

Transforming the system for delivering three waters services

**The case for change and summary of
proposals**

June 2021



**Te Tari Taiwhenua
Internal Affairs**

New Zealand Government

Introduction

In July 2020, the Government launched the Three Waters Reform Programme – a three-year programme to reform local government three waters service delivery arrangements in a way that improves health and wellbeing outcomes to benefit all communities in New Zealand. The Government's objectives from this programme are to:

- improve the safety, quality, and environmental performance of water services;
- ensure all New Zealanders have access to affordable three waters services;
- move the supply of three waters services to a more financially sustainable footing, and address the affordability and capability challenges that currently exist in the sector;
- improve transparency about, and accountability for, the delivery and costs of three waters services;
- improve the coordination of resources and unlock opportunities to consider New Zealand's water infrastructure needs at a larger scale and alongside wider infrastructure and development needs;
- increase the resilience of three waters service provision to both short and long-term risks and events, particularly climate change and natural hazards;
- provide mechanisms for enabling iwi/Māori rights and interests.

The last 12 months have involved an intense phase of policy advice, commercial, legal and analytical work, engagement with local government and iwi/Māori. This work has been progressed through a constructive partnership-based approach with the local government sector, under the oversight of a joint central-local government steering committee.

An integrated and extensive package of reform

The Government has decided, based on the substantial work undertaken over the past year, to pursue an integrated and extensive package of reform to the current system for delivering three waters services and infrastructure. The package comprises the following core components:

- establish four statutory, publicly-owned water services entities to provide safe, reliable and efficient water services
- enable the water services entities to own and operate three waters infrastructure on behalf of local authorities, including transferring ownership of three waters assets and access to cost-effective borrowing from capital markets to make the required investments
- establish independent, competency-based boards to govern each water services entity
- set a clear national policy direction for the three waters sector, including expectations relating to the contribution by water services entities to any new spatial / resource management planning processes
- establish an economic regulation regime, to ensure efficient service delivery and to drive the achievement of efficiency gains, and consumer protection mechanisms

- develop an industry transformation strategy to support and enable the wider three waters industry to gear up for the new water services delivery system.

Continuing to work in partnership with the three waters sector to support a smooth transition

The Government will continue to work closely with its local government and treaty partners on some of the details to give the reforms the best chance of success, to ensure the new water service entities can efficiently and effectively commence operations by no later than 1 July 2024.

Further details on the proposed approach to transition will be made available in the coming weeks, including a three waters reform support package for councils and their communities.

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Case for change

This document has been prepared to summarise the case for reforming service delivery arrangements and explain the key features of the Government's proposed system for water services delivery.

A successful New Zealand needs a thriving three waters system

The three waters system is critical for the health and wellbeing of New Zealand. It is significant for upholding te mana o te wai, the functioning of society, the health of the environment, and the performance of the economy.

With \$54.6 billion in assets and 4,900 council staff, supporting the delivery of services to 4.3 million customers, our three waters sector is easily one of the country's most significant infrastructure sectors, with activity that touches on every corner of the economy.

The majority (85%) of New Zealanders receive their three waters services from their council (local or unitary authorities). A significant number of mostly smaller private and community-based suppliers also supply drinking water to small and rural populations, including on marae.

The three waters infrastructure network consists of infrastructure and processes used to collect, store, transmit through reticulation, treat, and discharge three waters. The infrastructure is complex and expensive, and much of it is underground.

The three waters sector is facing a significant crisis and will continue to suffer from a series of challenges without necessary action

It has become clear that New Zealand's three waters sector is facing a significant crisis, and will continue to do so without major, transformational reform.

While there are pockets of good performance, in many parts of the country communities cannot be confident that their drinking water is safe, that the three waters sector is achieving good environmental outcomes, that it can accommodate population and housing growth, that the rights and interests of iwi/Māori are being upheld, and that climate change and natural hazard risks are being successfully managed.

The challenges the three waters sector faces in delivering health, customer and environmental outcomes and the sheer size of the infrastructure deficit that has developed, are symptomatic of a wider systemic failure underpinning the way three waters services are currently delivered.

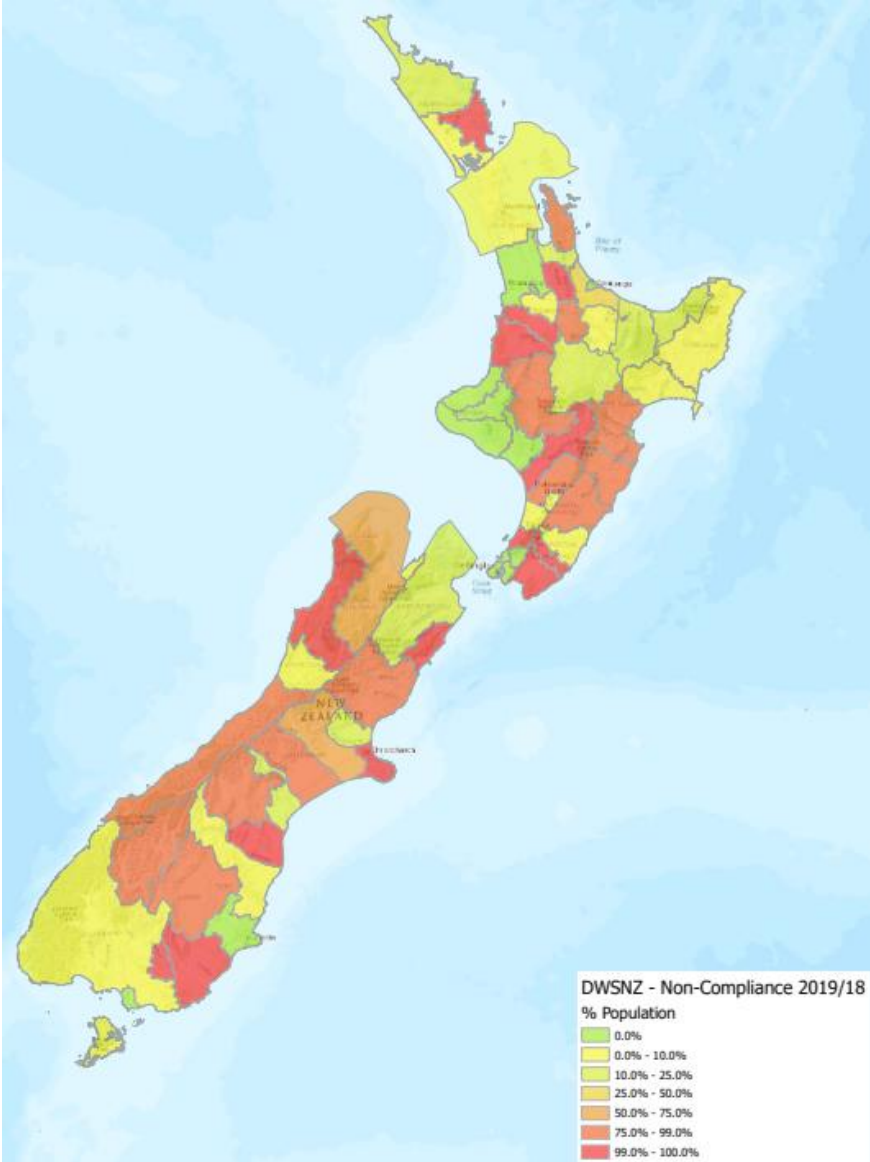
Significant investment is needed across the country to address the issues. Without a national, co-ordinated approach, the costs to householders will be high.

Poor compliance with drinking water standards

Access to safe drinking water and sanitation is considered a basic human right. However, many New Zealanders cannot be confident that their drinking water is safe.

Water suppliers' compliance with drinking water standards varies significantly across the country. The map below outlines the percentage of the population within each local authority area that is served by supplies that are non-compliant with the drinking water standards, as reported by the Ministry of Health.¹

Figure 1: Map of compliance with Drinking Water Standards New Zealand



Source: Beca, using data from the Ministry of Health Annual Report on Drinking Water Quality 2018-2019

The Ministry of Health also reports that there were 22 permanent and 18 temporary boil water notices in place for the whole of the reporting period (2018-2019), affecting roughly 40,000 people.

¹ Ministry of Health (2020). Annual Report on Drinking-water Quality. Available at <https://www.health.govt.nz/system/files/documents/publications/annual-report-drinking-water-quality-2018-2019-25june2020.pdf>

Poor health outcomes

One in five New Zealanders are supplied with drinking water that is not guaranteed to be safe from bacterial contamination, according to the Ministry of Health². A study in 2010 estimated that around 35,000 cases of acute gastrointestinal illness were contracted from reticulated drinking water each year.³ These numbers are likely to be an underestimation of the true incidence of illness due to the large number of visitors in small, non-compliant townships and/or the under-reporting of waterborne illnesses.

The health impacts of a failing three waters system has significant flow-on impacts from an economic perspective:

- Cases of water-borne gastrointestinal illnesses have been calculated to have cost New Zealanders \$496.1 million over 40 years, principally in terms of health care and lost productivity⁴
- In 2006, the Ministry for the Environment estimated that water-borne disease cost New Zealand \$25 million a year⁵
- The economic cost of the Havelock North outbreak to the country was calculated to be \$21 million.⁶

Specific cases of water contamination in recent years have also dented public confidence in the system for delivering three waters services and exposed the systemic issues facing the sector. The Havelock North tragedy was the largest recorded outbreak of waterborne disease in the country, killing four people and causing illness in 5,500 of the town's 14,000 residents. Recent infrastructure failures in Wellington and the discovery of elevated levels of lead in the water supply in Dunedin are more recent and tangible examples of the potential challenges we will continue to face across the country under the current system for delivering three waters services.

A large, accumulated infrastructure deficit

The Office of the Auditor General (OAG) reported in 2017 that local authorities are not investing enough in three waters assets, indicating that assets could be deteriorating to an extent that they are unable to meet the levels of service that their communities expect.⁷

² Ministry of Health (2020). Annual Report on Drinking-water Quality. Available at <https://www.health.govt.nz/system/files/documents/publications/annual-report-drinking-water-quality-2018-2019-25june2020.pdf>

³ Moore, et al., Cost Benefit Analysis of Raising the Quality of New Zealand Networked Drinking Water (LECG, 2010), 6. <http://srgexpert.com/wp-content/uploads/2018/02/cba-raising-quality-of-networked-drinking-water-jun20101.pdf>

⁴ Moore, et al., Cost Benefit Analysis of Raising the Quality of New Zealand Networked Drinking Water (LECG, 2010), 159. <http://srgexpert.com/wp-content/uploads/2018/02/cba-raising-quality-of-networked-drinking-water-jun20101.pdf>

⁵ Ministry for the Environment, Proposed National Environmental Standard for Sources of Human Drinking-Water: Resource Management Act Section 32: Analysis of the Costs and Benefits (Ministry for the Environment, March 2007), <https://www.mfe.govt.nz/sites/default/files/nes-drinking-water-section-32-mar07.pdf>

⁶ Government Inquiry into Havelock North Drinking Water, Report of the Havelock North Drinking Water Inquiry: Stage 2 (Department of Internal Affairs, December 2017), 33. [https://www.dia.govt.nz/diawebsite.nsf/Files/Report-Havelock-North-Water-Inquiry-Stage-2/\\$file/Report-Havelock-North-Water-Inquiry-Stage-2.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Report-Havelock-North-Water-Inquiry-Stage-2/$file/Report-Havelock-North-Water-Inquiry-Stage-2.pdf)

⁷ Controller and Auditor -General. Introducing our work programme - Water management. October 2017 ISBN 978-0-478-44275-5. paras 2.9 -2.11. Available at <https://oag.parliament.nz/2017/water-management/docs/water-management.pdf>

More recent analysis by the Water Industry Commission for Scotland (WICS), based on information provided by local authorities through the Request for Information process undertaken in late 2020, suggests that there has been systematic under-funding of economic depreciation by local authorities in New Zealand. This is shown in Table 1 below:

Table 1: Economic depreciation spent on three waters infrastructure by local authority groups.

Local authority group	Average annual spend per connected resident (based on Annual Reports from 2015 onwards)	WICS assessed economic depreciation per connected resident	% of economic depreciation
Metro	NZ\$124	NZ\$267	46%
Provincial	NZ\$128	NZ\$254	50%
Rural	NZ\$158	NZ\$253	63%
Larger rural (>10,000 residents)	NZ\$153	NZ\$237	65%
Smaller rural	NZ\$163	NZ\$266	61%

Source: Water Industry Commission for Scotland, 2021.

WICS estimates that between **\$120 billion to \$185 billion** of investment will be needed over the next 30 years to address this renewals backlog (i.e., replace and refurbish existing infrastructure), upgrade three waters assets to meet drinking water and environmental standards, and provide for future population growth.⁸ WICS reports that these figures are likely to underestimate the real cost of lifting the performance of our three waters infrastructure.

Box 1: Independent review of WICS assumptions underpinning investment estimates⁹

Beca has reviewed the standards and practices that apply in Scotland and their relevance for New Zealand. The analysis confirms that WICS' estimates are likely to be conservative as these do not include certain factors unique to New Zealand such as giving effect to iwi / Māori aspirations and building seismic resilience.

Poor customer outcomes

There is no globally consistent set of performance measures for evaluating the performance of three waters delivery systems.¹⁰ In New Zealand, this problem is compounded by the lack of high-quality information generally about the state and performance of three waters networks, which in itself reflects the challenges facing the sector.

⁸ Water Industry Commission for Scotland (2021). Economic analysis of water services aggregation: Final report. Available at [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/\\$file/wics-final-report-economic-analysis-of-water-services-aggregation.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/$file/wics-final-report-economic-analysis-of-water-services-aggregation.pdf)

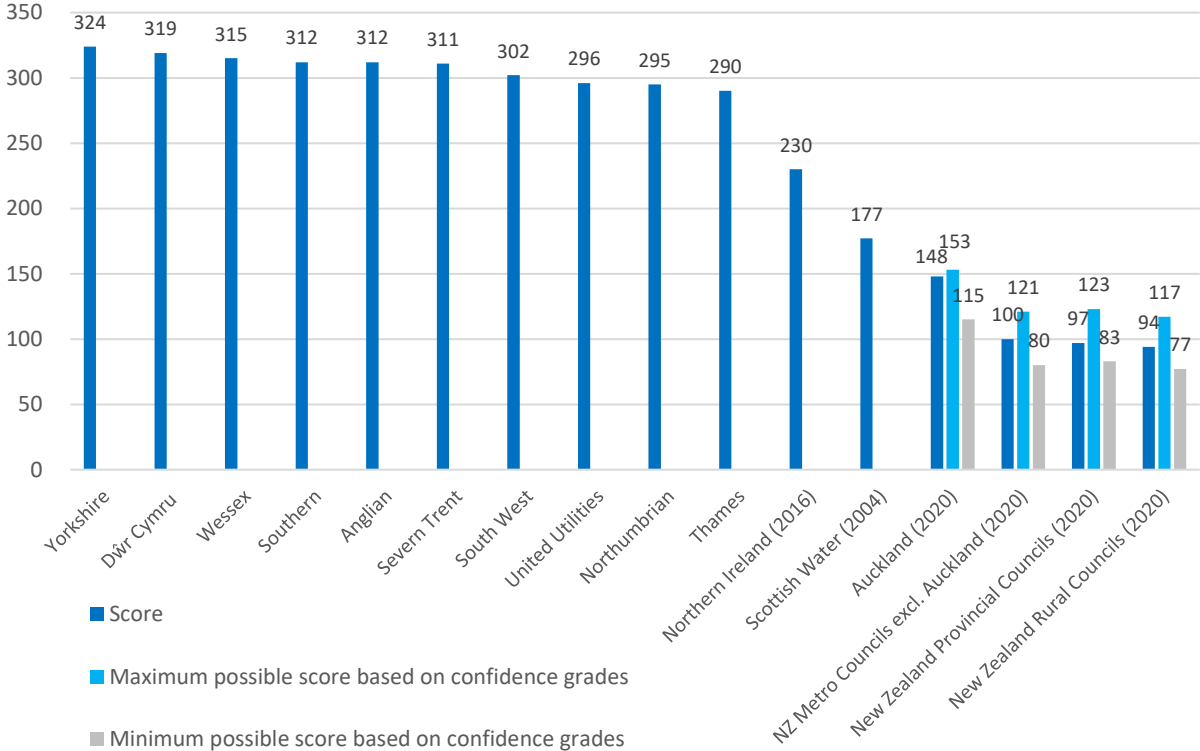
⁹ Beca (2021). Review of assumptions between Scotland and New Zealand three waters systems. Available at [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/\\$file/beca-report-dia-three-waters-reform-wics-modelling-phase-2.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/$file/beca-report-dia-three-waters-reform-wics-modelling-phase-2.pdf)

¹⁰ The closest measures used in New Zealand would be those used in the Water New Zealand National Performance Review, which helps to provide a basis for comparisons between different parts of the country.

WICS has used a performance measurement tool (the Overall Performance Assessment) developed by the water regulator in England and Wales (Ofwat) to measure the performance of water utilities on areas significant to customers (e.g. service disruptions, response to complaints). Based on WICS' comparison¹¹ of New Zealand local authorities at an aggregate level with regulated water utilities in the United Kingdom (see Figure 2), it is clear that:

- New Zealand has a long way to go, to catch up with the performance of more mature systems overseas
- We are at a starting position similar to Scottish Water, before the Scottish reforms. In the last two decades, Scottish Water has been able to close the performance gap and is now among the top-performing water services providers in the United Kingdom.

Figure 2: Comparison of New Zealand local authorities' Overall Performance Assessment scores with those of UK water utilities



Source: Water Industry Commission for Scotland, 2021

Poor environmental outcomes

Wastewater discharge

Discharges from wastewater treatment plants are harming the environment in many parts of New Zealand, particularly where multiple plants are scattered across a catchment or are operating poorly.

¹¹ The WICS assessment is indicative only as, like the Water New Zealand survey, it is based on the submissions of only a subset of local authorities in response to the Department's request for information (albeit a large subset representing over 80% of the population), and the assessment also relies on council's self-reporting. Unlike the Water New Zealand survey, there was no audit process for the RfI.

Resource consents are required for the discharge of treated wastewater from treatment plants in all regions. A report in 2019¹² found that nearly a quarter of wastewater treatment plants are currently operating on expired consents. Moreover, there is a bow wave of treatment plants that will require re consenting in the next decade, with almost 35% of all treatment plants (comprising 110 plants) currently going through or expected to go through a resource consenting process in the next 10 years.

These discharges can also cause health problems if they contain bacterial pathogens such as *E. coli* or *Campylobacter*, or protozoan pathogens such as *Cryptosporidium* or giardia.

Stormwater overflows

In urban areas, stormwater overflows are the main contributor to poor water quality, as a result of the greater proportion of impervious surfaces that increase the volume and speed of contaminant run-off. While there is a growing recognition and effort towards managing stormwater quality, this is not yet widespread. Of the 41 stormwater service providers contributing to the 2020/2021 National Performance Review, 26 (63%) had stormwater catchment management plans, and 23 (56%) were monitoring stormwater quality.¹³

As with treatment plants, formal actions in response to stormwater consent breaches are rare, but they are gradually increasing over time. One important difference from wastewater treatment discharges is that stormwater discharges are not always consented.

Other challenges facing stormwater systems are maintenance, resilience, and climate change. There is currently a lack of consistent information about the condition of stormwater infrastructure, and also about the impact of climate change and other natural hazards, to which stormwater systems are particularly susceptible.

Lack of resilience

New Zealand is facing threats to our water security. Climate change is bringing greater variation and extremes in our climate. Rural and urban areas across the country are experiencing more flooding and droughts. Water shortages disproportionately affect small, rural, and/or vulnerable communities, iwi/Māori, and households that depend on rainwater tanks.

Although estimates of water loss for water supplies without universal metering have a wider margin for error, it is estimated that 21% of water supplied to networks is lost on the way to its end use. This is more than the combined volume of water supplied by Christchurch City and Wellington Water. Opportunities for reducing water loss exist in at least 83% of serviced districts.¹⁴

The amount of water lost through networks is increasing. The median annual real water loss per property has increased by 44% in the last five years.

¹² GHD-Boffa Miskell (2019). National Stocktake of Municipal Wastewater Treatment Plants. Available at [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/\\$file/Report-1-National-Stocktake-of-Municipal-WWTPs.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/$file/Report-1-National-Stocktake-of-Municipal-WWTPs.pdf)

¹³ Water New Zealand (2021). National Performance Review 2019-20. Available at <https://www.waternz.org.nz/NationalPerformanceReview>

¹⁴ Water New Zealand (2021). National Performance Review 2019-20. Available at <https://www.waternz.org.nz/NationalPerformanceReview>

Water leakages and losses can contribute to water shortages, especially in dry years, and potentially can lead to water restrictions and disruption of supply. Because of leakages and losses, water takes, and water storage must also be greater than they would otherwise need to be.

Poor outcomes for iwi/Māori

Māori express a relationship with water as kaitiaki. Māori do not distinguish their rights and interests in freshwater from the three waters; they are viewed as a connection to the water environs and its systems. This holistic approach highlights the important connection between the review of three waters service delivery arrangements and other work programmes underway across government, particularly those that relate to resource management and freshwater allocation.

Water can be a taonga of particular significance and importance to Māori, and the Crown has a duty to protect iwi/Māori rights and interests under the Treaty of Waitangi / Te Tiriti o Waitangi (the Treaty / Te Tiriti), and existing and subsequent Treaty settlements. The Crown has responsibilities under the principles of Te Tiriti to protect such a relationship and allow for an appropriate exercise of tino rangatiratanga alongside kāwanatanga. The Crown also has broad responsibilities to protect taonga, the exercise of tino rangatiratanga and kāwanatanga, and the principles of Te Tiriti.

A clear concern from iwi/Māori is that the system for delivering three waters needs to uphold, align and integrate with Te Tiriti and Te Mana o te Wai.

In addition, iwi/Māori have roles within the current three waters service delivery system that will need to be acknowledged. They are suppliers and/or recipients of water services (particularly to rural marae, papakāinga, and rural communities), and are often members of communities that are underserved by the existing three waters service delivery system, and who receive poor quality three waters services or none at all.

The causes of New Zealand's three waters challenges are rooted in the way the system is currently designed

As the challenges and issues noted above show, many of New Zealand's communities are dealing with unacceptable outcomes from their three waters services. The Government has identified and is seeking to address four root causes that contribute to these persistent and systemic problems.

Limited opportunities to achieve benefits from scale

Most local authorities in New Zealand currently serve 100,000 or fewer connected ratepayers, and this creates significant inefficiencies within the system for delivering three waters, including:

- a lack of strategic and co-ordinated asset planning at a regional or greater level
- limited opportunities to consider catchment-level outcomes
- a lack of funding and pipeline certainty to create competitive pressures in the supply chain
- the lack of capacity and capability that tends to be associated with larger-scale entities
- a lack of innovation

- a lack of career pathways and opportunities for the workforce to specialise; and
- wide variation in water charges, particularly for vulnerable communities.

Achieving our ambitions for reform requires entities to have a sufficient asset and customer base to be financially sustainable, operate at an economically efficient scale, and enable prices to be affordable and levels of service to be broadly comparable.

We have drawn on international expertise and available empirical evidence¹⁵ to analyse the benefits of aggregation, including considering the scope for efficiency gains. This analysis took account of the potential for efficiency gains across financing costs, operating expenditure and capital expenditure.

International evidence indicates each entity would need to serve a connected population of at least **600,000 to 800,000** to achieve the desired level of efficiency. Below this point, water services providers may find it difficult to fully realise the efficiency benefits that have been shown to be possible in other jurisdictions.

The main benefits of scale relate to:

- improved access to capital markets and borrowing at a greater level than local authorities can achieve – as a result of having stronger balance sheets, and independent professional governance and management
- shifting the provision of water services onto a more financially sustainable footing – by leveraging scale to strategically plan, procure and manage three waters infrastructure and service delivery, delivering operating efficiencies, and adopting more flexible funding and pricing mechanisms to address geographical, climate risk and intergenerational equity considerations
- improving sector capacity – by providing sufficient scale to encourage strategic workforce planning, and provide the required depth of governance, management and specialist technical skills and experience

¹⁵ See for instance:

- Klien (2017). Global study on the aggregation of Water Supply and Sanitation Utilities. <https://openknowledge.worldbank.org/bitstream/handle/10986/27981/119098-WP-P159188-PUBLIC-ADD-SERIES-50p-stat-analysis-24-8-2017-13-34-31-W.pdf?sequence=1&isAllowed=y>
- Ferro, Lentini, and Mercadier (2011). Economies of Scale in the water sector: a survey of the empirical literature. <https://iwaponline.com/washdev/article-abstract/1/3/179/28777/Economies-of-scale-in-the-water-sector-a-survey-of?redirectedFrom=fulltext>
- González-Gómez and García-Rubio (2008). Efficiency in the management of urban water services. What we have learned after four decades of research. https://www.researchgate.net/publication/23565871_Efficiency_in_the_management_of_urban_water_services_What_have_we_learned_after_four_decades_of_research
- Independent Pricing and Regulatory Tribunal (2007). Literature Review: Underlying costs and industry structures of metropolitan water industries. https://www.ipart.nsw.gov.au/files/sharedassets/website/trimholdingbay/final_report_-_literature_review_-_underlying_costs_and_industry_structures_of_metropolitan_water_industries_-_september_2007.pdf

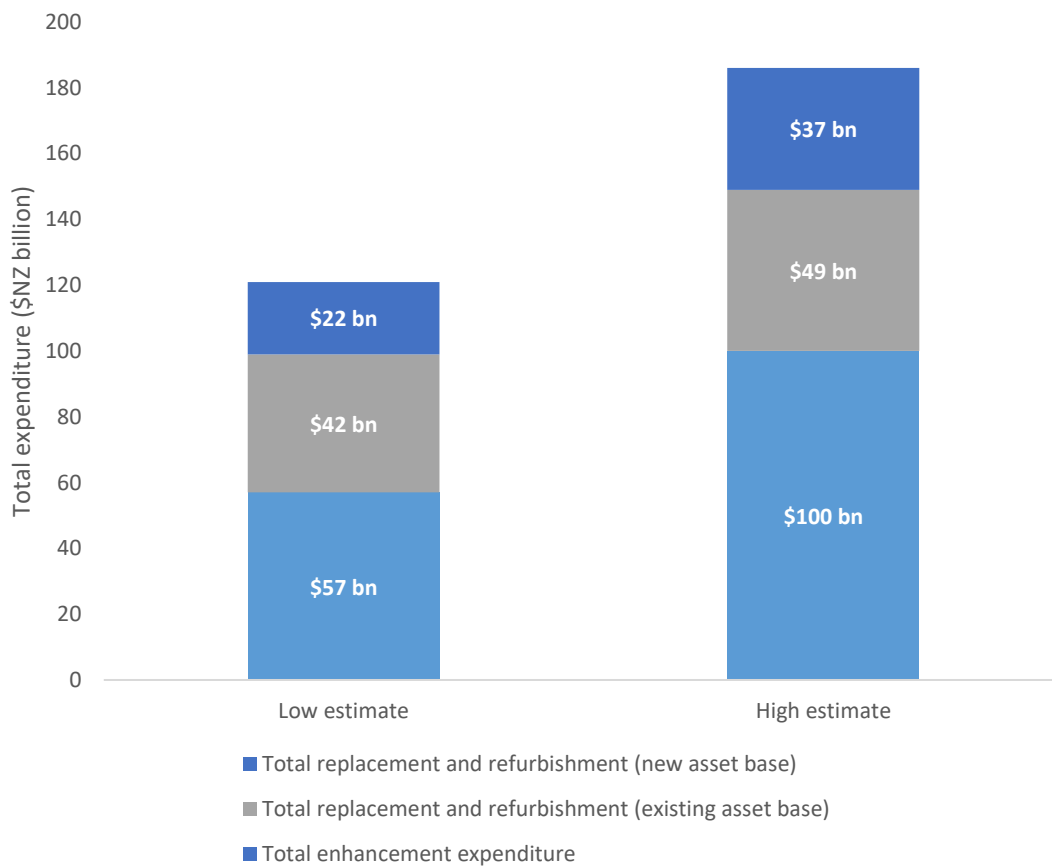
- regulatory burden and benchmarking performance of providers – including the ability to adequately benchmark performance across a smaller number of providers without imposing significant costs (relative to the costs associated with benchmarking the performance of a large number of entities with insufficient scale).

A further benefit of scale relates to the potential to spread costs over a larger population base, assisting in ensuring an acceptable level of service can be delivered affordably in smaller, rural communities.

A significant affordability challenge

As already noted, WICS analysis using information collected from local authorities on their assets, finances, and connected properties, indicates a likely range for future investment requirements in three waters at a national level in the order of \$120 billion to \$185 billion (see Figure 3 for a breakdown).

Figure 3: Estimated future capital investment requirement for three waters infrastructure



Source: Water Industry Commission for Scotland, 2021

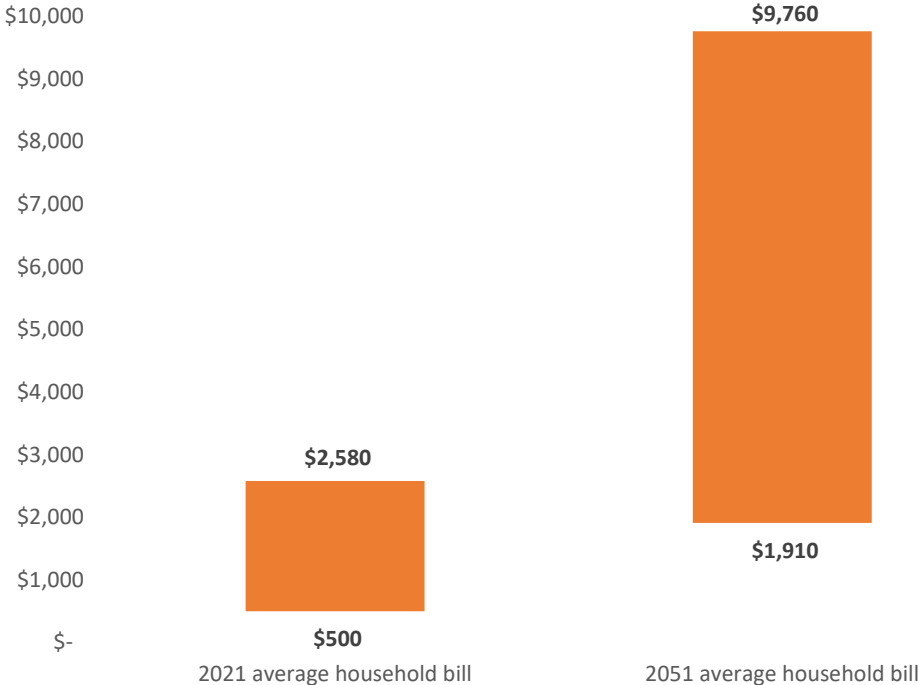
As illustrated in Figure 4 overleaf, meeting these costs will be challenging for most local authorities, with average household bills needing to increase significantly.¹⁶ Without reform, the real cost increases to households of meeting the required investment would be significant, and likely unaffordable for many smaller communities and low-income customers.

¹⁶ The average household cost figures for 2051 are charted up to the 75th percentile to account for large variances in the data collected from local authorities.

For rural local authorities, average household costs in 2019 ranged from less than \$500¹⁷ per annum to \$2,600 per annum, with a median of \$1,300. To meet the investment required, average household costs would need to increase by between three and 13 times in real terms. For some small, rural local authorities, average household costs in 2050 could reach as high as \$9,000 in today’s dollars and would be unaffordable for many households.

The situation is not much better for larger provincial and metropolitan local authorities. Average household bills (in 2019) for provincial local authorities ranged from around \$600 to \$2,550, with a median of \$1,120. By 2050, these bills would need to increase by between two and eight times to meet the required investment. Similarly, average household bills across metropolitan local authorities would need to increase by between 1.5 and seven times. In some metropolitan areas, bills could reach between \$1,700 and \$3,500 per annum in today’s dollars.

Figure 4: Average household bills in 2021 compared with 2051 without reform



Source: Water Industry Commission for Scotland, 2021

These findings are consistent with analysis undertaken independently by the following local authorities:

- **Otago/Southland.** Potential future average charges for three waters services across the region is estimated to more than double over the next 10 years from \$1,300 to almost \$3,000¹⁸
- **Hawkes’ Bay.** Average three water rates could increase to over \$3,500 and \$4,000 for households in Central Hawke’s Bay and Wairoa respectively.

¹⁷ Current costs are not necessarily a good reflection of the true economic costs of service delivery, as evidence suggests many councils do not fully cover economic depreciation through current charges.

¹⁸ Morrison Low (2021). Otago Southland Three Waters: Issues and principles. Available at (pages 39 to 68) <https://www.goredc.govt.nz/assets/documents/meetings/2021/20210309-Council-agenda.pdf>

The expected increases do not only impact on rural and provincial areas. In Auckland, recent announcements have signalled water charges will increase by 7 per cent in 2022, followed by a 9.5 per cent increase each year up to 2029.¹⁹

Clearly, the costs of accessing safe, clean and environmentally friendly three waters services are projected to increase significantly and would have an impact on the cost of living for New Zealanders, especially lower income households.

Misaligned incentives for critical water infrastructure decisions

Local authority service providers operate in a political environment, in which investment decisions are made by elected representatives who have a duty to consider broader community interests (for example, other investment priorities and affordability of rates increases) and a constrained financial environment, in which the main funding and financing mechanisms are via ratepayers and council borrowing.

These factors combine to limit the level of three waters investment, for example due to:

- covenants imposed by lenders which limit the debt to revenue ratios that councils can maintain while achieving a good credit rating and cost-effective financing
- varying attitudes to debt and rates increases across communities
- financially constrained households (such as ratepayers on low incomes), especially in areas with higher levels of deprivation
- misaligned incentives, and a lack of management focus, connected with an operating environment in which three waters is just one aspect of the broader responsibilities that councils have and services that communities require.

Recent reviews into the delivery of three waters infrastructure in Wellington,²⁰ the West Coast,²¹ Hawkes' Bay²² have arrived at similar conclusions regarding the challenges associated with three waters service delivery and infrastructure provision in the current local government operating environment.

Lack of effective oversight and stewardship for the three waters sector

New Zealand has 67 local authority (or council-controlled organisation) suppliers, 20 district health boards (noting the Government's recent announcements of major reform in this area, including to create one national health organisation with four regional divisions), 16 regional councils, and seven government ministries that have a role in relation to the supply of safe drinking water.²³

¹⁹ Watercare (2021). Water and wastewater prices to increase from 1 July 2021 Available at <https://www.watercare.co.nz/About-us/News-media/Water-and-wastewater-prices-to-increase-from-1-Jul>

²⁰ Wellington City Council (2020). Mayoral Taskforce on the Three Waters report Available at <https://wellington.govt.nz/-/media/environment-and-sustainability/water/files/2020/mayoral-taskforce-three-waters-taskforce-report.pdf?la=en&hash=3B3EC07C7DFBC70020C610AB8372E37FEB2C537E>

²¹ Tonkin & Taylor (2020). Three Waters Service Delivery Review.

²² Morrison Low (2020). Hawkes' Bay Three Waters: Business case of three waters service delivery options. Available at <https://www.hb3waters.nz/assets/Uploads/HB-3-Waters-Delivery-Detailed-Analysis-29.07.20-Full-Report.pdf>

²³ Department of Internal Affairs (2017). Report of the Havelock North Drinking Water Inquiry, Stage 2. Available at [https://www.dia.govt.nz/diawebsite.nsf/Files/Report-Havelock-North-Water-Inquiry-Stage-2/\\$file/Report-Havelock-North-Water-Inquiry-Stage-2.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Report-Havelock-North-Water-Inquiry-Stage-2/$file/Report-Havelock-North-Water-Inquiry-Stage-2.pdf)

The dispersed nature of the roles and responsibilities within the system, being spread across many agencies, means no one is responsible for monitoring or overseeing the performance of the whole system.

While the Government is already taking steps to strengthen the regulatory environment – through the creation of Taumata Arowai and the introduction of the Water Services Bill – this is focusing on improving the quality of the three waters, and other gaps remain around how the performance of the system and its outcomes for customers are regulated.

In addition, existing water service providers are not subject to even a basic form of economic regulation, such as information disclosure. This has hampered the quality of information about, and an understanding of, the condition of three waters assets and the performance of water networks.

The lack of effective oversight and stewardship arrangements, and weaknesses in the regulatory environment, only serve to compound the challenges noted above with how the system is currently designed.

Without good quality information, there is a lack of transparency about fundamental elements of the three waters system – such as the costs and performance of services, asset condition, and required investment – that makes it difficult for customers and communities to hold water services providers to account for performance.

A changing regulatory context will help, but the operating environment for many local authorities will continue to be challenging

The policy landscape will change significantly with the establishment of Taumata Arowai and the introduction of a new water services regulatory framework. It will take some time to implement the new regulatory regime, but it can be expected to provide much greater assurance that drinking water is safe and that drinking water standards are being complied with. Key features of the new regulatory framework include:²⁴

- all drinking water suppliers, except domestic self-suppliers, will have a duty to consistently provide safe drinking water
- stronger requirements on water suppliers to manage risks to drinking water safety
- strong compliance, monitoring and enforcement actions for Taumata Arowai
- new national environmental standards for wastewater discharges and overflows, with new obligations on network operators to manage risks to people, property and the environment
- new requirements for reporting on the performance of wastewater and stormwater networks.

These regulatory changes will increase the pressure on local authorities to raise current levels of investment in three waters infrastructure and services. Shifting public perceptions around access to safe drinking water and environmentally friendly wastewater and stormwater practices and tougher resource management consent requirements will only serve to amplify the regulatory pressure, and will be key drivers of investment.

²⁴ These features are contained in the current draft of the Water Services Bill being considered by the Health Select Committee and are subject to change when reported back to the House later this year.

Without reform, local authorities will need to make increasingly difficult decisions about how they meet this challenge, including through future rates rises, higher levels of borrowing, and scaling back or delaying other investment priorities.

Local authority responsibilities under provisions in the Water Services Bill

Local authorities (and other water suppliers) will face significant duties and obligations for drinking water when the Water Services Bill and associated regulations are enacted. A summary of these obligations is outlined in Table 2 below.

Under the proposed service delivery reforms, these responsibilities and obligations would transfer to the new water services entities, meaning local authorities (and their officers, employees and agents) would cease to face these obligations.

Table 2: Local authority responsibilities under provisions in the Water Services Bill

Local authorities as suppliers of water services	General obligations of local authorities
<ul style="list-style-type: none"> • Duty to provide safe drinking water and meet drinking water standards, and clear obligations to act when water is not safe or fails to meet standards • Key provisions include: <ul style="list-style-type: none"> ○ Suppliers need to register with Taumata Arowai ○ Local authority suppliers will need a drinking water safety plan and a source water risk management plan ○ Water suppliers must give effect to Te Mana o te Wai • Taumata Arowai will have significant compliance and enforcement powers, including powers to direct suppliers and enter into enforceable undertakings with suppliers • Officers, employees and agents of suppliers will have a duty to exercise professional due diligence • Complying with these new requirements is expected to require significant capital and operating expenditure by local authorities (including paying levies to Taumata Arowai for operation of the regulatory system) 	<ul style="list-style-type: none"> • Local authorities will have a duty to ensure communities have access to drinking water if existing suppliers face significant problems in complying with drinking water standards including: <ul style="list-style-type: none"> ○ Requirements to work with suppliers and consumers to identify solutions ○ Intervention responsibilities if a supplier is unable to meet standards, including potentially taking over management and operations of private or community supplies • In rural communities, this could represent a significant risk (contingent liability) for local authorities • Local authorities will be required to make assessments of drinking water, wastewater and sanitary services to ensure communities have access to safe drinking water • Local authorities will need to assess drinking water services available to communities at least once every three years, including private and community supplies (excluding domestic self-supplies)

It will be challenging for many suppliers to comply with these new obligations, particularly those suppliers that are being brought into the regulatory system for the first time. The WICS estimate of future investment requirement already presented in this paper signals the likely scale of the challenge facing water suppliers. Local authorities will also face an added burden given they will have a duty to intervene on behalf of those suppliers that are unable to meet their obligations under the new regulatory environment.

Transformative change is required, not piecemeal solutions

The nature and extent of the challenges facing the system, and the root causes of these problems, mean we cannot expect the current system of service delivery to respond to meet these challenges – particularly in the comprehensive, widespread and sustained manner that is required. Most councils and communities will not have the funding, or the operational capacity, to eliminate the infrastructure deficit and meet future growth requirements.

Experience over the past 30 years also indicates that widespread improvements, particularly through voluntary change and collaboration, are unlikely.

The Government has developed a package of reform interventions that collectively seeks to address the root causes of our three waters crisis.

The following are the key components of the Government's reform package:

- Three waters services are aggregated into four large-scale, multi-regional entities
- Water services entities, governed by competency-based, independent, professional boards, that will assume ownership of three waters assets and have greater capacity to finance investment
- Clear national policy direction is provided for the three waters sector
- Economic regulation to provide greater transparency about the costs and performance of three waters services and infrastructure, and to strengthen accountability for performance
- Development of an industry transformation and workforce transformation strategy to support and enable the wider three waters industry to 'gear up' and play its part in the reformed service delivery system
- The introduction of mechanisms that protect and promote the rights and interests of iwi/Māori in the new three waters service delivery system.

Further detail on each of these components of the reform package are provided below. A brief summary of some of the alternative options considered is provided in Appendix 1.

Aggregation of water services delivery

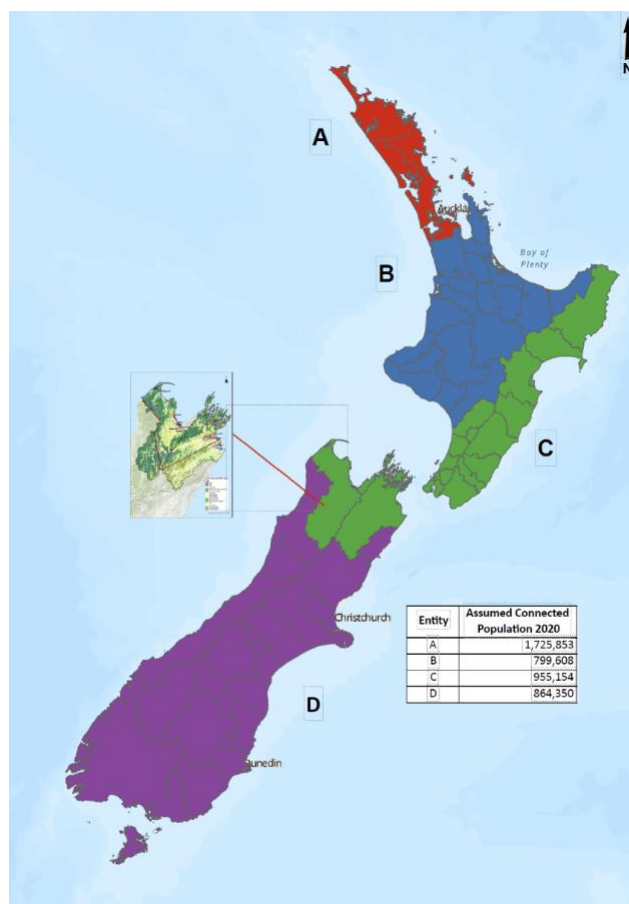
The Government has considered a range of factors to determine how many entities into which it should aggregate water services delivery, and their boundaries. The key considerations have been to establish entities that:

- have a sufficient asset and customer base to be financially sustainable, operate at an economically efficient scale, and deliver water services at an affordable price

- operate effectively in relation to water catchments and achieve desired environmental outcomes, which is dependent on containing entire catchments within the boundaries of entities. This will enable effective catchment planning and management of associated infrastructure
- engage meaningfully with iwi/Māori to inform understanding of Treaty rights and interests. This includes, but is not limited to understanding of rohe/takiwā boundaries and the importance of considering a Te Ao Māori expression of kaitiakitanga through ki uta ki tai – the passage of water from the mountains and great inland lakes, down the rivers to hāpua/lagoons, wahapū/estuaries, and to the sea
- understand and reflect relevant community interests, particularly where there are existing economic or functional relationships or a shared identity between neighbouring communities
- have access to a skilled local workforce.

The Government considers that the option comprising of four entities, with the configuration as presented in Figure 5, achieves an optimal balance of the factors described above.

Figure 5: Proposed boundary configuration for new water services entities



Entity	Regions included
A	Auckland and Northland regions.
B	All districts from the Waikato, Bay of Plenty and Taranaki regions and the upper parts of Manawatū-Whanganui region (Ruapehu, Whanganui, and Rangitikei).
C	The districts in the eastern and lower part of the North Island (Gisborne, Hawke’s Bay region, lower parts of the Manawatū-Whanganui region ²⁵ , and Wellington regions); and The local authorities at the top of the South Island (Tasman, Nelson and Marlborough).
D	The districts and regions in the rest of the South Island, including those parts of the Marlborough and Tasman Districts that comprise the Ngāi Tahu takiwā. ²⁶

²⁵ This includes Horowhenua, Manawatu, Palmerston North and Tararua.

²⁶ Adjustments will be made to this boundary to correspond to the Ngāi Tahu takiwā rather than conforming to local authority boundaries.

This configuration has several advantages, including that it:

- results in broadly even populations served outside of the 'northern entity', enabling each entity to realise the opportunities associated with scale
- combines all districts in the Waikato and Bay of Plenty into a single entity, recognising the significant relationships that exist between these councils and leveraging work undertaken to date towards reform
- aligns catchments in the central North Island, in particular from the Taupō district through the Waikato region
- recognises whakapapa linkages between the North and South Islands, including iwi boundaries that span the two islands.

Under this configuration, the Hauraki Gulf marine area spans the boundaries of the two upper North Island entities and will require them to collaborate with the relevant regional councils on an integrated catchment management approach to the Hauraki Gulf.

The Government intends to continue discussions with those local authorities and iwi/Māori that are most affected by the proposed boundaries, to inform final decisions on the boundaries of the new entities. These decisions will be considered by Cabinet in September 2021.

Design of the new water services entities

The new entities will need to be set up for success with a clear purpose and objectives, and the appropriate functions, operating principles, governance and accountability arrangements to support the achievement of these. The new water services entities would be statutory entities, established in legislation.

Purpose, objectives and operating principles

The purpose of the new water services entities is to provide safe, reliable and efficient water services.

The water services entities would have objectives that flow from this purpose, relating to:

- delivering water services, and related infrastructure, in an efficient and financially sustainable manner
- operating in accordance with best commercial and business practices
- acting in the best interests of consumers and communities, in the present and for the future
- giving effect to Te Mana o te Wai (to the extent that Te Mana o te Wai applies to the duties and functions of the entities)
- delivering and managing water services in a sustainable and resilient manner, which seeks to address climate risks and mitigate the negative effects of natural hazards
- protecting and promoting public health and the environment
- supporting and enabling housing and urban development.

To guide and inform how the water services entities deliver their objectives and functions, entities would be required to adhere to operating principles that relate to:

- developing and sharing capability and technical expertise – both internally, and across the wider three waters, development control, and land-use planning sectors
- being innovative in the design and delivery of water services and infrastructure
- being open and transparent – including in relation to the calculation and setting of prices, determining levels of service, and reporting on performance
- partnering and engaging early and meaningfully with Māori, local government and communities
- cooperating with, and supporting, other water services entities and infrastructure providers, local authorities, and the transport sector – including in relation to infrastructure planning, and development control and land-use planning processes
- understanding, supporting and enabling matauranga Māori and tikanga Māori and kaitiakitanga to be exercised –both within the entities and when engaging with iwi/Māori.

Scope of services – two or three waters

The reforms are an opportunity to achieve a step change in the performance of the stormwater system, by:

- bringing together the delivery of drinking water, wastewater and stormwater to enable the new water services entities to adopt an integrated and holistic approach managing catchments, particularly in urban areas
- leveraging the scale and financial capacity of the new entities to address the growing challenges associated with the stormwater system as a result of the continuing expansion of urban areas, increasing frequency of high-intensity rainfall events, and a growing awareness of the environmental impact of stormwater run-off on fresh and coastal water bodies
- allowing an increase in investment, capability and capacity to lift the performance of stormwater systems, ensure they are resilient, reduce impacts on water quality, enable delivery of large scale housing projects and adapt to long-term challenges like climate change
- providing the opportunity to co-ordinate and align stormwater management functions across the current system to enable a shift from the current reactive approach to management of the stormwater system.

Further detailed work is required to ensure that the transfer of stormwater responsibilities recognises the complicated array of legislative provisions and assets, and the policy and planning framework. These reforms are an opportunity to develop a much clearer legislative, policy and operational framework, to ensure accountabilities are clear, and there are robust arrangements in place for the maintenance, operation, and funding of stormwater system in the future. This work will be informed by advice from a 'stormwater technical working group' – comprising experts from central and local government, iwi/Māori, and the water sector, and with an independent chair.

While the issues are complex, the inclusion of stormwater within the scope of water services entities is not without precedent. Similar approaches have been followed in other jurisdictions; for example, Melbourne Water manages bulk stormwater infrastructure.

Ownership, accountability and charging arrangements

The ownership and accountability arrangements for the new entities are set out in Table 3 below. This design will create entities with the right oversight, governance, management and controls, that are best placed to provide the level of focus and independence required to deliver the objectives of reform. It will also enable local authorities and iwi/Māori who have an interest in the outcomes from the three waters system to have appropriate roles and influence within the three waters system. The structure of the new water services entities is illustrated in Figure 6.

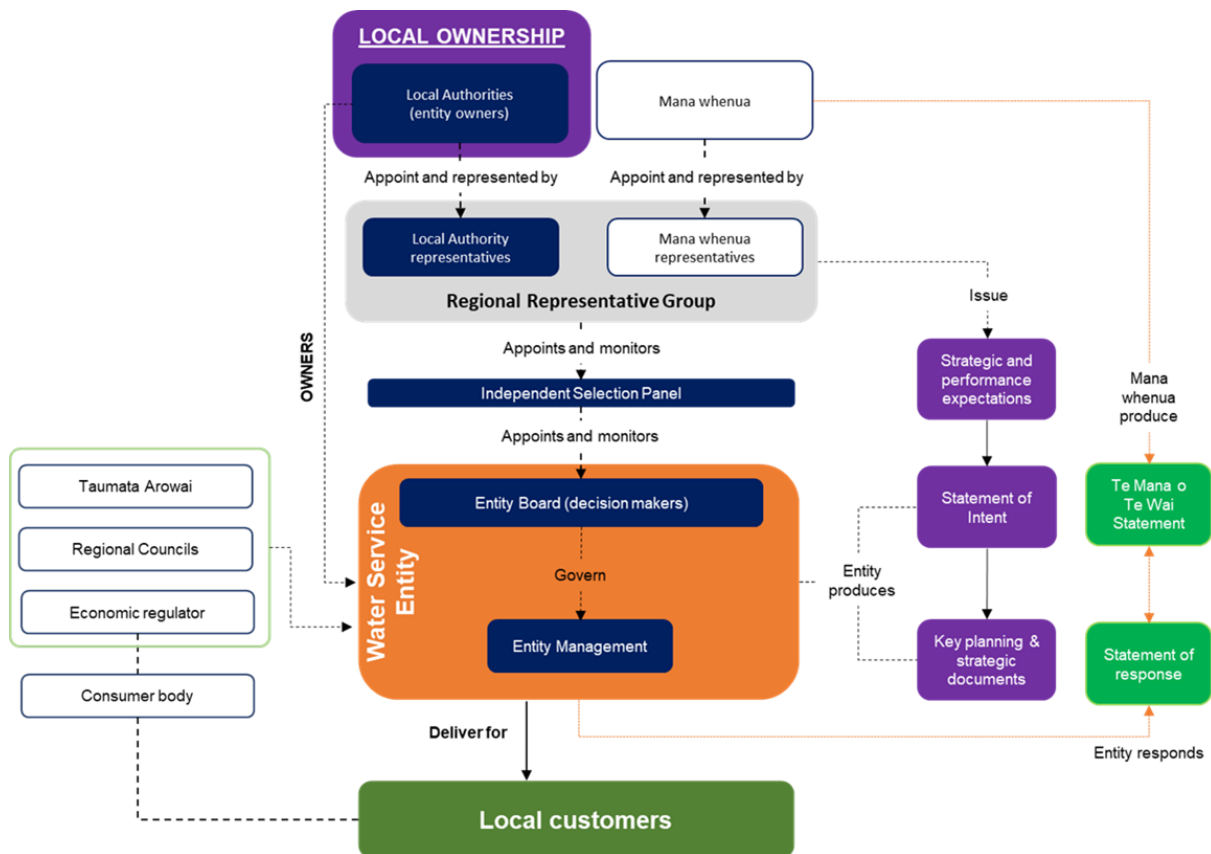
Table 3: Key design features of the new water service entities

Theme	Design features	Contribution to objectives
<p>Ownership of the entities</p>	<ul style="list-style-type: none"> • Local authorities are the ‘owners’ of the entity, on behalf of their communities • Mana whenua have a joint oversight role • Protections in legislation against privatisation 	<ul style="list-style-type: none"> • Local authorities and mana whenua have ability to influence key decisions that affect them • Three waters assets and service delivery remains in public ownership
<p>Governance of the entities</p>	<ul style="list-style-type: none"> • Entities will be governed by independent boards, with the relevant competencies in delivering and managing three waters or similar network infrastructure and other appropriate skills • Each entity will have a Regional Representative Group²⁷ that provides for representation of the local authority ‘owners’ of the entity and of mana whenua, with mana whenua and local authorities represented on a 50:50 basis • The regional Representative Group will issue a Statement of Strategic and Performance Expectations to inform the entity’s direction 	<ul style="list-style-type: none"> • Entities are independently and professionally run • Ability for local authorities and mana whenua to influence decisions

²⁷ Regional Representatives would be elected members (or a relevant and appropriately qualified senior council officer) and iwi/Māori representatives.

Theme	Design features	Contribution to objectives
Appointing board members	<ul style="list-style-type: none"> • An independent selection panel will appoint board members • The Regional Representative Group will appoint members to the Independent Selection Panel 	<ul style="list-style-type: none"> • Entities are operationally and financially independent from local authorities
Ownership of three waters infrastructure	<ul style="list-style-type: none"> • Entities will assume ownership of three waters infrastructure and service delivery arrangements, as well associated debt and revenue • Entities must be able to borrow in their own right, independent of local authorities 	<ul style="list-style-type: none"> • Entities have financial capacity to meet the infrastructure deficit and future investment needs • Balance sheet separation
Consumer and community influence	<ul style="list-style-type: none"> • Entities will be required to engage with consumers and communities on key strategies and plans that affect them • Entities will be required to establish a consumer forum 	<ul style="list-style-type: none"> • System for delivering three waters services is responsive and accountable to consumers and communities
Charging	<ul style="list-style-type: none"> • Each entity will be required to be transparent in how they calculate and set prices, and must engage with consumers and communities on proposed prices and charges • Entities will be enabled to use a range of charging instruments, many of which are already used by local authorities currently, including fixed and, volumetric charges • During the transition to the new delivery arrangements, it is anticipated that consumers would continue to be charged on a similar basis to their existing arrangements, at least in the initial years of the entities' operations 	<ul style="list-style-type: none"> • Entities are operationally and financially independent from local authorities • Entities have financial capacity to meet the infrastructure deficit and future investment needs

Figure 6: Water services entity structure



Protections against privatisation

The Government has been clear that continued public ownership of water services and infrastructure is a bottom line. The reform package includes a series of proposals that together help safeguard against future privatisation, making it more difficult to privatise than under the current arrangements. Key protections include:

- requiring that any proposal for privatisation be (1) endorsed by the Regional Representative Group by at least a 75 per cent majority (including by mana whenua representatives) and (2) put to a referendum so that the public can have its say on whether this should occur. The referendum would require 75 per cent or more votes in favour of the proposal for it to proceed, at which point it would go through the legislative and select committee processes, which would provide a further democratic protection.
- legislative provisions specifying that local authorities that constitute each water services entity would be the owners of the entity;
- no provision for financial recognition of ownership, including no shareholdings and a prohibition on dividends (these features would make divestment difficult without significant reconstitution of the entities and legislative change);
- mana whenua involvement in oversight and representing 50 per cent of Regional Representative Group;

- statutory restrictions on sale or transfer of material, strategic water assets, similar to the current approach in the Local Government Act 2002, which prevents local authorities from selling or disposing of strategic assets or the infrastructure necessary for providing water services; and
- a robust regulatory environment that includes Taumata Arowai, regional councils, an economic regulator, and likely consumer forum. These regulatory mechanisms would not be appropriate in the private sphere and likely to be unattractive.

More broadly, reform provides an opportunity to improve the level of service for more remote communities, within which Māori are overrepresented. The flow-on improvements to the natural environment will directly affect iwi/Māori as it will improve the mauri of waterways and the wider environment, and this will improve the wairua of mana whenua.

Relationship to resource management reform

Three waters service delivery reforms are part of a wider, interconnected programme of reforms. In addition to the implementation of the three waters regulatory reforms and establishment of Taumata Arowai, there are proposed changes to the resource management system.

In the new system for delivering three waters services, local government will continue to have primary accountability for urban and land-use planning.

The water services entities will be required to identify and make provision for infrastructure to support growth and development identified in relevant plans. This will enable them to service demand for new strategic capacity, including meeting the three waters needs of all new housing development, and commercial and industrial customers.

When providing new infrastructure, the entities will need to work with urban and land use planning authorities, and other infrastructure providers, to ensure that the delivery of infrastructure is sequenced and supports committed development, to minimise the likelihood of redundant assets.

In parallel with the resource management reforms, it is likely that the water services entities will have a statutory obligation to support an integrated planning approach. These obligations would ensure that urban planning authorities, the new water services entities, and other infrastructure providers, coordinate the planning and delivery of the right infrastructure, at the right time, in accordance with commitments in agreed urban growth strategies, and spatial and implementation plans (including those provided for under the new resource management system).

Protecting and promoting iwi/Māori rights and interests in the new three waters service delivery model

Reform of the system for delivering three waters, and the introduction of new legislative, governance and management arrangements to deliver water services, provides an opportunity to include mechanisms for the recognition of iwi/Māori rights and interests in the new three waters system. The reform package includes the following mechanisms for protecting and promoting iwi/Māori rights and interests in the new three waters service delivery model:

Table 4: Mechanisms to protect and promote iwi/Māori rights and interests

Mechanisms	Impacts
Statutory recognition of the Treaty of Waitangi and Te Mana o te Wai in legislation	Requiring that the conduct of the entities and other participants in the system for delivering three waters, upholds the principles of Te Tiriti, including through building the capacity of iwi/Māori to participate in the system
A mana whenua representative group at the strategic level of the new water services entities exercising greater tino rangatiratanga than the current system allows, which has equal rights to local authorities, and a kaupapa Māori selection method for this group	Iwi/Māori play a role in providing strategic influence and oversight for the new water services entities
Te Mana o te Wai statements, which would be issued to the entity by mana whenua, and to which the entity board would be required to respond	Enable mana whenua to express kaitiakitanga in the new system, with the onus of response sitting with the water services entity
Requirements that the board of each entity, collectively, has competence relating to the Treaty of Waitangi, mātauranga Māori, tikanga Māori, and te ao Māori	The water services entities have the competency to embed Te Mana o te Wai as an objective of the entity and to uphold the principles of Te Tiriti across all its activities
Requirements that the board of each entity includes members with specific expertise in supporting and enabling the exercise of mātauranga Māori and tikanga Māori and kaitiakitanga with respect to the delivery of water services	The water services entities have the competency to embed Te Mana o te Wai as an objective of the entity and to uphold the principles of Te Tiriti across all its activities
Requirements that the entities fund and support capability and capacity of mana whenua to participate in relation to three waters service delivery	Ensuring that iwi, hapū and Māori are provided with reasonable financial and non-financial support to participate fully and meaningfully in the system for delivering three waters and to undertake the roles envisaged for them

Clear national policy direction and stewardship

The Inquiry into Havelock North Drinking Water²⁸ did not only identify challenges with the way local authorities are currently set up to deliver three waters services. It also identified inadequacies in national policy and stewardship of the sector as contributing factors to the Havelock North tragedy.

These stewardship challenges need to be addressed, to ensure the benefits of reform are fully realised and sustained over time, and that the new system can adapt, and remain fit for purpose.

Government policy statement

As part of its stewardship of the three waters system, the Government will introduce a Government Policy Statement (GPS) as an enduring and transparent mechanism for:

- providing high-level strategic direction to the new water services entities
- informing and guiding the decisions and actions of water services entities in fulfilling their statutory purpose and objectives
- conveying any Government expectations in relation to Māori interests, partnering with Māori, and protections for Māori interests
- providing certainty to everyone operating in the three waters system and receiving services from the entities about the outcomes the new entities are expected to deliver.

When an entity makes decisions on three waters investment, they will be required to give effect to the strategic priorities set out in the GPS.

Stewardship of the new service delivery system

Over the transition phase, the Department of Internal Affairs will continue to support the Minister for Local Government and the group of Three Waters Ministers on the significant policy and legislative design choices to come. The Department will also undertake some stewardship functions during the transition phase, including monitoring progress towards establishment.

The Department will also lead further work, across the Government agencies with an interest in the three waters system, to develop an approach to organising stewardship arrangements for the system over the longer-term. A range of options would be explored through this work, including formal mechanisms for collaboration, coordination, and accountability across the many policy and regulatory agencies that have a role in the system.

Establishment of an economic regulation regime and mechanisms for consumer protection

Economic regulation and consumer protection are a critical part of the overall reform package, but detailed proposals will be developed over a slightly longer timeframe.

²⁸ Government Inquiry into Havelock North Drinking Water, Report of the Havelock North Drinking Water Inquiry: Stage 2 (Department of Internal Affairs, December 2017), 33.
[https://www.dia.govt.nz/diawebsite.nsf/Files/Report-Havelock-North-Water-Inquiry-Stage-2/\\$file/Report-Havelock-North-Water-Inquiry-Stage-2.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Report-Havelock-North-Water-Inquiry-Stage-2/$file/Report-Havelock-North-Water-Inquiry-Stage-2.pdf)

Evidence from overseas jurisdictions, and other utility sectors in New Zealand shows that economic regulation can be effective in protecting and enhancing the long-term interests of consumers. Economic regulation will also help to address the current information constraints within the sector, making performance information available so consumers, communities and other stakeholders can hold suppliers to account for the quality of their services and the prices they charge.

The Government has agreed, in-principle, to the introduction of an economic regulation regime in a reformed New Zealand three waters sector. At the minimum, this will include an information disclosure regime that publishes information relating to the performance of the new water services entities.

The Ministry of Business, Employment and Innovation are undertaking further work to develop an appropriate economic regulation regime. explore and consult on the options for an appropriate economic regulation and consumer protection regime. This work will also include the development of advice and proposals relating to consumer protection mechanisms for the new three waters system, including for example disputes resolution, protections for vulnerable consumers and transparency around price-setting.

The Ministry of Business, Employment and Innovation intends to consult publicly on options for economic regulation and consumer protection mechanisms in **October 2021**, with a view to informing decisions in time for the new economic regulatory regime to 'go live' at the same time as the new water services entities are established and commence operations.

Development of an industry and workforce transformation strategy

An industry transformation strategy is required to support and enable the wider three waters industry to 'gear up' and play its part in the reformed service delivery system.

There are significant additional challenges facing the three waters sector that will not be addressed solely through the service delivery reforms. These include matters such as workforce availability, supply chain logistics, and construction sector capacity.

The purpose of the industry transformation strategy is to:

- provide a holistic assessment of the existing constraints, challenges, and opportunities involved in delivering the reform objectives
- identify practicable solutions to the constraints, challenges, and opportunities, and a system for prioritising the delivery of these solutions
- successfully address the infrastructure funding 'deficit' and unlock increased productivity in the sector.

Reform can provide significant health, environmental, economic and other wellbeing benefits

Analysis commissioned by the Department, in partnership with the Steering Committee, and information from overseas jurisdictions that have undertaken reform²⁹, indicates that a number of significant benefits can be realised through reform. The main benefits are as follows:

²⁹ For example, Victoria and Tasmania in Australia; England, Wales and Scotland.

Improving health and environmental outcomes

Reform is expected to facilitate a material improvement in health and environmental outcomes. This conclusion is informed by international evidence that suggests that water service entities are likely to be in a stronger position to meet new drinking water and environmental standards because of the reforms. The combination of a stronger regulatory framework and structural and governance reform has been shown to both strengthen the incentives on water service providers to improve service standards and strengthen the capacity of those providers to deliver improvements.³⁰

A further benefit of reform, particularly for urban water outcomes, is the improved ability for water service entities to address contamination of urban streams through sewer overflows and other unauthorised discharges and stormwater run-off. Improved management and investment, as well as the ability to plan on a catchment level, will enable water service entities to better manage contamination and erosion, with flow-on benefits for receiving urban water environments.

Delivering economic benefits to all corners of the economy

Analysis by Deloitte shows that reform will impact every corner of the economy, and could see GDP expand by \$14 billion to \$23 billion over the next 30 years.³¹ This represents a 4.4% to 7.1% increase in the size of the New Zealand economy and an average increase in GDP per annum of between 0.3% to 0.5%.

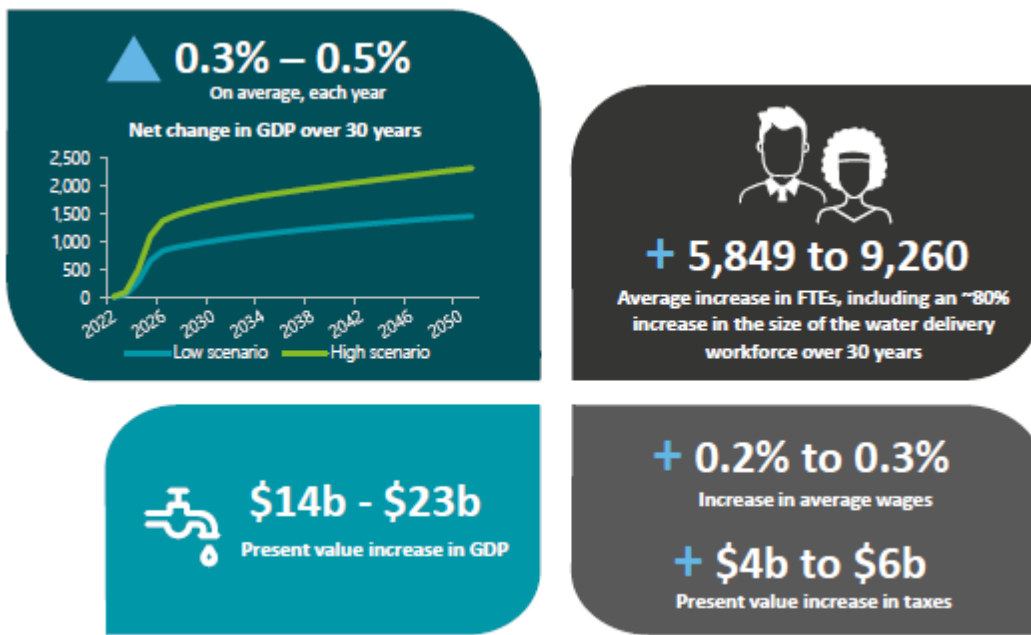
Reform is also expected to unlock an additional 5,800 to 9,300 jobs, with the water sector workforce expected to grow by 80% over the next 30 years. Deloitte anticipate that reform will change the composition of jobs in the water sector, with the likelihood of some jobs being replaced over time. However, the reform provides significant opportunities for career advancement, including greater levels of specialisation and a lift in average wages.

The widespread nature of the economic impacts underline the critical role that the water sector plays in the national and regional economy, as it cuts across many sectors. A lift in investment in the water sector therefore has multiple flow-on benefits for other parts of the economy.

³⁰ Frontier Economics (2019). Review of experience with aggregation in the water sector. Available at [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/\\$file/Frontier-Economics-review-of-experience-with-aggregation-in-the-water-sector.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/$file/Frontier-Economics-review-of-experience-with-aggregation-in-the-water-sector.pdf)

³¹ Deloitte Access Economics (2021). Industry Development Study and Economic Impact Assessment. Available at [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/\\$file/deloitte-report-industry-development-study-&-economic-impact-assessment.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/$file/deloitte-report-industry-development-study-&-economic-impact-assessment.pdf)

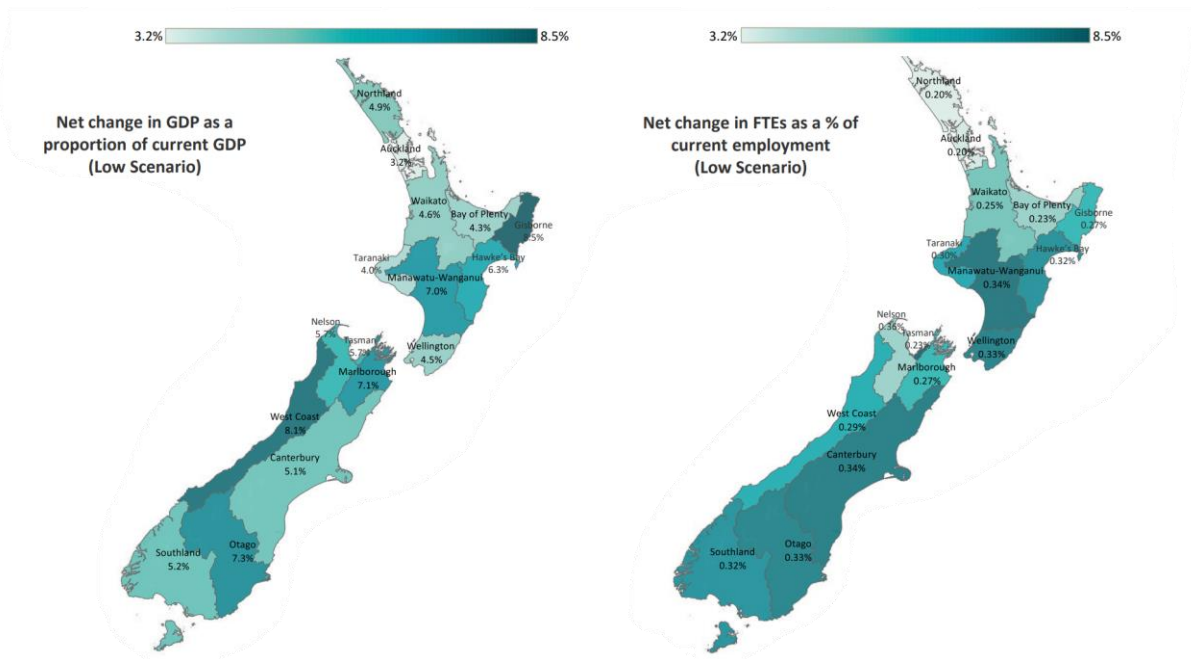
Figure 7: Summary of the potential economic benefits of reform



Source: Deloitte Access Economics, 2021

Every region in New Zealand will be positively impacted by reform but not all will be affected equally (see Figure 8). Most rural and provincial regions are estimated to benefit more than the national average through reform, experiencing larger increases in economic activity in relative terms. Metropolitan regions are also forecast to experience large increases in GDP and employment in absolute terms, particularly Auckland.

Figure 8: Regional impacts of reform on GDP and employment



Source: Deloitte Access Economics, 2021

Enabling efficiencies and lower operating costs, by consolidating administration and overhead costs, and improving organisational capabilities.

Consolidating administration and overhead costs, and improving organisational and technical capability, can enable more efficient delivery and lower the operating costs of providing water services. While some of those cost savings would be balanced against increases in capital expenditure to address the likely backlog of under investments, the cost savings attributable to those financial efficiencies could result in lower water charges, relative to what they would otherwise have been.

Significant improvements in efficiency have been achieved in overseas jurisdictions that have pursued reform of a similar nature to that proposed in New Zealand.

- In Australia, the Productivity Commission found that service delivery reform has helped to improve efficiency and deliver significant benefits for water users and communities³²
- Frontier Economics, in its review of the experience with water services aggregation in Australia, Great Britain, Ireland and New Zealand (Auckland and Wellington) finds that there is “strong and consistent evidence” that reforms have led to significant improvements in productivity and efficiency³³
- Farrierswier, in its review of WICS methodology, comments on the potential that exists for efficiency gains from amalgamating water services in New Zealand and notes significant improvements are possible through aggregation and associated reforms, including improving the ability to attract and retain skilled management and staff, more effective procurement functions, asset level optimisation and reduction in corporate overheads and duplicative functions³⁴
- WICS reports that Scottish Water has been able to reduce its operating costs by over 50% since reform, while improving levels of service to customers and absorbing the new operating costs associated with its investment programme³⁵
- A report for the United Kingdom water trade association found that reform of the water industry in England resulted in annual productivity growth of 2.1% or 64% over 24 years when adjusted for service quality improvements.³⁶

³² Productivity Commission (2021). National Water Reform 2020: Productivity Commission Draft Report. Available at <https://www.pc.gov.au/inquiries/completed/water-reform-2020/draft/water-reform-2020-draft.pdf>

³³ Frontier Economics (2019). Review of experience with aggregation in the water sector. Available at [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/\\$file/Frontier-Economics-review-of-experience-with-aggregation-in-the-water-sector.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/$file/Frontier-Economics-review-of-experience-with-aggregation-in-the-water-sector.pdf)

³⁴ Farrierswier (2021). Review of methodology and assumptions underpinning economic analysis of aggregation. Available at [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/\\$file/farrierswier-three-waters-reform-programme-review-of-wics-methodology-and-assumptions-underpinning-economic-analysis-of-aggregation-released-june-2021.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/$file/farrierswier-three-waters-reform-programme-review-of-wics-methodology-and-assumptions-underpinning-economic-analysis-of-aggregation-released-june-2021.pdf)

³⁵ Water Industry Commission for Scotland (2021). Supporting Materials Part 2: Scope for Efficiency. Available at [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/\\$file/wics-supporting-material-2-scope-for-efficiency.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/$file/wics-supporting-material-2-scope-for-efficiency.pdf)

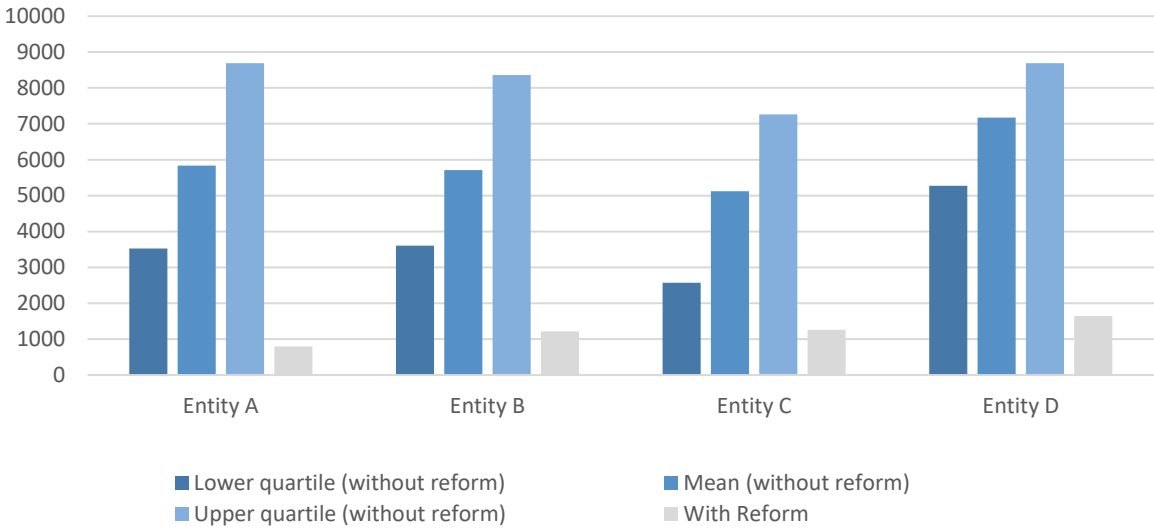
³⁶ Frontier Economics (2017). Productivity improvement in the water and sewerage industry in England since privatization. Available at <https://www.water.org.uk/wp-content/uploads/2018/11/Water-UK-Frontier-Productivity.pdf>

Delivering cost savings from households and communities

WICS analysis indicates that, with reform, the net present cost of serving each connected citizen is likely to reduce by between \$500 to \$1,000 depending on the entity (in relative terms this equates to a reduction of between 45% to 49%).³⁷

Figure 9 below summarises the impacts reform could have on the average costs of providing three waters services per household in 2051. The distributions of costs without reform demonstrate a significant variance across neighbouring councils, with smaller rural and provincial councils in particular likely to face significantly high costs on a per-household basis. Notably the potential costs under reform demonstrate that ALL councils stand to benefit from reform.

Figure 9: Comparison of average costs per household in 2051 without and with reform



Box 2: Independent review of WICS methodology³⁸

Farrierswier reviewed the methodology and assumptions underpinning WICS analysis to ensure this represented a reasonable basis for informing policy advice to ministers. They concluded that the overall approach adopted by WICS should give reasonable estimates in terms of direction and order of magnitude of the potential impacts of reform. This means we can have confidence that the WICS results are representative of the likely scale of benefits reform could provide.

The Farrierswier review notes several limitations associated with the kind of analysis WICS has undertaken but also concludes that these limitations are inherent and to be expected when projecting economic outcomes over a 30-year period based.

³⁷ Water Industry Commission for Scotland (2021). Supporting Materials Part 3: Costs and Benefits of Reform. Available at [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/\\$file/wics-supporting-material-3-costs-and-benefits-of-reform.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/$file/wics-supporting-material-3-costs-and-benefits-of-reform.pdf)

³⁸ Farrierswier (2021). Review of methodology and assumptions underpinning economic analysis of aggregation. Available at [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/\\$file/farrierswier-three-waters-reform-programme-review-of-wics-methodology-and-assumptions-underpinning-economic-analysis-of-aggregation-released-june-2021.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/$file/farrierswier-three-waters-reform-programme-review-of-wics-methodology-and-assumptions-underpinning-economic-analysis-of-aggregation-released-june-2021.pdf)

Farrierswier also considered the potential that exists for efficiency gains or losses in New Zealand and the ways in which these could be realised. They agree with WICS that a package of reform – which includes structural aggregation, strengthened governance, effective compliance and enforcement with water quality and environmental regulation and the introduction of economic regulation - should provide significant opportunities for efficiency gains.

Farrierswier also explored the relevant literature to test whether any concerns arise that amalgamation might lead to water entities becoming large enough that diseconomies of scale may emerge. Their view is that the amalgamation scenarios that the Government has considered – with entity sizes that do not exceed two million connected citizens – do not include entities of a size that give rise to concerns about diseconomies of scale.

Enabling more consistent water charges, with the ability to harmonise tariffs across much larger areas.

A common feature of many water service reforms has been a move to harmonise tariffs across the new service areas. In Scotland, which has one national provider, there is agreement that similar properties should pay the same amount for water services. In Auckland, when Watercare was established, all water charges were harmonised so that each community paid the same \$1.30 per unit for water services across Auckland. This process meant tariff reductions ranging from 0.6 per cent in Manukau City to 62.9 per cent in the rural Rodney District.

WICS analysis of current average costs for households indicates a variance of over 1200% (between a \$210 to \$2,580 average cost per household). Over time, this is estimated to reduce to a variance of around 200% with reform (between an \$800 to \$1,640 cost per household in 2051).³⁹

While aggregation overseas has sometimes been associated with an increase in average customer bills, this has been accompanied by improvements in service standards. In particular, more remote areas have benefited from access to a broader funding base and investment that may not otherwise have been possible.

Increased financial capacity and capability, with stronger, more flexible and resilient balance sheets, greater access to capital, and a more reliable investment pipeline.

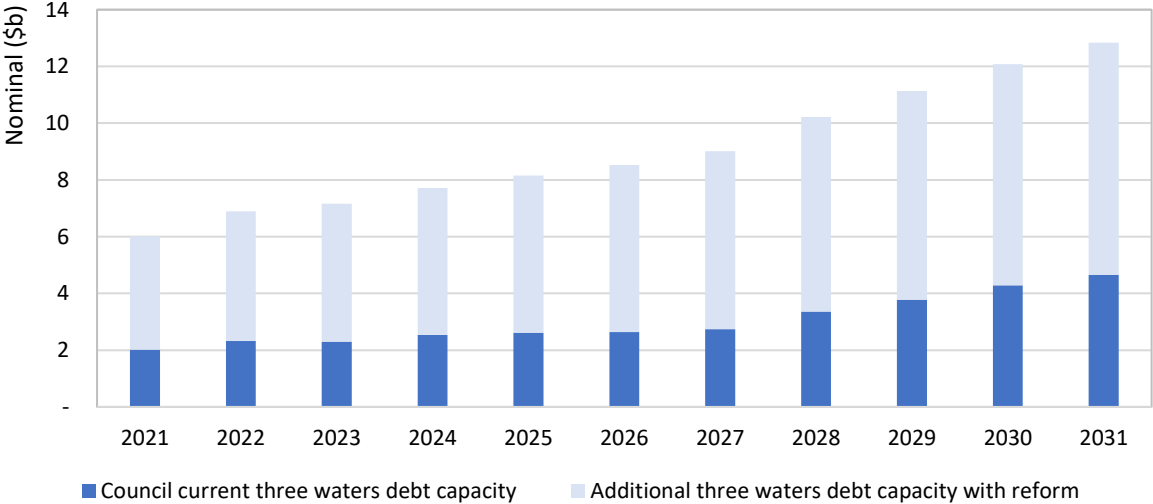
More customers, a larger revenue catchment, balance sheet separation and economic regulation will provide water service providers with stronger balance sheets and greater flexibility to direct significant investment to where it is needed. A stronger balance sheet means greater investment can be made in all communities throughout New Zealand. This would improve the resilience of new water service providers, enabling them to finance the required catch-up investment, and respond to short-term shocks like earthquakes, and long-term challenges like climate change.

³⁹ Water Industry Commission for Scotland (2021). Supporting Materials Part 3: Costs and Benefits of Reform. Available at [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/\\$file/wics-supporting-material-3-costs-and-benefits-of-reform.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/$file/wics-supporting-material-3-costs-and-benefits-of-reform.pdf)

Engagement with credit rating agency Standard & Poor’s has confirmed that under the new system and entity design arrangements, the water services entities would be deemed as financially and operationally separate from local authorities, ensuring their ability to borrow on similar terms to other utilities and operate on a financially sustainable basis over time. The rating of the water entities will reflect a variety of factors but are expected to achieve issuer ratings similar to that of councils.⁴⁰

Initial analysis shows that with balance sheet separation and appropriate credit worthiness, water entities can achieve higher leverage ratios than councils, creating additional debt capacity following reform of between \$4b-\$8b over the 2021 to 2031 period (see **Error! Reference source not found.**). We note that the conservative assumptions utilised means this may be understating the additional debt capacity for water investment following reform. International experience demonstrates that regulated water utilities are able to leverage up to 8 times water revenue while retaining an issuer rating similar to that of councils.

Figure 10: Comparison of current council three waters debt capacity and additional debt capacity for new water services entities following reform



Assumptions:

- Council three waters debt capacity assumes debt limit of 4x
- Water services entity debt capacity assumes debt limit of 6x
- Additional debt capacity is then water services entity debt capacity less council debt capacity

Source: DIA analysis based on RfI data and Draft 2021-2031 Long Term Plans

Initial feedback from capital markets participants has indicated that the credit profile of the water services entities would make them an attractive proposition to capital markets investors (i.e. issuers of debt, bonds etc). The water entities would join a suite of large, highly rated New Zealand borrowers (NZDMO, Kāinga Ora, LGFA and Auckland Council) who access the capital markets in volume and would increase New Zealand’s presence in international capital markets providing a wider benefit to New Zealand borrowers.

⁴⁰ The final credit rating of the entities will reflect a variety of factors including fiscal and economic performance, and the effectiveness of the government’s institutions.

Strong balance sheets and economic regulation means investment pipelines can be established with more confidence for a longer horizon and supports the development of programmes of work. Certain investment pipelines and programmes of work will give the sector the certainty needed to invest, supporting greater sector capacity and efficiencies over time.

Creating large scale providers with strong balance sheets would also contribute positively to the supply of housing by enabling water infrastructure to be provided to new developments, which has been a big constraint for debt-limited councils in high-growth areas.

Opportunities to take a strategic and coordinated approach, to consider infrastructure needs at a larger scale and in the context of wider catchment outcomes.

Currently within any catchment there could be several district and city councils, all making individual decisions to fund and upgrade water infrastructure. In the context of the significant wastewater investment programme required over the next 10 years, increases in scale create an opportunity to consider the best investment across boundaries. This could also enable new water services entities to rationalise existing water infrastructure and invest in new infrastructure where it can make the most impact.

Larger service providers can also unlock strategic opportunities to take a more coordinated approach, and consider our infrastructure needs at a larger scale. This has been the case in Auckland, where Watercare is building the \$1.2 billion Central Interceptor to improve the quality of Auckland waterways. It is unlikely this would have been possible under the previous seven Auckland councils.

Building technical capabilities, with access to a larger, more specialist workforce, and the ability to innovate and make use of new technology.

Increasing the size and scale of water service providers would enable the industry to build technical capability and attract talent. Watercare and Wellington Water demonstrate the lift in capability that is possible with larger providers. Larger providers can attract and retain specialist staff, such as microbiologists, water engineers, data specialists, and dedicated community engagement staff, and provide career pathways for people entering the water industry.

As noted above water entities will support more certain investment pipelines and greater use of programmes of work. Watercare has demonstrated some of the benefits associated with these elements, however, there are still improvements that can be driven through greater certainty of investment. International precedent suggests this could have substantial benefits for sector capacity and efficiency generation.

Reform would improve financial flexibility for the local government sector, freeing up significant borrowing capacity for non-water investment

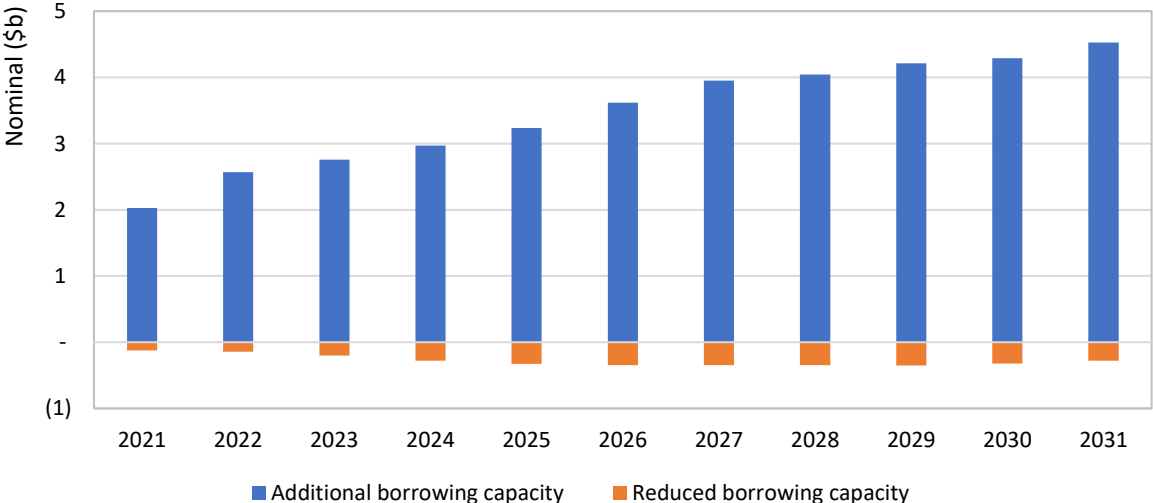
Engagement with credit rating agency Standard & Poor's has indicated that it is unlikely that any local authority will suffer a credit rating downgrade as a result of the transfer of water services to water entities. The engagement also suggests that for some local authorities the transfer may support a credit rating upgrade immediately following the transfer.

As a general observation three waters assets are more highly leveraged than other council assets, and a transfer of three waters assets and liabilities would tend to improve a local authority’s debt to revenue ratio.

DIA have estimated that cumulatively, the additional borrowing capacity associated with non-water investment for all local authorities could represent approximately \$2.5 billion by FY24 and \$4.0 billion by FY31 (see Figure 11). This reflects information provided in the Rfl and current draft long-term plans.

Additional borrowing capacity could either be utilised by councils to support additional investment that improves the wellbeing of their communities or improving the credit rating and reducing the council cost of capital with a commensurate reduction in rates.

Figure 11: Impact on council borrowing capacity for non-water investment following the transfer of water assets



The additional borrowing capacity for each council can only be determined following a detailed financial audit of council three water services to identify the associated debt and revenue.

As the graph shows, there are a small number of councils that could experience a slight reduction in non-water related borrowing capacity following the transfer of water assets. The Government is committed to working with all councils during the transition period to ensure that councils are “no worse off” as a result of the transfer.

Transition process and areas for further work

Implementing these reforms will be a highly complex and challenging process, involving a range of transition activities and tasks, and the management of a number of significant risks. The key activities relate to:

- establishing the new entities, including setting up governance and organisational structures;
- managing staff transfer and recruitment processes

- ensuring the components of the reforms that recognise iwi/Māori rights and interests are implemented effectively – including in relation to the proposed role of the mana whenua representative group
- ensuring local authorities are continuing to deliver water services (and to invest in those services and infrastructure) until the new entities become operational
- managing the transfer of assets and liabilities between local authorities and the new entities – including identifying the assets and liabilities to be transferred
- managing local authority transition activities that contribute to the establishment and operation
- establishing technical structures, policies and procedures, which ensure there is no disruption to water services through transition (this includes policies relating to asset management/planning, operations management, regulatory functions and delivery/procurement)
- preparing the new entities to undertake communications, customer services and community engagement
- preparing the new entities to have the necessary functions relating to financial and treasury, charging and pricing, legal, risk, insurance, data, digital and information technology systems and processes, to successfully deliver water services.

There are no examples in New Zealand of an amalgamation of this scale and complexity, although a number of New Zealand amalgamations, and overseas water reforms, were reviewed, as were other significant reform processes, such as the current health reform process. The New Zealand amalgamations include that of Auckland Council, Fire and Emergency New Zealand and Te Pūkenga/New Zealand Institute of Technology. We have also considered water reform in Tasmania and Scotland and New Zealand electricity reform.

The success of the reforms will be dependent on having a highly collaborative, partnership-based approach with local authorities and iwi/Māori. Local authorities and iwi/Māori participation in the transition process will be critical to ensuring all interests are recognised in decision making, important knowledge and expertise is well-utilised, and the water services entities are set up for success.

Appendix 1: Selection of alternative options that have been considered

Sector-led reform

While some regions have undertaken investigations of local service delivery reform options (e.g. the Hawke's Bay, Otago/Southland, Manawatū-Whanganui), limited progress has been made, and there are statutory barriers to aggregation of service delivery that are likely to limit the potential benefits of sector-led reform.

Continuing with a sector-led approach would require a significant, coordinated approach to reform, of a scale and extent not previously seen. There are no guarantees that reforms would be delivered consistently across the country, or the new service delivery models would meet the Government's objectives and achieve similar benefits to the large-scale, asset-owning entities that feature in the proposed approach.

It is also not clear if sector-led reform under existing legislation would deliver the kind of transformation required to address the root causes of the challenges the sector is facing. It is likely that councils would need to establish multi-regional providers as council-controlled organisations (CCOs) as provided for through the Local Government Act 2002. This approach would have some limitations, including that:

- current provisions in the Local Government Act are not fit for this purpose, and present barriers to reform. It is likely to take as long to redesign and amend the existing legislative provisions, as it would to create bespoke provisions in new legislation (including some form of economic regulation)
- establishing CCOs requires the agreement of all councils, each of which would need to undertake public consultation. This would take time and creates uncertainty about the outcome
- if the new entities were CCOs, this is likely to have implications for financing arrangements. They may not be sufficiently separate from local government to borrow at similar rates as other utilities, for example.

National three waters fund

Officials have considered the option of establishing a national three waters fund, similar to the National Land Transport Fund⁴¹ that the New Zealand Transport Agency administers. This could have the potential to provide a new dedicated fund for three waters improvements, while also incentivising some voluntary service delivery improvements.

However, there are fundamental challenges with establishing a national three waters fund, and this approach would not deliver the broader benefits associated with creating larger scale water service providers.

⁴¹ The National Land Transport Fund collects levies and charges applied to users of the transport system and distributes this to councils on the basis of a funding allocation formula that is decided by the New Zealand Transport Agency. Councils bid for funding from the national fund by preparing regional transport plans that need to reflect government policy priorities and are required to meet some of the costs through locally raised revenue (through rates, development contributions etc).

The main challenges relate to the sources and administration of funding. The National Land Transport Fund is sourced from road users through various charges, with local government contributing co-investment in addition to this (sourced largely from rates). However, water services are delivered locally and subject to different rating policies. There is no consistent user charge regime in place that would be amenable to a centralised collection of revenue. There are several theoretical revenue collection mechanisms that could be explored, for instance implementing a national or local levy, although all options have significant operational inefficiencies.

A newly created national fund would also require machinery to administer it, either through the creation of a separate function within an existing entity or a completely new entity altogether. This adds to the costs and complexity associated with the fund.

More importantly, even if the operational and administrative challenges noted above were addressed, a national fund would fail to address the other root causes we have identified, and any lift in investment levels would occur within a system that will continue to struggle from a lack of scale, accountability and operational independence.

Regulatory reform only

Officials have also examined the extent to which outcomes, objectives, and ‘strategic shifts’ can be achieved through regulatory reform alone.

This would require a coordinated change in the regulatory system to strengthen the consideration of environmental impacts alongside the increased focus on public health that Taumata Arowai would bring. It would also require the introduction of economic regulation of local authority service provision, including much more stringent performance measurement, information disclosure, and protections for consumers than is currently the case.

This approach, on its own, is unlikely to incentivise service delivery reforms or enable scale benefits to be achieved. In particular, it is unlikely to encourage widespread transfer of asset ownership into standalone three waters providers, which is one of the key contributing factors to the benefits associated with reform.

Asset-owning entities have greater flexibility to borrow against their balance sheets, greater access to capital, and long-term funding certainty, and can use this certainty to develop a reliable infrastructure pipeline that builds supplier capability and capacity. Shared service models, which do not involve asset ownership, have a number of shortcomings in comparison. Wellington Water, for example, is still subject to decisions of council owners who retain asset ownership and have different views on relative priorities and charging which limit Wellington Water’s ability to plan and invest strategically in its network.

While regulatory reform alone would not be sufficient to achieve the outcomes Ministers are seeking, it will form an important part of the overall reform pathway. Examples of successful international reforms indicate that a combination of quality and economic regulation, better governance models, and aggregation is a common approach, which is likely to lead to the best outcomes. As noted above, it is anticipated that a system of economic regulation will be developed, in addition to the creation of Taumata Arowai (the drinking water quality regulator).