Report. Two plants (Raetihi and Taumarunui) are now fully compliant with the New Zealand Drinking Water Standards and the remaining plants require upgrades as noted above.

We have defined our critical water supply assets that are significantly important to our community. These are classified as critical, low criticality and non-critical. These include items such as raw water pipelines, trunk mains and control equipment. The categorisation of critical water supply assets at component level has been completed as part of the condition assessments but not recorded in Council's asset management system (AssetFinda). We will address this as an improvement action in the next three years (this applies to wastewater and stormwater as well).

Significant issues for the water supply activity and principal options for managing these issues are detailed in the following table. The option preferred as the most likely scenario has been identified. Indicative cost estimates are provided for evaluating wide range of options only and not part of Long Term Plan budgets (this applies to wastewater, stormwater and land transport).

Significant issues and options for water supply

| Significant water supply issue | Options for managing the issue | Implications of the options | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|--|--|--|---|--|--|--|--------------|
| Implications of the Government's Three Waters Reforms and changes to legislation are likely to result in higher standards for water treatment and compliance costs, and changes to Water Services Delivery Models. | 1. Continue with water services remaining in house | <ul style="list-style-type: none"> Future water supply costs may be unaffordable for District's small population Not eligible for funding through Government's three waters reform programme Government may force amalgamation for councils that do not collaborate regionally | | ✓ Current budgets are known (\$50.8m for capital projects for 10 years inflated) | ✓ Current budgets are known (\$60.9m for capital projects for 10 years inflated) | ✓ Current budgets are known (\$83m for capital projects for 10 years inflated) | H |
| | 2. Continue to collaborate with the other councils in the Region to identify a preferred three waters management option (regional aggregation model) | <ul style="list-style-type: none"> Costly to set up water Council Controlled Organisation but will be eligible for Central Government funding A dedicated water Council Controlled Organisation with no other competing priorities will be expected to better prioritise investment decisions across the region leading to better environmental and community outcomes than the Councils can individually achieve Potentially loss of community involvement in water decisions Council needs to opt into reform programme to be eligible for funding | <p>Option 2 is preferred as the most likely scenario – Continue with regional collaboration on the preferred three waters management option</p> <p>Decision required by Council – Decision on participating in reforms and preparation for the formation of water services entities expected from late 2021 to 2023 (legislation is still being passed)</p> | ✓ Higher level estimates from industry of reduction in capital programme with aggregation (1.25% per year indicative estimated cost \$570k reduction in capital projects over 10 years in real terms) | ✓ Higher level estimates from industry of reduction in capital programme with aggregation (1.25% per year indicative estimated cost \$590k reduction in capital projects over 10 years in real terms) | ✓ Higher level estimates from industry of reduction in capital programme with aggregation (1.25% per year indicative estimated cost \$590k reduction in capital projects over 10 years in real terms) | H |

| Significant water supply issue | Options for managing the issue | Implications of the options | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|--|---|--|---|--|---|---|--------------|
| | | <ul style="list-style-type: none"> Regional collaboration is already underway with Regional Three Waters Services Delivery Study on preferred management option | | | | | |
| | 3. Maintain a watching brief on the Government's Three Waters Reform Programme and respond as required to ensure Council's best interest are considered particularly for a small rural district council | <ul style="list-style-type: none"> Central Government may force amalgamation for councils that do not aggregate regionally Implications from water reforms on service delivery including the impact of Taumata Arowai and changes to legislation are still unfolding and happening at a rapid pace | | ✓ Current budgets are known (\$50.8m for capital projects for 10 years inflated) | ✓ Current budgets are known (\$60.9m for capital projects for 10 years inflated) | ✓ Current budgets are known (\$83m for capital projects for 10 years inflated) | H |
| Challenge for Council's treatment plants to comply with the Drinking Water Standards for protozoan compliance criteria. Ohakune, Ohura, National Park and Owango Treatment Plants currently do not comply. | 1. Continue operating the plants that do not fully comply with the Drinking Water Standards | <ul style="list-style-type: none"> Public health risk for the community with being provided potentially unsafe drinking water Unfavourable review from Taumata Arowai and other Government agencies Water management may be removed from Council by Central Government | | ✓ Current budgets are known (\$2.1m opex per annum for operating networks) | ✓ Current budgets are known (\$2.2m opex per annum for operating networks) | ✓ Current budgets are known (\$2.2m opex per annum for operating networks) | H |
| | 2. Upgrade the plants to fully meet the Drinking Water Standards over long period that is affordable for our community | <ul style="list-style-type: none"> Public health risk for the community in the short to medium term as upgrades are completed Takes time to implement Taumata Arowai may not be satisfied with the time to implement the upgrade programme | | ✓ Requires additional LTP funding (estimated at \$5.9m plant upgrades at National Park, Ohura and Owango) | - (upgrades expected to be completed in first 10 years) | - | H |

| Significant water supply issue | Options for managing the issue | Implications of the options | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|--|---|---|--|---|---|---|--------------|
| | 3. Seek external Government funding to accelerate the capital upgrade programmes | <ul style="list-style-type: none"> Full compliance will be achieved in shortened timeframe Will require additional resources to deliver programme | <p>Option 3 is preferred as the most likely scenario – Seek external Government funding to accelerate the capital upgrade programmes to ensure full achievement with Drinking Water Standards</p> <p>Decision required by Council – Application made already, decision required if not successful to proceed as part of the 2021 Long Term Plan adoption</p> | <p>✓</p> <p>Requires seeking external funding (\$2.8m of capital grant funding, and \$300k of operational grant funding in year 1 only)</p> | - | - | M |
| 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. | 1. Allocate funding and resourcing to secure new resource consents and monitoring of conditions. Start early discussions with the Regional Council to understand significant changes so we can plan and budget for this | <ul style="list-style-type: none"> Dependent on early engagement with stakeholders and iwi to be successful Additional operational and capital expenditure may be required to meet consent conditions | <p>Option 1 is preferred as the most likely scenario - Allocate funding and resourcing to secure new resource consents and monitoring of conditions, and start early discussions with the Regional Council.</p> <p>Decision required by Council – Underway with Regional Council at township level. Decision required before expiration of current consents:</p> <ul style="list-style-type: none"> -National Park: Dec 2026 -Ohakune: Sept 2025 -Ohura: Nov 2021 -Owhango: - Lodged - Raetihi: July 2039 - Taumarunui: Lodged | <p>✓</p> <p>May require additional LTP funding (estimated at \$700k for National Park, Ohakune, Ohura and Taumarunui)</p> | <p>✓</p> <p>May require additional LTP funding (indicative estimated cost at \$300k over 10 years)</p> | <p>✓</p> <p>May require additional LTP funding (indicative estimated cost at \$300k over 10 years)</p> | M |
| | 2. Provide justification to the Regional Council for catchment allocation for public drinking water purposes | <ul style="list-style-type: none"> Takes time to plan and consult including cultural issues May not be successful with the Regional Council | | <p>✓</p> <p>Current budgets are known (about \$250k pa for Council staff)</p> | <p>✓</p> <p>Current budgets are known (about \$250k pa for Council)</p> | <p>✓</p> <p>Current budgets are known (about \$250k pa for Council)</p> | H |

| Significant water supply issue | Options for managing the issue | Implications of the options | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|---|---|---|--|--|---|---|--------------|
| | | | | time to respond) | staff time to respond) | staff time to respond) | |
| | 3. Reduce demand through enhanced water loss programme. Enforce water restrictions when the river flows at set locations approach the minimum flow thresholds | <ul style="list-style-type: none"> Community and stakeholders dissatisfied with Council's management of water sources District may not be attractive to businesses without certainty with service provision all year round | | ✓ Low cost from existing resources and budgets (about \$100k pa for water loss programme) | ✓ Low cost (about \$100k pa for water loss programme) | ✓ Low cost (about \$100k pa for water loss programme) | |
| Ability of water supplies to meet demands of visitor numbers coupled with future growth in main townships. National Park Village and Ohakune are impacted by peak tourist demand. | 1. Continue with ad hoc planning approach for water provision in growth areas, particularly Ohakune | <ul style="list-style-type: none"> Development occurs ad hoc Bulk infrastructure is not planned to meet current or future demand, or sequenced Does not support Council's Social and Affordable Housing project District is unattractive for developers as Council difficult to work with Not supported by Council as an ongoing option | | ✓ Low cost from existing resources and budget (about \$150k pa for Council staff time to respond) | ✓ Low cost (about \$150k pa for Council staff time to respond) | ✓ Low cost (about \$150k pa for Council staff time to respond) | H |
| | 2. Undertake hydraulic modelling of water supply for Ohakune township to understand and plan for the rapid population growth | <ul style="list-style-type: none"> Bulk infrastructure is planned holistically and enables growth in townships Based on realistic forecast of development, where it will likely occur and when Supports Council's economic stimulus programme to offset the impact of COVID-19 as | Options 2 and 3 are preferred. Option 2 is preferred as the most likely scenario (medium to long term) – Undertake hydraulic modelling of water supply for Ohakune township to understand and plan for the rapid population growth Decision required by Council – Study is underway. This option is | ✓ Moderate cost for study (about \$100k) | | | M |

| Significant water supply issue | Options for managing the issue | Implications of the options | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|--------------------------------|--|---|---|---|---|---|--------------|
| | | well as the Social and Affordable Housing project | shown for completeness and therefore no formal Council decision is required. | | | | |
| | 3. Seek Government funding for the significant costs of upgrades to meet increased demand more affordable to the local community | <ul style="list-style-type: none"> Softens any water rates increases for our community Will require additional resources to deliver programme Can be undertaken with upgrades to meet compliance requirements Have to compete for funding allocation with other local authorities facing similar challenges | <p>Option 3 is preferred as the most likely scenario – Seek Government funding for the significant costs of upgrades to meet increased demand.</p> <p>Decision required by Council – Budget approved as part of the 2021 Long Term Plan adoption.</p> | <p>✓</p> <p>Requires seeking external funding (about \$2m growth capex projects in total inflated over ten years)</p> | <p>✓</p> <p>(about \$2.3m growth capex projects in total inflated over ten years)</p> | <p>✓</p> <p>(about \$3.2m growth capex projects in total inflated over ten years)</p> | M |

WASTEWATER

BACKGROUND

The wastewater activity provides efficient and safe wastewater collection and disposal in the District in an effective and environmentally acceptable manner. A safe and efficient wastewater network is essential as the basis for maintaining public health in our communities and protecting the environment.

Council manages a wastewater network which includes six wastewater treatment plants, 18 pump stations, 104 km of pipes, 1,434 manholes, and 4,778 rateable properties connected. The wastewater assets had a gross replacement cost of \$53.1 million (as at 1 July 2020). Council collects wastewater from the Waiouru township customers and pays New Zealand Defence Force for treatment and disposal.

Resource consents are required for discharging into water bodies and onto planted forestry and are issued by Horizons Regional Council. The main purpose of a consent is environmental protection and driven by the Resource Management Act. These consents are subject to requirements that restrict the volume of water that can be discharged and stipulate the water quality parameters the discharged water must meet.

STRATEGIC WASTEWATER CHALLENGES

Changes to levels of service

There are significant wastewater challenges driven by higher future consent requirements, environmental protection, cultural expectations for suitable treatment processes, Government's freshwater reform programme coupled with growth. This will require significant investment as outlined in the Strategic Issues Section (at district wide level).

The priority for Council has been working towards improving its water supply schemes and their ability to comply with the Drinking Water Standards, post the Havelock North gastro water contamination outbreak. This dominates the capital works programme in the first ten years of this strategy.

We need to identify long term sustainable solutions that are affordable for our community. We will continue to undertake feasibility studies and gather technical information to inform our decision making recognising that wastewater challenges are complex. It can be difficult to schedule treatment plant upgrades as it takes time to investigate and build as well as ageing with stakeholders on sustainable solutions. We have adopted a collaborative approach with iwi, Regional Council and stakeholder groups noting that co-management is a longer process.

It is likely that Council will receive an increase in the number of non-compliances issued by the Regional Council with the new monitoring and stringent enforcement of the existing resource consents and until new / upgraded plants are completed. We will adopt short term measures to mitigate this risk and ensure maximum utilisation of the existing plants and processes where practical.

MANAGING RISK AND ASSET PERFORMANCE

Network resilience

A key focus is strengthening our infrastructural resilience as there are six treatment plants at significant distances from one another to serve our communities (similar challenge as for the water supply activity). The Waimarino networks (Ohakune and Raetihi) townships growth may see network collection systems join which will make a single treatment system viable in the future. It will also address the long-standing issues at the Ohakune Wastewater Treatment Plant (related to ammonia and suspended solids).

Climate change directly impacts the wastewater activity. Council's future action in response to climate change and strengthen resilience for the activity includes building any centralised plants out of flood plains.

FUTURE CHALLENGES

Changing technology

Council currently utilises the lowest cost technology to treat wastewater, largely using gravity to collect the wastewater from the community and delivering it to the treatment plant. The existing plants utilise low carbon treatment technologies with enhanced oxidation lagoons systems. The step change to treat nutrients to deliver nutrient removal will involve high carbon technology. Council will consider the carbon footprint with any new / upgraded treatment plants in its decision making.

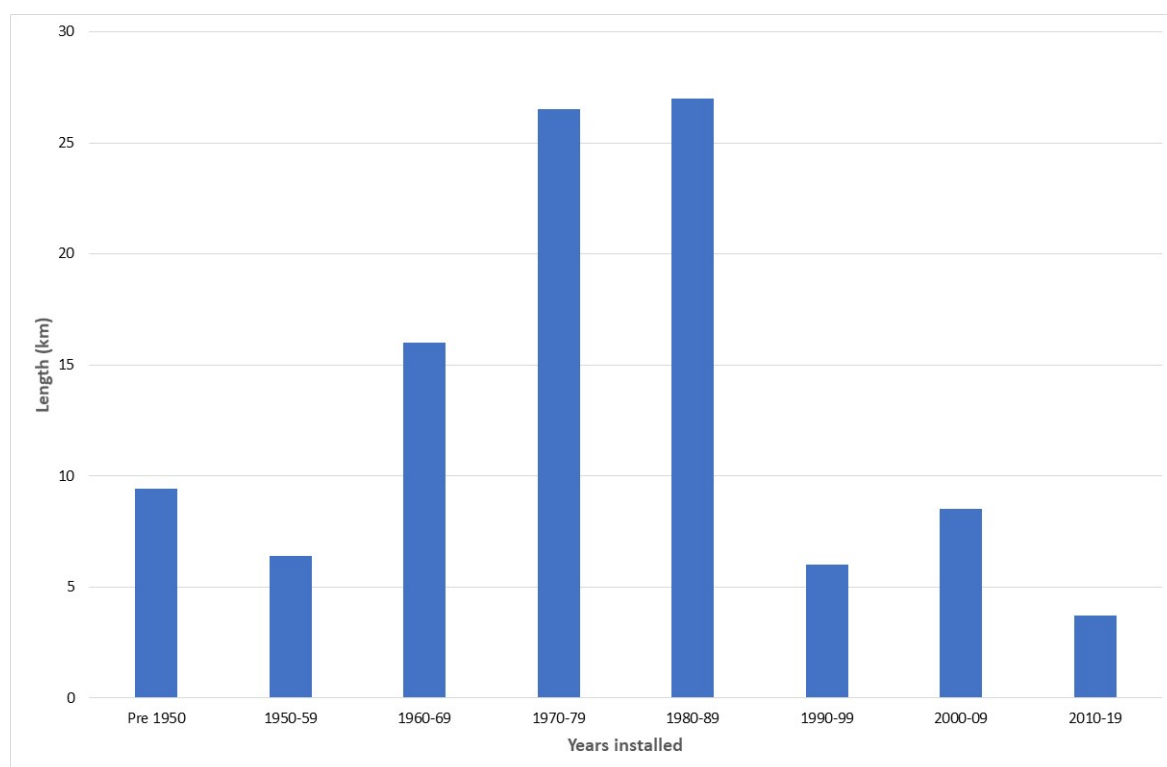
Sludge management

Future treatment plant upgrades will generate greater volumes of sludge which will require increased management, handling and disposal processes. While this is not currently a major pressure, it will be in the future and needs to be considered across plants. The new / upgraded plants will have large carbon footprints and will generate greater volumes of sludge. This will potentially generate increased greenhouse gases as well as ongoing operational costs.

ASSET CONDITION AND PERFORMANCE

Most of the district's wastewater network is plastic (newer pipe material) and asbestos concrete pipe material (at 41% each). Most of the network (69%) was installed after 1970, as shown in the figure below.

Wastewater pipes by age



Source: AssetFinda (as at 30 June 2019)

The overall condition of the wastewater assets is summarised in the table below by major asset class and township (by Veolia as at 2020). This shows that most asset classes and townships have been assessed between good and moderate.

Asset condition by township

| MAJOR ASSET CLASS | CONDITION GRADING | WASTEWATER SYSTEM | CONDITION GRADING |
|-----------------------------|-------------------|-------------------|-------------------|
| Wastewater mains | Good | National Park | Good |
| Manholes | Good | Ohakune | Good |
| Wastewater pump stations | Moderate | Pipiriki | Good |
| Wastewater treatment plants | Moderate | Raetihi | Good |
| | | Rangataua | Good |
| | | Taumarunui | Good |
| | | Waiohuru | Good |

Source: Veolia (August 2020)

We have defined our critical wastewater assets that are significantly important to our community. These are classified as critical, low criticality and non-critical. These include items such as raw wastewater pipelines, trunk mains and control equipment.

Asset performance of Council's wastewater network is assessed in terms of overflows and inflow and infiltration as follows:

- **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 the Regional Council.
Dry weather overflows are reported on as a mandatory performance measure and to Horizons Regional Council. Blockage incidences occur from time to time but our asset performance for dry weather overflow events meet the industry accepted benchmarks.
- **Wet weather overflows.** These incidents occur periodically, mainly during significant rainfall events at weak points in the system such as pump stations and low lying areas where gully traps are inundated with floodwaters. A wet weather overflow has limited environmental effect as it is diluted.
No overflows were recorded during the 2019/20 period due to the Raetihi network capacity being exceeded. This reduction in overflows indicates that the relining of the poor condition mains has been effective in reducing infiltration in the network.
- **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.
These increases occur in Raetihi, some Ohakune wastewater networks, and discrete catchments within the Taumarunui wastewater network. Significant wet weather flow increases at Raetihi Wastewater Treatment Plant resulted in regular wet weather flow discharge exceedance. Surveys of the wastewater network and subsequent relining of poor condition mains has now been completed in the last few years throughout the township and has significantly reduced the wet weather inflows to the treatment plant.

Significant issues for the wastewater activity and principal options for managing these issues are detailed in the following table. The option preferred as the most likely scenario has been identified.

Significant issues and options for wastewater

| Significant wastewater issue | Options for managing the issue | Implications of the options | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|--|---|--|---|---|---|---|--------------|
| Implications of the Government's Three Waters Reforms including strengthening the stewardship of wastewater and stormwater with regional councils remaining primary regulators, and changes to Water Services Delivery Models. Taumata Arowai will not start monitoring the wastewater and stormwater functions until 2023. The initial focus will be weighted towards wastewater. | 1. Continue with water services remaining in house | <ul style="list-style-type: none"> Future wastewater costs may be unaffordable for District's small population Not eligible for funding through Government's three waters reform programme Government may force amalgamation for councils that do not collaborate regionally | | ✓ Current budgets are known (\$26.9m for capital projects for 10 years inflated) | ✓ Current budgets are known (\$33.2m for capital projects for 10 years inflated) | ✓ Current budgets are known (\$45.2m for capital projects for 10 years inflated) | H |
| | 2. Continue to collaborate with the other councils in the Region to identify a preferred three waters management option (regional aggregation model) | <ul style="list-style-type: none"> Costly to set up water Council Controlled Organisation but will be eligible for Central Government funding A dedicated water Council Controlled Organisation with no other competing priorities will be expected to better prioritise investment decisions across the region leading to better environmental and community outcomes than the Councils can individually achieve Potentially loss of community involvement in water decisions Council needs to opt into reform programme to be eligible for funding Regional collaboration is already underway with Regional Three Waters Services Delivery Study on preferred management option | Option 2 is preferred as the most likely scenario – Continue with regional collaboration on the preferred three waters management option. Decision required by Council – Decision on participating in reforms and preparation for the formation of water services entities expected from late 2021 to 2023 (legislation is still being passed) | ✓ Higher level estimates from industry of reduction in capital programme with aggregation (1.25% per year indicative estimated cost \$300k reduction in capital projects over 10 years in real terms) | ✓ Higher level estimates from industry of reduction in capital programme with aggregation (1.25% per year indicative estimated cost \$310k reduction in capital projects over 10 years in real terms) | ✓ Higher level estimates from industry of reduction in capital programme with aggregation (1.25% per year indicative estimated cost \$310k reduction in capital projects over 10 years in real terms) | H |
| | 3. Maintain a watching brief on the Government's Three Waters Reform Programme and respond as required to ensure Council's best interest are considered | <ul style="list-style-type: none"> Central government may force amalgamation for councils that do not aggregate regionally Implications from water reforms on service delivery including the impact of Taumata Arowai and changes to legislation are still unfolding and happening at a rapid pace | | ✓ Current budgets are known (\$26.9m for capital projects for 10 years inflated) | ✓ Current budgets are known (\$33.2m for capital projects for 10 years inflated) | ✓ Current budgets are known (\$45.2m for capital projects for 10 years inflated) | H |

| Significant wastewater issue | Options for managing the issue | Implications of the options | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|---|--|---|---|--|---|---|--------------|
| | particularly for a small rural district council | | | | | | |
| Cultural concerns for suitable wastewater treatment processes. The fundamental position is that the direct discharge of wastewater to surface water is culturally unacceptable. | 1. Continue to meet existing resource consent conditions to keep within consented water quality limits to minimise the impact of the treated effluent discharged from the existing wastewater treatment plants | <ul style="list-style-type: none"> Meets current minimum resource consent requirements May not result in substantial positive environmental improvements Stakeholders including iwi and the Regional Council unlikely to support this approach for long-term resource consent condition on the current terms | | ✓ Current budgets are known (part of wastewater operational activity budget about \$150k pa) | ✓ Current budgets are known (part of wastewater operational activity budget about \$150k pa) | ✓ Current budgets are known (part of wastewater operational activity budget about \$150k pa) | M |
| | 2. Explore alternative options and stage appropriate solutions overtime to ensure our capital projects are culturally appropriate and supported by our community. Find the optimal solution for the balance between treatment provision, movement through Papatuanuku and discharge in a District with extreme weather events, geological constraints for discharge to land. | <ul style="list-style-type: none"> Better alignment with Māori values and community aspirations Improves freshwater quality Takes time to find appropriate solutions May not be practical at some locations Significant operational and capital expenditure may be required Requires greater stakeholder management to gain acceptable on alternative options | Option 2 is preferred as the most likely scenario – Explore alternative options and stage appropriate solutions overtime. Decision required by Council – The budget for new plant servicing Ohakune and Raetihi will be adopted as part of the 2021 Long Term Plan. Formal project approval will be required by Council in 2027/28 to 2028/29. | ✓ Solution still to be agreed and upgrade costs may be significant (about \$2.7m for new plant servicing Ohakune and Raetihi in 2030/31) | ✓ Upgrade costs may be significant (indicative cost estimate \$10m to \$15m over 10 years) | ✓ Upgrade costs may be significant (indicative cost estimate \$10m to \$15m over 10 years) | H |
| Significant challenges with the future wastewater treatment plant upgrades as consents expire and costly to address for a small rural district council. Interrelated issues to consider include growth, Horizon Regional Council's One Plan, National Policy Statement for Freshwater | 1. Meet new resource consent conditions on a plant by plant basis | <ul style="list-style-type: none"> The upgrades may not have substantial positive environmental improvements and be unaffordable for the district given the limited funds available Meets minimum resource consent requirements Stakeholders including iwi unlikely to support this approach | | ✓ Consent conditions still need to be agreed and cost impact (about \$2.7m for new plant servicing Ohakune and Raetihi starting in 2030/31) | ✓ Upgrade costs may be significant (indicative cost estimate \$15m to \$20m over 10 years) | ✓ Upgrade costs may be significant (indicative cost estimate \$15m to \$20m over 10 years) | |

| Significant wastewater issue | Options for managing the issue | Implications of the options | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|--|---|---|--|--|---|---|--------------|
| Management 2020, and a higher degree of treatment required for future resource consents. | 2. Identify options in consultation with iwi, Regional Council and stakeholder groups to identify long term sustainable solutions that are affordable for our community | <ul style="list-style-type: none"> Addresses issues holistically Requires greater stakeholder management to gain acceptance on new and innovative approach Sustainable investment that addresses the four well beings Maybe greater impact on the environment until investment is made | <p>Option 2 is preferred as the most likely scenario (medium to long term) – Identify options in consultation with iwi, Regional Council and stakeholder groups to identify long term sustainable solutions.</p> <p>Decision required by Council – This is current practice and will continue but takes longer. This option is shown for completeness and no formal Council decision is required for this option (planning stage).</p> | <p>✓</p> <p>Moderate costs for studies and supporting technical information (indicative cost estimate \$0.5m to \$1m)</p> | | | H |
| | 3. Seek external government funding for the significant upgrades such as the new single treatment plant to service Ohakune and Raetihi (to replace two existing plants) | <ul style="list-style-type: none"> Softens any wastewater rates increases for our community Will require additional resources to deliver programme Can be undertaken with upgrades to meet compliance requirements Have to complete for funding allocation with other local authorities facing similar challenges | <p>Option 3 is preferred as the most likely scenario – Seek Government funding for the significant costs of upgrades to meet increased demand</p> <p>Decision required by Council – The application does not require formal Council approval.</p> | <p>✓</p> <p>Requires seeking external funding (about \$2.7m for new plant servicing Ohakune and Raetihi starting in 2030/31)</p> | | | M |
| Treatment plant upgrades and discharge methods will require step change in technology to meet the higher environmental | 1. Continue with lagoon-based technology for treatment at existing plants | <ul style="list-style-type: none"> Operational costs are known Low carbon treatment technology Technology may become obsolete and not supported May not be suitable to meet future resource consent requirements | | <p>✓</p> <p>Costs are known (part of wastewater activity operational)</p> | <p>✓</p> <p>Costs are known (part of wastewater activity operational)</p> | <p>✓</p> <p>Costs are known (part of wastewater activity operational)</p> | M |

| Significant wastewater issue | Options for managing the issue | Implications of the options | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|------------------------------------|---|---|--|---|--|--|--------------|
| requirements and cultural concerns | | | | budget at \$1.3m pa) | budget at \$1.3m pa) | budget at \$1.3m pa) | |
| | 2. Stage the implementation of plant upgrades over longer period while meeting the various requirements | <ul style="list-style-type: none"> Addresses issues holistically Potentially degraded environment as takes too long to implement Timeframe may not be acceptable to stakeholders | | ✓ Budget impacts (indicative cost estimate \$1m to \$2m over 10 years) | ✓ Budget impacts (indicative cost estimate \$5m to \$8m over 10 years) | ✓ Budget impacts (indicative cost estimate \$5m to \$8m over 10 years) | H |
| | 3. Upgrade treatment plants before the existing consents expire to meet the more stringent requirements of One Plan, cultural concerns and stakeholder groups, and community expectations | <ul style="list-style-type: none"> May be unaffordable for the District given the limited funds available including higher operational costs Requires higher carbon technology Better alignment with Māori values and community aspirations Does not support reducing the District's carbon footprint | Option 3 is preferred as the most likely scenario - Upgrade treatment plants before the existing consents expire to meet the more stringent requirements Decision required by Council – The budget for new plant servicing Ohakune and Raetihi will be adopted as part of the 2021 Long Term Plan. Formal project approvals will be required by Council for each plant upgrade. | ✓ Budget impacts may be significant (about \$2.7m for new plant servicing Ohakune and Raetihi starting in 2030/31) | ✓ Budget impacts may be significant (indicative cost estimate \$15m to \$20m over 10 years | ✓ Budget impacts may be significant (indicative cost estimate \$15m to \$20m over 10 years n | H |

STORMWATER

BACKGROUND

The stormwater and flood protection activity provides a safe environment which protects the communities in the District in an environmentally sustainable manner. A developed network of pipes, culverts to drains, watercourses, provides a safe and efficient means of collecting and conducting stormwater through townships.

Council manages a stormwater and flood protection (stormwater) network across 11 townships which includes stormwater reticulation mains (50 km), public drains, watercourses (30 km), open drains and associated culverts, manholes and sumps. The assets had a gross replacement cost of \$29.5 million (as at 1 July 2020).

STRATEGIC STORMWATER CHALLENGES

Providing for growth and changes to levels of service

Resource consents

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

We know that there will be higher requirements than we currently have including treatment and more comprehensive monitoring. A significant amount of work will be required to prepare the consent application and supporting technical information. Horizon Regional Council's One Plan has stringent conditions regarding discharges of water to the receiving environment as well as the considerations of the National Policy Statement for Freshwater Management 2020.

Stormwater treatment will also be required with global consents. This will require us to be more proactive in stormwater quality management than our current practices. We need to develop evidence-based strategy and programmes to be more proactive in stormwater quality.

Servicing growth areas

Although our usually resident population is set to steadily increase, stormwater demand is linked indirectly to population growth with the creation of impervious or paved surfaces. This is not a linear relationship. Demand for stormwater infrastructure is directly related to the creation of imperviousness and rainfall.

There is significant growth occurring in Ohakune and the provision of core infrastructure is required to enable suitable housing to support the influx of people into the District. The timing and investment in core infrastructure including stormwater needs to be planned to support this growth.

We do know that the existing stormwater systems at the bottom of catchments cannot cope with the effects of growth in townships. These stormwater assets are undersized, and any additional paved surfaces may result in localised flooding. In particular, there is concern that future development in Ohakune may be constrained by the existing stormwater system. Ohakune is experiencing significant population growth and stormwater is a constraint for enabling future development in the township. We need to develop a Stormwater Master Plan as an overarching framework to guide our long term planning and capital works programme.

Managing risk and asset performance

Preparing for climate change

We are preparing for the impacts of climate change for the District for the next 20 to 30 years on the infrastructure assets as we are already experiencing impacts such as flooding. Ruapehu District is influenced by the Mountain and subject to intense weather events which may be short with a peak within two hours.

The National Climate Change Risk Assessment (August 2020) prepared by the Ministry for the environment identified New Zealand's ten most significant climate change risks based on consequence and urgency. The other most significant risks included risks to wastewater and stormwater systems due to extreme weather events and ongoing sea level rise.

A key focus is strengthening our infrastructure resilience, particularly for our townships with more built infrastructure as Raetihi, Ohakune and Taumarunui (less impact for National Park village).

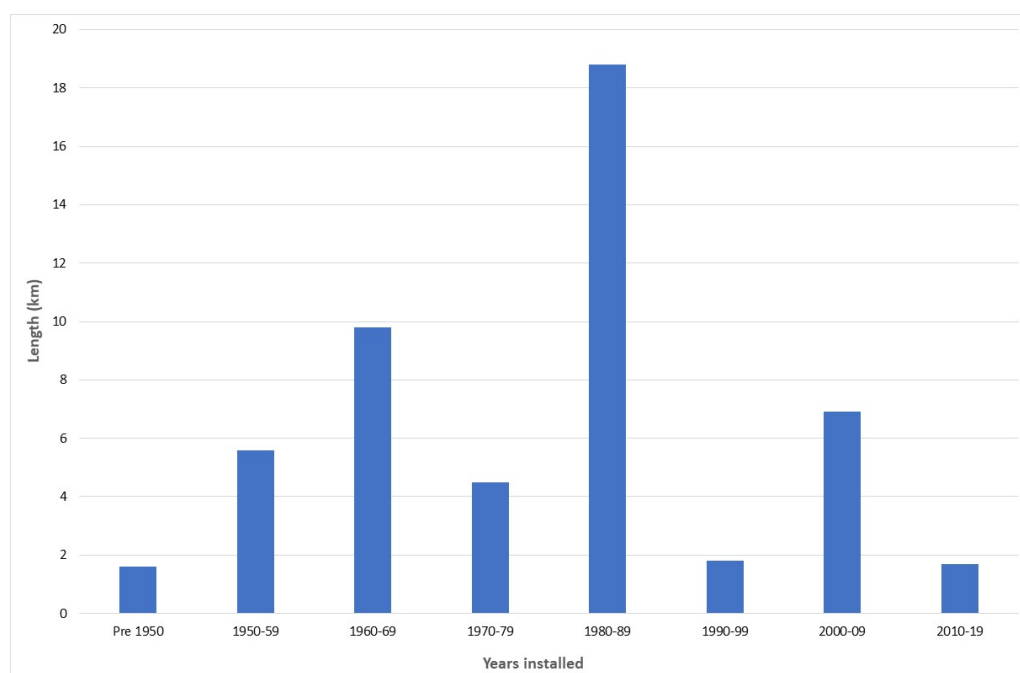
Stormwater infrastructure may not be able to cope long term, particularly with the intense rainfall predicted. Global climate change is likely to bring more intensive rainfall events with longer dry periods between them and annual rainfall volume is also expected to increase. Changes in rainfall intensity and frequency will have an impact on the performance of the stormwater network.

We will continue to monitor trends in the performance of our stormwater network, particularly flooding risk to residential properties, with more intense and frequent storms. New stormwater infrastructure is designed to provide for future capacity and changes in rainfall intensity. We design our infrastructure to take into account climate change projections and the risk of climate change weather related events. At this stage, the financial implications of adapting to the effects of climate change are uncertain for the stormwater activity and they will be refined in subsequent strategies and plans as investigations are progressed.

ASSET CONDITION AND PERFORMANCE

Most of the stormwater piped network (86%) is concrete material. In terms of age, 60% of the network was installed after 1980 with a further 30% constructed in the period 1950 to 1969 as shown in the figure below.

Stormwater pipes by age



Source: AssetFinda (as at 30 June 2019)

The overall condition of the stormwater assets is summarised in the table below by township (by Veolia as at 2020). This shows that most townships have been assessed between good and moderate. The overall asset condition of Council's stormwater asset classes has been assessed in good condition.

Asset condition by township

| STORMWATER SYSTEM | ASSET CONSION GRADING |
|-------------------|-----------------------|
| National Park | Good |
| Ohakune | Moderate |
| Ohura | Good |
| Owhango | Moderate |
| Raetihi | Good |
| Rangataua | Good |
| Raurimu | Moderate |
| Taumarunui | Moderate |
| Waiouru | Good |

Asset performance of Council's stormwater network is assessed in terms of capacity constraints (flood protection) and stormwater quality. Overall, the townships asset performance has been assessed between good (or 2) and moderate (or 3) (by Veolia as at 2020).

There has been historical flooding in Raetihi, Ohakune and Taumarunui. Council works with Horizon Regional Council on flood management schemes including flood modelling. There were no flood events reported or habitable floors flooded recorded in 2019/20 as a mandatory performance measure.

We have defined our critical stormwater assets that are significantly important to our community. These are classified as critical, low criticality and non-critical. These include items such as the Miro Street channel and most channels passing through urban Ohakune, and internal drainage release through the stopbanks and culverts through the stopbanks in Taumarunui.

Significant issues for the stormwater activity and principal options for managing these issues are detailed in the following table. The option preferred as the most likely scenario has been identified.

Significant issues and options for stormwater

| Significant stormwater issue | Options for managing the issue | Implications of the options | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|--|--|--|--|---|---|---|--------------|
| Implications of the Government's Three Waters Reforms including strengthening the stewardship of wastewater and stormwater with regional councils remaining primary regulators, and changes to Water Services Delivery Models. The initial focus for the three waters reforms for stormwater will be collecting performance information as relatively limited data currently exists and promoting best practice. | 1. Continue with water services remaining in house. Stormwater activity remains mainly reactive service. | <ul style="list-style-type: none"> Future stormwater costs may be unaffordable for District's small population Not eligible for funding through Government's three waters reform programme Government may force amalgamation for councils that do not collaborate regionally | | ✓ Current budgets are known (\$6.1m for capital projects for 10 years inflated) | ✓ Current budgets are known (\$7.1m for capital projects for 10 years inflated) | ✓ Current budgets are known (\$9.7m for capital projects for 10 years inflated) | H |
| | 2. Continue to collaborate with the other councils in the Region to identify a preferred three waters management option (regional aggregation model) | <ul style="list-style-type: none"> Costly to set up water Council Controlled Organisation but will be eligible for Central Government funding A dedicated water Council Controlled Organisation with no other competing priorities will be expected to better prioritise investment decisions across the region leading to better environmental and community outcomes than the Councils can individually achieve Potentially loss of community involvement in water decisions Council needs to opt into reform programme to be eligible for funding | Option 2 is preferred as the most likely scenario – Continue with regional collaboration on the preferred three waters management option including stormwater. Decision required by Council – Decision on participating in reforms and preparation for the formation of water services entities expected from | ✓ Higher level estimates from industry of reduction in capital programme with aggregation (1.25% per year indicative estimated cost \$70k reduction in capital projects over 10 years in real terms) | ✓ Higher level estimates from industry of reduction in capital programme with aggregation (1.25% per year indicative estimated cost \$70k reduction in capital projects over 10 years in real terms) | ✓ Higher level estimates from industry of reduction in capital programme with aggregation (1.25% per year indicative estimated cost \$70k reduction in capital projects over 10 years in real terms) | H |

| Significant stormwater issue | Options for managing the issue | Implications of the options | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|---|---|---|---|--|--|--|--------------|
| | | <ul style="list-style-type: none"> Regional collaboration is already underway with Regional Three Waters Services Delivery Study on preferred management option Water cycle promoted with stormwater retained with water and wastewater with regional approach | late 2021 to 2023 (legislation is still being passed) | | | | |
| | 3. Maintain a watching brief on the Government's Three Waters Reform Programme and respond as required to ensure Council's best interest are considered particularly for a small rural district council | <ul style="list-style-type: none"> Central government may force amalgamation for councils that do not aggregate regionally Implications from water reforms on service delivery including the impact of Taumata Arowai and changes to legislation are still unfolding and happening at a rapid pace | | ✓ Current budgets are known (\$6.1m for capital projects for 10 years inflated) | ✓ Current budgets are known (\$7.1m for capital projects for 10 years inflated) | ✓ Current budgets are known (\$9.7m for capital projects for 10 years inflated) | H |
| Historic under investment in the stormwater system. | 1. Continue with providing a mainly reactive service with limited renewals | <ul style="list-style-type: none"> Will not achieve good environmental outcomes Deterioration of the network and ultimately increased costs Not meeting the agreed levels of service with potentially local flooding issues including habitable floors Assets are deteriorated to a point that the community cannot afford to pay for | | ✓ Current budgets are known (\$2.9m renewal projects in total over 10 years inflated) | ✓ Current budgets are known (\$3.3m renewal projects in total over 10 years inflated) | ✓ Current budgets are known (\$4.6m renewal projects in total over 10 years inflated) | M |

| Significant stormwater issue | Options for managing the issue | Implications of the options | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|------------------------------|--|---|--|---|---|---|--------------|
| | | <ul style="list-style-type: none"> Investment burden is shifted to the next generation to pay for Compromises safety and resilience Constrains growth in township and District's economy Stakeholders including Regional Council, Taumata Arowai, local community and iwi dissatisfied with Council's management of stormwater activity | | | | | |
| | 2. Develop an investment programme that addresses asset performance issues including flooding and meets the higher standards expected by the NPS Freshwater Management 2020 and greater requirements for stormwater quality management | <ul style="list-style-type: none"> Achieves good environmental outcomes but will take time Will likely require higher level of investment Appropriate level of investment that maintains stormwater assets in perpetuity Ensures assets are functional and meets levels of service Bulk stormwater infrastructure is planned and enables growth in townships | <p>Option 2 is preferred as the most likely scenario – Develop of investment programme to maintain the stormwater assets to agreed level of service and at a sustainable level</p> <p>Decision required by Council – Investment programme will be expected to be adopted by Council in the medium term</p> | <p>✓</p> <p>Requires additional LTP and potentially seeking external funding (indicative cost estimate at \$5m+ over 10 years)</p> | <p>✓</p> <p>Requires additional LTP and potentially seeking external funding (indicative cost estimate at \$5m+ over 10 years)</p> | <p>✓</p> <p>Requires additional LTP and potentially seeking external funding (indicative cost estimate at \$5m+ over 10 years)</p> | H |

| Significant stormwater issue | Options for managing the issue | Implications of the options | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|---|---|---|--|--|---|---|--------------|
| | | | (2026/27 to 2028/29). | | | | |
| Growth in district, particularly from subdivisions adding pressure on existing drainage systems at the bottom of catchments that are already struggling to cope. Servicing future capacity in Ohakune will be a challenge and stormwater is a constraint for development. | 1. Continue with ad hoc planning approach for stormwater provision in growth areas, particularly Ohakune | <ul style="list-style-type: none"> Flooding is exacerbated with additional impervious areas into existing stormwater networks Development occurs ad hoc Bulk infrastructure is not planned to meet current or future demand, or sequenced Does not support Council's Social and Affordable Housing project District is unattractive for developers as Council difficult to work with Not supported by Council as an ongoing option | | ✓ Low cost from existing resources and budget (\$650k capital growth projects over 10 years inflated) | ✓ Low cost (\$740k capital growth projects over 10 years inflated) | ✓ Low cost (\$1m capital growth projects over 10 years inflated) | H |
| | 2. Develop a Stormwater Master Plan as an overarching framework to guide our long term planning and capital works programme | <ul style="list-style-type: none"> Bulk infrastructure is planned holistically and enables growth in townships Based on realistic forecast of development, where it will likely occur and when Supports Council's economic stimulus programme to offset the impact of COVID-19 as well as the Social and Affordable Housing project | Option 2 is preferred as the most likely scenario (medium to long term) – Develop and implement the Stormwater Master Plan to guide long term planning and the capital works programme Decision required by | ✓ Moderate cost for study (\$200k for study only) | | | M |

| Significant stormwater issue | Options for managing the issue | Implications of the options | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|---|--|---|--|---|--|--|--------------|
| | | | Council – Budget for study will be approved as part of the 2021 Long Term Plan process. | | | | |
| The implications of the National Policy Statement for Freshwater Management 2020 on Council's water quality improvements. This will dictate the redrafting of the Regional Policy Statement and will be the basis for assessing our Comprehensive Stormwater Resource Consent application and setting conditions. | 1. Secure new resource consent and negotiate with the Regional Council to ensure the conditions are pragmatic and affordable for our community | <ul style="list-style-type: none"> Consent requirements are understood and budgeted for May not achieve good environmental outcomes Some stakeholders including iwi may not support this pragmatic approach Preparation for consent application and support technical information will take time and may be costly | | ✓ Current budgets are known (about \$100k pa) | ✓ Current budgets are known (about \$100k pa) | ✓ Current budgets are known (about \$100k pa) | H |
| | 2. Develop evidence based strategy and programmes to be more proactive in stormwater quality than our current practices, aligned with the new requirements | <ul style="list-style-type: none"> Improves freshwater quality Achieves good environmental outcomes but may not be immediate There may ongoing operational costs that need to be considered as well as capital before adopting this approach Aligned to the new requirements Stormwater treatment devices will need to be installed both proactively and retrospectively | Option 2 is preferred as the most likely scenario - Develop evidence based strategy and programmes to be more proactive in stormwater quality Decision required by Council – Strategy will be | ✓ Strategy development and data consolidation about \$150k for external support; Stormwater quality capital improvements about \$300k pa | ✓ Stormwater quality capital improvements indicative estimated costs \$300k pa | ✓ Stormwater quality capital improvements indicative estimated costs \$300k pa | H |

| Significant stormwater issue | Options for managing the issue | Implications of the options | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|------------------------------|--------------------------------|--|---|------------|-------------|-------------|--------------|
| | | <ul style="list-style-type: none"> Demonstrates good stewardship to the Regional Council and Taumata Arowai | expected to be adopted by Council in the medium term (2026/27). | | | | |

LAND TRANSPORT

BACKGROUND

Ruapehu is at the top of the Manawatū-Whanganui Region in the heart of the North Island and its transport system plays a key role in connecting the central and lower North Island. The land transport activity is to provide a multi-modal network that allows for the safe, reliable, efficient and effective movement of vehicles, cyclists and people. Roads are essential infrastructure for both community and economic development.

Council owns and manages land transport assets including 1,325km of roads (sealed and unsealed), 1,548 streetlights, 341 bridges and large culverts, 286 retaining walls, 70km of footpath and 16km of Council maintained cycleways. The assets had a gross replacement cost of \$452 million (as at 1 July 2020).

STRATEGIC LAND TRANSPORT CHALLENGES

Impacts of forestry of 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 local geology of the district and pavement that have not been designed for this quantity and loading associated with logging haulage. Higher carrying loads of forestry trucks are accelerating pavement failures and consuming budget.

Transport legislation and strategy changes

There are significant changes to legislation that are either planned or underway that will impact the delivery of core infrastructure as outlined in the Infrastructure Overview Section. The key changes to legislation that impacts the land transport activity includes Road to Zero Strategy, Zero Carbon Act and the new Government Policy Statement on Land Transport (2021).

The One Network Framework is being developed nationally to provide a common language to reflect the role transport corridors play in the movement of people and freight across all land transport modes, the social spaces they provide and their role in providing access to adjacent land. This will ensure investment decisions are made consistently by local authorities rather than in an ad hoc manner. The network under this framework will be classified under a movement and place dimensions. Council will use the framework to guide its decisions on its transport network in the next Long Term Plan planning round. This will ensure that the transport network is accessible for the community, particularly the aging population.

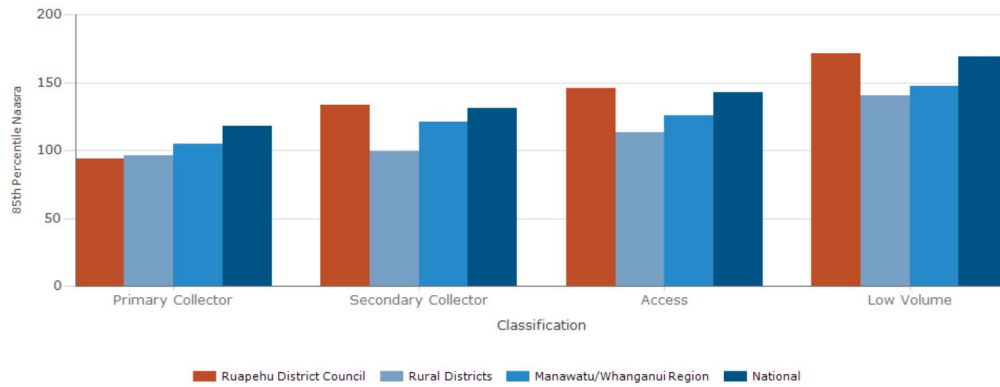
Investment Sustainability

Identified in the last Waka Kotahi audit, Ruapehu spends what it can afford rather than what the network needs. Performance of our primary collector roads is good however the other roads do not perform or compare that well. Ruapehu relies on a high Waka Kotahi subsidy rate (74%) to manage the network in a fiscal manner.

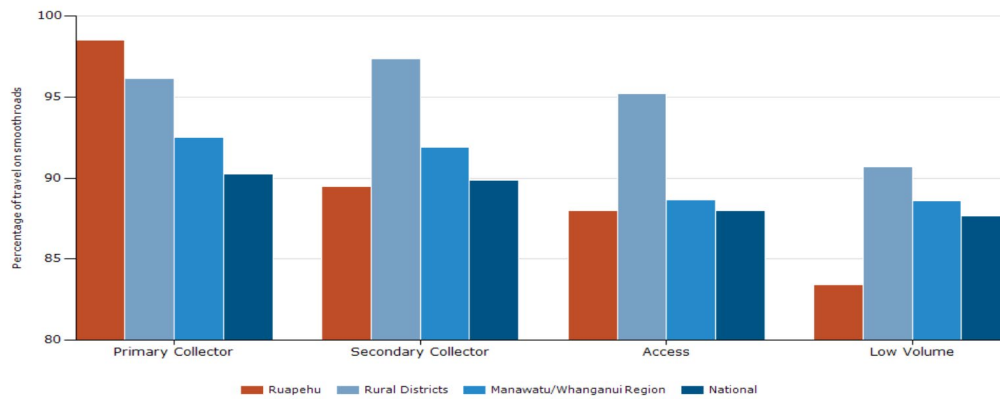
2019/20 Roughness and Smooth Travel Exposure results



85th percentile comparison



The trend of percentage of travel on roads smoother than the threshold



Significant issues for the land transport activity and principal options for managing these issues are detailed in the following table. The option(s) preferred as the most likely scenario have been identified.

Significant issues and options for land transport

| Significant issues | Principal options for managing the issue | Implications of the Issues | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|--|---|--|--|--|--|--|--------------|
| Forestry and land use - Impacts of intense forestry harvesting on the roading network. | 1. Respond reactively to industry demands. | <ul style="list-style-type: none"> No flexibility and agility to respond to the needs of the industry and network when roads deteriorate. | Option 1 is the preferred as the most likely scenario – continue to respond to the needs of industry. Decision required by Council – This is current practice and is shown for completeness and therefore no formal Council decision is required. | ✓ Current budgets are known (about \$100k pa for Council staff time to respond) | ✓ Current budgets are known (about \$100k pa for Council staff time to respond) | ✓ Current budgets are known (about \$100k pa for Council staff time to respond) | H |
| | 2. Ensure sufficient funding available to react to pavement wear caused by the forestry routes. | <ul style="list-style-type: none"> Condition of the pavement may make roads access limited or un-useable if funding is not sufficient. Forestry may not be able to transport harvest out. | | ✓ Current budgets are known (Renewal projects at about \$8m to \$9m pa over 10 years) | ✓ Current budgets are known (Renewal projects at about \$8m to \$9m pa over 10 years) | ✓ Current budgets are known (Renewal projects at about \$8m to \$9m pa over 10 years) | H |
| | 3. Work with industry sectors to understand their needs. Prioritisation of heavy maintenance and renewal on forest plantation cartage roads | <ul style="list-style-type: none"> Investment in renewals and heavy maintenance not aligned to where forestry operations are being undertaken and extra funding required to react to pavement issues. Wastage of works and funding. Customer complaints increase. | Option 3 is the preferred as the most likely scenario – prioritise heavy maintenance and renewals on plantation cartage routes. Decision required by Council – Renewal prioritisation undertaken is part of ongoing network management. | ✓ Current budgets are known (Renewal projects at about \$8m to \$9m pa over 10 years) | ✓ Current budgets are known (Renewal projects at about \$8m to \$9m pa over 10 years) | ✓ Current budgets are known (Renewal projects at about \$8m to \$9m pa over 10 years) | H |
| | 4. Negotiate maintenance agreements with forest owner for harvest period on low volume unsealed roads. | <ul style="list-style-type: none"> Low volume roads Customer complaints | | ✓ Current budgets are known (about \$50k pa for Council staff time to negotiate) | ✓ Current budgets are known (about \$50k pa for Council staff time to negotiate) | ✓ Current budgets are known (about \$50k pa for Council staff time to negotiate) | H |

| Significant issues | Principal options for managing the issue | Implications of the Issues | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|--|--|---|---|---|---|---|--------------|
| | 5. Collect pavement depth data to monitor trends and planning. | <ul style="list-style-type: none"> Without this information heavy maintenance and renewal works will be reactive to failures rather than proactive planning to improve pavements where it is needed most. | | ✓ Estimated \$100k pa for collection of technical data | ✓ Estimated \$100k pa for collection of technical data | ✓ Estimated \$100k pa for collection of technical data | H |
| Ageing rural bridges – bridge stock needing replacement and upgrades. | 1. Continue weight restriction, speed restrictions and permits on bridges. | <ul style="list-style-type: none"> Bridges capacity is not improved (maintained). | Option 1 is the preferred as the most likely scenario – maintain restrictions and permits on bridges. Decision required by Council – Bridge permitting is part of ongoing network management. | ✓ Current budgets are known (about \$50k pa for Council staff to manage) | ✓ Current budgets are known (about \$50k pa for Council staff to manage) | ✓ Current budgets are known (about \$50k pa for Council staff to manage) | H |
| | 2. Invest and undertake bridge strengthening and renewal programme. | <ul style="list-style-type: none"> Bridge failure or damage if works are not undertaken. Further restrictions are imposed to traffic using the bridge. Loss of accessibility to the network due to restrictions. | Option 2 is the preferred as the most likely scenario – undertake bridge strengthening programmes. Decision required by Council – The capital bridge strengthening programme to be approved by Council as part of the 2021 Long Term Plan process. | ✓ Programmes still to be agreed and upgrade costs may be significant (cost estimate at \$13.4m over ten years) | ✓ Upgrade costs may be significant (indicative cost estimate at \$0.5m over ten years) | ✓ Upgrade costs may be significant (indicative cost estimate at \$0.5m over ten years) | H |
| | 3. Work with communities to prioritise works. | <ul style="list-style-type: none"> Need to understand where the demand/need is greatest within the network. | | ✓ Current budgets are known (about \$30k pa for Council staff to liaise with communities) | ✓ Current budgets are known (about \$30k pa for Council staff to liaise with communities) | ✓ Current budgets are known (about \$30k pa for Council staff to liaise with communities) | H |
| | 4. Improve register of HPMV and restricted bridges (refer to Land Transport Activity Plan Appendix D). | <ul style="list-style-type: none"> Safe routes are unclear leading to breaches in bridges restrictions and permits. Risks and consequences are not fully understood and therefore not managed appropriately. | | ✓ Current budgets are known (about \$20k pa for Council staff to manage register) | ✓ Current budgets are known (about \$20k pa for Council staff to manage register) | ✓ Current budgets are known (about \$20k pa for Council staff to manage register) | H |
| | 5. Lobby central government. | <ul style="list-style-type: none"> RDC has a small rate-based population compared to the size of the network (and assets within it) | | ✓ Current budgets are known (about | ✓ Current budgets are known (about | ✓ Current budgets are known (about | H |

| Significant issues | Principal options for managing the issue | Implications of the Issues | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|---|---|--|--|--|--|--|--------------|
| | | and need assistance in funding to maintain what they have. | | \$30k pa for Council staff to lobby) | \$30k pa for Council staff to lobby) | \$30k pa for Council staff to lobby) | |
| Needs and expectations - road users (local, freight, events and tourists) expectations are increasing investment level to improve the form and function of the roading network. | 1. Continue pavement maintenance and renewal programmes and address alignment/widening/cornering in conjunctions. | <ul style="list-style-type: none"> Level of expectation not met. Roads that access the ski fields are not available during the ski season (e.g. Ohakune Mountain Rd, Bruce Rd) | Option 1 is the preferred as the most likely scenario – continue to address issues with alignment/widening & cornering. Decision required by Council – This is current practice and is shown for completeness and therefore no formal Council decision is required. | ✓ Current budgets are known (Renewal projects at about \$8m to \$9m pa over 10 years) | ✓ Current budgets are known (Renewal projects at about \$8m to \$9m pa over 10 years) | ✓ Current budgets are known (Renewal projects at about \$8m to \$9m pa over 10 years) | L/M |
| | 2. Utilise Low-Cost Low-Risk programme to address minor safety issues. | <ul style="list-style-type: none"> Works would otherwise need to be funded out of other categorises. | | ✓ Current budgets are known (Low-Cost Low-Risk programme about \$1m pa; varies each year) | ✓ Current budgets are known (Low-Cost Low-Risk programme about \$1m pa; varies each year) | ✓ Current budgets are known (Low-Cost Low-Risk programme about \$1m pa; varies each year) | L/M |
| | 3. Liaise with communities to prioritise works and spend. Continue advocacy role with ski operators. | <ul style="list-style-type: none"> Level of expectation not met. | Option 3 is the preferred as the most likely scenario – continue to liaise with communities to prioritise programmes. Decision required by Council – This is current practice and is shown for completeness and therefore no formal Council decision is required. | ✓ Current budgets are known (about \$50k pa for Council staff to liaise with communities) | ✓ Current budgets are known (about \$50k pa for Council staff to liaise with communities) | ✓ Current budgets are known (about \$50k pa for Council staff to liaise with communities) | L/M |
| | 4. Develop policy for assessing footpath development and renewal requirements. | <ul style="list-style-type: none"> Consistency in delivery of footpath assets in the network | | ✓ Current budgets are known (about \$50k to develop policy then ongoing implementation) | - | - | L/M |
| | 5. Unsubsidised seal extension programme. | <ul style="list-style-type: none"> Customer complaints. | | ✓ | ✓ | ✓ | L/M |

| Significant issues | Principal options for managing the issue | Implications of the Issues | Most likely scenario for managing the issue | Years 1-10 <i>(indicative cost estimate at \$0.53m pa)</i> | Years 11-20 <i>(indicative cost estimate at \$0.53m pa)</i> | Years 21-30 <i>(indicative cost estimate at \$0.53m pa)</i> | Risk (H/M/L) |
|--|---|--|--|--|--|--|--------------|
| | | | | ✓ Current budgets are known (about \$50k pa for Council staff for ongoing implementation) | ✓ Current budgets are known (about \$50k pa for Council staff for ongoing implementation) | ✓ Current budgets are known (about \$50k pa for Council staff for ongoing implementation) | H |
| Safety – vulnerable road users at risk due to increasing and changing activity and environmental conditions to the transport network. | 1. Continue with Ruapehu Road Safety Action Plan. | <ul style="list-style-type: none"> Fatal and serious crash numbers are likely to increase with associated costs and impacts on the health system. | | ✓ Current budgets are known (about \$50k pa for Council staff for ongoing implementation) | ✓ Current budgets are known (about \$50k pa for Council staff for ongoing implementation) | ✓ Current budgets are known (about \$50k pa for Council staff for ongoing implementation) | H |
| | 2. Utilise Low-Cost Low-Risk programme to address minor safety issues. | <ul style="list-style-type: none"> Known risks/hazards are not removed or minimised. Crash statistics don't improve. | Option 2 is the preferred as the most likely scenario – use Low-Cost Low-Risk funding to address safety issues where applicable. Decision required by Council – Revising the Road Safety Programme is part of the ongoing network management. | ✓ Current budgets are known (Low-Cost Low-Risk programme about \$1.2m pa; varies each year) | ✓ Current budgets are known (Low-Cost Low-Risk programme about \$1m pa; varies each year) | ✓ Current budgets are known (Low-Cost Low-Risk programme about \$1m pa; varies each year) | H |
| | 3. Undertake safety audits and inspections and all serious and fatal crashes are investigated with respect to road conditions. | <ul style="list-style-type: none"> Road /hazards risks are not identified and therefore cannot be managed appropriately. Safety is not at the forefront of our actions. | Option 3 is the preferred as the most likely scenario – Focus on safety. Decision required by Council – Revising the Road Safety Programme is part of the ongoing network management. | ✓ Current budgets are known (about \$50k pa for Council staff for ongoing implementation) | ✓ Current budgets are known (about \$50k pa for Council staff for ongoing implementation) | ✓ Current budgets are known (about \$50k pa for Council staff for ongoing implementation) | H |
| | 4. Reset action plan to align with Road to Zero strategy | <ul style="list-style-type: none"> Not meeting key strategic direction set by the GPS. Negative perception of RLC and its road management. | Option 4 is the preferred as the most likely scenario – alignment with Road to Zero strategy. Decision required by Council - Revising the Road Safety Programme is part of the ongoing network management. | ✓ Current budgets are known (about \$100k pa for Council staff to implement) | ✓ Current budgets are known (about \$100k pa for Council staff to implement) | ✓ Current budgets are known (about \$100k pa for Council staff to implement) | H |
| Climate, topography and geology – the effects of climate change on | 1. Continue proactive drainage maintenance and build resilience and capacity during renewals. New assets built with Climate Change consideration, not just like for | <ul style="list-style-type: none"> Lack of investment in resilience programmes will make the network more vulnerable to both high and low probability events. New assets just compound the issues instead of help – new assets | Option 1 is the preferred as the most likely scenario – to proactively build resilience into the network during renewals. | ✓ Current budgets are known (\$950k pa for drainage maintenance) | ✓ Current budgets are known (\$950k pa for drainage maintenance) | ✓ Current budgets are known (\$950k pa for drainage maintenance) | M |

| Significant issues | Principal options for managing the issue | Implications of the Issues | Most likely scenario for managing the issue | Years 1-10 | Years 11-20 | Years 21-30 | Risk (H/M/L) |
|-------------------------------------|---|---|--|---|---|---|--------------|
| the network assets and performance. | like replacements (e.g. culverts and bridges). | designed and built to future requirements. | Decision required by Council – This is conditional on budget being adopted as part of the 2021 Long Term Plan process then maintenance and renewal programmes can be implemented. | and renewal at \$530k pa) | and renewal at \$530k pa) | and renewal at \$5305k pa) | |
| | 2. Respond reactively to climate change and take direction from Central Government (Business Continuity Plans and Emergency Response Plans) | <ul style="list-style-type: none"> Increased delays in the ability for the network, businesses and communities to recover from events. | Option 2 is the preferred as the most likely scenario – follow direction on climate change from central government. Decision required by Council - This is conditional on budget being adopted as part of the 2021 Long Term Plan process for known capacity projects. Council approval is required as new information becomes available and management response to this. | ✓ Current budgets are part of service level improvements (\$29m over ten years inflated) | ✓ Current budgets are part of service level improvements (\$33.6m over ten years inflated) | ✓ Current budgets are part of service level improvements (\$46.3m over ten years inflated) | M |
| | 3. Develop hazard identification register | <ul style="list-style-type: none"> Risks and consequences are not understood and therefore not managed accordingly. | | ✓ About \$50k to develop register then ongoing implementation about \$20k pa | ✓ Ongoing implementation about \$20k pa | ✓ Ongoing implementation about \$20k pa | M |

FINANCIAL SUMMARY

DECISIONS WE EXPECT TO MAKE

We will need to make a number of key decisions over the duration of our strategy. Some of these decisions will be significant to the district and some will not. We consider our decision on three waters service delivery the most significant decision we will have to make.

Other key decisions and actions that will need to be made by elected members over the next 30 years include:

- All activities:
 - Deliver much larger capital programmes particularly for water supply and wastewater, meaning debt levels will exceed the benchmarks in some years
 - We will continue with our maintenance and renewal programmes that targets interventions at appropriate levels consistent with good industry practice and meeting agreed levels of service.
 - Provide core infrastructure to enable growth in Ohakune and Taumarunui.
- Three waters:
 - Accelerate the three waters capital programme
 - Identify a preferred three waters management option for the Manawatu-Whanganui Region.
 - Co-management with iwi, Regional Council and stakeholder groups as the platform for a holistic and integrated wastewater management approach.
- Land transport activity:
 - We will implement the Road to Zero Strategy to prioritise safety risks across the network holistically.
 - Replacement of aging bridge stock.
 - Collaborate with the forestry industry in use and timing of logging activities impact on the roading network.

KEY FINANCIAL ASSUMPTIONS

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

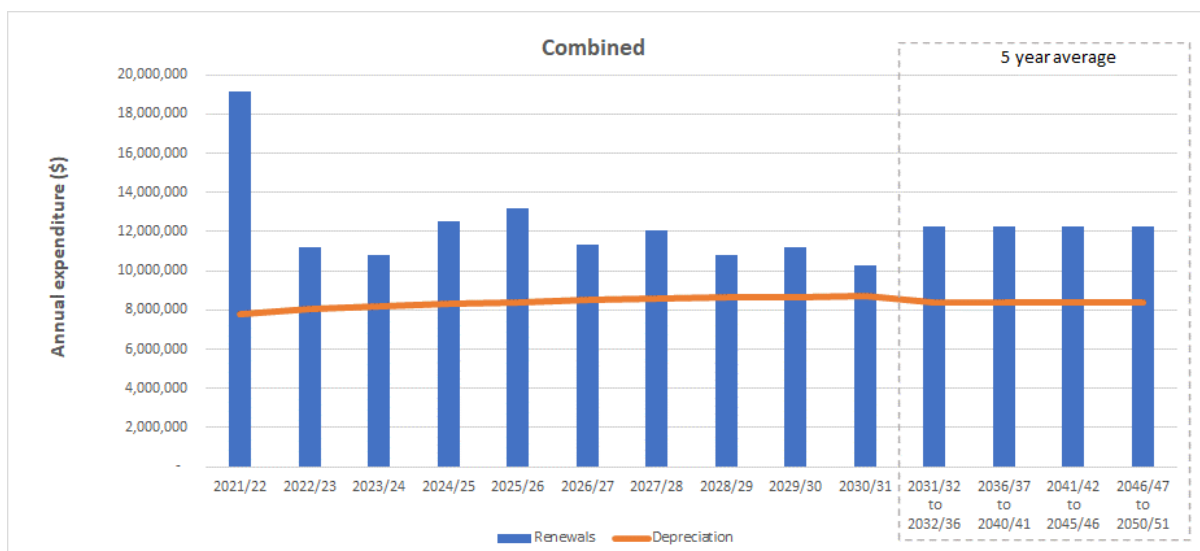
- We will upgrade water supply treatment plants (National Park, Ohura and Owango) so that they can comply fully with the Drinking Water Standards. However, there is a level of uncertainty with successfully gaining the full amount from the Government's three waters stimulus grant.
- There will need to be significant expenditure in the long term to meet higher environmental standards for wastewater discharges
- There will need to be significant expenditure in the long term to meet requirements for the management of three waters and implement water reform requirements
- We will maximise the useful and economic lives of our assets
- We will use risk management practices to maximise assets and the management of risk of a critical asset failing
- Climate change impacts will increase requiring better management of assets
- There will be increased costs for the acquisition, implementation compliance and monitoring of resource consents.
- Waka Kotahi will continue to provide subsidised funding to the Council for the road network over the next 30 years.
- All financial information presented in our strategy includes inflation, except for the graphs which present the renewal and depreciation expenses.

RENEWAL DEPRECIATION COMPARISON

The Figure below shows the annual renewal of \$12 million (average) versus annual depreciation of \$8 million. This shows that the forecast of renewals expenditure is higher than the depreciation over the 30-year period.

This is mainly due to the higher renewal investment in land transport than funded depreciation, and that gap is funded by Waka Kotahi. Three water capital works are classified levels of service due to legislative and environmental requirements. Most projects are a combination of levels of service and renewals (i.e. like for like scenario).

Combined renewal and depreciation (uninflated) 2021-2051



Source: Council's LTP budget (as at June 2021)

FINANCIAL FORECASTS

The table below shows the total expected capital and operations expenditure for each infrastructure activity over a 30-year period (2022-2052). The breakdown of the capital expenditure between renewals, growth and level of service highlights that growth makes up only 2.9% of the total capital expenditure.

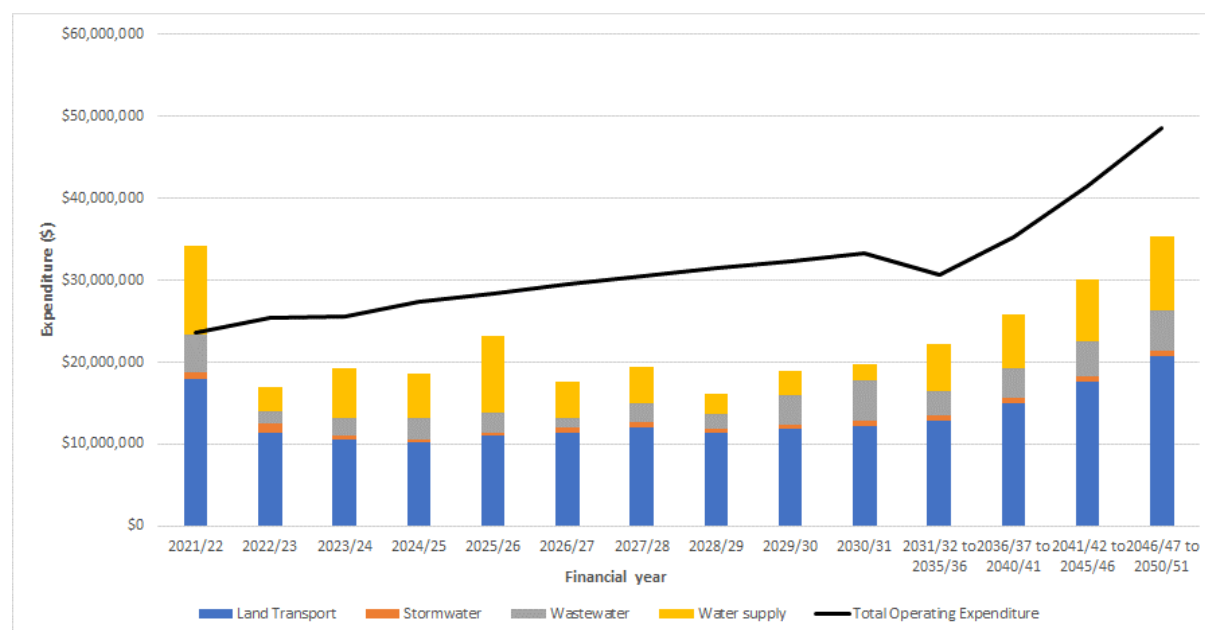
Expected total operating and capital expenditure (inflated)

| Activity | Capital Expenditure (30 year total) | | | Operational Expenditure (30 year totals) |
|-----------------------|-------------------------------------|---------------------|----------------------|--|
| | Renewals | Growth | Levels of Service | Operating |
| Water Supply | \$113,363,409 | \$7,583,482 | \$73,739,476 | \$211,576,385 |
| Waste Water | \$62,310,489 | \$9,007,844 | \$33,943,726 | \$127,985,933 |
| Stormwater | \$10,816,331 | \$2,398,700 | \$9,723,614 | \$47,353,183 |
| Land Transport | \$338,819,031 | \$3,507,736 | \$108,507,561 | \$688,361,818 |
| Sub Total | \$525,309,260 | \$22,497,762 | \$225,914,378 | \$1,075,277,318 |
| Total | \$1,848,998,718 | | | |

Source: Council's LTP budget (as at June 2021)

The Figure below shows the most likely scenario for total operating and capital expenditure for the combined assets.

Combined infrastructure operational and capital forecast (inflated) 2021-2051



Source: Council's draft LTP budget (as at June 2021)

Over the next 30-years it is expected that:

- Renewal expenditure across all the infrastructure activities is generally constant, water supply and wastewater have high capital programmes in 2021/22
- Limited provision for growth across the portfolio at present but as we gather better information, it is likely that there will be greater investment in growth, particularly to service Ohakune
- Significant level of service investment in water supply treatment plants to comply with the Drinking Water Standards in the initial years than larger investment in wastewater to meet higher environmental standards
- Land transport focus is on maintaining and strengthening resilience of existing assets.

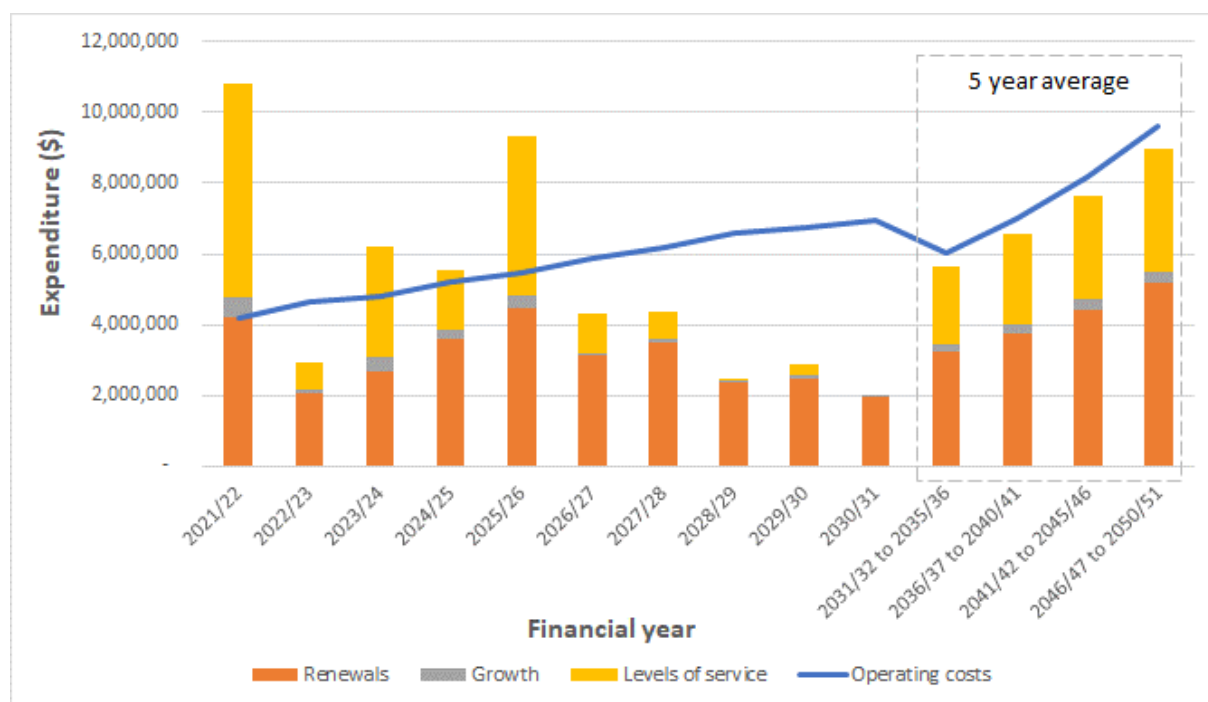
ACTIVITY EXPENDITURE HIGHLIGHTS

WATER SUPPLY EXPENDITURE FORECASTS

The Figure below presents the expenditure forecast for water supply which are based on the following assumptions:

- National Park, Ohakune Ohura and Owhango Water Supply Treatment Plants will be upgraded in first five years so that all plants are fully compliant with Drinking Water Standards (part of the accelerated capital programme)
- Undertake new water source assessment for Raetihi and Taumarunui
- Renew resource consents for National Park, Ohakune, Ohura
- Existing service levels will be maintained with significant investment required to ensure these are provided, particularly providing safe drinking water
- Legislation with the three waters reform will have a significant impact on this activity and at a rapid pace
- We will provide services at the levels forecast in our Water Supply Asset Management Plan and 2021 Long Term Plan.

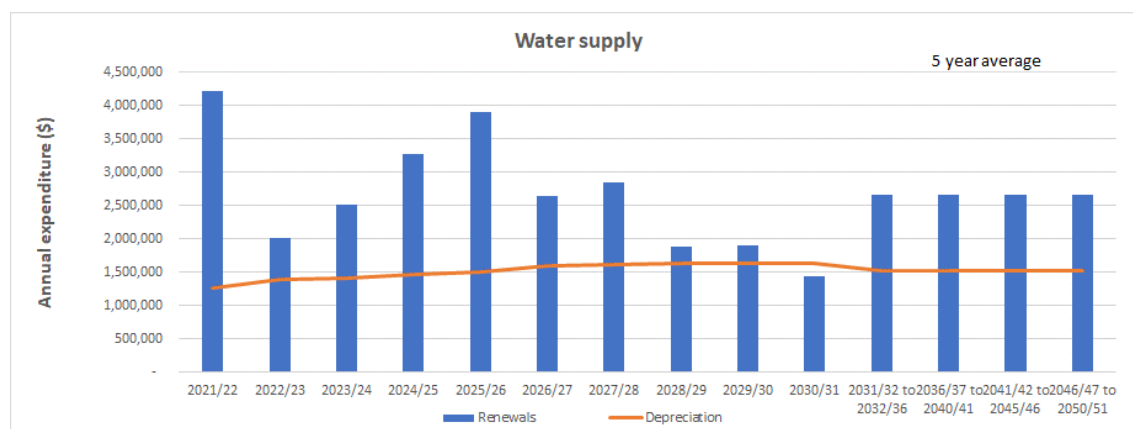
Water supply expenditure forecast (inflated)



Source: Council's LTP budget (as at June 2021)

The Figure below shows that the forecast for renewals is above the annual depreciation. This is mainly due to the classification of capital projects as noted earlier (i.e. combination of levels of service and renewals).

Water supply renewals versus depreciation (uninflated)



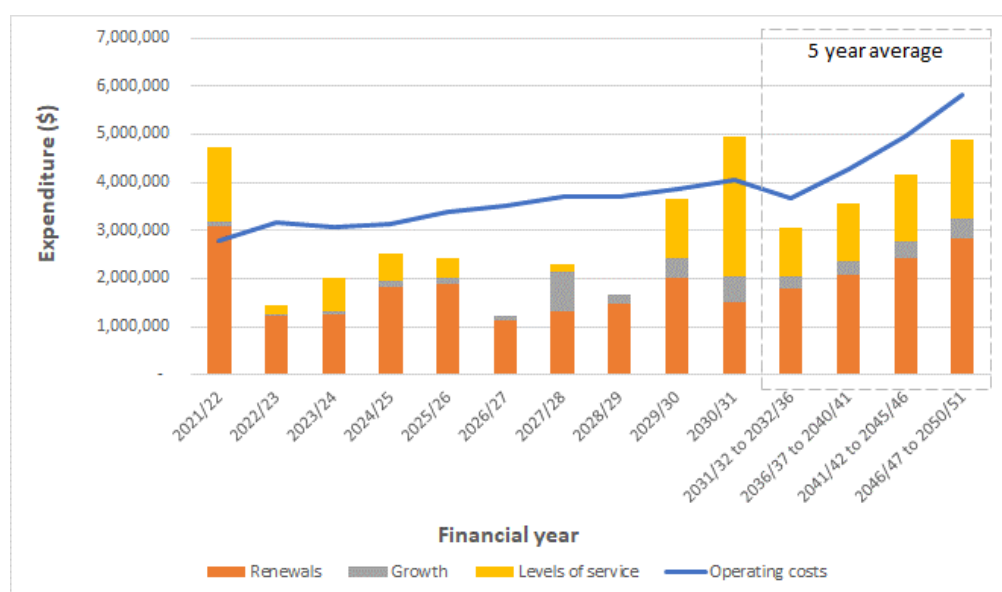
Source: Council's LTP budget (as at June 2021)

WASTEWATER EXPENDITURE FORECASTS

The figure below presents the expenditure for wastewater which are based on the following assumptions:

- The Government's freshwater reforms to improve ecological health will require a higher environmental standard
- The conditions and cost implications of the future resource consents for the wastewater treatment plants are uncertain
- A new wastewater treatment plant proposed to service Ohakune and Raetihi townships to cater for growth, improve non-compliance issues and strengthen resilience
- Wastewater treatment plant upgrades for National Park, Rangataua and Taumarunui
- Existing service levels will be maintained
- Legislation with the three waters reform will have a significant impact on this activity and at a rapid pace
- We will provide services at the levels forecast in our Wastewater Asset Management Plan and 2021 Long Term Plan.

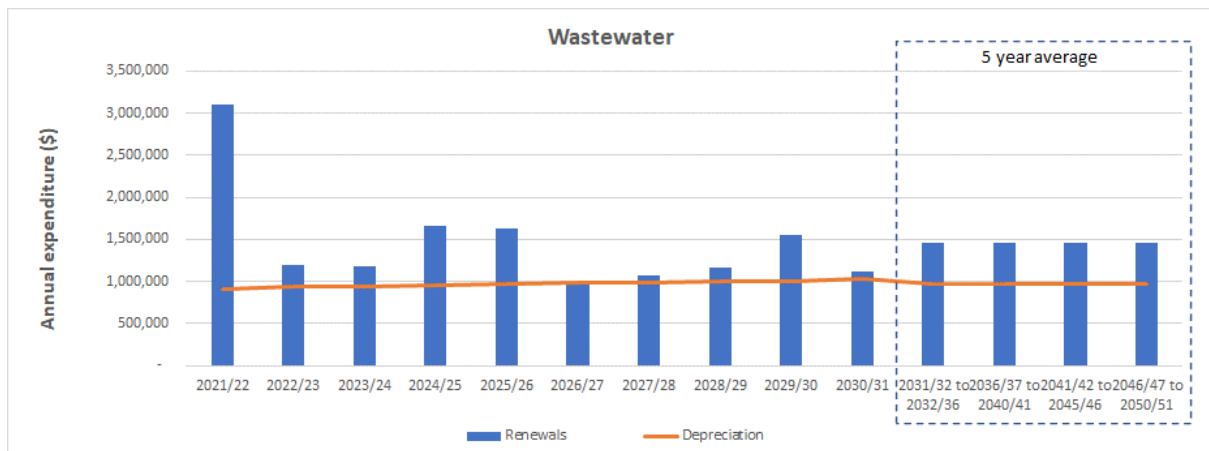
Wastewater expenditure forecast (inflated)



Source: Council's LTP budget (as at June 2021)

The Figure below shows that the forecast for renewals is about even with the annual depreciation of around \$1million, with some spikes above. The forecast for renewals is generally above the annual depreciation.

Wastewater renewals versus depreciation (uninflated)



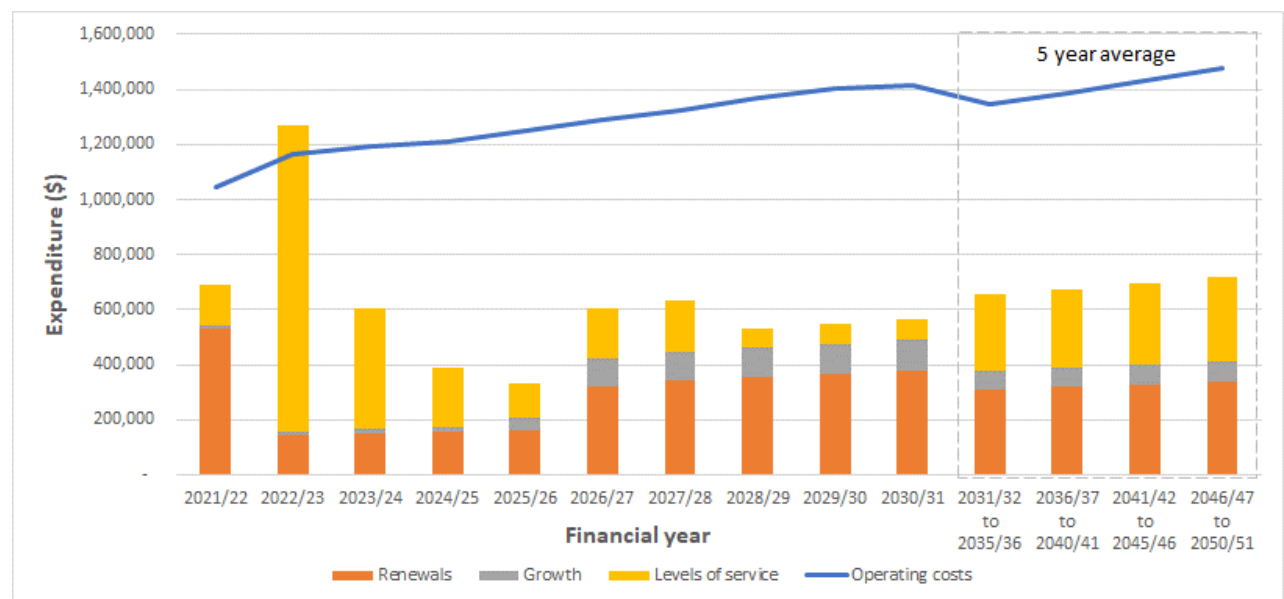
Source: Council's LTP budget (as at June 2021)

STORMWATER EXPENDITURE FORECASTS

The Figure below presents the expenditure for stormwater which are based on the following assumptions:

- Resource consents will be impacted by the new requirements of the National Policy Statement for Freshwater Management 2020 through the Regional Policy Statement
- Stormwater networks extensions in Ohakune to cater for growth
- Various flood control improvements in Taumarunui
- Legislative and regulatory changes will require stormwater treatment
- Existing service levels will be maintained
- Legislation with the three waters reform will have a significant impact on this activity and at a rapid pace
- We will provide services at the levels forecast in our Stormwater Asset Management Plan and 2021 Long Term Plan.

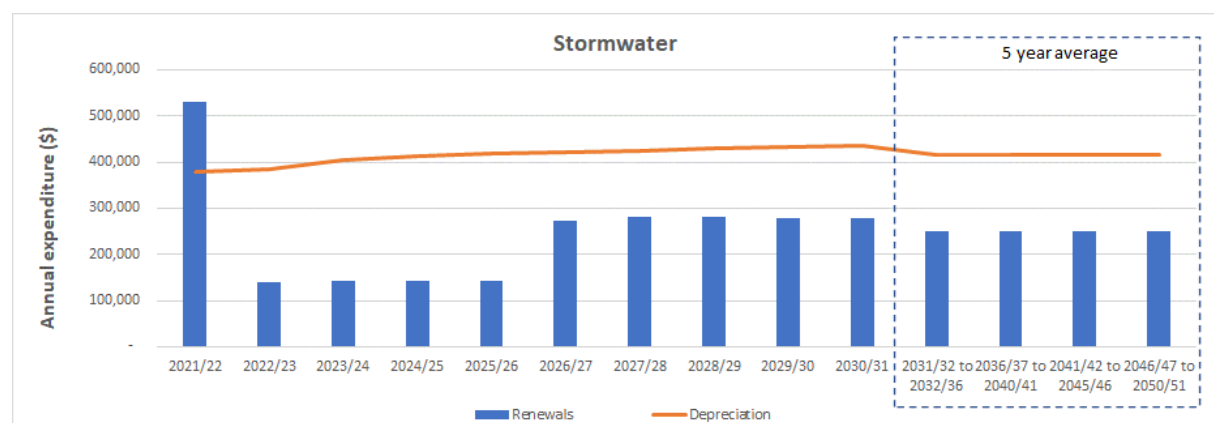
Stormwater expenditure forecast (inflated)



Source: Council's LTP budget (as at June 2021)

The Figure below shows that the forecast for renewals is well below the annual depreciation, except for in 2021/22.

Stormwater renewals versus depreciation (uninflated)



Source: Council's draft LTP budget (as at June 2021)

LAND TRANSPORT EXPENDITURE FORECASTS

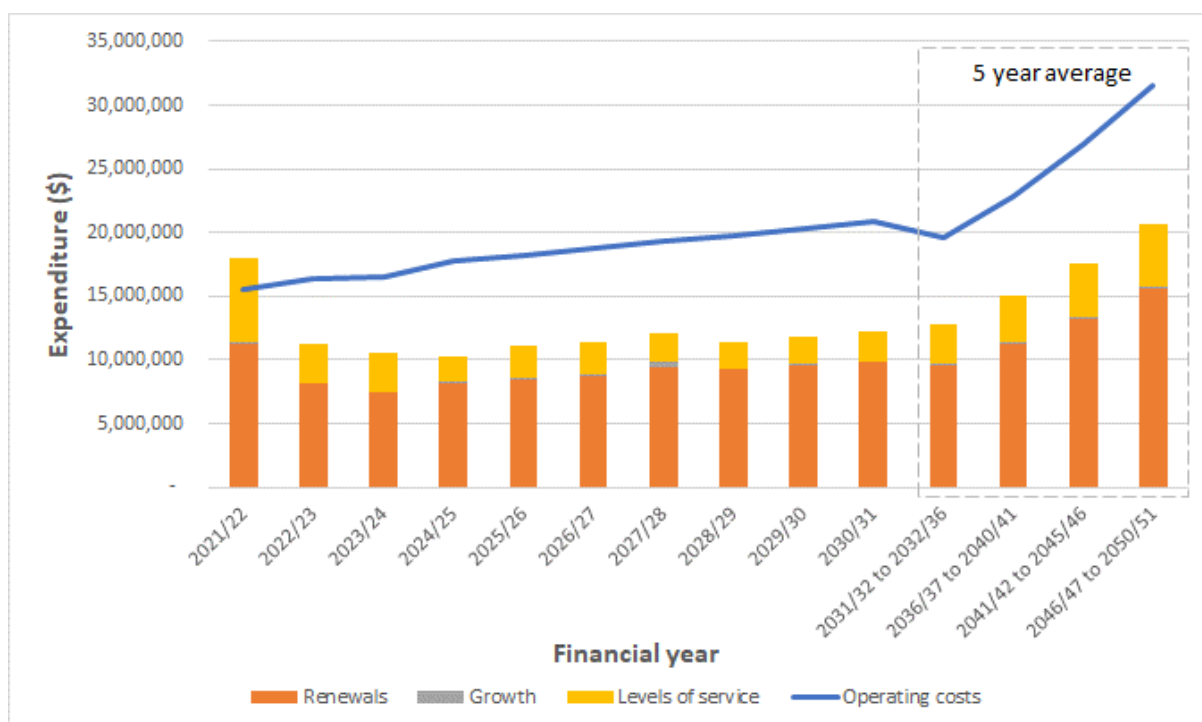
Figure 18 presents the expenditure for land transport which are based on the following assumptions:

- Waka Kotahi will continue to provide us with subsidised funding for the road network over the next 30 years
- We will continue to fund at the levels and ten year forecasts stated in our Long Term Plan
- We will provide services at the levels forecast in our Land Transport Activity Management Plan and 2021 Long Term Plan.

Over the next 30 years it is expected that Council's major capital expenditure items include:

- Bridge renewals and component replacements programme.
- Low Cost Low Risk programme to address safety issues.
- Footpaths and cycleways (Great Rides) to meet alternate transport modes.
- Network resilience (climate change & resilience).
- Programme of pavement rehabs and surfacing
- Unsubsidised seal extension programme.

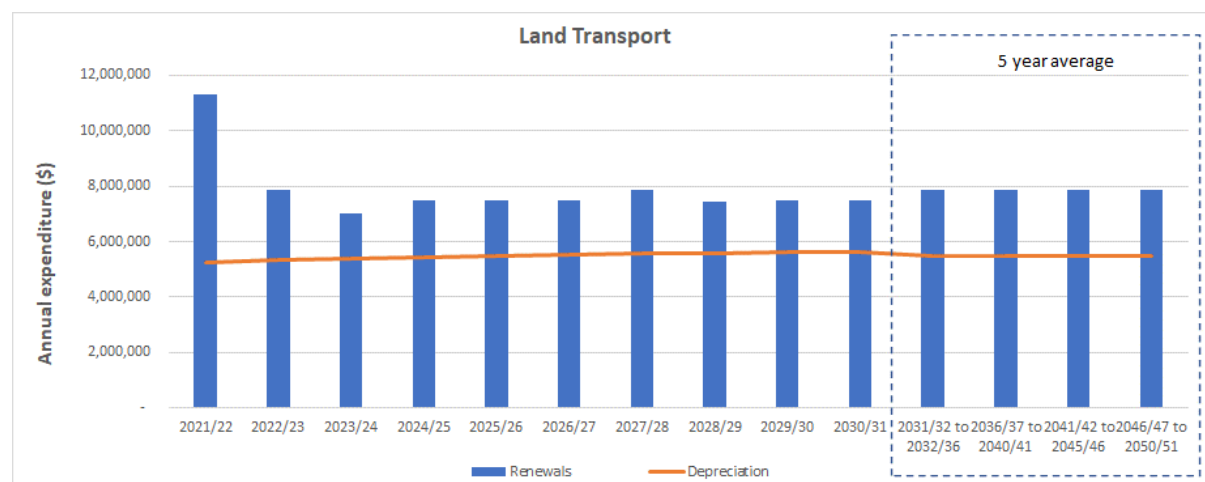
Land transport expenditure forecast (inflated)



Source: Council's draft LTP budget (as at June 2021)

The Figure below shows that the forecast for renewals is consistency above the annual depreciation. This is a result of deferring works on an ageing structures replacements and forestry harvesting accelerating the deterioration of the pavement condition.

Land transport renewals versus depreciation (uninflated)



Source: Council's draft LTP budget (as at June 2021)

Our land transport services are funded from a range of sources:

- Waka Kotahi subsidies (FAR)
- Targeted rates
- Fees and charges.

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 continues 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 and plenty of opportunities to negotiate. There is a level of uncertainty with successfully gaining the full amount from the Government's three waters stimulus grant applied for upgrading water standards and wastewater assets across the district.
- Council's ability to deliver the three waters capital programme as there has been poor achievement in the last three years (except for water supply in 2019/20). Council wishes to deliver a much larger capital programme to improve drinking water compliance.
- Finding a culturally acceptable solution for managing wastewater discharges that is affordable for our community and technically achievable with physical constraints in some locations.
- The duration of the international border closure and on the economic impact of the overseas tourist market on our District
- Council infrastructure assets are located on land that currently are part of the Treaty Settlement
- The conditions and cost implications of the future resource consents for the Wastewater Treatment Plants are uncertain.
- Legislative changes, National Policy Statements and National Environmental standards that may require significant changes to the way we plan, manage and fund the infrastructure.
- The impact of the Government's Three Waters Reform Programme and how water services will be delivered.
- 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.
- Future stormwater consent conditions may require us to be more proactive in stormwater quality management than current practices.

RELIABILITY OF INFORMATION

Quality data is important for end users so that they can have confidence in making an analysis using that data. We continue to have sound practices with data management for the three waters with support from our Facilities Management Contractor (Veolia).

Three waters - The data for three waters assets are recorded in Council's asset management system (AssetFinda) for all asset classes. The data confidence of the three waters asset data has been classified as reliable for inventory completeness and condition (in accordance with the International Infrastructure Management Manual), and mostly reliable for age.

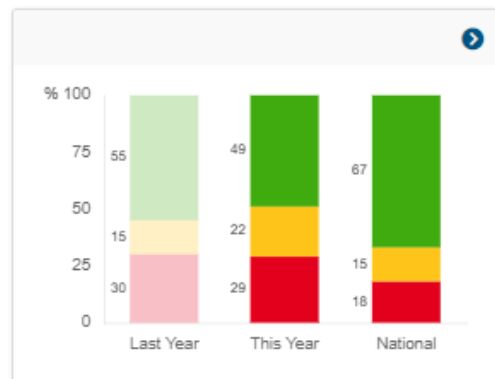
Land transport - The Performance Measure Reporting Tool (PMRT) reports annually on the condition and performance of asset data. The following figures give an overview of where we are compared nationally.

PMRT score and overall results for 2019/20 data quality

● Major Issues ● Minor Issues ● Expected Standard

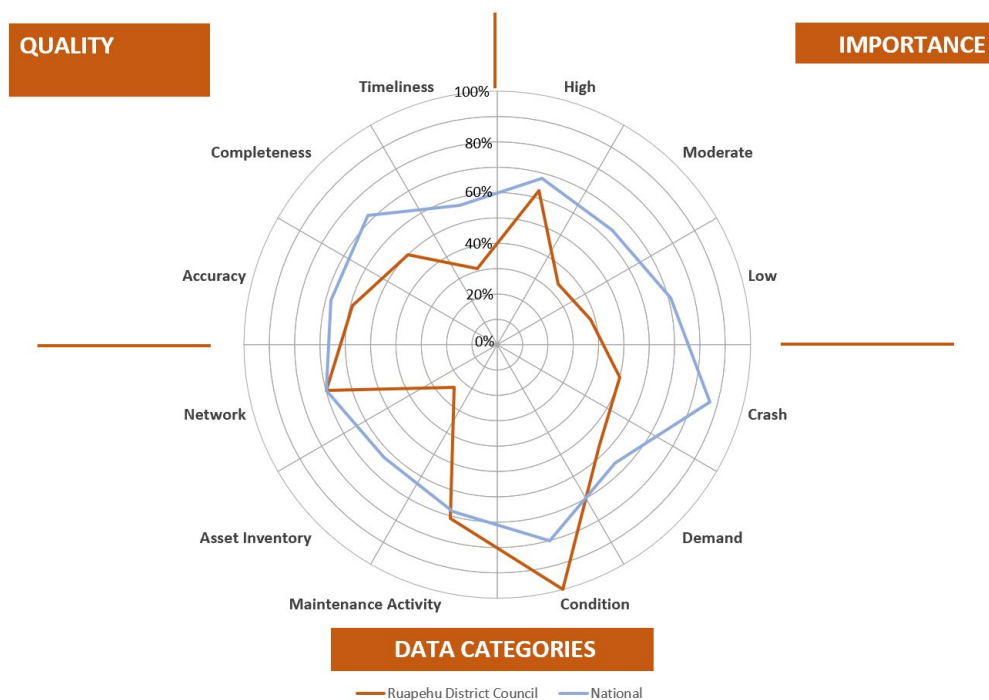


OVERALL RESULTS



Data quality results show a slight drop in our score but remain above the national average of 68 for the 2019/20 period. The low performing areas will look to be improved over the next year with the aid of MAX Quality reporting.

Spider diagram of RDC asset quality measures



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 the Ruapehu District Māori Council and Māori Electoral Wards
- Waka Kotahi will continue to provide us with subsidised funding for the land transport network over the next 30 years
- Domestic tourists will take the place of overseas visitors for the next three years
- Levels of service are defined in the Activity Management Plans for each activity, 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 alter them

- Activity Asset Management Plans will test the affordability of delivering the customer outcomes.
- Council will maximise the useful and economic lives of our assets.
- Council will use risk management practices to maximise assets and the management of risk of a critical asset failing
- Legislation with the three waters reform will have a significant impact on these activities and at a rapid pace
- Climate change will affect our District over the medium to long term in line with projections provided by the Ministry for the Environment
- Future resource consent conditions for three waters will be more restrictive and will cost more to comply with, implement and monitor
- There is new monitoring and stringent enforcement of the existing resource consents for the wastewater treatment plants and Council will expect an increase in the number of non-compliances issued by the Regional Council until new / upgraded plants are completed.