



**I, Steven May, Tumu Whakarae Chief Executive Officer, hereby give notice that
an Extraordinary Meeting of Council will be held on:**

Date: Wednesday, 16 September 2020
Time: 1.30pm
**Location: Council Chamber, Wairoa District Council,
Coronation Square, Wairoa**

AGENDA

Extraordinary Council Meeting

16 September 2020

The agenda and associated papers are also available on our website: www.wairoadc.govt.nz

For further information please contact us 06 838 7309 or by email info@wairoadc.govt.nz

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- 1 KARAKIA**
- 2 APOLOGIES FOR ABSENCE**
- 3 DECLARATIONS OF CONFLICT OF INTEREST**
- 4 PUBLIC PARTICIPATION**

A maximum of 30 minutes has been set aside for members of the public to speak on any item on the agenda. Up to 5 minutes per person is allowed. As per Standing Order 14.14 requests to speak must be made to the meeting secretary at least one clear day before the meeting; however this requirement may be waived by the Chairperson.

5 GENERAL ITEMS

5.1 THREE WATERS REPORT

Author: Steven May, Tumu Whakarae Chief Executive Officer

Authoriser: Steven May, Tumu Whakarae Chief Executive Officer

Appendices: 1. Hawke's Bay Three Waters, Business Case of Three Waters Service Delivery Options [↓](#)

1. PURPOSE

The purpose of this report is for Council to consider the receipt of the Hawke's Bay Three Waters, Business Case of Three Water Service Delivery options report, and in receiving this report note the collaborative work completed to date across the region and to provide endorsement for the continued collaborative working relationship as agreed in the Hawke's Bay Triennium Agreement.

RECOMMENDATION

The Tumu Whakarae Chief Executive Officer RECOMMENDS that having considered all matters raised in the report:

- a. That the Council receives the report titled Hawke's Bay Three Waters, Business Case of Three Waters Service Delivery options.
- b. The report is for information purposes only. No decision relating to the recommendations set out in this report are required by Council.
- c. Central Hawke's Bay District Council, Hastings District Council, Napier City Council and Wairoa District Council have opted into the government three waters reform and stimulus programme committing our councils to engage in the first stage of the reform programme. This includes working together with neighbouring councils and government to consider the creation of multiregional entities.
- d. The Hawke's Three Waters, Business Case of Three Waters Service Delivery Options report provides our regions representatives in the reform programme detailed information and analysis to engage with government to identify approaches to service delivery reform design that considers the recommendations, findings and challenges from the report.
- e. The Hawke's Bay councils based on the principles agreed in our Hawke's Bay Triennium Agreement agree to continue to work together in good faith for our region to develop our strategic capacity from available resources and achieve our strategies by working together through co-design partnership to grow a thriving Hawke's Bay economy to support inclusive and connected communities and sustainable and resilient environments.

2. EXECUTIVE SUMMARY

- 2.1 Central Hawke's Bay District Council, Hastings District Council, Hawke's Bay Regional Council, Napier City Council and Wairoa District Council commissioned Morrison Low in December 2018 to review the current and potential three waters (drinking, waste and storm) service delivery options for the region.

- 2.2 This report contributes to the strategic priority areas for the 2019-2022 triennium, Water – safety, security and planning agreed by the Hawke’s Bay Leaders Forum on 25 November 2019. Specifically the priority areas for cooperative approaches on the regional three waters review of the provision of drinking water, wastewater and storm water services.
- 2.3 It should be noted that Central Hawke’s Bay District Council, Hastings District Council, Napier City Council and Wairoa District Council have opted into the government three waters reform and stimulus programme committing our councils to engage in the first stage of the reform programme. This means that this report delivered to council is for information only and will be used by council representatives participating in the government programme to inform discussions to represent Hawke’s Bays interests in the design of multi-regional service delivery entities.
- 2.4 The review followed a structured, staged process moving from current state assessment, definition of key objectives and principles, into analysis of a long and short list of options and their impacts on Councils. The review report is now complete and provides independent analysis and recommendations on the effectiveness of existing drinking water, waste water and storm water services and alternative service delivery options.
- 2.5 It is important to note that the review is not about freshwater reforms, privatising assets or services, water storage or issues such as chlorination. Flood protection and control assets owned and managed by Hawke’s Bay Regional Council were considered outside the scope for the review.
- 2.6 The review report identifies that the status quo is not an option for the future of three waters service delivery in Hawke’s Bay. Making no changes to the way our three waters services are delivered is not affordable or sustainable.
- New regulations and standards are coming which will force change
 - Future affordability challenges need to be addressed
 - Strategically there are good reasons for the councils to work together
 - For customers, ratepayers, staff and councils
 - To achieve the best solution for Hawke’s Bay.
- The Hawke’s Bay Councils face the same or substantially the same issues and need to address these challenges in an affordable, coordinated way that eliminates duplication and ensures that all councils and their communities have access to the appropriate strategic capacity to do so.
 - Meeting the new regulations under current service delivery arrangements poses significant affordability challenges for the Hawke’s Bay region and in particular smaller councils.
 - The Review’s forecast investment in three waters infrastructure across the region to meet new drinking and wastewater standards is estimated to at a minimum double since councils’ 2018-2028 Long Term Plans from \$313m to \$605m.
 - The report recommends an asset owning council controlled organisation as the preferred service delivery model as it best met the Councils’ investment objectives and the cultural principles.

- It is the option that best addresses the issue of affordability. It is also the option that best addresses the very real risk that the scale of investment required to meet new standards and community expectations is greater than forecast.
 - A dedicated regional water CCO is able to concentrate on three water challenges and prioritise investment decisions across the region, leading to better environmental and community outcomes than the Councils can individually achieve.
 - It would have sufficient scale to create strategic capacity and capability across the region and support the areas where that is currently lacking. Scale, strategic capacity and capability gives a level of expertise and resilience in three waters that can be applied regionally, benefitting all ratepayers of the region rather than only some as is the case now.
 - The model best provides the opportunity to provide a meaningful role for Māori, including co-design and co-governance.
 - A regional water CCO is able to provide improved asset management, improved management of risk, and be better placed to meet any increased compliance requirements or increased environmental standards than the Councils can individually.
 - In addition to being the only model that effectively addresses affordability issues across the region, the asset owning model also maximises available operational savings for the region, ensuring that services are not only affordable, but delivered in a cost effective way.
 - There will be a need to ensure that the Statement of Intent and Shareholders Agreement of the regional CCO retain an appropriate balance between the individual priorities of each council with regional priorities including planning and supporting growth.
- A regional asset owning CCO would be owned collectively by Central Hawke's Bay, Hastings, Napier and Wairoa and taking into account the findings of the cultural case should be implemented using a co-governance model in partnership with Māori.
 - Partnering with Māori to co-design and co-govern responds directly to the principles developed for the review and the investment objective to have a model that enables a meaningful role for Māori. It builds on existing models of co-governance but does so in a way that would be designed specifically for Hawke's Bay three waters service delivery.
 - A regional asset owning CCO would operate as a separate legal entity external to all four councils, with its own governance, executive, administration support, procurement strategies and operational equipment. Importantly it would also own the networks and treatment plants and deal directly with customers.

- A board of professional directors would be appointed by the shareholding Councils and Māori. The directors will have the associated duties, obligations and liabilities of company directors rather than of councillors.
- Scrutiny of the CCO would be provided by a joint committee of the combined councils and Māori. The joint committee would, amongst other responsibilities, appoint and remove the directors and provide Māori with a co-governance role.
- The CCO would co-locate staff virtually and/or physically, housing all management, administration, asset management, planning and project management staff, and the coordination of the maintenance crews and contractors. Wairoa and Central Hawke's Bay would operate as satellite offices. There would be an estimated 143 staff (including Napier City Services staff) in the CCO. This includes more than 16 additional roles than are currently directly involved in delivering and supporting the three waters across the four councils.

2.7 The report also sets out the key challenges and risks associated with adopting asset owning CCO models.

- Perceived inequity that arises when councils are transferring different levels of debt or assets of varying conditions. Where this happens, ratepayers may feel that they are inheriting someone else's problem.
- The impact of regionalising costs is that in order to reduce the costs of three waters services to an affordable level across the Hawke's Bay, Napier ratepayers may pay more for three waters than they otherwise would (under the enhanced status quo).
- Without the critical mass of all four councils there is a danger that the benefits of change will be substantially reduced or lost.
- Water and the formation of CCO's are both politically sensitive issues for councils and a risk that other issues are brought into the conversation that detract from the key underlying issues highlighted in this report.
- The development of a co-design and co- governance approach will require councils and Maori to participate in a new and potentially a resource intensive process.
- Creation of a regional water entity will impact resourcing organisation structures and functions of each council. Water activity is a significant proportion of each council's budget so the transfer of the activity to a CCO will impact the way each council operates in the future. Consideration should be given to Councils broader priorities. COVID-19 has demonstrated how quickly the needs and priorities of communities can change.
- The extent to which Government is able to support formation of an asset owning CCO with a) legislative change to the Local Government Act 2002 and b) providing funding or investment to resolved the challenges of regionalisation and cross subsidisation.

3 Recommendations

- a. That the Council receives the report titled Hawke's Bay Three Waters, Business Case of Three Waters Service Delivery options.

- b. The report is for information purposes only. No decision relating to the recommendations set out in this report are required by Council.
- c. Central Hawke's Bay District Council, Hastings District Council, Napier City Council and Wairoa District Council have opted into the government three waters reform and stimulus programme committing our councils to engage in the first stage of the reform programme. This includes working together with neighbouring councils and government to consider the creation of multi-regional entities.
- d. The Hawke's Three Waters, Business Case of Three Waters Service Delivery Options report provides our regions representatives in the reform programme detailed information and analysis to engage with government to identify approaches to service delivery reform design that considers the recommendations, findings and challenges from the report.
- e. The Hawke's Bay councils based on the principles agreed in our Hawke's Bay Triennium Agreement agree to continue to work together in good faith for our region to develop our strategic capacity from available resources and achieve our strategies by working together through co-design and partnership to grow a thriving Hawke's Bay economy to support inclusive and connected communities and sustainable and resilient environments

4. Background

- 4.1 Central Hawke's Bay District Council, Hastings District Council, Hawke's Bay Regional Council, Napier City Council and Wairoa District Council commissioned Morrison Low in December 2018 to review the current and potential three waters (drinking, waste and storm) service delivery options for the region.

The review aligns with all five councils shared strategic priority for water safety, security and planning agreed as part of the Hawke's Bay Triennial Agreement October 2019 -2022 and specifically referenced as a priority area for cooperation to review the provision of drinking. Waste and storm water services.

- 4.2 Central government has supported the Hawke's Bay three waters review and the Minister's funding of \$1.55 million announced in January 2019 attests to that support. Hawke's Bay now has the opportunity to provide further perspective into the Central Government review on developing options to address the key concerns on regional solutions to improve the management of drinking water, storm water and wastewater.
- 4.3 Over the past three years, central government have been considering the issues and opportunities facing the system for regulating and managing the three waters.
- The Government Inquiry into Havelock North Drinking Water – set up following the serious campylobacter outbreak in 2016 – identified widespread, systemic failure of suppliers to meet the standards required for the safe supply of drinking water to the public. It made a number of urgent and longer-term recommendations to address these significant systemic and regulatory failures.
 - The Government's Three Waters Review highlighted that, in many parts of the country, communities cannot be confident that drinking water is safe, or that good environmental outcomes are being achieved. This work also raised concerns about the regulation, sustainability, capacity and capability of a system with a large number of localised providers, many of which are funded by relatively small populations.

- The local government sector's own work has highlighted similar issues. For example, in 2014, LGNZ identified an information gap relating to three waters infrastructure. A 2015 position paper, argued for a refresh of the regulatory framework to ensure delivery of quality drinking water and wastewater services, and outlined what stronger performance in the three waters sector would look like.
- Both central and local government acknowledge that there are many challenges facing the delivery of water services and infrastructure, and the communities that fund and rely on these services. These challenges include:
 - Underinvestment in three waters infrastructure in parts of the country, and substantial infrastructure deficits. For example, it is estimated that between \$300 to \$570 million is required to upgrade networked drinking water treatment plants to meet drinking water standards; and up to \$4 billion is required to upgrade wastewater plants to meet new consent requirements. These deficits are likely to be underestimates, given the variable quality of asset management data.
 - Persistent funding and affordability challenges, particularly for communities with small rating bases, or high-growth areas that have reached their prudential borrowing limits.
 - Additional investment required to increase public confidence in the safety of drinking water, improve freshwater outcomes, and as a critical component of a collective response to climate change and increasing resilience of local communities.
- COVID-19 has made the situation even more challenging. Prior to COVID-19, territorial authorities were planning on spending \$8.3 billion in capital over the next five years on water infrastructure. However, COVID-19 is likely to cause significant decreases in revenue in the short term. As a result, borrowing will be constrained due to lower debt limits that flow from lower revenues, and opportunities to raise revenue through rates, fees and charges will be limited.

5. Considerations of Tangata Whenua

5.1 The Local Government Act requires councils to provide for Māori to contribute to decision-making processes. Section 6(e) of the Resource Management Act 1991 sets out:

“Matters of national importance – In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance: The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga”.

5.2 The Māori engagement strategy used in this project was to meet with the existing council Māori committees of the four territorial authorities, as well as the Hawke's Bay Regional Council Regional Planning Committee and Māori Committee. Noting that Central Hawke's Bay does not have a formal committee, a meeting was held with Te Taiwhenua o Tamatea in place of a formal committee of Central Hawke's Bay District Council. Over 2019 and early 2020 tangata whenua engagement affirmed seven principles.

Value Te Ao Māori	Incorporating and implementing mātauranga Māori, culture and values (i.e. Te Aranga Design Principles) are a core element for any potential framework to realise and enhance the region's commitment to Māori to protecting/enhancing water
Value water	Wai is the essence of all life and the world's most precious resource. It is of high importance to Māori, as it is the life giver of all things, a precious taonga, part of our whakapapa
Whakapapa – genealogical links	Recognise and respect the relationship and whakapapa (genealogical link) that mana whenua has with water.
Te mauri o te wai – the life force of water	Mauri is the integrated and holistic well-being and life support capacity of water. The well-being/healthiness of the water, the land and the people are intrinsically connected.
Holistic approach to water	Although the project is based around the review of the service and delivery of the three waters (infrastructure), the proposed model needs to take into account a holistic water approach: there is only one water.
Enabling of Te Tiriti o Waitangi	Involving mana whenua in governance and decision making required to ensure Te Tiriti o Waitangi obligations are met, as well as making sure they are able to actively exercise kaitiakitanga in a practical way
Mana motuhake - identity, self-determination	The identity of mana whenua in Hawke's Bay should not be lost in any potential model. But inclusion and co-governance whilst keeping their identity is an opportunity

5.3 The significance Māori place on these principles and therefore on water is best encapsulated in the following kōrero,

Te wai, he taonga i tuku iho mai i ngā tīpuna – water is a taonga, a precious treasure passed down from our ancestors. The chairs of the Māori committees were clear that a meaningful role for Māori starts with the opportunity for partnership with co-design of the model across co-governance and operations. They were stringent in their view that the status quo is not a sustainable option for our environment and Te mauri o te wai. An Asset owning CCO was their preferred model with adaptation to a Māori worldview that places people within the environment, and not in a dominant and exploitive view.

5.4 The engagement identified a cultural gap in the better business case framework. Initially the approach was to weave a cultural element through the business case but during the project it became clear that a separate cultural case was required. The rationale for a cultural case was that Māori cultural values and traditions associated with water have been well documented within Council processes, however the operational implementation of cultural values was considered to be a gap. The role of the cultural case is to highlight that within the regulatory framework relating to water, Te Ao Māori, through its language, genealogy, stories and traditions, requires a greater level of competency than usual. The cultural case is underpinned by the Treaty of Waitangi.

6. PROGRESS WITH GOVERNMENT THREE WATERS REGULATORY REFORMS

6.1 Progress is being made to address the regulatory issues that were raised by the Havelock North Inquiry and the Governments Three Waters Review. The Government is implementing a package of reforms to the three waters regulatory system, which are designed to:

- improve national-level leadership, oversight, and support relating to the three waters – through the creation of Taumata Arowai, a new, dedicated Water Services Regulator;
- significantly strengthen compliance, monitoring, and enforcement relating to drinking water regulation;
- Manage risks to drinking water safety and ensure sources of drinking water are protected; o improve the environmental performance and transparency of wastewater and storm water networks.

- 6.2 Legislation to create Taumata Arowai had its third reading on 22 July 2020 and should be enacted shortly. This new Crown entity is currently being built, and will become responsible for drinking water regulation once a separate Water Services Bill is passed (anticipated mid 2021).

However, both central and local government acknowledge that regulatory reforms alone will not be sufficient to address many of the persistent issues facing the three waters system. Reforms to service delivery and funding arrangements also need to be explored.

- 6.3 Hawke's Bay as a region has now completed our Three Waters Review, which assesses current and potential service delivery options for drinking, waste and storm water for all of Hawke's Bay. Through this, the intention was that our councils would form a collective view on how we can use this opportunity to find the best long-term solution for three waters service delivery in Hawke's Bay, meeting the needs of all our communities.

As a region and district, our communities will be in a very good position to participate in the Government's co-design of multi-region three waters service delivery entities. Together, we will form a collective view on how we can use this opportunity to find the best long-term solution for three waters service delivery in Hawke's Bay, meeting the needs of all our communities

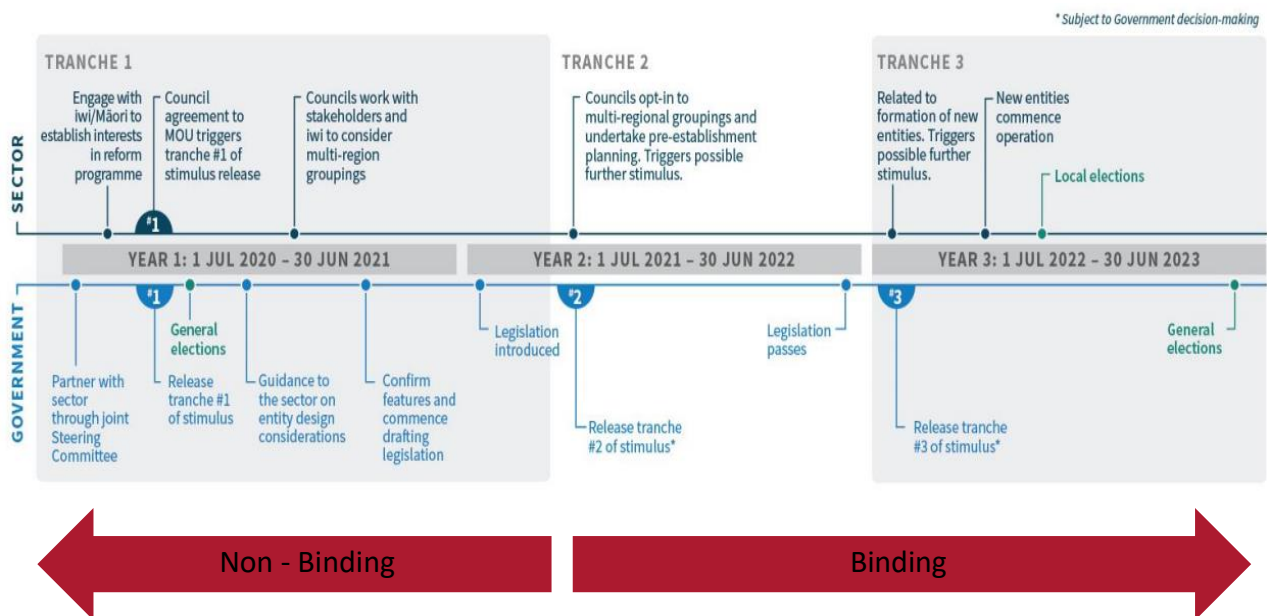
7. GOVERNMENT REFORM PROCESS AND INDICATIVE TIMETABLE

- 7.1 Government has communicated a three-year programme to reform three waters service delivery arrangements, which is being delivered in conjunction with an economic stimulus package of Crown investment in water infrastructure. The reform programme will be undertaken in stages.

The initial stage is an opt in, non-binding approach, which involves councils signing a Memorandum of Understanding, Funding Agreement, and Delivery Plan documents. Wairoa District Council, Napier City Council, Hastings District Council and Central Hawke's Bay Council have agreed to participate in this initial stage of the reform process and will receive a share of the initial \$50 million Hawke's Bay funding package.

Any further tranches of funding will be at the discretion of the Government and may depend on progress against reform objectives.

- 7.2 An indicative timetable for the full reform programme is provided below. While this is subject to change as the reforms progress, and subject to future Government budget decisions, it provides an overview of the longer-term reform pathway.





Further Information

N/A

References (to or from other Committees)

N/A

Signatories

 	
Author Steven May	Approved by Steven May



Furthermore, the asset owning option's ability to regionalise capital and operational costs means that it is the only model that minimises the risk associated with unplanned future capital costs or the risk that the costs of meeting new standards and regulations are higher than anticipated.

For almost all residents it creates the lowest cost service for Central Hawke's Bay, Hastings and Wairoa. While we recognise that it is not the lowest cost option for Napier residents, the difference is within the range of the sensitivity analysis that has been undertaken.

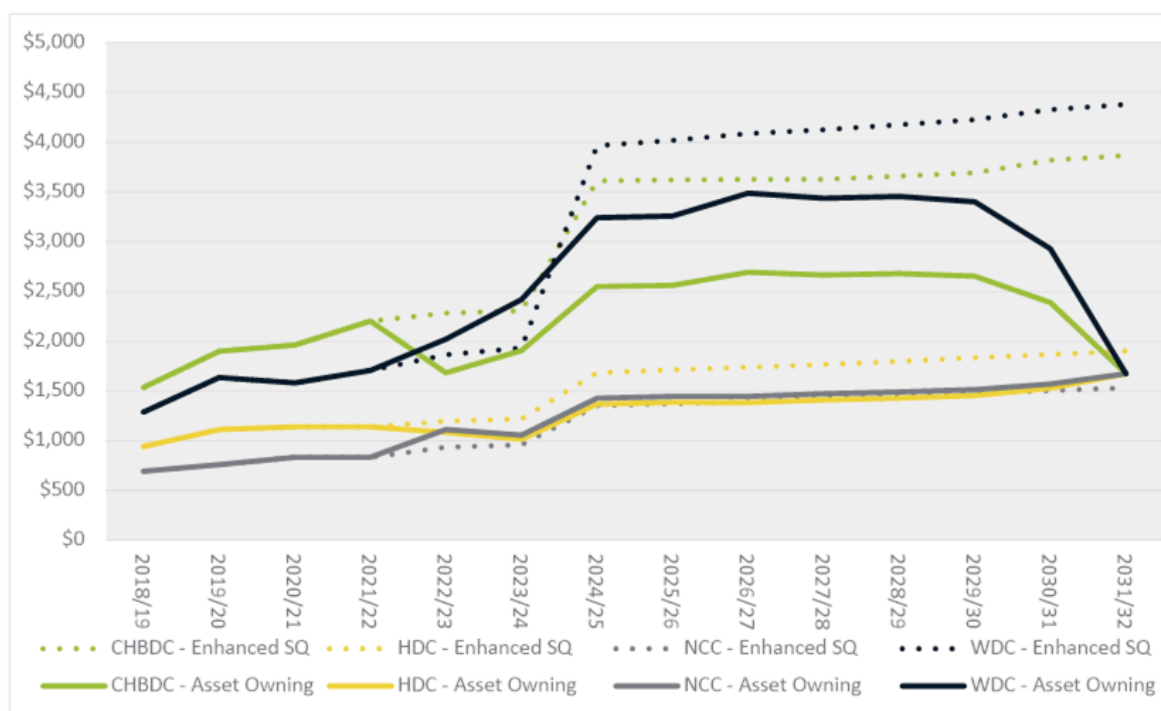
It is important to note that the management CCO option is still a better outcome than the status quo for almost all councils. Central Hawke's Bay, Hastings and Wairoa ratepayers are all better off compared to the status quo under the management CCO option when the average rate in 2032 is considered. However, again while we recognise that it is not the best financial option for Napier residents the difference is within the range of our sensitivity testing.

Equitable regionalisation

To address the perceived inequity that may arise from adopting an asset owning CCO model and regional pricing we have proposed an equitable regionalisation approach. This provides that for a period of time after the establishment of the asset owning CCO, charges would not be regionalised to a standard charge.

There are different options for how this could work which are presented in the financial case. **Figure 46** below demonstrates the approach we believe is the best compromise. Under our proposed approach the asset owning CCO becomes more affordable for ratepayers in Central Hawke's Bay, Hastings, and Wairoa after three years. While Napier ratepayers are not projected to achieve savings under the asset owning model, the difference is within the range that was explored in our sensitivity testing.

Figure 46 Comparison of rates impact under asset owning and enhanced status quo models



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Hawke's Bay Three Waters

Business Case of Three Waters Service Delivery Options

July 2020

**Document status**

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Executive Summary

Purpose of this review

The New Zealand Government is reforming how drinking water, wastewater and stormwater (three waters) services are delivered across New Zealand. The reforms began in response to the issues identified following the Havelock North drinking water contamination in 2016.

Late last year the Taumata Arowai Water Services Regulator Bill, was introduced into Parliament. This legislation creates a new regulatory authority to oversee, administer and enforce a revised three waters regulatory system. The Government has now also introduced the Water Services Bill, which will set out the proposed legislation to reform the regulation of New Zealand's three waters networks. In July 2020, as this report was being finalised, government revitalised the three waters reform programme. It announced a partnership with local government, a timetable, preferred delivery model and funding.

These reforms will have significant implications and challenges for three waters service delivery. Councils across the country will need to adapt to meet the new requirements.



The Government has stated *"for many smaller councils, there is no clear way forward given the scale of the challenges"*.

The five councils of Hawke's Bay commissioned this report to see whether there are benefits in developing a region-wide solution, to help address current and future challenges for the delivery of drinking water, wastewater and stormwater services and to prepare for likely new central government regulations. It was commissioned in 2018, well ahead of the July 2020 announcement.

The review aligns with all five councils' shared strategic priority for 2019 to 2022 – water safety, security and planning – agreed by the Hawke's Bay Leaders Forum in November 2019. The Hawke's Bay councils all share responsibility for ensuring their communities enjoy safe, reliable, resilient and efficient drinking, waste and stormwater services. They also share the challenges of achieving community affordability at the same time as meeting growing demand, developing resilience and improving the performance of three waters services.

This report provides independent analysis and makes recommendations on

- the effectiveness of existing drinking, wastewater and stormwater services
- alternative service delivery options.

It is important to note that the review is not about freshwater reforms, privatising assets or services, water storage or issues such as chlorination. Flood protection and control assets owned and managed by Hawke's Bay Regional Council were also considered outside of the scope for this review.

What does the review set out to achieve?

Three waters services in Hawke's Bay are currently delivered by the four councils that own the assets: Central Hawke's Bay District Council (**Central Hawke's Bay**), Hastings District Council (**Hastings**), Napier City Council (**Napier**) and Wairoa District Council (**Wairoa**). The review concentrates on these four councils even though it was commissioned by all five councils¹. It examines options for a new organisation model to deliver the services and addresses the skills and expertise needed, operational considerations, challenges and benefits.

¹ While not involved in the three waters service delivery the Hawke's Bay Regional Council is a stakeholder as it has a regional role including a regulatory one for three waters.



Guiding the review were

- the six investment objectives developed and agreed through a series of workshops with council leaders, employees and Māori committee representatives
- principles developed through engagement with the Māori committees
- a current state assessment
- consideration of the future requirements of three waters services.

Figure 1 Investment objectives

To provide three water services in a way that is affordable and effective		The three waters service's model must address the challenge of providing for an effective, affordable service in a fiscally responsible way
To provide services that are safe, reliable and resilient		Access to safe and reliable three waters service are fundamental to all the urban and rural communities of Hawke's Bay
To provide services through a model that enables a meaningful role for Māori		The Local Government Act requires a local authority to provide opportunities for Māori to contribute to its decision making processes
To provide services through a model that has the value of water at the centre		Water is vital to community life and as such three water services are part of a holistic water system
To provide three waters services in a way that supports our urban and rural communities		The services influence how people across Hawke's Bay live, work, gather, socialise, recreate and value environmental amenity
To provide three waters services that build enduring capability and capacity		The three waters model must be capable of, and have the capacity to, deliver quality sustainable planning, management and operation of three water services now and into the future

Figure 2 Principles

Value Te Ao Māori	Incorporating and implementing mātauranga Māori, culture and values (i.e. Te Araanga Design Principles) are a core element for any potential framework to realise and enhance the region's commitment to Māori to protecting/enhancing water
Value water	Wai is the essence of all life and the world's most precious resource. It is of high importance to Māori, as it is the life giver of all things, a precious taonga, part of our whakapapa
Whakapapa – genealogical links	Recognise and respect the relationship and whakapapa (genealogical link) that mana whenua has with water.
Te mauri o te wai – the life force of water	Mauri is the integrated and holistic well-being and life support capacity of water. The well-being/healthiness of the water, the land and the people are intrinsically connected.
Holistic approach to water	Although the project is based around the review of the service and delivery of the three waters (infrastructure), the proposed model needs to take into account a holistic water approach: there is only one water.
Enabling of Te Tiriti o Waitangi	Involving mana whenua in governance and decision making required to ensure Te tiriti o Waitangi obligations are met, as well as making sure they are able to actively exercise kaitiakitanga in a practical way
Mana motuhake - identity, self-determination	The identity of mana whenua in Hawke's Bay should not be lost in any potential model. But inclusion and co-governance whilst keeping their identity is an opportunity



The primary focus of this review was to complete an assessment of the current state of council drinking water, wastewater and stormwater (**three waters**) services in the Hawke's Bay and develop a recommended approach to ensure the sustainable delivery of these critical services over the long term. The review followed a structured, staged process moving from current state assessment, definition of key principles, into analysis of a long and short list of options and their impacts on the Councils.

Detailed information and thorough analysis are provided in this report to provide the councils with the information they need to evaluate all the options. The approach and then analysis are consistent with the Better Business Case approach and the requirements of Section 17A of the Local Government Act 2002.

The case for change

- The status quo is not an option for the future of three waters service delivery in Hawke's Bay
- New regulations and standards are coming which will force change
- Future affordability challenges need to be addressed
- Strategically, there are good reasons for Hawke's Bay's councils to work together
 - for customers and ratepayers, staff and councils
 - to achieve the best solution for Hawke's Bay

The New Zealand Government is currently reviewing how three waters services are delivered across New Zealand. In a Cabinet paper released on 20 November 2018, the Government indicated that alongside regulatory changes there may be major structural reform of the water sector. It described a system facing significant issues where

“the scale of the challenge indicates that the status quo is not sustainable in the long term”.

Among the key issues identified were weak regulation, capability challenges (particularly for smaller councils) and funding and financing issues for upgrading infrastructure. The Government set out the following key objectives for the reform:

- Retaining and protecting public ownership of three waters assets
- Significantly improving the safety and quality of drinking water services, and the environmental performance of wastewater and stormwater systems
- Ensuring that all New Zealanders have equitable access to affordable three waters services
- Improving the coordination of resources and unlocking strategic opportunities to consider New Zealand's infrastructure needs at a larger scale
- Increasing the resilience of three waters service provision to both short and long-term risks and events, particularly climate change and natural hazards
- Moving the supply of three waters services to a more financially sustainable footing, and addressing the affordability and capability challenges faced by small suppliers and councils
- Improving transparency about, and accountability for, the delivery and costs of three waters services, including the ability to benchmark the performance of service providers.
- Being consistent with the objectives and operating principles of Taumata Arowai, the water services regulator
- Supporting an integrated approach to the development and management of land and water



- Providing a customer voice
- Accepting that change will have an impact on local government but limiting that impact as much as possible

Shared challenges and opportunities

In July 2020, the Government announced a revitalised three waters reform programme. That announcement provided a direction that did not exist during the preparation of this report. While at this stage the intent of the reform is clear the shape of the reform is still uncertain. It has not therefore influenced the outcomes and conclusions of this report.

The Councils face the same or substantially the same issues and need to address these challenges in an affordable, coordinated way that eliminates duplication and ensures that all councils and their communities have access to the appropriate strategic capacity and capability to do so.

The case for change centres around four key themes that are based on shared challenges and opportunities:



Maintaining and improving the condition and performance of infrastructure

All four councils, in their 30-year infrastructure strategies, highlighted similar challenges around

- managing *growth and demand* for extensions to existing supplies or supply challenges
- *asset condition and performance* driving renewal of aging infrastructure
- developing *resilience* to respond to floods, slips, infiltration and coastal inundation
- meeting increasing standards for *risk and compliance* in the provision of three waters services.

Napier City Council and Hastings District Council are roughly equivalent with approximately \$100 million operating revenue and over 400 employees. Central Hawke's Bay District Council and Wairoa District Council have revenue of \$27 million and \$21 million respectively and less than 62 employees.²

These statistics matter in the context of delivering three waters service because the small, rural councils need multiple small schemes to serve their communities, yet they have less employees who have to cover a broad range of duties and act as generalists, not specialists. In addition, the population and rating base in the smaller councils limits the funding available for capital works.

\$313M of three waters investment in three waters infrastructure originally forecast in 2018 – 2028 LTP

1

\$605M of investment in three waters infrastructure now estimated as required during 2018-2028 LTP period

The Councils originally forecast a combined capital program for three waters over the 2018 - 2028 Long Term Plans (LTPs) of \$313 million. That has now been revised to a combined \$388 million.

There are also impending requirements for investment in three waters that all New Zealand Councils will face to meet changes in regulatory standards that the Councils have not allowed for. These changes require safer drinking water and upgrades to wastewater treatment plants that discharge to the freshwater and marine environments. We have estimated those additional costs using information made available by the Department of Internal Affairs (DIA) and the experience of the Councils themselves. The total estimated investment required is estimated by Morrison Low to be **\$605** million (during the LTP period) which is almost twice the amount that the councils allowed for in their LTPs.

² www.localcouncils.govt.nz – Key financial statistics (2018)



There may also be further costs associated with investment in stormwater in the future. However, at this stage we do not know what these standards may be, or the investment required so the costs have not been allowed for.

The current forecast capital program plus the additional investment required to meet new regulatory standards is the **'enhanced status quo'** position. This position has been used throughout the review as the basis against which to assess different options as these changes and their costs will need to be met regardless.



Ensuring the right capability and capacity

There is a shortage of specialist resources for three waters across New Zealand and internationally. Hawke's Bay's councils are already finding it difficult to fill certain roles and attract the skills they need. Councils compete with each other for talent and the smaller councils require people who must be able to cover a broad range of duties aside from their specialist area.

As water reforms occur across New Zealand there is likely to be increased competition to attract and retain the specialist skills in water that are necessary to enhance delivery.



Ensure a meaningful role for Māori

Our kōrero with the Hawke's Bay Māori committees revealed their frustration with the current model for three waters services delivery.

The principles that were developed through engagement with the Māori committees demonstrate the significance that Māori place on water and their expectations.

Te wai, he taonga i tuku iho mai i ngā tīpuna – water is a taonga, a precious treasure passed down from our ancestors.

The chairs of the Māori committees were clear that a meaningful role for Māori starts with the opportunity for partnership, co-governance and co-design in a new model and how it operates. Their view was that the status quo is not a sustainable option.

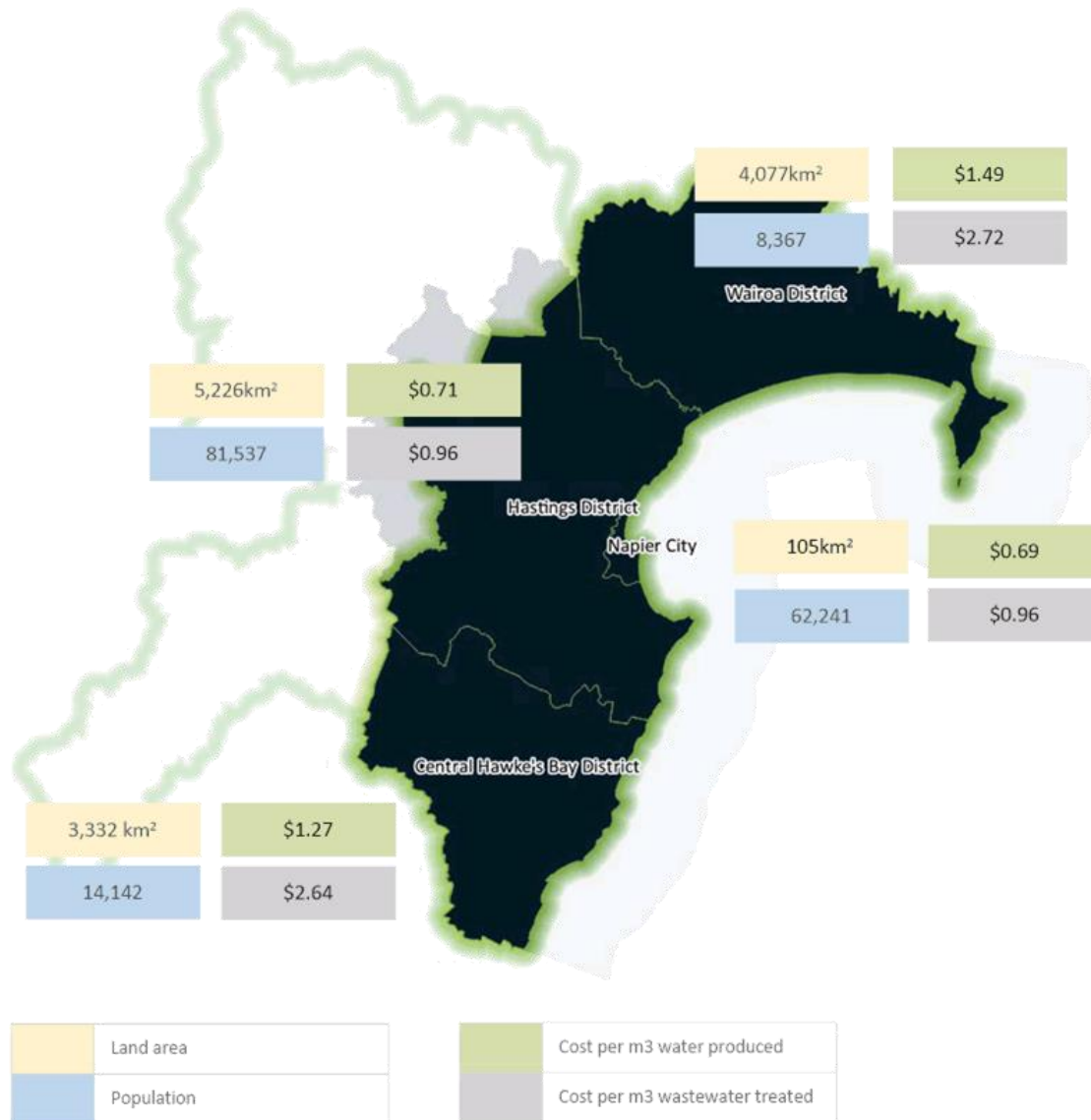
The review provides an opportunity for Hawke's Bay's councils to develop a partnership with Māori based on aligned values, from decision and design through to governance and implementation.



Community affordability

The four councils need to address three waters challenges and opportunities despite their differences. The most striking and obvious differences are the size of each organisation, the population they serve and their coverage of rural or urban areas.

For the Hawke's Bay region to thrive, it is critical that core infrastructure and basic services are provided to all residents in the region at an affordable cost. As shown in **Figure 3** below, there are already stark differences between the cost to produce water and to treat wastewater between Napier and Hastings as compared to rural Wairoa and Central Hawkes Bay.

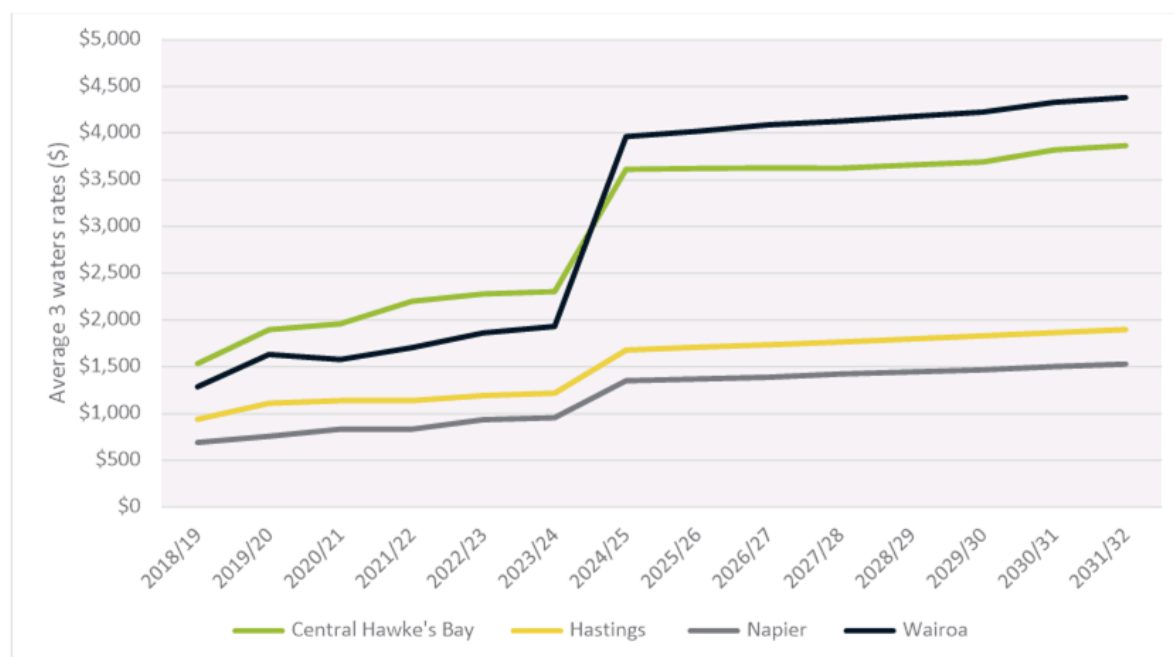
Figure 3 Comparison of size and population and current cost of water³

The enhanced status quo projection highlights that all the Councils face significant increases in three water rates over the next five years in order to meet new requirements. However, a combination of already high water rates, significant future investment requirements and a small rating base could see the average three water rate rise to over \$3,500 and \$4,000 per household in Central Hawke's Bay and Wairoa, respectively.

³ www.localcouncils.govt.nz and Morrison Low financial analysis



Figure 4 Enhanced status quo: estimated future costs



When the impact of the future investment required across the region is considered alongside the differences in the communities, the issues regarding affordability are magnified. The international affordability metrics for water and wastewater cited by Water New Zealand⁴ consider a range of spending between 2% to 5% of household income on water and wastewater as being unaffordable. **Table 1** below compares the current affordability challenge with the future projection. It demonstrates that at 2032 Wairoa exceeds, and Central Hawke's Bay is close to, the highest benchmark of 5%.

Table 1 Estimated two waters residential rate affordability metric: enhanced status quo (2032)

	2018/19	2031/32
Central Hawke's Bay	2.7%	4.4%
Hastings	1.1%	1.9%
Napier	1.0%	1.5%
Wairoa	2.1%	5.9%

This affordability measure considers average (median) household income at a council level. That means half of all households fall below this level of income so their proportion of household income being spent on water and wastewater would be much greater than the average. For fixed income households large future price rises would be expected to have a greater affect than for the average.

⁴ Water New Zealand 2017-18 National Performance Review report



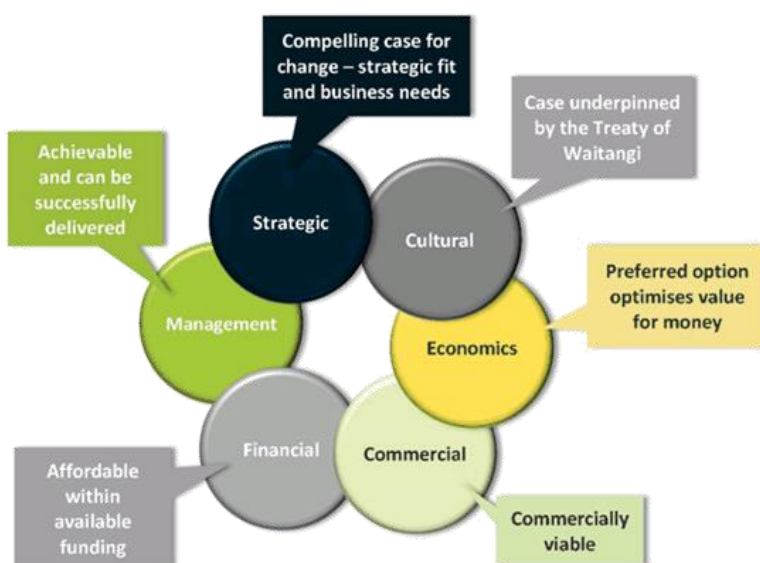
Our approach to the review

An overview of the methodology for the project is set out in **Figure 5**. It follows a structured, staged process moving from current state assessment, definition of key principles, into analysis of a long and short list of options over time. The approach and then analysis are consistent with the Better Business Case approach and the requirements of Section 17A of the Local Government Act 2002.

Figure 5 Summary of project methodology



Assessment using the better business case framework



The review was undertaken using a modified Better Business Case (BBC) framework.

This structured process ensures a wide range of factors are considered in reaching an overall recommendation. However, in this case the largely financially focused framework was supplemented by a sixth case, a cultural case, to ensure that principles developed through discussions with the Māori committees were incorporated into the assessment.

Some of the important issues considered were:

- Governance and accountability
- Impact on wider council services and functions
- Establishment costs
- Government funding
- Supporting legislation needed to implement changes
- Stranded costs
- Debt
- Shareholding



During the later stages of this review the Covid-19 pandemic swept through New Zealand and the world and the impact on the Councils and their communities was significant. Whilst the long-term impacts were not fully understood at the time of completing the review, we responded by:

- using the latest available projections (June 2020) for the Councils in financial forecasts
- creating an additional scenario where a substantial three waters investment programme is funded by the potential Government ‘shovel ready projects’ programme
- reconsidering aspects such as resilience, community affordability, capacity and capability in light of the known and expected long term economic and social impacts.

The options

Initially a long list of options was considered, and this was reduced to a short list through a high-level assessment. The shortlist represents the options most likely to meet the investment objectives with the enhanced status quo being the benchmark against which all options were considered. The five shortlisted options were then considered in detail.

Table 2 Shortlisted options

Option	Council Responsibility	Approach
Enhanced status quo	Each council retains three waters: <ul style="list-style-type: none"> – service delivery – asset ownership – resourcing (employees, consultants and contractors). 	The approach would see no change to service delivery arrangements but require significant additional resource and investment in infrastructure to meet changes to three waters regulations.
Shared services business unit (SSBU)	Each council retains three waters: <ul style="list-style-type: none"> – staff but second them to SSBU – asset ownership – relationship with public accountability for performance 	The SSBU would: <ul style="list-style-type: none"> – second staff from each council into a single group – have regional strategic oversight of asset management and infrastructure delivery and would plan and deliver all the capital and operational works for the region.
Management council controlled organisation (CCO)	Collectively the Councils would: <ul style="list-style-type: none"> – form a joint committee with other councils and Māori in a co-governance model – in co-governance role with Māori determine the objectives for the CCO – monitor the CCO performance – be accountable to ratepayers and residents for CCO performance – retain three waters asset ownership – approve strategies and plans. 	The management CCO would: <ul style="list-style-type: none"> – be accountable to councils and provide performance reports – employ its own staff and provide its own support services. – deal directly with the public for three waters matters. – have regional strategic responsibility for network management and asset management strategies and deliver all capital and operational works for the region – recover costs from each council based on the funding model chosen – be overseen by a board of directors and be accountable to the joint committee.



Option	Council Responsibility	Approach
Sub-national management CCO	<p>This option considers Hawke's Bay joining an existing CCO or creating a model that goes beyond Hawke's Bay.</p> <p>The intention is that by widening the area covered by the model, there might be savings and efficiencies of scale, however there is no guarantee that the main office would be based in Hawke's Bay.</p> <p>The model would operate the same as for the asset management CCO as set out above.</p>	
Asset owning (CCO)	<p>Collectively the Councils would:</p> <ul style="list-style-type: none"> – form a joint committee with other councils and Māori in a co-governance model – in co-governance role with Māori determine the objectives for the CCO – monitor the CCO performance – be accountable to ratepayers and residents for CCO performance 	<p>The asset owning CCO would:</p> <ul style="list-style-type: none"> – be accountable to councils and provide performance reports – own the three waters assets – be responsible for investment strategies and plans required for new infrastructure and meeting standards – consolidate operational and infrastructure costs to develop economies of scale – employ its own staff and provide its own support services. – deal directly with the public for three waters matters. – have regional strategic responsibility for network management and asset management strategies and deliver all capital and operational works for the region. – recover costs directly from each customer. – be overseen by a board of directors and be accountable to the joint committee.

Summary of the assessment of options against investment objectives and principles

The assessment of the options in the economic case discusses the extent to which each of the options meets the investment objectives and incorporates or responds to the principles developed through engagement with the Māori committees. A summary table of that assessment is set out below.



Enhanced status quo

Meets objective



- Retains the existing operational, technical and strategic roles in each council and community (through staff, consultants and contractors).
- Councils retain full control over all aspects of growth planning and infrastructure provision for their areas. Local matters can be prioritised to support growth and development.

Does not meet objective



- The anticipated future costs of upgrading infrastructure and meeting an enhanced regulatory requirement will have a significant impact on all the ratepayers of Hawke's Bay. The biggest impact, however, is on Central Hawke's Bay and Wairoa.
- Affordability challenge increase.



- Increased national regulatory standards assumed to have affect and lead to better environmental outcomes.
- Trade-offs between investment in three waters and other services and assets will continue to have to be made.



- No change, status quo does not meet expectations of Māori.



- Councils continue to compete with each other for resources, strategic capacity and capability not spread across the region.



- Does not enable participation in decision making, existing roles are largely advisory

Risks



- Small communities bear the risk of meeting future cost increases.



- Asset management and risk management opportunities to share and collaborate initiatives regionally will be based on individual asset managers rather than a system or structure.
- Capacity and capability will be unevenly spread across the region.



- Significant cost increases may affect the future growth of these areas.

Key to investment objectives and principles



To provide three water services in a way that is affordable and effective



To provide three waters services in a way that supports our urban and rural communities



To provide services through a model that enables a meaningful role for Māori



To provide services that are safe, reliable and resilient



To provide three waters services that build enduring capability and capacity



To provide services through a model that has the value of water at the centre



Principles developed through consultation with the Māori committees



Shared Services Business Unit

Meets objective



- Retains the existing operational, technical and strategic roles in each council and community (through staff, consultants and contractors).
- Councils retain full control over all aspects of growth planning and infrastructure provision for their areas. Local matters can be prioritised to support growth and development.

Does not meet objective



- Limited savings created.
- the anticipated future costs of upgrading infrastructure and meeting an enhanced regulatory requirement will still have a significant impact on all the ratepayers of Hawke's Bay. The biggest impact, however, is on Central Hawke's Bay and Wairoa.
- Affordability challenge just increase.



- No real change from the status quo. Increased national regulatory standards assumed to have affect and lead to better environmental outcomes.
- Trade-offs between investment in three waters and other services and assets will continue to have to be made.



- Aggregation of existing resources creates some improvements but minor as no additional resources developed.
- Shared services structure is less robust than other options, complex and has poor track record of delivering benefits.
- Lack of certainty in structure likely to limit the investment that would be required to achieve real benefits.



- No change.



- Does not enable participation in decision making, existing roles are largely advisory.

Risks



- Small communities bear the risk of meeting future cost increases.



- Improved resilience in key roles through co-location (virtually and physically) leads to some improvements in asset management and risk management processes and practices but this is minor, and risk remains.



- Significant cost increases may affect the future growth of these areas.

Key to investment objectives and principles



To provide three water services in a way that is affordable and effective



To provide three waters services in a way that supports our urban and rural communities



To provide services through a model that enables a meaningful role for Māori



To provide services that are safe, reliable and resilient



To provide three waters services that build enduring capability and capacity



To provide services through a model that has the value of water at the centre










Principles developed through consultation with the Māori committees



Management CCO

Meets objective	 <ul style="list-style-type: none"> Regional CCO able to create greater breadth and depth of resources to improve resilience. Risk management processes and practices driven by Board (and Statement of Intent).  <ul style="list-style-type: none"> Dedicated water CCO expected to lead to better ability to meet increasing standards and bring consistency of approach across the region. Communities able to choose individual service levels (within national standards). Trade-offs between investment in three waters and other services and assets will continue to have to be made.  <ul style="list-style-type: none"> Creation of dedicated water CCO provides increased opportunity for advancement and job enrichment. No competition between the Councils for resources. Strategic capacity able to be built within the CCO and then used for benefit of all four councils. Improved resilience through co-location, dedicated three waters focus and additional resourcing.  <ul style="list-style-type: none"> Provides opportunity for co-governance and in implementing that co-design.  <ul style="list-style-type: none"> Model provides opportunity for step change and development of new structure that enables participation in decision making by Māori.
Does not meet objective	 <ul style="list-style-type: none"> Delivers operational savings through aggregation but as each council area funds capital investment it has a limited impact on affordability. Individual councils make investment decisions which may limit effectiveness.
Risks	 <ul style="list-style-type: none"> Structure must ensure that resources are not all drawn into the cities and away from the small communities.  <ul style="list-style-type: none"> Mixed points of accountability between CCO and Councils. Trade-offs between investment in three waters and other services and assets will continue to have to be made.  <ul style="list-style-type: none"> Model requires significant focus on relationships between the CCO and Councils. Requires high degree of trust to be successful.  <ul style="list-style-type: none"> Development of co-governance and co-design process will place additional pressure on resources as Councils and Māori need to participate fully.

Key to investment objectives and principles

	To provide three water services in a way that is affordable and effective		To provide three waters services in a way that supports our urban and rural communities		To provide services through a model that enables a meaningful role for Māori
	To provide services that are safe, reliable and resilient		To provide three waters services that build enduring capability and capacity		To provide services through a model that has the value of water at the centre
	Principles developed through consultation with the Māori committees				



Sub-national management CCO

Meets objective	<ul style="list-style-type: none"> Large water CCO able to create even greater breadth and depth of resources to improve resilience. Risk management processes and practices driven by Board (and Statement of Intent). Dedicated water CCO expected to lead to better ability to meet increasing standards and bring consistency of approach across the region. Communities able to choose individual service levels (within national standards). Trade-offs between investment in three waters and other services and assets will continue to have to be made. Creation of dedicated water CCO provides increased opportunity for advancement and job enrichment. No competition between the Councils involved in the CCO for resources. Strategic capacity able to be built within the CCO and then used for benefit of all, including the four councils. Improved resilience through co-location, dedicated three waters focus and additional resourcing. Provides opportunity for co-governance and in implementing that co-design. Model provides opportunity for step change and development of new structure that enables participation in decision making by Māori
Does not meet objective	<ul style="list-style-type: none"> Delivers operational savings through aggregation but as each council area funds capital investment it has a limited impact on affordability.
Risks	<ul style="list-style-type: none"> Structure must ensure that resources are not all drawn into the cities and away from the small communities. Mixed points of accountability between CCO and Councils. Trade-offs between investment in three waters and other services and assets will continue to have to be made. Model requires significant focus on relationships between the CCO and Councils. Requires high degree of trust to be successful. Requires involvement and engagement with Councils and Māori outside of Hawke's Bay. Development of co-governance and co-design process will place additional pressure on resources as Councils and Māori need to participate fully.

Key to investment objectives and principles








	To provide three water services in a way that is affordable and effective		To provide three waters services in a way that supports our urban and rural communities		To provide services through a model that enables a meaningful role for Māori
	To provide services that are safe, reliable and resilient		To provide three waters services that build enduring capability and capacity		To provide services through a model that has the value of water at the centre
	Principles developed through consultation with the Māori committees				



Asset Owning CCO

Meets objective	 <ul style="list-style-type: none"> Delivers the greatest savings through scale and capacity as well as controlling the revenue stream and investment decisions. Regionalising costs has a major impact on affordability when considered at a regional level,  <ul style="list-style-type: none"> Regional CCO able to create greater breadth and depth of resources to improve resilience. Risk management processes and practices driven by Board (and Statement of Intent). Board in this model bear all statutory responsibilities for three waters.  <ul style="list-style-type: none"> Dedicated water CCO expected to lead to better ability to meet increasing standards and bring consistency of approach across the region. Communities able to choose individual service levels (within national standards).  <ul style="list-style-type: none"> Creation of dedicated water CCO provides increased opportunity for advancement and job enrichment. No competition between the Councils for resources. Strategic capacity able to be built within the CCO and then used for benefit of all four councils.  <ul style="list-style-type: none"> Provides opportunity for co-governance and in implementing that co-design.  <ul style="list-style-type: none"> Model provides opportunity for step change and development of new structure that enables participation in decision making by Māori.
Does not meet objective	
Risks	 <ul style="list-style-type: none"> Structure must ensure that resources are not all drawn into the cities and away from the small communities. CCO now has responsibility for three waters infrastructure planning and must balance delivering on local and regional growth priorities.  <ul style="list-style-type: none"> Development of co-governance and co-design process will place additional pressure on resources as Councils and Māori need to participate fully. Requires legislative changes to be fully effective.

Key to investment objectives and principles

	To provide three water services in a way that is affordable and effective		To provide three waters services in a way that supports our urban and rural communities		To provide services through a model that enables a meaningful role for Māori
	To provide services that are safe, reliable and resilient		To provide three waters services that build enduring capability and capacity		To provide services through a model that has the value of water at the centre
	Principles developed through consultation with the Māori committees				



Recommended option: Regional asset owning CCO

Although both CCO options have benefits, the detailed analysis in this report demonstrates that a regional asset owning CCO is a more effective service delivery model than the management CCO and best meets the review's investment objectives and principles.

- It is the option that best addresses the issue of affordability. It is also the option that best addresses the very real risk that the scale of investment required to meet new standards and community expectations is greater than forecast.
- A dedicated regional water CCO is able to concentrate on three water challenges and prioritise investment decisions across the region, leading to better environmental and community outcomes than the Councils can individually achieve.
- It would have sufficient scale to create strategic capacity and capability across the region and support the areas where that is currently lacking. Scale, strategic capacity and capability gives a level of expertise and resilience in three waters that can be applied regionally, benefitting all ratepayers of the region rather than only some as is the case now.
- The model best provides the opportunity to provide a meaningful role for Māori, including co-design and co-governance.
- A regional water CCO is able to provide improved asset management, improved management of risk, and be better placed to meet any increased compliance requirements or increased environmental standards than the Councils can individually.
- In addition to being the only model that effectively addresses affordability issues across the region, the asset owning model also maximises available operational savings for the region, ensuring that services are not only affordable, but delivered in a cost effective way.
- There will be a need to ensure that the Statement of Intent and Shareholders Agreement of the regional CCO retain an appropriate balance between the individual priorities of each council with regional priorities including planning and supporting growth.

A regional asset owning CCO would be owned collectively by Central Hawke's Bay, Hastings, Napier and Wairoa and taking into account the findings of the cultural case should be implemented using a co-governance model in partnership with Māori.

Partnering with Māori to co-design and co-govern responds directly to the principles developed in this project and the investment objective to have a model that enables a meaningful role for Māori. It builds on existing models of co-governance but does so in a way that would be designed specifically for Hawke's Bay three waters service delivery.

- A regional asset owning CCO would operate as a separate legal entity external to all four councils, with its own governance, executive, administration support, procurement strategies and operational equipment. Importantly it would also own the networks and treatment plants and deal directly with customers.
- A board of professional directors would be appointed by the shareholding Councils and Māori. The directors will have the associated duties, obligations and liabilities of company directors rather than of councillors.
- Scrutiny of the CCO would be provided by a joint committee of the combined councils and Māori. The joint committee would, amongst other responsibilities, appoint and remove the directors and provide Māori with a co-governance role.



- The CCO would co-locate staff virtually and/or physically, housing all management, administration, asset management, planning and project management staff, and the coordination of the maintenance crews and contractors. Wairoa and Central Hawke's Bay would operate as satellite offices. There would be an estimated 143 staff (including Napier City Services staff) in the CCO. This includes more than 16 additional roles than are currently directly involved in delivering and supporting the three waters across the four councils.

Over the ten year modelling period the asset owning model:

- saves \$117.4M in operating costs
- reduces capital expenditure by \$31.1M

By 2032 the asset owning CCO creates \$18M of operational savings per annum

As highlighted in **Table 3** below, by 2032 the asset owning model has \$28.3 million less debt and \$16.7 million lower annual operating costs (totalling a \$117.4 million saving in our modelling period).

In addition, it has saved \$31.1 million in capital expenditure when compared to the enhanced status quo.

Table 3 Comparison of financial performance of service delivery models

	Debt (2032) \$m	Cumulative capital spend (2032) \$m	Annual operating cost (2032) \$m
Enhanced status quo	\$316.7	\$758.5	\$131.5
Shared service business unit	\$307.5	\$749.6	\$121.7
Management CCO	\$303.1	\$745.6	\$121.9
Asset owning CCO	\$288.4	\$727.4	\$114.8

These savings translate into lower ratepayer charges and an increased ability to respond to costs arising from further regulation, new standards or unforeseen investment requirements.

One of the challenges in adopting an asset owning CCO model that is regularly encountered in business cases and through the consultation process, is the perceived inequity that arises when councils are transferring different levels of debt or assets of varying conditions. Where this happens ratepayers may feel that they are inheriting someone else's problem.

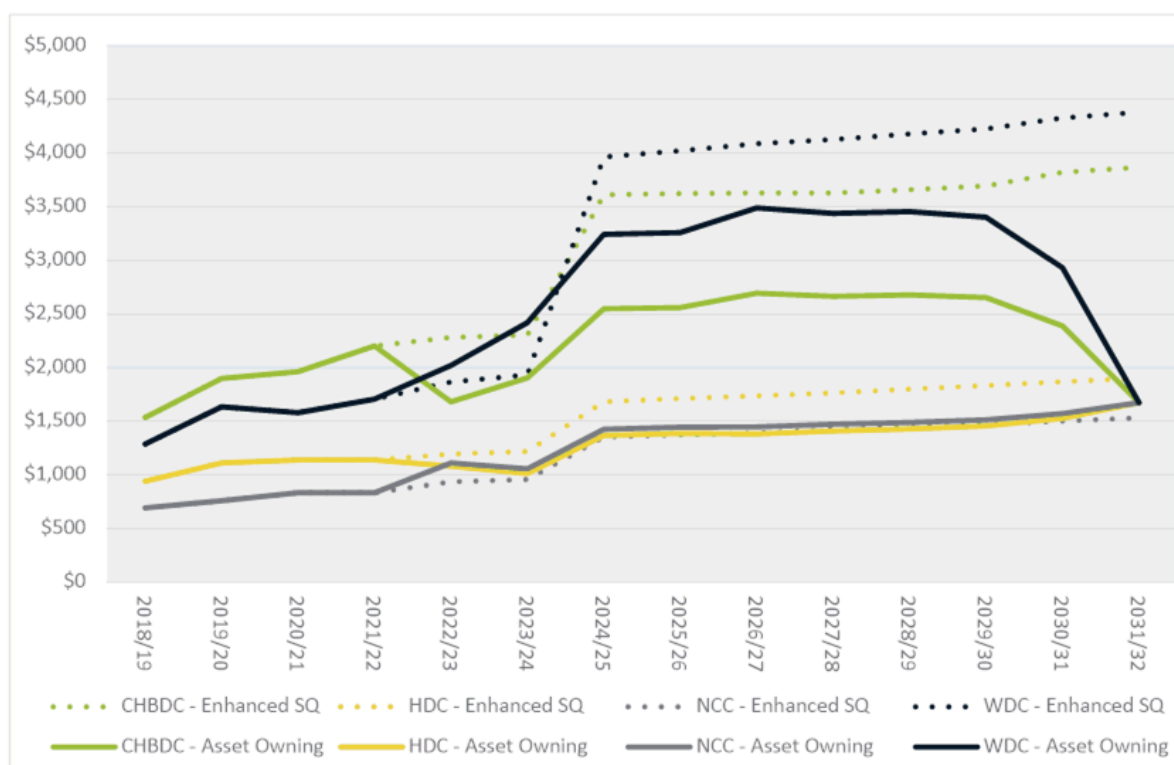
To address this issue, we have proposed an equitable regionalisation approach where three waters charges are gradually regionalised for a period of time after the establishment of the asset owning CCO. Over that period, residents in each former council area would have charges that include a contribution based on the proportion of 'liability'⁵ each council contributes to the CCO. In our view this creates a more equitable path toward a standard regional charge. There are options for how this could work, and we have presented in **Figure 6** an approach which, in our view, is the best compromise.

The charges are compared to the projected three waters average residential rate for the enhanced status quo.

⁵ A combination of debt, future required compliance upgrades, and costs to bring assets up to the regional average condition



Figure 6 Comparison of rates impact under asset owning and enhanced status quo models



Within three years of its formation, the asset owning CCO becomes more affordable for ratepayers in Central Hawke's Bay, Hastings and Wairoa. While Napier ratepayers are not projected to have a reduced cost of three waters under the asset owning model, the difference when costs are equalised is within the range that was explored in our sensitivity testing. We explored other options for regulating costs varying both time and value, which are set out in this report.

For ratepayers in Central Hawke's Bay, Hastings and Wairoa the savings afforded by an asset owning CCO exceeds the value of stranded costs left in the respective councils. This means that the total cost of local government services is likely to be lower for ratepayers in those regions under an asset owning CCO.

The path to change

Implementation of change does not come without risks and challenges. However, the CCO model is not new in New Zealand, and water authorities are common in Australasia and internationally.

Making a change in the model for service delivery of the three waters would be significant for the Councils, their staff and their communities, and the management case set out an outline of the next steps required.

REVIEW PROCESS

Report delivered September 2020

Councils decide whether to proceed to community consultation

Independent review of the effectiveness of existing services and to identify and assess alternative service delivery options.
Full report to councils providing an independent recommendation for a preferred option.

➤ **Second half of 2021**
Community consultation

Region-wide community consultation

➤ **First half of 2022**
Final decision

Councils decide whether to proceed to implement a new three waters service delivery model for Hawke's Bay



In summary, there are two stages if the Councils choose to proceed:

- Stage 1: The key aspects of stage 1 are
 - Decision by the Councils to proceed to consultation
 - Community consultation in accordance with the Local Government Act on the options
 - Decision by Councils on whether to form a CCO
- Stage 2: The second stage, a transition process, would only occur if a decision to form a regional three waters CCO was made. That process will be determined as part of Stage 1 but is likely to take 6 – 12 months from the date of any decision by the Councils. Again, there are legislative requirements which will dictate the process and programme including councils' obligations to its employees.

Together stages 1 and 2 will form the body of a change program which has been estimated to take two to three years from now (allowing for almost a year for the LTP process to be completed) and cost in the order of \$2 - \$2.4 million to reach the point of making a decision to form a CCO, and then \$5.9 million for its actual formation.

Cost estimates for change
Stage 1: \$2 – \$2.4M
Stage 2: \$5.9M

These are substantial costs for any group of councils, and while ultimately the communities of Hawke's Bay will benefit, the Councils quite rightly have expectations of government support in order to make the change. At this stage, no allowance for government support is included within the modelling.

Risks

Key risks include the need for all councils to agree to the change and the high degree of community interest that will arise with the proposed change.

- Without the critical mass of all four councils there is a danger that the benefits of change will be substantially reduced or lost. That is particularly the case if Napier or Hastings were not involved.
- Equally, if there is not a regional response then it is less likely to gain the same or any degree of support from the Government.
- Water and the formation of CCOs are both politically sensitive issues for councils and the community. Combining them together will create a very high level of interest and there is likely to be significant engagement on the issues. There is a risk that other issues are brought into the conversation that detract from the key underlying issues highlighted in this report.
- The development of a co-governance model will require Councils and Māori to participate in what may be a resource intensive process.
- Uncertainty created by the potential change can and will affect existing staff. Attraction, recruitment and retention of key staff is a particular concern for the councils.

Conclusion

A change in the service delivery model to an asset owning CCO is anticipated as being able to provide improved asset management, improved management of risk and be better placed to meet any increased compliance requirements than the Councils individually can. It is expected to have sufficient scale to create strategic capacity across the region and support the areas where that is currently lacking. It provides an opportunity for a uniquely Hawke's Bay co-governance approach with Māori that delivers on the expectations expressed by the Māori committees during this review. The cultural case describes their views on how Māori can contribute in a meaningful way to this process in partnership with the councils. This recommendation holds if, through the government reform programme, a regional water entity evolves that is similar (shared ownership, asset owning, co-governance) but is created under new legislation.



A dedicated regional water CCO that has no other competing priorities is expected to support and prioritise investment decisions across the region leading to better environmental and community outcomes regionally than the Councils individually can.

Where to find important information

Section of the report	What it contains
Introduction (page 21)	Context for the review Methodology
Strategic Case (page 30) <i>The strategic case sets out a case for change, problem definition, investment objectives and critical success factors and in this case, to provide a cultural lens, the seven principles developed through engagement with the Māori committees.</i>	Investment objectives Current state assessment Expected changes from three waters reform Development of enhanced status quo
Cultural Case (page 53) <i>The role of this cultural case is to highlight that within the regulatory framework relating to water, Te Ao Māori, the Māori world view, through its language, genealogy, stories and traditions, requires a greater level of competency than usual.</i>	Engagement with Māori Principles
Economic Case (page 59) <i>The economic case sets out the options for change and analyses them against the investment objectives, critical success factors and in this case, to provide a cultural lens, the seven principles developed through engagement with the Māori committees.</i>	Description of options Assessment of the options using <ul style="list-style-type: none"> investment objectives principles
Commercial Case (page 88) <i>The commercial case sets out the transactions that would be required to implement any change and the impact of changes on the commercial arrangements for service delivery.</i>	Draft governance and functional structures Demonstration of how councils hold the CCO to account Examples of some co-governance models Organisational design principles for options reflecting the investment objectives and principles Impacts on each Council if regional three waters CCO is created Shareholding
Financial Case (page 123) <i>The financial case sets out the financial impact of any change and the high-level funding arrangements of the options.</i>	Costs and benefits of different options Costs for establishing each option Debt Equitable regionalisation Impacts on ratepayers Sensitivity analysis Stranded costs Financial impact on Councils
Management Case (page 150) <i>The management case sets out overall transition management and project governance arrangements for any change, high-level timing and future decision-making requirements.</i>	Next steps in process of change Cost estimates for process of change Risks of change

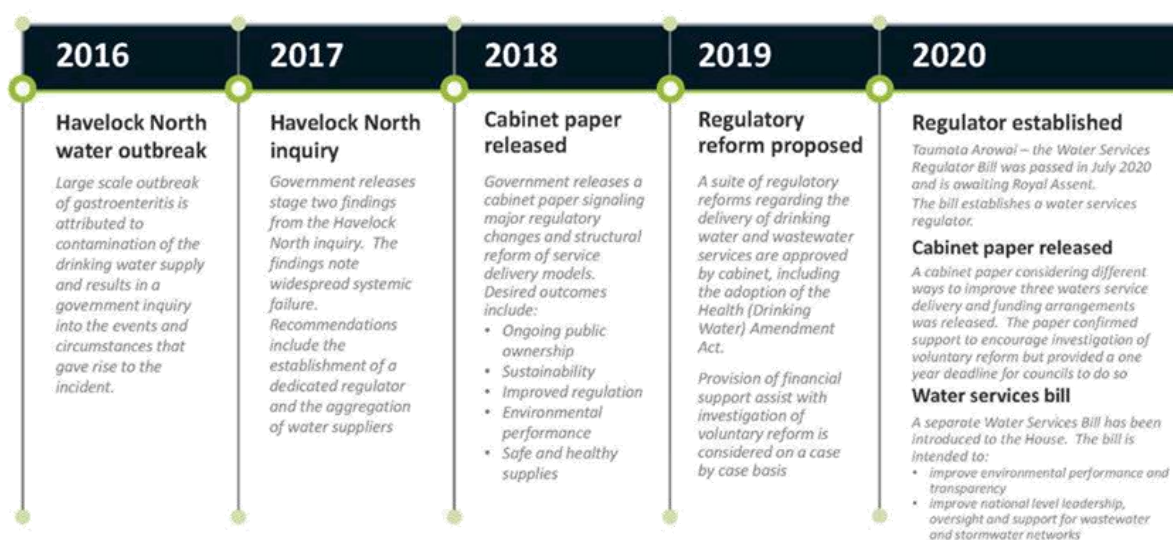


Introduction

National context - a timeline of reform

Following the Havelock North water contamination event of 2016, the New Zealand Government has embarked on a major programme of reform of the delivery and regulation of three waters services in New Zealand.

The major events and announcements that have taken place as part of that programme of reform are outlined in the timeline below.



The programme has, to date, resulted in:

- creation of Taumata Arowai – the Water Services regulator
- announcement of \$761M in funding to councils who agree to investigate opportunities for collaborative approaches to water service delivery with further tranches of funding potentially available
- amendments to the Health Act 1956 to remove the defence of “all practicable steps” and to mandate compliance with the standards, among other changes to improve compliance
- announcement of three year, three waters reform programme supported by a central / local government steering committee.

The Government clearly remains committed to reform of the water service delivery sector (whether voluntary or otherwise) and has also been unwavering in its key objectives in any such reform. Broadly, the Government has made it clear that any reform of water service delivery should seek to achieve the following key objectives:

- Retaining and protecting public ownership of three waters assets
- Significantly improving the safety and quality of drinking water services, and the environmental performance of wastewater and stormwater systems
- Ensuring that all New Zealanders have equitable access to affordable three waters services
- Improving the coordination of resources and unlocking strategic opportunities to consider New Zealand’s infrastructure needs at a larger scale



- Increasing the resilience of three waters service provision to both short and long-term risks and events, particularly climate change and natural hazards
- Moving the supply of three waters services to a more financially sustainable footing, and addressing the affordability and capability challenges faced by small suppliers and councils
- Improving transparency about, and accountability for, the delivery and costs of three waters services, including the ability to benchmark the performance of service providers.
- Being consistent with the objectives and operating principles of Taumata Arowai, the water services regulator
- Supporting an integrated approach to the development and management of land and water
- Providing a customer voice
- Accepting that change will have an impact on local government but limiting that impact as much as possible.

This review incorporated the aspects of the reforms known at the time of completion. It also recognises the growing expectation within the sector that the anticipated reforms will be made. As a result, the status quo option considered in this report includes estimates of future additional costs arising from changes to meet enhanced regulatory standards (known as enhanced status quo).

Taumata Arowai – the Water Services Regulator Bill

Taumata Arowai – the Water Services Regulator Bill was introduced to Parliament in December 2019. It has completed legislative passage and awaits Royal Assent.

There is a growing acknowledgement, both within Hawke's Bay and New Zealand of the importance of tikanga Māori and the need to create a meaningful role for Māori in decisions relating to the management of water. This is reflected in recent legislation to establish Taumata Arowai, and in recent changes to the Local Government Act 2002. Taumata Arowai – the Water Services Regulator Bill includes provisions to ensure the establishment of a governance group and Māori Advisory Board.

The intent of Taumata Arowai – the Water Services Regulator Bill is to ensure that Māori interests and knowledge are embedded throughout the work of the water regulator. For example, the operating principles of Taumata Arowai include building and maintaining credibility and integrity, so that Taumata Arowai is trusted by Māori (amongst others) and partnering and engaging early and meaningfully with Māori.

One of the duties of the governance board is to ensure that Taumata Arowai maintains the systems and processes that enable it to act consistently with the principles of the Treaty of Waitangi, and to engage with Māori and understand perspectives of Māori. The board must include members that collectively have knowledge, experience and capability in the Treaty of Waitangi and its principles and the perspectives of Māori and tikanga Māori.

The role of the Māori Advisory Group is to advise the board on Māori interests and knowledge as they relate to the objectives, functions and operating principles of Taumata Arowai and the collective duties of the board. This includes

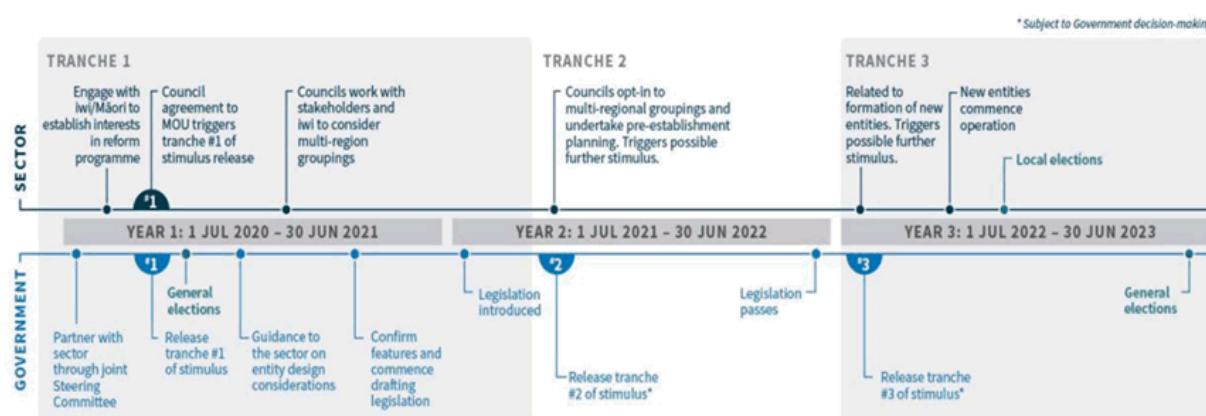
- developing and maintaining a framework that provides advice and guidance for Taumata Arowai on how to interpret and give effect to Te Mana o te Wai. Te Mana o te Wai can be broadly translated as the quality and vitality of water; and
- providing advice on how to enable mātauranga Māori, tikanga Māori, and kaitiakitanga to be exercised.



July 2020 Government Reform

In July 2020, the Government announced a revitalised three waters reform programme.

- The reform programme is to examine, at a minimum,
 - waters service delivery entities that are of a significant scale, are asset owning, structured as statutory entities and publicly owned
 - delivery of drinking water and wastewater services as a priority – stormwater where effective and efficient, and
 - must have mechanisms for enabling iwi/Māori communities to provide input.
- The potential size of entities will need to be considered against three principles:
 - Potential to scale benefits to consumers at a multi-regional level to ensure full benefits of scale.
 - Alignment of geographical boundaries to encompass natural communities of interest.
 - Relationship with relevant regulatory boundaries particularly to enable water to be managed from source to the sea.



The announcement provided a direction that did not exist during the preparation of this report. While at this stage the intent of the reform is clear the exact shape and timing of the reform is still uncertain. The analysis and conclusions of this report remain relevant to the intent of the reform.

Local Government Act 2002

A council-controlled organisation (CCO) is a model of regional service provision that has been effectively used by local government in New Zealand. Establishing regional or multi-regional water service CCOs is therefore a viable solution to the voluntary water reforms required by government and a formal requirement for Section 17A reviews. Government is also intent on ensuring that Māori interests and perspectives are embedded through the reforms associated with three waters.

To this end, Government has enacted several changes to the provisions relating to CCOs in the Local Government Act 2002.

The Local Government Act 2002 Amendment Act 2019 (2019 No 54), requires that:

- local authorities consider whether knowledge of tikanga Māori may be relevant for directors of the CCO (section 57(3))
- before a CCO makes a decision that may significantly affect land or a body of water, it must take into account the relationship of Māori and their culture and traditions with their ancestral water, amongst other things (section 60A).



While less directly relevant, the amendment to section 17 relating to the transfer of responsibilities (insertion of (3A)) may also have some bearing

- The terms and conditions agreed under subsection (3) must ensure effective provision for any affected co-governance or co-management arrangements that are established by legislation (including Treaty of Waitangi claim settlement legislation) and that are between local authorities and iwi or Māori organisations.

Ownership of water

The report needs to acknowledge that there are currently unresolved issues of native title in freshwater and Māori ownership over freshwater.⁶ The scope of the review is confined to the three waters services and does not therefore consider freshwater nor the ownership of freshwater itself. Having said that, the recent focus on Auckland's drinking water supply issues and Watercare's desire to take water from the Waikato River is a good example of how closely connected they are.

The purpose of this report is to compare service delivery models for the provision of drinking water, wastewater and stormwater. The impact of any resolution of freshwater ownership issues is therefore considered to be the same as resolution will be at the national level. Any organisation across New Zealand that provides three waters services will be equally impacted regardless of their structure. We do note that different options considered in this report do provide different opportunities to recognise and give effect to Treaty of Waitangi obligations and these are highlighted, but that is distinct from recognising rights in and over freshwater.

Regional context

The five councils within the Hawke's Bay Region including Central Hawke's Bay District Council, Hastings District Council, Hawke's Bay Regional Council, Napier City Council and Wairoa District Council ("the Councils") have collectively commenced this review of the three waters service delivery.

The primary objective of this review is to complete an assessment and recommendations of the current and potential delivery models for three waters in the Hawke's Bay region. It is focussed on the three waters service provided by the Councils, but in doing so needs to acknowledge the broader issues and emerging community concerns relating to water and the management of water within Hawke's Bay and more generally across the country. The review is concerned with the three waters services – drinking water, wastewater and stormwater. Issues relating to the wider management of rivers, lakes and harbours, for example, are not part of this study except to the extent that the three waters services impact on rivers, lakes and harbours.

Excluded from the scope of this study are the drainage and flood protection assets and services provided by the Regional Council. While they form part of the overall management of stormwater in the region, at this stage, they are outside the scope of the study.

This study is intended to provide the Councils with information to engage effectively with central government on the water sector reforms whatever shape those reforms take.

⁶ <https://www.stuff.co.nz/national/115362888/waitangi-tribunal-slams-crown-over-freshwater-failures-calls-for-mori-rights-to-be-recognised?rm=a>



Covid-19

During the later stages of this review the Covid-19 pandemic swept through New Zealand and the world. The impact on the review itself was relatively minor as work was able to continue regardless. However, the impact on the Councils and their communities was significant.

The Councils and the Government have played a key role in supporting communities and the economy and now in supporting and driving forward recovery. Nationally and regionally, there is pressure to both reduce the rates burden on communities and to invest to create jobs. This creates a difficult balancing act for the Councils.

Collectively the Councils grouped together to make a combined application for over \$300 million of three waters infrastructure investment to the Government, through Crown Infrastructure Partners, who sought shovel ready projects. The coordinated approach was intended to ensure that the economic recovery of the region could, in part, be driven by investment into three waters infrastructure.



Methodology

Project

An overview of the methodology for the project is set out in **Figure 7**. It follows a structured, staged process moving from current state assessment, definition of key principles, into analysis of a long and short list of options over time. The approach and then analysis are consistent with the Better Business Case approach and the requirements of Section 17A of the Local Government Act 2002.

Throughout the process there was engagement with the Councils' project team as well as the Councils themselves and identified stakeholders.

The current state assessment and initial review of the options was undertaken in 2019. While the data in that current state assessment has in many cases been superseded, the current state still provides a good background and supporting evidence in the case for change. The detailed analysis stage in the review was elongated by a break during the local government elections, confirmation of a substantial financial contribution from the Government and Covid-19. The Government contribution enabled further and more detailed work to be undertaken on key elements of the review. This included a *Regional Asset Valuation and Condition Alignment* by WSP to better understand the differences and similarities in the asset information used as a base for this report and informed sensitivity analysis. It also allows for an analysis of the actual impacts on each council of potential changes in the service delivery model. The findings from this further work are included throughout this report. The WSP Report is attached as **Appendix D** and the Current State as **Appendix G**.

It is important to note that the review is intended to provide analysis of the costs and benefits of different service delivery models for three waters in Hawke's Bay. The report should therefore be seen as only the first step in a process and not an outcome in and of itself.

The report will need to be considered individually and collectively by the Councils, including, we anticipate, identification of the future work required to identify a preferred option and the approach to those phases of work, then engagement with the respective communities and the region as a whole before any determination by a council or the Councils is made.

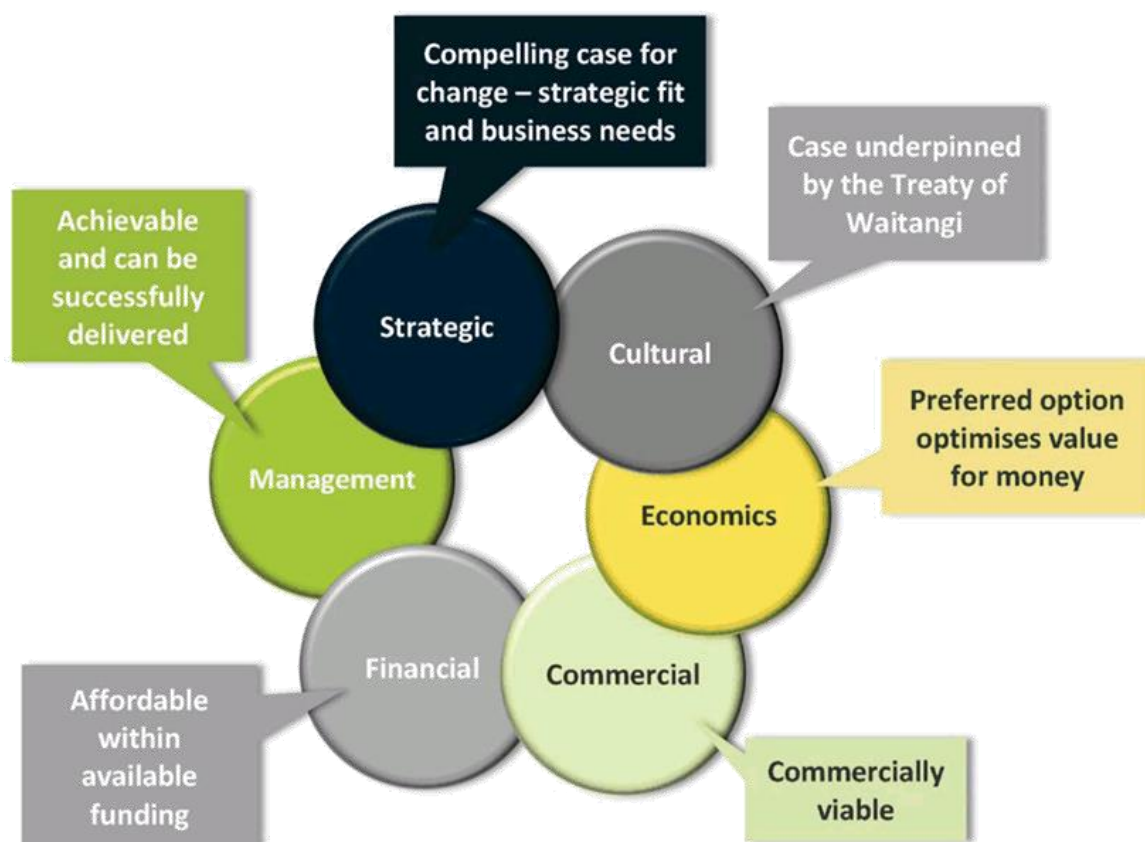
Figure 7 Summary of project methodology



The review was undertaken using a modified Better Business Case (BBC) framework. This structured process ensures a wide range of factors are considered in reaching an overall recommendation. However, in this case the largely financially focused framework was supplemented by a sixth case, a cultural case, to ensure that principles developed through discussions with the Māori committees were incorporated into the assessment.



Figure 8 Treasury better business case approach



Engagement process

Council engagement

A combined workshop was held in Waipawa on 21 January 2019, with representatives from all five councils involved in the study. Chief executives, infrastructure managers, Māori advisory staff and the chairs and/or representatives from the Māori committees of each council attended the workshop.

Workshops were held with each council in late March 2019 to coincide with the conclusion of the short-listing process to provide an update on the project at that point, the current situation, identify the options that were short listed and why, along with options that were not short listed and why.

Māori engagement

The Māori engagement strategy used in this project was to meet with the existing council Māori committees of the four territorial authorities (noting that Central Hawke's Bay does not have a formal committee) as well as the Hawke's Bay Regional Council Regional Planning Committee (statutory Treaty Entity Committee) and Māori Committee. A meeting was held with Te Taiwhenua o Tamatea Inc in place of a formal committee of Central Hawke's Bay District Council. These meetings were held around Hawke's Bay in February 2019.



Out of the meetings with the Māori committees, a set of principles was developed. These principles were then used to inform development of the investment objectives. Investment objectives lie at the heart of the Better Business Case approach.

A further session held in April of 2020 with the chairs of the Māori committees confirmed the principles and led to an assessment in this report of how the options incorporate or respond to these principles. It was through discussion intended to be about assessing the shortlisted options against the investment objectives and in particular the objective of *enabling a meaningful role for Māori*, that the chairs articulated that a meaningful role for Māori starts with co-design of the model. The outcomes of the hui are discussed in the strategic case.

Wider engagement

Extensive engagement with the Councils and the community, should the project proceed, is programmed to take place once a preferred option or options are identified.

A communication and engagement strategy for engaging with the communities of Hawke's Bay has been developed, and implementation of this, should the project proceed, will be funded from the government financial contribution.

Clarifications

Council areas considered by the review

While parts of the Rangitikei and Taupō District Councils are within the Hawke's Bay Regional Council area, those areas are not within the scope of this study.

Financial data

Financial data is based on three years of budget information provided by each council, and updated 2018 long term plan projections for the years beyond that. The original figures were updated through the 2019/20 annual planning process, the 2020/21 annual planning process, Covid-19 and application for funding from the Crown Infrastructure Partners led programme of "shovel ready" projects to support the economic recovery post Covid-19. All of which took place over the course of this project.

Figures used in this report may therefore differ from the published 2018 LTP, annual reports and annual plans.

DIA performance measures

Department of Internal Affairs (DIA) requires all councils in New Zealand to report against mandatory non-financial performance measures. These measures have been used in this report, with the 2017/18 results reported in the current state assessment (**Appendix G**) and the 2018/19 results separately in **Appendix H**. However, we note that while the measures themselves are mandatory, each council may set its own targets.

This means that although, for example, all councils may meet a particular measure, their performance can be quite different. This also means that the most useful comparison requires analysis of both the target and the actual performance.

The Water NZ annual performance review has also been used for comparative purposes.



Asset condition

While each council reports condition data based on the same scale of 1 – 5, we acknowledge that each council has its own approach to determining the actual condition of its assets. It is noted that the amount of unknown asset condition information that was reported may also skew the results. A comparison between the respective conditions of the Councils' three waters assets should only therefore be treated as indicative. We note that during WSP's 2020 regional asset valuation and condition alignment review they found such significant variation as to consider that a comparative analysis based on the raw data was not possible. WSP developed an approach to provide a comparison and this has been used as part of the sensitivity analysis.

Supporting legislation

This report assumes that, as advised by DIA, certain legislative changes to support the efficient and effective operation of a regional water CCO would be made to the Local Government Act 2002 if a regional water CCO was formed in Hawke's Bay. Essentially these changes would put a regional water CCO in the same position as a council and Watercare. Key provisions would relate to an ability to plan, charge and recover development contributions, exemption from income tax, access to land etc. Similar provisions were part of a Local Government Act 2002 Amendment Bill in 2016 that was never passed into legislation.

Regional approach

The analysis in this report assumes that any new model is adopted by all four of the councils. If one or more of the councils did not proceed then the likely costs and benefits (financial and non-financial) would be different from that set out in this report.



Strategic Case

The strategic case sets out a case for change, problem definition, investment objectives and critical success factors.

Conclusions from the strategic case

In order for the Hawke's Bay region to thrive it is critical that core infrastructure and basic services are provided to all residents in the region at an affordable cost. Given that the Councils face the same or substantially the same issues, then addressing this challenge in a coordinated way that eliminates duplication and ensures that all the Councils and their communities have access to the appropriate strategic capacity and capability to do so.

The strategic case highlights a number of challenges for the region with the current approach and in doing so it identifies the case for change. These challenges are both current and future. They are a challenge for all councils, but in particular for the smaller councils who do not have the resources to address these issues effectively.

- Increasing government regulations are driving requirements for significant future investment into three waters infrastructure. Councils originally forecast a combined \$313 million in capital investment in three waters in the 2018-2028 LTP, that has been revised to \$388 million. Taking into account the expected change in regulatory standards we estimate that to now be \$605 million.
- an increasing need to recognise the environmental impacts and use of water generally by the communities and the role required of the three waters services to mitigate these impacts
- While the engagement with the Māori committees and the chairs of the Māori committees was focussed on the future of service delivery for three waters, it quickly highlighted issues for Māori with the current approach. While those are addressed in the cultural case, they are also reflected in the investment objectives. Issues were identified around the need to recognise Treaty of Waitangi partnership obligations and that the current approach does not sufficiently provide for Māori to participate in decision making.
- A shortage of specialist resources for three waters across New Zealand and internationally. Hawke's Bay's councils are already finding it difficult to fill certain roles and attract the skills they need. Councils compete with each other for talent and the smaller councils require people who must be able to cover a broad range of duties aside from their specialist area

Affordability of three waters services is identified as a key issue. There is currently a stark difference between the cost of the three waters services in the cities and the rural councils.

Table 4 Comparison of cost of service

	Central Hawke's Bay	Hastings	Napier	Wairoa
Average three waters residential rate - now ⁷	\$1,664	\$759	\$686	\$1,123

⁷ Based on sum of average weighted residential rate from funding impact statements (2018/19 Annual Plans). Exclusive of GST



The rates disparity between rural and urban councils that is already evident, is set to worsen over the coming years. Councils are already forecasting increasing costs to meet new standards and stronger regulation of the provision of water services, and there are many more costs that councils have not yet had the opportunity for forecast. While this will impact all communities, it most obviously affects Wairoa and Central Hawke's Bay where there is a smaller number of ratepayers over which to spread the costs.

There are a range of international benchmarks for what is considered affordable for water and wastewater services. Water NZ has previously referred to these as ranging from 2% to 5% of household income. The table below shows that Wairoa and Central Hawke's Bay already exceed the low benchmark of 2%, and by 2032 Wairoa is projected to exceed the highest benchmark.

Table 5 Comparison of affordability of service

	Central Hawke's Bay	Hastings	Napier	Wairoa
Affordability of water and wastewater - now	2.7%	1.1%	1%	2.1%
Affordability of water and wastewater - projected	4.4%	1.9%	1.5%	5.9%

Investment objectives

The investment objectives were developed through workshops with council staff and Māori committees and a review of the current state and take into account Section 17A assessment criteria.

These were then discussed and confirmed following the options assessment workshop with representatives from the four territorial authorities and the Hawke's Bay Regional Council.

The principles developed through engagement with the Māori committees are discussed in the cultural case, but they have been shown here to show the link between the investment objectives and the principles.



Figure 10 Principles

Value Te Ao Māori	Incorporating and implementing mātauranga Māori, culture and values (i.e. Te Arainga Design Principles) are a core element for any potential framework to realise and enhance the region's commitment to Māori to protecting/enhancing water
Value water	Wai is the essence of all life and the world's most precious resource. It is of high importance to Māori, as it is the life giver of all things, a precious taonga, part of our whakapapa
Whakapapa – genealogical links	Recognise and respect the relationship and whakapapa (genealogical link) that mana whenua has with water.
Te mauri o te wai – the life force of water	Mauri is the integrated and holistic well-being and life support capacity of water. The well-being/healthiness of the water, the land and the people are intrinsically connected.
Holistic approach to water	Although the project is based around the review of the service and delivery of the three waters (infrastructure), the proposed model needs to take into account a holistic water approach: there is only one water.
Enabling of Te Tiriti o Waitangi	Involving mana whenua in governance and decision making required to ensure Te tiriti o Waitangi obligations are met, as well as making sure they are able to actively exercise kaitiakitanga in a practical way
Mana motuhake - identity, self-determination	The identity of mana whenua in Hawke's Bay should not be lost in any potential model. But inclusion and co-governance whilst keeping their identity is an opportunity

Figure 9 Investment objectives

To provide three water services in a way that is affordable and effective		The three waters service's model must address the challenge of providing for an effective, affordable service in a fiscally responsible way
To provide services that are safe, reliable and resilient		Access to safe and reliable three waters service are fundamental to all the urban and rural communities of Hawke's Bay
To provide services through a model that enables a meaningful role for Māori		The Local Government Act requires a local authority to provide opportunities for Māori to contribute to its decision making processes
To provide services through a model that has the value of water at the centre		Water is vital to community life and as such three water services are part of a holistic water system
To provide three waters services in a way that supports our urban and rural communities		The services influence how people across Hawke's Bay live, work, gather, socialise, recreate and value environmental amenity
To provide three waters services that build enduring capability and capacity		The three waters model must be capable of, and have the capacity to, deliver quality sustainable planning, management and operation of three water services now and into the future



These investment objectives were then used to assess the options against as part of the long list assessment and then also the short list. They are explained below with reference to what these mean in the context of Hawke's Bay.

Investment objectives explained



To provide three water services in a way that is affordable and effective

Asset management plans and financial forecasts have identified that substantial capital investment is required either to support existing communities or to facilitate and sustain the growth occurring within the region. The three waters services model must address the challenge of providing for an effective, affordable service in a fiscally responsible way. In doing that we must consider not only the current costs of the services but also consider the future costs as they are known and quantified within the Councils' long-term plans. We must also consider the future infrastructure costs which the Councils have not yet quantified but are aware of as well as the capital and operational costs which are expected to come as a result of the Government's three waters reform.

Underpinning everything is the purpose of local government as set out in the Local Government Act: the provision of efficient and effective services.



To provide services that are safe, reliable and resilient

Access to safe and reliable three waters services are fundamental to all the urban and rural communities of Hawke's Bay. There is a particularly heightened sensitivity and understanding of what's required within Hawke's Bay as a result of the Havelock North contamination event in 2016. Stormwater disposal is a significant issue within the region. Three waters services are a core service for councils under the Local Government Act and they must meet health and environmental standards in delivering key public health services. The Government's three waters reform agenda is anticipated to significantly increase environmental standards and compliance requirements for all councils. The three waters services' model must deliver quality, compliant services that are resilient and sustainable both now and in the future. Resilience requires consideration of much more than the infrastructure. While understanding and acknowledging the challenges of the natural disasters that Hawke's Bay is at risk of facing, there is a need for the three waters system to be resilient; that includes the human resources, infrastructure and financial capacity.



To provide services through a model that enables a meaningful role for Māori

The principles contained within the Local Government Act require a local authority to provide opportunities for Māori to contribute to its decision-making processes. The development of any model must be cognisant of the importance of providing a meaningful role for Māori. Māori culture and values have always placed a high importance on water. An example of that is that Te Awa Tupua now has the legal status of a person⁸. Marae have always been established close to water, and the rivers, harbours and sea have always been a source of food. This is particularly evident in Hawke's Bay. Water is central to Māori culture: water is taonga, respecting water, the way water is used and the impact of human life on water and the life it sustains.

⁸

S14(1) of the Te Awa Tupua (Wanganui River Claims Settlement Act 2017)



To provide services through a model that has the value of water at the centre

Water is vital to community life and as such water services are part of a holistic water system, not only within Hawke's Bay but across New Zealand. The communities of Hawke's Bay are deeply connected to their water (lakes, rivers and harbours) and they place significant importance on the use, health, quality and protection of future use of that water. Water crosses communities and is not constrained by local or regional boundaries, as such each community's decisions can affect its neighbours. Similarly, there are sometimes competing interests for the same resources within a council area and within the wider Hawke's Bay. Safe and secure water supplies, drainage and sewerage treatment are identified by most individuals as a top priority for the region.

A different example of the value of water to communities is the issue of chlorination of drinking water. Some communities, or parts of communities in New Zealand place a high value on having un-chlorinated drinking water. This is a significant issue for some communities in Hawke's Bay right now where currently all council supplies are being chlorinated.

The Government's reform of drinking water will introduce mandatory disinfection of water supplies (i.e. chlorination) with suppliers able to seek exemptions where they can demonstrate to the regulator's satisfaction that all risks to water safety are being managed appropriately. Essentially, this allows communities to seek and receive a different service level than the standard service level of chlorination. A successful three waters service delivery model must have processes that enable engagement with communities on issues such as this and where support exists be capable of meeting the relevant level of service, even where that might be higher than for the remainder of the area.

Water has cultural significance for Māori and models should be able to incorporate Te Ao Māori, kaitiakitanga and implement mātauranga Māori. Designing in Māori principles and values into projects and infrastructure is emerging across New Zealand and needs to be able to be reflected in the operations of a service delivery model. To be successful, the service delivery model for three waters will recognise all of these different values of water.



To provide three waters services in a way that supports our urban and rural communities

Three waters services and the people that form part of those services are deeply linked in the communities of Hawke's Bay. The services influence how people live, work, gather, socialise, recreate and value environmental amenity. The three waters are a crucial element of the local economy, providing direct employment, facilitating business establishment and growth, and as such are essential to community place making. Local employment and growth are priorities for all the communities of Hawke's Bay. The direct impacts as well as flow-on impacts of change in service delivery models for these communities need to be considered. It is also important for small communities to feel listened to and represented by the service delivery model. All of these must be balanced against the benefits that may arise for these communities with improved services and affordability.



To provide three waters services that build enduring capability and capacity

The three waters model must be capable of, and have the capacity to, deliver quality sustainable planning, management and operation of water services that is consistent with the wider regional strategic objectives. This will continue to require skills beyond traditional service delivery functions and include a wider appreciation of stakeholder view and expectations. Attracting and retaining strategic capacity and capability in the three waters workforce itself is a key challenge for the Hawke's Bay councils. Strategic capacity is important to ensure good long-term asset investment decisions are made.



Water NZ found that nationally, total vacancies in the water industry were at nearly 10% “confirming staff attraction and remains a pressing industry need. Efforts to attract and retain staff into the water sector require concerted effort”. That was before the creation of Taumata Arowai which will further draw on the scarce resources nationally.

Creating and holding that capability and capacity over the medium and longer term will be a challenge. This challenge is not unique to Hawke’s Bay.

Critical success factors

The long list of options was also assessed against critical success factors. The long list is set out in **Appendix E**. These critical success factors are considered standard for Better Business Case analysis:

- Strategic fit and business needs
- Potential value for money
- Supplier capacity and capability
- Potential affordability
- Potential achievability

Current state of three waters services and service delivery

Background

Three waters services are the responsibility of local government. The provision of drinking water, treatment and disposal of wastewater and management of stormwater are critical services to the health of our communities and their social, cultural, economic and environmental well-being.

Section 130 of the Local Government Act 2002 sets out a requirement for councils who provide three water services “to continue to provide services” and maintain “capacity to meet its obligations”. There are numerous legislative obligations, requirements and controls that go beyond the Local Government Act in the provision of these services, including requirements under the Health Act 1956, Building Act 2004 and the Resource Management Act 1991.

What is of particular relevance for the purposes of this review is the obligation on councils to provide the services, maintain their capacity to do so and restrictions which prevent the divestment of the three waters assets (except to another local government organisation) and the use of the assets as security. Effectively this creates an enduring obligation to provide three waters services. It is not a service that the Councils can opt out of, and with the significant public health implications of the services, there is an ongoing substantial need for investment and resourcing.

The Government is currently reviewing how three waters services are delivered across New Zealand. In a Cabinet paper released on 20 November 2018, the Government indicated that alongside regulatory changes there may be major structural reform of the water sector. That reform programme took a significant step forward with the July 2020 announcement and introduction of \$761M of funding to facilitate regional and multi-regional discussions about aggregation.

The 2018 Cabinet paper described a system facing significant issues where “the scale of the challenge indicates that the status quo is not sustainable in the long term”. Among the key issues identified were weak regulation, capability challenges (particularly for smaller councils), funding and financing issues for upgrading infrastructure, where the Government stated, “for many smaller councils, there is no clear way forward given the scale of the challenges”.



Hawke's Bay has been a focal point for the three waters discussion due to the 2016 Havelock North water contamination event. Following this, the Councils have collectively worked together to respond to recommendations arising from the inquiry into the event. The region is now one of the few that has joined together to engage with the Government on the issues identified by the November 2018 Cabinet paper.

In the first stage of this review, during early 2019, an assessment of the current state was undertaken (refer to **Appendix G**). Information was collected from each of the Councils and analysed for trends, issues, challenges and opportunities. This identified that at that time there were some major issues within the region for the three waters services. The biggest of these are affordability of future services and differences in strategic capability and capacity. These two issues come together in the smallest councils where there is a future requirement for infrastructure to be upgraded. This requires capacity and capability to plan and deliver the works but also the financial capacity of the community to pay for it on an ongoing basis.

Subsequent to the initial assessment of the 2019 current state, further and more detailed work was

- undertaken by WSP to look at regional asset value and condition alignment in **Appendix D**
- provided by each council with financial forecasts and asset expenditure projections from 2020
- undertaken by Morrison Low to understand the potential impacts on each council of the options for change.

The Councils

The four councils that provide three waters services in the Hawke's Bay are different but have many similarities. The most striking and obvious differences are their sizes and differences between rural and urban areas. Wairoa and Central Hawke's Bay are small councils by population. They are the 6th and 19th smallest councils in New Zealand respectively on that measure. When combined, the population within the council areas is comparable to Hamilton City but the nature of the areas is vastly different.

Napier City Council and Hastings District Council are roughly equivalent with approximately \$100 million operating revenue and over 400 employees. Central Hawke's Bay District Council and Wairoa District Council have revenue of \$27 million and \$21 million respectively and 50 - 60 employees. This is significant in the context of delivering three waters service and as noted later in the human resources section, results in employees having to cover a broad range of duties and act as generalists, not specialists. The population and rating base in the smaller councils also limits the funds available for capital works. The capital works budget (across all council activities) in Hastings District Council is over ten times larger than the capital works budget for Wairoa District Council. Napier is unique as a city council, with a significantly smaller land area and one population centre.

The differences between rural and urban areas is pronounced for the three waters services as shown in **Table 6**. It shows through in the number of different schemes for supplying water, treatment plants, kilometres of pipe network, reservoirs, extent of stormwater network and, because of the population density of Napier and to a lesser extent Hastings, proportionally fewer ratepayers and users of the three waters services to pay for the services.

Table 6 Territorial authority key statistics (2018) ⁹

	Central Hawke's Bay	Hastings	Napier	Wairoa
Land area	3,332 km ²	5,226km ²	105km ²	4,077km ²
Population ¹⁰	14,142	81,537	62,241	8,367
Council operating revenue (\$000)	26,689	104,864	96,856	21,108
Council operating expenditure (\$000)	31,745	114,707	98,808	25,592
Council capital expenditure (\$000)	11,806	77,419	32,801	10,149
Council rates revenue (\$000)	19,135	72,674	53,900	12,636
Median personal income ¹¹	\$29,000	\$28,400	\$28,900	\$22,600
Council employees	52	415	466	61

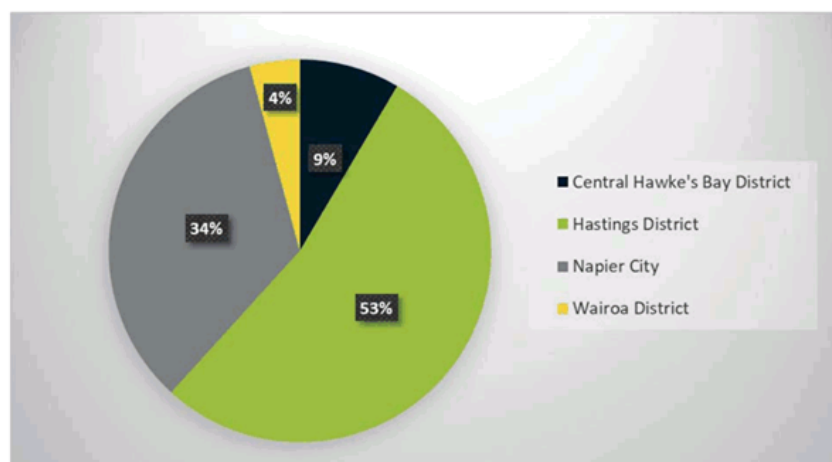
The three waters services are critical to the communities they serve. They link to almost all of the economic, social, cultural and environmental outcomes of the individual Councils. A summary of the customers is set out in **Table 7** below.

Table 7 Region wide summary of three water customers

	Water	Wastewater	Stormwater
No of service properties	56,218	55,490	52,068
Communities served	26	24	n/a

The relative value of the three waters assets by council area is shown below. Hastings has both a comparatively large population and their network covers a larger geographic area meaning that the value of their three water assets is the largest of the group.

Figure 11 Regional three waters assets replacement value (WSP)



⁹ www.localcouncils.govt.nz – Key financial statistics (2018)

¹⁰ Ibid

¹¹ Stats NZ 2018 Census data

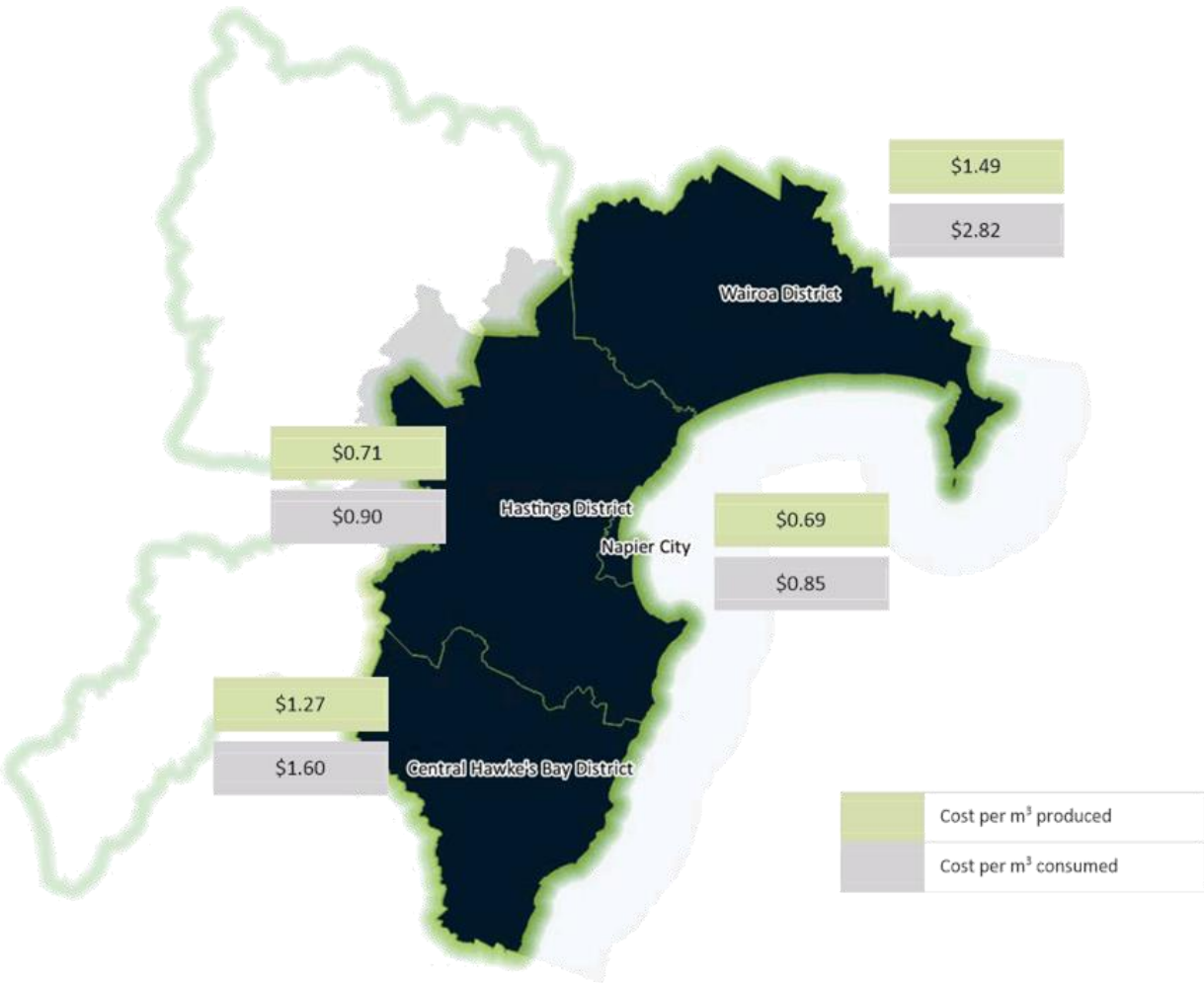


Cost of service

There are already significant differences between the cost of the three waters services across the four councils as presented in **Figures 12** and **13**. The cost to produce and supply drinking water as well as the cost to treat wastewater is much higher in Central Hawke’s Bay and Wairoa than it is in Hastings and Napier.

This can be explained by the differences in the systems and the population bases of each, but the key point is the disparity between the regions and the cities.

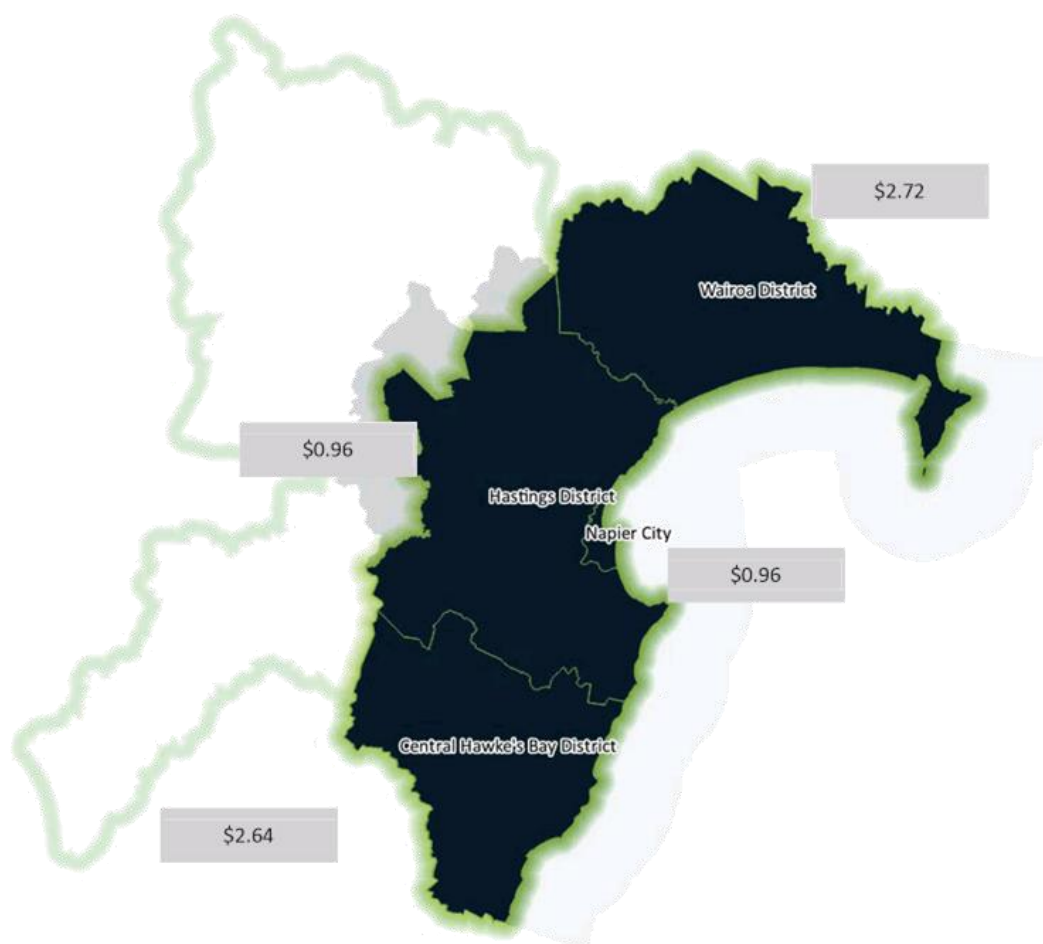
Figure 12 Cost¹² per cubic metre of water produced and consumed in Hawke’s Bay Region (2019)



¹² Total operating cost including depreciation divided by water produced/consumed



Figure 13 Cost¹³ per cubic metre of wastewater treated in Hawke's Bay Region (2019)



There is a clear difference, not just in terms of the cost of the service but in what ratepayers pay for the services, between the large councils (Napier and Hastings) and the smaller rural councils (Wairoa and Central Hawke's Bay). The average residential rate for three waters in Central Hawke's Bay is more than double that in Hastings and Napier. Such big differences are not however unusual in New Zealand. The Water NZ Annual Performance Review 2018-19 found that

"consumers are paying over three times as much (\$863/year versus \$262/year) in some areas as in others for water, and over ten times as much (\$1,217 versus \$116/year) for wastewater services. There was even higher variation in stormwater charges, which ranged by a factor of over 20, from \$18 to \$427 per year" ¹⁴

The 2017/18 Annual Performance Review, considered charges for the three waters services across the 46 organisations that participated that year and noted, *"this suggests that as the scale of drinking water and wastewater services increases, there are efficiencies of scale resulting in lower averages (sic) costs to consumers"*.

¹³ Total operating cost including depreciation divided by wastewater treated

¹⁴ Page 39, 2018-19 Water NZ Annual Performance Review

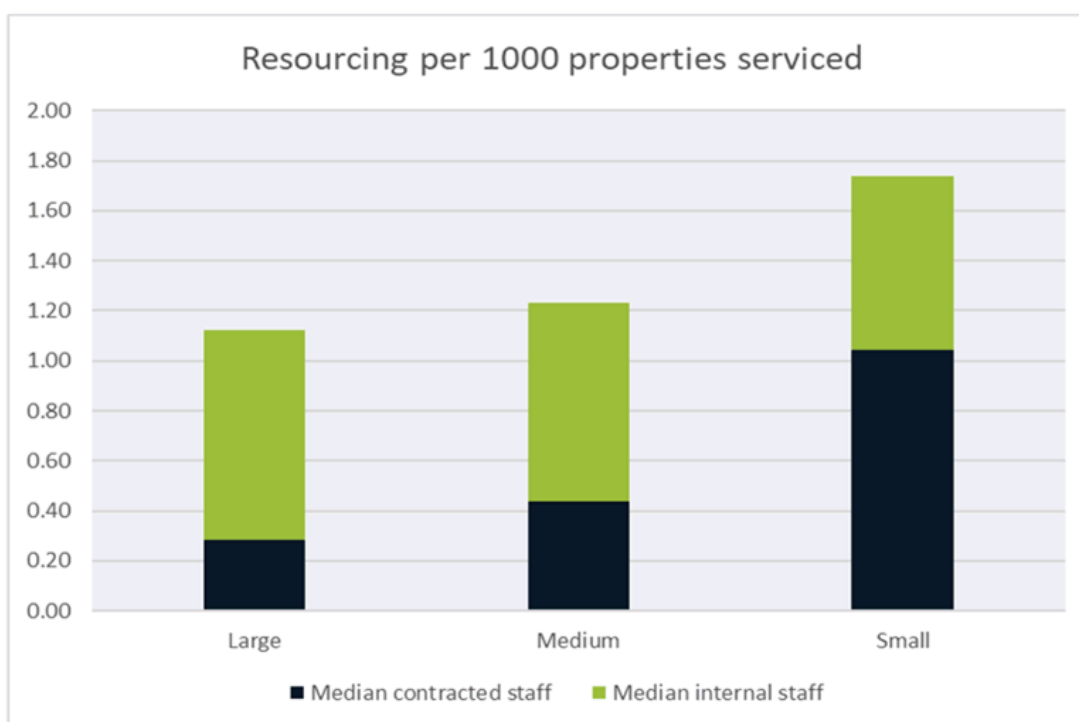


The report highlighted two particular areas, where in their view this was evident – the number of employees per 1,000 properties serviced and the overall water/wastewater charges.

“Relative Water and wastewater charges are also co-related with scale, with customers of small entities paying median charges of \$1,057 a year, and customers of large participants paying \$723 a year”¹⁵

While a council to council comparison may be problematic the trend identified by Water New Zealand is relevant. The chart below is produced from the information within the 2018/19 Performance Review. It shows the same trend as the 2017/18 data. In 2018/19 the median staffing levels were 1.12 employees per 1,000 properties serviced with water and wastewater compared with a median staffing level of 1.74 for small entities.

Figure 14 Comparison of staffing levels (Data from Water NZ Annual Performance Review 2018/19)



We note that, based on the categorisation used by Water NZ, a combined Hawke's Bay CCO would be considered a large water organisation.

In our review we have used a different comparison based on an average residential rate, yet we found the same trend. The average residential three waters rate for Napier and Hastings (both medium in the Water NZ benchmarking) was substantially less than for Central Hawke's Bay and Wairoa (both small in the Water NZ benchmarking).

Affordability is not only related to the cost of the service but also the community that is paying. In the Water NZ 2017-18 National Performance Review it considered relative affordability of water and wastewater services. It referred to varying international water affordability metrics for water and wastewater services ranging from 2 - 5% of household income¹⁶. Analysis of the current level of affordability of water and wastewater in Hawke's Bay shows a wide variation with both Central Hawke's Bay and Wairoa above the lower range metric of 2% already.

¹⁵ Page 6, 2018-18 Water NZ Performance Review

¹⁶ 2018-18 National Performance Review, Page 7



Table 8 Comparison of current cost of service

	Central Hawke's Bay	Hastings	Napier	Wairoa
Average three waters residential rate ¹⁷	\$1,664	\$759	\$686	\$1,123
Affordability of water and wastewater ¹⁸	2.7%	1.1%	1%	2.1%

Three water assets

Asset condition

There is a wide variation in the condition of the three waters assets across Hawke's Bay. That in and of itself is not surprising and, given that each council has its own approach to condition assessment, care should be taken in direct comparisons between them. The 2019 current state assessment collected asset condition data from each Council. This showed that at the time Wairoa was unable to provide any condition data for the stormwater network. Highlighting this is not a criticism of Wairoa, it has been done to highlight the challenge faced by small councils across New Zealand who have limited resources, capability and capacity and are forced to make choices in the allocation of those scarce resources. We note that by the time of the 2020 *Regional review of asset condition* by WSP, Wairoa had the relevant data. However, WSP found

"Condition assessment approaches and data availability varies between the Councils with generally lower confidence than other valuation input data. Because of the significant variations in condition approach and data availability, a comparison is not possible based on raw condition data".

All Councils are preparing for the 2021-2031 LTPs. This process includes reviewing asset management plans and forecast programs. Of which we understand that Napier is in the process of developing masterplans for its three waters networks and these will inform updated investment plans which may contain more infrastructure investment.

As new information is developed these updates could be expected to change the current reported condition and forecast expenditure.

The charts in this section show the asset condition for each of the water, wastewater and stormwater networks by reference to inferred condition based on remaining useful life.

Inferred condition based on remaining useful life – where condition data is unavailable it is typical to make an age-based determination of condition. Age has been used as a proxy for condition on the basis that as an asset gets closer to its expected lifespan, its condition will deteriorate. This approach is commonly used for municipal assets where condition data is not readily available. Asset age data has been used to calculate the Remaining Useful (RUL) (as a percentage) of the asset in accordance with the following formula

$$RUL(\%) = 1 - \left(\frac{\text{Assessment Year} - \text{Year Installed}}{\text{Adopted Useful Life}} \right) * 100$$

To support the reader to interpret the charts, they should note *Excellent* is rated as 1 and 5 is rated as *Very Poor*.

¹⁷ Based on sum of average weighted residential rate (GST exclusive) from funding impact statements (2018/19 Annual plans).

¹⁸ GST inclusive. As a percentage of household income. Relies on 2018 Census data for household income by Council area with Morrison Low projections of future values.



What is relevant in the next three charts is that based on information provided there is a trend is for the assets of Wairoa to be in a worse condition than the rest of the Councils. Hastings and Central Hawke's Bays assets are then generally reported as being in a better condition than Napier's.

Figure 15 Water pipes inferred condition based on remaining useful life (by value)

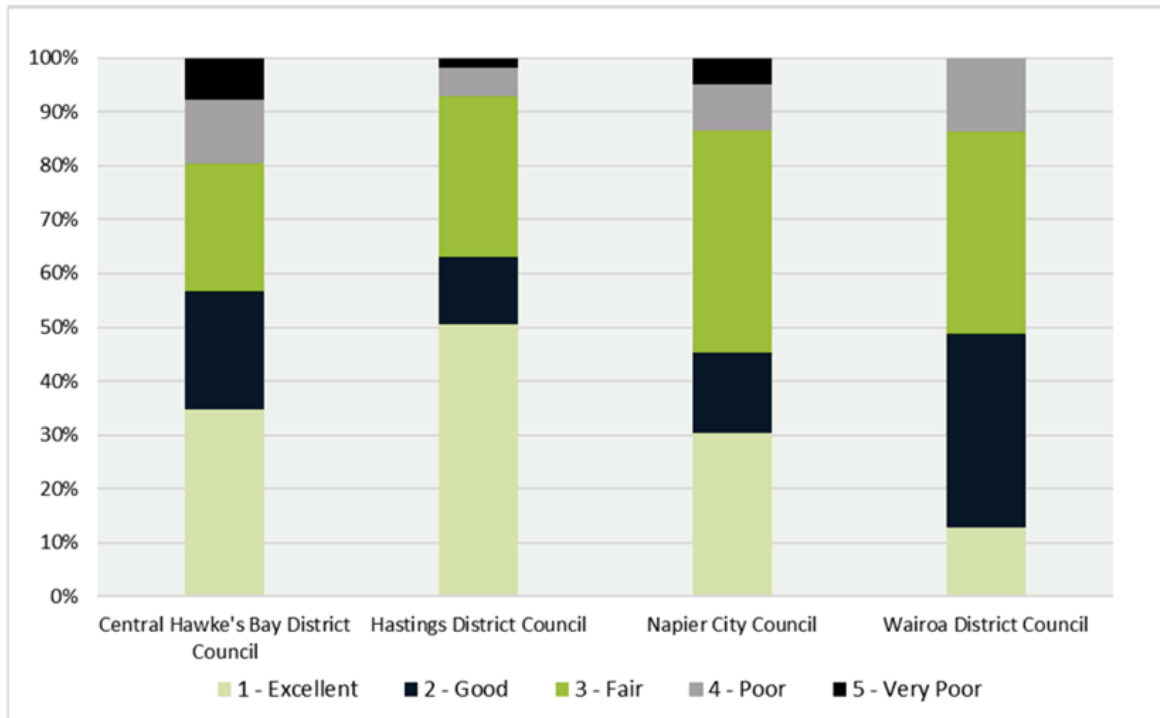


Figure 16 Wastewater pipes inferred condition based on remaining useful life (by replacement value)

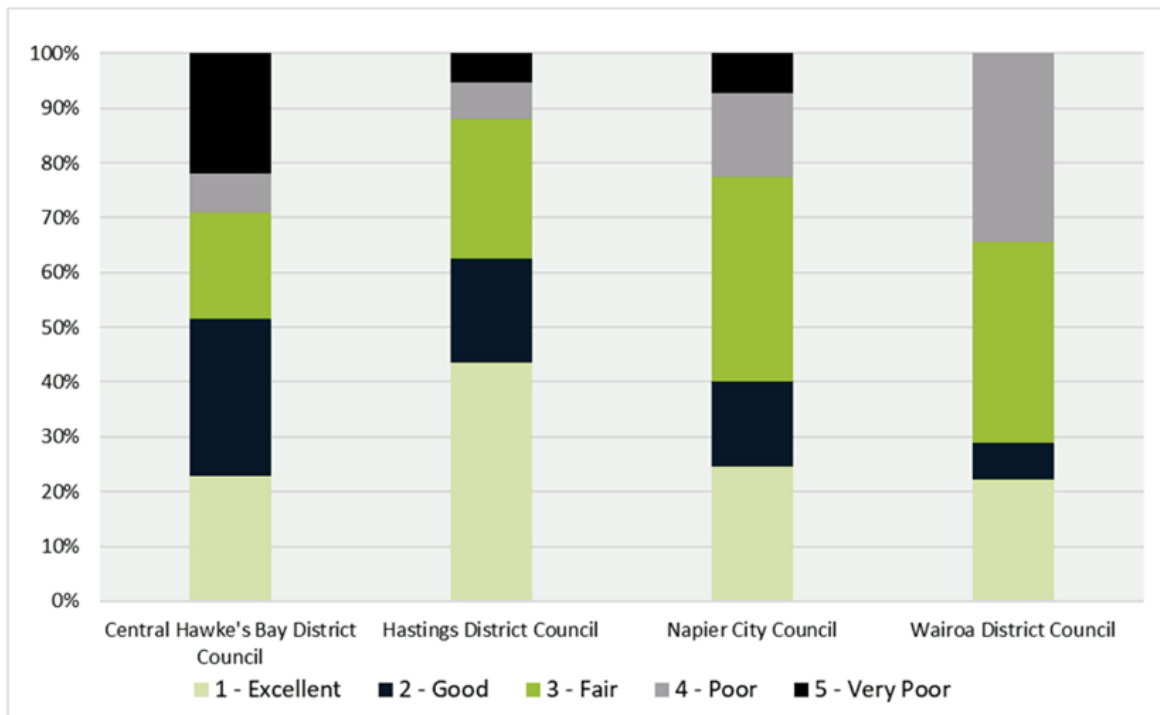
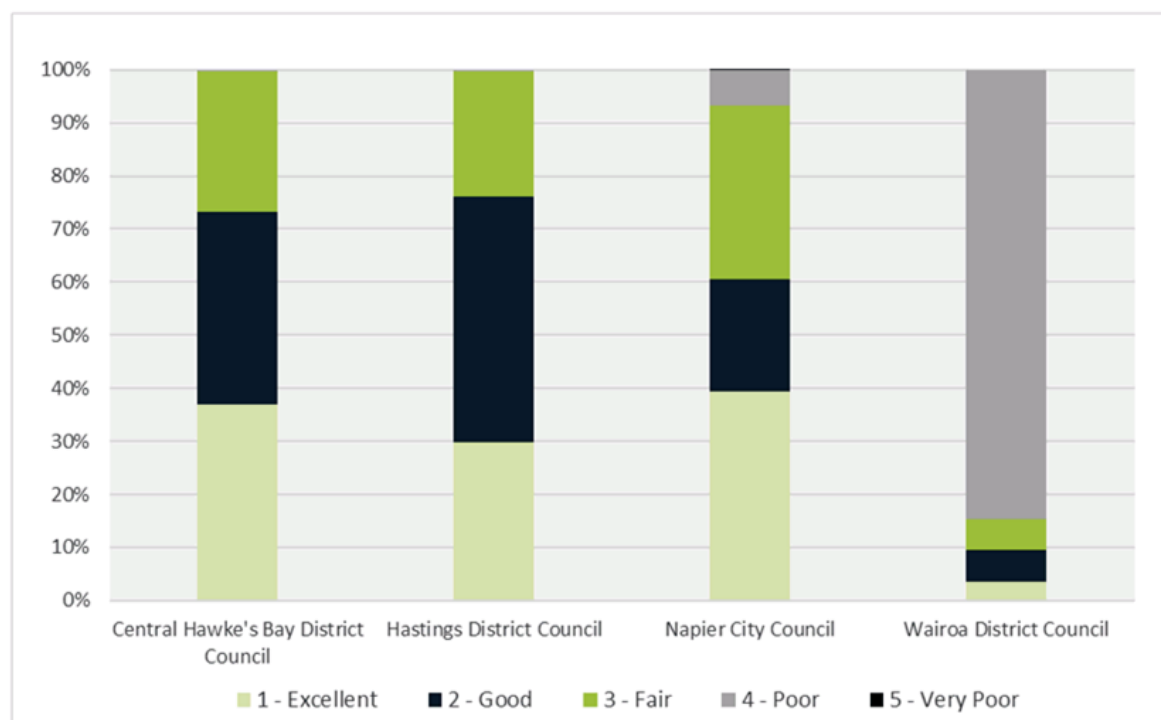




Figure 17 Stormwater pipes inferred condition based on remaining useful life (by value)



Planned future investment

While the current condition of the assets is relevant, the planned future expenditure on the three waters assets is also highly relevant. The review began in 2019 and at that stage each of the Councils had a significant capital expenditure program planned over the life of the 2018-2028 LTPs. The total forecast capital expenditure on three waters at the time was \$313M. As the review has progressed the Councils have updated (2019/20 annual plans) and re-updated (2020/21 annual plans) their forward projections.

Capital expenditure has been compared across the four councils based on the published LTPs updated with current three-year budgets provided by each council. A number of the councils, through the current annual planning process, planned to bring forward some of the capital works that were currently in the outer years of the LTP or added new works. The total capital expenditure for each council across the three waters through to 2027/28 is shown below. That total is now \$387.6M.

- Central Hawke's Bay \$36.6M
- Hastings \$227.2M
- Napier \$106.7M
- Wairoa \$17.1M

The differences, particularly for Napier and Hastings, highlight how quickly councils have started to respond to the impending changes from the three waters reform, the underlying reasons for the reform and the scale of the impact.



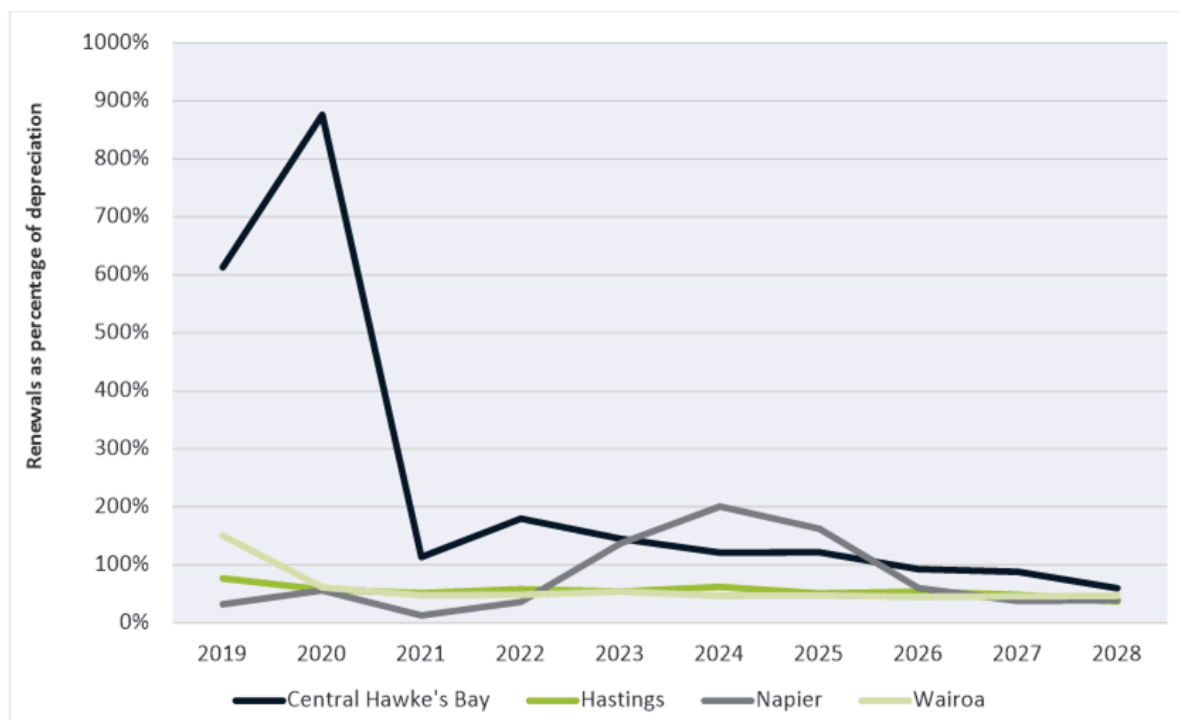
The charts in this section show how the forecast expenditure translates to a per ratepayer basis. Noting that these charts are only for the projected LTP expenditure so the current per capita spend for Napier and Hastings will be significantly higher. The charts highlight the varying level of investment across the region, with Central Hawke's Bay and Hastings investing the most on a per capita basis in the LTPs, followed by Napier and Wairoa. If that position was adjusted due to the increased expenditure now forecast, then Hastings would be investing the most with Napier and Central Hawke's Bay next. Wairoa would be some way behind on per capita investment.

We note that the Councils all have different approaches to funding asset renewal and depreciation but for comparative purposes a renewal ratio has been used in the charts below.

The renewal ratio compares renewal expenditure to depreciation for each asset group. While on a year to year basis the ratio is expected to fluctuate, generally a ratio of at or near 100% should be achieved over the longer term. It relies on the accurate categorisation of expenditure.

Water

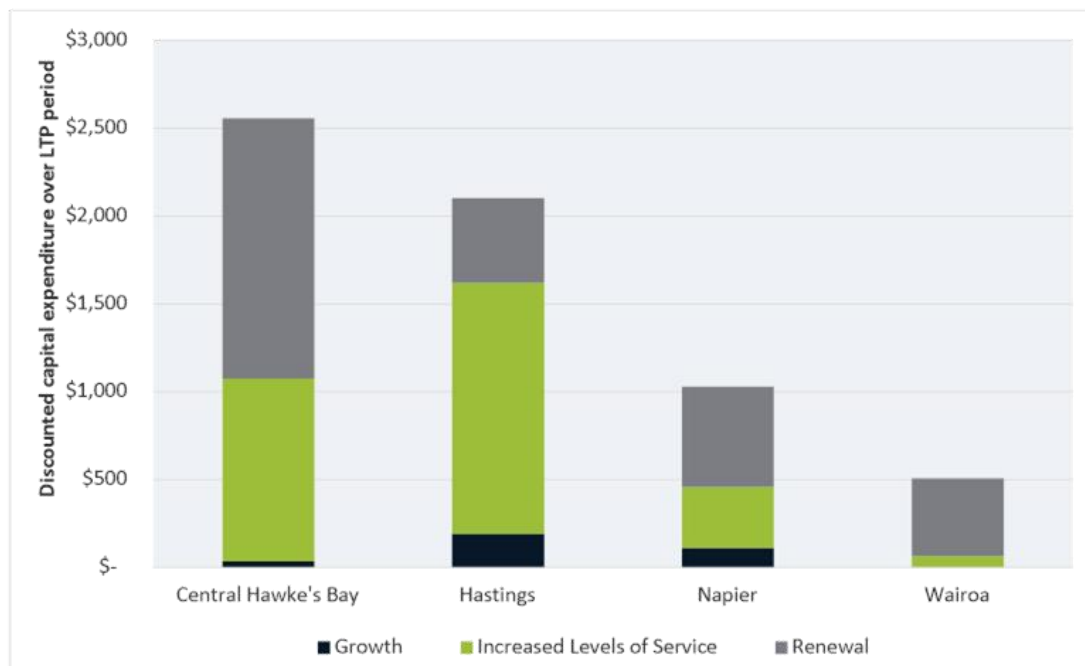
Figure 18 Water asset renewal ratio (LTP)



Planned asset renewals as set out in the LTP, when compared to depreciation of water assets as set out in the LTP were projected to be high for Central Hawke's Bay over the next five years, with Napier also planning a marked increase in renewals spending during the LTP period.



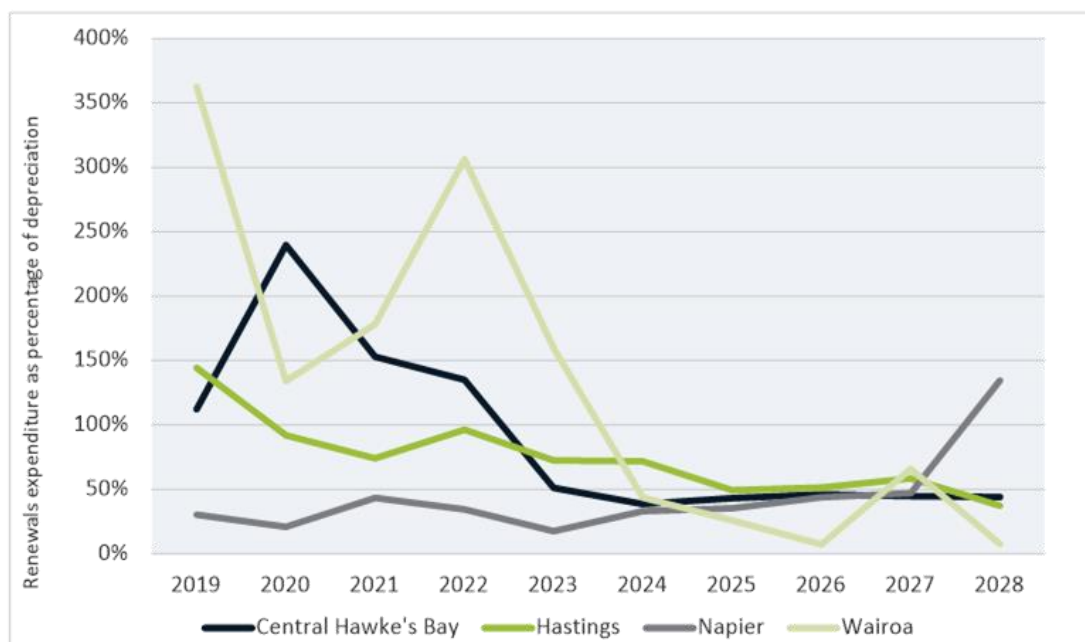
Figure 19 Planned water capital expenditure per ratepayer (LTP¹⁹, NPV 5% discount rate)



Despite low renewals expenditure compared to most of the other Hawke's Bay councils, Hastings has significant investment planned in assets to increase level of service over the LTP period, aspects of which contribute to renewal. Similarly, almost half of Central Hawke's Bay's planned investment in the water assets is directed toward improving levels of service.

Wastewater

Figure 20 Wastewater renewal ratio (LTP)

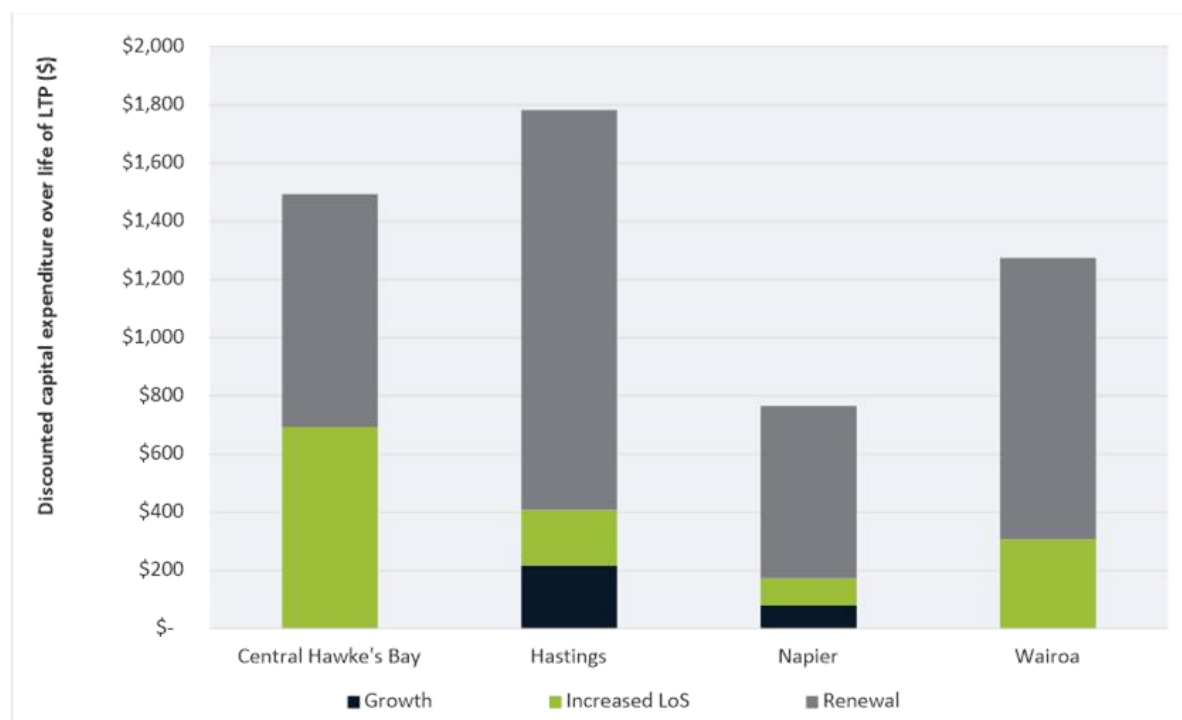


¹⁹ Ten-year period, years 2019/20, 2020/21 and 2021/22 from detailed budgets



Analysis of LTP projections for renewals spend and depreciation expense shows significant investment planned in the renewal of wastewater assets in Wairoa and Central Hawke's Bay over the three to four years. However, reinvestment in wastewater assets in Napier as proposed in the LTP was less than 50% of depreciation cost over the same period.

Figure 21 Planned wastewater capital expenditure per ratepayer²⁰ (2018 LTP, NPV 5% discount rate)²¹



Across all the Councils, renewal of assets was the main driver of capital expenditure within the wastewater activity as set out in the LTP due to increasing compliance requirements. However, given differences in scale between Central Hawke's Bay and Hastings, it is interesting to note the comparatively high investment in assets to increase levels of service in Central Hawke's Bay. This reflects meeting compliance requirements and is not directly related to population size.

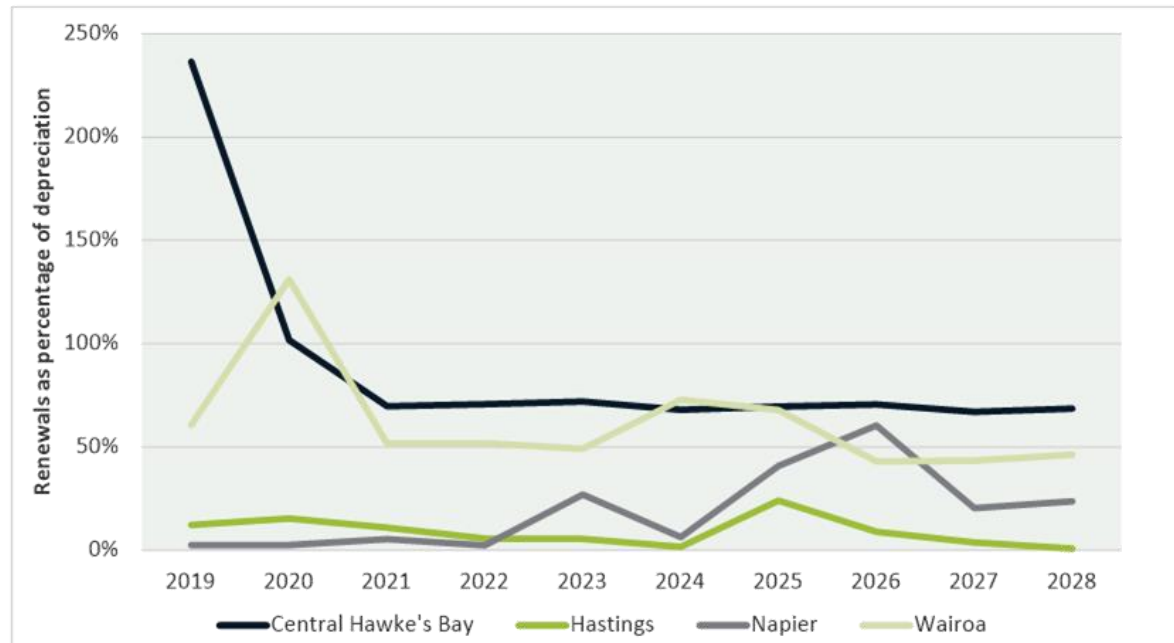
²⁰ Ten-year period, years 2019/20, 2020/21 and 2021/22 from detailed budgets

²¹ LoS – Levels of Service



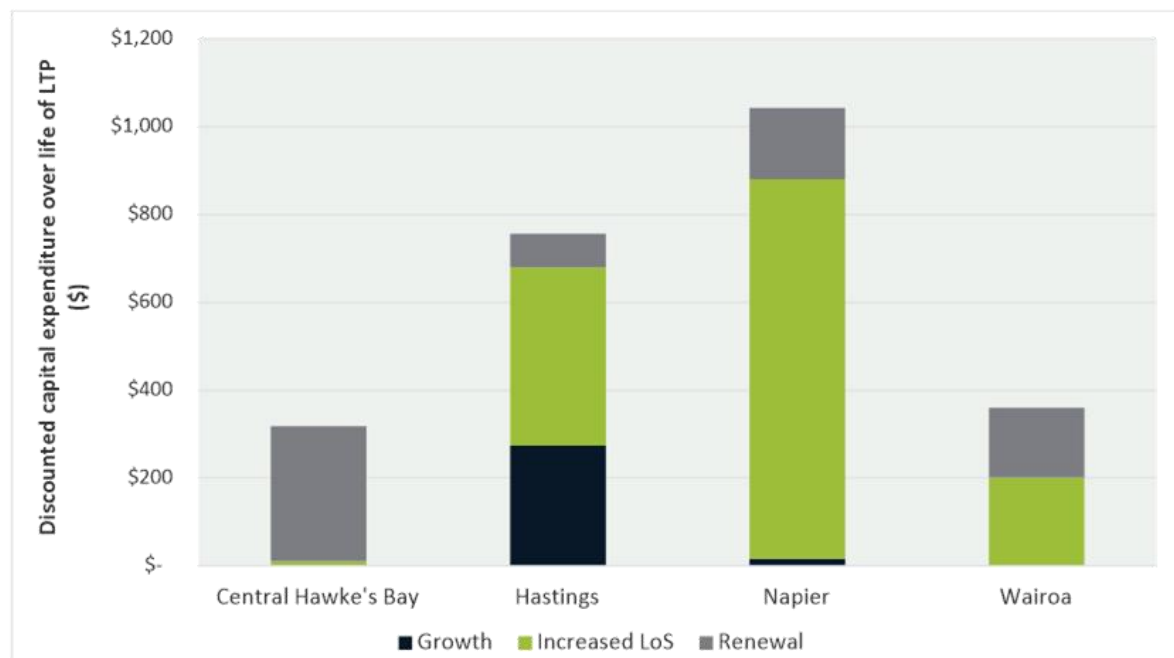
Stormwater

Figure 22 Stormwater renewal ratio (LTP)



Planned reinvestment in the stormwater network is low across the entire region based on the LTP projections, with reinvestment typically remaining well below the rate of depreciation. This is consistent with trends across all New Zealand councils.

Figure 23 Planned stormwater capital expenditure per ratepayer²² (LTP, NPV 5% discount rate)²³



²² Ten-year period, years 2019/20, 2020/21 and 2021/22 from detailed budgets

²³ LoS – Levels of Service



Hastings, Napier and Wairoa are all investing quite heavily in increasing levels of service and/or growth for stormwater.

Additional future costs

We have been asked to consider what additional future costs if Council forecasts are adjusted for the expected regulatory reform and associated increased community expectations. These additional costs will drive operational cost increases to meet new compliance requirements and capital investment to upgrade infrastructure to meet the higher standards. This has been referred to as the enhanced status quo throughout this report.

In order to estimate what these additional costs could be we have relied on cost estimates prepared for DIA for nationwide upgrades to meet new drinking water standards and the National Policy Statement for Freshwater Management and marine discharge standards²⁴ and these provide cost estimates for each council for capital upgrades and increased operating costs.

We have also added increased operating costs to make an allowance for increased compliance costs recognising the increased compliance activity (and therefore cost) that Hastings has incurred since the Havelock North incident. While we recognise all councils have responded we note that Water NZ in their latest benchmarking study reported:

*“Only four participants [out of 46] provided a response suggesting they were actively engaged in any regional council processes for protecting source water, and the only comprehensive response was provided by Hastings District Council. It appears, therefore that the Havelock North enquiry findings have catalysed an improvement in that district but that the learnings have not translated into action in other jurisdictions”.*²⁵

The estimates outlined above increase the total capital programme for the LTP period from the original \$313 million to \$605 million across the region

We note that other councils also report being impacted by these cost increases and that in the 2018/19 Water NZ Annual Performance Review a substantial increase in staff over recent years was reported. The number of internal staff and contractors employed by repeat participants from 2016 through to 2019 shows an increase over that time of 23% for internal staff and 86% for contracted staff²⁶. While we note that not all of the increases in all situations can be solely attributed to responding to increased levels of compliance, but the scale is similar to Hastings. However, we have still used Hastings as the benchmark for assuming increased costs for compliance for all the councils.

The impact of these additional allowances is shown in the following chart. This highlights the future cost increases that all the Councils may face and in particular for Central Hawke’s Bay and Wairoa. This enhanced status quo position has been used throughout the review as the basis against which to assess the different options. It is important to highlight that the enhanced status quo does not include an additional allowance for upgrades to stormwater over and above that allowed for by each council. There is too much uncertainty over what any new standards might be and what would be required to meet those for this to be included. The risk that investment required is greater than forecast is highlighted throughout the report including analysis of how the options address that risk.

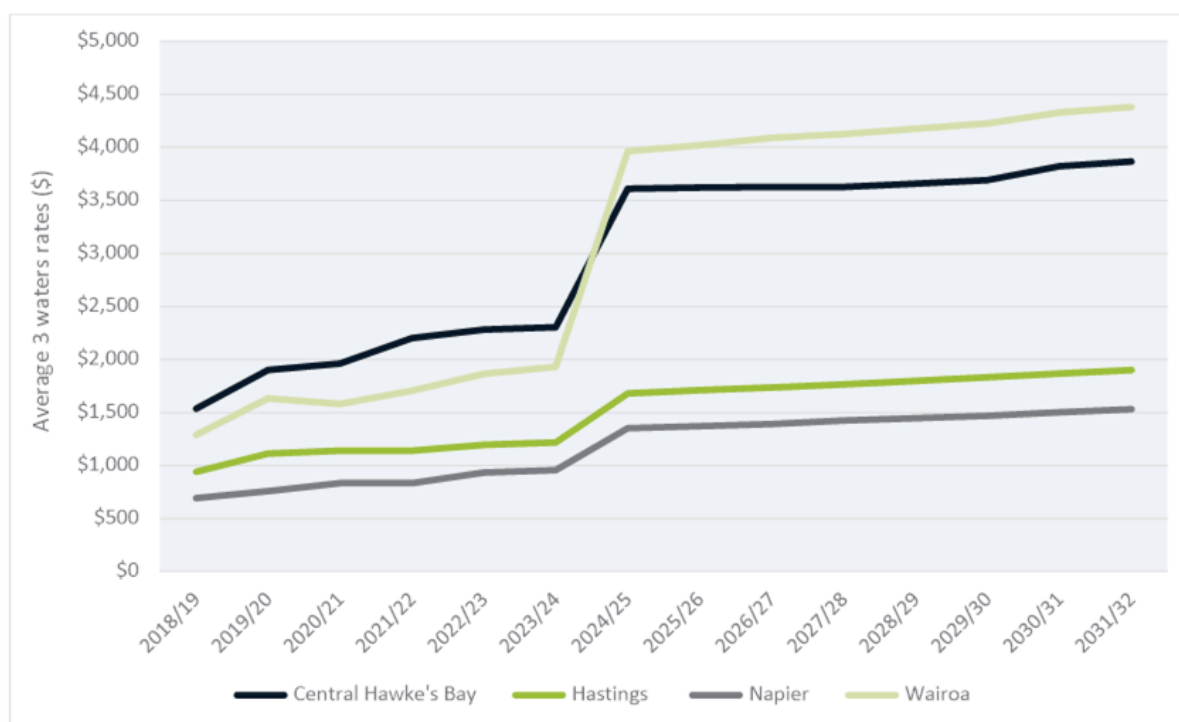
²⁴ Work undertaken by Beca and GHD

²⁵ Page 18, Water NZ Annual Performance Review

²⁶ Ibid



Figure 24 Enhanced status quo: estimated future costs (average three water residential rates)



When considered using the same affordability measure introduced in the analysis of the current costs, the full impact of the enhanced status quo is shown below at the end of the modelling period. This shows that in Central Hawke's Bay and Wairoa unaffordability has increased significantly, with Wairoa now over the 5% threshold.

Table 9 Estimated average three waters residential rate enhanced status quo (2032)

	Central Hawke's Bay	Hastings	Napier	Wairoa
Average three waters residential rate	\$3,867	\$1,901	\$1,531	\$4,380
Affordability of water and wastewater ²⁷	4.4%	1.9%	1.5%	5.9%

Similarity of challenge

Where there are significant differences between the Councils there are also many similarities. Some of these are set out in the Councils' 30-year infrastructure strategies and highlighted through the current state assessment set out in **Appendix G**. In addition to this, all the communities of Hawke's Bay face a common challenge of funding the expected costs arising in the future for the three waters. These are not only those which are known, quantified and set out in each council's LTPs but also those which are anticipated as arising from the expected reform of the regulatory regime by the Government.

²⁷ GST inclusive two waters rate as a percentage of household income. Relies on 2018 Census data for household income by council area with Morrison Low projections of future values.



Figure 25 Key themes for three waters (from 30-year infrastructure strategies)



Given that the Councils face similar issues, then addressing these challenges in a coordinated way that eliminates duplication and ensures that all councils and their communities have access to the appropriate strategic capacity and capability to do so should be the desired goal.

Different approach to service delivery

Currently, however, the four councils have different approaches to delivering the three waters services with regional activities driven by specific projects and actions rather than a coordinated approach. This project was initiated to seek to identify if there was a better approach for the region.

The number of employees directly involved in delivering water services varies from less than ten in Central Hawke's Bay and Wairoa to 70 FTEs at Napier where City Services staff undertake the operational work. This represents the differences both of the size of each council's three waters network and the service delivery model utilised at each council as illustrated in **Tables 10 and 11**.

Table 10 Internal delivery of three waters services

	Central Hawke's Bay	Hastings	Napier	Wairoa
Asset management	Across all assets	Dedicated three waters	Across all assets	Across all assets
Capital projects	Dedicated three waters	Dedicated three waters	Across all assets	Across all assets
Operations	Dedicated three waters	Dedicated three waters	Dedicated three waters	Dedicated three waters



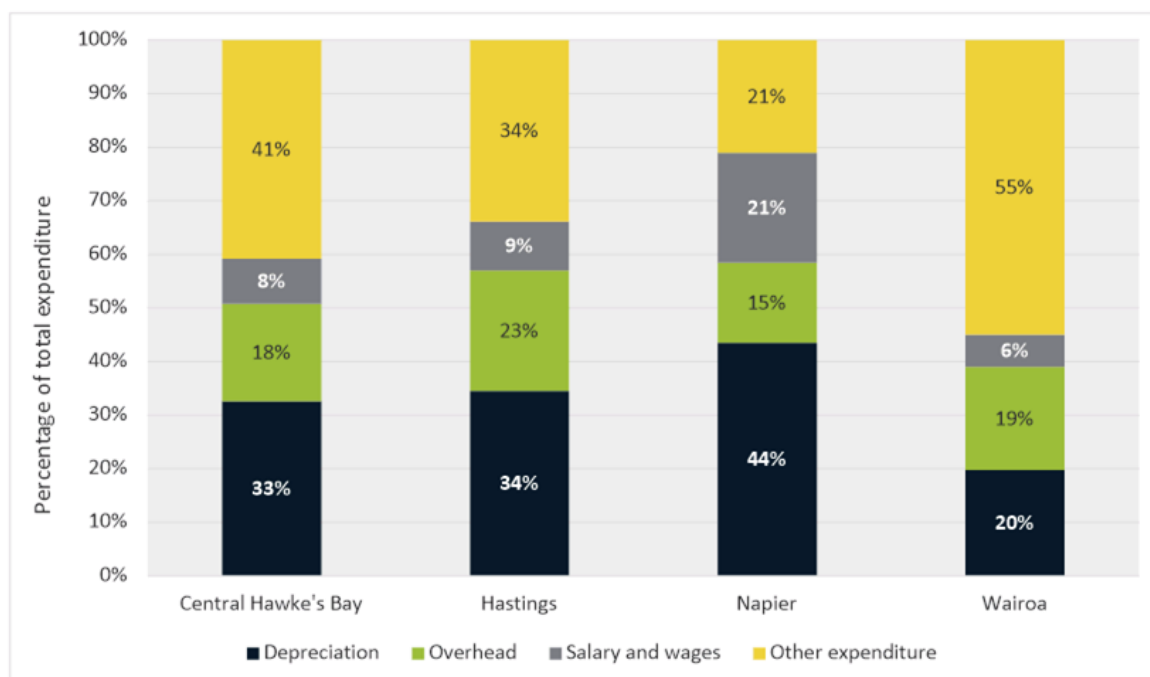
Table 11 Extent of in-house delivery and outsourcing for three waters

	Central Hawke's Bay	Hastings	Napier	Wairoa
Reticulation O&M	Outsourced	Outsourced	In-house with specialist contract support	Outsourced
Treatment O&M	Outsourced	In-house with contract support	In-house with specialist contract support	In house
Professional services	Outsourced on an as required basis	Design/project management largely outsourced	In-house with specialists contracted as required	Outsourced on an as required basis

If a regional approach is adopted, then there will be opportunity to rationalise the contracts, as Wellington Water has recently done for example. However, that would not be able to be implemented until at least the end of 2026 when contract renewal dates could be aligned. There would also be an opportunity to maximise the use of the internal strategic and technical capability and capacity of Hastings and Napier across the region to support the smaller councils where virtually all aspects of the three waters services are outsourced.

The different approaches of the Councils are also demonstrated in the breakdown of Councils' operational cost for three waters. Napier, with a higher reliance on internal staff, spends a much higher proportion on staff than the other councils. The following graph highlights depreciation as a small cost proportionally for Wairoa. We have compared the rates of depreciation being used by the Councils. Wairoa has a comparatively low rate of depreciation for wastewater and stormwater but the highest of the group for water. This tends to indicate that it is not that depreciation is less of a cost for Wairoa, but that other operational expenditure is proportionally higher than the other councils.

Figure 26 Breakdown of three waters expenditure (2018 LTP)





Capacity and capability

Capacity and capability gives an organisation an appropriate level of expertise and resilience. In relation to three waters an organisation needs strategic, technical, and operational capacity and capability. Strategic capacity is important to ensure good long-term asset investment decisions are made.

There are already shortages of three waters resources across New Zealand with Water NZ reporting vacancies of 10% across the country in the 2018-2019 Annual Performance Review. Currently the Councils effectively compete for these scarce resources.

The four councils have different approaches to developing strategic capacity with Wairoa and Central Hawke's Bay largely contracting that in through consultants and contractors. Whereas Napier largely uses internal resources and Hastings's a blend of both. However, as part of the initial review, each council was asked to identify, for each of the three waters separately, the major priorities and challenges. The trend across these was for Central Hawke's Bay and Wairoa's challenges and priorities to be more operational, whereas Hastings and Napier's issues were more strategic. In our view this indicates the differences in the capability and capacity of the Councils.

External debt

There is a wide variation in the Councils' approach to managing and using debt. The current position of three waters debt and revenue is shown in **Table 12** where the major difference is between Napier and the other councils, where debt is not used to the same extent as the other councils, is highlighted. Over the period of the LTP, all the councils remain within the Local Government Funding Agency limits at a whole of council level.

Differences in the use of debt highlights key differences in each council's approach toward funding and financing the purchase of new infrastructure assets.

We have not made any judgements on the approach of any of the Council's use of debt but note that when considering regional service delivery models, finding a way to balance the different debt levels and approaches to debt of the Councils can be challenging.

Table 12 2019/20 Three waters debt

	Central Hawke's Bay	Hastings	Napier	Wairoa
Total debt	\$22.8 million	\$116.7 million	\$10.9 million	\$7.5 million
Average loan term	18 years	25 years	25 years	24 - 45 years
Debt to asset ratio²⁸	23 %	18.8 %	2.9 %	18.2 %
Interest cost per annum	\$823,000	\$3,949,000	\$862,000	\$109,000
Interest to revenue²⁹	11.4 %	15.9 %	4.5 %	3.2 %

²⁸ 2019/20 total projected debt divided by 2019/20 project net book value of infrastructure assets

²⁹ The LGFA limit on borrowing for this ratio is 20% across a council's entire business



Cultural Case

The role of this cultural case is to highlight that within the regulatory framework relating to water, Te Ao Māori, through its language, genealogy, stories and traditions, requires a greater level of competency than usual. The cultural case is underpinned by the Treaty of Waitangi.

Summary of the cultural case

The cultural case identifies the potential for a model that paves a pathway of partnership and co-design, underpinned by the Treaty of Waitangi. The opportunity to build a model unique to Hawke's Bay, considerate of the feedback captured through engagement with Māori committees from all five councils.

The cultural case acknowledges the need to consider co-design with Māori of both governance and operational models with a common goal to optimise cultural values across three waters service delivery.

The outcomes of this cultural case align to two relevant investment objects:

To provide services through a model that enables a meaningful role for Māori:

- Adopt a co-design approach to both governance and operations to ensure that co-governance is made meaningful through **operational responsiveness to Māori** cultural values.
- Consider the cultural **capability and capacity** of three waters service delivery to successfully enable Te Ao Māori *the Māori Worldview* to be embedded across the organisation.
- Consider the **cultural performance indicators** of three waters service delivery to monitor the ongoing value of water, accessibility of water and wellbeing of Hawke's Bay people.

To provide services through a model that has the value of water at the centre:

- Consider the cultural **capability and capacity** of three waters service delivery to successfully enable Te Ao Māori *the Māori Worldview* to be embedded across the organisation.
- Consider the **cultural performance indicators** of three waters service delivery that is centred by te Mauri o te wai.
- Consider the **cultural engagement** of three waters service delivery to reach marae communities and whānau with the outlook to connecting with their immediate natural environment.

Responsiveness to Māori is defined in terms of principles, conduct and action, with effective measures, that reach the structures, systems, management, staff and culture of the organisation in such a way that it accounts for the needs and aspirations of Māori in all activities and, in particular, its core business.

The cultural case is intended as a strategic starting point with mana whenua, however, does not intend to presuppose solutions without further engaging with Māori.

Engagement with Māori

The Māori engagement strategy used in this project was to meet with the existing council Māori committees of the four territorial authorities, as well as the Hawke's Bay Regional Council Regional Planning Committee and Māori Committee. Noting that Central Hawke's Bay does not have a formal committee, a meeting was held with Te Taiwhenua o Tamatea in place of a formal committee of Central Hawke's Bay District Council. These meetings were held in February 2019.



The engagement identified a cultural gap in the better business case framework. Initially the approach was to weave a cultural element through the business case but during the project it became clear that a separate cultural case was required. The rationale for a cultural case was that Māori cultural values and traditions associated with water have been well documented within Council processes, however the operational implementation of cultural values was considered to be a gap.

The kōrero from the 2019 workshops with the Māori committees was brought together into seven principles.

Figure 27 Principles

Value Te Ao Māori	Incorporating and implementing mātauranga Māori, culture and values (i.e. Te Aranga Design Principles) are a core element for any potential framework to realise and enhance the region's commitment to Māori to protecting/enhancing water
Value water	Wai is the essence of all life and the world's most precious resource. It is of high importance to Māori, as it is the life giver of all things, a precious taonga, part of our whakapapa
Whakapapa – genealogical links	Recognise and respect the relationship and whakapapa (genealogical link) that mana whenua has with water.
Te mauri o te wai – the life force of water	Mauri is the integrated and holistic well-being and life support capacity of water. The well-being/healthiness of the water, the land and the people are intrinsically connected.
Holistic approach to water	Although the project is based around the review of the service and delivery of the three waters (infrastructure), the proposed model needs to take into account a holistic water approach: there is only one water.
Enabling of Te Tiriti o Waitangi	Involving mana whenua in governance and decision making required to ensure Te Tiriti o Waitangi obligations are met, as well as making sure they are able to actively exercise kaitiakitanga in a practical way
Mana motuhake - identity, self-determination	The identity of mana whenua in Hawke's Bay should not be lost in any potential model. But inclusion and co-governance whilst keeping their identity is an opportunity

These principles informed development of the investment objectives at the heart of this Business Case. However, the cultural case recognises the need for these principles to also be considered on their own.

In a further session held in April of 2020 with the chairs of the Māori committees, the principles were confirmed, and this led to an assessment in this report of how the options incorporate or respond to these principles. This hui was held during a national lockdown due to Covid-19. In many respects the uniqueness of that timing helped provide clarity to the discussion and engagement of the issues with the chairs.

- It was through discussion about assessing the shortlisted options against the investment objectives and in particular the objective of *enabling a meaningful role for Māori*, the chairs articulated that a meaningful role for Māori starts with co-design of the model across co-governance and operations.
- The chairs also reinforced the principles used in the review however they questioned where the Councils' values were in return.
- This led to an assessment as part of the review as to how the options incorporate or respond to the seven principles.

An explanation of each principle is provided below, along with the context and background from the kōrero with specific comments or points of discussion from the workshop that highlight where or how the principles apply in Hawke's Bay.



Principles and values

1. Value Te Ao Māori the Māori world view

Te Ao Māori *the Māori worldview* is integral to the identity of Māori. Incorporating and implementing mātauranga Māori *indigenous knowledge*, culture and values, are a core element for any potential framework in decision-making, business plan and procurement plan development and service delivery to realise and enhance the region's commitment to Māori and protecting/enhancing water.

Adoption of a Māori worldview would place people within the environment, and not in a dominant and exploitive role. It would also reflect the ngākau *heart* and kōrero *voice* of mana whenua, including tikanga *protocols*, kawa *custom* and values, whilst acknowledging their mana, their role as guardians *kaitiaki*, caretakers of the mauri *life-essence* within Te Ao Tūroa, for the benefit and wellbeing of the next generation.

Our workshops highlighted this through discussions and comments on the following:

- Models should consider Te Ao Māori, not just on individual projects or issues but embedded within the organisation
- There is only 'one water'
- Current systems to take water for water supply and treat and discharge wastewater are not incorporating tikanga Māori
- There are alternative ways to treat water using Māori principles, land-based solutions
- Opportunity to use cultural monitoring frameworks e.g. example being developed in Hawke's Bay *Ngā Pou Mataara Hou*
- Incorporate Te Aranga design principles in the design of new infrastructure.

Recommendation: Consider the **cultural capability and capacity** of three waters service delivery to successfully enable Te Ao Māori *the Māori worldview* to be embedded across the organisation.

2. Value wai water

Wai *water* is the essence of all life and the world's most precious resource. It is of high importance to Māori, as it is the life giver of all things, a precious taonga *treasure*, part of Māori whakapapa *genealogy*.

Te wai, he taonga i tuku iho mai i ngā tīpuna

Water is taonga, a precious treasure passed down from our ancestors.

Water is under increasing pressure due to the strain we have put on the world, including rapid urbanisation, food production challenges, aging infrastructure and climate change.

Through urbanisation we have disrupted the flow of water, in particular ngā roimata o ngā Atua, the tears of Ranginui *sky father* to Papatūānuku *earth mother*. We have made the land impervious to water through laying concrete, asphalt and roofs; we have piped and culverted our waterways; we have taken water from one catchment to serve the people in another catchment.

As a result, many of our local water resources have depleted over time and this has impacted a range of traditional practices. This is especially true for the harvesting of resources, wild foods and plants, where stocks have been depleted or lost, or where discharges of wastewater and stormwater make wild food consumption and recreation unsafe and subject to tapu *cultural restriction*.

This is of real concern to Māori and communities as the health of the waterway is connected to the health of the people; Māori consider they are born of the water and therefore one and the same.

Ko au te awa, ko te awa ko au

I am the river: the river is me.



Our workshops highlighted this through discussions and comments on the following:

- No water, no life
- Access to water is a human right. Many residents, communities and marae do not have access to water supply
- Some communities only have one water
- Water is the reflection of the people; if it is in a poor state, the people are also in a poor state
- Behavioural and attitude change is required across the region
- We need to incentivise change, lead change and be aspirational.

Recommendation: Consider the **cultural performance indicators** of three waters service delivery to monitor the ongoing value of water, accessibility of water and wellbeing of Hawke's Bay people.

3. Whakapapa genealogical links

Recognise and respect the relationship and whakapapa genealogical links that mana whenua have with water. Connect people and communities back to water.

Whakapapa connects all of us, tying us all together. It reminds us of our mortal position in the natural world, our inter connectedness and dependency on water to constitute and sustain us. This reminder needs to be acted upon if Māori are to maintain their tūrangawaewae *standing place* that in turn enables the exercise of kaitiakitanga *guardianship* ensuring humanity to thrive. Our environmental and sustainability challenges in our ever-changing world, specifically climate change, tell how our behaviour toward water and the environment is inconsistent with kaitiaki responsibility. The whakapapa and mauri that hold us and our shared ecology together is being degraded. This risks our existence as we know it. We must remember what is important and we must change our behaviour or we, and the world we know, will be lost.

We, the human element - he tangata - inhabit the space between Ranginui and Papatūānuku. Between the sky father (father of all things) and mother earth (mother of all things). This space was created by their children who form the natural realms and the lifeforms that inhabit them. These elements are connected by a whakapapa that weaves through their wairua *spirit*. These connections and whakapapa surround, extend and give rise to tangata whenua, *the human element*, and our individual experience in the world.

Whatungarongaro te tāngata, toitū te whenua, toitū te wai

Man perishes, but land and water remain.

Our workshops highlighted this through discussions and comments on

- connections of communities and marae to water and waterways
- disconnection of people in the region with their ancestral waterways
- common issues but unique communities
- desire not to lose the important local connections through a big utility service provider who would not/could not understand at the local level.

Recommendation: Consider the **cultural engagement** of three waters service delivery to reach marae communities and whānau with the outlook to connecting with their immediate natural environment.

4. Te mauri o te wai the life-essence of water

Water has a mauri *life-essence*, a vitality or essence that supports all life. Mauri is the integrated and holistic well-being and life supporting capacity of water. The wellbeing/healthiness of the water, the land and the people are intrinsically connected.



- Co-governance, co-creation, co-managed.
- Should be built into the operations of the potential model, not just governance.
- Desire for Māori to be involved in co-design, not to be re-interpreted.

Recommendation: Adopt a co-design approach to both governance and operations to ensure that co-governance is made meaningful through operational implementation of Māori cultural values.

7. Mana motuhake – identify, self-determination

The identity of respective mana whenua in Hawke's Bay must be maintained in any potential model through its process of inclusion, co-governance and implementation.

"Mana motuhake means the authority (mana) gained through self-determination and control over one's own destiny. Mana whenua communities have this authority in their customary 'rohe' or territory and have special cultural relationships with ecosystems in these areas. It is important to proactively engage mana whenua in designing urban environments within their rohe so that they can have a meaningful role in shaping the outcome." - Urban Water Principles – Ngā Wai Manga (MfE 2018)

Our workshops highlighted this through discussions and comments on

- strong Māori communities
- strong river identity - the "River is the life of our town, and the vibrancy of their community". Waikaremoana is the beating heart and the other rivers are the arteries (if you do not look after these you die)
- "We have nine marae in this district and every marae has water problems - all reliant on tanks (trucking water in) but it is worse now." Waipukurau marae, access to sewerage line stops there, separate pump to push it uphill, every quarter it breaks down, infrastructure is old
- "One of the marae had to be closed because the water was contaminated".
- Māori economy and local employment.



Our actions can enhance mauri, or they can diminish mauri. There are consequences of our actions across the whole water cycle if the equilibrium of water as a precious resource is not maintained.

Te mauri o te wai needs to be considered in any potential model.

Our workshops highlighted this through discussions and comments on

- the need to protect mahinga kai food and resource harvesting. There have been instances where dead and/or degraded shellfish have been observed in Māhia after heavy rain. Reports of sewage flowing into Waipawa and Tukituki, contaminating food sources and wildlife.
- safe waterbodies, swimmable water
- paru *contaminants* dumped into waterways, affecting the quality and health of the water and all that lives in and around the waterways
- the four pou/wellbeings; economic, environmental, social and cultural to be considered
- “put the mauri back into it – how do we blend it back”.

Recommendation: Consider the **cultural performance indicators** of three waters service delivery that is centred by te mauri o te wai.

5. Holistic approach to water

Although the project is based around the review of the service and delivery of the three (infrastructure) waters, the proposed model needs to take into account a holistic water approach: there is only one water.

The potential option should take into account the upstream water (all water that contributes into the three (infrastructure) waters) and the downstream water (all discharges to water). This would include all rivers, lakes, sea, groundwater etc.

Mai te rangi, ki te whenua, Mai uta, ki tai - from the sky to the land, from the hinterlands to the sea

Our workshops highlighted this through discussions and comments on

- the importance of putting water at the centre
- a strong requirement to consider a holistic approach to water
- a Te Ao Māori focused framework for “mountains to sea”
- “all hinges back to the environment – all comes back to the river”
- looking outward toward the future.

Recommendation: Consider the **cultural capability and capacity** required of three waters service delivery to successfully enable Te Ao Māori *the Māori worldview* to be embedded across the organisation.

6. Enabling of Te Tiriti o Waitangi The Treaty of Waitangi)

Involving mana whenua in governance and decision-making roles that enables the active exercise of kaitiakitanga aligns with Te Tiriti o Waitangi obligations.

The Local Government Act requires councils to provide for opportunities for Māori to contribute to decision making processes. Section 6(e) of the Resource Management Act 1991 sets out:

“Matters of national importance – In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for the following matters of national importance: The relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga.”

Workshops with the Māori Committees highlighted this through discussions and comments on the following:

- If the model is not through local government then where and what is the role of Māori?
- Relationships with mana whenua and Treaty of Waitangi partners are critical to any model.



Economic Case

The economic case sets out the options for change and analyses them against the investment objectives, critical success factors from the strategic case and the principles of the cultural case.

Conclusions from the economic case

Asset owning CCO

The assessment in the economic case highlights the asset owning CCO as the model which is best able to meet the investment objectives, the critical success factors and the principles. It is the most effective service delivery model for the following reasons:

- It is the option that best meets the investment objectives and principles defined as part of the review.
- It addresses the issue of affordability.
- A dedicated regional water CCO is expected to concentrate on three water challenges and be able to prioritise investment decisions across the region leading to better environmental and community outcomes than the Councils can individually achieve.
- It would have sufficient scale to create strategic capacity across the region and support the areas where that is currently lacking. Scale, capacity and capability gives a level of expertise and resilience in three waters that can be applied regionally, benefitting all ratepayers of the region rather than only some as is the case now. Importantly the capacity and capability is shared across the region in an ongoing and sustainable way.
- Each of the five Hawkes Bay councils engages with mana whenua who have been complicit in this Three Waters review. They collectively presented and then endorsed seven principles in respect of water (set out in the cultural case), as well as the asset owning CCO as the preferred option. The continuance of involving mana whenua in governance and decision-making roles that enables the active exercise of kaitiakitanga aligns with Te Tiriti o Waitangi obligations.
- A regional water CCO is expected to provide improved asset management, improved management of risk, and be better placed to meet any increased compliance requirements or increased environmental standards than the Councils can individually.
- In addition to being the only model that effectively addresses affordability issues across the region, the asset owning model also maximises available operational savings for the region, ensuring that services are not only affordable, but delivered in a cost effective way.

While the water utility would be of modest size and scale when compared to other national and international examples it still provides improved opportunities for advancement and job enrichment for the staff working in it. Similarly, by being a dedicated water utility there is an improvement in resilience when considered regionally than under the current model through creating greater breadth and depth of resources, right up to and including the board of directors.

The financial benefits generated from aggregation mean that overall, the cost of the three waters service for the region is the lowest under the asset owning CCO model. Notwithstanding that, in our view a key financial benefit is that a regional asset owning CCO reduces the future risk of any single community having to fund an unexpected or unplanned infrastructure upgrade.



The analysis in this report suggests that while a Hawke's Bay regional water CCO is of a small scale it is sufficient to achieve the investment objectives and principles of the region. Notably, the identity of respective mana whenua in Hawkes Bay must be maintained in any potential model through its process of inclusion, co-governance and implementation, supported by, *"It is important to proactively engage mana whenua in designing urban environments within their rohe so that they can have a meaningful role in shaping the outcome."* (Urban Water Principles – Ngā Wai Manga (MfE 2018)

Other options considered

In our view the asset management capability and the understanding of the network performance regionally would improve with the creation of either of the CCO options, but strategic asset management decisions would be the most effective with the regional asset owning CCO. While the economic case identifies that the regional management CCO is also better than the enhanced status quo, it is clear in our view, that the asset owning CCO is the most effective service delivery model for Hawke's Bay. Under the management option the individual councils will still need to approve the funding which may hamper making the best regional investment due to differences of opinion, funding challenges or competing priorities within each council.

The following diagram depicts the core of planning, delivery and control of the three waters services. They are inter-related and difficult to separate, and, in our view, the optimal model is one in which there is clarity around roles and responsibilities.

Figure 28 Core activities for three waters



Under the enhanced status quo all three roles sit with each council. Under the asset owning option all three roles sit with the CCO. Under the management CCO option the roles and responsibilities are shared. This creates a structure that requires significant investment into building and maintaining relationships. It is this shared responsibility that reduces the management CCO from achieving the full benefits of aggregation that the asset owning model can achieve.

Consideration was also given to whether the management CCO could also be funded regionally (different to the Wellington Water model). In our view that is not practical as a long-term solution for Hawke's Bay. Issues relating to "investment into other council areas" would continue to arise and Councils would be left as asset owners, ultimately responsible for the assets and the service, holding residual risks but with almost no ability to control any aspect of the service. It would require a complicated arrangement between the CCO (service provider), Regional Council (regional rating entity) and Council (asset owners).



It is in effect a structure designed to replicate an asset owning CCO model, but it does so without the clarity that is created by transferring the assets and ability to fund itself through charging customers.

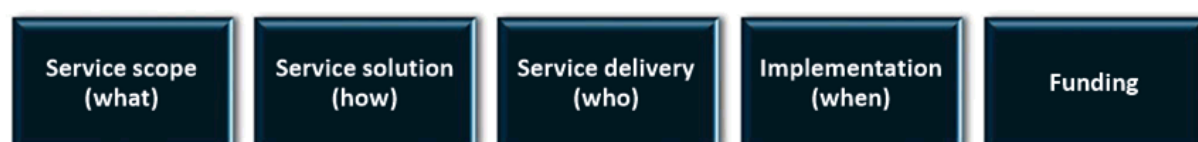
A shared services business unit provides limited benefits and is simpler and cheaper to implement. However, it does so through a relatively complicated arrangement that has had mixed success in New Zealand. There are benefits for Central Hawke's Bay and Wairoa from access to strategic capacity the SSBU would create but these flow through to almost no impact on overall affordability.

While a sub-national management CCO will likely create the largest efficiencies and a water utility with genuine scale, the region would no longer be in control of the service provider. For many communities of Hawke's Bay, the local connection to the provider was highlighted as being of real importance and this was a point reinforced by mana whenua of Hawke's Bay through councils' Māori committee engagement.

Assessment of the long list

A long list of three waters services delivery options was developed using the five dimensions of the Better Business Case approach.

Figure 29 Five long list option dimensions



This structured nature of this approach forces the separate consideration of each dimension rather than the traditional approach of selecting from the usual answers and seeing which fits best. The advantage is that all potential options are canvassed and considered at the initial stage.

All options are compared to the enhanced status quo which assumes that there are changes to the regulatory settings. In all other respects the enhanced status quo remains as it is with the four territorial authorities³⁰ delivering the three waters services under their current arrangements. While the precise nature of the regulatory changes are not yet known, these changes are assumed to be increased environmental standards and compliance requirements. For the purposes of this assessment, this is assumed to be leading to increased operational costs and further capital expenditure in order to upgrade existing treatment plants to meet these new higher standards and relies on information provided by the Department of Internal Affairs and discussions with the councils. That sees the three waters capital investment across the four councils 2018-2028 LTP period increase from \$313 million to \$605 million.

All options have been considered as operating in the new regulatory environment, but it is important to highlight that the enhanced status quo represents real change and that presents affordability challenges for two of the four councils.

The long list of options is set out in **Appendix E** along with the long list assessment in **Appendix F**. Options that did not meet the strategic objectives or critical success factors were then discarded from further analysis. The principles were not used in the assessment of the long list as at the time a cultural case had not been developed.

³⁰ Hawke's Bay Regional Council has no direct role in the delivery of three waters services except in a number of overlaps between land drainage and urban stormwater



Short list

The long list assessment was confirmed through a workshop with the Council's project team on 12 March 2019. A high-level analysis was undertaken using the investment objectives and critical success factors. Key findings at the long list stage were:

- Stormwater.** The service being considered should be the three waters. While there are technical and operational reasons that could see stormwater being either included or excluded. The holistic approach to water, expressed as a principle by Māori is that there is only one water and any potential option should take into account the upstream water (all water that contributes into the three ((infrastructure)) waters) and the downstream water (all discharges to water). This would include all rivers, lakes, sea, groundwater etc.
Mai te rangi, ki te whenua, Mai uta, ki tai - from the sky to the land, from the hinterlands to the sea
- Delivery Model.** Whether the ultimate delivery model was through staff, contractors and consultants or a mix was not as important at this stage as determining the right organisation. A mixed model where a balance of staff, contractors and consultants was used was the likely outcome and the organisation(s) would themselves work out the appropriate mix. What was identified was that neither an entirely outsourced model or entirely insourced model was appropriate, and that the organisation(s) should retain control over the strategic asset management function under any model.
- Delivery Options.** The delivery model itself was one of the critical decisions and there were multiple options with this that if implemented well could meet the investment objectives and critical success factors and that these would need to be evaluated in detail.
- Regional Approach.** The strong intention of the Councils was to move forward together to implementing a preferred option, once that is identified, and the analysis should assume that as the position. The strength of a regional approach was recognised as was the likely reduction in benefits if one of more Councils did not proceed.

Affordability. Given the affordability challenge in the region different options for funding need to be explored including different options to that which currently exist in New Zealand.

The following options were determined as the short-list:

- Enhanced status quo – Noting that the future status quo will be considerably different to the current and will therefore be evaluated as an enhanced status quo
- Option 1 – Three waters shared services business unit with
 - current council funding
- Option 2 – Three waters management CCO
 - current council funding
 - regional funding
- Option 3 – Three waters asset owning CCO
 - regional funding

All options were required to consider the opportunities available from government support.

In addition to these options, the additional costs and benefits of sub-national management CCO were to be compared at a high level to the costs and benefits of a regional management CCO so that the additional costs and benefits of that model being sub-national could be considered.



Responding to community desires for different service levels

Like the Councils, a regional water CCO, whether asset owning or the management option could accommodate community desires for different levels of service such as un-chlorinated water. In doing so any organisation would have to ensure that the regulations and standards could be met. In an article for Water New Zealand magazine called 'Chlorine-free Drinking Water - how might that be done?'³¹ Jim Graham, who at the time was Water New Zealand's Principal Advisor Water Quality, looked at how exceptions to treatment and residual disinfected water supplies might look in a New Zealand environment. He considered the Danish example as the most suitable model for New Zealand. Mr Graham referred to greater efforts in source protection, increased research, compliance with appropriate standards, backflow devices on every property, a reduction of water leaks to below 5% and attitudinal change from suppliers and customers such that there was acceptance that the costs likely to arise from the provision of unchlorinated water were considered worthwhile.

These would all be issues that a water supplier, regardless of the model would need to take into account and to be successful in Hawke's Bay be able to deliver if the community or communities so desired. But what is of particular relevance for this review is the paragraph which states

"both the Dutch and Danes said that corporatised water entities, large or small were essential because decision making needs to be independent of other municipal activities. Decision makers need specific water supply knowledge and water funding should not be competing with other projects."

We note that Jim Graham is now the Principal Technical Advisor at Taumata Arowai.

Assessment of shortlist options

The financial case sets out the costs and benefits of each option and their impacts at a regional and individual council level. There are, however, many non-financial costs and benefits of each option which need to be considered. This section concentrates on those.

The comparison of the short-listed options again uses the investment objectives and principles to both demonstrate the differences between the options and the relative strengths and weaknesses of each. All comments on alternative options are as a comparison to the enhanced status quo and from a regional perspective.

A summary of each option is set out before the assessment with further detail about roles and responsibilities set out in **Appendix A**. For the sake of clarity, we highlight that none of the options include assumptions about installation of water metres or volumetric charging, nor provide for privatisation of the water services or assets.

Enhanced status quo

Function

- Each council would plan and deliver all capital and operational works within their council area
- Accountability for overall performance of the networks would lie with each council
- Each council would continue to fund and finance the services from within their respective council areas according to their own policies and approaches

Operation

³¹ Water, July/August 2019 Issue 210 at Page 28 https://www.waternz.org.nz/Article?Action=View&Article_id=1656



- The council will continue to employ staff and determine the right mix of staff, consultants and contractors for three water services and all associated corporate support
- Operational plant, equipment and vehicles would remain the property of each council (except where services are contracted out and plant, equipment and vehicles are the contractor's property) as would the replacement programs
- Regional projects would continue on an ad-hoc basis with Central Hawke's Bay and Wairoa largely benefiting from picking up on initiatives driven by Hastings and Napier

Governance

- The Councils with the support of the relevant committees in each council will provide oversight of the three waters services including the councils standing committees, Māori Advisory and/or liaison committees
- Assume that the Hawke's Bay Drinking Water Governance Joint Committee continues in a regional role
- Public Interfaces
- Each council would maintain their role as the interface with the community. Customer service, billing and all major customer interfaces is with the Councils



Table 13 Summary of assessment against investment objectives – enhanced status quo

	To provide three water services in a way that is affordable and effective
Impact on customers / ratepayers	
<ul style="list-style-type: none"> ▪ The anticipated future costs of upgrading infrastructure and meeting an enhanced regulatory requirement will have a significant impact on all the ratepayers of Hawke's Bay. The biggest impact, however, is on Central Hawke's Bay and Wairoa. ▪ The average three waters rate in Central Hawke's Bay and Wairoa is forecasted to rise by 107% and 160% at an average of 8% and 12% per annum respectively. In both cases the average cost of water and wastewater in these districts is approaching the highest of the international affordability metrics referenced by Water NZ of 5% of household income, with Wairoa forecast to exceed that threshold. 	
Asset management	
<ul style="list-style-type: none"> ▪ The four councils will continue to undertake strategic and technical AM activities independently. Opportunities to share and collaborate AM initiatives regionally will be based on individual asset managers (or fraternity approach) rather than building institutional knowledge. This approach will continue with using consultants to fill the capacity gaps. For the two rural councils, they will continue to be operationally focused, reacting to incidences, and meeting mandatory requirements as needed. They will less likely plan long term due to limited resources. Assets may not be managed proactively in terms of risk, levels of service and costs with the enhanced status quo option. 	
Financial sustainability	
<ul style="list-style-type: none"> ▪ Councils can and do set their rates based on the services they provide. They are therefore capable of raising the revenue necessary to provide the three waters services regardless of the costs. However, rising three water costs will mean council investment is focused on three waters and other council services and activities may be reduced in order to alleviate impacts on the ratepayers. ▪ In the post Covid-19 councils will be under pressure to keep rates low, lead communities and stimulate their local economies. This will force councils to make difficult trade-offs. ▪ The Councils' debt profiles under the enhanced status quo option sees borrowing peak at \$433 million across the region (in 2023/24). With the impact of Covid-19 changing appetites for taking on debt. 	
	To provide services that are safe, reliable and resilient
Resilience	
<ul style="list-style-type: none"> ▪ The four councils will continue to operate their water systems independently. This will result in low level of resilience capability and readiness with operators only having knowledge of their own plants, limited documented processes, limited standardisation of plants regionally and aged workforce. Critical equipment spares may be available locally but not necessarily shared regionally. ▪ The smaller councils with communities that rely more heavily on a limited number of sectors are exposed to risks of economic shocks that affect those sectors and their communities. There is less resilience across the whole the system of people, funding and infrastructure. 	
Risk management	
<ul style="list-style-type: none"> ▪ Water network risks will continue to be understood and managed at operational level. The enhanced status quo option may not structurally support a multi layered risk management approach which is more common with larger organisations particularly utility focused. High risk events may not be escalated as dealt with informally. ▪ Similar to asset management above, risk management opportunities to share and collaborate initiatives regionally will be based on individual asset managers. For the two rural councils, they will continue to react to incidences due to limited resources and competing demands. There may be less focus on critical assets. Good practice risk management documentation such as Emergency Response Plans and Standard Operating Procedures will be undertaken separately and be of a variable standard. We note that an Emergency Response Plan is part of the Drinking Water Governance Joint Committee work programme. 	



Compliance

- The four councils will have less flexibility to respond to changing requirements (such as legislation changes or higher environmental standards) and the ability to discuss strategically with the regulator (i.e. Regional Council, Taumata Arowai and Ministry of Health) with the enhanced status quo option. Meeting increasing compliance requirements such as SCADA system and consent monitoring will be undertaken separately. Discussions with the Regional Council on strategic issues such as NPS Freshwater Management and consent conditions for specific schemes will be undertaken separately. This may lead to less cost-effective strategic outcomes for the region.



To provide services through a model that enables a meaningful role for Māori

Treaty of Waitangi partnership

- No change. The Local Government Act continues to require councils to give effect to principles of Treaty of Waitangi and each council determines how to give effect to this.
- Engagement with the Chairs of the Māori committees indicated that the status quo does not meet expectations of Māori and the Asset Owning CCO was the preferred option.
- Governance provided by council and relevant individual committees of council and the region wide Joint Committee on Drinking Water. Māori committees continue in their roles with limited or no delegated authorities noting that Hastings District Council now has a role for mana whenua on each committee.
- Currently, little opportunity for Māori to participate in decision making relating to three waters.



To provide services through a model that has the value of water at the centre

Environment

- Increased national regulatory standards assumed to have affect and lead to better environmental outcomes as a result with associated investment required to deliver those.
- Different approaches across the region continue with affordability and strategic capacity having an impact on the ability of each council to respond to requirements for investment and when that can take place.
- Balance between investment in three waters and other services and assets will continue to be made with this now exacerbated by post Covid-19 response plans limiting budgets and requirements to focus on economic recovery.

Community

- No change: retains greatest connection between community and the services provided.
- Strong connections to community remain through well-established mechanisms, links, people and identify of their Councils.
- Single provider of 'council services' provides clarity of accountability and responsibility for community that can be accessed through established channels.

Cultural

- No change. Different approaches across the region with these being driven by the Council and the individual needs of Māori and mana whenua.
- Connections remain through well-established mechanisms and links to the individual councils.
- Te Ao Māori principles incorporated into individual projects on an ad hoc basis.



To provide three waters services in a way that supports our urban and rural communities

Social and economic impacts

- The status quo will retain the existing operational, technical and strategic roles in each council and community (through staff, consultants and contractors).
- Cost increases for the three waters services will impact all communities creating future affordability issues in particular for Central Hawke's Bay and Wairoa. Impact of cost increases will most be felt most by those who can least afford the increases e.g. fixed and low-income households.
- Significant cost increases may affect the future growth of these areas.
- Councils retain full control over all aspects of growth planning and infrastructure provision for their areas. Local matters can be prioritised to support growth and development.



Local connection

- No change, councils retain the role of service provider.



To provide three waters services that builds enduring capability and capacity

Technical and operational

- Succession planning and dealing with an aged workforce will be undertaken separately or in limited capacity. This may result in key operational staff working for long periods with health and safety implications. There is a risk of high staff turnover due to fatigue or extended sick leave. It may be difficult to attract and retain new staff in these situations.
- Councils will continue to compete with each other, the private sector and Taumata Arowai for resources. Further exacerbating challenges with recruitment and retention of appropriately skilled and experienced staff.

Strategic capacity

- The strategic capacity will remain embedded within the four councils with the enhanced status quo option. Capacity and capability will be unevenly spread across the region.
- Strategic capability / capacity is more limited for the two rural councils due to their size. They are generally more focused on operational aspects and meeting mandatory requirements.



How does this option incorporate or respond to the seven principles developed by Māori?

- Engagement with the Chairs of the Māori committees indicated that the status quo does not meet expectations of Māori and the Asset Owning CCO was the preferred option.
- Under the current approach, the key requirements established in the Local Government Act in order to give effect to the principles of the Treaty of Waitangi are around maintaining and improving opportunities for Māori to contribute to local government decision making processes. While we acknowledge Hastings District Council has put in place Māori representation on all committees, in general the role for Māori in three waters is an advisory one or consultative. The chairs of the Māori committees also highlighted the advisory nature of the Māori Advisory Board of Taumata Arowai as an example of the status quo approach.
- Incorporation of the principles under the status quo largely relies on the individual practice or approach of a Council rather than it being part of a system designed to give effect to them.



Shared Services Business Unit

Function

- The Shared Services Business Unit (SSBU) would aim to develop a single set of strategic asset management plans and a combined infrastructure delivery programme for implementation across the region.
- The SSBU would plan and deliver all capital and operational works within the sub-region.
- Accountability for overall performance of the networks would lie with the Councils.
- The SSBU would have regional strategic oversight of network management and implement asset management strategies across the region which may be uneconomical for some of the councils to introduce individually.

Operation

- The SSBU would operate as a ring-fenced business unit and would not exist as a separate legal structure. Staff would be seconded into the SSBU but remain employed by their original council on the current terms and conditions.
- The SSBU would only have the limited corporate support with the existing three waters structures to supplement the three waters specialists but largely would be supported by service level agreements (SLAs) with respective councils to provide the full range of support.
- SSBU would co-locate staff (virtually and physically) bringing together all management, administration, asset management, planning and project management staff, and the coordination of the maintenance crews. Wairoa and Central Hawke's Bay would operate as satellite offices.
- Any physical works staff would be accommodated either at treatment plants or in existing locations. Napier operational staff remain working out of the existing depot.
- Operational plant, equipment and vehicles would remain the property of each council as would the replacement programs.
- Operations and maintenance costs would be coded for costing through logging of work orders (within the systems adopted by the SSBU) to each council's network and asset identifiers, to enable costs to flow through the relevant council as required.
- The SSBU would consolidate materials and consumables across the sub regional networks to develop economies of scale.
- To produce the maximum opportunity to provide enhanced services, the SSBU organisation structure will be finalised at the establishment planning stage to ensure there is increased capacity and capability in the SSBU, and not simply the sum of the relevant parts of the Councils. There may be different positions required than currently exist across the combined councils, but it is expected that the total management and operational staff costs will be no more than the current group totals.

Governance

- The councils with the support of the relevant committees in each council will provide oversight of the three waters services including the Māori Advisory or Liaison committees.
- Assume that the Hawke's Bay Drinking Water Governance Joint Committee continues in a regional role and that could potentially increase in scope to include wastewater and stormwater
- SSBU would be supported by an advisory board that the CEO would report to. Formal reporting lines to each council would be through a joint committee of the Councils.

Public Interfaces

- Councils would maintain their role as the interface with the community. Customer service, billing and all major customer interfaces is with each of the Councils.



Table 14 Summary of assessment against investment objectives – shared services business unit

To provide three water services in a way that is affordable and effective
Impact on customers/ratepayers <ul style="list-style-type: none"> The anticipated future costs of upgrading infrastructure and meeting an enhanced regulatory requirement will have a significant impact on the ratepayers of Central Hawke's Bay and Wairoa. A SSBU provides only a minor reduction in impact compared to the status quo through expected savings that can be delivered as a result of improved asset management and aggregating the technical capability across the region. Over the next twelve years the average three waters rate in Central Hawke's Bay and Wairoa is forecasted to rise by between 91% and 141% at an average of between 7% and 11% per annum.
Asset management <ul style="list-style-type: none"> There will likely to be more asset management undertaken with larger in-house capability with SSBU across the now shared resources. The SLA will need to ensure the scope and deliverables are clearly defined to achieve good asset management benefits. Resource levels will need to be closely monitored to ensure it delivers the asset management programmes. There is opportunity to build in house asset management capability and the understanding of the network performance should improve with the SSBU option. It may not have the capability and strategic capacity of a dedicated water authority so improvements may be limited. The strategic investment decisions will still be made by the individual councils so limited benefits with this option.
Financial sustainability <ul style="list-style-type: none"> Councils can and do set their rates based on the services they provide. They are therefore capable of raising the revenue necessary to provide the three waters services regardless of the costs. However, rising three water costs will mean council investment is focused on three waters and other council services and activities may be reduced in order to alleviate impacts on the ratepayers. The Councils' debt profiles under the shared services business unit option sees borrowing peak at \$428 million (in 2023/24) for three waters.
To provide services that are safe, reliable and resilient
Resilience <ul style="list-style-type: none"> There is opportunity to improve resilience with all operators and key operational staff located physically and/or virtually within the SSBU. Critical equipment spares would be available to share regionally. However, there are no commercial incentives with the SSBU to make major changes such as standardisation of plants, processes or procedures. The smaller councils with communities that rely more heavily on a limited number of sectors are exposed to risks of economic shocks that affect those sectors and their communities. There is less resilience across the whole the system of people, funding and infrastructure.
Risk management <ul style="list-style-type: none"> The water focused SSBU will more likely have the resources to improve risk management practices compared to the enhanced status quo option. The SLA will need to state the risk practices that need to be strengthened to ensure it is delivered. The less robust structure of the SSBU means that it is unlikely to bring new risk ideas or practices to the region in the same way that the industry specialist CCOs will. A suitable risk management framework may not be adopted with this option.
Compliance <ul style="list-style-type: none"> The water focused SSBU will have the resources to meet the current compliance requirements (i.e. SCADA and drinking water compliance). The asset owners in each council will still need to make any significant strategic decisions / negotiations with the regulators and not with the SSBU. This may not lead to less cost-effective strategic outcomes for the region with the shared services BU.



To provide services through a model that enables a meaningful role for Māori

Treaty of Waitangi partnership

- No change. The Local Government Act continues to require councils to give effect to principles of Treaty of Waitangi and each council determines how to give effect to this.
- Engagement with the Chairs of the Māori committees indicated that the status quo does not meet expectations of Māori
- Governance provided by council and relevant individual committees of council and the region wide Joint Committee on Drinking Water. Māori committees continue in their roles with limited or no delegated authorities noting that Hastings District Council now has a role for mana whenua on each committee.
- Currently, little opportunity for Māori to participate in decision making relating to three waters

To provide services through a model that has the value of water at the centre

Environment

- Increased national regulatory standards assumed to have affect and lead to better environmental outcomes as a result with associated investment required to deliver those.
- Different approaches across the region continue with affordability and strategic capacity having an impact on the ability of each council to respond. Balance between investment in three waters and other services and assets will continue to be made.

Community

- No real change retains greatest connection between community and the services provided.
- Strong connections to community remain through well-established mechanisms, links, people and identity of their councils.
- Communities should remain able to choose individual services levels that may be over and above the 'standard' e.g. unchlorinated water. Responsibility for and decisions will rest solely with each individual Council.
- While SSBU has little public 'brand', the regionalisation of people and the services while still retaining the councils as the public interface could lead to less clarity of accountability and responsibility for the community.

Cultural

- No change. Different approaches across the region with these being driven by the Council and the individual needs of Māori and mana whenua.
- Connections remain through well-established mechanisms and links to the individual councils.
- Te Ao Māori principles incorporated into individual projects on an ad hoc basis.

To provide three waters services in a way that supports our urban and rural communities

Social and economic impacts

- The SSBU will retain the existing operational, technical and strategic roles in each council and community (through staff, consultants and contractors).
- Cost increases for the three waters services will impact all communities creating future affordability issues in particular for Central Hawke's Bay and Wairoa. Impact of cost increases will most be felt most by those who can least afford the increases e.g. fixed and low-income households.
- Significant cost increases may affect the future growth of these areas.
- Councils retain full control over all aspects of growth planning and infrastructure provision for their areas. Local matters can be prioritised to support growth and development.
- Development of a single set of standards and a consistent approach to their application for all across the region will simplify things for developers and community.

Local connection

- Councils retain the role of service provider, some element of regionalisation through the SSBU but community unlikely to recognise any change in provider.



To provide three waters services that builds enduring capability and capacity

Technical and operational

- The shared services SSBU provides an opportunity to train operators to be interchangeable between plants, authorities and attract and retain new staff. The SSBU will need to compete with the private sector for staff. The SSBU still will be at a relatively moderate scale compared with the private sector. There will be some benefits with this option as the SSBU can make operational decisions regionally.
- Harmonising the asset management systems and processes will be more difficult with the SSBU option than with the CCO options.
- The aggregation of specialist resources provides some improvement for advancement and job enrichment but not at the same scale as a dedicated water utility. While staff would be seconded from the region into the SSBU it still relies on individual Councils resourcing and recruiting roles.
- SSBU structure is less robust than CCO structures and relying on SLAs for shared support services creates a more complex arrangement to administer. Highly reliant on relationships.

Strategic capacity

- Strategic capacity may be built up to a greater extent with the SSBU than the status quo, the increase is limited and modest.
- The SSBU does not have the scale and robustness of a dedicated water utility with wider industry exposure and involvement. The lack of certainty and longevity inherent in shared services will hamper the investment needed for real benefits to be achieved.



How does this option incorporate or respond to the seven principles developed by Māori?

- This option presents little change and is also therefore not considered to respond to or incorporate the principles.
- While a joint committee including Māori could have oversight, the principles and kōrero focussed on co-design and co-governance. Achieving these within what is effectively a status quo structure is unlikely to be successful in making the step change needed. In fact, in our view making that change would mean the opportunity to incorporate or respond to those principles would be lost.
- Engagement with the chairs of the Māori committees indicated that the status quo does not meet expectations of Māori and the Asset Owning CCO was the preferred option.



Regional Management CCO

Function

- The CCO would aim to develop a single set of strategic asset management plans and a combined infrastructure delivery programme for implementation across the region. This would be done by first reviewing all current Asset Management Plans, converting them to a common and consistent basis, then consolidating them into a sub-regional plan.
- The CCO would plan and deliver all capital and operational works within the region. Costs are then recovered from each council depending on the funding model chosen.
- Accountability for overall performance of the networks would lie with the CCO, except where a council has chosen not to proceed with the CCO's recommendations.
- Councils are the water supply authorities for the purposes of the Health Act.
- The CCO would have regional strategic oversight of network management and implement asset management strategies across the region which may be uneconomical for some of the councils to introduce individually.

Operation

- The CCO would operate as a separate legal entity external to all four councils, with its own governance, executive, administration support, procurement strategies, and operational equipment.
- The CCO would co-locate staff (virtually and physically) bringing together the management, administration, asset management, planning and project management staff, and the coordination of the maintenance crews and contractors. Wairoa and Central Hawke's Bay would operate as satellite offices.
- Any physical works staff would be accommodated either at treatment plants or in existing locations. We have assumed that Napier operational staff remain working out of the existing depot either as staff working for the CCO or Napier City Council staff working under contract for the CCO.
- The CCO would have its own financial systems, IT arrangements, risk management systems and a single asset management system which would all be introduced over time.
- Operational plant, equipment and vehicles would be sold to the CCO by each council at valuation. Funding for purchasing this equipment, along with sufficient reserves for working capital and to ensure equipment can be replaced, would be included in the initial capital provided to the CCO by all four councils. Typically, the operational funding requirement is related to the expenditure over the first six weeks to two months' trading.
- Operations and maintenance costs would be regionalised but coded for costing through logging of work orders (within the systems adopted by the CCO) to each council's network and asset identifiers. The CCO would consolidate materials and consumables across the sub regional networks to develop economies of scale
- The CCO is not intended to make a profit so it ought to be able to maintain lower rates than other external businesses.
- To produce the maximum opportunity to provide enhanced services, the CCO organisation structure will be finalised during the transition to ensure there is increased capacity and capability in the CCO, and not simply the sum of the relevant parts of the Councils. There may be different positions required than currently exist across the combined councils and there are additional roles created due to new corporate roles.
- The CCO would produce a capital works programme (including renewals) for each council annually in advance, along with drivers for key project. Each council would have the opportunity to approve or change the programme planned for their area, including the ability to add projects that have become significant for the council. Similarly, the CCO will be transparent about its maintenance plans (including intervention strategies) which would be derived from the Asset Management Plans.



- Once approved, the council would then have responsibility for funding the agreed list of works to be undertaken by the CCO or others. The utilisation of different funding mechanisms would be at the discretion of each council.
- Although councils have existing time frames for determining rating requirements, earlier time frames may need to be introduced for reaching agreement between the CCO and each council, similar to that afforded large contractor works at present, in order for the CCO to be able to operate efficiently.
- Having approved the maintenance plans as part of the AMP, councils would be aware if significant changes to existing funding levels are expected.

Governance



- Assumed that a co-governance model is adopted as part of responding to the cultural case
- The regional water CCO would report to and be held accountable by a joint committee of the Councils that include Māori in a co-governance role (shareholder committee). Involving mana whenua in governance and decision-making roles that enables the active exercise of kaitiakitanga aligns with Te Tiriti o Waitangi obligations and section 6(e) of The Local Government Act that requires councils to provide for opportunities for Māori to contribute to decision-making processes.
- A small board of professional directors would be appointed. The CEO would report to the board.

Public Interfaces

- Customer management would transition to the CCO. The transfer of customer services was found to a key success factor for Wellington Water.
- Vested infrastructure assets and development contributions would continue to be received by the relevant council. As the infrastructure became required, the contributed funds would be paid to the CCO as part of the capital delivery programme.
- The CCO would procure goods and services in its own name in order to deliver the required services.



Table 15 Summary of assessment against investment objectives – regional management CCO

 To provide three water services in a way that is affordable and effective
Impact on customers/ratepayers <ul style="list-style-type: none"> Regionalising the operational costs, the councils benefit from efficiencies of scale. This flows through particularly for Central Hawke's Bay and Wairoa where the future cost of three waters services reduced from the status quo as a result of the increased population base over which these costs are shared. While at a regional level it moves from having four councils that residents, developers and the regional council may have to deal with bringing consistency of standards and approach. For residents it means potentially dealing with both the Council and a water CCO and creates the possibility of confusion over who is responsible for what. Stranded costs mean that the cost of the remaining services of each council will rise but when taken together the overall cost of the local government services for almost all ratepayers is less than it would be under the status quo.
Asset management <ul style="list-style-type: none"> The regional management CCO would be water focused and provide strategic asset management capability for multiple water networks. There would be large amount of work required to prepare a single Asset Management Plan and regional asset management strategies and work programmes. Strategic decisions must still be made by the asset owning councils which may hamper the decision-making capability of this option. Separate council priorities and service levels may require some loss of efficiency with the CCO required to plan for different requirements from funding agencies. The individual councils will still need to approve the funding which will limit the ability of the CCO to make the best for region investment due to differences of opinion or funding challenges. Asset management capability and the understanding of the network performance regionally will improve with the regional management CCO option. The strategic investment decisions will still be made by the individual councils so a lot of effort to gain moderate benefits with this option.
Financial sustainability <ul style="list-style-type: none"> The financial benefits generated from aggregation mean that overall, the cost of the three waters service for the region is less under this model than it would be under the enhanced status quo. Each council funds its capital expenditure so rising costs for upgrades and or new infrastructure still falls on small communities. If Council investment is focused on three waters, then other council services and activities may be reduced in order to alleviate impacts on the ratepayers. In the post Covid-19 councils will be under pressure to keep rates low, lead communities and stimulate their local economies. This will force councils to make difficult trade-offs even under the management CCO model. The Councils' debt profiles under the management CCO option sees borrowing peak at \$423 million (in 2023/24).
 To provide services that are safe, reliable and resilient
Resilience <ul style="list-style-type: none"> There is opportunity to improve resilience with all operators and key operational staff located within the single entity. Critical equipment spares would be available to share regionally. The larger entity would have the smarts to make major changes such as standardisation of plants and documented processes. A regional management CCO would be able to create greater breadth and depth of resources to improve resilience. A regional CCO would have the financial capacity to meet and respond to any future challenges better than an individual council could. However, due to funding arrangements limiting capital expenditure to within the council area the smaller councils with communities that rely more heavily on a limited number of sectors are still exposed to risks of economic shocks that affect those sectors and their communities.



Risk management

- The water focused entity will have the resources to improve risk management practices compared to the enhanced status quo or the SSBU option.
- The water focused Board of professional Directors is expected to have a higher level of expectations for risk including a risk management framework and the suitable underlying technical risk documents such as activity risk registers. Their risk appetite will be set by the Board but guided by the councils through the Statement of Intent and funding.
- Operational risks transfer to the CCO in the management option but as the Councils hold the funding responsibility and strategic decision-making responsibility, they will also hold risks associated with those.
- Model requires a significant focus on relationships between the CCO and the Councils. Relies on a high degree of trust to be effective.

Compliance

- The water focused CCO will have the resources to meet the current compliance requirements (i.e. SCADA and drinking water compliance). The single entity will have clear accountabilities under its SOI for each council.
- The asset owners in each council will still need to make any significant strategic decisions / negotiations with the regulators and not with the management CCO. This may not lead to less cost-effective strategic outcomes for the region with the management CCO option.



To provide services through a model that enables a meaningful role for Māori

Treaty of Waitangi partnership

- A Hawke's Bay water CCO would provide the opportunity to develop a framework that involves and engages with Māori that is designed for Hawke's Bay rather than accept a nationally imposed approach.
- To be effective the model will need to incorporate co-governance with Māori so they can contribute as a partner rather than via the advisory role they have had in the past. Based on feedback from the Chairs of the Māori committees the first step in the process will need to be a values-driven, co-design.
- The new provisions of the Local Government Act apply in addition to the "standard" legislative obligations on Councils to give effect to Treaty of Waitangi obligations and the principles of the Treaty of Waitangi. These are
 - the requirement to consider whether knowledge of tikanga Māori is relevant to governance of the CCO and
 - provisions requiring a water CCO, when making decisions that significantly affect land or a body of water, to consider "the relationships between Māori, and their culture and traditions, with their ancestral land, water, sites, wāhi tapu, valued flora and fauna and other taonga."
- Statutory obligations of Councils would be, at a minimum, passed through to the CCO through the Constitution, Statement of Intent, Statement of Expectations and Shareholder Agreements.
- The CCO structure provides the opportunity to embed a new approach. For example, the existing water CCOs in New Zealand have embedded the following:
 - Wellington Water has just updated its approach so that 'mana whenua partnership entities' can be appointed to the Wellington Water Committee. The Committee's role, amongst others is to appoint the Directors of Wellington Water and provide oversight.
 - Watercare – Independent Māori Statutory Board
 - statutory responsibility to promote Issues of Significance to Māori
 - oversight of projects, planning through to implementation and 'call in' powers.



To provide services through a model that has the value of water at the centre

Environment

- Increased national regulatory standards assumed to have affect and lead to better environmental outcomes.
- Dedicated regional management CCO with sole focus on three waters expected to lead to better ability to meet expectations and standards across the region. Bring consistency of approach and services across the region.
- CCO may still be limited by the extent to which each council can/will fund the required upgrades with this exacerbated by post Covid-19 response plans limiting budgets and requirements to focus on economic recovery
- Mixed points of accountability for the regulators as responsibility is shared between the CCO and the Councils.



Community

- Mixed points of accountability for the community across the basket of council services. Three waters services delivery comes from the CCO and the remainder from council and key decisions still made by each council.
- Communities should remain able to choose individual services levels that may be over and above the 'standard' e.g. unchlorinated water. Responsibility for and decisions will be spread across the CCO (as service provider) and the Council (as asset owner and water authority)
- All communities have access to the strategic capacity required to inform good decision making
- Requires community to engage with both the CCO and the Council.

Cultural

- Mixed points of accountability for the community. Three waters services delivery comes from the CCO, yet the ultimate responsibility lies with the decisions made by each Council.
- Requires Māori to engage with both the CCO and the Council.
- Opportunity with the change created with a CCO to develop a new approach to embed Te Ao Māori principles, noting the high degree of similarity between the new Local Government Act provisions relating to CCOs and the principles developed during this review through discussions with the Māori Committees.



To provide three waters services in a way that supports our urban and rural communities

Social and economic impacts

- Three waters services are vital to the social and economic viability of towns and cities. Mitigating expected future increases in costs of these service is important to regional growth and the growth of Hawke's Bay. This option reduces future costs for both Central Hawke's Bay and Wairoa from a level that is considered unaffordable.
- The management CCO option would retain the existing operational, technical and strategic roles that currently exist within each council as
 - under all options the operational roles in the rural and regional communities will continue to exist
 - both Wairoa and Central Hawke's Bay already largely outsourced the three waters service so the location of the roles is arguably already outside of their control and already at the level that could be expected if the service were aggregated.
- Councils retain control over growth planning and infrastructure provision for their areas but for three waters do so with the advice/support of the CCO.
- Local priorities would have to be recognised by the CCO through a prioritisation framework in the Statement of Intent and Shareholders Agreement otherwise local priorities could get lost in a regional view. However, some change can be expected from the current full council control given the broad regional mandate of the CCO and the need to balance regional priorities with local.
- Development of a single set of standards and a consistent approach to their application for all across the region will simplify things for developers and community.

Local connection to three waters service provider

- A regional management CCO governed by a board of professional directors may disconnect the community from the service provider.
- Customer service will be through a different organisation and the CCO will need to ensure that services and service levels for the small communities are at least maintained at the same level or increased in order to be successful.



To provide three waters services that builds enduring capability and capacity

Technical and operational

- The management CCO provides an opportunity to train operators to be interchangeable between plants, locations and attract and retain new staff (staff or contractors). The management CCO will need to compete with the private sector for staff. The management CCO still will be at a relatively moderate scale compared with the private sector with national and global reach including comprehensive training programmes, processes and systems. There will be major benefits with this option as the management CCO can make operational decisions regionally.
- The creation of a dedicated water utility CCO will provide increased opportunity for advancement, professional development, variety of locations and job enrichment for the staff working in it.



- There will be no competition between the councils for resources and the scale, while modest, will better allow them to compete with the private sector, the regulators and other utilities for those resources.
- The asset management systems and processes will likely be harmonised with the management CCO but will depend on the approval of the individual councils. The regional harmonisation will take longer than expected as experienced in the Auckland Region amalgamation (with Watercare and Auckland Transport).

Strategic capacity

- Strategic capacity will be able to be built more effectively with the management CCO than the status quo. The regional water CCO will have the moderate scale and smarts of a dedicated water utility with wider industry experience.
- Crucially for the region this option allows all four councils to benefit from the increase in strategic capacity and capability as that is shared regionally under this model.
- There will be less reliance on consultants for low level project work as they will be used as specialists or for peer reviews.
- There is a window of opportunity post Covid-19 to attract talent to the regions and away from the cities as people re-assess priorities and the job market tightens.



How does this option incorporate or respond to the seven principles developed by Māori?

- A regional three waters CCO provides an opportunity to develop a model that better incorporates and responds to the principles developed in this review than the status quo.
- Engagement with the Chairs of the Māori committees indicated that the status quo does not meet expectations of Māori and Asset Owning CCO was the preferred option.
- A new approach would better accord with the post Treaty of Waitangi settlement structures considered in the commercial case of this report where examples of co-governance are set out. There is also the Regional Planning Committee of the Hawke's Bay Regional Council where co-governance is already currently in action. We note the recently announced reform the health sector accepted by the government³² also proposes a co-governance model for Health NZ with 50:50 representation of Māori and Crown. Sitting alongside that recommendation was one for a Māori health authority that "ensure that mātauranga Māori (Māori knowledge) and Māori health issues are appropriately incorporated into all aspects of the system". This echoes similar sentiments expressed throughout this review around the need for any new model to recognise Te Ao Māori and Te Mauri o Te Wai.
- A new structure, the business and operating models required to implement them all provide an opportunity for a step change and reflect a trend toward co-governance models. There is an opportunity to create a Hawke's Bay specific structure that incorporates the principles of mana motuhake and enabling of Te Tiriti o Waitangi.
- Developing the structure itself is an opportunity to show this in action by providing for a co-design approach which helps establish the governance structure. Developing a values-driven approach would likely need to be the first step in co-design process. The Chairs of the Māori committees articulated an expectation that the councils would, like Māori, define their values for three waters service delivery.
- Development of a three waters focussed entity allows for managing water in its widest sense to be at the core of the obligations, values and approach of the organisation such that it is responsive to Te Ao Māori. Reflecting not just wider community desires but incorporating Te Ao Māori principles of water management throughout the organisation.

³² <https://www.stuff.co.nz/national/health/300035515/halve-number-of-dhbs-drop-elected-boards-sweeping-health-system-reform-plan-accepted-by-govt?rm=a>




Sub-National Management CCO

The assumptions for a sub-national management CCO are the same as for the regional management option.

The key differences are that

- a larger water CCO is created to service a wider population that goes beyond Hawke's Bay
- the savings arising from aggregation including efficiencies of scale and better asset management would be the greatest with the creation of a sub-national CCO or joining into an existing CCO such as South Wairarapa have recently done with Wellington Water
- there is no guarantee that the main office would be located within Hawke's Bay CCO nor that all staff would transfer into the CCO. Hastings, Napier, Waipawa and Wairoa may all become satellite offices.

Table 16 Summary of assessment against investment objectives – sub national management CCO

 To provide three water services in a way that is affordable and effective	
Impact on customers/ratepayers	
<ul style="list-style-type: none"> • A larger CCO is more likely to be able to deliver on efficiency and effectiveness benefits. • These would ultimately flow through to customers and ratepayers although unless all the costs (capital and operational) can be rationalised then the smaller communities will still face significant costs when major infrastructure is required. • Stranded costs mean that the cost of the remaining services of each council will rise but when taken together the overall cost of the local government services for almost all ratepayers is less than it would be under the status quo. 	
Asset management	
<ul style="list-style-type: none"> • The subnational management CCO would be water focused and provide strategic Asset Management capability for multiple water networks for many regions. • There would need to be a decision if there is a separate Asset Management Plan for the Hawke's Bay region or it is included within the subnational area. The Hawke's Bay region's key infrastructure issues, levels of service, asset strategies and investments may be buried in the larger entity. • Strategic decisions will still be made by the asset owning councils which may hamper the decision-making capability of this option. The individual councils will still need to approve the funding which may hamper good investment decisions. • Asset management capability will improve with the subnational management CCO option due to the much larger scale and ability to adopt their good industry practices. Care would be needed to ensure that the understanding of the network performance regionally is retained. • The strategic investment decisions will still be made by the individual councils so much effort to gain moderate benefits with this option. There are multiple asset management risks with the subnational management CCO that would need careful management / oversight. 	
Financial sustainability	
<ul style="list-style-type: none"> • The financial benefits generated from aggregation mean that overall, the cost of the three waters service for the region is less under this model than it would be under the enhanced status quo. • Having a larger group of customers, spread across a wide area with a broad range of economic sectors helps reduce the exposure to sector specific downturns. • However, as each council funds its capital expenditure so rising costs for upgrades and or new infrastructure still falls on small communities. If Council investment is focused on three waters, then other council services and activities may be reduced in order to alleviate impacts on the ratepayers. In the post Covid-19 councils will be under pressure to keep rates low, lead communities and stimulate their local economies. This will force councils to make difficult trade-offs even under the management CCO model. 	



To provide services that are safe, reliable and resilient

Resilience

- Higher level of resilience capability and readiness by merging with a major water entity would be achieved. This needs to be balanced with having key operational staff located within the region.
- Critical equipment spares would be available to share sub nationally. The much larger entity would have the smarts to make major changes such as standardisation of plants and documented processes.
- A water CCO would be able to create greater breadth and depth of resources to improve resilience. These benefits would grow as the size of the CCO grows.
- A regional CCO would have the financial capacity to meet and respond to any future challenges better than an individual council could. Again, this benefit would grow as the size of the CCO grows.

Risk management

- There is an opportunity to adopt the risk management practices of a major water entity. Care would be needed that the risk appetite is aligned to the smaller Hawke's Bay councils, particularly the two rural councils.
- The risk management practices would improve with this option compared to the enhanced status quo or the shared services BU option.

Compliance

- The major water entity already has the resources, processes and systems to meet the current compliance requirements (i.e. SCADA and drinking water compliance).
- The single entity will have clear accountabilities under its Statement of Intent.
- The asset owners in each council will still need to make any significant strategic decisions. Negotiations with the regulators will need to involve both councils and the sub national management CCO. This may not lead to less cost-effective strategic outcomes for the region with the sub national management CCO option. The CCO may not be aligned to the Hawke's Bay's strategic outcomes.



To provide services through a model that enables a meaningful role for Māori

Treaty of Waitangi partnership

- The size of the CCO would dictate the iwi that would need to be involved, but regardless it would involve iwi from outside Hawke's Bay which may create complexity
- The new provisions of the Local Government Act apply in addition to the "standard" legislative obligations on Councils to give effect to Treaty of Waitangi obligations and the principles of the Treaty of Waitangi. These are
 - the requirement to consider whether knowledge of tikanga Māori is relevant to governance of the CCO and
 - provisions requiring a water CCO, when making decisions that significantly affect land or a body of water, to consider "the relationships between Māori, and their culture and traditions, with their ancestral land, water, sites, wāhi tapu, valued flora and fauna and other taonga."
- Statutory obligations of Councils would be, at a minimum, passed through to the CCO through the Constitution, Statement of Intent, Statement of Expectations and Shareholder Agreements.
- The CCO structure provides the opportunity to embed a new approach. For example, the existing water CCOs in New Zealand have embedded the following which contrast with the status quo:
 - Wellington Water has just updated its approach so that 'mana whenua partnership entities' can be appointed to the Wellington Water Committee. The Committee's role, amongst others is to appoint the Directors of Wellington Water and provide oversight.
 - Watercare – Independent Māori Statutory Board
 - statutory responsibility to promote Issues of Significance to Māori
 - oversight of projects, planning through to implementation and 'call in' powers.



To provide services through a model that has the value of water at the centre

Environment

- Increased national regulatory standards assumed to have affect and lead to better environmental outcomes.
- Dedicated sub-national management CCO with sole focus on three waters expected to lead to better ability to meet expectations and standards across the region. Bring consistency of approach and services across the breadth of its area of responsibility.



- Depending on the funding option this may still be limited by the extent to which each council can/will fund the required upgrades.
- Mixed points of accountability for the regulators as responsibility is shared between the CCO and the Councils.

Community

- Mixed points of accountability for the community across the basket of council services. Three waters services delivery comes from the CCO and the remainder from council and key decisions still made by each council.
- Communities should remain able to choose individual services levels that may be over and above the 'standard' e.g. unchlorinated water. Responsibility for and decisions will be spread across the CCO (as service provider) and the Council (as asset owner and water authority)
- Requires community to engage with both the CCO and the Council. As the size of the CCO grows then the connection to Hawke's Bay could be lost.

Cultural

- Mixed points of accountability for the community. Three waters services delivery comes from the CCO, yet the ultimate responsibility lies with the decisions made by each council.
- Requires Māori to engage with both the CCO and the Council. As the size of the CCO grows then the connection to Hawke's Bay could be lost.
- Opportunity with the change created with a CCO to develop a new approach to embed Te Ao Māori principles. While there is a high degree of similarity between the new Local Government Act provisions relating to CCOs and the principles developed during this review through discussions with the Māori Committees, new principles would need to be developed with Māori that reflect the actual area of the CCO.



To provide three waters services in a way that supports our urban and rural communities

Social and economic impacts

- Three waters services are vital to the social and economic viability of towns and cities. Mitigating expected future increases in costs of these service is important to regional growth and the growth of Hawke's Bay. This option would, through efficiencies of scale reduces future costs the Councils.
- It would not be clear whether the sub-national option would retain all the existing operational, technical and strategic roles that currently exist within each council as the larger the organisation created the greater the potential for duplication of roles.
- Councils retain control over growth planning and infrastructure provision for their areas but for three waters do so with the advice/support of the CCO.
- Local priorities would have to be recognised by the CCO through a prioritisation framework in the Statement of Intent and Shareholders Agreement otherwise local priorities could get lost in a regional view. However, some change can be expected from the current full council control given the broad regional mandate of the CCO and the need to balance regional priorities with local. The risk to small communities of being 'lost' within a regional provider will increase as the size of the CCO grows.
- Development of a single set of standards and a consistent approach to their application for all across the region will simplify things for developers and community.

Local connection to three waters service provider

- A sub-national water CCO governed by a board of professional directors may disconnect the community from the service provider. This would increase as the size of the CCO grows and if the 'head office' was not located within Hawke's Bay.
- Customer service will be through a different organisation and the CCO will need to ensure that services and service levels for the small communities are at least maintained at the same level or increased in order to be successful. The risk, perceived risk, for small communities would grow as the size of the CCO grows.



To provide three waters services that builds enduring capability and capacity

Technical and operational

- The subnational management CCO provides an opportunity to train operators to be interchangeable between locations and attract and retain new staff. The subnational management CCO will have scale that the Hawke's Bay councils can tap into including comprehensive training programmes, processes and systems. There will be mixed benefits with this option as the subnational management CCO can make operational decisions for the region potentially located in a metropolitan city outside the region.
- The creation of a large dedicated water utility CCO will provide increased opportunity for advancement and job enrichment for the staff working in it. The benefits of this will grow as the size of the CCO grows.
- There will be no competition between the councils for resources and the scale will better allow them to compete with the private sector, the regulators and other utilities for those resources.
- The asset management systems and processes of the large water entity will be adopted but will depend on the approval of the individual councils. The harmonisation will take longer than expected as experienced in the Auckland Region amalgamation (with Watercare and Auckland Transport).

Strategic capacity

- There will be immediate strategic capacity with joining or creating a large water entity. This needs to be balanced against regional IP potentially lost / eroded. It will be likely that the strategic capacity will be located outside the region in a metropolitan city.
- However, this option would still allow all four councils to benefit from the increase in strategic capacity and capability as those benefits would be shared sub-nationally under this model.
- There will be less reliance on consultants for low level project work as they will be used as specialists or for peer reviews.
- There is a window of opportunity post Covid-19 to attract talent to the regions and away from the cities as people re-assess priorities and the job market tightens.

How does this option incorporate or respond to the seven principles developed by Māori?

- A sub-national three waters CCO provides an opportunity to develop a model that better incorporates and responds to the principles developed in this review than the status quo however the importance of local connection was reinforced by mana whenua of Hawkes Bay through councils' Māori committee engagement
- A new approach would better accord with the post Treaty of Waitangi settlement structures considered in the commercial case of this report where examples of co-governance are set out. There is also the Regional Planning Committee of the Hawke's Bay Regional Council where co-governance is already currently in action. We note the recently announced reform the health sector accepted by the government³³ also proposes a co-governance model for Health NZ with 50:50 representation of Māori and Crown. Sitting alongside that recommendation was one for a Māori health authority that "ensure that mātauranga Māori (Māori knowledge) and Māori health issues are appropriately incorporated into all aspects of the system". This echoes similar sentiments expressed throughout this review around the need for any new model to recognise Te Ao Māori and Te Mauri o Te Wai.
- A new structure, the business and operating models required to implement them all provide an opportunity for a step change and reflect a trend toward co-governance models. The model would not be Hawke's Bay specific.
- Developing the structure itself is an opportunity to show this in action by providing for a co-design approach which helps establish the governance structure. Developing a values-driven approach would likely need to be the first step in co-design process. The Chairs of the Māori committees articulated an expectation that the councils would, like Māori, define their values for three waters service delivery.
- Development of a three waters focussed entity allows for managing water in its widest sense to be at the core of the obligations, values and approach of the organisation such that it is responsive to Te Ao Māori. Reflecting not just wider community desires but incorporating Te Ao Māori principles of water management throughout the organisation.

³³ <https://www.stuff.co.nz/national/health/300035515/halve-number-of-dhbs-drop-elected-boards-sweeping-health-system-reform-plan-accepted-by-govt?rm=a>



Regional Asset Owning CCO

Function

- The CCO would aim to develop a single set of strategic asset management plans and a combined infrastructure delivery programme for implementation across the region. This would be done by first reviewing all current Asset Management Plans, converting them to a common and consistent basis, then consolidating them into a sub-regional plan.
- The CCO would plan and deliver all capital and operational works within the region.
- Accountability for overall performance of the networks and the services would lie with the CCO.
- CCO is the water supply authority for the purposes of the Health Act.
- The CCO would have regional strategic oversight of network management and implement asset management strategies which may be uneconomical for some of the councils to introduce individually.

Operation

- The CCO would own all the three waters assets in Hawke's Bay and invest as required into new assets.
- The CCO operate as a separate legal entity external to all four councils, with its own governance, executive, administration support, procurement strategies, and operational equipment.
- The CCO would co-locate staff (virtually and physically) bringing together the management, administration, asset management, planning and project management staff, and the coordination of the maintenance crews and contractors. Wairoa and Central Hawke's Bay would operate as satellite offices.
- Any physical works staff would be accommodated either at treatment plants or in existing locations. We have assumed Napier operational staff remain working out of the existing depot either as staff working for the CCO or Napier City Council staff working under contract for the CCO.
- The CCO would have its own financial systems, IT arrangements, risk management systems and a single asset management system which would all be introduced over time.
- Operational plant, equipment and vehicles would be sold to the CCO by each council at valuation. Funding for purchasing this equipment, along with sufficient reserves for working capital and to ensure equipment can be replaced, would be included in the initial capital provided to the CCO by all four councils. Typically, the operational funding requirement is related to the expenditure over the first six weeks to two months' trading.
- The CCO would consolidate all operational costs across the regional networks to develop economies of scale.
- The CCO is not intended to make a profit so it ought to be able to maintain lower rates than other external businesses.
- To produce the maximum opportunity to provide enhanced services, the CCO organisation structure will be finalised during the transition to ensure there is increased capacity and capability in the CCO, and not simply the sum of the relevant parts of the Councils. There may be different positions required than currently exist across the combined councils and there are additional roles created due to new corporate roles
- As part of establishing the CCO, the Councils would delegate the necessary powers, responsibilities and decision-making authority to the CCO.
- The CCO would carry the full responsibility for operation and compliance across the networks and would not require Council approval of capital or maintenance expenditure/funding. Council would still provide direction and KPIs to the CCO through the Letter of Intent as a Shareholder, but not have direct control of projects.
- The CCO would set tariffs necessary to fund the programmes they develop, guided by principles agreed with the shareholders.

**Governance**



- Assumed that a co-governance model that responds to the cultural case is implemented.
- The regional asset owning water CCO would report to and be held accountable by a joint committee of the Councils that includes Māori in a co-governance role (shareholder committee). The regional water CCO would report to and be held accountable by a joint committee of the Councils that include Māori (shareholder committee) in a co-governance role. Involving mana whenua in governance and decision-making roles that enables the active exercise of kaitiakitanga aligns with Te Tiriti o Waitangi obligations and section 6(e) of The Local Government Act that requires councils to provide for opportunities for Māori to contribute to decision-making processes.
- A small board of professional directors would be appointed. The CEO would report to the board.

Public Interfaces

- The CCO would become the interface for all billing and water related issues. Customer management would transition to the CCO. The transfer of customer service was found to be a key success factor for Wellington Water.
- Existing development contributions be transferred to the CCO. The CCO would develop its own plan and then levy for future development contributions ensuring that there was no duplication with Council charges.
- The CCO would prepare and distribute bills to customers.



Table 17 Summary of assessment against investment objectives – regional asset owning CCO

 To provide three water services in a way that is affordable and effective
Impact on customers / ratepayers <ul style="list-style-type: none"> ▪ This option makes the greatest possible impact across the region. The regional asset owning CCO is expected to create more savings over a longer period of time than the management option due to owning the assets and having control over all aspects of decision making. ▪ It significantly reduces the future burden on small communities of the infrastructure that is required by spreading those costs across a wider area. ▪ Current ratepayers would transfer to being customers of a regional asset owning CCO, complete with customer contracts more similar to other utility providers than the current approach. A CCO is not a council. It does not have the same powers to compel payment. Non-payment of a water CCO bill leads to debt recovery action and/or restriction of supply. ▪ While at a regional level it moves from having four councils that residents, developers and the regional council may have to deal with bringing consistency of standards and approach. For residents it means potentially dealing with both the Council and a regional asset owning CCO and creates the possibility of confusion over who is responsible for what in the short term.
Asset management <ul style="list-style-type: none"> ▪ The regional asset owning CCO would be water focused and provide strategic Asset Management capability for multiple water networks. There would be large amount of work required to prepare single Asset Management Plan and regional asset management strategies and work programmes. ▪ Strategic decisions would be the most effective with the regional asset owning CCO option. Senior staff can easily discuss infrastructure issues and options with their Executive Leadership Team and Board. These will be formalised with their Statement of Intent and Asset Management Plan. ▪ Asset management capability and the understanding of the network performance regionally would improve greatly with the regional asset owning CCO. ▪ Potential for connections to wider, more integrated asset planning to reduce with separate entities responsible
Financial sustainability <ul style="list-style-type: none"> ▪ The financial benefits generated from aggregation mean that overall, the cost of the three waters service for the region is the lowest under this model. ▪ The regional asset owning CCO reduces the future financial risk of any single community having to fund an unexpected or unplanned infrastructure upgrade. ▪ Having a larger group of customers, spread across a wide area with a broad range of economic sectors helps reduce the exposure to sector specific downturns. ▪ The regional three waters debt under this option sees borrowing peak at \$420 million (in 2023/24). ▪ Stranded costs mean that the cost of the remaining services of each council will rise but when taken together the overall cost of the local government services for almost all ratepayers is less than it would be under the enhanced status quo.
 To provide services that are safe, reliable and resilient
Resilience <ul style="list-style-type: none"> ▪ There will be improved resilience with all operators and key operational staff located within the single entity. Critical equipment spares would be available to share regionally. The larger entity would have the strategic capacity and capability to make major changes such as standardisation of plants and documented processes with consistently applied measures. ▪ A regional asset owning CCO would be able to create greater breadth and depth of resources to improve resilience. ▪ A regional asset owning CCO would have the financial capacity to meet and respond to any future challenges better than an individual council could. Neither does it face the kind of trade-offs that councils will face in the post Covid-19 recovery phase. Their role is clear and their income stream secure.



Risk management

- The water focused entity will have the resources to improve risk management practices compared to the enhanced status quo or the shared services BU option.
- The water focused Board will have a higher level of expectations for risk including a risk management framework and the suitable underlying technical risk documents such as activity risk registers. The Board can set its own risk appetite based on good industry practice.

Compliance

- The water focused CCO will have the resources to meet the current compliance requirements (i.e. SCADA and drinking water compliance). The single entity will have clear accountabilities under its SOI.
- The water entity can make any significant strategic decisions / negotiations with the regulators. This should lead to better outcomes for the region with the regional asset owning CCO option.



To provide services through a model that enables a meaningful role for Māori

Treaty of Waitangi partnership

- A Hawke's Bay water CCO would provide the opportunity to develop a framework that involves and engages with Māori that is designed for Hawke's Bay rather than accept a nationally imposed approach.
- To be effective the model will need to incorporate co-governance with Māori so they can contribute as a partner rather than via the advisory role they have had in the past. Based on feedback from the Chairs of the Māori committees the first step in the process will need to be a values-driven co-design of the CCO.
- The new provisions of the Local Government Act apply in addition to the "standard" legislative obligations on Councils to give effect to Treaty of Waitangi obligations and the principles of the Treaty of Waitangi. These are
 - the requirement to consider whether knowledge of tikanga Māori is relevant to governance of the CCO and
 - provisions requiring a water CCO, when making decisions that significantly affect land or a body of water, to consider "the relationships between Māori, and their culture and traditions, with their ancestral land, water, sites, wāhi tapu, valued flora and fauna and other taonga."
- Statutory obligations of Councils would be, at a minimum, passed through to the CCO through the Constitution, Statement of Intent, Statement of Expectations and Shareholder Agreements.
- The CCO structure does provides opportunity to embed a new approach. For example, the existing water CCOs in New Zealand have embedded the following
 - Wellington Water has just updated its approach so that 'mana whenua partnership entities' can be appointed to the Wellington Water Committee. The Committee's role, amongst others is to appoint the Directors of Wellington Water and provide oversight.
 - Watercare – Independent Māori Statutory Board
 - statutory responsibility to promote Issues of Significance to Māori
 - oversight of projects, planning through to implementation and 'call in' powers.



To provide services through a model that has the value of water at the centre

Environment

- Increased national regulatory standards assumed to have affect and lead to better environmental outcomes.
- Dedicated regional asset owning CCO with sole focus on three waters expected to lead to better ability to meet expectations and standards across the region. Bring consistency of approach and services across the region.
- Single point of accountability for the regulators.

Community

- Mixed points of accountability for the community across the basket of council services. Three waters services delivery comes from the CCO and the remainder from council and key decisions still made by each council.
- All communities have access to the strategic capacity required to inform good decision making.
- Communities should remain able to choose individual services levels that may be over and above the 'standard' e.g. unchlorinated water provided that is set out in the Statement of Intent.
- Requires community to engage with both the CCO and the council.



Cultural

- Mixed points of accountability for the community. Three waters services delivery comes from the CCO, yet the ultimate responsibility lies with the decisions made by each council.
- Requires Māori to engage with both the CCO and the council.
- Opportunity with the change created with a CCO to develop a new approach to embed Te Ao Māori principles, noting the high degree of similarity between the new Local Government Act provisions relating to CCOs and the principles developed during this review through discussions with the Māori committees.



To provide three waters services in a way that supports our urban and rural communities

Social and economic impacts

- Three waters services are vital to the social and economic viability of towns and cities. Mitigating expected future increases in costs of these service is important to regional growth and the growth of Hawke's Bay. Under this model the cost reduces giving the biggest reduction in future costs for both Central Hawke's Bay and Wairoa from a level that is considered unaffordable.
- The regional asset owning CCO option would retain the existing operational, technical and strategic roles that currently exist within each council as
 - under all options the operational roles in the rural and regional communities will continue to exist
 - both Wairoa and Central Hawke's Bay already largely outsourced the three waters service so the location of the roles is arguably already outside of their control and already at the level that could be expected if the service were aggregated.
- Growth planning is shared between councils and the CCO. Councils have control over broader growth planning and infrastructure provision for their areas but for three waters that transfers to the CCO. Local priorities would need to be recognised by the CCO through a prioritisation framework in the Statement of Intent and Shareholders Agreement. However, some change can be expected from the current full council control given the broad regional mandate of the CCO and the need to balance regional priorities with local in order to achieve best overall outcome for the region.
- Development of a single set of standards and a consistent approach to their application for all across the region will simplify things for developers and community.

Local connection to three waters service provider

- A regional asset owning CCO governed by a board of professional directors may disconnect the community from the service provider.
- Customer service will be through a different organisation and the CCO will need to ensure that services and service levels for the small communities are at least maintained at the same level or increased in order to be successful.



To provide three waters services that builds enduring capability and capacity

Technical and operational

- The regional asset owning CCO provides an opportunity to train operators to be interchangeable between locations, plants and attract and retain new staff. The regional asset owning CCO still will be at a relatively moderate scale compared with the private sector with national and global reach including comprehensive training programmes, processes and systems.
- There will be major benefits with this option as the regional asset owning CCO can make operational decisions regionally.
- The creation of a dedicated asset owning CCO will provide increased opportunity for advancement, professional development, a variety of locations and job enrichment for the staff working in it.
- There will be no competition between the councils for resources and the scale, while modest, will better allow them to compete with the private sector, the regulators and other utilities for those resources.
- The asset management systems and processes will be harmonised with the regional asset owning CCO. However, experience is that the regional harmonisation will take time as experienced in the Auckland Region amalgamation (with Watercare and Auckland Transport).



Strategic capacity

- Strategic capacity will be able to be built more effectively with the regional asset owning CCO. It will have the moderate scale and smarts of a dedicated water utility of modest scale with wider industry experience, noting though that it remains small when compared across NZ or internationally for dedicated water authorities.
- Crucially for the region this option allows all four councils to benefit from the increase in strategic capacity and capability as that is shared regionally under this model.
- There will be less reliance on consultants for low level project work as they will be used as specialists or for peer reviews.
- There is a window of opportunity post Covid-19 to attract talent to the regions and away from the cities as people re-assess priorities and the job market tightens.



How does this option incorporate or respond to the seven principles developed by Māori?

- A regional three waters CCO provides an opportunity to develop a model that better incorporates and responds to the principles developed in this review than the status quo.
- Engagement with the Chairs of the Māori committees indicated that the status quo does not meet expectations of Māori and Asset Owning CCO was the preferred option.
- A new approach would better accord with the post Treaty of Waitangi settlement structures considered in the commercial case of this report where examples of co-governance are set out. There is also the Regional Planning Committee of the Hawke's Bay Regional Council where co-governance is already currently in action. We note the recently announced reform the health sector accepted by the government³⁴ also proposes a co-governance model for Health NZ with 50:50 representation of Māori and Crown. Sitting alongside that recommendation was one for a Māori health authority that "ensure that mātauranga Māori (Māori knowledge) and Māori health issues are appropriately incorporated into all aspects of the system". This echoes similar sentiments expressed throughout this review around the need for any new model to recognise Te Ao Māori and Te Mauri o Te Wai.
- A new structure, the business and operating models required to implement them all provide an opportunity for a step change and reflect a trend toward co-governance models. There is an opportunity to create a Hawke's Bay specific structure that incorporates the principles of mana motuhake and enabling of Te Tiriti o Waitangi.
- Developing the structure itself is an opportunity to show this in action by providing for a co-design approach which helps establish the governance structure. Developing a values-driven approach would likely need to be the first step in co-design process. The Chairs of the Māori committees articulated an expectation that the councils would, like Māori, define their values for three waters service delivery.
- Development of a three waters focussed entity allows for managing water in its widest sense to be at the core of the obligations, values and approach of the organisation such that it is responsive to Te Ao Māori. Reflecting not just wider community desires but incorporating Te Ao Māori principles of water management throughout the organisation.

³⁴ <https://www.stuff.co.nz/national/health/300035515/halve-number-of-dhbs-drop-elected-boards-sweeping-health-system-reform-plan-accepted-by-govt?rm=a>



Commercial Case

The commercial case sets out the transactions that would be required to implement any change and the impact of changes on the commercial arrangements for service delivery.

Summary of the commercial case

Establishing an asset owning CCO for Hawke's Bay requires the creation of a separate organisation that would be collectively owned by the shareholding councils.

The key features of each option are set out in the commercial case which includes:

- Shareholding, if appropriate
- Governance structures
- Mechanisms for holding CCOs to account
- Examples of co-governance
- Draft CCO operating models that respond to investment objectives
- Draft functional structures for CCOs that respond to investment objectives
- Impact on the existing councils
- Draft organisational design principles that respond to investment objectives

An organisational structure would be developed during the transition to a CCO but for the purposes of the review a functional structure was developed based on similar organisations across Australasia and adapted for Hawke's Bay.

All four councils are affected as dedicated three waters staff and in some cases support staff would transfer to the CCO. Importantly, there are additional roles created when the CCO is established so that the overall resourcing of three waters across the region would increase. Wairoa and Central Hawke's Bay would remain as satellite offices with roles in those areas remaining where they are now.

Structures that would need to be established

SSBU

The SSBU would operate as a ring-fenced business unit and would not exist as a separate legal structure. Staff would be seconded into the SSBU but remain employed by their original council on the current terms and conditions.

A CEO would be appointed with all staff from across the region reporting through to them. This may create some issues with reporting lines, formal delegations and having staff on different terms and conditions.

The SSBU would, like the CCOs, report formally through to the Councils via a joint committee. There is opportunity for Māori to be part of the Joint Committee and exercise some aspects of co-governance.

In the financial modelling we have allowed for some costs for an advisory board with external independent advisors. The advisory board could provide support and advice to the CEO but would not have any formal delegations or standing.

Service level agreements would need to be developed for the provision of all the support services e.g. Legal, IT, Finance, HR, Planning etc.



Regional three waters CCO

Governance and accountability

The same basic legal structure would apply to a management CCO and an asset owning CCO, albeit with differences depending on the option. Both are assumed to be companies owned collectively by the Councils and would need to be set up under the Local Government Act. They, and the relationship between the Councils, Māori and the CCO, would be governed by the core foundation documents including:

- Statement of intent
- Constitution
- Shareholders agreement
- Statement of expectations.

Co-governance

The principles developed through discussions with the Māori Committees and confirmed by the Māori Chairs clearly identified co-governance as a key component of any future three waters service delivery model. The review therefore recommends that approach be adopted.

Some examples of co-governance set out below are discussed to highlight the range of scenarios and the different approaches where co-governance is used. Alongside this, in Hawke's Bay the Regional Planning Committee is an example of a co-governance model and more recently the Government has accepted the findings of a review of the health system in which a new entity, Health NZ will be established. That is intended to include a co-governance model where membership of the Health NZ board will be 50:50 between the crown and Māori.

Tūpuna Maunga/Ancestral mountains

In December 2012, a Redress Deed was signed by the Crown and the Tāmaki Makaurau Collective. In August 2014, the Act setting up Tūpuna Maunga o Tāmaki Makaurau Authority (Tūpuna Maunga Authority) came into effect. In September 2014, the authority had its first hui.

The gap between signing the deed of settlement and the first hui gave the Tāmaki Makaurau Collective and Auckland Council time to discuss how they were going to work together. This included determining the financial reporting format, frequency of reporting and the programme of meetings. Participants advise that this time invested at the outset saved time in the long run as the authority was able to "hit the ground running".

The authority has six representatives from Ngā Mana Whenua o Tāmaki Makaurau, six from Auckland Council and one non-voting Crown representative appointed by the Minister for Arts, Culture and Heritage.

It has prepared an integrated management plan for the Tūpuna Maunga and, with Auckland Council, an annual operational plan, a summary of which is included in Auckland Council's annual operational plan.

The objectives of the authority include giving visibility to the mana whenua world view, and their associations and connections with the maunga, through shared decision-making. The role and visibility of mana whenua is central to the discussions and outcomes the authority is trying to achieve.

The legislation provides for funding and staff resourcing through Auckland Council. The Authority is currently supported by a core team of eight council staff. Auckland Council is responsible for managing the maunga under the direction of the authority.



The scale of this arrangement is unparalleled in Auckland and has resulted in a unified and cohesive approach to caring for the maunga.

Healthy rivers/Wai Ora plan for Waikato and Waipā rivers

Waikato Māori and the Waikato Regional Council (council) have established an effective co-management regime for the Waikato River and its catchments to achieve the restoration and protection of the health and wellbeing of the river for future generations.

A key feature of the co-management arrangement is the establishment in December 2010 of the Waikato River Authority (authority). The authority was established as a statutory body by the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010, the Ngāti Tūwharetoa, Raukawa the Te Arawa River iwi Waikato River Act 2010 and the Ngā Wai O Maniapoto (Waipā River) Act 2012.

The authority has 50/50 Crown and Māori appointees, five of each.

A partnership agreement between the authority and council was signed on 24 November 2011 and sets out the intended relationships and approach to working together. The authority sets the direction for managing the Waikato River in its Vision and Strategy document and, unusually, holds financial decision-making power (this usually sits with council). It is the body responsible for administering a \$210 million clean-up fund for the river.

Following its inception, the authority took a year to set up its processes, such as financial and risk management, and to develop its funding strategy. This was done before any funding allocations were made. The authority used expert advice to help ensure it had good policies and processes in place. During this year, the authority ensured that other parties, especially potential applicants, understood the approach the authority was taking.

Council may apply to the authority for clean-up funds, has a role in reporting to the authority, and provides technical support to the council appointee on the authority. Māori are continuing to develop joint management agreements with council, which include agreed processes for input into resource consents, monitoring, enforcement, and policy and planning matters to do with the river. Four agreements have already been signed.

Externally, the Waikato River Authority is viewed as having helped in bringing industry partnerships and interests together in a constructive way.

Kawa o Te Urewera

The Te Urewera Act 2014 vested the Te Urewera as its own legal entity and established a Board to be the voice for Te Urewera and provide governance and management in accordance with the principles of the Act. The composition of the board was originally four crown and four Tūhoe representatives, which changed after three years (2017) to three Crown and six Tūhoe members. The chair of the board is a Tūhoe representative in perpetuity.

The Act and the co-governance board seeks to strengthen and maintain the connection between Tūhoe and Te Urewera, alongside other environmental and recreation priorities.



The Te Urewera Board is required to produce a management plan and a statement of priorities. The management plan, Te Kawa o Te Urewera 2017 (Te Kawa), acknowledges that time is needed for Tūhoe to “replace low capability with vigour, expertise and confidence”. It also acknowledges the important ongoing investment and contribution of the Department of Conservation, and that together creative models and methods of working can be developed.

Ideal attributes for co-governance success

A 2018 SOLGM wānanga on co-governance identified the critical importance of:

- Enabling and recognising uniqueness in co-governance arrangements. This uniqueness ensures the arrangements reflect the values and aspirations of different iwi, the whakapapa of the partnership, and the values and needs of the place.

Tāmaki Makaurau/Auckland Council, which has several well-advanced co-governance and co-management arrangements in place, has identified the importance of:

- equal representation of mana whenua and council members
- reasonable breath of decision-making powers (mana)
- the support of a dedicated co-management team, ideally including or working towards being 100% mana whenua

In a February 2016 report titled *Principles for effectively co-governing natural resources*, the Auditor-General identified elements that help to achieve successful co-governance which are shown in the figure below. Investing in building quality relationships from the outset was identified as pivotal for productive co-governance arrangements.

Figure 30 Factors that contribute to successful co-governance arrangements



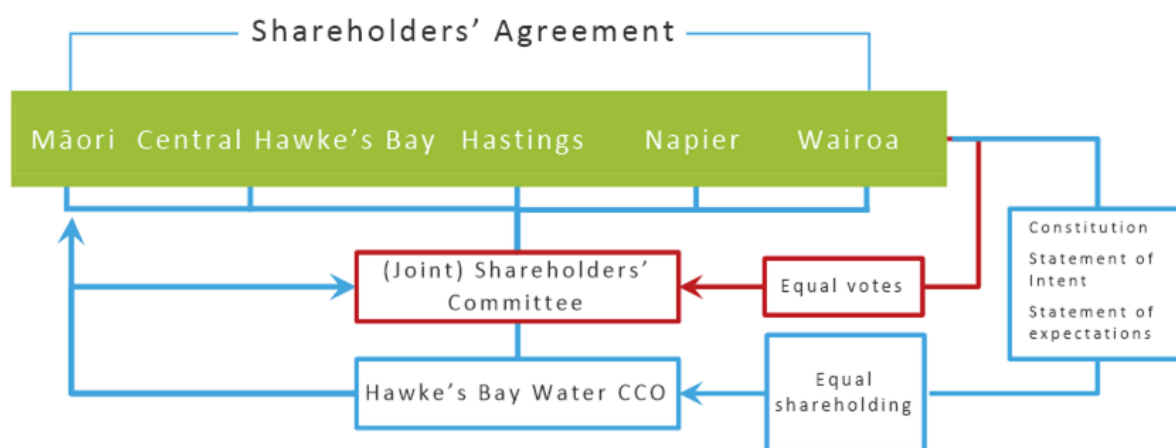


It is clear from the examples above, the findings of the Auditor General and the principles developed in this project that for co-governance to be effective, Māori will need to be part of the process to design and establish any regional water CCO in Hawke's Bay. Co-design is therefore included as a key part of the next steps should the Councils decide to consult with their communities, and then subsequently to establish a regional water CCO.

However, for the purposes of the review, a draft governance structure is set out for both the management and asset owning CCOs. This explains the relationships between the councils, Māori and the CCO, the councils and Māori and the councils themselves.

Management CCO governance

Figure 31 Management CCO governance structure



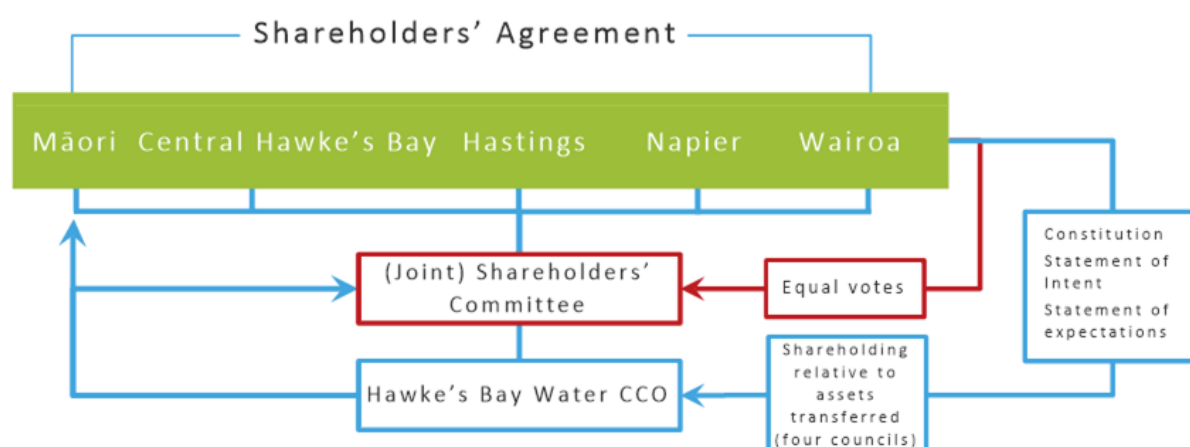
- The CCO will initially have four shares, with each council subscribing for one share. Each council need only be compensated for the operational plant purchased by the CCO. There is no advantage in holding more or less shares, as the CCO is not structured to make profits and requires local council funding and approval to deliver local projects.
- As the CCO is providing similar services to all shareholders any voting is carried out on a one vote per organisation basis, requiring a simple majority to pass, except in specific situations where the councils agree that voting ought to be unanimous.
- A Joint Shareholders Committee would be appointed to be the main liaison between the CCO and each council. Māori representation should be part of the committee in co-governance capacity. Authority would be delegated to the shareholders' committee as agreed by all councils. All have equal 'votes' and decisions reached unanimously with an independent member appointed to Chair the committee. Joint committee would be responsible for proposing by-laws, appointing enforcement officers and enforcement action as required.
- Joint shareholders committee responsible for holding the CCO to account.
- The CCO would be run by an independent board consisting of at three to four members. All board members must be approved by all shareholders with Māori as part of the joint committee having a vote on the appointment and removal of directors.



- Board members would be appointed impartially based on their experience and expertise, not to represent a specific Council. The Auditor General has said that appointing elected members to Boards of CCOs should be the exception³⁵. We endorse that opinion and would recommend that the Board of the CCO be a skills and merit based board made up of independent, appropriately skilled and remunerated directors as is the case for Watercare and Wellington Water.
- The Chair should be appointed separately by the shareholders' committee.
- Initial capital will be provided by the Councils equally and will be based on the assets required and sufficient operational funding to allow the CCO to pay its costs and remain solvent. Ongoing support payments will not be necessary as the CCO will be able to generate a secure source of funds through its activities which are charged through to the Councils.
- The board will determine the scope of any external funding requirements but as it will not own the assets it is unlikely that the CCO would need to incur, or be capable of incurring, debt of any note.

Asset owning CCO governance

Figure 32 Asset owning CCO governance structure



- The CCO will initially have shareholding based on the value of assets at the time of transfer / establishment (or as agreed through an alternative valuation approach).
- Each council will need to be compensated for the operational plant purchased by the CCO, the assets transferred to the CCO and liabilities.
- The CCO would be run by an independent board consisting of three to four members. All board members must be approved by all shareholders with Māori as part of the joint committee (co-governance) having a vote on the appointment and removal of directors.
- A joint shareholders committee would be appointed to be the main liaison between the CCO and each council. Māori representation should be part of the committee. Authority would be delegated to the shareholders committee as agreed by all councils. All have equal 'votes' and decisions reached unanimously with an independent member appointed to chair the committee. The joint committee would be responsible for proposing bylaws, appointing enforcement officers and enforcement action as required.
- Joint shareholders committee responsible for holding the CCO to account.

³⁵ Governance and Accountability of council-controlled organisations, Office of the Audit General, September 2015



- Board members would be appointed impartially based on their experience and expertise, not to represent a specific council. The Auditor General has said that appointing elected members to boards of CCOs should be the exception³⁶. We endorse that opinion and would recommend that the board of the CCO be a skills and merit based board made up of independent, appropriately skilled and remunerated directors.
- The Chair should be appointed separately by the shareholders' committee.
- Initial capital will be provided by the Councils equally and will be based on the assets required and sufficient operational funding to allow the CCO to pay its costs and remain solvent. Ongoing support payments will not be necessary as the CCO will be able to generate a secure source of funds through its activities which will be charged to its customers.
- It is common to expect the CCO to raise some of its required funding through third party financiers using its revenue base as the prime security offering. The board will determine the scope of external funding requirements.

Not for Profit

Neither of the CCOs are intended to be profit making and would not return dividends to the Councils. Their focus would be on delivering the lowest possible price while ensuring the quality of service is maintained. For example, the following legislative provision guides Watercare (and is similar in objective to other international examples such as Scottish Water. Note that this does not mean they cannot make a surplus and indeed a surplus may be part of building financial capacity for future investment.

Part 5, section 57(1), of the Local Government (Auckland Council) Act 2009 stipulates that an Auckland water organisation (Watercare) *"must manage its operations efficiently with a view to keeping the overall costs of water supply and wastewater services to its customers (collectively) at the minimum levels consistent with the effective conduct of its undertakings and the maintenance of the long-term integrity of its assets"*.

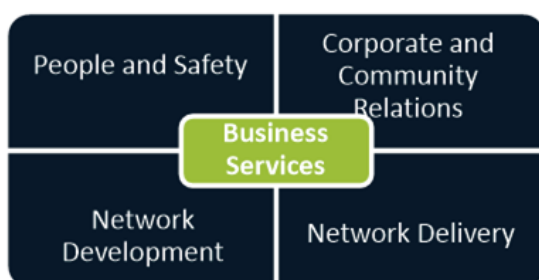
We envisage that the Councils would create a similar obligation on a Hawke's Bay regional water CCO through the statement of intent.

Developing the structure of the CCO options

In this section we set out the key considerations for the design and development of a CCO. Given there are two CCO options shortlisted, a management CCO and an asset owning CCO, we discuss the structural elements common to both and identify where there are differences.

Having reviewed various water utilities in NZ and Australia, we observed that a typical operating model design would look like the figure below

Figure 33 Typical CCO operating model design



³⁶ Governance and Accountability of Council-controlled Organisations, Office of the Audit General, September 2015



However, considering the findings of the cultural case and the need to support the proposed co-governance role with Māori we adapted the typical model to incorporate a **Māori responsiveness framework**. The proposed Māori responsiveness framework responds to the cultural demands of co-governance and is intended to enable Māori water values to be operationalised

Figure 34 Māori responsiveness framework



Co-Governance professional directors, council leaders, and Māori leaders as co-governors under a Treaty of Waitangi partnership model.

Cultural Performance Indicators (CPIs) set by co-governors to drive the operational embedding of Māori values. The CPIs set the cultural direction, measurements and expectation of the operational three waters service delivery. The CPIs should have oversight by an internal Māori function e.g. Māori partnerships team.

Key Performance Indicators (KPIs) set by management for teams and individuals to meet the CPI outcomes. Cultural KPIs should be normalised throughout the business as standard practice to meet the CPIs set by co-governance. The CPIs should drive internal cultural capability building programmes that enable CCO teams to meet their individual cultural KPIs, and to collectively meet the organisational CPIs.

Māori engagement. Through being equipped to meet their CPIs and KPIs, CCO teams are fully equipped to successfully engage with Māori whānau, marae, hapū, hapori with cultural competence. Māori engagement should occur through both regulatory and non-regulatory needs.

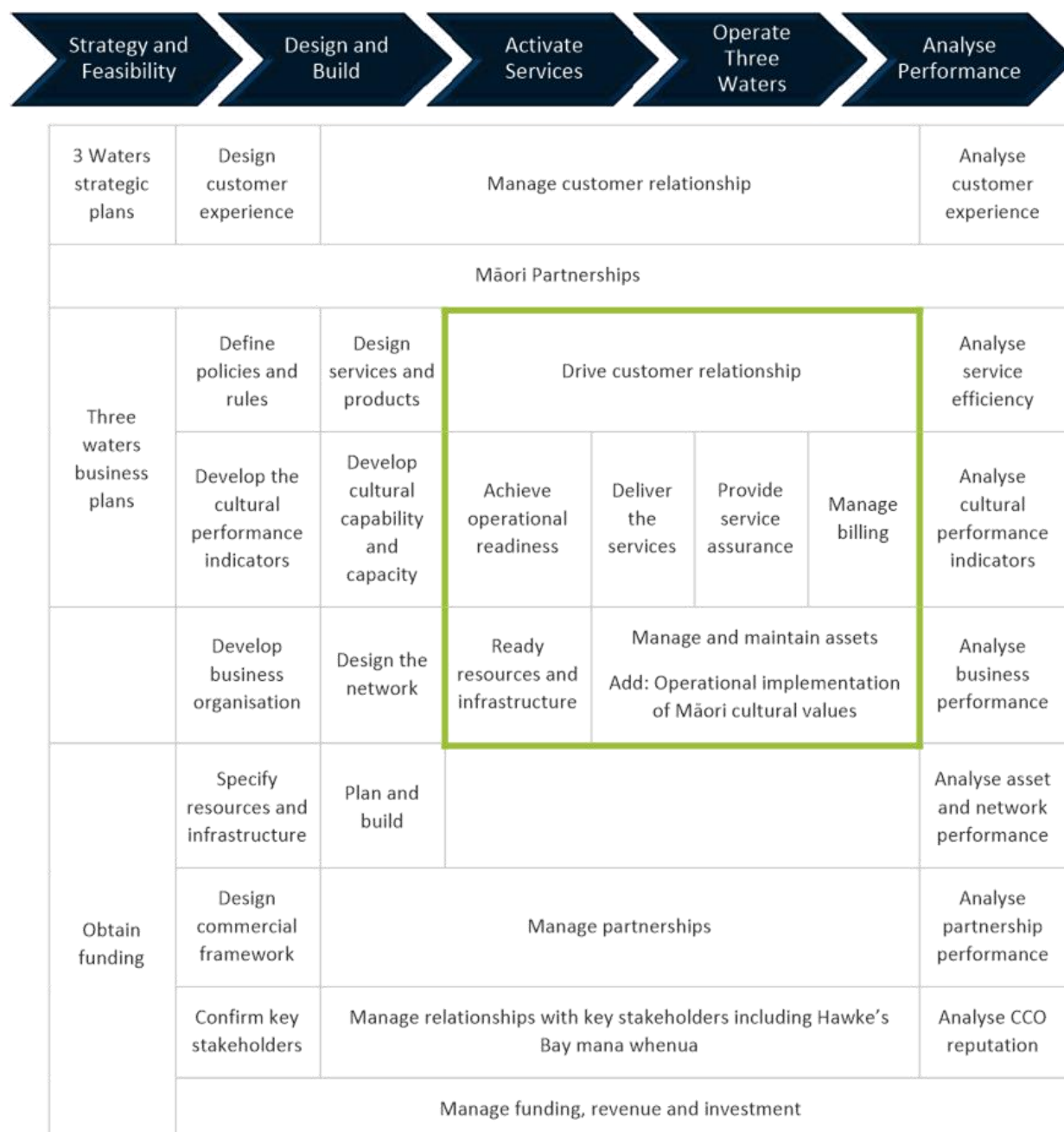
Cultural excellence is a reporting mechanism to provide updates to co-governance on the tracking of CPIs. Reporting is to demonstrate that embedding of Māori values across the business is driving a culture of excellence and active kaitiakitanga.



Draft operating model

The following draft operating model helps to inform the development of a functional structure for the management and asset owning CCOs. It sets out the key functions that in our view a Hawke's bay water CCO needs to operate effectively.

Figure 35 Proposed three waters CCO operating model showing key business functions





A functional structure was then developed to implement the operational model. This is shown in **Figure 36** below. The detailed description of each of these functional groups is found in **Appendix B**.

The functional structure was used as the basis for assessing the overall resourcing required and comparison to the resourcing which is assumed to transfer to the CCO from the four Councils and the additional resources required to support the operation of the asset owning. This in turn informed the analysis in the financial case. There are some differences between the management CCO and the asset owning CCO. For example, some functions do not transfer to the management CCO e.g. billing and some functions would occur in both e.g. finance

Figure 36 Functional structure of CCO

Business Services	People and Safety	Corporate and Community Relations	Network Development	Network Delivery	Māori Partnerships
<ul style="list-style-type: none"> • Finance • ICT • Strategy and corporate planning • Regulation • Audit • Legal • Governance • Risk and business process 	<ul style="list-style-type: none"> • Capability • Learning and development • Employee relations • Payroll • Health, safety and wellbeing 	<ul style="list-style-type: none"> • Government and council relations (public affairs) • Community engagement and communications • Education and strategic relationships • Internal Communications and marketing and design • Sustainability 	<ul style="list-style-type: none"> • Integrated planning • Network strategy • Investments • Integrated water and land management • Water quality • Resilience 	<ul style="list-style-type: none"> • Assets and infrastructure • Operations including Customer Service • Commercial delivery 	<ul style="list-style-type: none"> • Mātauranga Māori (Māori knowledge) • Māori partnerships • Cultural performance • Māori capability and cultural safety

Moving into designing a CCO organisational structure

If there is a decision to create an asset owning CCO then there will need to be a process to design and establish the operating model, functional structure and then the organisational structure. This is identified as part of the next steps in the management case. However, in order to assist that process of we have set out a series of organisational design principles starting on the next page. The organisational design principles can be used to guide the consideration of various alternatives and the basis for the choice of a proposed structure that is fit for purpose.



Organisational design principles

Description	Implication for structure	Application to structure
Affordable		
The structure is affordable now, and into the future.	The structure sets the CCO on the right track for the future in line with the current budget.	Working within the constraints of the current three waters budget, the structure allows an increase in leadership and technical capability and capacity. Grouping functions in line with the operating model gives the ability to further grow and modify the structure in the future, as budget allows.
Efficient and effective service delivery		
This is a key principle so needs to be consistently achieved.	Ensure the critical service delivery functions are well resourced with depth in capability that also incorporates service principles and delivery that are meaningful for Māori.	Account management roles manage and lead relationships at a senior level. This capability ensures contract adherence to allow delivery teams to focus on day-to-day operations. Working with service providers to deliver the network and meet (and surpass) community expectations.
Fiscal responsibility		
The business must be well run so it is financially sustainable and affordable, with no surprises.	Strong partnership links to central government agencies and councils. Capability and capacity for business cases, funding and process management.	Commercial capability added.
Clear responsibilities		
Accountabilities, authorities and duties are clear including those defined in the cultural case and measured through cultural and key performance indicators.	Accountabilities, authorities and duties are clear and include responsibilities for decision points within business processes.	Proposed new roles have clear accountabilities described.
Information driven		
Ensure decisions are informed by good information and insight - relates to all parts of the operating model.	Structure allows the use of data analytics and insight to drive operational performance improvements across all parts of the business.	Capability for this is combined with Strategy to highlight the importance of information requirements and data accuracy for CCO strategy and decisions. Cultural and Key Performance indicators are defined and within CCO strategy and business planning.



Description	Implication for structure	Application to structure
Partners with Māori		
<p>The business is committed to working in partnership with mana whenua.</p> <p>The business is responsive to Māori values, and is equipped and capable to embed Te Ao Māori The Māori Worldview across the business.</p> <p>The business is culturally accountable to Māori directors represented through co-governance.</p>	<p>The structure enables the meaningful role of co-governance to be extended across the organisational delivery of the business with internal Māori capacity and organisational cultural capability to successfully work in partnership with ongoing contributions from mana whenua to the future of land and water management across all parts of the operating model.</p> <p>The structure recognises and incorporates Māori cultural, spiritual and economic connections to land, water and resources and aims to be kaitiaki alongside mana whenua.</p>	<p>CCO leaders and managers are culturally empowered to involve mana whenua in decision making to realise the mutual benefit of working collaboratively.</p> <p>CCO is equipped with internal Māori capacity to guide the business through Te Ao Māori <i>The Māori Worldview</i> and to ensure that Māori values are interpreted and applied to mana whenua expectations.</p> <p>CCO teams are culturally capable to build strong, respectful partnerships with mana whenua. Integrating Māori centred initiatives and projects across the operating model will allow all stakeholders to maintain a balanced view of how kaitiakitanga <i>stewardship</i> can coexist with commercial and operational requirements.</p>
Strategy led		
<p>Taking account of the proposed three waters operating model, business decisions should be aligned with short and long-term strategic outcomes.</p>	<p>The structure should allow for delivery now and planning for the future. Structure is agile enough to respond to new opportunities and changing demands (e.g. price regulation).</p>	<p>Strategy and decisions are data driven and well informed. Strategy and business plans are developed with the business to ensure they are relevant and to guide operational work. Plans give clear direction on how to work, react and link what is delivered now and in the future. Creates a foundation for future transformation.</p>
Integrated product offering		
<p>Three waters is a set of three integrated products providing a unifying experience under the CCO brand.</p>	<p>Business is organised to maximise the value of each product within the overall network and brand. Integrated view of three water services and how they are connected.</p>	<p>Each water service is kept separate at operational level but brought together at leadership level. This allows specialisation of product at the detailed level but supports holistic and integrated view of three water services and how services are connected.</p>



Description	Implication for structure	Application to structure
Community centric		
Business has a strong community focus with mandate to influence, lead and engage in co-design. Importantly the relationship with mana whenua is special and not to be subsumed within a community centric focus	Community input and perspective is enabled through the structure across all parts of the operating model – from strategy to analysing performance.	All teams are empowered to consider the Community's perspective, as well as design and deliver for customers. The structure encourages the embedding of community-centric principles to feed into business and operational planning. Educating and empowering CCO teams to own the customer experience for their areas, and to work directly with communities to represent their voice. Develop community-centred initiatives and projects. A balanced view between community centricity, commercial feasibility and operational requirements.
Business acumen		
Commercial thinking is ingrained in key aspects of CCO business, including contract management.	Structure needs to enable strong commercial leadership in a partnership model with service providers and vendors. Structure (and processes) need to recognise key dependencies (e.g. finance, pricing, projects, operational performance). This is where post-settlement governance entities (PSGEs) and/or mandated iwi authorities may choose to participate, contribute or joint venture on the basis of shared strategic outcomes.	Business rules ensure commercial and financial health of the organisation and commercial implications are understood. Additional roles enable strong business leadership required in the partnership model with service providers and vendors for commercial performance. A strong focus on financial sustainability through revenue protection and by developing pricing for revenue generation. Contract management allow contract support and implementation at both a senior and operational level. Account management roles provide senior level relationship accountability, support the partnership approach and contractual obligations and allow internal escalation. Procurement outcome opportunities through Matariki Hawkes Bay Regional Economic Development strategy (HBREDS) exist for economic, inclusive and sustainable growth.
Functional alignment		
Like functions are grouped together where logical and practical to minimise hand-offs within business processes. Māori responsiveness has a unique cross-cutting and enabling role across all functions.	Structure has good alignment with proposed operating model. Individuals and teams know where they fit.	Viewing the operating model as a circular function (end-to-end) and aligning the structure, accordingly, will allow smooth handling of business processes and articulate clear accountabilities.



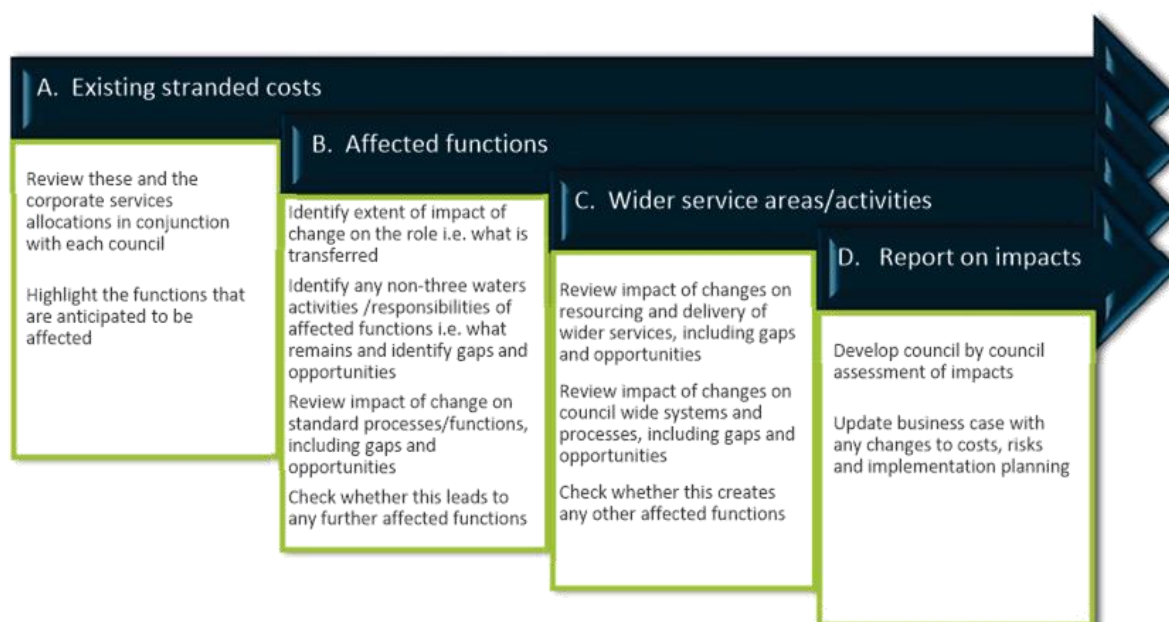
Description	Implication for structure	Application to structure
Strong and motivated workforce		
Enables and enhances talent retention and development of existing workforce and attraction of new people.	Structure provides opportunities for staff to be involved in wider projects. Structure provides opportunities for professional advancement.	Separating leadership and technical skill for different career pathways where appropriate. Introducing roles to allow differentiation between technical leadership and people leadership. This presents additional career development opportunities. Both managerial and technical leadership increases on- the- job development through coaching and mentoring for staff. Structure fosters collaboration between teams and support staff so they can be involved in wider projects. A project management framework will allow resources to be pulled across the group for cross functional and agile teams.
Māori responsiveness and cultural capability development and its definition within key performance indicators across the entire business will be value-add toward strategic outcomes and professional/personal development	Māori responsiveness as a central point of excellence in the business structure and operation is essential. The recruitment pool to attract credible and competent talent is small and competitive.	
Span of control		
Team size, number of direct reports and responsibilities are manageable, enabling a 'coaching' approach to management which empowers staff.	Team size, number of direct reports and responsibilities can empower staff, create a coaching environment, and ensures the effective decision-making frameworks are possible.	Maximum number of direct reports is ten to ensure capacity in management roles for leadership, staff development and a coaching approach. Larger teams and those requiring specialist expertise have additional technical senior support provided.



Impact on Councils of change

Our approach

In order to understand the actual impact on each Council of a proposed change to a regional water CCO we used a four-step approach, as shown in the following figure.



Onsite discussions were held with the chief executives, directors/group managers and relevant senior managers that were either directly providing three waters services or involved in supporting the delivery of three waters services.

This section discusses the impacts with the functional charts set after the discussion of each council identifying the affected functions. It is important to note that the discussions have focussed on functions rather than individual roles as at this stage no decision has been made to form a CCO.

All financial implications are included within the business case and to provide context a total FTE for each Council pre and post creation of a CCO has been provided.

It also recommends some approaches that the Hawkes Bay councils could take related to the changing role of local government in New Zealand.

Quantifying the change

An estimate of the quantity of water related work that teams and individuals within each council are currently undertaking was made. This informed modelling of the overall potential costs of establishing the water CCO as well as the assessment of the likely change to council workforces.



The estimate was used as a guide only in determining the level of resource available from each council to be transferred to the newly formed CCO. In practice, reallocation of workload between the staff resource remaining in the councils, and the transfer of staff to the Water CCO will be a complex exercise. Viability of the delivery of the non-water related core council functions and services with the remaining staff will need careful consideration as will matching individual skill and capability with tasks. Support of water service activities is integrated into many roles throughout the council organisations, particularly in Central Hawkes Bay and Wairoa.

- Firstly, an assessment was made to identify and quantify the functions that are directly related to and/or funded by three waters services. These were assumed to transfer into the regional water CCO.
- Secondly, the proportion of resource that supports three waters from across the entire council workforce was identified as well as roles that were not affected.

Impacts on resourcing, structure and functions

Creation of a Hawkes Bay regional water CCO will impact the resourcing, organisational structures and functions of each council. Water activity is a significant proportion of each council's budget, so the transfer of the activity to a CCO will impact the way each council operates in the future.

In the larger councils, Napier City Council and Hastings District Council, specialist functions directly related to the delivery of water services were more easily identified. In the two smaller councils, Central Hawke's Bay District Council and Wairoa District Council, the roles tend to be more generalist. Separating out water related resources from other infrastructure functions is likely to be more disruptive and may undermine the ability of the reconfigured councils to deliver the remaining functions effectively to their communities.

Should the recommended approach (asset owning CCO) progress to be the one with which the Councils proceed to consult with the community on, staff communication will occur in parallel. Consultation with staff and unions will occur after the outcome of the community consultation is known.

The impact of the proposed creation of a regional CCO on council structures extends further than just those staff whose roles are directly related to water. Many functions within council spend a proportion of time on three water-related matters, for example, finance, HR and communications.

If the move to an asset owning CCO proceeds, we envisage that the vast majority of three waters staff would transfer to the new CCO on conditions of employment that are no less favourable than they are currently employed on, and in accordance with the employees existing employment agreement. For ease, this has been referred to as staff being 'transferred' to the new entity. Existing three waters staff (and other staff) from all four councils may apply for additional roles created in the CCO.

There is a balance to be struck between ensuring a water CCO is formed that has the capacity and capability to improve services in an affordable way and maintaining efficient and effective ongoing delivery of the remaining council functions with reduced resources.

Wairoa and Central Hawke's Bay are already facing resourcing challenges in delivering core local government functions and, at times, struggle to attract and retain employees for key roles. Reducing their resource further will mean they will have to consider how they can continue to provide effective services and retain and attract suitably qualified and capable employees in a way that protects the wellbeing of their communities.



Central Hawkes Bay District Council

Before and after functional structure charts of Central Hawkes Bay are set out on the following pages. In all cases vacancies have been included.

What does the change mean for CHBDC?

In our view, the transfer of resource to the proposed water CCO will have a significant impact on the ability of Central Hawke's Bay District Council to maintain the current level of service across the remaining council functions.

Resources are already at capacity within council. Roles within council tend to be generalist, so the capacity and capability that existing three waters employees provide across non water related functions will be lost to council with the transfer of three waters to a CCO. For example, council has existing challenges in delivering best practice asset management and infrastructure planning. This situation is likely to be exacerbated with any further loss of resource despite the actual transfer of resources from Council to the CCO being small. Our analysis shows only 9% of the council's FTEs are solely or significantly focussed on water related activities as most roles are already outsourced.

In recent years, Water has been the most significant issue for the predominantly rural Central Hawke's Bay community. It has become a cornerstone around which the Council has connected with its community and brought change through the organisation. Transfer of responsibility for delivering water to a CCO will mean the Council (from the Councillors, through its leadership and operational staff.) will need to reassess the opportunity it has to effectively deliver on other issues for its community with its remaining resource.

The actual transfer of resources from Council to the CCO would be small. Many roles are already outsourced within the three waters function as well as in other areas, so the impact is different. The number of staff directly involved in three waters is also small and there is insufficient resourcing in the support functions for any other staff to realistically transfer. Some capacity will be created in many key areas of the organisation such as corporate services, finance and HR with the organisation benefiting from this increased capacity. However, this additional capacity will not be funded by water revenue so in effect becomes a stranded cost. The organisation will need to manage this cost as well as the funding of senior positions within the Council whose roles would have in part been based on a span of responsibility that included water. Attracting and retaining high quality staff to the reduced roles in future may also be a challenge.

Overall, the loss of the revenue, the cost of supporting stranded costs and the diminished scope of responsibility may place an unsustainable strain on the remaining council organisation unless further changes are made and/or additional responsibilities or requirements for Councils eventuate. The remaining organisation structure is likely to have to evolve to remain a high performing Council. There may need to be future reorganisation of resources allocated to the various functional areas and most importantly finding a new focus for the council.

Pre CCO FTE	Post CCO FTE
69.6 ³⁷	63.6

³⁷ As at 26 June 2020



Figure 37 Current Central Hawke’s Bay District Council functional chart showing functions impacted by water CCO

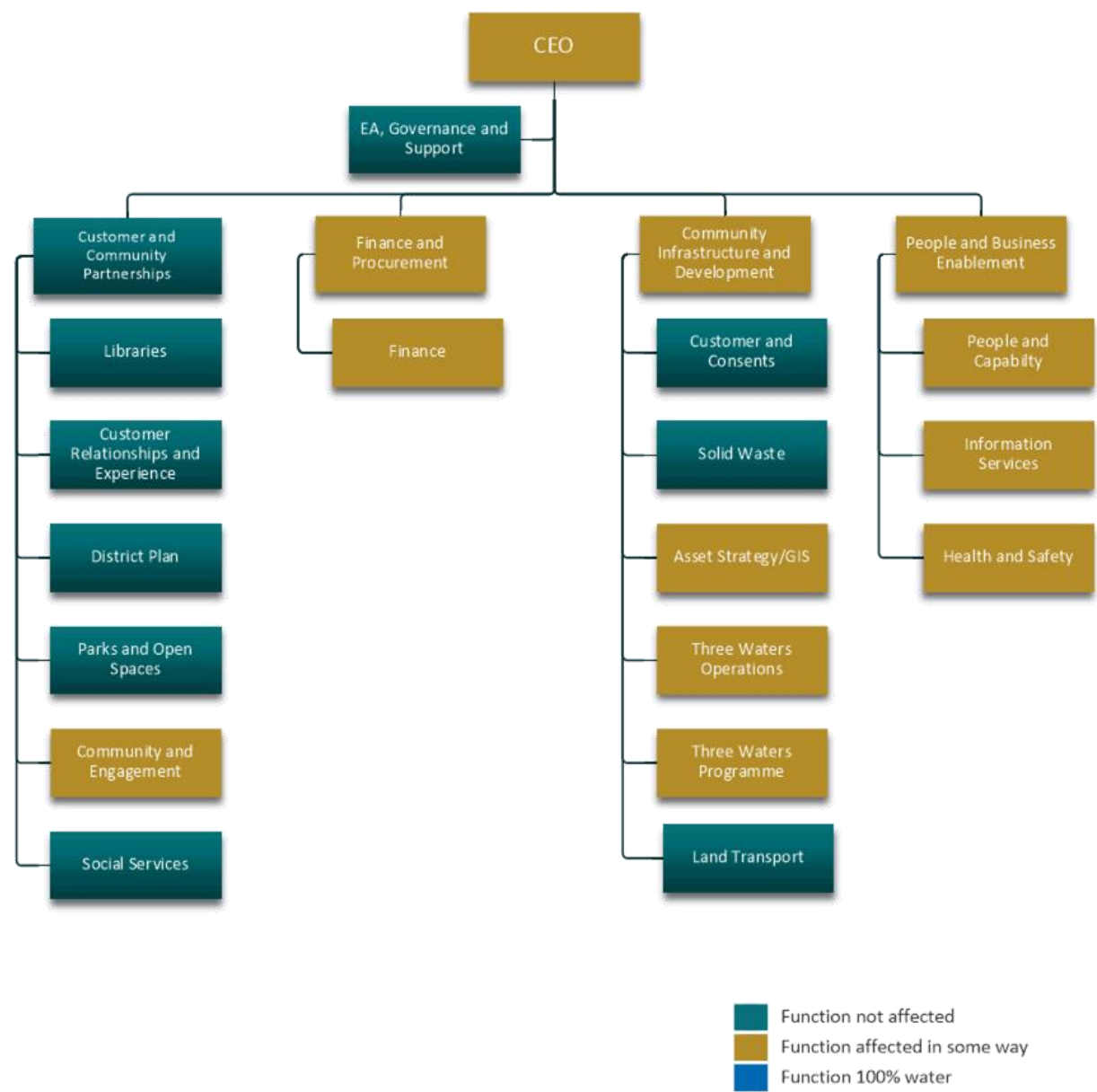
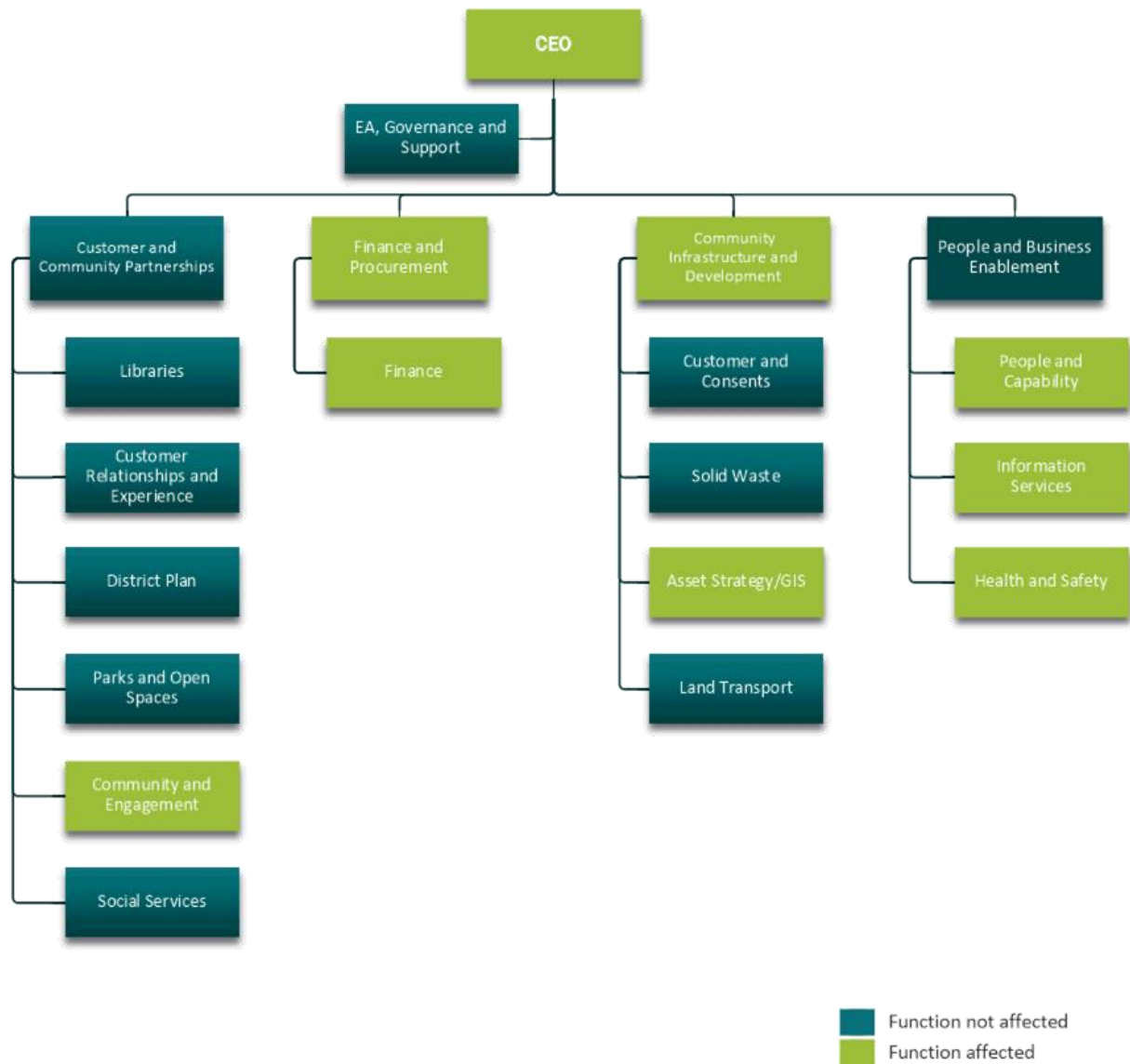




Figure 38 Indicative functional chart for Central Hawke’s Bay District Council post creation of water CCO





Hasting District Council

Before and after functional structure charts of Hastings are set out on the following page. In all cases vacancies have been included.

What does the change mean for Hastings District Council?

The formation of a water CCO appears to have the least direct impact on Hastings District Council. Project delivery, planning for and oversight of the three waters functions are all delivered within one unit and the delivery of three waters operations is already outsourced. It is anticipated that transferring these functions to the water CCO will have minimal disruption on the balance of the organisation and the delivery of business as usual.

Our analysis shows only 8% of the council's FTEs are solely or significantly focussed on water related activities as remaining work is already outsourced.

The existing three waters team is supported by a range of Council corporate services functions including IT, HR, WHS and finance who also have well-resourced teams. Some resource from within those functions would likely transfer to the CCO to continue their support roles. We estimate that 2.4% of the total FTE would transfer resulting in the remaining teams needing to reallocate tasks or complete some reorganisation of resources. There are other support areas where capacity would be created with the organisation benefiting from this increased capacity. However, this additional capacity will not be funded by water revenue so in effect becomes a stranded cost. The organisation will need to manage this cost as well as the funding of senior positions within the Council whose roles would have in part been based on a span of responsibility that included water.

Council officers consider the move to a water CCO is unlikely to materially impact their ability to attract and retain good applicants to roles within the council that would remain. Other factors, such as location and the breadth of responsibilities, are seen to be key influencers.

A loss of integrated infrastructure planning is, however, considered to be the greatest risk to the ongoing delivery of services by Hastings District Council. It is critical that a framework and protocols are put in place as part of establishing the water CCO to ensure effective district and regional planning and policy making. This must be underpinned by regular, timely meetings and communication to ensure council can continue to provide an integrated response to infrastructure issues and development. For example, stormwater is an integral part of the design and decision making for roading design and upgrades and three waters supports housing growth as well as planning for commercial and industrial developments.

Pre CCO FTE	Post CCO FTE
411 ³⁸	368

³⁸ As at 26 June 2020



Figure 39 Hastings District Council functional chart showing functions impacted by water CCO

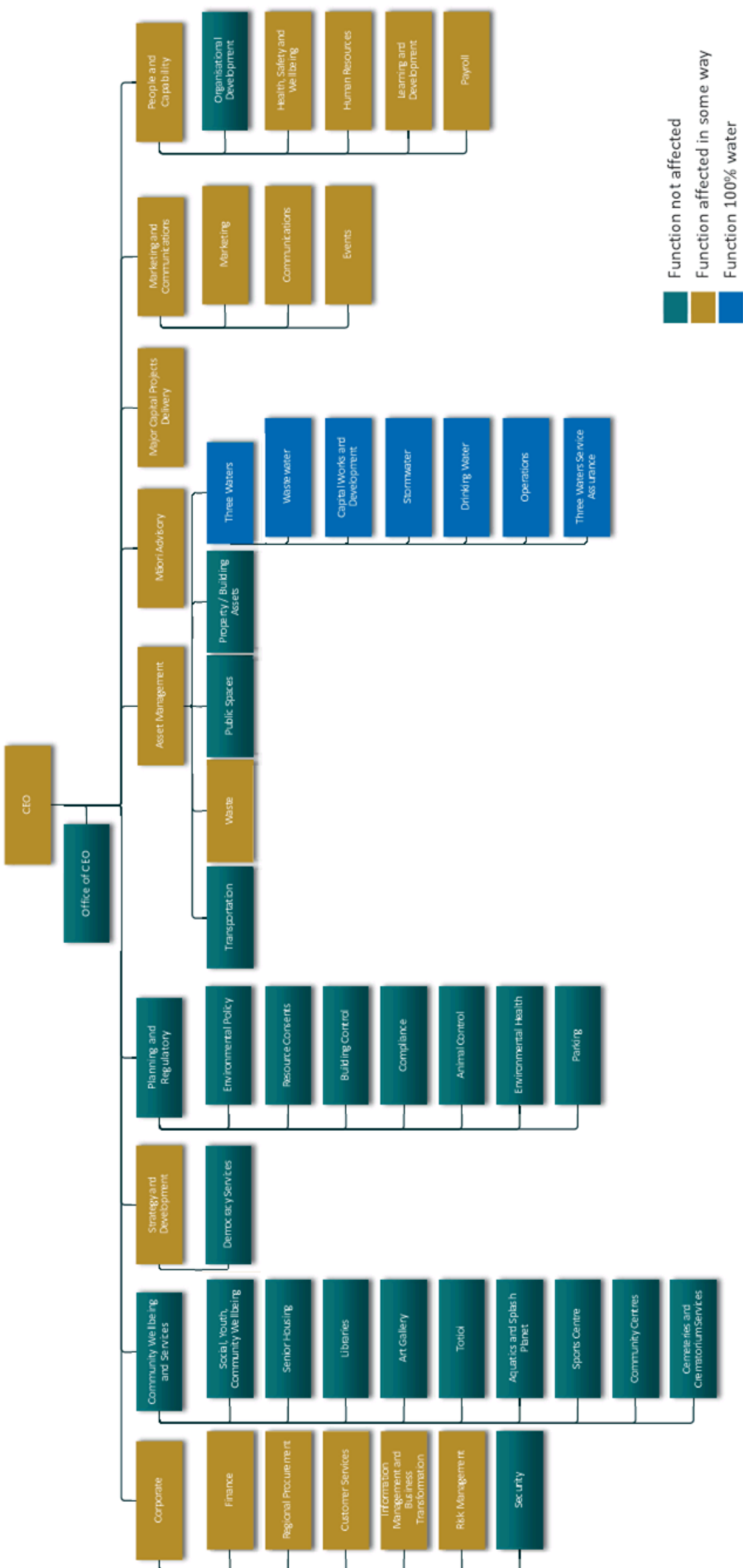
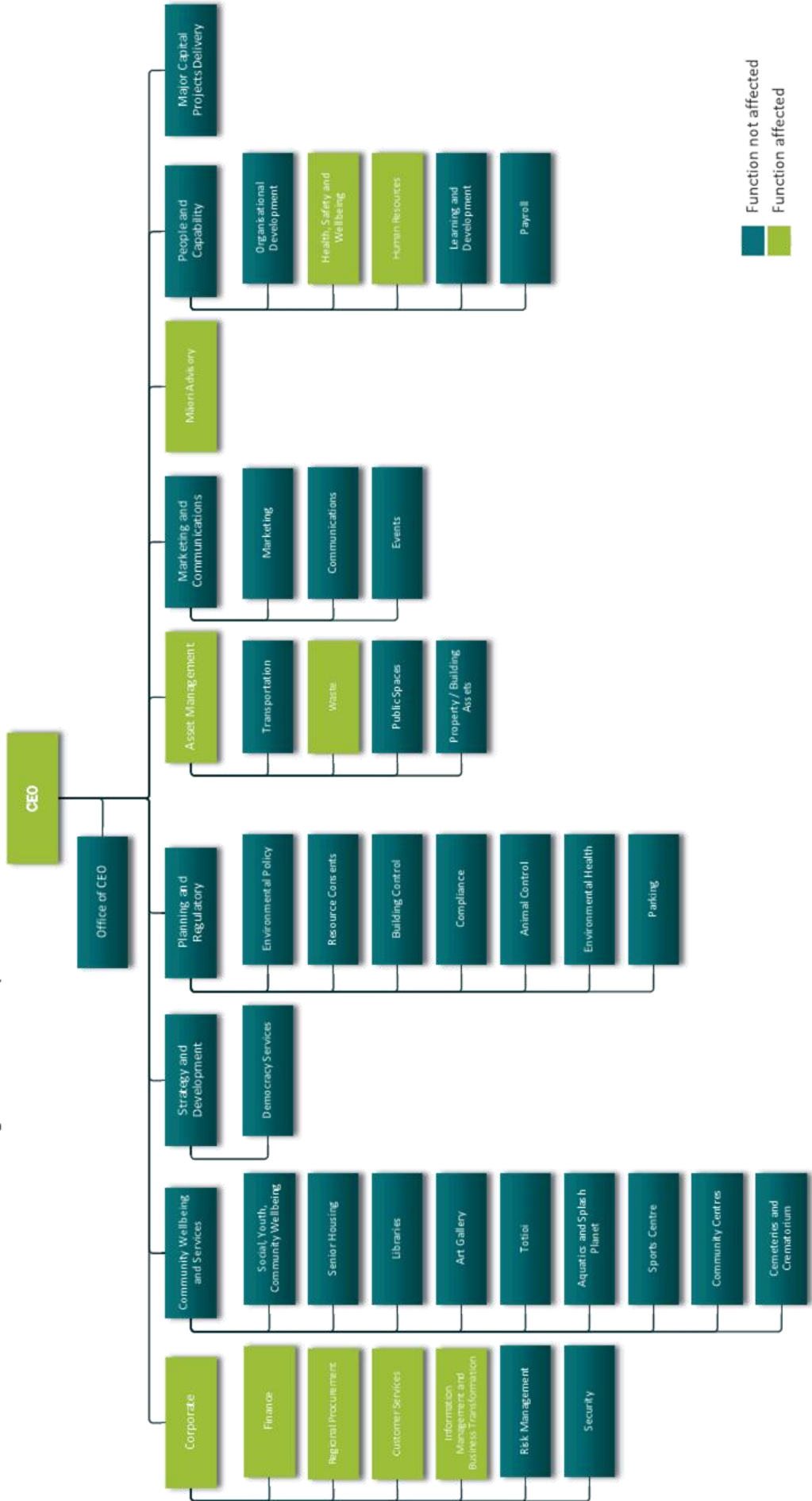




Figure 40 Indicative functional chart for Hastings District Council post creation of water CCO





Napier City Council

Before and after functional structure charts of Napier are set out on the following pages. In all cases vacancies have been included.

What does the change mean for Napier City Council?

Unlike other councils in the region, Napier City Council has predominately retained provision of services in house, rather than outsourcing. The creation of the proposed water CCO will therefore have a greater impact on the organisational structure of Napier City Council as it would affect proportionally more roles when compared to Hastings District Council.

Two functional areas have a significant proportion of specialist staff directly involved in the provision of water services. Approximately 40% of the FTEs reporting through to the Director of Infrastructure would transfer to the water CCO as their role is directly related to three waters, and approximately 26% of the FTEs reporting through to the Director of City Services would likely move to the water CCO should the City Services staff transfer.

While many functions across council provide varying degrees of support for water services and an estimated 5 FTE from across corporate services would transfer to the CCO, generally the organisation would be largely unaffected due to its size and range of activities it undertakes. There are other support areas where capacity would be created with the organisation benefiting from this increased capacity. However, this additional capacity will not be funded by water revenue so in effect becomes a stranded cost. The organisation will need to manage this cost as well as the funding of senior positions within the Council whose roles would have in part been based on a span of responsibility that included water.

Council officers consider the move to a water CCO is unlikely to materially impact its ability to attract and retain good applicants to roles within council. Other factors, such as location and the breadth of responsibilities, are seen to be key influencers.

Council officers also consider the loss of intellectual property and expertise that would occur through transferring all water specialist roles to the CCO increases organisational risk. This may be partially, but not completely offset by the creation of a good service level agreement with the water CCO and regular, structured communication and information sharing.

The ability to continue integrated decision making for infrastructure is essential to the success of the proposed water CCO. Given these concerns, it is considered likely council would prioritise retaining strategic engineering expertise at the executive level to somewhat mitigate the risk.

Pre CCO FTE	Post CCO FTE
529 ³⁹	456

³⁹ As at 19 June 2020



Figure 41 Current Napier City Council functional chart showing functions impacted by water CCO

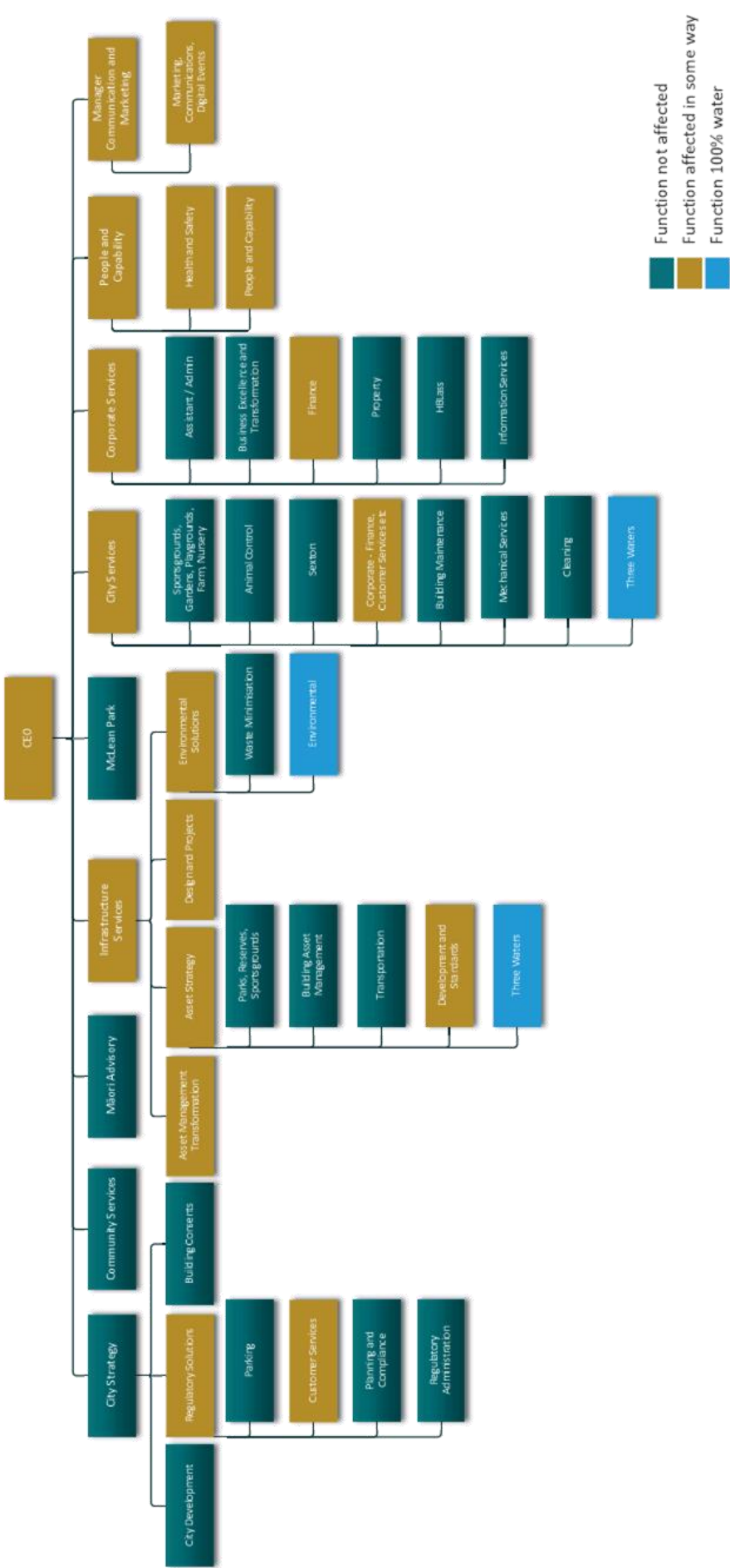




Figure 42 Indicative functional chart for Napier City Council post creation of water CCO – scenario one (City Services staff transfer)

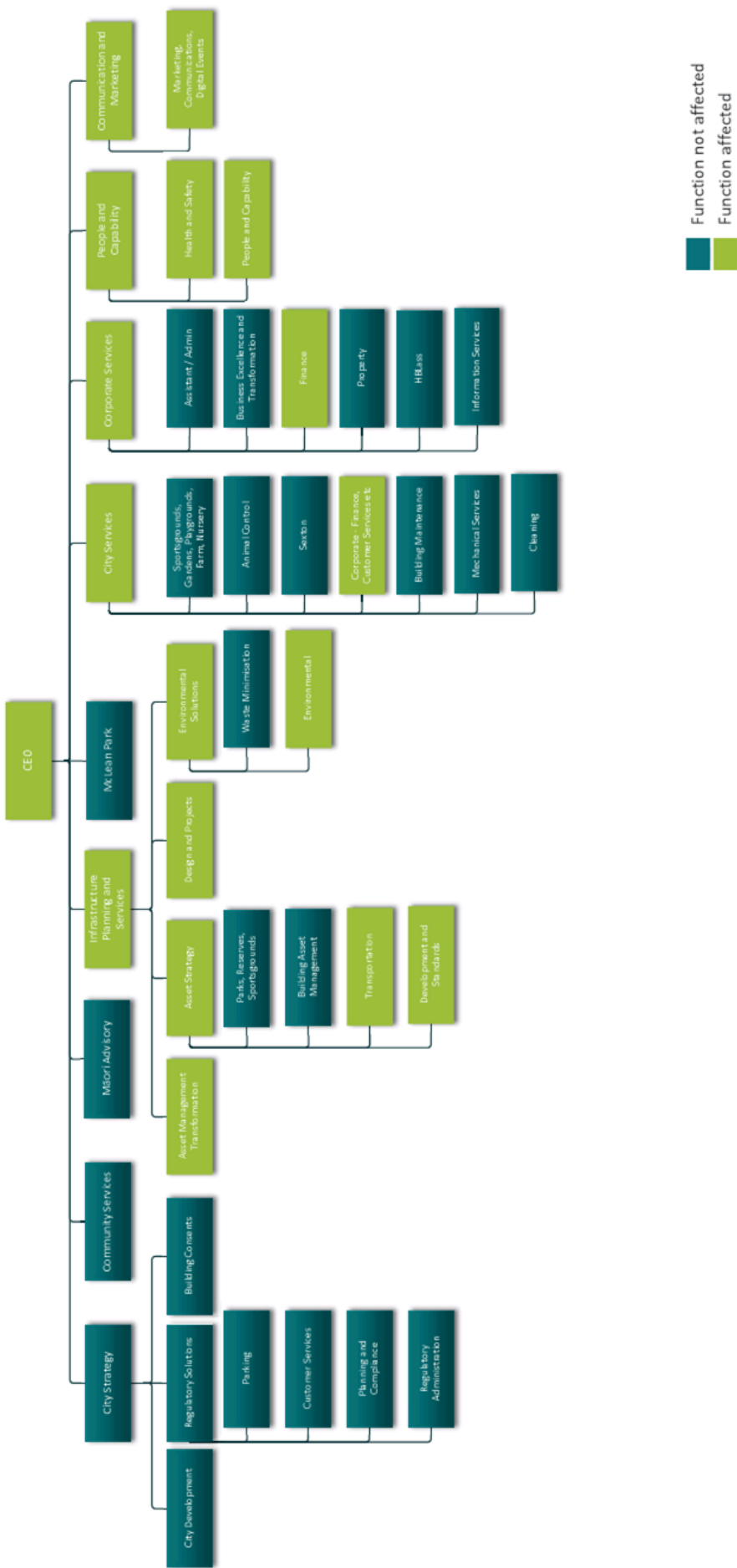
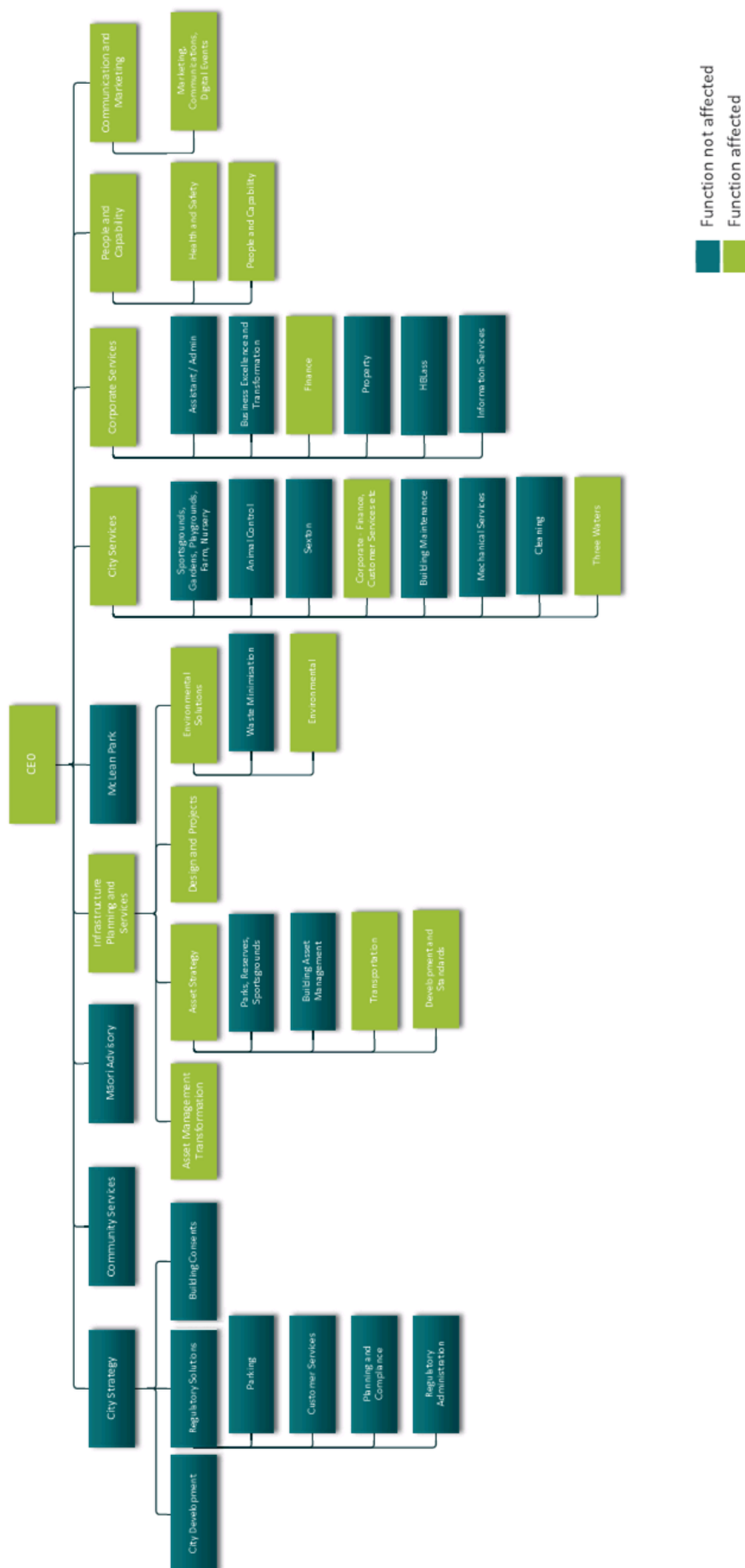




Figure 43 Indicative functional chart for Napier City Council post creation of water CCO – scenario two (City Services staff transfer)



Function not affected
Function affected



Wairoa District Council

Before and after functional structure charts of Wairoa are set out on the following pages. In all cases vacancies have been included.

What does the change mean for Wairoa District Council?

In our view the creation of a regional three waters CCO will have a significant impact on the ability of Wairoa District Council to maintain the current level of service across the remaining council functions.

Given the relatively small size of Wairoa District Council, roles within the organisation tend to be generalist with a wide range of responsibilities delivered across a relatively small asset base when compared with other councils in the region. The actual transfer of resources from Council to the CCO would be small, only 8% of the council's FTEs can be demonstrated to be solely or significantly focussed on water related activities as most roles are already outsourced.

While many roles within council provide some degree of support for three water activities, as a proportion of the total resource for any given function it is frequently less than 20% due in part to the activity being largely outsourced or varies on an issue by issue basis (for example, communications). Overall, it was difficult to identify resources applied to waters and given the limited capacity within council there is insufficient resourcing in the support functions for any other staff to realistically transfer to a CCO.

Some capacity will be created in many key areas of the organisation such as corporate services, finance and HR with the organisation benefiting from this increased capacity. However, this additional capacity will not be funded by water revenue so in effect becomes a stranded cost. The organisation will need to manage this cost as well as the funding of senior positions within the Council whose roles would have in part been based on a span of responsibility that included water. Attracting and retaining high quality staff to the reduced roles in future may also be a challenge.

Wairoa is already resource constrained when delivering some core services to its community. For example, it has been late in producing its LTP and annual report. Any further reduction in FTEs may significantly impact council's ability to deliver its remaining services and may impact its ability to recruit to vacancies. This situation is likely to be exacerbated by the demands placed on council to engage in governance and relationship development activities arising from the creation of a water CCO.

Overall, the loss of the revenue, the cost of supporting stranded costs and the diminished scope of responsibility may place an unsustainable strain on the remaining council organisation unless further changes are made and/or additional responsibilities or requirements for Councils eventuate. The remaining organisation structure is likely to have to evolve. There will need to be future reorganisation to reprioritise the resources allocated to the various functional areas.

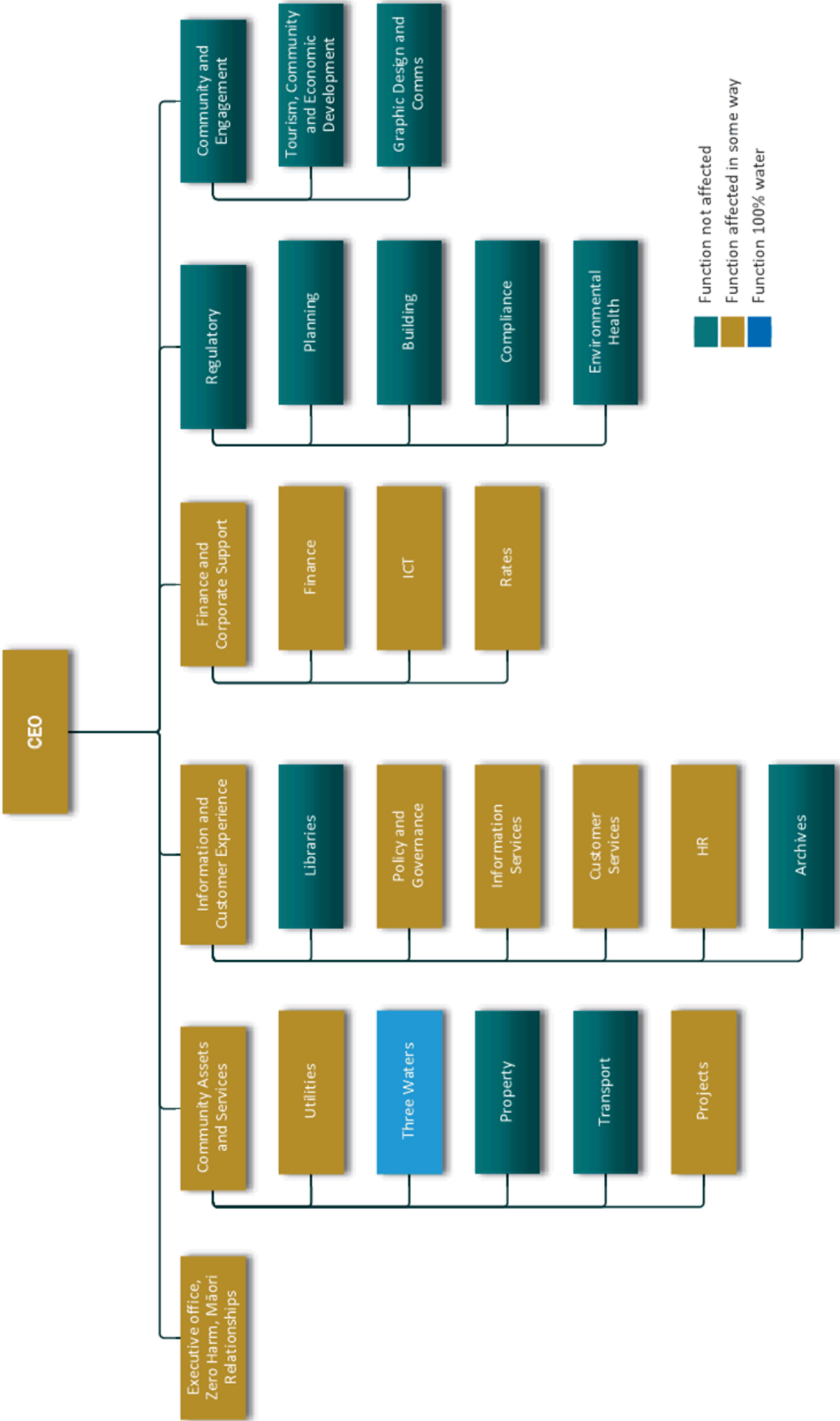
Pre CCO FTE	Post CCO FTE
66.7 ⁴⁰	61.7 ⁴¹

⁴⁰ As at 15 June 2020

⁴¹ Ibid



Figure 44 Current Wairoa District Council Current Wairoa District Council functional chart showing functions impacted by water CCO



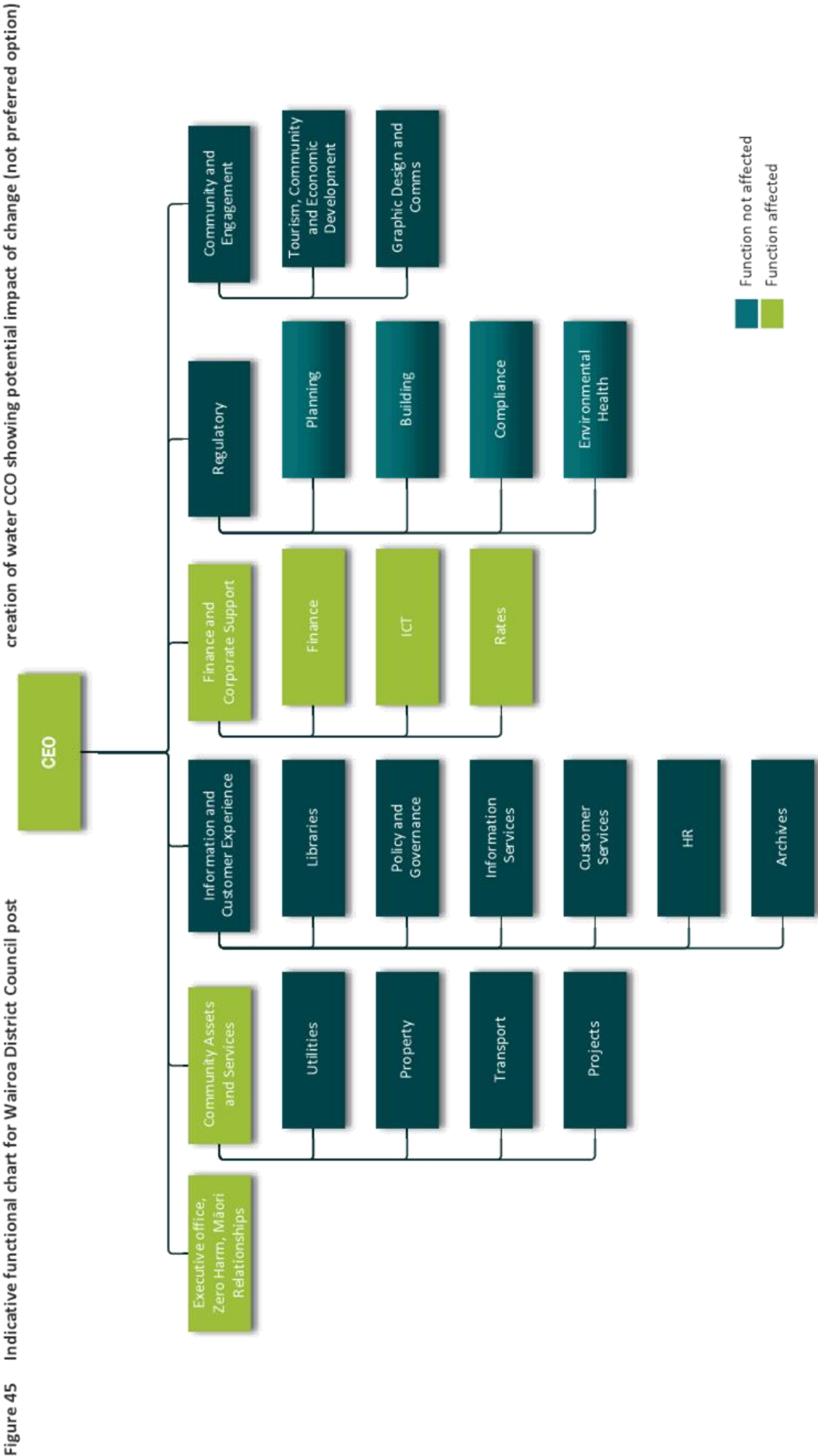


Figure 45 Indicative functional chart for Wairoa District Council post



Opportunity for a different future

If a regional water CCO is formed, then all councils need to consider how they will function after such a significant change. This can be viewed as an opportunity to return to first principles to find ways to deliver important council services in a new way to ensure that Central Hawke's Bay and Wairoa have a viable future.

Supporting a regional water CCO

In addition to the immediate change in functions related to water activity transferring, some new functions are likely to arise for councils in guiding and supporting the regional water CCO (see **Table 18** below). There may be merit in regionalising these costs to the CCO, which in practice would result in a small financial contribution being returned from the CCO to councils to offset these cost increases.

For example, the New Zealand Government in its 7 August 2019 Cabinet Paper: *working with local government on community wellbeing* signalled its intention that local authorities would put greater focus and, presumably, resource into more inclusive community participation and partnerships, particularly with Māori. Local government would be expected to

- build capacity and capability of parties to engage
- use innovative engagement methods and communication tools
- demonstrate a greater flexibility and range of consultation methods
- increase the uptake of effective Māori participation mechanisms.

In terms of the NZ Government's wellbeing priorities (social, cultural, economic and environmental), a regional water CCO would be considered a priority for increased engagement. Some of these potential new functions for Hawke's Bay councils arising out of the creation of a water CCO are detailed in **Table 18** below. In some councils, aspects of these functions may already exist. They will need to become more formal if a CCO was created.

Table 18 New functions for councils with water CCO

New council functions to support CCO
Oversight and governance of three waters.
Set key outcomes and performance measures for CCO.
Monitor and audit CCO performance against these measures.
Develop strategic relationship with Māori. Ongoing Māori liaison, consultation and engagement on the strategic, sustainable management of water regionally.
Regional strategy development for three waters.

We note that South Wairarapa (the 14th smallest Council in NZ by population), reported very positively on the change associated with becoming part of Wellington Water. The depth of expertise and resources that could be brought to bear was a significant help when Martinborough faced water contamination issues. The organisation now, quite deliberately, has a second-tier role of Group Manager Partnerships and Operations as it responds to the changes that flow from joining Wellington Water.



The evolving role of local government

The NZ Government is considering the role of local government in strengthening the delivery of intergenerational wellbeing for all New Zealanders, and in better supporting regional growth. Government has signalled its intention to evolve the role of local government. This is in part due to the increasingly unsustainable financial position of many councils, with growing financing and debt constraints, and the need for more localised responses to effectively address societal and economic challenges. The economic shock from the COVID-19 pandemic has further demonstrated the need to promote wellbeing in regions that are heavily reliant on tourism and exports.

The Local Government (Community Well-being) Amendment Act 2019 restored the four aspects of community wellbeing. The amendment broadened the purpose of local government to include promoting the social, economic, environmental and cultural well-being of their communities, while taking a sustainable development approach.

While assessing the proposed structural reform of Hawke's Bay water provision, Hawke's Bay councils have the timely opportunity to review their ongoing structures and roles and consider how to:

- organise council's functions and activities to best deliver the wellbeing needs of their communities in a measurable way
- best bring together and deliver on the intergenerational aspirations of central government, their local communities and Māori
- in a financially sustainable way, achieve good outcomes to pressing social issues, build community resilience and drive local economic growth

In the Cabinet paper released in August 2019 the government also indicated its intention to explore a more meaningful and efficient role for local government in the design, targeting and (where appropriate) commissioning of traditionally central services.

Role of local government internationally

Local government in New Zealand is responsible for a comparatively low proportion of total government expenditure. In New Zealand central government controls 89% of government expenditure, whereas the OECD average is 44%. In other countries local government often plays a greater role in economic development, health, education and social welfare. It also plays a far lesser role in infrastructure provision.

Refocus activities

Hawke's Bay councils could also consider what else they can offer to their communities. For example, they could become a centre of excellence for a particular aspect of council services that they can trade with other councils. A smaller size will allow them to become more nimble and responsive in a changed economic climate as new technology emerges and their ratepayer demographic changes. An example of a council that has pursued a new focus is Hamilton city. Hamilton has a younger population and has developed a focus on being a smart city by using new technology to automate, become more efficient and partner with the local university and industry.



Napier City Council – options for City Services staff

Napier City Council resources the delivery of three waters services differently to the other councils as it relies on internal resources to a far greater extent. This includes operational staff who undertake operations and maintenance of the treatment plants and the reticulation networks. There are more than 40 staff within the Napier City Services who work directly on three waters services as well as those support services and management within City Services.

The presumption in this report is that if the future model is a regional water CCO then all staff directly associated with delivering three waters services as well as some additional staff who support service delivery would transfer to the regional water CCO.

Given the unique nature of City Services there are options that have been considered in this report as to who employs the Napier City Services staff who deliver three waters services.

- Option A – City Services staff transfer to the regional water CCO in the same way other staff do from across the region and City Services staff continue to deliver the same activities and services they currently do.
- Option B – City Services staff remain employed by Napier City Council and a contract is developed between Napier City Council and the regional water CCO such that City Services staff continue to deliver the same activities and services they currently do.

Under all options the same people would effectively remain doing the same roles, the question is about which structure they operate within.

Understanding the different options

The transfer of operational staff from Napier to the regional three waters CCO makes the transition more complicated. The large number of City Services staff, their location and the differences between their duties and activities when compared to the remainder of the regional water CCO staff mean that including them in the organisation would make creating it more complicated. Additionally, as the staff are currently located in the Napier City depot, then either those staff would need to continue working out of the existing depot despite being employed by a separate organisation or move to another location.

- A regional water CCO would need to create a new culture – focussing on the regional and local priorities that they determine. Having a large group of staff co-located within the Depot of their former employer is likely to make it difficult to implement that change.
- If the City Services people, plant and equipment that service three waters were moved to another location then that would leave Napier City Council with responsibility for the entire depot. That would create a significant stranded cost over and above those considered in the review.

We also understand that Napier City Council places a high value on having City Services and the loss of that capacity or perceived capacity of City Services may not be desirable.

The alternative approach, where Napier City Council becomes a contractor to the CCO, does create some risks for Napier. Napier City Council would become a commercial contractor and take on all the associated risks and issues. However, this would be limited to the contract with the regional water CCO, that is a separate entity, with separate management and ownership. A regional water CCO would rightly expect Napier City Council to develop the sort of systems and processes that a comparable contractor would have and take similar responsibility for delivering work on time, budget and to the standard required.



While the transition process would allow time for a contract to be developed, the nature of any contractual relationship between distinct organisations with different objectives, responsibilities and 'owners' may lead to tensions. There are also risks and opportunities for Napier if changes were made in the future by the regional water CCO. In our view, there are mechanisms that can be used to ensure the future employment of City Services staff would be as protected under either option should the regional water CCO decide to review its model of service delivery and, for example, chose to have a regionally consistent approach. Having the staff within Napier means that those risks fall onto Napier rather than the regional water CCO. There is also a risk that any stranded costs or flow on impacts from such a change would be seen as falling on Napier City, rather than being seen as part of considering the regional impacts as has been done through this business case.

Operationally, a regional water CCO may prefer to have a greater level of control over practices, processes and systems, and ability to create change through having the City Services staff as employees from the start rather than contractors. By having its own operational staff it would have also have the ability to directly compare the performance of its operational staff and those of its contractors. This was the approach in Wellington Water where it inherited operational staff as well as contractors. Over time that information was used to evaluate what was the best model before establishing it regionally.

Impacts on the review

When considered from a regional perspective there is little difference between the two options, and the net impact of the difference for the purposes of the financial modelling used throughout this report is negligible for both a regional water CCO and for Council. Regardless of how City Services delivers its services (as a contractor to a three waters CCO or as staff working within a three waters CCO) the full cost of the City Services staff associated with three waters, plant, equipment, and overheads (including the depot) site are accounted for and charged through as a three waters cost and levied on the appropriate group of ratepayers. The only difference would be if Napier determined that as a commercial contractor to the CCO they would need to add a margin to their current costs. If that were the case, then there would be financial impacts for both the CCO and for Napier.

There are some minor additional costs with the more complicated transition but those are not significant. The differences between the options really lies in the complication of giving effect to a larger transition with a distinct group of staff. This is not an insurmountable issue and City Services staff have indicated that either option is, in their view, manageable. Ultimately, we believe the decision needs to lie with Napier City Council, not just because it is their staff but the impact of the decision falls on them to a much larger extent than the other councils.

Valuation and shareholding

Management CCO

Equal shares, one per council.

Under this option the CCO does not own any of the three water assets. What assets it does own will be related to operational delivery. There is no expectation by the owners of a profit being made and returned as a dividend to shareholders. The purpose of the CCO is to deliver the lowest cost service while meeting all other obligations.

The shareholders agreement will contain clauses preventing privatisation (as does the Local Government Act) and sale of the shares but not the winding up.



Asset owning CCO

There are a number of different valuation methods which could be used to establish relative shareholdings. These include those based on future cashflows (Net Present Value) and different models of determining asset value (Optimised Depreciated Replacement Cost, Discounted Future Cashflows, Condition Based Value). A brief summary of each is included in the table below.

Table 19 Valuation approaches

Approach	Basis of valuation	Characteristic of system rewarded
Optimised Depreciated Replacement Cost	Theoretical remaining life and replacement cost	Younger assets, longer asset lives
Discounted Future Cashflows	Sustainable cashflows	Revenue generation
Condition Based Value	Actual remaining life	Well maintained assets

The typical approach for previous regional water CCOs (e.g. Waikato Water) has been to use the optimised depreciated cost and that is shown in the table below. The debt of each council is taken off the assets transferred to equate to the equity being transferred and therefore the relative shareholding. The asset values used to determine the shareholding percentages below represent the current value of assets in each of the councils.

Table 20 Shareholding based on asset value

	Book value of assets	Debt	Net assets	% shareholding
Central Hawke's Bay	\$100,526,039	\$19,827,906	\$80,698,133	8.2%
Hastings	\$617,395,765	\$109,579,830	\$507,815,934	51.4%
Napier	\$376,929,221	\$10,949,751	\$365,979,471	37.0%
Wairoa	\$40,923,976	\$6,746,112	\$34,177,864	3.5%
Combined	\$1,135,775,002	\$147,103,600	\$988,671,402	100%

WSP was commissioned in May 2020 (**Appendix D**) to undertake a review of asset values and unit rates for each of councils. That review found most differences in unit rates were explainable, however it also made adjustments to 'standardise' some component of the unit rates including Preliminary and General cost allowances, and indexation to current values. In **Table 21**, we outline the impact of those adjustments on the relative shareholding of each council. Note that these adjustments to asset value also have flow on impacts to the total cost of service and debt profile for all of the options modelled in this report.

We have also set out an alternative approach below for comparative purposes. We note that under the model used in this business case where there is equitable regionalisation applied during the first ten years that the discounted cashflow approach doesn't match the relative population, which is what you would expect it to do.



Effectively this highlights that, under this approach, Central Hawke's Bay and Wairoa are, relative to population, bearing a higher proportion of the costs of the regional water CCO in the initial years due to the significant investment occurring within their area.

Table 21 Alternative approaches to valuation and shareholding

	Asset Value (Depreciated cost)	Asset value (WSP update)	Discounted cashflow
Central Hawke's Bay	8.2%	9.2%	8.4%
Hastings	51.4%	45.9%	45%
Napier	37%	41.1%	40.6%
Wairoa	3.5%	3.9%	6.1%

The shareholders agreement will contain clauses preventing privatisation (as does the Local Government Act) and sale of the shares but not the winding up.

A key part of the next steps will be a common valuation and condition assessment across the region. This, amongst other changes, may lead to adjustments in the relative shareholding.



Financial Case

The financial case sets out the financial impact of any change and the high-level funding arrangements of the options. The results are presented initially at the regional level then for each council.

Conclusions from the financial case

Financial analysis of the potential costs and benefits of each option was undertaken by comparing each option against the enhanced status quo over a period of ten years of operation for each option (2032).

The enhanced status quo

- modifies each council's forecasts with estimated future cost increases that all the councils may face from changes in regulatory standards. This has been undertaken using information made available by the DIA
- assumes further additional costs for meeting increased compliance requirements for all councils, except Hastings which has already seen a 100% increase in the operational costs of drinking water post Havelock North.

The outcome of the financial analysis, when considered at a regional level, is that all options are able to reduce the future cost of three waters service delivery to less than under the current approach (enhanced status quo). In a strictly financial sense, all options are better than the enhanced status quo. This analysis includes an allowance for transitional costs, ongoing savings and additional costs associated with each model.

Table 22 Summary of costs and benefits (total operating and capital) (NPV)

2021 - 2032	Costs (\$000)	Benefits (\$000)
Business unit	\$9,148	\$22,893
Management CCO	\$19,945	\$47,144
Asset Owning CCO	\$23,243	\$70,736

These savings translate into lower ratepayer charges and are driven by the creation of efficiencies through improved asset management, the aggregation of purchasing power, and adopting a coordinated approach to procurement across the region. They are balanced against the costs to establish each option and the introduction of some longer-term costs in the CCO models from additional resources and being a separate organisation.

The best performing option and the recommended one is the asset owning CCO. The asset owning CCO by 2032

- creates \$16.7M (12.7%) in annual savings in operational costs compared to enhanced status quo
- creates a 10% reduction in the annual costs of the capital programme compared to the enhanced status quo
- reduces regional three waters debt by a total of \$28.3 million compared to the enhanced status quo
- saves a total of \$117.4 million in operational savings and \$31.1 million in capital expenditure when compared to the enhanced status quo.



Affordability

The asset owning CCO option is the only option that adequately addresses affordability across the region by providing a path to regional pricing.

By 2032 (when we have assumed all costs are regionalised to a standard charge) all councils, other than Wairoa, are below the threshold of spending 2% of average household income on water and wastewater services. Wairoa ratepayers sees a substantial improvement in affordability under the asset owning model, but due to low projected household income levels still exceeds the 2% threshold.

Table 23 Estimated three waters residential rate: Affordability of water and wastewater⁴² (2032)

	Central Hawke's Bay	Hastings	Napier	Wairoa
Enhanced Status	4.4%	1.9%	1.5%	5.9%
Shared Service Business Unit	3.9%	1.7%	1.5%	5.3%
Management CCO	3.2%	1.8%	1.7%	4.3%
Asset owning CCO	1.9%	1.6%	1.8%	2.3%

The financial case also addresses key issues such as

- stranded costs
- establishment costs
- anticipated additional costs and savings from each of the models.

Estimating the costs and benefits of change

The financial analysis has relied on making assumptions about what the future costs and potential savings that could be derived by each option may be. Comparison with other similar entities in this case is problematic as there are no similar sized three water organisations in NZ. For comparison, within New Zealand a combined Hawke's Bay regional water CCO would service a population almost as large as Hamilton with the large rural area making for quite a different organisation.

Internationally, water organisations tend to be larger, often, much larger. In Victoria, Australia there are 19 water corporations created under the Water Act 1989. They range in size, including four which service a similar sized population. Central Highlands, Coliban, Gippsland and Western Water all provide water and wastewater services to a population of between 145,000 and 160,000. Interestingly, their annual revenue in each case is between 60% and 120% higher than the combined Hawke's Bay councils three waters revenue. That makes comparison with these entities of little value.

⁴² GST inclusive water and wastewater rates as a percentage of household income. Relies on 2018 Census data for household income by Council area with Morrison Low projections of future values.



Additionally, there was until 2017 Mid-Coast Water, a water and sewer county council in New South Wales which provided two waters services to an area with a population of 90,000 spread across urban and rural areas. Formed in 1997 to provide water and then subsequently sewerage services across what was at that time three separate council areas. Following a merger of those councils in 2016, the decision was made to fold Mid-Coast water back into the councils. Interestingly, savings of almost \$3M were projected to arise from reducing governance and executive costs and removing the duplication of corporate functions. Mid-Coast water was also considered to be heavily indebted following a significant capital investment program.

Given the lack of appropriate organisations off which to benchmark performance, size or scale an alternative approach has been used for estimating the costs and benefits of the changes created by each option. The starting point has been to combine the existing staff and costs of the four councils three waters services. In addition, it was determined that maintaining the existing jobs was important to the regional and rural economies. The modelling then

- calculates the expected costs to implement change (establishment costs)
- estimated any additional costs (whether staff, contractors, consultants, services or otherwise)
- estimated any benefits and savings that may arise from implementing the change. These arise from
 - efficiency – doing things right, with less inputs e.g. a reduction in the costs of contracted services
 - effectiveness – doing the right thing e.g. reduction in re-active maintenance from improved asset management practices
 - efficacy – setting the right objectives (as it relates to three waters e.g. asset management).

The modelling assumptions are set out in **Appendix C** with a summary of the financial impact of those set out in the table below. In each case there are short term costs to establish the change and ongoing increased costs from the day to day operation of separate organisations.

In each case the establishment costs and ongoing additional costs are outweighed by the savings that can be realised from each model.

Table 24 Summary of costs and benefits (total operating and capital) (NPV)

2021 - 2032	Costs (\$000)	Benefits (\$000)
Business unit	\$9,148	\$22,893
Management CCO	\$19,945	\$47,144
Asset Owning CCO	\$23,243	\$70,736



Establishment costs

While the establishment costs for the SSBU model are significantly lower than those of the asset owning and management CCOs, the SSBU offers only modest net benefits as it is only able to realise small savings when compared to the asset owning and management CCOs.

We note that the period of time covered by the analysis (ten years of change) is relatively short for the true benefits of these options to be realised. The larger benefits over time will be realised through reduced and improved capital expenditure and the financial benefits of that take time to be realised. By 2032 the ongoing savings for the management and asset owning CCOs are 3.7 and 5 times greater than the ongoing costs (respectively).

The establishment costs are summarised below with the assumptions detailed in **Appendix C**. We note that establishment costs do not include costs that are additional and created by the change but are ongoing such as rental of new office space, cost of additional corporate support roles, director fees, wage harmonisation and overheads. These are also set out in **Appendix C**.

Table 25 Establishment Costs

(\$000)	Capital	Operating
Business unit	1,263	1,163
Management CCO	2,458	2,379
Asset Owning CCO	3,558	2,379

Financial analysis of the options

Debt

The debt associated with the three waters services of each council is transferred to the asset owning CCO as will be the projected borrowings to fund future infrastructure investment. Under all other options current and future debt remains with the Councils.

The Local Government Funding Agency borrowing limits are set out in the table below. We note that all of the four councils are within these limits, forecast to be for the life of the LTPs and will remain within the limits under any of the options considered in this report.

Table 26 Local Government Funding Agency current borrowing limits for councils

Financial covenant	Lending policy covenants	Foundation policy covenants
Net debt / total revenue	<175%	<250%
Net interest / total revenue	<20%	<20%
Net interest / annual rates income	<25%	<30%
Liquidity	>110%	>110%



An asset owning CCO would purchase the three waters assets from each council. While the Councils will also need to provide a modest amount of capital to start the CCO off, it will not be sufficient to purchase the three waters assets. The asset owning CCO would therefore borrow in order to pay the Councils sufficient cash so that their loans can be repaid.

Each council will report their proportion of the CCO's debt (and assets) relative to their shareholding. The table below shows the relative debt positions under the different options. Under the asset owning CCO the italicised figures represent each council's proportion of the CCO debt based on shareholding by a depreciated replacement cost.

Table 27 Comparison of debt

Debt at 2030	Enhanced Status Quo	Business Unit	Management CCO	Asset Owning CCO
Central Hawke's Bay	\$86M	\$84M	\$83M	<i>\$23.4</i>
Hastings	\$81M	\$78M	\$77M	<i>\$148.1</i>
Napier	\$84M	\$81M	\$81M	<i>\$106.7</i>
Wairoa	\$65M	\$64M	\$62M	<i>\$10</i>
CCO	-	-	-	\$288M
Region wide	\$317M	\$307M	\$303M	\$288M

As part of this review an initial conversation has been held with the LGFA. They have advised that the shareholders of LGFA have just recently approved lending directly to CCOs with water CCOs in mind. The different nature of a three waters CCO was understood by the LGFA and appropriate covenants for a water 'business' would be put in place. This means that debt/revenue ratios would likely be higher for a water business, and any new three waters CCO would be unlikely to be limited by the debt covenants imposed. We also understand that as of July 2020 the LGFA has announced an increase in net debt/total revenue limit to 300% for A rated councils.

Regionalisation of costs

One of the challenges to adopting an asset owning CCO model that is regularly encountered in business cases, and through the consultation process, is the perceived inequity that arises when councils are transferring different levels of debt or assets of varying conditions. Where this happens, ratepayers may feel that they are inheriting someone else's problem.

A different approach

To address this issue, we have proposed an equitable regionalisation approach where three waters charges are gradually regionalised for a period of time after the establishment of the asset owning CCO. Over that period, residents in each former council area would have charges that included a contribution based on the proportion of 'liability'⁴³ each council contributes to the CCO. In our view this creates a more equitable path toward a standard regional charge.

⁴³ A combination of debt, future required compliance upgrades, and costs to bring assets up to the regional average condition



In this approach the debt of each council has been considered alongside the condition of the current assets (as compared to a regional average) and the forecast investment required over the next ten years.

The total of all of these has been summed together and the proportion relating to each council is then used to determine a share of the revenue requirement over a period of time to represent the relative liability that each council contributes to the CCO.

As this approach is based on developing a 'fair' solution ultimately the decision as to whether such an approach is used, and if so, what the recovery period should be, is for the Councils to decide.

We have modelled various scenarios which show impacts on different groups of ratepayers but acknowledge that there are numerous alternative scenarios which could be adopted.

- Immediate regionalisation of all costs
- 100% of the relative liabilities brought by each council with a repayment period of
 - 20 years
 - nine years (ten years of the CCOs operations)
- 50% of the relative liabilities brought by each council
 - 20 years
 - nine years (ten years of the CCOs operations)

Each of these scenarios is presented in the charts below and compared to the enhanced status quo. We note that the scenarios include some 'smoothing' of the charge where necessary and we note that further smoothing could be applied to soften the impacts on specific ratepayer groups.

In our view the scenario that best balances the competing interests is '50% of the liability over a nine year period' because:

- the full benefits of regionalisation are not achieved until all ratepayers are paying a regional rate: that is the point at which community affordability is best addressed. A 20 year period would significantly delay these benefits from being realised.
- recovery of the full amount of the relative liability over such a short time frame would be inequitable. The costs being recovered by this calculation are for capital investment and are typically recovered over an extended timeframe taking into account the life of the assets.

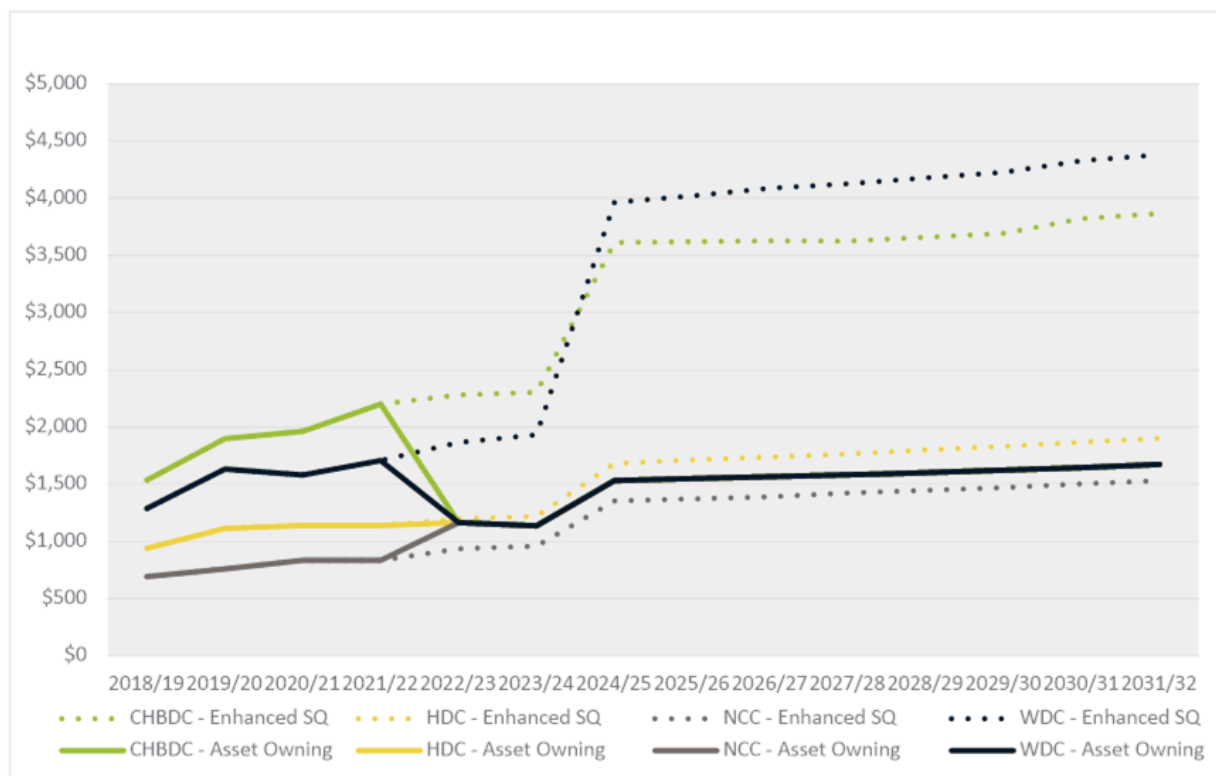
These options do not include the impact of any government funding for infrastructure upgrades. The potential for such financial support may become part of the package announced in July 2020 but at this stage we do not know if or how much that might be. If such funding was available, then that has the potential to remove any issues relating to the regionalisation of costs. That would allow for an immediate regionalisation on day one without negative financial impacts on any group of ratepayers.

Immediate regionalisation of costs

This option does not address concerns about differing asset condition or debt levels but addresses community affordability quickly for some councils.



Figure 47 Immediate regionalisation of costs



With no regional equalisation, there is an immediate, significant reduction in three waters charges for Central Hawke's Bay and Wairoa of \$1,116(49%) and \$699 (38%) respectively. Hastings ratepayers also see a reduction of \$30 (2%).

Under this option, Napier ratepayers see an increase in rates, compared to the status quo, after formation of \$230 (25%), with all ratepayers paying the same regional rate in year one.

20 year period recovering 100% of the relative liability

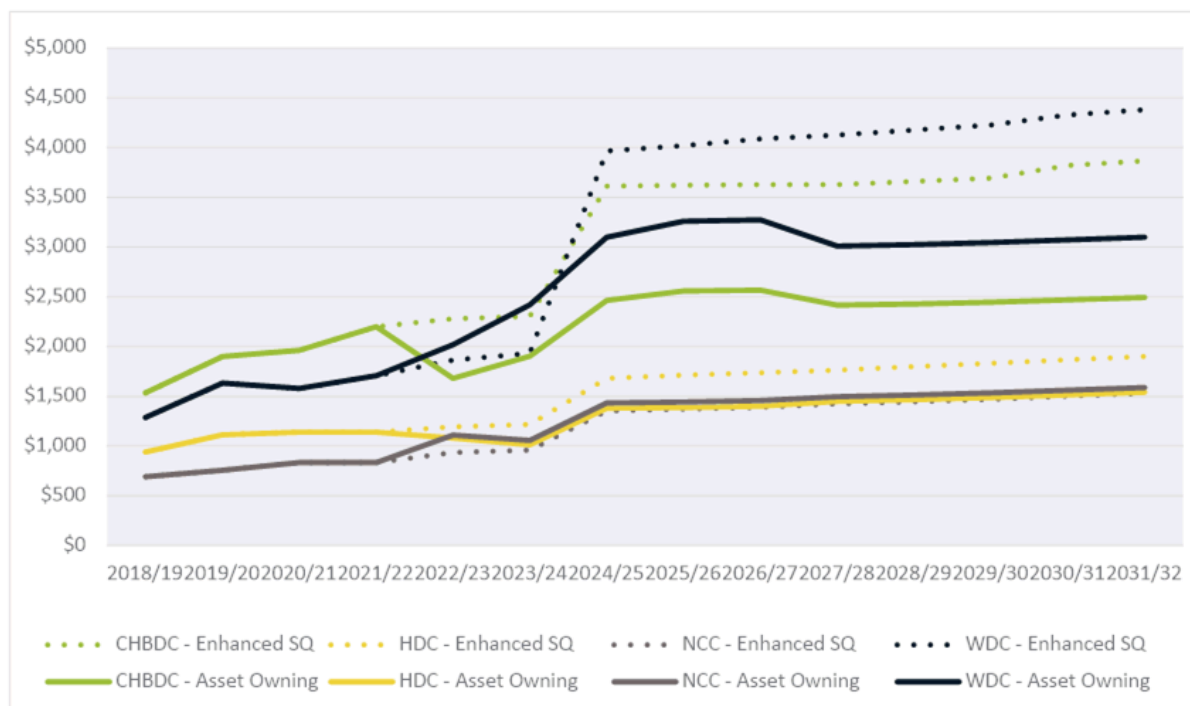
A 20 year equalisation period with 100% recovery of relative liability would give Central Hawke's Bay an immediate rates reduction of \$601 (26%) and Hastings a reduction of \$113 (9%) in the first year. Napier and Wairoa would see increases in rates of \$177 (19%) and \$156 (8%) respectively, although the increase in rates for Wairoa would last three years when compared to the enhanced status quo.

The full benefits of a regional rate would not be passed on to Central Hawke's Bay or Wairoa for 20 years.

Under this option communities are still forced to repay infrastructure costs over a shorter time than would otherwise be required and the length of time until community affordability issues are addressed is considered to be too long.



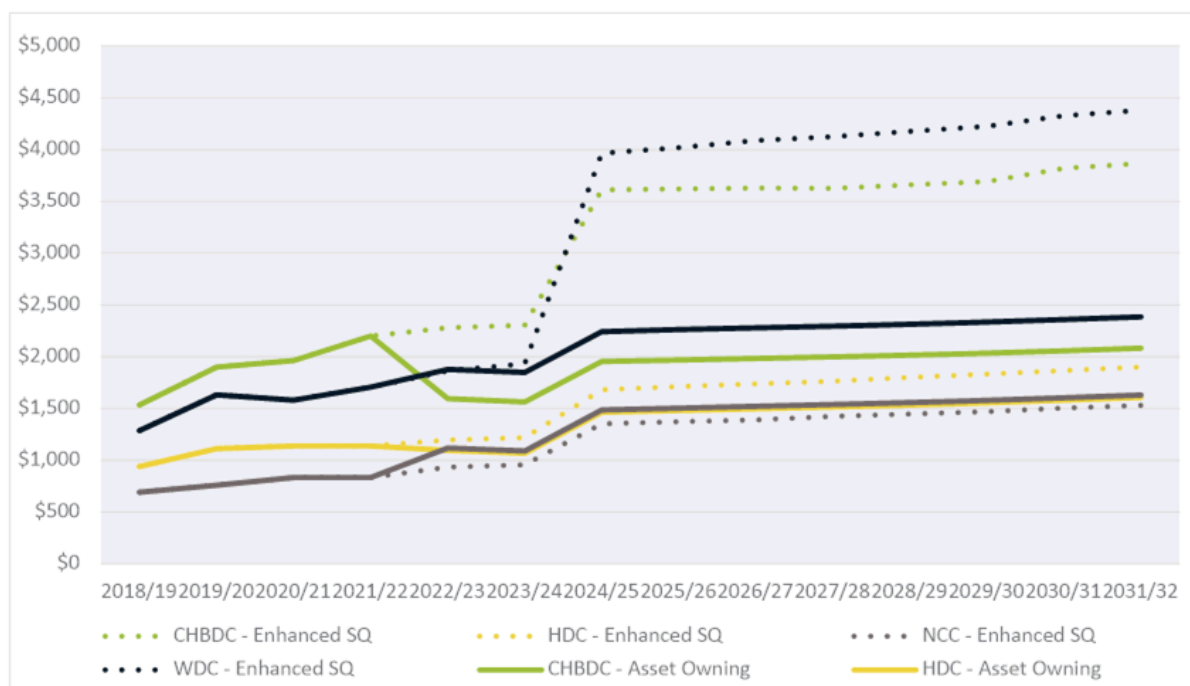
Figure 48 20 year recovery period of 100% or relative liability



20 year equalisation period recovering 50% of the relative liability

The length of the repayment period in this option is too long. It prevents true benefits of regionalisation from occurring for 20 years.

Figure 49 20 year equalisation of 50% of relative liability





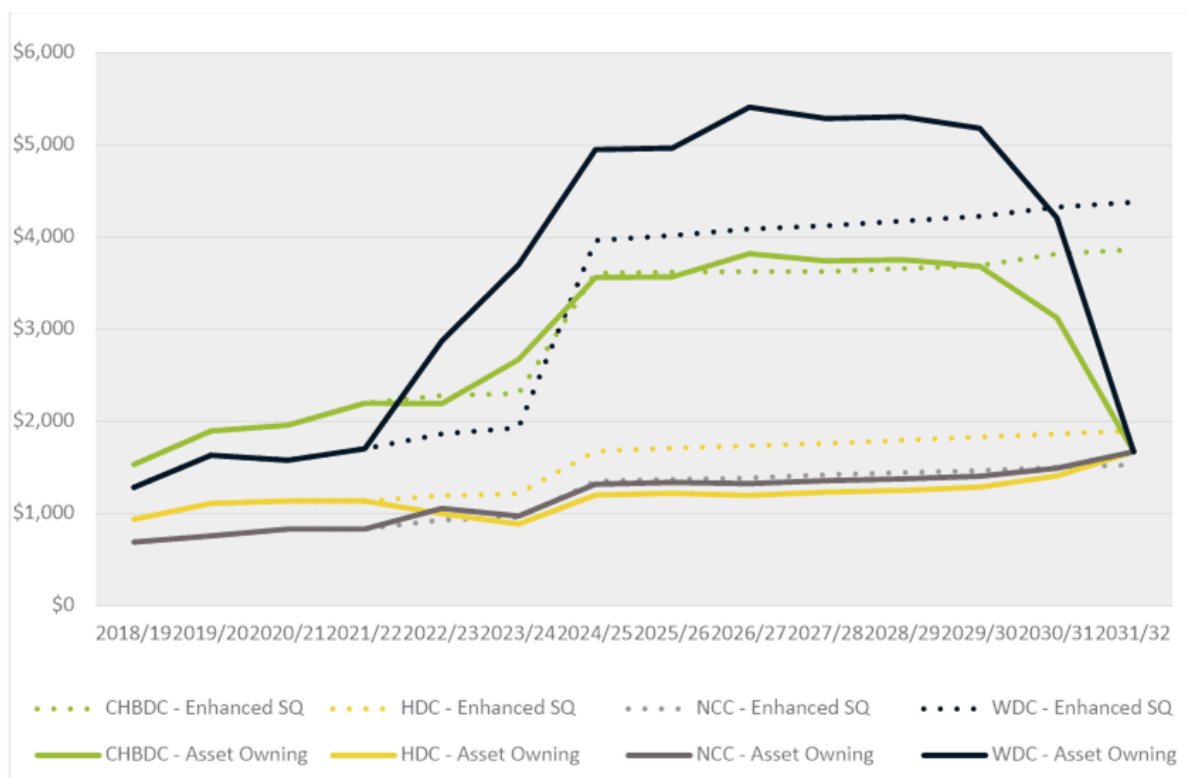
A 20 year equalisation period would give Central Hawke's Bay an immediate rates reduction of \$687 (30%) and Hastings a reduction of \$99 (8%) in the first year. Napier and Wairoa would see increases in rates of \$186 (20%) and \$13 (1%) respectively, although the increase in rates for Wairoa would only last one year when compared to the enhanced status quo.

The full benefits of a regional rate would not be passed on to Central Hawke's Bay or Wairoa for 20 years.

Nine year equalisation period recovering 100% of relative liability

Under this option communities are forced to repay infrastructure costs over a substantially shorter time than would typically be undertaken, which increases the affordability challenge over that period rather than addresses it. Over the nine-year period Central Hawke's Bays rates would track closely to its enhanced status quo forecast but Wairoa rates would be less affordable than the status quo during the nine year period.

Figure 50 Nine year recovery period of 100% of relative liability



A nine year equalisation period 100% would see Central Hawke's Bay see an immediate rates reduction of \$85 (4%) and Hastings a reduction of \$196 (16%) in the first year. Over the nine-year period Central Hawke's Bays rates would track closely to its enhanced status quo forecast.

Napier and Wairoa would see increases in rates of \$123 (13%) and \$1011 (54%) respectively. Wairoa's rates would be less affordable during the nine year period than under the enhanced status quo.

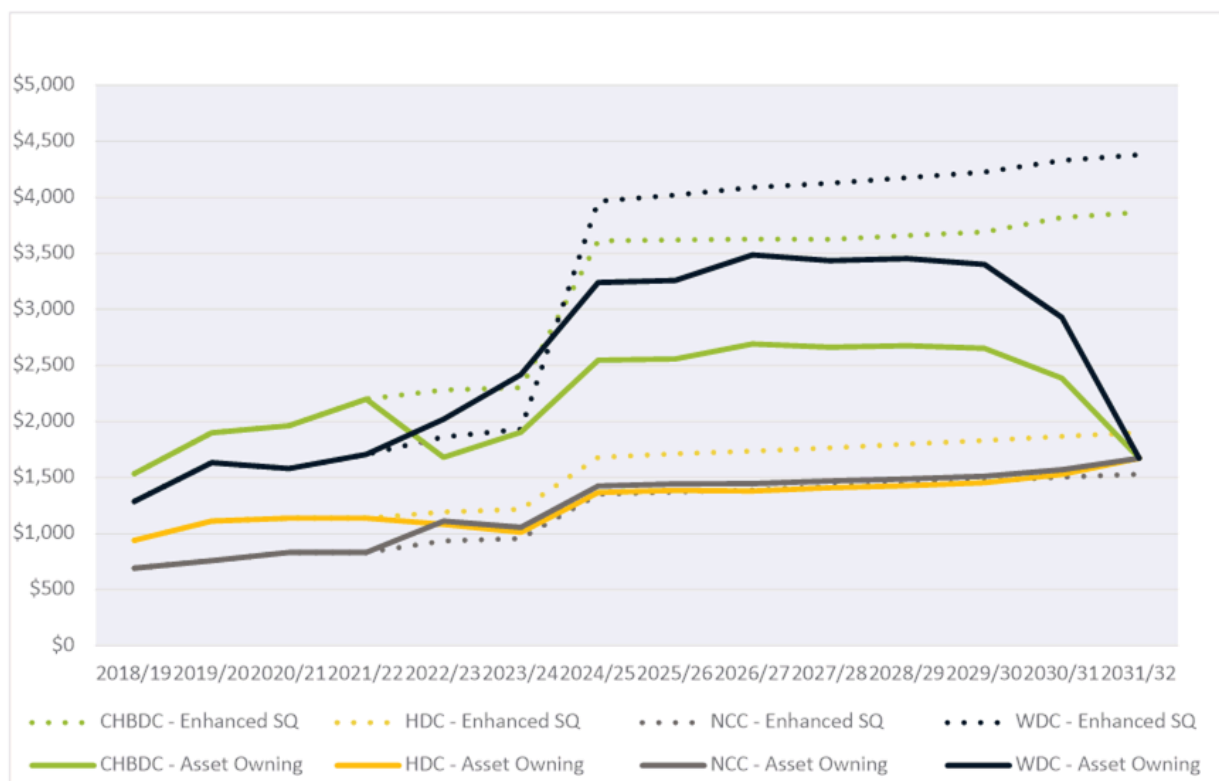
The full benefits of a regional rate would not be passed on to Central Hawke's Bay or Wairoa for ten years.



Nine year payback period recovering 50% of the relative liability

In our view this option best balances concerns about unfairness with requiring communities to repay infrastructure over a shorter time than would typically be undertaken. While it increases the affordability challenge over an immediate regionalisation of costs, it is still less than the status quo in most situations and reaches a standard regional charge faster than a 20-year period.

Figure 51 Nine year equalisation of 50% of relative liability



With a nine year equalisation period, Central Hawke's Bay sees an immediate rates reduction (compared to status quo in the same year) of \$601 (26%), and Hastings a reduction of \$113 (9%). Meanwhile Napier and Wairoa see increases of \$177 (19%) and \$156 (8%) respectively. By year 10, all councils are paying the same regional rate. Wairoa would begin to see some of the benefits of regionalisation after three years.



Comparison of the options

This section compares each option. Initially, at the regional level and then for each council using the average residential three waters rate as a consistent measure. Each of the options is based on the creation of efficiencies through improved asset management and the aggregation of purchasing power. They are balanced against the establishment costs and the introduction of some longer-term costs in the CCO models. The outcome at a regional level is set out in the table below.

When considered at a regional level all options provide a better financial outcome over time than the status quo

When compared to the enhanced status quo option

- the asset owning CCO is projected to create operational savings of \$16.7M (12.7%) per annum
- the management CCO is projected to create savings of \$9.6M (7.3%) per annum.

Table 28 Regional three waters operational expenditure

\$M	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
Enhanced status quo	74.7	77.7	79.8	112.8	115.1	117.3	119.9	122.5	125.1	128.6	131.5
Business unit	75.1	76.9	77.7	106.2	108.2	110.0	112.2	114.2	116.4	119.0	121.7
Management CCO	79.2	79.5	79.3	106.6	108.5	110.3	112.5	114.4	116.6	119.2	121.9
Asset owning CCO	77.1	76.4	75.1	100.9	102.7	104.3	106.3	108.0	110.0	112.4	114.8

Operational cost savings only show part of the picture. It is important to note that

- the asset owning model also sees improvements in the management and procurement of capital works, which results in a 10% reduction in capital costs.
- the management CCO shows a reduction of 6% in capital costs, and
- the business unit 3%

These reductions translate into operating savings over a longer period of time but will have an immediate impact on cash flow and debt levels.

Table 29 Comparison of financial performance of service delivery models

2032 (\$M)	Debt	Cumulative capital spend	Annual operating cost
Enhanced status quo	\$316.7	\$758.5	\$131.5
Shared service business unit	\$307.5	\$749.7	\$121.7
Management CCO	\$303.1	\$745.6	\$121.9
Asset owning CCO	\$288.4	\$727.4	\$114.8



Comparative analysis by council

Central Hawke's Bay District Council

The difference in the three waters average residential rate for Central Hawke's Bay ratepayers in 2032 between the enhanced status quo and asset owning option is a saving of \$2,194.

Figure 52 Comparison of options for Central Hawke's Bay District Council (average residential three waters rate)

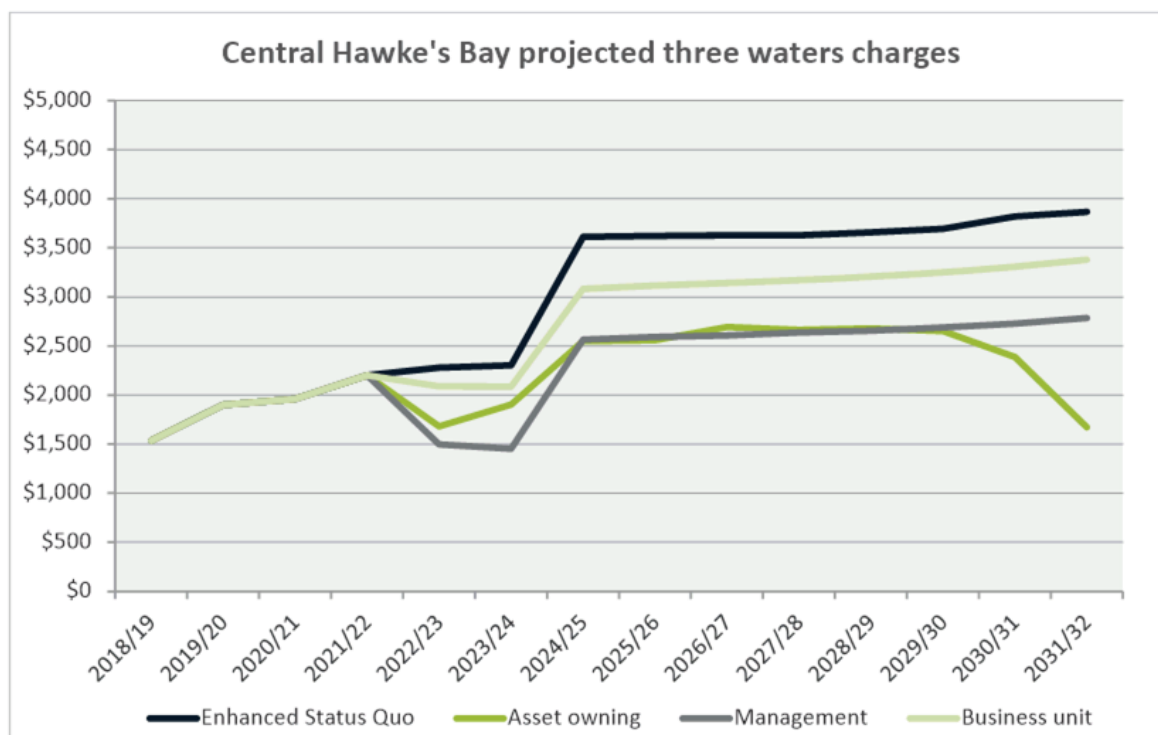


Table 30 Comparison of options for Central Hawke's Bay District Council year by year (average residential three waters rate)

\$	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
Enhanced Status Quo	\$2,200	\$2,281	\$2,304	\$3,611	\$3,621	\$3,628	\$3,627	\$3,659	\$3,692	\$3,821	\$3,867
Business unit	\$2,200	\$2,089	\$2,086	\$3,084	\$3,116	\$3,144	\$3,171	\$3,206	\$3,252	\$3,307	\$3,379
Management	\$2,200	\$1,497	\$1,454	\$2,565	\$2,592	\$2,609	\$2,637	\$2,656	\$2,688	\$2,728	\$2,785
Asset owning	\$2,200	\$1,681	\$1,905	\$2,549	\$2,560	\$2,693	\$2,665	\$2,679	\$2,653	\$2,388	\$1,673



Hastings District Council

The difference in the three waters average residential rate for Hasting's ratepayers in 2032 between the enhanced status quo and asset owning option is a saving of \$228.

Figure 53 Comparison of options of Hastings District Council (average residential three waters rate)

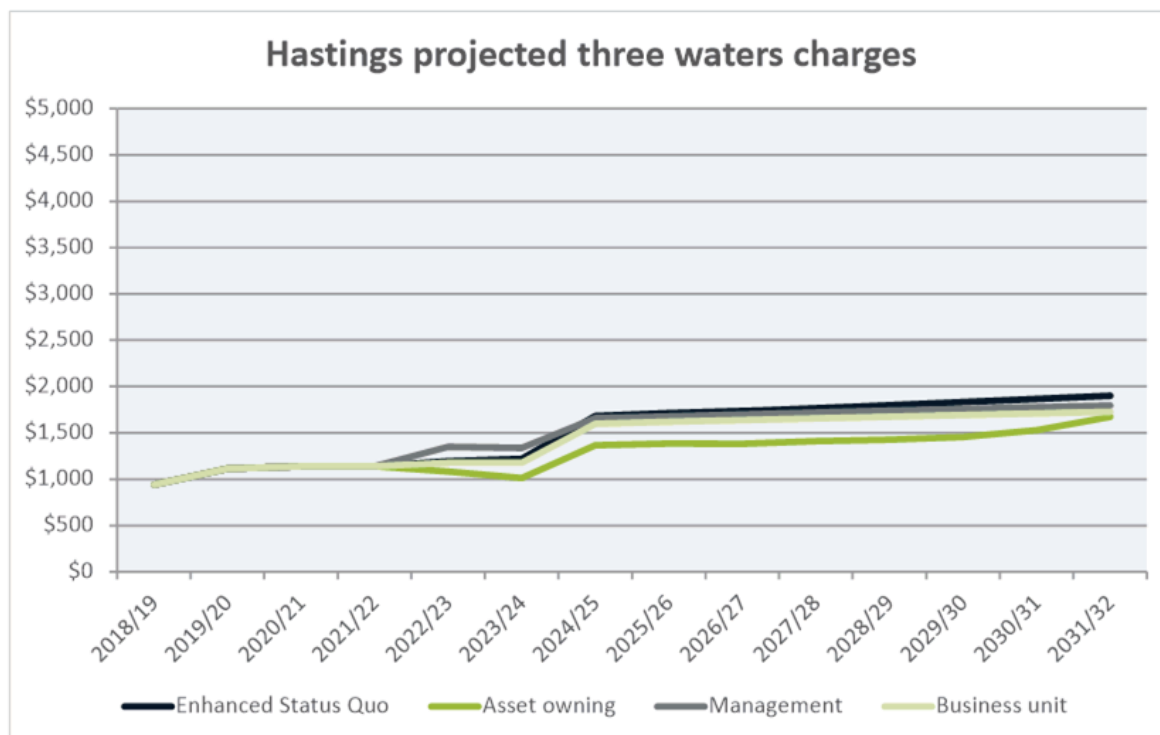


Table 31 Comparison of options for Hastings District Council year by year (average residential three waters rate)

\$	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
Enhanced Status Quo	\$1,140	\$1,195	\$1,219	\$1,681	\$1,712	\$1,737	\$1,764	\$1,799	\$1,832	\$1,867	\$1,901
Business unit	\$1,140	\$1,177	\$1,177	\$1,599	\$1,623	\$1,639	\$1,660	\$1,676	\$1,694	\$1,711	\$1,729
Management	\$1,140	\$1,351	\$1,339	\$1,660	\$1,680	\$1,697	\$1,722	\$1,739	\$1,758	\$1,777	\$1,796
Asset owning	\$1,140	\$1,082	\$1,012	\$1,367	\$1,386	\$1,381	\$1,409	\$1,428	\$1,454	\$1,528	\$1,673



Napier City Council

The difference in the three waters average residential rate for Napier's ratepayers in 2032 between the asset owning option and enhance status quo is an additional cost of \$142.

Figure 54 Comparison of options for Napier City Council (average residential three waters rate)

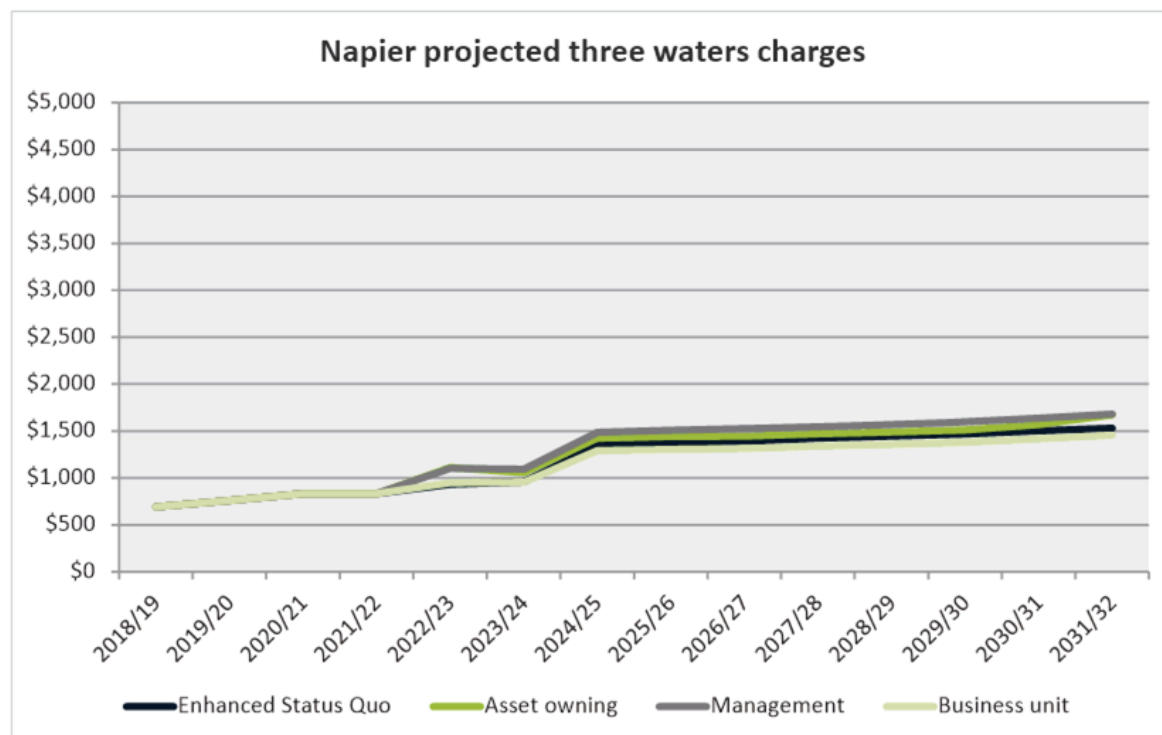


Table 32 Comparison of options for Napier City Council year by year (average residential three waters rate)

\$	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
Enhanced Status Quo	\$834	\$934	\$958	\$1,353	\$1,373	\$1,390	\$1,424	\$1,447	\$1,470	\$1,504	\$1,531
Business unit	\$834	\$950	\$954	\$1,291	\$1,305	\$1,315	\$1,339	\$1,358	\$1,381	\$1,419	\$1,457
Management	\$834	\$1,104	\$1,092	\$1,487	\$1,509	\$1,525	\$1,546	\$1,569	\$1,597	\$1,639	\$1,681
Asset owning	\$834	\$1,111	\$1,056	\$1,425	\$1,444	\$1,446	\$1,471	\$1,489	\$1,513	\$1,570	\$1,673



Wairoa District Council

The difference in the three waters average residential rate for Wairoa's ratepayers in 2032 between the enhanced status quo and asset owning option is a saving of \$2,708.

Figure 55 Comparison of options for Wairoa District Council (average residential three waters rate)

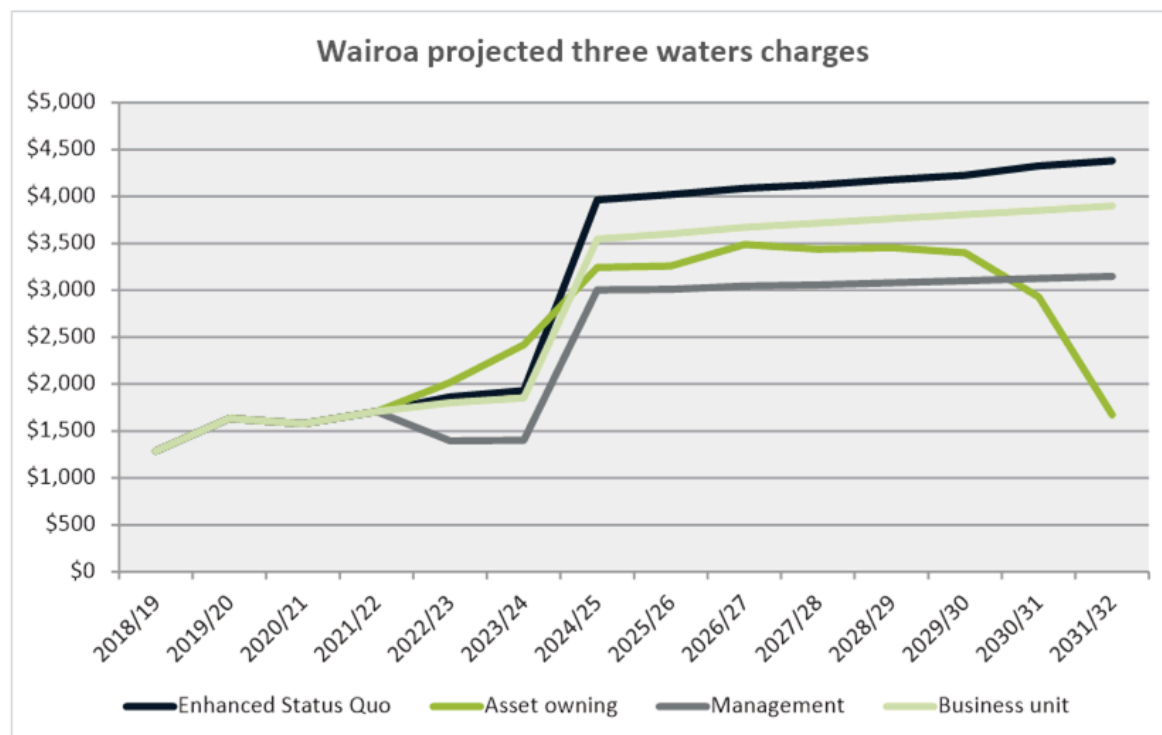


Table 33 Comparison of options for Wairoa District Council year by year (average residential three waters rate)

\$	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	2028/29	2029/30	2030/31	2031/32
Enhanced Status Quo	\$1,707	\$1,864	\$1,932	\$3,965	\$4,020	\$4,088	\$4,126	\$4,177	\$4,226	\$4,328	\$4,380
Business unit	\$1,707	\$1,801	\$1,853	\$3,545	\$3,603	\$3,671	\$3,716	\$3,763	\$3,807	\$3,853	\$3,899
Management	\$1,707	\$1,397	\$1,403	\$3,005	\$3,011	\$3,045	\$3,057	\$3,081	\$3,103	\$3,126	\$3,149
Asset owning	\$1,707	\$2,020	\$2,419	\$3,242	\$3,260	\$3,488	\$3,437	\$3,454	\$3,402	\$2,930	\$1,673



Sensitivity analysis

Sensitivity analysis has been undertaken in different ways in order to understand where the greatest risks are and what factors have the greatest impact on the overall outcome.

The sensitivity testing demonstrates that:

- the asset owning model compares favourably even in pessimistic scenarios
- the asset owning model is the model which is most resilient to cost increases or overruns
- the asset owning model softens the impact of unforeseen expenditure for all ratepayers (including Napier)
- there are significant financial benefits for all Hawke's Bay residents if the region is successful in its application for government funding of three waters shovel ready projects
- there is a need to adopt a regional valuation approach as part of the transition to any new entity
- under some circumstances the asset owning model may be a cheaper option for Napier than the enhanced status quo.

Sensitivity to changes in costs and benefits of each option

Initially sensitivity analysis was undertaken on each option by varying the costs and benefits of change. In each a pessimistic scenario was modelled where costs of change (transitional and ongoing) increase by 50% and the benefits of change decrease by 50%. An optimistic scenario was run as an alternative where benefits increase by 50% and costs of change decrease by 50%.

These were found to have little impact on the outcomes of the asset owning option and minor impacts on the management option. These results were not surprising given the scale of the entities when compared to the modest establishment costs and benefits.

Table 34 Sensitivity analysis of changes in costs and benefits of change for management option – average three water rate (2032)

Management CCO	Pessimistic	Mid-point	Optimistic
Central Hawke's Bay	\$2,911	\$2,785	\$2,660
Hastings	\$1,876	\$1,796	\$1,716
Napier	\$1,758	\$1,681	\$1,604
Wairoa	\$3,276	\$3,149	\$3,021
Asset Owning CCO	\$1,786	\$1,673	\$1,559

The sensitivity modelling was more sensitive to changes in future capital expenditure costs. Given the uncertainty over future upgrades and an increasing trend for capital projects cost increases we modelled two different sensitivities for capital costs.

Scenario 1: A capital expenditure increase of 50%

The result was significant increases in the average three waters residential rate for Wairoa (22%), Central Hawke's Bay (19%). Hastings (11%) and Napier (11%) had more modest increases to rates. In contrast the increase for the asset owning CCO in the same scenario was only 11% across the region. This demonstrates the extent to which the asset owning CCO best mitigates the risk of future increases in capital expenditure requirements for the region.



Table 35 Sensitivity analysis in changes in future capital costs common to each council – average three water rate (2032)

50% increase in Capex	Enhanced Status Quo	SSBU	Management Option	Asset Owning Option
Central Hawke's Bay	\$4,583	\$3,976	\$3,372	\$1,861
Hastings	\$2,104	\$1,895	\$1,960	\$1,861
Napier	\$1,696	\$1,616	\$1,837	\$1,861
Wairoa	\$5,347	\$4,685	\$3,913	\$1,861

Scenario 2: A one off significant capital project to represent a major unforeseen upgrade or replacement

We assumed \$20M for either Wairoa and Central Hawke's Bay, and \$80M for Napier and Hastings. Under that scenario it is only the individual council where the increased costs are applied. This scenario highlights the mitigation of risk for a single community of a major unforeseen or unplanned expenditure.

The result shows the ability of the asset owning CCO to insulate the region's ratepayers from such one off cost shocks. Even in Napier, where the enhanced status quo remains the cheapest option under this testing, the rates increases faced by ratepayers are substantially higher under the enhanced status quo (increase of 12%) than in an asset owning model (up 3%).

Table 36 Sensitivity analysis of changes in future capital costs for one off expenditure – average three water rate (2032)

One off increase	Enhanced Status Quo	SSBU	Management Option	Asset Owning Option
Central Hawke's Bay	\$4,175	\$3,616	\$3,017	\$1,686
Hastings	\$2,061	\$1,855	\$1,919	\$1,726
Napier	\$1,707	\$1,597	\$1,818	\$1,726
Wairoa	\$4,904	\$4,324	\$3,562	\$1,686

Asset valuation and condition assessment sensitivity

Engaged as part of this review, WSP undertook a regional review of asset values and condition (**May 2020 Appendix D**). WSP found that asset values were within an expected range but with wide variations. The relative value of assets impacts shareholding and depreciation costs.

We also modelled the impact of applying the 'normalising adjustments' from the WSP report on asset unit rates to the asset values for all the Councils. The adjustments ensure the preliminary and general cost overheads are consistent across the region, and that all unit rates are indexed to 2019/20 dollars.

The WSP report also provided a set of bounds for sensitivity testing the impact of asset values. These adjustments are applied on top of the normalised unit rates from above. The sensitivity adjustments applied to asset values are outlined in the table below.

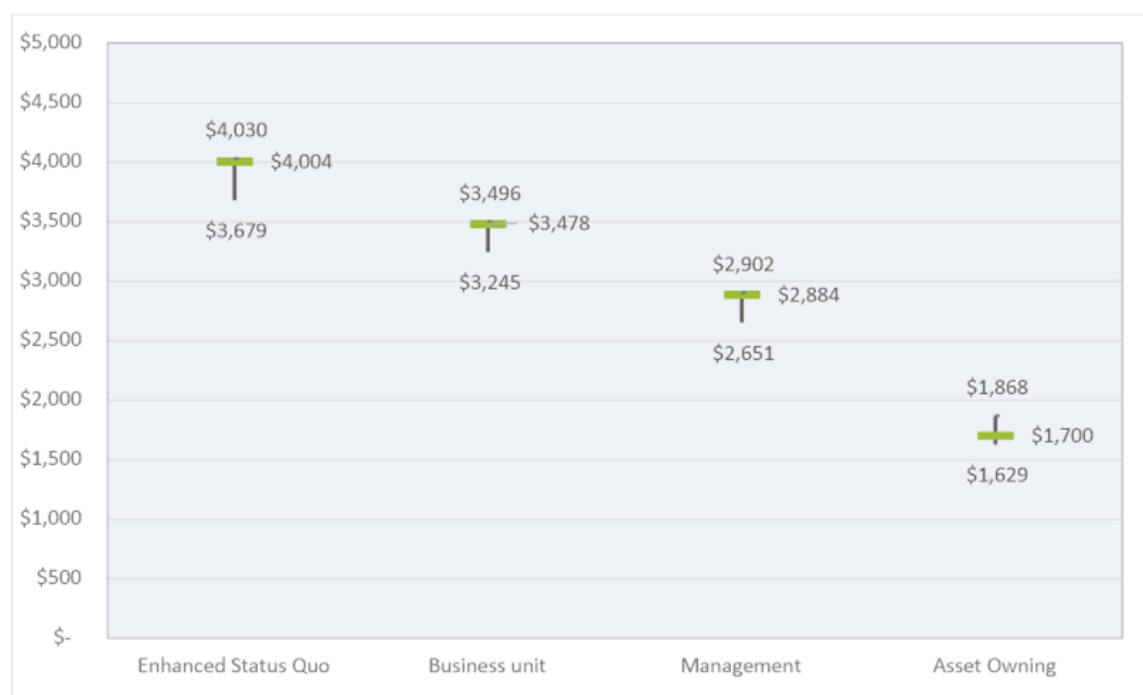


Table 37 WSP recommended adjustments to baseline costs and upper and lower valuation bounds

Asset value adjustment	Base normalising adjustment	Lower bound adjustment	Upper bound adjustment
Central Hawke's Bay	17.4%	-35%	2.8%
Hastings	-2.8%	-6%	56%
Napier	19.4%	-27.3%	31%
Wairoa	17.4%	-24.4%	57.2%

The key outcome of the sensitivity analysis in the following charts is the overlap in the potential three waters rates for Napier and Hastings. This demonstrates the impact of variations in asset valuation approach to the potential financial forecasts of the new entity. It reinforces the need for a regional, consistent valuation to be undertaken as part of the formation of any new water entity.

Figure 56 Sensitivity analysis of changes in asset values – Average three water rate 2032 Central Hawke's Bay



The sensitivity analysis makes no difference to the recommendation for Central Hawke's Bay.



Figure 57 Sensitivity analysis of changes in asset values –Average three water rate 2032 Hastings



The sensitivity analysis confirms the asset owning model for Hastings but also shows the importance of comparable, consistent valuations in implementing the CCO.

Figure 58 Sensitivity analysis of changes in asset values –Average three water rate 2032 Napier



The sensitivity analysis shows the overlap between options for Napier and demonstrates the importance of comparable, consistent valuations in implementing the CCO.



Figure 59 Sensitivity analysis of changes in asset values –Average three water rate 2032 Wairoa



The sensitivity analysis makes no change for Wairoa.

Covid-19 recovery funding sensitivity

In April 2020 the Government, through Crown Infrastructure Partners, sought a list of “shovel ready” projects from councils and private enterprise across New Zealand. The process sought to identify major projects which could be commenced in a short period of time to provide economic stimulus.

As part of that process, the Hawke’s Bay councils submitted a joint programme of work covering three waters assets. The application included over \$300 million of three waters projects in the region.

We understand that, at the time of writing, some of these projects have been shortlisted for funding, but that no funding decision or announcement has yet been made. We are unaware of the quantum of projects that have been shortlisted by the Government, or the likelihood of shortlisted projects making the final cut. Similarly, while it has been indicated that such funding may come with additional conditions, these conditions are yet to be confirmed.

It is clear from our analysis that there is significant benefit for the region in obtaining that funding. We have tested two different scenarios below:

- All councils receive the full amount of funding applied for.
- All councils receive only half of the funding applied for.



Table 38 Sensitivity analysis of receiving full amount of CIP funding request - impact on average three water rate

CIP funding 100%	Enhanced Status Quo	SSBU	Management Option	Asset Owning Option
Central Hawke's Bay	\$3,012	\$2,060	\$1,467	\$1,413
Hastings	\$1,794	\$1,557	\$1,625	\$1,413
Napier	\$1,459	\$1,340	\$1,565	\$1,413
Wairoa	\$3,265	\$2,047	\$1,296	\$1,413

The significant reduction in the burden for ratepayer funded capital works means that for Wairoa the management option becomes the lowest cost. If the funding is available under that model. For all other councils the asset owning option becomes the lowest cost option.

Table 39 Sensitivity analysis of receiving half of CIP funding request - impact on average three water rate

CIP funding 50%	Enhanced Status Quo	SSBU	Management Option	Asset Owning Option
Central Hawke's Bay	\$3,439	\$2,720	\$2,126	\$1,543
Hastings	\$1,847	\$1,643	\$1,710	\$1,543
Napier	\$1,495	\$1,399	\$1,623	\$1,543
Wairoa	\$3,823	\$2,973	\$2,222	\$1,543

A reduction in the burden for ratepayer funded capital works through 50% of the CIP funding confirms the asset owning option as the lowest cost for Central Hawke's Bay, Hastings and Wairoa and with a reduction in the impact on Napier.

Government funding contribution

We understand that government contributions may be possible to support a transition to a new model. However, it is important to note that this modelling does not include any such government contribution. All costs are currently assumed to be borne by the ratepayers of Hawke's Bay either through rates to their council or a combination of rates and charges imposed by a regional water CCO.

We note that the modelling shows that it would require an estimated \$3.8 million per year average subsidy to reduce an asset-owning CCO's water charges to the level that the average residential three waters rate in Napier would otherwise be. This amount is sufficient to subsidise the costs of Napier ratepayers only. There would be no impact on ratepayers of other council areas.

Stranded costs

In each council there are currently organisational costs which are spread across each council and the services that it delivers. They include costs for things like the administrative building, governance costs (councillors and related costs), IT, HR, insurance etc. Each council calculates them differently and spreads them across its services and activities differently but for the purposes of this analysis we refer to them generically as corporate overheads. What is important is that they form part of the overall cost of each council and therefore contribute to the charges on ratepayers.



The three waters services are a substantial part of each council's operation, typically one third by value. The three waters services therefore bear a substantial part of the corporate overheads. Through the creation of a separate organisation (either the management CCO or asset owning CCO option) the three waters services no longer form part of the council and that proportion of the corporate overhead that was previously borne by the three waters services must now be spread over the remaining services within the council or where possible transferred to the regional water CCO.

There are some aspects of the corporate overhead cost that can be transferred to the regional water CCO however the vast majority of the remaining cost that make up the corporate overhead charge previously borne by the three waters services in each council are costs which are in our view difficult to change. For example, each council will continue to bear the costs of their administrative building, their governance costs, CEO etc.

Similarly, some overhead costs such as IT services, communications, and human resources support may not immediately transfer with the three waters activities but may be able to be reduced over a period of time. For that portion of overhead costs that have been allocated across the three waters (not the entirety of the cost centre budget), we have assumed a gradual reduction such that only 50% of those overheads remain in 2030.

Costs which are assumed to transfer are those corporate overheads that relate directly to an identified staff member who is also assumed to transfer to the regional water CCO e.g. vehicles, training. In addition, within the corporate overhead charge there are costs for the services provided by other areas of council to the three waters services e.g. HR, IT and legal. Where the regional water CCO has identified one of these as a function required to be performed and there is sufficient alignment between the resourcing in a council (typically either Napier or Hastings) and the estimated cost for the regional water CCO to justify a transfer of a corporate staff member those costs have been identified and a consequential reduction in the amount of stranded costs for that Council calculated.

The assumption is that the stranded costs will be borne by each council. The rationale for this is that these are not costs related to the three waters services and should not form part of the costs of that service. Stranded costs already exist, are not a new cost, are the result of decisions and choices by each council over time and only the Councils themselves can influence any reduction in these costs. If a repayment of the stranded costs as has been proposed in previous approaches is created, then the incentive to reduce the costs disappears.

For ratepayers in Central Hawke's Bay, Hastings and Wairoa the savings afforded by an asset owning CCO exceed the value of stranded costs. This means that the total cost of local government services is likely to be lower for ratepayers in those regions under an asset owning CCO.

Staff who have minor contributions to three waters activities

The information supplied by the Councils highlighted that there are some staff who spend relatively small proportions of their time on three waters. The build-up of the cost model for the CCOs therefore includes an allowance for the cost of that resource but does not transfer the resource into the CCO. The full cost of that resource remains with the council and is a stranded cost. We note that through the creation of the three waters CCO there will be capacity created within the council as that service will no longer be required from that staff member. In some councils that increased capacity will be seen as a benefit.

The total stranded costs are set out in the following table and have been included in the modelling of each option.



Table 40 Stranded costs by council

	2019/20		2031/32 (inflation adjusted)	
	Per ratepayer	Actual \$000	Per ratepayer	Actual \$000
Central Hawke's Bay	\$27.05	\$209	\$26.23	\$217
Hastings	\$28.44	\$886	\$ 20.61	\$690
Napier	\$17.89	\$471	\$ 17.27	\$492
Wairoa	\$121.10	\$872	\$ 105.48	\$760

It is important to highlight that these are not new costs. They already exist and have been met by the ratepayers of each council.

Table 41 Average 2032 three waters residential rate plus stranded costs

(\$)	Central Hawke's Bay	Hastings	Napier	Wairoa
Enhanced status quo	\$3,867	\$1,901	\$1,531	\$4,380
Business unit	\$3,406	\$1,749	\$1,474	\$4,005
Management	\$2,812	\$1,817	\$1,698	\$3,254
Asset owning	\$1,699	\$1,693	\$1,690	\$1,778

From a ratepayer perspective in almost every case for ratepayers who are connected to water and water services across the region, they would pay less under the asset owning CCO option.

Working capital

The Councils would need to provide initial funding for the CCO to operate. The table below sets out the funding requirements based on one to three months. The Councils would contribute to this in proportion to their shareholding.

The working capital effectively funds the CCO to allow it to operate from day one. This is before it can collect the income associated with providing the service. The funding should therefore be in the form of loans to the CCO to be repaid over time once the revenue has been collected.

Table 42 Weeks cover of operation expenditure (assumes borrowings for capital)

	4	6	8	10	12
Management CCO	\$3.13M	\$4.70M	\$6.26M	\$7.83M	\$9.40M
Asset Owning CCO	\$3.58M	\$5.37M	\$7.16M	\$8.94M	\$10.73M



Total council contributions

The total funding contributions that would be required to establish a new asset owning CCO are outlined in **Table 43** below. The basis of the stage one (consultation and engagement on options) and stage two (transition to a CCO) costs are set out in the management case.

Table 43 Total funding contributions required

	Total contribution (\$m)
Stage one costs	\$2.4
Stage two capital	\$3.56
Stage two operating costs	\$2.4
Working capital (12 weeks)	\$10.7
Total required	\$19

Stage two capital costs have been assumed to be debt funded, and we would anticipate that these would be funded by way of loans from the shareholding councils. Similarly, we would anticipate that working capital would be provided to the new entity by way of a loan from the shareholding councils.

Exactly how the costs are apportioned across each of the councils is a matter that is yet to be decided and will depend on whether there are any external contributions from central government. If allocated based on shareholding, the following contributions would be required (assuming no funding from central government).

Table 44 Funding contributions allocated based on shareholding

(\$000)	Operating costs	Loans to CCO
Central Hawke's Bay	\$390	\$1,166
Hastings	\$2,455	\$7,340
Napier	\$1,769	\$5,290
Wairoa	\$165	\$494

Impact on existing councils

The removal of the three waters from each council under the asset owning option has a significant impact on the organisation. Revenue, expenses, external debt and the value of the assets of each council change as a result of the removal of the three water operations.

The tables below show the impact for each council. In each table the 'group' includes the proportional share of the regional water CCO that the Council 'parent' would report under current reporting requirements. This highlights the direct impact of the stranded costs. In the case of Central Hawke's Bay, it demonstrates that there may be a need to increase rates to recover the increased costs, whereas in other councils a surplus is still generated.

Table 45 Impact of change on Central Hawke's Bay Council financial position 2027/28 (final LTP year)⁴⁴

Central Hawke's Bay (\$000)	LTP	Enhanced Status Quo	Business Unit	Management CCO	Asset Owning (Parent)	Asset Owning (Group)
Operating income	39,506	44,824	43,068	41,008	29,917	39,264
Operation expenditure	40,230	46,622	44,866	42,806	31,934	40,608
Surplus/deficit	-724	-1,798	-1,798	-1,798	-2,017	-1,344
Debt	8,653	72,182	70,438	68,575	-	11,964
Assets (NBV)	994,337	1,079,656	1,048,969	1,047,106	882,921	993,438
Debt to revenue ratio	22%	161%	164%	167%	0%	30%

Table 46 Impact of change on Hastings District Council financial position 2027/28 (final LTP year)

(\$000)	Current	Enhanced Status Quo	Business Unit	Management CCO	Asset Owning (Parent)	Asset Owning (Group)
Operating income	165,319	189,256	186,266	188,044	130,183	189,002
Operation expenditure	146,561	163,541	160,551	157,459	108,699	163,282
Surplus/deficit	18,758	25,715	25,715	30,585	21,484	25,720
Debt	116,356	66,687	64,374	61,805	-	106,581
Assets (NBV)	2,715,411	2,854,398	2,711,664	2,709,095	2,049,762	2,745,221
Debt to revenue ratio	70%	35%	35%	33%	0%	56%

Table 47 Impact of change on Napier City Council financial position 2027/28 (final LTP year)

(\$000)	Current	Enhanced Status Quo	Business Unit	Management CCO	Asset Owning (Parent)	Asset Owning (Group)
Operating income	139,952	153,698	151,499	156,843	112,660	155,050
Operation expenditure	133,439	145,602	143,483	147,413	106,448	145,785
Surplus/deficit	6,513	8,096	8,016	9,430	6,212	9,265
Debt	-	20,508	18,401	16,883	-	120,959
Assets (NBV)	1,932,271	2,069,954	1,979,310	1,977,792	1,546,346	2,047,559
Debt to revenue ratio	0%	13%	12%	11%	0%	78%

⁴⁴ Last year LTP used as no whole of council projects exist beyond there



Table 48 Impact of change on Wairoa District Council financial position 2027/28 (final LTP year)

(\$000)	Current	Enhanced Status Quo	Business Unit	Management CCO	Asset Owning (Parent)	Asset Owning (Group)
Operating income	30,679	35,278	34,382	32,943	25,370	29,329
Operation Expenditure	30,982	35,355	34,559	33,021	26,278	29,952
Surplus/Deficit	-303	-77	-177	-77	-908	-623
Debt	12,281	74,144	72,629	69,600	1,617	12,913
Assets (NBV)	338,920	422,342	404,633	403,119	298,644	345,451
Debt to revenue ratio	40%	210%	211%	211%	6%	44%



Management Case

The management case sets out overall transition management and project governance arrangements for any change, high-level timing and future decision-making requirements.

Summary of the management case

This report identifies that there are benefits in changing the model of service delivery of three waters in Hawke's Bay to an asset owning CCO. However, in doing so it also highlights that identifying the benefits of change is only the first step in the process. Consultation and engagement with the councils, staff and communities is a feature of the change process.

Before a local authority may establish or become a shareholder in a council-controlled organisation, the local authority must undertake consultation in accordance with section 82 of the Local Government Act 2002.

A consultation may be undertaken as part of a long-term plan, however it is the intention of the Councils, should a decision to proceed to consultation be made, that the 2021-31 LTP process be completed before a regional consultation on the formation of a water CCO take place. This is due to the significance of the change and an intent to undertake a regional consultation process.

This means that there will be a considerable gap between the decision to consult (expected in September 2020) and the regional consultation process (expected second half of 2021.)

Some matters that can be determined prior to undertaking consultation should the councils choose to proceed, include:

- Better understanding of Councils' role as an owner and how does that differ from now? This report identifies that documents such as the statement of intent, shareholders agreement, statement of expectations and constitution will be developed to enshrine how and what the CCO does. The Councils will need to see these to understand how they address the concerns raised about their role, impacts on levels of service, community engagement, accountability and impacts on staff.
- Māori and councils will need to enter into a values-based co-design process. This is a key next step and requires early engagement with Māori. The initial focus should be on the process to be used.
- What are each council's and communities' broader priorities and how does the creation of a CCO and the timing of that fit within those? Covid-19 has demonstrated how quickly the needs and priorities of communities can change.
- What would the actual financial impact be on properties connected to one or more of the three waters systems and on those that are not. This report considers the overall regional benefits from change and how these flow to councils by considering the average three waters residential ratepayer, identifies a path to regionalised three water charges and identifies the stranded costs a council will be left with. These costs will need to be smoothed and translated to the actual cost impacts for groups of ratepayers in each council area for meaningful consultation.
- The extent to which the Government is able to support the formation of an asset owning CCO with legislative change. In our view, there is clear evidence presented in this report that the preferred model is the asset owning model. However, unless these legislative changes are made it may be necessary to consider a staged approach to change. The first step would be the formation of a management CCO, then following the appropriate changes to legislation there would be a second transition to an asset owning CCO. This is not the preferred approach.
- The extent to which the Government is able to support the formation of an asset owning CCO.



This section breaks the process for change into two stages. The vast majority of the steps in both stage 1 and 2 are common across both the management CCO option and the asset owning option.

- Stage 1 Consultation and engagement on options
- Stage 2 Transition to a CCO

Stage	Timeframe	Estimated costs
Stage 1 Consultation and engagement on options	18 months	\$2M - \$2.4M
Stage 2 Transition to a CCO	6 - 12 months	\$2.4M of operational costs \$3.5M of capital costs <i>(\$3.5M in ongoing operational costs in the CCO support the transition)</i>

Matters requiring resolution by changes to the Local Government Act 2002

Councils are governed by the Local Government Act (and other legislation) including provisions that dictate the formation and operation of CCOs. There are however a number of provisions within the Local Government Act that enable the effective delivery of three waters services that would not directly apply to a CCO. Key provisions include those that relate to development contributions, taxation, acquisition and disposal of land and liability for damage to the network.

The Local Government Act 2002 Amendment Bill (No 2) was intended to address these and other issues relating to infrastructure CCOs as well as other changes to the Local Government Act. Many of these aspects were removed from the bill before it was passed but some aspects of the changes introduced to the Local Government Act are directly relevant for the purposes of this study and have been incorporated.

- Shareholding councils can now prepare statements of expectation which specify how the CCO is to conduct its relationship with the shareholding councils, its communities, iwi, hapū and other Māori organisations and require the CCO to act consistently with statutory requirements of the Councils and any agreements with third parties (including Māori). We note that it had always been envisaged by the Councils that statutory obligations, including Treaty of Waitangi obligations, would be imposed on any regional water CCO. However, the ability to specify how a relationship is to be conducted allows the councils a greater level of control than previously.
- A requirement that local authorities, when identifying the skills, knowledge and experience required of directors of CCOs, specifically consider whether knowledge of tikanga Māori may be relevant to the governance of the CCO. Even at this first stage of the review, it is clear that this would be relevant to appointments made to any regional water CCO in Hawke's Bay.
- CCOs must now take into account the relationship of Māori and their culture and traditions with their ancestral land, water, sites, wāhi tapu, valued flora and fauna and other taonga before making decisions that may significantly affect land or a body of water. There is a lot of alignment between this new statutory requirement and the principles developed through engagement with the Māori committees about what was required from a three waters service delivery model. It is interesting that this requirement and the requirement to consider whether knowledge of tikanga is required are in addition to the statutory obligations that sit on councils and can be passed through to CCOs.
- The statement of intent of a CCO that provides three waters services (as is proposed in this report) must now state any performance measures specific in rules made under the powers of the Local Government Act and the performance target/s of the CCO for each rule.



While these changes are a welcome strengthening of aspects of the relationship between councils and their CCOs there are other aspects that were in the Amendment Bill (No 2) that were not proceeded with along with other amendments to the Local Government Act necessary to give a regional water CCO the same powers, duties, rights and liabilities as a Council in relation to three waters service delivery. There have been some indications that if Hawke's Bay were to form a regional water CCO these aspects could form part of a new bill.

In summary those key provisions should

- allow the regional water CCO to prepare policies then set and charge development contributions. Included within the proposed amendments are protections to ensure that there can be no duplication of charges by a council and a CCO, obligations for how the policy can be developed and provision to transfer previously collected development contributions across to a newly formed CCO
- treat a regional water CCO the same as a Council for income tax purposes, provided they meet certain conditions i.e. wholly owned by local authorities and performing core local government services
- include a regional water CCO as one of the bodies that can exercise powers under the Public Works Act to compulsorily acquire land. Equally it would impose the same obligations on a regional water CCO as a council if disposing of land that was compulsorily acquired
- provide a regional water CCO with the same protections as a council from wilful or negligent damage to the networks and obtain the same liability from anyone who does damage to the network.

We also note that there are provisions of the Amendment Bill (No2) which were not passed into legislation that we have used as the basis of the regional water CCO as in our view they are best practice for joint CCOs. Specifically, they are:

- the formation of a joint committee to provide oversight of the CCO
- development of a shareholders' agreement that establishes the basis of the partnership between the shareholding councils and Māori.

It is worth highlighting that Part 5 of the Local Government (Auckland Council) Act 2009 appears to apply a broader range of Council powers, rights, duties and liabilities to Watercare than what the amendment bill proposed to do. In our view any future change in legislation should provide a regional water CCO, whether in Hawke's Bay or anywhere in the country, with the same powers, rights, duties and liabilities as Watercare.

Option to transition from one model to the next

In our view there is clear evidence presented in this report that the preferred model is the asset owning model. A management CCO only addresses part of the challenges. In order to address the affordability issue the management option would need to be tied to a regional funding approach. However, as highlighted earlier, we believe that this would create an overly complicated financial structure involving the four district councils, the Regional Council and the CCO in a system where accountability, responsibility and funding are spread across all five organisations all the time. This contrasts with the asset owning model which would achieve the same outcome with only one organisation being responsible.



There are however, as noted in this section, particular aspects of legislation which need to be changed for the asset owning model to be effective. Unless the government can move at the same speed as the Councils with making such change then it may be necessary to consider a staged approach to change. The first step would be the formation of a management CCO then, following the appropriate changes to legislation, there would be a second transition to an asset owning CCO.

This would allow some benefits of regionalisation to be achieved through the management CCO being established. It would need the establishment of an agreed pathway to move to the asset owning CCO so that the second step in the process would take place as soon as the enabling legislation is passed.

Emergency repair of essential infrastructure

Following an emergency, subject to Cabinet approval, the Government funds 60 percent of eligible costs (above the local authority's threshold) to rebuild or repair damaged essential infrastructure, river management systems and community assets in accordance with Section 33 of the Guide to the National CDEM Plan.

Essential infrastructure assets include sewerage, water supply, storm water, electrical and gas facilities and other structures such as retaining walls and tunnels upon which essential services depend. To be eligible for the 60 percent government contribution, rebuild or repair work, the asset must be local authority-owned and damaged as the result of an emergency.

We note that 60 percent is under review. However, regardless of the outcome of that, and prior to formation, we would expect the Government to confirm that a regional water CCO and its assets would come within the definition of local authority owned, allowing a Hawke's Bay regional water CCO to be treated as if it were the council in an emergency.

Process for change

Stage 1 Consultation and engagement on options

Stage 1 covers the period between now and any decision by the Councils to proceed with the formation of a CCO.

1. Create joint project control group (or similar) to guide the future work with appropriate representation from across the Councils to which the Councils' project manager would report
 - a. Key council staff
 - b. Councillor representation
 - c. Independent chair
 - d. Māori representation.
2. Develop workstreams, appoint workstream leads and working groups which would be responsible for key aspects of the process
 - a. Overall project management (manages workstream leads, project timeframe and budget)
 - b. Finance and assets
 - c. People (including staff engagement and all employment related matters)
 - d. Māori Responsiveness Plan
 - e. Governance (including model design, shareholders matters)
 - f. Communications and engagement (including internal, external and with Councils, staff and communities)



Workstream leads would be responsible for developing project plans that cover Stage 1 with an emphasis on only doing the work required in Stage 1 to get to the point of

- providing for informed decision making by Councils
- having informed consultation with the community
- providing clear communication for all staff.

Some of the key steps for each workstream are set out below.

3. Finance and Assets

- a. Undertake common
 - i. asset valuation
 - ii. condition assessments
- b. Review stranded costs and identify any opportunities to reduce or adjust
- c. Consider each council's financial strategies and map out high-level separation of reserves, working capital and debt
- d. Consider how to align council transport services and stormwater where managed by separate water CCOs
- e. Outline how regional prioritisation of growth planning and three waters delivery could recognise local priorities
- f. Consider whether Hawke's Bay Regional Council drainage and flood protection assets should be within scope of the CCO
- g. Seek tax advice as required and adjust the structures as required.

4. People

A comprehensive programme of work would be undertaken in relation to employment processes and requirements. This would include engaging with staff and unions, outlining the intended process and timelines, and developing a comprehensive consultation process. Formal consultation with staff would take place in stage 2 and only if the Council or Councils decide to form a CCO.

- a. Review implications for staff
- b. Further develop draft functional structure
- c. Further develop draft organisational design principles
- d. Engagement with unions
- e. Engagement with potentially affected staff
- f. Decision on whether City Services transfers to the CCO or stays with Napier if a CCO is formed
- g. Develop change management processes and plans.

5. Māori Responsiveness Plan

- a. Develop *Māori* responsiveness plan
- b. Develop co-design approach and protocols
- c. Develop Cultural Performance Indicators (CPIs) to guide Key Performance Indicators (KPIs)
- d. Develop Māori engagement strategy
- e. Develop cultural excellence reporting mechanism.

6. Co governance

- a. Work with government on amendments to the Local Government Act
- b. Develop co-design approach and protocols.



- c. Develop drafts of key documents
 - i. Shareholders agreement
 - ii. Statement of intent
 - iii. Statement of expectations
 - iv. Constitution.
7. Develop an initial statement of proposal for formation of a CCO for the initial approvals of Councils.
8. Communications and engagement
 - a. Develop communications strategy
 - b. Develop key messages
 - c. Ongoing engagement to ensure that both progress and delays are understood
 - d. Develop final proposal
 - e. Jointly undertake public consultation.
9. Combined reporting to each council on results of public consultation
10. Each council approves the formation of CCO.

Timing for stage 1

An outline program is set out below that would see the Councils undertake a stand-alone consultation exercise for the formation of a three waters CCO. This was the approach used in the Waikato (unsuccessfully) and with South Wairarapa District Council (successfully).

This timetable is based on our understanding that should a decision be made to consult with the community, the Councils will complete the process of consultation and adoption of the 2021-31 LTPs before embarking on a consultation process for formation of a three waters CCO.

Actions	Provisional timing
Communications	
- Initial key messages for councils, staff and communities based on process	June 20 – September 20
Joint working group	
- Established to oversee process and, if agreed, implementation	October 20 – Early 2022
Analysis of key issues	October 20 – June 21
- Model, structure - roles and responsibilities	
- Develop co-design approach and implement	
- Draft statement of intent, state of expectations, constitution and shareholders agreements	
- Ongoing engagement and informing councils and staff	
- Ongoing process to inform communities	
- Update analysis as any new data/information is available	
- Legal advice (structure and employment)	
- Tax advice	
Community consultation process for formation of CCO	
- Prepare consultation documents including statement of proposal	October 20 – May 21
- Community meetings, media, advertising, communications, events etc (i.e. reaching communities)	July 21 – Dec 21
- Receive, analyse and report	Early 2022



Costs of change for stage 1

It is estimated that the costs of completing are in the order of \$1.6 – 2.0 million depending on how the project is resourced.

The estimated costs include allowance for council staff time including incurring costs for back-filling positions if key council staff are unable to perform their usual role due to being focussed on this process, and external costs for other aspects including communications, consultants, tax and legal advice, supporting Māori involvement in a co-design process and an independent chair of the working group.

In January 2020, the Government announced funding of \$1.55M in a co-funding arrangement to support delivery of the three waters review from inception, through consultation, and to the point of any formal decision being made by Councils. We note that the funding is to be provided in stages and contingent on Council decisions to proceed at various hold points. It includes an allowance for costs already incurred by the Councils.

The financial projections included within this report do not assume that any amount of government funding will be provided unless explicitly stated.

Stage 2 Transition to a CCO

This is the period following the agreement of the Councils to form a CCO until Day 1 of operations. Should the councils confirm the proposal to establish a CCO then there are future steps required to implement that change.

1. Establish project control group to oversee and implement the transition.
While Councils could modify the scope of the PCG from Stage 1, it is suggested it would be necessary to review the employees involved so that those directly affected by the transition are not involved.
Once the joint shareholders committee is in place then oversight and implementation of the transition should transfer to them.
2. Appoint overall transition manager/project lead. They will develop transition workstreams, appoint transition workstream leads and transition working groups which would be responsible for key aspects of the process including developing until they transfer responsibility to the organisation as it is formed and the leadership appointed six months prior to the start of the CCO
 Some of the key steps for each workstream are set out below.
3. Overall transition project management
 - a. Develop transition plan and confirm budget/funding
 - b. Manage transition workstreams and report to PCG.
4. People
 - a. Each council begin staff consultation process
 - i. Consultation with affected staff
 - ii. Consultation with unions
 - b. Confirm operation model, develop structure of CCO, including preparation of a draft organisational chart detailing the number and type of positions, position descriptions and any specialised skill sets required
 - c. Develop position description for CEO



- d. Develop position descriptions for Tier 2 roles
 - e. Appoint CEO
 - f. Appoint Tier 2 roles.
5. Co-governance
- a. Finalise shareholder agreements between Councils and Māori
 - b. Establish joint committee, membership including Māori and independent chair, appropriate terms of reference and delegations
 - c. Develop a letter of expectation or similar detailing specific directives, required service levels, pricing principles and KPIs and CPIs for the CCO
 - d. Update/finalise the draft CCO statement of intent and statement of expectations to engage with new board members on
 - e. Each council develops its own internal function to act in the role of owner
 - f. Finalise constitution and create company
 - g. Appoint chair and then directors
 - h. Final approval to implement from all councils including transfer of all responsibilities
6. Communications and engagement
- a. Develop communications strategy
 - b. Develop key messages for councils, staff and communities
 - c. Ongoing engagement to ensure that the timeliness is understood, and progress regularly reported and updated.
7. Finance and Assets
- a. Confirm banking arrangements and debt facilities
 - b. Start-up costs and an agreed amount of working capital transferred by all four councils
 - c. All assets and liabilities transfer from the Councils including contracts (where possible).
8. Operations
- Workstream established with the appointment of the CEO and second tier six months prior to the start and increasingly takes responsibility for CCO activities and requirements*
- a. Finalise organisational structure, position descriptions, KPIs (incorporating Cultural Performance Indicators)
 - b. Identify location of offices and make arrangements for future occupation including fit out and ways of working
 - c. Fill any vacant positions through advertising having complied with all councils' employment policies. Existing three waters staff from all four councils transfer and others may apply for additional roles, and any external applicants if appropriate
 - d. New positions offered and employed
 - e. Take responsibility for existing workstreams
 - f. Systems and processes implemented.

Timing for stage 2

The timing and length of the transition would be developed as part of stage 1. We have assumed a six – twelve month process for the purposes of the analysis with the CCO starting to take responsibility once its own resources and staff are appointed.



Costs of change for stage 2

It is estimated that the costs of stage 2 would be \$3.5m (capital) and \$2.4m (operational). The detail of the assumptions for these costs is set out in **Appendix C**.

In addition to this allowance, there are ongoing annual additional resources allowed for within the CCO model that would initially support the transition including administration, governance and overhead costs of \$3.5m per annum.

Risks of change

There are many and varied risks with implementing any change. The establishment of CCOs and water supply are two of the most politically sensitive issues that councils face. Combining the two of them increases the interest and will require sufficient resources and time to be dedicated to managing any process for change.

The traditional approach to three waters service delivery is still perceived to be that Council is the service provider, yet over half of New Zealand's population is currently serviced by a separate, council-owned water entity. While there are risks and challenges with change, they are not insurmountable.

Table 49 below identifies the risks for stage 1 and 2, along with the likelihood of the risk occurring and any future mitigation measures that may be required.

Table 49 Identification of transitional risks

Risk	Likelihood (high/medium/low)	Future mitigation / management measures
Political		
Change takes longer and is harder than expected	High	Councils continue to dedicate enough and sufficiently skilled resources to planning, programming and delivering the change process.
Government is unable/unwilling to pass the enabling legislation for asset owning CCOs	Medium	If changes cannot be made that suits the Council's timetable, then a staged approach would need to be adopted providing for change to a management CCO option before progressing to asset owning CCO option when appropriate.
Issues unrelated to the service delivery model dominate the discussion with the community e.g. water meters and chlorination	High	Communications and engagement strategy developed which focuses on key issues and benefits of change. Councils collectively stay on message. Use independent chair of working group to facilitate any hearings that are part of the engagement process to de-politicise the discussions.
Changing priorities of the Councils takes emphasis off three waters e.g. Covid-19 response	High	Communications and engagement strategy developed which focuses on key issues and benefits of change. Ongoing engagement process with Councils. Joint working group involves all councils and is independently chaired. All councils continue to stay involved in all aspects with regular briefings to all councils. The risk materialising is in part a demonstration of the benefits of an alternative model and the need for change
Government forces widespread change overtaking the Hawke's Bay process	High	An early and combined approach from the Hawke's Bay has the opportunity to influence any government led change
Public concern over future privatisation	High	Government reform program has explicitly rejected privatisation as an option.



Risk	Likelihood (high/medium/low)	Future mitigation / management measures
		This report assumes the same position. Statement of intent would prevent sale of any CCO and/or its assets, other than return to local authority.
The complexity of a CCO co-design and co-governance model with Māori takes significantly more time with relative impact on cost/resourcing	High	(Māori) Earliest engagement with Māori Resources and funding to support Māori participation in co-design and co-governance process provided for in next steps (Other) Defining critical success factors, learnings from other co-governance models in operation across NZ Board director specification includes mandatory level of cultural competency (Local Govt) Leveraging best practice collateral (Māori Partnership Teams) from region's five councils
One or more councils choose not to proceed with change and others wish to continue. Impact depends on which, if any, Councils do not proceed.	Medium	Demonstrate benefits to each council of change and regional approach. Ongoing engagement process with Councils. Joint project control group involves all councils and is independently chaired. All councils continue to stay involved in all aspects with regular briefings to all councils.
Local government elections changes priorities	Medium	Communications and engagement strategy developed which focuses on key issues and benefits of change. Ongoing engagement process with Councils. Joint project control group involves all councils and is independently chaired. All councils continue to stay involved in all aspects with regular briefings to all councils.
One or more councils choose to exit a CCO if established and others wish to continue	Medium	Benefits of option are documented and clearly articulated on regular basis. However, should the situation arise then the shareholders agreement, Statement of Intent and Constitution would provide a mechanism for Councils to exit and enter the CCO.
Councils cannot agree on key terms of Shareholders Agreement and/or Statement of Intent	Medium	Joint working group involves all councils and is independently chaired. All councils continue to stay involved in all aspects with regular briefings to all councils.
Community or some communities do not support change	Medium	Communications and engagement strategy developed which focuses on key issues and benefits of change. Councils will need to evaluate the advantages and disadvantages of the CCO option and make the decision.
Operational		
Operational risks to three waters services arising from change	Medium	Change management process includes managed transition of services. Existing staff transition to any water CCO.
Assets are in a different condition than expected	Medium	Regional asset valuation and condition alignment study undertaken by WSP and included within the business case. Sensitivity analysis provides different scenarios which cover assets in different condition/valuation Approach and the principles established through this business case don't change even if the underlying information does. Equitable regionalisation calculation can be adjusted to allow for changes as information becomes available.



Risk	Likelihood (high/medium/low)	Future mitigation / management measures
Change takes longer and is harder than expected	High	Councils continue to dedicate enough and sufficiently skilled resources to planning, programming and delivering the change process.
Process becomes drawn out affecting staff morale	Medium	Communications strategy and messaging is targeted at staff and provides transparency around process and timeframes. Ensure that staff understand that the creation of a CCO will increase jobs, and that roles in rural communities will be protected.
Uncertainty from the process makes it hard to attract and retain key staff	High	Communications strategy and messaging is targeted at staff and provides transparency around process and timeframes. Ensure that staff understand that the creation of a CCO will increase jobs, and that roles in rural communities will be protected.
Process negatively impacts existing projects and initiatives	Medium	Councils agree that existing projects and initiatives (within three waters and more broadly) should continue unless good reasons for placing on hold. Look to make projects regional (within three waters) where practicable.
Operationalise co-design and co-governance	Medium	Defining critical success factors, learnings from other co-governance models in operation across NZ Leveraging best practice collateral (Māori Partnership Teams) from region's five councils
Financial		
Future capital expenditure is much greater than allowed for	High	Sensitivity analysis has addressed potential for this. Note that the asset owning CCO option is best placed to deal with this risk should it arise through regionalising costs.
Costs of change increase beyond what has been estimated	High	Sensitivity analysis has addressed potential for this. Long term benefits are not sufficiently sensitive to increased costs of change so benefits will still arise.
Financial savings are less than what has been estimated	Medium	Sensitivity analysis has addressed potential for this. Projected financial savings have been conservative but benefits of change are not just financial. Assessment of costs and benefit options do not rely solely on achieving the stated financial benefits.
Government financial support does not materialise	Low	Some financial support has been provided already. Continue to engage with government and maintain momentum for change. Use public pressure to get government attention.
Three waters services become unaffordable for some communities	High	A change in model can help address this risk. For some communities doing nothing is not an option.



Glossary of Māori Terms

Te Reo Māori	Te Reo Pākehā
Hapū	Subtribe, usually containing a number of whānau and marae (gathering place) with a common ancestor or ancestors
Hui	To gather, congregate, assemble, meet
Iwi	Extended kinship group, tribe, nation, people, nationality, composed of a number of hapū
Kaitiaki	Caregiver, caretaker, guardian
Kaitiakitanga	The exercise of kaitiaki roles and responsibilities. The exercise recognises the intricate balance and integral relationship between all natural resources
Kawa	Protocols and customs and procedures, the way that tikanga is enacted
Kōrero	Conversation, discussion
Mahinga kai	Customary and contemporary gathering and use of naturally occurring and cultivated foods
Mana	Authority, spiritual authority, protective power and prestige
Mana whenua	The tangata whenua group or groups with primary and customary rights and responsibilities over an area
Mana motuhake	Separate identity, autonomy, self-government, self-determination, independence, sovereignty, authority through self-determination and control over one's own destiny
Marae	Traditional and contemporary gathering places
Mātauranga Māori	Traditional and contemporary Māori knowledge
Maunga	Mountain
Mauri	Life force
Ngākau	Seat of affections, heart, mind, soul
Papatūānuku	Earth, Earth mother and wife of Rangi-nui – all living things originate from them
Paru	Contaminants
Rangi-nui	Atua (God) of the sky and husband of Papatūānuku
Rohe	District, area, territory, vicinity, region
Tangata whenua	Local people, hosts, indigenous people – Māori and their whānau, hapū, iwi
Taonga	Treasure, gift
Te Ao Māori	Māori world view which acknowledges the interconnectedness and interrelationship of all living and non-living things
Te Aranga	Te Aranga design principles are a cultural landscape strategy/approach to design thinking and making which incorporates a series of Māori cultural values and principles
Te mana o te wai	The integrated and holistic well-being of water
Te Tiriti o Waitangi	Māori interpretation of the Treaty of Waitangi
Tūpuna maunga	Ancestral mountains. Also, a relative term for the volcanic cones within Auckland region
Tūrangawaewae	A place to stand
Wāhi tapu	Sacred site, sacred place, culturally significant and sometimes imbued with restriction on access/use
Wai	Water
Wairua	Spirit
Wānanga	To meet and discuss, deliberate, consider
Whakapapa	Genealogy, lineage, descent, layers of kin relationships
Whānau	Family unit



Appendix A Allocation of Responsibilities under the Different Models



	Shared Services Business Unit	Management CCO	Asset-Ownning CCO
Asset Management Plans	Initially, the SSBU would develop a single set of strategic asset management plans and a combined delivery programme for implementation across the region. Each council would still be required to adopt a water, wastewater and stormwater plan as part of their Long-Term Plan, but these would be heavily based on the regional plans developed by the SSBU.	Initially, a management CCO would develop a single set of strategic asset management plans and a combined delivery programme for implementation across the region. Each council would still be required to adopt a water, wastewater and stormwater plan as part of their Long-Term Plan, but these would be heavily based on the regional plans developed by the CCO. If the CCO became regionally funded, it may no longer be necessary to develop individual plans for each territory.	An asset owning CCO would develop a single set of strategic asset management plans and a combined delivery programme across the region.
Growth Planning	Decision remains with the Councils. SSBU provides advice.	Growth planning and sequencing would remain the prerogative of the individual councils. The CCO would be charged with ensuring that waters infrastructure met each council's growth objectives in the most efficient and effective manner.	Broader growth planning and sequencing would remain the prerogative of the individual councils. Three waters growth planning and sequencing transfers to the CCO. The CCO would be charged with ensuring that waters infrastructure met each council's growth objectives in the most efficient and effective manner.
Demand Management	Decision remains with the Councils. SSBU provides advice.	Any decision to introduce water meters would remain with the Councils. Most other decisions (e.g. restricted water season) would transfer to CCO.	A decision to introduce universal water metering would transfer to the CCO, although this could be subject to principles established by shareholders.
Development Engineering	Transfers to the SSBU, although Development Agreements, because of the funding implications, may require adoption by the individual councils	Transfers to the CCO, although Development Agreements, because of the funding implications, may require adoption by the individual councils.	Transfers to CCO.



	Shared Services Business Unit	Management CCO	Asset-Ownning CCO
Compliance and Consenting	Accountability and liability would remain with Council	Accountability and liability would remain with Council while it was Council-funded. Consents could transfer to CCO, but Council would still hold some responsibility as asset owners. Liaison with the Regional Council, applications and reporting would transfer to the CCO.	The CCO would hold legal accountability for compliance.
Statutory Planning	Each council would be required to include three waters services in Annual Plans, LTPs, AMPs, Infrastructure Strategies, development contribution policies etc.\ The development of the three waters elements of these documents would be undertaken by the SSBU.	While the CCO is council funded each council would be required to include three waters services in Annual Plans, LTPs, AMPs, Infrastructure Strategies, development contribution policies etc. The development of the three waters elements of these documents would be undertaken by the CCO.	The CCO would be required to produce an annual Statement of Intent.
Resilience Planning	Transfer to the SSBU, but ultimately subject to Council decisions on funding and implementation.	Transfer to the CCO, but ultimately subject to Council decisions on funding for implementation. If regionally funded, then extent of transfer increases.	Transfer to the CCO.
Project Delivery	Transfer to the SSBU	Transfer to the CCO.	Transfer to the CCO.
Project Management	Transfer to the SSBU	Transfer to the CCO.	Transfer to the CCO.
Renewals	Transfer to the SSBU	Transfer to the CCO.	Transfer to the CCO.
Procurement	Transfer to the SSBU	Transfer to the CCO.	Transfer to the CCO.
Network Operations	Transfer to the SSBU	Transfer to the CCO.	Transfer to the CCO.
Plant Operations	Transfer to the SSBU	Transfer to the CCO.	Transfer to the CCO.
Maintenance and Planning	Transfer to the SSBU	Transfer to the CCO.	Transfer to the CCO.



	Shared Services Business Unit	Management CCO	Asset-Ownning CCO
Laboratory Services	Transfer to the SSBU	Transfer to the CCO.	Transfer to the CCO.
Trade Waste	Transfer to the SSBU	Transfer to the CCO.	Transfer to the CCO.
Communications	Stays with Councils	Transfer to the CCO.	Transfer to the CCO.
Customer Services	Stays with Councils	Transfer to the CCO.	Transfer to the CCO.
Māori Engagement	Stays with Councils	Transfer to the CCO.	Transfer to the CCO.
Water Education	Transfer to the SSBU	Transfer to the CCO.	Transfer to the CCO.
Finance	Stays with Councils. SSBU gets finance input to analysis and planning from the councils/a Council through SLAs	The CCO, as a stand-alone entity, will require a finance team. The Councils will also require finance staff to undertake the council functions. This reduces under a regionally funded CCO. It may be possible to transfer some finance people to the council-funded CCO while leaving sufficient to manage a smaller water asset workload related to finance.	The CCO would be direct funded, and therefore council finance staff would transfer to the CCO.
Meter Reading	Transfer to the SSBU	Transfer to the CCO.	Transfer to the CCO.
Revenue	Councils would set rates / tariffs to gather revenue based on council's capex and opex plans developed by the SSBU	Councils would set rates / tariffs to gather revenue for a Council-funded CCO based on agreed capex and opex plans. If Regionally funded then, the CCO would set tariffs based on principles established by the shareholders.	CCO would set tariffs, based on principles established by the shareholders.



Appendix B Description of Business Functions



Business services

This function incorporates Finance, ICT, Strategy and Corporate Planning, Regulation and Pricing, Audit, Legal, Governance and Risk and Business Process.

This function provides strategic management and guidance to the CCO by

- setting priorities and allocating funding and resources
- strengthening operational focus on key targets
- aligning staff and other stakeholders to common goals
- clarifying intended outcomes/results
- assessing and adjusting the CCO's direction in response to a changing environment and in line with the three waters plan.

The corporate services function acts as the front end of the operating model and accordingly includes the critical function of long-term planning for investment needs. It uses best practice frameworks and processes to produce fundamental decisions and actions that shape and guide what the CCO does and why it does it, with a focus on the future, driven by accurate data. An effective CCO strategy function articulates not only where the CCO is going and the actions needed to make progress, but also how it will measure and know if it is successful.

The team will focus on the development of robust business cases to recommend allocation of funding and resources, benefit realisation monitoring and managing growth of the network. Data collection and analysis capability will provide critical information to drive CCO strategy development; business planning and evaluation and course correction if required. There is a critical connection from this data capability to all other parts of the business, as the business becomes data driven in order to best respond to communities' needs and expectations as well as to new water regulation requirements.

What does the function do?

- Leads the process for developing CCO strategies and business plans. This function has the ultimate responsibility for ensuring CCO strategy and business planning activities take place, however all other teams have accountabilities to contribute to this activity so this team needs appropriate collaborative planning and strategy development processes in place to ensure all can contribute.
- Leads the process for the CCO providing input into Council strategies and plans such as the Regional Water Plan, Long Term Plan and Annual Plans
- Ensures alignment between strategy, planning and funding
- Reviews legislation for implications and future planning and lead a process to develop a stakeholder relationship management strategy to increase avenues to contribute to the government policy development
- Manages relationships with key strategic stakeholders
- Works with the Māori Responsiveness and Engagement team to assist the co-governance group to develop and set cultural performance indicators (CPIs) that will flow through to KPIs for staff
- Works with the Māori Responsiveness and Engagement team to develop a reporting mechanism to provide updates to the co-governance group on the tracking of CPIs
- Defines operational and business policy and rules to provide frameworks for the business to operate (for example a framework to balance community and community wants with required commercial outcomes)



- Manages information sharing and requests and ensures obligations are met
- Develops business cases for all service changes and capital investments
- Ensures all CCO data requirements are identified, accurate, available, analysed and utilised by all stakeholders to inform decisions and action plans
- Ensures technology and systems are in place to collect data and support operations and delivery services
- Ensures data analysis takes place to inform reporting and evaluation and to inform the strategy development and planning cycle
- Ensures transparency of all data, subsequent performance reporting and enables open interaction with stakeholders
- Leads the management of internal and external legal and other professional commercial advisory relationships
- Provides strategic commercial advice and assurance to strategic decision-makers and for policy formulation and delivery
- Develops and implements a strategy for enhancing commercial capability across the CCO, ensuring community interests are balanced against commercial objectives

Areas for focus

- Works with the Māori Responsiveness and Engagement team to ensure the elements of the Māori Responsiveness plan are embedded in the organisation
- Working with Council Strategy and Planning teams to provide and obtain data to shape CCO strategy and regional three waters infrastructure and network planning including ensuring adequate funding at affordable prices
- A long term CCO strategy to guide business planning internally and with service providers including defining benefits to be delivered
- Leads a collaborative business planning process to drive prioritisation, set goals and KPIs and to ensure activities in each team are aligned towards the delivery of agreed outcomes
- A clear framework for engagement with business partners and other stakeholders
- Enforces clear business rules to follow for change control including RACI for change decision processes and documentation (Benefit analysis, Impact assessment, prioritisation against business plans and strategy, business cases etc.)
- Alignment between strategy development and funding
- Collaboration and consultation across the CCO's teams to problem solve and ensure delivery of CCO goals
- Leads the data collection and analysis function to define strategic data collection requirements and analysis capability to ensure strategy, planning and management is driven by data analysis
- Data collection and analysis is a critical resource for regional planning, business planning with and management of service provider contract performance, network and system performance, to enable managers to measure service provider performance against KPIs, as well as for network planners to design infrastructure effectively and develop an appropriate pricing structure for services
- ICT vendor management across all the support vendors for three waters data and information systems, including for community billing information

People and safety

The function is responsible for ensuring ethical and culturally aware people practices, values and behaviours to



ensure a positive employee experience with a focus on capability development at all levels, safety and wellbeing, talent acquisition and succession planning.

Responsiveness to Māori is defined in terms of principles, conduct and action, with effective measures, that reach the structures, systems, management, staff and culture of the organisation in such a way that it accounts for the needs and aspirations of Māori in all activities and in particular its core business.

The People and Safety function works with the Māori Responsiveness and Engagement team who have the expertise to provide strategic focus and then an enabling role to accelerate responsiveness growth across all functions of the organisation.

What does the function do?

- Ensures alignment of organisational vision, purpose and values that drive a high-performance culture
- Promotes and champions development of Māori capacity and organisational cultural capability
- Develops a leadership capability and development framework to build skill and capability
- Delivers a unique value proposition to attract and retain talent to the organisation
- Develops a remuneration and benefit framework that supports recognition of skill and performance
- Ensures individual objectives are aligned to business goals and outcomes with a focus on personal and organisational growth
- Provides learning and development opportunities to grow skill and expertise
- Promotes the importance of health, safety and wellbeing in the workplace
- Develops and embeds policies and procedures that are aligned with vision and values of the organisation
- Designs succession planning models that support talent development from within
- Provides employment relations support across the organisation
- Works with the Māori Responsiveness and Engagement team on acquisition (recruiting talent) and growth (capability and competency). Each has bearing on the ability and speed of the organisation to achieve its 'responsiveness' objectives.

Areas for focus

- Develop people strategy aligned with organisation objectives
- Assist with embedding Māori Responsiveness Plan and partnership with Māori
- A clear framework for engaging and communicating with employees
- Establish individual role objectives, KPIs and performance measures
- Identify learning and development needs
- Develop health, safety and wellbeing framework
- Promote CCO as a preferred employer to attract new talent
- People related demographic reporting



Corporate and community relations

This function is accountable for liaising with government and council owners (public affairs), community engagement and communications, education and strategic relationships, internal communications incorporating marketing and design (brand) and sustainability (services, community and environment).

What does the function do?

- Develops a design and planning stakeholder and relationship management plan (to ensure effective relationships with managers and key staff within the CCO, Māori, community engagement groups, service providers, central government agencies and councils)
- Develops a communication plan to address both internal and customer facing information requirements and other audiences such as councillors
- Works with the community to design customer experience, ensuring the customer experience is represented in decision making about service delivery, network design and services and other key products and services
- Engages the community through education and strategic relationships
- Promotes sustainability of services and sustainability in the community through efficient use of water and care for the environment

Areas for focus

- Support the empowerment of all areas of the CCO to own the customer experience and build understanding on this discipline and its benefits
- Build and maintain the trust of customers through regular, useful communication and interaction

Network development

This function includes the disciplines of integrated portfolio planning, network strategy, investments, integrated water and land management, water quality, liveability and resilience.

This function is accountable for the design of the network and services to be delivered, in consultation with service providers, ensuring a robust business case is made for change, and design is aligned to strategy and data analysis, including water quality and customer data. This function ensures that the services are safe, high quality and are suited to the needs of the customers and are delivered in line with any commercial agreements. They examine all activities, infrastructure, communication, people and material components involved in services to improve both quality of service and interactions between the provider of the service, the CCO and its customers. It ensures that design changes can be executed effectively and efficiently within commercial constraints, across the three waters infrastructure.

What does the function do?

- Ensures an integrated design and planning approach across the three waters and associated land
- Leads the planning and design of an integrated, effective and efficient three waters system and network to meet the water outcomes specified in regional plans
- Ensures a planning and design process framework is in place that includes modelling to identify impacts of change
- Identifies data requirements and ensures collection, monitoring and analysis of data trends in three waters service performance, quality and coverage at a network and service level informs design and planning



- Monitors and carries out rolling reviews of service levels and quality
- Ensures that the needs of the public and stakeholders are met while balancing cost and resource efficiency to maximise value for money
- Develops robust business cases for changes to three water network and services which clearly set out the rationale for making such changes and the justification for any changes in funding required
- Leads the service planning input to public and stakeholder consultation on new and varied services and works closely with the corporate and community relations team to ensure that the consultation and engagement process is well-informed and results in the best possible customer, community and operational service outcomes
- Provides input into high level strategy development and policy guidance and support for three waters services
- Works collaboratively with service providers to evaluate the impact and possibility of service changes
- Works closely with network delivery staff to quickly resolve customer pain-points and identify things to build on things that are working well
- Identifies any infrastructure changes that will be required as a result of network changes and liaise with the assets and infrastructure staff regarding these
- Implements policies contained in the Regional Water Plan
- Develops service specifications for inclusion in service provider contracts
- Works with the network delivery staff to help ensure service changes are implemented successfully

Areas for focus

- Strong alignment between the three waters network, customer experience and needs in network design, and ability to deliver through commercial partnerships and the overall CCO strategy
- Clear process framework for planning and design to ensure both growth and proposed changes are driven by robust analysis of data and impact analysis (to manage delivery risks)
- Clear, efficient and agreed processes in place to for interactions and consultation with service providers
- Collaboration and consultation across the CCO to problem solve and ensure better delivery of three waters goals
- Have clear rules (RACI) in place regarding how and who makes network growth and service change decisions
- Develop a strategy/relationship management model for interactions with service providers

Network delivery

This function combines three distinct disciplines:

- Assets and infrastructure
- Operations
- Commercial delivery



Assets and infrastructure

Accountable for building, managing and maintaining assets and infrastructure to support an integrated network for the three waters. Its tasks include planning, design, project management, infrastructure and major projects, strategic asset management and asset performance. The objective of the function is to provide the best value level of service for the budget available. It includes the management of the entire life cycle, including design, construction, commissioning, operating, maintaining, repairing, modifying, replacing and decommissioning/disposal of physical infrastructure and assets. They also ensure that assets and infrastructure are built and maintained to CCO strategy, design, regulatory and contractual requirements to ensure an integrated three waters network that is accessible and meets customer and stakeholder needs and strategic goals.

What does this discipline do?

- Ensures vendors working on asset delivery, management and maintenance meet their contractual KPIs through a robust monitoring regime
- Works closely with the commercial delivery team to procure and manage contracts
- Project manages contracts to build and maintain assets and infrastructure
- Manages resource consenting and related consenting processes
- Ensures pipes (and other assets) meet regulatory standards statutory, health and safety and environmental requirements
- Works with service providers to resolve pipe blockage issues
- Identifies risks associated with pipes (and other assets) ensuring that they are appropriately managed and monitored
- Provides insights and support on network related improvements
- Advocates for regulatory changes that would improve three water services
- Works with Network Strategy and Investments to provide input into asset related strategies and policies

Areas for focus

- Delivery of capital investment infrastructure programme
- Coordinated network strategy
- Align infrastructure with growth
- Efficiencies in asset management practices
- Visibility of infrastructure benefits
- Connection between strategy (where, when, why) and this team (how to deliver)
- Clear accountability for asset performance
- Clear network delivery strategy

Operations

Accountable for delivering service to customers. Their remit is operational planning and improvement, water treatment, service delivery management, customer service, business continuity (resilience) and disaster recovery. They do this by maintaining close and effective working relationships with service providers to ensure that the operation of three waters conforms to contracted services and performance levels. They focus on customers and working with service providers on improving services and their delivery.



What does this discipline do?

- Ensures integrated service delivery
- Responsible for customer service team
- Actively manages connections between service providers to support integrated seamless service delivery across three waters
- Provides operational planning, business continuity plans (resilience) and disruption and disaster recovery management
- Owns the day-to-day contractual relationship with service providers, ensuring delivery and performance management
- Activates the disruption management plan when necessary, ensuring the communications internally and externally (customer contact teams, customer engagement teams and service providers) are prompt and effective
- Ensures there is a focus on safety and quality for staff and customers
- Accountable for supporting the account management approach by ensuring contractual issues are escalated to the relevant commercial delivery manager

Areas for focus

- 24/7 network management
- 24/7 customer service

Commercial delivery

Responsible for procuring and managing contracts with service providers to deliver three waters services to customers. In their commercial partnership role, they develop strong relationships within the CCO and with service providers to ensure everyone is working toward the same commercial targets and goals. They provide strategic commercial advice and assurance to support strategic decision-making and to feed into policy formulation and delivery.

What does this discipline do?

- Owns and manages the account management function with key business partners ensuring key issues and communication requirements are channelled through this function, supporting the operations teams to focus on day to day delivery and support
- Accountable for procurement: ensure best practice procurement standards and strategies are adhered too
- Accountable for contract negotiations and contract management and the development and implement of the KPIs and incentive regime to manage service provider performance
- Ensures monitoring and reporting on contract performance is undertaken
- Leads joint annual business planning with service providers, in consultation with strategy, investments and operations
- Works closely with the asset and infrastructure and operations teams
- Ensures successful partnership relationships with key vendors
- Ensures delivery technology requirements are understood in liaison with ICT



Areas for focus

- Clear account management responsibility for service providers
- Ensure all aspects of the contracts are managed including all KPIs are met/delivered
- Drive procurement discipline, including more innovative means of delivering outcomes over the long-term in a manner that is cognisant of whole of life costs
- Improve service provider performance through KPI regime and incentives

Māori Responsiveness and Engagement

This function provides operational support to the CCO by incorporating Mātauranga Māori *Māori knowledge*, Māori partnerships, Cultural performance and Māori capability and cultural safety aspects into the delivery of the other functions.

What does the function do?

- Accountable for Māori partnerships
- Leads the implementation of the Māori responsiveness framework plan into the business
- Works with the Business services team to assist the co-governance group to develop and set cultural performance indicators (CPIs) that will flow through to KPIs for staff.
- Works with the Business Services team to develop a reporting mechanism to provide updates to the co-governance group on the tracking of CPIs
- Leads the monitoring of CPIs and advises the Business Services team of improvements to be made in the business
- Develops and implements a Māori engagement strategy for enhancing relationships with mana whenua, ensuring their interests are balanced against commercial objectives
- Works with the People and Safety team to advise on cultural capability training needs across the business
- Works with the People and Safety team to advise on cultural safety needs across the business
- Works with the Network Development and network delivery teams to incorporate Te Aranga design principles in the design of new infrastructure

Areas for focus

- Ensure the elements of the Māori responsiveness plan are embedded in the organisation including the development and roll out of CPIs, KPIs and Māori engagement and the measurement of success for the cultural excellence reporting mechanism.



Appendix C Assumptions for Costs and Benefits of Change



This appendix includes

- common assumptions
- transitional costs and benefits
- ongoing costs and benefits
- notes on inflation
- WSP report on benefits of improved asset management.

Common assumptions used for the purposes of modelling and comparison

- All costs are in addition to the total existing three waters budgets (operational and capital) assumed to transfer into any mode. This appendix only identifies changes to that budget.
- All options are assumed to fully fund depreciation.
- Average three water residential rate is based on the total rates requirements divided by the number of connections and assumes that commercial customers continue to pay a similar share of the cost of three water services under all options.
- Debt is used to fund the capital program in any single year where there is not sufficient operating cash and where in any single year there is excess operating cash then debt is repaid.
- Additional costs have been modelled into all options based on
 - increased compliance costs associated with regulatory reform
 - auditing new regulatory requirements
 - additional future capex over and above what is planned for each council in their LTP based on estimates prepared for the Department of Internal Affairs for the costs of meeting infrastructure upgrades to satisfy the National Policy Statement for Freshwater Management, meeting upgraded drinking water standards and upgrades to wastewater treatment plants that discharge to the marine environment.
- Any change to a new delivery model is assumed for modelling purposes to take place on 1 July 2022. The actual start date will be determined by the Councils should they choose to proceed.
- Modelling includes efficient capital and operational transition costs to set up a new model and ongoing operational costs once a new model is decided upon. Co-design costs are not accounted for as it is assumed they are incurred as part of the engagement leading up to the final decision. Additional costs have been included to support co-governance.
- Operating costs and revenue requirements for the financial years post 2027/28 are projected using the BERL local government cost index 20-year average indexation rate.
- Capital works for the financial years post 2027/28 are forecast using the BERL local government cost index 20-year average indexation rate, with the exception of Napier City Council and Hastings District Council, whose capital works for the 2028/29 and 2029/30 years were advised by councils and reflect planned investment.
- Savings grow progressively over three years to the stated values to recognise the transition to a fully efficient new model over three years.
- Procurement savings realised progressively to allow time to regionalise contracts and/or achieve savings through purchasing power.



	SSBU	Management Option	Asset Owning Option	Rationale
Transitional costs and benefits (short term to establish the CCO)				
Operational costs				
Transitional body	\$500,000	\$1,000,000	\$1,000,000	Transitional body established and resourced Set up shell CCO with CEO, Tier 2 and Board appointed six months ahead of operations
Business process change	\$250,000	\$500,000	\$500,000	It is prudent to allow for transformation costs when merging staff from several organisations together and when designing a new operating model and associated structure
ICT Business Process	\$250,000	\$500,000	\$500,000	As ICT systems are consolidated, updated, or introduced, business processes will need to be reviewed and updated for efficiency. Also, staff will need to be trained on the new systems.
Communications and Marketing	\$100,000	\$250,000	\$250,000	Setting up a new model will require additional engagement with stakeholders to inform them of the changes.
Branding	\$25,000	\$50,000	\$50,000	In addition to existing branding costs, allowance was made for development of logo in different formats and communication of it to staff and public. (The cost of updating uniforms, stationery, website and vehicle branding was assumed to be included as part of business process and transition costs).
Re-organisation costs		\$600,000	\$600,000	Assume remaining existing three waters staff and support roles to be similar enough to transfer to new organisation, however it is prudent to allow for some restructuring costs as some staff may choose not to transfer. Depending on the model selected and final structure, some of these costs may not be required.
Capital Costs				
IT capital cost	\$500,000	\$1,500,000	\$2,500,000	Asset owning higher to allow for billing system. Assume SSBU is able to use existing council systems initially, however some consolidation of the multiple systems will be required. CCOs will be required or will choose to purchase their own corporate (GL, billing, payroll etc), asset management, CRM and customer service. Tech one in NSW mergers were around \$1M but general run over. Could be reduced if able to go to cloud-based systems.
Office fit out	\$735,000	\$905,000	\$981,000	Floor area based on 15m ² per staff member x state service guide fitout allowance of \$600 per m ² .



	SSBU	Management Option	Asset Owning Option	Rationale
Ongoing costs and benefits				
<i>Operational costs</i>				
Directors	\$40,000	\$120,000	\$150,000	Benchmarked on average fees paid to directors and chair of Wellington Water (Management CCO) as reported in their annual report and allowing for inflation. Assume four directors including a chairperson for each CCO. Assume two external appointees to oversee SSBU. Asset owning CCO has more responsibility for water supply assets and overall reputation of organisation, so fees increased by 25%.
Co-governance	\$25,000	\$50,000	\$50,000	For each CCO, assumes cost of supporting Māori develop and implement co-governance capability.
Tier 1 additional costs	\$250,000	\$300,000	\$350,000	New CEO role, remuneration based on tier 2 position in a large water CCO as reported in annual reports. For SSBU used proxy for existing GM level. Assumed higher pay for Asset owning due to the extra responsibility for the services.
Tier 2 additional costs	\$0	\$300,000	\$500,000	Additional costs for increase in scope of Tier 2 roles on top of existing staff costs assuming some Tier 2 existing employees may step up to expanded roles while some new capability will need to be brought in. Calculation used remuneration based on current 3rd tier mid-point in the current HB TA salaries and other water CCO remuneration (excluding large CCOs) of second tier directors/managers. Assumes some additional skill sets and commercial acumen will be required. Sources: council data and annual reports.
ICT - extra operating	\$50,000	\$50,000	\$100,000	Based on assumption that current system costs transfer but new license fees, connectivity, and data transfer costs will be incurred.
Harmonisation of salary	\$145,000	\$145,000	\$145,000	To same average cost (excluding Napier operational roles). For the SSBU, some secondments might need a higher duty allowance to recognise relocation and increased quantum of work.
Auditor remuneration	\$15,000	\$68,000	\$165,000	Additional cost of financial auditing based on complexity of organisation structure and assets.
Regulatory auditing	0.5% of total opex	0.5% of total opex	0.5% of total opex	When new regulatory requirements are put in place from 2022 or 2023, additional auditing of compliance will be required.
Accommodation - office rent	\$268,000	\$349,000	\$385,000	Allowed 15m ² per staff member and used \$300 per square metre. This is the market rate based on a desktop review of commercial office rents in Hastings and Napier.



	SSBU	Management Option	Asset Owning Option	Rationale
				Subtracted existing rental cost to get additional costs. No allowance for depot rent but assumed to be within existing budgets if this function transfers.
Office overheads	\$27,000	\$35,000	\$38,500	Allowed ~ 10% of office accommodation cost for insurance, electricity etc.
Staff overheads	\$66,000	\$198,000	\$242,000	In addition to overhead costs already transferred from councils, allowed ~10% of new corporate staff plus Tier 1, Tier 2 and Board additional costs. Allows for expenses, vehicles, tools of trade etc.
Additional resources	\$343,000	\$1,210,000	\$1,365,000	Additional staff to create support structure. Includes Māori advisory function, HR, IT, Finance, health and safety and customer service.
Operational savings				
Asset management practices efficiency	3 - 3.5%	6 - 7%	10 - 11%	Refer to WSP Opus study included in this appendix, scaled down for SSBU and low/mid-point used to be conservative. Applied across total operational costs and capital excluding insurance, depreciation, electricity, rates and overheads.
Staff turnover (excluding managerial)	\$0	\$404,000 (by Year 3)	\$531,000 (by Year 3)	Assume initial saving 0%, 1.5% and 2% respectively over the first three years via not replacing natural attrition of staff (about 1 – 2 FTE per annum).
Procurement efficiencies	1.5%/year \$1.16m (by Year 3)	3%/year \$2.33m (by Year 3)	4.50%/year \$3.49m (by Year 3)	Bulk strategic procurement from aggregation of purchases and regional contracts. Adoption of advanced procurement approaches over the region. Assume some reduction in use of professional services through use of new capacity and capability of staff. Applied across combined capital programme and outsourced operational costs.

Notes on Inflation

Inflation figures for the financial modelling are sourced from the Local Government Cost Index (LGCI) produced by Business and Economic Research Limited (BERL) for the New Zealand Society of Local Government Managers. This is the index that councils use to inform their long term plans.

It is likely that the inflation figures used will be higher over the near term than actual inflation.

On 13 May 2020, the Monetary Policy Committee (MPC) of the Reserve Bank of New Zealand released its Monetary Policy Statement (MPS) which included their analysis of recent changes in the world and NZ economy due to the COVID-19 pandemic:



“The global economic disruption caused by the COVID-19 pandemic is expected to persist and lead to lower economic growth, employment, and inflation both in New Zealand and abroad. Even if New Zealand successfully contains the spread of disease locally, reduced world activity will mean lower demand for many of New Zealand’s exports. The Monetary Policy Committee is committed to achieving its employment and inflation objectives. The main support for the economy in this environment is appropriately being provided through increased fiscal spending. However, monetary policy will continue to provide significant support through keeping interest rates low for the foreseeable future.”

The MPC must set policy to keep future annual inflation between one and three percent over the medium term, with a focus on keeping future inflation near the two percent midpoint. The MPC practises forecast targeting, which means that it sets monetary policy such that it expects to achieve its inflation and employment goals in the medium term. In most instances the MPC aims to return inflation to the target mid-point within a one to three year horizon.

The May MPS noted:

- that survey measures of inflation expectations have declined significantly. Averaging across several measures, one- and two-year-ahead expectations fell to 0.8 and 1.5 percent in the June quarter 2020. Longer-horizon expectations also fell, with five-year-ahead expectations falling to 1.8 percent.
- to support its inflation and employment mandates, the MPC reduced the OCR to 0.25 percent in March and signalled its intention to keep the OCR at this level for at least a year. It also decided to implement a large scale asset purchase (LSAP) programme.
- that considerable monetary stimulus remains necessary to achieve inflation objectives. Given the unparalleled developments over the past three months, the economic outlook is very uncertain.
- inflation expectations have declined. Lower inflation expectations are likely to further suppress inflation outcomes through their effects on firms’ price-setting decisions.

Morrison Low notes that local government price inflation is generally higher than CPI. In May 2019, the Productivity Commission released a report as part of their inquiry into local government funding and financing. They commissioned from Sapere Research Group titled ‘Analysis of Local Government Cost Drivers’. Sapere had the task of constructing a price index that measures changes in prices faced by local councils. examining the inflationary pressures councils face. The report found:

- local government price inflation has risen faster than the CPI, reflecting that all relevant input indices have risen faster than the CPI over the same period
- salary and wage growth has been relatively restrained, prices have risen faster in capital expenditure (CAPEX) categories (due to more roading, transport, and community activities) than operational expenditure (OPEX) categories (with inflation primarily from water and environmental management work)
- price inflation for OPEX varies between council types: regional councils have faced the highest price pressures, while metropolitan councils have faced the lowest. This extends to real per capita growth; initial investigation suggests tourism may be a key factor
- price inflation for CAPEX is relatively similar across the council types.



1 Introduction & Scope

It is forecast that over the next 10 years the 4 Councils in the Hawkes Bay Region will spend \$524m on capital works and operations and maintenance on their 3Waters system, refer Table 1.

This assessment estimates the benefits that could arise from improved asset management of the 3water supplies in the Hawkes Bay region.

A ballpark estimate is provided, giving a general indication in monetary terms of the scale of possible benefits.

Table 1 – Budgeted 3Waters Expenditure FY18/19 to FY27/28 (Total of 4 TLA)

LTP Budgets FY18/19 to FY27/28	
CapEx to meet additional demand	\$31,531,000
CapEx to improve the level of service	\$128,182,543
CapEx to replace existing assets	\$154,154,502
Total CAPEX FY18/19 to FY27/28	\$313,868,045
Total O&M¹ FY18/19 to FY27/28	\$229,081,224

1 O&M budget is OPEX less insurance, depreciation, overheads and interest on loans

2 Assessment Method

Benefits are quantified in terms of monetary savings. Savings can arise from either reduction in expenditure or the provision additional service. In the latter case the extra amount it would have cost to provide the additional service without improved asset management practices is treated as a saving.

The analysis is supported by research undertaken by WSP Opus that identified the benefits arising from improved asset management. The research reviewed over 20 case studies gathered from a variety of public infrastructure sectors across the globe. The case studies included projects delivered by WSP Opus as well projects delivered by other organisations.

The research identified the overall savings to Capex and O&M expenditure that could be achieved and then determined the savings that various components of asset management practice could generate.

The research determined that reductions in total expenditure in the range of 10% to 40% can be achieved. As an example, OFWAT in the UK have reported that water bills are 30% lower than they would have been if privatisation and regulation had not been introduced (over a 20year period). Most of these savings being generated because of improved asset management practices.

The quantum of savings that can be generated from improved asset management depend on:

- The complexity of the asset system, i.e. the more complex the system the greater the likely savings.
- The existing level of asset management maturity/sophistication, i.e. the less sophisticated the existing practices, the greater the scope for savings from improved asset management systems.
- The age of the system and the rate of change, i.e. initially limited savings are likely to be achieved on new networks. Greater savings can be expected as assets age and reach the end of their lives or in systems experiencing a lot of change or growth.

Savings from improved asset management arise from:



- Efficiency – *doing things right, with less inputs*
- Effectiveness – *doing the right thing*
- Efficacy - *setting the right objectives*, in terms of asset and community outcomes

This assessment concentrates on the savings likely to arise from effectiveness as the other two areas are addressed elsewhere in the review of 3waters services., as:

- Gains from increased efficiency will largely arise from adoption of alternative contracting strategies.
- Savings from efficacy largely arise from improved governance.

The research also identified various components of improved asset management practice and quantified the savings that can be achieved through adoption of these practices. The relevant components being:

- Risk based maintenance, i.e. focusing maintenance activities on assets with the highest consequence and/or likelihood of failure.
- Optimising reactive/proactive maintenance, e.g. adopting just in time jetting programmes to reduce blockages.
- Extending asset life through increased knowledge of asset condition and deterioration.
- Making the most of existing infrastructure, to avoid the need for capital improvements.
- Improved project selection, identifying projects that provide the greatest combined benefit rather than taking a silo approach to project selection.

3 Assessment

The assessment has been undertaken in two steps:

- An initial assessment was made considering the scale of expected savings at total expenditure level.
- A refined assessment was undertaken considering the savings likely to be generated from the various components of improved asset management.

3.1 Initial Assessment

It is estimated that savings to CAPEX and O&M expenditure in the order of 10% can be achieved through improved asset management. This would save \$54mil over the next 10 years. This assessment is based on:

- Extent of assessment, i.e. the assessment only considers saving arising from improved effectiveness, not efficiency or efficacy.
- Complexity of the systems – 3waters systems are moderately complex.
- Existing level of asset management maturity - current asset management practices are at core to intermediate level, with scope to improve to advanced.
- Age of the system – sections of the networks are reaching the end of their useful lives, providing increased scope for asset management savings.

3.2 Asset Management Components

To refine the estimate the savings from individual asset management components were assessed. The relevant components and the expected savings being from:

- Optimising reactive and proactive maintenance, generating potential reductions in maintenance budgets in the order of 7% to 15%.
- Extending asset lives, generating reductions in renewals budgets in the order of 7% to 15%.
- Improved project selection and making the most of existing assets, generating reductions in level of service and growth CAPEX works in the order of 6% to 14%.



Further savings are not expected to be generated from risk-based maintenance practices as the TLAs have larger adopted these practices already.

The assessment is summarised in Table 2. It is estimated that savings in the range of 7% to 15% of total CAPEX and O&M expenditure can be achieved, i.e. between \$36m and \$80m over the next 10 years.

4 Summary of Assessment

It is estimated that savings in the range of 7% to 15% of total CAPEX and O&M can be achieved from improved asset management practices associated with:

- Optimising reactive and proactive maintenance
- Extending asset lives
- Improved project selection and making the most of existing assets

This would save between \$36m and \$80m over the next 10 years.



Hawkes Bay Waters Review - Benefits of Improved Asset Management

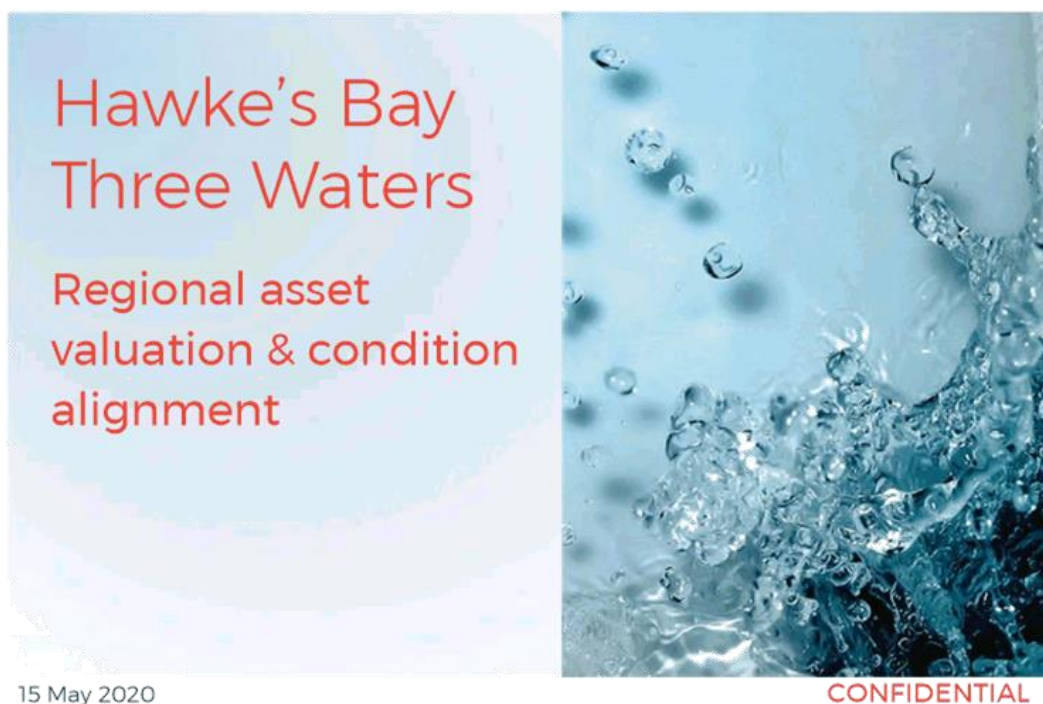
Table 2 - Summary of Assessment

Item	Combined LTP Budget FY18/19 to FY27/28	Initial Assessment	Assessment of Components (Lower Bound)			Assessment of Components (Upper Bound)		
			Optimising reactive and proactive maintenance	Extending asset lives	Improved project selection and making the most of existing assets	Optimising reactive and proactive maintenance	Extending asset lives	Improved project selection and making the most of existing assets
CapEx to meet additional demand and	\$31531000							
CapEx to improve the level of service	\$128,182,543				\$189,1860			\$4,414,340
CapEx to replace existing assets	\$154,154,502			\$10,790,815	\$7,690,953			\$17,945,556
Total O&M	\$229,081,224		\$16,035,686			\$34,362,184		
			\$16,035,686	\$10,790,815	\$9,582,813	\$34,362,184	\$23,123,175	\$22,359,896
Total CAPEX & O&M	\$542,949,269	\$54,294,927		\$36,409,313			\$79,845,255	
		10 %		7 %			15 %	



**Appendix D Hawke's Bay Three Waters: Regional Asset Valuation and
Condition Alignment, WSP, May 2020**

Project Number: 2-S5521.00





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Revision Details

Revision	Details
Version 2	Draft report delivered to Councils for review
Version 3	Final report submitted to Napier City Council (client)
Version 4	Final report revised to include updated Napier City Council valuation methodology and data, submitted to Napier City Council (client)



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Disclaimers and Limitations

This report ('**Report**') has been prepared by WSP exclusively for Napier City Council ('**Client**') in relation to Morrison Low Limited's three waters regional delivery scenarios assessment, to gain an increased understanding and confidence of the asset valuation information which is a key input into the study's financial model ('**Purpose**') and in accordance with the Contract 1259 with Napier City Council dated 9 March 2020. The findings in this Report are based on and are subject to the assumptions specified in the Report and WSP's Hawke's Bay Regional Asset Value and Condition Alignment Proposal dated 19 February 2020. WSP accepts no liability whatsoever for any reliance on or use of this Report, in whole or in part, for any use or purpose other than the Purpose or any use or reliance on the Report by any third party.

In preparing the Report, WSP has relied upon data, surveys, analyses, designs, plans and other information ('**Client Data**') provided by or on behalf of the Client. Except as otherwise stated in the Report, WSP has not verified the accuracy or completeness of the Client Data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in this Report are based in whole or part on the Client Data, those conclusions are contingent upon the accuracy and completeness of the Client Data. WSP will not be liable in relation to incorrect conclusions or findings in the Report should any Client Data be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to WSP.

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Executive summary

The purpose of this report is to support refinement of the financial models for the next phase of assessment and analysis of current and potential service delivery models for Three Waters in the Hawke's Bay region. The Councils' wish to gain an increased understanding and confidence of the three waters asset valuation information, which is a key input into the financial model that is being used to analyse regional delivery scenarios.

It is desired that any new organisation structure provides equitable regionalisation of costs and debt. The Councils are therefore particularly interested in identifying differences in the valuation data provided by the various councils, understanding the basis of these differences and determining to what degree the data can reasonably be normalised. Identifying issues that affect inputs equally across all councils is less of a concern as these will not make a difference to relativity.

In order to assess the confidence in asset valuation data, differences between the Councils' various valuation inputs and assumptions have been reviewed, in particular:

- The unit rates used to calculate asset replacement values
- The asset lives used to identify asset renewal requirements
- The differing approaches used by the Councils to assess condition, performance and capacity of assets.

Alongside this assessment of valuation confidence, the analysis has included:

- A regional valuation perspective to determine the extent to which valuation data can be normalised.
- Assessment of asset replacement/upgrade drivers to identify factors other than renewal that could materially affect future investment requirements.

Detailed analysis focuses on reticulation assets (pipes and points assets) as opposed to plant and other assets. This is partially due to the less comparative value of plant assets, but also because of their more specialised nature, which makes valuation comparison more difficult. It is acknowledged that plant assets often represent a significant portion of non-deferrable capital expenditure, so a review of asset replacement and upgrade drivers is included.

Valuation data confidence

The analysis for this report is based on valuation report summaries and valuation asset register data provided by each of the Councils. Overall valuation asset data confidence is assessed as follows.

Council	Overall valuation confidence	Valuation date	Valuation and data management practices
CHBDC	Reliable	30 June 2017	<ul style="list-style-type: none"> • Underlying data capture and management processes appear to be appropriate for the size of the network. • Valuation process completed in-house in accordance with national accounting and valuation requirements. • Unit rates component peer reviewed by external consultant.
HDC	Reliable	30 June 2018	<ul style="list-style-type: none"> • Underlying data capture and management processes appear to be robust and comprehensive. • Valuation process completed in-house in accordance with national accounting and valuation requirements. • Unit rates component and valuation report peer reviewed and external consultants.

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Council	Overall valuation confidence	Valuation date	Valuation and data management practices
NCC	Process not documented	30 June 2017	<ul style="list-style-type: none"> Points assets have not been included as separate assets in the valuation asset register. The value of these point assets is included in the unit rate cost for main pipes. Service line pipes have not been included as separate assets in the valuation asset register. The value of these service lines is included in the unit rate cost for main pipes. There is some uncertainty around data capture and management processes. Napier City have noted that data accuracy and completeness survey is underway. Valuation process for pipes and points is not fully detailed through valuation reporting.
WDC	Reliable	30 June 2017	<ul style="list-style-type: none"> Data capture and management processes appear adequate for the size of the network. Significant data improvements have been instigated since the time of the 2017 valuation, including recent independent consultant review of data for all three waters. Valuation process completed by external consultant in accordance with national accounting and valuation requirements.

The valuation data from all Councils is in the expected range for unit rates and base lives, this indicates that the resulting valuations are appropriate. However, assumptions regarding the value included for some Napier City Council reticulation assets (service line pipes and points) results in their overall valuation outcomes being uncertain.

Unit rates

In order to ensure unit rates provided by the Councils are as comparable as possible, adjustments have been made to the raw valuation unit rates based on the date when the valuation was completed, item coverage and overheads inclusions.

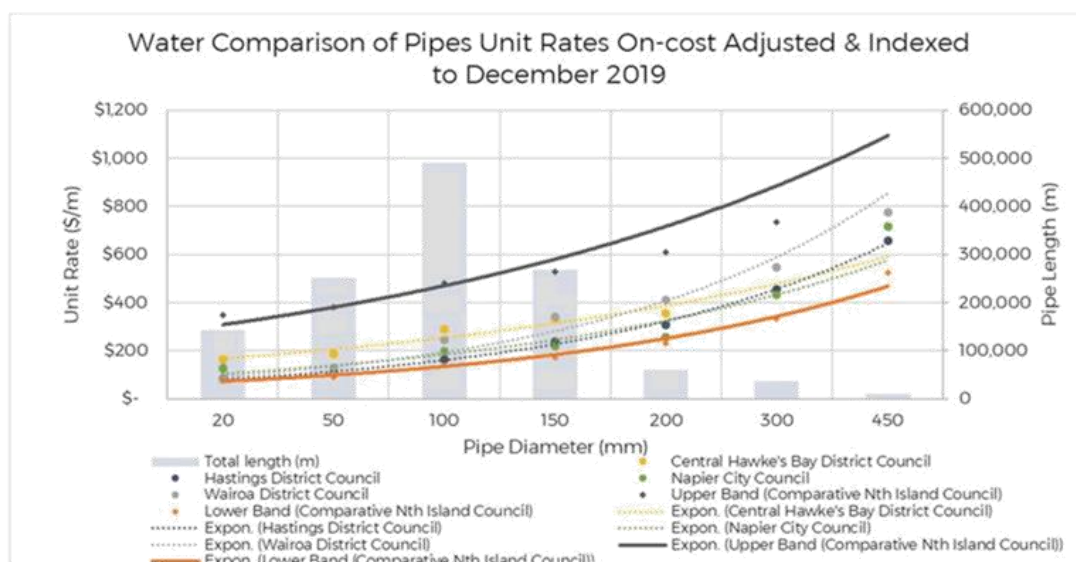
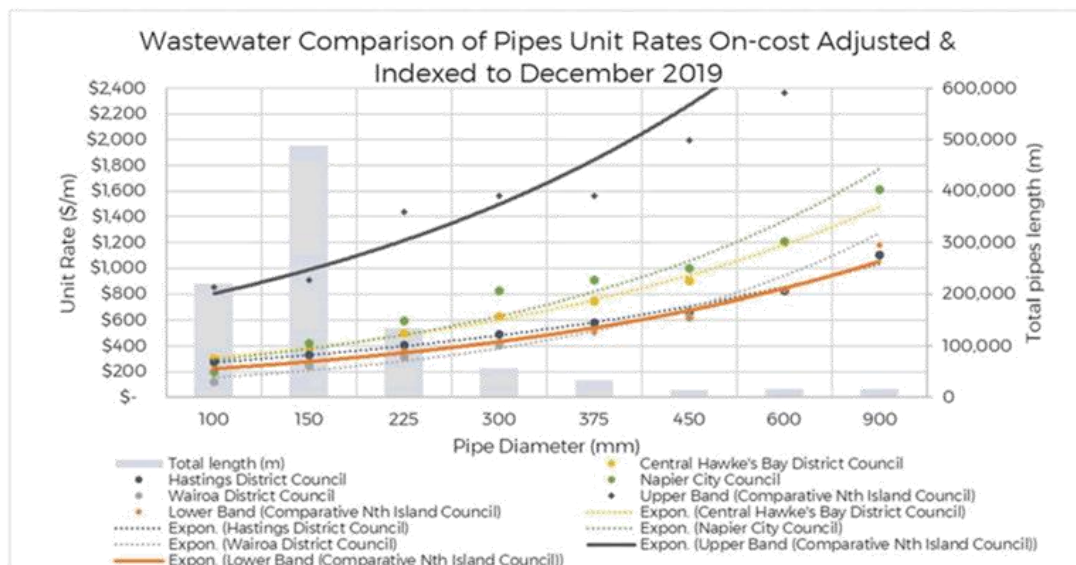
Valuations were not completed at the same date, so all unit rates have been indexed to December 2019 to provide a comparable point in time.

Unit rate item coverage is comparable for Central Hawke's Bay District Council, Hastings District Council and Wairoa District Council. These Councils have separate unit rates for each asset type or component (i.e. service line pipes and point assets have their own unit rates). Napier City Council has used a different approach where the cost of associated features (i.e. service line pipes, and manholes, valves points assets etc) are included in the unit rate cost of the main pipe. The unit rates for Napier City Council have been adjusted so they provide a more comparable unit rate coverage to the other Councils.

It has also been acknowledged by the Councils, that since the valuations were completed, there have been increases in Preliminary and General (P&G) costs and overhead costs. A big driver for this is increased compliance requirements, Health and Safety, planning, reporting and monitoring costs. The current industry recommended values for P&G costs and overhead costs are 20% and 15% respectively. P&G costs can vary depending on renewal project requirements, so only a standard overhead cost has been adjusted in the comparative analysis.

The figures below provide a comparison across all Councils for each of the Three Waters. They also provide a comparison with upper and lower bound unit rates, which are from other Councils within the North Island.

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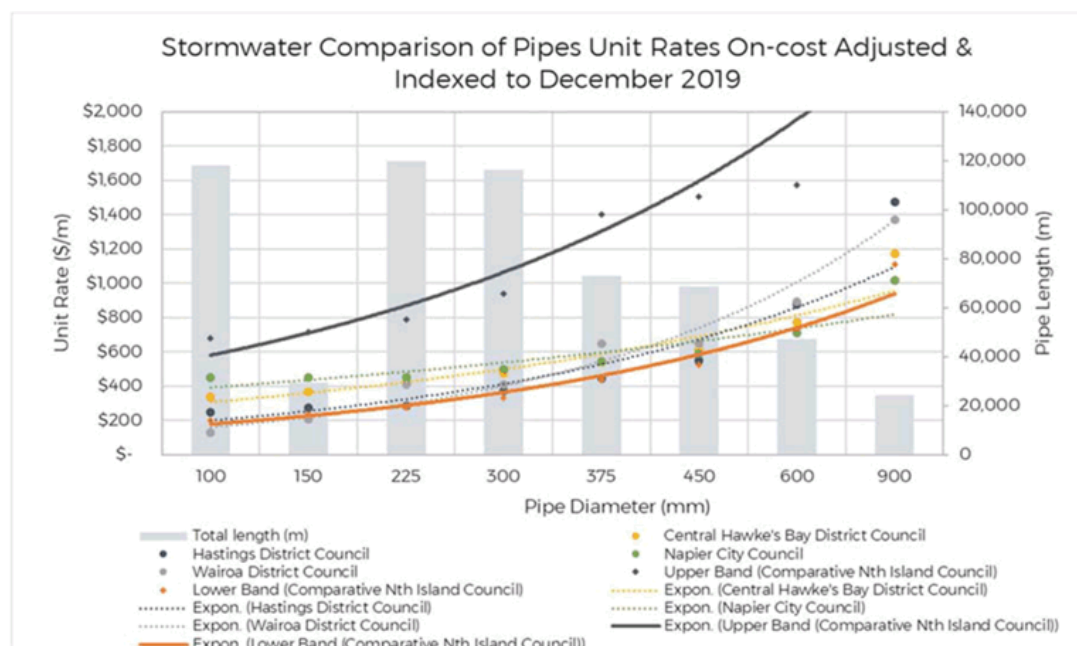


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Unit rate outcomes for water reticulation assets are closely comparable, however there is more variance for wastewater and stormwater reticulation assets. For the most common pipe diameters there is less variation in unit rates. Unit rates are generally within the upper and lower bounds from other Councils within the North Island but are at the lower end of the range as shown in the figures above.

There is good confidence in Hastings District Council unit rates as these were built up based on actual construction contract costs and have been externally peer reviewed. Central Hawke's Bay District Council have also used a similar approach. It is assumed that these rates provide a good basis for robust item coverage.

Napier City Council pipes unit rates for main pipes are based on indexed historic rates and include costs associated with renewal of service line pipes and points assets and therefore provide the least comparable item coverage. Napier's unit rates are the highest for wastewater reticulation assets, which may in part be due to the higher proportion of its wastewater reticulation network within private property (~50%). For comparison, the bulk of Hastings District Council wastewater reticulation assets are within the road carriageway (~83%).

For wastewater reticulation assets, Wairoa District Council have the lowest unit rates, which are also lower than the North Island lower bound unit rates, indicating they are too low. Wairoa's wastewater assets make up only 3% of the total regional wastewater assets, by replacement value, which means the resulting impact on the total value of wastewater pipe assets across the region is minimal.

Based on the most common pipe types for each of the Three Waters, an approximate sensitivity adjustment has been determined for each Council for wastewater, water and stormwater asset valuations. These lower and upper bound adjustments are expressed as percentages and can be applied to the total valuation for each Council in the financial modelling, as an approximation to normalise the unit rates across all assets.

Base lives

Asset lives for all Councils have been derived from best practice 'Base Lives' by material type derived from NZIAVDG, which have then been adjusted as necessary to take into account any

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specific asset conditions. Base lives defined by each Council are generally comparable for all Three Waters, with some variance as a result of individual Council adjustments.

Generally, Wairoa District Council have adopted longer Base Lives than the other Councils for both wastewater and water assets. Longer lives impact on the forecast renewal timing and therefore the Optimised Depreciated Replacement Values (ODRV) and annual depreciation. Due to the much smaller quantities of reticulation assets in the Wairoa network, this does not have a significant regional valuation impact. If Wairoa's base lives are shortened to match the Typical Base Life suggested for Hawke's Bay Councils, the overall reduction in the ODRV of Wairoa District Council's wastewater pipes is \$1.2M and \$0.8M for water pipes.

Central Hawke's Bay District Council has a short Base Life for Asbestos Cement water pipes. If this is adjusted to reflect the Typical Base Life suggested for Hawke's Bay Councils, the overall increase in the ODRV of Central Hawke's Bay District Council's water pipes is \$1.1M. Again, the smaller quantities of reticulation assets in the Central Hawke's Bay network does not have a significant regional valuation impact.

Regional valuation outcomes

To ensure a robust total regional Optimised Replacement Value (ORV) for Three Waters assets, it is important that all assets are accounted for. An assessment of the impact of missing assets on the total ORV has been completed.

The total ORV for reticulation assets for Central Hawke's Bay District Council and Hastings District Council appear to be appropriate, reflecting the higher level of confidence in unit rates and more complete asset registers. Both Councils record detailed valuation asset registers, with main pipes, service line pipes and points assets recorded separately.

For Napier City Council the incorporation of service line pipes and points asset value within the main pipes' valuation, means the Total ORV for all Three Waters is less certain.

Likewise, with Wairoa District Council wastewater assets, the service line pipes were not recorded in the valuation asset register and so were not included in the total ORV. An assessment of potential Replacement Value of service lines results in a potential ORV increase of \$1.4M for wastewater assets. This represents an increase in Wairoa's Total ORV for wastewater assets of 6%. For water and stormwater assets, Wairoa District Council has recorded and valued all asset types, including service line pipes, where applicable.

Condition

Condition assessment approaches and data availability varies between the Councils with generally lower confidence than other valuation input data. Because of the significant variations in condition approach and data availability, a comparison analysis is not possible based on raw condition data.

Where condition assessment data is unavailable, it is typical to make an age-based determination of condition. Age has been used as a proxy for condition on the basis that as an asset gets closer to its expected lifespan, its condition will deteriorate. This approach has been used for all Three Waters reticulation pipes assets.

The Adopted Useful Life used in the analysis is the average expected life. As such, some pipes will be expected to behave better, while others may behave worse. It provides an indication of the condition of the overall pipe stock, rather than condition of individual pipes.

The inferred condition outcomes included in the report are indicative of the condition at the point when valuations were completed 2-3 years ago. These may not represent the current condition of the Councils pipes. However, it does indicate that 19% of all wastewater pipes, 17% of all water pipes and 6% of all stormwater pipes across Hawke's Bay may be in 'Poor' or 'Very Poor' condition.

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As condition is generally less certain and data is not current for all Councils, it is recommended that it not be used to assess future renewal requirements.

Renewal and upgrade drivers

Renewal and upgrade drivers are generally not based on condition but driven by compliance requirements, asset performance and capacity requirements (including that of anticipated development) and in some cases community expectations.

For wastewater assets, the Government has already signalled requirements for increased standards for discharges to freshwater in the National Policy Statement for Freshwater. While the Hawkes Bay regional council plan change 6 is already imposing higher discharge standards for some catchments, Department of Internal Affairs (DIA) are looking at the implications of applying consistent minimum national discharge standards. Although DIA estimates were completed at a high level to cover the entire country and upgrades for individual plants may vary from this, the budgets allowed in the Council's current Long-Term Plans fall well short of what would be required should the minimum discharge standards that the DIA reports are based on be adopted.

For water assets, there has been heightened awareness for compliance with the drinking water standards in order to improve the quality of drinking water and public health. Additional requirements have also been included in the drinking water standards. It appears that the budgets allocated for water treatment upgrades in the Hawkes Bay region are of a similar order of magnitude expected from the DIA report. However, potentially the individual budgets set by each council may be under or over what is required. It is also likely that climate change will increase the frequency and duration of droughts placing more pressure on the need to reduce leakage. Increased environmental standards for water takes has the potential to reduce assumed asset lives and require installation of additional reservoirs.

For stormwater assets, the key impact is climate change with more assets likely to be replaced before the end of their useful life and land use constraints may need to be put in place.

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1 Introduction

1.1 Background

Central Government has announced a reform programme to improve the management of wastewater, drinking water, and stormwater to better support New Zealand's prosperity, health, safety and environment.

The five Hawke's Bay Councils, namely Central Hawke's Bay District Council (CHBDC), Hastings District Council (HDC), Hawke's Bay Regional Council (HBRC), Napier City Council (NCC) and Wairoa District Council (WDC) (collectively "the Councils") are working collaboratively together to engage effectively with central government on the water sector reforms, in particular review of drinking water, wastewater and stormwater ("Three Waters") service delivery in the Hawke's Bay region.

In 2019 the Councils commissioned Morrison Low Ltd, with WSP as their subconsultant, to undertake an initial assessment and analysis of current and potential service delivery models for Three Waters in the Hawke's Bay region. The Draft Business Case Analysis of Service Delivery Options¹ identified a shortlist of service delivery options but identified the need to undertake further analysis to validate and refine financial model inputs before a preferred option could be selected.

1.2 Purpose

The purpose of this current project is to support the next phase of analysis and refinement of the financial models. The Councils' wish to gain an increased understanding and confidence of the three waters asset valuation information, which is a key input into the financial model that is being used to analyse regional delivery scenarios.

It is desired that any new organisation structure provides equitable regionalisation of costs and debt. The Councils are therefore particularly interested in identifying differences in the valuation data provided by the various councils, understanding the basis of these differences and determining to what degree the data can reasonably be normalised. Identifying issues that affect inputs equally across all councils is less of a concern as these will not make a difference to relativity.

1.3 Scope

1.3.1 Analysis

In order to assess the confidence in asset valuation data, differences between the Councils' various valuation inputs and assumptions have been reviewed, in particular:

- The unit rates used to calculate asset replacement values
- The asset lives used to identify asset renewal requirements
- The differing approaches used by the Councils to assess condition, performance and capacity of assets.

Alongside this assessment of valuation confidence, the analysis has included:

- A regional valuation perspective to determine the extent to which valuation data can be normalised.
- Assessment of asset replacement/upgrade drivers to identify factors other than renewal that could materially affect future investment requirements.

¹ Hawke's Bay Three Waters, Draft Business Case Analysis of Service Delivery Options, May 2019. Morrison Low Ltd.

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1.3.2 Assets extent

At an initial meeting held on 24 January 2020, it was agreed that detailed analysis would focus on reticulation assets as opposed to plant and other assets. This is partially due to the less comparative value of plant assets, but also because of their more specialised nature, which makes valuation comparison more difficult. It is acknowledged that plant assets often represent a significant portion of non-deferrable capital expenditure, so a review of asset replacement and upgrade drivers is included. For the purposes of this project, the asset types and scope inclusions outlined in Table 1 apply.

Table 1 – Asset types and scope inclusions

	Project scope inclusions	Asset type	Description	Replacement Value
Reticulation	<ul style="list-style-type: none"> Unit rates review Asset lives review Condition review Valuation confidence assessment Asset replacement / upgrade drivers 	Pipes	Pipe type components of the reticulated system, that distribute or collect from the community (generally underground). These include main pipes and service lines pipes (from the main to the property boundary).	The metre length of the pipe asset is multiplied by the applicable unit rate.
		Points	Point type components of the reticulated system, such as manholes, valves etc.	The quantity of the item is multiplied by the applicable unit rate.
Plant & Other	<ul style="list-style-type: none"> Asset replacement / upgrade drivers 	Plant	Plant items are facilities and equipment servicing the whole network or a portion of the network and include treatment plants, storage reservoirs, pumps, wells etc.	Unit rates are established for the items listed in the plant register and this rate is multiplied by the number of items.

A regional summary of the Three Waters assets valuations completed by each Council is shown in Figure 1.

Figure 1 – Regional Three Waters assets valuation summary^{2 3 4 5}



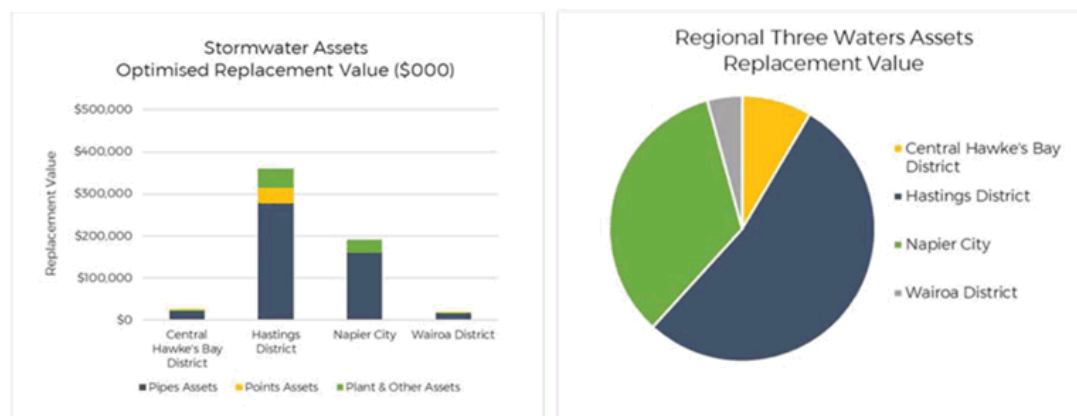
² ORV is based on the published valuation reports produced by each Council, with the exception of Napier City Council pipes ORV, which has been calculated from their valuation asset register. The valuations have been completed at different times. Central Hawke's Bay District Council, Napier City Council and Wairoa District Council valuations were completed as at 30 June 2017, while the valuation for Hastings District Council was completed as at 30 June 2018.

³ Separate service line pipes and points assets have not been included in the valuation asset register provided by Napier City Council. The replacement value of these assets has been included in the replacement value for main pipes.

⁴ Hastings District Council stormwater plant and other assets replacement value includes detention dams, outfall drains, seawall and pump stations and equipment.

⁵ Central Hawke's Bay District Council stormwater pipes assets replacement value includes open drains and channels.

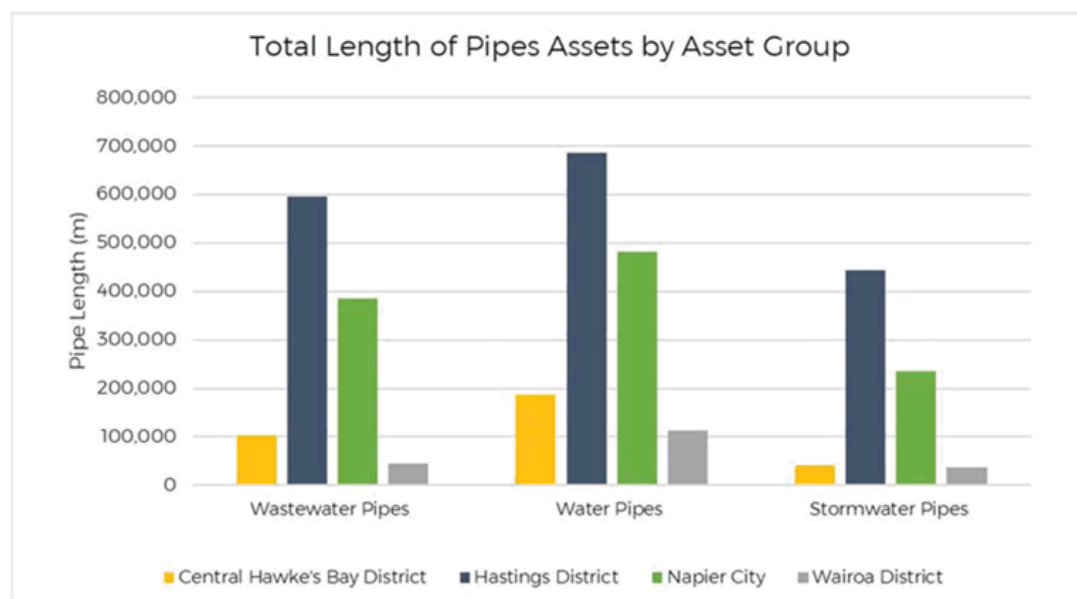
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The Optimised Replacement Value (ORV) of pipes and points assets make up approximately 84% of the total Three Waters asset ORV for the region. Almost half of the total Three Waters asset ORV is associated with wastewater assets.

Hastings District Council has the highest ORV for all three waters, reflecting the larger quantities of pipe network length as shown in Figure 2. Although the pipe network length for water assets is the greatest, the pipe diameters are smaller than those used for wastewater and stormwater and therefore have lower value.

Figure 2 – Regional Three Waters Length of Pipes Assets



In reviewing the overall length of pipes across each asset group it is apparent that service line pipes have been included as separate assets in some of the Councils' asset registers and not in others. Hastings District Council have included service line pipes in all three waters asset registers. The other three Councils have either made estimations of service line pipes replacement value or have not included these pipes in the valuation, where asset data was unavailable at the time of valuation. Where no allowance for service lines has been made in a Council's valuation, an assessment of the likely value of these assets has been made in the analysis completed in the following sections.

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1.3.3 Exclusions from scope

Excluded from the scope of this study are the following:

- Asset valuations have not been undertaken as part of this project. The project has only reviewed existing asset valuation data and assumptions provided by the Councils. Full audit of completeness and accuracy of Councils asset register data, including review of systems and processes used by Councils to audit their data, is out of the scope of this project.
- Plant and other assets are excluded from the detailed unit rate, asset lives and condition analysis. Only discussion on asset replacement and upgrade drivers included.
- The drainage and flood protection assets and services provided by the Regional Council. While they form part of the overall management of stormwater in the region, at this stage, they are outside the scope of the study.

1.4 Base data for analysis

The analysis for this report is based on valuation report summaries and valuation asset register data provided by each of the Councils. A summary of the valuation information and data provided is included in Table 2 and Table 3. It is noted that all Councils asset valuation data used in this analysis provides a snapshot in time, which is 2-3 years old and therefore may no longer represent current assets or their condition.

Table 2 – Asset valuation reports provided by the Councils

Council	Valuation Report Date	Asset Coverage			Comments
		Pipes	Points	Plant	
CHBDC	30 June 2017	✓	✓	✓	2017 valuation report prepared internally with independent unit rate review by Opus (WSP) Wellington.
HDC	30 June 2018	✓	✓	✓	2018 valuation report prepared internally with independent unit rate review by Opus (WSP) Wellington, and Valuation Review by Waugh Consulting.
NCC	29 Sept 2017			✓	2017 valuation report by AECOM including Three Waters facilities only.
	14 August 2014	✓	✓		2014 valuation report including infrastructure assets other than facilities (i.e. pipes and points). Valuations undertaken by Council staff were reviewed by Telfer Young as Independent Valuer. Limited detail on assumptions and inclusions provided.
WDC	30 June 2017	✓	✓	✓	2017 valuation report by Opus (WSP) Napier with Unit rate review and Valuation review by Opus (WSP) Wellington.

All Councils valuation reports state that valuations have been undertaken in accordance with the following industry standards and guidelines:

- NZ equivalent to the International Financial Reporting Standard 17, Accounting for Property, Plant and Equipment (PBE IPSAS 17)
- NZ Infrastructure Asset Valuation and Depreciation Guidelines (2006 Edition) (NZIAVDG)

The exception is Napier City Council's pipes assets valuation, for which the methodology used is unknown.

Table 3 – Detailed valuation asset register data provided by the Councils

Council	Effective Date	Asset Coverage			Comments
		Pipes	Points	Plant	
CHBDC	30 June 2017	✓	✓	✓	Single spreadsheet with asset registers for three asset groups included.
HDC	Data export dated 7 August 2019	✓	✓	✓	Series of spreadsheets including asset registers for all three asset groups. Spreadsheets broken out by asset types (i.e. different types of pipes, points etc). Also provided some IPS valuation, base lives and unit rate summary reports.

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Council	Effective Date	Asset Coverage			Comments
		Pipes	Points	Plant	
NCC	30 June 2017	✓			Single spreadsheet export from Accela including asset registers for all three asset groups. Separate unit rates calculation spreadsheet showing historical indexing. No separate asset register provided for service line pipes or point assets. The replacement value of these assets has been incorporated into the replacement value for main pipes assets.
WDC	30 June 2017	✓	✓	✓	Series of spreadsheets exported from AssetFinda including asset registers for three asset groups.

One of the biggest sources of asset data error is caused through poor updating of asset registers (e.g. additions and deletions as changes are made to physical assets) and there may be inconsistency between Councils in the processes used and how often this is done. WSP cannot take responsibility for the accuracy of the information provided by the Councils and have not fully verified the data in terms of completeness and accuracy, as it represents the actual physical assets owned by each Council.

However, an indication of the completeness and assessed level of confidence of the data provided has been completed based on the valuation reports provided by the Councils and our desk top assessment. A summary of the valuation confidence for each asset group is included in the following sections of this report. The NZIAVDC asset data confidence ratings have been used to indicate data confidence. Table 4 provides a comparison between these ratings and those used by each Council as summarised in their valuation reports.

Table 4 – Asset data confidence ratings

NZIAVDC Rating	NZIAVDC Rating Description	Applicable Council Rating			
		CHBDC	HDC ⁶	NCC	WDC
A Highly Reliable	Data based on sound records, procedure, investigations and analysis, documented properly and recognised as the best method of assessment.	1 – Accurate ±5%	High or Very high	High or Very high	A – Highly reliable ±2%
B Reliable	Data based on sound records, procedures, investigations and analysis, documented properly but has minor shortcomings, for example some data is old, some documentation is missing, and reliance is placed on unconfirmed reports or some extrapolation.	2 – Minor Inaccuracies ±15%	Good	Good	B – Reliable ±10%
C Uncertain	Data based on records, procedures, investigations and analysis which is incomplete or unsupported or comes from a limited sample for which grade A or B data is available.	3 – Significant data estimated ±30%	Average	Average	C – Uncertain ±25%
D Very uncertain	Data based on unconfirmed verbal reports and/or cursory inspection and analysis.	4 – All data estimated ±40%	Poor	Poor	D – Very uncertain ±40%

All councils show evidence of data improvement processes since the date the valuations were last completed. These processes are driven by compliance and improving asset management practices within all Councils. In general, the level and quality of asset metadata is best for higher criticality and higher value assets.

⁶ Hastings District Council and Napier City Council descriptions of ratings have not been included in the valuation reports. These ratings do not correlate with NZIAVDC. Alignment between ratings has been assumed.

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2 Wastewater assets

2.1 Assets summary

2.1.1 Asset data confidence

A desk top review of the wastewater valuation asset register data provided by each Council has been completed. Based on this review, the data confidence summaries from the Councils' valuation reports and discussions with each Council, the data confidence ratings in Table 5 and Table 6 have been assessed.

Table 5 – Wastewater pipes valuation asset data confidence

Council	Data Confidence				Data Completeness of Asset Register Provided		
	Register	Unit rates	Asset Lives	Condition	Data field Blank	Install dates in expected range	Data field "Unknown"
CHBDC	B ⁷	B	B	C	OK (Key valuation fields populated)	Minor issues (Small lengths of PVC, uPVC, MPDE & HDPE pre 1960)	Minor issues (1% pipe material unknown)
HDC	B	B	B	Data not available	OK (Key valuation fields populated)	OK (Date range: 1911 – 2018)	Minor issues (0.67% pipe material unknown)
NCC	C ⁸	C	C	Data not available	OK (Key valuation fields populated)	Some errors (2,128m pipe install date after 2020)	OK (0.06% pipe material unknown)
WDC	C ⁹	B	B	C	Minor issues (867m PVC pipe with "0" diameter)	OK (Date range: 1900 – 2016, 51% of pipes installed in 1948)	OK (No "unknown" data points)

Table 6 – Wastewater points valuation asset data confidence

Council	Data Confidence				Data Completeness of Asset Register Provided		
	Register	Unit rates	Asset Lives	Condition	Data field Blank	Install dates in expected range	Data field "Unknown"
CHBDC	C	B	B	C	OK (Key valuation fields populated)	OK (Date range: 1910 – 2017)	OK (No "unknown" data points)
HDC	B	B	B	Data not available	OK (Key valuation fields populated)	Minor Issues (Manholes date range: 1903 – 2017 doesn't match pipes range)	OK (0.1% unknown)
NCC	Data not available	Data not available	Data not available	Data not available	Separate asset register not provided		
WDC	C	B	B	C	OK (Key valuation fields populated)	OK (Date range: 1900 – 2016)	OK (0.2% unknown)

⁷ Central Hawke's Bay District Council has assumed one connection per property based on the rates database, to determine replacement value of service line pipes for the wastewater network. In the valuation asset register service lines have a "Status" of either "Existing" or "Guess connection".

⁸ Napier City Council data register does not record wastewater service lines as separate assets in the valuation asset register.

⁹ Wairoa District Council have not included wastewater service lines in 2017 asset valuation as not enough data was held for these assets at the time.

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With the exception of Hastings District Council, there is generally less data confidence for points assets and service line pipes assets, either due to unavailability of data or the data for key valuation fields may be inferred based on documented assumptions.

All councils are indicating continuing data improvements since these valuation snapshots. Wairoa District Council have noted that due to review of asset data, asset inspections and asset renewals over the last three years (since the 2017 valuation), the accuracy of current asset data is improved from that used in this analysis. Recent renewals work has also improved the condition of these assets.

2.1.2 Pipes assets

A summary of all Councils wastewater pipes assets by diameter and material type is included in Figure 3 and Figure 4. It is noted that wastewater service lines for Wairoa District Council have not been included in valuation asset data register due to lack of data at the time the valuation was completed. Napier City Council pipes asset register also does not include wastewater service line pipes as separately recorded assets.

Figure 3 – Length of wastewater pipes by diameter and Council

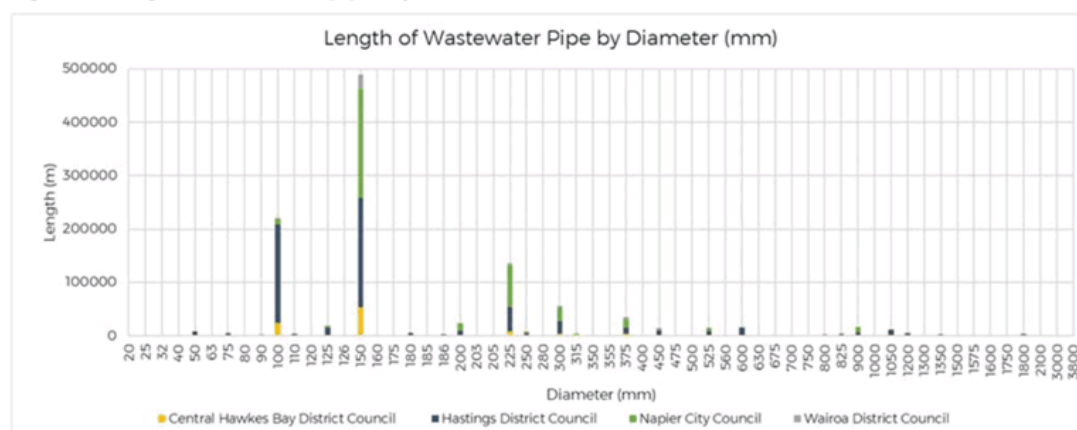
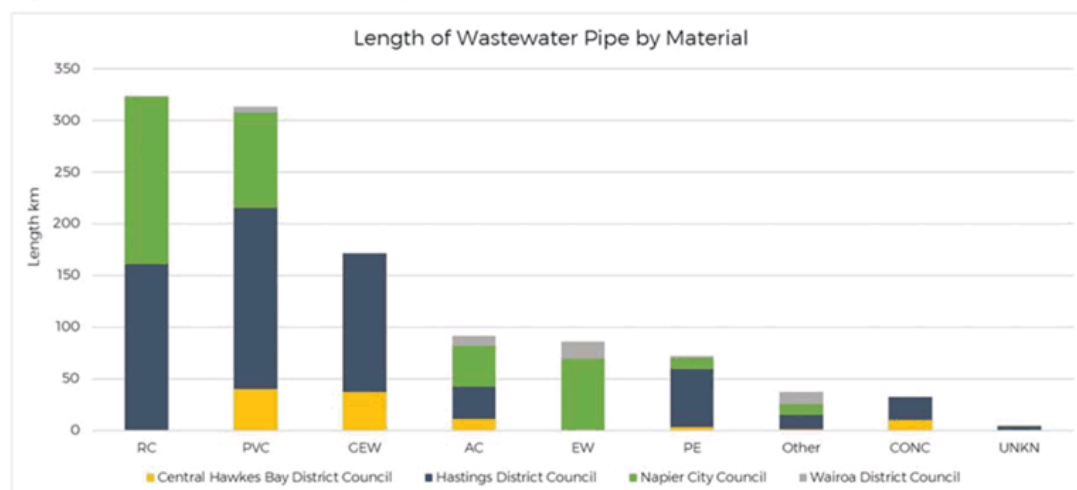


Figure 4 – Length of wastewater pipes by material and Council



The unit rates comparison analysis in this report has been based on the most common diameter pipes, while the asset lives analysis focuses on the most common material types.

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2.1.3 Points assets

For points assets, the three Councils with data available have large differences in the number and type of assets. Hastings District Council has significantly greater network complexity and size, and data reflects more definition of individual asset types and a more detailed breakdown of asset components. All Councils with records have slightly different asset hierarchies and naming conventions in their data which require normalisation beyond the scope of this review.

Only higher value items which could be compared are included in the following unit rate and asset life analysis. For wastewater point assets, 86.6% of the total replacement value is associated with manholes, so these assets are the focus of comparative analysis. Only Central Hawke's Bay District Council and Hastings District Council have valves in their valuation asset registers and there are a range of types with Hastings having a wider range of types and diameter.

2.2 Unit rates review

A key input into the valuation of assets is the need to establish robust unit rate replacement costs for each asset type. A desk top review of each Council's unit rates across both pipe and point assets has been completed to assess any differences between the unit rates used by the Councils, the reasons for these differences and the reasonableness of these differences.

2.2.1 Rates inclusions

A summary of the general inclusions and assumptions made in assets unit rate calculations for each Council is included in Table 7. These same inclusions and assumptions apply for all Three Waters, unless otherwise indicated in subsequent sections of this report.

Table 7 – Pipes and points assets unit rates inclusions and assumptions

Inclusions and assumptions	Central Hawke's Bay District Council	Hastings District Council	Napier City Council	Wairoa District Council
Engineering overhead costs included¹⁰	✓ (8%)	✓ (20% inclusive of contingency & overheads)	✓ (Assumed to be included 6%) ¹¹	✓ (8%)
Preliminary and General (P&G) Costs included¹²	✓ (10%)	✓ (an average of 25%)	Nil as work completed by in-house resources	✓ (percentage not stipulated)
Reflect actual construction costs	✓ (unit rates determined based on review of historical and current contract rates & product suppliers' rates)	✓ (unit rates built up based on review of recent local construction rates)	Inflation adjusted unit rates since 2005. Original rates derived from previous works and analysis of actual project costs.	Inflation adjusted from 2014 unit rates. Some adjustments made to these based on engineer's assessment & tendered rates from renewal projects recently let for tender)

¹⁰ Engineering overheads is an allowance for professional fees and for Council costs of staff involved in capital works activities. It includes planning, investigation, design, performance and quality monitoring of physical works projects (maintenance and construction) and providing other specialist advice.

¹¹ Based on discussions with Napier City Council, it is assumed that 6% overhead costs have been included in the unit rates provided. No P&G costs have been included due to internal service delivery model.

¹² P&G represents those costs which cannot be reasonably allocated to any specific identified activity on a physical works project. They allow for costs associated with completing the physical works such as site access, health and safety requirements, material handling and storage and traffic control.

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Inclusions and assumptions	Central Hawke's Bay District Council	Hastings District Council	Napier City Council	Wairoa District Council
Inflation adjusted	✓ (where historic costs were used as part of determining 2017 rates, BERL inflation factors were used)	✓ (2018 unit rates indexed to June 2019 – total of 1.2% applied from June 2018 to June 2019)	✓ (2014 unit rates indexed to 2017 using PPI ¹³ - total 3.06% applied over 3 year period)	✓ (2014 unit rates indexed to 2017 using CGPI ¹⁴ for pipelines - total of 6% applied over the 3 year period)
Replacement with modern equivalent materials	✓ (yes, but unstated material type)	✓ (yes, but unstated material type)	Unknown	✓ (MPDE or PVC)
Specific unit rates for separate asset components	✓ (unit rates applied separately to all recorded asset components)	✓ (unit rates applied separately to all recorded asset components)	Cost of associated features (service line pipes, and manholes, valves points assets etc) are included in the unit rate cost of the main pipe.	✓ (unit rates applied separately to all recorded asset components)
Service Lines Fixed Rate	Nil	✓ (Service Lines replacement costs include additional fixed rate per asset)	Nil	Nil
Assets in high cost areas (e.g. private vs public)	✓ (10x normal unit rate applied for railway corridors)	Unknown	Unknown	Nil
Independent unit rate assessment	✓ (reviewed by WSP (Opus) 2017)	✓ (reviewed by WSP (Opus) 2018)	Not completed	✓ (reviewed by WSP (Opus) 2017)

Although most of the Councils have similar inclusions in their unit rates, these have been applied differently by each Council. There is a lack of comparability of how Preliminary and General (P&G) costs and overhead costs are applied. Based on the valuation reports provided it is assumed that the P&G and engineering overhead costs have been incorporated into the unit rates provided in the detailed valuation asset register data. The nature of any asset replacement will make a difference to how P&G and overhead costs are applied (e.g. project type, quantity of asset replacement etc), however all Councils appear to have applied blanket P&G and overhead percentages across all replacement cost unit rates.

There is good confidence in Hastings District Council unit rates as these were built up based on actual construction contract costs and have been externally peer reviewed. Central Hawke's Bay District Council have also used a similar approach. It is assumed that these rates provide a good basis for robust item coverage.

Napier City Council main pipes unit rates are based on indexed historic rates and include costs associated with renewal of service line pipes and points assets and therefore provide the least comparable item coverage.

¹³ Producers Price Index (PPI) for construction (code SQNEEO000). PPI construction input index measures changes in prices paid by producers in this industry for inputs such as raw materials, fuel, and services. It excludes labour and capital costs paid by these businesses.

¹⁴ Capital goods price index (CGPI) for pipelines construction (code S2CB). CGPI measures changes in prices of new physical assets. For the construction industry, these physical assets include infrastructure-related construction such as roads and pipelines. It excludes the cost of ongoing maintenance and services. This exclusion is the key difference between the PPI construction output index and CGPI for construction asset types.

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2.2.2 Rates exclusions

Aspects excluded from unit rates by the Councils are summarised in Table 8. These same exclusions apply for all Three Waters, unless otherwise indicated in subsequent sections of this report.

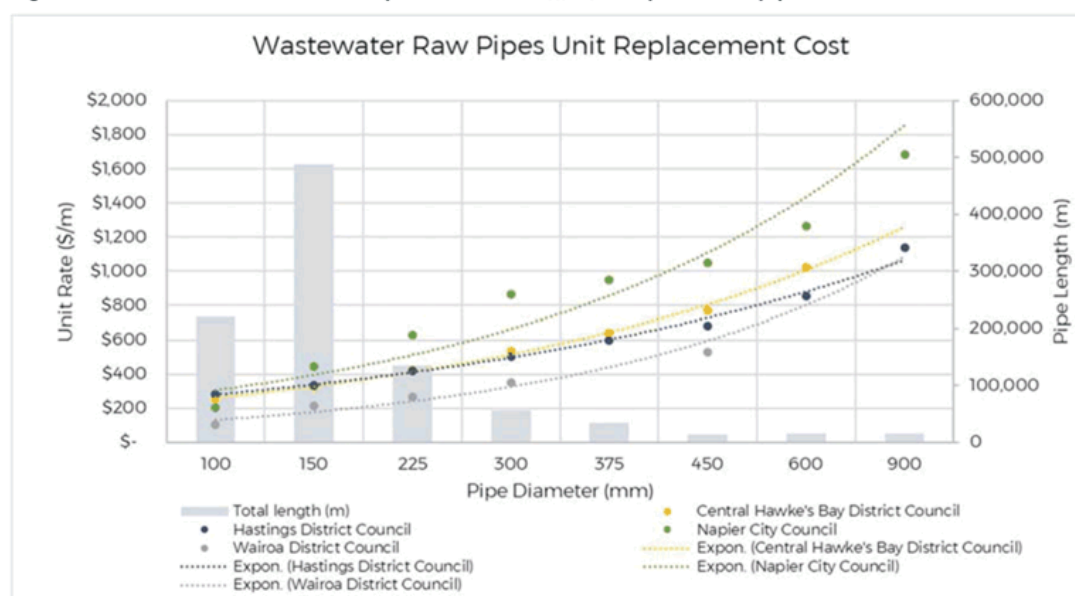
Table 8 – Pipes assets unit rates exclusions

Exclusions	Central Hawke's Bay District Council	Hastings District Council	Napier City Council	Wairoa District Council
Cost of dismantling or disposing of asset (where modern renewal technique would require this)	Not explicitly mentioned	Not specifically accounted for	Assumed not included	Not explicitly mentioned
Depth of pipes (i.e. unit rate varies by depth of pipe)	No apparent allowance	No apparent allowance	No apparent allowance	No apparent allowance

2.2.3 Pipes assets unit rates comparison

Figure 5 shows a comparison of the raw unit rate replacement cost by pipe length for the most common wastewater pipe diameters for each Council. Both main and service line pipes are included in this analysis, where data for service lines was available.

Figure 5 – Wastewater raw unit rate replacement cost (\$/m) comparison for pipes assets



Using the unit rates in Figure 5 as a basis, further adjustment has been completed to provide comparable unit rates with similar item coverage across all Councils.

All unit rates have been inflation indexed¹⁵ to December 2019 costs.

Hastings District Council valuation asset register includes two costs against service lines pipes, a unit rate applied by length and a fixed rate per asset. The total cost of the fixed component is \$14.6M or 4% of Hastings total wastewater pipes replacement value. As wastewater service lines have a variety of pipe diameters, the unit rate adopted for each pipe diameter has been increased by 4% to reflect this additional cost.

¹⁵ Using Capital Goods Price Index for pipelines (code S2CB)

Napier City Council have confirmed that a decision was made in 2003 to hold valuation and depreciation details against only the main feature assets. Therefore, the unit rate replacement costs of associated features (service line pipes, and points assets such as manholes, valves etc.) are included in the main pipe unit rate replacement cost. This is reflected in the valuation asset register which only includes main pipes and does not include service line pipes as separate assets. Although not recorded separately, Napier City Council have confirmed that service line pipes connecting to main pipes in road reserve to private property (up to the private property boundary) are Council owned assets. Where the main pipes run through private property, any service connections are assumed to be treated as private assets.

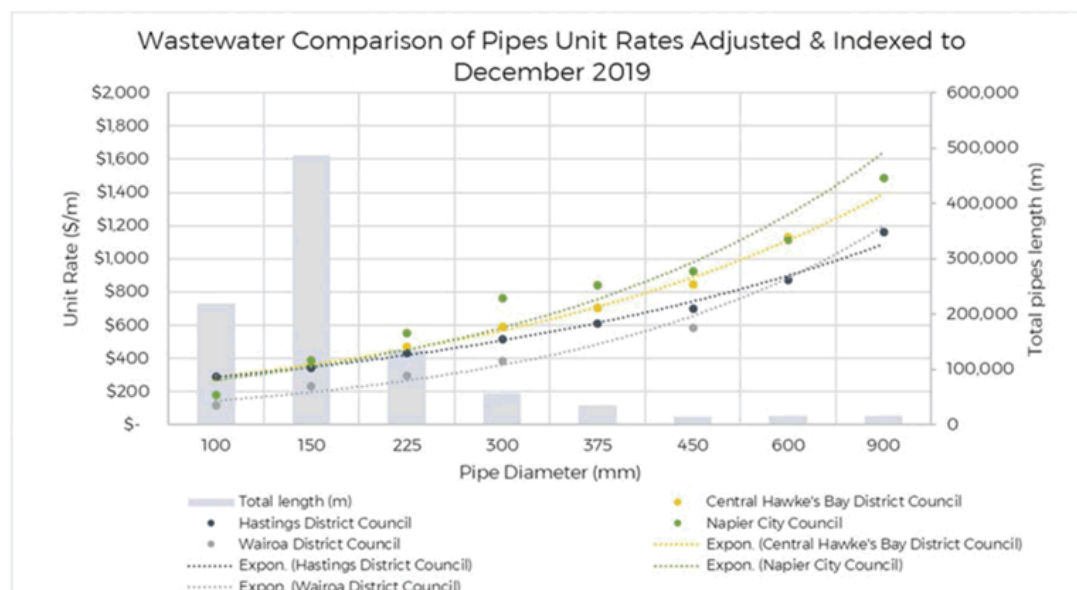
Figure 6 – Napier City Council reticulation assets in private property



These changes to the unit rates are reflected in the adjusted unit rates included in Figure 7.

17 The percentage of the total replacement value of Hastings District Council wastewater points assets from the total replacement value of all wastewater pipes and points assets.

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Figure 7 – Wastewater adjusted unit rate replacement cost (\$/m) comparison for pipes assets

For the most common pipe types (100mm, 150mm and 225mm diameter), Wairoa District Council unit rates remain the outliers, being lower than the other three Councils.

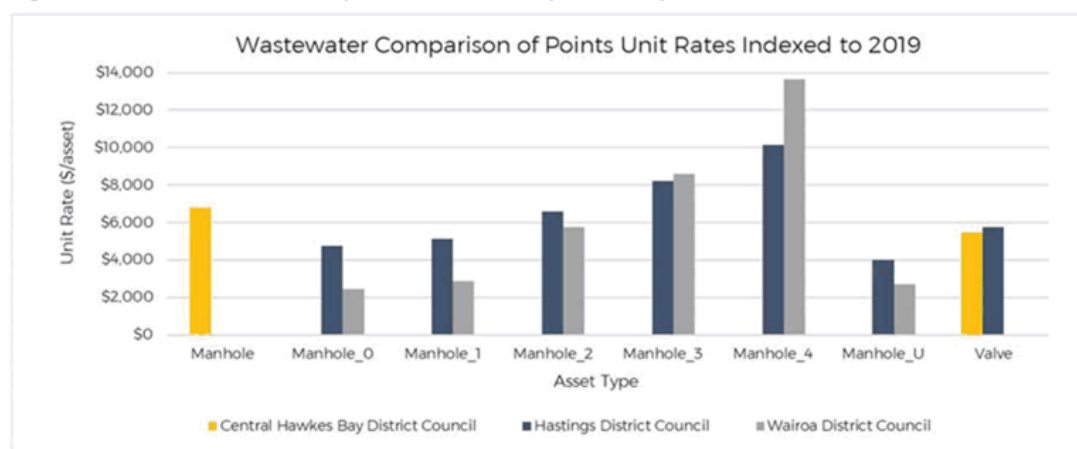
The variation in unit rate replacement costs in Figure 7 may be due to factors such as:

- Topography
- Ground water levels and soil conditions
- Depth of pipes
- Brown-field costs to reflect constraints of undertaking construction and renewal work simultaneously with continued operation of the infrastructure
- The proportion of pipes within private property versus public road reserve
- Proportion of the network that is rural versus urban versus city
- Local economy
- Optimised material suitable for local conditions

2.2.4 Points assets unit rates comparison

The unit rate review for points assets is only possible for clearly defined common items like manholes. Figure 8 shows a comparison of the unit rate replacement cost by point asset type for the most common wastewater point assets for each Council. All unit rates have been inflation indexed up to 2019 costs to provide a fair comparison across all Councils.

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Figure 8 – Wastewater unit rate replacement cost comparison for points assets¹⁸

Wastewater point assets unit rates illustrate the different approaches used by each Council. Central Hawke's Bay District Council use a standard unit rate for all manholes, whereas both Hastings District Council and Wairoa District Council have also accounted for depth of the manholes in their unit rates (i.e. Manhole_0 are manholes < 1m depth, Manhole_1 are 1-2m depth etc). Central Hawke's Bay District Council's unit rate is in the middle of the range of the depth graded rates. Wairoa District Council rates are clearly lower than comparable Hastings District Council rates for shallow manholes but get closer as depth increases. Most of Wairoa District Council's manholes are in the Manhole_2 (2-3m depth) range.

2.3 Asset lives review

2.3.1 Pipes asset base lives comparison

Generally, asset lives for all Councils have been derived from best practice 'Base Lives' by material type derived from NZIAVDG, which have then been adjusted as necessary to consider any specific asset conditions. A summary of the general assumptions made for asset lives for each Council is included in Table 9. A summary of the adopted base lives for each Council is included in Figure 9.

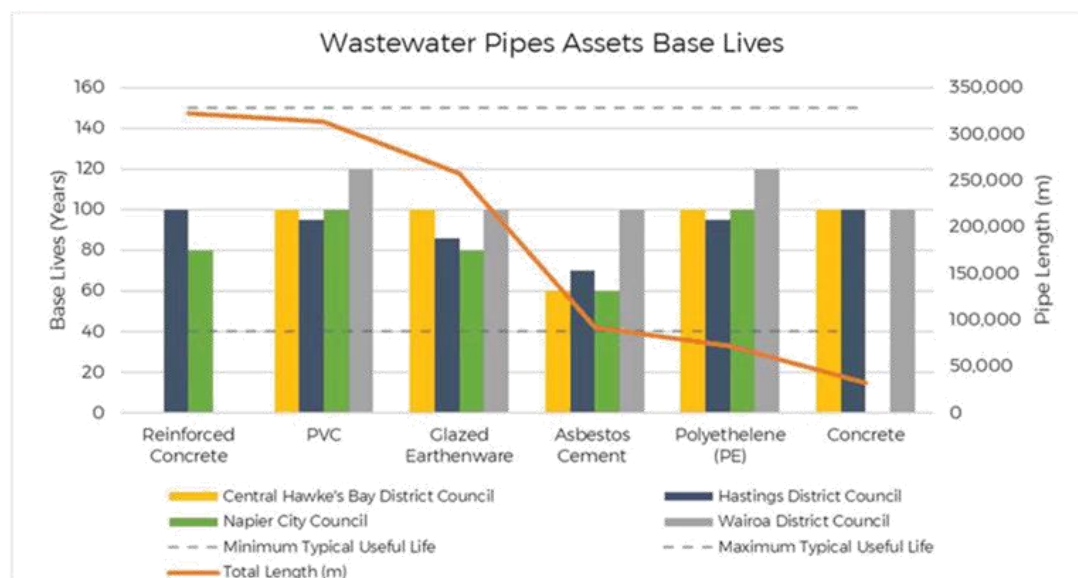
Table 9 – Wastewater asset lives assumptions

Council	Adjustments made to base lives derived from NZIAVDG
CHBDC	Where information is available, further adjustments are made to the useful life estimate to take into account existing asset lives and knowledge of the asset
HDC	Hastings District Council have a methodology that extends or shortens the base lives using various factors as documented in Appendix 2 of the Revaluation Report, including: <ul style="list-style-type: none"> Separation of Industrial Effluent Adjustment (Wastewater Mains) - A 20% discount factor is applied to separated Industrial Effluent mains to reflect the experienced reduction in life
NCC	Unknown
WDC	Where information is available, further adjustments are made to the useful life estimate to take into account condition and use of the asset.

¹⁸ Separate points data for Napier City Council not available.

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Figure 9 – Wastewater pipes assets base lives



All Councils have used Base Lives within the Typical Useful Life range included in the NZIAVDG. For most pipe types, the Base Lives provide minimal variance between the Councils.

Table 10 provides a Typical Base Life which could be used for each pipe material type based on the four Councils' Base Lives.

Table 10 – Typical Base Lives for wastewater pipes assets in Hawke's Bay

Pipe Material	Typical Base Life (years)
Reinforced Concrete	90
PVC	100
Glazed Earthenware	90
Asbestos Cement	70
Polyethylene	100
Concrete	100

Looking at the variances from the Typical Base Lives in

Table 10, shows that in general, Wairoa District Council has adopted longer Base Lives than the other Councils. In particular, the Base Life for Asbestos Cement pipes is significantly longer. If the Base Lives for Wairoa are reduced in line with the Typical Base Lives in

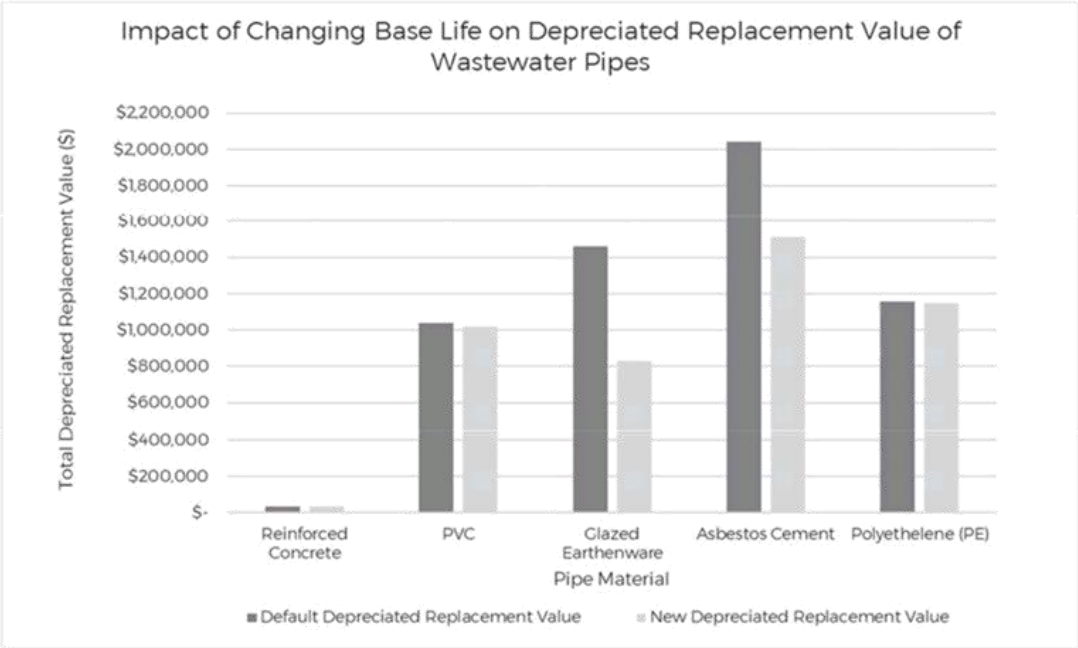
Table 10, the forecast renewal timing is impacted and therefore the Optimised Depreciated Replacement Values (ODRV) and annual depreciation reduce. The size of this reduction is further impacted by the age and quantity of the existing pipe stock.

Figure 10 shows the change in Wairoa District Council's ODRV if the base lives are shortened to match the Typical Base Lives in

Table 10. The overall reduction in the ODRV of Wairoa District Council's wastewater pipes is \$1.2M. The impact is most significant for Glazed Earthenware and Asbestos Cement pipes as these are older pipes and represent 58% of the pipe length. PVC and Polyethylene pipes make up only 16% of the pipe length and have higher average age, resulting in limited change in the ODRV.

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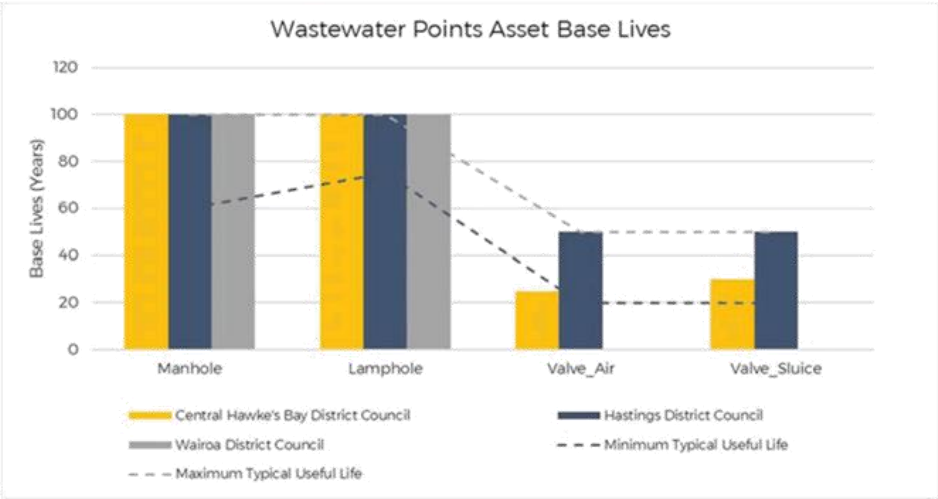
Figure 10 – Wastewater pipes depreciated replacement value – Wairoa District Council



2.3.2 Points asset base lives comparison

Points assets data is variable between the Councils and without some standardisation of grouping and classification there is limited potential for detailed analysis of points assets Base Lives. Figure 11 shows limited variation in the points assets' base lives between Councils. Hastings District Council has a defined logic in the valuation report to refine the base age within classes for some point data whereas both Central Hawke's Bay District Council and Wairoa District Council have limited variation in base lives across the same type of point asset.

Figure 11 – Wastewater points assets base lives¹⁹



¹⁹ Separate points data for Napier City Council not available.

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2.4 Valuation confidence assessment

Table 11 provides a summary of the overall valuation confidence assessed for each Council and how this is impacted by any asset valuation omissions, service delivery arrangements and asset management practices.

Table 11 – Wastewater pipes and points assets valuation confidence

Council	Impact of Asset Omission	Asset management practices	Service Delivery	Overall valuation confidence
CHBDC	Some assumptions made for missing service line pipes data. These ensure all assets replacement costs are considered as part of the total ORV of wastewater assets.	Underlying data capture and management processes appear to be appropriate for the size of the network. Valuation process completed in-house in accordance with national accounting and valuation requirements. Unit rates component peer reviewed by external consultant.	External delivery allows for clear breakdown of costs and verification of unit rates. May provide opportunities for competitive pricing, depending on the market.	B Reliable
HDC	No apparent significant omissions.	Underlying data capture and management processes appear to be robust and comprehensive. Valuation process completed in-house in accordance with national accounting and valuation requirements. Unit rates component and valuation report peer reviewed and external consultants.	External delivery allows for clear breakdown of costs and verification of unit rates. May provide opportunities for competitive pricing, depending on the market.	B Reliable
NCC	Wastewater service line pipes and points assets are not recorded as separate assets in the asset register data. However, their replacement value has been accounted for in the replacement value of main pipes. This means that all assets replacement costs are considered as part of the total ORV of wastewater assets.	There is some uncertainty around data capture and management processes. Napier City have noted that data accuracy and completeness survey is underway. Valuation of associated feature assets included in valuation of main feature.	Internal service delivery. Unclear how costs for work are recorded. May provide opportunities for efficiencies by minimising P&G component of costs.	C Process not documented
WDC	Service lines not included due to lack of data. Estimated value of these assets is \$1.4M or 6% of the total replacement value of Wairoa's wastewater assets (see discussion below).	Data capture and management processes appear adequate for the size of the network. Significant improvements have been instigated since the time of the 2017 valuation. Valuation process completed by external consultant in accordance with national accounting and valuation requirements.	External delivery allows for clear breakdown of costs and verification of unit rates. May provide opportunities for competitive pricing, depending on the market.	B Reliable

2.4.1 Service line pipes valuation

The overall valuation confidence for each Council is impacted by how individual asset types have been valued. There are two main components to determine the total replacement value for the reticulation network: the quantum of each type of asset and the unit rate replacement cost for that asset type. The replacement value of service line pipes has been assessed differently by all

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Councils, but has been included in the total replacement value of the wastewater reticulation network for all Councils, except Wairoa District Council.

Wairoa District Council has confirmed that the approximate number of wastewater connections to private property within their wastewater network. This has been used to determine the potential replacement value of Wairoa's wastewater service line pipes as shown in Table 12.

Table 12 – Potential replacement value of Wairoa District Council wastewater service line pipes

Replacement Value Method	Description of method	Approx. no. of connections	Total length of service lines	Potential Service Lines Replacement Value for WDC (\$000)	% of WDC wastewater assets replacement value	% of regional wastewater replacement value
Number of wastewater connections	Assume there is one 100mm diameter service line per connection with an average 8.4m ²⁰ length. The unit rate for 100mm diameter pipes of \$106/m has been applied.	1,600	13,453m	\$1,426	6.0%	0.2%

2.5 Asset condition review

2.5.1 Condition data

Condition assessment approaches and data availability varies between the Councils. A summary of how condition has been assessed by each Council and the condition data available is summarised in Table 13.

Table 13 – Condition assessment approach

Council	Condition Rating Approach	Individual Asset Condition Rating Data	Data Confidence
CHBDC	Modified version of New Zealand Pipeline Asset Grading Manual Scoring. Valuation report provides no commentary on how condition ratings have been obtained (e.g. from inspections, inferred based on age etc). All assets condition graded based on 1 to 5 grading system, 1 being excellent, 5 being very poor.	Condition rating recorded against each asset in the valuation asset register. In the case of unknown condition, a default setting of 3 (fair) is used.	C Uncertain
HDC	There is a programme of ongoing asset condition assessment and unit lives are reviewed based on deterioration trends and other factors affecting asset life. The condition grading is assigned mostly by the City Care contractors' assessment whenever an asset is observed and is subjective, but it is done by staff in the field.	No apparent condition rating recorded against individual assets in the valuation asset register.	Not available
NCC	Some pipes have had CCTV inspections. Otherwise inferred condition based on age. No specific condition rating system noted.	No apparent condition rating recorded against individual assets in the valuation asset register.	Not available
WDC	Condition Rating Based on IIMM 2015. CCTV Condition assessment programme in place, but network not fully assessed, results extrapolated. Condition information has been used to adjust the remaining useful life of the asset where appropriate. Over the last three years since the 2017 valuation, Wairoa District Council has focussed on improving condition data records and asset condition. Any resulting improvement in condition has not been included in the analysis in this report.	Condition rating recorded against each asset in the valuation asset register.	C Uncertain

²⁰ Average length of Hastings District Council service line pipe.

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Because of the significant variations in condition approach and data availability, a comparison analysis is not possible based on raw condition data.

2.5.2 Pipes inferred condition

Where condition assessment data is unavailable, it is typical to make an age-based determination of condition. Age has been used as a proxy for condition on the basis that as an asset gets closer to its expected lifespan, its condition will deteriorate. This approach is commonly used for municipal assets where condition data is not readily available.

Asset age data has been used to calculate the Remaining Useful Life (RUL) (as a percentage) of the asset in accordance with the following formula:

$$RUL(\%) = 1 - \left(\frac{\text{Assessment Year} - \text{Year Installed}}{\text{Adopted Useful Life}} \right) * 100$$

From the RUL information, an inferred condition has been assigned in accordance with Table 14.

Table 14 – Remaining useful lives based condition grades²¹

Grade	Grade Description	% of Remaining Useful Life (RUL)	Description of Age Based Condition
1	Excellent Fit for future	RUL ≥ 75%	The asset in the system or network has greater than or equal to 75% of its remaining useful life. It is generally in very good condition, typically new or recently rehabilitated.
2	Good Adequate for now	75% > RUL ≥ 50%	The asset in the system or network has less than 75% (and greater than or equal to 50%) of its remaining service life. It is in good condition.
3	Fair Requires attention	50% > RUL ≥ 25%	The asset in the system or network has less than 50% (and greater than or equal to 25%) of its remaining service life. It is in fair condition.
4	Poor At risk	25% > RUL ≥ 3%	The asset in the system or network has less than 25% (and greater than or equal to 3%) of its remaining service life. It is in poor condition and mostly below standard, with many elements approaching the end of their service life.
5	Very poor Unfit for sustained service	RUL < 3%	The asset in the system or network has less than 3% of its remaining service life. It is in very poor, unacceptable condition and should be replaced or rehabilitated.

For wastewater assets the 'Adopted Useful Life' for use in the RUL calculations, is the Typical Base Life derived from the Councils' Base Lives summarised in

Table 10. Pipes which have a material type of 'Other' or 'Unknown' have been excluded from the analysis.

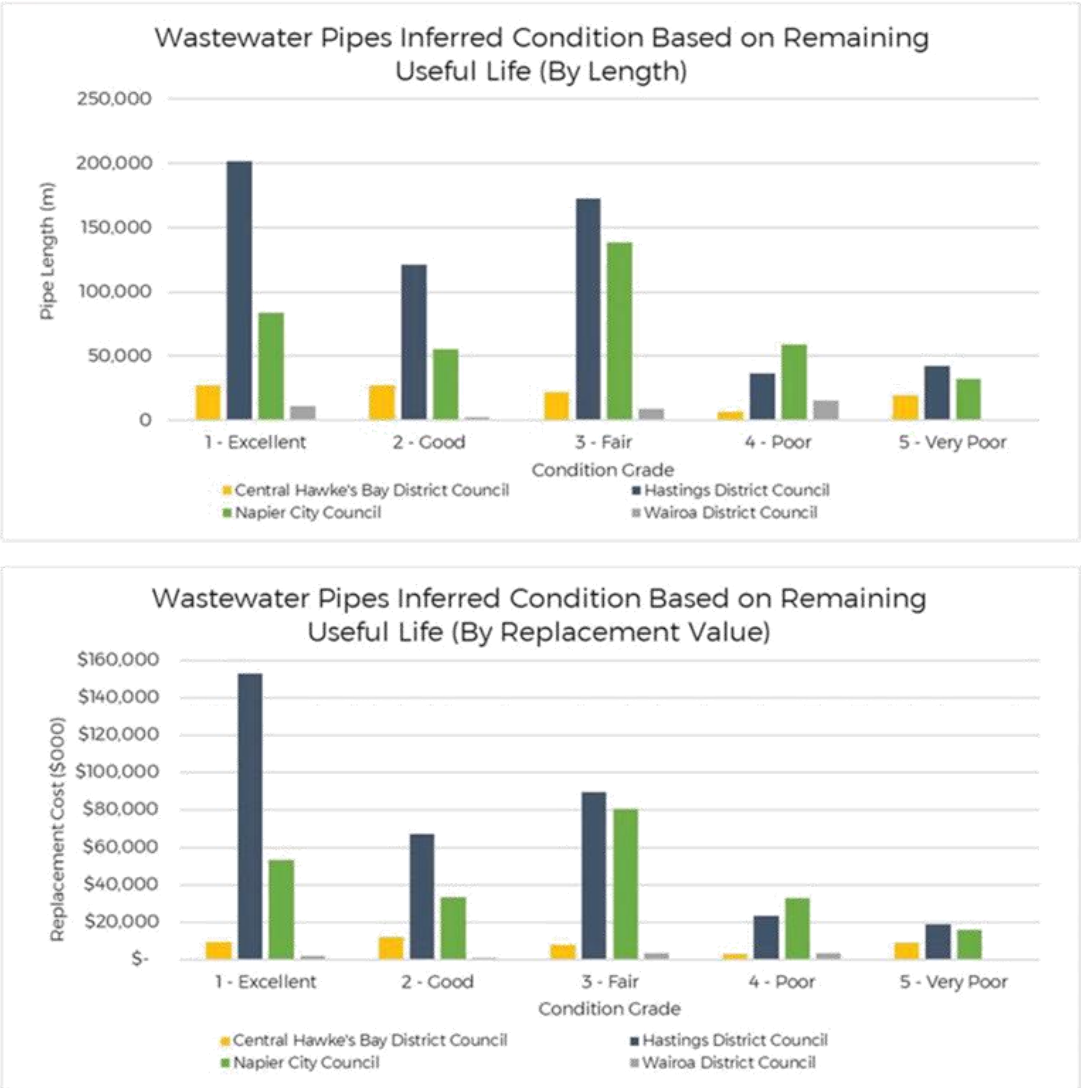
The Typical Base Life used for 'Adopted Useful Life' is the average expected life. As such, some pipes will be expected to behave better, while others may behave worse. It provides an indication of the condition of the overall pipe stock, rather than condition of individual pipes.

Figure 12 shows the resulting inferred condition for wastewater pipes for each Council.

²¹ Remaining useful lives adopted for each condition grade based on methodology used in WSP Opus report "Pipe Data Confidence, Desktop Condition Assessment & Water Loss Management Plan, Wairoa Water Supply" (August 2019)

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Figure 12 – Wastewater pipes assets inferred condition (by length and replacement value)



The inferred condition outcomes indicated in Figure 12 are indicative of the condition at the point when valuations were completed 2-3 years ago. These may not represent the current condition of the Councils wastewater pipes. However, theoretically it does indicate that 19% of all wastewater pipe length across Hawke's Bay may be in Poor or Very Poor condition.

As condition is generally less certain and data is not current for all Councils, it is recommended that it not be used to assess future renewal requirements.

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3 Water assets

3.1 Assets summary

3.1.1 Data confidence

A desktop review of the water valuation asset register data provided by each Council has been completed. Based on this review, the data confidence summaries from the Councils' valuation reports and discussions with each Council, the confidence ratings in Table 15 and Table 16 have been assessed.

Table 15 – Water pipes valuation asset data confidence

Council	Data Confidence				Data Completeness of Asset Register provided		
	Register	Unit rates	Asset Lives	Condition	Data field Blank	Install dates in expected range	Data field "Unknown"
CHBDC	B	B	B	C	OK (Key valuation fields populated)	OK (Date range: 1907 – 2017, <20m PVC/HDPE installed 1926)	Minor issues (1% pipe material unknown)
HDC	B	B	B	Data not available	OK (Key valuation fields populated)	OK (Date range: 1911 – 2018, 50% post 1990)	Minor issues (0.73% pipe material unknown)
NCC	C ²²	C	C	Data not available	OK (Key valuation fields populated)	Some errors (14,856m pipe install date after 2020, 16m PVC pipe installed in 1930)	OK (0.10% pipe material unknown)
WDC	B	B	B	C	OK (Key valuation fields populated)	OK (Date range: 1925 – 2016, 20m PVC pipe pre 1960)	Some issues (0.02% mains material unknown, 82% service lines material unknown)

Table 16 – Water points valuation asset data confidence

Council	Data Confidence				Data Completeness of Asset Register provided		
	Register	Unit rates	Asset Lives	Condition	Data field Blank	Install dates in expected range	Data field "Unknown"
CHBDC	B	B	B	C	OK (Key valuation fields populated)	OK	OK (No "unknown" data points)
HDC	B	B	B	Data not available	OK (Key valuation fields populated)	OK	OK (No "unknown" data points)
NCC	Data not available	Data not available	Data not available	Data not available	No separate asset register provided		
WDC	C	B	B	C	Minor issues (A few generically populated or missing data fields)	Minor issues (Old network and often estimated)	OK (No "unknown" data points)

²² Napier City Council data register does not include water service lines as separate assets in the valuation asset register.

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For points assets, except for Hastings District Council data, there is generally less data confidence, either due to unavailability of data or the data for key valuation fields may be inferred based on documented assumptions.

Wairoa District Council have noted that an independent consultant has carried out a pipe data confidence and condition desktop assessment in 2019²³. This has resulted in the confidence of current asset data being improved from that used in this analysis.

3.1.2 Pipes assets

A summary of all Councils water pipes assets by length and material type is included in Figure 13 and Figure 14. The lack of 20mm diameter pipes for Napier City Council in Figure 13 shows that the pipes asset register does not include all water service line pipe assets.

Figure 13 – Length of water pipes by diameter and Council

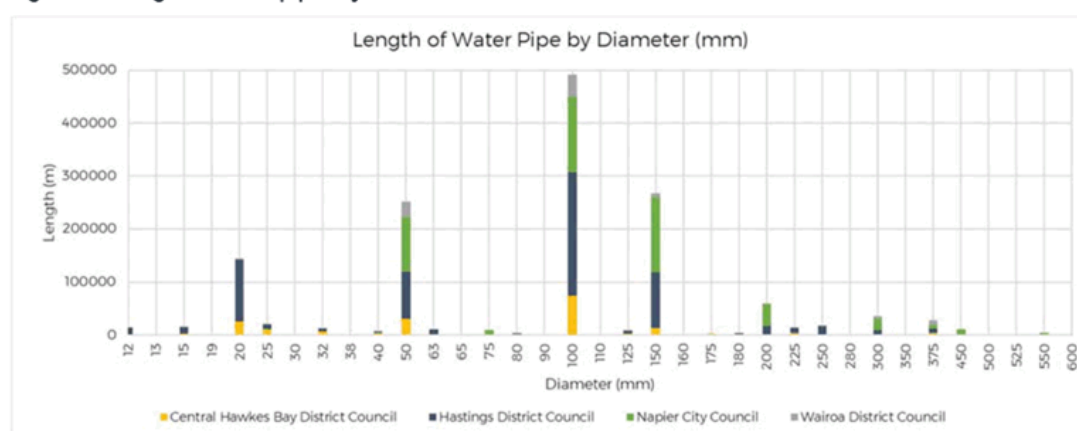
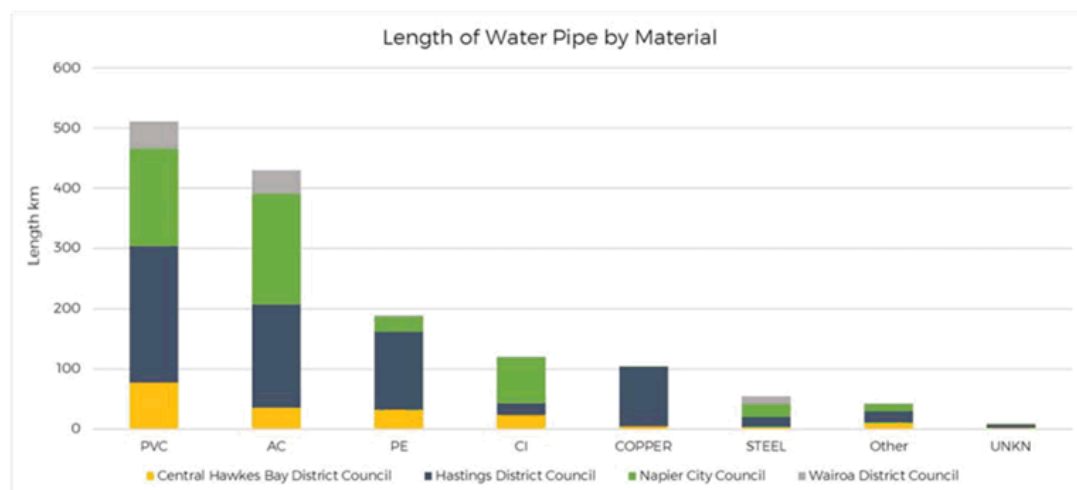


Figure 14 – Length of water pipes by material and Council



The unit rates comparison analysis has been based on the most common diameter pipes, while the asset lives analysis focuses on the most common material types.

²³ WSP Opus (05/08/2019). Pipe Data Confidence, Desktop Condition Assessment & Water Loss Management Plan

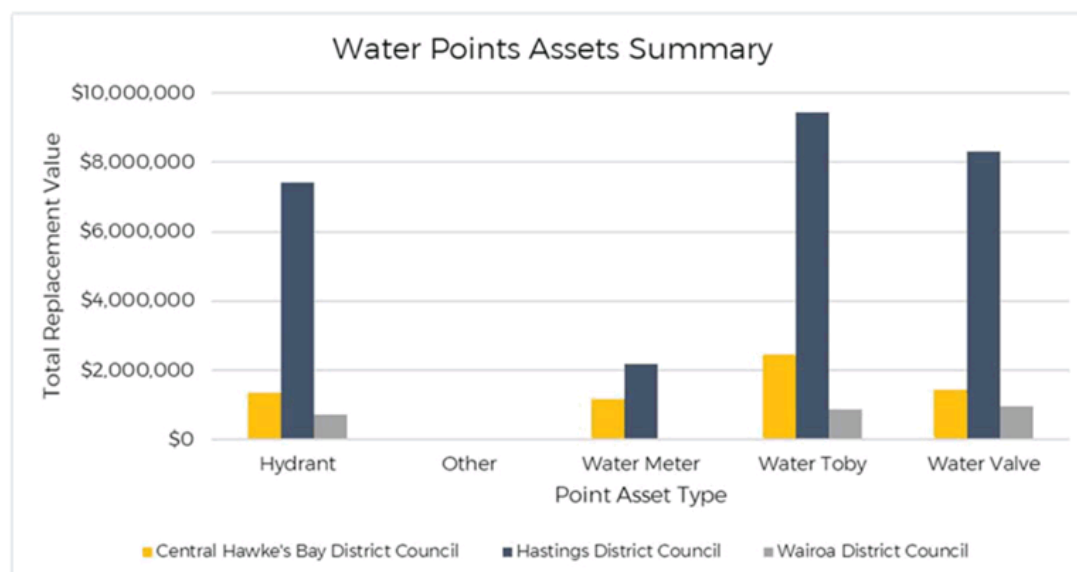
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3.1.3 Points assets

There are limits to the comparison able to be made within the data available, and there is a need to normalise the classification and terminology to get improved comparison between Council data sets.

Figure 15 shows the replacement value by point asset type for the most common water point assets for each Council. Hastings District Council has significantly more of each asset type than both other Councils, resulting in a significantly higher total replacement value for each asset type.

Figure 15 – Water points asset replacement value for all Councils²⁴



3.2 Unit rates review

3.2.1 Rates inclusions

A summary of the general inclusions and assumptions made in pipes assets unit rate calculations for each Council is included in Table 7. These same inclusions and assumptions apply for water pipes assets.

3.2.2 Rates exclusions

Aspects excluded from unit rates by the Councils are summarised in Table 8. These same exclusions apply for water pipes assets.

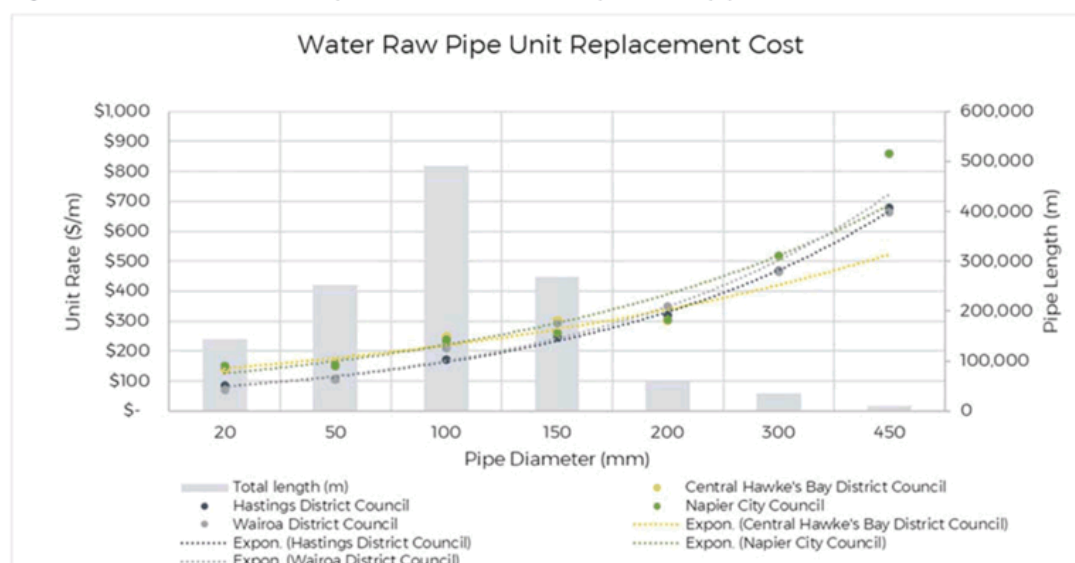
3.2.3 Pipes assets unit rate comparison

Figure 16 shows a comparison of the raw unit rate replacement cost by pipe diameter for the most common water pipe diameters for each Council.

²⁴ Separate points data for Napier City Council not available.

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Figure 16 – Water raw unit rate replacement cost (\$/m) comparison for pipes assets



As with wastewater assets, the following rate adjustments have been made to raw unit rates:

- All unit rates have been inflation indexed²⁵ to December 2019 costs.
- Hastings District Council valuation asset register includes two costs against service lines pipes, a unit rate applied by length and a fixed rate per asset. The total cost of the fixed component is \$6.9M or 4.8% of Hastings total water pipes replacement value. As water service lines have a variety of pipe diameters, the unit rate adopted for each pipe diameter has been increased by 4.8% to reflect this additional cost.
- Napier City Council unit rate replacement costs of associated features (service line pipes, and points assets such as manholes, valves etc.) are included in the main pipe unit rate replacement cost for pipes. Using Hastings District Council as a comparable network, the likely proportion of the cost associated with service line pipes assets has been assessed at approximately 12%²⁶ for water reticulation assets. For points assets the likely proportion of cost has been assessed at approximately 18%²⁷ for water reticulation assets. These proportions of the total unit rate for main pipes have been further validated by reviewing recent Napier City Council greenfields construction costs. The unit rate adopted for each pipe diameter has been decreased by 30% to reflect this.

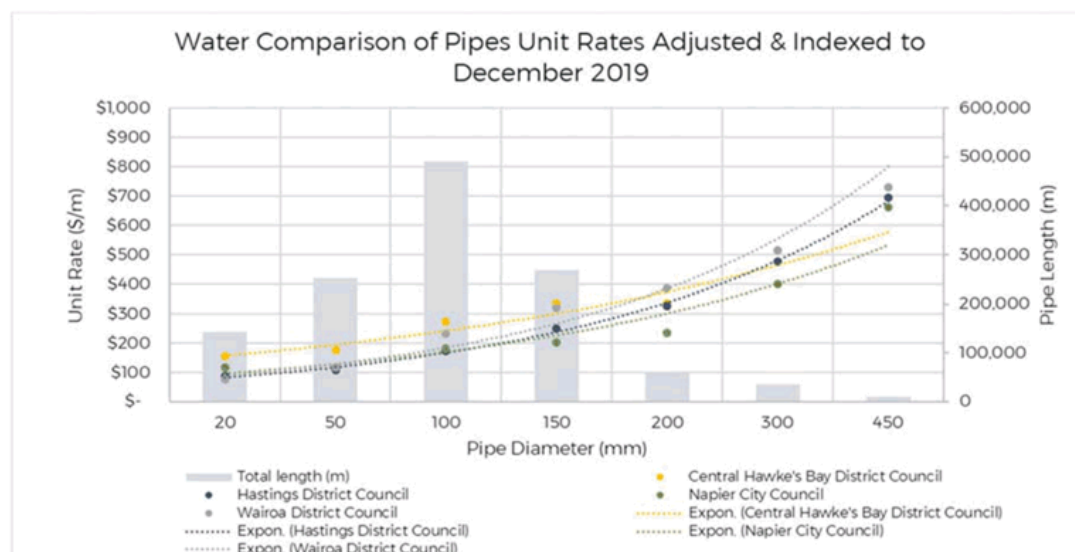
These changes to the unit rates are reflected in the adjusted unit rates included in Figure 17.

²⁵ Using Capital Goods Price Index for pipelines (code S2CB)

²⁶ The percentage of the total replacement value of Hastings District Council water service line pipes assets from the total replacement value of all water pipes and points assets

²⁷ The percentage of the total replacement value of Hastings District Council water points assets from the total replacement value of all water pipes and points assets

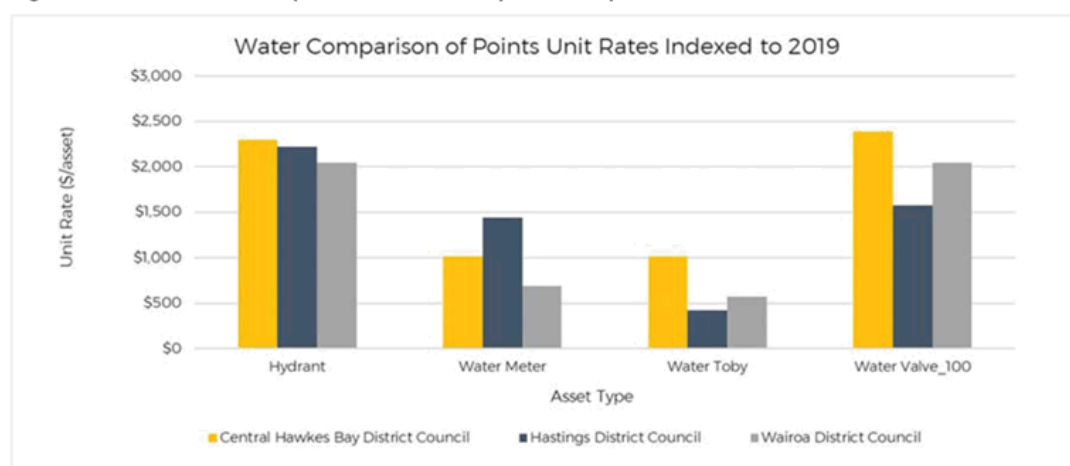
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Figure 17 – Water adjusted unit rate replacement cost (\$/m) comparison for pipes assets

Overall unit rates for all water pipe diameters are generally more comparable than wastewater unit rates. For the most common pipe types (50mm, 100mm and 150mm diameter), Central Hawke's Bay District Council unit rates are the outliers, being higher than the other three Councils. The variation in unit rate replacement costs are likely due to similar factors as for wastewater reticulation.

3.2.4 Points assets unit rate comparison

The unit rate review for points assets is only possible for a small number of clearly defined common asset types. Figure 18 shows a comparison of the unit rate replacement cost by point asset type for the most common water point assets for each Council. All unit rates have been inflation indexed up to 2019 costs to provide a fair comparison across all Councils.

Figure 18 – Water unit rate replacement cost comparison for points assets²⁸

Unit rates for water points assets are more variable between asset types. Some of this variability is due to the greater complexity in the Hastings District Council urban network, and with a wider range of asset sizes and types. Unit rates in three of the four asset types show Central Hawke's Bay

²⁸ Separate points data for Napier City Council not available.

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District Council's unit rate is higher than Hastings District Council's and Wairoa District Council's rates. Hastings District Council does have significantly more of these asset types, so the unit rates may reflect economies of scale.

The nature of the data and issues reliably matching data between Councils makes a unit rate comparison of questionable value. Recent Hastings District Council projects also indicate that the scope and scale of projects have a significant influence on the expected unit rates. Hastings District Council has a more detailed subdivision of pricing reflecting the larger asset inventory.

3.3 Asset lives review

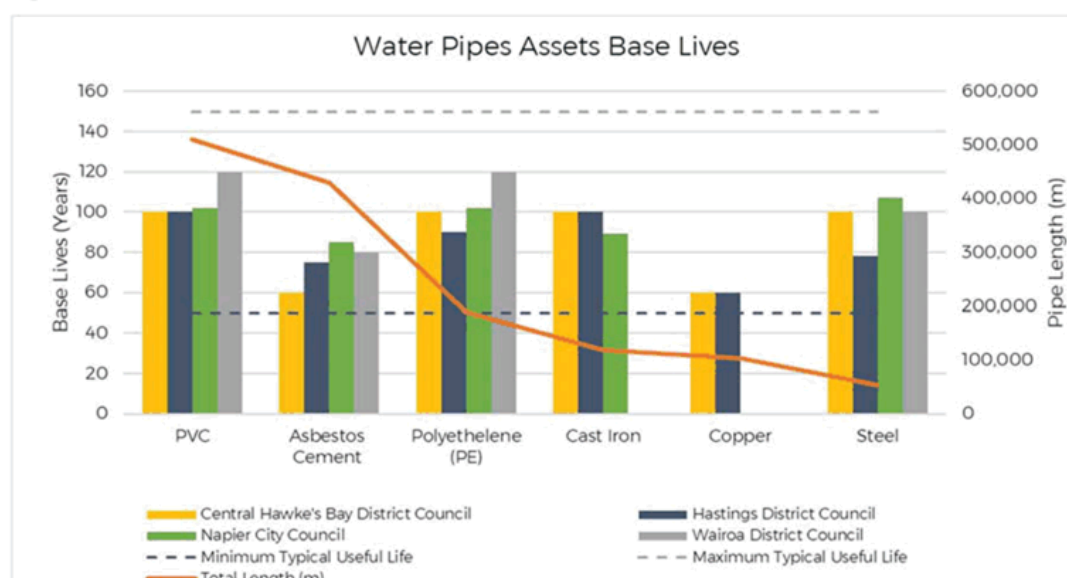
3.3.1 Pipes assets base lives comparison

Generally, asset lives for all Councils have been derived from best practice 'Base Lives' by material type derived from NZIAVDG, which have then been adjusted as necessary to take into account any specific asset conditions. A summary of the general assumptions made for asset lives for each Council is included in Table 17. A summary of the adopted base lives for each Council is included in Figure 19.

Table 17 – Water assets lives assumptions

Council	Adjustments made to base lives derived from NZIAVDG
CHBDC	Where information is available, further adjustments are made to the useful life estimate to take into account existing asset lives and knowledge of the asset
HDC	Hastings District Council have a methodology that extends or shortens the base lives using various factors as documented in Appendix 2 of the Revaluation Report: <ul style="list-style-type: none"> Pressure against Class Adjustment (Water Mains) - lives assessed on a combination of diameter, pipe class and average operating pressure A +25% post 1960 installation date factor is applied to the Opus methodology, to account for an improvement in construction quality at that time
NCC	Unknown
WDC	Where information is available, further adjustments are made to the useful life estimate to take into account condition and use of the asset.

Figure 19 – Water assets base lives²⁹



²⁹ Hastings District Council reports a range of lives for Asbestos Cement depending on the age of the pipe. Pipes older than 1960 have a base life of 55 years, pipes installed between 1961 and 1977 have a base life of 75 years, and pipes installed post 1977 have a base life of 85 years. The general base life adopted for Asbestos Cement pipes is 75 years.

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All Councils have used Base Lives within the Typical Useful Life range included in the NZIAVDG. For most pipe types, the Base Lives provide minimal variance between the Councils. Table 18 provides a Typical Base Life which could be used for each pipe material type based on the four Councils Base Lives.

Table 18 – Typical Base Life for water pipes assets in Hawke's Bay

Pipe Material	Typical Base Life (years)
PVC	100
Asbestos Cement	75
Polyethylene	100
Cast Iron	100
Copper	60
Steel	100

The Base Lives for Asbestos Cement show the most variance between Councils. These Base Lives have been further adjusted by several Councils to account for actual condition and performance, so the base life shown above may not be applicable for all Asbestos Cement water pipe assets. The variability may be appropriate given the nature of deterioration of these pipes, which are given to more sudden failure. The lives of these pipes are also more likely impacted by ground and operating conditions than other pipe types. Central Hawke's Bay District Council has adopted the shortest Base Life for Asbestos Cement pipes. The total length of Asbestos Cement water pipes in Central Hawke's Bay is 35.7km, which is 8.3% of the Hawke's Bay region's total Asbestos Cement pipe length and 2.5% of region's total water pipe length. If the Base Life is increased to the Typical Base Life in Table 18 of 75 years, the ODRV of their water pipes increases by \$1.1M.

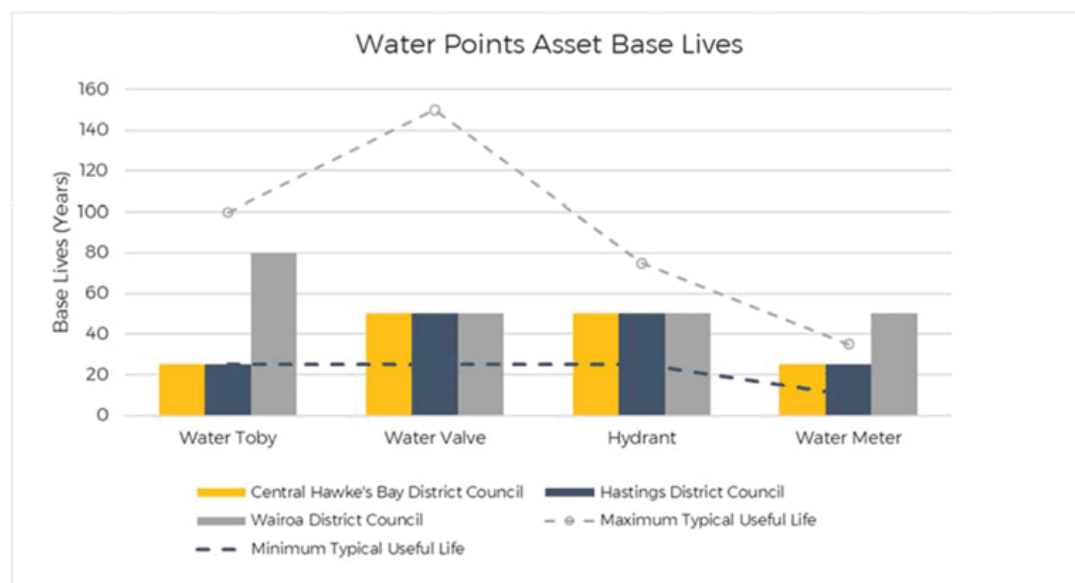
Wairoa District Council has adopted longer Base Lives than the other Councils for PVC and Polyethylene pipes, although these Base Lives have been adjusted based on condition and performance of individual assets. The total length of PVC water pipes in Wairoa is 44.4km, which is 8.7% of the Hawke's Bay region's total PVC pipe length and 3% of region's total water pipe length. The total length of Polyethylene water pipes in Wairoa is 3.0km, which is 1.6% of the Hawke's Bay region's total Polyethylene pipe length and 0.2% of region's total water pipe length. Longer lives impact on the forecast renewal timing and therefore the Optimised Depreciated Replacement Values (ODRV) and annual depreciation. The overall reduction in the ODRV of Wairoa District Council's water pipes is approximately \$0.8M, if the revised base lives are used.

Hastings District Council has adopted a shorter Base Life than the other Councils for steel pipes. Steel pipes make up 2.4% of their total water pipe network length and 0.1% of the Hawke's Bay region's total water pipe network length, so the impact of increasing the Base Life to 100 years is considered minimal.

3.3.2 Points assets base lives comparison

Water points assets data is the most consistent and most detailed for all three Councils, but still requires normalisation for more useful comparison. Figure 20 shows consistent Base Lives used by all Councils. Hastings District has a well developed logic for points assets Base Life allocation reflecting the wider range and diversity of point assets in the inventory. For the asset types compared Wairoa District Council has longer Base Lives for toby and meter assets, and there was very good consistency for valves and hydrants for all three councils. All Base Lives are within the recommended Typical Useful Life ranges provided in the NZIAVDG.

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Figure 20 – Water points assets base lives³⁰

3.4 Valuation confidence assessment

Table 11 provides a summary of the overall valuation confidence assessed for each Council and how this is impacted by any asset valuation omissions, service delivery arrangements and asset management practices. This same confidence assessment applies for all Three Waters, with the exception that Wairoa District Council service line pipes are included in their water reticulation network replacement value.

3.5 Asset condition review

3.5.1 Condition data

Condition assessment approaches and data availability varies between the Councils but is essentially similar across all Three Waters groups. Given this, the condition data for water pipes assets is as summarised in Table 13.

Central Hawke's Bay District Council have noted that they have a higher level of confidence in the condition of water mains than that for service lines.

Because of the significant variations in condition approach, a comparison analysis is not possible based on raw condition data. As a result, an analysis of pipes assets condition based on RUL has been completed using the methodology detailed in section 2.5.2.

3.5.2 Pipes inferred condition

For water assets the 'Adopted Useful Life' for use in the RUL calculations, is the Typical Base Life derived from the Councils' Base Lives summarised in Table 18. Pipes which have a material type of 'Other' or 'Unknown' have been excluded from the analysis.

The Typical Base Life used for 'Adopted Useful Life' is the average expected life. As such, some pipes will be expected to behave better, while others may behave worse. It provides an indication of the condition of the overall pipe stock, rather than condition of individual pipes.

³⁰ Separate points data for Napier City Council not available.

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Figure 21 shows the resulting inferred condition for each Council.

Figure 21 – Water pipes assets inferred condition (by length and replacement value)



The inferred condition outcomes indicated in Figure 21 are indicative of the condition at the point when valuations were completed 2-3 years ago. These may not represent the current condition of the Councils water pipes. However, theoretically it does indicate that 17% of all water pipe length across Hawke's Bay may be in 'Poor' or 'Very Poor' condition.

As condition is generally less certain and data is not current for all Councils, it is recommended that it not be used to assess future renewal requirements.

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4 Stormwater assets

4.1 Assets summary

4.1.1 Data confidence

A desktop review of the stormwater valuation asset register data provided by each Council has been completed. Based on this review, the data confidence summaries from the Councils' valuation reports and discussions with each Council, the confidence ratings in Table 19 and Table 20 have been assessed.

Table 19 – Stormwater pipes valuation asset data confidence

Council	Data Confidence				Data Completeness of Asset Register Provided		
	Register	Unit rates	Asset Lives	Condition	Data field Blank	Install dates in expected range	Data field "Unknown"
CHBDC	B	B	B	C	OK (Key valuation fields populated)	OK (Date range: 1930 – 2016)	OK
HDC	B	B	B	Data not available	OK (Key valuation fields populated)	OK (Date range: 1940 – 2017)	Minor Issues (1.13% mains materials & 4.35% service line materials unknown)
NCC	C ³¹	C	C	Data not available	OK (Key valuation fields populated)	Minor Issues (Date range: 1932 – 2017, 100m PVC pre 1960)	OK (0.08% pipe material unknown)
WDC	C	B	B	C	OK (Key valuation fields populated)	OK (Date range: 1900 – 2016)	OK (0.13% pipe material unknown)

Table 20 – Stormwater points valuation asset data confidence

Council	Data Confidence				Data Completeness of Asset Register Provided		
	Register	Unit rates	Asset Lives	Condition	Data field Blank	Install dates in expected range	Data field "Unknown"
CHBDC	C	B	B	C	OK (Key valuation fields populated)	OK (Date range: 1930 – 2016 matches pipes)	OK (No "unknown" data points)
HDC	B	B	B	Data not available	OK (Key valuation fields populated)	OK	OK (Manholes: 0.17% unknown)
NCC	Data not available	Data not available	Data not available	Data not available	No separate asset register provided		
WDC	C	B	B	C	OK (Key valuation fields populated)	OK (Date range: 1900 – 2016 matches pipes)	OK (0.09% Unknown)

³¹ Napier City Council data register does not include stormwater service lines as separate assets in the valuation asset register.

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For points assets, except for Hastings District Council data, there is generally less data confidence, either due to unavailability of data or the data for key valuation fields may be inferred based on documented assumptions.

Hastings District Council has a more detailed data structure with depth and diameter accounted for as well as more detailed data for other assets including headwalls, chambers and sumps. This reflects the larger and more diverse asset holding within Hastings District.

Wairoa District Council does note in their 2017 valuation report some potential for manholes to be better defined between the water and road valuations to ensure no double counting for Wairoa District Council.

4.1.2 Pipes assets

A summary of all Councils stormwater pipes assets by length and material type is included in Figure 22 and Figure 23. The lack of 100mm diameter pipes for Napier City Council in Figure 22 shows that the pipes asset register does not include stormwater service line pipe assets.

Figure 22 – Length of stormwater pipes by diameter and Council

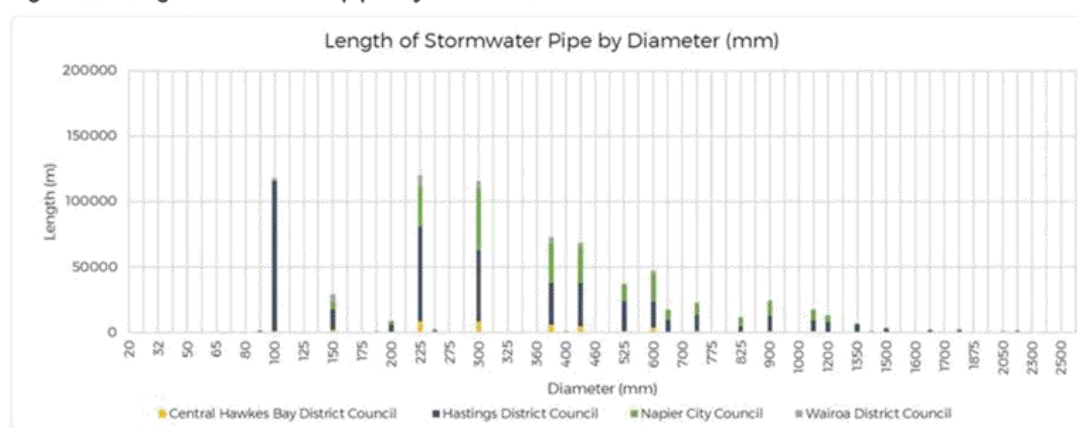
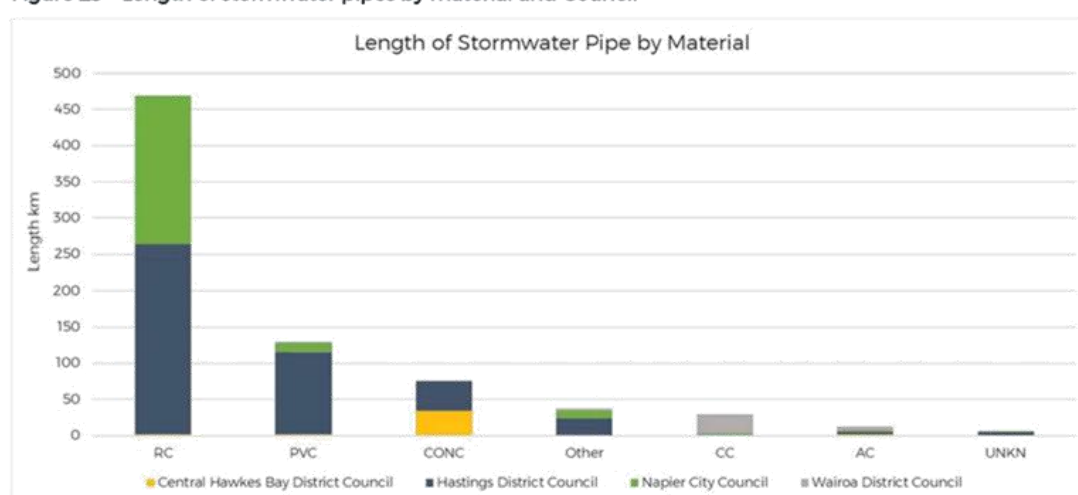


Figure 23 – Length of stormwater pipes by material and Council



The unit rates comparison analysis has been based on the most common diameter pipes, while the asset lives analysis focuses on the most common material types.

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4.1.3 Points assets

For points assets, the three Councils with data available all have different asset hierarchies and naming conventions in their data which make direct comparison difficult and limits the potential for analysis. Of the three asset groups the stormwater point data is the least developed. Stormwater points assets are predominantly manholes or similar nodes.

Only higher value items which could be compared are included in the following unit rate and asset life analysis. For stormwater point assets, 91.7% of the total replacement value is associated with manholes, so these assets are the focus of analysis.

4.1.4 Flood control and land drainage assets

Although out of the scope of this analysis, where possible during the review of valuation asset registers, flood control and land drainage assets have been identified as summarised in Table 21.

Table 21 – Stormwater flood control and land drainage assets

Council	Channel	Length (m)		Replacement value (\$000)
		Open Drain	Culvert	
CHBDC	763	16,476	199 ³²	\$877
HDC	2,318	1,713	2,864	\$9,709
NCC	Unknown	Unknown	1,013	\$2,682
WDC	24,436	32 no. (length not recorded)	3,390	\$1,644

For Napier City Council, the stormwater open drain formation work was not included in the 2014 valuation as there was insufficient detailed data upon which to base costings.

4.2 Unit rates review

4.2.1 Rates inclusions

A summary of the general inclusions and assumptions made in pipes assets unit rate calculations for each Council is included in Table 7. These same inclusions and assumptions apply for stormwater pipes assets, except for Hastings District Council service line pipes fixed rates. There are no fixed rates applied for stormwater pipes assets.

4.2.2 Rates exclusions

Aspects excluded from unit rates by the Councils are summarised in Table 8. These same exclusions apply for water pipes assets.

For Hastings District Council, P&G costs have been excluded from the unit rates for service lines, as they are largely renewed in association with a Transportation footpath renewal programme, where P&G is incorporated into the parent contract.

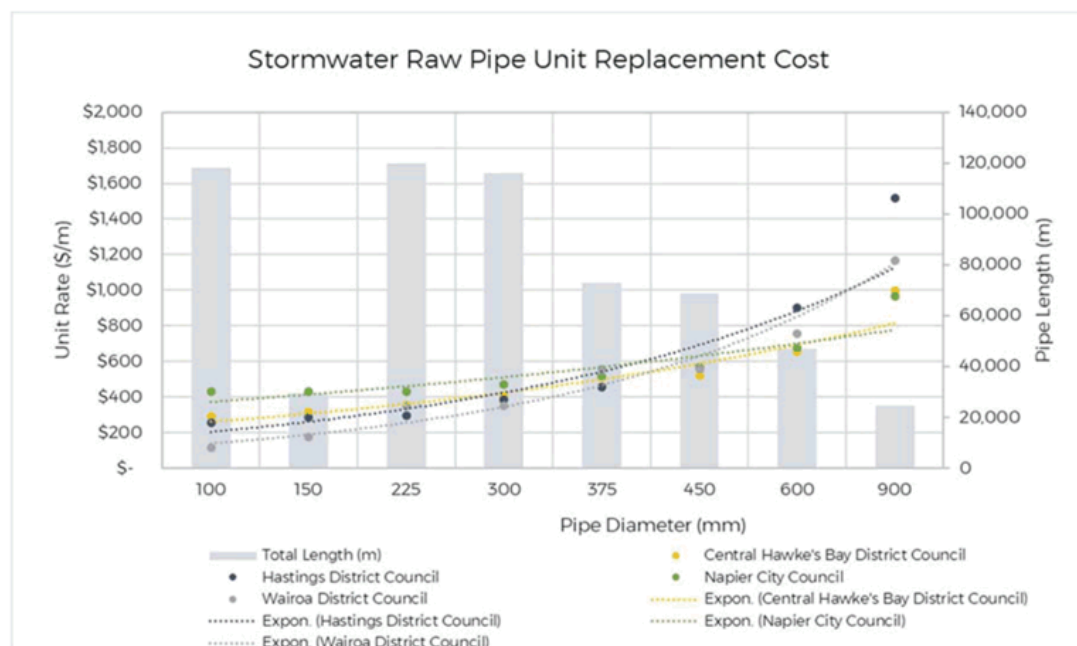
4.2.3 Pipes assets unit rate comparison

Figure 24 shows a comparison of the raw unit rate replacement cost by pipe diameter for the most common stormwater pipe diameters for each Council.

³² Catch pit leads

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Figure 24 – Stormwater raw unit rate replacement cost (\$/m) comparison for pipes assets



As with wastewater pipes, all unit rates have been inflation indexed³³ to December 2019 costs to provide a fair comparison across all Councils.

Napier City Council unit rate replacement costs of associated features (service line pipes, and points assets such as manholes, valves etc.) are included in the main pipe unit rate replacement cost for pipes. Using Hastings District Council as a comparable network, the likely proportion of the cost associated with points assets has been assessed at approximately 12%³⁴ for stormwater reticulation assets.

In terms of service line pipes assets, Hastings and Napier reticulation networks are not comparable. Napier City Council has significantly fewer serviced properties than Hastings District Council³⁵. For Napier any connections between sumps and the main pipes are considered as roading assets and not included in this assessment. There are also a significant amount of kerb outlets, so there will be few direct service line connections for stormwater pipes assets. Therefore, the mains unit rate associated with service line pipes is considered negligible.

The unit rate adopted for each pipe diameter in Figure 25 has been reduced by 12% to reflect this.

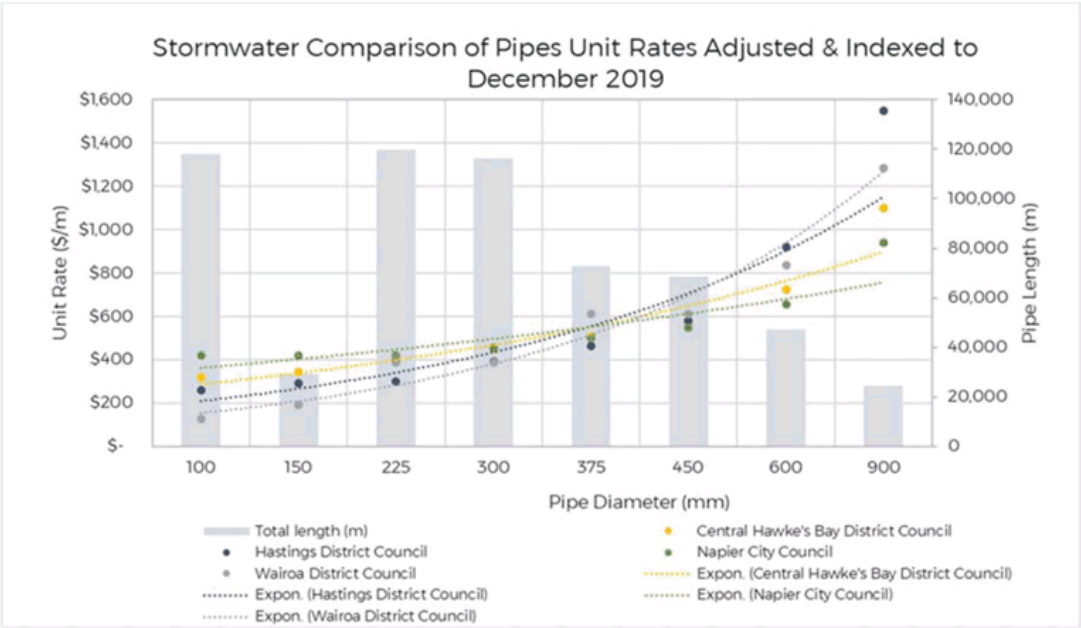
³³ Using Capital Goods Price Index for pipelines (code S2CB)

³⁴ The percentage of the total replacement value of Hastings District Council stormwater points assets from the total replacement value of all stormwater pipes and points assets.

³⁵ Hastings District Council reports 22,051 serviced properties, whereas Napier City Council reports 1,900 service properties.

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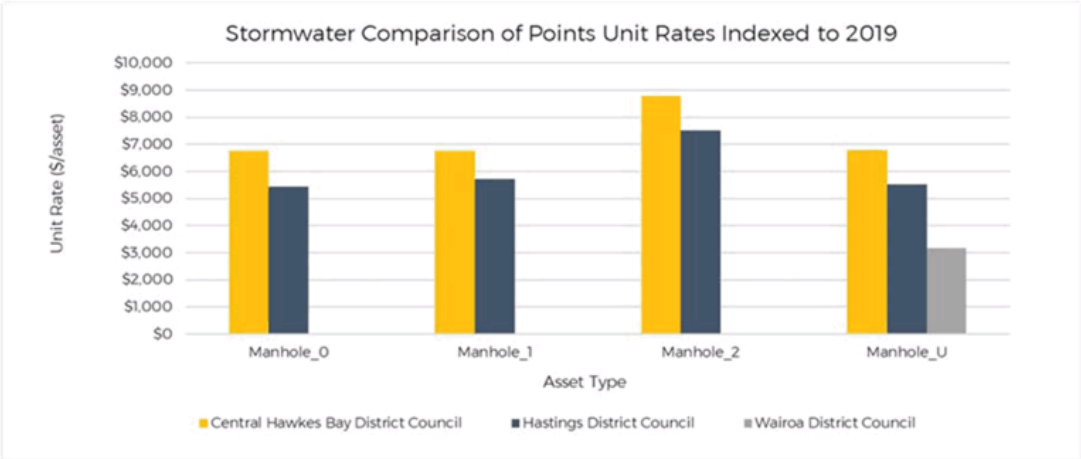
Figure 25 – Stormwater adjusted unit rate replacement cost (\$/m) comparison for pipes assets



4.2.4 Points assets unit rate comparison

The unit rate review for stormwater points assets is only possible for a small number of clearly defined common items like manholes. Figure 26 shows a comparison of the unit rate replacement cost by point asset type for the most common stormwater point assets for each Council. All unit rates have been inflation indexed to December 2019 costs to provide a fair comparison across all Councils.

Figure 26 – Stormwater unit rate replacement cost comparison for points assets



Both Central Hawke's Bay District Council and Hastings District Council have accounted for depth in their unit rates (i.e. Manhole_0 are manholes < 1m depth, Manhole_1 are 1-2m depth etc), while Wairoa District Council has not. Wairoa has used a single distinctly lower rate for its 218 units, however the total number of manholes across all three Councils is 12,484, so again Wairoa's contribution is small. The Hastings District Council unit rate determination is most detailed and reflects depth and diameter.

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4.3 Asset lives review

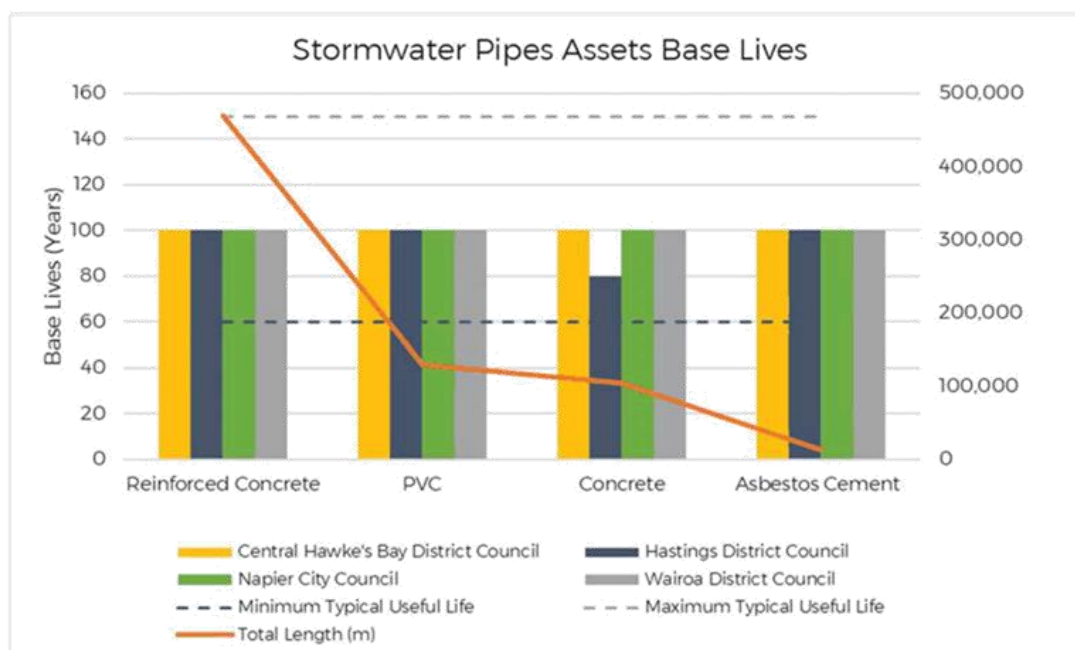
4.3.1 Pipes assets base lives comparison

Generally, asset lives for all Councils have been derived from best practice 'Base Lives' by material type derived from NZIAVDG, which have then been adjusted as necessary to take into account any specific asset conditions. A summary of the general assumptions made for asset lives for each Council is included in Table 22. A summary of the adopted base lives for each Council is included in Figure 27.

Table 22 – Stormwater assets lives assumptions

Council	Adjustments made to base lives derived from NZIAVDG
CHBDC	Where information is available, further adjustments are made to the useful life estimate to take into account existing asset lives and knowledge of the asset.
HDC	HDC have a methodology that extends or shortens the base lives using various factors as documented in Appendix 2 of the Revaluation Report.
NCC	Unknown
WDC	Where information is available, further adjustments are made to the useful life estimate to take into account condition and use of the asset.

Figure 27 – Stormwater base lives



All councils have used the same Base Lives for each type of stormwater pipe, except for a shorter life for concrete pipes used by Hastings District Council. This difference is within recommended Typical Useful Life ranges provided in the NZIAVDG. Table 23 provides a Typical Base Life which could be used for each pipe material type based on the four Councils Base Lives.

Table 23 – Typical Base Life for stormwater pipes assets in Hawke's Bay

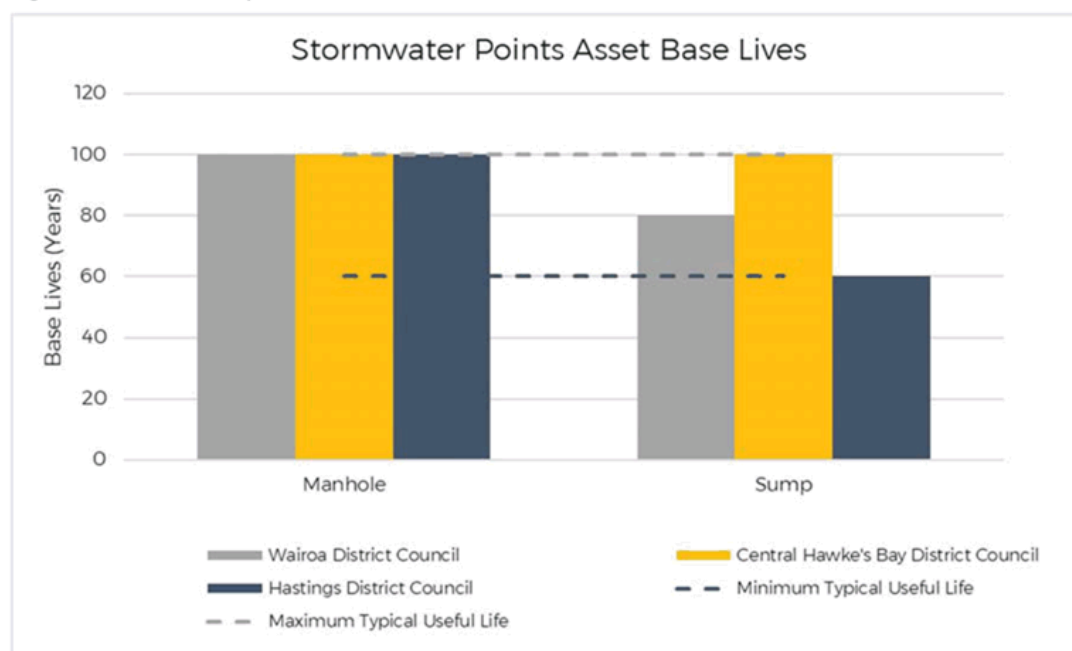
Pipe Material	Typical Base Life (years)
Reinforced Concrete	100
PVC	100
Concrete	100
Asbestos Cement	100

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4.3.2 Points assets base lives comparison

Figure 28 shows that the Base Lives for the stormwater points assets of the three Councils are consistent for the key manhole asset type with some variation for sump assets which may to some extent be related to aggregation and classification of the different asset types. All Base Lives are within recommended Typical Useful Life ranges provided in the NZIAVDG.

Figure 28 – Stormwater points assets base lives



4.4 Valuation confidence assessment

Table 11 provides a summary of the overall valuation confidence assessed for each Council and how this is impacted by any omissions, service delivery arrangements and asset management practices. This same confidence assessment applies for all Three Waters, with the exception that Wairoa District Council service line pipes are included in their stormwater reticulation network replacement value, where applicable.

4.5 Asset condition review

4.5.1 Condition data

Condition assessment approaches and data availability varies between the Councils but is essentially similar across all Three Waters groups. Given this, the condition data for water pipes assets is as summarised in Table 13.

Because of the significant variations in condition approach, a comparison analysis is not possible based on raw condition data. As a result, an analysis of pipes assets condition based on RUL has been completed using the methodology detailed in section 2.5.2.

4.5.2 Pipes inferred condition (by length and replacement value)

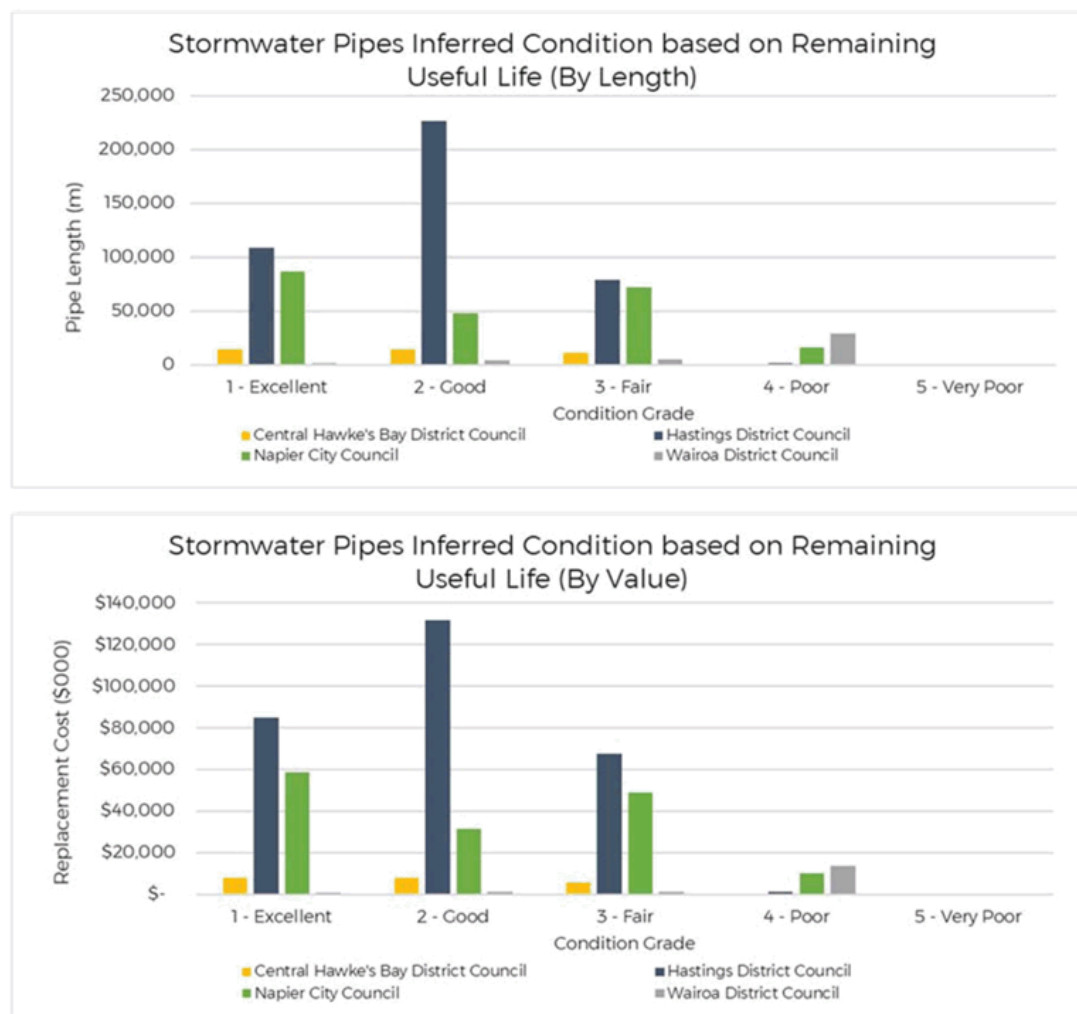
For stormwater assets the 'Adopted Useful Life' for use in the RUL calculations, is the Typical Base Life derived from the Councils' Base Lives summarised in Table 23. Pipes which have a material type of 'Other' or 'Unknown' have been excluded from the analysis.

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The Typical Base Life used for 'Adopted Useful Life' is the average expected life. As such, some pipes will be expected to behave better, while others may behave worse. It provides an indication of the condition of the overall pipe stock, rather than condition of individual pipes.

Figure 29 shows the resulting inferred condition for each Council.

Figure 29 – Stormwater pipes assets inferred condition



The inferred condition outcomes indicated in Figure 29 are indicative of the condition at the point when valuations were completed 2-3 years ago. These may not represent the current condition of the Councils stormwater pipes. However, theoretically it does indicate that only 6% of all stormwater pipe length across Hawke's Bay may be in 'Poor' or 'Very Poor' condition.

As condition is generally less certain and data is not current for all Councils, it is recommended that it not be used to assess future renewal requirements.

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5 Regional valuation perspective

This section reviews the valuation data from a regional perspective to determine the extent to which valuation data can be normalised and provides a range of data which could be inputted into Morrison Low's financial model for sensitivity analysis. It focusses particularly on reticulation pipes assets, as Three Waters valuation asset register data provided by Councils for reticulation points and plant assets is less comparable.

5.1 Wider industry comparison

The valuation data from all Councils has been compared against the expected range of values for both unit rates and base lives, indicating that the resulting valuations are appropriate. Below is a summary of the wider industry comparisons made.

5.1.1 North Island unit rates

WSP has access to a large data base of valuation unit rates used by councils across New Zealand. The analysis in this section incorporates a review against unit rates from recent valuation completed for two other Councils within the North Island, to provide an acceptable envelope for unit rates comparison. The upper bound identified in the analysis is from a city council in the North Island and the lower bound is from a district council in the North Island. These unit rates were also reviewed against other North Island councils to confirm they provide an appropriate upper and lower bound. This gives a range of unit rates for pipes based on rural versus urban network configuration.

5.1.2 Typical asset lives

By reviewing the typical useful lives identified in industry practice documents, such as NZIAVDG, it is confirmed that all Councils have used base lives within the recommended typical range for all pipe materials shown in Table 24.

Table 24 – Summary of industry recommended typical useful lives

Asset group	Minimum Typical Useful life (years)	Maximum Typical Useful Life (years)
Wastewater	40	150
Water	50	150
Stormwater	60	150

5.2 Valuation normalising factors

The valuation data from all Councils is in the expected range for both unit rates and base lives, indicating that the resulting valuations are appropriate. However, in order to ensure data provided by Councils is comparable as possible, normalising factors can be adopted as outlined below.

5.2.1 Unit rates factors

In order to ensure unit rates provided by the Councils are as comparable as possible, adjustments have been made to the raw unit rates. Further to the adjustments made in the previous sections based on date when the valuation was completed and item coverage, the overhead costs have also been reviewed and adjusted as detailed in Table 25.

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Table 25 – Unit rates normalising factors for regional valuation perspective

Normalising factor	Description	Change applied			
		CHBDC	HDC	NCC	WDC
Date of valuation	Valuations were not completed at the same time, so need to ensure all valuation outcomes are indexed to a comparable point in time.	All unit rates indexed up to December 2019 ³⁶ .			
		+10.4%	+2.2%	+10.4%	+10.4%
Item coverage	With the exception of Napier City Council, all other Councils' unit rates appear to have similar coverage. There is good confidence in Hastings District Council unit rates as these were built up based on actual construction contract costs and have been externally peer reviewed. It is assumed that these rates provide a good basis for robust item coverage. Napier City Council main pipes unit rates include costs associated with renewal of service line pipes and points assets and therefore provide the least comparable item coverage and should be adjusted.	Reduced Napier City Council main pipes unit rates to account for inclusion of service line pipes and points assets: <ul style="list-style-type: none"> Wastewater pipes -20% Water pipes -30% Stormwater pipes -12% 			
Preliminary & General and overhead costs	It has been acknowledged by all Councils, that since the valuations used for this analysis were completed, there have been significant increases in P&G costs and overhead costs. A big driver for this is increased compliance requirements, Health and Safety, planning, reporting and monitoring costs. The current industry recommended values for P&G costs and overhead costs are 20% and 15% respectively. Because of the variances in renewal project requirements and location of works (e.g. private or public property) it is more difficult to apply blanket rates for P&G costs; however overhead requirements are more comparable across different types of renewals projects.	Uniform overhead rate of 15% applied. Unit rates for all Councils adjusted (up or down) to match.			
		+7%	-5%	+9%	+7%

By using these normalising factors, a range of acceptable unit rates has been developed to feed into the financial model that is being used to analyse regional delivery scenarios. This will provide the key input to form a sensitivity analysis of the model outcomes.

5.2.2 Asset base lives

Generally, asset lives for all Councils have been derived from best practice 'Base Lives' by material type derived from NZIAVDC, which have then been adjusted as necessary to take into account any specific asset conditions. Base lives defined by each Council are generally comparable for all Three Waters, with some variance as a result of individual Council adjustments. Table 26 provides a summary of Typical Base Lives for the region which can be used to normalise the renewal timings across all Councils. It is noted that this approach may not account for specific modelled adjustment made to Base Lives by each Council to reflect actual lives being achieved. However, it does provide a comparative approach that can be used in Hawke's Bay regional financial modelling sensitivity analysis.

Table 26 – Typical base lives for Hawke's Bay regional financial modelling sensitivity analysis

Pipe Material	Typical Base Life for Hawke's Bay Region (years)		
	Wastewater pipes	Water pipes	Stormwater pipes
Reinforced Concrete	90		100
PVC	100	100	100
Asbestos Cement	70	75	100

³⁶ Using Capital Goods Price Index for pipelines (code S2CB)

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Pipe Material	Typical Base Life for Hawke's Bay Region (years)		
	Wastewater pipes	Water pipes	Stormwater pipes
Polyethylene	100	100	
Concrete	100		100
Glazed Earthenware	90		
Cast Iron		100	
Copper		60	
Steel		100	

5.2.3 Total Optimised Replacement Value

To ensure a robust total regional ORV for Three Waters assets, it is important that all assets are accounted for. Therefore, an assessment of the impact of missing assets on the ORV has been completed.

The total ORV for Central Hawke's Bay District Council and Hastings District Council reticulation assets appear to be appropriate, reflecting the higher level of confidence in unit rates and more complete asset registers, including an allowance for both main pipes and service line pipes.

For Napier City Council the incorporation of service line pipes and points assets into the unit rates for main pipes may impact the Total ORV for all Three Waters. It is uncertain how well the nominated unit rates cover the actual replacement value of assets not recorded separately in the valuation asset register.

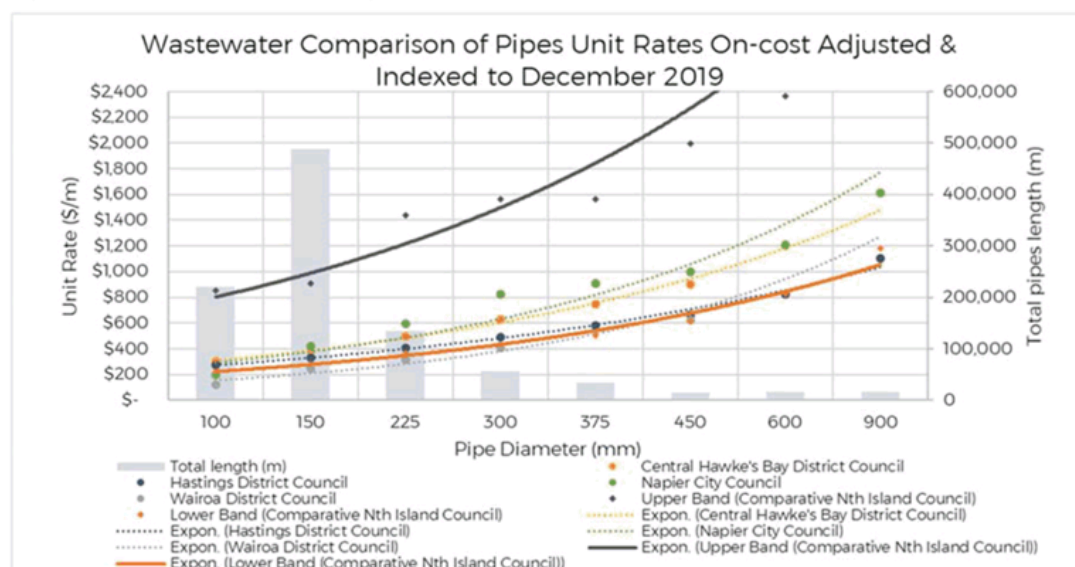
For Wairoa District Council wastewater assets, the assessment of potential Replacement Value of service lines can be used to give a revised Total ORV.

5.3 Wastewater valuation

5.3.1 Unit rates sensitivity analysis

Using the normalising factors outlined in Table 25, the unit rates for all four Councils have been adjusted as shown in Figure 30. Also included are the upper and lower North Island Council bands discussed in 5.1.1.

Figure 30 – Wastewater revised comparative unit rates



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Wastewater pipes unit rates show the most variance between Councils of all Three Waters asset groups. All Councils are at lower end of this North Island range for unit rates, reflecting their less complex networks than a large city may have.

Napier City Council unit rates are the highest. The most comparable wastewater reticulation network for Napier is Hastings, so it would be expected that Napier's unit rates would be more aligned to Hastings' unit rates. However, Napier City Council has a higher proportion of its wastewater reticulation network within private property, which is likely to be increasing the unit rates. The bulk of Hastings District Council wastewater reticulation assets are within the road carriageway (~83%), whereas for Napier City Council a significant proportion of these assets are within private property (~50%). The higher renewals unit rates for assets within private property can be negated depending on the renewal approach used (e.g. non-trenching renewals methods such as lining).

Wairoa District Council have the lowest rates for the most common pipe types (by diameter). These rates were reviewed in 2017 against other Councils with similar networks and were found to be in line with rates for 150mm and 225mm diameter pipes, but half the cost of 100mm diameter pipes. Wairoa's pipes make up 1.2% of the regional pipe length for 100mm diameter pipe, 5.7% of 150mm diameter pipes and 3.1% of 225mm diameter pipes. This means the resulting impact on the total value of wastewater pipe assets across the region is minimal.

Table 27 includes a summary of the rates shown in Figure 30, with the range of proposed rates for financial modelling sensitivity analysis highlighted. The upper bound represents the 75th percentile value for the four Councils, while the lower bound represents the 25th percentile for all four Councils.

Table 27 – Wastewater pipes recommended unit rates range for financial modelling

Unit Rate Source	Pipe Diameter (mm)							
	100	150	225	300	375	450	600	900
NI Upper Bound	\$851	\$909	\$1,436	\$1,566	\$1,566	\$1,994	\$2,366	\$4,525
NI Lower Bound	\$226	\$282	\$365	\$433	\$502	\$619	\$826	\$1,180
CHBDC (adjusted)	\$304	\$380	\$501	\$628	\$752	\$902	\$1,202	-
HDC (adjusted)	\$276	\$327	\$409	\$491	\$583	\$665	\$828	\$1,104
NCC (adjusted)	\$196	\$423	\$598	\$826	\$908	\$1,001	\$1,208	\$1,610
WDC (adjusted)	\$124	\$249	\$314	\$411	-	\$622	-	-
Sensitivity Analysis Upper Bound (75thile)³⁷	\$283	\$391	\$525	\$677	\$830	\$927	\$1,205	\$1,484
Sensitivity Analysis Lower Bound (25thile)³⁸	\$178	\$308	\$385	\$471	\$667	\$654	\$1,015	\$1,231

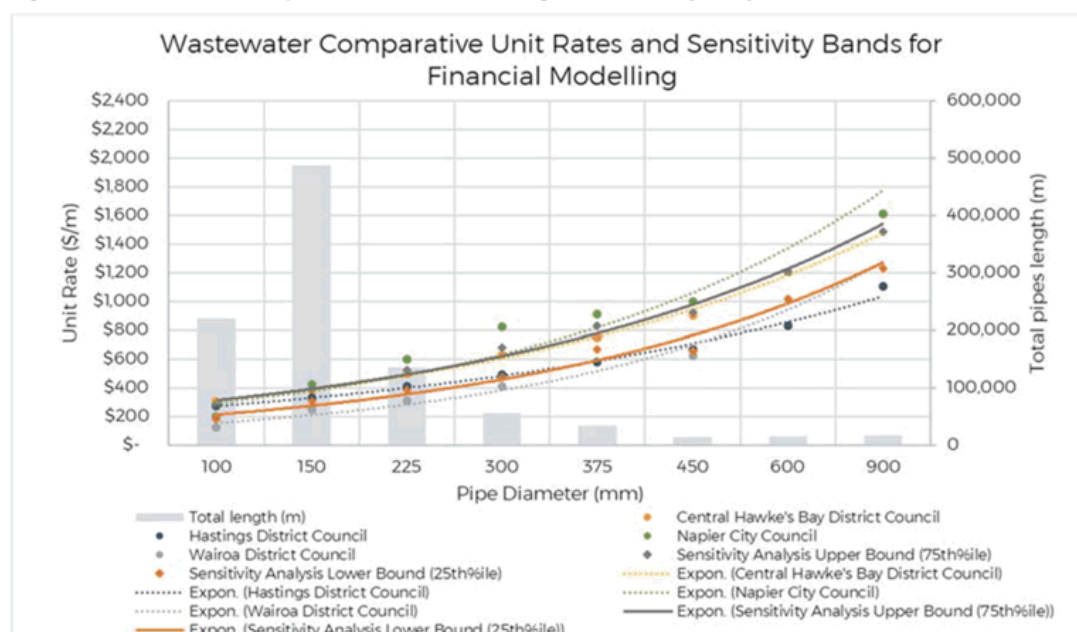
Figure 31 shows the sensitivity analysis upper and lower bounds in relation to the Councils' adjusted unit rates.

³⁷ Upper Bound is the 75th percentile of all Councils unit rates.

³⁸ Lower Bound is the 25th percentile of all Councils unit rates.

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Figure 31 – Wastewater comparative unit rates with regional sensitivity analysis bounds



Based on the most common pipe type (diameter 150mm), an average sensitivity adjustment has been determined for each Council as shown in Table 28. These lower and upper bound adjustments are expressed as percentages and can be applied to the total wastewater valuation for each Council in the financial modelling, as a proxy for normalising the unit rates across all wastewater assets.

Table 28 – Wastewater pipes sensitivity adjustment for financial modelling

Council	Lower Bound unit rate adjustment for 150mm dia pipe	Lower Bound valuation sensitivity analysis percentage	Upper Bound unit rate adjustment for 150mm dia pipe	Upper Bound valuation sensitivity analysis percentage
CHBDC	-\$75	-19.1%	\$11	2.8%
HDC	-\$20	-6.0%	\$64	19.5%
NCC	-\$116	-27.3%	-\$32	-7.6%
WDC	\$59	23.6%	\$142	57.2%

It must be stressed that the lower and upper bounds above, provide an approximate envelope for reviewing the regional valuation sensitivity.

5.3.2 Base lives outcomes

Base lives across all wastewater pipes assets are generally comparable and have been adjusted by Councils for individual assets based on several factors, such as condition, to reflect actual performance. However, Wairoa District Council has generally adopted longer base lives than the other Councils. Longer lives impact on the forecast renewal timing and therefore the Optimised Depreciated Replacement Values (ODRV) and annual depreciation. A reduction of Wairoa District Council's ODRV for wastewater pipes of \$1.49M, could be applied as part of the regional financial modelling sensitivity analysis.

5.3.3 Total Optimised Replacement Value

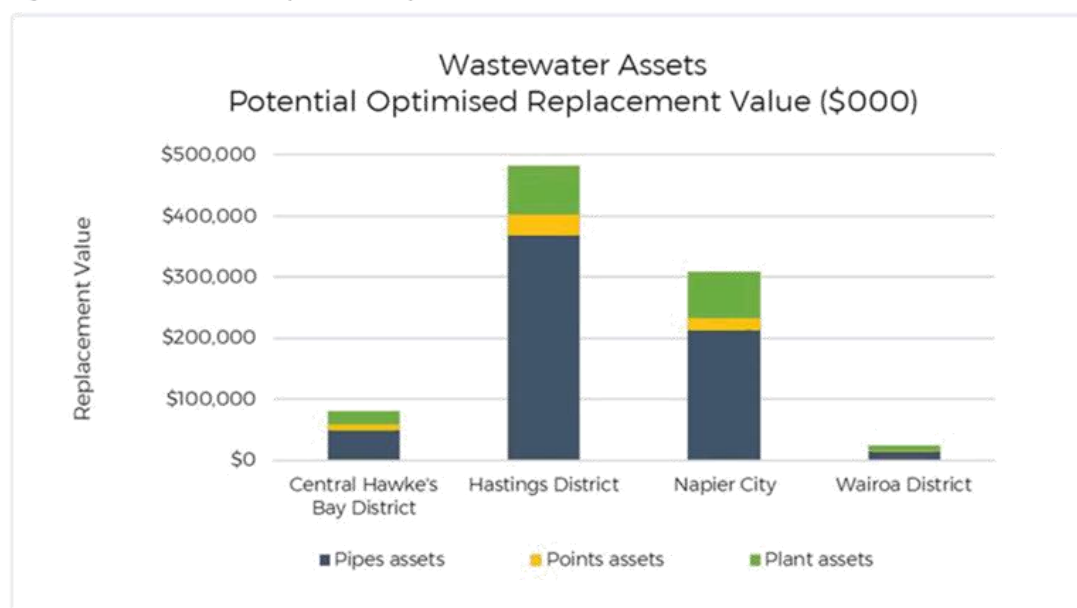
Using the assessed potential Replacement Value for service line pipes by serviced properties in 2.4.1, the Total Optimised Replacement Value for wastewater assets for Wairoa District Council has been calculated as shown in Table 29.

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Table 29 – Potential total optimised replacement value of wastewater assets³⁹

Council	Existing ORV for pipes assets	Potential ORV of service line pipes	Revised total ORV for pipes assets	Revised total ORV for wastewater assets	Percentage increase
WDC	\$12,273	\$1,426	\$13,700	\$23,860	6%

Figure 32 shows the potential ORV for all Councils using the revised total ORV for Wairoa District Council, shows minimal impact on the total ORV of all regional wastewater assets.

Figure 32 – Potential Total Optimised Replacement Value for wastewater assets⁴⁰

5.4 Water valuation

5.4.1 Unit rates sensitivity analysis

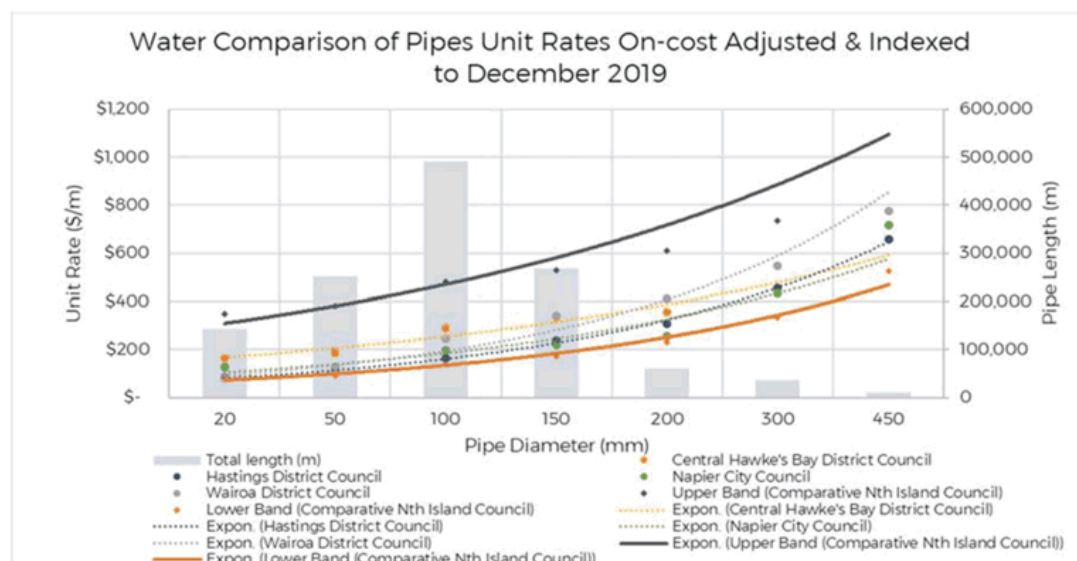
Using the normalising factors outlined above, the unit rates for all four Councils have been adjusted as shown in Table 27. Also included are the upper and lower North Island Council bands discussed in 5.1.1.

³⁹ All costs are based on 2017 Replacement Costs and have not been indexed to December 2019.

⁴⁰ ORVs are based on original valuation costs and have not been indexed to December 2019.

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Figure 33 – Water revised comparative unit rates



Water pipes unit rates are the most consistent between Councils of all Three Waters asset groups. All Councils are at lower end of this North Island range for unit rates, reflecting their less complex networks than a large city may have.

Table 30 includes a summary of the rates shown in Figure 33, with the range of proposed rates for financial modelling sensitivity analysis highlighted. The upper bound represents the 75th percentile value for the four Councils, while the lower bound represents the 25th percentile for all four Councils.

Table 30 – Water pipes recommended unit rates range for financial modelling

Unit Rate Source	Pipe Diameter (mm)						
	20	50	100	150	200	300	450
NI Upper Bound	\$348	\$382	\$479	\$527	\$609	\$736	\$1,488
NI Lower Bound	\$82	\$90	\$137	\$173	\$231	\$335	\$525
CHBDC (adjusted)	\$165	\$188	\$290	\$334	\$356	-	-
HDC (adjusted)	\$82	\$108	\$165	\$237	\$309	\$453	\$660
NCC (adjusted)	\$126	\$126	\$196	\$218	\$256	\$433	\$718
WDC (adjusted)	\$81	\$118	\$246	\$342	\$411	\$547	\$778
Sensitivity Analysis Upper Bound (75 th percentile) ⁴¹	\$136	\$141	\$257	\$336	\$369	\$500	\$748
Sensitivity Analysis Lower Bound (25 th percentile) ⁴²	\$82	\$116	\$189	\$232	\$296	\$443	\$689

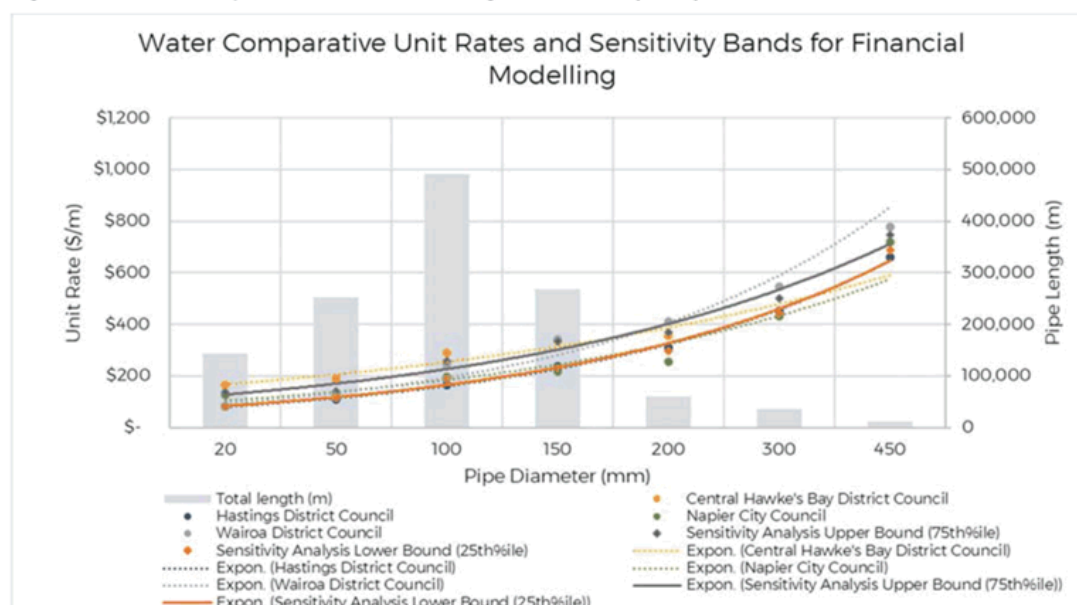
Figure 34 shows the sensitivity analysis upper and lower bounds in relation to the Councils' adjusted unit rates.

⁴¹ Upper Bound is the 75th percentile of all Councils unit rates.

⁴² Lower Bound is the 25th percentile of all Councils unit rates.

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Figure 34 – Water comparative unit rates with regional sensitivity analysis bounds



Based on the most common pipe type (diameter 100mm), an average sensitivity adjustment has been determined for each Council as shown in Table 31. These lower and upper bound adjustments are expressed as percentages and can be applied to the total water valuation for each Council in the financial modelling, as a proxy for normalising the unit rates across all water assets.

Table 31 – Water pipes sensitivity adjustment for financial modelling

Council	Lower Bound unit rate adjustment for 100mm dia pipe	Lower Bound valuation sensitivity analysis percentage	Upper Bound Unit rate adjustment for 100mm dia pipe	Upper Bound valuation sensitivity analysis percentage
CHBDC	-\$101	-35.0%	-\$33	-11.3%
HDC	\$24	14.3%	\$92	56.0%
NCC	-\$8	-4.0%	\$61	31.0%
WDC	-\$58	-23.5%	\$11	4.4%

These lower and upper bounds provide an approximate envelope for reviewing the regional valuation sensitivity.

5.4.2 Base lives outcomes

Base lives across all water pipes assets are comparable and have been adjusted by Councils for individual assets based on several factors, such as condition, to reflect actual performance. It is not considered necessary to make any adjustment to the regional valuation outcomes as a result of differences in the base lives.

5.4.3 Total Optimised Replacement Value

As there were no assets unaccounted for in the valuations completed by each Council for water assets, there is no change to the total ORV as a result of missing assets.

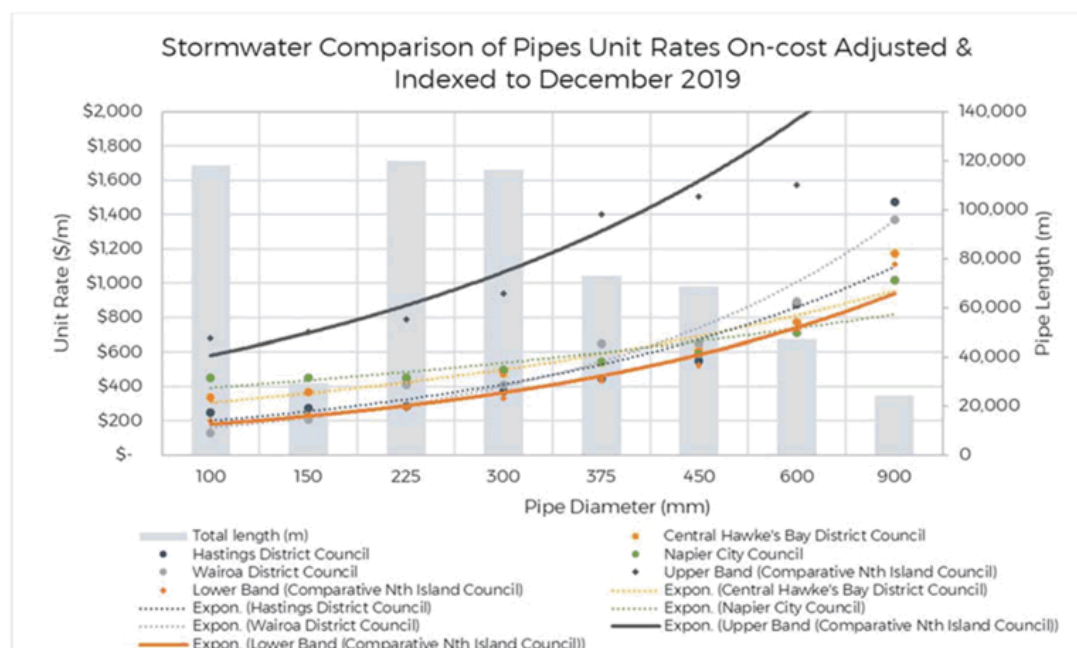
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5.5 Stormwater valuation

5.5.1 Unit rates sensitivity analysis

Using the normalising factors outlined above, the unit rates for all four Councils have been adjusted as shown in Figure 35. Also included are the upper and lower North Island Council bands discussed in 5.1.1. All Councils are at lower end of this North Island range for unit rates, reflecting their less complex networks than a large city may have.

Figure 35 – Stormwater revised comparative unit rates



The differences in stormwater pipes unit rates across the most common pipe diameters are similar to wastewater pipes, with Napier City Council having higher rates than other Councils for smaller diameter (≤ 225 mm) pipes. However, 58.7% of Napier's stormwater pipe network by length are pipes with a diameter ≥ 375 mm. Wairoa District Council have higher rates for larger diameter pipes (≥ 375 mm), which represents 28.6% of their network by length.

Table 32 includes a summary of the rates shown in Figure 35, with the range of proposed rates for financial modelling sensitivity analysis highlighted. The upper bound represents the 75th percentile value for the four Councils, while the lower bound represents the 25th percentile for all four Councils.

Table 32 – Stormwater pipes recommended unit rates range for financial modelling

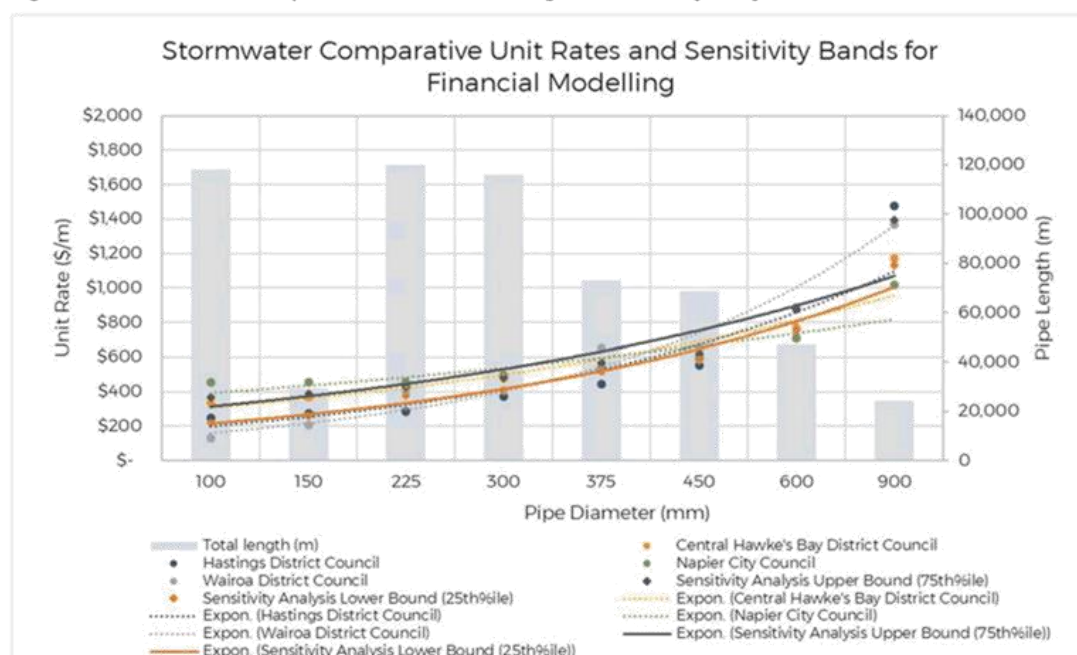
Unit Rate Source	Pipe Diameter (mm)							
	100	150	225	300	375	450	600	900
NI Upper Bound	\$676	\$714	\$790	\$937	\$1,404	\$1,504	\$1,574	\$3,130
NI Lower Bound	\$199	\$236	\$274	\$331	\$437	\$524	\$729	\$1,111
CHBDC (adjusted)	\$338	\$367	\$419	\$475	\$540	\$610	\$771	\$1,171
HDC (adjusted)	\$246	\$275	\$285	\$374	\$442	\$551	\$875	\$1,475
NCC (adjusted)	\$453	\$453	\$453	\$495	\$541	\$592	\$709	\$1,017
WDC (adjusted)	\$129	\$205	\$411	\$411	\$650	\$650	\$890	\$1,369

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Unit Rate Source	Pipe Diameter (mm)							
	100	150	225	300	375	450	600	900
Sensitivity Analysis Upper Bound (75th%ile) ⁴³	\$367	\$389	\$427	\$480	\$568	\$620	\$879	\$1,395
Sensitivity Analysis Lower Bound (25th%ile) ⁴⁴	\$217	\$258	\$379	\$401	\$516	\$582	\$756	\$1,133

Figure 36 shows the sensitivity analysis upper and lower bounds in relation to the Councils' adjusted unit rates.

Figure 36 – Stormwater comparative unit rates with regional sensitivity analysis bounds



Based on the most common pipe type (diameter 225mm), an average sensitivity adjustment has been determined for each Council as shown in Table 33. These lower and upper bound adjustments are expressed as percentages and can be applied to the total stormwater valuation for each Council in the financial modelling, as a proxy for normalising the unit rates across all stormwater assets.

Table 33 – Stormwater pipes sensitivity adjustment for financial modelling

Council	Lower Bound unit rate adjustment for 225mm dia pipe	Lower Bound valuation sensitivity analysis percentage	Upper Bound Unit rate adjustment for 225mm dia pipe	Upper Bound valuation sensitivity analysis percentage
CHBDC	-\$40	-11.8%	\$5	1.2%
HDC	\$94	38.3%	\$107	37.4%
NCC	-\$73	-16.2%	-\$15	-3.2%
WDC	-\$31	-24.4%	\$70	17.0%

These lower and upper bounds provide an approximate envelope for reviewing the regional valuation sensitivity.

⁴³ Upper Bound is the 75th percentile of all Councils unit rates.

⁴⁴ Lower Bound is the 25th percentile of all Councils unit rates.

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5.5.2 Base lives outcomes

Base lives are the same for all Councils across all stormwater pipe materials, so there is no adjustment necessary or impact on regional valuation outcomes.

5.5.3 Total Optimised Replacement Value

As there were no assets unaccounted for in the valuations completed by each Council for water assets, there is no change to the total ORV as a result of missing assets.

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6 Asset replacement & upgrade drivers

This section identifies factors other than renewal that could materially affect future investment requirements. This has been prepared based on the author's knowledge of the current and likely future trends and through discussions with Council asset managers and reviews of long-term plans. It provides a high-level opinion as to how these issues might influence renewal of assets.

The section considers issues that could impact on wastewater and drinking water treatment plants as well as reticulation assets.

It can be seen from this section that a lot of renewal is not based on condition but driven by compliance and community expectations.

6.1 Wastewater

6.1.1 Treatment plant discharge quality

To minimise environmental effects there is a driver to reduce the level of contamination of wastewater discharges to freshwater and the ocean. There is a possibility that the Government may introduce a national standard that defines minimum discharge standards that would be applied consistently across New Zealand. These standards will most likely require increased and more advanced treatment practices which may require upgrades to treatment plants or replacement of treatment plants.

The Government has already signalled requirements for increased standards for discharges to freshwater in the National Policy Statement (NPS) for Freshwater. The Hawke's Bay Regional Council plan change 6 is already imposing higher discharge standards for some catchments.

Boffa Miskell Ltd and GHD Ltd have prepared the following reports for the Department of Internal Affairs (DIA) looking at the implications of applying consistent minimum national discharge standards:

- Cost Estimates for Upgrading Wastewater Treatment Plants to meet Objectives of the NPS Freshwater (GHD Ltd & Boffa Miskell Ltd, 2018)
- Cost Estimates for Upgrading Wastewater Treatment Plants that Discharge to the Ocean (GHD Ltd & Boffa Miskell Ltd, 2019)

These reports estimate that \$28 million to \$42 million may be required to upgrade the wastewater treatment plants in Hawke's Bay that discharge to the ocean to meet compliance with a potential new minimum standard. \$37 million to \$56 million may be required to upgrade treatment plants in Hawke's Bay to meet attribute B of the NPS Freshwater.

The budgets allocated for wastewater treatment plant upgrades from the Councils' 2018-2028 Long Term Plans (LTP) are shown as a comparison in Table 34 and Table 35.

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Table 34 – Summary of wastewater treatment plants discharging to the ocean

Treatment Plant	High level cost estimates from DIA reports ⁴⁵ (\$000)	Valuation Replacement Value (\$000)	Valuation OPRC (\$000)	Total Annual Depreciation (\$000)	Budget allocated for upgrades in LTP (\$000)
Hastings, East Clive	\$4,600	\$67,900	\$37,800	\$2,000	Nothing identified
Napier, Awatoto	\$2,500	\$42,000*	\$34,000*	Nothing identified	\$8,000
Wairoa	\$29,200	\$7,800	\$6,500	\$1,000	\$6,000 to \$7,000
Total	\$36,000	\$118,000	\$78,300	\$3,000	\$14,000 to \$15,000

Table 35 – Summary of wastewater treatment plants discharging to fresh water

Treatment Plants	High level cost estimates from DIA reports ⁴⁵ (\$000)	Valuation Replacement Value (\$000)	Valuation OPRC (\$000)	Total Annual Depreciation (\$000)	Budget allocated for upgrades in LTP (\$000)
Central Hawke's Bay		\$21,000	\$14,000	\$600	\$4,750
Wairoa		\$5,000	\$4,800	\$100	Nothing identified
Total	\$37,000 to \$56,000	\$26,000	\$18,800	\$700	\$5,600

Note that the DIA estimates were completed at a high level to cover the entire country. Upgrades for individual plants may vary from this. However, the budgets allocated in the Councils' current LTPs fall well short of what would be required should the minimum discharge standards that the DIA reports are based on be adopted.

Information provided by Central Hawke's Bay District Council indicates that their actual forecast expenditure is in the order of \$66M to upgrade wastewater treatment plants to meet new and future consent compliance, regulatory, environmental, cultural and community requirements. This is more than the amount estimated in the DIA report and an order of magnitude greater than the allowance in the current LTP.

6.1.2 Wet weather overflows

Wastewater networks can be prone to infiltration due to age and condition of the pipes. During wet weather events stormwater can infiltrate into the wastewater network and increase the volume of water that needs to be treated. This can overwhelm the treatment plant or can cause wastewater to overflow from the network, degrading the environment and potentially compromising the public health of the community through exposure to untreated sewage.

The frequency and intensity of wet weather events is likely to increase due to climate change, resulting in more frequent wet weather overflow. Wairoa District Council, for example already have a programme to line wastewater pipes to reduce infiltration

To reduce these issues parts of the network may need to be replaced before the end of its expected useful life. This particularly affects pipes made of earthenware and asbestos cement. These pipes are already starting to reach the end of their useful lives. It is unlikely that it would be

⁴⁵ GHD comments that the result will be likely different after special assessment due to length of outfall and mixing. The outfall charge is not accounted for.

⁴⁶ Does not include all plants due to lack of information obtained and is likely to be higher than reported

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possible to extend their lives much beyond what has been assumed due to wet weather overflow concerns.

To deal with infiltration, treatment plants may also need to be upgraded.

6.2 Water

6.2.1 Increased standards for water health

As a result of the Havelock North water event and subsequent inquiry a new water regulator is being established. There is heightened awareness of the need for compliance with the drinking water standards in order to improve the quality of drinking water and public health. Additional requirements have also been included in the drinking water standards.

There is a particular focus on water drawn from groundwater sources. Where previously groundwater sources may have been considered secure water sources and therefore treatment was not required, it is increasingly difficult to demonstrate that the water source is secure due to land use changes and greater understanding of hydrology. The impact of this is that treatment is required.

A total of \$18 million to \$34 million (Beca Limited, 2018) is estimated to be required to upgrade water supplies in the Hawkes Bay region to comply with the drinking water standards.

The budgets allocated for treatment upgrades from the Councils' LTPs are shown in Table 36.

Table 36 – Budget allocated in LTPs for water treatment

Council	Budget allocated for treatment upgrades in LTP (\$000)
Central Hawkes Bay District Council	\$8,000
Hastings District Council	\$18,500
Napier City Council	\$1,700
Wairoa District Council	\$400
Total	\$28,600

It appears that the budgets allocated for water treatment upgrades in the Hawkes Bay region are of a similar order of magnitude expected from the DIA report (Beca Limited, 2018). However, potentially the individual budgets set by each council may be under or over what is required.

6.2.2 Increased environmental standards for water takes

Increased focus on quality of freshwater and groundwater is imposing increased standards around the amount of water that can be drawn from the water source. For example, Hawkes Bay Regional Council plan change 6 sets new water quality and allocation limits for groundwater and water from rivers and sets minimum river flows. This may reduce the amount of water that can be drawn for town supplies, requiring additional reservoir storage to reduce draw offs during peak flows, and minimising leakage from the water network. The impact of this is that pipes may need to be replaced before the end of their useful life and limits the ability to 'sweat' the asset. If there is a high level of leakage this could result in more frequent water restrictions during summer periods and may limit the council's ability to service wet industries.

It is likely that climate change will increase the frequency and duration of droughts placing more pressure on the need to reduce leakage.

Private water takes will also be subjected to the same restrictions. Some private water takes may need to be closed and properties connected to the public network, leading to a need to increase the area serviced for both wastewater and water networks.

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In summary increased environmental standards for water takes has the potential to reduce assumed asset lives and require installation of additional reservoirs.

6.3 Stormwater

6.3.1 Discharge Quality

Increased discharge standards for stormwater may require water treatment devices to be installed for example wetlands, stormwater ponds and silt traps. This will have a minimal impact on renewals.

6.3.2 Flooding & Climate Change

More intense storm events because of climate change could mean that portions of the network are under capacity and this could result in greater flooding. Pipes may need to be upsized to mitigate flooding and this could result in pipes being replaced before the end of their useful life. Additional storage ponds may also need to be installed. Constraints may need to be placed on land use and new developments may need to install detention tanks or similar devices.

The key impact of climate change on stormwater is that assets may need to be replaced before the end of their useful life to provide additional capacity and land use constraints may need to be put in place.

6.4 General

6.4.1 Lining Technology

Pipe lining technology repurposes the existing pipe in the ground. It is usually cheaper than a full renewal for deep pipes, pipes in private properties or pipes in busy roads, where additional capacity is not required. However, lining is not suitable for pipes that are in very poor condition and are significantly deformed or where the capacity of the pipe needs to be increased.

Current practice is to assume a life of 50 years for liners. However, this is conservative. If properly installed liners should last just as well as other modern pipe materials (80-100 years).

The use of relining technology should reduce the cost of renewals for pipes which would otherwise have high reinstatement costs, but may have similar depreciation impacts for pipes with lower reinstatement costs.

6.4.2 Climate Change

Climate change will likely increase the periods of drought and increase the frequency of storms (impacts discussed in the sections above). This will mean that more storage for potable water is likely to be required and leakage of water pipes is less tolerable.

Increased periods of drought will also lead to dry ground conditions which exacerbates failures of older water mains. This may mean some pipes will have to be renewed before the end of their previously expected design life.

6.4.3 Resilience

6.4.3.1 Earthquake resilience

Hawkes Bay is a seismically active area and significant areas of the district are potentially susceptible to liquefaction. Older brittle pipes in all three water systems are particularly vulnerable in these areas. Resilience could be improved by replacing these pipes. The impact of this is that pipes may be replaced before the end of their useful life.

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6.4.3.2 Natural hazards

Some examples of natural hazards include slips, coastal erosion and inundation from rising sea levels. Some infrastructure may be affected by sea level rise and may need to be relocated or abandoned before the end of its design life. However, this is only likely to impact a relatively small proportion of the networks.

6.4.4 Growth

Increased residential growth could mean that some of the existing pipes are under capacity and have to be upsized before the end of their useful life. However, this is expected to affect a low percentage of the overall network and in many cases will be dealt with by installing additional infrastructure. Additional infrastructure may be required to supply areas outside of the extent of current urban areas. Growth is expected to have a limited impact on renewals.

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7 References

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Appendix E Description of Long List Options



Scoping options

These options relate to the extent of water services that will be covered under the new model. Specifically, whether or not the delivery of stormwater services is included or not.

We note that the approach towards the inclusion of stormwater varies between the two existing water services entities already existing in New Zealand. Watercare manages the two waters while Wellington Water manages all three.

The third option includes all water related aspects within the model; service delivery as well as regulatory and compliance functions. This effectively replicates the unitary Council function.

Service solution options

Delivery options refer to the manner in which various aspects of three waters services are delivered. Specifically, the options outlined relate to whether operations and maintenance, professional services, and asset management services are delivered internally through the proposed water model, or whether these are outsourced (contracted to an external provider).

The services have been categorised as

- **Operations and Maintenance** – this is the day to day running, maintenance and repair of the network or treatment plants
- **Professional services** – this includes engineering and technical design services
- **Asset management** – This includes all strategic functions and asset planning, including development of asset management plans, and infrastructure strategies.

Delivery options

The delivery options describe the structure and nature of the service provider. Existing examples are highlighted to help provide high level definition and identify the different features. Additionally, a table that follows the descriptions highlights differences by reference to important questions of responsibility for aspects of the services. The descriptions are not intended to be a comprehensive explanation of all aspects of the models.

Status Quo

Each council operates independently, delivering the service to its own customers. Strategic planning is limited on a regional basis. Each council's asset management capability is limited by its own resources.

Centre of Excellence

e.g. Waikato Road Asset Technical Accord (RATA)

Collaboration between two or more councils with a specific focus on information sharing and identification of areas or potential improvement, rather than delivery of the core service. This lends itself to activities where economies or efficiencies of scale are most available, such as valuations, condition surveys, planning and asset management, where smaller councils may not have the resources or the data to develop alone or solve common issues. Each council contributes an agreed fee per year to fund the Centre of Excellence (CoE) operations, and the CoE provides recommendations to each participating council on improvements and efficiencies that are relevant to them. The CoE employs staff directly and may provide opportunities for secondments for other council staff. In the case of RATA, an employed technical director reports to a governance group consisting of representatives from each council, and a technical advisory group allows the CoE to leverage off specialists located in each council.

**Joint Procurement****e.g. Napier and Hastings Waste Collection Services (Waste)**

Councils approach the market together to engage a third party for services, with the intention of securing better prices for a larger scope of works. Each council defines their own level of service and enters into separate contracts with the successful contractor following negotiations. The administration of each contract is managed within the respective council while delivery is carried out by a common third party.

'Simple' Shared Services**e.g. Masterton servicing Carterton (Roading, part of Two Waters)**

Typically, a larger council providing a service to a smaller council, leveraging off a larger asset base and larger staff allowances. The scope of the services can be as small as providing laboratory services, up to full-service delivery. Smaller councils can benefit from the more advanced asset management systems, while retaining asset ownership, strategic oversight and funding control. In the case of Masterton and Carterton, there is a common roading contractor between the councils, and Carterton contracts Masterton to manage their roading programme. In the Waingawa area of Carterton, Masterton is also contracted to deliver water and wastewater services.

Shared Service Business Unit**e.g. Northland Transport Alliance and Rangitikei DC and Manawatu DC (Infrastructure)**

The business unit delivering the shared service is usually located at one of the participating council offices and staff are employed by the host council but directly within the business unit. Level of service, funding and strategic decisions are still made separately by the individual councils. The cost of operating the business unit is divided among the participant in agreed proportions that may take into account overall asset base, forecast capital programmes, or any other metric agreed by the councils. Support services may be provided by any participating council (usually the host under service level agreements) or by third parties as agreed.

Management CCO**e.g. Wellington Water**

Asset ownership and strategic direction is retained by the council, but management of day-to-day operations is carried out through the Management CCO. The Management CCO is a separate entity from all participating councils, which can increase overheads but also provides clarity for the assessment of costs directly related to the activity. The Management CCO will typically employ their own staff and provide their own support services (as opposed to utilising a council's services). The setting of price and level of service remains with the council. Each council can set its own requirements of the CCO, while benefiting from the combined knowledge and asset management maturity of the larger organisation. The key difference between the Management CCO and the Centre of Excellence is the ability to deliver the whole service rather than supplement each council's in-house team.

Asset Owning CCO**e.g. Watercare Services Ltd**

The CCO has full independence over service delivery but must give effect to councils' development and growth plans. CCOs are overseen by a Board of Directors that may be a combination of Councillors, technical experts and independent parties. The Board will approve the budget prepared by the CCO, including the setting of fees and charges and submit the information to the controlling council as part of the LTP and annual plan process. The CCO's Chief Executive is delegated operational responsibility by the Board and oversees the daily operation of the service. All staff are employed by the CCO directly.

Watercare is part of the Auckland Council 'family' and is responsible for Water and Wastewater. Stormwater is the responsibility of Auckland Transport, a separate CCO also established through the Auckland amalgamation.



Table 50 Features of examples of existing models

	Status Quo	Centre of Excellence (e.g. RATA)	Joint Procurement (e.g. Napier and Hastings Waste Collection Contract)	'Simple' Shared Services (e.g. Masterton/Carterton)	Shared Services Business Unit (e.g. NTA, Rangitikei & Manawatu DC)	Management CCO (e.g. Wellington Water)	Asset Owning CCO (e.g. Watercare)
Who owns the assets?	Individual councils	Individual councils	Individual councils	Individual councils	Individual councils	Individual councils	CCO
Who determines the level of service?	Individual councils	Individual councils (Governance group for CoE's level of service to the councils)	Individual councils	Individual councils	Individual councils	Individual councils	CCO
Who approves strategic decisions?	Individual councils	Individual councils	Individual councils	Individual councils	Individual councils (On recommendations of the business unit)	Individual councils (On recommendations made by CCO)	CCO* (Growth projections developed by individual councils)
Who approves operational decisions?	Individual councils	Individual councils	Individual councils (Contractor – to meet defined level of service targets)	Individual councils	Shared Services Business unit	CCO	CCO
Who sets the price to the customer? ⁴⁵	Individual councils	Individual councils	Individual councils	Individual councils	Individual councils	Individual councils	CCO
Who provides administrative support (e.g. employing staff)?	Individual councils	Individual councils (CoE may have small number of specialist staff)	Individual councils (Contractor – within scope of contract)	Individual councils	Shared Services Business unit (typically, with support from host council e.g. HR/IT)	CCO	CCO
Who approves future plans?	Individual councils	Individual councils	Individual councils	Individual councils	Individual councils	Individual councils* (On recommendations of CCO)	CCO* (subject to LTP or AP consultation requirements)

⁴⁵ Including who raises the revenue for the service



Implementation options

- **Now**

This arrangement would require that, if there was a change, then all councils transfer to the new model as soon as reasonably practicable.

Phased implementation

A phased approach may allow councils to shift to a new model while reducing risk. It may also allow councils that are ready to transition to a new model achieve early savings without having to wait for all of the councils to be ready or create a simpler transition process.

A phased transition may alter the time period in which the full benefits of a new model can be achieved.

- **Phased implementation as contracts roll off**

This option would enable councils to remain with existing service contracts and transfer certain functions or activities over to the new model as contracts lapse.

The full benefits of entering into the new model may not be realised for some time.

- **Phased transition of councils**

This option would enable a smaller group of councils to move to the new model initially, with other councils joining at a later time.

There may be benefits in this approach due to the simplicity of implementation with a smaller number of councils, but it may limit the extent to which benefits can be realised.

- **Phased model transition**

This option would enable councils to transition slowly to a new model. For example, while the ultimate model may be an asset owning CCO, a phased transition may begin with a management CCO to allow councils to achieve some benefits without the full risk of transition.

- **Phased model and councils' transition**

This option would enable councils to move to the new model in a phased manner. This means some councils would move to the new model immediately (and realise some of the benefits of the new model immediately), while others would do so over time.

Funding Options

Status quo

Under this arrangement each council remains individually responsible for all aspects of funding and financing of the water services.

Regional funding model

This option could involve a full "regional rate" model in order to equalise water rates across the region, or a model whereby communities or councils have targeted rates. The funding and financing of the three waters services would take place at a regional level rather than at the current territorial authority level.

Any sub-national delivery model which incorporates multiple regions would work in a similar way and include all customers within that region.



National funding

National funding would need to be enabled by central government. At the time of developing and assessing the long list (2019) there was no indication of a national funding model although we note that there are however significant core services already provided by local government that are part-funded on a national level e.g. roading.

The impact on local ratepayers under a national funding model is likely to be much lower than under a regional funding model.

At the time of the assessment what did appear to be part of the three waters reform was potential funding for making changes. This was the case in Hawke's Bay with government contributing funding to investigating alternative options. So, a national funding option simply allows the Councils to explore what is possible with the Government. It is assumed to be supplementary to either the local or regional option rather than a replacement.



Table 51 Long list of options

Scoping options (What)	Enhanced Status Quo (three waters)	Water	Stormwater	Wastewater	Water and wastewater	Water and stormwater	Wastewater and stormwater	Three waters plus regulatory and compliance	
Service solution options (How)	Status quo: Individual councils choose approach (mixture)	O & M (in) PS (in) AM (in)	O & M (out) PS (in) AM (in)	O & M (out) PS (out) AM (in)	O & M (out) PS (out) AM (out)	O & M (in) PS (out) AM (in)	O & M (in) PS (out) AM (out)	O & M (out) PS (in) AM (out)	
Delivery options (Who)	Status quo: Councils	Centre of Excellence	Joint procurement	Share service (simple)	Shared service business unit	Regional CCO (management)	Regional CCO (asset owning)	Sub-national CCO (management)	Sub-national CCO (asset owning)
Implementation options (When)	Now	When existing contracts roll off			Phased - councils		Phased - model transition		Phased – councils and model transition
Funding options	Status quo: rates, fees and charges set by each council			Regional funding			National funding		

Abbreviations used

O & M	Operations and Maintenance
PS	Professional Service
AM	Asset Management
CCO	Council Controlled Organisation



Appendix F Long List Assessment



Appendix G Current State - 2019



Hawke's Bay Three Waters Service Delivery Current State Assessment

April 2019

**Document status**

Ref	Approving Director	Date
2418	Dan Bonifant	1 March 2019
2418V2	Dan Bonifant	15 April 2019
2418V3	Dan Bonifant	22 May 2019

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1 Introduction

1.1 National context

The New Zealand Government is currently reviewing how three waters services are delivered across New Zealand. In a Cabinet paper released on 20 November 2018, the Government indicated that alongside regulatory changes there may be major structural reform of the water sector. The Cabinet paper described a system facing significant issues where *“the scale of the challenge indicates that the status quo is not sustainable in the long term”*. Among the key issues identified were weak regulation, capability challenges (particularly for smaller councils), funding and financing issues for upgrading infrastructure, where the Government stated *“for many smaller councils, there is no clear way forward given the scale of the challenges”*.

The Government has identified the following as the major outcomes it seeks for the reform of the three waters system:

- *Existing three waters assets and services must remain in public ownership, and the system will incorporate safeguards to protect public ownership of this essential infrastructure, both now and in the future*
- *A sustainable three waters system that operates in the long-term interests of consumers, communities, tangata whenua, and New Zealand generally*
- *Drinking water that is safe, acceptable and reliable*
- *Environmental performance of wastewater and stormwater realise the aspirations of communities in which they are situated, including tangata whenua and New Zealand generally*
- *Three waters services are delivered in a way that is efficient, effective, resilient and accountable, with transparent information about performance, and prices consumers can afford*
- *Regulatory stewardship of the three waters system is fit for purpose, and provides assurance that these outcomes are being achieved and safeguarded.*

The Cabinet paper identified three high level options for reform.

1. Regulatory reforms only, with voluntary, sector led reforms to service delivery arrangements.
2. A three waters fund to support voluntary service delivery improvements.
3. An aggregated system of dedicated, publicly owned, drinking water and wastewater providers
 - On a regional basis – 12 providers
 - On a multi-regional basis, with approximately three to five providers.

Through the Government’s consultation process around the Cabinet paper and three waters review generally, it has encouraged stakeholders to put forward their best suggestions as to what that reform may look like. The three options for reform are now expected to be considered progressively with the first announcements relating to the regulatory reform package expected in June 2019.

This review does not assume any outcomes of the Government’s reform program. However, as announcements are made providing certainty over outcomes, they will be taken into consideration and adjustments to the project made as required. We also recognise the political environment and growing expectation within the sector that significant regulatory reform will be made.



1.2 Regional context

The five councils within the Hawke's Bay Region, including Napier City Council, Hastings District Council, Central Hawke's Bay District Council, Wairoa District Council and Hawke's Bay Regional Council ("the Councils") have collectively commenced this review of the three waters service delivery.

The Hawke's Bay has been a focal point for the three waters discussion due to the 2016 Havelock North water contamination event. Following this, the Councils have collectively worked together to respond to recommendations arising from the inquiry into the Havelock North water contamination event. The region is now one of the few who have joined together to engage with the government on the issues identified by the November 2018 Cabinet paper.

The primary objective of this review is to complete an assessment and recommendations of the current and potential delivery models for three waters in the Hawke's Bay region. It is focussed on the three waters service provided by the Councils, but in doing so needs to acknowledge the broader issues and emerging community concerns relating to water and the management of water within the Hawke's Bay and more generally across the country. The review is concerned with the three waters services – drinking water, wastewater and stormwater. Issues relating to the wider management of rivers, lakes and harbours for example is not part of this study except to the extent that the three waters services impact on rivers, lakes and harbours.

While parts of the Rangitikei and Taupō District Councils are within the Hawke's Bay Regional Council area, those areas are not within the scope of this study.

This study is intended to provide the Councils with information to engage effectively with central government on the three waters reforms. Ultimately a recommendation will be provided to the Councils about the best way forward. It will then be for the Councils and their communities to decide the next steps.

1.2.1 Current state assessment

The purpose of this initial phase of the project, the current state assessment, is to complete a stocktake of the current three waters service delivery in the Hawke's Bay in order to inform all later parts of the study. This includes gathering data and information relating to:

- the infrastructure and physical assets that provide the services
- the funding and financing of the service
- the people involved in providing the service (both employed by the Councils and through contracts)
- the performance of the three waters system and compliance with current regulatory standards.

This report does not analyse the data to compare relative performance across the region nor draw conclusions on future options from the information contained within it. The report is presented solely to provide an assessment of the current situation such that it can be used to inform later analysis of the options. It does however quite clearly identify some common themes, the similarity of challenges, but quite stark differences between the respective councils' situations. Taken together, these create opportunities at a regional level.



2 Methodology

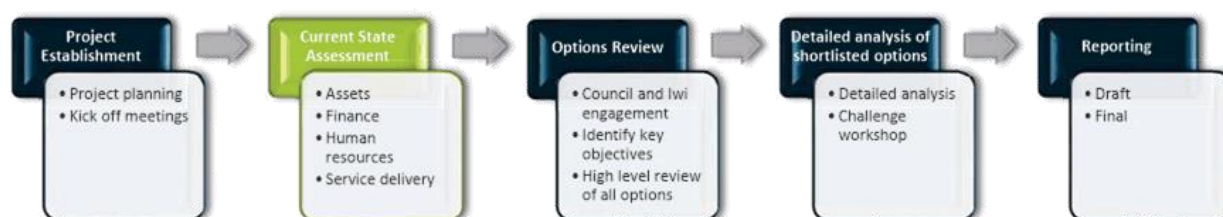
2.1 Project

An overview of the methodology for the entire project is set out below to give context to this current state assessment. The project follows a structured, staged process moving from current state assessment, definition of key principles into analysis of a long and short list of options over time. The approach and then analysis will be consistent with the Better Business Case approach and the requirements of Section 17A of the Local Government Act.

Throughout the process there was engagement with the Councils' project team as well as the Councils themselves and identified stakeholders. It is important to note that the review is intended to provide analysis of the costs and benefits of different service delivery models for three waters in Hawke's Bay. The report should therefore be seen as only the first step in a process and not an outcome in and of itself.

The report will need to be considered individually and collectively by the Councils, including, we anticipate, identification of the future work required to identify a preferred option and the approach to those phases of work, then engagement with the respective communities and the region as a whole before any determination by a council or the Councils is made.

Figure 1 Summary of project methodology



2.2 Current state assessment

The purpose of this phase is to achieve clarity around the services, assets and resources of three waters in the region. It is not possible to undertake meaningful analysis of the options or consideration of the benefits of changing approach without first having a consistent, common understanding of the status quo across the region.

The process has included a number of data requests, a questionnaire sent to the Councils for completion, data validation meetings, web-conferences and telephone discussions. We would like to acknowledge and thank the Councils for their openness and the willingness of the project team and wider council staff to respond to our numerous requests.

The results of the current state assessment are presented in separate sections for each service (i.e. water supply, wastewater and stormwater) with numeric and qualitative information collated at council level that shows the contribution each council makes to the total. A regional view has also been provided where that is relevant.



The current state assessment has been presented using a range of suitable benchmarks and measures covering the resources (financial, asset and human resources) and the services themselves. Our approach has been to present a summary of the information in charts, tables and figures with explanatory notes throughout.

2.2.1 Data limitations and clarifications

Financial data

Financial information is based on three years of information provided by each council, and LTP projections for the years beyond that. Figures used in this report may therefore differ from the published LTP.

DIA performance measures

DIA requires all councils in New Zealand to report against mandatory non-financial performance measures. These measures have been used in this report. However, we note that while the measures themselves are mandatory, each council may set its own targets.

This means that although, for example, all councils may meet a particular measure, their performance can be quite different. This also means that the most useful comparison requires analysis of both the target and the actual performance.

Asset condition

While each council reports condition data based on the same scale of 1 – 5, we acknowledge that each council has its own approach to determining the actual condition of its assets. A comparison between the respective conditions of the Councils' three waters assets should only therefore be treated as indicative.



3 Hawke's Bay

3.1 General information

The Hawke's Bay region lies on the east coast of the North island of New Zealand and is home to an estimated 165,900¹ people. The main cities are located close to each other - Napier on the coast, and Hastings 17 km inland. Smaller towns are Wairoa, Waipawa and Waipukurau, with other small settlements found throughout the region.

Figure 2 Map of the Hawke's Bay Region



Figure 2 above shows the area covered by the Hawke's Bay Regional Council and within that area there are six territorial authorities (one city council and five district councils). For the purposes of this study the region does not include the area within the boundaries of Rangitikei or Taupō District Councils.

¹ Sub-national population estimates, June 2018, Stats NZ



3.2 The councils of the region

Based on population and size of council operations, there are two large and two small territorial authorities within the Hawke's Bay region. The www.localcouncils.govt.nz website publishes comparative information about the councils. It states that Napier City Council and Hastings District Council are roughly equivalent, each with approximately \$100 million operating revenue and over 400 employees. Central Hawke's Bay District Council and Wairoa District Council each have revenue of \$25 million and \$19 million respectively, and less than 60 employees. This is significant in the context of delivering three waters service and, as noted later in the human resources section, results in employees having to cover a broad range of duties and act as generalists, not specialists. The population and rating base in the smaller councils also limits the funds available for capital works. The capital works budget (across all council activities) in Hastings District Council is over ten times larger than the capital works budget for Wairoa District Council. Napier is unique in the context of the Hawke's Bay as a City Council, with a significantly smaller land area and one population centre.

Table 1 Territorial Authority key statistics

	Central Hawke's Bay	Hastings	Napier	Wairoa
Land area	3,332 km ²	5,226km ²	105km ²	4,077km ²
Population ²	14,150	80,600	62,800	8,230
Council operating ³ revenue (\$000)	24,989	104,635	99,160	18,974
Council operating expenditure (\$000)	29,649	113,855	80,915	21,209
Council capital expenditure (\$000)	12,742	54,069	38,342	5,086
Council rates revenue (\$000)	18,520	70,469	51,029	11,736
Median personal income	\$26,800	\$26,500	\$26,000	\$22,000
Council employees	51	403	428	56

3.3 Three waters service

The 'three waters' refers to the provision of drinking water, wastewater and stormwater services. These services are largely provided by the Central Hawke's Bay District, Hastings District, Napier City and Wairoa District Councils. Hawke's Bay Regional Council has no direct role in the delivery of three waters services except in a number of overlaps between land drainage and urban stormwater.

The three waters services are critical to the communities they serve. They link to almost all the economic, social, cultural and environmental outcomes of the individual councils.

While the Councils' 30-year infrastructure strategies are structured differently there are some common themes that emerge in relation to the three waters. Those are shown in Figure 3 below, with a summary set out in [Appendix A](#).

² Ibid

³ www.localcouncils.govt.nz – key financial statistics (2017)



Figure 3 Key themes for three waters (from 30-year infrastructure strategies)



Table 2 Region wide summary of three water assets

	Water	Wastewater	Stormwater
Length of pipe (km)	1,441	1,082	760
No of reservoirs	101	n/a	n/a
No of pump stations	35	n/a	24
No of wastewater pump stations	n/a	115	n/a
Average age of pipes	36	47	46
No of treatment plants ⁴	33	13	n/a

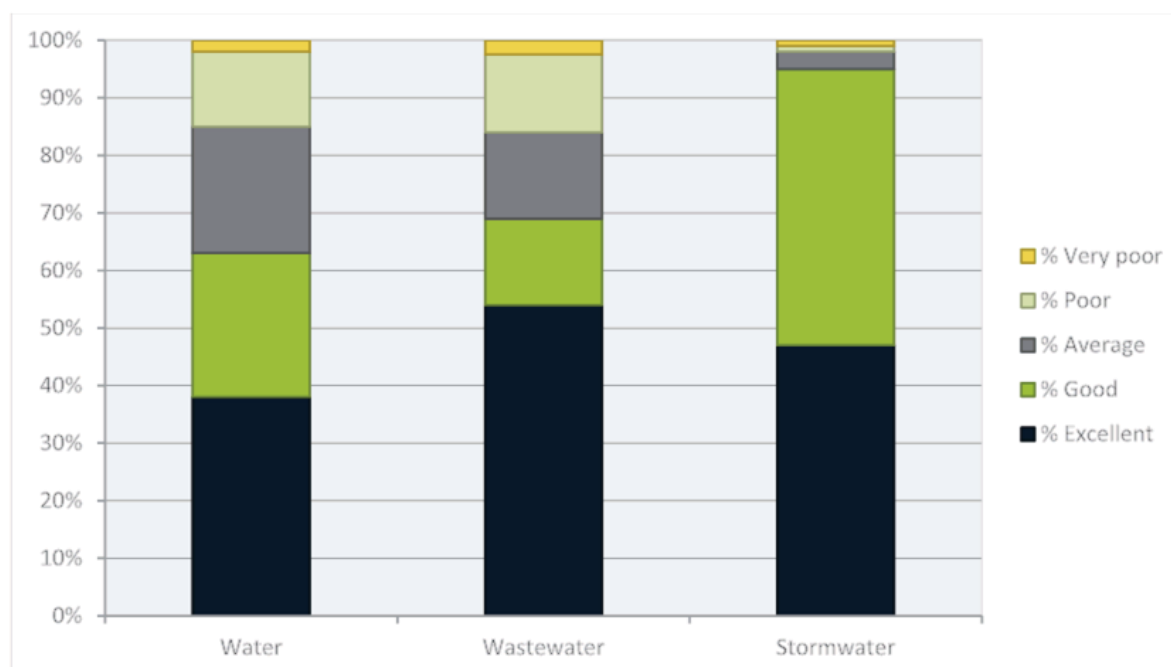
Table 3 Region wide summary of three water customers

	Water	Wastewater	Stormwater
No. of serviced properties	55,664	52,479	52,068
Population served	129,408	127,917	126,835
Communities served	26	24	n/a
Serviced Area (ha)	1,322,900	948,260	1,271,000

⁴ The size of treatment plants varies from small, low complexity to large, complex plants. Differences would be recognised in the valuations of the treatment plants.



Figure 4 Region wide summary of three water asset condition (by length)



3.4 Funding and financing

Financial information for the delivery of three waters was provided by all Councils and supplemented with data from long term plans and annual reports where necessary. The total annual operating expenditure and rates revenue are outlined in the table below, along with the percentage of three waters to total council operating expenditure and rates revenue. This data is sourced from 2018 annual reports.

Table 4 Three waters key financial information

	Central Hawke's Bay	Hastings	Napier	Wairoa
Rates revenue	\$6,209,000	\$15,864,000	\$14,461,000	\$2,790,000
% of Council total	32%	22%	27%	23%
Operating costs including depreciation	\$7,102,000	\$31,942,000	\$20,467,000	\$4,914,000
% of Council total	22%	28%	20%	18%
Average three waters residential rate⁵	\$1,798.02	\$773.30	\$752.50	\$1,265.75

⁵ Based on sum of average weighted residential rate from funding impact statements (2018 LTPs).



There is a clear difference, not just in absolute terms but in per ratepayer costs, between the large councils (Napier and Hastings) and the smaller rural councils (Wairoa and Central Hawke's Bay).

The way in which these costs are recovered also differs across the Councils, as outlined in the table below.

Table 5 Council approaches to three waters charges

	Water	Wastewater	Stormwater
Central Hawke's Bay	District wide targeted rate Metered water for extraordinary users	District wide targeted rate	Targeted, undifferentiated rate on catchment area
Hastings	District wide targeted rate. Metered for high users	Targeted rate differentiated for properties in Waipatiki Wastewater treatment 20% funded by UAGC	General rates
Napier	District wide targeted water rate Targeted fire protection rate differentiated based on property use Metered for high users	Targeted rate differentiated for properties in Bay View	General rates
Wairoa	Targeted rate differentiated by supply area Some metered properties	Targeted rate differentiated by supply area	Targeted rate differentiated by urban area

These differences also flow into the Councils' approaches to funding asset renewal and depreciation. The table below outlines the approach to renewals funding for each council.

Table 6 Council approaches to funding renewal and depreciation

	Water	Wastewater	Stormwater
Central Hawke's Bay	Rate fund renewals Borrow for large capital expenditure	Rate fund renewals Borrow for large capital expenditure	Rate fund renewals Borrow for large capital expenditure
Hastings	Fully fund depreciation	Don't fully fund depreciation, renewals funded from a mix of debt and rates	Don't fully fund depreciation, rates fund \$750,000 for renewals, if not required used to repay debt
Napier	Fully fund planned renewals rather than depreciation	Fully fund planned renewals rather than depreciation	Fully fund planned renewals rather than depreciation
Wairoa	Fund depreciation unless asset was debt funded (then fund debt servicing cost)	Fund depreciation unless asset was debt funded (then fund debt servicing cost)	Fund depreciation unless asset was debt funded (then fund debt servicing cost)



The differences in approach to funding renewals and other capital expenditure impact the levels of debt carried by each council. The charts and figures below show the Councils' total debt, debt to asset, and debt to revenue ratios respectively. The chart data is based on projected debt levels in 2019/20, and in addition to being reflective of differences in funding and financing policies, also demonstrates differences in level of investment.

Figure 5 Total three waters projected debt across the Hawke's Bay (2019/20 budgets) - \$000s

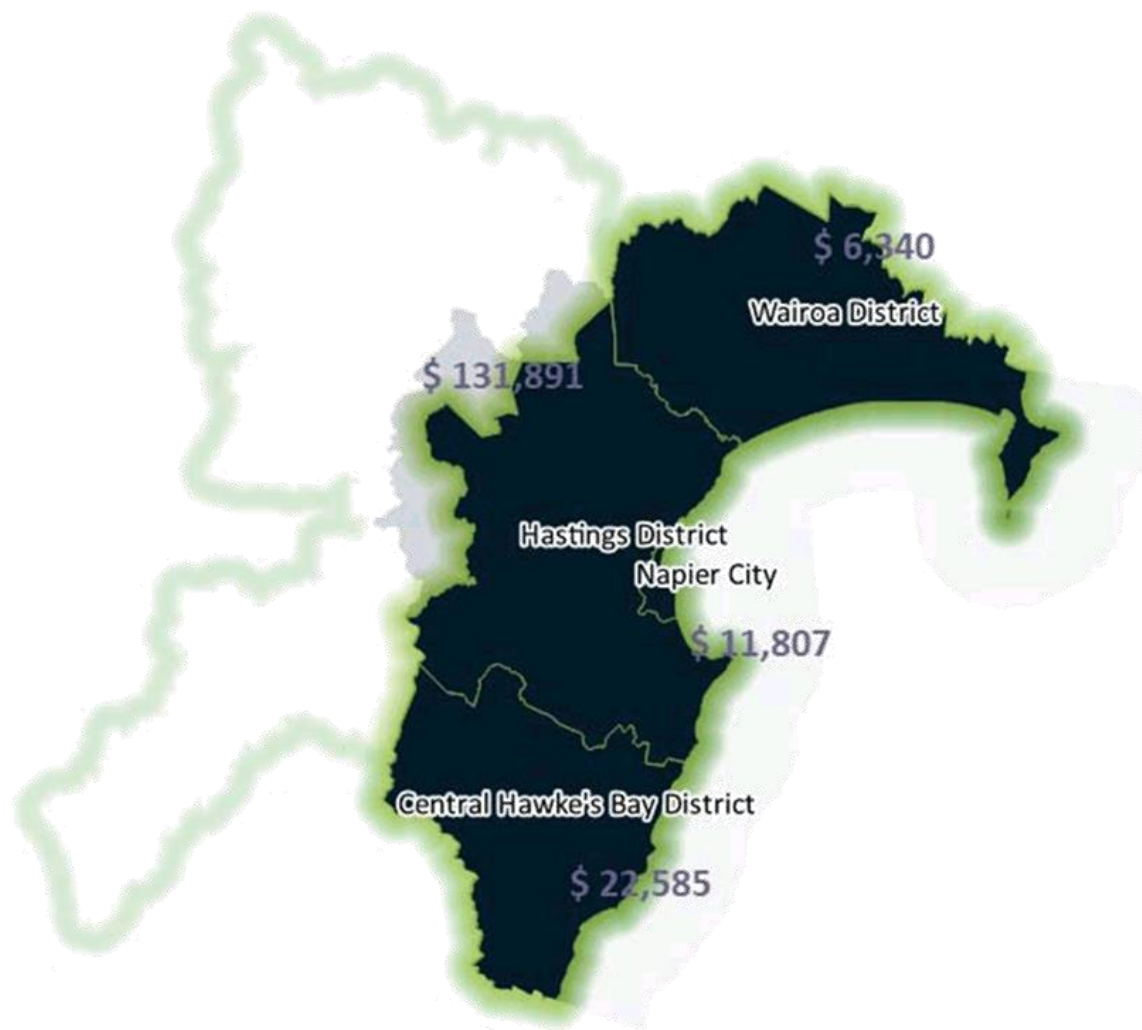




Figure 6 Three waters debt to asset ratio

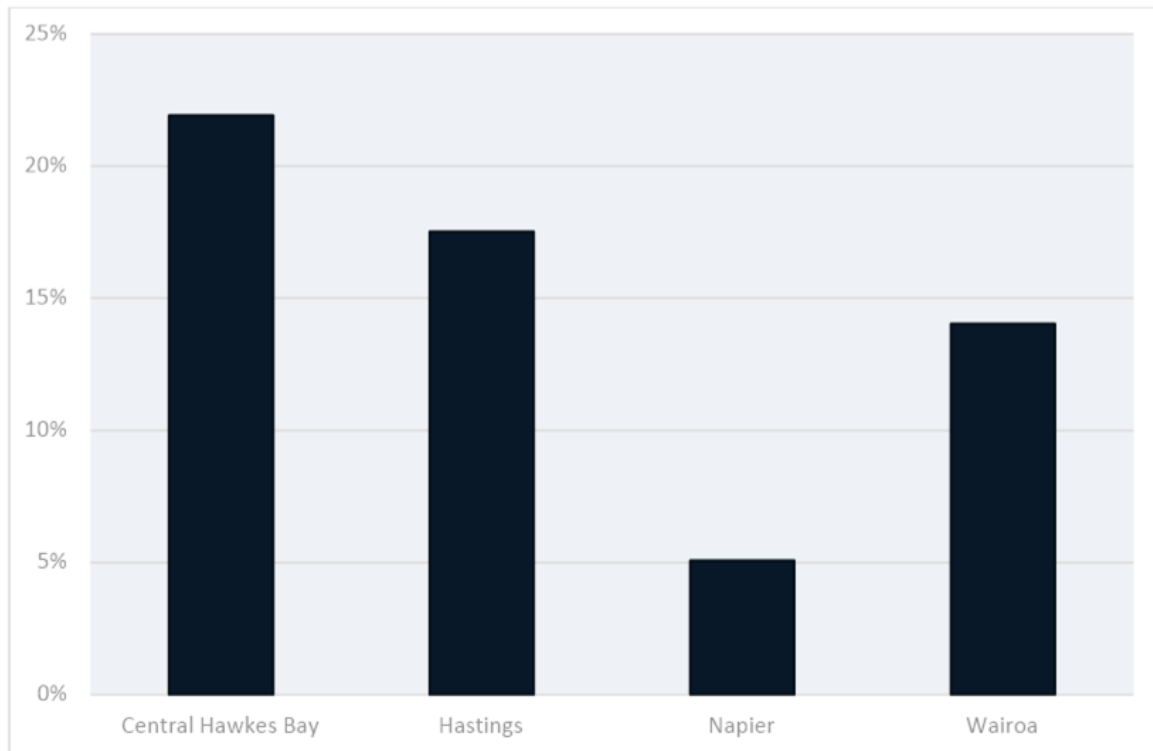
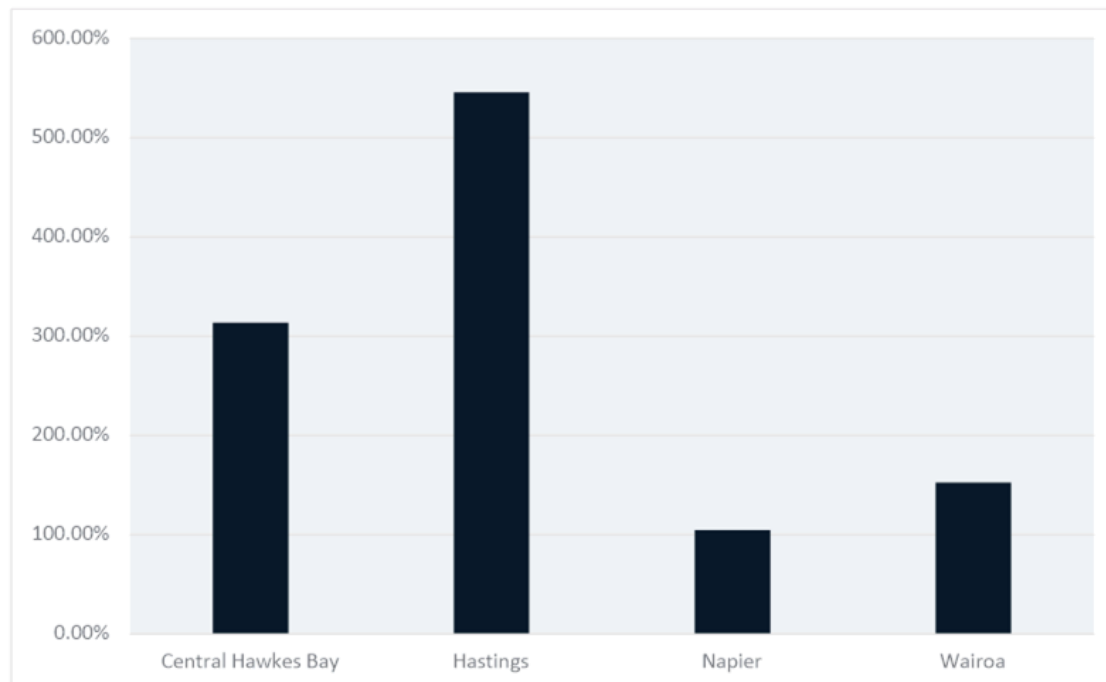


Figure 7 Three waters debt to revenue ratio



The charts demonstrate a wide variation in the Councils' approach to managing debt.



3.5 Human resources involved in three waters services

Human resources information for the delivery of three waters services has been provided by Central Hawke’s Bay, Hastings, Napier and Wairoa. A summary of the Council staff involved for each territorial authority is shown below. The organisational structures are shown at a high level to show the relationship between the three waters’ team(s) and the other infrastructure services. Support functions such as finance, human resources, planning, information technology and customer services are not shown. A key to the charts is shown below.



3.5.1 Central Hawke’s Bay District Council

In Central Hawke’s Bay, all three waters services are delivered through the Community Infrastructure and Development department, with dedicated three waters operations and programme teams, as well as a shared asset strategy team with other council assets. The total team comprises six dedicated water specialists. There is only one employee who is shared across water and other assets, as well as the General Manager of Community Infrastructure and Development.

Figure 8 Central Hawke’s Bay District Council three waters team structure

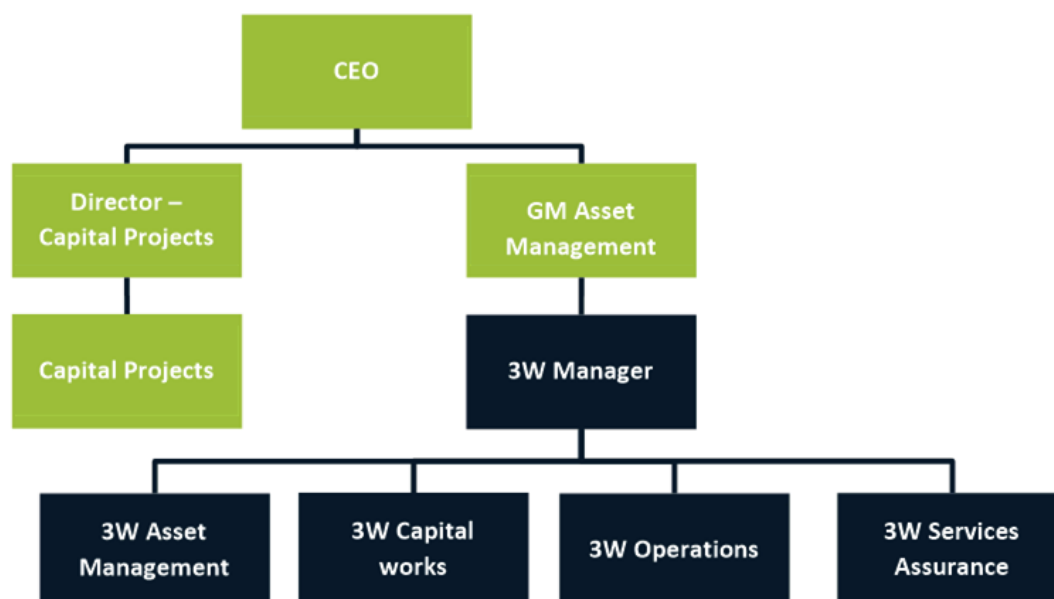




3.5.2 Hastings District Council

Hastings's structure is the most clearly delineated by asset class, with one three waters team covering asset management, capital works, operations and assurance. There is not the same degree of overlap with other infrastructure as in the other councils.

Figure 9 Hastings District Council three waters team structure



3.5.3 Napier City Council

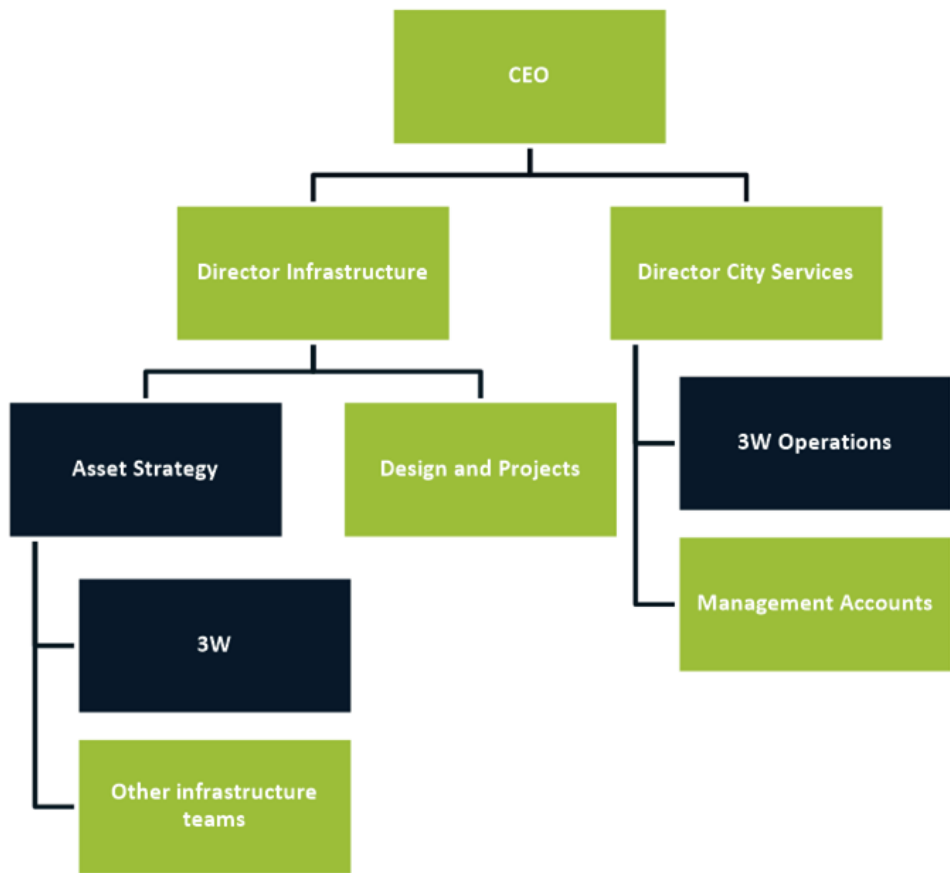
Napier has five teams delivering three waters services, reporting through to the Director of City Services and the Director of Infrastructure. These are

- Asset Strategy – includes a dedicated three waters team and an asset management team and development and standards team shared with transportation and parks, reserves and sportsgrounds
- Design and Projects – providing internal design and project management services across all of Council's assets
- Environmental Solutions – providing environmental compliance services
- City Services Management Accounts – providing accounting, procurement and administration support to the City Services team (which is wider than three waters)
- City Operations – providing operations of the water, wastewater and drainage networks and treatment plants, as well as transfer station operations.

The Napier service delivery model has a high degree of in-house services with a higher proportion of employees being functional specialists (e.g. asset management, capital projects) rather than asset specialists. The size of Napier's network allows for more specialised roles within the Council.



Figure 10 Napier City Council three waters team structure



3.5.4 Wairoa District Council

Wairoa’s water services are provided through the Community Assets and Services team. Due to the small size of Council, there are often only one or two positions for each function, with these individuals responsible for all asset classes. Wairoa has two dedicated three waters positions, with another five individuals providing support on a part-time basis.



Figure 11 Wairoa District Council three waters team structure



3.5.5 Hawke's Bay Regional Council

Hawke's Bay Regional Council has no direct role in the delivery of three waters services except in a number of overlaps between land drainage and urban stormwater. A small overlap of services occurs in the provision of stormwater services to urban customers through the use of drainage networks owned, operated and maintained by Hawke's Bay Regional Council. There are also very small areas of reverse overlap where a district council operates natural streams or manmade drains as part of a greater stormwater service to their customers.

The Regional Council's in-house Works Group undertakes the significant share of scheme maintenance and minor capital works for the land drainage schemes. The Works Group also undertakes work on a commercial basis for Napier, Hastings and Wairoa.

3.5.6 Relative scale of the three waters service

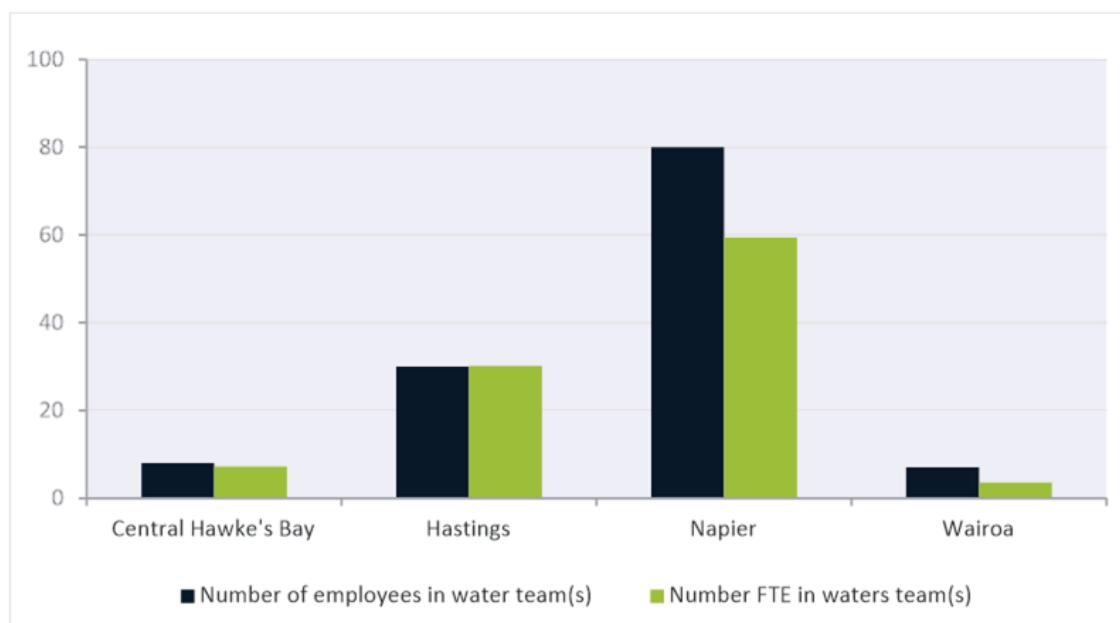
The number of employees directly involved in delivering water services varies, from less than ten in Central Hawke's Bay and Wairoa, through to 80 at Napier. This represents both the size of each council's three waters network, and the service delivery model utilised at each council. The number of full-time equivalent staff (FTEs) involved in the three waters delivery is generally lower than the number of employees as some employees work across a number of different council assets, not only three waters.

These figures exclude management and corporate support roles that are shared with other council areas. All three waters teams make use of centralised finance, human resources, information technology and customer services teams. The only exception to this is the dedicated management accounting team supporting the City Services division at Napier. Customer services is an important support function for three waters provision, with 24-hour contact centres necessary to allow rapid response to high priority incidents.

Note, the Napier figures are much higher due to the in-house operations team.



Figure 12 Number of employees and full-time-equivalent employees in each council's water team(s)



3.5.7 Service delivery models

The different service delivery models are illustrated in the tables below.

Table 7 Internal delivery of three waters services

	Central Hawke's Bay	Hastings	Napier	Wairoa
Asset management	Across all assets	Dedicated Three Waters	Across all assets	Across all assets
Capital projects	Dedicated Three Waters	Dedicated Three Waters	Across all assets	Across all assets
Operations	Dedicated Three Waters	Dedicated Three Waters	Dedicated Three Waters	Dedicated Three Waters

Table 8 Extent of in-house delivery and outsourcing for three waters

	Central Hawke's Bay	Hastings	Napier	Wairoa
Reticulation O&M	Outsourced	Outsourced	In-house with specialist contract support	Outsourced
Treatment O&M	Outsourced	In-house with contract support	In-house with specialist contract support	Outsourced
Professional Services	Outsourced on an as required basis	Design/project management largely outsourced	In-house with specialists contracted as required	Outsourced on an as required basis



We note the following expiry dates for the term contracts:

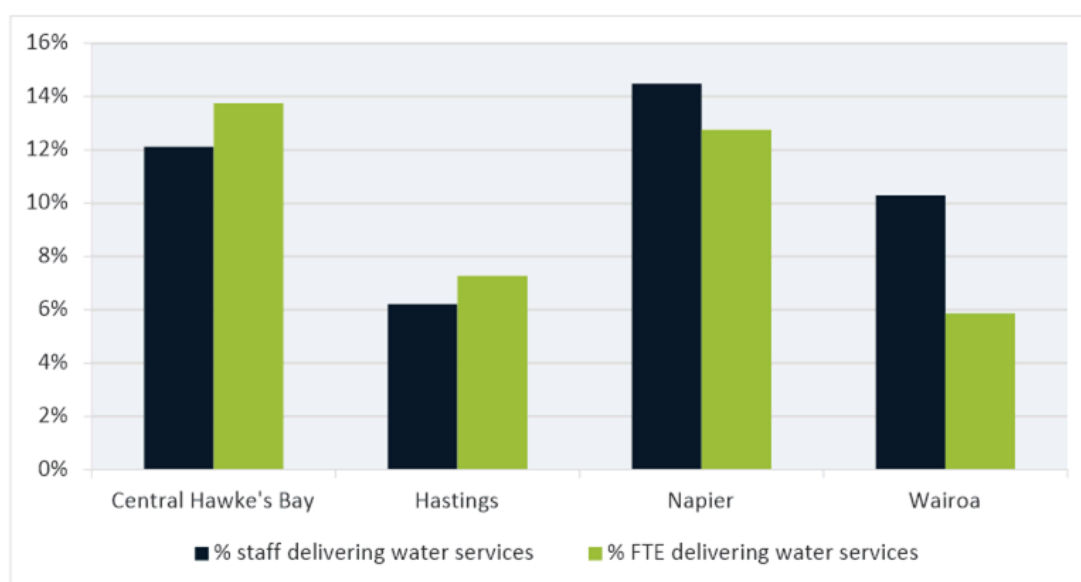
- Hastings Operations and Maintenance and Professionals Services contracts: June 2020
- Central Hawkes Bay Operations and Treatment contract: Dec 2023
- Wairoa three Waters Operations and Maintenance contract: (2 + 2 +2)

3.5.8 Scale relative to council size

The proportion of council staff directly involved in the delivery of three waters varies⁶, from 5% in HDC to 14% in NCC. This is driven by the different delivery models including

- the proportion of in-house delivery versus outsourcing, and
- the use of either dedicated functional teams (e.g. asset management, capital works) versus teams dedicated to the various asset types (e.g. water, transport).

Figure 13 Proportion of employees and proportion of FTEs involved in delivering three waters services



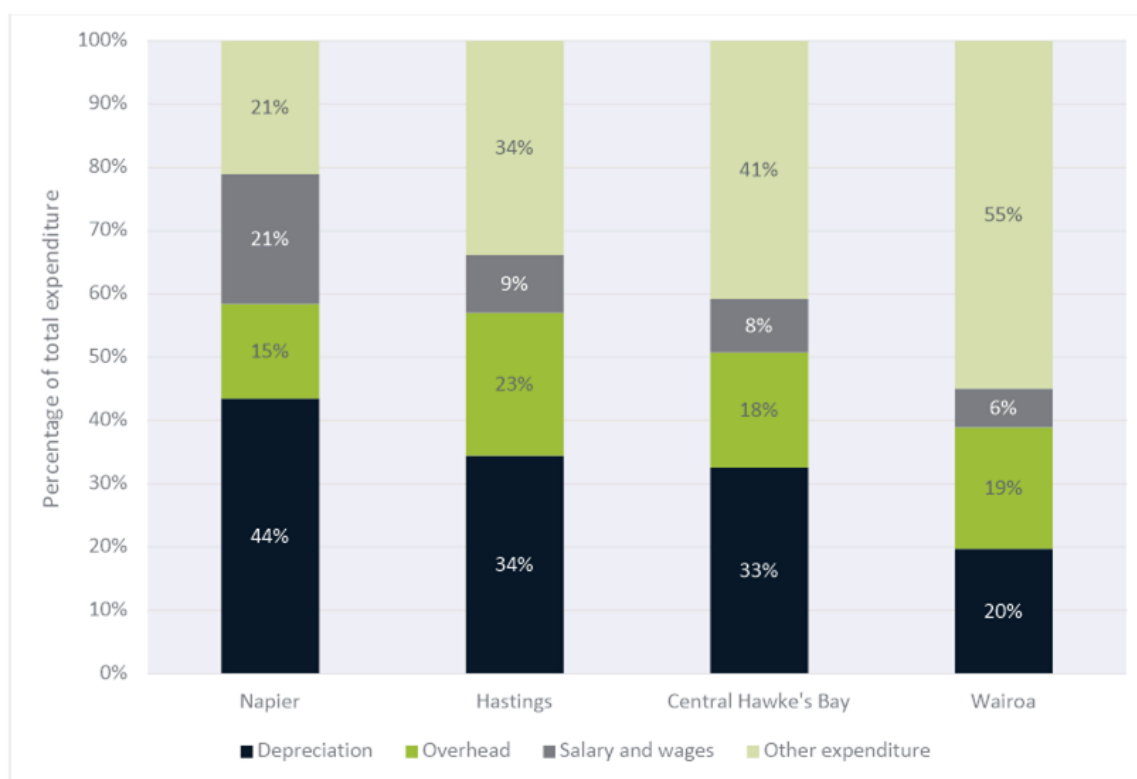
The proportion of the Councils' full-time equivalent staff delivering three waters services varies slightly from the proportion of employees. In Napier and Wairoa, the proportion is lower reflecting the higher number of employees who are engaged in three waters delivery as well as other activities (e.g. transport). In Central Hawke's Bay and Hastings, the proportion is higher due to the presence of a dedicated three waters team. To a lesser extent, these figures also reflect the different proportion of part-time employees at each council.

This can be further seen in the proportion of three waters expenditure on salaries and wages when compared to other operational expenditure. This varies from 6% in Wairoa to 21% in Napier. Equally it shows through the significant difference between other expenditure which varies from 55% in Wairoa to 21% at Napier. Other expenditure includes contractors, consultants, insurance, finance costs, potentially some maintenance or small repair costs, electricity, monitoring, etc. All the Councils will have a different mix of costs in that category depending on how they allocate and code expenses, and the extent to which they contract out services. Figure 14 provides a demonstration of the different approaches that the Councils use to deliver the services.

⁶ Note all figures exclude corporate services and customer services staff supporting three waters delivery.



Figure 14 Breakdown of three waters expenditure



3.5.9 Culture

Different cultures exist within the four territorial authorities. This is partly driven by the different size of the organisation, with 552 employees at Napier versus 66 at Central Hawke's Bay. This impacts the depth of corporate support such as the provision of dedicated water or infrastructure support roles e.g. infrastructure management accountants. In the smaller councils, officers are required to cover a number of different roles and are more likely to be generalists, while there are more specialists within the larger councils. Examples of specialists include a dedicated Contract Manager in Hastings and a Drinking Water Quality Lead and Network Control Systems Engineer in Napier. The different delivery models are important to allow the Councils to effectively and efficiently deliver services to their communities.

There are many other elements to culture including the level of customer focus, the degree to which the council is risk adverse, the willingness to work collaboratively across departments, willingness to embrace new technology and solutions to become more efficient and effective. There will naturally be differences between the Councils and differences in culture may become relevant if changes are made to the current service delivery model.

The culture also reflects the different urban or rural nature of the region as well as the key community priorities. The extent of in-house delivery versus outsourcing will also impact the culture of the team. A number of the Councils have had restructures in recent years and the HDC team has recently been through a significant period of change with the Government Inquiry into Havelock North Drinking Water.

Most of the councils have some very long-serving water services employees with tenures exceeding fifteen or twenty years.



This means that there is significant knowledge and expertise that exists within the water services teams. In some cases, however, the expertise and knowledge which has been built over years resides with single individuals in specialist roles.

Workforce risks identified by the Council's include aging workforce demographic, the need to mitigate potential loss of expertise through resignation/retirement, and the current tight labour market for systems, operations and water quality engineers and drinking water specialists. We note that structural engineers, construction project managers (roading and infrastructure) are on the NZ Immigration Skills Shortage List.

3.5.10 Employment terms and conditions

A mixture of individual employment agreements and collective agreements are used by the Councils, with varying terms and conditions. Specifics have not been provided for confidentiality reasons, however differences in terms and conditions include

- annual, sick and long service leave allowances
- provision of vehicles, terms of use and corresponding salary sacrifice
- standard hours of work
- overtime and on-call provisions
- superannuation provisions
- redundancy provisions
 - notice period
 - redundancy compensation
 - provisions regarding transfer of business to new entity including distance to location of new position.

Provisions vary by employee as well as between the different councils, with numerous versions of employment agreements depending on the tenure of employees.

3.6 Governance of three waters

3.6.1 Regional

Following the Havelock North water contamination event, a joint working group comprising members of Hastings District Council staff, Hawke's Bay Regional Council staff and Hawkes Bay District Health Board staff was established to implement the initial recommendations. Napier City Council staff subsequently joined the working group.

Subsequently a joint committee, the Hawke's Bay Drinking Water Governance Joint Committee was formerly established under the Local Government Act to provide governance oversight and direction in a range of drinking water related matters across the region. The joint committee has members from

- Hastings District Council
- Hawke's Bay Regional Council
- Hawkes Bay District Health Board
- Central Hawke's Bay District Council
- Napier City Council
- Wairoa District Council.

The Committee is Chaired by an independent member.



3.6.2 Councils

The current arrangement within each council is that each of the four Territorial Authorities have standing committees of council that have differing responsibilities and oversight of three waters.

- Wairoa District Council – Infrastructure Committee where the committee’s role is one of oversight, reviewing plans, policies and projects and making recommendations to Council on matters that include the three waters.
- Hastings District Council – Has both a portfolio leader “Our Water” to provide leadership, and a Works and Services Standing Committee with a broad range of delegated authority “to exercise functions, duties and powers” within approved budgets of LTP/AP on matters which include the three waters.
- Napier City Council – Strategy and Infrastructure Committee whose role is to provide leadership, develop policy, govern and make recommendations to Council on matters which include the three waters.
- Central Hawkes Bay District Council – Finance and Planning Committee role is to support Council in preparing key planning documents such as the LTP and AP, assess current and future projects and review policies on matters which include the three waters.

Ultimately however, in each case Council provides the governance of the three waters.

3.6.3 Involvement of Māori in governance of three waters

Each of the Councils has one or more Māori standing or advisory committees.

- Hawkes Bay Regional Council – Hawke’s Bay Regional Council Regional Planning Committee⁷ and Māori Committee
- Wairoa District Council – Wairoa Māori Standing Committee
- Hastings District Council – Hastings Māori Joint Committee
- Napier City Council – Napier Māori Consultative Committee
- Central Hawkes Bay District Council

While none of the committees have specific three waters responsibilities, their terms of reference or charters typically have broad ranging roles including advising the Council, considering and providing leadership on matters of importance to Māori and tangata whenua. Generally, the role of the committees is to make recommendations to Council but there are some cases where they are delegated decision-making powers e.g. Hastings for the allocation of Marae Development grants (within approved budgets).

⁷ The Regional Planning Committee was established under the Hawke’s Bay Regional Planning Committee Act 2005 with specific responsibilities relating to the Resource Management Act



4 Water

The table below summarises the major issues and challenges for the Councils relating to the water service.

Table 9 Major water issues (as identified by the Councils)

Central Hawke's Bay			Hastings		Napier		Wairoa	
Priorities	Challenges		Priorities	Challenges	Priorities	Challenges	Priorities	Challenges
Meeting Drinking Water Standards compliance. Particularly creating and implementing effective and approved Water Safety Plans	Changing environment with meeting the Drinking Water Standards	Development and implementation of the Source Protection Strategy	Resourcing the Water Strategy adequately	Water quality due to clarity, microbiological, chemical contamination.	Water quality due to clarity, microbiological, chemical contamination.	Accessing sufficient and appropriate information for strategic planning. (models, masterplans, strategies etc.)	Water leak management (Wairoa and Tūai) due to ageing infrastructure	Water leak management (Wairoa and Tūai) due to ageing infrastructure
Creating a second supply for Waipukurau to improve capacity and resilience	Predicting growth and where growth will impact on our networks	Upgrading water treatment facilities and reticulation network	Long term Aquifer health monitoring	Asset knowledge. Lack of asset data accuracy and completeness for all 3-W laterals networks. Above ground inventory is only at high level.	Asset knowledge. Lack of asset data accuracy and completeness for all 3-W laterals networks. Above ground inventory is only at high level.	Organisational capacity to deliver capital plan (projects team, engineering scoping. Constrained local capacity to do work (e.g. NCC Depot and external contractors).	Secure, safe water river intake (major bank erosion)	Maintaining secure, safe water river intake (major bank erosion)
Ensuring network capacity to meet growth	Design and construction of new treatment plants for Pōrangahau and Takapau to remove iron and magnesium	Management and development of backflow prevention programme	Changing compliance and regulatory framework	Water demand. Unmetered supply and therefore no disincentive to high consumption	Water demand. Unmetered supply and therefore no disincentive to high consumption		New water supplies (Blue Bay, Mahanga)	Ageing infrastructure difficult to fund due to economy of scale

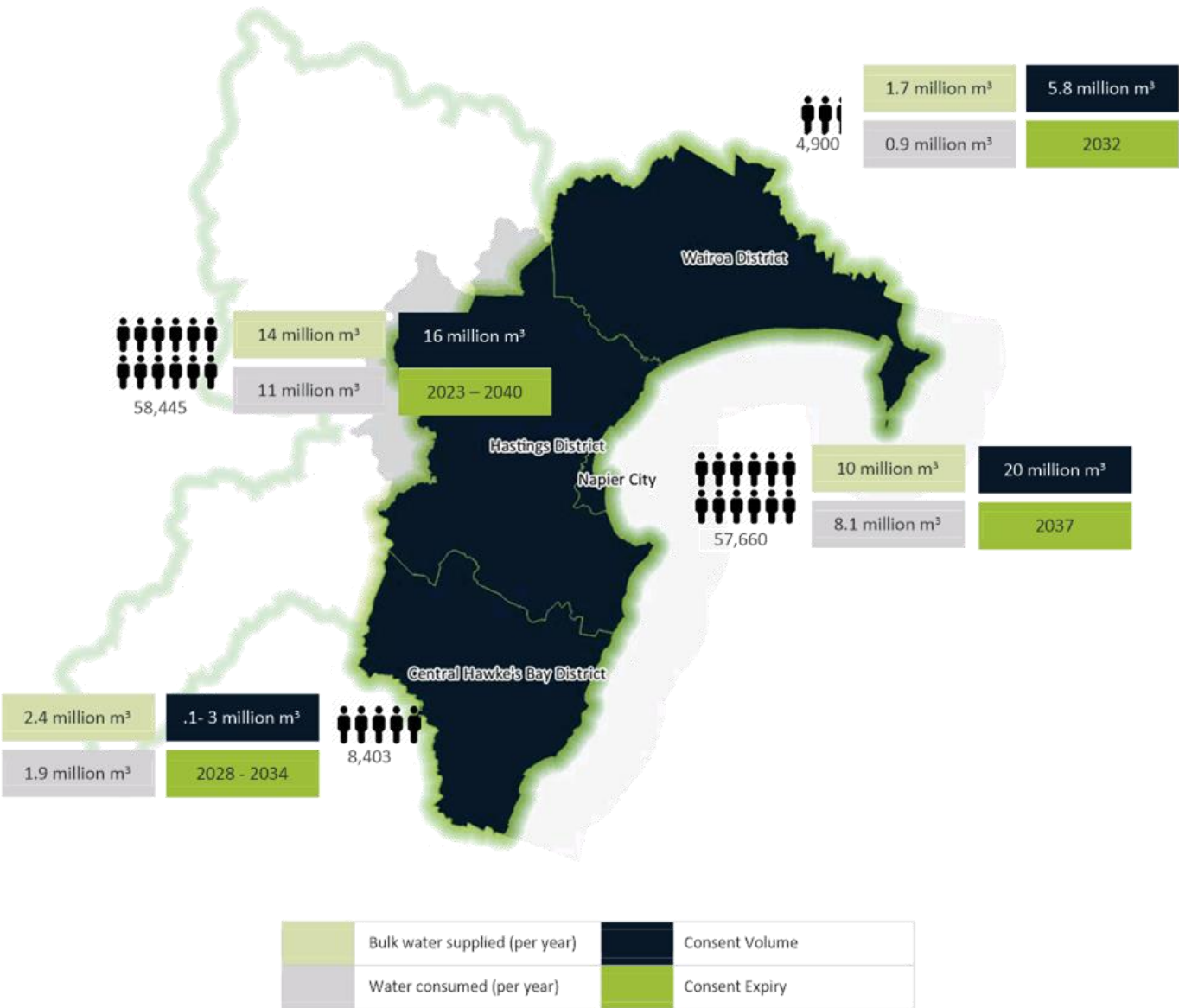


4.1 Assets

4.1.1 Water supplied and consumed

The figure below demonstrates the populations served, water supplied and consumed by each of the Councils respectively. Also depicted are the relevant consents; all consents are for total water take. The difference between the amount produced and the amount consumed is the unaccounted-for water. In this case, it is largely assumed to be network losses and of a much smaller scale, the unauthorised users of water.

Figure 15 Water supply service key information⁸





4.1.2 Asset information

The figures below set out information about the number and type of assets involved in the water supply service. The type of pipe material and age of the assets is also set out. This information begins to highlight the differences between the respective councils’ networks.

What follows in the next sections is a comparison of the condition of the network and comparison of the failure rates in the network.

Figure 16 Water pipe length

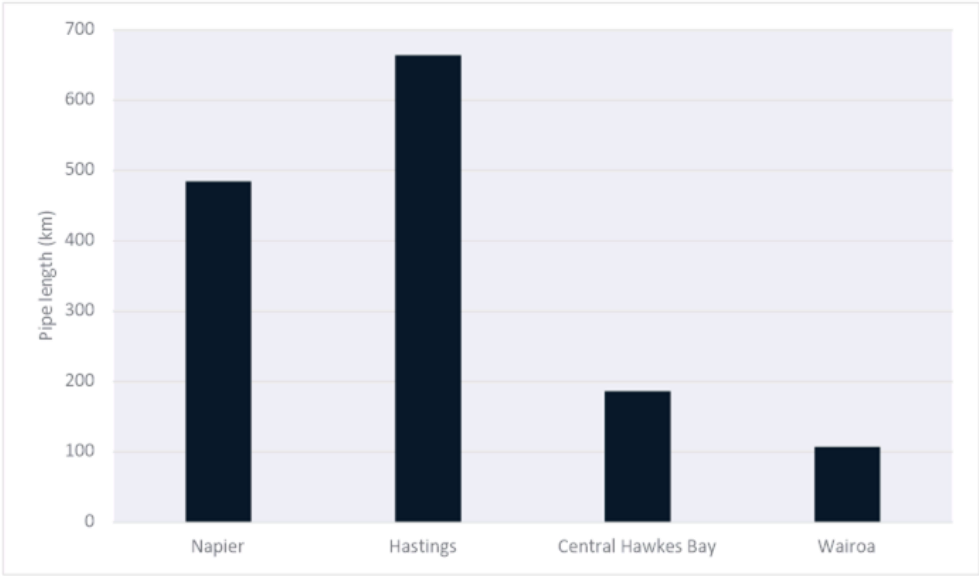
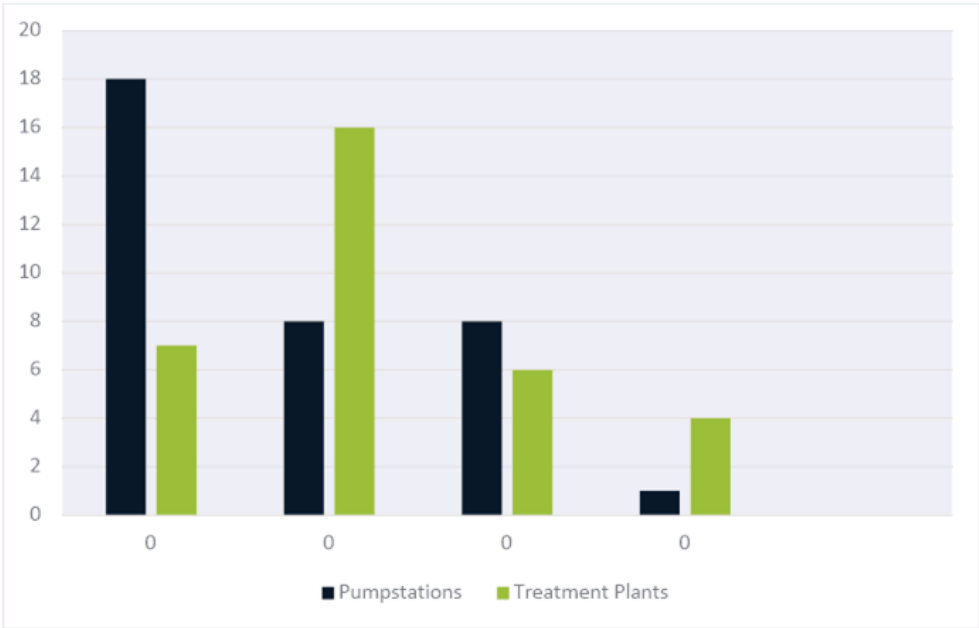


Figure 17 Pump stations and treatment plants

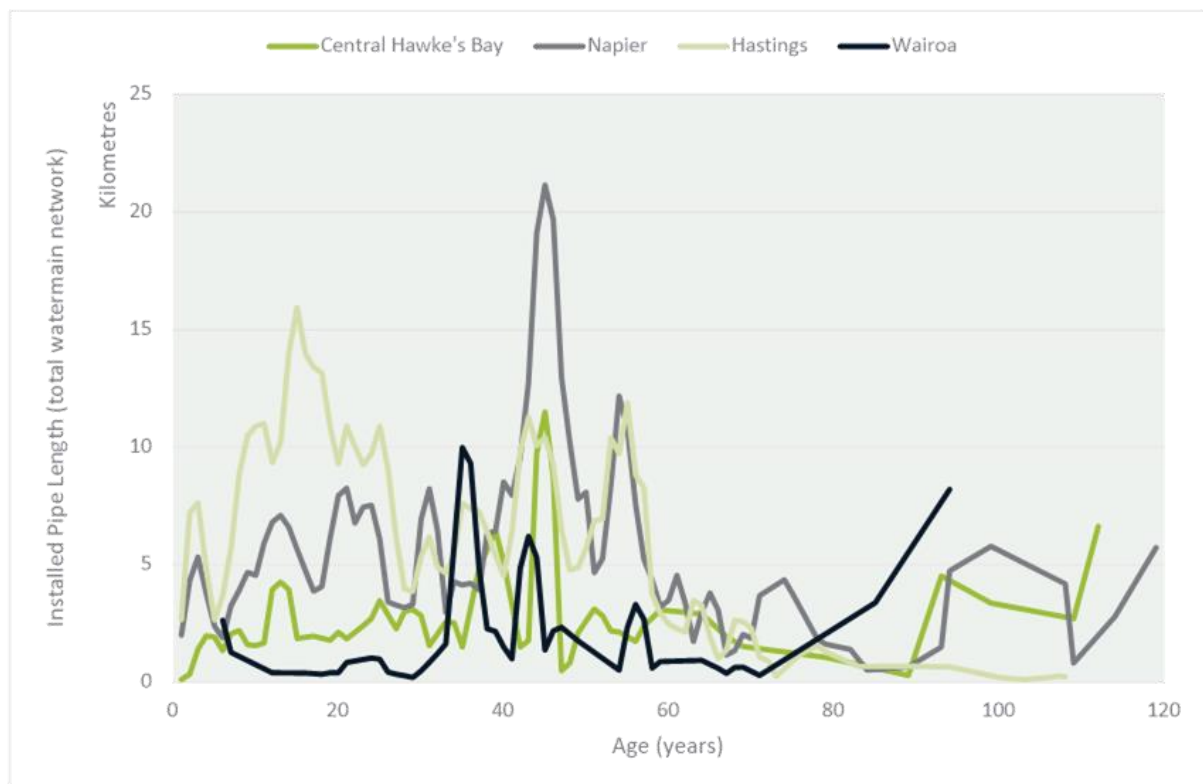




We note that treatment plants can vary in scale from small scale Chlorine dosing units at bore to full scale, complex water treatment plants.

The age of each council's watermains is shown below, with ages of some pipes exceeding 100 years. There is a significant length in the 40 – 45 year age bracket for all four councils due to urban expansion in the 1970s. Wairoa in particular noted the impact of aging infrastructure as one of its key challenges for its water network.

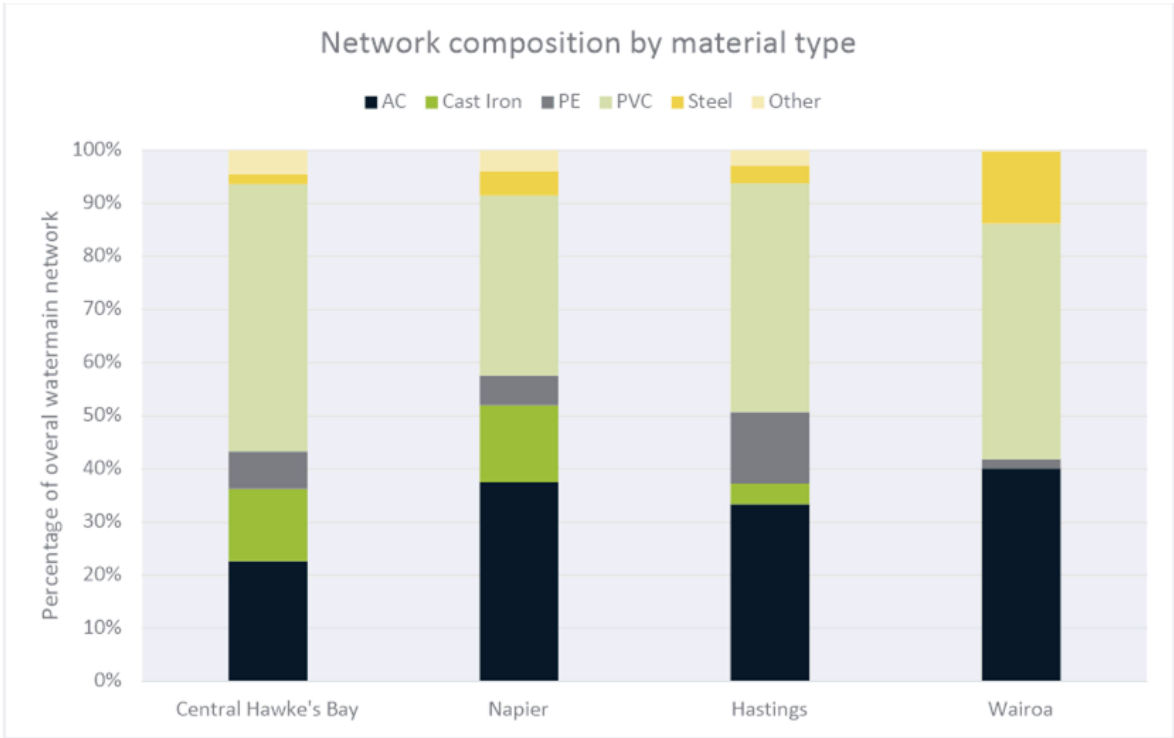
Figure 18 Age profiles of water networks (watermains)



As expected, due to the age profile of the network, there is a variety of materials currently in place. Figure 19 shows the composition of the water network by pipe material with the different pipe types explained in Appendix B. The type of pipes that make-up of each council's water network is relevant due to the different requirements for repair and replacement of each pipe type. We note that each council's forward program should take into account the different types of pipes within its network.



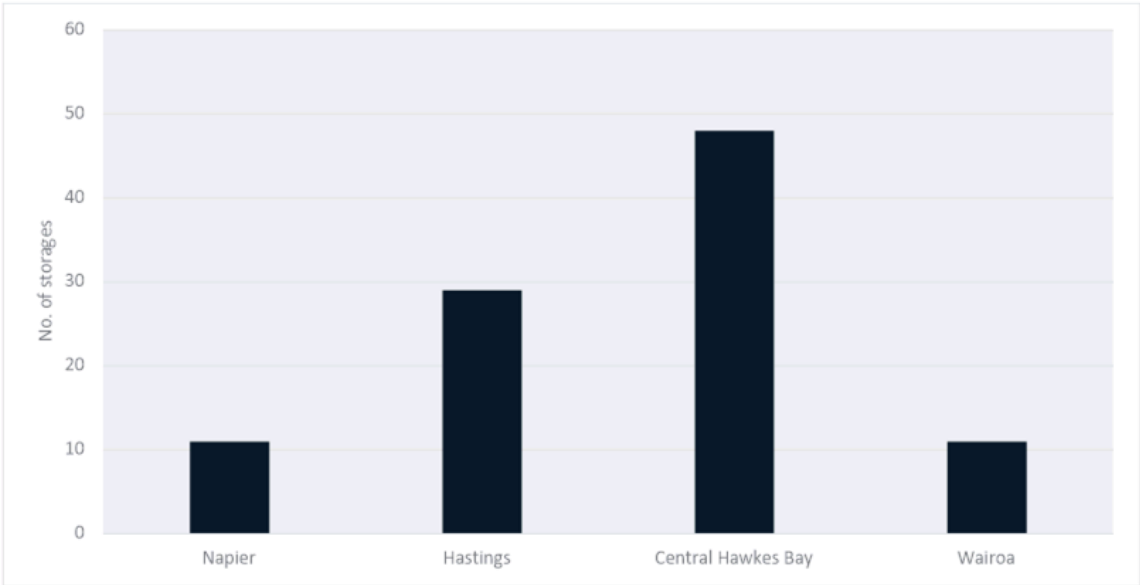
Figure 19 Network composition by material type



4.1.3 Water Reservoirs

There is also differences in the Council’s water storage capacity. This is show by reference to the number of reservoirs then also the capacity in cubic metres and hours of supply. Central Hawke’s Bay has a system characterised by a lot of smaller schemes and a large number of reservoirs. Napier and Hastings have a smaller number of reservoirs supporting larger networks servicing bigger populations.

Figure 20 Number of reservoirs

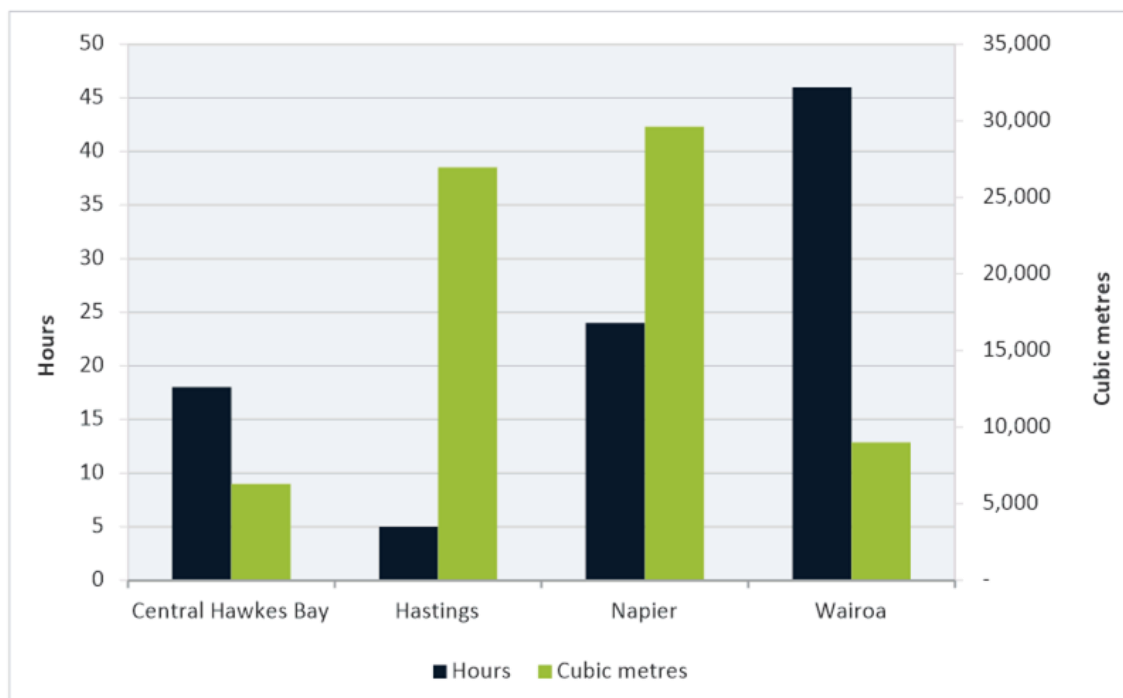




The Councils' water storage in the reservoirs also varies. Hastings has five hours (with Napier over 40 hours). Hastings storage is at a low level (five hours) and low in comparison to the other councils but an explanation from the AMP states

"The primary Hastings and Havelock North reservoirs only have approximately 5 hrs of storage during peak summer flows, however this is on the basis that Council relies on groundwater stored in the underground aquifers rather than investing in above ground storage. A greater reliance is therefore placed on the ability to extract water to meet peak demands."

Figure 21 Reservoir storage

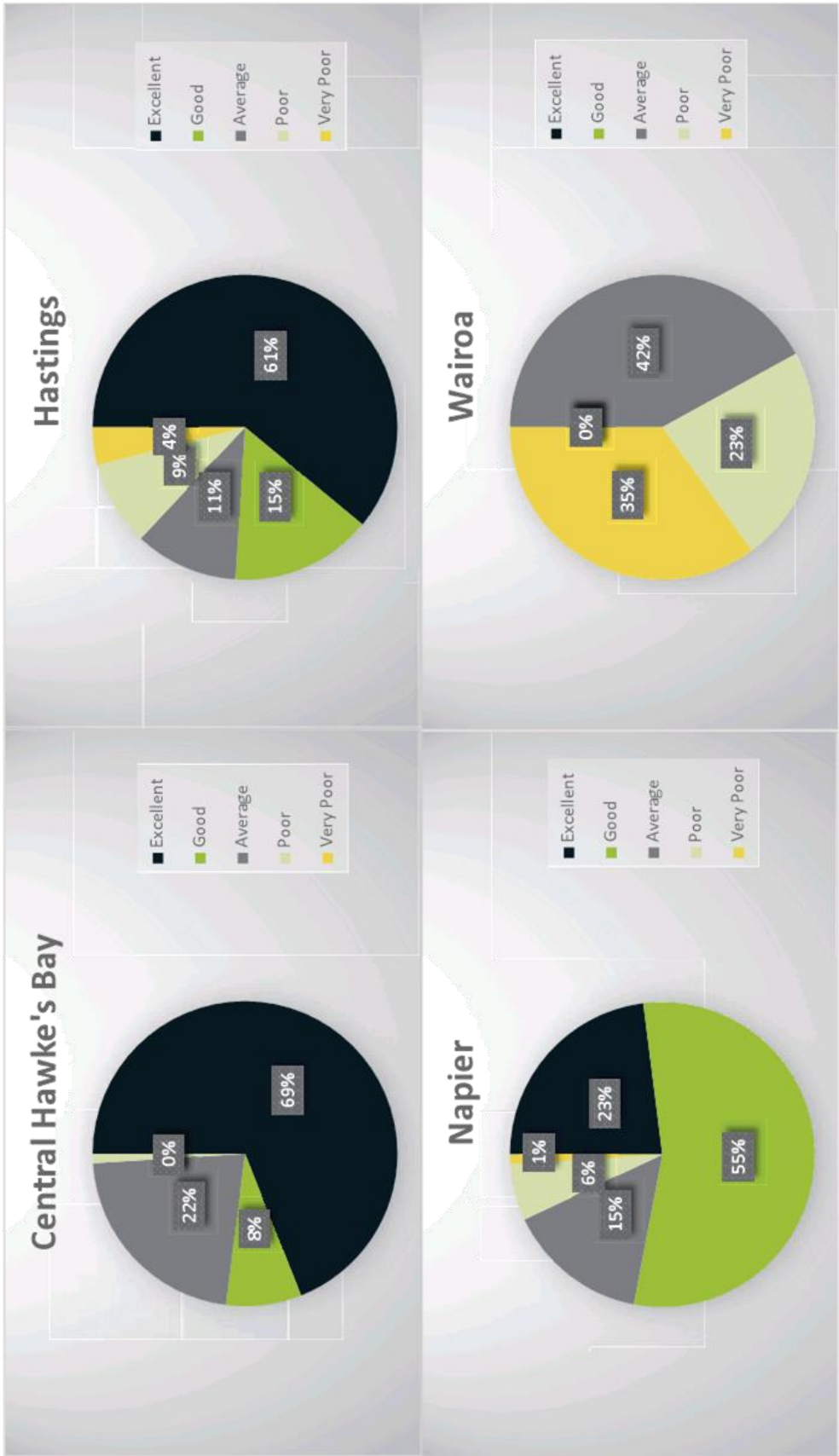




4.1.4 Asset Condition

A comparison of the respective condition of each council’s water services assets is set out below. While each council has different approaches to rating their assets and different confidence levels in the data on which the assessment is based there are significant differences in the condition of the assets across the group of councils.

Figure 22 Water asset condition (by length)





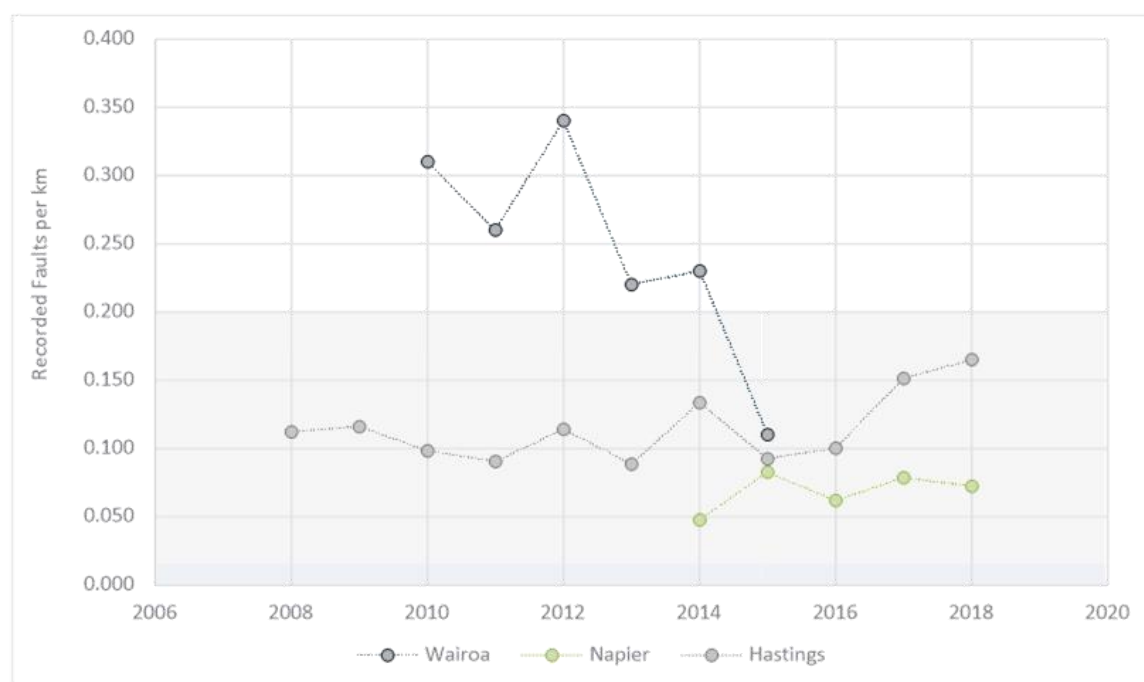
4.1.5 Analysis of pipe failures in the water network

An initial high-level statistical analysis of the water network was undertaken by reference to the number of failures on each Council's networks over a four-year period. The purpose of the analysis is to understand the actual performance of the network as compared to the condition of the network, which has been considered above.

The analysis found that there was no direct correlation between network composition, age and annual faults per kilometre. We note that Central Hawke's Bay was not able to provide failure data. A summary of the analysis is set out below with further detail (including analysis of failure by pipe type) is set out in Appendix B.

Overall, Napier has the lowest failure rates we note that this is based on a limited data sets so no strong conclusions should be drawn and Napier has one of the oldest networks and the second most AC pipes in their network. The results from the Councils who provided failure data linked to material type show no consistent pattern between material type and failure rates, though they do show decreasing failure trends in the worst material type, suggesting problems are being addressed as they arise.

Figure 23 Annual faults normalised by network length (all material types)



Further observations

Central Hawke's Bay has a similar age profile to Napier, but with more PVC and less AC installed. Hastings has the youngest average network age and the highest pipe length under 25 years old, implying there has been an active replacement programme (or new growth) in the area. The other three councils all have watermain ages peaking around the 40-year mark, which is typical of most New Zealand councils.



Hasting's younger network overall does not translate into less faults per kilometre, with Napier having less recorded faults over the 2014-2018 period. In fact, Napier has the lowest recorded faults per kilometre yet has the second oldest average network age and the second highest percentage of AC installed.

Wairoa has seen a sharp decline in the number of recorded faults per kilometre, particularly in AC watermains which make up 40% of their network, bringing down their total faults per kilometre. The overall age profile of the Wairoa network does not suggest an aggressive replacement programme has been underway, so this reduction is likely to be due to the targeted replacement of mains causing multiple failures.

The number of annual faults per kilometre has been relatively consistent in Napier and Hastings over the time period supplied. Hastings may be trending upwards, with an increase in failures in PVC and AC, but the trend is not yet well established.

Fault data by material is limited to two councils, Wairoa and Hastings. Comparing these two:

- Wairoa AC and Hastings steel watermains both have above 'average' annual faults per kilometre and both with a decreasing trend over time, suggesting these issues are being or have been addressed by the respective councils.
- PVC generally has the lowest annual fault rate per kilometre, though in Wairoa it is comparable to steel. This may be because of the relative urban/rural composition. Elsewhere we have seen rural PVC with poor installation techniques, pull down overall PVC performance.

4.1.6 Performance and levels of service

The Councils have varying levels of service and performance against those targets. Each council's targets for the Department of Internal Affairs (DIA) performance measures and their actual performance against these is set out in the table below this brief summary.

All the Councils currently meet the DIA mandatory performance measures for compliance with drinking water. Targets for water loss (network maintenance) range from 20% to 30%. Wairoa has a target of 30% and an estimated current level of 50%, Hastings is close to achieving its target of 20% and Napier meets its target of 22%. Central Hawke's Bay however records zero water loss against a target of 30%.

Demand management (water use per person) targets and performance against those targets varies considerably. Targets range from 400 to 666 litres per person per day with actual performance ranging from current usage of 350l/p/d⁹ to a high of 1420l/p/d.

Response times are fairly similar and all Councils report meeting these.

Customer satisfaction criteria targets vary significantly but show Councils are meeting these.

⁹ WSP Estimate based on information provided by the Councils



Table 10 DIA performance measures: water (17/18)

DIA performance measurement	Central Hawke's Bay		Hastings		Napier		Wairoa	
	Target	Current Actual	Target	Current Actual	Target	Current Actual	Target	Current Actual
DIA Non-financial performance Measure 1: <i>(safety of drinking water)</i> The extent to which the local authority's drinking water supply complies with: a) part 4 of the drinking-water standards (bacteria compliance criteria), and b) part 5 of the drinking-water standards (protozoal compliance criteria).	100%	- Otāne100% - Waipawa100% - Waipukurau100% - Takapau in progress - Kairakau in progress - Pōrangahau in progress	100%	a) Target achieved b) Target not achieved	100%	a) Not achieved b) Not achieved	100%	100%
DIA Non-Financial performance Measure 2: <i>(maintenance of the reticulation network)</i> The percentage of real water loss from the local authority's networked reticulation system (including a description of the methodology used to calculate this).	30%	0 %	20%	21%	22%	18.8%	25%	Estimate 50% - based on nightflows, Water Loss Management Plan in progress to better understand water loss
DIA Non-Financial performance Measure 3: <i>(fault response times)</i> Where the local authority attends a call-out in response to a fault or unplanned interruption to its networked reticulation system, the following median response times measured: a) attendance for urgent call-outs: from the time that the local authority receives notification to the time that service personnel reach the site, and b) resolution of urgent call-outs: from the time that the local authority receives notification to the time that service personnel confirm resolution of the fault or interruption.	a) <2 Hours b) <12 Hour	a) 10 Minutes b) 38 Minutes	a)1 Hour b) 2 Hours	a)43 minutes Hour b) 2.98 Hours	a) <90 minutes b) <6 Hours	a) 23 minutes b) 1 hour 23 minutes	a) 1 hour for Wairoa/Frasertown and 2 hours for other areas b) 4 hours from Wairoa/Frasertown and 5 hours for other areas Priority Work in Contract:	a) 1 hour for Wairoa/Frasertown and 2 hours for other areas b) 4 hours from Wairoa/Frasertown and 5 hours for other areas. Priority Work in Contract:



DIA performance measurement	Central Hawke's Bay		Hastings		Napier		Wairoa	
	Target	Current Actual	Target	Current Actual	Target	Current Actual	Target	Current Actual
c) attendance for non-urgent call-outs: from the time that the local authority receives notification to the time that service personnel reach the site, and d) resolution of non-urgent call-outs: from the time that the local authority receives notification to the time that service personnel confirm resolution of the fault or interruption	c) <6 Hours d) <72 Hours	c) 5hrs 54 minutes d) 16 Hours 51 minutes	c) 3 Days d) 7 Days	c) 2 Days d) 3 Days	c) <8 Hours d) <72 Hours	c) 1 hour 15 mins d) 1 hour 48 minutes	c) 2 days and d) 3 working days.	c) 2 days and d) 3 working days.
DIA Non-Financial performance Measure 4: (customer satisfaction) The total number of complaints received by the local authority about any of the following: a) drinking water clarity b) drinking water taste c) drinking water odour d) drinking water pressure or flow e) continuity of supply, and f) the local authority's response to any of these issues. expressed per 1000 connections to the local authority's networked reticulation system	<5	0	1	9.16	a) <2 b) <2 c) <2 d) <2 e) <2 f) <2	a) 30.42 b) .15 c) 1.04 d) 1.5 e) 1.73 f) .27	a) 20 b) 20 c) 20 d) 40 e) 40 f) 20	a) 0 b) 0 c) 0 d) 2.87 e) 3.83
DIA Non-performance Measure 5: (demand management) The average consumption of drinking water per day per resident within the territorial authority district. (litres per person per day)	666	1420 litres per connected property	400	427.77	<430	560	550	Not every property is metered, WLMP underway to better understand consumption



4.2 Financial

The average water rates for the 2018/19 financial year are detailed below. The amount paid for water services in Wairoa and Central Hawke's Bay is higher than that of Napier and Hastings.

Table 11 Water charges

	Central Hawke's Bay	Hastings	Napier	Wairoa
Average residential rate for water ¹⁰	\$668	\$357 ¹¹	\$234	\$698

Detailed budgets for the 2019/20 year show significant variation across the region in the amount that ratepayers are paying for water services.

Table 12 Water revenue

	Central Hawke's Bay	Hastings	Napier	Wairoa
Total revenue from targeted rates	\$3,027,880	\$10,938,000	\$5,228,797	\$2,442,037
Total revenue from general rates	0	\$83,000	0	0
Percentage of targeted rates revenue from metered water	14%	4.5%	11%	34%

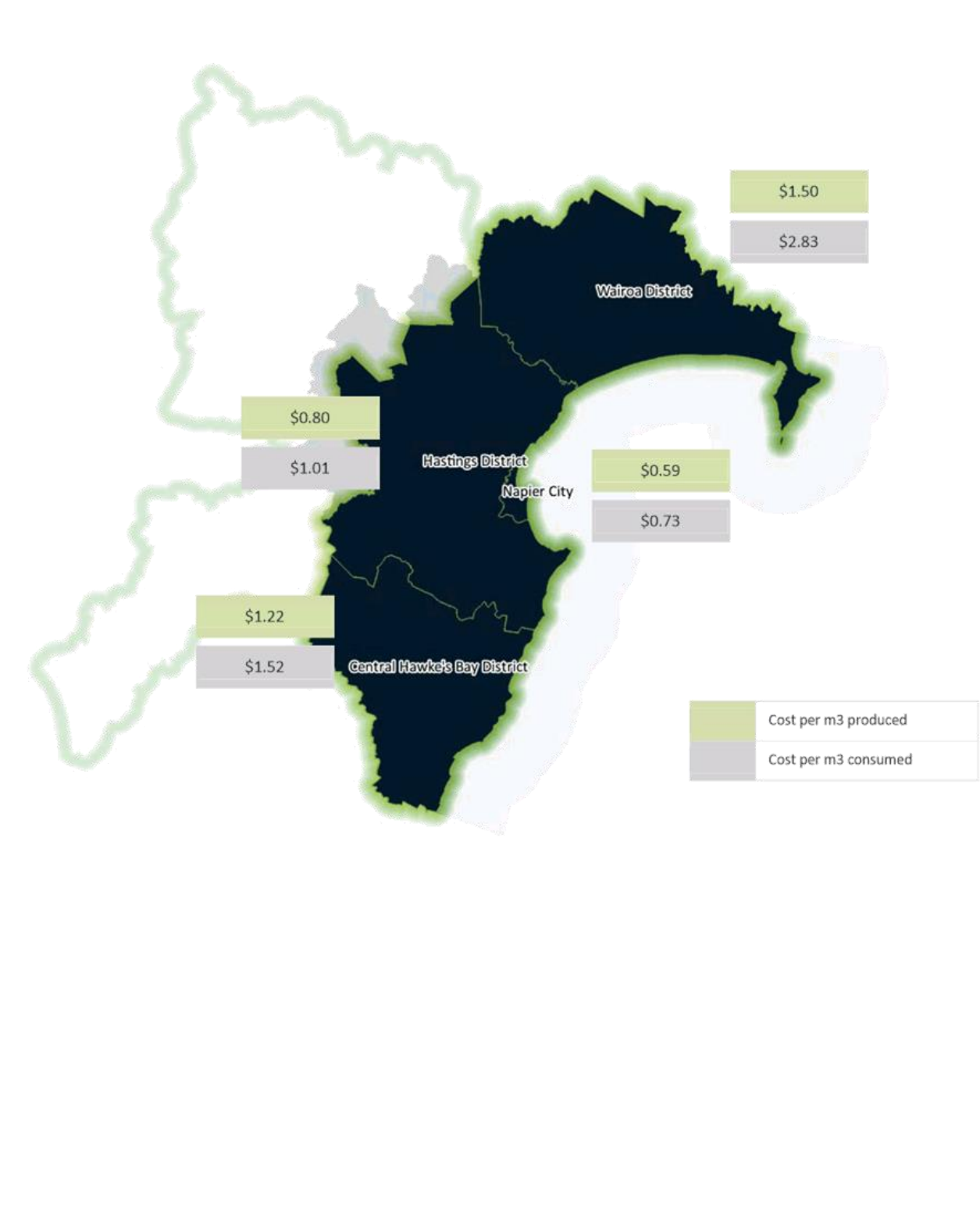
These differences are also reflected in the cost for each council of water consumed and produced within the district as shown in Figure 24 below. The differences between the cost produced and the cost consumed again represents the unaccounted-for water which is predominantly network losses.

¹⁰ Weighted average across schemes

¹¹ Plus contribution from general rates



Figure 24 Cost¹² per cubic metre of water produced and consumed in Hawke’s Bay Region



¹² Total operating cost including depreciation divided by water produced/consumed



The levels of debt associated with water services across each of the Councils, as per 2019/20 detailed budgets, is outlined in Table 13 below. This comprises a mix of internal borrowings and allocations of external debt, with a range of different loan terms.

Differences in the debt to asset ratio across the Councils highlights key differences in each council's approach toward funding and financing the purchase of new infrastructure assets.

Table 13 Water debt

	Central Hawke's Bay	Hastings	Napier	Wairoa
Total debt	\$10.4 million	\$65.3 million	\$8.0 million	\$0.4 million
Debt to revenue ratio¹³	342 %	576 %	132 %	15 %
Average loan term	18 years	25 years	25 years	44 years
Debt to asset ratio¹⁴	26 %	40 %	7 %	2 %
Interest cost per annum	\$316,000	\$1,964,000	\$222,000	\$2,000
Interest to revenue¹⁵	10 %	17 %	6 %	0.1 %

Expenditure on asset renewal has been compared across the four councils based on the published 2018-2028 LTPs updated with current three-year budgets provided by each council. We note that a number of the Councils, through the current annual planning process, looked to bring forward some of the capital works that are currently in the outer years of the LTP. These have been taking into account.

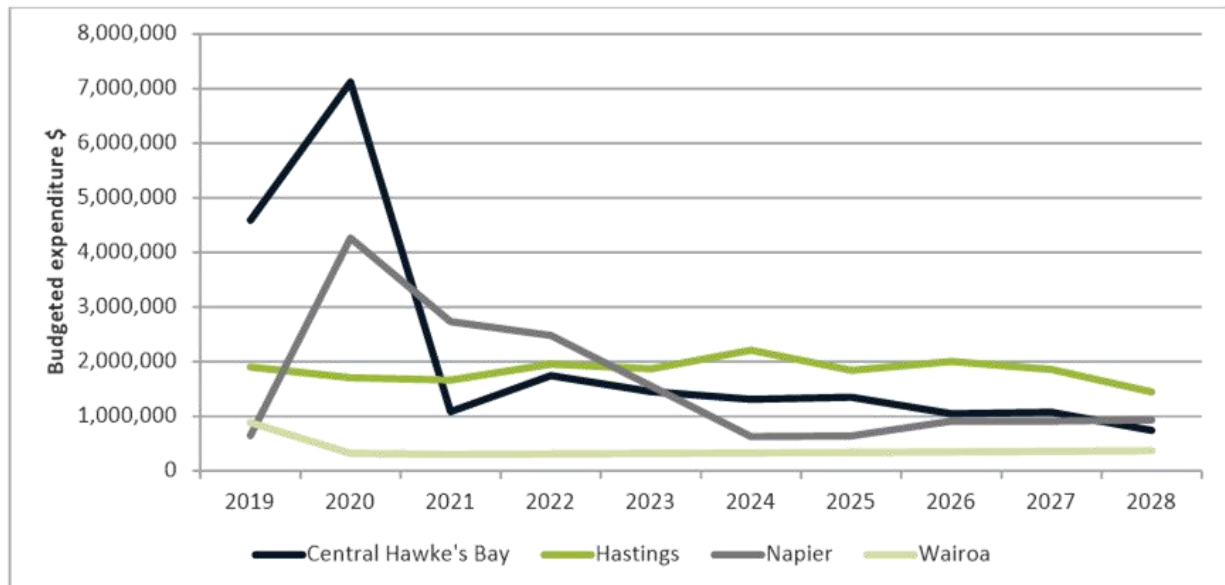
¹³ The LGFA limit on borrowing for this ratio is 250% across a council's entire business

¹⁴ 2019/20 total projected debt divided by 2019/20 project net book value of infrastructure assets

¹⁵ The LGFA limit on borrowing for this ratio is 20% across a council's entire business

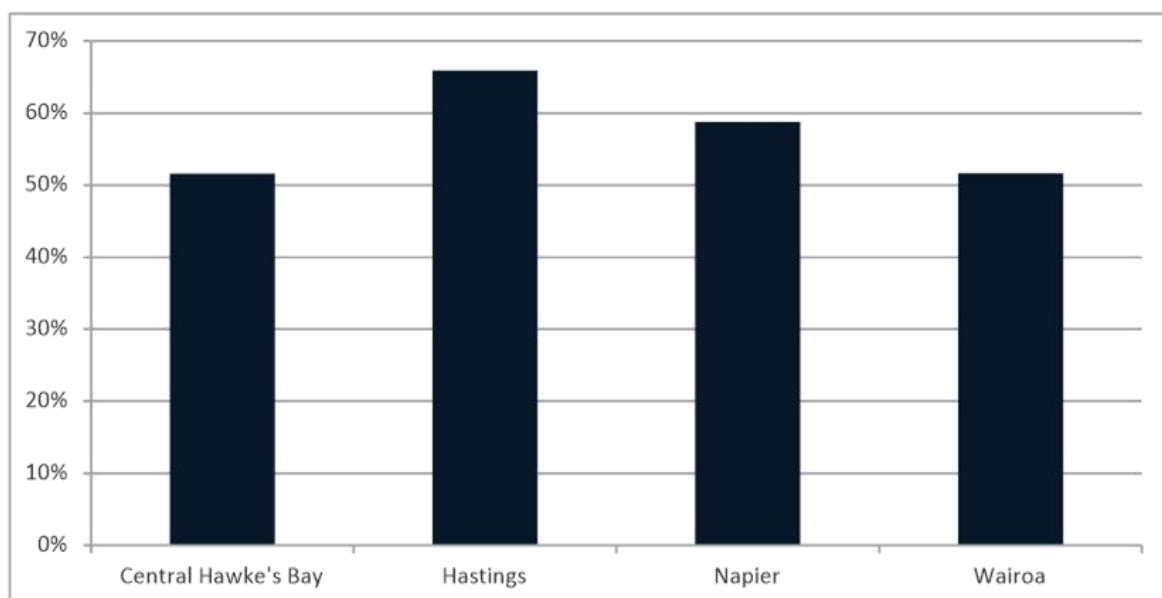


Figure 25 Water assets planned renewals investment



The asset consumption ratio, shown below, is a financial measure of the maturity of an asset base. The ratio compares the written down value of assets with their replacement cost to show an average amount of useful life left in the assets. The ratios below relate to the 2018 financial year (i.e. the last complete year), and highlights differences between the urban and rural councils.

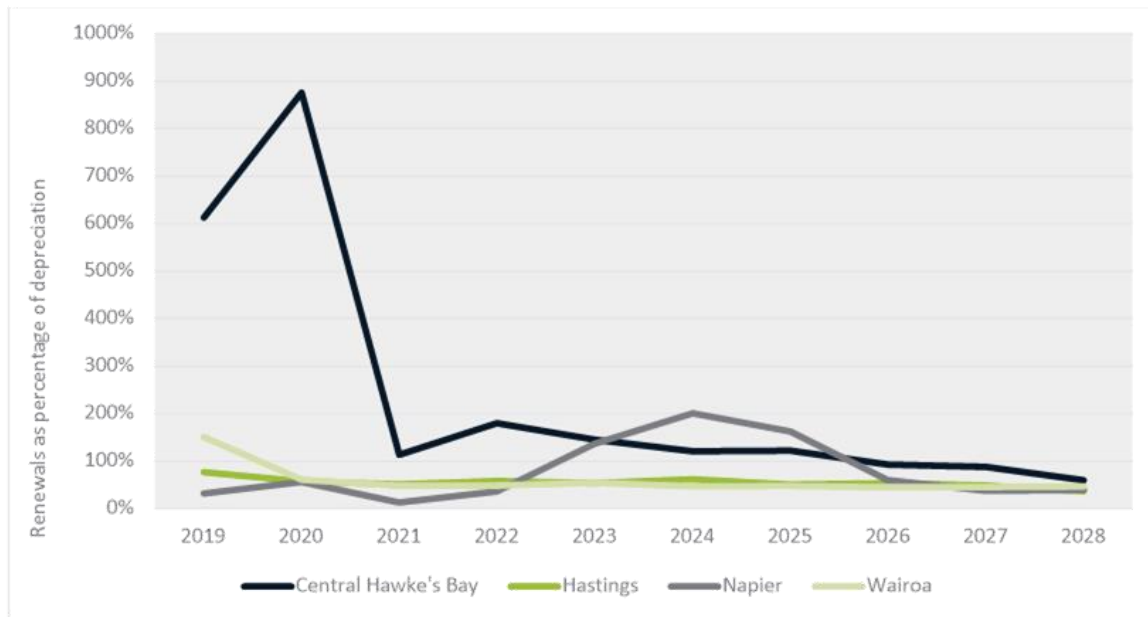
Figure 26 Asset consumption ratio for water assets



Planned asset renewals, when compared to depreciation of water assets are high for Central Hawke's Bay over the next five years, with Napier also planning a marked increase in renewals spending during the long-term plan period.

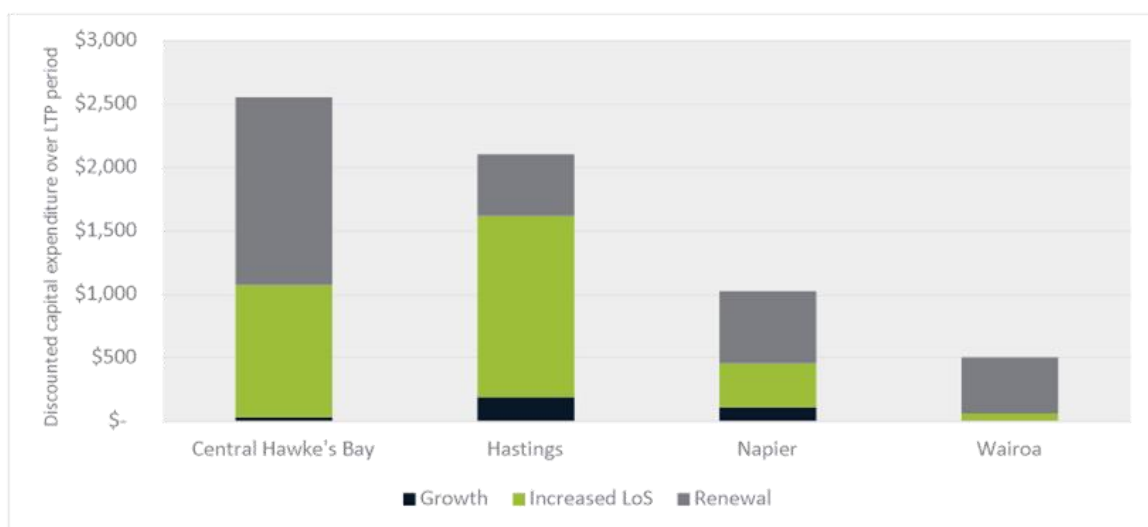


Figure 27 Water asset renewal ratio (long term plan)



Despite low renewals expenditure compared to most of the other Hawke's Bay councils, Hastings has significant investment planned in assets to increase level of service over the long-term plan period. Similarly, almost half of Central Hawke's Bay's planned investment in the water assets is directed toward improving levels of service.

We also note that the 2018 LTPs do not include any potential costs for as yet unspecified upgrades required to meet any increased environmental standards coming out of the three waters reform. That means the capital expenditure over this period may well be much higher than was planned at the time.

Figure 28 Planned water capital expenditure per ratepayer (Long term plan¹⁶, NPV 5% discount rate)

¹⁶ Ten-year period, years 2019/20, 2020/21 and 2021/22 from detailed budgets



Below is a description of what the growth and increased level of service expenditure includes for each council.

Central Hawke's Bay

- Second supply and building resilience in Waipukurau
- Building resilience in Waipawa
- Alternative supply in Otāne
- Treatment upgrades in Takapau, Pōrangahau, Kairakau and Puerere

Hastings

- To meet additional demand and improve levels of service such as treatment and storage improvements and capacity upgrades to water supplies and reservoirs at Clive, Eastbourne, Frimley Havelock North, Wilson road plus others. New reservoir at Havelock Hills. Upgrades and renewals and small suppliers
- To provide infrastructure in line with the Heretaunga Plains Urban Development Strategy and Development updates

Napier

- Commissioning a new reservoir in 2018
- Replacing the Enfield reservoir - one of Napier's critical reservoirs - in 2022-2025
- Installing an additional supply main from the Taradale bore field to the Taradale reservoir as part of the network reconfiguration to improve water quality

Wairoa

- Meet additional demand and improve levels of service such as new main supply pipe from Blue Bay bore, Blue bay bore rehabilitation and Blue bay water treatment plant upgrade
- Install earthquake valves
- Install Chlorine analysers



5 Wastewater

The table below summarises the major issues and challenges for the Councils relating to the wastewater service.

Table 14 Major wastewater issues (as identified by the Councils)

Central Hawke's Bay			Hastings		Napier		Wairoa	
Priorities	Challenges	Priorities	Challenges	Priorities	Challenges	Priorities	Challenges	
Wastewater treatment for the Wapiawa, Waipukurau and Otāne wastewater system	Community and compliance expectations along with funding impact	Continuing to maintain Resource consent compliance, including management of trade waste	Ensuring processing in place to manage and mitigate odour and corrosion in the reticulation	Inflow and Infiltration (I&I) compromises system capacity during prolonged wet weather	Being able to correlate LOS, rates funding and O&M in a meaningful way for strategic planning and community understanding of value returned for rates paid	Consent compliance - underway	Re-consenting of Wairoa wastewater discharge ongoing key milestones to achieve	
	I&I reduction	Wastewater treatment for the Wapiawa, Waipukurau and Otāne wastewater system	Continuing to implement the renewals strategy, including improvements where required for capacity increase (informed from modelling and performance)	Network resilience	Consent renewal for discharge of treated effluent requires renewal in 2026 and may require additional level of treatment	Compliant systems	Ageing infrastructure difficult to fund due to economies of scale	
Capacity to service growth	Predicting growth and where growth will impact on our networks	Reticulation and treatment resilience planning and climate change responses	Climate change impacts on critical assets i.e. WWTP	Integrity and capacity of ocean outfall during prolonged wet weather (I&I)		Infiltration and inflow	Significant negative impact of inflow and infiltration on the entire wastewater system	



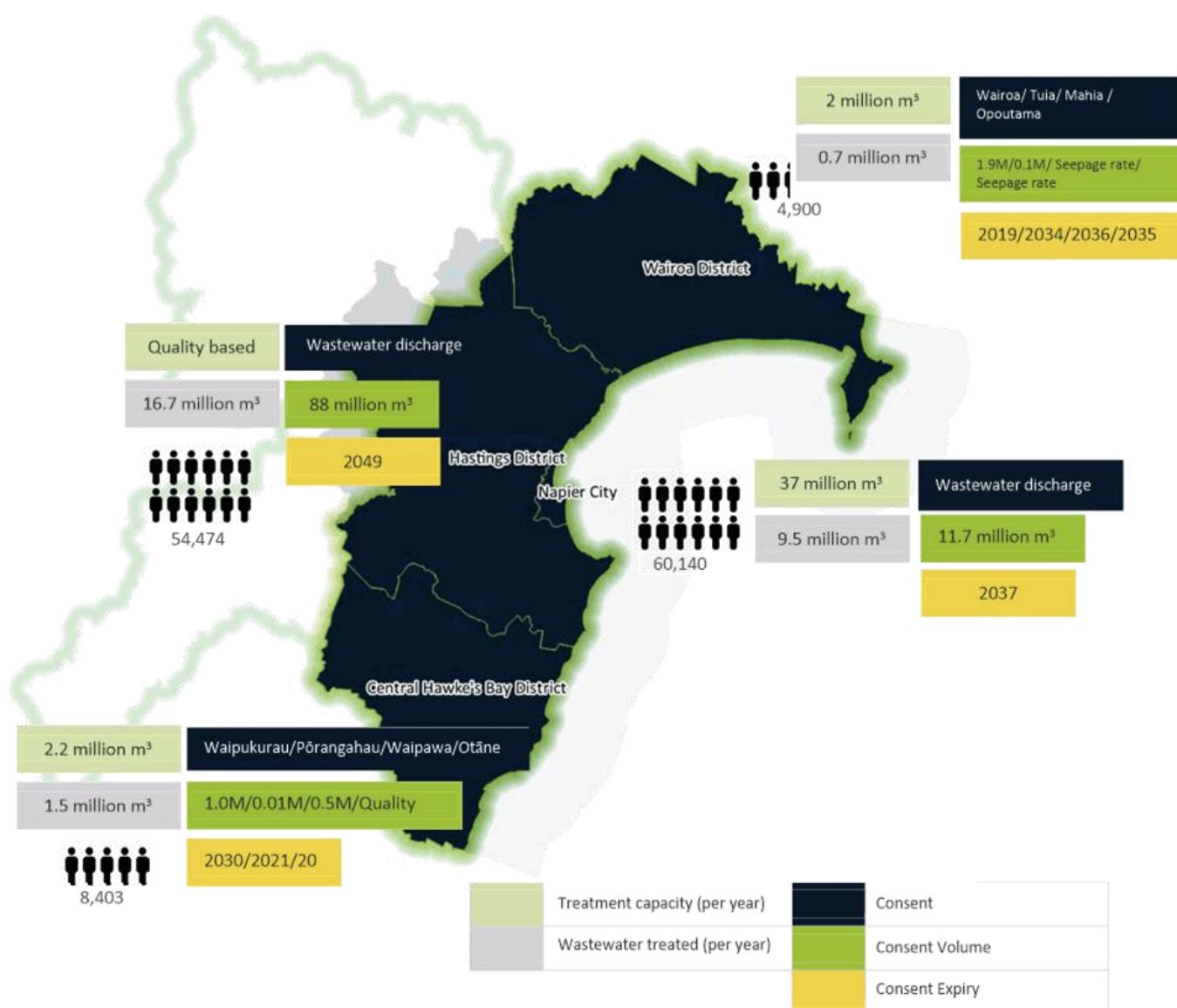
5.1 Assets

5.1.1 Wastewater treatment capacity and treated

The figure below demonstrates the populations served, water supplied and consumed by each of the Councils respectively.

Also depicted are the relevant consents showing the Central Hawke's Bay and Wairoa have consents that will need to be renewed imminently. We note that Napier, Hastings and Wairoa consents are for coastal discharges whereas Central Hawke's Bay is to surface water. All councils with consents expiring soon were found to be aware of the expiry and were in or had begun the process to seek renewals of consents. However, we note there are some ongoing issues with Wairoa's new consent.

Figure 29 Wastewater service key information





5.1.2 Wastewater asset information

The figures below set out information about the number and type of assets involved in the wastewater service. The age of the assets is also set out. This information begins to highlight the differences between the respective council’s networks. Napier and Hastings have longer networks with fewer treatment plants, whereas Central Hawke’s Bay and Wairoa have smaller networks with a larger number of treatment plants.

What follows in the next sections is a comparison of the condition of the network to provide a fuller picture of the assets.

Figure 30 Wastewater pipe length

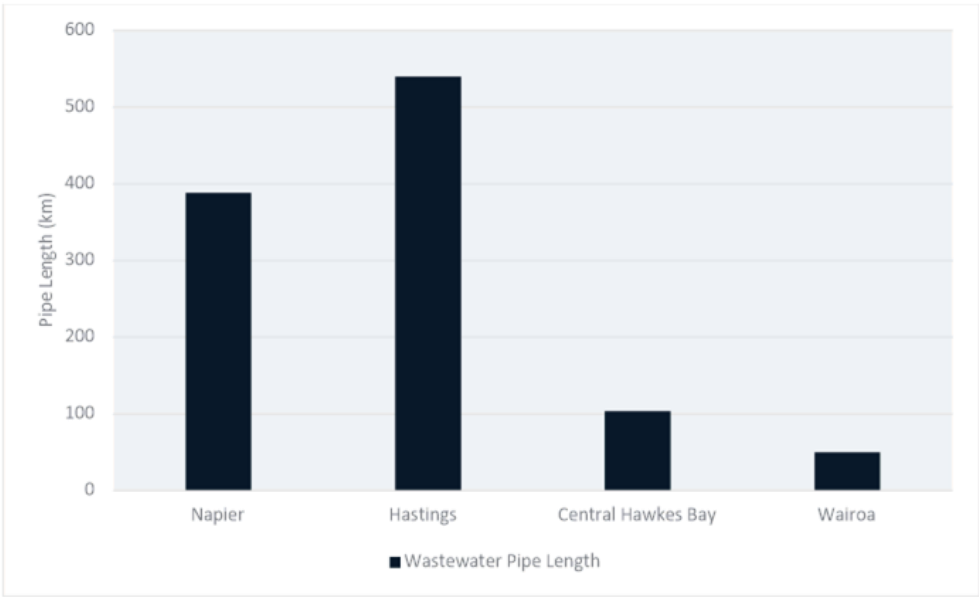
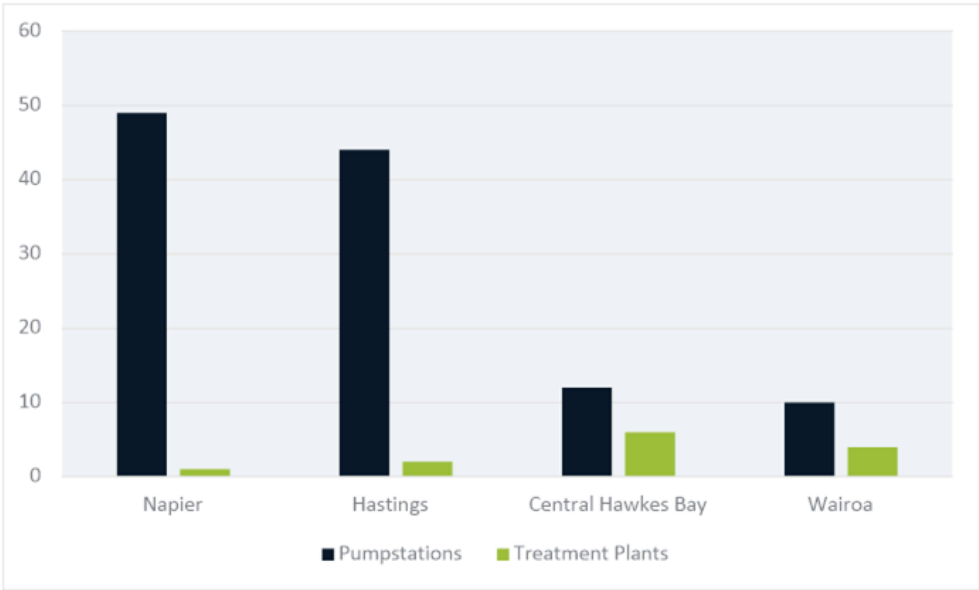


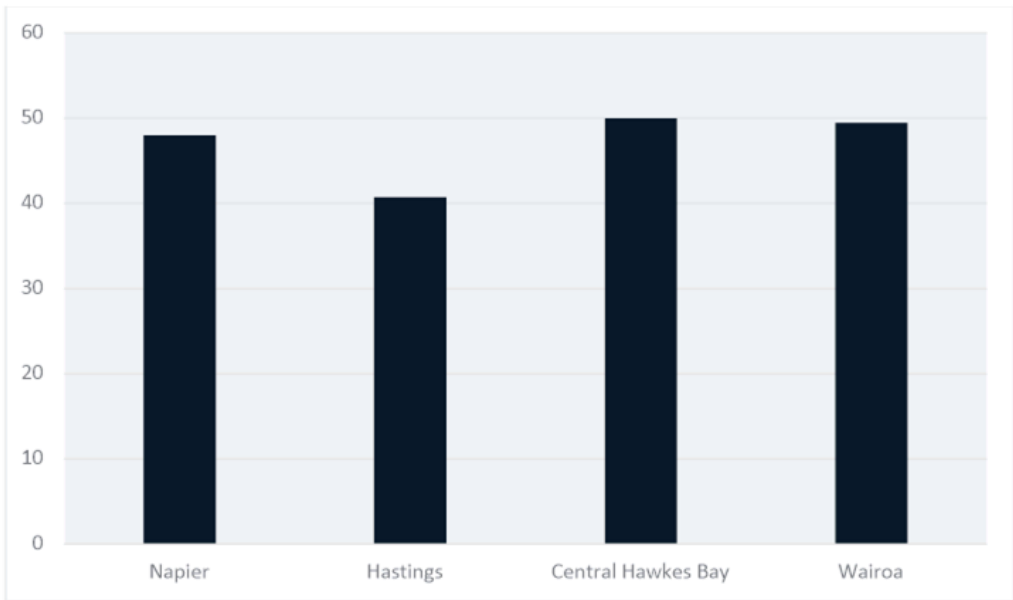
Figure 31 Number of pump stations and treatment plants





The average age of the pipes is between 40 and 50 years for all the Councils.

Figure 32 Wastewater pipe average age

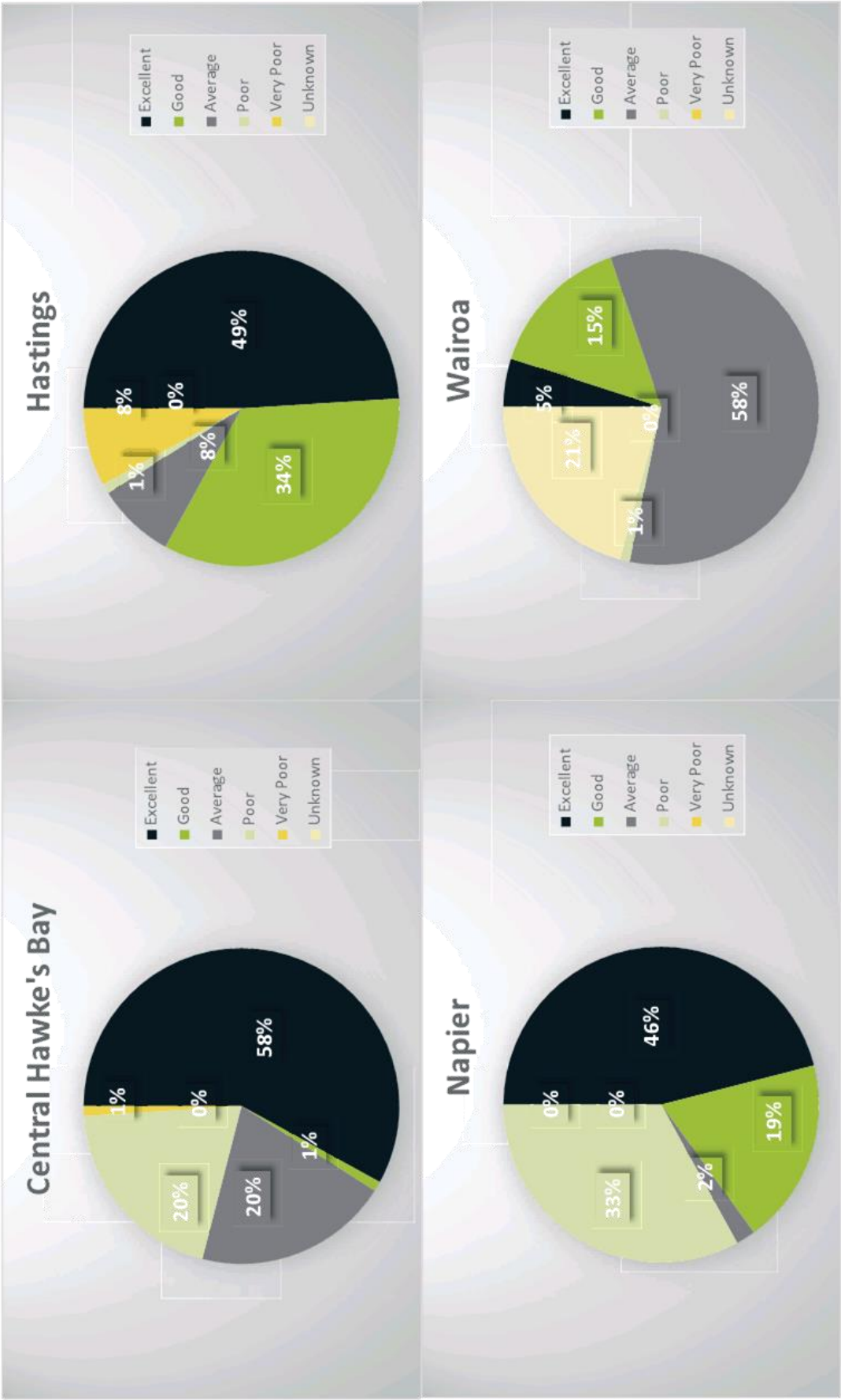


5.1.3 Asset Condition

A comparison of the respective condition of each council’s wastewater services assets is set out below. While each council has different approaches to rating their assets, and different confidence levels in the data on which the assessment is based there are significant differences in the condition of the assets across the group of councils with a significant proportion of the Wairoa network in an unknown condition.



Figure 33 Wastewater asset condition (by length)





5.1.4 Performance and levels of service

The Councils have varying levels of service and performance against those. Each council's targets for the DIA performance measures and their actual performance against these is set out in the table below this brief summary.

All currently meet the DIA mandatory performance measures for compliance with wastewater discharge resource consents except to note that Wairoa has reported one abatement notice.

Response times vary and all the Councils report meeting these. In many cases the response times achieved (as reported) are significantly less than required by the measure.

Customer satisfaction criteria targets vary significantly with all Councils meeting these.



Table 15 DIA performance measures: wastewater (17/18)

DIA performance measurement	Central Hawke's Bay		Hastings		Napier		Wairoa	
	Target	Current Actual	Target	Current Actual	Target	Current Actual	Target	Current Actual
DIA Non-Financial Performance Measure 1: (system and adequacy) Number of dry weather sewerage overflows from the Council's wastewater System, expressed per 1000 sewerage connections to that sewerage system.	<10	1.15	5	0.85	<0.1	0.24	16 in total across the network	0
DIA Non-Financial Performance Measure 2: (Discharge compliance) Compliance with Council's resource consents for discharge from its sewerage system measured by the number of: a) Abatement notices b) Infringement notices c) Enforcement orders d) Convictions	a) 0 b) 0 c) 0 d) 0	0	0	a) 0 b) 0 c) 0 d) 0	a) 0 b) 0 c) 0 d) 0	a) 0 b) 2 c) 0 d) 0	a) 0 b) 0 c) 0 d) 0	a) 1 b) 0 c) 0 d) 0
DIA Non-Financial Performance Measure 3: (Fault response times) Where the Council attends to sewerage overflows resulting from a blockage or fault in the Council's sewerage system, the following median response times are measured:	a) <1 Hours b) <4 Hours	a) 28 minutes b) 1hr 31 minutes	a) 1 Hour b) 1 day	a) 0.5 Hour b) 2.25 hours	a) <2 Hours b) <8 Hours	a) 1.09 hours b) 2.32 hours	The target for this performance measure is: a) 1 hour for Wairoa and 2 hours for Tuai areas; b) 4 hours for Wairoa and 5 hours for Tuai areas.	The target for this performance measure is: a) 1 hour for Wairoa and 2 hours for Tuai areas; b) 4 hours for Wairoa and 5 hours for Tuai areas.



	Central Hawke's Bay		Hastings		Napier		Wairoa	
	Target	Current Actual	Target	Current Actual	Target	Current Actual	Target	Current Actual
DIA performance measurement								
a) Attendance time: From the time that the Council receives notification to the time that service personnel reach the site, and							Priority Work in Contract: a) 2 days and b) 5 working days.	Priority Work in Contract: a) 2 days and b) 5 working days.
b) Resolution time: From the time that the Council receives notification to the time that service personnel confirm resolution of the blockage or other fault reach the site								
DIA Non-Financial Performance Measure 4: (customer satisfaction) Total Number of complaints received by the Council about any of the flowing:								
a) Sewage odour	<10	0	61	23.6	a) <5	a) 0.55	a) 20	a) 0
b) Sewerage system faults					b) <20	b) 1.38	b) 20	b) 0
c) Sewerage system blockages					c) <10	c) 9.37	c) 20	c) 9.3
d) The Council's response to issues with its sewerage system expressed per 1000 connections to the Council's sewerage system					d) <1	d) 5.9	d) 20	d) unknown



5.2 Financial

The average wastewater rates for the 2018/19 financial year are detailed below. Ratepayers in Central Hawke's Bay are currently facing rates that are more than double those faced in the next most expensive district.

Table 16 Wastewater charges

	Central Hawke's Bay	Hastings	Napier	Wairoa
Average residential rate for wastewater ¹⁷	\$895	\$320 ¹⁸	\$366	\$366

The detailed 2019/20 budgets show some consistency in the amount that ratepayers are currently paying for wastewater services across the region.

Table 17 Wastewater revenue

	Central Hawke's Bay	Hastings	Napier	Wairoa
Total revenue from targeted rates and trade waste	\$3,472,166	\$9,271,247	\$8,775,163	\$1,018,585
Total revenue from general rates	0	\$472,000	0	0

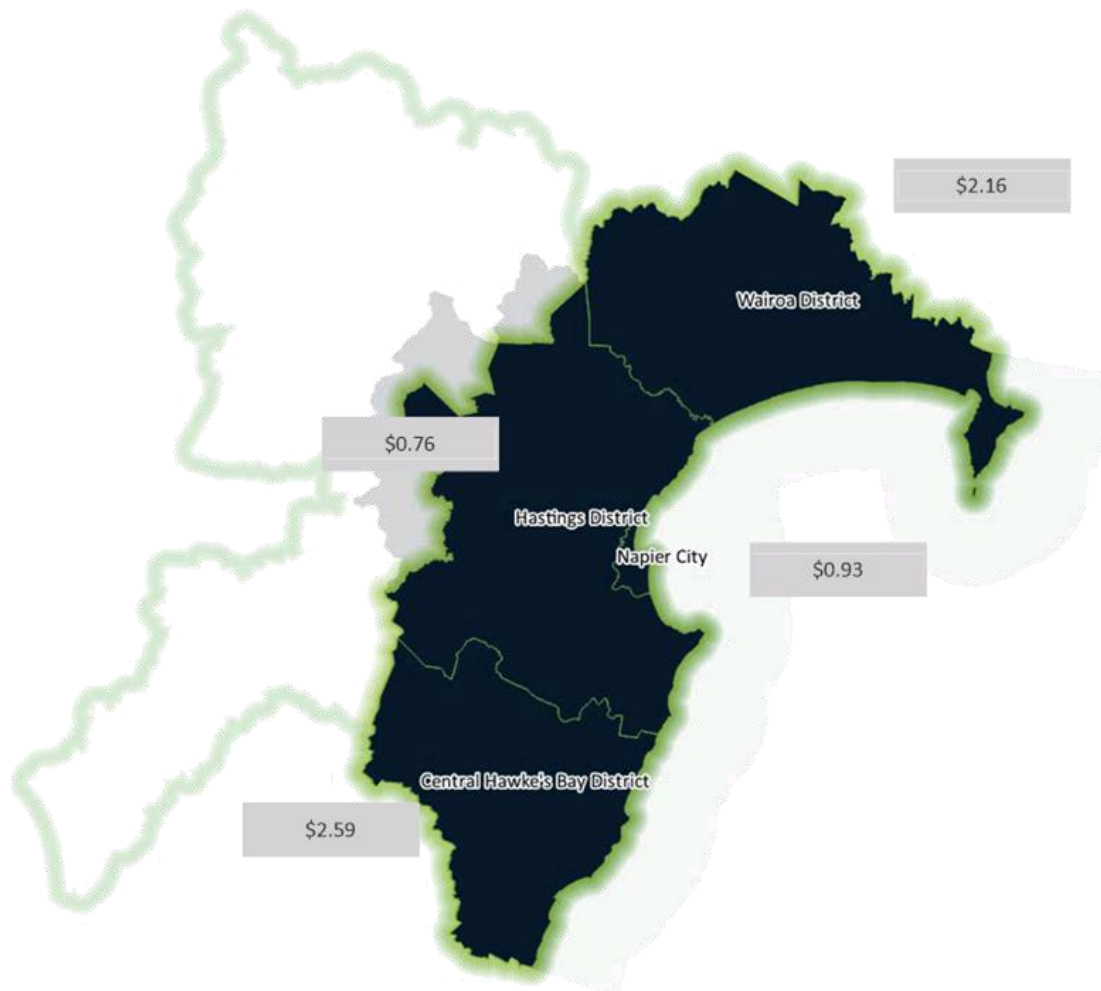
There are also large differences in the cost of treatment of water with Napier and Hastings having a similar cost of treatment but Wairoa and Central Hawkes Bay having a similar but significantly higher cost of treating a cubic metre of wastewater, as shown in Figure 34 below.

¹⁷ Weighted average across schemes

¹⁸ Plus, contribution from general rates



Figure 34 Cost¹⁹ per cubic metre of wastewater treated in Hawke's Bay Region



The levels of debt associated with wastewater services, as per 2019/20 detailed budgets, across each of the Councils is outlined below. This comprises a mix of internal borrowings and allocations of external debt, with a range of different loan terms.

Differences in the debt to asset ratio across the Councils highlights key differences in each council's approach toward funding and financing the purchase of new infrastructure assets, and the extent to which the council has made significant investment in its wastewater assets in recent years.

¹⁹ Total operating cost including depreciation divided by wastewater treated

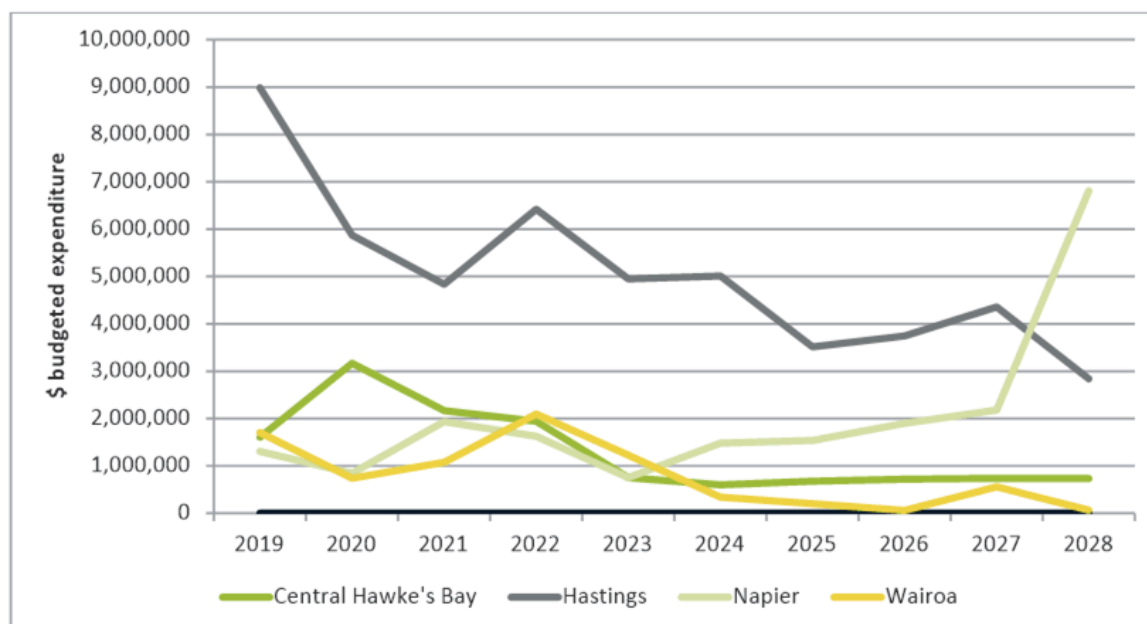


Table 18 Wastewater debt

	Central Hawke's Bay	Hastings	Napier	Wairoa
Total debt	\$11.6 million	\$43.5 million	\$4 million	\$5.5 million
Debt to revenue ratio²⁰	336%	442%	45%	461%
Average loan term	18 years	25 years	25 years	24 years
Debt to asset ratio²¹	26%	12%	3%	32%
Interest cost per annum	\$481,000	\$1,314,000	\$179,000	\$72,000
Interest to revenue²²	13.9%	13.4%	2%	6.1%

Expenditure on asset renewal has been compared across the four councils based on the published 2018-2028 LTPs updated with current three-year budgets provided by each council. We note that a number of the Councils, through the current annual planning process, looked to bring forward some of the capital works that are currently in the outer years of the LTP. These have been taken into account.

Figure 35 Wastewater assets budgeted renewals expenditure



The asset consumption ratio for wastewater assets shows a typically younger asset base than water assets, with more variability across the region. The figures are again sourced from 2018 actual results.

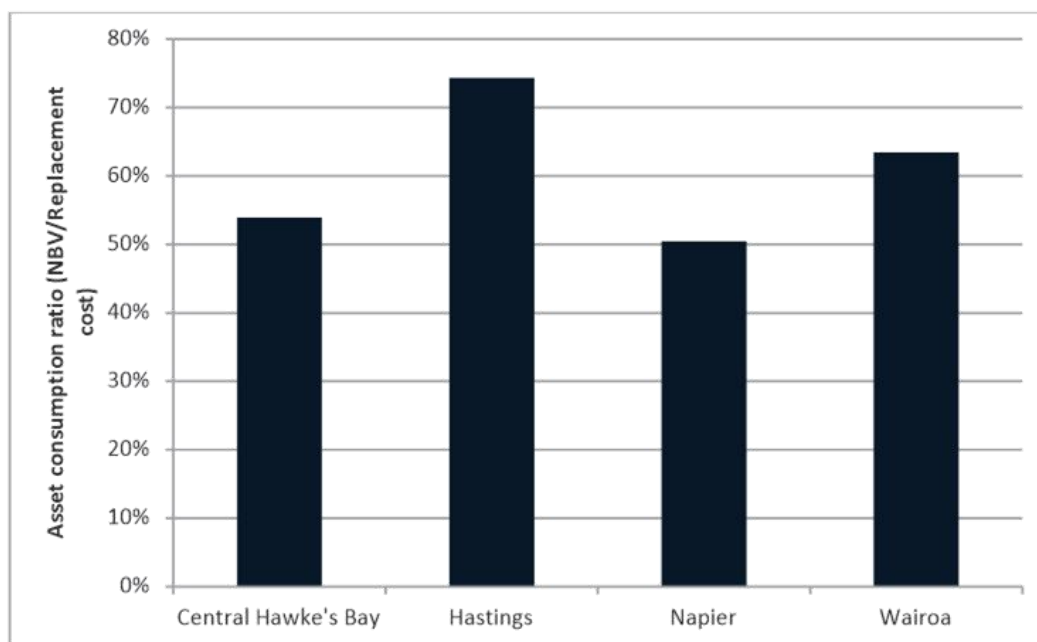
²⁰ The LGFA limit on borrowing for this ratio is 250% across a council's entire business

²¹ ²¹2019/20 total projected debt divided by 2019/20 project net book value of infrastructure assets

²² The LGFA limit on borrowing for this ratio is 20% across a council's entire business

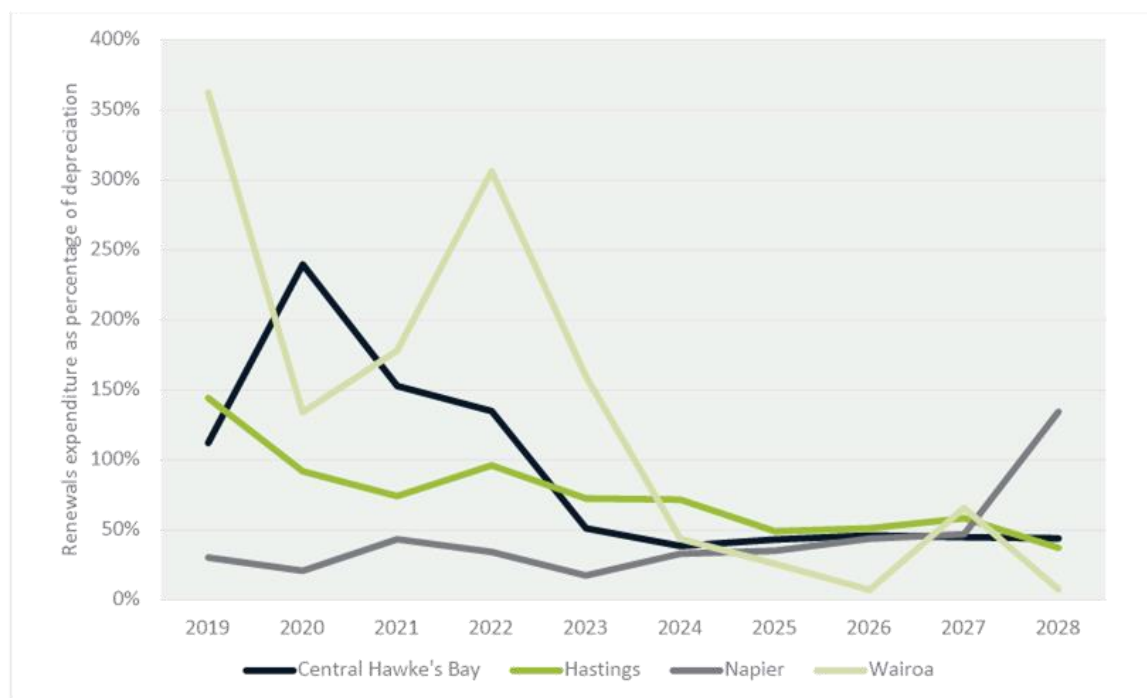


Figure 36 Asset consumption ratio (2018) for wastewater assets



Analysis of long-term plan projections for renewals spend and depreciation expense shows significant investment planned in the renewal of wastewater assets in Wairoa and Central Hawke's Bay over the three to four years, however reinvestment in wastewater assets in Napier is less than 50% of depreciation cost over the same period.

Figure 37 Wastewater renewal ratio

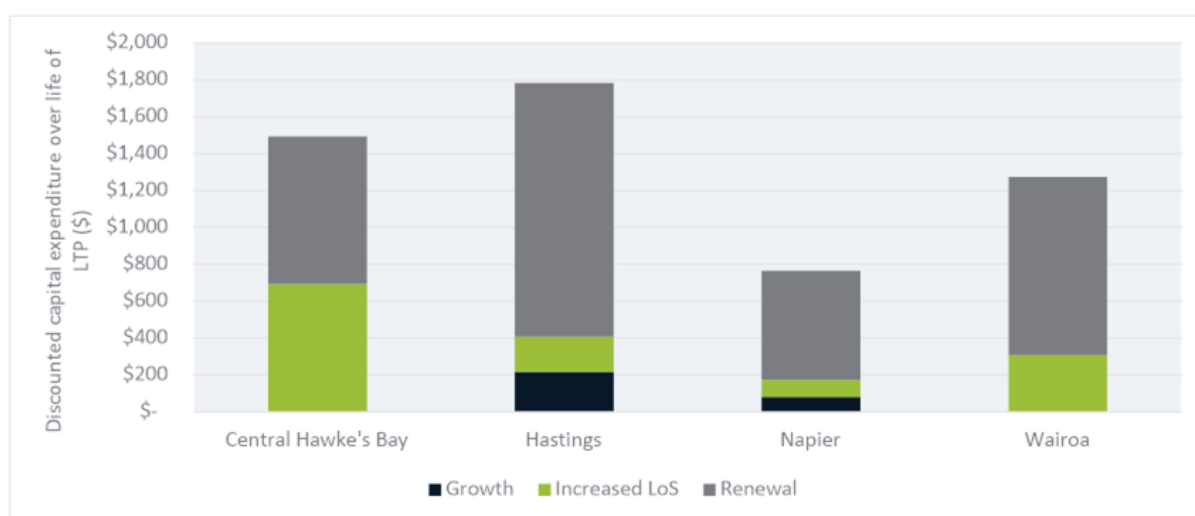




Across all councils, renewal of assets is the main driver of capital expenditure within the wastewater activity. However, given differences in scale between Central Hawke's Bay and Hastings, it is interesting to note the comparatively high investment in assets to increase levels of service in Central Hawke's Bay.

We also note that the 2018 LTPs do not include any potential costs for as yet unspecified upgrades required to meet any increased environmental standards coming out of the three waters reform. That means the capital expenditure over this period may well be much higher than was planned at the time.

Figure 38 Planned wastewater capital expenditure per ratepayer²³ (Long term plan, NPV 5% discount rate)



Below is a description of what the growth and increased level of service expenditure includes for each council.

Central Hawke's Bay

- Treatment improvements and building resilience in Waipukurau
- Main trunk renewal, treatment improvements and building resilience in Waipawa
- Treatment upgrade in Takapau, Otāne and Pōrangahau/Te Paerahi

Hastings

- To meet additional demand and improve levels of service such as increase capacity and extensions to trunk sewers, pump stations and rising mains at various locations across the district. Outfall manifold.

Napier

- The upgrading and rationalising of several sewer mains will be investigated
- Work is underway to identify options for wastewater treatment
- Replacing or upgrading of marine outfall is planned in the years 2026 to 2029

Wairoa

Improve levels of service such as de-sludge oxidation ponds, remedial works to network following infiltration study and upgrade of a treatment plant

²³ Ten-year period, years 2019/20, 2020/21 and 2021/22 from detailed budgets



6 Stormwater

The table below summarises the major issues and challenges for the Councils relating to the stormwater service²⁴.

Table 19 Major stormwater issues (as identified by the Councils)

Central Hawke's Bay		Hastings		Napier		Wairoa	
Priorities	Challenges	Priorities	Challenges	Priorities	Challenges	Priorities	Challenges
New consent requirements and compliance	Changing environmental compliance requirements	Managing stormwater discharge quality	Climate change implications	Capacity - Most of reticulated stormwater is design to one in two-year event and needs upgrading to meet standard	Available funding and resources to address levels of service, climate change and growth areas	Application under way not yet submitted for global consent	No current consent
Condition-related failures of Helicoil pipes and the availability of good asset information to effectively plan	Working through the new consent process for stormwater management and the implications on budget and resources	Continuing development of a Renewals Strategy	Havelock streams management strategy	Quality of stormwater discharged to receiving environments is of great concern to Council and the public	Ability to improve water quality in water bodies with other contributing factors/parties that are beyond our control	Asset data cleansing, understanding which assets are roading responsibility and 3 waters	Ageing infrastructure difficult to fund due to economy of scale
Capacity to service growth	Historical issues with pipe materials failing and poor historical records	Ongoing stormwater model development	Managing urban flooding and overland flow control	There is no reticulated stormwater network in some areas of the city			Lack of historical data, maintenance and management of the entire stormwater network (shared management between three waters and roading)

²⁴ We note that Hastings stormwater as set out in this report will include an element of flood control (primarily Havelock streams and Dams that HDC provides some management on behalf of HBRC

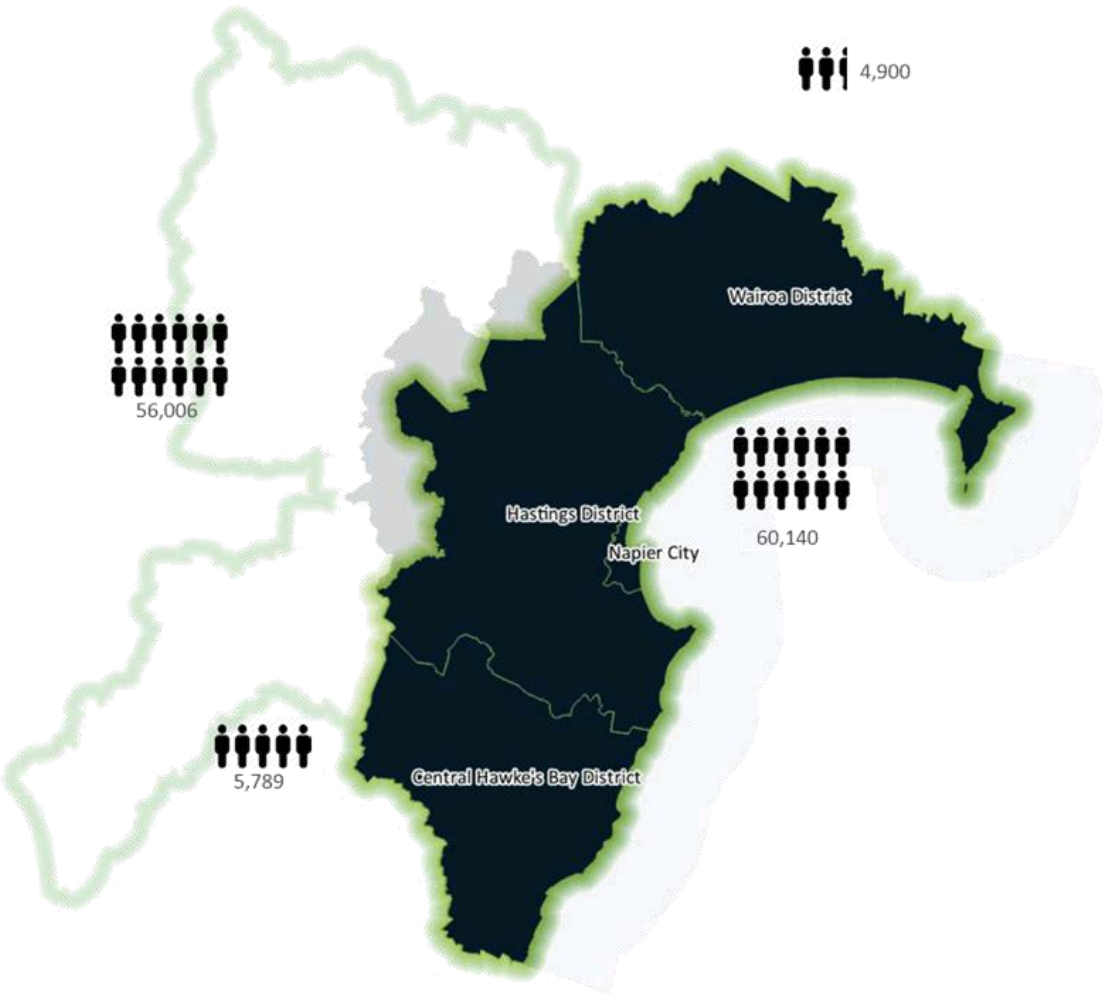


6.1 Assets

6.1.1 Stormwater serviced population

The figure below demonstrates the population served by each council’s stormwater service.

Figure 39 Stormwater service key information





6.1.2 Stormwater asset information

The figures below set out information about the number and type of assets involved in the stormwater service. The age of the assets is also set out as is the serviced area for stormwater. This information begins to highlight the differences between the respective council’s networks.

What follows in the next sections is a comparison of the condition of the network to provide a fuller picture of the assets.

Figure 40 Stormwater pipe length

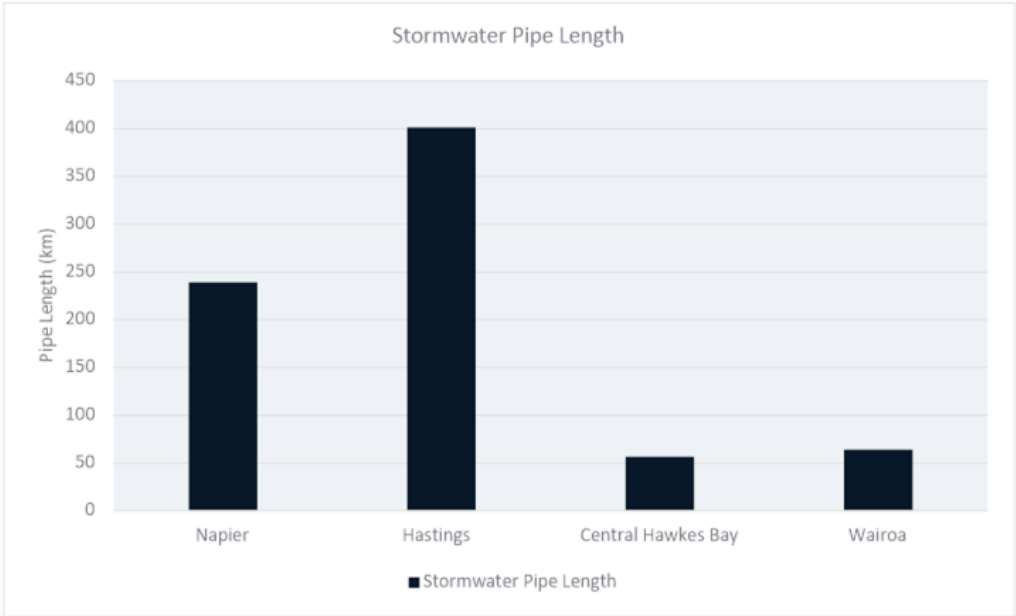


Figure 41 Stormwater pump stations

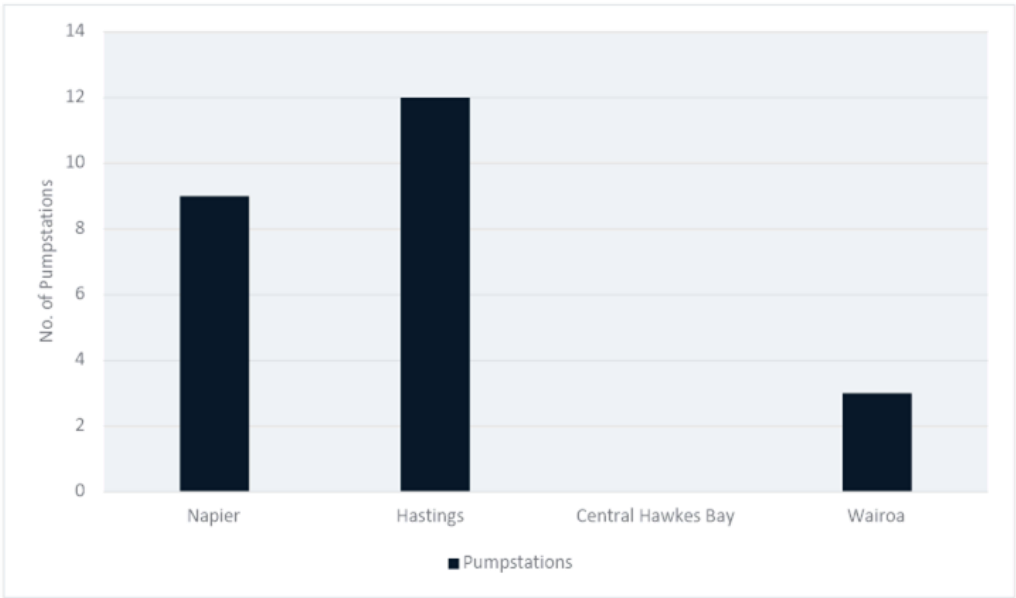
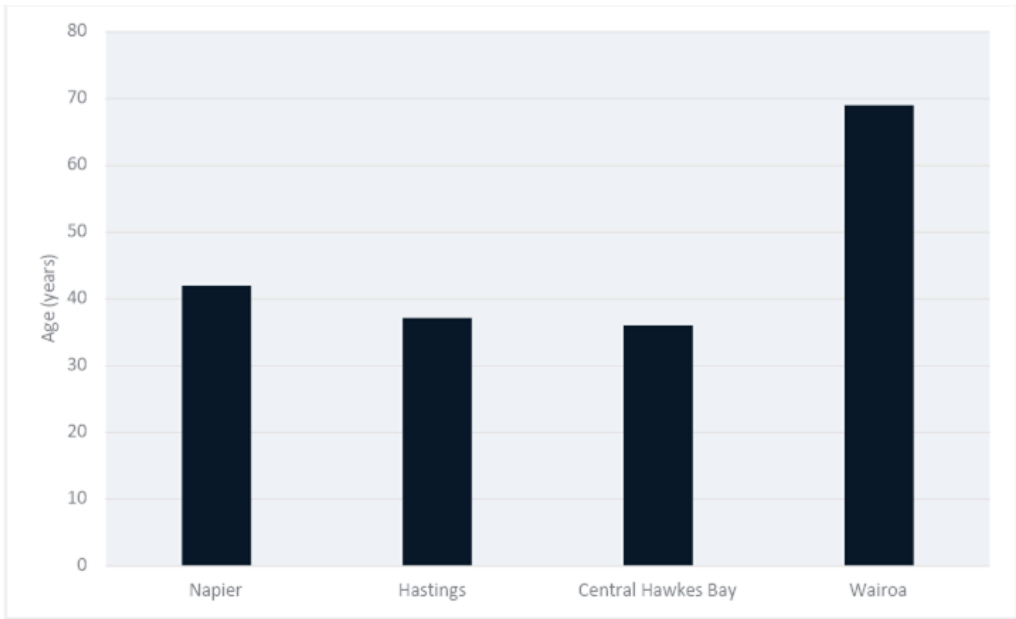




Figure 42 Stormwater pipe average age

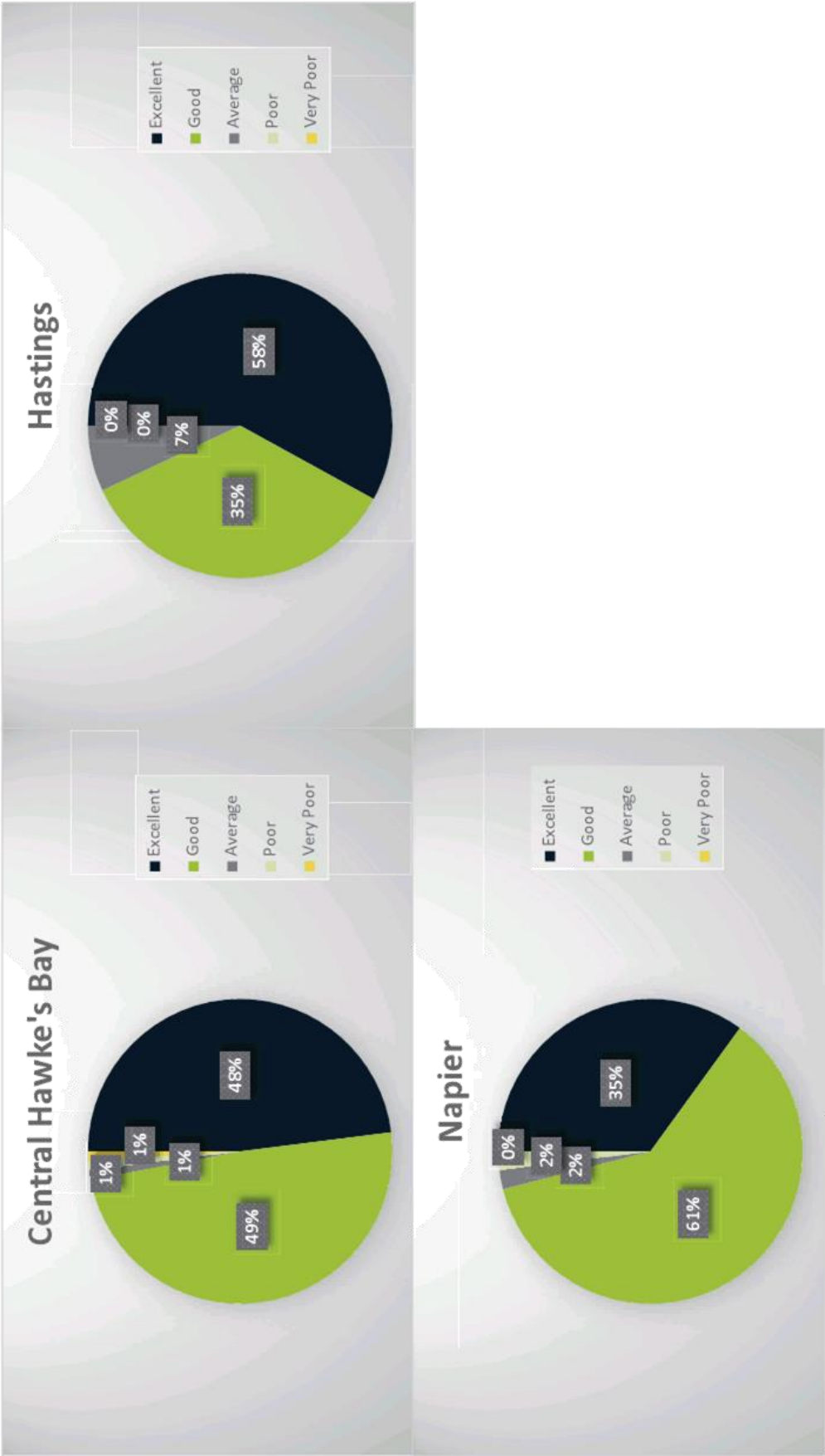


6.1.3 Asset Condition

A comparison of the respective condition of each council’s wastewater services assets is set out below. While each council has different approaches to rating their assets and different confidence levels in the data on which the assessment is based there are significant differences in the condition of the assets across the group of councils with a significant proportion of the Wairoa network in an unknown condition.



Figure 43 Stormwater asset condition²⁵



²⁵ No asset condition was provided for Wairoa. Addressing the lack of stormwater condition data has been identified as an action in Council's asset management improvement programme.



6.1.4 Performance and levels of service

The Councils have varying levels of service and performance against those. Each council's targets for the DIA performance measures and their actual performance against these is set out in the table below this brief summary.

All currently meet the DIA mandatory performance measures for compliance with stormwater discharge resource consents. Note that Wairoa has no stormwater consent and is in the process of applying for a comprehensive stormwater discharge consent.

Response times are fairly similar and all the Councils report meeting these.

Customer satisfaction criteria targets vary significantly with all Councils reporting performance significantly better than the target.



Table 20 DIA performance measures: stormwater (17/18)

	Central Hawke's Bay		Hastings		Napier		Wairoa	
	Target	Current Actual	Target	Current Actual	Target	Current Actual	Target	Current Actual
DIA Non-Financial Performance Measure 1: (System and Adequacy) The number of flooding events that occur in the Councils district. For each flooding event, the number of habitable floors affected (expressed per 1000 properties connected to the Council network).	0	0	0 (zero)	0 (NPR)	<1	None	50	0
DIA Non-Financial Performance Measure 2: (Discharge compliance) Compliance with Council's resource consents for discharge from its stormwater system measured by the number of: a) abatement notices b) infringement notices c) enforcement orders d) convictions	0 (zero)	0	0 (zero)	a) 0 (Zero) Abatement notices b) 1 Infringement notices c) 0 (Zero) Enforcement orders d) 0 (Zero) convictions	0 (zero)	None	0 (zero)	No current consent
DIA Non-Financial Performance Measure 3: (Response Times) The median response time to attend a flooding event, measured from the time that the Council receives notification to the time that service personnel reach the site.	<2 hours	0	1 Hour	1.12 Hours	<2 hours	No event	Unknown	<2 hours
DIA Non-Financial Performance Measure 4: (Customer Satisfaction) The number of complaints received by Council about the performance of its stormwater system, expressed per 1000 properties connected to the Councils stormwater system.	<5	0	15	11.15	<5	4.87	50	25 in total No records of connected properties available



6.2 Financial

The average stormwater rates for the 2018/19 financial year are detailed below.

Table 21 Stormwater charges

	Central Hawke's Bay	Hastings	Napier	Wairoa
Average residential rate ²⁶	\$153	\$96	\$235	\$202

The detailed 2019/20 budgets show some variation in the rates charged across the region for stormwater. In addition, there is a clear differentiation between the charging mechanisms in Napier and Hastings, which use a general rate, and Central Hawke's Bay and Wairoa, which use targeted rates, to fund the stormwater activity. Differences in revenue collected to fund the stormwater activity across the Councils is broadly reflective of differences in the size of the Councils.

Table 22 Stormwater revenue

	Central Hawke's Bay	Hastings	Napier	Wairoa
Total revenue from targeted rates and trade waste	\$699,342	0	0	\$428,065
Total revenue from general rates	0	\$2,937,392	\$3,927,000	0

Total debt allocated to stormwater assets is comparatively low when compared to water and wastewater, as would be expected given typically low levels of investment in the network nationwide. However, low revenues mean that Hastings District Council's debt to revenue ratio for this activity is particularly high. It is important to note that lending covenants are unlikely to specifically consider stormwater debt and revenue in isolation however.

Table 23 Stormwater debt

	Central Hawke's Bay	Hastings	Napier	Wairoa
Total debt	\$0.6 million	\$23.1 million	\$7.7million	\$0.5 million
Debt to revenue ratio ²⁷	80%	776%	194%	105%
Average loan term	18 years	25 years	25 years	45 years
Debt to asset ratio ²⁸	3%	10%	6%%	8%

²⁶ Total rate take for stormwater activity divided by number of assessments for stormwater

²⁷ The LGFA limit on borrowing for this ratio is 250% across a council's entire business

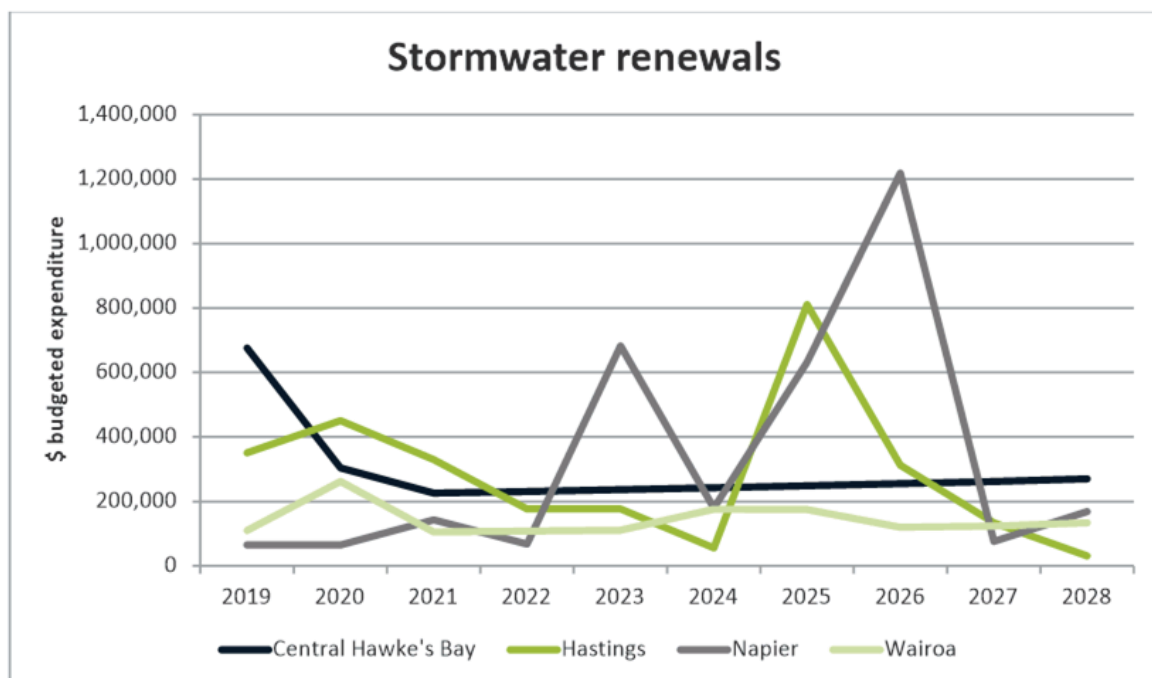
²⁸ 2019/20 total projected debt divided by 2019/20 project net book value of infrastructure assets



	Central Hawke's Bay	Hastings	Napier	Wairoa
Interest cost per annum	\$24,000	\$667,000	\$101,000	\$70,000
Interest to revenue ²⁹	3.4%	22.4%	2.5%	14.9%

Expenditure on asset renewal has been compared across the four Councils based on the published 2018-2028 LTPs updated with current three-year budgets provided by each Council. We note that a number of the Councils, through the current annual planning process, looked to bring forward some of the capital works that are currently in the outer years of the LTP. These have been taken into account.

Figure 44 Stormwater assets budgeted renewals expenditure

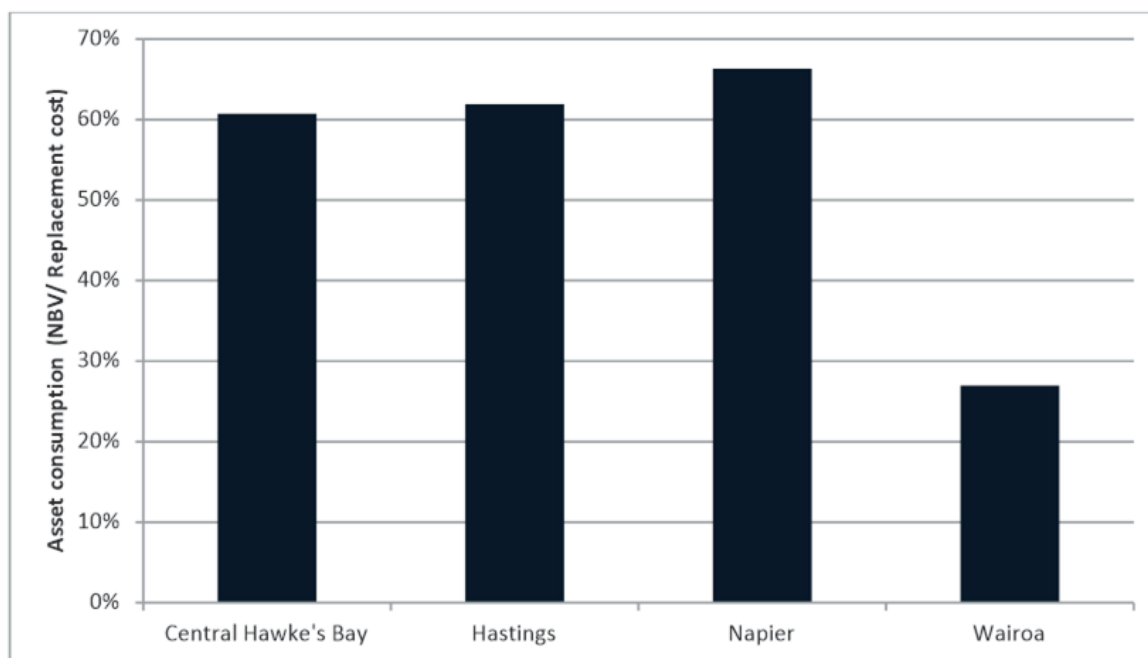


The asset consumption ratio for wastewater assets shows a typically younger asset base than water assets, with the exception being Wairoa which has a particularly low consumption ratio for its stormwater assets. The figures are again sourced from 2018 actual results.

²⁹ The LGFA limit on borrowing for this ratio is 20% across a council's entire business

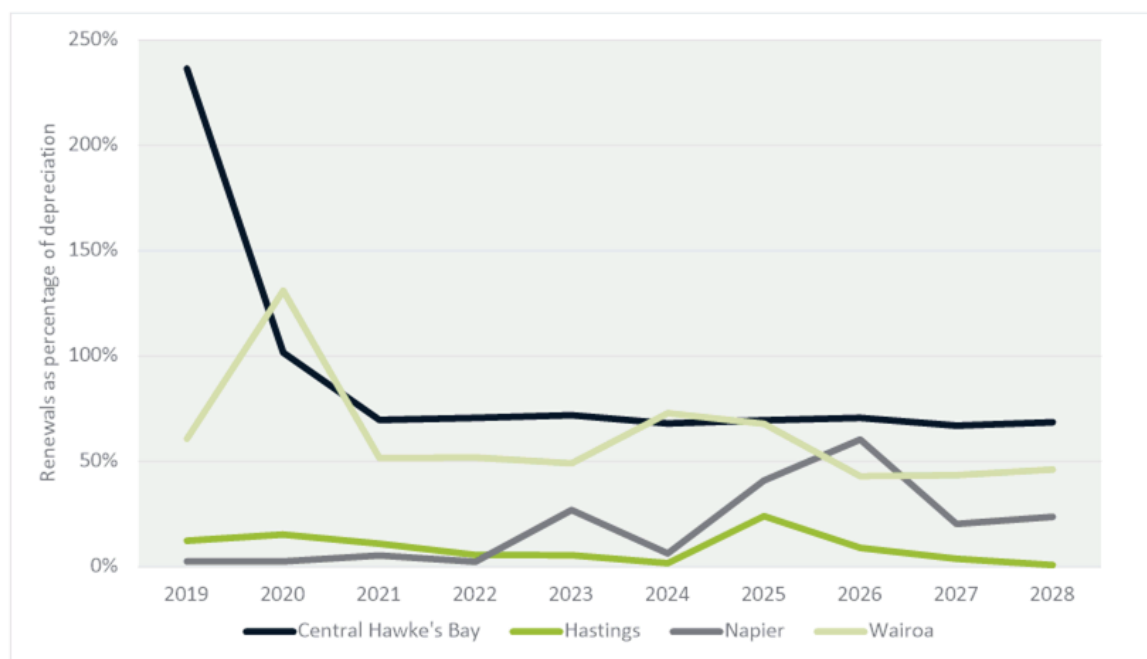


Figure 45 Asset consumption ratio (2018) for stormwater assets



Planned reinvestment in the stormwater network is low across the entire region, with reinvestment typically remaining well below the rate of depreciation. This is consistent with trends across all New Zealand councils.

Figure 46 Stormwater renewal ratio

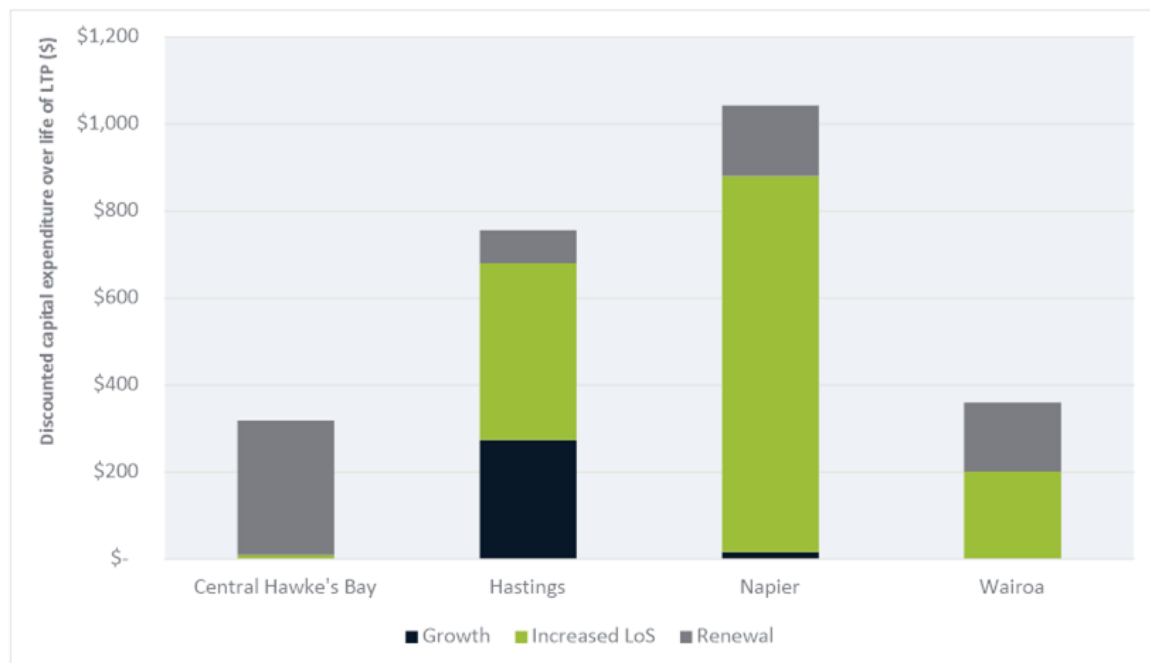




Despite relatively low levels of renewals investment for stormwater assets in Napier and Hastings, total capital expenditure over the life of the Long-Term Plans exceeds \$23 million and \$26million respectively (discounted at 5%). This is supported by significant investment in new stormwater assets to facilitate growth (which will be part funded by Development Contributions) and investment in improving the level of service.

We also note that the 2018 LTPs do not include any potential costs for as yet unspecified upgrades required to meet any increased environmental standards coming out of the three waters reform. That means the capital expenditure over this period may well be much higher than was planned at the time.

Figure 47 Planned stormwater capital expenditure per ratepayer³⁰ (Long term plan, NPV 5% discount rate)



Below is a description of what the growth and increased level of service expenditure includes for each council.

Central Hawke's Bay

- CBD Improvements in Waipukurau
- Network wide building resilience

Hastings

- To meet additional demand and improve levels of service such as increase capacity and extensions to pipes, open drains and detention ponds at various locations across the district.

³⁰ Ten-year period, years 2019/20, 2020/21 and 2021/22 from detailed budgets



Napier

- The Council is developing a modern network wide hydraulic model to use as a tool for assessing and analysing the stormwater system. Existing networks are not designed to our required standards, hydraulic models will assist with the prioritisation of levels of service improvement works

Wairoa

- Improve levels of service such as piping open drains



7 Further observations

7.1 Good practice

The assessment of the current state has not been an in-depth review of the processes and practices that underpin the three waters services. It has focussed on collection and comparison of information from each council about the services themselves in order to develop a regional understanding. We have not at this stage therefore highlighted particular strengths of any individual council. However, through this process a number of areas of good practice were highlighted.

- The initiation of this joint regional review and the collaborative manner in which it has been undertaken. The Hawke's Bay is one of only two areas that we are aware of undertaken a similar exercise to inform their response to the Minister's reform agenda. It is not easy to create the political and operational goodwill required for a regional project to be successful. Even with the HBLASS in place undertaking the project in the open, collaborative manner that it is with leadership from elected members, CEOs, right through the project team and beyond is a credit to the Councils.
- The joint working group set up following the following the Havelock North water contamination event has the territorial authorities and the regional council alongside government agencies at both a Governance (elected members) and operational (council staff) levels. The Councils highlighted the benefits of having the joint working group and joint governance committee.
- Regional work on Emergency Management and Lifelines

7.2 Regional opportunities

Several key common challenges stood out for the three water activities. They are faced by all five councils and the commonality of the issues means that understanding and addressing the challenges at the same time, especially give the capacity challenges faced by two of the four territorial authorities presents significant opportunity for regional co-operation.

- Community expectations i.e. correlation of being able to meet LOS, rates, funding.
- Changing regulatory environment i.e. Drinking water standards and wastewater & stormwater discharge limits.
- As yet unquantified future costs arising from increased regulatory standards and community expectations.
- Growth pressure – resilience and organisational capacity to deliver capital plan.
- Connection between the water supplies across the Hawke's Bay.
- Resourcing – staff, suppliers and training



Appendix A Summary of Infrastructure Strategy Key Themes

Wairoa District Council

Demand and Growth

- Council predicts a static population with little change to the demand for services over the next 30 years.
- With over 50% of Wairoa's population being Māori, the relationship with the tangata whenua of Wairoa needs to be actively managed if changes affect their ancestral lands, water, sites, waahi tapu and other taonga.
- Residential development on previously rural land, such as that which has occurred in Mahia over the last ten years, can increase demand on the water services and typically increases impermeable service, which can impact on wastewater and stormwater networks.
- Tourism is an area of focus, in particular the potential tourism related to Rocketlab, with an aim to launch once per week. Infrastructure must be in place to support tourism.

Asset Condition and Performance

- 44% of water supply pipes have been assessed as being in poor or very poor condition
- The wastewater system in Wairoa has been assessed as having less than 50% of pipes being in good condition.
- Wastewater pump stations are at times unable to accommodate extreme wet weather flows – this has resulted in some incidents where untreated overflows of wastewater into the Wairoa River. The proposed upgrade to the wastewater treatment plant and associated works over the next two to three years will reduce these events in the future.
- Condition information of the stormwater assets is limited, information captured is based primarily on visual assessments and age with some information gathered through reactive works etc.

Resilience

- The nature of some small three waters networks can be vulnerable due to flooding and slips in severe storm events which may lead to communities being cut off.
- Potential impacts for Wairoa include coastal inundation and erosion, inland flooding from the Wairoa River and wider changes associated with extended period of drought. Many lowland areas, including the Wairoa township and the Nuhaka settlement, are at risk from flooding. This may have multiple adverse effects on roads and to three waters networks; flooding; loss of key infrastructure; increased demand for water; and/or disruption to gravity sewerage system from droughts.



Napier City Council

Demand and Growth

- Napier projects an increase in population growth of 18.9% over the next 30 years (from 61,100 in 2017 to 71,000 by 2048).
- Considering anticipated growth and current rates of water consumption across the city, the drinking water supply network will reach its maximum permitted peak allocation in 30 years' time.
- There is currently a wider regional discussion about capping the total amounts of water drawn from the aquifers and rivers. As the region's population grows, and the regional economic activity with it, it is likely that the City will need to be much more proactive in demand management of its water supply.

Asset Condition and Performance

- Council's three waters SCADA system has reached its end of life and requires a completed replacement or upgrade.

Resilience

- The traditional concept of city-wide networks collecting and treating wastewater is now being challenged. Smaller local or on-site treatment facilities embedded throughout the urban area are proposed as opposed to a single large treatment facility. This will increase the overall network redundancy and thus reliability and resilience.

Risk and Compliance

- The implications from the Havelock North Inquiry Report no.2 for Napier were the recommendations for compulsory chlorination of water and loss of groundwater security. Napier's water supply network was never configured for large scaled permanent chlorination.
- The aquifer Napier draws its water from is fed from the Hastings District. As such Napier needs to investigate means to assure itself of the protection of the upstream aquifer and the safety of the water source. Council will also need to allow for changes in groundwater quality and aquifer levels that may result from other environmental factors outside Napier's ability to control.
- Several of Council's current water bores have well heads located below ground level and located within the urban area and close to wastewater infrastructure. This situation has been identified as a high risk for the safety of the water supply.
- The consent for the wastewater disposal via the treatment facility and ocean outfall is due to expire in 2037.
- Napier wastewater system is a conventional system comprising a network of pump stations, gravity and pumping mains. One of the main disadvantages of the system is high inflow and infiltration during wet weather.
- Council's goal with respect to flood protection is to provide protection to houses, business and commercial buildings from a rain event with a 50-year return period. Due to lower standards in the past, this target cannot be met in localised areas already developed within the city.



Central Hawke's Bay District Council

Demand and Growth

- Council predicts growth of households around 9.5% in total across the district for the next ten years from 2018, with a growth of around 9.0% over the following 20 years to 2048.
- Lifestyle residential development on the city fringe will result in pressure on Council to extend existing networks to accommodate growth. Intense development within the existing towns will also place pressure on the capacity of the existing three waters networks.

Asset Condition and Performance

- Waipawa and Waipukurau have aging water supply and wastewater network. They will reach the end of their asset life over the next 30 years.

Resilience

- Some of the wastewater networks are more prone to infiltration because of the age or condition of assets or the design of some of the networks means that stormwater infiltration is more common irrespective of asset age and condition.
- Some water supply schemes only have a single supply with no redundancy.

Risk and Compliance

- Recent findings in modelling highlighted the lack of firefighting/supply capacity to meet legislative needs in the Waipukurau, Waipawa and Otāne water supply networks.
- The National Policy Statement for Freshwater Management (NPS-FM) requires Council to meet high levels of treatment for the disposal of waste from treated waste pond discharges. Similarly, the Regional Council consents have increased cost both in capital and operation works to manage stormwater discharges.
- The Hawke's Bay Regional Council Plan Change 6 may have the effect of reducing the quantities of water that can be extracted for town supplies, particularly reducing the peak flow rates. This may result in water restrictions for longer periods in the summer periods and constrains the ability to service additional wet industries in Waipukurau.
- Water supply schemes currently comply with Drinking Water Standards (DWS) 2002 but do not comply with the DWS 2005 (revised 2008).
- In the towns of Waipukurau and to a lesser extent Waipawa, there are a number of points where the three waters infrastructure crosses known fault lines.
- Smaller wastewater schemes are currently meeting consent conditions however in the future, consent conditions may set higher standards or the conditions for new resource consents may not be met given the age, conditions or design of existing infrastructure.

Funding

- Havelock North water crisis has resulted new capital projects such as new UV water treatment and also added cost on the operational side of Council water supply systems.
- The South West area of Waipukurau drains to Lake Hātuma and can silt up at times creating a constraint for the single outlet. This may cause flooding upstream including onto the Racecourse and a constraint for future development in the catchment.



Hawke's Bay Regional Council

Level of Service

- For Heretaunga Plains Flood Control and Drainage Scheme, Council has committed to increase the level of service to convey flood water with a 0.2% chance of occurrence in any one year.
- The community values and climate impacts with respect to the natural environment have changed and continue to change at a significant rate.
- Public is increasingly seeking multiple values in addition to the original single purpose of flood protection or drainage at the time many of the schemes were established.
- There is an increasing expectation that stock will be excluded from the vicinity of waterways. The presence of fences (especially electric) on the river berms is resented by a portion of the community.
- Future river management will most likely require extending the flood protection scheme upstream boundary together with additional funding to allow for the ongoing removal of unwanted tree species from the braided riverbed.
- Intend to review future level of service on infrastructure including:
 - National and international advice on climate change predictions
 - Community expectations for appropriate levels of flood protection
 - Affordability and willingness to pay
- The review will also include risk assessments of schemes, including climate change, and where appropriate may recommend changes or improvements that reduce the risk of premature failure, or enable the level of service to be reinstated more rapidly following a natural hazard event that impacts on the scheme.

Resilience

- Iwi will be more empowered and better positioned to provide shared input into scheme management as Treaty of Waitangi settlements and redress occur in Hawkes Bay.
- Hawkes Bay experiences a number of natural hazards which have the potential to impact critical assets (i.e. flooding, earthquakes, tsunamis, landslides, coastal erosion and inundation).
- Many of the Hawke's Bay public and businesses have little or no knowledge of the potential impact of a major flood and are not well prepared for the consequences.
- The requirement for informing and educating scheme ratepayers to possible impacts and threats to schemes and scheme assets is a challenging area.
- Hawke's Bay Region is predicted to be drier but with the potential for increased storminess. Severe storms are predicted to bring more intense rainfall which will result in increased flood flows.
- Land use change and climate change are predicted to result in increased runoff from the land into the waterways.

Significant Infrastructure Issues

- Significant quantities of sediment are carried by the major rivers. The flood carrying capacity of waterways will be compromised by aggradation of sediment unless appropriate measures are put in place to manage that risk.
- Some of the scheme developments occurred at the expenses of the natural environment with significant impacts on wetlands and rivers and the surrounding habitat.



Hastings District Council

Level of Service

- Community expectations in respect of wastewater disposal have changed over time and may do again in the future. Council's consent does not expire until 2048, the disposal methods will be reassessed as part of the nine yearly consent review process.

Asset Condition and Performance

- On average the water supply network is about half way through its expected life.
- 35% of water supply pipes are made of AC. AC pipe has a reduced life, is brittle and can fail without warning.
- Council's three key wastewater trunk mains require renewal over the next 30 years.
- Analysis on the remaining life of the submerged and beach sections of the East Clive wastewater discharge pipeline is underway to determine timing for replacement

Risk and Compliance

- The Council faces changes in:
 - Drinking water security, treatment, availability and legislation
 - Increasing environmental standards, particularly in relation to stormwater quality and road runoff
- There are growing concerns regarding the quality of stormwater discharges (urban and rural) and the potential degradation of the District's waterways.
- The Havelock North contamination events had a marked impact on the community as well as the necessary investment response. Focus is on drinking water security, treatment, availability and legislation.
- Due to the changes of understanding and status of the groundwater, a new water supply strategy was adopted. The water strategy is to move away from Brookvale borefield, develop new borefield, increase pipe capacity and install water treatment on all urban water supplies.
- Council's approach to the provision of safe drinking water has changed significantly since the Havelock North contamination event and subsequent government enquiries.



Appendix B Failure Analysis

Information supplied

Asset data was available from all councils of a reasonably consistent standard. The attributes required were mainly an install date, material and length. More sophisticated management attributes such as criticality and condition were not investigated.

Information about asset failures is not recorded consistently as it typically is not included in the asset management systems of the Councils. Even where failures are recorded, the level of detail and reliability of failure histories does vary between Councils.

Information supplied for this study includes:

Table 24 Data supplied for failure analysis

Council	Age of Assets	Total Annual Failures	Annual Failures by material	Annual failures by asset	Failure period
Central Hawke's Bay	X				
Napier	X	X			2014-2018
Hastings	X	X	X		2008-2018
Wairoa	X	X	X	X	2010-2015

Assumptions and limitations

- Faults caused by third party damage to watermains have been included for consistency as they were not identified in all data sets.
- Installed pipe lengths are as per the data supplied and are representative of the installed pipe lengths over the period of faults analysed, but may not be exact.
- Faults are as provided and may include faults on watermains that have since been replaced or renewed. As most fault data is not recorded against a specific pipe, extraction of faults on pipes no longer in service was not possible at this stage.
- Results are presented for watermain failures only, and do not include service lines or laterals, tobies, hydrants or other ancillary assets.
- The definition of a 'fault' is not necessarily consistent between Council's. While minor leaks have been discarded if they were identified, there may be some inaccuracy in the level of fault recorded and/or classified by each Council.
- Similar pipe materials have been grouped together for ease of comparison (e.g. 'PE' covers HDPE, MDPE and PE).
- All watermain information supplied has been used, this includes urban and rural networks.



Figure 48 Annual AC faults normalised by network length

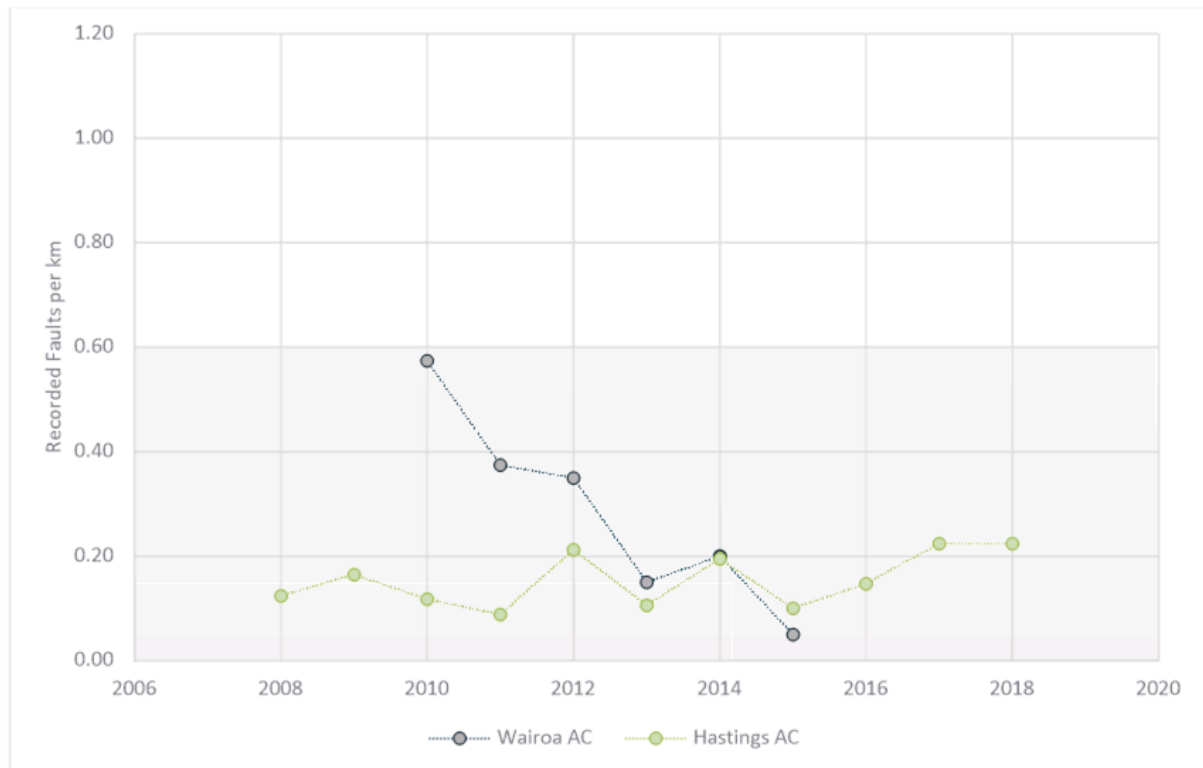


Figure 49 Annual PVC faults normalised by network length

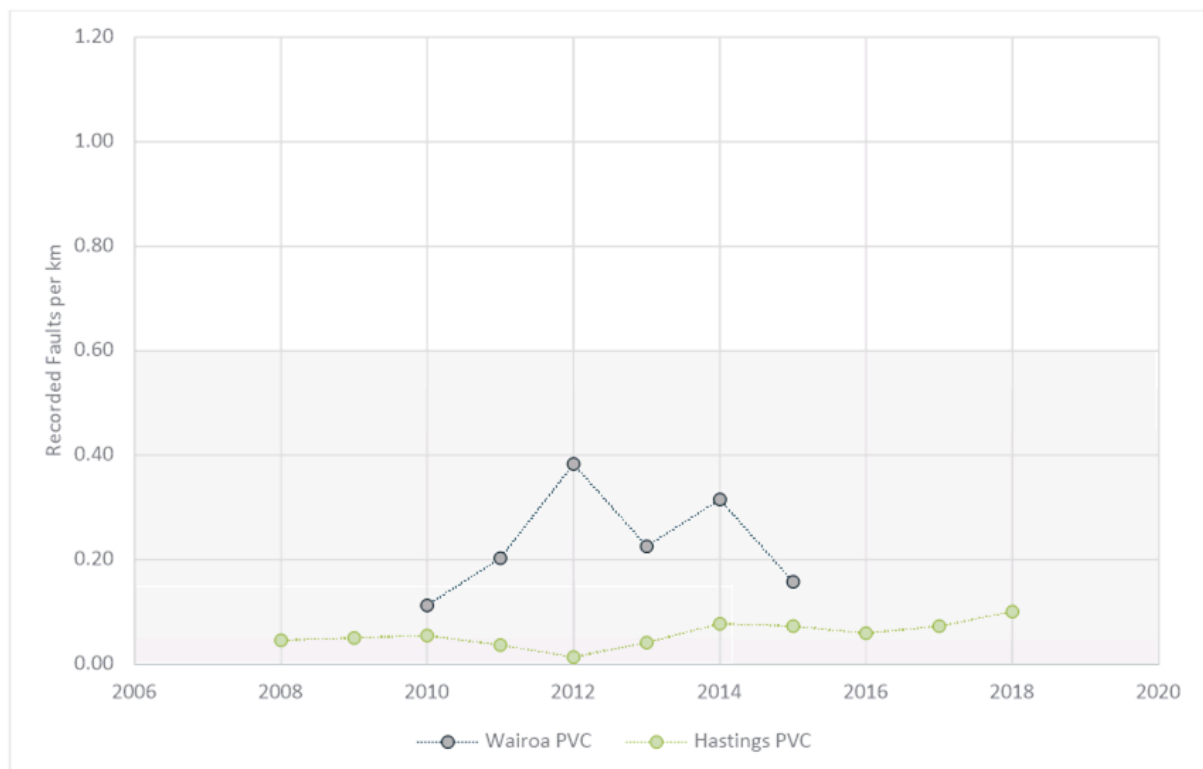
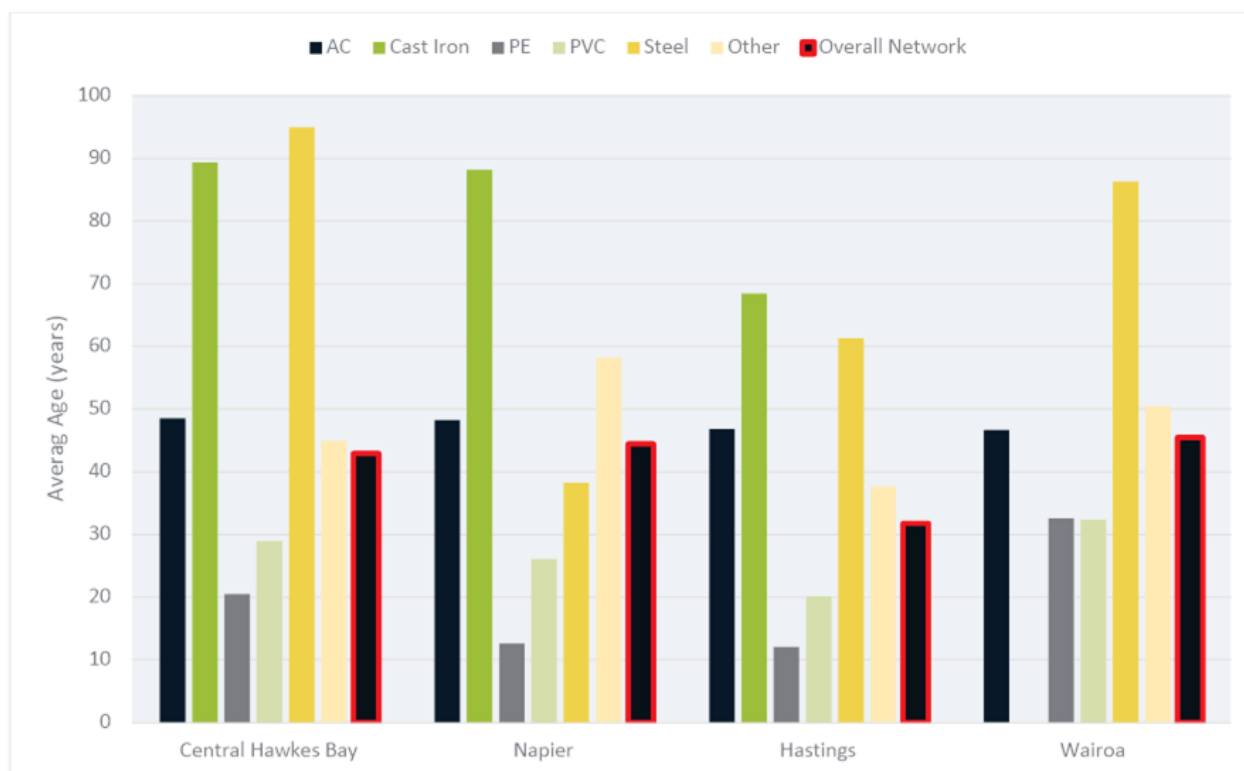




Figure 50 Annual steel faults normalised by network length



Figure 51 Age distribution by pipe material





Appendix H DIA Non-Financial Performance Measures 2018/19

DIA Performance Measures 2018/19

DIA performance measures: water (18/19)

DIA performance measurement	Central Hawke's Bay		Hastings		Napier		Wairoa	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual
<p>DIA Non-financial performance Measure 1: (<i>safety of drinking water</i>) The extent to which the local authority's drinking water supply complies with:</p> <p>a) part 4 of the drinking-water standards (bacteria compliance criteria), and</p> <p>b) part 5 of the drinking-water standards (protozoal compliance criteria).</p>	100%	<p>a) Not achieved</p> <p>b) Not achieved</p>	100%	<p>a) Target achieved</p> <p>b) Target not achieved</p>	100%	<p>a) Achieved</p> <p>b) Achieved</p>	100%	Not achieved
<p>DIA Non-Financial performance Measure 2: (<i>maintenance of the reticulation network</i>) The percentage of real water loss from the local authority's networked reticulation system (including a description of the methodology used to calculate this).</p>	30%	Not achieved	20%	Not measured in 2018	22%	19.8%	25%	35.33%
<p>DIA Non-Financial performance Measure 3: (<i>fault response times</i>) Where the local authority attends a call-out in response to a fault or unplanned interruption to its networked reticulation system, the following median response times measured:</p> <p>a) attendance for urgent call-outs: from the time that the local authority receives notification to the time that service personnel reach the site, and</p> <p>b) resolution of urgent call-outs: from the time that the local authority receives notification to the time that service personnel confirm resolution of the fault or interruption.</p> <p>c) attendance for non-urgent call-outs: from the time that the local authority receives notification to the time that service personnel reach the site, and</p> <p>d) resolution of non-urgent call-outs: from the time that the local authority receives</p>	<p>a) <2 Hours</p> <p>b) <12 Hour</p> <p>c) <6 Hours</p> <p>d) <72 Hours</p>	<p>a) 31 Minutes</p> <p>b) 1 hour 52 mins</p> <p>c) 5hours 20 mins</p> <p>d) 25 hours 23.5 mins</p>	<p>a) 1 Hour</p> <p>b) 2 Hours</p> <p>c) 3 days</p> <p>d) 7 days</p>	<p>a) 45 minutes</p> <p>b) 2.52 Hours</p> <p>c) 20 hours</p> <p>d) 3 days</p>	<p>a) <90 minutes</p> <p>b) <6 Hours</p> <p>c) <8 Hours</p> <p>d) <72 Hours</p>	<p>a) 32 minutes</p> <p>b) 1.52 hours</p> <p>c) 1.72 hours</p> <p>d) 3.18 hours</p>	<p>a) 1 hour for Wairoa/ Fraserstown and 2 hours for other areas</p> <p>b) 4 hours from Wairoa/ Fraserstown and 5 hours for other areas</p> <p>c) Priority Work in Contract: 2 days</p> <p>d) 3 working days.</p>	<p>a) Not assessed – not recorded in system</p> <p>b) Not achieved – 24.75 hours</p> <p>c) Achieved (not recorded in system)</p> <p>d) 4.23 hours</p>

DIA Performance Measures 2018/19

DIA performance measurement	Central Hawke's Bay		Hastings		Napier		Wairoa	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual
DIA performance measurement notification to the time that service personnel confirm resolution of the fault or interruption								
DIA Non-Financial performance Measure 4: (customer satisfaction) The total number of complaints received by the local authority about any of the following:								
a) drinking water clarity					a) <2	a) 40.89	a) 20	a) 0
b) drinking water taste					b) <2	b) .19	b) 20	b) 1
c) drinking water odour					c) <2	c) 0.39	c) 20	c) 0
d) drinking water pressure or flow			1	9.50	d) <2	d) 0.73	d) 40	d) 8
e) continuity of supply, and					e) <2	e) 0	e) 40	e) 11
f) the local authority's response to any of these issues.					f) <2	f) 62.60	f) 20	f) 0
expressed per 1000 connections to the local authority's networked reticulation system								
DIA Non-performance Measure 5: (demand management) The average consumption of drinking water per day per resident within the territorial authority district. (litres per person per day)	666	Achieved 1.56m ³ average consumption per day per connection	400	500	<430	496	550	Not achieved

DIA Performance Measures 2018/19

DIA performance measures: wastewater (18/19)

DIA performance measurement	Central Hawke's Bay		Hastings		Napier		Wairoa	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual
DIA Non-Financial Performance Measure 1: (system and adequacy) Number of dry weather sewerage overflows from the Council's wastewater system, expressed per 1000 sewerage connections to that sewerage system.	<10	0.58	5	0.89	<0.1	0.08	16 in total across the network	Not achieved
DIA Non-Financial Performance Measure 2: <i>(Discharge compliance)</i> Compliance with Council's resource consents for discharge from its sewerage system measured by the number of: a) Abatement notices b) Infringement notices c) Enforcement orders d) Convictions	a) 0 b) 0 c) 0 d) 0	a) 0 b) 0 c) 0 d) 0	0	a) 0 b) 0 c) 0 d) 0	a) 0 b) 0 c) 0 d) 0	a) 0 b) 2 c) 0 d) 0	a) 2 b) 0 c) 0 d) 0	
DIA Non-Financial Performance Measure 3: <i>(Fault response times)</i> Where the Council attends to sewerage overflows resulting from a blockage or fault in the Council's sewerage system, the following median response times are measured: a) Attendance time: From the time that the Council receives notification to the time that service personnel reach the site, and	a) <1 Hours b) <4 Hours	a) 22 minutes b) 1hr 54 minutes	a) 1 Hour b) 1 day	a) 0.5 Hour b) 2.1 hours	a) <2 Hours b) <8 Hours	a) 0.98 hours b) 2.1 hours	The target for this performance measure is: a) 1 hour for Wairoa and 2 hours for Tuai areas; b) 4 hours for Wairoa and 5 hours for Tuai areas. Priority Work in Contract: a) 2 days	a) Not assessed

DIA Performance Measures 2018/19

DIA performance measurement	Central Hawke's Bay		Hastings		Napier		Wairoa	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual
b) Resolution time: From the time that the Council receives notification to the time that service personnel confirm resolution of the blockage or other fault reach the site							b) 5 working days	b) Achieved with median response time of 20 hours
DIA Non-Financial Performance Measure 4: (customer satisfaction) Total number of complaints received by the Council about any of the flowing: a) Sewerage odour b) Sewerage system faults c) Sewerage system blockages d) The Council's response to issues with its sewerage system expressed per 1000 connections to the Council's sewerage system	<10	0	61	26.9	a) <5 b) <20 c) <10 d) <1	a) 0.63 b) 0.59 c) 10.79 d) 0	a) 20 b) 20 c) 20 d) 20	a) 0 b) 16 c) 13 d) 0

DIA Performance Measures 2018/19

DIA performance measures: stormwater (18/19)

	Central Hawke's Bay		Hastings		Napier		Wairoa	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual
DIA Non-Financial Performance Measure 1: <i>(System and Adequacy)</i> The number of flooding events that occur in the Council's district. For each flooding event, the number of habitable floors affected (expressed per 1000 properties connected to the Council network).	0	0	0 (zero)	0	<1	N/A	50	Achieved
DIA Non-Financial Performance Measure 2: <i>(Discharge compliance)</i> Compliance with Council's resource consents for discharge from its stormwater system measured by the number of: a) abatement notices b) infringement notices c) enforcement orders d) convictions	0 (zero)	a) 0 (zero) b) 0 (zero) c) 0 (zero) d) 0 (zero)	0 (zero)	a) 0 (zero) b) 0 (zero) c) 0 (zero) d) 0 (zero)	0 (zero)	Nil	0 (zero)	Not achieved - no current consent
DIA Non-Financial Performance Measure 3: <i>(Response Times)</i> The median response time to attend a flooding event, measured from the time that the Council receives notification to the time that service personnel reach the site.	<2 hours	20 mins	1 Hour	No event (48 mins to respond to general surface flooding)	<2 hours	N/A	Unknown	Not assessed
DIA Non-Financial Performance Measure 4: <i>(Customer Satisfaction)</i> The number of complaints received by Council about the performance of its stormwater system, expressed per 1000 properties connected to the Council's stormwater system.	<5	0	15	10.1	<5	4.96	50	Achieved