



Te Tari Taiwhenua
Internal Affairs

Regulatory Impact Assessment

Decision on the reform of three waters service delivery arrangements

Proactively released by the Department of Internal Affairs

Coversheet: Decision on the reform of three waters service delivery arrangements

Advising agencies	Department of Internal Affairs
Decision sought	Policy decisions on the reform of three waters service delivery arrangements
Proposing Ministers	Minister of Local Government

Overview of this Regulatory Impact Assessment

The Three Waters Review commenced in mid-2017 as a Government cross-agency initiative led by the Department of Internal Affairs (the Department) to investigate the challenges facing our three waters system; and to develop recommendations for system-wide performance improvements.

This Regulatory Impact Assessment (RIA) has been developed to inform the decision on whether and how to improve the system for delivering three waters services.

This RIA has been developed in two parts:

- A Strategic RIA assessing the rationale for reform; and
- Seven detailed analyses (chapters) of each of the core design choices the Government needs to make to ensure the package of policy proposals delivers the intended outcomes. The seven chapters include:

- Scope of reform.
- Number and boundaries of entities.
- Establishment of new water services entities.
- Entity regulation, system stewardship, and system direction.
- Mechanisms for consumer and community voice and influence.
- Strengthening the role of iwi/Māori in the three waters system.
- Transition and implementation

We demonstrate through this RIA that a package of reforms is needed to address the root causes that contribute to the systemic challenges in the system for delivering three waters. The following are the key components of the package:

- Three waters services are aggregated into large-scale, multi-regional entities.
- Those entities have effective, professional, independent governance arrangements, and are able to attract and retain appropriately skilled management.
- The entities have sufficient balance sheet capacity to raise debt to meet the cost of future investment requirements and smooth that cost over time.
- There is effective system stewardship and a clear national policy direction.

- Economic regulation is established to ensure efficient service delivery and to drive the achievement of efficiency gains.
- How the reforms are implemented and the transition to the new system.

A significant body of evidence underpins this RIA. In addition to already publicly available documentation, a range of bespoke analysis has been completed. This most recently includes expert opinion and input from: Beca, Deloitte, Ernst & Young (EY), FarrierSwier, Mafic, and the Water Industry Commission for Scotland (WICS) (Scotland’s economic regulator for the water industry).

Additionally, significant community and sector engagement continues to provide critical input into the development of policy, as well as understanding the impacts of the proposed reform programme. For example, a series of national workshops were held in March 2021, and were attended by over 1,000 local government elected members, iwi/hapū representatives, and council staff from across the country.

This is a large and complex reform programme, with a suite of changes to be made. Some aspects of the reform are not as developed as others; for example, the detail of how stormwater will be transferred to new water service entities is yet to be fully developed. Given the scale and magnitude of the decisions being made, this RIA provides the analysis to support decisions on the package of options that comprise systemwide transformation of three waters service delivery.

The Department is solely responsible for the analysis and advice set out in this RIA, except as otherwise explicitly indicated.

Quality Assurance Reviewing Agency:

A joint panel with representatives from the Treasury’s Regulatory Quality Team (RQT), the Ministry for the Business, Innovation and Employment, and the Department of Internal Affairs has reviewed the Regulatory Impact Assessment (RIA).

Quality Assurance Assessment:

A quality assurance panel with representatives from the Department of Internal Affairs, the Ministry of Business, Innovation and Employment and the Regulatory Impact Analysis Team at the Treasury has reviewed the Regulatory Impact Statement for the “Reform of the Three Waters Service Delivery Arrangements”. The panel considers that it **meets** the Quality Assurance criteria.


Reviewer comments and recommendations:

Overall the RIS is clear, convincing, and well-structured.

However, the full implications of the decision to include stormwater in the scope of the reform are uncertain, as the decision will take place ahead of the substantive work intended to clarify the ‘perimeter’ between stormwater and other assets. The logic and arguments for including stormwater in the reform are convincing but uncertainty remains on the implications for local councils in deciding to transfer stormwater assets to the entities.

Also the proposed benefits of the directive Government Policy Statement (GPS) are dependent on the content of the GPS, how it is operationalised by the entities, and ongoing stewardship of the system. .

Responsible Manager (signature and date):



Allan Prangnell

Executive Director Three Waters

Department of Internal Affairs

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Strategic Regulatory Impact Analysis

Summary: The problem and the proposed package of policy interventions

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

Latest estimates indicate that an investment of \$120 billion to \$185 billion is needed to replace and refurbish existing infrastructure, upgrade three waters assets to meet drinking water and environmental standards, and provide for future population growth. The size of the infrastructure deficit that has developed under the current system is one of a number of symptoms of the systemic failure underpinning the way three waters services are currently delivered.

The root causes of New Zealand's three waters crisis

Many of New Zealand's communities are dealing with some unacceptable outcomes in connection with three waters, such as not being confident that their drinking water is safe. We have identified four root causes that contribute to the persistent systemic problems with the delivery of three waters infrastructure and services:

- the large number of small water service providers, which limits opportunities for efficiencies of scale in delivering three waters services;
- incentives and governance structures that are not conducive to long-term decision-making in relation to three waters asset management and investment;
- affordability challenges associated with addressing the infrastructure deficit; and
- lack of effective system stewardship.

The system is not well placed to address these four persistent problems or to meet new challenges. Experience over the past 30 years also indicates that widespread improvements, particularly through voluntary change and collaboration, are unlikely. Further, under the current arrangements most councils and communities will not have the funding or the operational capacity to eliminate the infrastructure deficit and meet future growth requirements.

The key components of the proposed reform package

We demonstrate through this Regulatory Impact Analysis (RIA) that a package of reforms is needed to address those four root causes. Further discussion and analysis of these and other material components of the reform package are set out in seven Detailed Chapters. The following are the key components of the package:

- Three waters services are aggregated into large-scale, multi-regional entities.
- Those entities have effective, professional, independent governance arrangements, and are able to attract and retain appropriately skilled management.
- The entities have sufficient balance sheet capacity to raise debt to meet the cost of future investment requirements and smooth that cost over time.
- A clear national policy direction is provided for the three waters sector.
- Economic regulation is established to ensure efficient service delivery and to drive the achievement of efficiency gains.

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Strategic Regulatory Impact Analysis

Section 1: General information

Purpose

1. The Three Waters Review was established in mid-2017 by Government as a cross-agency initiative led by the Department of Internal Affairs (the Department) to investigate the challenges facing our three waters system, and to develop recommendations for system-wide performance improvements. Appendix 1 and Appendix 2 provide an overview of the various Cabinet papers (and decisions made) on this topic.
2. This Regulatory Impact Analysis (RIA) has been developed to inform the decision on whether and how to improve the system for delivering three waters services.
3. The Department is solely responsible for the analysis and advice set out in this RIA, except as otherwise explicitly indicated.

Structure of the Regulatory Impact Analysis

4. This RIA has two parts:
 - a strategic RIA assessing the rationale for reform; and
 - and detailed analyses of each of the core design choices the Government needs to make to ensure the package of policy proposals delivers the intended outcomes.
5. The strategic RIA sets out the analysis and overarching rationale for the reform package that the Department has recommended the Government adopt. This will transform the way three waters services are delivered, to meet the desired outcomes. The strategic RIA will do this by:
 - describing the current state of the three waters system, including how it is contributing to economic, social, environmental and cultural wellbeing;
 - identifying the existing challenges and opportunities within the system;
 - evaluating the broad options available to the Government to address these challenges and opportunities;
 - assessing the likely impacts of these broad options relative to the counterfactual; and
 - identifying a preferred option.
6. The more detailed analysis chapters will set out the Department's policy thinking in support of its recommendations to the Government. Each chapter focuses on one of the key components of the package. While these represent discrete components of the overall reform package, each component encompasses key policy design questions and choices that have the potential to materially impact on the efficacy of the reform package, and whether it

will deliver on all the intended outcomes sought. The analysis in the detailed chapters focuses on the most significant policy choices and options.

7. Each of the detailed chapters covers:
 - the policy objectives relevant to the particular policy choices;
 - the design principles or criteria that should inform the evaluation of options;
 - an analysis of broad options; and
 - a preferred option, noting where relevant how this might interact with other components of the reform package.
8. A summary of the purpose of each chapter is provided below in table 1:

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Table 1: List of detailed chapters and summary of their content.

Detailed chapters	Purpose
1. Scope of reform	<ul style="list-style-type: none"> Confirms that all three waters assets owned by local authorities should be transferred to the new water service entities. Confirms that non-council suppliers are out of scope for these reforms.
2. Number and boundaries of entities	<ul style="list-style-type: none"> Confirms that, assuming all local authorities are part of the reforms, establishing three or four water service entities will best achieve the Government’s reform objectives.
3. Establishment of new water services entities	<ul style="list-style-type: none"> Confirms that water service entities will have a non-shareholding structure. Confirms that water service entities will not pay dividends to local authorities. Confirms that an independent selection panel will be established for each water service entity Board.
4. Entity regulation, system stewardship, and system direction	<ul style="list-style-type: none"> Confirms that a directive Government Policy Statement will be developed to enable Government to provide direction on three waters service delivery. Confirms a shared accountability approach between the Ministry of Health (MoH), the Ministry for the Environment (MfE), the Ministry of Business, Innovation and Employment (MBIE), and the Department. Confirms that the Minister for Local Government should continue to be responsible for leading the Three Waters Reform Programme and that the Department will continue to support the Minister in this work, as the “lead agency”.
5. Mechanisms for consumer and community voice and influence	<ul style="list-style-type: none"> Confirms that the water service entities will be required to engage on key business documents, to publish those documents, and to report on how feedback was incorporated into final decision making. Confirms that mana whenua and local authorities will be represented on the Governors Representative Group. Confirms that a consumer forum will be established.
6. Strengthening the role of iwi/Māori in the three waters system	<ul style="list-style-type: none"> Confirms the key mechanisms that will be put in place to strengthen the role of iwi/Māori in the three waters system.
7. Transition and implementation	<ul style="list-style-type: none"> Confirms the need to establish an interdepartmental transition unit to oversee the implementation of the Three Waters Reform. Confirms the need to form establishment units within each water service entity to manage the transition to operational entities. .

Key limitations or constraints on analysis

9. The following areas have not been included in the scope of this RIA:

- the impact of recent Three Waters Regulatory Reform that canvassed the potential improvements in health and environmental benefits from an improved regulatory regime. That analysis has not been duplicated in this RIA, except where the proposed options for the Three Waters Service Delivery Reform are likely to

enhance or stifle the intended outcomes of the Three Waters Regulatory Reform;
and

- any policy issues or design choices that are unlikely to materially impact on the efficacy of the reform package.

10. A range of bespoke analysis informed this RIA. This analysis has most recently included expert opinion and input from Beca, Deloitte, EY, Farrierswier, Mafic, and the Water Industry Commission for Scotland (WICS) (Scotland's economic regulator for water services). A full list of supporting material is provided on the Department's three waters website, [Three Waters Reform](#).

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Section 2: Problem definition and objectives

Summary

- The three waters system is critical for the health and wellbeing of New Zealand. It is significant for the functioning of society, the health of the environment, and the performance of the economy.
- However, in many parts of the country, communities cannot be confident that their drinking water is safe, that the three waters system is achieving good environmental outcomes, that the system can accommodate growth in population and housing, that the rights and interests of iwi/Māori are being upheld, and that climate change and natural hazard risks are being successfully managed.
- The evidence suggests that there are persistent systemic issues facing three waters infrastructure and services that are leading to these unacceptable outcomes. These systemic issues are underscored by four root causes:
 - **The large number of small water service providers, which limits opportunities for efficiencies of scale in delivering three waters services.** Many local authorities in New Zealand serve fewer than 100,000 connected ratepayers, which creates significant inefficiencies within the system. It has been estimated that New Zealand's current structure for delivering three waters could lead to an efficiency gap of up to 45%¹.
 - **Incentives and governance structures that are not conducive to long-term decision-making in relation to three waters asset management and investment.** Local authorities in New Zealand operate in a political environment, in which investment decisions are made by elected representatives who have a duty to consider broader community interests (such as other investment priorities and affordability of rates increases). In 2018/19², all local authorities' capital expenditure for renewal was 79% of depreciation, which was less than the 91% that all local authorities planned for in their 2018-28 Long-Term Plans.
 - **Affordability challenges associated with addressing the infrastructure deficit.** Analysis by WICS shows a total investment challenge of between \$120B and \$185B. The estimated deficit would require an annual expenditure of between \$4B and \$6B. By comparison, current local authority has spent on average \$1.4B annually on three waters over the last five years. These figures could be larger, as they do not take account of investment uncertainty associated with the need to provide for seismic resilience, climate change, or responding to the expectations of iwi/Māori.
 - **A lack of effective system stewardship.** New Zealand has 67 local authorities supplying drinking water, along with 20 district health boards, 16 regional councils, and seven government ministries that all have a role in relation to the supply of safe drinking water. A lack of coordination between all players in the system, combined with inadequate whole of system oversight, has led to poor understanding of risks and system performance.
- The available evidence suggests the system is not well placed to address these issues and meet new challenges. Experience over the past 30 years also indicates that widespread improvements, particularly through voluntary change and collaboration, are unlikely, and that a consolidated package of reforms is needed to respond to these systemic problems and meet proposed objectives.

Context

The Havelock North Inquiry has been a catalyst for significant reform in how drinking water is provided

11. There are fundamental challenges facing the system for delivering three waters in New Zealand. Before 2016 there had been a general awareness of some of these challenges, but events in August of that year brought them all into sharp focus. The Havelock North tragedy saw a widespread outbreak of campylobacteriosis caused by contamination of the public water supply, leading to more than 5,000 people becoming ill and contributing to the deaths of four people in a town of 15,000 people.
12. The campylobacter outbreak in Havelock North highlighted the systemic failure across all parts of the drinking water system - regulation, service provision, and source protection of drinking water.
13. The Havelock North Drinking Water Inquiry (the Inquiry) commissioned in response to the tragedy identified failures across all levels of the system, failures that if addressed may have resulted in a different outcome³. These included:
 - widespread systemic failure among water suppliers to meet the high standards required for the supply of safe drinking water to the public;
 - failure by the Ministry of Health, the government body charged with administering the drinking water provisions of the Health Act 1956, to perform its statutory role and provide leadership and stewardship of the drinking water regulatory regime;
 - failure by the regional council to meet its Resource Management Act 1991 (RMA) responsibilities; and
 - no adequate or effective enforcement of water suppliers' the statutory obligations.
14. The Inquiry also identified the benefit of economies of scale as crucial to enabling smaller suppliers in rural and provincial areas to have access to the resources needed to produce and maintain a high-quality drinking water supply. It recommended the aggregation of drinking water suppliers to achieve this.

Work to reform of how drinking water is provided led to the beginning of The Three Waters Review

15. While Havelock North was a large-scale outbreak with significant consequences, it is not an isolated event. There have been many more events since that have demonstrated the increasing pressure on *all* three waters and the systemic failures underpinning the current delivery arrangements. These include:

¹ Water Industry Commission for Scotland (2021). Economic analysis of water services aggregation. Phase 2.

² The Office of the Auditor General's audit of Council annual reports in 2020.

³ Department of Internal Affairs (2017). Government Inquiry into Havelock North Drinking Water. Report of the Havelock North Drinking Water Inquiry, Stage 1 - [https://www.dia.govt.nz/vwluResources/Report-Havelock-North-Water-Inquiry-Stage-1/\\$file/Report-Havelock-North-Water-Inquiry-Stage-1.pdf](https://www.dia.govt.nz/vwluResources/Report-Havelock-North-Water-Inquiry-Stage-1/$file/Report-Havelock-North-Water-Inquiry-Stage-1.pdf); Department of Internal Affairs (2017). Government Inquiry into Havelock North Drinking Water, Report of the Havelock North Drinking Water Inquiry: Stage 2 [https://www.dia.govt.nz/diawebsite.nsf/Files/Report-Havelock-North-Water-Inquiry-Stage-2/\\$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)

- lead in Dunedin’s drinking water reported in February 2021;
 - ongoing wastewater leaks in Wellington, for example the Willis Street leak in the summer of 2019/20 and the sewage overflows at the intersection of Victoria and Mercer Streets;
 - ongoing pipe breaks in Wellington, at an average of 40 per week over the last year, with recent incidents in Mt Victoria, Aro Valley, and Wainuiomata;
 - repeated pipe bursts in Levin in February 2021;
 - ongoing water restrictions in Auckland City, Hamilton, and Kaitaia; and
 - ongoing boil water notices in many areas, more recently including Akaroa and Carterton.
16. The Three Waters Review was established in mid-2017 by Government as a cross-agency initiative led by the Department to look into the challenges facing our three waters system, and to develop recommendations for system-wide performance improvements.

The Three Waters Review identified several challenges within the three waters system and has shaped the Government’s policy response

17. The Review made seven initial high-level findings⁴:
- There are risks to human health and the environment in some parts of the country.
 - There is evidence of low levels of compliance, monitoring, and enforcement against a range of standards, rules, and requirements.
 - There is evidence of capability and capacity challenges, particularly for smaller local authorities. A consistent theme was the role that scale plays in relation to asset management and governance capability, levels of compliance, and service quality.
 - There is evidence of affordability issues in some places, driven by a range of factors and funding pressures. These include population growth, renewals, increased expectations around drinking water and freshwater, and the need to adapt to the impacts of climate change.
 - There is inadequate system oversight and connections between key parts of the system.
 - Variable asset management practices, and a lack of good asset information, are affecting the efficiency and effectiveness of three waters infrastructure and services.
 - Existing reporting obligations do not provide consumers and other interested stakeholders with meaningful information on the delivery and performance of three

⁴ April 2018 Cabinet paper, Review of Three Waters Infrastructure: Key Findings and Next Steps, [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-Waters-Review-Cabinet-papers-April-2018/\\$file/Review-of-three-waters-infrastructure-key-findings-and-next-steps-April-2018-a.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-Waters-Review-Cabinet-papers-April-2018/$file/Review-of-three-waters-infrastructure-key-findings-and-next-steps-April-2018-a.pdf)

waters services in a way that appropriately promotes transparency, accountability and performance improvement over time.

18. These findings for three waters infrastructure are consistent with many of the Inquiry's Stage 2 findings relating to drinking water supplies. The collective magnitude of these challenges suggests the system is not well placed to address them and to meet new challenges. Experience over the past 30 years also indicates it is likely to be difficult to achieve widespread improvements, particularly through voluntary change and collaboration.
19. Additionally, the operating environment for three waters is becoming more challenging, due to:
 - increasing demand for three waters services in high-growth areas, often with capacity constraints;
 - declining rating bases in some areas, and high seasonal demand in small tourism centres;
 - a need to replace ageing infrastructure, which has been exacerbated by decades of under-investment in asset maintenance and refurbishment;
 - community expectations and regulatory requirements relating to water quality, treatment and/or management, and national directions on fresh and coastal water quality;
 - the impact that COVID-19 has had on local authorities' revenue; and
 - the need to respond to climate change, emergencies and natural hazards, and infrastructure resilience problems.
20. The three waters service delivery system is interrelated with planning and development, freshwater and coastal management, and responses to climate change. There will be broader national and local implications if there are not performance improvements right across the three waters system, including:
 - housing infrastructure supply being constrained by a lack of three waters infrastructure development in high-growth areas;
 - failure to meet the national and local environmental outcomes that are sought for freshwater and the marine environment;
 - a reduced ability to plan and fund robust systems that can cope with climate change, emergencies, and natural hazards; and
 - limitations on developing the regions, particularly for areas with declining rating bases, or small tourism centres with high seasonal demand. Decisions to establish or expand businesses in a particular area may depend on there being reliable water infrastructure, for example.
21. In response to those problems, the Government has adopted the following three pou of water reform:

- the establishment of a new dedicated drinking water regulator, Taumata Arowai, with roles around regulation and oversight of stormwater and wastewater;
 - the introduction of a new regulatory framework for drinking water through the Water Services Bill, with some provisions for regulation of wastewater and stormwater; and
 - transforming the current system for delivering three waters services, including assessment of aggregated service provision (the subject of this RIA).
22. In June 2020, Cabinet agreed to proceed with a three-year programme for reforming the delivery arrangements for three waters services, to be delivered in parallel with an economic stimulus to assist economic recovery through job creation and maintain investment in water infrastructure⁵. Local authorities could receive the economic stimulus only if they participated in the first phase of the reform programme, including exploring the creation of a small number of multi-regional water service providers.
23. In December 2020, Cabinet agreed to continue with a voluntary approach to reform, but recognised that this approach carries additional cost and risk, and that it might need to reassess this position if there was a risk of reforms not being achieved⁶. At that time, Cabinet also made a number of decisions relating to key components of the reform including the process for identifying the number of new water service entities and their boundaries, the entity design scenarios that would be tested with credit rating agencies, and an in-principle agreement that economic regulation will be an integral part of the new system.

The Government has clearly signalled that it will not consider privatising three waters assets and service provision arrangements

24. On 5 November 2018, Cabinet agreed that the outcome of three waters reforms would include that “existing three waters assets and services must remain in public ownership, and the system will incorporate safeguards to protect public ownership of this essential infrastructure, both now and in the future”⁷. Cabinet has expressed a clear and consistent message that public ownership of water infrastructure must continue and that there must be protections against privatisation. This has always been, and will continue to be, a bottom line for the current government.
25. Several comparable overseas jurisdictions that have successfully reformed their water service delivery arrangements created publicly-owned entities. For example:
- Scottish Water is owned by the Scottish Government.
 - Tasmania Water is owned by local authorities and the Tasmanian State Government.
 - Melbourne Water is owned by the Victorian State Government.
 - Sydney Water is a statutory state-owned corporation that is 100% owned by the people of New South Wales.

⁵ [DEV-20-MIN-0099 refers]

⁶ [CAB-20-MIN-0521.01 refers]

⁷ [CAB-18-MIN-0545 refers]

- Welsh Water is owned by Glas Cymru, a single purpose company with no shareholders, and is run solely for the benefit of its customers.

Te ao Māori view – Te Mana o te Wai

26. Māori are not a uniform group of people with one view. Every iwi, hapū, and whānau has a different view and different whakapapa connections that inform their knowledge. However, there are some common guiding principles among Māori.
27. Māori interests in water are more clearly articulated in a whole of system approach, as opposed to government policy objectives that have previously delineated freshwater, three waters, marine, and urban water. This whole of system approach is reflected in Te Mana o te Wai.
28. Freshwater Iwi Leaders Group developed a framework Nga Matapono ki te Wai, for articulating Te Mana o te Wai, which has been adapted by Kāhui Wai Māori (the Māori Freshwater Forum, which advises MfE on the rights and interest of iwi/Māori in freshwater)⁸. Nga Matapono ki te Wai sets out the key objectives as follows:
- **Improved water quality – Mana o te Wai.** This a first-order objective.
 - **Realise value of water resources (including economic).**
 - **Enduring future iwi relationship with water bodies – mana whakahaere.** This objective recognises both the inherent mana of iwi and also their associated kaitiaki responsibilities over these water bodies.
29. The key values that Nga Matapono ki te Wai sets out are:
- **Ki uta ki tai** (mountains to the sea, integrated land and water management across the whole catchment).
 - **Mana – Mana Atua Mana Tangata** (mana both of the water and of the iwi exercising mana over it).
 - **Mauri** (protecting the inherent life-supporting capacity of the wai).
 - **Kaitiakitanga** (recognising an intergenerational duty to restore and increase the mauri of land and water, and to nurture the reciprocal relationship between tangata and the whenua).
 - **Wairua.**
 - **Mo tatou a mo nga uri** (intergenerational decision making).
30. Te Mana o te Wai is incorporated in the water management system of New Zealand through the National Policy Statement for Freshwater Management 2020. This National Policy Statement for Freshwater Management provides direction on how local authorities should carry out their responsibilities under the RMA 1991 for managing freshwater.

⁸ Freshwater Iwi Leaders Group (2015). Nga Matapono Ki Te Wai. <https://iwichairs.maori.nz/wp-content/uploads/2015/06/Nga-Matapono-ki-te-wai-Framework.pdf>

31. The Three Waters Reform work aims to help uphold Te Mana o te Wai by strengthening how Te Mana o te Wai is reflected throughout the three waters system, and by aligning the resource management system and Three Waters Review so that together they contribute to a holistic and integrated whole of system approach to water management.
32. The Water Services Regulator Act 2020, requires Taumata Arowai to “give effect to Te Mana o te Wai” to the extent that it applies to the entity’s functions, powers, and duties. The Water Services Bill, which is before the Health Select Committee and may change, currently contains a similar clause that applies to all those regulated by the legislation, including local authorities. Those required by statute to give effect to Te Mana o te Wai have an obligation to work with iwi, hapū, and whānau to further understand what that means.
33. The new water service entities, that will be established and regulated by legislation, will be required by that legislation to “give effect to Te Mana o te Wai”.
34. Statutory references such as those to the Treaty of Waitangi/Te Tiriti o Waitangi and to Te Mana o te Wai are important mechanisms through which the Crown’s obligations as a Treaty/Tiriti partner and the kaitiaki role of whānau, hapū, iwi, and Māori are formally recognised.
35. However, Te Mana o te Wai can only be achieved when the relationship of tangata whenua to water is recognised and provided for.
36. Māori rights and interests in water have been considered by the Waitangi Tribunal. In its 2012 “Interim Report on the National Freshwater and Geothermal Resources Claim”⁹ the Tribunal said:
 - “Our generic finding is that Māori had rights and interests in their water bodies for which the closest English equivalent in 1840 was ownership rights, and that such rights were confirmed, guaranteed, and protected by the Treaty of Waitangi, save to the extent that there was an expectation in the Treaty that the waters would be shared with the incoming settlers.”
37. The implications of this finding have yet to be resolved, and it was a common observation from whānau, hapū, and iwi and individuals across the water sector (three waters, irrigation, and flood protection) that progress towards a holistic approach to managing water would be impeded until Māori rights and interests in freshwater have been determined. However, this RIA and the work it is part of are focused on three waters service delivery.

What makes up the current system for delivering three waters services?

38. The three waters (drinking water, wastewater, and stormwater) are considered lifeline utilities that provide essential services that are critical to public health, environmental sustainability, community wellbeing, growth, and the economic development of New Zealand's communities.

⁹ Waitangi Tribunal (2012). The Stage 1 Report on the National Freshwater and Geothermal Resources Claim. <https://waitangitribunal.govt.nz/inquiries/kaupapa-inquiries/national-fresh-water-and-geothermal-resources-inquiry/>

39. In pre-colonial times, iwi and hapū lived within a tribal area bounded by features of the landscape. Leadership came from chiefs who gained their status by right of birth. A range of issues were discussed in tribal local authorities and decisions reached by consensus.
40. Settler communities set up single-purpose public works boards and charged rates for services including sewers and water supply. These boards were formalised under the Public Roads and Works Ordinance 1845¹⁰. This structure was significantly different from the way that iwi and hapū governed their communities.
41. Water and sewerage services have been provided by local authorities ever since. However, the structure, function, and size of these authorities has changed with various reforms. For example, the 1853 development of provincial governments, which created local authorities such as boards and boroughs, then the abolition of provinces and the development of counties in 1876, and more recently the 1989 local government reform, which led to the consolidation of 850 single- and multi-purpose local bodies into 86 multi-purpose local authorities. Various changes in the structure of local government have occurred over the last 150 years, but water and sewerage services have been supplied by local authorities (in various forms) over this period.

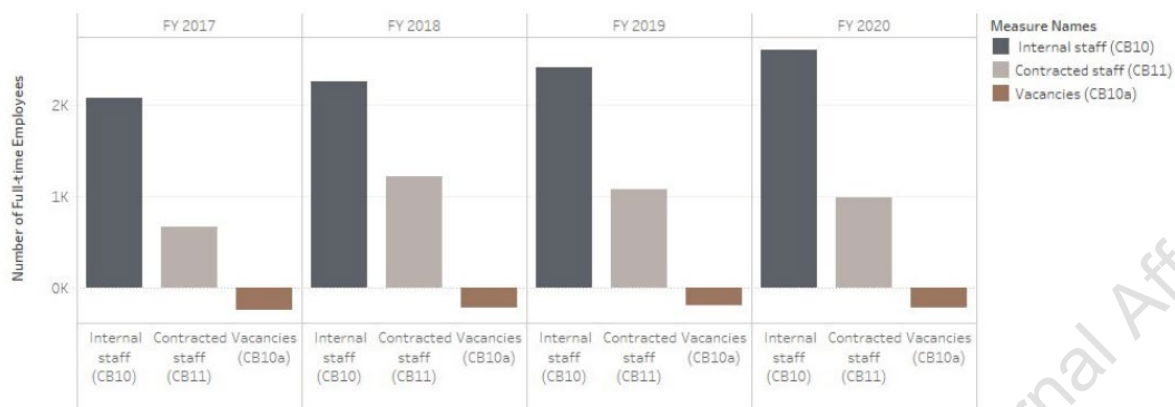
Delivery arrangements

42. Currently 67 different local authorities own and operate the majority of the drinking water, wastewater, and stormwater services across New Zealand, however, some have arrangements with council-controlled organisations such as Wellington Water and WaterCare to provide three waters services.
43. Local authorities have a number of private contracting and third-party supply arrangements with specialist water services providers, engineers, and other specialist skilled parties. The three waters sector workforce includes a large proportion (just over 40%) of contractors who are involved only in the delivery of three waters services.¹¹ The breakdown for the 42 local that completed the Water New Zealand National Performance Review in 2020/2021 is as follows:
 - Internal staff – 2,745
 - Contracted staff – 1,196
 - Staff vacancies – 236
 - Median staff per 100 serviced properties – 1.36
44. The workforce has been expanding over time as shown below in Figure 1.

¹⁰ Te Ara (2012). Local and regional government, Te Ara – the Encyclopedia of New Zealand. <https://teara.govt.nz/en/local-and-regional-government>

¹¹ Water New Zealand (2021). National Performance Review 2019-20. Available at <https://www.waternz.org.nz/NationalPerformanceReview>. The National Performance Review is a voluntary survey of council-owned water assets.

Figure 1: Trend in staffing numbers for Water New Zealand 2019/2020 National Performance Review participants who provided five years continuous data¹².



45. A few local authorities use external three waters service providers, such as Wellington Water (which delivers three waters services) and Watercare in Auckland (which delivers drinking water and wastewater services). Both of these organisations are council-controlled organisations and are not structurally separate from the local authorities, and therefore, three waters assets and associated operating costs and depreciation form part of their accounts.
46. The majority (85%) of New Zealanders receive their three waters services from their council (local or unitary authorities), but there are a significant number of mostly smaller private and community-based suppliers, who supply drinking water to small, mostly rural populations, including on marae.

Three waters assets

47. 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.
48. Taken together, the three waters represent one of New Zealand’s most significant infrastructure sectors, with an estimated replacement value of \$54.7 billion. The sector includes:
 - A total of 349 water treatment plants, 43,062kms of water supply pipes, and 749 water pump stations across the 42 local authorities who participated in Water New Zealand’s 2021 National Performance Review¹³. These assets were valued at \$13 billion.

¹² Water New Zealand (2021). National Performance Review 2019-20. Available at <https://www.waternz.org.nz/NationalPerformanceReview>.

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

- A total of 321 wastewater treatment plants across New Zealand, which are owned and operated by local authorities¹⁴.
- Stormwater network assets 17,989kms in length and 260 pump stations across the 42 local authorities who participated in the 2021 National Performance Review¹⁵. These assets were valued at \$12 billion.

Charging

49. The approach to charging varies significantly across the country. However, most local authorities levy a rate for water services which is wholly or partly, based on the land or capital value of the landowner's property. The striking of these rates and charges is subject to public consultation as part of local planning processes.
50. A 2018 study of charging practices in New Zealand found the following¹⁶:
- A fixed targeted rate is the most common charging regime for the supply of potable water (around 57 local authorities adopt this approach). A combination of a fixed and volumetric or variable (based on land or capital value) charges was the most common structure for metered properties, implemented by 49 local authorities. Six local authorities used solely volumetric charging, Watercare in Auckland, South Taranaki, Wairoa, Timaru, Waimate, and Westland.
 - Wastewater tends to be charged on a fixed targeted rate basis (by 42 local authorities), with the remainder implementing charges based on the number of pans (15 district local authorities), or on a volumetric basis (Auckland and Manawatū) or on a variable basis (e.g., based on capital value).
 - Stormwater is charged either as part of a council's general rate, or as a specific targeted rate, or a combination. It is common for stormwater charges to include a variable component based on capital or land value.
51. Over time, a growing number of local authorities have moved to using water metering (also known as volumetric charging) as the principal method for funding drinking water. Over half (55%) of New Zealand's residential properties and 80% of non-residential properties have a water meter, including many of New Zealand's large centres. These numbers are skewed by Auckland, where widespread water metering is in place.
52. WICS has assessed current household charges based on information provided through the Rfl process¹⁷ and found a wide range of between \$213 and \$2,581 for revenue per household. *Detailed Chapter 2: Number and boundaries of entities* provides scenarios for assumed household bills as calculated by WICS.

¹⁴ New Zealand Infrastructure Commission Te Waihanga (2021). Sector State of Play: Water, Draft Discussion Document.

¹⁵ Water New Zealand (2021). National Performance Review 2019-20. Available at <https://www.waternz.org.nz/NationalPerformanceReview>.

¹⁶ Garnett, A. and Sirikhanchai, S. (2018). Residential water tariffs in New Zealand. Accessible via https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=3665

¹⁷ WICS calculates the revenue local authorities collect from households for three waters services using the Rfl reported revenue and divides this amount by the number of households for each council area, which is calculated by taking the Council reported figures for population served and dividing that by an average household occupancy rate of 2.7, based on the latest Statistics New Zealand figures. There are inherent limitations with this approach, including variations in household occupancy rates and revenue shares between households and businesses across different local authorities.

Regulatory arrangements

53. A complex system of regulation applies to the three waters system, with responsibilities shared across multiple local and central government agencies. The regulatory environment is changing, as recent policy decisions have yet to come into force, particularly through the Water Services Bill, which is currently being considered by the Health Select Committee. The former drinking water standards are outlined in Appendix 3.
54. The roles and responsibilities of parties with a key role in the regulatory system is summarised below in Table 2.

Proactively released by the Department of Internal Affairs

Table 2: Summary of the roles and responsibilities of various agencies and organisations in the three waters system.

Agent	Role	Responsibilities
Department of Internal Affairs	Lead policy responsibility and stewardship role in relation to local government Treaty/Tiriti partners	<ul style="list-style-type: none"> Leading the policy response to the Three Waters Review, including the service delivery reform programme. Monitoring Taumata Arowai.
Regional councils	Environmental regulators	<ul style="list-style-type: none"> Setting consent standards for its region. Granting consents. Monitoring compliance with consents. Monitoring and regulating discharge and abstraction. Flood protection.
Taumata Arowai	Drinking water regulator Oversight of environmental regulation (after the proposed Water Services Bill is enacted)	<ul style="list-style-type: none"> Enforcement of drinking water regulatory requirements imposed under the system. Monitoring of wastewater and stormwater performance. Monitoring how water service providers give effect to Te Mana o te Wai.
Local authorities	Urban planners	<ul style="list-style-type: none"> Urban and land use plans. Growth strategy. Providing water service (regulated by Taumata Arowai and regional councils). Will assume responsibilities in relation to private and community supplies (under the Water Services Bill).
Ministry of Health	Drinking water regulator (until the Water Services Bill is enacted) Treaty/Tiriti partners	<ul style="list-style-type: none"> Enforcement role in the drinking water regulatory system (until the Water Services Bill is enacted). Will continue to have responsibilities under the public health legislation, including the Health Act 1956.
Ministry for the Environment	Lead responsibility for environmental policy Steward of the environmental management system Treaty/Tiriti partners	<ul style="list-style-type: none"> Sets high-level standards for environmental regulation. Oversight for national environmental standards.
Iwi/Māori	Treaty/Tiriti partners	<ul style="list-style-type: none"> Involved through consenting processes (Cultural Impact Assessments, community consultation, and defining and assessing Te Mana o te Wai).

55. The new regulatory framework for water services is contained in the Water Services Bill, which is being considered by the Health Select Committee. The Bill is expected to be reported back to the House later this year. It includes the following provisions, which may change after the Select Committee has considered the Bill:
- All drinking water suppliers, except domestic self-suppliers, will be captured by the regulatory system, and will have a duty to consistently provide safe drinking water as one of the core components of the new regime.
 - Stronger requirements will be imposed on water suppliers in order to manage risks to drinking water safety. This will include doing more to protect drinking water sources, taking a multi-barrier approach to drinking water safety, and improving drinking water safety planning.
 - There is a stronger, centralised approach to drinking water compliance, monitoring, and enforcement, with Taumata Arowai having the power to support suppliers to comply with their regulatory obligations, and to address non-compliance.
 - There will be new national environmental standards for wastewater discharges and overflows, and new obligations imposed on network operators to manage risks to people, property, and the environment associated with the operation of their networks.
 - Wastewater and stormwater networks will be more transparent as operators will be required to report annually on a set of nationally-prescribed environmental performance metrics, including the status of active and expired discharge consents, and the expected timeframes for renewals.
 - There will be better national-level leadership, oversight, and support relating to wastewater and stormwater regulation. This will include national guidance for local authorities on the compliance, monitoring, and enforcement approaches to be used by wastewater and stormwater network operators.
 - There are transitional provisions in the Water Services Bill that focus regulation in the first year on larger, municipal suppliers. By the end of the first year, all drinking water suppliers serving populations of 500 or more will be required to have a drinking water safety plan that complies with the legislation. Suppliers serving populations of less than 500 have five years to comply.¹⁸

Interface with reform of the resource management system

56. The Government has initiated a review of the resource management system that is likely to result in significant changes to the way that local government plans, funds, and manages land use and urban growth. This includes a stronger approach to spatial planning at a regional level. This will impact the planning regime that new water service entities will have to work within.

¹⁸ This position was correct at the time of writing – but may change following consideration at Select Committee.

57. The proposed Strategic Planning Act is intended to provide a spatial planning framework that would include an implementation (delivery) plan that is agreed to by central and local government (and the water entities).
58. The Natural Built Environments Act will replace the current Resource Management Act 1991 regime for managing the consenting process for wastewater and stormwater discharges into rivers, lakes, and coastal waters. It may also affect the regulation of land use around water infrastructure and treatment plants, particularly the regime for designations.
59. A National Planning Framework that will consolidate and coordinate existing national direction and instruments is likely to have the most direct impact on the standards required of wastewater and stormwater discharges into rivers, lakes, and coastal waters. We expect that current national instruments (e.g., National Policy Statement for Freshwater Management) will continue to have effect in the short to medium term.
60. The Government has also recently established a Review into the Future For Local Government, in response to concern by the sector of the impact of the multiple reforms the Government is pursuing. The overall purpose of the Review is to identify how our system of local democracy and governance needs to evolve over the next 30 years, in order to improve the wellbeing of New Zealand communities and the environment, and to actively embody the Treaty/Tiriti partnership.

How is the system performing?

61. The three waters system is critical for the health and wellbeing of New Zealand. It is significant for the functioning of society, the health of the environment, and the performance of the economy.
62. 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 system is achieving good environmental outcomes, that the system 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.
63. The evidence suggests that there are persistent systemic issues facing three waters infrastructure and services that are leading to these unacceptable outcomes. These also represent many of the ‘symptoms’ of the root cause problems identified in the intervention logic map (Appendix 4) and the sections below.
 - Poor compliance with drinking water standards.
 - Poor health outcomes.
 - Poor environmental outcomes.
 - Poor customer outcomes associated with current service delivery arrangements.
 - Historical underinvestment and an aging asset base.
 - Lack of resilience.

Poor compliance with drinking water standards

64. Water suppliers' compliance with drinking water standards varies significantly across the country.
65. MoH's annual report on drinking water quality 2018/19¹⁹ assessed the extent to which drinking water suppliers met the requirements of the Health Act 1956 during the reporting period. Compliance by large suppliers (serving populations of 10,000 more) with drinking water standards is 88.4%.
66. Of the 4,077,000 people receiving drinking water from 490 suppliers serving 101 or more people:
 - 76.2% (3,107,000 people) received drinking water that fully met all standards;
 - 95.3% (3,885,000 people) received drinking water that fully met the bacteriological standards;
 - 78.7% (3,209,000 people) received drinking water that fully met the protozoal standards; and
 - 97.5% (3,975,000 people) received water that fully met the chemical standards.
67. Concerns about the quality of New Zealand's publicly reticulated water networks are reinforced by the large number of boil water notices issued each year. Boil water notices are reported as the number of affected residents multiplied by the number of days that restrictions were in place (or "resident days").
68. The Ministry of Health's annual report on drinking water quality shows that there were 22 permanent and 18 temporary boil water notices in place for the whole of the reporting period, covering roughly 40,000 people²⁰. Performance comparisons based on boil water notices should be made with caution, as the threshold at which participants apply a boil water notice varies²¹. The distribution of these boil water notices is shown in Figure 2.

¹⁹ Ministry of Health. (2020). Annual Report on Drinking-water Quality.

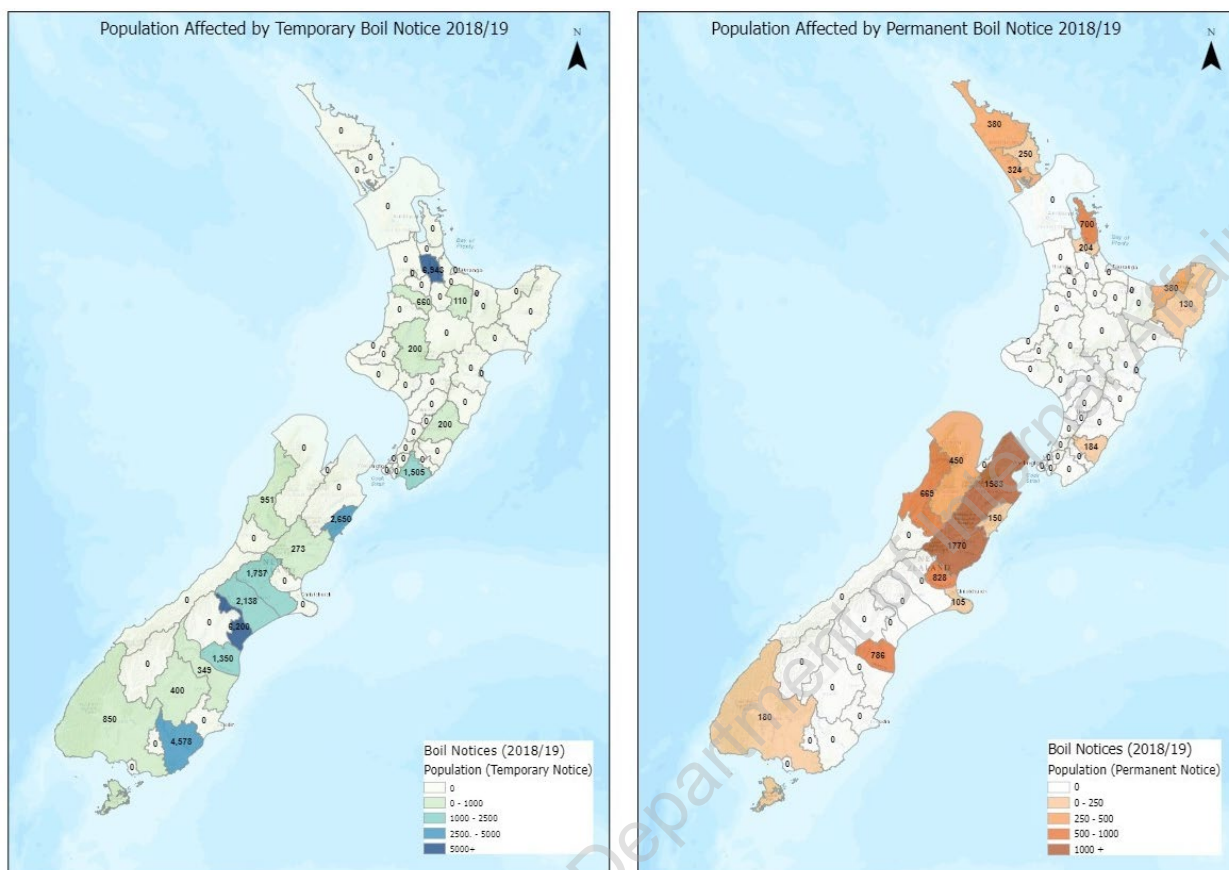
<https://www.health.govt.nz/system/files/documents/publications/annual-report-drinking-water-quality-2018-2019-25june2020.pdf>

²⁰ Ministry of Health. (2020). Annual Report on Drinking-water Quality.

<https://www.health.govt.nz/system/files/documents/publications/annual-report-drinking-water-quality-2018-2019-25june2020.pdf>

²¹ These maps have been prepared using data from the latest Annual Report on Drinking-water Quality 2018-2019 reported by water suppliers, reviewed by Drinking-Water Assessors and verified and published by the Ministry of Health. This reports on all registered drinking water supplies serving greater than 100 people, including local authority supplies and private, community, and Crown supplies. The report covers the period from 1 July 2018 to 30 June 2019.

Figure 2: Map of population affected by temporary boil water notices in 2018/2019 on left, and population affected by permanent boil water notices on right²².



Poor health outcomes

69. Access to safe drinking water and sanitation was declared a “human right” by the United Nations in 2010. This commitment is enshrined in the United Nation’s Sustainable Development Goal 6 - “Ensure availability and sustainable management of water and sanitation for all”.
70. However, for a number of reasons, New Zealanders cannot be confident that their drinking water is safe:
 - One in five New Zealanders are supplied with drinking water that is not guaranteed to be safe from bacterial contamination, according to MoH data. However, private and community suppliers are likely to represent a disproportionate share of this supply.
 - As noted above, 76.2% of the population (3,107,000 people) connected to suppliers serving 101 or more people received drinking water that fully met all Drinking Water Standards.

²² Beca, 2021.

- Research for the MoH in 2007 estimated the overall burden of sporadic or underlying drinking waterborne gastrointestinal disease in New Zealand at 18,000 to 34,000 cases per year²³.
 - Another study estimated in 2010 that 35,000 cases of acute gastrointestinal illness were contracted from reticulated drinking water each year²⁴.
71. 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. For two weeks daily life was seriously interrupted in the area, with approximately 5,500 of the town's 14,000 residents estimated to have become ill with campylobacteriosis. Around 45 were hospitalised and four died. The economic cost of the outbreak to the country was calculated to be \$21 million²⁵.
 - In late 2019 and early 2020, infrastructural and environmental problems with Wellington's three waters system came to a head when a tunnel in Dixon Street failed and led to wastewater entering the harbour, and broken pipes in a tunnel under Mt Albert resulted in trucks carrying wastewater sludge to the landfill around the south coast. These and many more incidents have led public criticism of the increased number of wastewater and drinking water leaks across the city²⁶.
 - Since February 2021, residents in Waikouaiti and Karitāne in Dunedin have been advised not to use tap water for drinking, cooking, or preparing food until further notice because of elevated lead levels detected in the water supply. Elevated lead levels have been found in children and adults²⁷.
72. These numbers are likely to underestimate the true incidence of disease because of the under-reporting of waterborne illnesses (many people do not go to a doctor when they have a stomach bug). Further, the number of people exposed to unsafe drinking water will be higher, as the figures do not account for the large visitor numbers in some of the small, non-compliant townships in New Zealand.
73. The health impacts of a failing three waters system also have significant flow-on economic impacts:

²³ Andrew Ball (2006). Estimation of the Burden of Water-Borne Disease in New Zealand: Preliminary Report (Ministry of Health). <https://www.health.govt.nz/system/files/documents/publications/water-borne-disease-burden-prelim-report-feb07-v2.pdf>

²⁴ Moore, et al., (2010). Cost Benefit Analysis of Raising the Quality of New Zealand Networked Drinking Water. <http://srgexpert.com/wp-content/uploads/2018/02/cba-raising-quality-of-networked-drinking-water-jun20101.pdf>.

²⁵ Department of Internal Affairs (2017). Government Inquiry into Havelock North Drinking Water, Report of the Havelock North Drinking Water Inquiry: Stage 2 [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)

²⁶ 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>

²⁷ Radio New Zealand (2021). Lead in East Otago water supply unlikely to mean long-term health effects – medical expert <https://www.rnz.co.nz/news/national/438103/lead-in-east-otago-water-supply-unlikely-to-mean-long-term-health-effects-medical-expert>

- Cases of waterborne gastrointestinal illnesses have been calculated to have cost New Zealanders \$496.1 million over 40 years, mainly in health care and lost productivity²⁸.
- In 2006, the Ministry for the Environment estimated that waterborne disease cost New Zealand \$25 million a year²⁹.
- The economic cost to the country of the Havelock North outbreak was calculated to be \$21 million³⁰.
- In addition, contamination events in tourist centres could potentially damage New Zealand’s global reputation.

Poor environmental outcomes

Wastewater discharge or overflow

74. When untreated sewage spills, surcharges, discharges or otherwise escapes from the wastewater network to the external environment, this is referred to as a “wastewater overflow”.
75. The 2019/20 National Performance Review reports there were 1,939 dry-weather (i.e., blockages or system failures) wastewater overflows and 1,123 wet-weather (i.e., rainfall events) overflows, and a further 155 from combined wastewater and stormwater networks³¹.
76. Formal responses to non-compliance with discharge consents are rare, for both wastewater and stormwater³². Of the 321 wastewater treatment plants in the country, 60 require upgrades to meet minimum standards under the National Policy Statement for Freshwater Management³³.
77. 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. 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*.

²⁸Moore, 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>.

²⁹Ministry for the Environment (2007). Proposed National Environmental Standard for Sources of Human Drinking-Water: Resource Management Act Section 32: Analysis of the Costs and Benefits <https://www.mfe.govt.nz/sites/default/files/nes-drinking-water-section-32-mar07.pdf>

³⁰Department of Internal Affairs (2017). Government Inquiry into Havelock North Drinking Water, Report of the Havelock North Drinking Water Inquiry: Stage 2 [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)

³¹Water New Zealand (2021). National Performance Review 2019-20. Available at <https://www.waternz.org.nz/NationalPerformanceReview>.

³²Water New Zealand (2021). National Performance Review 2019-20. Available at <https://www.waternz.org.nz/NationalPerformanceReview>.

³³GHD, Boffa Miskell. (2019). Cost estimates for upgrading wastewater treatment plants that discharge to the ocean. [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/\\$file/Report-2-Cost-Estimates-for-Upgrading-WWTPs-that-Discharge-to-the-Ocean.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/$file/Report-2-Cost-Estimates-for-Upgrading-WWTPs-that-Discharge-to-the-Ocean.pdf)

Stormwater overflows

78. Stormwater overflows are the main contributor to poor water quality in urban areas (because the greater proportion of impervious surfaces increases the volume and speed of contaminant run-off).
79. There is a growing trend towards managing stormwater quality, with the number of service providers with catchment management plans gradually increasing over the three years in which data has been collected. Catchment and monitoring plans are not yet widespread, however: 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 quality³⁴.
80. 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.
81. 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.

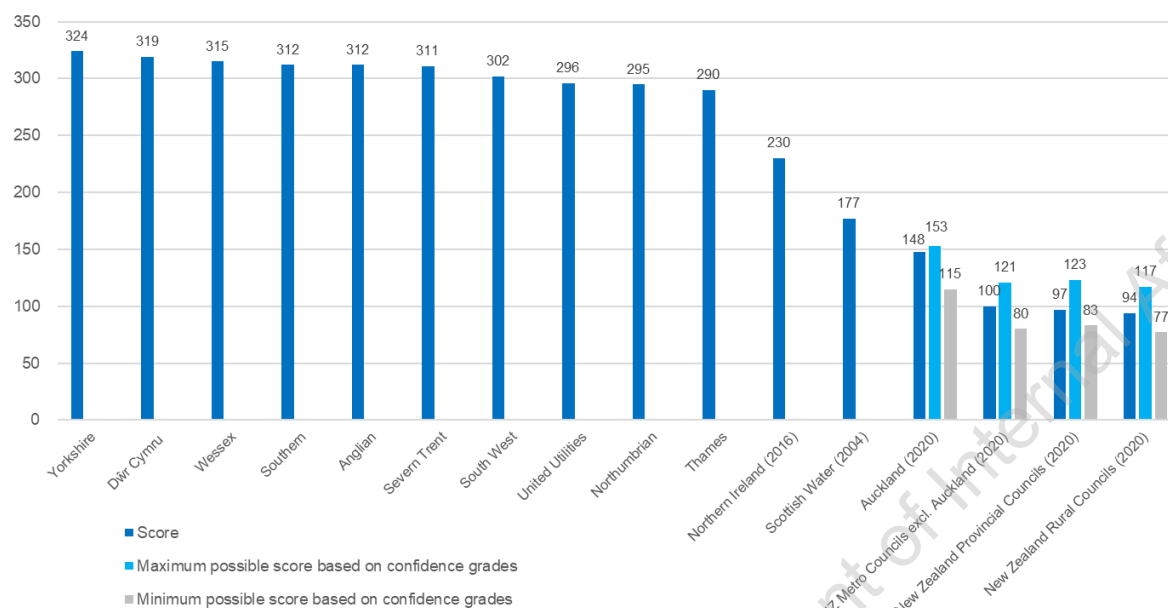
Poor customer outcomes associated with current service delivery arrangements

82. The current system for delivering three waters is associated with poor outcomes for local ratepayers and customers.
83. There is no globally consistent set of performance measures for evaluating the performance of three waters delivery systems. In New Zealand, this problem is compounded by the lack of high-quality information generally about the state and performance of three waters networks. The closest measures would be those used in the Water New Zealand National Performance Review, which we have referred to in several parts of this RIA, and the WICS assessment of performance, which used the Ofwat Overall Performance Assessment.
84. Based on the WICS assessment of the performance³⁵ of New Zealand local authorities against United Kingdom regulated utilities and Scottish Water before the Scottish reforms (see Figure 3), it is clear that:
 - New Zealand has a long way to go, to catch up with the performance of more mature systems overseas; and
 - 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 companies in the United Kingdom.

³⁴ Water New Zealand (2021). National Performance Review 2019-20. Available at <https://www.waternz.org.nz/NationalPerformanceReview>

³⁵ 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.

Figure 3: Overall performance assessment of water entities in 2004, assessed by WICS, comparing Auckland, New Zealand metro councils excluding Auckland, New Zealand provincial councils, and New Zealand rural councils to other jurisdictions.



85. Unplanned interruptions to water supply are the most common form of service disruption. The number of planned interruptions, third party incidents, and unplanned interruptions for drinking water and wastewater are shown in Table 3 below.

Table 3: Number of planned interruptions, third party incidents, and unplanned total interruptions in New Zealand in the year 2019/2020.³⁶

Type of interruption	Drinking water	Wastewater
Planned interruptions	2,619	-
Third party incidents	2,732	345
Unplanned total interruptions	14,794	726

Historic underinvestment and an ageing asset base

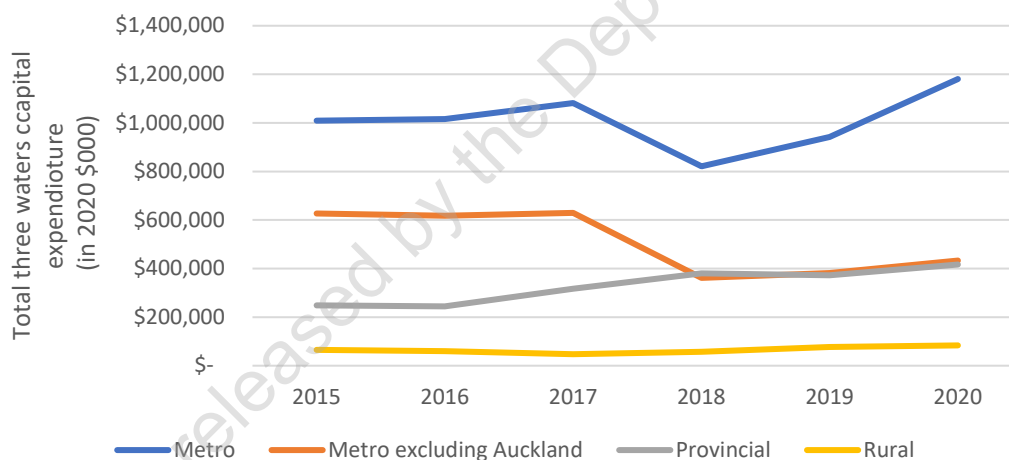
86. Three waters infrastructure has not been well maintained and it is ageing. Across New Zealand drinking water supply pipes have the lowest median weighted age of 34.1 years, followed by 36.7 years for wastewater pipelines, and 37.2 years for stormwater pipelines (see Appendix 5)³⁷.

³⁶ Water New Zealand (2021). National Performance Review 2019-20. Available at <https://www.waternz.org.nz/NationalPerformanceReview>

³⁷ Water New Zealand (2021). National Performance Review 2019-20. Available at <https://www.waternz.org.nz/NationalPerformanceReview>

87. The Office of the Auditor General reported in 2017 that local authorities might not be reinvesting enough in three waters assets, suggesting that these assets could be deteriorating to an extent that they are unable to meet the levels of service that their communities expect³⁸.
88. The Office of the Auditor General also noted, following its 2016/17 local government audits, that relevant and reliable information about assets remains a challenge for local authorities. About 45% of the potable and wastewater networks, and 52% of stormwater networks, are categorised as “ungraded”.
89. A more recent analysis highlights the extent of the reinvestment challenge and the “renewals gap”:
- Water supply – on average, forecast renewals are 82% of forecast depreciation.
 - Wastewater – on average, forecast renewals are 67% of forecast depreciation.
 - Stormwater – on average, forecast renewals are 52% of forecast depreciation.
90. Local authority expenditure on capital has been inconsistent, as shown in Figure 4. Analysis of funding impact statements suggests that in aggregate, but excluding Auckland, expenditure appears to be flatlining (or reducing in the case of metro local authorities).

Figure 4: Capital expenditure by local authorities between 2015 and 2020 (in real 2020 \$000)³⁹.



91. The Office of the Auditor General has also found that most local authorities did not deliver on their capital expenditure budgets⁴⁰:

Local authorities’ total capital expenditure in 2018/19 was \$4.66 billion, which was the highest amount local authorities spent on their assets in the last seven years. However, the amount spent was only about 82% of the \$5.70 billion budgeted. This is a smaller percentage than in 2017/18, when local authorities spent 84% of their capital expenditure budgets

³⁸ Controller and Auditor - General. Introducing our work programme - Water management. October 2017 ISBN 978-0-478-44275-5.

³⁹ Department of Internal Affairs database of local authority funding impact statements, 2015-2020

⁴⁰ Office of the Auditor General (2020). Insights into Local Government 2019. Available at <https://oag.parliament.nz/2020/local-govt/docs/local-govt.pdf>

92. WICS modelling indicates a likely range for future investment requirements at a national level in the order of \$120 billion to \$185 billion. This investment is what WICS has estimated is necessary for New Zealand to meet current United Kingdom levels of compliance with EU standards over the next 30 years, which in its assessment (and confirmed by Beca) are broadly comparable with equivalent New Zealand standards.
93. While this implies a large amount of investment is required, the estimates need to be considered in context. It compares with historic council capital expenditure of around \$1.4 billion on average annually over the last 5 years. Forecasts in draft 2021-2031 Long-Term Plans already indicate a close to doubling of this investment to around \$2.7 billion annually over the next 10 years. Extending this over 30 years⁴¹ suggests a broadly indicative range for future council investment of anywhere between \$42 billion to \$81 billion over the next 30 years. This anticipated increase in investment would still leave a significant investment gap according to the WICS estimates.
94. The WICS' analysis of the RfI information suggests that there has been systematic under-funding of economic depreciation by local authorities in New Zealand, which is likely to continue over the next 10 years according to current draft Long-Term Plan numbers, shown in Table 4 below⁴²:

Table 4: Economic depreciation spent on three waters infrastructure, by council groups

Council Group	Average annual expenditure per connected citizen	WICS assessed economic depreciation per connected citizen	% of economic depreciation	Average annual net new assets created per connected citizen
Metro	\$124	\$267	46%	-\$150
Provincial	\$128	\$254	50%	-\$50
Rural	\$158	\$253	63%	-\$3
Larger rural	\$153	\$237	65%	-\$5
Smaller rural	\$163	\$266	61%	\$1

95. This finding is backed by the Office of the Auditor General's audit of council annual reports⁴³ in 2020, which showed that in 2018/19, all councils' renewal capital expenditure was 79% of depreciation (Figure 5), which was less than the 91% that all local authorities planned for in their 2018-28 Long-Term Plans. There is considerable variation across local authorities however, with 29 local authorities spending more than 100% on renewals capital

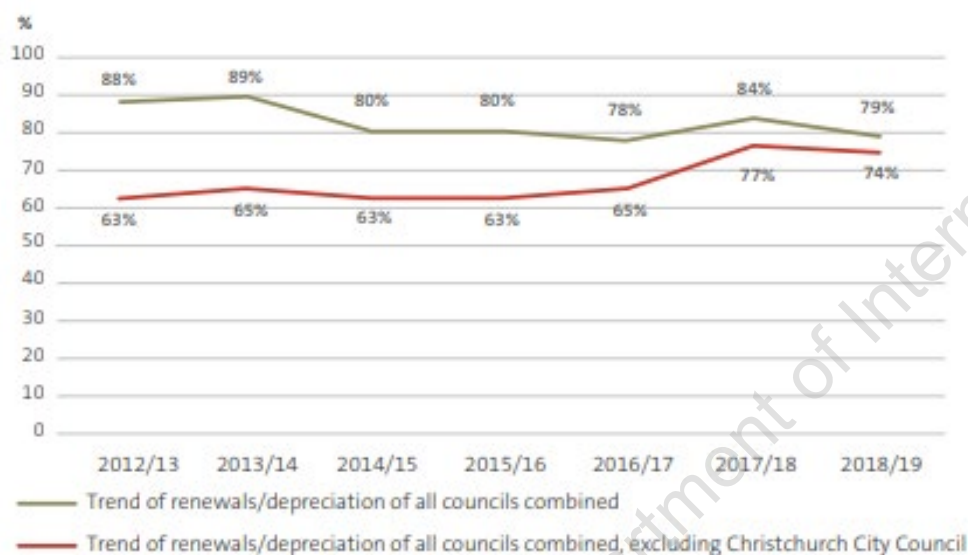
⁴¹ This assumes capital expenditure follows a linear trend however we know that investment in three waters infrastructure tends to be lumpy.

⁴² Water Industry Commission Scotland (2021). Economic analysis of water services aggregation. Phase 2.

⁴³ Office of the Auditor General (2020). Insights into Local Government 2019. Available at <https://oag.parliament.nz/2020/local-govt/docs/local-govt.pdf>

expenditure. If you exclude Christchurch City Council, which has spent a significant amount on capital renewals because of the post-earthquakes rebuild, the figure is 74%.

Figure 5: Renewal capital expenditure compared with depreciation for all local authorities, 2012/13 to 2018/19 (green line includes all local authorities and the red line excludes Christchurch City Council) ⁴⁴.



96. The additional scrutiny of local authority accounts and Long-Term Plans by auditors has resulted in significant upwards revaluation of assets and associated provision for depreciation expense.
97. This is in part evidenced by the significant uplift in Long-Term Plan investment forecast for three waters of about 50% compared to 2018-28 Long-Term Plans. The uplift in investment plans could also be an anticipation of this package of policy proposals.

Lack of resilience

98. 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.
99. Although we should note that estimates of water loss for water supplies without universal metering are inherently inaccurate, 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

⁴⁴ Office of the Auditor General (2020). Insights into Local Government 2019. Available at <https://oag.parliament.nz/2020/local-govt/docs/local-govt.pdf>

Christchurch City and Wellington Water. Opportunities for reducing water loss exist in at least 83% of service districts⁴⁵.

100. 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.
101. 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.

Outcomes for Iwi/Māori

102. A range of issues to do with three waters service delivery are important to Māori, as suppliers or recipients of water services to marae, papakāinga, and rural communities, and as members of communities who receive poor quality three waters services or none at all. Māori are particularly over-represented in communities that receive no or only poor quality three waters services.
103. Iwi/Māori are concerned about the impacts of freshwater pollution on the mauri of waterways and in turn on the wairua of tangata whenua.
104. They are also concerned about the impacts of three water services delivery problems on the ability of iwi, hapū and whānau to be kaitiaki of their waterways and land.
105. These issues and options to address them will be examined more deeply in *Detailed Chapter 6: Strengthening the role of iwi/Māori in the three waters system*.

Defining the root causes

106. The previous section discussed a wide range of issues associated with the outcomes being delivered by the current three waters system. As mentioned earlier, the Government's policy response to these systemic challenges is built on three pou:
 - a strengthened regulatory regime;
 - establishment of a water quality regulator; and
 - reform of the system for delivering three waters.
107. This RIA relates to the third of these pou, but the reforms also need to take account of the impact on the other two pou.
108. We have identified four root causes that contribute to the systemic challenges in the system for delivering three waters:
 - **Root cause one:** The large number of small water service providers, which limits opportunities to realise efficiencies of scale in delivering three waters services;

⁴⁵ Water New Zealand (2021). National Performance Review 2019-20. Available at <https://www.waternz.org.nz/NationalPerformanceReview>

- **Root cause two:** Incentives and governance structures that are not conducive to long-term decision-making in relation to three waters asset management and investment;
- **Root cause three:** Affordability challenges associated with addressing the infrastructure deficit; and
- **Root cause four:** A lack of effective system stewardship.

109. We acknowledge that these root causes are all interrelated and that this is just one way to separate and define them. They all influence and reinforce each other, and together lead to the poor functioning of New Zealand's three waters system. That said, the lack of size and scale of water entities is a dominant root cause that runs through everything.

Root cause one: The large number of small water service providers, which limits opportunities to realise efficiencies of scale in delivering three waters services

Ability to access economies of scale

110. Many 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;
- lack of funding and pipeline certainty to create competitive pressures in the supply chain;
- the lack of capacity and capability (as identified below) that tends to be associated with larger-scale entities;
- 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.

111. Research on economies of scale (see Breakout box 1 below) indicates that a connected population of at least 600,000 to 800,000 is needed to achieve any noticeable efficiency gains. Below that population level, entities may find it difficult to fully realise the efficiency benefits that have been shown to be possible in other jurisdictions.

112. Recent analysis by WICS of Watercare's potential efficiency savings provides some indication of the potential benefits of scale that reform could enable:

- WICS found that Watercare has an efficiency gap of 45% compared to the frontier company and 35% to the average company in the United Kingdom.⁴⁶

⁴⁶ WICS (2020). A (mock) draft determination for Watercare.

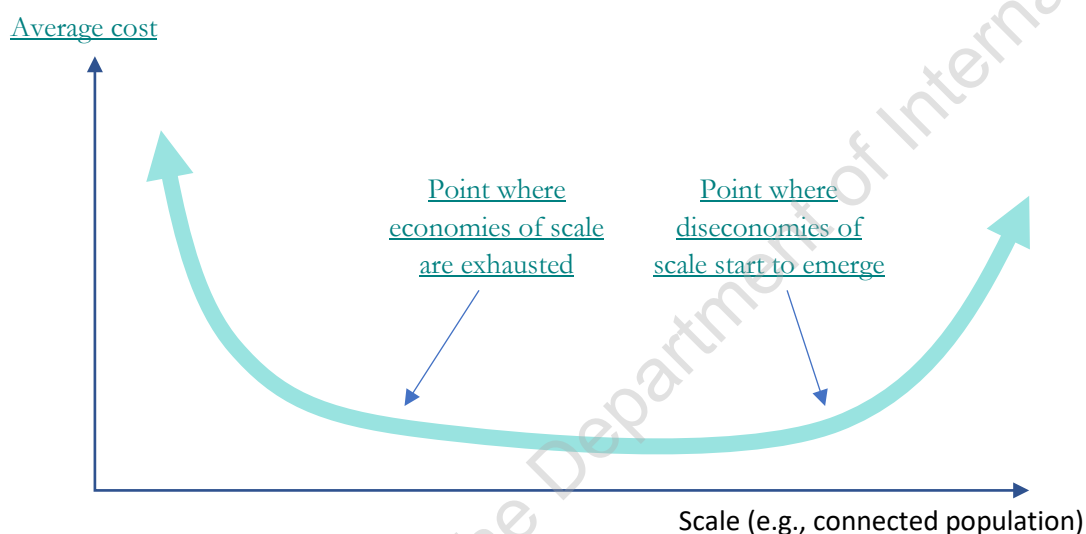
- In its “mock” determination, which recognised that Watercare operates in a different regulatory and governance environment from the United Kingdom, WICS challenges Watercare to achieve an operating cost efficiency target of 4.4% a year between 2022 and 2031.
- This would enable Watercare to close 80% of the identified efficiency gap to the frontier over that period (80% of the 45% gap, resulting in a reduction of 36%).
- WICS recognises this is an aspirational target as Scottish Water was able to achieve a similar improvement only after regulatory and governance reform in Scotland.

Proactively released by the Department of Internal Affairs

Breakout box 1: International evidence on scale efficiencies⁴⁷.

It is well accepted in the economic literature, and in the consultation for the reform programme so far, that there is a 'U-shaped' average cost function (comparing average cost per unit of output), indicating an optimal range of size for water utilities. As shown in Figure 6 below, this means that aggregation of smaller water providers would be likely to result in lower average unit costs, but that at some point – as a water utility becomes larger – economies of scale effects may be exhausted. As a water entity becomes larger still it may start to operate with diseconomies of scale.

Figure 6: U-shaped average cost function⁴⁸.



There is a wide range of international evidence on the benefits of scale. A range of studies find evidence of significant scale benefits, whereas others are more cautious. Evidence of scale efficiencies in relation to wastewater treatment are stronger than for drinking water supplies. The international evidence base suggests a range of between 500,000 to one million connected customers is needed to achieve a level of efficient scale, with the exact number dependent on a range of factors, including population density, rurality, topography, and geography.

⁴⁷ A sample of international evidence includes:

- Abbott and Cohen (2009). Productivity and efficiency measurement in the water industry. https://www.nzae.org.nz/wp-content/uploads/2011/08/Productivity_and_efficiency_measurement_in_the_water_industry.pdf
- Farrierswier (2021). Three Waters Reform: Review of methodology and assumptions underpinning economic analysis of aggregation.
- Ferro (2017). Global study on the aggregation of Water Supply and Sanitation Utilities. <http://documents1.worldbank.org/curated/zh/962151503628572004/pdf/119097-WP-PUBLIC-P159188-35p-ADD-SERIES-lit-review-24-8-2017-12-18-52-W.pdf>
- Ferro, Lentini, and Mercadier (2011). Economies of Scale in the water sector: a survey of the empirical literature. <https://iwaponline.com/washdev/article/1/3/179/28777/Economies-of-scale-in-the-water-sector-a-survey-of>
- 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
- Water Industry Commission for Scotland (2021). Supporting materials part 2: Scope for efficiency.

⁴⁸ Farrierswier (2021). Three Waters Reform: Review of methodology and assumptions underpinning economic analysis of aggregation.

Analysis by WICS highlights that United Kingdom companies serving populations lower than 800,000 are less efficient than larger companies, as they only manage to realise between 10% and 50% of the efficiency savings* that the best-performing larger companies were able to realise following reform. That is not to say that entities serving populations smaller than 800,000 are inefficient; rather they are assumed to be less efficient than larger entities. In its analysis, WICS assumes no additional efficiency gains from serving a connected population of more than 800,000, and states that below 60,000, it is unlikely that there will be significant efficiency improvements beyond current levels within the sector.

In New Zealand, it is important to separate efficiency benefits that are likely to accrue to larger, professionally managed organisations from scale benefits that arise from the provision of the water services (including network benefits). Both arguments hold, but the first is difficult to separate from the wider benefits of reform including professional governance, specialist management, and good regulatory discipline.

On balance, in applying the international literature to New Zealand, a connected population of 600,000 to 800,000 seems likely to achieve a level of efficient scale to contribute to meeting the investment deficit.

**Measured by looking at the extent to which regulated water utility companies have been able to close the efficiency challenge issued by the regulator (Ofwat in England/Wales or WICS in Scotland) over the period of 1994-2002.*

Capability and capacity issues

113. As a result of the challenges in system design and scale, water providers vary considerably across the country, leading to significant variation in their abilities to procure and deliver three waters services.
114. Research undertaken earlier in the Three Waters Review indicated that many local authorities are facing capacity and capability issues relating to three waters services and infrastructure.⁴⁹ A consistent theme is the role that scale plays in relation to asset management and governance capability, levels of compliance, and service quality:
- There is a strong correlation between organisational size and levels of infrastructure asset management maturity and compliance with drinking water standards. For example:
 - Higher performance tends to be found in mid- to large-sized local authorities and in single-purpose entities such as Watercare, which all have large, specialised three waters asset management teams and sophisticated technology and data systems.
 - It is often difficult for smaller, rural, and provincial local authorities to develop the capabilities needed, and to access and retain people with specialist skills. Smaller local authorities by nature have smaller teams, with wider and more general skills, rather than specialists.

⁴⁹ The Department of Internal Affairs commissioned two reports to explore capability and capacity issues facing local government three waters providers – Castalia Ltd (2017). Three waters asset management maturity in New Zealand; and MartinJenkins (2017). Three Waters Review – interface between asset management and council governance. The observations summarised are from these reports.

- Research on asset management maturity and capability found that, while most of the local authorities sampled have the basic, underpinning ‘architecture’ of sensible asset management:
 - the quality of their frameworks and their planning and strategy documents varies considerably;
 - above this basic level, maturity is commensurate with scale; and
 - advanced asset management is unlikely to be fit-for-purpose at a small scale given the resources available, and resource constraints are barriers to improvement in smaller local authorities.
115. There are also skills gaps within the sector (see Breakout box 2 below). The three waters sector is transforming from being engineering and asset-centric to a more technology-enabled customer focus⁵⁰. International best practice in water service delivery also relies on highly specialised and sophisticated capabilities, for example in relation to hydrology and telemetry.
116. These capabilities are in short supply in New Zealand, partly because of an uncertain investment pipeline, which has meant the supply chain has not committed to investing in the local market.
117. Establishing a smaller number of water service entities with much greater scale, professionalisation, and investment certainty will provide a foundation for responding to these workforce challenges. However, reform will need to be complemented by a strategic workforce plan that leverages the benefits of reform in order to build the workforce the sector needs for the future.⁵¹

⁵⁰ KPMG (2017). Workforce skills of the future. Report commissioned by the Water Services Association of Australia and the Water Environment & Reuse Foundation.

https://www.wsaa.asn.au/sites/default/files/publication/download/WSAA%20Workforce%20Skills%20of%20the%20Future_0.pdf

⁵¹ Deloitte (2021). Economic impact assessment

Breakout box 2: The three waters sector workforce⁵².

The three waters sector workforce is complex and spans multiple industries and disciplines. Different structures currently apply across different local authorities. While many use a combination of in-sourced and out-sourced provision, the nature of those arrangements varies widely.

The closest estimate of the size of the workforce directly employed in three waters services comes from the Water New Zealand National Performance Review. This showed that, for the 42 local authorities that completed the survey in 2019/20, there were 2,745 internal staff and 1,196 contracted staff. A significant part of local authorities' workforces (just above 40%) are contractors.

There are several challenges and opportunities facing the sector, and these are not unique to local authorities but also apply to private suppliers. They include:

- an ageing workforce lacking gender and racial diversity, a challenge that is common in other jurisdictions like Australia and the United States;
- limited succession planning, recruitment, and retention strategies to build a supply of experienced and skilled staff;
- difficulties accessing staff with technical skills in rural and remote areas;
- scarce supply of highly specialised water consultancy expertise as well as “boots on the ground” labour resource;
- new and more sophisticated technologies requiring different skills to those traditionally associated with the workforce, with good practice in the sector likely to look very different in the future; and
- competition for similar skill sets with other sectors (e.g., the wider construction sector); and
- increasing demand for labour from programmes like the COVID response fund (e.g., shovel ready projects), as well as increasing expectations to address climate change.

Some organisations are tackling these issues but there is no consistent approach across the sector. Water New Zealand has begun work on a workforce strategy to improve coordination and develop a shared view across the sector about how to address these problems.

⁵² A range of sources have been used to determine these findings including:

- Brookings (2018). Renewing the water workforce. <https://www.brookings.edu/wp-content/uploads/2018/06/Brookings-Metro-Renewing-the-Water-Workforce-June-2018.pdf>
- Deloitte (2021). Economic impact assessment
- Infrastructure Commission (2021). Sector state of play: Water. <https://infracom.govt.nz/assets/Uploads/State-of-Play-Water.pdf>
- c (2017). Workforce skills of the future. Report commissioned by the Water Services Association of Australia and the Water Environment & Reuse Foundation. https://www.wsaa.asn.au/sites/default/files/publication/download/WSAA%20Workforce%20Skills%20of%20the%20Future_0.pdf
- Opus International (2011). Skilled people in the water industry – information for the future. https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=973
- Water New Zealand (2021). National Performance Review 2019-20. Available at <https://www.waternz.org.nz/NationalPerformanceReview>
- Water New Zealand (2021). Sector Workforce Capability. https://www.waternz.org.nz/Category?Action=View&Category_id=1060

Root cause two: Incentives and governance structures that are not conducive to long-term decision-making in relation to three waters asset management and investment

118. Local authority service providers in New Zealand 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).
119. Research on three waters governance⁵³ indicates that the standard of governance across the 13 interviewed local authorities varied, especially regarding their understanding of technical issues, but that the strength of governance generally correlates with scale.
120. The research noted concerns that local authorities without a water council-controlled organisation may lack assurances of ‘robust’ governance. This observation was based on several factors, including that:
- the separation of governance and management is generally blurred, which weakens accountability;
 - the governance agenda is often driven by council officers, rather than elected members;
 - councillors are elected to represent community interests, not for their governance skills – therefore, they may not have the mix of skills and experience needed to deliver best practice governance of these complex, critical water assets; and
 - professionalisation of governance of three waters is below that of other infrastructure assets (such as electricity and gas) despite equal or greater challenges.
121. Several reviews have considered the challenges associated with council elected members making decisions in relation to the management and delivery of a critical and life-supporting infrastructure like water:
- **Wellington Water.** Analysis⁵⁴ commissioned by the Local Government Commission showed that one of the biggest challenges for Wellington Water was the lack of collaboration and agreement across the Wellington local authorities on key priorities for investment. For example, in relation to resilience, which is a key regional priority, local authorities would need to agree to some measure of cross-funding of investments, which may benefit some more than others. While necessary in the interests of the greater good and resilience for the region, these decisions require elected members to trade-off their local priorities. A more recent report by the Mayoral Water Taskforce⁵⁵ reinforces these conclusions. The report concluded that:

“Our three waters system has for many years been largely out of sight, out of mind. This changed with the high-profile pipe failures in the wastewater network in late 2019 and early 2020, which highlighted the consequences of decades of inattention. Engineers had highlighted the problems of ageing infrastructure and growing

⁵³ MartinJenkins: *Three Waters Review – interface between asset management and council governance* (December 2017).

⁵⁴ Mott MacDonald (2016). *Analysis of Three Waters in the Wellington Region: Scoping Report*. Available at <http://www.lgc.govt.nz/assets/Wellington-Reorganisation/Mott-MacDonald-3-Waters-Review-June-2016-PDF.pdf>

⁵⁵ 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>

investment requirements for years, but the lack of obvious problems meant, until recently, this had gone unaddressed.”

See Breakout box 3 below for further detail.

- **Hawkes’ Bay.** A business case for new service delivery options found there was a wide variation in the condition of the three waters assets across Hawke’s Bay, noting that direct comparisons are difficult as each council has its own approach to assessing the condition of the assets. The business case also highlighted that Wairoa’s assets were generally in a worse condition than those of other local authorities in the region. It did this not to criticise Wairoa, but rather to highlight the challenge faced by small local authorities across New Zealand who have limited resources, capability and capacity and are forced to make choices in allocating those scarce resources.
- **West Coast.** Similar to the Hawkes’ Bay business case, a review of three waters service delivery in the West Coast pointed to affordability as a key concern for smaller and more remote local authorities. Problems such as a low rating base, limits on loan funding, limited access to subsidies, and a focus on user pays approaches by local authorities limit what can be achieved in some communities⁵⁶.
- **Mangawhai community wastewater scheme.** The Office of the Auditor General found that many of the challenges associated with this scheme, which ended up costing over \$60M after first being estimated at around \$10M, were partly governance failures – but little has changed systemically to ensure that such failures do not occur again⁵⁷.
- **The Havelock North Inquiry** concluded that political accountability by elected councillors in relation to three waters, while seen as an advantage in the case of local authority suppliers, was ineffectual in reality. It highlights examples of where council officers with responsibility for three waters services encountered difficulty or resistance at the governance or political level when seeking decisions relating to service delivery and investment that would require trade-offs with other local community priorities or that was deemed unaffordable⁵⁸.

⁵⁶ Tonkin & Taylor (2020). Three Waters Service Delivery Review.

⁵⁷ Office of the Auditor-General (2013). Inquiry into the Mangawhai community wastewater scheme. Available at <https://oag.parliament.nz/2013/mangawhai/docs/oag-mangawhai.pdf>

⁵⁸ Department of Internal Affairs (2017). Report of the Havelock North Drinking Water Inquiry, Stage 2 - [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)

Breakout box 3: Challenges of the Wellington Water model

Wellington Water operates three waters services on behalf of its client local authorities*, but three local authorities in the Wellington region are not part of Wellington Water.

Wellington Water faces several key barriers that make it difficult to provide safe, reliable, and resilient three waters services. These barriers include, that⁵⁹:

- assets are held separately by the client local authorities, which means Wellington Water cannot access economies of scale or scope;
- it faces split accountabilities, being accountable to each of its client local authorities;
- it has ageing assets, but also some younger failing assets; and
- reliance on revenue from local authorities means it has no long-term certainty over its funding and financing, which undermines long-term asset management, and the opportunity to use its supply chain effectively.

Wellington Water has no ability to make trade-offs between operating and capital expenditure, nor can it cross-subsidise between owners or ratepayers in different districts.

Because of these constraints, investment in three waters services will need to increase by a factor of three to meet expected service levels, and to be consistent with what is expected internationally.

Without unlocking funding and financing opportunities, the cost of three waters services to the community is expected to continue to rise at a faster rate.

A recent Wellington City Council Mayoral Taskforce report reinforced these findings and recommended that the council commit to the Government's reform programme by⁶⁰:

- transferring water assets to a multi-council, publicly-owned entity that Wellington City Council participates in governing, to leverage economies of scale and improve efficiency and affordability; and
- give the water entity powers to borrow, raise revenue directly from customers, and require fully-funded depreciation of assets so that funding is sufficient to finance replacement and quality improvement, with a premise that growth pays for growth.

**Greater Wellington Regional Council, Wellington City Council, Hutt City Council, Upper Hutt City Council, Porirua City Council, South Wairarapa District Council*

Root cause three: Affordability challenges associated with addressing the infrastructure deficit

122. There is a significant investment challenge within the three waters system that local authorities will need to address to ensure three waters infrastructure meets current and future regulatory standards, as well as community expectations.

123. Many local authorities have struggled, and continue to struggle, to fund plant and pipe infrastructure to the level required in order to meet standards and community aspirations,

⁵⁹Mott MacDonald (2016). Analysis of Three Waters in the Wellington Region: Scoping Report. Available at

<http://www.lgc.govt.nz/assets/Wellington-Reorganisation/Mott-MacDonald-3-Waters-Review-June-2016-PDF.pdf>

⁶⁰ 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>

keep pace with population growth and demand for new housing developments, and build resilience within current structures and funding arrangements.

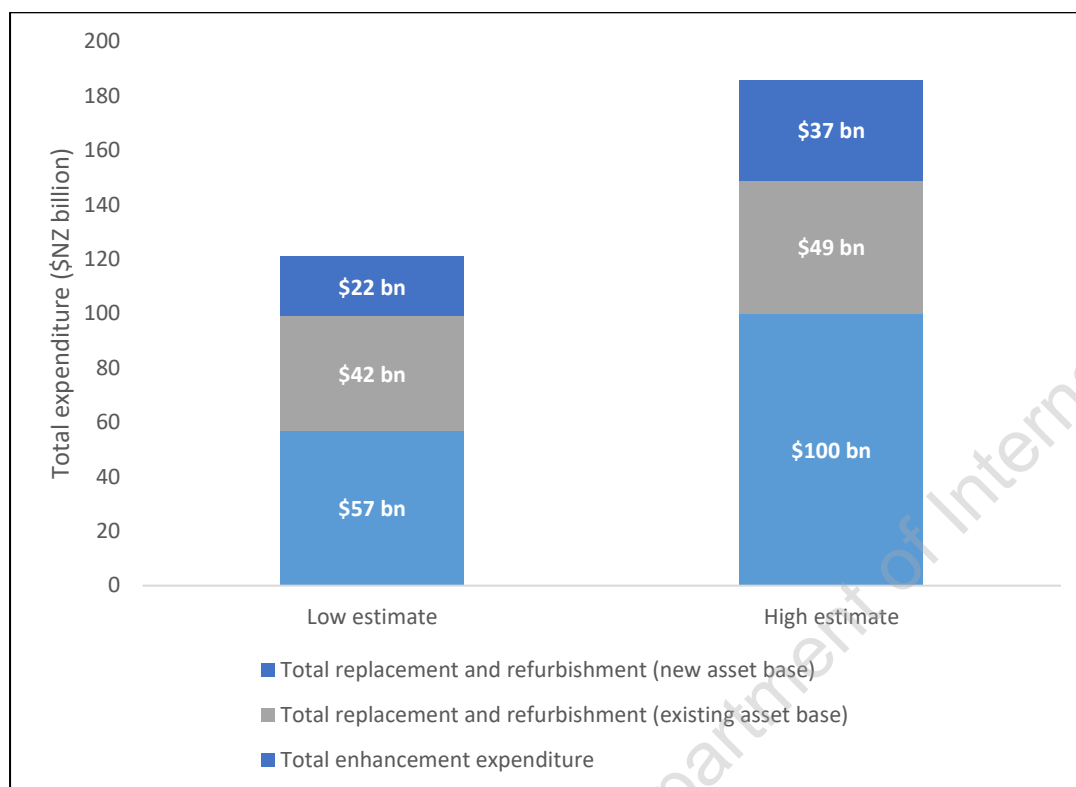
124. Without reform, the required investment would have significant implications for local authority finances, and would present affordability issues for many communities, now and into the future.

The accumulated investment deficit facing local authorities is significant and meeting this will be particularly challenging for smaller and rural communities

125. A WICS analysis commissioned by the Department, using information collected from local authorities on their assets, finances, and connected properties has enabled modelling indicates a likely range for future investment requirements in three waters at a national level in the order of **\$120 billion to \$185 billion**. This investment is what WICS has estimated is necessary for New Zealand to meet current United Kingdom levels of compliance with EU standards over the next 30 years, which in its assessment (and confirmed by Beca) are broadly comparable with equivalent New Zealand standards. These estimates make no further allowance for seismic resilience, climate change, or investment to meet iwi/Māori expectations beyond that already included in current local authority expenditure.
126. The WICS analysis shows a total investment challenge of between \$120 to \$185B (Figure 7), which comprises⁶¹:
- an estimated \$42 to \$49B to maintain and replace the existing asset base due to ageing infrastructure;
 - \$57 to \$100B of further investment required over the next 30 years to upgrade existing three waters assets to meet environmental and current drinking water standards; and
 - a minimum of \$22B to maintain and replace the new asset base introduced over the next 30 years. The upper estimate is around \$37B.

⁶¹ Sum totals may not add due to rounding.

Figure 7: Estimated expenditure between 2020 and 2050⁶².



127. While this implies a large amount of investment is required, the estimates need to be considered in context. It compares with current council capital expenditure of around \$1.4 billion on average annually over the last 5 years. Forecasts in draft 2021-2031 long-term plans already indicate a close to doubling of this investment to around \$2.7 billion annually over the next 10 years. Extending this over 30 years⁶³ suggests a broadly indicative range for future council investment of anywhere between \$42B to \$81B over the next 30 years. This anticipated increase in investment would still leave a significant investment gap according to the WICS estimates.

Affordability challenges are particularly acute for smaller and rural communities

128. New Zealand has a highly urbanised population, with more than 80% of people living in towns and cities. However, our towns are small by international standards and the distance between them can be large. We also have a large rural hinterland, with a dispersed population, many of whom are either on private community supplies or are self-suppliers.

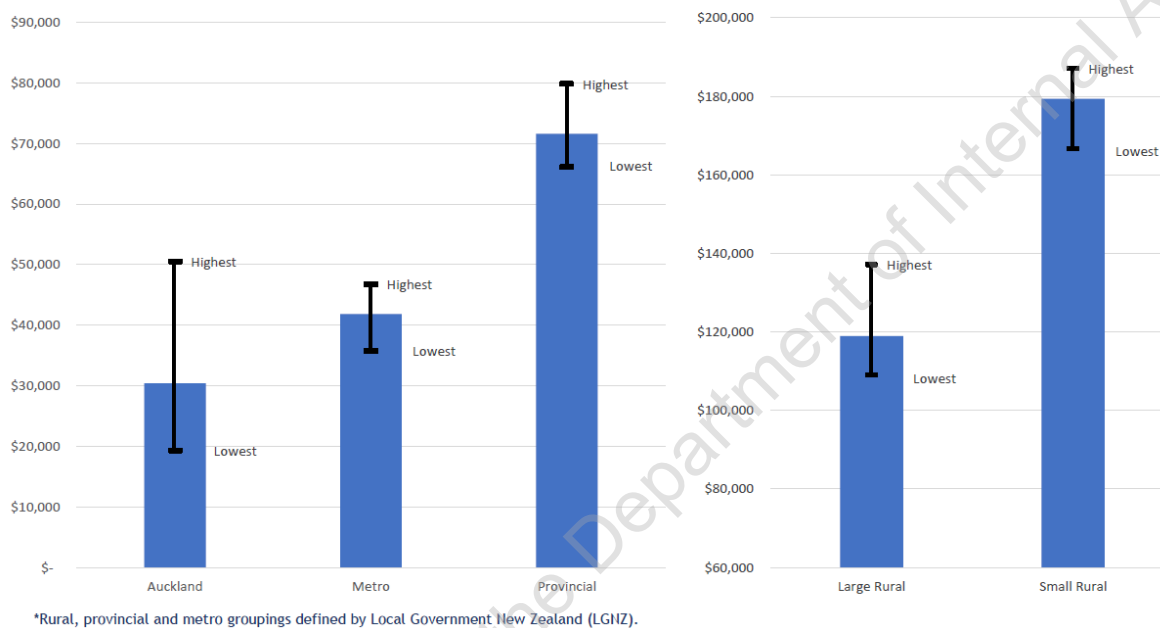
129. Services and infrastructure are delivered, operated, and paid for by (or on behalf of) a large number of service providers, many of which have a small customer base, making it more challenging and expensive, relative to international comparators, to serve their communities.

⁶² Water Industry Commission for Scotland (2021). Economic analysis of water services aggregation. Phase 2.

⁶³ This assumes capital expenditure follows a linear trend however we know that investment in three waters infrastructure tends to be lumpy.

- 130. The investment challenge identified above will present affordability challenges across the country, but will be felt more by smaller communities, including rural and provincial local authorities.
- 131. Figure 8 below shows how the forecast enhancement and growth investment is likely to be distributed across different council groupings. Costs for provincial and rural local authorities are significantly larger than those facing metro local authorities.

Figure 8: Predicted enhancement and growth investment per property (based on high total estimate of \$185 billion)⁶⁴.



- 132. The increase needed on a net present cost basis is also significantly higher for rural and provincial local authorities as shown below in Table 5⁶⁵.

⁶⁴ Water Industry Commission for Scotland (2021). Economic analysis of water services aggregation. Phase 2.

⁶⁵ Water Industry Commission for Scotland (2021). Economic analysis of water services aggregation. Phase 2.

Table 5: Net present cost basis for Auckland, other metro, provincial, and larger and smaller rural areas.

Council grouping	Net Present Cost of provisional Long Term Plan	Net Present Cost of high investment estimate (\$185bn) per connected citizen per year (Real terms)			Net Present Cost of modelled sensitivity (25%) level of investment (Real terms)		
		Low	High	% Change on current Long-Term Plan	Low	High	% Change on current Long-Term Plan
Auckland	\$770	\$850	\$1,020	10%-30%	\$720	\$850	-5% to +10%
Other Metro	\$780	\$1,260	\$1,530	60%-100%	\$1,070	\$1,270	40%-60%
Provincial	\$870	\$2,060	\$2,300	140%-160%	\$1,680	\$1,860	90%-110%
Larger Rural	\$1,170	\$3,910	\$4,060	230%-250%	\$3,090	\$3,210	160%-170%
Smaller Rural	\$900	\$3,740	\$3,820	315%-325%*	\$2,960	\$3,030	230%-240%

Council-commissioned studies on the size of the investment needed have come to similar conclusions

133. Reports commissioned by local authorities have also come to similar conclusions, summarised in Table 6 below.

Table 6: Summary of findings from review reports commissioned by local authorities on their three waters.

Council / region	Study	Findings
Otago and Southland	Analysis of Rfl submissions ⁶⁶	<ul style="list-style-type: none"> Funding the level of investment required in three waters over the next 10 years would push the collective three waters debt from its current 215% to over 400% of three waters' revenue by 2031. The future renewal requirement is not a "bow wave" as has previously been described. It is sustained over at least the next 20 years. Estimated projected renewal requirements for years 1-10 at \$1.5B (compared to Rfl that identified \$1.1B) and for years 10-20 at \$950M. The potential future costs of three waters services ("average charge") across the region is estimated to more than double over the next 10 years from \$1,300 to almost \$3,000 (uninflated). Forecast investment needed in three waters for the eight local authorities will more than double from \$101M in 2020 to an average of \$230M per year for each of the next 10 years.
Hawke's Bay	Business case investigating alternative service delivery models ⁶⁷	<ul style="list-style-type: none"> Projections are that all the Hawkes' Bay local authorities face significant increases in three water rates over the next five years in order to meet new requirements around growth, levels of service, resilience, and health and environmental standards. Local authorities originally forecast a combined \$313M in capital investment in three waters in the 2018-2028 Long-Term Plan. Taking into account the expected change in regulatory standards, this is estimated to be closer to \$605M, an increase of 190%. A combination of already high water rates, significant future investment requirements, and a small rating base could see the average three water rate increase to over \$3,500 and \$4,000 per household in Central Hawke's Bay and Wairoa, respectively.
Wellington	Mayoral Taskforce Report ⁶⁸	<ul style="list-style-type: none"> Wellington Water has proposed that the level of capital investment across the region, including Wellington City, needs to increase from around \$140m per year to around \$240m per year. Independent advice WICS suggests that even this increase will be insufficient, with \$300-\$350M a more realistic estimate. This represents a 200-250% increase on current levels. This investment deficit is compounded by rising capital and operating costs, water asset revaluations that increase the rates funding required for depreciation, and the need to improve the functional and environmental performance of the network.

⁶⁶ 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>

⁶⁷ Morrison Low (2020). Hawkes' Bay Three Waters: Business case of three waters service delivery options. <https://www.hb3waters.nz/assets/Uploads/HB-3-Waters-Delivery-Detailed-Analysis-29.07.20-Full-Report.pdf>

⁶⁸ 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>

Root cause four: Lack of effective system stewardship

134. The other root causes and system design issues noted above are compounded by inadequate oversight and stewardship arrangements, and weaknesses in the regulatory environment.
135. While the Government is taking steps to strengthen the regulatory environment – through the creation of Taumata Arowai and introducing the Water Services Bill – these steps focus on improving the quality of the three waters, and gaps remain.
136. Most notably, existing water service providers are not subject to even a basic form of economic regulation: 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. Appendix 6 shows the rate of condition grading of three waters assets, as assessed by Water New Zealand’s National Performance Review.
137. This means there is a lack of transparency about fundamental elements of the three waters system – such as the costs and performance of services, the condition of assets, and the investment needed – and a corresponding weakness in accountability for performance.
138. Key areas where there are gaps in how performance is measured and providers are held accountable include:
- a lack of public reporting on the environmental performance of wastewater treatment plants and the extent to which they comply with discharge consents;
 - inconsistencies in monitoring parameters, reporting, the use of compliance limits, taking iwi/Māori interests into account, and monitoring⁶⁹;
 - regional councils not publishing, and not being required to publish, enough information to provide assurance about the impact of three waters services on the environment;
 - no oversight over regional council’s environmental regulation functions; and
 - inconsistent compliance and enforcement practices across the country, which has meant there is little or no accountability or consequence for failing to meet regulatory requirements.
139. The dispersed nature of stewardship roles and responsibilities, which are spread across many agencies, means no one is responsible for monitoring or overseeing the performance of the whole system. New Zealand has 67 local authority (or council-controlled organisation) suppliers, 20 district health boards, 16 regional councils, and seven government ministries that have a role in relation to the supply of safe drinking water⁷⁰.
140. A lack of coordination between all players in the system, combined with inadequate whole of system oversight, has led to poor understanding of system performance.

⁶⁹Beca, GHD, Boffa Miskell. (2020). The New Zealand Wastewater Sector. Report prepared for Ministry for the Environment.

<https://www.mfe.govt.nz/sites/default/files/media/Fresh%20water/wastewater-sector-report.pdf>

⁷⁰Department of Internal Affairs (2017). Report of the Havelock North Drinking Water Inquiry, Stage 2 -

[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)

These root causes are not challenges that the sector on its own can address

141. The available evidence⁷¹ suggests the system is not well placed to address these four root causes and also meet new challenges. Experience over the past 30 years also indicates that widespread improvements are unlikely, particularly improvements through voluntary change and collaboration.
142. While some local authorities have taken significant steps to improve three waters service delivery, the results have been mixed and changes have been slow and limited across the whole system. Where local authorities have looked at options for improving on current delivery models, these have tended to require political agreement across multiple local authorities as well as legislation in order to achieve them. For example:
- Wellington Water was formed to take a more integrated and strategic investment approach to water infrastructure across Wellington’s urban local authorities. Although it has been operating for 10 years, there are challenges associated with this model (see the Wellington Water Case study in Breakout box 3).
 - Proposals for Waikato sub-regional water services arrangements have been investigated over several years but have not come to fruition. In December 2017, Waipā District Council voted against a proposal to form a non-asset-owning water company in collaboration with Hamilton City Council.
 - In Hawke’s Bay, a business case examining new service delivery options found an asset-owning council-controlled organisation to be the most effective option to ensure sufficient financial savings for local authorities. This would require central government to develop new legislation.
 - A review commissioned by Otago and Southland shows that addressing the challenges associated with existing service delivery arrangements would be beyond the capacity of Otago and Southland, as a combined region⁷².
 - A review of three waters service delivery in the West Coast found that an asset-owning council-controlled organisation could help to address some of the challenges facing the region but would not address the significant affordability challenges. Only a multi-regional council-controlled organisation could help to overcome the affordability challenges⁷³.
143. Several studies have concluded that successful reform is likely to require legislative change or other government intervention.
144. The Inquiry considered whether better levels of collaboration were a viable alternative to dedicated suppliers, as some submitters had contended. Its view was that cooperation at a combined or shared operational level between drinking water suppliers is not readily achievable, for a range of practical, statutory, and political reasons. It concluded that something more structured and durable is needed.

⁷¹ Department of Internal Affairs (2017). Report of the Havelock North Drinking Water Inquiry, Stage 2. [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)

⁷² 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>

⁷³ Tonkin & Taylor (2020). Three Waters Service Delivery Review.

145. The multiplicity of local, regional, and central government agencies involved in water management is also a matter of concern for some iwi and hapū. Tangata whenua find it challenging to deal with all the different agencies within their one rohe.

Policy objectives and intervention logic

146. The analysis above identifies the root causes for the symptoms experienced in the current state and makes a strong case for change. Before describing strategic options, it is important to document:
- Policy objectives – what the Government wants to achieve; and
 - Intervention logic – the logical flow of how to get there.
147. The Government’s primary policy objective is to significantly improve the safety, quality, resilience, accessibility, and performance of three waters services, and also confidence in those services, a way that is efficient and affordable for New Zealanders. This is critical for:
- public health and wellbeing;
 - environmental outcomes;
 - economic growth and employment;
 - housing, urban development, and support for population growth; and
 - mitigating the effects of climate change and natural hazards.
148. An intervention logic mapping exercise demonstrates the logical flow from these policy objectives (long-term outcomes), evaluation criteria (short-term outcomes), outputs (interventions and strategic options), and problem statements (root causes and symptoms). This intervention logic map is provided in Appendix 4.

Section 3: Strategic choices for intervention

Summary

- Three alternative packages of options – called “strategic options” in this document - have been identified to respond to the root causes identified in the system. Across all strategic options, public ownership of water infrastructure is a bottom line, and there are protections against privatisation.
- Strategic options one and two seek to improve to the system in order to cautiously address the root causes that have been identified, while still generally maintaining its current structure.
- Strategic option three, system transformation, seeks to fundamentally change the way the system is designed in order to more comprehensively address the root causes identified. This includes:
 - Aggregating delivery into a three or four water service entities that manage and own the assets, on behalf of communities, and are operationally and financially independent of local authorities.
 - Introducing price-quality regulation.
 - Establishing competency-based, independent Boards (where asset ownership is transferred).
 - Increasing transparency of service performance and cost, and increasing accountability.
 - Establishing a system stewardship role and appropriate instruments.
- The estimated cost of establishment and transition is in the order of \$1B to \$2B. These costs are relatively small compared to the estimated benefits.
- Strategic option three is the preferred option as it is the only one that achieves all policy objectives, and it is expected to provide significant improvements across all major assessment criteria.
- Detailed system design choices are explained in each chapter of the Detailed RIA.

149. This section sets out the strategic options for intervention to improve the system holistically. This will focus on the various approaches the Government could take to reform the system, as opposed to the second-order policy decisions about system design.

150. To construct holistic strategic options, the various ways of solving each root cause problem is considered first, with the most appropriate activities taken forward to serve as “building blocks” for each strategic option.

Design of strategic options

151. As noted in the problem definition section above, the root causes of the problems identified in the three waters delivery system are as follows – please note that shorthand descriptions of the root causes have been developed in the interests of brevity:

- **Root cause one: Lack of economies of scale.** The existence of many small water service providers makes it difficult to access financing, operating, and capital efficiencies.
- **Root cause two: Misaligned incentives and weak governance structures.** There are misaligned incentives in the system as critical decisions about how three waters networks are planned, managed, and funded are made by decision-makers who must balance competing community interests⁷⁴.
- **Root cause three: Affordability challenges.** There are affordability challenges associated with addressing a substantial investment deficit that has accrued historically and to fund and finance future investment requirements to meet environmental and water quality standards.
- **Root cause four: Lack of system stewardship.** The system lacks arrangements to align the actors in the system with common outcomes and to keep them accountable.

152. The interdependencies between these root causes requires a package of interventions that address these root causes together rather than in isolation. However, for the purpose of developing the strategic options, we have used a “building blocks” approach that involves:

- developing a spectrum of interventions and activities to address each root cause;
- assessing how likely each intervention and activity is to address the root causes of the problems identified; and
- identifying those activities and interventions that are “taken forward” to form building blocks to determine strategic options assessed in this RIA.

153. This approach is consistent with evidence from overseas and the various ways in which other jurisdictions have approached similar challenges facing the delivery of water services, which confirms that a *coordinated and multi-pronged* effort is required. Specifically:

- A review of international approaches to water services aggregation by Frontier Economics found that in most examples of aggregation in Australia, the United Kingdom, and Ireland, the policy response included improved water quality and environmental regulation, the introduction of independent economic regulation, pricing reforms, and improved governance models. This makes it difficult to disentangle the benefits of amalgamating service delivery, from the benefits of regulatory reform (that is, improved water quality and environmental regulation and the introduction of economic regulation) and governance reforms⁷⁵.
- The OECD, in considering the challenges facing the delivery of water services around the world, highlights the need for governments to consider water reform using the

⁷⁴ This position is exacerbated by poor quality information on asset condition, asset values, economic depreciation and future investment requirements and has meant the nature of the problems have been somewhat hidden from decision-makers (or at least not easily observable).

⁷⁵ 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)

building blocks of financing, governance and increased coherence between water and sectoral policies⁷⁶.

154. A range of alternative delivery mechanisms are possible, with and without multi-pronged efforts – with mixed results⁷⁷. For example, in Papakura local government has delegated service delivery to third party providers, with Veolia operating a concession contract there since 1997. However, these examples are rare.

Response to root cause one: Lack of economies of scale

Long-list options

155. As noted in the analysis of root cause one above, the three waters system currently comprises many water service providers of varying sizes, with many sub-scale providers, and this leads to inefficiencies in the planning and delivering of infrastructure networks and services.
156. Scale will assist new water entities to achieve several types of efficiencies:
- **Financial efficiency** - increased financial capacity and capability with stronger, more flexible and more resilient balance sheets, greater access to capital, and a more reliable investment pipeline;
 - **Operating efficiency** - improved operating efficiencies and lower operating costs, achieved by consolidating administration and overhead costs, and improving organisational capabilities;
 - **Capital efficiency** - improved asset management, including opportunities to take a strategic and coordinated approach to consider infrastructure needs at a larger scale and in the context of wider catchment outcomes; and
 - **Regulatory efficiency** - Increased ability to manage regulatory burden, minimise compliance costs, and enable quality and performance to be benchmarked.
157. The following are four options for addressing this are:
- **Local authority-led changes to service delivery (e.g., shared service delivery).** Under this option, local authorities are responsible for pursuing changes to the way services are delivered. The Wellington Water example has been operating since 2014. Moreover, several other local authorities have been considering their three waters delivery arrangements, including: Waikato District Council, the Hawke's Bay councils, and Otago and Southland⁷⁸.
 - **Aggregation of water service delivery into regional groupings.** This involves central government passing legislation that aggregates water service delivery into 16

⁷⁶ Organisation for Economic Co-operation Development (2012). Meeting the Water Reform Challenge. Available at <http://www.oecd.org/environment/resources/49839058.pdf>

⁷⁷ Castalia (2020). Comparative Analysis of Institutional Forms in Water Services for Proposed New Zealand Reforms.

⁷⁸ Waikato District Council (2019). Partnership between Waikato District Council and Watercare agreed.

<https://www.waikatodistrict.govt.nz/news/media-releases/article/2019/08/16/partnership-between-waikato-district-council-and-watercare-agreed>; Morrison Low (2020). Hawke's Bay Three Waters, Business Case of Three Waters Service Delivery.

<https://www.hb3waters.nz/assets/Uploads/HB-3-Waters-Delivery-Detailed-Analysis-29.07.20-Full-Report.pdf>; and 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>

regional entities, including transferring assets to those entities from local authorities.

- **Aggregation of water service delivery into a small number (e.g., three to four) of multi-regional groupings.** Central government passes legislation that aggregates water service delivery into a small number – three or four – of multi-regional groupings.
- **Aggregation of water service delivery into a single national entity.** Central government passes legislation that aggregates water service delivery into just one national provider of water services.

Long-list option evaluation

158. Table 7 below includes a high-level assessment of the long-list of options for responding to the root cause of the lack of scale in the current system. Please note that specific scenarios of multi-regional water providers, and their boundaries, are discussed in *Detailed Chapter 2: Number and boundaries of entities*. That chapter considers scale benefits (i.e., different combinations of urban and rural centres), communities of interest (including rohe/takiwā), and relationships with other jurisdictional boundaries, including catchments.

Table 7: Assessment of options to address lack of economies of scale

Option	Pros	Cons	Outcome
<p>One: Local authority-led shared service delivery</p>	<ul style="list-style-type: none"> • Some economies of scale are possible. • Less disruption and up-front costs to sector. 	<ul style="list-style-type: none"> • Without asset ownership, investment decisions will still be made by individual local authorities and subject to revenue and debt constraints. • In the longer-term inefficiencies will still be likely due to limits on scale. • Split accountabilities across local authorities makes it more complex to pursue collaborative forms of service delivery. 	<p>Evidence to date suggests that the political and economic barriers to sector-led reforms are high. Proceeding with a sector-led approach to service delivery reform, or unconditional investment, would not guarantee that reform will occur or be achieved in a way that meets the objectives.</p> <p>While this option is not expected to achieve the objectives of the reform programme we propose that it be taken forward because it closely mirrors the expected base case⁷⁹.</p>

⁷⁹ The Crown is unlikely to undertake statutory reform on a bespoke, region-by-region basis, as this would add significant complexity to the service delivery system and impede effective system stewardship and regulation. Moreover, without Crown statutory intervention (e.g., to enable asset owning entities that achieve balance sheet separation), sector-led reforms are likely to fall short of fully realising the benefits from reform.

Option	Pros	Cons	Outcome
<p>Two: Aggregation into regional council groupings</p>	<ul style="list-style-type: none"> Limited economies of scale are possible. Alignment with catchments. Alignment with regional identity. 	<ul style="list-style-type: none"> In many regions, operations and balance sheets will be relatively small-scale because of uneven economic geography. The very different population sizes and resources will make it difficult to achieve consistency of cost, service standards, and performance benchmarking. Some regions will continue to struggle with funding and infrastructure challenges (e.g., if they are small, spread out, and/or do not have a large urban base). Existing operators and asset owners will face disruption. 	<p>Pursuing a regional council grouping structure would impose disruption costs without the major expected efficiency gains from amalgamation and we therefore propose that it not be taken forward.</p> <p>Moreover, there is a risk that rural regional water service providers with smaller populations will struggle financially and continue to underinvest in three waters infrastructure.</p>
<p>Three: Aggregation into a small number of multi-regional groupings</p>	<ul style="list-style-type: none"> Large-scale operations and population coverage enables greater operational efficiencies, provided the boundaries are determined appropriately so that there is a sufficient urban base and growth outlook. Bigger balance sheets – all areas could be self-funding and sustainable, and could leverage greater debt than is currently possible within local government funding constraints. Providers would be similar, and so allow for benchmarking. 	<ul style="list-style-type: none"> It is harder to reflect local identity than with a regional (or smaller) model of aggregation, though service delivery could still have a local presence. Existing operators and asset owners will face disruption. 	<p>We propose that this be taken forward given that this option provides a good balance between the objectives for scale and efficiency and the aspirations for community representation.</p> <p>The rationale for this conclusion is presented in more detail in the <i>Detailed RIA Chapter 2: Number and boundaries of entities</i>.</p>

Option	Pros	Cons	Outcome
<p>Four: Aggregation into a single national entity</p>	<ul style="list-style-type: none"> • This provides the largest scale operations and concentration of expertise. • It has the biggest population coverage and balance sheet (although diseconomies of scale also become more likely). • This option could leverage greater debt, but not significantly more than larger-scale multi-regional providers. 	<ul style="list-style-type: none"> • This requires more onerous regulation of the single entity. • The entity may need to be Crown-owned, making it is harder to provide for council or community ownership. • It is hard to reflect local identity – though service delivery could still have a local presence. • It concentrates the risk of poor governance and performance. • It could encounter diseconomies of scale. 	<p>This option of one national water provider is also not taken forward, as it has a number of weaknesses compared to the multi-regional provider model.</p> <p>Moreover, in January 2020, Cabinet Business Committee agreed that further work with local government on the design of new service arrangements would focus on multi-regional and regional models for service delivery. This effectively ruled out a single provider as an option.</p> <p>The rationale for this conclusion is presented in more detail in the <i>Detailed RIA Chapter 2: Number and boundaries of entities</i>.</p>

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Response to root cause two: Misaligned incentives and weak governance structures

Long-list options

159. As noted in the analysis of root cause two above, the current design and governance arrangements for the system places critical decisions about how three waters networks are planned, managed and funded in the hands of decision-makers who need to balance competing community interests.
160. Options to address these problems through strengthening governance and accountability include the points outlined below. The rationale for introducing economic regulation is set out further below:
- **Introducing economic regulation**⁸⁰
 - Introducing an **information disclosure regime** that would require councils to provide information so that interested parties can compare and benchmark performance. The specific scope of this option is varied but could span from voluntary light-touch information disclosure through to more extensive information disclosure under a newly introduced economic regulation regime.
 - Introducing **price-quality regulation** that would put a cap on the maximum price or revenue of a supplier, alongside minimum requirements for service quality.
 - **Alternative governance arrangements**
 - Encouraging local government to establish **council-controlled organisations** with competency-based boards.
 - Establishing **independent, competency-based boards** for asset-owning statutory entities.
161. Some of these options are linked with the options for addressing problems of scale, as having asset-owning entities would allow for greater independence in governance arrangements than shared service arrangements would.

Rationale for economic regulation

162. Like other network utility sectors, three waters networks have strong natural monopoly characteristics that can lead to a lack of investment and innovation, and inefficient and/or poor-quality services being delivered to end consumers.
163. Evidence from overseas jurisdictions and other utility sectors in New Zealand (such as electricity, telecommunications, gas, and airports) is clear that economic regulation would play a critical part in a well-functioning three waters system⁸¹. It would do this by protecting

⁸⁰ Department of Internal Affairs (2021) Three Waters Reform Programme Supporting Information | What is economic regulation. Available at [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/\\$file/Economic-Regulation-Engagement-Slides-March-2021.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/$file/Economic-Regulation-Engagement-Slides-March-2021.pdf)

⁸¹ Department for Business Innovation and Skills (2011). Principles for Economic Regulation. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/31623/11-795-principles-for-economic-regulation.pdf

and enhancing the long-term interests of consumers and providing system-wide performance information that can be used by a range of system players and stakeholders.

164. In particular, economic regulation drives:
- efficient pricing, procurement, and asset management practices;
 - incentives to invest and innovate; and
 - the provision of services at a quality and level of resilience that reflect the demands of consumers and the wider community.
165. Effective economic regulation will support and reinforce good governance, by shining a light on the relative performance of water services providers and by strengthening the reputational incentives to deliver services that meet consumer demands. In turn, economic regulation will need to be supported by high-quality governance arrangements, and by ensuring a strong and enduring consumer and community voice throughout the three waters system.

Long-list option evaluation

166. A high-level assessment of the long-list of options to respond to the root cause of misaligned incentives is provided in Table 8 below.
167. Specific considerations related to economic regulation are discussed in the *Detailed RIA Chapter 4: Entity regulation, system stewardship, and system direction* and issues relating to the establishment of independent, competency-based boards are discussed in the *Detailed Chapter 3: Establishment of new water services entities*.
168. Moreover, it is expected that responsibilities relating to the specific design of the economic regulation will fall within the portfolio of the Minister of Commerce and Consumer Affairs, and the preparation of advice would be led by the MBIE, in consultation with the Department and the Treasury. An indicative timeline for the progression of this work would see a discussion paper released in Q4 of 2021 and Cabinet decisions sought in 2022.

Assessment of long-list options

Table 8: Assessment of options to address governance and accountability.

Option	Pros	Cons	Outcome
<p>One a. Information disclosure regime</p>	<ul style="list-style-type: none"> • Would provide transparency of costs and levels of service. • Could lead to some improved decision-making as a result. • Could be an option as part of a transition to full price-quality regulation, given the higher-quality of information that would be required. 	<ul style="list-style-type: none"> • Limited as an incentive given that it depends on the extent to which the public can engage with the information. • Does not offer consumers and communities the same level of protection as price-quality regulation, especially given the significant catch-up in efficiency required. • Introduces limited new costs for entities. 	<p>Taken forward given that light touch economic regulation would provide additional transparency and accountability with comparable low new costs imposed on water entities.</p> <p>The rationale for this conclusion is presented in more detail in the <i>Detailed RIA Chapter 4: Entity regulation, system stewardship, and system direction</i>.</p>
<p>One b. Price-quality regulation</p>	<ul style="list-style-type: none"> • Would provide transparency of costs and levels of service. • The revenue constraint placed on entities would act as a strong incentive to improve efficiency. • Would provide more protection for consumers and communities than information disclosure, given the assessed scope for efficiency gains. 	<ul style="list-style-type: none"> • Introduces new costs for regulated entities and their customers. However, these would be quickly offset if efficiencies are realised. 	<p>Taken forward given that economic price-quality regulation is common in overseas jurisdictions and is expected to have a positive impact on transparency, accountability and efficiency.</p> <p>The rationale for this conclusion is presented in more detail in the <i>Detailed RIA Chapter 4: Entity regulation, system stewardship, and system direction</i>.</p>

Option	Pros	Cons	Outcome
<p>Two a. Council-controlled organisations</p>	<ul style="list-style-type: none"> Improved decision-making through allocating responsibility to relevant experts, subject to the quality of board appointments. 	<ul style="list-style-type: none"> Boards are still directly accountable to shareholder local authorities and to political influence. Constraints on directors’ remuneration may limit the quality of governance. Investors are more likely to limit lending or to charge higher premiums because of the higher governance risk. 	<p>Not taken forward given the experience to date is that establishing a joint council-controlled organisation inevitably becomes politicised and polarised, the employment of staff is problematic, and external parties are often unwilling to enter into contracts with any entity with limited capital backing and no parent guarantee⁸².</p>
<p>Two b. Independent, competency-based boards for asset-owning entities</p>	<ul style="list-style-type: none"> Improved decision-making through allocating responsibility to relevant experts. Independence from shareholder councils would be likely to enable decision-making based on longer-term considerations. 	<ul style="list-style-type: none"> Board will be one step removed from owners and communities, although this can be mitigated through economic regulation and other measures. 	<p>Taken forward given that independent, competency-based boards are common in overseas jurisdictions and would be expected to drive significant improvements in transparency and accountability for decision making.</p> <p>The rationale for this conclusion is presented in more detail in the <i>Detailed RIA Chapter 4: Entity regulation, system stewardship, and system direction</i>.</p>

⁸² Government Inquiry into Havelock North Drinking Water (2018) Havelock North Drinking Water Inquiry: Stage 2 (PP123). 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)

Response to root cause three: Affordability challenges

Long-list options

169. Reforms to strengthen the three waters regulatory system will place greater emphasis on compliance with legislation and standards, and on transparency about the environmental performance of wastewater and stormwater networks. As noted above, the costs of meeting these standards is expected to be in the order of \$120B to \$185B⁸³. These investment deficits do not provide for seismic resilience, climate change, or responding to the expectations of iwi/Māori, as these drivers for investment will have different impacts in New Zealand relative to overseas and will vary between different entity groupings.
170. As noted in the analysis of root cause three above, the funding, capability, and affordability challenges currently facing three waters service providers and their communities are significant, and local authorities will struggle to meet these costs under current arrangements. Moreover, current arrangements require them to consider the importance of improvements to three waters assets against:
- other priorities that are important to local communities;
 - local affordability and acceptance of rates rises; and
 - debt policies (which vary considerably across the country).
171. While these challenges are in part driven by misaligned incentives, there is also an underlying question of capacity within local authorities to fund and finance the level of investment needed. These challenges are exacerbated for smaller and rural local authorities.
172. There are three options for addressing this are:
- **Central government funding to close the infrastructure deficit.** The Crown would provide a mixture of one-off grants and loans to local authorities that cannot meet the costs of upgrading their infrastructure as a “catch-up”, following which local authorities would be responsible for funding ongoing maintenance, refurbishment, and asset replacement on a sustainable basis.
 - **Introduction of a national centralised fund to fund ongoing investment.** Central government would create a national fund for three waters infrastructure investment, similar to the National Land Transport Fund⁸⁴. The revenue collected would be pooled at the national level and distributed across the country on the basis of need and alignment with nationally prescribed strategic outcomes. Local authorities would be able to raise additional revenue (through general rates and other mechanisms) to meet some of those costs. Crown funding could be considered as part of this option as a way of topping up the national fund, but this would be for central government to decide based on the benefit to New Zealand when compared with other competing uses of funding.

⁸³ This estimate is inclusive of population growth assumptions.

⁸⁴ The National Land Transport Fund collects levies and charges applied to users of the transport system and distributes this to local authorities on the basis of a funding allocation formula that is decided by the New Zealand Transport Agency. Local authorities 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.).

- **Transfer of asset ownership to new entities.** This option would only be possible with the options above that establish multi-regional entities with independent, competency-based boards. It would transfer ownership of the assets from local authorities to the new entities, to enable greater capacity to borrow against assets, and to spread these costs over generations of consumers, to reflect the inter-generational nature of the benefits resulting from investing in the three waters network.

173. The following alternative approaches were considered early in the policy development process but ruled out for the reasons stated here:

- **Asking local authorities to fund further investments on their balance sheets, by utilising further borrowing,** is unlikely to be effective and would not bridge the expected investment gaps. The decrease in revenues will severely constrain local authorities' ability to take on more debt and mean most local authorities will need to curtail almost all of their borrowing programmes.
- **Supporting council debt through issuing some form of government bond** is only an attractive option if the differential is large and councils can take on more debt than is currently allowed. Overall, the likelihood of this occurring is low, and it is unlikely to be sufficiently attractive to the sector nor sufficient to prevent the infrastructure deteriorating.
- There are several **challenges** with **using special purpose vehicles**⁸⁵, particularly from an immediate response perspective. Special purpose vehicles are not well-suited to brown-field development or renewal of assets, which is what the bulk of this programme of work is looking to support in the short to medium term. Special purpose vehicles also typically rely heavily on private or overseas equity investment to fund up-front capital costs. Due to the economic shock relating to COVID-19, it is likely that ready access to private equity and capital will be limited, and the Crown will need to step in to help fill this gap in the short term. Even in instances where private equity is available, borrowing costs are likely to escalate substantially for firms to access this form of capital.

Policy issues associated with a national centralised fund

174. The establishment of a national three waters fund, similar to the National Land Transport Fund administered by Waka Kotahi New Zealand Transport Agency, is often proposed as an alternative to the reform package. In the absence of broader reform of the three waters service delivery system, it is possible that this option may be explored further as a way of meeting the funding challenges associated with the current system.

175. Notwithstanding that, establishing a national three waters funding mechanism involves fundamental challenges, including:

- **The sources of funding.** The closest local example, the National Land Transport Fund, is sourced directly from road users through various charges, with this revenue redistributed according to a transparent allocation formula, and with local

⁸⁵ A special purpose vehicle is a subsidiary company that is formed to undertake a specific business purpose or activity.

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 (e.g., using the tax system, implementing a national levy, and legislating to permit local authorities to implement a local levy) although all options have significant operational inefficiencies.

- **The mechanism to distribute funding.** A methodology and process for allocating funding would need to be developed. Significant work will be needed to design, implement and administer a new regime, and this work would be challenging, time-consuming, and costly, and would require significant public engagement to ensure the regime succeeds.
- **The administration of funding.** A newly created national fund would also require machinery to administer it, either through creating a separate function within an existing entity or creating a completely new entity altogether. This adds to the costs and complexity associated with the fund.

176. On balance, it is unlikely that this option would make more funding available, and therefore the same challenges associated with the current system (such as lack of scale, lack of accountability, and lack of system stewardship) would remain.

Long-list option evaluation

177. A high-level assessment of the long-list of options to respond to the root cause of affordability challenges is provided in Table 9 below.
178. Specific considerations related to affordability and efficiency are canvassed in many parts of the Detailed RIA including *Detailed Chapter 2: Numbers of boundaries and entities*, and issues relating to establishing independent, competency-based boards are discussed in *Detailed Chapter 3: Establishment of new water services entities*.

Assessment of long-list options

Table 9: Assessment of options to address funding constraints.

Option	Pros	Cons	Outcome
<p>One. Central government funding to close the infrastructure deficit.</p>	<ul style="list-style-type: none"> • Direct Crown funding to contribute to investment need. • Would accelerate a closing of the infrastructure deficit compared to the status quo. 	<ul style="list-style-type: none"> • Reliance on taxpayers to address local issues (albeit with broader public benefits). • Does not address ongoing funding constraints on local authorities. • Does not address systemic issues, meaning that underlying root causes and their symptoms would be likely to continue. • Unlikely to improve capital efficiency, as it does not lift capability in asset management and procurement. 	<p>Not taken forward as this option would not result in fundamental changes to how infrastructure is procured, assets are managed, and services are operated, and so would be unlikely to realise significant operating, capital and financing efficiencies.</p> <p>This is also not a sustainable long-term solution.</p>
<p>Two. Introduce a national centralised fund</p>	<ul style="list-style-type: none"> • It addresses some of the funding challenges facing local authorities. • If coupled with clear policy direction and performance measures, it could act as a strong incentive for better decision-making and investment. • A less disruptive option for local authorities. 	<ul style="list-style-type: none"> • Additional funding from local authorities is likely to still be required, to supplement water-related revenue. • It would require establishing alternative charging and funding allocation mechanisms, which could be costly to develop, implement, and administer. • It does not address broader systemic issues, which might lead to sub-optimal outcomes. 	<p>Taken forward given that this seeks to fundamentally improve the sustainability of funding and can act as an incentive for better decision-making and investment.</p>

Proactively released by the Department of Internal Affairs

Option	Pros	Cons	Outcome
<p>Three. Transfer of asset ownership</p>	<ul style="list-style-type: none"> • It provides the ability to leverage greater debt. • It vests responsibility for asset management and investment in appropriately skilled boards. • It frees up borrowing capacity for most (but not all) councils. 	<ul style="list-style-type: none"> • It is the most disruptive option – with high up-front transition costs. 	<p>Taken forward given that this option, when coupled with multi-regional entities with independent, competency-based boards, will significantly improve the ability to leverage debt and free up borrowing capacity.</p> <p>The rationale for this conclusion is presented in more detail in <i>Detailed RIA Chapter 3: Establishment of new water service entities</i> and <i>Detailed RIA Chapter 4: Entity regulation, system stewardship, and system direction</i>.</p>

Proactively released by the Department of Internal Affairs

Response to root cause four: Lack of system stewardship

179. As noted in the analysis of root cause four above, there has been a lack of stewardship and leadership within the three waters system, as evidenced by the inconsistent outcomes across the country and the historical underinvestment by local government.
180. The three waters system interfaces with multiple interests. Establishing functions, roles, and instruments for providing stewardship for the system will require considering the type of system that will exist after reform as well as the actors, roles, and interests already represented within it.
181. Options that exist for addressing this are:
- **Establishing a system stewardship role and functions.** In principle, this would be expected to cover functions such as system advice, policy coordination, regulatory coordination, Crown entity monitoring, and Ministerial support. Sub-options include distributing the role and functions across multiple agencies, sharing them across agencies but with one party acting as ‘Lead’, or mandated with a Lead Minister and Agency.
 - **Introduce instruments to provide government policy direction for the three waters system.** This could mainly be achieved through a Government Policy Statement, but at a water service entity level it could also be achieved through requiring entities to produce strategic documents such as Statements of Strategic Performance Expectations, Statements of Intent, enhanced Asset Management Plans, and Funding and Pricing Plans.
182. System stewardship arrangements might evolve over time as the reform process moves through design, to implementation, to business as usual. These specific transitional arrangements are not detailed in this section but are canvassed in the Detailed RIA including *Detailed Chapter 4: Entity regulation, system stewardship, and system direction* and *Detailed Chapter 7: Transition and implementation*.

Long-list option evaluation

183. Table 10 below provides a high-level assessment of the long-list of options for responding to the root cause of system stewardship challenges.
184. Specific considerations related to system stewardship are canvassed in the Detailed RIA, including *Detailed Chapter 4: Entity regulation, system stewardship, and system direction*.

Assessment of long-list options

Table 10: Assessment of options to address lack of system stewardship.

Option	Pros	Cons	Outcome
<p>One. Establish system stewardship role / functions</p>	<ul style="list-style-type: none"> Addresses an obvious gap in the system and brings New Zealand in line with international jurisdictions. Ensures that responsibility for long term system outcomes is recognised and allocated appropriately. 	<ul style="list-style-type: none"> Increased costs to establish a formal stewardship arrangement. 	<p>Taken forward given that it is proven to be a pre-condition for an effective three waters sectors in overseas jurisdictions and is expected to have modest cost implications.</p> <p>The rationale for this conclusion is presented in more detail in the <i>Detailed RIA Chapter 4: Entity regulation, system stewardship, and system direction</i>.</p>
<p>Two. Instrument to provide Government policy direction for the system</p>	<ul style="list-style-type: none"> Ensures that government policy objectives and priorities for the three waters system are given effect to by water services entities. 	<ul style="list-style-type: none"> Might introduce further transactions and compliance costs for system actors if not designed appropriately – these costs would be increasingly prohibitive for water service entities of smaller scale. 	<p>Taken forward given that it is proven to be a pre-condition for an effective three waters sectors in overseas jurisdictions and is expected to have modest cost implications – particularly if coupled with aggregating water service entities.</p> <p>The rationale for this conclusion is presented in more detail in the <i>Detailed RIA Chapter 4: Entity regulation, system stewardship, and system direction</i>.</p>

Three “strategic options” (or packages of options)

185. There are two broad approaches available to the Government as it considers whether and to what extent it should change how the three waters system is structured:
- Improve the current system for delivering water services.
 - Design a new system for delivering three waters services.
186. We have identified three alternative packages of options, called “strategic options” in this RIA, based on the analysis of broad policy options set out above. There are several variations that could be made to each of these packages, and many of those design choices are described in the Detailed RIA chapters.
187. Two of those packages of options – strategic options one and two – fall under the first of the two broad approaches referred to above: they seek to cautiously address the root causes identified in this RIA by making several improvements to the system while still broadly maintaining its current structure. Strategic option three, by contrast, is to design a new system:
- **Strategic option one** pursues an information disclosure regime and other changes to improve service delivery and stewardship within the system.
 - **Strategic option two** includes all of the interventions in strategic option one but also a national fund for three waters infrastructure investment.
 - **Strategic option three** seeks to fundamentally redesign the system to more comprehensively address the root causes identified.
188. These strategic options are summarised in Table 11.

Table 11: Strategic options under the two broad approaches available to government.

Root cause	Improving the current system for delivering three waters services		A new system for delivering three waters
	Strategic option one	Strategic option two	Strategic option three
One: Lack of economies of scale	<p>Encouraging council-led changes to delivery arrangements, including:</p> <ul style="list-style-type: none"> outsourcing procurement; shared services arrangements; and setting up a delivery entity that manages the network on behalf of council shareholders (e.g., Wellington Water). 	<p>Encouraging council-led changes to delivery arrangements, including:</p> <ul style="list-style-type: none"> outsourcing procurement; shared services arrangements; and set up a delivery entity that manages the network on behalf of council shareholders (e.g., Wellington Water). 	<ul style="list-style-type: none"> Aggregating delivery into a smaller number of entities that both manage and own the assets on behalf of communities, and that are operationally and financially independent of local authorities.
Two: Misaligned incentives and weak governance structures	<ul style="list-style-type: none"> Introducing an information disclosure regime (a light-handed form of economic regulation). Encouraging establishment of competency-based boards (where there are separate entities, e.g., council-controlled organisations, managing the network on behalf of local authorities). 	<ul style="list-style-type: none"> Introducing an information disclosure regime (a light-handed form of economic regulation). Encouraging establishment of competency-based boards (where there are separate entities managing the network on behalf of local authorities). 	<ul style="list-style-type: none"> Introducing price-quality regulation. Establishing independent, competency-based boards (if asset ownership is transferred). Increasing the transparency of service performance and cost and increasing public accountability.
Three: Affordability challenges	<ul style="list-style-type: none"> No specific intervention. 	<ul style="list-style-type: none"> Introducing a centralised national fund. 	<ul style="list-style-type: none"> Balance sheet aggregation and separation enabling greater capacity to borrow against assets and at more competitive rates allowing more efficient investment in three waters services. Economic regulation that holds entities to account for meeting an efficiency challenge.
Four: Lack of system stewardship	<ul style="list-style-type: none"> Establishing a system stewardship role and appropriate instruments (this will not be as effective as under strategic option three). 	<ul style="list-style-type: none"> Establishing a system stewardship role and appropriate instruments (this will not be as effective as under strategic option three). 	<ul style="list-style-type: none"> Establishing a system stewardship role and appropriate instruments.

The counterfactual

189. This RIA uses the counterfactual as a baseline against which to evaluate all the strategic options. It is the Department's best guess at what the future state would look like in the absence of the proposed reform programme.
190. Determining the counterfactual is not an exact science. It requires informed judgments based on the drivers that are likely to remain in the absence of reform, and on assumptions around potential changes.
191. The sections below describe the key assumptions underpinning the counterfactual. The later section "strategic option evaluation" provides detailed analysis of how the counterfactual is expected to perform against the evaluation criteria.

Key assumptions underpinning the counterfactual

Local government will retain the delivery function

192. In the absence of the current reform programme, it is unlikely the Government will pursue other significant interventions beyond incremental improvements to the current service delivery system.
193. Before the reform programme was announced, the Government had adopted a sector-led approach to service delivery reform, providing funding support to regions that expressed interest in exploring shared-service arrangements within the current legislative framework. It is likely this would continue under the counterfactual, as there would be limited incentives and support arrangements to encourage changes to how water services are delivered.

A step-change in water services regulation and public perceptions will place greater pressure on local authorities

194. The policy landscape will change significantly with the establishing of Taumata Arowai and a new water services regulatory framework. However, it will take some time to implement the new regulatory regime. Over time, the new drinking water regulatory framework can be expected to provide much greater assurance that drinking water is safe and that drinking water standards are being complied with.
195. This new regulatory framework is modelled on the fundamental principles of drinking water safety as identified by the Havelock North Drinking Water Inquiry:
 - a high standard of care must be embraced in relation to drinking water;
 - the protection of source water is paramount;
 - multiple barriers against contamination of drinking water must be maintained;
 - water contamination is almost always preceded by some kind of change and these changes must never be ignored;
 - suppliers must guarantee the safety of drinking water; and

- a preventative risk management approach must be applied to drinking water.

196. These regulatory changes will improve:

- levels of compliance, monitoring, and enforcement against a range of standards, rules, and regulatory requirements;
- regulatory system oversight and the connections between key parts of the system; and
- transparency, accountability, and reporting on performance improvements.

197. The public's perceptions are also shifting, and it now expects better access to safe drinking water and more environmentally friendly wastewater and stormwater practices (which are further reinforced through the National Policy Statement for Freshwater Management). Those increased expectations will further increase the pressure on local authorities to improve how they deliver these services.

198. The combined effect of these regulatory changes and shifting public perceptions will be to increase the pressure on local authorities to make difficult decisions around borrowing, rates, and relative investment priorities.

Further regulatory changes are unlikely

199. Economic regulation is unlikely in the counterfactual. While an information disclosure regime could be implemented, there have been no Cabinet decisions on this and, therefore, we are not assuming any regulatory changes.

Future investment assumptions remain relatively unchanged

200. Estimates of local government spending on three waters in this context is based on a set of core assumptions:

- Future investment plans for the next 10 years are in line with Long-Term Plans (and RfI data), and investment priorities beyond that are determined by WICS modelling.
- Local authorities will leverage debt against their three waters assets to the limit allowed by the Local Government Funding Agency of 250%.
- A relatively small number of local authorities can improve how efficiently they deliver services, but this is limited to those that already have a reasonable scale (i.e., the metropolitan and large provincial councils) and falls short of what would be possible under greater levels of aggregation⁸⁶.

⁸⁶ Assumptions regarding the potential for operating efficiency improvements are based on the experience of water services companies in the United Kingdom following reform. These assumptions may overstate the likely gains that local authorities would make, given that the UK reforms were accompanied by the introduction of a relatively strong form of economic regulation.

Summary of underpinning drivers and assumptions

201. The combination of the above leads to the drivers and assumptions identified in Table 12.

Table 12: Summary of drivers and assumptions underlying the counterfactual.

Drivers	Assumptions
Strong regulatory mandate for Taumata Arowai	<ul style="list-style-type: none"> • Local authorities will come under increasing pressure to invest more in three waters infrastructure, but the scale and pace of investment will be significantly constrained compared to the reform scenario. • A greater challenge for Taumata Arowai, as the drinking water regulator, seeking to regulate 67 local authorities. Taumata Arowai’s role for wastewater and stormwater under the counterfactual will be less acute, and more akin to a system oversight role, but with limited ability to influence and enforce standards.
Introduction of new drinking water regulatory framework	<ul style="list-style-type: none"> • There will be no further regulatory changes in the three waters system beyond the changes to the drinking water quality regulatory system. • Local authorities will face increased compliance costs as a result of being regulated by Taumata Arowai, including (but not limited to) the cost of producing and maintaining Drinking Water Safety Plans and of monitoring whether their supplies comply with the drinking water standards. • Local authorities will come under pressure to address wider problems with drinking water quality in their areas, as a result of their duties under the new Water Services Bill to ensure access to safe drinking where private supplies consistently fail to comply with standards or pose risks to the communities they serve.
Increased public expectations around health and environmental outcomes associated with water	<ul style="list-style-type: none"> • Structural change is unlikely given that legislation would be required, but some local authorities (e.g., Hawke’s Bay, and Otago and Southland) may voluntarily pursue other arrangements like shared services or outsourcing of procurement. • Limited funding and financing options will be available to local authorities, with different challenges for rural and provincial local authorities (significantly high costs per ratepayer) and metro local authorities (limited balance sheet capacity). • The Crown will come under increasing pressure to either relax regulatory standards or provide financial support for local authorities to meet those standards.

Impacts on affected parties

202. The likely impacts of the counterfactual on affected parties are summarised in Table 13.

Table 13: Impacts of the counterfactual on affected parties.

Affected party / domain	Impacts
National economy	<ul style="list-style-type: none"> Planned future investment from local authorities will have a stimulating effect to the extent that local authorities are able to set out a clear and certain long-term programme of capital works.
Regional economy	<ul style="list-style-type: none"> Funding challenges for rural and provincial councils may mean that they are less able to leverage investment to increase local employment opportunities and that they cannot fund necessary infrastructure to encourage regional economic growth.
Water users	<ul style="list-style-type: none"> The costs of improving water networks will be passed onto water users or ratepayers (albeit potentially on a longer transition path, given that the ability of local authorities to meet new standards will be limited and longer lead-in times will probably be needed). Inconsistency in service outcomes is likely to continue, including significant disparities of access and service quality between urban and rural areas.
Iwi/Māori	<ul style="list-style-type: none"> Persistent poor water quality outcomes will affect Te Mana o te Wai, mauri, and wairua. There will be limited opportunities for partnership around water services delivery. Māori will continue to be over-represented in communities with small or no water supplies, and the costs and burden of regulatory compliance will fall disproportionately on these communities.
Local government	<ul style="list-style-type: none"> Will retain direct ownership and control over water assets and associated investment in those assets. Will have direct local ownership over decisions around whether and how to pursue structural changes, including choosing which councils they collaborate or share services with (if any). Will continue to face pressure to direct funding away from non-water-related investment priorities to meet the costs of improving their water networks, or to reduce investment to restrict rates rises. Will have to increase their borrowing, which will affect credit ratings and cost of finance, and will limit financial flexibility for local authorities that are near their debt ceiling. Will probably need to continue to defer a large proportion of the required investment in three waters because of affordability constraints, especially in small, rural communities. Will continue to face challenges in attracting and retaining specialist three waters capability.
Central government	<ul style="list-style-type: none"> Will face the risk of being the funder of last resort when urgent needs arise or where there are funding and financing constraints.

Affected party / domain	Impacts
Regulators	<ul style="list-style-type: none"> • Taumata Arowai will have high administrative costs because of the fragmented industry structure. • There will be a risk that the expectations on local authorities will be too high, which will limit Taumata Arowai's ability to regulate against nationally consistent outcomes.
Supply chain and workforce	<ul style="list-style-type: none"> • There is a risk that a lack of industry engagement and development will limit the ability of the supply chain to respond to the forward investment needs. • There will be limited or no improvement in capability for the sector's workforce, with ongoing vacancies and skills shortages likely.

Strategic option - evaluation

203. This section sets out the evaluation criteria used in this RIA to assess the strategic options available to government to reform three waters service delivery across the country. That framework enables strategic options to be evaluated transparently and consistently.

Evaluation criteria - Design features

204. The basis for the assessment framework are the reform objectives identified in Section 2 and a bespoke intervention logic completed for this RIA (attached as Appendix 4).

205. We used the intermediate outcomes from the intervention logic map as the level at which to align the evaluation criteria, because the intermediate outcomes are clearly definable. Moreover, we have assumed that if all intermediate outcomes are addressed collectively, and in combination with regulatory reform, then the long-term outcomes that are sought will be achieved.

206. We have used a multi-criteria analysis framework to assess the merits of the three strategic options. A multi-criteria analysis is preferable to cost-benefit analysis for two main reasons:

- *The ability to consistently monetise proposed criteria.* For example, while the economic efficiency of a strategic option can be described quantitatively, it is not appropriate, or possible, to monetise the extent to which an option upholds the rights and interests of iwi/Māori.
- *The integrated relationship between system design decisions and regulatory reform changes.* There are real difficulties in attributing costs, benefits and impacts between a reform programme that helps set regulatory expectations⁸⁷ and a reform programme that aims to improve the way the service delivery system is designed, governed and funded (*the subject of this RIA*). For example, it is difficult to prove the extent to which improved health and environmental outcomes are a function of stronger regulation, stricter enforcement, or a fit-for-purpose system design.

⁸⁷ Department of Internal Affairs (2019). Regulatory Impact Assessment: Decision on the organisational form of a new drinking water regulator. [Regulatory Impact Assessment \(dia.govt.nz\)](https://www.dia.govt.nz/regulatory-impact-assessment)

207. The evaluation criteria have been used comprehensively to assess the strategic options. However, individual criteria have also been used selectively to guide the evaluation of detailed design options considered in the Detailed RIA. ‘Selectively’ in this context refers to relevant individual criterion being used to assess detailed design considerations.
208. The strategic options have been assessed against each criterion as shown in Table 14. The criteria have all been considered equally important and no differential weighting was used.

Table 14: Scoring scale for the evaluation criteria

Score	Description
✓✓	Much better than the counterfactual
✓	Better than the counterfactual
0	About the same as the counterfactual
×	Worse than the counterfactual
××	Much worse than the counterfactual

Descriptions of the evaluation criteria

209. Table 15 provides a description of the evaluation criteria used in this RIA.

Table 15: Evaluation criteria description.

Criteria	Description
Improves economic efficiency	The extent to which a strategic option leads to greater dynamic efficiency, allocative efficiency, and administrative efficiency.
Supports a financially sustainable system	The extent to which a strategic option addresses the ability of water service providers to fund and finance new investment.
Improves infrastructure delivery	The extent to which a strategic option enables faster and smarter investment in three waters infrastructure.
Improved decision making and performance	The extent to which a strategic option supports a more transparent and accountable system that drives better decision making and improved performance.
Upholds the rights and interests of iwi/Māori	The extent to which a strategic option upholds the rights and interests of iwi/Māori.
Ease of implementation	The extent to which a strategic option allows for a smooth transition to a new system.

Evaluation of the strategic options – Summary

210. A detailed assessment of each strategic option is provided in Appendix 7. A summary of these findings is provided in Table 16 and the supporting sections below the table. The counterfactual is not presented in the table because it is the comparator.
211. **Strategic option three: systemwide transformation** is the only option that achieves all policy objectives and that is expected to lead to significant improvements across all major assessment criteria. The estimated cost of implementing this option is \$1B - \$2B. Detailed system design choices are explained further in the Detailed RIA chapters.

Table 16: Summary of evaluation of strategic options.

Criteria	Strategic option one: Information disclosure regime	Strategic option two: Information disclosure regime and national funding regime	Strategic option three: Systemwide transformation
Improves economic efficiency	✓	✓	✓✓
Supports a financially sustainable system	0	✓	✓✓
Improves infrastructure delivery	0	0	✓
Improves decision making and performance	✓	✓	✓✓
Upholds the rights and interests of iwi/Māori	0	✓	✓✓
Ease of implementation	x	xx	xx
Balanced scorecard	Meets some objectives	Meets most objectives	Exceeds most objectives

Evaluating the strategic options – Analysis

Status quo - the counterfactual

212. It is expected that the status quo will get demonstrably worse against all the criteria unless significant action is taken.
213. As noted in the discussion of the current state in Section 2 of this RIA, the configuration of the current system does not support a high level of performance in the sector. For example
- **Poor health and environmental outcomes.** One in five New Zealanders are supplied with drinking water that is not guaranteed to be safe from bacterial contamination⁸⁸.

⁸⁸ Water New Zealand (2021) Water New Zealand – Health Committee, oral submission on Water Services Bill. Available at: https://www.waternz.org.nz/Story?Action=View&Story_id=1453

- **Poor enforcement of regulations.** In 2018/19, 627 non-conformances with wastewater treatment plant consents were identified, yet only 11 compliance actions were taken⁸⁹.
 - **Poor investment accountability.** The level of actual investment vs. planned investment is continually below 100%, indicating that local authorities spend less capital than they budget for. The median percentage over the past five years has been between 59% and 92%⁹⁰.
 - **Lack of specialist governance capability.** The elected member governance model relies on elected community representatives having the necessary skills to govern a complex set of assets and engineering systems⁹¹.
 - **Poor and decreasing customer outcomes.** The total number of complaints about three waters services received by local authorities continues to climb. In 2019, there were almost 35,000 complaints (up from around 23,000 in 2016)⁹².
214. WICS analysis also demonstrates that current performance falls well below comparable organisations in the United Kingdom and Scotland, with New Zealand water service entities between 32% and 39% as effective as those overseas organisations⁹³.
215. The 67 water service providers in New Zealand collectively spend nearly \$1.5B per year on three waters, or \$45B over 30 years. Despite this, there is evidence of significant underinvestment by local authorities in three waters infrastructure. For example, when Christchurch is removed it is estimated that local authorities are only investing around 60% of weighted average depreciation charge per person on three waters investments⁹⁴.
216. New Zealand water service providers in their current form are also between 58% and 325% less efficient at delivering services than counterparts in the United Kingdom and Scotland. It is expected that this differential will continue to grow as regulatory standards increase, domestic assets come to the end of their useful lives, and the marginal costs of repair, replacement and remediation escalate⁹⁵.
217. The proportion of the population connected to water and wastewater services varies from around one third of properties in the far north, to all properties in most major centres. The median numbers of properties in jurisdictions receiving services are 81% for water supply, and 75% for wastewater⁹⁶.

⁸⁹ Water New Zealand (2019) National Performance Review. Available at: https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=4271

⁹⁰ Water New Zealand (2019) National Performance Review. Available at: https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=4271

⁹¹ MartinJenkins (2017). Three Waters Review: The Interface between Asset Management and Council Governance Practices. Available at: [MJ-Three-Waters-Review-Governance-Final-Report-Dec-2017.pdf \(dia.govt.nz\)](https://www.dia.govt.nz/Attachment?Action=Download&Attachment_id=4271)

⁹² Water New Zealand (2019). National Performance Review. Available at: https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=4271

⁹³ Water Industry Commission for Scotland (2021). Supporting Materials Part 2: Scope for Efficiency.

⁹⁴ Water Industry Commission for Scotland (2021). Economic analysis of water services aggregation. Phase 2.

⁹⁵ Water Industry Commission for Scotland (2021). Supporting Materials Part 2: Scope for Efficiency.

⁹⁶ Water New Zealand (2019). National Performance Review. Available at: https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=4271

218. Putting this all together, WICS estimate that between \$120B and \$185B of additional investment will be needed to upgrade three waters assets to meet environmental and drinking water standards and meet population growth⁹⁷.
219. If \$4B to \$6B were spent across the sector each year it is estimated that this investment gap could be closed in 30 to 40 years. If not, it is expected that it would take significantly longer, with 30-47 local authorities not clearing this backlog within 60 years, and some of that group (10 to 18 local authorities) not clearing it within 80 years⁹⁸.
220. Without service delivery reform, and the associated efficiency gains, the real cost increases to households of meeting the required investment would be significant, and probably unaffordable for many smaller communities and low-income customers.
221. For rural local authorities, average household costs for three waters in 2019 ranged from a minimum of \$213 per year to \$2,581 per year, with a median of \$1,337. To meet the investment required, average household costs would need to increase by between 3.4 and 13.2 times in real terms. For some local authorities, average household costs in 2050 could reach as high as \$9,500 in today's dollars and would be unaffordable for many households.
222. The situation is not much better for larger provincial and metropolitan local authorities. Average household bills for provincial local authorities in 2019 ranged from \$609 to \$2,553, with a median of \$1,118. By 2050, these bills would need to increase by between 1.8 and 8.4 times to meet the required investment. Similarly, average household bills across metropolitan local authorities would need to increase by between 1.5 and 7.1 times. In some metropolitan local authorities, bills could reach between \$1,700 and \$3,500 per year in today's dollars⁹⁹.
223. Given covenants imposed by lenders, attitudes towards debt and rates collection, and the financial constraints on some households (such as ratepayers on low or fixed incomes), this level of increased investment simply cannot be met, and improved performance measures cannot be achieved, without considerable reform.
224. The counterfactual would continue to provide for the local voice in decision making through elected councillors and the public making submissions on councils' Long-Term Plans.

Strategic option one: Information disclosure regime

225. Introducing an information disclosure regime is the least intrusive and least ambitious option. It is expected that this option would be comparatively easy to implement, but also that it would perform better than the counterfactual in only two areas.

Improves economic efficiency

226. In theory an information disclosure regime would be expected to lead to more efficient investment decisions, improved quality standards (in addition to those set by Taumata

⁹⁷ Water Industry Commission for Scotland (2021). Economic analysis of water services aggregation. Phase 2.

⁹⁸ Mafic (2021). EIA Counterfactual model (30 March 2021).

⁹⁹ Water Industry Commission for Scotland (2021). Economic analysis of water services aggregation. Phase 2.

Arowai), and lower operating expenditure in the long-run – particularly given the effect of public benchmarking in driving efficiencies¹⁰⁰.

227. In practice, there are very few examples of information disclosure being applied as a separate intervention in the water sector. However, a comparator example from New Zealand’s airports sector shows that information disclosure has:

- a positive effect on the quality of services;
- a positive effect on pricing efficiency;
- mixed results for observed reductions in operating costs; and
- unclear results for whether any cost savings were passed onto consumers¹⁰¹.

228. A combination of theory and practice, therefore, indicates that an information disclosure regime might lead to modest improvements in economic efficiency.

Improves decision making and performance

229. It is expected that an information disclosure regime will materially improve transparency and accountability across the sector, and also improve the consistency of information and, therefore, enable benchmarking.

230. As noted above for the criterion “improves economic efficiency”, there are limited examples of an information disclosure regime being applied as a separate intervention in the water sector. However, the review for the airline sector also referred to above found a consistently positive effect on the quality of services, particularly as natural monopolies become more responsive to consumer demand¹⁰².

231. It is also expected that more transparent decision-making and performance would lead to actual expenditure being more aligned with budgeted expenditure, and also to depreciation funding being spent on renewals.

Upholding the rights and interests of iwi/Māori

232. An information disclosure regime also provides another potential mechanism for holding water service entities to account for the extent to which they uphold the rights and interests of iwi/Māori.

233. However, we assume that this mechanism would be largely ineffective unless combined with significant changes to the design of the three waters system, including but not limited to:

- additional funding for iwi/Māori to support them to participate in the three waters system;

¹⁰⁰ Department of Internal Affairs/ Ministry of Business, Innovation and Employment (2021). Three Waters Reform Programme Supporting Information. What is economic regulation? Available at: [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/\\$file/Economic-Regulation-Engagement-Slides-March-2021.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/$file/Economic-Regulation-Engagement-Slides-March-2021.pdf)

¹⁰¹ Ministry of Business, Innovation and Employment (2014). Effectiveness of Information Disclosure Regulation for Major International Airports. Available at: <https://www.mbie.govt.nz/assets/6f391fb0fc/major-airports-info-disclosure-discussion-document.pdf>

¹⁰² Ministry of Business, Innovation and Employment (2014). Effectiveness of Information Disclosure Regulation for Major International Airports. Available at: <https://www.mbie.govt.nz/assets/6f391fb0fc/major-airports-info-disclosure-discussion-document.pdf>

- include te ao Māori approaches and capability within entities;
 - augmented governance arrangements whereby the interests of mana whenua are better represented;
 - the inclusion of cultural values and measures in regulatory design and standards; and
 - additional funding for investment that minimises negative environmental effects in waterways.
234. Fundamentally, introducing information disclosure would still not significantly improve decision making and performance, or indeed have a positive effect in relation to the other evaluation criteria, given:
- residual constraints on funding and financing mechanisms;
 - continuing misalignment of incentives for decision makers who control three waters budgets;
 - inherent scale issues, and capacity and capability challenges in delivery.

Strategic option two: Information disclosure regime and national funding regime

235. Introducing a new national funding regime would involve a more complex set of processes than simply introducing an information disclosure regime. However, we expect this option to perform better than the counterfactual against most evaluation criteria.

Improves economic efficiency

236. As noted above in the analysis of strategic option one, we expect that imposing an information disclosure regime would marginally improve economic efficiency. We also expect that establishing a national fund to aggregate revenue from water-related charges and redistribute it to local authorities would have a similarly marginal positive effect on economic efficiency.
237. A revised funding system in itself would not lead to economic efficiencies. However, it would provide greater long-term certainty of funding, which would support better asset management and investment decisions. Funding could also be made conditional on providers achieving certain outcomes, including more efficient performance. However, without greater scale, independent and professional governance, and stronger price-quality regulation, any gains in efficiency are likely to be limited.
238. A revised funding system would also support a stronger, more predictive and proactive approach to maintenance, rather than reactive and unplanned maintenance.

Supports a financially sustainable system

239. As noted in the analysis of strategic option one, we expect that an information disclosure regime would marginally improve available funding as a result of economic efficiencies and greater scrutiny of depreciation expenditure.
240. Establishing a national fund to aggregate revenue from water-related charges and redistribute it to local authorities would also provide greater funding certainty to water service providers, which should result in a more stable investment profile.
241. Although greater funding certainty is a material improvement on the status quo, we do not expect that this strategic option would result in a significant change to the **quantum** of funds that could be accessed. Moreover, we expect that water service entities would still be unable to borrow materially beyond existing levels, given the covenants imposed by lenders.

Improves infrastructure delivery

242. Establishing a national fund to aggregate revenue from water-related charges and redistribute it to local authorities will provide greater funding certainty to water service providers, which should result in a more stable investment profile.
243. This could support a more stable investment pipeline that enables contractors and suppliers to better prepare for upcoming delivery programmes and that also incentivises international organisations with scale and expertise to enter the sector and tackle the investment backlog.

Upholding the rights and interests of iwi/Māori

244. The introduction of an information disclosure regime provides another mechanism to potentially hold water service entities to account for the extent to which they uphold the rights and interests iwi/Māori.
245. However, this mechanism will always be ineffective unless it is combined with significant changes to the design of the three waters system, as we noted above in the analysis of strategic option one.
246. Establishing a national fund to aggregate and distribute revenue from water-related charges would provide an additional means of ensuring that water service entities uphold the interests of iwi/Māori. For example, funding could possibly be conditional on them implementing some of the initiatives identified in strategic option three.

Improves decision making and performance

247. It is expected that an information disclosure regime will materially improve transparency and accountability, and also decision making and performance, across the sector, as shown above under strategic option one. We also expect that a more sustainable funding model would provide greater investment certainty and so enable contractors and suppliers to better prepare for upcoming delivery programmes.

248. However, this strategic option would still not support significant improvement in decision making and performance given:

- residual constraints on the quantum of funding and financing that can be accessed;
- misaligned incentives for decision makers; and
- inherent scale issues, and capacity and capability challenges in delivery.

Strategic option three: Systemwide transformation (preferred option)

249. This option is the most complex, challenging, and wide-ranging of all the options, with the cost of establishment and transition in the order of \$1B to \$2B. However, this is the only option that achieves the policy objectives, and significant improvements are expected over the status quo across all the evaluation criteria.

Improves economic efficiency

250. Under this option, it is proposed that three to four water entities would be established, and this would provide greater economies of scale and opportunities for strategic planning and procurement. This option also includes operating within a new economic regulatory regime to drive system-wide efficiencies.

251. WICS analysis¹⁰³ demonstrates that United Kingdom and Scottish water entities comparable in size to those proposed in the systemwide transformation option achieved a 40-45% reduction in unit costs between 2002 and 2020. This analysis also showed that half of that reduction was generated in the first four years of the transformation¹⁰⁴.

252. WICS attributed the greater capital efficiencies in the United Kingdom and Scotland to a range of factors, including:

- **Improved asset management practices** through longer-term and large-scale investment choices – including across catchments. This is particularly the case for water treatment investment and use of alternative technologies. Better understanding of the condition of assets will also improve planning and practice for managing strategic assets¹⁰⁵.
- **Better procurement** – including strategic planning, bulk purchases, and scale discounts.

253. Operating efficiencies can also be assumed to be attributable to the ability to attract and retain skilled management and staff, and to reduced corporate overheads, staff rationalisation, and elimination of duplicated functions¹⁰⁶.

¹⁰³ Water Industry Commission for Scotland (2021). Economic analysis of water services aggregation. Phase 2.

¹⁰⁴ Farrierswier peer review of WICS efficiency assumptions note that: “relying on UK and Scottish Water experience to estimate potential operating and capital efficiencies in New Zealand is not an unreasonable starting point – however, care needs to be taken given the inherent difficulties translating that experience into a New Zealand context

¹⁰⁵ Farrierswier peer review of WICS efficiency assumptions notes that this may be less pronounced than in Scotland as some of New Zealand’s population lives in small urban areas that are widely spread and where opportunities for asset level optimisation are unlikely

¹⁰⁶ Farrierswier (2021). Three Waters Reform: Review of methodology and assumptions underpinning economic analysis of aggregation.

Supports a financially sustainable system

254. Establishing three to four water entities would enable larger customer bases, a larger revenue catchment, and cross-subsidisation. This would provide water service providers with stronger balance sheets and greater flexibility to direct significant investment to where it is needed¹⁰⁷.
255. Increased economies of scale coupled with establishing an economic regulation regime (including information disclosure and price-quality regulation) would be expected to result in significant cost efficiencies – a roughly 45% improvement on current cost per connection rates. This could free up additional funding for the significant backlog of investment required.
256. Balance sheet separation, coupled with autonomy of funding decisions, would also be expected to result in an increased ability to borrow. Initial guidance from ratings agency Standard and Poor's indicates that current borrowing capacity of 4* debt to revenue ratio could increase to 6* debt to revenue under the reform scenarios¹⁰⁸.
257. Initial estimates are that the reforms could increase the borrowing capacity of the local government sector by up to \$2B across all local authorities.
258. The combination of the above factors is expected to result in a considerably stronger and more sustainable financial position for water service entities than the counterfactual.
259. Additionally, WICS analysis has shown the potential impact on customer bills from various amalgamation scenarios. One scenario, which assumes four water service entities with a lateral split, demonstrated that consumers' annual bills would be 45% to 71% lower than under a no-amalgamation scenario¹⁰⁹.
260. Compared with the status quo, the net present cost of three waters service delivery per connected person per year is expected to be between \$480 and \$1,060 lower under the reform proposals.
261. The output of detailed scenario testing of different amalgamation scenarios on household bills is provided in *Detailed Chapter 2: Number of entities and boundaries*.

Improves infrastructure delivery

262. The comprehensive package of interventions in strategic option one, which individually and collectively respond to all root causes, is expected to significantly accelerate necessary three waters infrastructure delivery and to eliminate the backlog of investment within 30-40 years, while also imposing a lower bill on customers as discussed above.
263. It is also expected that greater aggregation of water service entities will provide capacity and capability benefits for entities, and also give supply chain participants greater confidence in the future pipeline. Specifically, the increased scale and related funding capability of the proposed new water service entities is expected to drive material changes to supply chain arrangements. New entrants are also likely, particularly major organisations that have a

¹⁰⁷ CAB-20-MIN-0003 refers. Available at: [https://www.dia.govt.nz/diawebsite.nsf/Files/Proactive-releases/\\$file/three-waters-service-delivery-and-funding-arrangements-approach-to-reform.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Proactive-releases/$file/three-waters-service-delivery-and-funding-arrangements-approach-to-reform.pdf)

¹⁰⁸ Standard and Poor's (2021) New Zealand DIA 3 Waters Reform RES Letter.

¹⁰⁹ WICS (2021). Economic analysis of water services aggregation. Phase 2.

significant presence in Australia but are not currently present in New Zealand. These supply chain impacts are explained in more detailed in Section 4 below.

Upholding the rights and interests of iwi/Māori

264. The statutory design of the new water service entities presents an opportunity to strengthen the role of iwi/Māori in the three waters system. Specific mechanisms proposed under strategic option three include, for example:

- requiring a mana whenua group at the governance level, with rights equal to local authorities;
- requiring each entity's Board to have, as a collective, has competencies relating to the Treaty of Waitangi/Te Tiriti o Waitangi, mātauranga Māori, tikanga Māori, and te ao Māori;
- including statutory recognition of the Treaty of Waitangi/Te Tiriti o Waitangi and Te Mana o te Wai in the legislation; and
- requiring water services entities to fund and support the capability and capacity of mana whenua to participate in the three waters system.

265. These are only a few of the mechanisms in the systemwide transformation option for improving and promoting the role of iwi/Māori in the three waters system. The options are examined in more depth in *Detailed Chapter 6: Strengthening the role of iwi/Māori in the three waters system*.

Section 4: Impact Analysis

Summary

- The implications of the reform programme are far-reaching. However, a snapshot of the material impacts shows the following:
 - **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 of 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.
 - **The reform is forecast to affect every corner of the economy.** Gross Domestic Product (GDP) is projected to expand by \$14B to \$23B over the next 30 years, relative to the counterfactual. New Zealand could also have an extra 5,850 to 9,260 additional full-time equivalent (FTE) jobs between 2022 and 2051. Additional tax revenue of \$4B to \$6B could also be expected.
 - **Every region in New Zealand would be positively affected by the economic impacts of the reform, but the regions are not expected to all be affected equally.** Based on the current GDP of each region, all rural and most provincial regions are estimated to benefit more than the national average from the reform. Metropolitan regions see larger gains than the national average, except for Auckland. Similarly, all rural regions will benefit from additional FTEs as a result of the reform, but job growth is higher than the national average in some regions and lower in others.
 - **Three waters will have significant impacts for local authorities.** The specific impacts will differ by local authority, although three waters infrastructure assets are a significant item on local government balance sheets and a significant source of capital and operating expenditure. The transfer of these assets (and liabilities) will inevitably have direct implications for the scope, role and purpose of divisions within local government responsible for three waters, as well as workforce implications. Indirectly, the reform package will have implications for the way local government plans, funds, and manages land use and urban growth. Moreover, it is expected that there might be different impacts on the ability of local authorities to borrow for the future – with some local authorities forecast to have less borrowing headroom, while others forecasted to have an increase¹¹⁰.
 - **Compared with the status quo, the net present cost of three waters service delivery per connected person per year is expected to be between \$480 and \$1,060 lower under the reform proposals.** This represents a significant gain in economic wellbeing, in addition to the health and environmental benefits associated with reform.

266. This section provides an impact analysis of the preferred option, strategic option three: systemwide transformation. The impacts have been assessed relative to the likely outcomes under the counterfactual.

¹¹⁰ This is indicative analysis and will be subject to ongoing and further validation.

267. The framework for this analysis has been to identify the ‘domains’ of impacts, and then demonstrate how they affect relevant ‘affected parties’. If an affected party is not identified under a domain heading, then it is assumed that the impact on them is negligible.

Health and environmental impacts

Domain description

268. The preferred strategic option is expected to facilitate a material improvement in health and environmental outcomes. This conclusion is informed through international evidence of similar reforms, including WICS analysis of the Scottish Water example, and the fact that a more sustainable three waters system will be able to better realise the health and environmental benefits identified in the regulatory reform programme.
269. International evidence 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 improvements¹¹¹.
270. Moreover, analysis from WICS shows that in 2006, Scottish Water had an Overall Performance Assessment score of 130. This was 67% of the ‘best in class’ result. Overall Performance Assessment is a composite measure of a range of health and environmental attributes, including water supply, wastewater service, environmental performance (leakage, sewage sludge disposal, and non-compliant wastewater treatment works), and customer contact.
271. Scottish Water has since overcome its challenges and has now improved its service performance to match the best performing companies in England and Wales (i.e., an Overall Performance Assessment of 350-400). The key features that enabled this improvement included greater economies of scale, clarity of policy priority, introduction of economic regulation, excellence in management, and robust water quality and environmental regulation.
272. WICS notes that these attributes are not currently in place in New Zealand, with the introduction of robust water quality and environmental regulation still being in its relative infancy. Therefore, a material improvement in levels of service can be expected if these issues are all addressed, as is proposed under the preferred option.
273. Moreover, the regulatory impact assessment prepared to support the previous regulatory reforms (the first two pou of the Three Waters Review) identified the following health and environmental benefits of reform of the three waters system, which will all be supported through strengthened system delivery arrangements¹¹²:

¹¹¹ 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)

¹¹² Department of Internal Affairs (2019). Regulatory Impact Assessment: Strengthened the regulation of drinking water, wastewater and stormwater. [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/\\$file/Cabinet-Paper-and-minute-Strengthening-regulation.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/$file/Cabinet-Paper-and-minute-Strengthening-regulation.pdf)

- avoided costs of reduced incidence of illness from drinking water - \$12.5M to \$23.7M per annum;
- avoided costs from preventing significant outbreaks similar to Havelock North, which had an estimated economic cost of \$21M;
- avoided costs to New Zealanders of water-borne gastrointestinal illnesses of \$496.1M over 40 years, consisting mainly of health care costs and lost productivity¹¹³; and
- avoided costs to New Zealand of water-borne disease of \$25M a year (estimated by MfE in 2006)¹¹⁴.

274. The benefits above are conditional on the regulatory reforms, but are also contingent on Taumata Arowai being able to perform its regulatory functions effectively and on water service providers having the capability to comply. The system transformation option will help to enable both of those other developments.

275. A further benefit of the reforms, 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.

Affected parties

Water users and communities

276. Water users and communities are expected to directly benefit from improvements in drinking water quality, including living healthier and longer lives (given the reduced risk of illness and significant outbreaks). Those benefits would be achieved through increased investment, stronger and more accountable decision making, and more effective system stewardship.
277. Water users will also directly and indirectly benefit from improvements in the natural environment. This will be achieved through more efficient use of water (minimising the environmental effects of extraction and treatment) as well as reduced negative effects on the environment from stormwater and wastewater contamination.

¹¹³ 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>.

¹¹⁴ 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), 33. <https://www.mfe.govt.nz/sites/default/files/nes-drinking-water-section-32-mar07.pdf>

Iwi/Māori

278. Iwi/Māori are expected to benefit from the reforms in a number of ways. As well as the benefit for water users and communities generally, they will also benefit in other ways. For example:

- Communities that do not receive three waters services are disproportionately Māori, and therefore, improved connection rates will benefit these communities.
- Statutory recognition of the Treaty of Waitangi/Te Tiriti o Waitangi and Te Mana o te Wai, and the requirement for water service entities to respond to Te Mana o te Wai Statements, will lead to stronger alignment to Te Mana o te Wai.
- Water service entities would be required to fund and support capability and capacity of mana whenua to participate in three waters service delivery, and this will enable iwi/Māori to participate more effectively and have more say in the three waters services system. Iwi/Māori will have roles at all levels of the three waters system, including governance and within the entities.
- The improvements to the natural environment mentioned above 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.

Economic impacts

Domain description

279. The preferred strategic option three is expected to deliver large economic benefits across New Zealand – both geographically and by sector. A comprehensive economic study was done to determine the economic impacts of the reform¹¹⁵:

- An **economic impact assessment** considered the effect of a material step-up in investment in connection with the reform, and how this would flow through to national, regional, and local indicators such as GDP, employment, wages, and taxes.
- An **industry development study** identified the industries most likely to be affected by reform, their current state, the implications of reform for these industries, how they need to develop in order to leverage the benefits of reform, and how the government could support industry development.

280. A critical design feature of this analysis is that it focuses on the **incremental impact** of the policy reform – that being the difference between the counterfactual and the identified scenario (system transformation).

281. For the economic impact analysis, the counterfactual sets out a pathway for the water sector in the absence of reform and describes what local authorities are expected to spend if the reform does not proceed, and the extent to which they might face regulatory pressure. Debt and price constraints have been applied to the counterfactual. The counterfactual used in

¹¹⁵ Deloitte (2021). Industry Development Study and Economic Impact Assessment.

WICS's Phase 2 analysis, sourced through the RFI process, has been relied on for all economic analysis.

282. Two core sensitivities have been modelled, and accordingly a range of results are presented throughout, to reflect the uncertainty of input assumptions looking over 30 years.
- The '**High**' bounded analysis is characterised by an **optimistic estimate** of local authorities' expected spend in the face of new regulatory expectations, and the spend with reform based on relationships between historical enhancement and growth investment in Scotland and various geographical indicators (WICS Approach 2).
 - The '**Low**' bounded analysis is characterised by a **conservative estimate** of local authorities' expected spend in the face of new regulatory constraints, and the spend with reform based on relationships between historical enhancement and growth investment in the United Kingdom and various geographical indicators (WICS Approach 1).
283. Notably, the counterfactual already envisages a material step-up in investment from the status quo – with the associated employment and GDP impact. For instance, under the Low scenario, the GDP impact is estimated based on incremental capital expenditure of \$65B on top of \$55B of capital expenditure already included in the counterfactual.
284. It is expected that impacts would occur in different timeframes. **First-order impacts** are expected to result from the accelerated investment in three waters infrastructure that is provided by amalgamation – specifically as a result of increased ability to borrow, stronger incentives to ringfence revenue collected to three waters investment, and greater levels of employment. **Second-order** impacts will also flow from indirect and induced expenditure from parties in the three waters sector, such as three waters employees, construction companies, and professional services.
285. A description of expected economic impacts is provided below as it applies to affected parties. All material provided under the 'Economic impacts' section refers to the outputs of comprehensive economic study unless otherwise stated.

Affected parties

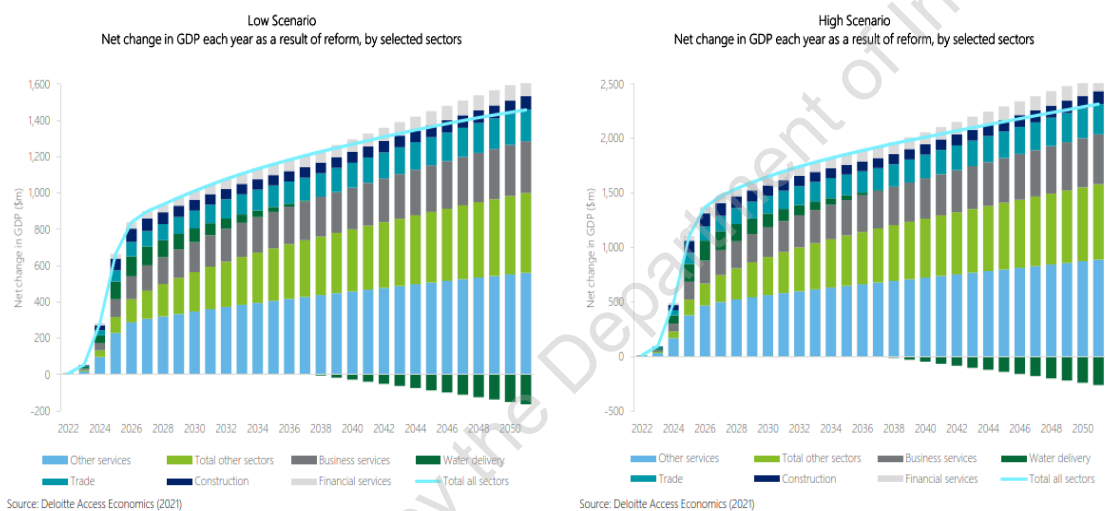
National economy

286. The reform is forecast to impact every corner of the economy and could see GDP expand by \$14B to \$23B over the next 30 years, relative to the counterfactual. To put this in perspective, this represents investment equivalent to 4.4% to 7.1% of the total New Zealand economy. In relative terms this increased economic activity equates to an average increase in GDP of 0.29% to 0.46% per annum.
287. While the national impact is universally positive, the sectoral and temporal impact of the reforms is not equally distributed. This is partly because individual sectors provide differential inputs to the three waters sector (for example, the construction sector provides considerable inputs whereas the health sector provides limited inputs). It is also partly because of the extent to which labour and capital substitution occurs between sectors (i.e.,

there is a choice to divert resources away from non-water sector activity given capacity constraints in the construction sector).

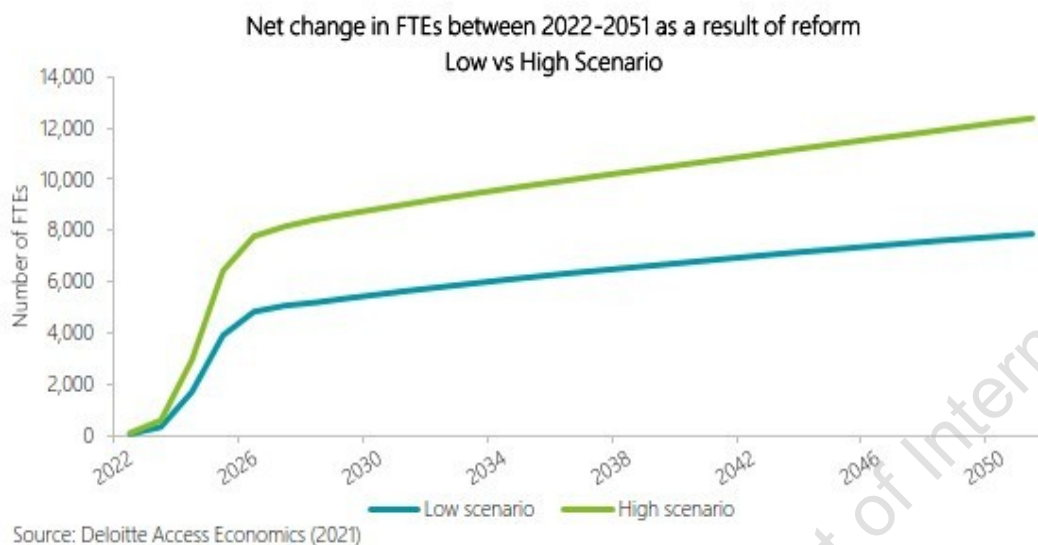
- 288. The GDP impact on the water delivery sector may start to decline in relative terms versus the counterfactual from 2038 onwards, as cost savings and efficiencies increase. In today’s terms, GDP in the water sector still increases by \$0.3B between 2022 and 2051. The step-up in investment increases output in the water delivery sector, through improved capital efficiency. Any relative decline in water sector GDP is offset by an increase in intermediate inputs (i.e., how reform benefits all other sectors).
- 289. Figure 9 demonstrates the impacts of the reforms by broad industry classification.

Figure 9: Net change in GDP each year as a result of reform, by selected sector, Low vs High scenario.



- 290. Reform is expected to support jobs across the economy. Relative to the counterfactual, New Zealand could have on average an extra 5,850 to 9,260 additional FTE jobs between 2022 and 2051, as shown in Figure 10.

Figure 10: Net change in FTEs between 2022-2051 as a result of reform Low vs High scenario.

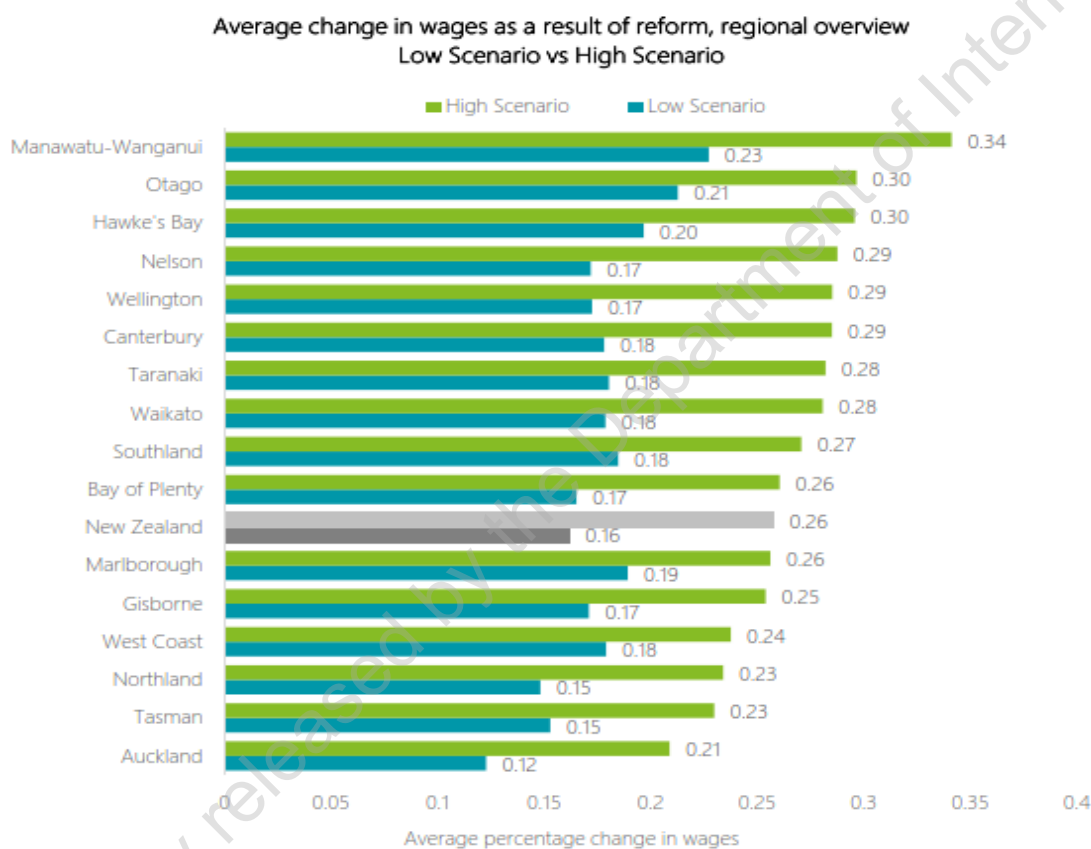


291. On average, the number of FTEs is 0.19% to 0.30% larger than it otherwise would have been under the counterfactual. This represents approximately 0.26% to 0.41% of the current total workforce in the economy, or 0.36% to 0.57% of the total FTEs in New Zealand.
292. In both the Low and High scenarios, the employment impact in terms of additional FTEs is significantly positive for all sectors. However, the pace of growth in water sector FTEs under the system transformation is expected to be slower than under the counterfactual.
293. At a national level, it is expected there may be between 1,687 (under the Low scenario) and 2,787 (High scenario) fewer additional job FTEs on average in the water sector under the system transformation scenario, relative to the counterfactual.
294. The reasons for this probably include a shift in the composition of the workforce during the transition (given the ageing workforce, removal of duplicated jobs through reform, and the increase in employment opportunities in other sectors), and higher labour productivity in the longer term as more efficient systems and processes for delivering three waters take effect.
295. Average real annual wages are expected to increase by 0.16% to 0.26% from 2022 to 2051. This increase is mainly driven by an increase in labour productivity. Specifically, reform is expected to drive improved capital productivity through capital deepening – an increase in the proportion of capital stock relative to the number of labour hours worked. Capital deepening therefore leads to higher labour productivity, which can be associated with changes in wages.

Regional economies

- 296. Every region in New Zealand is positively affected by the economic impacts of the reform, but the regions are not expected to be affected equally.
- 297. The modelling suggests most regions will see an increase in annual average real wages close to the national impact. For example, Manawatū and Whanganui is estimated to gain the most as a result of reform, followed by Hawke’s Bay, Nelson, Otago, and Wellington. On the other hand, Auckland and Northland see smaller gains relative to the national average. These impacts are shown in Figure 11.

Figure 11: Average change in wages, by region (2022-2051).



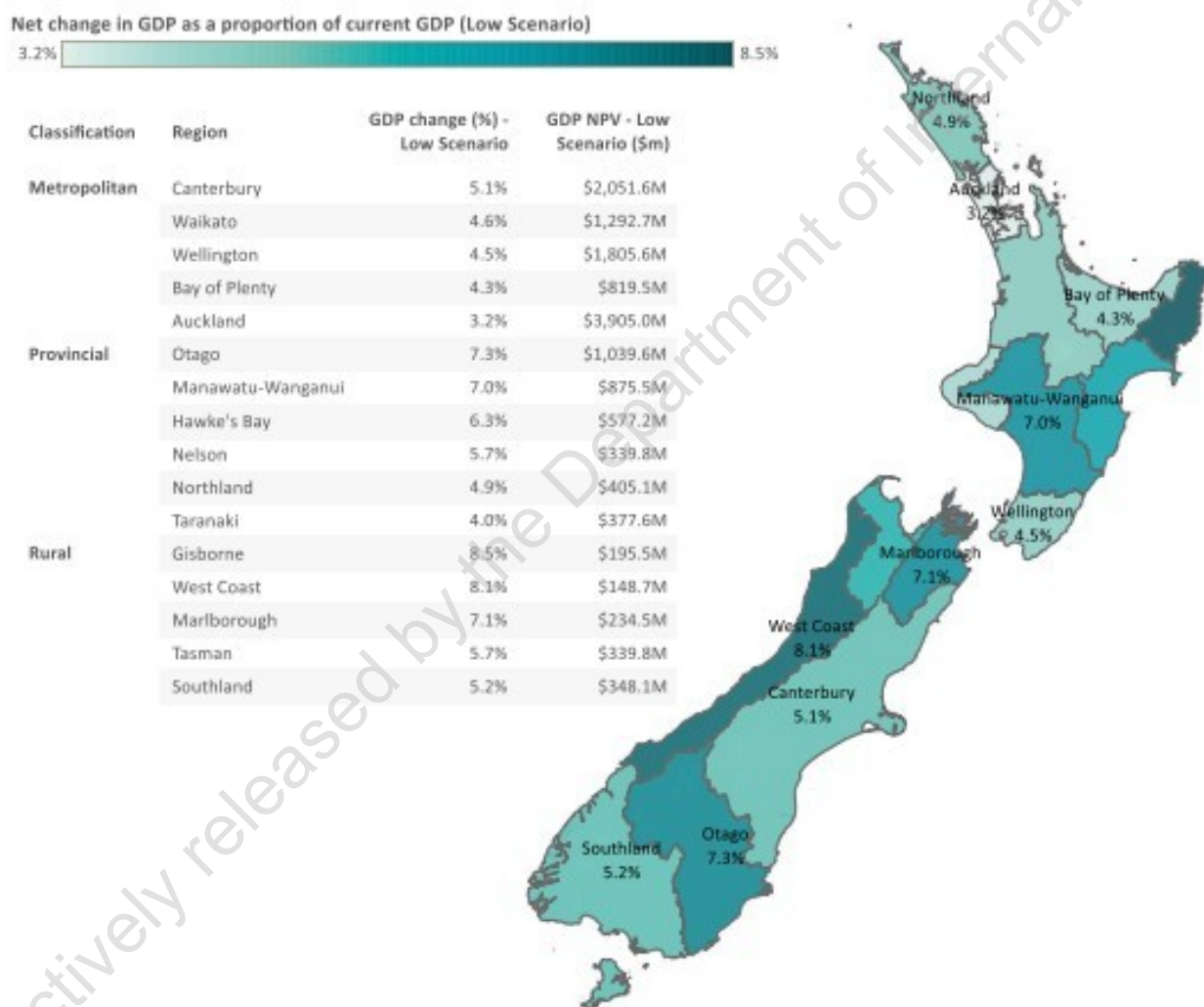
Source: Deloitte Access Economics (2021)

- 298. Figures 12 and 13 show the overall impact on regional GDP, in real present value terms over 30 years, as a proportion of the region’s current GDP. Relative to the impact on the economy at a national level, regions characterised as rural and provincial will benefit the most from the reform.

299. Based on the current GDP of each region:

- all rural¹¹⁶ regions are estimated to benefit more than the national average as a result of reform;
- most regions classified as provincial¹¹⁷ will also gain more than the national average; and
- metropolitan regions see larger gains than the national average, except Auckland¹¹⁸.

Figure 12: Net change in GDP as a proportion of current GDP, Low scenario.



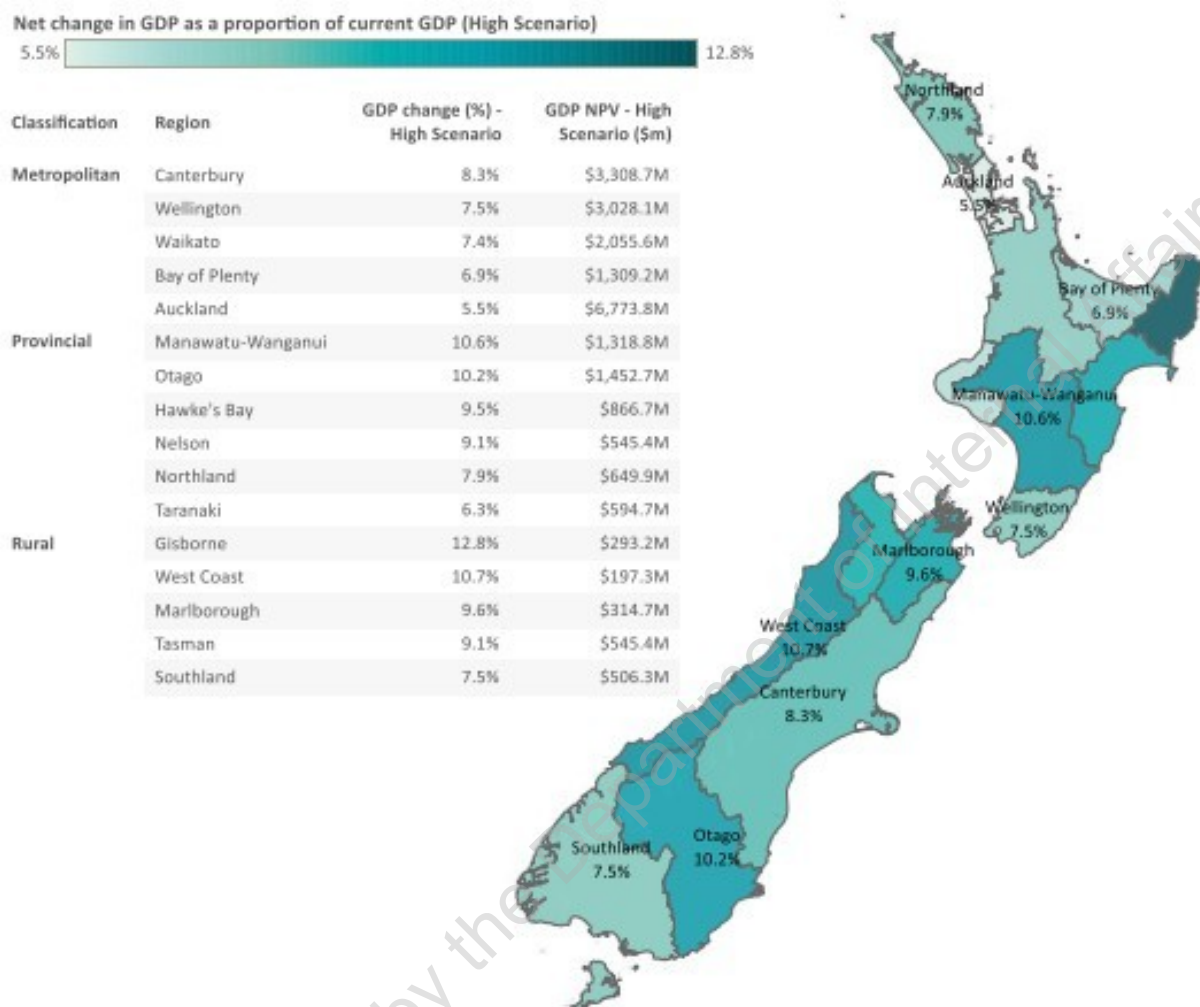
Source: Deloitte Access Economics (2021)

¹¹⁶ Defined as: Gisborne, Tasman, Marlborough, West Coast, and Southland

¹¹⁷ Defined as: Northland, Hawkes Bay, Taranaki, Manawatu-Whanganui, Nelson, and Otago.

¹¹⁸ Defined as: Auckland, Wellington, Bay of Plenty, Waikato, and Canterbury.

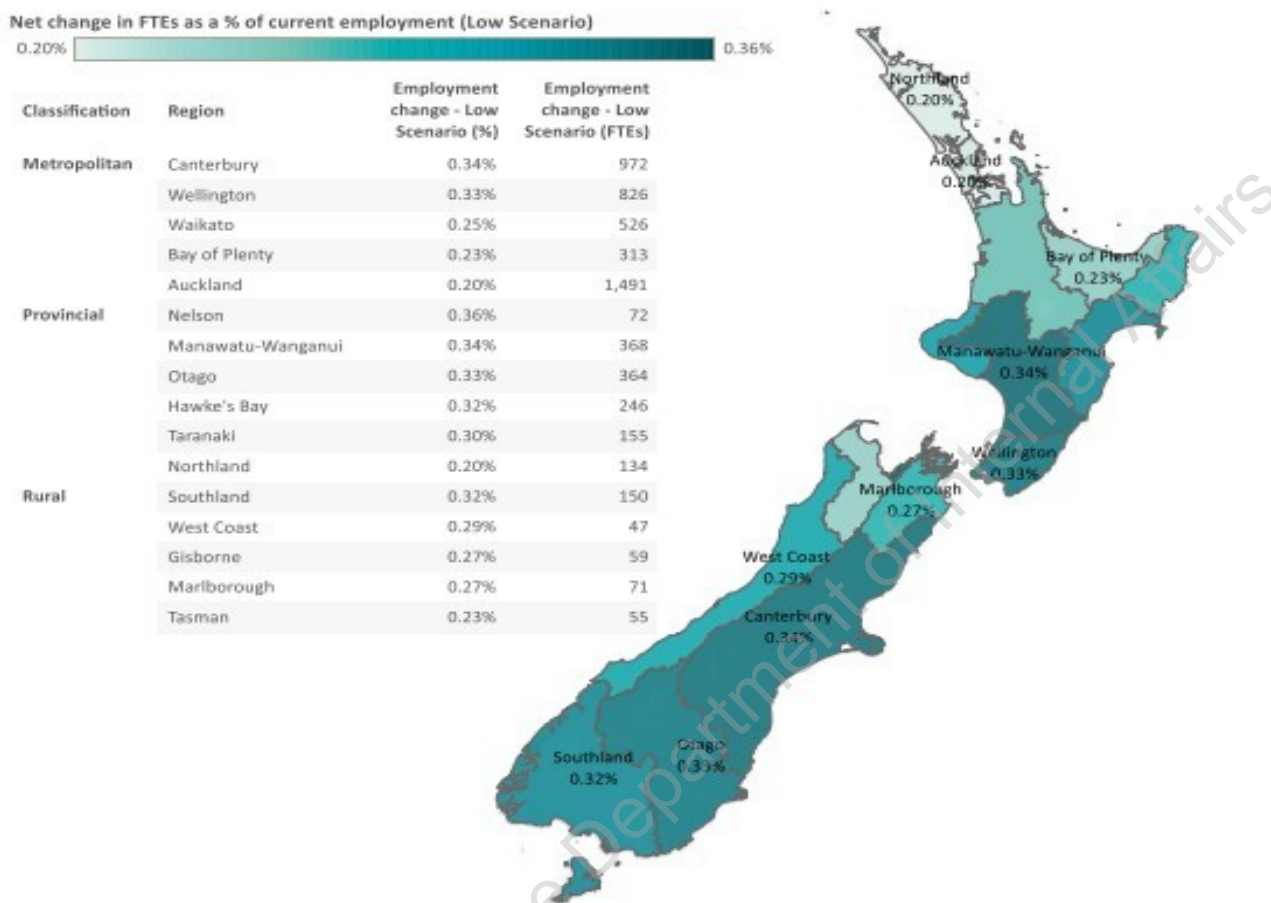
Figure 13: Net change in GDP as a proportion of current GDP, High scenario.



Source: Deloitte Access Economics (2021)

300. The heat map in Figure 14 and 15 below demonstrates the estimated regional employment impact as a result of reform. All rural regions will benefit from additional FTEs as a result of the reform, but job growth is higher than the national average in some regions and lower in others. Regions classified as provincial areas show a similar outcome.

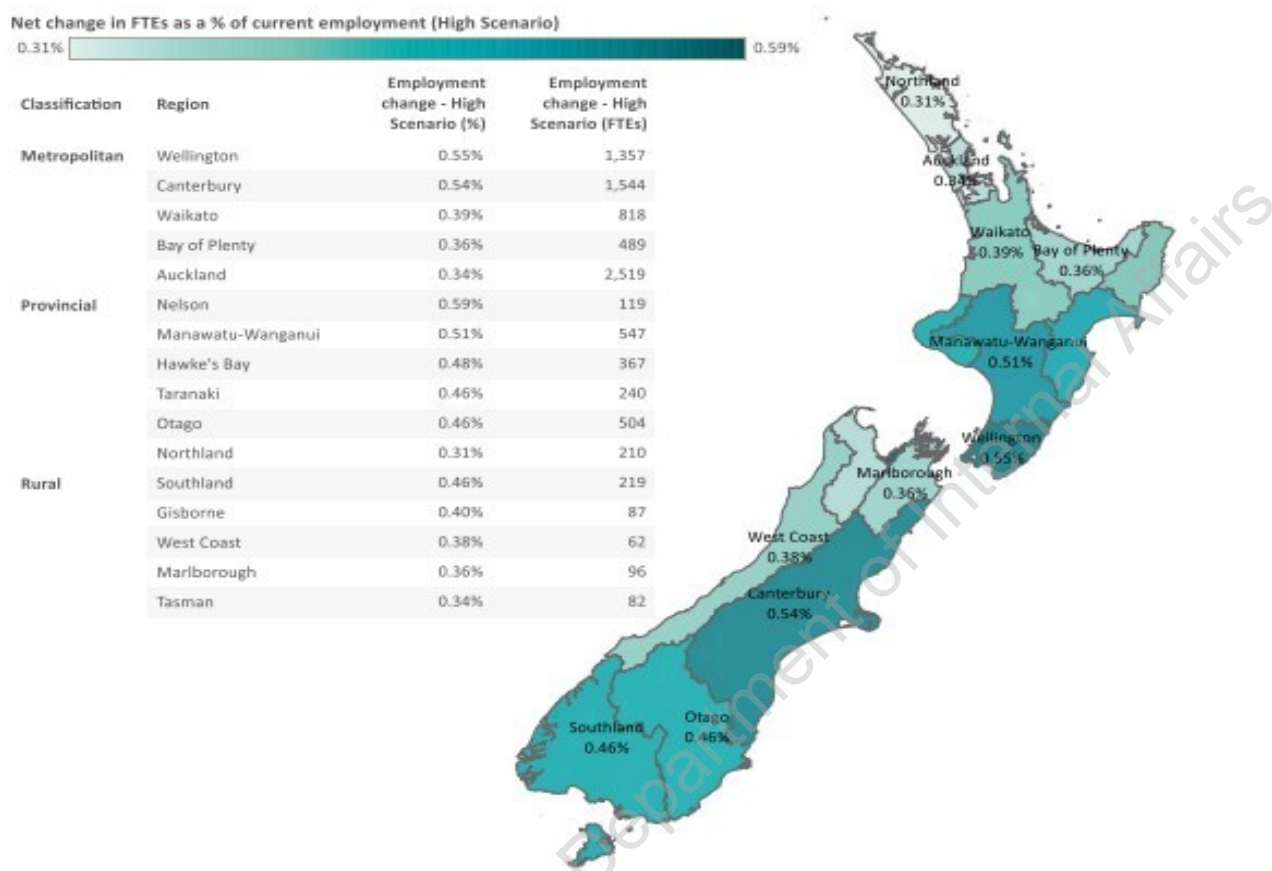
Figure 14: Net change in FTE as a proportion of current employment, Low scenario.



Source: Deloitte Access Economics (2021)

Proactively released by the Department of Internal Affairs

Figure 15: Net change in FTE as a proportion of current employment, High scenario.



Source: Deloitte Access Economics (2021)

Central government

301. As well as achieving the reform objectives, and those benefits identified above in the health and environment section, and national economy sub-section above, Three Waters Reform could also generate \$4B to \$6B in additional tax revenue.

Local government

302. Local government would expect to see significant impacts from the reform programme – although these will be unique to each local authority given differences in, among other things financial position and workforce composition.

303. Directly, three waters infrastructure assets are a significant item on local government balance sheets and a significant source of capital and operating expenditure. The transfer of these assets (and liabilities) will inevitably have direct implications for the scope, role, and purpose of divisions within local government responsible for three waters, as well as workforce implications.

304. Workforce, and water sector-specific implications are noted in the supply chain/industry impact sub-section below. The material impact on local government's financial positions is captured in this sub-section.
305. Indirectly, the reform package will have implications for the way local government plans, funds, and manages land use and urban growth. Moreover, it is expected that there might be differential impacts on the ability of local authorities to more closely focus on other core council activities such as providing libraries, parks, and recreation centres. These will always be local authorities-specific and will be expected to be canvassed at length through the independent review of local government.

Supply chain/industry impact

306. Targeted stakeholder interviews, and supporting case study validation, was undertaken to understand the implications of the reform on the supply chain and a number of related industries. The results of these interviews and case study analysis is presented across four domains: supply chain, workforce, access to capital, and innovation and productivity.

Supply chain

307. There is an expectation that the increased scale and related funding capability of the proposed new water service entities will drive material changes in supply chain arrangements. As the industry model and procurement practices mature after any transition period, the following is expected to happen:
- industry is likely to consolidate in parts of the supply chain as the new water service entities increase the scale at which they procure and move to refine their supply chain arrangements;
 - new entrants are likely, particularly major organisations that have a significant presence in Australia but who are not currently present in New Zealand;
 - participants with an existing presence in New Zealand are likely to scale up their local operations. A number of major industry participants and international consultancies and service providers have some footprint in New Zealand currently, and all are well informed about the Reform Programme and the related implications and opportunities;
 - while new or scaled-up entities may bring new capability, it is also likely that entities scaling up could acquire local entities and local capability;
 - new business models are likely to emerge, particularly between the water entities and service providers;
 - scale benefits are likely – with higher spend across fewer or more standardised requirements, as well as greater standardisation of parts and materials used to enable greater purchasing power;
 - greater specialisation of procurement services is likely; and

- smaller-scale operators may potentially be squeezed out as a result of the procurement processes that the water service entities might adopt, reducing supply chain diversity.

308. Moreover, a key expected benefit of reform in relation to supply chains will be improved procurement and pipeline management processes, which the water service entities are expected to implement. The ability to contract at scale with certainty and over a longer time has potential benefits in the form of inventory and working capital management, which in turn flows through to the efficiency of workforce management and project delivery.

Workforce

309. The water sector and its affected industries are experiencing a workforce shortage, which the reform is likely to exacerbate in the short to medium term.

310. Labour and related direct costs – in their various forms – is the largest cost input into three waters capital works by a material margin, representing an estimated 50% of total costs currently (excluding the labour content of the materials and equipment component of the supply chain, which is also significant).

311. The supply of qualified staff to deliver capital works is already under stress due to a lack of overseas resources, increasing remuneration expectations, and other opportunities in the wider construction sector. The contractor market is currently sized to reflect historical delivery requirements. The workforce is expected to be squeezed further as spending on three waters projects, shovel-ready infrastructure projects, climate change, and RMA reforms increases nationally.

312. While the skills of the current workforce will be needed, not all current roles will map neatly onto those available in the new water service entities or industry. Some in the sector may need to take up alternative roles and possibly move to different locations. This factor, combined with the relatively older age profile of the council workforce, creates a significant risk that capability could be lost through the transition.

313. Moreover, in some regions it is likely that considerable information on matters such as the location and condition of assets is held as part of the institutional knowledge of the existing workforce. There is a risk that knowledge will be lost through the transition process as the current workforce retires.

314. Other risks to smaller local authorities will also need to be managed. For example, some technical and leadership roles are shared positions that cover a range of council activities rather than just water. A move to water service entities could see that capability lost either to the water service entities, local authorities, or industry.

315. Based on experience in other sectors and countries, it is expected that the composition of the workforce will change. There is likely to be proportionally less employment in the water service entities due to a combination of a) efficiencies that can be expected over time from consolidating management structures, and systems and processes and b) efficiencies that will be expected from improving the performance of the underlying asset base as this is replenished or enhanced. On the other hand, it is expected that there would be a step up

both proportionately and in absolute terms, in response to the expected increase in investment.

316. The most immediate pressure points are likely to be specialist water consultancy expertise, which is seen as scarce and “boots on the ground” labour. Several interviewees noted that migration policies (once borders re-open) could help mitigate skill shortages in the near term, but “growing our own” was preferred.
317. Industry participants and sector bodies believe there is a relatively low awareness of career opportunities and little in the way of sector-driven training and development. It is expected that aggregated water service entities would provide better career pathways than the current model. This conclusion is supported by the Victorian experience:

“In Victoria the creation of regional water entities created much better career paths for workers in the industry. It enabled them to specialise in the water industry (rather than being a council employee and having to do a bunch of other things) plus it meant that rather than having to move from one small council to another to progress their career (which often meant relocating) career path opportunities within new (larger) organisation became much more available.”

Access to capital

318. Access to capital is critical for funding the new water service entities. The reforms in the preferred Strategic option should make it easier to fund water infrastructure in New Zealand.
319. Industry sees certainty of funding and being able to achieve scale as critical to the water service entities’ ability to develop strategic procurement practices and the related supplier arrangements. Key areas for stakeholders also included clarity around the level of expected investment, around the breakdown of spending, and around processes for allocating work.
320. Long-term funding certainty for major infrastructure providers of water infrastructure, such as local authorities currently or new water service entities, is pivotal for achieving gains in the sector and provides a range of benefits. Long-term certainty will enable each entity to take a long-term view of its investment programme and develop a construction pipeline that can be funded through the economic cycle.
321. This greater certainty will enable water service entities to build the strategic partnering arrangements that characterise sophisticated infrastructure providers – where partners are sufficiently invested in the relationship that they are willing to work with water service entities to develop the best solutions.
322. There is likely to be downward pressure on the cost of capital in affected industries as a result of industry consolidation and because of stronger and more certain cash flows backed by the scale and financial capacity of the water service entities. That said, many of the larger entities that form part of the supply chain already have the scale and financial strength necessary to command a competitive cost of capital.

Innovation and productivity

323. There is strong evidence from both New Zealand and overseas that significant productivity gains are achievable in a sector with the right settings. In particular, the combination of scale and financial certainty allows organisations to take a strategic approach to procurement, which can drive both higher productivity and innovation¹¹⁹.

324. Specific productivity gains will depend on unique characteristics and the extent to which the reforms are implemented successfully. However, we can identify a number of outcomes of the reforms that will provide, “directional” opportunities for productivity gains – these include that water service entities will be able to, for example:

- develop a better understanding of the asset base and its condition - which should improve planning, and ensure that the right investment decisions are being made and that wasteful spending is reduced;
- make efficient investment decisions – for example settling on the most efficient regional or cross-regional wastewater plant networks;
- move away from current council procurement practices, which are seen as being fragmented, risk-averse, and far too focused on price, rather than whole of life value, in the tender evaluation process;
- standardise componentry, which will drive cost efficiency, specialisation, and better inventory management;
- reduce overheads and administration costs as duplication is removed and economies of scale are achieved – for example with single IT systems replacing multiple ones;
- attract specialist global capability – as Watercare has done with its Central Interceptor project through engaging the Ghella-Abergeldie Harker joint venture (following a tender process in which three of the four short-listed parties were international consortiums, a fact that reflects the benefits of scale);
- establish provider panels that are prepared to invest in capability, bring innovation and offer cost efficiencies off the back of long run, confirmed, and large-scale work programmes; and
- the ability to build high calibre, internal capability in areas such as strategic planning and procurement, asset management, and contract and treasury management.

325. Although there was optimism about potential productivity gains, the parties we interviewed were also concerned about several factors that might delay the gains or limit their extent:

- New Zealand is relatively isolated from major centres of capability and therefore not all of the gains seen in other jurisdictions will be as readily achievable here, or achievable to the same scale;

¹¹⁹ Water Industry Commission for Scotland (2021). Supporting Materials Part 2: Scope for Efficiency; 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)

- there is a risk that workflow for the industry slows through the transition, with a lack of interim work;
- the longer-term planning that is critical for improving the performance of the sector will happen only after water service entities have come through the early transition phase and have aggregated, interrogated, and improved their information about key assets; and
- water service entities will also all inherit a myriad of commitments and contractual arrangements that will limit their freedom of operation in the near to medium term.

Costs of reform

Domains description

326. We have estimated the costs of establishing up to five water service entities. We have based this forecast on costs associated with the Auckland Transition Agency (creation of Auckland Council), the establishment of Fire Emergency New Zealand (amalgamation of urban and rural fire services), and the establishment of Te Pūkenga (the new national institute of skills and technology).
327. The estimated cost of establishment and transition is in the order of \$1B to \$2B.
328. We are still developing the specific elements of this cost estimate, but we expect that the estimate should include at least the following costs:
- the cost of establishing a transition unit;
 - the costs of establishing water service entities (including the costs of the establishment units themselves);
 - other external costs; and
 - the transfer of assets.
329. The main parties affected are expected to be local authorities, regulators, and the new water service entities.

Affordability and equity

Domains (and impact on water users)

330. The reforms will affect the level of access that local communities have to good quality three waters infrastructure, as well as the affordability of those services.

Affordability

331. The cost of meeting future investment requirements under the counterfactual is significant:

- For **rural local authorities**, average household costs in 2019 ranged from \$213 to \$2,581 per year across the 67 local authorities, with a median of \$1,337. To meet the investment required, average household costs would need to increase between 3.4 and 13.2 times in real terms. For some local authorities, average household costs in 2050 could reach as high as \$9,500 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 annual household bills in 2019 for provincial local authorities ranged from \$609 to \$2,553, with a median of \$1,118. By 2050, these bills would need to increase between 1.8 and 8.4 times to meet the required investment. Similarly, average household bills across metropolitan local authorities would need to increase between 1.5 and 7.1 times. In some metropolitan local authorities, bills could reach between \$1,700 and \$3,500 per year in today's dollars.

332. WICS analysis however has shown the potential impact on customers' bills from various amalgamation scenarios. One scenario (assuming four water service entities with a lateral split) demonstrated that consumers would face annual bills that are 45% to 71% lower than under the no-amalgamation scenario. *Detailed RIA Chapter 2: Number and boundaries of entities* provides a detailed breakdown of the different scenarios and their implications for different regions.

Equity

333. To meet equity objectives for improved water service standards across the country, we also expect that each water service entity will essentially have to 'cross-subsidise' service delivery within their catchment, and that metropolitan areas would probably be effectively supporting an improvement in water service quality in more provincial and rural areas.

Service performance

334. WICS analysis demonstrates that current performance in New Zealand falls well below comparator United Kingdom and Scotland organisations, as measured by the Overall Performance Assessment score^{120, 121}:

- United Kingdom and Scotland comparators = 290–324
- New Zealand metro local authorities = 99–138 (or 39% as effective as United Kingdom and Scotland comparators)

¹²⁰ Ofwat introduced the overall performance assessment (OPA) in 1999. It covers four broad categories of measures. These are: **Water supply**: inadequate pressure, unplanned supply interruptions, water restrictions and water quality;

Wastewater service: internal sewer flooding incidents (due to overloaded sewers and other causes) and properties at risk of sewer flooding; **Environmental performance**: leakage, sewage sludge disposal and non-compliant wastewater treatment works; and **Customer contact** which covers telephone contacts, response to billing contacts and response to written complaints.

¹²¹ Water Industry Commission for Scotland (2021). Supporting Materials Part 2: Scope for Efficiency.

- New Zealand provincial local authorities = 82–122 (or 33% as effective as United Kingdom and Scotland comparators)
 - New Zealand rural local authorities = 78–117 (or 32% as effective as United Kingdom and Scotland comparators).
335. WICS notes that in 2006, Scottish Water had an Overall Performance Assessment score of 130. This was 67% of the “best in class”. Scottish Water has since overcome its challenges and has now improved its service performance to match the best performing companies in England and Wales (i.e., an Overall Performance Assessment of 350-400).
336. The key features that enables this improvement included: greater economies of scale, clarity of policy priority, introduction of economic regulation, excellence in management, and robust water quality and environmental regulation.
337. WICS notes that the first four of these factors are not currently in place in New Zealand and therefore that a material improvement in service can be expected if these are addressed. The process of introducing, robust water quality and environmental regulation in New Zealand is still in its relative infancy.
338. Notably, the preferred reform option Strategic option three: Systemwide transformation is a comprehensive package of interventions that individually and collectively respond to these challenges. The interventions include:
- the establishing of independent water service delivery entities;
 - aggregation of the delivery of water services into a small number of delivery entities, to provide scale efficiencies;
 - establishing independent, professional, competency-based boards to govern those entities and make appropriate investment decisions;
 - introducing of information disclosure to provide greater transparency and accountability for asset management decisions, and price quality regulation to ensure entities are running efficiently, meeting quality standards, and charging a fair price to water users; and
 - strengthening system stewardship through: creating and using clear mechanisms for regulatory and policy coordination, system oversight, and performance improvement; and implementing tools and mechanisms to enable consumer and communities to participate effectively in three waters decision making, including strengthened roles for iwi/Māori.
339. It is reasonable to expect that if those proposed interventions are implemented successfully, New Zealand’s Overall Performance Assessment could resemble that of “best in class” across United Kingdom and Scotland.

Impact on iwi/Māori

340. From our engagement to date, many iwi/Māori have expressed dissatisfaction with the current service delivery arrangements both in terms of their responsiveness to iwi/Māori and in terms of performance of service (reach, quality, and cost).
341. Iwi/Māori also have roles within the current three waters service delivery system that need to be acknowledged and considered. 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 delivery system, and who receive poor quality or no three waters services.
342. Through engaging with iwi/Māori we have identified some key areas where reform could enable the three waters system to better address the rights and interests of iwi/Māori. These are:
- **Enabling greater strategic influence.** The reforms would enable iwi/Māori to have greater strategic influence and to exercise their rangatiratanga over water services delivery, including through improving their capacity and capability to participate in delivering (and influence the delivery of) three waters services.
 - **Integration within a wider system.** The rights and interests of iwi/Māori would be analysed and understood within the wider system of the allocation and management of resources.
 - **Reflecting te ao Māori perspective.** The reformed three waters system would recognise the holistic way in which te ao Māori and Te Mana o te Wai perspectives see water and water services, including environmental, cultural, spiritual, and economic dimensions, and including ki uta ki tai or a catchment-based approach, consistent with rohe/takiwā or whakapapa links.
 - **Supporting clear accountabilities.** Throughout the reformed system, roles, responsibilities, and accountabilities for the relationship with iwi, hapū, and whānau as Treaty/Tiriti partners would be clear and, as part of honouring the Crown's Treaty/Tiriti obligations, resources would be available to develop and support the capacity and capability of with iwi/Māori to participate more in delivering (and influence the delivery of) three waters services
 - **Improving local outcomes.** There would be significant improvement in delivery of water services for iwi/Māori at a local level, including through increased capacity and capability of with iwi, hapū, and whānau to participate more in delivering (and influence the delivery of) three waters services and improved wellbeing.

Stakeholder views

343. As well as the impacts analysed in this section, it is important to note and reflect the views of various stakeholder groups given that the reform programme has been undertaken in partnership with the local government sector.
344. A joint Steering Committee has been established to represent local government views and guide the development of the reform proposals. The Steering Committee has focused in particular on ensuring that the policy proposals provide for:
- a strong role for local community voice and influence;
 - mechanisms to ensure that the rights and interests of iwi/Māori are upheld;
 - mechanisms for the reformed system to interface effectively and efficiently with the existing resource management and land use planning systems; and
 - a smooth transition to the new system arrangements.
345. The Steering Committee also established five reference groups, made up of local government officers, three waters practitioners, iwi technical experts, communications experts, and industry representatives, to test the policy proposals as these were being developed. Appendix 8 presents a list of the groups the Department has engaged with throughout the policy development process.
346. The Department also held a number of regional formal workshops with the sector and with iwi/Māori partners, summarised in Table 17. A summary of themes from each regional workshop is then provided in Appendix 9.

Table 17: Summary of formal engagement in the Three Waters Reform Programme so far.

Timing	July/August 2020	September/October 2020	March 2021
Participants	Over 1,000 elected members, iwi/hapū representatives, council staff and industry professionals.	Over 300 representatives from many different iwi, hapū, and Māori organisations.	Approximately 960 participants, with representatives from all New Zealand local authorities and over 140 Māori participants.
Format	<p>14 half-day workshops.</p> <p>Split into two sessions:</p> <ul style="list-style-type: none"> the first covered the case for change and reform proposals; and the second covered how local authorities could access the associated stimulus funding. 	<ul style="list-style-type: none"> An introductory webinar with the Minister of Local Government, Hon Nanaia Mahuta; A technical webinar on the details of the Water Services Bill; 17 a-tāngata hui across the country; and One online hui. 	<ul style="list-style-type: none"> Two pre-workshop webinars viewed/attended over 400 times; eight full-day workshops; workshops split into six sections covering case for change, numbers and boundaries of entities, possible ownership and governance arrangements, protections for communities of interest, iwi/Māori rights and interests, and establishment and transition; and four break-out sessions to hold deeper discussions on the above topics.
Purpose	<ul style="list-style-type: none"> Discuss the Three Waters Reform Programme proposals and design; and discuss stimulus funding and the process for agreeing to participate in the reform programme. 	<ul style="list-style-type: none"> (Re)introduce the Three Waters and Taumata Arowai kaupapa; provide an overview of the direction of travel of this mahi; and and listen to the perspectives of iwi, hapū, and Māori across the country regarding this mahi. 	<ul style="list-style-type: none"> (Re)introduce the case for change; present current thinking on reform proposals and analysis and seek feedback on these proposals; and discuss next steps in the reform programme.

Net impacts of the system transformation approach

347. The following Tables (18 and 19) summarise the expected impacts across relevant domains and affected parties. Table 18 covers the expected costs of the reform while Table 19 covers the expected benefits.

Table 18: Net impacts (costs) of the system transformation approach.

Affected parties	Comment	Impact	Evidence certainty
<i>Additional costs of proposed approach compared to no action</i>			
Consumers	The price of water services is not expected to increase relative to the counterfactual. In fact, as noted in the benefits table, it is expected to become more affordable.	N/A	Medium
Iwi/Māori	Costs incurred through greater participation (e.g., governance opportunities and developing and updating Te Mana o te Wai statements).	Low	Medium
Local communities	The way in which local communities engage in three waters investment decisions will change, but it is unclear whether this will represent a cost, or no change, or an improvement on the status quo.	Low	Low
Local government	<p>Costs associated with a reduction in the three waters investment function – with implications for expenditure, revenue collection, and employment.</p> <p>There may be cost implications for credit rating downgrades for some local authorities when three waters assets are transferred to the new water service entities.</p> <p>A greater regulatory, monitoring, and oversight function given the increase in investment and activity around three waters.</p>	<p>Medium – some local authorities are forecast to have reduced borrowing capacity as part of the proposed debt-based asset transfer.</p> <p>There are also stranded overheads that remain in local authorities.</p>	Medium
Wider government	<p>Transition units' internal costs: this covers employees, contractors, advisors, and associated overheads.</p> <p>Local authority and iwi costs: this covers personnel supporting the transition units and any diligence to support the transfer.</p> <p>Other external costs: these costs are associated with recruiting personnel, an industry and workforce transformation strategy, training programmes, etc.</p>	High (short term).	Medium

Affected parties	Comment	Impact	Evidence certainty
Regulators	Additional costs of regulation imposed on regulators (Taumata Arowai, regional councils, and MBIE) resulting from greater three waters investment activity, the introduction of economic regulation (including information disclosure), and the establishment of new mechanisms to protect customers.	Medium – costs to establish regulatory functions, and assumed greater responsibilities for Taumata Arowai	Low
Water service entities	Costs of establishing new water service entities including the establishment unit and the ongoing operation of the entities.	Medium	Medium
Total monetised costs	Includes total costs to transition the service delivery of three waters from local authorities to the new water service entities.	At least \$1B to \$2B.	Low-medium
Non-monetised costs	Includes stewardship, the increased costs to participate in and comply with the system.	Medium	Low

Table 19: Net impacts (benefits) of the system transformation approach.

Affected parties	Comment:	Impact	Evidence certainty
Expected benefits of proposed approach compared to no action			
Consumers	<p>WICS analysis has shown the potential impact on customer bills from various amalgamation scenarios. In one scenario (four water service entities with a lateral split) consumers' annual bills would be 45% to 71% lower than in a scenario with no amalgamation.</p> <p>Ongoing avoided costs (benefits) of water-borne disease and illnesses</p>	<p>The net present cost of three waters service delivery per connected person per year would be expected to be between \$480 and \$1,060 lower than the status quo.</p> <p>It is also expected that these reforms will contribute to the benefits identified in the regulatory reform programme through avoiding the following costs:</p> <ul style="list-style-type: none"> • Cases of water-borne gastrointestinal illnesses cost New Zealanders \$496.1 million over 40 years; • water-borne disease costs New Zealand \$25 million a year; and • The Havelock North outbreak cost New Zealand \$21 million. <p>Contamination events in tourist centres could also potentially damage New Zealand's global reputation.</p>	Medium
Iwi/Māori	<p>Ongoing benefits incurred through greater participation (e.g., governance opportunities and Te Mana o te Wai statements), and support by water service entities to do this.</p> <p>Improved access to clean, safe, and healthy drinking water, and improved environmental outcomes (e.g., for disposal of waste water) consistent with Te Mana o te Wai.</p>	Medium	Medium
Local communities	<p>Improved levels of service, and improved health and environmental outcomes.</p> <p>The way in which local communities engage in three waters investment decisions will change, but it is unclear whether this will represent a cost, or no change, or an improvement on the status quo.</p>	WICS assess that New Zealand's Overall Performance Assessment score to only be 32-39% as effective as United Kingdom and Scotland comparator organisations – but WICS found that this gap could be fully caught up if the reforms are implemented effectively.	Low

Local government	Improved financial, operating, capital and regulatory efficiency.	Medium – initial estimates are that the reforms could increase borrowing capacity.	Low
National economy	A positive net improvement in GDP over 30 years compared to the counterfactual. Increased tax revenue as compared to the counterfactual.	<ul style="list-style-type: none"> • \$14B to \$23B present value increase in GDP; • 5,849 to 9,269 Average increase in FTEs; and • \$4B to \$6B present value increase in tax revenue from 2022-2051. 	Medium-High
Regulators	Lower ongoing compliance and administrative costs.	A reduction in the number of entities to monitor (from 67 to three or four) will have operational and administrative efficiencies for regulators such as Taumata Arowai.	N/A
Wider government	Central government will have confidence that service delivery of three waters is being managed better than it was.	High	Medium
Total monetised benefits	Includes the avoided cost of illness caused by unsafe drinking water over 40 years. Increases to GDP and tax revenue.	<ul style="list-style-type: none"> • Contribution to avoid health impacts totalling at least \$496 million over 40 years and \$25M per year. • \$14B to \$23B present value increase in GDP. • \$4B to \$6B present value increase in tax revenue from 2022-2051. 	Medium
Non-monetised benefits	Improvement in wellbeing: improved quality of life and life expectancy, national confidence in water infrastructure, and that inequality of access is being addressed.	High	Low

Section 5: Conclusions

Recommended approach

348. It has become clear that New Zealand's three waters system is facing a significant crisis, and will continue to do so without major, transformational reform.
349. Latest estimates indicate that the amount of investment of \$120B to \$185B is needed to replace and refurbish existing infrastructure, upgrade three waters assets to meet drinking water and environmental standards, and provide for future population growth. The size of the infrastructure deficit that has developed under the current system is one of a number of symptoms of the systemic failure underpinning the way three waters services are currently delivered.
350. We have identified four root causes that contribute to the systemic challenges in the system for delivering three waters:
- the large number of small water service providers, that limits opportunities to realise efficiencies of scale in delivering three waters services;
 - incentives and governance structures that are not conducive to long-term decision-making in relation to three waters asset management and investment;
 - affordability challenges associated with addressing the infrastructure deficit; and
 - lack of effective system stewardship.
351. The system is not well placed to address these issues and meet new challenges. Experience over the past 30 years also indicates that widespread improvements, particularly through voluntary change and collaboration, are unlikely. Moreover, eliminating the infrastructure deficit and meeting future growth requirements could take 30 to 40 years, and this would be beyond the funding and operational capacity of most local authorities and communities under current arrangements.
352. We have shown through this RIA that a package of reforms is necessary to address the root causes identified within the system. The following are the key components of the package:
- Aggregation of three waters services into a small number of large-scale, multi-regional entities.
 - Those entities have effective, professional, independent governance arrangements, and are able to attract and retain appropriately skilled management.
 - The entities have sufficient balance sheet capacity to raise debt to meet the cost of future investment requirements and smooth that cost over time.
 - A clear national policy direction is provided for the three waters sector.
 - Economic regulation is established to ensure efficient service delivery and to drive the achievement of efficiency gains.
353. The Detailed RIA chapters provide further discussion and analysis of these and other material components of the reform package.

What other impacts is this approach likely to have?

Impacts on resource management reform

354. The reform package would have implications for the way local government plans, funds, and manages land use and urban growth. The new water service entities would also have to work within a new planning regime proposed through the resource management reforms. The Department is working with the MfE to ensure that the current work to develop the proposed spatial planning and national planning frameworks takes those implications and factors into account.

Impacts on future role and function of local government

355. The reform package would have a significant impact on the future of local government, as it would transfer responsibility for a core infrastructure and service delivery function.

356. However, local government will also face some broader challenges in the future, including:

- greater urbanisation;
- changing demographics, including an ageing population;
- the need for better environmental stewardship and an effective response to climate change; and
- the changing nature of work.

357. A broader discussion is needed about the future role and function of local government after the reforms, including in the context of those broader challenges facing the sector.

358. The Department is working in partnership with the sector on a separate programme of work around the Future For Local Government, and has established an Independent Panel to review local government arrangements with a specific focus on:

- roles, functions, and partnerships;
- representation and governance; and
- funding and financing.

359. The Review will start engaging with the sector from May 2021. It will issue an interim report on the probable direction of the Review in September 2021. This will be followed by a draft report for public consultation in September 2022, and a final report in April 2023.

Section 6: Implementation and stewardship

How will the reform package be implemented?

360. The size and scope of the transition is very large, involving the amalgamation of the water-related workforce, assets, liabilities, and revenue of 67 local authorities. This represents approximately 4,900 people¹²², \$64B of assets¹²³, \$5-7B of debt, and \$2.6B in annual revenue¹²⁴. There are no examples in New Zealand of an amalgamation of this scale and complexity (although there are still some useful precedents).
361. The transition must help ensure that policy decisions are supported by a smooth transition and that the implementation approach is efficient and effective and minimises disruption to communities and consumers. We have developed a recommended transition process, explained further in *Detailed Chapter 7: Transition and Implementation* of the Detailed RIA.
362. In summary, the implementation approach will involve the following elements:
- The timeframe for transition for the water services entities is to begin operations on 1 July 2024 at the earliest;
 - Local authorities should continue to be responsible for providing water services during the transition, to reduce the risk of disruption to services during this period.
 - Some policy, legislative, and stewardship work will need to be done throughout the transition: several outstanding policy issues will need to be resolved, new legislation will be required to give effect to the transfer of assets and resources, and ongoing stewardship will be critical to achieving the reform objectives.
 - Transition work will be done by a combination of a national transition unit and an establishment unit for each water service entity. This will enable consistent national guidance about the objectives of the reform and also provide scope for the local establishment units to apply this guidance in an efficient and targeted way, based on their local settings.

Industry and workforce transformation strategy

363. The reforms provide both opportunities and challenges for the existing three waters industry and workforce¹²⁵:
364. The opportunities include:
- a clearer investment pipeline, which will provide certainty for the industry in the medium to longer term as it invests in local capacity and capability;
 - the opportunity to take a proactive, longer-term approach to developing the workforce, with clearer career pathways and more opportunities for people to specialise;

¹²² Local authority RFI data.

¹²³ WICS (2020). Phase 1 analysis

¹²⁴ Includes developer contributions and grants

¹²⁵ Deloitte (2021). Economic Impact Analysis and Affected Industries Report.

- opportunities for more mature and innovative procurement practices, including to outsource work at scale;
- opportunities for greater standardisation of componentry, which would drive cost-efficiency, specialisation and inventory management benefits;
- opportunities for increased use of international best practice, assets, and technology, including intelligent componentry to reduce cost and improve performance; and
- the ability to attract specialist global capability.

365. At the same time, the industry and workforce face these challenges:

- the need for the industry to scale up in the short term to deliver the significant investment required;
- an ageing and less diverse workforce (these issues are also experienced by other jurisdictions);
- New Zealand’s relative isolation from major centres of capability;
- the potential for a lack of collaboration between the water service entities, particularly in relation to cross boundary investment decisions and standardisation; and
- the risk of workflows slowing during the transition as the supply chain scales up.

366. It is important that these and other areas are addressed as part of an industry and workforce transformation strategy developed in partnership with the water sector.

Stewardship arrangements

367. Stewardship and related functions are a core element of the effective design and delivery of the reform programme throughout the establishment and transition phase. This phase will extend from when policy decisions are made, through ‘Day One’ of the new water services entities (currently expected to be 1 July 2024) and for a year beyond that point.

368. Stewardship arrangements provide an opportunity for ongoing monitoring of implementation to ensure that outcomes during this phase are consistent with the reform objectives. It is important that the stewardship arrangements allow for adaptive management throughout the implementation phase, so that corrective action can be taken as issues arise.

369. A shared accountability approach is proposed for the next three years. This would mean that:

- System stewardship is a shared accountability of MoH, MfE, MBIE, and the Department.
- The Department continues beyond mid-2022 to provide leadership for system design and support to Three Waters Ministers led by the Minister of Local Government.

- The Department works with agencies to achieve effective system stewardship with a particular focus on what's needed throughout the period of policy development, establishment, and transition.
370. The Department should also carry out some 'core' oversight and coordination functions during the transition phase. This would include:
- ongoing monitoring of the transition process;
 - reviewing the transition arrangements once they expire and considering the lessons learned; and
 - working with other agencies to identify, develop, and begin to implement appropriate longer-term stewardship arrangements and mechanisms.
371. Specific, longer-term stewardship arrangements for the three waters are largely machinery of government matters, which can be developed over time. Further work is needed, as part of a cross-agency piece of work to be led by the Department during the transition, to identify an appropriate approach to organising stewardship functions and governance arrangements in the longer term.
372. The design and implementation of stewardship arrangements are covered in further detail in *Detailed RIA Chapter 4: Entity regulation, system stewardship, and system direction*.

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Appendices

Strategic RIA Appendix 1 – List of three waters Cabinet papers

The table below lists and describes a series of Cabinet papers that were written on the findings of the Three Waters Review and on the Three Waters Reform process.

Cabinet Papers Date	Title	Description
April 2018	Review of Three Waters infrastructure: Key findings and next steps	This provided an early evidence base indicating problems with sustainability and with the capacity and capability of the system, as well as a range of local government affordability issues and financial pressures.
November 2018	Future state of three waters system: Regulation and service delivery	This set out the problem definition and case for changing the delivery and regulatory arrangements for three waters services. Note that in 2019 three waters officials moved to focusing on regulatory reform.
July 2019	A plan for three waters reform	This summarised the strategy for reforming the three waters system and regulatory framework. Note that this paper was considered at the same time as the Cabinet paper seeking policy decisions on the regulatory reform.
July 2019	Strengthening the regulation of drinking water, wastewater and stormwater Supported by Regulatory Impact Assessment	This set out a suite of proposals to strengthen the regulatory arrangements for drinking water, wastewater and stormwater.
September 2019	Three Waters Review: Institutional arrangements for a drinking water regulator	This contained advice and proposals for the form, location, costs, and funding of a centralised drinking water regulator that would also deliver the new wastewater and stormwater regulatory function.
December 2019	Taumata Arowai – the Water Services Regulator Bill: Approval for introduction	This sought approval to introduce the Taumata Arowai – Water Services Regulator Bill.
January 2020	Three waters service delivery and funding arrangements: approach to reform	This set out the Minister of Local Government’s proposed approach for supporting local government to transition to new water service delivery arrangements.

Cabinet Papers Date	Title	Description
June 2020	Investing in water infrastructure to accelerate reform and support economic recovery post COVID	This proposed a three-year programme for reforming three waters service delivery arrangements, with the proposed programme to run in parallel with an economic stimulus package of Crown investment in water infrastructure. It included an analysis of the significant systemic challenges facing water providers, which have been exacerbated by COVID-19.
July 2020	Water Services Bill: Approval for introduction	This sought approval to introduce the Water Services Bill into Parliament.
December 2020	Progressing the Three Waters Service Delivery Reforms	This sought decisions on: key components of the reform strategy and timeline; continuing the voluntary approach; agreement to introduce the legislation needed to facilitate a voluntary approach; the process for identifying the number and boundaries of new water service entities; design options for the entities, to be tested with credit rating agencies; and programme funding.

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Strategic RIA Appendix 2 – Key decisions made by Cabinet

The table below sets out some key decisions made by Cabinet in the papers listed above that have influenced the direction of the reform.

What was agreed	When
Regulatory reform	
<p>Agreed that the new regulatory system be implemented over a five-year period, but with the following requirements:</p> <ul style="list-style-type: none"> • from the date of enactment: <ul style="list-style-type: none"> ○ all drinking water suppliers would be required to register with the regulator, and ensure the water they provide is safe to drink; ○ all suppliers that provide drinking water to 500 or more consumers would be required to prepare/update drinking water safety plans, and be operating in accordance with those plans within one year following enactment; • the regulator’s initial focus would be implementing the core components of the regulatory system, working with suppliers to build capability and understanding, and investigating and addressing serious cases of non-compliance; • by the end of the third year following enactment, the regulator would: <ul style="list-style-type: none"> ○ actively monitor the performance of all suppliers that provide drinking water to 500 or more consumers, and take enforcement action where appropriate; ○ work with smaller suppliers to bring them into the regulatory system; • by the end of the fifth year following enactment, all drinking water suppliers would be required to comply with all regulatory requirements, and the regulator would take action to deal with non-compliance. 	1 July 2019
<p>Agreed that:</p> <ul style="list-style-type: none"> • all drinking water suppliers be required to provide safe drinking water and comply with drinking water standards on a consistent basis; • to help clarify this new approach, the lesser requirement to take ‘all practicable steps’ to comply would no longer feature in drinking water legislation; 	1 July 2019
Agreed to introduce a regulatory requirement for wastewater and stormwater network operators to report annually on a set of nationally-prescribed environmental performance metrics	1 July 2019
Agreed that a central regulator be required to specify national environmental performance metrics for wastewater and stormwater networks, and develop suitable methods for collecting, validating, analysing, and publishing this information	1 July 2019
Overall approach – including intent that these will be multi-regional entities	
Agreed to proceed with a three-year programme for reforming three waters service delivery arrangements, to be delivered in parallel with an economic stimulus	3 June 2020
Agreed that provisions of the economic stimulus is conditional on local authorities opting in to service delivery reform and, specifically, the creation on a small number of multi-regional water service providers	3 June 2020
Agreed that a high-level principle of partnership with iwi/Māori will be followed throughout the reform programme, and reflected in the new three waters service delivery system	14 December 2020

What was agreed	When
<p>Agree that the outcomes for reforms will be as follows:</p> <ul style="list-style-type: none"> • existing three waters assets and services must remain in public ownership, and the system will incorporate safeguards to protect public ownership of this essential infrastructure, both now and in the future; • a sustainable three waters system that operates in the long-term interests of consumers, communities, tangata whenua, and New Zealand generally; • drinking water that is safe, acceptable, and reliable; • environmental performance of wastewater and stormwater realises the aspirations of communities in which they are situated, including tangata whenua, and New Zealand generally; • three waters services are delivered in a way that is efficient, effective, resilient, and accountable, with transparent information about performance, and prices consumers can afford; • regulatory stewardship of the three waters system is fit for purpose, and provides assurance that these outcomes are being achieved and safeguarded 	November 2018
Scope	
Agreed that all drinking water suppliers be covered by the drinking water regulatory system, except for individual 'domestic self-suppliers'	1 July 2019
Numbers and boundaries	
<p>Agreed there would be further discussions with 3W Ministers and local government about the exact number and boundaries of multi-regional providers, and final decisions would be based on the following factors:</p> <ul style="list-style-type: none"> • Achieving scale benefit • Communities of interest • Relationship with other jurisdictional boundaries, including catchments 	3 June 2020
Agreed to proceed with a centrally-led process for identifying the number of entities and their boundaries	14 December 2020
System / entity design	
<p>Agreed the following high-level design objectives would be reflected in the new multi-regional models for service delivery</p> <ul style="list-style-type: none"> • Financial sustainability, affordability, and resilience • Effective, efficient, and reliable services • Enable an effective, efficient regulatory system • Minimise the negative impact of reform, where possible 	3 June 2020
<p>Agreed the new multi-regional models for water service delivery would include the following safeguards:</p> <ul style="list-style-type: none"> • Mechanisms that provide for continued public ownership of water infrastructure, and protect against privatisation • Mechanisms that provide for community input and local service delivery 	3 June 2020
<p>Agreed in principle that, subject to discussions with local government and detailed policy design work, the new multi-regional water providers would be:</p> <ul style="list-style-type: none"> • Statutory, asset-owning entities, with commercial disciplines and a competency-based board • Owned by local authorities (as shareholders), but with sufficient legal separation to ensure there are no restrictions on the entities' ability to borrow on similar lines to other utilities 	3 June 2020

What was agreed	When
Agreed that the proposed water services entities will have: <ul style="list-style-type: none"> • Financial and operational autonomy, including independent and competency-based governance arrangements • A commercial objective, among other objectives 	14 December 2020
<i>Economic regulation</i>	
Agreed in principle that an economic regulation regime will be employed in a reformed three waters sector	14 December 2020
Agreed in principle that an information disclosure regime that allows the performance of entities to be compared will apply, at a minimum, to a substantively reformed three waters sector	14 December 2020

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Strategic RIA Appendix 3 - Former drinking water standards

An outline of the former drinking water standards and regulation is shown in the tables below.

Act	Responsibility
Health Act 1956 (Part 2A)	Responsibilities were fragmented across the Director-General of Health, Medical Officers of Health, and Drinking Water Assessors.
Building Act 2004 (and Building Code)	The Act and Code are administered by local authorities and the MBIE. They regulate drinking water between the toby and the tap through building consents.
Local Government Act 2002	The establish local authorities as the primary providers of drinking water, wastewater, and stormwater services.
National Environmental Standard (NES) for Sources of Human Drinking Water	This is a national direction, issued as regulations under the Resource Management Act 1991, relating to the protection of sources of drinking water. It is administered by regional councils and the MfE.

Key elements for drinking water regulatory system	
Source water management	<ul style="list-style-type: none"> • Source water, whether from below ground or from a surface catchment, is primarily governed by the Resource Management Act 1991 (RMA) and the National Environmental Standard for Sources of Human Drinking Water (Drinking Water NES). • Both the RMA and the NES impose requirements on regional councils and territorial authorities when they make decisions that could affect the quality of drinking water. • The Drinking Water NES¹²⁶ has recently been reviewed. This regulatory reform proposes that the Drinking Water NES be revised (using the processes set out in the RMA) to strengthen and clarify the requirements on regional local authorities and local authorities.

¹²⁶ Ministry for the Environment (2020). Resource Management (National Environmental Standards for Freshwater) Regulations 2020. <https://environment.govt.nz/acts-and-regulations/regulations/national-environmental-standards-for-freshwater/>

Key elements for drinking water regulatory system	
Regulation of networked drinking water suppliers	<p>Networked drinking water suppliers are regulated under the Health Act, which imposes requirements on any network supplier who supplies water to more than 500 people:</p> <ul style="list-style-type: none"> • Suppliers must be registered on the Register of Drinking Water Suppliers in New Zealand. The register provides information on who is registered as a drinking water supplier and about their supplies or sources of water. • Suppliers must take all practicable steps to ensure they provide an adequate supply of drinking water that complies with the Drinking Water NES (see above). The drinking water standards are the reference that water quality is measured against. • Suppliers must develop and implement Water Safety Plans, which consider the potential risks to the water supply and identify ways to manage those risks. • Suppliers must keep records and provide information about compliance to the Ministry of Health. The Annual Report on Drinking-Water Quality is published each year. • Suppliers must assist Drinking Water Assessors, Designated Officers, and Medical Officers of Health to determine compliance with the Health Act and the Drinking Water Standards. • Networked suppliers who supply drinking water to fewer than 500 people have the same duties but are not required to implement a Water Safety Plan. Networked suppliers (including rural agricultural drinking water suppliers) who supply water to fewer than 25 people are not required to meet any of the above requirements.
Regulation of “specified self-suppliers” of drinking water	<p>These are self-suppliers who supply water to a building that is owned by them and that has a community purpose (for example hospitals, rural schools, marae, and community halls). These self-suppliers must register as drinking water suppliers but are regulated by the legislation that applies to their primary activity, such as the Food Act 2014, the Building Act 2006, the Local Government Act 2002, campground regulations, and standards for schools.</p> <p>While some self-suppliers (hospitals, for example) must meet higher standards, for most specified self-suppliers drinking water is not a focus for the regulatory regimes they operate under.</p>
Regulation of domestic self-suppliers of drinking water	<p>Domestic self-suppliers are subject to the Building Act, which takes over responsibility for water once it leaves a networked supply and enters the building-owner's property. The Building Act also cover situations where a building has its own self-supply (such as a roof tank or bore).</p> <p>This regulatory reform has not changed the existing regulatory arrangements for domestic self-suppliers.</p>

Strategic RIA Appendix 4 – Intervention Logic Map

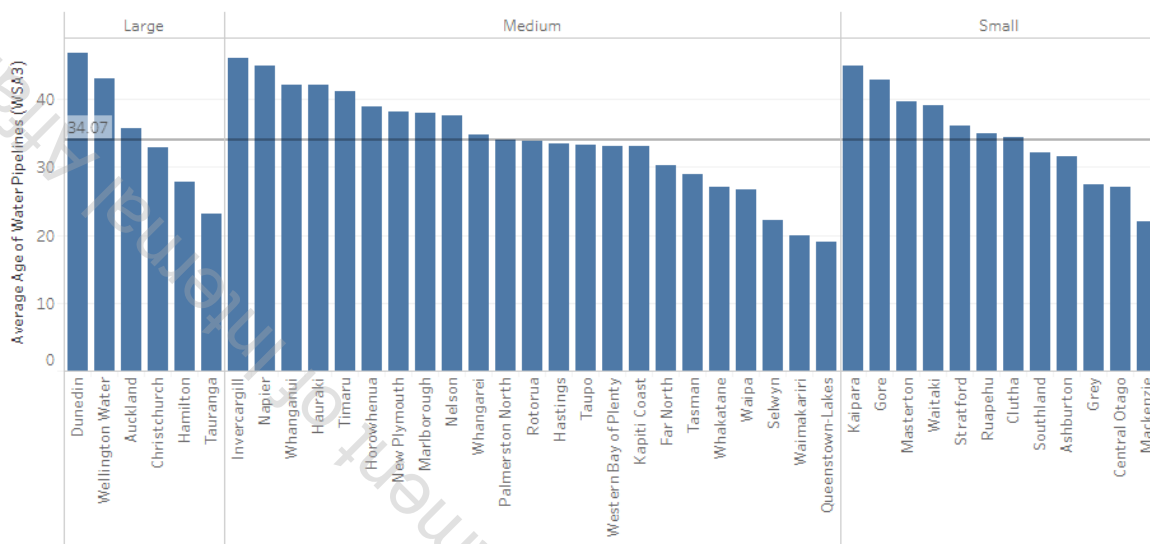
Problem statement	The current three waters system does not provide confidence that: drinking water is safe, good environmental outcomes are being achieved, growth in population and housing can be accommodated, iwi/Māori rights and interests are upheld, and climate change and natural hazard risks are being managed. Moreover, water quality, efficiency, access and affordability vary significantly across the country.				
Root causes	Lack of economies of scale: New Zealand has a highly fragmented and dispersed system, in which services and infrastructure are delivered, operated, and paid for by (or on behalf of) a large number of providers, many of which have a small customer base.	Misaligned incentives and weak governance structures: Local authority service providers operate in a political environment, in which investment decisions are made by elected representatives who have to balance competing community interests.	Affordability challenges: The current system places constraints on the ability of local authorities to leverage greater borrowing to spread the costs of investment across present and future beneficiaries. There are also limitations to the extent rates can be relied upon to meet investment shortfalls.	Lack of system stewardship: The dispersed nature of stewardship roles and responsibilities, which are spread across a large number of agencies, means no one is responsible for monitoring or oversight of the performance of the whole system. Inadequate oversight and stewardship arrangements, weaknesses in the regulatory environment, and limited transparency of and accountability for performance. There are also a lack of tools to enable effective participation in three waters decision making.	
Issues / symptoms	Significant and widespread under-investment in three waters infrastructure increases health, wellbeing, and environmental risks to people and places. Historic underinvestment also limits the ability to keep pace with population growth and/or build resilience to climate change and natural hazards.	Economic inefficiencies due to a lack of organisational scale, the dispersed nature of service delivery arrangements, and the inability to make strategic resourcing and infrastructure investment decisions across district and regional boundaries.	Significant affordability challenges facing local authorities and communities, who are struggling to fund the infrastructure needed to meet regulatory requirements and local expectations, keep pace with population growth, and/or build resilience to climate change and natural hazards.	Poor three waters outcomes for iwi/Māori and other vulnerable communities and an inability to meet obligations relating to Te Mana o te Wai.	Capability and capacity challenges at governance and operational levels – including a lack of the breadth and depth of expertise, and/or a lack of the systems and processes, needed to manage highly complex three waters infrastructure and services, and make investment decisions.
Outputs and interventions	<p>A comprehensive package of interventions that individually and collectively respond to the root causes identified:</p> <ul style="list-style-type: none"> • The establishment of independent water service delivery entities: <ul style="list-style-type: none"> • Aggregation of the delivery of water services into a small number of delivery entities to provide scale efficiencies • Structural or balance sheet separation to enable improved access to capital markets and support sustainable funding of needed investment • Establishment of competency-based, independent, and professional boards to govern those entities and make appropriate investment decisions • The introduction of economic regulation: <ul style="list-style-type: none"> • Introduce information disclosure to provide greater transparency and accountability for asset management decisions • Introduce price quality regulation to ensure entities are running efficiently, meeting quality standards, and charging a fair price to water users • Strengthened system stewardship: <ul style="list-style-type: none"> • The creation and use of clear mechanisms for regulatory and policy coordination, system oversight, and performance improvement <p>Tools and mechanisms to enable effective participation in three waters decision making by consumers and communities, including strengthened roles for iwi/Māori</p>				
Intermediate outcomes	Improved infrastructure delivery enabling greater, faster, and smarter investment in three waters infrastructure.	Improved economic efficiency and productivity in the sector.	Improved financial sustainability , including the ability to access greater debt to fund infrastructure requirements.	Iwi/Māori rights and interests are upheld including obligations relating to the Treaty of Waitangi/Te Tiriti o Waitangi and Te Mana o te Wai.	Improved decision-making and performance generated through a more transparent and accountable system.
Long term outcomes	A three waters system that provides confidence that drinking water is safe, good environmental outcomes are being achieved, growth in population and housing is being accommodated, iwi/Māori rights and interests are upheld, economic growth is being supported, and climate change and natural hazard risks are being managed. While the sector reform is focussed on local authority suppliers, it is expected that over time the proposed new water entities would also support improvements in water quality, efficiency, access and affordability for non-council suppliers.				

Please note that the issues/symptoms of the current system are broader than is described in the above. Particularly those identified in the root causes and also some of the elements identified in the problem statement.

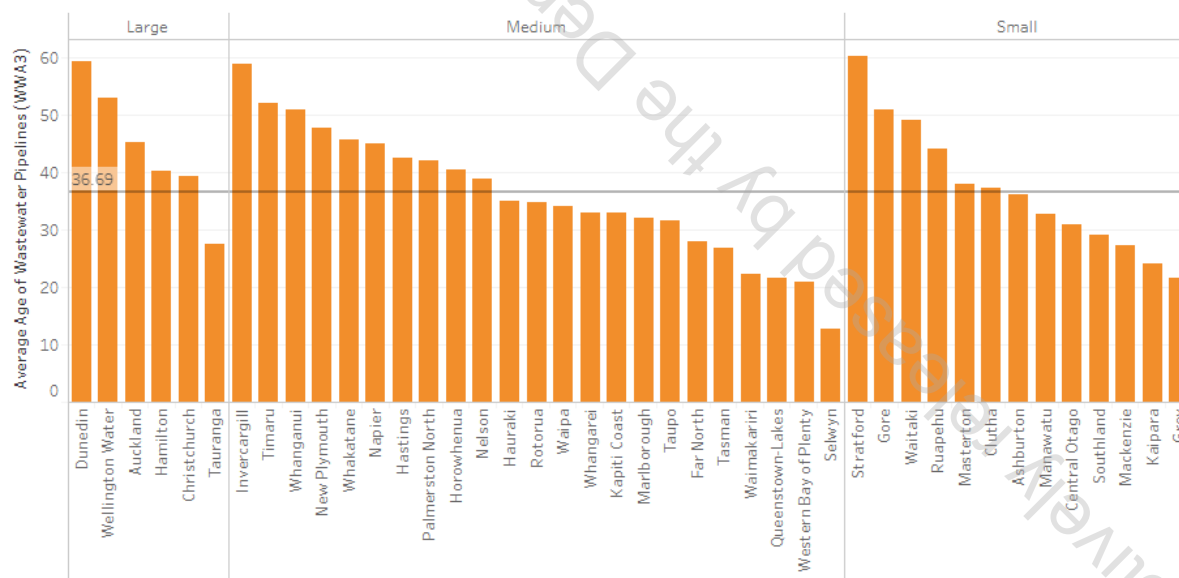
Strategic RIA Appendix 5 – Age of three waters asset

The figures below show, for each of the three waters, asset age for three waters infrastructure (from Water New Zealand’s 2018/19 National Performance Review).

Average age in years of drinking water pipes in regions (by size) across New Zealand as of 2019¹²⁷



Average age in years of wastewater pipes in regions (by size) across New Zealand as of 2019¹²⁸.



Average age in years of stormwater pipes in regions (by size) across New Zealand as of 2019¹²⁹.

¹²⁷ Water New Zealand, National Performance Review 2018 – 2019 (Water New Zealand, 2020).

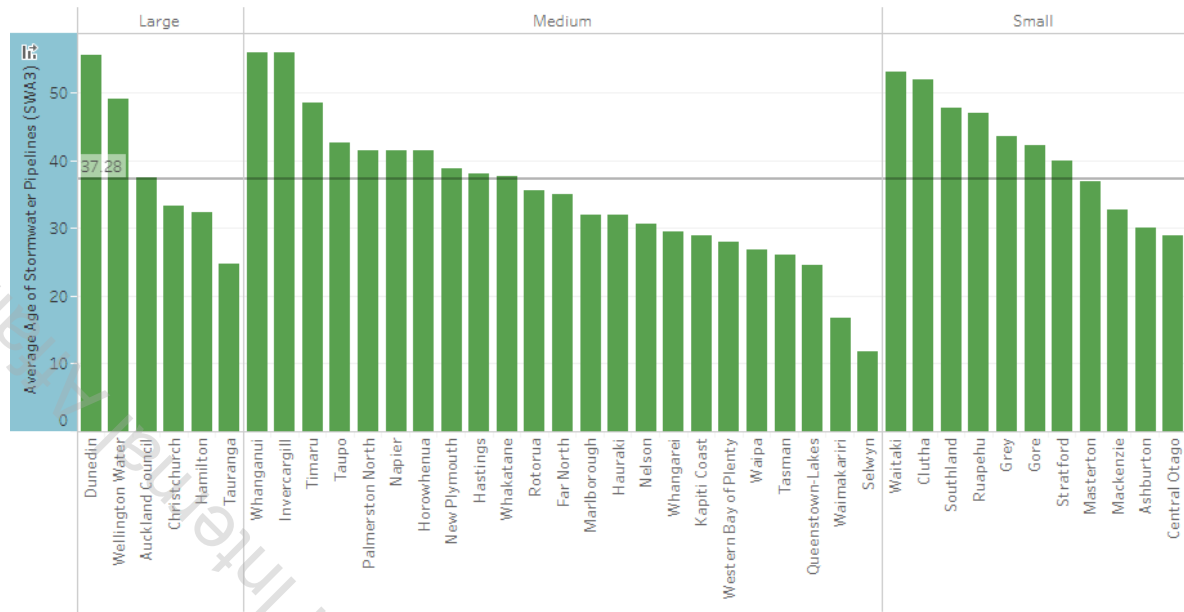
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¹²⁸ Water New Zealand, National Performance Review 2018 – 2019 (Water New Zealand, 2020).

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¹²⁹ Water New Zealand, National Performance Review 2018 – 2019 (Water New Zealand, 2020).

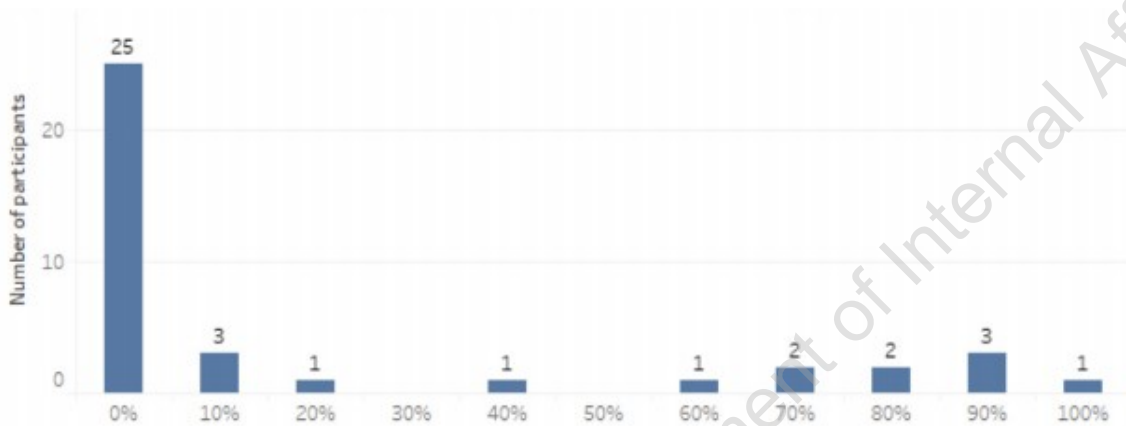
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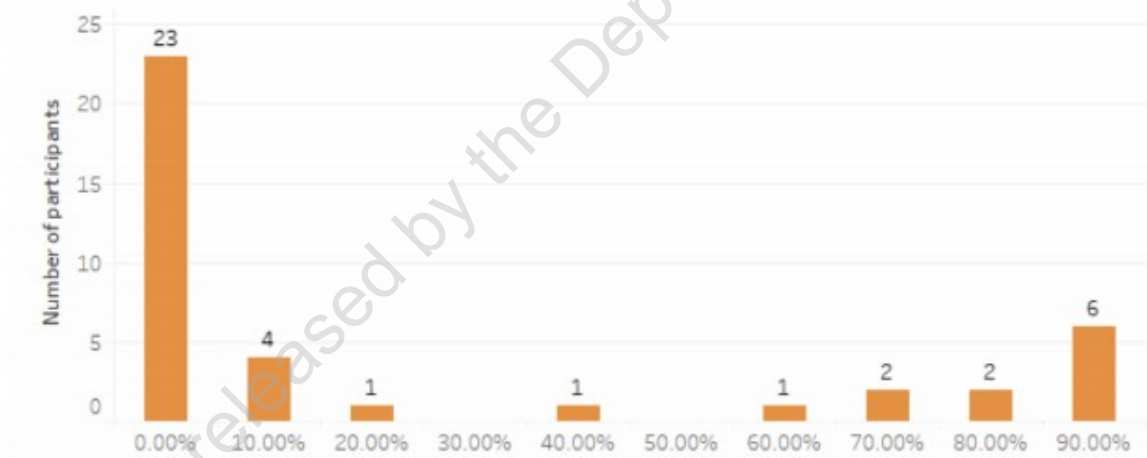
Strategic RIA Appendix 6 – Condition grading of three waters pipelines

The figures below show, for each of the three waters, the proportion of three waters pipelines that had not yet been assigned a condition grading (from Water New Zealand’s 2018/2019 National Performance Review).

Proportion of drinking water pipelines that had not yet been assigned a condition grading¹³⁰.



Proportion of wastewater pipelines that had not yet been assigned a condition grading¹³¹.

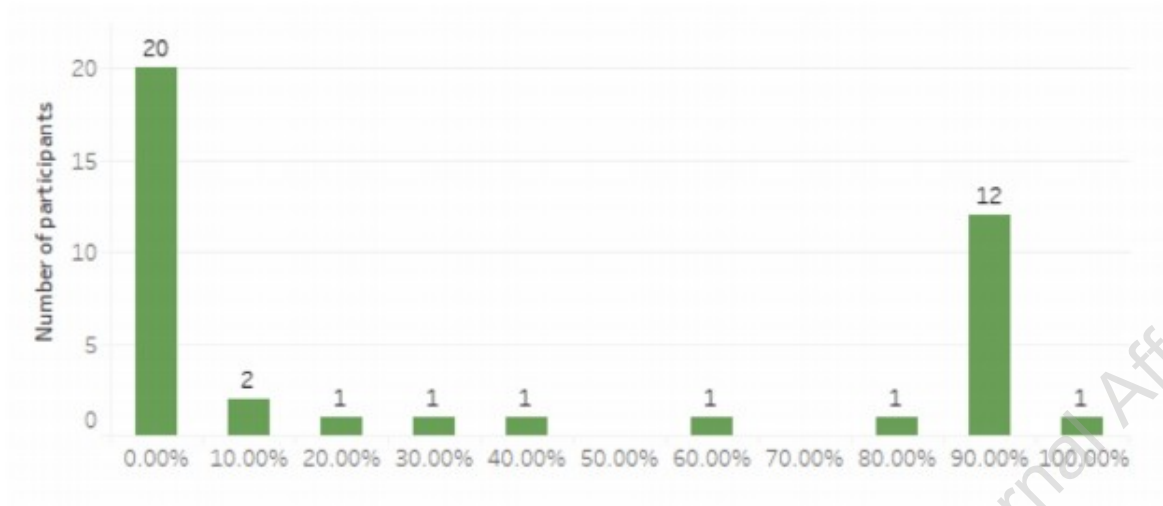


Proportion of stormwater pipelines that had not yet been assigned a condition grading¹³².

¹³⁰ Water New Zealand, National Performance Review 2018 – 2019 (Water New Zealand, 2020). https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=4271.

¹³¹ Water New Zealand, National Performance Review 2018 – 2019 (Water New Zealand, 2020). https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=4271.

¹³² Water New Zealand, National Performance Review 2018 – 2019 (Water New Zealand, 2020). https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=4271.



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Strategic RIA Appendix 7 – Detailed analysis of each option

Criteria / Strategic Option	Counterfactual (no further reform)	Strategic Option one: Introduction of information disclosure regime	Strategic Option two: Introduction of information disclosure regime and national funding regime	Strategic Option three: Systemwide transformation
	0	✓	✓	✓✓
Improves economic efficiency	<p>Lack of aggregation causes inefficiency</p> <p>There are currently 67 water service providers in New Zealand and this leads to considerable economic inefficiencies.</p> <p>For example, WICS analysis¹³³ demonstrates that relative unit costs for New Zealand water service providers are considerably higher than United Kingdom and Scotland comparators (using 2020, current prices):</p> <ul style="list-style-type: none"> • United Kingdom and Scotland comparators: \$130 to \$200 per connected citizen (with Scottish Water being the best performer). • New Zealand metro local authorities: \$205 per connected citizen, which is 58% higher than Scottish Water. • New Zealand provincial local authorities: \$340 per connected citizen, which is 162% higher than Scottish Water. • New Zealand rural local authorities: \$550 per connected citizen, which is 323% higher than Scottish Water. <p>It is reasonable to assume that these efficiency differentials (between Scottish Water as “best in class” and New Zealand metro, provincial, and rural local authorities) would continue to grow, as regulatory standards increase, domestic assets come to the end of their useful lives, and the marginal cost of repair, replacement and remediation escalate.</p> <p>Lack of scale and of transparency and accountability are key factors</p> <p>The causes of these inefficiencies are numerous, but a lack of scale of water service providers and a lack of transparency and accountability for decision making are significant contributors.</p>	<p>Lack of aggregation causes inefficiency</p> <p>Under this option, there are still 67 water service providers, which leads to considerable economic inefficiencies as stated in the counterfactual.</p> <p>Information disclosure might marginally increase efficiency</p> <p>In theory an information disclosure regime should in the long run lead to more efficient investment decisions, improved quality standards (in addition to those set by Taumata Arowai), and lower operating expenditure – particularly given the effect of public benchmarking in driving efficiencies¹³⁴.</p> <p>However, a of the impact of information disclosure in the airport sector provides insight into how effective it is when used as a stand-alone tool (the airport sector shares monopoly characteristics with the water sector, which enables some comparison¹³⁵):</p> <ul style="list-style-type: none"> • a positive effect on the quality of services; • a positive effect on pricing efficiency; • mixed results for observed reductions in operating costs; and • unclear results for whether any cost savings were passed onto consumers. <p>A combination of theory and practice therefore indicates that an information disclosure regime might lead to marginal improvements in economic efficiency.</p>	<p>Lack of aggregation causes inefficiency</p> <p>Under this option, there are still 67 water service providers leading to considerable economic inefficiencies as stated in the counterfactual.</p> <p>Information disclosure might marginally increase efficiency</p> <p>Imposing an information disclosure regime might be expected to marginally improve economic efficiency, as noted at left under strategic option one.</p> <p>A new funding system could also support some limited efficiency gains</p> <p>Establishing a national fund to aggregate revenue from water-related charges and redistribute it to councils could also be expected to marginally increase economic efficiency.</p> <p>A revised funding system in and of itself will not lead to economic efficiencies. However, it would provide greater long-term certainty of funding, which would support better asset management practices and investment decisions. Funding could also be made conditional on providers achieving certain outcomes, including more efficient performance.</p> <p>However, without greater scale, independent and professional governance, and stronger price-quality regulation, efficiency gains are likely to be limited.</p> <p>A revised funding system would also support a stronger, more predictive and proactive approach to maintenance, rather than reactive and unplanned maintenance.</p> <p>A more proactive maintenance strategy can lead to economic efficiencies as a common rule of thumb in asset management is that planned maintenance costs one-third less than unplanned maintenance for the same task¹³⁶.</p>	<p>Aggregation would drive significant efficiency gains</p> <p>Under this option, it is proposed that three or four water entities would be established. This would provide greater economies of scale and opportunities for strategic planning and procurement.</p> <p>This small number of entities would also be operating within a new economic regulatory regime, which would drive system-wide efficiencies.</p> <p>Significantly lower unit costs would be expected</p> <p>WICS analysis¹³⁷ demonstrates that United Kingdom and Scottish water entities comparable in size to those proposed for this option achieved a 40-45% reduction in unit costs between 2002 and 2020. Half of that reduction was generated in the first four years of the transformation.</p> <p>WICS attributed the greater efficiencies in the United Kingdom and Scotland to a range of factors:</p> <ul style="list-style-type: none"> • better procurement – including strategic planning, bulk purchases, and scale discounts; • improved asset management practices; • other innovations <p>These types of efficiencies are equally possible in New Zealand, where there is currently a lack of mature asset management, a lack of scale, and a lack of transparency and accountability in decision making.</p> <p>WICS analysis shows that it would be possible for amalgamated water service entities to achieve a similar cost per connected citizen to United Kingdom and Scottish comparators. WICS analysis also demonstrates that there is a critical mass when it comes to connections and people served: water entities serving fewer than about 800,000 people have only managed to achieve between 10% and 50% of what the best performing larger companies have been able to realise¹³⁸.</p> <p>Capability and capacity would also increase</p> <p>It is also likely that greater scale would lead to improved capability and capacity – including opportunities for greater specialisation, increased ability to pay market rates, increased numbers of staff, and improved governance and management.</p>

¹³³ Water Industry Commission for Scotland (2021). Supporting Materials Part 2: Scope for Efficiency.

¹³⁴ Department of Internal Affairs/Ministry for Business, Innovation and Employment (2021). Three Waters Reform Programme Supporting Information. What is economic regulation? Accessed through: [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/\\$file/Economic-Regulation-Engagement-Slides-March-2021.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/$file/Economic-Regulation-Engagement-Slides-March-2021.pdf)

¹³⁵ MBIE (2014) Effectiveness of Information Disclosure Regulation for Major International Airports. Accessed through: <https://www.mbie.govt.nz/assets/6f391fb0fc/major-airports-info-disclosure-discussion-document.pdf>

¹³⁶ Environmental Protection Authority (2016). Fundamentals of Asset Management: Optimize Operations & Maintenance Investment. Accessed through: <https://www.epa.gov/sites/production/files/2016-01/documents/epa-7-o-m.pdf>

¹³⁷ Water Industry Commission for Scotland (2021). Supporting Materials Part 2: Scope for Efficiency.

¹³⁸ Water Industry Commission for Scotland (2021). Supporting Materials Part 2: Scope for Efficiency.

Criteria / Strategic Option	Counterfactual (no further reform)	Strategic Option one: Introduction of information disclosure regime	Strategic Option two: Introduction of information disclosure regime and national funding regime	Strategic Option three: Systemwide transformation
	0	0	✓	✓✓
Supports a financially sustainable system	<p>There is evidence of significant underinvestment</p> <p>The 67 water service providers in New Zealand currently spend roughly \$1.5B per year on three waters. Despite this, there is evidence of significant underinvestment by local authorities in three waters infrastructure.</p> <p>For example, when Christchurch is excluded it is estimated that local authorities are only investing around 60% of weighted average depreciation charge per person on three waters investments¹³⁹.</p> <p>WICS also estimate that between \$75B and \$140B of additional investment will be needed over the next 30 years to upgrade three waters assets to meet environmental and drinking water standards and meet population growth.¹⁴⁰</p> <p>The current system cannot support the level of investment needed</p> <p>The current system cannot support this scale of investment, given:</p> <ul style="list-style-type: none"> the covenants imposed by lenders attitudes to debt and rates increases the financial constraints on some households (such as ratepayers on low or fixed incomes). <p>Affordability challenges are particularly acute for smaller communities, rural and provincial councils, non-council drinking water suppliers, and marae, who are already finding it difficult to afford high-quality infrastructure and services.</p> <p>Put simply, in their current form local authorities cannot support the scale of additional investment needed.</p> <p>To make the necessary investment local authorities would have to significantly increase household costs</p> <p>WICS modelling shows that for rural local authorities, average household costs in 2019 ranged from \$213 to \$2,581 per year across the 67 local authorities, with a median of \$1,337. To meet the investment required, average household costs would need to increase by between 3.4 and 13.2 times in real terms.</p>	<p>Greater transparency and accountability may marginally affect the available funding</p> <p>The introduction of an information disclosure regime is not intended to make local authorities more financially sustainable.</p> <p>However, as noted above, an information disclosure regime may marginally improve economic efficiency, and this could free up some limited additional funding for the significant backlog of investment required.</p> <p>It is also expected that greater information disclosure will increase the amount of depreciation funding that is accrued and spent on three waters infrastructure.</p> <p>The ability to borrow would still be significantly constrained</p> <p>Water service entities would not be expected to be able to borrow significantly more than they currently are, given the covenants imposed by lenders (that is, the Local Government Funding Agency debt to income limits).</p> <p>Water entities' financial position might be roughly the same</p> <p>These factors in combination are not expected to fundamentally improve the financial sustainability of the system. In fact, it is possible that water service providers would be in roughly the same position in this respect as under the counterfactual.</p> <p>Moreover, it is expected that household bills would remain similar to those under the counterfactual.</p>	<p>Greater transparency and accountability may marginally affect the available funding</p> <p>The introduction of an Information Disclosure regime is not intended to improve the financial sustainability of local authorities as noted in strategic option one.</p> <p>However, it is expected there would be marginally more funding available, as a result of the economic efficiencies generated by an information disclosure regime and the greater scrutiny of depreciation expenditure, as noted in strategic option one.</p> <p>A more stable funding profile is expected</p> <p>Establishing a national fund to aggregate revenue from water-related charges and redistribute it to councils will also provide greater funding certainty to water service providers, which should in turn result in a more stable investment profile.</p> <p>While this greater funding certainty would be a material improvement on the status quo, the improvement is not expected to be big enough to reduce the significant investment backlog and qualitatively increase the funding available.</p> <p>The ability to borrow would still be significantly constrained</p> <p>Water service entities would not be expected to be able to borrow significantly more than they currently are, given the covenants imposed by lenders.</p> <p>Water entities' financial position may be marginally better</p> <p>The combination of the above suggests that water service entities' financial position would be marginally better than under the counterfactual.</p> <p>It is also expected that household bills would be similar to those under the counterfactual.</p>	<p>Aggregation and balance sheet separation would provide economies of scale and greater borrowing capacity</p> <p>Establishing three or four water entities would enable larger customer bases, a larger revenue catchment, and the ability to cross-subsidise. This would provide water service providers with stronger balance sheets and greater flexibility to direct significant investment to where it is needed¹⁴¹.</p> <p>Increased economies of scale coupled with an economic regulation regime (including information disclosure and price quality regulation) would be expected to result in significant cost efficiencies (a roughly 45% improvement on current cost per connection rates) that could free up additional funding for the significant backlog of investment required.</p> <p>Balance sheet separation, coupled with autonomy of funding decisions, would also be expected to result in an increased ability to borrow.</p> <p>Initial estimates are that the reforms could increase the borrowing capacity of the local government sector by up to \$2B across all local authorities.</p> <p>Consumers' bills could be significantly lower</p> <p>WICS analysis has shown the potential impact on customer bills from various amalgamation scenarios. One scenario involving four water service entities with a lateral split showed that consumers would face annual bills that are 45% to 71% lower than under a no-amalgamation scenario¹⁴².</p> <p>The sector would be stronger and more sustainable financially</p> <p>The combination of the above factors is expected to result in a considerably stronger and more sustainable financial position for water service entities than the counterfactual.</p>

¹³⁹ Water Industry Commission for Scotland (2021). Economic analysis of water services aggregation. Phase 2.

¹⁴⁰ Water Industry Commission for Scotland (2021). Economic analysis of water services aggregation. Phase 2.

¹⁴¹ CAB-20-MIN-0003 refers. Accessed through: [https://www.dia.govt.nz/diawebsite.nsf/Files/Proactive-releases/\\$file/three-waters-service-delivery-and-funding-arrangements-approach-to-reform.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Proactive-releases/$file/three-waters-service-delivery-and-funding-arrangements-approach-to-reform.pdf)

¹⁴² Water Industry Commission for Scotland (2021). Economic analysis of water services aggregation. Phase 2.

Criteria / Strategic Option	Counterfactual (no further reform)	Strategic Option one: Introduction of information disclosure regime	Strategic Option two: Introduction of information disclosure regime and national funding regime	Strategic Option three: Systemwide transformation
	<p>For some local authorities, average household costs in 2050 could reach as high as \$9,500 in today's dollars and would be unaffordable for many households.</p> <p>The situation is not much better for larger provincial and metropolitan local authorities. Average household bills (in 2019) for provincial local authorities ranged from \$609 to \$2,553, with a median of \$1,118. By 2050, these bills would need to increase by between 1.8 and 8.4 times to meet the required investment.</p> <p>Similarly, average household bills across metropolitan local authorities would need to increase by between 1.5 and 7.1 times. In some metropolitan local authorities, bills could reach between \$1,700 and \$3,500 per year in today's dollars.</p>			

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Criteria / Strategic Option	Counterfactual (no further reform)	Strategic Option one: Introduction of information disclosure regime	Strategic Option two: Introduction of information disclosure regime and national funding regime	Strategic Option three: Systemwide transformation
	0	0	0	✓
Improves infrastructure delivery	<p>There is significant underinvestment</p> <p>As noted above, there is evidence of significant underinvestment by local authorities in three waters infrastructure¹⁴³.</p> <p>WICS estimate that between \$75B and \$140B of additional investment will be needed over the next 30 years to upgrade three waters assets to meet stricter environmental and drinking water standards and meet expected population growth¹⁴⁴.</p> <p>It would take decades to clear the investment backlog</p> <p>Some local authorities will be able to clear this backlog within 40 years. However, rough estimates are that 30 to 47 local authorities would not clear this backlog within 60 years, and some of that group – 10 to 18 local authorities – are not expected to clear it within 80 years¹⁴⁵.</p> <p>Moreover, the proportion of the population connected to water and wastewater services varies from around one third of properties in the far north, to all properties in most major centres. The median numbers of properties receiving services are 81% for water supply, and 75% for wastewater¹⁴⁶.</p> <p>Accelerating investment to improve levels of service and expand access requires a range of inputs contemplated in this RIA, including sustainable funding and effective governance arrangements.</p> <p>Smaller councils also face capability challenges</p> <p>Additionally, good capability is needed to support effective infrastructure delivery. Specialist skills are needed to design, procure, deliver and manage three waters services. However, it is often difficult for smaller councils and service providers to develop the capabilities required, and to access and retain people with specialist skills.</p> <p>These challenges tend to be greater for smaller rural and provincial councils, as well as non-council drinking water suppliers (such as small private and community schemes, and marae)¹⁴⁷.</p>	<p>Introducing an information disclosure regime would not materially influence any of the levers that are needed to accelerate infrastructure delivery, although it will provide greater transparency for asset management decisions.</p> <p>Information disclosure would not accelerate investment, or address capability and capacity</p> <p>It is expected that the time taken to reduce the investment backlog would be comparable to the counterfactual.</p> <p>Similarly, information disclosure alone will not address chronic capacity and capability challenges that local authorities are facing.</p> <p>Information disclosure could highlight, but would not resolve, access challenges</p> <p>Finally, it is expected that information disclosure may shine a light on access challenges (that is, the ability to access high-quality three water services) for certain populations.</p> <p>However, without significantly greater funding (and financing capacity), strong governance structures, and strong capacity and capability, it is expected that these access challenges will persist.</p>	<p>Information disclosure would not accelerate investment, or address capability and capacity or access</p> <p>An information disclosure regime would not materially influence any of the levers that are needed to accelerate infrastructure delivery, expand levels of service to populations with poor access to three waters services, and redress capacity and capability challenges, as noted under strategic option one.</p> <p>It is expected that the time taken to reduce the investment backlog would be comparable to the counterfactual.</p> <p>A new national fund could support a more stable investment pipeline</p> <p>Establishing a national fund to aggregate revenue from water-related charges and redistribute it to councils would provide greater funding certainty to water service providers, which should result in a more stable investment profile.</p> <p>This could support a more stable investment pipeline, one that enables contractors and suppliers to better prepare for upcoming delivery programmes.</p> <p>But the new funding system would not substantially reduce the investment gap</p> <p>However, while greater funding certainty is an improvement on the status quo, the improvement is not expected to be big enough to significantly reduce the large investment backlog.</p>	<p>This reform package would significantly accelerate investment in infrastructure</p> <p>Strategic option three, as a comprehensive package of interventions that individually and collectively respond to the root causes of New Zealand’s persistent three waters problems, is expected to significantly accelerate the necessary infrastructure delivery.</p> <p>It is assumed that this backlog could be cleared within 30 to 40 years.</p> <p>These are the key features that will drive greater investment</p> <p>In particular, the reform package will have these key features:</p> <ul style="list-style-type: none"> the aggregating of water services into a small number of delivery entities, which will provide efficiencies of scale; structural or balance sheet separation, which will allow greater access to capital markets and support sustainable funding for the necessary investment; the introduction of price quality regulation to ensure entities are running efficiently, meeting quality standards, and charging water users a fair price; and independent, professional, competency-based boards to govern water service entities and make appropriate investment decisions¹⁴⁸. <p>Aggregation should increase capacity and capability, and boost confidence</p> <p>It is also expected that greater aggregation of water service entities will provide capacity and capability benefits for these entities, and provide supply chain participants with greater confidence in the future investment pipeline.</p>

¹⁴³ Department of Internal Affairs (2020). Information Memorandum (draft).

¹⁴⁴ Water Industry Commission for Scotland (2021). Economic analysis of water services aggregation. Phase 2.

¹⁴⁵ Mafic (2021) EIA Counterfactual model.

¹⁴⁶ Water New Zealand (2019) National Performance Review. Accessed through: https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=4271

¹⁴⁷ CAB-20-MIN-0003 refers. Accessed through: [https://www.dia.govt.nz/diawebsite.nsf/Files/Proactive-releases/\\$file/three-waters-service-delivery-and-funding-arrangements-approach-to-reform.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Proactive-releases/$file/three-waters-service-delivery-and-funding-arrangements-approach-to-reform.pdf)

¹⁴⁸ DIA (2021) Intervention Logic Map. Appendix 3

Criteria / Strategic Option	Counterfactual (no further reform)	Strategic Option one: Introduction of information disclosure regime	Strategic Option two: Introduction of information disclosure regime and national funding regime	Strategic Option three: Systemwide transformation
	0	✓	✓	✓✓
Improves decision making and performance	<p>The current system does not support high performance</p> <p>A range of observations suggest that the configuration of the current system is not supporting a high level of performance.</p> <p>A sample of these indicators include:</p> <ul style="list-style-type: none"> • Poor health and environmental outcomes. Decisions around financing have a major impact on the quality of water and infrastructure and this has a big influence on the ability of water sector managers to carry out their role in providing healthy water¹⁴⁹. • Poor enforcement. 627 nonconformances with wastewater treatment plant consents were identified in 2018/19 yet only 11 compliance actions were taken¹⁵⁰. • Poor investment accountability. The level of actual investment vs planned investment is continually below 100%, indicating that local authorities spend less capital than they budget for. The median percentage over the past five years has been between 59% and 92%¹⁵¹. • Lack of specialist governance capability. The elected member governance model relies on elected community representatives having the skills needed to govern a complex set of assets and engineering systems¹⁵². <p>Notably, the total number of complaints about three waters services received by local authorities continues to climb – in 2019, there were almost 35,000 complaints (up from around 23,000 in 2016)¹⁵³.</p> <p>WICS analysis of that body of evidence, shows that current performance falls well below comparator United Kingdom and Scotland organisations, as measured by the Overall Performance Assessment score^{154,155}.</p> <ul style="list-style-type: none"> • United Kingdom and Scotland comparators: 290-324. 	<p>Information disclosure would increase transparency and accountability, and enable benchmarking</p> <p>It is expected that an information disclosure regime would materially increase transparency and accountability across the sector – as well as improving the consistency of the information provided, and so enable benchmarking.</p> <p>While there are limited examples of an information disclosure regime being as a separate intervention in the water sector, a review completed for the airports sector noted that there were consistently positive effects on the quality of services, particularly as natural monopolies become more responsive to consumer demand¹⁵⁶.</p> <p>It is also expected that greater transparency of decision-making and performance would lead to actual expenditure and budgeted expenditure being more aligned, and to depreciation funding being spent on renewals.</p> <p>But information disclosure would not significantly improve decision making and performance</p> <p>However, enhanced information disclosure would still not support a significant improvement in decision making and performance, given:</p> <ul style="list-style-type: none"> • residual constraints and limitations on funding and financing mechanisms; • continuing misalignment of incentives for decision makers who control three waters budgets; and • inherent scale issues, and capacity and capability challenges in delivery. 	<p>Information disclosure would increase transparency and accountability, and marginally improve performance and decision making</p> <p>It is expected that an information disclosure regime would materially increase transparency and accountability, with marginal improvements in decision making and performance, across the sector, as shown in strategic option one.</p> <p>A new funding regime would increase funding certainty</p> <p>It is also expected that a more sustainable funding model would provide greater investment certainty that enables contractors and suppliers to better prepare for upcoming delivery programmes.</p> <p>But this option would still not significantly improve decision making and performance</p> <p>However, this strategic option would still not support significant improvement in decision making and performance given:</p> <ul style="list-style-type: none"> • residual constraints and limitations on the amount of funding and financing that can be accessed; • continuing misalignment of incentives for decision makers; and • inherent scale issues, and capacity and capability challenges in delivery. 	<p>The Scottish experience indicates that this strategic option would materially improve service levels</p> <p>WICS notes that in 2006, Scottish Water had an overall performance assessment score of 130. This was 67% of the “best in class”. Scottish Water has since overcome its challenges and has now improved its levels of service performance to match the best performing companies in England and Wales (i.e., an overall performance assessment of 350-400).</p> <p>The key features that enables this improvement included: greater economies of scale, clarity of policy priority, introduction of economic regulation, excellence in management, and robust water quality and environmental regulation.</p> <p>WICS notes that the first four of these elements are not currently in place in New Zealand and therefore levels of service can be expected to materially improve if these are addressed. The fifth element, robust water quality and environmental regulation, is still in its relative infancy.</p> <p>These are the relevant features of this strategic option</p> <p>This systemwide transformation option proposes a comprehensive package of interventions that individually and collectively responds to these challenges:</p> <ul style="list-style-type: none"> • establishing independent water service delivery entities; • aggregating the delivery of water services into a small number of delivery entities to provide scale efficiencies; • establishing independent, professional, competency-based boards to govern those entities and make appropriate investment decisions; and • introducing information disclosure to provide greater transparency and accountability for asset management decisions, and price quality regulation to ensure entities are running efficiently, meeting quality standards, and charging a fair price to water users. <p>This strategic option would also strengthen the stewardship of the system</p> <p>This Strategic Option also seeks to strengthen system stewardship by:</p>

¹⁴⁹ Water New Zealand (2021) Water NZ – Health Committee, oral submission on Water Services Bill. Accessed through: https://www.waternz.org.nz/Story?Action=View&Story_id=1453

¹⁵⁰ Water New Zealand (2019) National Performance Review. Accessed through: https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=4271

¹⁵¹ Water New Zealand (2019) National Performance Review. Accessed through: https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=4271

¹⁵² MartinJenkins (2017) Three Waters Review: The Interface between Asset Management and Council Governance Practices. Accessed through [MJ-Three-Waters-Review-Governance-Final-Report-Dec-2017.pdf \(dia.govt.nz\)](https://www.dia.govt.nz/assets/MJ-Three-Waters-Review-Governance-Final-Report-Dec-2017.pdf)

¹⁵³ The increasing number of complaints may also be attributed to better recording of complaints by local authorities.

¹⁵⁴ Ofwat introduced the overall performance assessment (OPA) in 1999. It covers four broad categories of measures. These are: **Water supply**: inadequate pressure, unplanned supply interruptions, water restrictions and water quality;

Wastewater service: internal sewer flooding incidents (due to overloaded sewers and other causes) and properties at risk of sewer flooding; **Environmental performance**: leakage, sewage sludge disposal and non-compliant wastewater treatment works; and

Customer contact which covers telephone contacts, response to billing contacts and response to written complaints.

¹⁵⁵ Water Industry Commission for Scotland (2021). Supporting Materials Part 2: Scope for Efficiency.

¹⁵⁶ MBIE (2014) Effectiveness of Information Disclosure Regulation for Major International Airports. Accessed through: <https://www.mbie.govt.nz/assets/6f391fb0fc/major-airports-info-disclosure-discussion-document.pdf>

Criteria / Strategic Option	Counterfactual (no further reform)	Strategic Option one: Introduction of information disclosure regime	Strategic Option two: Introduction of information disclosure regime and national funding regime	Strategic Option three: Systemwide transformation
	<ul style="list-style-type: none"> • New Zealand metro local authorities: 99–138 (or 39% as effective as United Kingdom and Scotland comparators). • New Zealand provincial Local authorities: 82–122 (or 33% as effective as United Kingdom and Scotland comparators). • New Zealand rural Local authorities: 78–117 (or 32% as effective as United Kingdom and Scotland comparators). 			<ul style="list-style-type: none"> • creating clear mechanisms for regulatory and policy coordination, system oversight, and performance improvement; and • implementing tools and mechanisms to enable consumers and communities to participate effectively in three waters decision making, including strengthened roles for iwi/Māori.

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Criteria / Strategic Option	Counterfactual (no further reform)	Strategic Option one: Introduction of information disclosure regime	Strategic Option two: Introduction of information disclosure regime and national funding regime	Strategic Option three: Systemwide transformation
Uphold the rights and interests of iwi/Māori	XX	0	✓	✓✓
	<p>Iwi/Māori have said they are not satisfied with the Treaty/Tiriti partnership approach and level of cultural responsiveness of the current delivery system by local authorities, and that mātauranga Māori frameworks are not understood and applied at the hapū and whānau level¹⁵⁷.</p> <p>Māori are over-represented in communities with no or poor-quality water supplies – there is a concern that the costs and burden of compliance will fall disproportionately on these communities.¹⁵⁸</p> <p>Persistent poor water quality outcomes impacting on Te Mana o te Wai, mauri, and wairua.</p>	<p>Information disclosure on its own would be largely ineffective without major system change</p> <p>An information disclosure regime provides another potential mechanism to hold water service entities to account for the extent to which they uphold the rights and interests of iwi/Māori.</p> <p>However, this mechanism will always be largely ineffective by itself unless it is coupled with significant changes to system design, including but not limited to:</p> <ul style="list-style-type: none"> • additional funding to support meaningful engagement with iwi/Māori and to include te ao Māori approaches and capability within entities; • augmented governance arrangements whereby the interests of mana whenua are better represented; • the inclusion of cultural values and measures in regulatory design and standards; and • additional funding for investment that minimises negative environmental effects in waterways. 	<p>Information disclosure on its own would be largely ineffective without major system change</p> <p>An information disclosure regime provides another potential mechanism to hold water service entities to account for the extent to which they uphold the rights and interests of iwi/Māori.</p> <p>However, this mechanism will always be largely ineffective by itself unless it is coupled with significant changes to system design, as noted under strategic option one.</p> <p>A new funding regime could help ensure that rights and interests of iwi/Māori are upheld</p> <p>Establishing a national fund to aggregate and distribute revenue from water-related charges would provide an additional means of ensuring that water service entities uphold the rights and interests of iwi/Māori. For example, funding could possibly be conditional on them implementing some of the initiatives identified in strategic option three.</p> <p>However, the quantum of increased funding availability is likely to be modest in comparison to strategic option three, and therefore this option is not scored as strongly.</p>	<p>Iwi and Māori would be supported through a range of mechanisms</p> <p>While there is no single way to uphold Iwi/Māori rights and interests, a range of elements of the strategic option three have been developed to support this objective¹⁵⁹. These include:</p> <ul style="list-style-type: none"> • Governance. A mana whenua group would be required at the governance level, with rights equal to territorial authorities. • Board arrangements. A central way for Te Mana o te Wai to be embedded as an operating principal of the entity is to ensure that the Board is adequately competent both as a Treaty partner and with expertise in accessing mātauranga Māori, tikanga Māori and te ao Māori knowledge to inform the water entities activities. • Establishing mana whenua interests. The proposed entities will operate within the environmental regulatory system, however it will also be important that they have a direct relationship with mana whenua given the significance of water from a te ao Māori perspective. • Kaitiakitanga mechanism. Mana whenua would be able to provide a statement of mana whenua (with flexibility as to form), and water entities would be required to respond • Community and consumer input. Māori have interests as consumers and community members within the water service system and there would be mechanisms for them to have input.

¹⁵⁷ Department of Internal Affairs (2021). Local Government Briefing (26 Feb 2021) Three Waters Review: Māori rights and interests.

¹⁵⁸ Department of Internal Affairs (2020). Taumata Arowai Establishment Unit | Three Waters Reform Programme. Hui a Motu – September/October 2020

¹⁵⁹ Department of Internal Affairs (2021). Local Government Briefing (26 Feb 2021) Three Waters Review: Māori rights and interests.

Criteria / Strategic Option	Counterfactual (no further reform)	Strategic Option one: Introduction of information disclosure regime	Strategic Option two: Introduction of information disclosure regime and national funding regime	Strategic Option three: Systemwide transformation
Ease of implementation	0	x	xx	xx
	<p>This option involves no changes to the status quo.</p>	<p>Implementing information disclosure would be comparatively easy</p> <p>An information disclosure regime is expected to be comparatively easy to implement – particularly in comparison to strategic options two and three – but will still impose costs on the system. Broadly, it is expected that the costs implementing information disclosure will consist of:</p> <ul style="list-style-type: none"> • structural implementation costs from the introduction of new legislation or regulation and the need for dedicated officials to oversee and monitor the information disclosure system. • additional costs and business processes that water service providers would incur. <p>Structural implementation costs would be modest</p> <p>Structural implementation costs are expected to be modest and will centre on the cost of establishing a dedicated team of officials that will monitor and evaluate the information disclosure regime.</p> <p>As a frame of reference, the multi-year appropriation (19-24 inclusive) for the Commerce Commission’s Regulation of airport services is \$2.7m¹⁶⁰. This cost is not the same as establishing and operating a new information disclosure regime, and is applicable to the airport sector (which only has three parties monitored). At the other end of the spectrum, it is noted that the multi-year appropriation for Part Four electricity and gas regulation (inclusive of price quality regulation) is around \$35m. This covers information disclosure and price quality regulation for 29 electricity distribution businesses and four gas pipeline businesses.</p> <p>Additional costs will depend on the specific disclosure requirements</p> <p>Additional costs imposed on water service providers will also depend on what specific information must be disclosed¹⁶¹.</p> <p>Drinking water and wastewater providers already publish a considerable amount of information about their business, for example in Annual Reports, Asset Management Plans, and Long-Term Plans. Moreover, Water New Zealand already</p>	<p>Implementing information disclosure would be comparatively easy</p> <p>An information disclosure regime is expected to be comparatively easy to implement but will still impose costs on the system, as noted under strategic option one.</p> <p>But establishing a national funding mechanism would be challenging</p> <p>Establishing a national three waters fund, similar to the National Land Transport Fund (similar to that the New Zealand Transport Agency administers) is often proposed as an alternative to the reform package in strategic option three. If there is not broader reform of the three waters service delivery system, this option could be explored further as a way of meeting the funding challenges associated with the current system. However, establishing a national three waters funding mechanism would involve fundamental challenges:</p> <ul style="list-style-type: none"> • The sources of funding. The closest local example, the National Land Transport Fund, is sourced directly from road users through various charges, with this revenue redistributed according to a transparent allocation formula and 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 – such as using the tax system, implementing a national levy, and legislating to enable local authorities to implement a local levy - but all options have significant operational inefficiencies. • The mechanism to distribute funding. A methodology and process for allocating funding would need to be developed. Significant work would be needed to design, implement, and administer a new regime. This would be challenging, time-consuming, and costly, and it would require significant public engagement to ensure success. • The administration of funding. 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 	<p>A systemwide transformation would be a significant undertaking</p> <p>The implementation of systemwide transformation of the three waters sector, within three years, would be a significant undertaking and a once-in-a-generation exercise.</p> <p>The following interventions would all come with considerable complexities and challenges:</p> <ul style="list-style-type: none"> • establishing independent water service delivery entities; • introducing economic regulation covering information disclosure and price-quality regulation; • strengthening system stewardship, including the creation and use of clear mechanisms for regulatory and policy coordination, system oversight, and performance improvement, and also the introduction of tools and mechanisms to enable consumers and communities to participate effectively in three waters decision making, including strengthened roles for Iwi/Māori. <p>However, the benefits would clearly outweigh the implementation costs</p> <p>The estimated costs of implementation could be at least \$1B - \$2B, but these pale in comparison to the expected benefits.</p>

¹⁶⁰ Appropriation (2019/20 Estimates) Act 2019. <https://www.legislation.govt.nz/act/public/2019/0048/latest/whole.html>

¹⁶¹ Robinson, M.D. (2014) What future economic regulation might look like – lessons from electricity, gas and airports. Accessed through: https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=408

Criteria / Strategic Option	Counterfactual (no further reform)	Strategic Option one: Introduction of information disclosure regime	Strategic Option two: Introduction of information disclosure regime and national funding regime	Strategic Option three: Systemwide transformation
		<p>captures a range of information from water entities to inform its National Performance Review.</p> <p>If the information disclosure requirements are similar to this, then the information disclosure regime may not be too different from existing business practices. However, given the poor levels of performance in the sector, it is expected that there would be additional information requested beyond what is already captured.</p> <p>Complying with these requirements will be likely to involve substantial time and cost – firstly to understand the regulations, and then to comply with them, and the experience of electricity distribution businesses is that these regimes can be onerous for small businesses¹⁶².</p>	<p>completely new entity altogether. This adds to the costs and complexity associated with the fund.</p>	

Proactively released by the Department of Internal Affairs

¹⁶² Robinson, M.D. (2014) What future economic regulation might look like – lessons from electricity, gas and airports. Accessed through: https://www.waternz.org.nz/Attachment?Action=Download&Attachment_id=408

Strategic RIA Appendix 8 – List of groups that have been engaged with throughout the process

Joint Central/Local Government Three Waters Steering Committee

Membership includes:

- Chief Executives and mayors from a range of local authorities, including Central Hawke’s Bay District Council, Nelson City Council, Ashburton District Council, Taranaki Regional Council, Western Bay of Plenty District Council, Palmerston North City Council, Auckland Council, Hastings District Council, Otago Regional Council, Christchurch City Council, New Plymouth District Council, and Hutt City Council;
- officials from the Department, Treasury, and MBIE;
- Chief Executive of Taumata Arowai; and
- representatives from LGNZ and Taituarā.

Meets monthly, or fortnightly if significant issues are being worked through.

Communications Sub-group of the Steering Committee

- Sub-group of the Steering Committee
- Test issues around the communication of the Three Waters Reform Programme

Water Infrastructure Technical Reference Group

Membership includes asset managers, water engineers, delivery specialists, and other experts with knowledge of three waters assets and finances, coming from a range of organisations, such as:

- Water New Zealand;
- range of local authorities, including Auckland Council, Rotorua Lakes Council, Kāpiti Coast District Council, Marlborough District Council, Hastings District Council, Christchurch City Council, South Wairarapa District Council, and Manawatū District Council;
- Wellington Water and WaterCare; and
- Fulton Hogan, Citycare, Downer, and Veolia.

Tests more technical issues related to the reform programme.

Meets monthly, or fortnightly if significant issues are being worked through.

System Design Reference Group

Membership includes chief executives, chief financial officers, chief legal officers, and tier 2 infrastructure managers from:

- a range of local authorities, including Porirua City Council, Hamilton City Council, Auckland Council, Timaru District Council, Hauraki District Council, Marlborough District Council, Whangārei District Council, Greater Wellington Regional Council, Thames Coromandel District Council, Buller District Council, Queenstown Lakes District Council, and Manawatū District Council;

- Environment Canterbury; and
- Watercare.

This group tests issues around overall system and institutional design, entity purpose, ownership, governance, accountability, and funding models.

Meets monthly, or fortnightly if significant issues are being worked through.

Stormwater Technical Working Group

Membership includes:

- te ao Māori experts;
- stormwater experts from local authorities, including Christchurch City Council, Waimakariri District Council, Queenstown Lakes District Council, Greater Wellington Regional Council, Hamilton City Council, Gisborne District Council, Hastings District Council, Western Bay of Plenty District Council, Otago Regional Council, Auckland Council, and Tasman District Council;
- representatives from Auckland Healthy Waters, Auckland Transport, and Watercare;
- representative from Wellington Water;
- representative from Stormwater Environmental;
- representatives from Beca;
- representative from Water New Zealand;
- officials from the Department, MfE, and Waka Kotahi; and
- representative from Taituarā.

Meets monthly, for full-day workshops.

Te Ao Māori Technical Working Group

Membership includes a wide range of technical, industry, governance, and iwi/Māori work experience and backgrounds.

- Technicians are from a range of iwi from Auckland, Northland, and Taupō.
- The team are recruiting for technicians from Waikato, Southland, and Hawkes Bay.

Meets every 5 weeks.

The group tests policy options.

Strategic RIA Appendix 9 – Themes from regional engagement/workshops

Themes from July/August 2020 sector workshops

373. The sector was broadly receptive to the proposed reform programme with the following themes arising during the workshops:¹⁶³

- Participants were keen to see more data and modelling, particularly at a local level, to better understand our current three waters system and, the pressures and challenges faced, and to co-design and test options that will work best for communities.
- There were mixed views on whether stormwater should be included in the reform, with some strongly advocating for it to be a focus and others suggesting it should be included on a case-by-case basis.
- Iwi/hapū representatives were interested in ensuring their rights and interests would be heard and woven into consideration of future three waters service arrangements.
- There were questions about what governance and ownership of new entities might look like, and how communities would be able to retain strong local voices and choices in their water services into the future.
- Participants were keen to understand how a transfer of their communities' assets would be managed fairly and equitably, should the reforms proceed as proposed.
- Participants raised questions as to the role of local government following any transition to new water entities. There was a keen interest in ensuring a parallel conversation is progressed (including fleshing out local authorities' enduring role in delivering community wellbeing) at a similar pace to the reform programme.

Themes from hui-ā-motu, September 2020

374. The following themes emerged from the hui-ā-motu¹⁶⁴:

- There was resounding support throughout the hui-ā-motu for a stronger partnership between tāngata whenua and the Crown.
- It is important that the Department alongside iwi, hapū, and Māori work through rights, interests and entity ownership and governance, so the Department can identify the roles and responsibilities of all, as Treaty/Tiriti partners, at these levels.
- One of the major concerns iwi shared was regarding their ability to participate and engage in this kaupapa. Currently, there is insufficient capacity and capability for

¹⁶³ Department of Internal Affairs (2020). Three Waters Steering Committee workshops: Summary report. Available at [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/\\$file/Three-Waters-Steering-Committee-workshops-summary-report-August-2020.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-reform-programme/$file/Three-Waters-Steering-Committee-workshops-summary-report-August-2020.pdf)

¹⁶⁴ Department of Internal Affairs (2020). Three Waters Reform Programme and Taumata Arowai: Hui-ā-Motu Summary Report. Available at [https://www.dia.govt.nz/diawebsite.nsf/Files/Three%20Waters%20Hui%20a%20Motu%20-%20Summary%20Report%202021/\\$file/Three%20Waters%20Hui%20a%20Motu%20-%20Summary%20Report%202021.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three%20Waters%20Hui%20a%20Motu%20-%20Summary%20Report%202021/$file/Three%20Waters%20Hui%20a%20Motu%20-%20Summary%20Report%202021.pdf)

many iwi, hapū, and Māori to engage. As a result, the Department heard many calls for support to develop Māori capacity and capability to participate throughout the reform process and in the new entities as well as alongside Taumata Arowai.

- Iwi also made many calls for protection of their rights, roles and responsibilities as tāngata whenua. Iwi, hapū, and Māori noted that they don't want to see Taumata Arowai issuing permits to their wai. They want to see protection around their cultural assets, and they want to see how the service delivery arrangements will provide this.
- Iwi want to see protections against privatisation of water services and hope to see roles for iwi and hapū being woven into these protections.
- Iwi spoke about their inherent and inter-generational relationships with the waterbodies and landscapes within their rohe. Iwi want to see their mātauranga-ā-iwi incorporated within the three waters reform process and Taumata Arowai's regulatory regime.
- In relation to entity design, they do not want to see catchments broken. There was a strong preference to adhere to the ki uta ki tai concept and to ensure that the entity boundaries take this into account. Additionally, iwi, hapū and Māori do not want their whakapapa, iwi, and hapū boundaries to be separated by the new entities.

Themes from March 2021 sector workshops

375. In March 2021, the Department presented its draft reform proposals. Key themes are summarised as below:

- **Challenges:** Acknowledgement that the challenges of the status quo are substantial and growing.
- **Outcomes and opportunities:** Ensuring the Reform Programme remains based in the outcomes (and opportunities) we wish to see for a future Aotearoa and our people.
- **Treaty/Tiriti Partnership:** Ensuring the opportunity for stronger mana whenua rangatiratanga in the provision of water services is realised and that the reform process embodies a true Treaty/Tiriti partnership at all stages.
- **Reform timelines:** The reform timeframes set by the Government were met with concerns about the timing and sequencing of a variety of aspects.
- **Voluntary or mandatory?** Questions were raised about whether the reforms should remain voluntary or should be mandated by central government.
- **The evidence base:** A need to see more detailed data and analysis at a local level to be able to better understand the implications of the reforms for local communities and how the reforms would achieve efficiencies.
- **Future For Local Government:** A desire to see answers to the question of what is the future of local government following the removal of three waters services ahead of the Three Waters and Resource Management Reforms.

- **Privatisation protections:** Agreement the reforms need to protect against any future privatisation of the water entities but want to see more detail of these protections.
- **Responsiveness to local needs:** A need to ensure local authorities and mana whenua can influence the new entities' planning and investment decisions to ensure they are responsive to local needs. However, there was debate about the appropriate level of influence of local government in the entities.
- **Transition management:** Local government attendees were keen to understand how the transition of assets and debt would be managed through any future transition and to ensure their good investment would not be punished.
- **Workforce enhancement:** Concern about the workforce capacity and capability to deliver an increased future works programme and a keenness to see the local workforce enhanced and maintained through the reform programme.
- **Miscellaneous:** Other themes discussed across the workshops included queries about why the Department has been working with Scotland, what responsibilities the entities would have for working with private suppliers, and how rural water schemes are considered in the reforms.

Proactively released by the Department of Internal Affairs

Strategic RIA Appendix 10 – Executive summary of Farrierswier report ‘Three Waters Reform: Review of methodology and assumptions underpinning economic analysis of aggregation’



Three Waters Reform

Review of methodology and assumptions underpinning economic analysis of aggregation

2 May 2021

Executive summary

Purpose of our report

This report sets out findings from our review of work completed by the Water Industry Commission of Scotland (WICS) to assess the potential benefits from amalgamating and reforming water, wastewater, and stormwater (3waters) services from 67 council areas in New Zealand into a small number of new operationally and financially independent water services entities subject to economic regulation and other stewardship reforms – a reform program that is being considered by the New Zealand Government as part of the Three Waters Reform Program (3waters reform). This program is being led by the Department of Internal Affairs (DIA).

Our task was to review WICS' methodology and assumptions to undertaking this assessment, including by commenting on:

- the extent to which the efficiency assumptions included in the WICS study of the economic benefits of aggregation (and associated reform) are reasonable for the purpose of providing advice to ministers
- the extent to which the assumptions relating to the financial and commercial position of the new entities are reasonable
- the WICS methodology and its appropriateness for developing advice on the potential benefits of the proposed reform package
- the potential that exists for efficiency gains or losses (dynamic, productive and allocative) in New Zealand and the ways in which these could be realised.

Our review is based on the version of WICS' analysis and supporting material provided to us as at 21 April 2021. We have not considered any subsequent changes to that analysis.

Overall finding

In our opinion, the overall approach adopted by WICS to modelling the potential impact that amalgamation of water entities and associated reforms could have on projected expenditure, financing costs, revenue and prices of water service providers should give reasonable estimates in terms of direction and order of magnitude¹⁶⁵.

By using a standardised approach to projecting cash flows over a 30-year horizon for councils if amalgamation and associated reforms do not occur – the counterfactual – and comparing these to those for the water entities if it does – the factual – WICS is able to test the impact that assumptions as to potential investment and operating requirements, efficiencies, financing, and revenue profiles may have on expenditure per connected person and household bills.

Given the nature of the analysis, there are invariably limitations with it, including that:

- forecasts almost always turn out incorrect, especially over a 30-year horizon
- choices need to be made over a myriad of modelling approaches, inputs, and assumptions that reasonable minds may disagree with

¹⁶⁵ Due to the scope of our review, we cannot provide an opinion on whether the forecasts and estimates generated by WICS by applying its methodology and assumptions are reasonable. Given this, we have focused our review on whether the modelling is likely to give estimates that are appropriately either positive or negative (i.e. direction) and are at an appropriate scale (i.e. order of magnitude).

- decisions on reform processes of this kind are typically undertaken while facing information challenges – all reforms face limitations and uncertainty as to the quality and availability of information needed to project long-term outcomes
- there are a wide range of unknowns, including as to what the eventual structure of the 3waters sector will actually look like once the 3waters reform is implemented.

Yet, for the reasons we discuss below, we do not consider that the modelling undertaken by WICS and the choices it has made over how to do this materially affect the direction (i.e. sign) of estimated benefits from amalgamation and associated reforms. We could, of course, be wrong about this – with the actual outcome if amalgamation and associated reforms go ahead being a reduction in efficiency or otherwise some form of economic loss. However, we consider that highly unlikely based on the information we have reviewed and our experience working across a range of utility infrastructure, including water infrastructure in other jurisdictions.

The order of magnitude of benefits estimated by WICS appears feasible, especially given the 30-year horizon being considered. Sensitivity analysis undertaken by WICS shows that the estimated benefits from amalgamation and associated reform – in terms of average household bills in 2051 – can vary materially if key assumptions are changed¹⁶⁶. Although this analysis shows that the direction of those benefits is in almost all cases positive, the order of magnitude of estimated benefits could vary noticeably if different assumptions were adopted.

Importantly, our review has not assessed whether the outputs from WICS' analysis (e.g. expenditure, revenue and price forecasts) are reasonable, nor whether the calculations used to derive those outputs are free from error¹⁶⁷. We also have not assessed whether financial inputs provided through the Request for Information (RFI) process or by DIA's commercial and financial advisors are accurate. We understand that this is a matter for DIA to consider further when preparing its advice to Government.

By not reviewing certain inputs and the outputs for reasonableness, our review of the methodology and assumptions is limited to considering whether WICS' analysis is likely to give estimated benefits that are appropriately either positive or negative (i.e. the direction) and are at an appropriate scale (i.e. the order of magnitude)¹⁶⁸. It is out of scope for us go further to say that the range of estimated benefits produced by that analysis is likely to be reasonable or not.

Scope of WICS analysis

At the outset, it is important to be clear on exactly what WICS' analysis can and cannot say about potential benefits from amalgamation and the associated reforms.

Broadly, WICS is comparing two scenarios¹⁶⁹:

- **A factual** – where amalgamation goes ahead and there are associated economic and other reforms that support improvements to the governance, management, resourcing, and policy direction of 3water services in New Zealand

¹⁶⁶ For that sensitivity analysis, WICS was comparing average household bills for each council area under the counterfactual to amalgamation scenarios 2 and 3 where there are 4 water entities – 3 in the North Island and 1 in the South Island. The outputs from the analysis are presented using histograms of potential outcomes and in most cases show a wide potential range, especially for average household bills under the counterfactual.

¹⁶⁷ We have also not considered broader economy-wide impacts from the proposed amalgamations and associated reforms. We understand that DIA is considering those impacts separately.

¹⁶⁸ In general, there is a hierarchy of uses for estimates produced through analysis like that undertaken by WICS. The most general is the direction of an effect (i.e. positive or negative); the next is the potential scale of the effect (i.e. the order of magnitude). The more specific use is an estimated range of values (i.e. a reasonable range), which will typically be expressed as a defined range around a point value and may also including a probability of the actual value lying within the range (i.e. a confidence interval).

¹⁶⁹ As well as these two scenarios, WICS tests a range of sensitivities (e.g. of assumptions and inputs) across both.

- **A counterfactual** – where amalgamation does not go ahead and, although some reform does apply such as decisions already made to introduce a drinking water regulatory system and environmental standards, this is not as extensive as that applying in the factual because it is not feasible to apply the full suite of governance, management and resource reforms to 67 separate 3water service providers.

The upshot is that when we say that WICS is assessing the benefits of amalgamation and associated reform we really mean that WICS is assessing ‘the benefits of amalgamation and associated reforms that go beyond those applying if amalgamation does not occur’.

This is important because – as discussed below – the United Kingdom data relied on by WICS to estimate potential investment requirements and efficiency gains in New Zealand reflects the economic regulatory regime and other factors (e.g. access to financing and resources) that are present in the United Kingdom, which we understand are similar to those being contemplated for implementation in New Zealand. As such, the benefits estimated by WICS cannot be used to definitively conclude that amalgamation by itself will lead to material efficiency gains in New Zealand. The associated economic and other reforms are an important contributor to the benefits estimated by WICS.

For this reason, WICS did not seek to attribute benefits to amalgamation by itself. It recognised that associated economic and other reforms are pre-conditions for the benefits that it estimated. WICS also applied a special factor adjustment when estimating potential opex efficiency gains for all council areas except for Auckland¹⁷⁰.

Limitations with WICS’ analysis

As noted above, limitations are to be expected with the type of long-range economic analysis undertaken by WICS. Such limitations are inherent in WICS’ methodology and assumption choices and due to current unavoidable constraints, such as lack of empirical data from New Zealand to draw from, other data availability and quality challenges, and what is feasible to achieve in the circumstances (e.g. timeframe and resources).

To help understand the potential impact of some limitations, WICS has completed sensitivity analysis on changes to key assumptions (discussed further in sections 2.4 and 3.3)¹⁷¹. These limitations and their potential impact should be considered when relying on the outputs from such analysis to inform policy and other decisions (discussed further below).

In our view, key limitations with WICS’ analysis include:

- difficulty in estimating future investment requirements over the next 30 years given generally poor asset information, lack of detailed engineering assessment of what is required across New Zealand to improve water quality to match the proposed water quality standards, and uncertain connection growth¹⁷²
- uncertainty over what level of efficiency will be realised by the councils (if no amalgamation and associated reform occurs) and water entities (if amalgamation and associated reform

¹⁷⁰ Specifically, WICS adopted a special factor of 5.1% based on discussions with councils to identify potential differences between the UK and New Zealand.

¹⁷¹ The WICS’ sensitivity analysis that we have seen does not assess the materiality of individual assumptions. Rather, sensitivities are grouped into high and low cases. This means that we are unable to comment on the relative materiality of limitations with reference to their quantitative impact on estimated benefits.

¹⁷² By design, WICS’ analysis does not consider investment needed to improve seismic resilience and address climate change.

does occur) and by when, including whether it is reasonable to assume – as WICS has done – that the level of efficiency realised by the United Kingdom water businesses is a good guide for New Zealand^{173,174}

- it is unlikely that the efficiency assumptions drawing on the United Kingdom experience would capture all the important nuances of the future New Zealand regulatory and policy context that are likely to affect actual realised investment and efficiency outcomes
- alternative approaches could be used to translate forecast expenditure and other costs into projected net present cost, revenue and price (or household bill) outcomes and adopting those alternatives could materially affect how the benefits from amalgamation and associated reforms are presented over the 30 year horizon¹⁷⁵
- it is unclear how appropriate the amalgamation and associated reform cost assumptions are given differences between the reform planned for New Zealand and what occurred in Scotland – we consider that amalgamation and associated reform costs in New Zealand could potentially be higher than they were in Scotland because of the complexity of combining 3 water services from 67 councils into a handful of water entities is, in principle, greater than merging 3 water businesses into one (Scottish Water) and because this also involves separation of water assets and functions from councils¹⁷⁶
- the effect of cultural standards and expectations on future expenditures in New Zealand – such as Māori views on wastewater discharge quality standards – are not included in the base case¹⁷⁷
- the potential for demand side management measures to defer growth expenditure has not explicitly been modelled by WICS in assessing growth expenditure requirements for either the factual or counterfactual scenarios¹⁷⁸
- given the nature of WICS' analysis and challenges in forecasting cash flows over a 30-year horizon, WICS understandably has made some simplified finance assumptions¹⁷⁹
- given the approach adopted by WICS to determining the projected price and revenue paths, care should be taken when considering the projected price levels over the 30 year time period as they could look quite different if alternative profiles were used, different costs were projected, and if the assumed revenue recovered from households (70%) and number

¹⁷³ In our view, there are several potential differences between the New Zealand and UK context that may make it difficult to achieve UK levels of operating efficiency. These include evidence in New Zealand of low levels of economy wide productivity growth (related to New Zealand's remote location and small population), qualification and skills mismatches, and weak competitive pressures including in the construction industry. There are also likely to be differences in the ability of amalgamated water entities to capture asset level optimisation benefits.

¹⁷⁴ WICS has completed some sensitivity analysis of potential efficiency gains. WICS also estimated the breakeven level of efficiency needed to ensure that amalgamation and associated reform did not produce net costs (as opposed to net benefits).

¹⁷⁵ If such alternatives apply equally to the factual and counterfactual scenarios, then the estimated benefits in aggregate may not change materially. However, if different approaches of translating expenditure and costs applies to those scenarios, then they could affect the magnitude of those benefits as well.

¹⁷⁶ We note for clarity that amalgamation and associated reform costs actually have two features and related benefits: separation of water assets and functions from councils; and amalgamation of these into larger entities. WICS' modelling in effect captures both benefits as it is based on UK water businesses that are separated and amalgamated. WICS has included a NZ\$1 billion spend-to-save allowance advised by DIA, which is higher than the equivalent allowance for Scottish Water, and notionally covers both the costs of separation and amalgamation, including entity establishment and transition costs. DIA has advised that the NZ\$1 billion allowance is based on costs incurred in other reform programs like: (1) the Auckland amalgamation, (2) amalgamation of urban and rural fire services, and (3) the establishment of Te Pūkenga, the new national institute of skills and technology. We also note that WICS adopted a comparatively higher spend-to-save allowance for the amalgamated entities than it allowed for in the Scottish Water reform. This may address the potential for higher amalgamation and associated reform costs in New Zealand.

¹⁷⁷ WICS did test a sensitivity of adding a notional 10% uplift to projected investment to test the impact that Māori expectations could have on estimated benefits from amalgamation and associated reform.

¹⁷⁸ WICS considers that such measures are implicitly factored into its modelling because it relies on UK experience to estimate projected investment requirements for New Zealand council areas. However, without comparing the impact that such measures have had on expenditure in the UK to the potential available in New Zealand, we are not convinced that that assumption holds entirely.

¹⁷⁹ However, we consider that these are unlikely to materially affect the direction of the estimated benefits as these largely affect both the factual (with amalgamation and associated reform) and counterfactual (without amalgamation and associated reform) in a similar way.

of households (based on council projections) materially differ from what occurs in reality or between the factual and counterfactual scenarios

- no explicit adjustment was made for the economic and political response to the COVID-19 pandemic – which may have a prolonged impact on forecast cash flows of water entities¹⁸⁰.

Implications for decision makers

Given this, advice to decision makers including Government on potential benefits from amalgamation and associated reform that relies on the outputs from the WICS analysis should make clear that:

- the analysis is high-level and directional and should not be relied on to project actual expenditure, revenue and pricing outcomes – in simplified terms, the analysis is structured to estimate a net benefit from amalgamation and associated reform where the assumed efficiency improvement exceeds the assumed cost from amalgamation and associated reform
- sensitivity analysis undertaken by WICS highlights just how sensitive estimated benefits – in terms of the impact on average household bills in 2051 – are to changes in key inputs and assumptions
- the actual impact of particular amalgamation options on household prices will depend on a wide range of factors, including the expenditure incurred, the form of economic regulation applied, the level and nature of Government support given to the water entities, and the extent of cross-subsidising between regions
- critically, the benefits (or costs) actually realised will depend on whether the amalgamated entities can realise projected efficiencies – which will themselves depend on preconditions (as WICS acknowledged), including that:
 - most councils opt in to amalgamation and associated reforms (including Auckland)¹⁸
 - that the entities will have effective governance arrangements and be able to attract and retain appropriately skilled management
 - that regulatory compliance and enforcement with water quality and other matters is effective
 - that effective economic regulation is established, and
 - the entities have access to the necessary resources to fund the amalgamation and reform processes and over time make the required investment
- it may be beneficial to characterise the costs of separating water assets and functions from councils and amalgamating these into larger entities as ‘restructuring costs’ rather than ‘amalgamation costs’ – these costs are needed to realise benefits in terms of both:
 - more transparent and accountable water entities, and
 - achieving economies of scale.

Qualitative case for efficiency improvements

- As a complement to our review of WICS’ analysis, we also considered whether it is likely that amalgamation and associated reform should lead to efficiency improvements and any boundaries to this.

¹⁸⁰ It is conceivable that the pandemic will just have a temporary effect, with the New Zealand water industry returning to a pre-pandemic operating environment within a few years. The reality is that no one knows for sure. Given this, WICS’ approach of not explicitly modelling the impact of the pandemic is not unreasonable given the long horizon that it is using.

- The factors that will promote allocative, productive, and dynamic efficiency in the water sector have been identified by WICS in its Phase 2 analysis. In our view:
 - management quality will have a critical impact on all aspects of efficiency realised by the amalgamated water entities – this is a priority aspect of reform for Government to focus on, both in the short term and when providing ongoing oversight of the industry¹⁹
 - as WICS notes, there are important decisions that need to be made about charging and initial priorities and considers these choice can realistically only be taken by central government, with input from local Government and other stakeholders – careful thought should be given to how these decisions are made in New Zealand as while some decisions will lend themselves to central government decision-making, we suspect that New Zealand may have more decentralised traditions and institutions for making decisions than does Scotland (and the United Kingdom more generally)
 - given the diversity apparent in New Zealand’s regions and 3water systems, adopting economic efficiency concepts and best practice regulation for setting drinking water quality and environmental regulation standards is likely to result in diverse strategies for addressing water quality concerns – this should be seen as an opportunity
 - the economic regulatory framework assumed by WICS appears appropriate to us, including based on our experience with the economic regulation applying to Australian water businesses.
- We have 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. The amalgamation scenarios that DIA is considering – with entity sizes that do not exceed 2 million connected citizens – do not appear to include entities of a size that give rise to concerns about diseconomies of scale.



Te Tari Taiwhenua
Internal Affairs

Detailed Regulatory Impact Assessment

Detailed chapters

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Chapter 1: Scope of reform

Scope of the chapter

1. This chapter confirms the proposed scope of the Three Waters Service Delivery Reforms, and then provides detailed consideration of the decision to include the transfer of stormwater assets to the new water service entities.

In scope for reforms

2. *Spatially*, all regions and territories within New Zealand are within the scope of the reform programme. More detail about the extent to which aggregation of water service entities will occur, and the effect on spatial areas, is provided in *Detailed Chapter 2: Number and boundaries of entities*.
3. All *three waters* (drinking, waste, and storm) are within the scope of the reform programme. A detailed description of the current state is provided in the Strategic RIA.
4. Drinking water and wastewater assets have clear functional roles and responsibilities for asset owners/operators. Accordingly, there has been general acceptance that drinking water and wastewater are included in the reform programme for health, environmental, and economic reasons.
5. However, issues related to stormwater are more challenging. There are significant complexities associated with the current arrangements for planning, delivering, and funding stormwater services and infrastructure. These complexities exist from a national system perspective as well as at a local planning and delivery level.
6. For these reasons, the primary focus of this chapter is on the decision to include stormwater within the scope of the reforms, and ultimately the transfer to water service entities.

Out of scope for reforms

7. *Regulatory decisions* relating to drinking water and freshwater management are outside of the scope of this reform programme as they have been captured through the Water Services Regulator Act 2020, the establishment of Taumata Arowai, the Water Services Bill (currently in front of the Health Select Committee), and the implementation of the National Policy Statement for Freshwater Management.
8. *Regulatory decisions* relating to wastewater infrastructure standards will be included in subsequent analysis and advice.
9. *Non-council supplies and suppliers* are broadly outside of the scope of the reforms. These providers encompass private suppliers, Crown suppliers (including agencies such as the Department of Corrections, New Zealand Defence Force, and the Ministry of Education), and community suppliers.
10. The proposed approach to Crown supplies at this stage is:
 - These agencies are already working together, and with Taumata Arowai, to consider how they can improve the provision of water services and meet regulatory requirements.

- It is anticipated that, once established, the water services entities are likely to become involved in these discussions, and in the longer-term there may be opportunities for them to provide assistance. This could include, for example, considering the potential transfer of responsibilities for some supplies to the new entities, on a case-by-case basis.
 - There are a number of complex issues that need to be examined further during the transition phase, and there will need to be a clear process for doing this. The process and timeframe will need to be worked through as part of the transition work to come in June 2021.
11. The number of non-council suppliers is contestable, as there is not a formal register, but internal research commissioned by Taumata Arowai in 2021 suggests that there could be 75,000 such suppliers in New Zealand¹⁸¹. This equates to the provision of water services to around 15% of the national population.
 12. To date, non-council suppliers have not fallen within the scope of the Three Waters Review, which focuses on local government water infrastructure¹⁸². It is expected that there will be a gradual and organic transition of these non-council suppliers to water service entities over time, given an improved level of understanding of asset condition, greater enforcement of standards, heightened expectations about levels of service, and increased investment obligations.
 13. The Water Services Bill amends the Local Government Act 2002 to place a duty on local authorities to ensure communities have access to drinking water if existing, non-council suppliers face significant problems with their services. A significant problem could include a persistent failure to comply with drinking water regulatory requirements, there being a serious risk to public health, or that the supplier has ceased to operate a service.
 14. In this situation, the duty on local authorities would include:
 - working collaboratively with existing suppliers, Taumata Arowai, and consumers to identify solutions; and
 - potentially stepping in to ensure drinking water is provided to affected consumers, which might include (but does not necessarily require) taking over the management and operations of a service on a temporary or permanent basis.
 15. In addition, each local authority will be required to undertake a 'proactive' assessment of the drinking water services available to communities in its district, at least once every three years. This includes assessing all private and community supplies, except domestic self-supplies. These assessments can also be undertaken by organisations on a local authority's behalf, including an iwi or Māori organisation.
 16. If water services entities are created, it is proposed that these legislative responsibilities and obligations (if enacted) would be transferred from local authorities to the new entities.

¹⁸¹ Beca (2021) Small Drinking Water Supplier Analysis – Report.

¹⁸² CAB-18-MIN-0145 refers

Context and problem definitions

Stormwater definition

17. Drinking water and wastewater service networks are readily definable and generally consist of pipes, structures, and treatment plants. These systems are connected, conveying drinking water from its source to household or business users, before collecting wastewater from those users for treatment and discharge. Notwithstanding that drinking water is abstracted from source water and wastewater is discharged to the environment, both have a strong focus on asset and utility management.
18. In contrast, while most stormwater systems include a dedicated reticulated network, the bulk of the stormwater system is the network of above ground overland flow paths over public (for example, parks) and private land, roads, and waterways.¹⁸³ This means that the stormwater management has a significant interface with the regulatory and land use planning system.

In scope assets and interests

19. In principle, it is proposed that any land or infrastructure where the primary purpose is to manage stormwater will be transferred to the new water entities¹⁸⁴.
20. It is acknowledged that while this conceptual definition of in scope assets and interests is clear, precise demarcation points are complex (for example, is a drain grate part of road or reticulated system?). To this end, the Stormwater Technical Working Group is currently considering the precise definition of assets and interests in scope for a transition to new water service entities.
21. To give an indication of the potential size of assets and interests captured by this decision, it is noted that Water New Zealand's National Performance Review estimates that \$12 billion of physical stormwater assets are currently under ownership by councils.¹⁸⁵

Problem statements

Problem statement one: Public good characteristics, and misaligned incentives, pose funding and financing challenges

22. Stormwater requires different funding arrangements from drinking water and wastewater. The costs and benefits of drinking water and wastewater services can be directly linked to users, with levels of service reflected in pricing and charging approaches. In contrast, the costs (including opportunity costs through restrictions on land use and costs of freshwater degradation from stormwater pollution) of stormwater system cannot always be linked directly to benefits (including flood protection and improved environmental outcomes).
23. Reflecting that diffuse connection between benefits and costs, the costs of stormwater system are typically spread across the community and funded as a public good through rates or levies, with standards of service and funding levels set through local government planning processes.

¹⁸³ Overland flow paths are an essential element of the stormwater system, capturing contaminants before they enter the reticulated system, and mediating the rate that water enters the reticulated system. When intensity of rainfall increases (above normal), the above ground network also becomes a critical element of the stormwater system, absorbing the excess flows that would overwhelm the reticulated network.

¹⁸⁴ 'In principle' in this context acknowledges that the precise definition of assets and interests will be determined by the Stormwater Technical Working Group at a later stage, but that the broad intent of the transfer is expected to capture stormwater assets (and land).

¹⁸⁵ Water New Zealand (2021) National Performance Review 19/20. Available at <https://www.waternz.org.nz/NationalPerformanceReview>

24. Expanding the public good definition is the fact that individual households and businesses do not have direct access to the stormwater network in the same way that customers do for drinking and wastewater. Rather, households and businesses receive benefit from the system as it prevents flooding and can improve water quality outcomes if treated appropriately.
25. It is also noted that because stormwater is ‘jurisdictionally blind’ local government stormwater management practices can be affected by actions, or inaction, within the wider catchment which maybe in neighbouring local government areas.
26. Investment in stormwater has been low and is often the lowest priority for three waters investment, which itself is competing with other council priorities for investment. The Office of the Auditor General reported in 2017¹⁸⁶ that local authorities might not be reinvesting enough in three waters assets, suggesting that these assets could be deteriorating to an extent that they are unable to meet the levels of service that their communities expect.
27. A more recent analysis highlights the extent of the reinvestment challenge and the “renewals gap”:
 - Water supply, on average, forecast renewals are 82% of forecast depreciation.
 - Wastewater, on average, forecast renewals are 67% of forecast depreciation.
 - Stormwater, on average, forecast renewals are 52% of forecast depreciation.
28. Moreover, as noted in the Strategic RIA, the latest estimates indicate that the amount of investment required to replace and refurbish existing infrastructure, upgrade three waters assets to meet drinking water and environmental standards, provide for future population growth, and build resilience into the system is in the order of \$120B to \$185B¹⁸⁷.
29. Eliminating this infrastructure deficit and meeting future growth and resilience requirements could take at least 30 to 40 years and will be beyond the funding and operational capacity of most councils and communities under current arrangements (with some councils forecast to not reduce the deficit even over 80 years). This position is as true for stormwater assets as it is for drinking water and wastewater assets.

Problem statement two: Stormwater management is complex with variable levels of service and performance

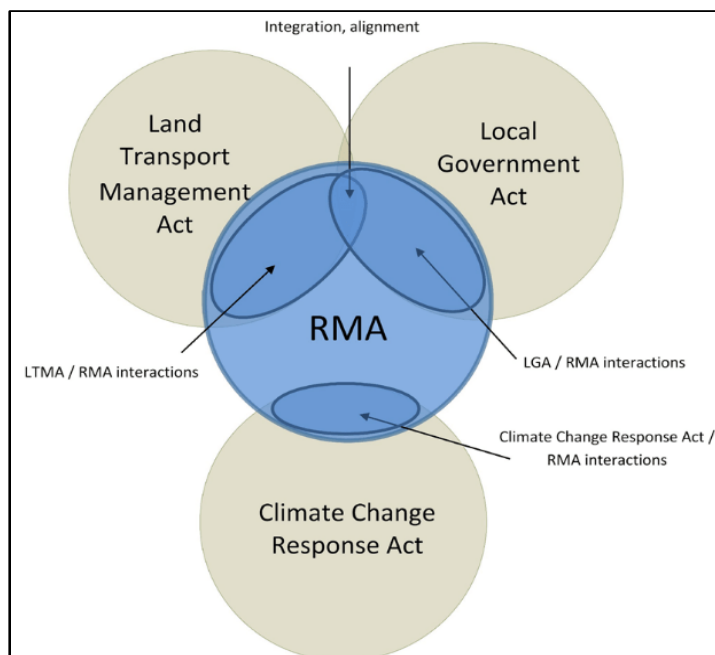
30. There is no single piece of legislation (or regulation) that sets out expectations and rules for stormwater. A complex patchwork of overlapping legal, regulatory, and planning instruments exist, and a lot of “common practices” are encapsulated in legal precedence under the application of the current regulatory framework.
31. These complex ownership, operation, and regulatory arrangements are not unusual in overseas jurisdictions. For example, in Melbourne the stormwater system is split across Melbourne Water, local councils, residential, VicRoads, and VicTrack and there are many different stormwater management clauses for different areas¹⁸⁸.
32. Figure 1 provides a high-level overview of key statutory/regulatory overlays, while Appendix 1 provides a high-level list of the applicable regulatory and legislative tools and instruments.

¹⁸⁶ Controller and Auditor -General. Introducing our work programme - Water management. October 2017 ISBN 978-0-478-44275-5. paras 2.9 -2.11

¹⁸⁷ Water Industry Commission for Scotland phase 2 analysis, 2021

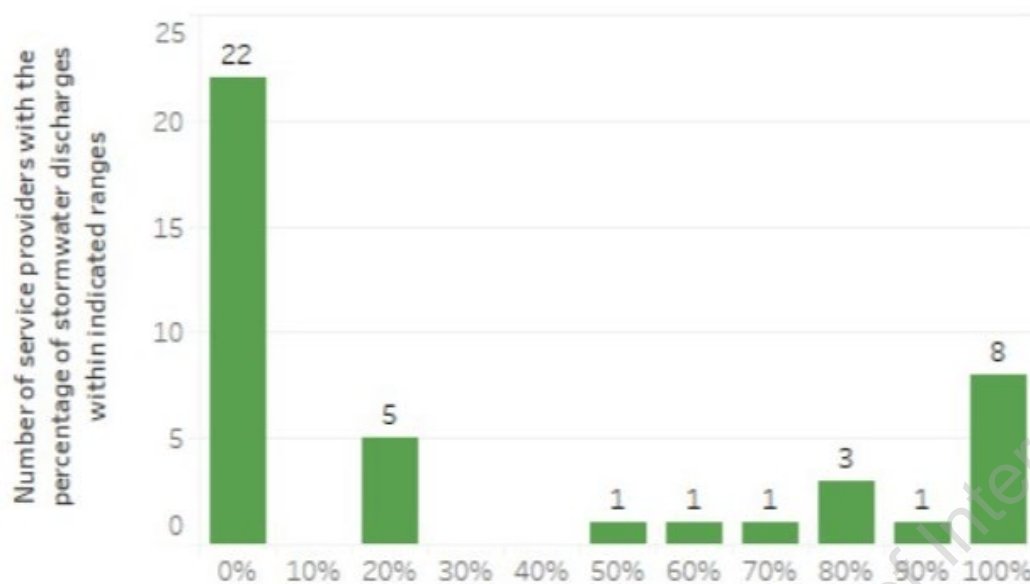
¹⁸⁸ Melbourne Water (2021) Water Facts and Figures: Drainage systems. Available at: <https://www.melbournewater.com.au/water-data-and-education/water-facts-and-history/flooding/drainage-system>

Figure 16: Current regulatory/statutory overlays.



33. In addition, Councils and community's expectations about the approach to stormwater management is evolving, with an increasing focus on the contribution, and impact of, stormwater for the sustainability and amenity of cities and towns. This includes the development of water sensitive urban design, the restoration and protection of urban streams and rivers, and stormwater capture to reduce the demand for drinking water in urban areas. These enhanced community expectations are not always readily conducive with the current regulatory framework.
34. This complex regulatory regime, coupled with the presence of 67 local authorities with responsibilities for stormwater management, leads to significant variability in stormwater levels of service and performance. As an example, Figure 2 demonstrates how little of the stormwater system is controlled by the resource consenting system, with 22 of 67 stormwater service providers with 0% of their stormwater system having a resource consent to discharge.

Figure 17: Proportion of the network with stormwater discharge consents per service provider¹⁸⁹.



Problem Statement three: Lack of scale can create capability and capacity constraints

35. Nationally the current capability to plan for and deliver across the multiple outcomes that are expected from stormwater system is low. As noted by the Water Infrastructure Technical Reference Group,¹⁹⁰ very few councils¹⁹¹ have staff dedicated to stormwater, and there are limited career opportunities across the sector for stormwater specialist expertise. This is primarily a function of lack of scale¹⁹².

Transferring responsibility to newly established water service entities has benefits – but remains complex

36. Enabling the new water entities to deliver all three waters is an opportunity to address existing and future investment needs, make a step change in the performance of the stormwater management system, and lift stormwater management capacity and capability.

37. Most notably, a transfer to the new water service entities would mean that the significant stormwater investment backlog would have a better chance of being addressed given:

- scale efficiencies from amalgamation and the introduction of price quality regulation could be as high as 45%; and
- initial estimates are that the reforms could increase the borrowing capacity of the local government sector by up to \$2B across all local authorities.

38. Lifting the performance of stormwater systems will be critical to meet future challenges that will be exacerbated by climate change and continued concentration of growth in urban centres.

¹⁸⁹ Water New Zealand (2021) National Performance Review 19/20. Available at <https://www.waternz.org.nz/NationalPerformanceReview>

¹⁹⁰ A group that includes council CEs, WaterNZ staff, water managers from councils, and contractors.

¹⁹¹ Auckland Council (Healthy Waters) which has both the scale, the single focus of stormwater, and significant political pressure to address community concern about coastal water quality, has been able to make the investment in people and programmes to build multi-disciplinary capability to implement a water sensitive city approach.

¹⁹² It is noted that the Auckland Council (Group) has established a dedicated stormwater asset management plan – and this is likely possible given the increased scale of participant organisations (Auckland Council, Watercare and Auckland Transport).

39. It is also noted that a decision to transfer drinking water and wastewater assets to new water service entities, without stormwater, would likely lead to a significant reduction in the capacity and capability of remaining staff within councils.
40. The transfer of responsibility for stormwater to new water entities is complex, and creates risks both for the stormwater system, and new water entities. Key considerations include ensuring that the new water entities can:
 - balance the need to urgently progress priority upgrades of drinking water and wastewater systems and lift overall performance of stormwater systems in a timeframe that meets community expectations, while keeping costs affordable; and
 - engage effectively with councils who will continue have a key role in the stormwater system, as owners, managers, and/or regulators of the public and privately-owned land that supports the above ground network of stormwater flow paths. These above ground flow paths provide crucial additional capacity to support the reticulated network, for example, unrestricted urban expansion within an urban area can place significant pressure on the reticulated stormwater network.
41. As noted above, the Stormwater Technical Working Group is currently considering precisely which assets, responsibilities, and powers would be transferred to the new entities. This will be a technically and legally complex process and it is likely that some of the detailed legislative provisions will need to be included in a subsequent piece of legislation.
42. In the interim, it is expected that the Stormwater Technical Working Group will develop some principles to guide those decisions, but being localised in nature, some of those stormwater decisions will need to be worked through as part of the establishment phase. However, in the interests of transparency, a description of initial thinking is provided in the remainder of this chapter.

Identification of the policy objectives/design principles

43. It is proposed that three policy objectives are used to determine the efficacy of potential options. These policy objectives respond to specific problems noted above and have alignment to the Assessment Framework used in the Strategic RIA. A map of these linkages is provided in Table 1.

Table 20: Alignment of stormwater policy objectives to problem statements.

Stormwater problem statements becomes...	...Policy objectives
Variable levels of service and performance.	Improving performance levels for stormwater systems and creating greater consistency across the country.
Public good characteristics, and misaligned incentives, pose funding and financing challenges.	Lifting long term investment in stormwater systems.
Lack of scale can create capability and capacity constraints.	Ability to improve stormwater capability across the sector.

Identification of the options

44. Four potential options have been identified for future stormwater delivery including the status quo. The scope of these options is focussed on assets where the predominant function is stormwater – both from an ownership and operating perspective. A summary of key design elements is provided in Table 2.
45. In all options, it is assumed that the broad regulatory environment does not change – in that there remain multiple overlapping regulatory/statutory instruments as described in paragraphs 30 to 32.
46. It is also noted that issues around funding for current and future investment, and timing and transition for any asset transfers, is still under active consideration as part of the reform programme and will be developed as part of future suite of advice by July 2021.
47. Sub-sections documenting these considerations (about the implications of funding and regulatory complexity) are provided beneath Table 2.

Table 21: Stormwater system - options development.

Design element	Status quo / counterfactual: Leave responsibility with local authorities	Option one: Leave responsibility with local authorities but have contracting ability	Option two: Transfer responsibility to the regional councils	Option three: Transfer assets and responsibility to the new water service entities
Ownership of assets	Local authorities maintain ownership of their stormwater assets.	Local authorities maintain ownership of their stormwater assets.	Transfer of stormwater assets to regional councils.	Transfer of stormwater assets to new water service entities.
Provider of services	Local authorities (or their council-controlled organisations) remain providers of stormwater services.	Local authorities can contract new entities to provide stormwater services.	Transfer responsibility of stormwater to regional councils.	Transfer responsibility of stormwater to new water service entities.

Funding mechanisms

48. No specific or 'new' funding mechanisms are assigned to each option above. Rather the assumption is that the current suite of funding mechanisms – rates, general tariffs, targeted tariffs, growth charges, and possibly connection charges – would continue to be available under all options.
49. However, it is expected that the transfer of assets and operations could better align available funding mechanisms (for example, by combining three waters together there would be opportunities to introduce a stormwater charge alongside drinking water and waste water charges) or could broaden potential funding bases given larger population catchments. This larger funding pool coupled with the capital operating efficiencies expected under amalgamated water service entities implies that existing funding will go further even if mechanisms themselves are not changing. It is also expected that by retaining ownership and operation of all three waters it is easier to effectively charge for the benefit of the three waters system as a whole.

50. An assessment of appropriate funding mechanisms is expected to be captured through subsequent advice.

Analysis of the options

Assessment framework

51. As noted earlier, to lift the performance of the stormwater system, it is proposed that three policy objectives are used to determine the efficacy of potential options.
52. Collectively, these policy objectives respond to specific problems noted above and have alignment to the Assessment Framework used in the Strategic RIA. A map of these linkages is provided in Table 3.

Table 22: Alignment of stormwater assessment framework to Strategic RIA assessment framework.

Stormwater Assessment Framework	Maps to	Relevant Strategic RIA Assessment Framework
Lifting long term investment in stormwater systems.	<i>Directly maps to</i>	Improves effective infrastructure delivery.
Improving performance levels for stormwater systems and creating greater consistency across the country.	<i>Broadly maps to</i>	Improved decision making and performance. Uphold iwi/Māori rights and interests – protect taonga.
Ability to lift stormwater capability across the sector.	<i>Broadly maps to</i>	Improves effective infrastructure delivery. Improves economic efficiency. Uphold iwi/Māori rights and interests – link to building capability of rangitahi.

53. The following evaluation criteria scoring system is then employed as identified in Table 4. This is the same as the Strategic RIA assessment criteria scoring scale.

Table 23: Evaluation criteria scoring scale.

Score	Description
✓✓	Much better than the counterfactual
✓	Better than the counterfactual
0	About the same as the counterfactual
×	Worse than the counterfactual
××	Much worse than the counterfactual

Analysis

54. A summary of the scoring for each option is provided in Table 5 while more detailed supporting evidence is then provided in paragraphs 56 to 75.
55. The headline finding is that transferring assets and responsibilities to the new water service entities best meets the policy objectives – although there is a lot of complexity associated with transfer, implementation, and transition. The Stormwater Technical Working Group and Officials will provide further advice to Three Waters Ministers on these matters in July 2021

Table 24: Summary analysis of stormwater options.

Policy Objective	Counterfactual: Leave responsibility with local authorities	Option one: Leave responsibility with local authorities but have contracting ability	Option two: Transfer responsibility to the regional councils	Option three: Transfer assets and responsibility to the new water service entities
Enabling greater consistency around the standards for the performance of stormwater systems	0	0	0	✓✓
Lifting long term investment in stormwater systems	0	0	✓	✓✓
Ability to lift stormwater capability across the sector	0	✓	✓	✓

Counterfactual - Leave stormwater with local authorities.

56. Leaving responsibility with local authorities recognises the complexity of shifting the existing regulatory and funding arrangements for stormwater, and the critical links to the management of public land, urban planning, and the planning and operation of the roads. Retaining responsibility with councils ensures that there are incentives on councils to consider those links, and to ensure that management across those responsibilities is coordinated.
57. However, this must be balanced against the limited ability of most councils to manage and invest in stormwater systems now and in the future.
58. As noted in Problem statement one above, the size of the investment shortfall, and the funding gap, suggests that the current system, characterised by a lack of scale, and misaligned incentives, would not be able to support the necessary levels of investment in stormwater assets.

59. Moreover, it is expected that the asset management capacity and capability of staff responsible for stormwater will be compromised by a separate transfer of drinking water and wastewater to the new water service entities.
60. In many (smaller and more rural councils), there is often very concentrated capacity (i.e., one officer, or a small group of officers), for all three waters planning and asset management functions. It is reasonable to assume that this officer (or officers) would move to proposed new water service entities given the strong asset management nature of drinking water and wastewater – thus minimising stormwater asset management expertise within local authorities.
61. It is noted that leaving stormwater with local authorities would support the continuation of synergies that exist between asset management functions and land use, planning, and roading functions that exist within councils.

Option one - Leave stormwater with local authorities but add contracting ability

62. This option would not materially change the limited ability of most councils to manage and invest in stormwater systems now and in the future. It is expected that there might be some modest efficiencies associated with an outsourced contract – but that fundamental concerns about quantum of available funding and an inability to catch up the investment backlog would remain.
63. This option would, however, solve some of the capacity and capability challenges – particularly if there is a provision for councils to contract the new water entities¹⁹³ to deliver stormwater services. Waikato District Council's contract with Watercare, where the councils continues to own the assets but Watercare manages infrastructure is an example of this approach.
64. A contract with each individual council would continue to limit the ability to leverage investment across region/multi-regions and would leave each council to determine (subject to regulatory requirements) its own levels of service.
65. This option is similar to the way Wellington Water operates, and there are clear limitations of this arrangement, as mentioned in breakout box 3 of the Strategic RIA. This means that while this option could provide a useful transitional step (discussed below), it is unlikely to be able to make the long-term performance and investment improvements in the stormwater system that are required.
66. Moreover, there is a risk that this arrangement might exacerbate a lack of accountability as the levers of asset ownership/funding and operation are separate.

Option two - Transfer responsibility to regional councils

67. This option would seek to leverage existing synergies between stormwater and flood management which is under the jurisdiction of regional councils.
68. Regional Councils have an existing technical capability in planning, hydrology, ecology, and flood management that are transferable to stormwater management, so they could take over ownership and management which could result in improvements in performance standards. However, managing urban stormwater (assets) would be a significant new activity for many regional councils.

¹⁹³ The new water entities would be obliged to provide contract for services with choice around what functions and levels of service to be determined by council.

69. Moving stormwater to the regional scale would consolidate capacity and capability which could lead to greater scale, specialisation, and professional development opportunities.
70. However, similar to Option one, Regional councils will still face similar investment challenges to their local authority counterparts due to the similar revenue raising mechanisms they have and the scale of their rateable population.
71. There is also the potential for conflict with regional councils' environmental regulatory role.

Option three (preferred) - Transfer assets and responsibility to new water service entities

72. Officials current thinking is that the ownership and responsibility for the management of the reticulated stormwater system should be transferred to the new water service entities, subject to the development of effective mechanisms to support water entities to effectively manage stormwater assets in partnership with local authorities.
73. The key reasons for supporting this as the preferred option are:
 - **Address funding constraints.** The new water service entities larger balance sheets and greater borrowing capacity create an opportunity to enable a significant uplift in investment. The ability to fund investment in stormwater has been identified by some councils as a key constraint on land use development in high growth urban areas. As noted above, some councils see the inclusion of stormwater within the scope of the new water service entities and the investment opportunities it creates, as a decisive factor in their decision whether to participate in the reforms.
 - **Generate scale efficiencies through better asset management practices.** As noted in the Strategic RIA, it is expected that significant cost efficiencies would be expected through amalgamation of council-provided water services. These would accrue across asset management, procurement, and reduced overheads and duplication.
 - **Creates an opportunity to make a step change in way we manage stormwater.** The establishment of the new water service entities is an opportunity to lift performance of stormwater management nationally and make progress toward applying an integrated (water sensitive) approach to stormwater management. It will also enable meaningful benchmarking given the expected balance of water service entity size and geography (as noted in *Detailed Chapter 2: Number and boundaries of entities*).

While transferring the assets where stormwater is the predominant use to the new entities and ensuring that the water entities can partner with local authorities to manage the stormwater system is complex, without change the current issues with the system will continue. There is also a risk that if the reform of service delivery arrangements does not include stormwater there may be limited opportunity to revisit this decision in the future.

- **Address existing and future resource and capability gaps:** The new water service entities will be able to build the multidisciplinary capability across catchment, ecology, modelling, land use planning, and network and asset management disciplines required to deliver an integrated approach to stormwater management. The scale of the water service entities could also address the limited career pathways (and opportunities) that currently exist for people to specialise and build capability to manage stormwater across multiple outcomes. It has also been raised that if the transfer of two waters (drinking and waste) to entities occurs and councils are left with stormwater then they will not have remaining capacity to manage stormwater effectively.

- **Support a holistic approach to water management.** Māori have been consistent in their view that “wai is wai” and have indicated strong support for the integration of all three waters. In practice, there are multiple “interactions” between the three waters. In many parts of the country, wastewater enters the stormwater systems, through leaking wastewater pipes, constructed overflows, or illegal connections. The public health and environmental impacts of those discharges is of significant concern to Māori and the wider public. Bringing the three waters together supports an integrated approach to address those issues and would support the new water service entities to give effect to Te Mana o te Wai.
74. Alternatively, it is noted that the movement of stormwater asset management functions to the new water service entities will de-couple the synergies that exist between asset management and wider planning functions that currently exist within councils.
75. Moreover, it is expected that there will be significant transition/implementation costs associated with an asset transfer. These costs will be unique to each local council / water service entity. In the long-term it is expected that these transition/implementation costs will be ‘paid back’ through greater efficiencies expected from grouping of three water together within a water service entity.

Implementation challenges

Transferring responsibility is complex

76. The network of overland flow paths is located on private and publicly owned land. Councils have a key role to manage the above ground stormwater system, as providers of parks and reserves, as urban development and land use regulators, and as road controlling authorities. There is a risk that if responsibility for the management of the reticulated stormwater network is transferred to the new water service entities, the existing incentives on councils to ensure this system of above ground overland flow paths is maintained and protected will be reduced. This could have a significant impact on the effectiveness of the overall stormwater system.
77. Transferring responsibility for the management of the assets where stormwater is the predominant function to water service entities will require the development of mechanisms to enable the new water entities and councils to work together to manage the stormwater system. This approach where water entities work closely with councils to manage the stormwater system is not without precedent with examples of these shared arrangements in Melbourne, Wellington, and Auckland, although with varying degrees of success.
78. The roading system is a significant element of the stormwater system. Developed, operated, and funded by road controlling authorities the primary purpose of the stormwater infrastructure in roads is to remove surface water from roads. But many roads (particularly local roads) also provide key overland flow paths and connect to the reticulated stormwater system.
79. While councils are the road controlling authorities for local roads, the Waka Kotahi New Zealand Transport Agency owns and operates the state highway network. There is significant overlap between the road safety and stormwater outcomes of the stormwater infrastructure within the roading system, which has implications for performance and funding of both networks. How road controlling authorities and new water entities will work together, and the funding arrangements is another key issue that will be worked through by the Stormwater Technical Working Group.

80. The role of the Stormwater Technical Working Group is to determine how stormwater would be transferred to new water service entities, with the expectation that stormwater is included in the water service entities.
81. To meet the objectives of the reform means that the status quo is no longer tenable, i.e., leaving stormwater with local authorities. The costs of transfer are proposed be a part of the transition phase, and if they are deemed too high then a set of objectives and priorities would be developed to stage the transfer and how it is funded.
82. However, the substantial benefits to the environment, public, amenity, city function, resilience to climate change, and achievement of Te Mana o te Wai of including stormwater in the entities would likely outweigh the costs of the transfer.

Timeframe

83. Transferring responsibility of stormwater to new water service entities is complex, with risks for both the water service entity and wider sector. There are a range of issues that need to be worked through under the following areas:
 - The development of the systems, processes, and relationships required to support water entities and councils to effectively manage stormwater.
 - The timeframe and process for transferring the assets and responsibility for managing stormwater to the new water entities.
84. The Stormwater Technical Working Group is currently considering the implications of any transfer of responsibility, with specific consideration being given to the timeframe of the transfer and the extent to which staging may or may not occur. Officials will provide advice to Three Waters Ministers in July 2021 on this matter.
85. *Detailed Chapter 7: Transition and implementation* (coming with later advice) will also provide additional details on the scope of the proposed transition and establishment units that would be expected to manage the eventual transition of these assets and interests.

Detailed Chapter 1 Appendix 1: Statutory and Regulatory Arrangements

The Stormwater Technical Advisory Group notes a sample of the regulatory instruments and tools that guide stormwater considerations. This list is not exhaustive.

- The Resource Management Act 1991 promotes managing the use, development, and protection of natural and physical resources in a way, or at a rate, that enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety.
- The Local Government Act 2002 provides for local authorities to play a broad role in promoting the social, economic, environmental, and cultural wellbeing of their communities.
- The Land Transport Management Act 2003 provides an integrated approach to land transport funding and management that takes into account the views of affected communities.
- The Climate Change Response Act 2002 (and Zero Carbon Amendment Act 2019) interacts with the Resource Management Act again through an outcomes lens, with a focus on emissions.
- Overlaying this are the obligations under the Treaty of Waitangi/Te Tiriti o Waitangi and national and international reporting frameworks such as the UN Sustainable Development Goals and the Treasury's Living Standards Framework.
- National Policy Statements sets out objectives and policies for freshwater management and coastal management and provides direction to regional councils as to how to manage freshwater and coastal environment.
- Building Act (2004) and Code – government is in the process of a legislative reform programme to change the building regulatory system – which will also impact on natural and built environment.
- Bylaws and regulations – Stormwater Bylaws are developed by local councils to regulate and protect land drainage to help protect streams and rivers by setting out everyone's responsibilities in regard to stormwater. Councils exercise its powers and authorities under the Local Government Act 2002 and the Health Act 1956.
- Flood Management Legislation - Land Drainage Act 1908, Rivers Board Act 1908, Soil Conservation Rivers Control Act 1941, Civil Defence Emergency Management Act 2002, Resource Management Act 1991, Local Government Act 2002, Building Act 2004.
- Reserves Legislation - The Reserves Act 1977, the Local Government Act 2002, Conservation Act 1987, and the Resource Management Act 1991 set out the core regulatory functions of local authorities in managing reserve land. Reserve Management Plans require the consideration of these statutory documents.

Chapter 2: Number and boundaries of entities

1. This chapter sets out the recommended number and boundaries of entities for delivering water services.
2. In doing so, it takes a 'first best' approach to assessing the decision around the number and boundaries of entities, to ensure *all* communities are able to access the benefits of reform. This implies full participation by all territorial authorities in the reform process.

Context

3. Key to achieving the Government's objectives for water services reform is unlocking the potential for significant economic efficiencies through aggregation of water services delivery.
4. Aggregation of water services delivery into a small number of large, multi-regional entities, together with clear policy objectives and an appropriate regulatory regime, is a key means by which these efficiency gains can be achieved. The types of efficiency gains associated with entity scale include:
 - **Financing efficiency:**
 - Increased financial capacity and capability, with stronger, more flexible and resilient balance sheets, greater access to capital, and a more reliable investment pipeline.
 - **Operating expenditure efficiency:**
 - Increased capacity and capability, including building technical capabilities, with access to a larger, more specialist workforce, and the ability to innovate and make use of new technology.
 - Improved operating efficiencies and lower operating costs, by consolidating administration and overhead costs, and improving organisational capabilities.
 - Increased ability to meet the likely compliance costs of the new regulatory regime, including a new economic regulatory regime that will require performance benchmarking.
 - **Capital expenditure efficiency:**
 - Improved asset management, including opportunities to take a strategic and coordinated approach to consider infrastructure needs at a larger scale and in the context of wider catchment outcomes.
 - Improved procurement efficiency arising from scale benefits and improved risk sharing.
 - **Regulatory efficiency:**
 - Increased ability to manage regulatory burden, minimise compliance cost, and enable quality and performance benchmarking.
5. Smaller entities are unlikely to be able to fully achieve the above benefits. However, it is also possible that there would be diseconomies of scale associated with very large entities.

6. The decision on the number and boundaries of entities is key to ensuring entities have a sufficient asset and customer base to be financially sustainable and operate at an economically efficient scale. This will ultimately enable the new entities to address the significant infrastructure deficit, while ensuring prices are affordable for customers. This is particularly important given the scale of the likely investment challenge.
7. Realisation of these economic efficiencies is necessary to ensure the investment required to 'catch-up' on the historic infrastructure deficit is affordable for current and future generations of New Zealanders.
8. The investment challenge is expected to be between \$120B to \$185B over 30 years, an average of \$4B to \$6B annually.
9. To put this investment requirement in context, territorial authorities currently invest around \$1.5B annually on three waters capital expenditure.
10. While the numbers do include growth demands as indicated by territorial authorities (based on supplied population growth information), they do not make additional provision for seismic resilience, climate change, or responding to iwi/Māori expectations. These drivers for investment will have different impacts in New Zealand relative to overseas and will vary between different regions or catchments. The absence of these investment drivers may mean that the total investment required over time is likely to be an underestimate.
11. It is important to note that the size of the investment deficit means reform does not imply lower absolute prices in real terms. Rather, reform helps to avoid future price rises under the current service delivery arrangements that would be unaffordable for many communities, particularly those served in small, rural areas.

Scale is not the only factor to consider in determining the number and boundaries of water services entities

12. It is important that the potential to realise benefits from reform is not assessed on the basis of scale benefits alone. The ability for the proposed entities to realise any efficiencies will depend on several important pre-conditions. These pre-conditions have been identified by Water Industry Commission for Scotland (WICS), who are the economic regulator of the sector in Scotland, and the independent review of its methodology conducted by FarrierSwier. They include:
 - clear policy direction for the water sector, as expressed for example through a Government Policy Statement;
 - entities with effective governance arrangements, able to attract and retain appropriately skilled management;
 - new regulatory arrangements for water quality and improved environmental outcomes are effective;
 - establishment of effective economic regulation (that is, entities face a hard budget constraint); and
 - entities with access to the necessary resources to fund the amalgamation processes and over time make the required investment.
13. For that reason, thinking about the benefits in terms of scale also requires consideration of the degree to which these pre-conditions are strengthened or weakened under different aggregation scenarios.

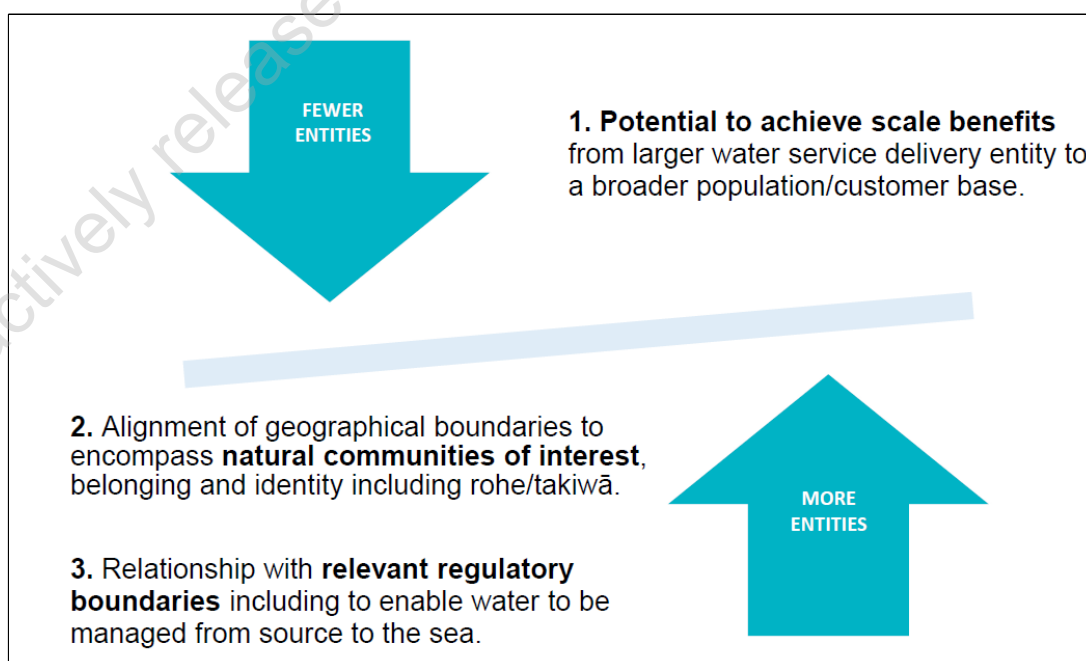
What is the problem/opportunity?

14. The Government intends to significantly improve the safety, quality, resilience, accessibility, and performance of three waters services, in a way that is efficient and affordable for New Zealanders. This is critical for:
- good public health and wellbeing;
 - good environmental outcomes;
 - economic growth and job creation;
 - housing and support for population growth; and
 - mitigating the effects of climate change and natural hazards.
15. Achieving these outcomes, through the decisions on the number and boundaries of entities, requires such entities to:
- have a sufficient asset and customer base to be financially sustainable, and operate at an economically efficient scale, so that prices are affordable and levels of service comparable; and
 - contain entire catchments within their boundaries to realise environmental outcomes by enabling effective catchment planning and management of associated infrastructure.

Policy objectives

16. Determining the number and boundaries of water service delivery entities will require a trade-off between competing principles. Guided by the factors previously considered by Cabinet, there are a range of considerations (see Figure 3) that will guide advice on the number and boundaries of entities:

Figure 18: Key principles to inform decisions on number and boundaries of water service delivery entities.



17. These principles sit in tension with each other, with the potential for scale benefits and efficiency gains supporting the case for fewer entities, and alignment with communities of interest and regulatory boundaries providing a case for a greater number of entities.
18. The Scottish water reform experience shows that the choice of where boundaries are drawn can have significant implications for the sustainability of the chosen configuration of entities.
19. Additional factors that are relevant for determining the number and boundaries of entities include the need to consider alignment with Resource Management Act 1991 reforms, and the implications for the cost effectiveness of economic regulation size of labour market, ability to provide competitive tension in procurement, and ability to attract and retain capable management and governance capability.

Scale benefits

20. Drawing on evidence from the United Kingdom regarding the relationship between the size of water services entities and the efficiency gains achieved post-reforms, WICS assumes that scale increases on a logarithmic basis above a minimum size. This means there is no scope for efficiency benefits below 600,000 population, but efficiency gains are realisable at a diminishing rate from above this threshold, up to a maximum of 800,000, after which constant returns to scale are exhibited.
21. Outside of the WICS analysis, there is a wide range of international evidence on the benefits of scale. A range of studies find evidence of significant scale benefits, whereas others are more cautious. Evidence of scale efficiencies in relation to wastewater treatment are stronger than for drinking water provision.
22. In a New Zealand context, it is important to separate scale benefits that will likely accrue to larger, professionally managed organisations from scale benefits that arise from the provision of the water services (including network benefits). Both arguments hold, but the first is difficult to separate from the wider benefits of reform including professional governance, specialist management, and good regulatory discipline that are attributes of the broader system reform.
23. Drawing on the broader evidence base, on balance, each entity would need to have in the order of 500,000 to one million population served to achieve a level of efficient scale to contribute to meeting the investment deficit.

Communities of interest

24. A key focus of the reform programme is ensuring that the new water services system is responsive to community and consumer interests. We have outlined a range of options designed to support the inclusion of the community voice in the new service delivery system in (see *Detailed Chapter 5: Mechanisms for consumer and community voice and influence* and *Detailed Chapter 6: Strengthening the role of iwi/Māori in the three waters system*).
25. These options include, among other things, the creation of a new Te Mana o te Wai statement and response mechanism to support the rights and interests of iwi/Māori.
26. In analysing communities of interest, our focus has been on the geographical expression of communities including:
 - rohe/takiwā, common whakapapa and other confederations¹⁹⁴;
 - the electoral boundaries of territorial authorities and regional councils; and

¹⁹⁴ This analysis has been informed by the Te Kahui Māngai directory managed by Te Puni Kōkiri.

- the labour market size and workforce location.
27. At the scale of the likely entities proposed, consideration of factors relating to communities of interest become most relevant if considering more than three entities.
28. We have attached a strong weighting to the probability that a community identity will warrant consideration of a South Island entity (including potential for a Ngāi Tahu/Tauihu takiwā approach) on a standalone basis. This means that any consideration of community of interest issues is likely to focus on how these interests manifest in the North Island, and relatedly, how these impact on the consideration of entity boundaries.

Relevant regulatory considerations

29. Our analysis has been informed by extensive GIS mapping, integrating physical boundaries, with catchment, rohe/takiwā, and regulatory boundaries. Regulatory boundaries have been defined widely to include administrative boundaries as they relate to regional council boundaries, Waka Kotahi New Zealand Transport Agency (NZTA) boundaries for transport planning and investment, current district health boundaries, and some other government agency relationship boundaries such as Te Puni Kōkiri.
30. Our view, and that of other stakeholders including members of the Three Waters Steering Committee, is that priority should be accorded to catchment boundaries.
31. Consistent with the te ao Māori concept of ki uta ki tai, a catchment-based approach will best support improved environmental outcomes. There is a strong alignment between rohe/takiwā and catchments, and aligning boundaries to catchments is a priority identified through our engagement with iwi/Māori.

Nationally consistent pricing is not deemed to be a core objective for reform

32. We have considered if price harmonisation should be a policy objective, given the extent to which the government wishes to pursue a form of national equity by consumer type or equity by geographical region. This will affect decisions about the number of entities, for example, wider tolerance for price variation allows for a greater number of entities whereas low tolerance leads to fewer.
33. A policy of consistent national prices is likely to require one or two entities, which may be subject to diseconomies of scale and concentrated risk of poor performance, as well as challenges in reflecting communities of interest and achieving alignment with relevant regulatory boundaries.
34. Some variation in prices is natural given significant differences in economic geography across the country, and desirable from the perspective of achieving other outcomes (for example, providing incentives for resource conservation in dry areas).
35. Given the balance of policy challenges, prioritisation of nationally consistent quality of service is deemed more important than nationally consistent prices.

Options development

36. Our analysis identifies the following most relevant considerations:
- Catchments in the South Island are not well aligned to territorial authority boundaries. Many South Island territorial authority boundaries are defined by rivers, which means catchments are often split. This is only material if you were considering multiple entities within the South Island, particularly in Canterbury.

- The central North Island is the most complex area in terms of overlapping catchments, rohe/takiwā, regulatory, and communities of interest. Balancing those interests aligned to reform outcomes would warrant options where the Taupō District Council geographical area follows the Waikato river catchment consistent with the approach taken by the Waikato River Authority. We note that in Waikato/Bay of Plenty, recognition of economic, transport, and labour market linkages do not necessarily correspond with a catchment-based approach.
- There is merit in considering options that incorporate both the Kaipara catchment and the Hauraki catchment into an entity that includes Auckland. Both catchments have faced long standing deterioration in water quality, with both urban intensification (mixed contaminant load) and rural contaminants (sediments, nitrates, and phosphates) contributing factors across a wide range of territorial authority and regional boundaries and aligned mana whenua interests.

Number and boundaries scenarios

37. A summary of the implications of the relevant considerations is provided in Table 6 below.

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Table 25: Key considerations and implications for scenarios.

Factors to consider	Assessment	Implications
Scale benefits	<ul style="list-style-type: none"> Addressing the large investment deficit requires new entities to have sufficient scale to be able to realise efficiencies and spread costs equitably. Each entity would need in the order of 500,000 to 1 million population served to achieve scale efficiencies of a level sufficient to help address the investment deficit. Fewer entities (one to two) will enable greater price harmonisation. 	<ul style="list-style-type: none"> Between one to five entities are required to realise sufficient economies of scale – more than five entities would leave significant efficiency gains ‘on the table’ and would lead to wide variation in average costs across the country. A high weight on price harmonisation objectives would suggest one to two entities.
Communities of interest	<ul style="list-style-type: none"> Strong community identity for South Island. Economic communities of interest including labour market and infrastructure links are relevant, and sometimes at odds with the catchment-based approach. At the scale of the entities, we are considering – common whakapapa becomes more relevant than rohe/takiwā. 	<ul style="list-style-type: none"> South Island (including potential for a Ngāi Tahu/Tauihu takiwā approach) likely to require a stand-alone entity. Community of interest considerations more relevant when considering three or more entities.
Relationships with other jurisdictional boundaries	<ul style="list-style-type: none"> Catchments have become the most important of physical considerations. Consistent with ki uta ki tai, environmental outcomes benefit from a catchment-based approach. Regional Council boundaries and rohe/takiwā align with catchments. Some local authority boundaries have boundaries on rivers, and should be external boundaries for new entities. 	<ul style="list-style-type: none"> Boundaries should be situated along catchment boundaries. Avoid splitting local authority boundaries to prevent adding further complexity to the system.

38. Given the considerations above, we have looked at eight scenarios for the assessment:

- One national entity – WICS scenario 24
- Two entities (North and South separate) – WICS scenario 9
- Three entities (South Island on its own) – WICS scenario 6
- Four entities (lateral split) – WICS scenario 3
- Four entities (vertical split) – WICS scenario 2
- Four entities (Lateral split, catchment extended, South Island takiwā approach) – WICS scenario 30
- Five entities (Waka Kōtahi) – WICS Scenario 1

- 13 entities – WICS scenario 12

39. WICS has assessed close to 30 different scenarios in total but we have limited these to the material ones for the purpose of this RIA.
40. Maps for each of the scenarios, together with the entity configurations are provided in Appendix 1.

Options analysis

41. As noted earlier, the criteria for assessment is based on the four principles agreed to by Cabinet.
42. Collectively, these principles respond to specific problems noted above and also have alignment to the Assessment Framework used in the Strategic RIA. A map of these linkages is provided in Table 7.

Table 26: Alignment of number and boundaries assessment framework to Strategic RIA assessment framework.

Number and boundaries Assessment Framework	Maps to	Relevant Strategic RIA Assessment Framework
The ability to realise scale efficiencies	<i>Directly maps to</i>	Improves effective infrastructure delivery Improves economic efficiency
Alignment with communities of interest	<i>Broadly maps to</i>	Ease of implementation Improved decision making and performance
Rohe/takiwā	<i>Directly maps to</i>	Uphold iwi/Māori rights and interests
Regulatory boundaries and catchments	<i>Broadly maps to</i>	Improved decision making and performance Ease of implementation

43. The following evaluation criteria scoring system is then employed as identified in Table 8. This is similar to the Strategic RIA assessment criteria scoring scale.

Table 27: Evaluation Criteria scoring scale

Score	Description
✓✓	Very strong alignment with criteria
✓	Strong alignment with criteria
0	No alignment with criteria
×	Weak alignment with criteria
xx	Very weak alignment with criteria

44. This analysis is set out in Table 9 below.

Table 28: Analysis of options for number and boundaries of entities.

Options / Principles	The ability to realise scale efficiencies	Alignment with communities of interest	Rohe/takiwā	Regulatory boundaries and catchments
<p>Scenario 1 – one national entity</p>	<p>x</p> <p>One entity with over 4 million customers is likely to experience significant diseconomies of scale, according to Farrierswier’s review of the relevant literature.</p> <p>WICS analysis suggests the benefits would far outweigh these impacts as Net Present Cost per connected citizen is expected to reduce by 48% (or \$720) on average over 30 years, but we have assessed this as less likely to happen given existing productivity challenges and the risk that a single entity could create monopsony tensions with the supply chain.</p> <p>Ability to benchmark against other New Zealand companies is lost, which could impact on effectiveness of economic regulation.</p>	<p>xx</p> <p>Lack of a strong labour market dynamic, particularly to provide career pathways and develop a pool of skilled staff and executives.</p> <p>Risk that South Island may feel a loss of identity.</p>	<p>0</p> <p>A single national entity would strengthen the basis for a Crown/Māori Treaty/Tiriti based relationship however this would not be reflective of underlying ownership arrangements (local authorities) and may give rise to a need for greater mechanisms for iwi/Māori to influence outcomes at a sub-regional level.</p>	<p>✓✓</p> <p>No splitting of catchments, ability for the new entity to take a ki uta ki tai approach.</p>

Options / Principles	The ability to realise scale efficiencies	Alignment with communities of interest	Rohe/takiwā	Regulatory boundaries and catchments
<p>Scenario 2 – two entities (North and South separate)</p>	<p>0</p> <p>Two entities with over 2 million customers are likely to experience significant diseconomies of scale, according to Farrierswier’s review of the relevant literature.</p> <p>However, WICS analysis suggests the benefits would far outweigh these impacts with Net Present Cost per connected citizen reducing by 47% (\$640) or 50% (\$1070) for the North and South Island entities respectively.</p>	<p>x</p> <p>Lack of a strong labour market dynamic, particularly to provide career pathways and develop a pool of skilled staff and executives.</p> <p>South Island identity maintained through a separate entity.</p>	<p>xx</p> <p>No material benefit from a strengthened relationship with iwi/Māori within confined geographical levels.</p> <p>Move to two entities would weaken the case for the entity to reflect a single national Crown partnership approach.</p>	<p>✓✓</p> <p>No splitting of catchments, ability for the new entity to take a ki uta ki tai approach.</p>
<p>Scenario 3 – three entities (South Island on its own)</p>	<p>✓</p> <p>Entities broadly within the assessed range of connected customers required to enable significant efficiency savings.</p> <p>WICS analysis suggests Net Present Cost per connected citizen would reduce by 47% (\$490), 50% (\$830), and 50% (\$1070) for each of the three entities.</p>	<p>✓</p> <p>Stronger labour market dynamics, particularly to enable greater flexibility of labour flows.</p> <p>South Island identity maintained through a separate entity.</p>	<p>x</p> <p>Enables some more localised connection to core whakapapa connections.</p>	<p>✓</p> <p>Integrates a number of large catchments.</p>

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Options / Principles	The ability to realise scale efficiencies	Alignment with communities of interest	Rohe/takiwā	Regulatory boundaries and catchments
<p>Scenario 4 - four entities (lateral split)</p>	<p>✓</p> <p>Entities broadly within the assessed range of connected customers required to enable significant efficiency savings.</p> <p>WICS analysis suggests Net Present Cost per connected citizen would reduce by 45% (\$480), 49% (\$860), 49% (\$800), and 50% (\$1070) for each of the four entities</p>	<p>✓✓</p> <p>Strong labour market dynamics, particularly to enable greater flexibility of labour flows.</p> <p>South Island identity maintained through a separate entity.</p>	<p>0</p> <p>Enables more localised connection with some rohe/takiwā, but disrupts others.</p>	<p>0</p> <p>More orthodox boundaries but slight misalignment of catchments in the central north island.</p> <p>Not a natural ki uta kia tai approach.</p>
<p>Scenario 5 - four entities (vertical split)</p>	<p>✓</p> <p>Entities broadly within the assessed range of connected customers required to enable significant efficiency savings.</p> <p>WICS analysis suggests Net Present Cost per connected citizen would reduce by 45% (\$490), 49% (\$900), 48% (\$740), and 50% (\$1070) for each of the four entities.</p>	<p>✓✓</p> <p>Strong labour market dynamics, particularly to enable greater flexibility of labour flows.</p> <p>South Island identity maintained through a separate entity.</p>	<p>✓</p> <p>Enables more localised connection with more consistent approach to a greater number of rohe/takiwā.</p>	<p>✓</p> <p>Integrates a number of large catchments particularly in the central North Island which is the more complex from a boundary perspective.</p>

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Options / Principles	The ability to realise scale efficiencies	Alignment with communities of interest	Rohe/takiwā	Regulatory boundaries and catchments
<p>Scenario 6 - four entities (lateral split, catchment extended, South Island takiwā approach)</p>	<p>✓</p> <p>Entities broadly within the assessed range of connected customers required to enable significant efficiency savings.</p> <p>WICS analysis suggests Net Present Cost per connected citizen would reduce by 45% (\$480), 52% (\$950), 49% (\$800), and 49% (\$1030) for each of the four entities.</p>	<p>✓</p> <p>Strong labour market dynamics, particularly to enable greater flexibility of labour flows.</p> <p>Recognises significant relationships between Waikato and Bay of Plenty regions by including all districts in one entity.</p> <p>South Island identity relatively strong but joined with bottom of the North Island.</p>	<p>✓</p> <p>Enables improved whakapapa/takiwā alignment at bottom of north/top of south islands. Disrupts some rohe/takiwā connection.</p>	<p>✓</p> <p>Slightly less orthodox boundary but aligns catchments in the central North Island and Bay of Plenty.</p>
<p>Scenario 7 - five entities (Waka Kotahi)</p>	<p>✓</p> <p>Entities broadly within the assessed range of connected customers required to enable significant efficiency savings.</p> <p>WICS analysis suggests Net Present Cost per connected citizen would reduce by 45% (\$480), 49% (\$840), 47% (\$1020), 44% (\$640), and 49% (\$1030) for each of the five entities.</p>	<p>0</p> <p>Aligns with existing regional transport committee boundaries, but importance of this is questionable.</p> <p>Strong labour market dynamic.</p>	<p>0</p> <p>Achieves some greater local connection and some takiwā. Other boundaries not materially informed by rohe/takiwā.</p>	<p>0</p> <p>Aligns some existing boundaries, but importance of this is questionable.</p>

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Options / Principles	The ability to realise scale efficiencies	Alignment with communities of interest	Rohe/takiwā	Regulatory boundaries and catchments
<p>Scenario 8 – 13 entities</p>	<p>xx</p> <p>Apart from the 3 entities with large metros (Auckland, Wellington, Christchurch) the scale of the other entities is likely to be too low to achieve the efficiency gains required to deliver net benefits.</p> <p>WICS analysis suggests Net Present Cost per connected citizen would be reduced by between 17% and 42%, with a large variance between absolute figures given starting costs for each local authority would have a larger differential with limited ability for smaller local authorities to access cost structures of large scale local authorities.</p>	<p>✓✓</p> <p>Strong alignment with existing regional council boundaries.</p>	<p>✓</p> <p>Enables greater local connection and more finely tuned relationship between rohe/takiwā (and catchment).</p>	<p>0</p> <p>May not enable a ki uta kia tai approach as catchments are broken up under regional boundaries.</p>

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WICS sensitivity analysis and limitations

45. WICS has tested the sensitivity of its results to variation in core assumptions, including in relation to the amount of investment and level of efficiency improvement, to understand the full range of possible outcomes. This analysis makes use of montecarlo simulations to present a distribution of possible outcomes, and their likelihood of occurring.
46. The parameters for which it has undertaken these sensitivity tests are set out below in Table 10 (green colouring represents parameters that would be favourable for the counterfactual and red colouring denotes parameters that would be least favourable for reform):

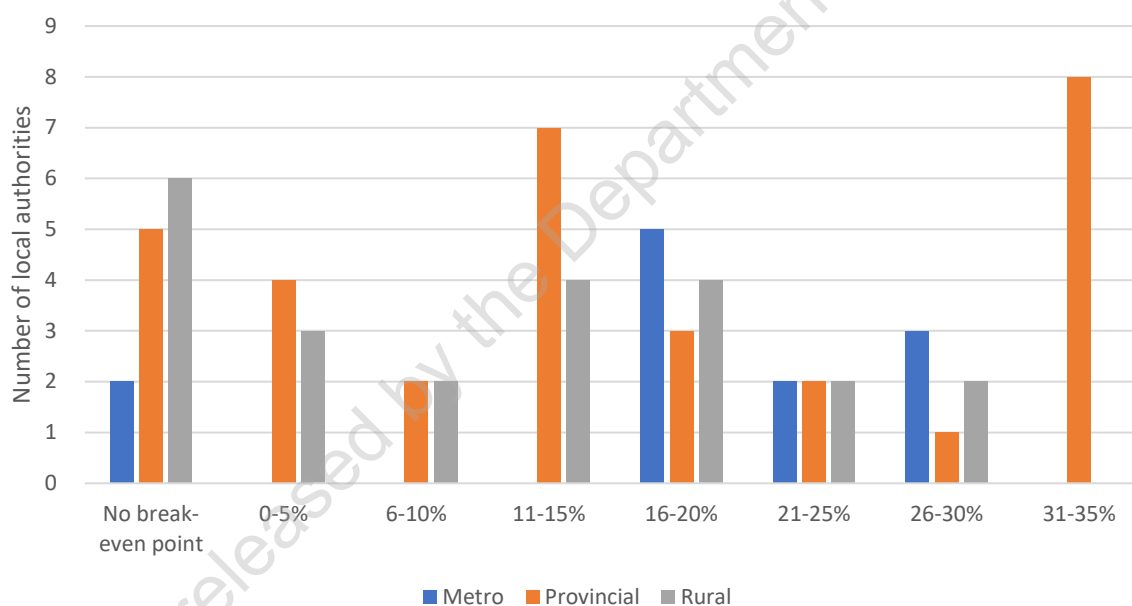
Table 29: Sensitivity testing by WICS of its results to variation in core assumptions.

Local authority lower bound	Local authority upper bound	Amalgamated entities lower bound	Amalgamated entities upper bound
\$35,000 investment cap per property	\$70,000 investment cap per property	15 years to close the efficiency gap	8 years to close the efficiency gap
No efficiency improvement	Closes 20% of efficiency gap	35% efficiency gap	50% efficiency gap
\$53B enhancement and growth investment	\$107 billion enhancement and growth investment	\$53bn enhancement and growth investment	\$107B enhancement and growth investment
Asset lives as reported	Asset lives shortened to reflect seismic resilience issues	Asset lives as reported	Asset lives shortened to reflect seismic resilience issues
3% new operating costs associated with increase in capital costs	5% new operating costs associated with increase in capital costs	Operating costs increases expected to be absorbed by new entities	Operating costs increases expected to be absorbed by new entities
Capital inflation relative to consumer price inflation of 1%	Capital inflation relative to consumer price inflation of 5%	Amalgamated entities expected to absorb inflationary pressure	Amalgamated entities expected to absorb inflationary pressure

47. One part of the sensitivity analysis has been to identify a “break-even” efficiency point – the point at which the performance of an amalgamated water services entity would match the performance of a council delivering water services on its own (i.e. the counterfactual). This is a helpful marker as to what level of efficiency savings a new water services entity needs to deliver in order for reform to provide a cost advantage for the typical household within a particular council area.
48. It is important to note that this break-even point is likely to be conservative as it compares the reform scenario under the least favourable set of parameters (i.e., those in red above) against the counterfactual scenario under the most favourable set of parameters (i.e., those in green above). The results of the break-even efficiency analysis are presented in Figure 4 below.

49. The analysis shows that that the maximum break-even point for all councils at which reform would still provide a cost advantage for households is 35%. To achieve a 35% efficiency gain over 30 years, a new water services entity would need to deliver an annual operating efficiency improvement of 1.2% per annum. To put this into context, Scottish Water has reduced unit costs by more than 50% since 2002 (equivalent to a 3.6% per annum compound efficiency improvement). Having made these improvements, Scottish Water is still expected to deliver an ongoing annual efficiency improvement of around 1% per annum.
50. For most councils, the break-even point is much lower than 35%. For example, 35 councils have a breakeven point of 15% or lower, which means that these councils would experience a net cost advantage from reform if a future water services entity were to deliver an efficiency gain above 15% over 30 years (or a 0.5% reduction in unit costs per annum).
51. This reflects the fact that, without reform, these councils would face challenges in accessing similar levels of economic efficiencies that aggregated water service entities would under an appropriate economic regulatory regime.

Figure 19: Break-even efficiency analysis, difference between metro, provincial, and rural local authorities.



52. Local authorities without a break-even point are those that will be unable to match the performance of aggregated water services entities and therefore would receive a cost advantage from reform under all the scenarios modelled through the sensitivity analysis. The reasons for this include their size, small rate payer base, and limited ability to access economic efficiencies, including scale economies.
53. This analysis undertaken by WICS also does not take into account the potential improvements in outcomes for iwi/Māori, levels of service, health and environmental impacts, which are anticipated to materially improve as a result of the reform.

Independent review of WICS analysis

54. Farrierswier’s opinion (see Appendix 10 of Strategic RIA) is that the overall approach adopted by WICS to modelling the potential impact of amalgamation of water entities and associated reforms should give reasonable estimates in terms of *direction* and *order of magnitude*.
55. It also notes the sensitivity analysis WICS has done of the potential benefits of reform shows that in almost all cases the household bills are materially lower if amalgamation occurs than if it does not.
56. Notwithstanding their opinion, Farrierswier notes that there are certain limitations that are associated with the analysis which decision-makers should be mindful of. These relate to estimating the level of future investment requirements and potential efficiency savings that could be realised, particularly given differences in the nuances of the New Zealand regulatory and policy context.
57. Farrierswier has also considered whether it is likely that amalgamation should lead to efficiency improvements and any limits to this. Farrierswier agrees with WICS views on the factors that will promote allocative, productive, and dynamic efficiency in the water sector, including that:
 - the quality of management of the future water entities will have a critical impact on all aspects of efficiency;
 - there are important decisions that need to be made about charging and initial priorities, and considers these choices can realistically only be taken by central government, with input from local government and other stakeholders;
 - given the diversity apparent in New Zealand’s regions and three water systems, adopting economic efficiency concepts and best practice regulation for setting drinking water quality and environmental regulation standards is likely to result in diverse strategies for addressing water quality concerns – this should be seen as an opportunity; and
 - the economic regulation framework assumed by WICS appears appropriate, based on Farrierswier’s experience with the economic regulation applying to Australian water businesses.
58. Finally, Farrierswier 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 Department is considering – with entity sizes that do not exceed two million connected citizens – do not appear to include entities of a size that give rise to concerns about diseconomies of scale.

Recommendations and implementation considerations

59. Our first best advice, assuming all local authorities are part of the reforms, is that the balance of the Government’s reform objectives will be best met through a three or four entity scenario.
 - A three-entity scenario would:
 - potentially access a greater range of efficiencies;
 - provide a greater potential uniformity of average costs per household; and

- likely require the South Island entity to be expanded to include Wellington to achieve broadly comparable population density and economic geography between the entities¹⁹⁵.
 - A four-entity scenario would:
 - require a higher degree of tolerance for price variance over the long term across the country (a graph of options by estimated household price impacts is included as Appendix 1);
 - provide a greater connection to the communities serviced by that entity;
 - enable the South Island (including Ngāi Tahu/Tauihu takiwā approach) to be serviced by a single entity; and
 - enable robust regulatory and performance benchmarking.
60. Ultimately, the choice between these options can be determined by which configuration of number and boundaries is judged most likely to:
- resonate with the iwi/Māori and territorial authorities impacted;
 - best manage environmental outcomes;
 - ensure a smooth and effective transition; and
 - best position the new entities to be able to engage with willing partners from establishment.
61. This trade-off has been tested with the Three Waters Steering Committee who have a preference toward a four-entity model reflective of the considerations set out below.
62. In reaching our ‘first best’ advice on three or four entities, it is worth noting that we have considered a single entity model, like those operating in Scotland and Tasmania. We do not consider a single entity model to be optimal given the limited evidence of significant additional scale economies above 800,000 connected customers, combined with a limited ability to adequately benchmark without comparable performance data.
63. A single provider could also provide potentially perverse incentives in both labour market (shallow talent pools) and procurement (monopsony tensions). A summary of the best-performing entity scenarios (between three and four entities) and the key trade-offs between these is provided below in Table 11.

¹⁹⁵ Comparable population size is not deterministic but does mean that entities of broadly a similar size will be able to access broadly similar scale benefits that may flow on to consumers (all other things being equal). It also means regulatory benchmarking may be easier to apply.

Table 30: Best performing entity scenarios (between three and four entities) and the key trade-offs between these.

Scenario	Strengths	Challenges / risks
Scenario 3 – three entities (South Island on its own)	<ul style="list-style-type: none"> Enables significant efficiency savings. WICS analysis suggests Net Present Cost per connected citizen would reduce by 47% (\$490), 50% (\$830), and 50% (\$1070) for each of the three entities. Strong labour market dynamics. South Island identity maintained. Integrates a number of large catchments including the Hauraki Gulf. 	<ul style="list-style-type: none"> Some localised connection to core whakapapa connections but not a strong rohe/takiwā approach in the South Island and top of the North Island. Not a natural ki uta ki tai approach in the central North Island.
Scenario 5 - four entities (vertical split)	<ul style="list-style-type: none"> Enables significant efficiency savings. WICS analysis suggests Net Present Cost per connected citizen would reduce by 45% (\$490), 49% (\$900), 48% (\$740), and 50% (\$1070) for each of the four entities. Strong labour market dynamics. South Island identity maintained. Integrates a number of large catchments, particularly in the central North Island. 	<ul style="list-style-type: none"> Some localised connection to core whakapapa connections but not a strong rohe/takiwā approach in the South Island and top of the North Island. Not a natural ki uta ki tai approach in the Hauraki Gulf.
Scenario 6 - four entities (lateral split, catchment extended, South Island takiwā approach)	<ul style="list-style-type: none"> Enables significant efficiency savings. WICS analysis suggests Net Present Cost per connected citizen would reduce by 45% (\$480), 52% (\$950), 49% (\$800), and 49% (\$1030) for each of the four entities. Strong labour market dynamics. Enables improved whakapapa/takiwā alignment at bottom of North/top of South Islands. Takes a more natural ki uta ki tai approach in the Hauraki Gulf, central North Island, and Bay of Plenty. 	<ul style="list-style-type: none"> South Island identity relatively strong but joined with bottom of the North Island. Not a natural ki uta ki tai approach in the Hauraki Gulf.

64. The above trade-offs require subjective judgments on rohe/takiwā and communities of interests, and how these are weighted. These ultimately are matters for Cabinet to determine and could benefit from further engagement with relevant local authorities and iwi/Māori on boundary considerations.

Engagement with the Three Waters Steering Committee

65. The joint central-local government Steering Committee considered advice from officials that the three waters system reform objectives are best met through either a three or four entity model.
66. The Steering Committee broadly endorsed this general conclusion based on the evidence presented to date, including preliminary findings from the WICS Phase Two analysis, subject to the final model obtaining a high level of participation by territorial authorities, especially the metropolitan local authorities.
67. On balance, the Steering Committee considered that a four-entity model was likely to have a broader appeal to the sector than a three-entity option, given greater connection to communities of interest.
68. We note that the Steering Committee sees the determination of number and boundaries of entities as only one aspect of the reform programme, and reserves the right to consider the reform package as a whole.
69. The Steering Committee sought further consideration of several boundary issues including, for example, the top of the South Island and the catchment approach in Hauraki. It concluded that this issue would benefit from further engagement with the affected local authorities and their neighbours, and with affected iwi/Māori. It noted the importance of completing the independent review of the analysis, which is now complete.

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Detailed Chapter 2 Appendix 1: Scenario descriptions and outcomes

One National entity – WICS scenario 24

Group	Councils included
A	Auckland, Ashburton, Buller, Carterton, Central Hawke’s Bay, Central Otago, Chatham Islands, Christchurch, Clutha, Dunedin, Far North, Gisborne, Gore, Grey, Hamilton, Hastings, Hauraki, Horowhenua, Hurunui, Invercargill, Kaikoura, Kaipara, Kapiti Coast, Kawerau, Lower Hutt, Mackenzie, Manawatu, Marlborough, Masterton, Matamata-Piako, Napier, Nelson, New Plymouth, Opotiki, Otorohanga, Palmerston North, Poirirua, Queenstown-Lakes, Rangitikei, Rotorua Lakes, Ruapehu, Selwyn, South Taranaki, South Waikato, South Wairarapa, Southland, Stratford, Taranua, Tasman, Taupo, Tauranga, Thames-Coromandel, Timaru, Upper Hutt, Waikato, Waimakariri, Waimate, Waipa, Wairoa, Waitaki, Waitomo, Wellington City, Western Bay of Plenty, Westland, Whakatane, Whanganui, Whangarei



Scenario 24		Individual councils (weighted average of councils within each entity grouping)**		Post-amalgamation**		Difference (NZ\$)**		Difference (%)	
Entity*	Population served	Net Present Cost (NPC) per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051
A	4,344,966	\$1,500	\$3,400	\$780	\$1,110	-\$720	-\$2,290	-48%	-67%

Two entities (North and South separate) – WICS scenario 9

Group	Councils included
A	Auckland, Carterton, Central Hawke’s Bay, Far North, Gisborne, Hamilton, Hastings, Hauraki, Horowhenua, Kaipara, Kapiti Coast, Kawerau, Lower Hutt, Manawatu, Masterton, Matamata-Piako, Napier, New Plymouth, Opotiki, Otorohanga, Palmerston North, Poirirua, Rangitikei, Rotorua Lakes, Ruapehu, South Taranaki, South Waikato, South Wairarapa, Stratford, Tararua, Taupo, Tauranga, Thames-Coromandel, Upper Hutt, Waikato, Waipa, Wairoa, Waitomo, Wellington City, Western Bay of Plenty, Whakatane, Whanganui, Whangarei
B	Ashburton, Buller, Central Otago, Chatham Islands, Christchurch, Clutha, Dunedin, Gore, Grey, Hurunui, Invercargill, Kaikoura, Mackenzie, Marlborough, Nelson, Queenstown-Lakes, Selwyn, Southland, Tasman, Timaru, Waimakariri, Waimate, Waitaki, Westland



Scenario 9		Individual councils (weighted average of councils within each entity grouping)**		Post-amalgamation**		Difference (NZ\$)**		Difference (%)	
Entity*	Population served	Net Present Cost (NPC) per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051
A	3,364,467	\$1,350	\$3,030	\$710	\$950	-\$640	-\$2,080	-47%	-69%
B	980,499	\$2,130	\$4,920	\$1,060	\$1,610	-\$1,070	-\$3,310	-50%	-67%
Weighted average	4,344,966	\$1,500	\$3,450	\$780	\$1,090	-\$720	-\$2,360	-48%	-68%

*Coloured red if the entity has fewer than 800,000 connected citizens, or the entity contains a council with a higher NPC through amalgamation.

**Real prices (current dollars). Rounded to the nearest NZ\$10.

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Three entities (South Island on its own) – WICS scenario 6

Group	Councils included
A	Auckland, Far North, Hauraki, Kaipara, Thames-Coromandel, Whangarei
B	Carterton, Central Hawke’s Bay, Gisborne, Hamilton, Hastings, Horowhenua, Kapiti Coast, Kawerau, Lower Hutt, Manawatu, Masterton, Matamata-Piako, Napier, New Plymouth, Otago, Otorohanga, Palmerston North, Poirirua, Rangitikei, Rotorua Lakes, Ruapehu, South Taranaki, South Waikato, South Wairarapa, Stratford, Tararua, Taupo, Tauranga, Upper Hutt, Waikato, Waipa, Wairoa, Waitomo, Wellington City, Western Bay of Plenty, Whakatane, Whanganui
C	Ashburton, Buller, Central Otago, Chatham Islands, Christchurch, Clutha, Dunedin, Gore, Grey, Hurunui, Invercargill, Kaikoura, Mackenzie, Marlborough, Nelson, Queenstown-Lakes, Selwyn, Southland, Tasman, Timaru, Waimakariri, Waimate, Waitaki, Westland



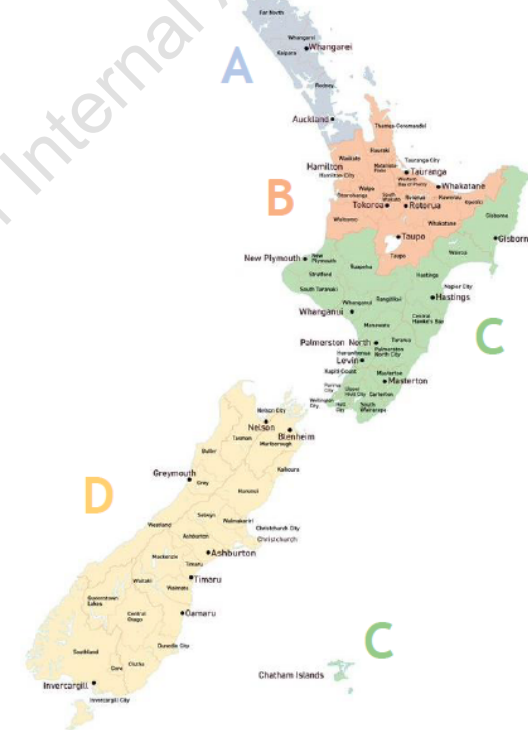
Scenario 6		Individual councils (weighted average of councils within each entity grouping)**		Post-amalgamation**		Difference (NZ\$)**		Difference (%)	
Entity*	Population served	Net Present Cost (NPC) per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051
A	1,762,746	\$1,090	\$2,230	\$600	\$820	-\$490	-\$1,410	-45%	-63%
B	1,601,721	\$1,660	\$3,900	\$830	\$1,190	-\$830	-\$2,710	-50%	-69%
C	980,499	\$2,130	\$4,920	\$1,060	\$1,610	-\$1,070	-\$3,310	-50%	-67%
Weighted average	4,344,966	\$1,500	\$3,400	\$780	\$1,120	-\$720	-\$2,280	-48%	-67%

*Coloured red if the entity has fewer than 800,000 connected citizens, or the entity contains a council with a higher NPC through amalgamation.

**Real prices (current dollars). Rounded to the nearest NZ\$10.

Four entities (lateral split) – WICS scenario 29

Group	Councils included
A	Auckland, Far North, Kaipara, Whangarei
B	Hamilton, Hauraki, Kawerau, Matamata-Piako, Opotiki, Otorohanga, Rotorua Lakes, South Waikato, Taupo, Tauranga, Thames-Coromandel, Waikato, Waipa, Waitomo, Western Bay of Plenty, Whakatane
C	Carterton, Central Hawke’s Bay, Chatham Islands, Gisborne, Hastings, Horowhenua, Kapiti Coast, Lower Hutt, Manawatu, Masterton, Napier, New Plymouth, Palmerston North, Poirirua, Rangitikei, Ruapehu, South Taranaki, South Wairarapa, Stratford, Tararua, Upper Hutt, Wairoa, Wellington City, Whanganui
D	Ashburton, Buller, Central Otago, Christchurch, Clutha, Dunedin, Gore, Grey, Hurunui, Invercargill, Kaikoura, Mackenzie, Marlborough, Nelson, Queenstown-Lakes, Selwyn, Southland, Tasman, Timaru, Waimakariri, Waimate, Waitaki, Westland



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Scenario 29		Individual councils (weighted average of councils within each entity grouping)		Post-amalgamation		Difference (NZ\$)		Difference (%)	
Entity*	Population served	Net Present Cost per connected citizen per year	Projected Average Household Bill: 2051**	Net Present Cost	Projected Average Household Bill: 2051**	Net Present Cost	Projected Average Household Bill: 2051**	NPC per connected citizen per year	Projected Average Household Bill: 2051
A	1,725,853	\$1,060	\$2,170	\$580	\$800	-\$480	-\$1,370	-45%	-63%
B	641,569	\$1,740	\$4,000	\$880	\$1,220	-\$860	-\$2,780	-49%	-70%
C	997,245	\$1,640	\$3,890	\$840	\$1,280	-\$800	-\$2,610	-49%	-67%
D	980,299	\$2,120	\$4,940	\$1,060	\$1,610	-\$1,060	-\$3,330	-50%	-67%
Weighted average	4,344,966	\$1,500	\$3,400	\$790	\$1,140	-\$710	-\$2,260	-47%	-66%

*Coloured red if the entity has fewer than 800,000 connected citizens, or the entity contains a council with a higher NPC through amalgamation.

**Real prices (current dollars). Rounded to the nearest NZ\$10.

Four entities (vertical split) – WICS scenario 2

Group	Councils included
A	Auckland, Far North, Hauraki, Kaipara, Thames-Coromandel, Whangarei
B	Hamilton, Horowhenua, Manawatu, Matamata-Piako, New Plymouth, Otorohanga, Palmerston North, Rangitikei, Ruapehu, South Taranaki, South Waikato, Stratford, Taupo, Waikato, Waipa, Waitomo, Whanganui
C	Carterton, Central Hawke’s Bay, Gisborne, Hastings, Kapiti Coast, Kawerau, Lower Hutt, Masterton, Napier, Opatiki, Poirirua, Rotorua Lakes, South Wairarapa, Tararua, Tauranga, Upper Hutt, Wairoa, Wellington City, Western Bay of Plenty, Whakatane
D	Ashburton, Buller, Central Otago, Chatham Islands, Christchurch, Clutha, Dunedin, Gore, Grey, Hurunui, Invercargill, Kaikoura, Mackenzie, Marlborough, Nelson, Queenstown-Lakes, Selwyn, Southland, Tasman, Timaru, Waimakariri, Waimate, Waitaki, Westland



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Scenario 2		Individual councils (weighted average of councils within each entity grouping)**		Post-amalgamation**		Difference (NZ\$)**		Difference (%)	
Entity*	Population served	Net Present Cost (NPC) per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051
A	1,762,746	\$1,090	\$2,230	\$600	\$820	-\$490	-\$1,410	-45%	-63%
B	623,653	\$1,840	\$4,360	\$940	\$1,420	-\$900	-\$2,940	-49%	-67%
C	978,068	\$1,540	\$3,610	\$800	\$1,130	-\$740	-\$2,480	-48%	-69%
D	980,499	\$2,130	\$4,920	\$1,060	\$1,610	-\$1,070	-\$3,310	-50%	-67%
Weighted average	4,344,966	\$1,500	\$3,400	\$790	\$1,140	-\$710	-\$2,260	-47%	-66%

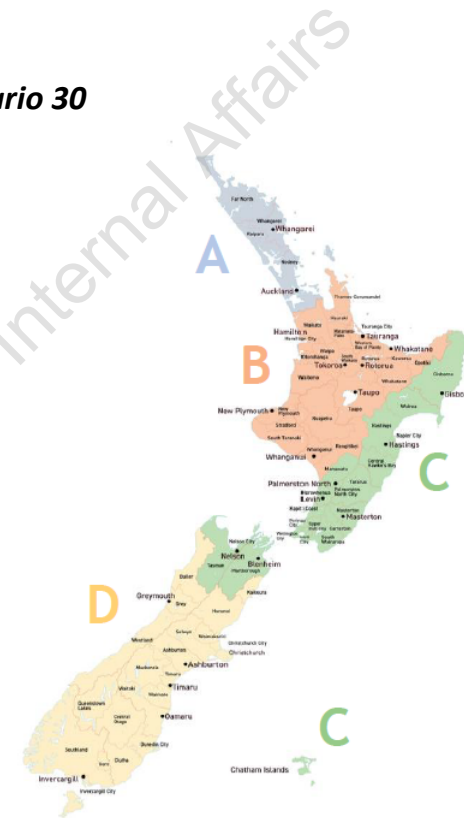
*Coloured red if the entity has fewer than 800,000 connected citizens, or the entity contains a council with a higher NPC through amalgamation.

**Real prices (current dollars). Rounded to the nearest NZ\$10.

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Four entities (lateral split, catchment extended, South Island takiwā approach) – WICS scenario 30

Group	Councils included
A	Auckland, Far North, Kaipara, Whangarei
B	Hamilton, Hauraki, Kawerau, Matamata-Piako, New Plymouth, Oportiki, Otorohanga, Rangitikei, Rotorua Lakes, Ruapehu, South Taranaki, South Waikato, Stratford, Taupo, Tauranga, Thames-Coromandel, Waikato, Waipa, Waitomo, Western Bay of Plenty, Whakatane, Whanganui
C	Carterton, Central Hawke's Bay, Chatham Islands, Gisborne, Hastings, Horowhenua, Kapiti Coast, Lower Hutt, Manawatu, Marlborough, Masterton, Napier, Nelson, Palmerston North, Porirua, South Wairarapa, Taranua, Tasman, Upper Hutt, Wairoa, Wellington City
D	Ashburton, Buller, Central Otago, Christchurch, Clutha, Dunedin, Gore, Grey, Hurunui, Invercargill, Kaikoura, Mackenzie, Queenstown-Lakes, Selwyn, Southland, Timaru, Waimakariri, Waimate, Waitaki, Westland



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Scenario 30		Individual councils (weighted average of councils within each entity grouping)		Post-amalgamation		Difference (NZ\$)		Difference (%)	
Entity*	Population served	Net Present Cost per connected citizen per year	Projected Average Household Bill: 2051**	Net Present Cost	Projected Average Household Bill: 2051**	Net Present Cost	Projected Average Household Bill: 2051**	NPC per connected citizen per year	Projected Average Household Bill: 2051
A	1,725,853	\$1,060	\$2,170	\$580	\$800	-\$480	-\$1,370	-45%	-63%
B	799,608	\$1,840	\$4,300	\$890	\$1,220	-\$950	-\$3,080	-52%	-72%
C	955,354	\$1,640	\$3,730	\$840	\$1,260	-\$800	-\$2,470	-49%	-66%
D	864,150	\$2,090	\$4,970	\$1,060	\$1,640	-\$1,030	-\$3,330	-49%	-67%
Weighted average	4,344,966	\$1,500	\$3,400	\$780	\$1,130	-\$720	-\$2,270	-48%	-67%

*Coloured red if the entity has fewer than 800,000 connected citizens, or the entity contains a council with a higher NPC through amalgamation.

**Real prices (current dollars). Rounded to the nearest NZ\$10.

Five entities (Waka Kotahi New Zealand Transport Agency) – WICS Scenario 1

Group	Councils included
A	Auckland, Far North, Kaipara, Whangarei
B	Hamilton, Hauraki, Kawerau, Matamata-Piako, Otorohanga, Rotorua Lakes, South Waikato, Taupo, Tauranga, Thames-Coromandel, Waikato, Waipa, Waitomo, Western Bay of Plenty, Whakatane
C	Central Hawke’s Bay, Gisborne, Hastings, Horowhenua, Manawatu, Napier, New Plymouth, Opotiki, Palmerston North, Rangitikei, Ruapehu, South Taranaki, Stratford, Taranua, Wairoa, Whanganui
D	Carterton, Kapiti Coast, Lower Hutt, Marlborough, Masterton, Nelson, Poirirua, South Wairarapa, Tasman, Upper Hutt, Wellington City
E	Ashburton, Buller, Central Otago, Chatham Islands, Christchurch, Clutha, Dunedin, Gore, Grey, Hurunui, Invercargill, Kaikoura, Mackenzie, Queenstown-Lakes, Selwyn, Southland, Timaru, Waimakariri, Waimate, Waitaki, Westland



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Scenario 1		Individual councils (weighted average of councils within each entity grouping)**		Post-amalgamation**		Difference (NZ\$)**		Difference (%)	
Entity*	Population served	Net Present Cost (NPC) per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051
A	1,725,853	\$1,060	\$2,170	\$580	\$800	-\$480	-\$1,370	-45%	-63%
B	637,172	\$1,720	\$3,960	\$880	\$1,230	-\$840	-\$2,730	-49%	-69%
C	484,925	\$2,150	\$5,220	\$1,130	\$1,800	-\$1,020	-\$3,420	-47%	-66%
D	632,666	\$1,450	\$3,060	\$810	\$1,210	-\$640	-\$1,850	-44%	-60%
E	864,350	\$2,090	\$4,950	\$1,060	\$1,650	-\$1,030	-\$3,300	-49%	-67%
Weighted average	4,344,966	\$1,500	\$3,400	\$800	\$1,180	-\$700	-\$2,220	-47%	-65%

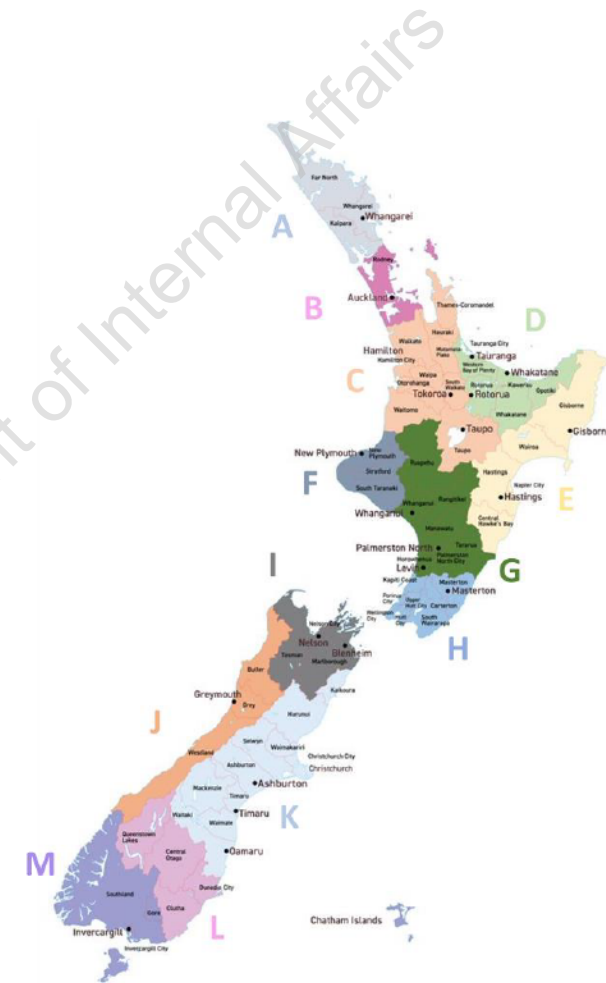
*Coloured red if the entity has fewer than 800,000 connected citizens, or the entity contains a council with a higher NPC through amalgamation.

**Real prices (current dollars). Rounded to the nearest NZ\$10.

Proactively released by the Department of Internal Affairs

13 entities – WICS scenario 12

Group	Councils included
A	Far North, Kaipara, Whangarei
B	Auckland
C	Hamilton, Hauraki, Matamata-Piako, Otorohanga, South Waikato, Taupo, Thames-Coromandel, Waikato, Waipa, Waitomo
D	Kawerau, Opotiki, Rotorua Lakes, Tauranga, Western Bay of Plenty, Whakatane
E	Central Hawke’s Bay, Gisborne, Hastings, Napier, Wairoa
F	New Plymouth, South Taranaki, Stratford
G	Horowhenua, Manawatu, Palmerston North, Rangitikei, Ruapehu, Tararua, Whanganui
H	Carterton, Kapiti Coast, Lower Hutt, Masterton, Porirua, South Wairarapa, Upper Hutt, Wellington City
I	Marlborough, Nelson, Tasman
J	Buller, Grey, Westland
K	Ashburton, Christchurch, Hurunui, Kaikoura, Mackenzie, Selwyn, Timaru, Waimakariri, Waimate, Waitaki
L	Central Otago, Clutha, Dunedin, Queenstown Lakes
M	Chatham Islands, Gore, Invercargill, Southland



Scenario 12		Individual councils (weighted average of councils within each entity grouping)**		Post-amalgamation**		Difference (NZ\$)**		Difference (%)	
Entity*	Population served	Net Present Cost (NPC) per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051	NPC per connected citizen per year	Projected Average Household Bill: 2051
A	96,853	\$2,790	\$6,500	\$2,110	\$3,760	-\$680	-\$2,740	-24%	-42%
B	1,629,000	\$930	\$1,910	\$540	\$760	-\$390	-\$1,150	-42%	-60%
C	364,799	\$1,820	\$4,260	\$1,060	\$1,660	-\$760	-\$2,600	-42%	-61%
D	276,769	\$1,630	\$3,660	\$990	\$1,610	-\$640	-\$2,050	-39%	-56%
E	173,606	\$2,310	\$5,630	\$1,510	\$2,870	-\$800	-\$2,760	-35%	-49%
F	90,140	\$2,100	\$5,090	\$1,630	\$3,030	-\$470	-\$2,060	-22%	-40%
G	216,782	\$1,990	\$4,850	\$1,250	\$2,090	-\$740	-\$2,760	-37%	-57%
H	516,518	\$1,210	\$2,690	\$750	\$1,190	-\$460	-\$1,500	-38%	-56%
I	116,148	\$2,400	\$4,700	\$1,730	\$2,790	-\$670	-\$1,910	-28%	-41%
J	22,612	\$4,530	\$11,530	\$3,750	\$7,890	-\$780	-\$3,640	-17%	-32%
K	584,922	\$1,650	\$3,930	\$900	\$1,430	-\$750	-\$2,500	-45%	-64%
L	188,209	\$2,990	\$6,740	\$2,010	\$3,340	-\$980	-\$3,400	-33%	-50%
M	68,608	\$2,650	\$6,610	\$2,150	\$4,440	-\$500	-\$2,170	-19%	-33%
Weighted average	4,344,966	\$1,500	\$3,400	\$940	\$1,520	-\$560	-\$1,880	-37%	-55%

*Coloured red if the entity has fewer than 800,000 connected citizens, or the entity contains a council with a higher NPC through amalgamation.

**Real prices (current dollars). Rounded to the nearest NZ\$10.

Chapter 3: Design of new water services entities

1. This chapter assesses the choices around the purpose, function, and design required to establish new water service entities that meet the reform objectives.
2. The options proposed cover the ownership structure, whether dividend payments will be paid to territorial authorities, and the process and mechanisms for appointing each water service entity Board.
3. The analysis was twofold, with the development of a base case scenario (preferred option) of entity design and the development of various scenarios that could be used to test different design features. In addition to this, a Ratings Evaluation Service was undertaken with the ratings agency Standard and Poor's across six different scenarios.

Context and problem definition

4. The policy proposals include the establishment of a small number of water service entities to assume ownership of three waters assets and responsibility for delivering three waters services.
5. The purpose, function, and design of these new entities will be set in legislation and requires careful consideration to ensure they are set up to enable the new system to deliver on the Government's reform objectives. Analysis around the form, function, and make-up of those entities is provided in this chapter.
6. The design of new entities also provides an opportunity to ensure that the rights and interests of iwi/Māori are better reflected and given effect to in the new system for delivering three waters services. These options are discussed further in *Chapter 6: Strengthening the role of iwi Māori in the three waters system* and include:
 - statutory references to the principles of the Treaty of Waitangi/Te Tiriti o Waitangi and to Te Mana o te Wai;
 - creation of a Mana Whenua Group (or similar), that would have the same rights as territorial local authorities, to influence the board of the water entities;
 - ensuring board competencies reflect general competence in the principles of the Treaty of Waitangi/Te Tiriti o Waitangi and specific expertise in supporting and enabling the exercise of mātauranga Māori, tikanga Māori, and kaitiakitanga with respect to the delivery of water services; and
 - a new statutory mechanism that enables mana whenua to prepare a 'Statement of Te Mana o te Wai' (or similarly titled document) and requires each water services entity to provide a formal published response.
7. Providing water service entities with financial independence, and limited local authority oversight, will require consumer protection and accountability mechanisms. At a minimum, water service entities should be subject to (these are addressed further in *Chapter 5: Mechanisms for consumer and community voice and influence*):
 - economic regulation to protect consumer interests and to act as a driver of efficiency gains over time;
 - consultation requirements on water service entities when developing its strategic direction, investment plans, and proposed prices or charges;

- mechanisms that enable communities and consumers to participate in water service entities decision-making processes; and
- protections for vulnerable consumers.

Objectives and key design features

8. As noted in the Strategic RIA, the Government's policy objectives for reform are to significantly improve the safety, quality, resilience, accessibility, and performance of three waters services, in a way that is efficient and affordable for New Zealanders.
9. In order to deliver on the Government's reform objectives, there are several key entity design features that were required to be addressed in the structure of the proposed water services entities and accompanying arrangements. Key entity design features included:
 - **balance sheet separation** from local authorities, to provide entities with the financial capacity to meet the infrastructure deficit and future investment needs;
 - entities should have **financial and operational autonomy**, including **independent and competency-based governance arrangements**;
 - entities must be able to **borrow in their own right**, as newly established public entities, independent of local government debt restrictions, and the legislative decision-making framework (under the Local Government Act 2002);
 - the purpose of the entities is expected to relate to the **provision of water services**, but entities will need to have **an express commercial objective** – among other, non-commercial objectives (these are described in the Strategic RIA, for example, improved decision making and performance);
 - entities must be **publicly owned**, with mechanisms to protect against privatisation; and
 - entities will be **statutory entities**, that is, designed and established by legislation.
10. The key entity design features outlined above have heavily influenced the preferred structure and key entity design decisions for entities. In particular, the requirements for public ownership (with appropriate privatisation protections), balance sheet separation, independent and competency-base governance arrangements, and the expectation that entities will be statutory in nature were influential in guiding key decisions on entity design.

Approach to option development and analysis

11. There are a high number of permutations when it comes to the entity design options available to the Government. However, given the root causes of the failure in the system for delivering three waters, the Government's objectives for reform, the scope for variation in the design of new water service entities is relatively narrow.
12. Our approach to assessing options has therefore focused on testing the variables that are likely to materially impact on the outcomes of reform and on which there are likely to be policy trade-offs required.
13. To do this, we have sought to establish a base case scenario that balances the policy, commercial and governance considerations, and developed variants of this to test the impact this has on achieving the reform objectives.
14. The approach to the development and assessment of alternative entity design options can be summarised as follows:

- identification of key design features required to balance the competing policy, commercial, and governance objectives to ensure that the new entities are set up in a way that enables the new system to deliver on the Government’s reform objectives;
 - develop a base case entity design scenario and alternatives that meet the key design features;
 - develop alternative entity design scenarios and key design features;
 - assessment of scenarios against strategic criteria to test the effect that these have on achieving the reform objectives, including consideration the impact on council balance sheets; and
 - identification and further development of preferred option.
15. In addition to, and in parallel with, the development and assessment of entity design options, a Ratings Evaluation Service was undertaken with the ratings agency Standard and Poor’s across six different scenarios to ensure officials were fully informed about the implications of a number of potential structural, system, and entity design choices. Further detail on this process is set out below.

Scenario development

16. The base case structure was identified through detailed planning and analysis, and domestic and international precedents, including:
- Scottish Water.
 - The Victorian Urban (regional) model.
 - TasWater.
 - Welsh Water.
 - Ontario Clean Water Agency.
 - Crown entities, including Crown Research Institutes.
 - Council Controlled Organisations e.g., Watercare.
 - Statutory entities (e.g., ACC, Kāinga Ora–Homes and Communities, Ports of Auckland, and Waka Kotahi New Zealand Transport Agency).
17. Following a review of the models above, the Department found that there is no existing entity internationally or domestically with the characteristics, capability, and capacity to deliver water infrastructure in the way contemplated by the Reform Programme.
18. International experience and best practice have shown that the creation of discrete entities (with the right oversight, governance, management, expertise, processes, and controls) are best placed to provide the level of focus and autonomy required to deliver on the objectives of the Reform Programme (see Appendix 1 for further detail).
19. Given the varying nature of expectations on, and features of, entities, it was established that entities would need to be statutory entities established under new legislation, now termed the Water Services Entity Bill.

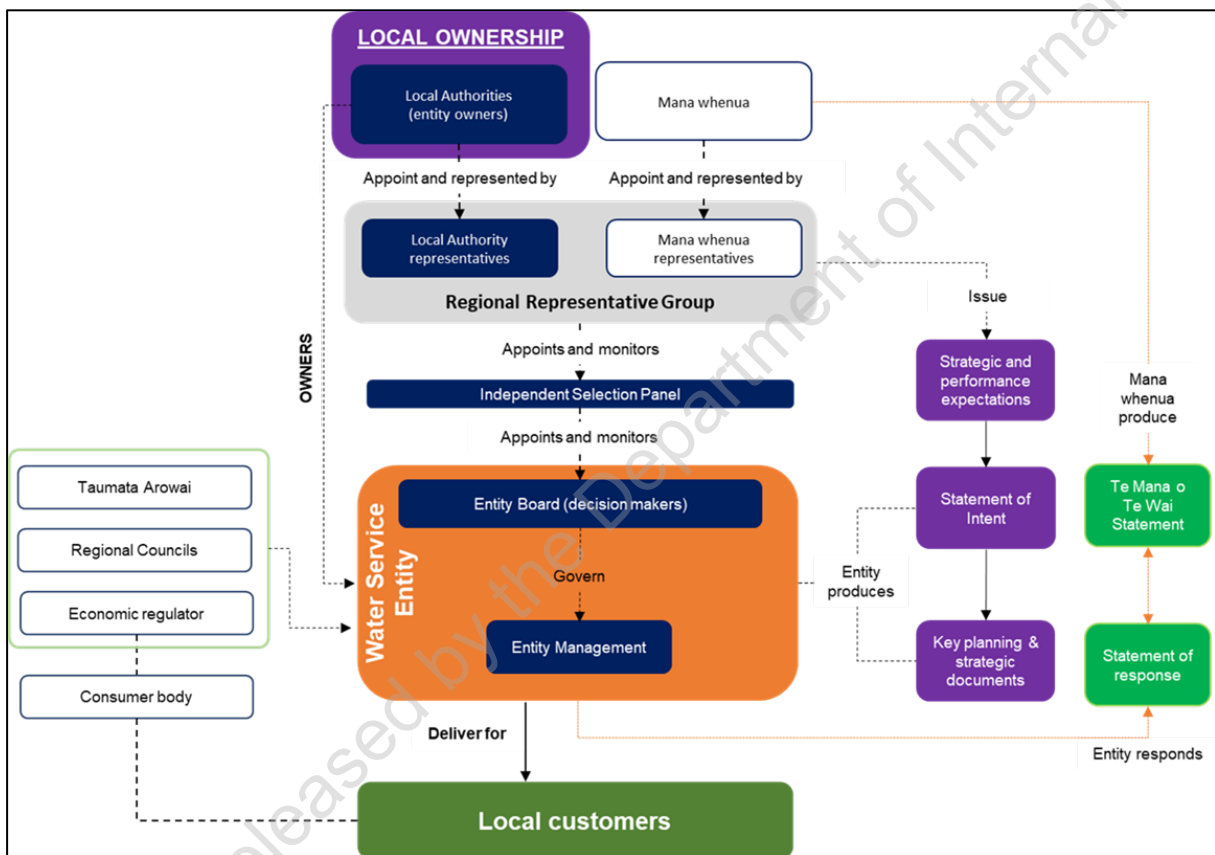
20. Entities established through legislation have been used frequently in New Zealand (e.g., Accident Compensation Corporation, Kāinga Ora—Homes and Communities, and Waka Kotahi New Zealand Transport Agency). Statutory entities are established by specific legislation that contains their entity-specific objectives (for example, these objectives can be social, cultural, public policy, and/or commercial). The Water Services Entity Bill would also set out the ownership, governance accountability, and other characteristics of the water service entities.
21. In order to achieve the expectations and features required of entities, different aspects from entity models listed above were adapted into the preferred entity design structure, including:
 - an appropriate degree of local government influence over governance of entities, while also maintaining balance sheet separation;
 - continued use of mechanisms similar to a Letter of Expectations (such as a Statement of Strategic and Performance Expectations) and Statement of Intent;
 - a requirement for a suite of planning and strategic documents, similar to those used by other water utilities or council-controlled organisations;
 - the use of an Independent Selection Panel to appoint directors; and
 - financial and operational autonomy of entities.

Base case structure

22. The base case scenario represents our preferred entity structure as set out in Figure 5 below. This scenario most effectively delivers on the reform outcomes and key entity design features (including balance sheet separation from local authorities for credit rating purposes), when compared to the remaining scenarios.
23. Without balance sheet separation, the entities will not have the financial capacity to meet current and future investment needs without increasing prices significantly. It also enables independent, competency-based governance which will help to deliver efficiency gains.
24. The base case is shown in the Figure 5 below and provides for:
 - public ownership;
 - influence by local authorities and mana whenua over strategic and performance expectations and governance;
 - protections against privatisation; and
 - an integrated regulatory system that ensures accountability of the entity and its Board (economic regulation, Taumata Arowai, and environmental regulation).
25. Local authorities and iwi/Māori will have a joint oversight role, and will appoint and remove representatives to the Representative Group. Legislation will set additional requirements relevant to appointment of representatives (e.g., number of representatives).
26. The role of the Independent Selection Panel is to rigorously assess and evaluate potential Board candidates, then shortlist and finally appoint members. Independent Selection Panel members will be appointed by the Representative Group, who will also conduct periodic performance reviews of the Independent Selection Panel.
27. Key documents that direct/or guide the strategic direction of the water service entities (in addition to the legislation) include:
 - **Government Policy Statement** (see *Chapter 4: Entity regulation, system direction, and system stewardship*): provide policy direction to all water service entities.

- **Statement of Strategic and Performance Expectations:** set objectives and priorities that boards of individual water service entities would take into account. This is similar to a Letter of Expectations.
- **Statement of Intent:** produced by the water service entities in response to the Statement of Strategic and Performance Expectations. This is the primary accountability document for the Board.
- **Key planning documents:** key documents to guide the delivery of services, including a Strategic Asset Management Plan and a Funding and Pricing Plan.

Figure 20: Base case entity design structure.



Comparison of the base case to alternative scenarios

28. Six scenarios were developed to compare the base case option against alternatives. These scenarios were also tested with Standard and Poor's, because achieving balance sheet separation and appropriate credit worthiness are crucial for ensuring the entities' long-term financial sustainability and embedding the ability to fund current and future investment needs. See Appendix 2 for a full comparison of these.
29. We were also conscious that there were some key entity design considerations that will influence the Government's ability to achieve its outcomes. For example, ownership, governance and control arrangements, the number and boundaries of entities, and a level of support from the Crown.

30. Over the course of six months, we engaged with Standard and Poor's to educate them around the Reform Programme and to run a Ratings Evaluation Service to test various entity design scenarios to understand what impacts the proposed water service entities structures would have on council credit ratings, the Crown, and the Local Government Funding Agency. That analysis also extended to understanding the creditworthiness of entities and balance sheet treatment.
31. The results of this analysis informed further entity design work but endorsed the base case structure. It was found that additional Crown support through the provision of a liquidity facility would likely provide a significant credit rating uplift to the water service entities. This is explored in scenario four.
32. The six entity design scenarios were also tested with:
 - The Joint Three Waters Central/Local Government Steering Committee, who requested that we test them with targeted members of the Local Government Funding Agency shareholders council. This was undertaken, and feedback incorporated into the scenarios. The Local Government Funding Agency Board Chair and executive team were also consulted.
 - The Treasury and Ministry of Business, Innovation and Employment (MBIE), particularly as they relate to Crown support and the anticipated economic regulatory regime.

The six scenarios

33. The six scenarios proposed that water service entities would be structurally separated from local authorities and the Crown, have financial and operational autonomy, borrow in their own rights, and have independent governance arrangements.
34. The scenarios have varying levels of local authority and Crown influence over the governance arrangements, as well the number of entities and various options for Crown support, as outlined below.

Base case

35. The base case proposes that the Crown will establish water services entities as statutory corporations through legislation. The purpose and objectives of entities will be set by legislation with Government Policy Statements providing overarching direction.
36. Relevant local authorities will appoint representatives to a Representative Group (the Representatives). The Representatives will provide their entity with a Statement of Strategic and Performance Expectations that will influence the entity's statement of intent. Each entity will need to consider the Representatives' comments on the entity's statement of intent. The Representatives will also establish an Independent Selection Panel that has the sole responsibility for appointing and removing entity Board members.
37. The entity's management will be responsible for day-to-day operations including pricing, and they will be regulated by the Commerce Commission.
38. Each of the subsequent scenarios are based on the base case, with varying levels of local authority and Crown influence over the governance arrangements, as well the number of entities and various options for Crown support.

Scenario two – lower degree of Governor influence

39. The key area of differentiation of this scenario is that there will be no Letter of Expectations from the Representatives and the entities are not required to consider the Representatives' comments on their Statements of Intent.

Scenario three – higher degree of Governor influence

40. The key areas of differentiation of this scenario are:
- Representatives have approval rights over the entities' Statements of Intent, including pricing principles and investment decisions;
 - there is no Independent Selection Panel and Representatives vote on the appointment of entity board members; and
 - Representatives can vote to remove the entity's chair or members.

Scenario four – Central Government support variant

41. The key areas of differentiation of this scenario are:
- entities benefit from a NZ\$500M Crown liquidity facility on the same terms as the Local Government Funding Agency; and
 - entities increase their leverage by NZ\$1B at commencement.

Scenario five – ownership structure variant

42. The key area of differentiation of this scenario being:
- ownership will be through a statutory entity with a shareholding ownership structure. Shareholding would correspond to asset values, with local authorities having a proportional shareholding and ability to appoint Representatives.

Scenario six – number of entities variant

43. The key area of differentiation of this scenario is that there would be 13 entities across the country, with each entity covering a smaller group of local authorities. This scenario essentially tests smaller entities, and less diffuse governance arrangements.

Common features across scenarios

44. The following assumptions are common to all scenarios:
- water service entities will be established as statutory entities with legislation setting out their core functions, powers, and characteristics;
 - water service entities will be owned by the relevant local authorities, whose assets they assume; and

- an economic regulation regime will be established to ensure that the water service entities are incentivised to deliver services that are cost-effective and meet consumer interests (this will be explored by MBIE).

45. Below are the common design features that have been developed for all scenarios.

Purpose, functions, powers, and responsibilities

46. The purpose and primary objective of the water service entities will be prescribed in legislation (under the Water Services Entity Bill). The purpose of the water service entities will relate to the provision of water services – that is, drinking water, wastewater, and stormwater. The primary objectives of the water service entities are currently expected to focus on the following key aspects:

- a commercial objective, for example, “to operate as a successful business” or “to operate on an economic and commercial basis”;
- objectives reflecting the interests of iwi and Māori; for example, “to give effect to Te Mana o te Wai”; and
- objectives that address fundamental sector issues, for example, “operate in accordance with best practice asset management”.

47. As a result of the above core purpose and objectives, the key categories of functions, powers, and responsibilities that will need to apply to water service entities are as summarised below:

- **Obligation to provide and maintain water services.** The fundamental responsibility of the water service entities will be to provide and maintain water services, and the underlying infrastructure, within their region.
- **Ownership of infrastructure.** The water service entities will own, or have appropriate interests in, all infrastructure necessary for providing water services within their region. Controls around divesting or disposing of significant assets will also be provided for in the Water Services Entity Bill.
- **Pricing and charging.** Water service entities will be responsible for determining their pricing methodology and methods of charging, within the boundaries of the applicable economic regulatory framework.
- **Provision for finance and funding.** The water service entities will be responsible for funding their capital expenditure and operating expenses (e.g., from charges, borrowing, and levies). They will also be responsible for undertaking financial planning, management, and reporting, and setting any development contributions, growth charges, or equivalent levies.
- **Consumer and community relationship and protections, including broader public health protections.** The water service entities will be responsible for consulting with consumers and communities in relation to its pricing methodology, asset management plans, and other relevant plans and strategies. The water service entities will also be responsible for the continuity of water supply and for complying with drinking water (and stormwater and wastewater) quality standards administered by Taumata Arowai (and other organisations).
- **Access and protections for infrastructure.** The water service entities will be granted appropriate access rights, and other relevant powers and protections, in respect of land and infrastructure necessary for them to provide water services within the region.

- **Planning and strategy.** The water service entities will be responsible for developing, consulting on, and implementing relevant business plans and strategies (e.g., infrastructure programme prioritisation, Strategic Asset Management Plan, and Funding and Pricing Plan).
- **Consenting and land use planning.** The water service entities will not have any responsibility for making district and regional plans and/or be empowered to grant resource consents. That responsibility will continue to sit with local and regional authorities. However, water service entities will need to hold all applicable resource consents required for the purposes of their operations.
- **Accountability.** While water service entities will not be accountable in the same way as local authorities are. Accountability mechanisms for the water service entities will be incorporated into the establishing legislation and governance arrangements.
- **Environmental.** The water service entities will have objectives that relate to environmental outcomes such as sustainability, resilience, and natural hazard management and climate change.

Representative Group

48. A Representative Group enables efficient oversight, governance, and decision making on behalf of a potentially large group of representative local authorities and mana whenua, within the multi-regional jurisdiction of the entity. Importantly, it serves as a representation of the public, communities, and mana whenua to the publicly owned water service entity.
49. We considered the option of having representation from all constituent local authorities and mana whenua in the Representative Group. However, this was assessed as being unwieldy because there would be variability in the number of representatives from local authorities and mana whenua within the jurisdiction of the entity (which could reach over 100 Representatives). The preferred option is to have a consistent number of local authorities and mana whenua on each Representative Group.
50. The Representative Group provides an opportunity for the local authority and mana whenua representatives to communicate expectations on behalf of their communities directly to the water services entities. This will provide a mechanism for the inclusion of more local and regionalised priorities, objectives, and expectations to guide entities' behaviours and decisions.
51. The proposal is that local authorities and mana whenua will provide joint oversight on the Representative Group. They will appoint and remove representatives to the Representative Group. Iwi/Māori (through mana whenua) will appoint representatives through a mana whenua led process, so will vary between entities. Legislation will set minimum requirements around appointment of Representatives.
52. The degree of influence of the Representative Group varies between scenarios, however, all scenarios propose the establishment of a Representative Group.

Independent Selection Panel (in all scenarios except scenario three)

53. The role of the Independent Selection Panel is to ensure that independent, competent, and appropriately qualified people are appointed to the key governance positions on the Board of the water service entities.

54. Legislation will provide that an Independent Selection Panel must be established for each entity, and that governor representatives appoint three members and select the Chair of the Independent Selection Panel.
55. Independent Selection Panel members and the Chair will be appointed by a Representative Group, with a legislative requirement that Independent Selection Panel members be independent and appropriately qualified.
56. Governor Representatives may remove an Independent Selection Panel member via a vote, with the threshold for that vote expected to be high (e.g., special majority).

No dividends

57. We considered whether the water service entities should be able to pay dividends to their local authority owners.
58. For the following reasons, payment of dividends was ruled out as an option:
 - dividends will create perception risks about future privatisation;
 - similar risks may also be seen in respect of prices, namely that they could be high due to the enablement of a dividend and monopolistic characteristics of water entities;
 - difficulty allocating dividend due to shifting levels of investment;
 - risk undermining tax position, noting the current taxation treatment of entities includes an entity acting in the public good and for no profit motive;
 - the infrastructure deficit will mean dividends are unaffordable in the medium term;
 - iwi/Māori are expected to view dividend to Councils negatively;
 - there are other more effective methods of providing consideration for asset transfer and supporting Councils in the transition; and
 - increases complexity of shareholding and the need for this to change over time, and potentially creates a perverse incentive for local authorities to maximise their shareholding.
59. This position has been reinforced by feedback received from our work with the Steering Committee and engagement with the sector.
60. In addition to the above reasons, we also do not see a valid argument that the inclusion of a dividend paying structure would incentivise efficiency improvements and improved water services. There are other efficiency driving mechanisms that can be utilised to deliver similar incentives to a dividend and one of the key motivating factors for a water entity will be in the economic regulatory environment (to be progressed in the economic regulation RIA being developed by MBIE).

Restriction on asset sales or transfers

61. The requirement that entities must have mechanisms to protect against privatisation extends to how entities can deal with the assets they own.

62. Entities should have the flexibility be able to structure commercial arrangements in relation to the use of their assets. For example, a long-term lease or concession of assets, which retains an appropriate degree of control and a reversionary ownership interest, should be able to be explored by entities, if that gives rise to effective and efficient operations. However, these rights should not go as far as giving entities the ability to sell or transfer water service assets, that are owned for the purposes of providing core service to the public.
63. In order to give effect to that intent, another key feature of the model that should be included in legislative provisions is relevant mechanisms to place appropriate commercial restrictions on sales or transfers of material and core three waters assets by water service entities.

Differentiating features to be tested

64. Some of the core differentiating features across the six scenarios are set out below. These variations enabled testing of the impact these choices have on overall outcomes.

Ownership structure: shareholding vs non-shareholding

65. Two ownership structures were considered: shareholding and no shareholding. Both models would be established under legislation and draw from existing legislative frameworks.
66. Given the public nature of the underlying assets and service delivery needs, ownership has been framed in the context of collective local authority (community) ownership. Instead of a traditional shareholding structure, the proposed approach is that the entities will each have a Board, but will be body corporates rather than companies. Local authorities that constitute each water services entity would be the 'owners' of the entity, on behalf of their communities, and this would be provided for in legislation.
67. The Boards of statutory entities are generally comprised of members, rather than directors (which are a feature of companies). Members are subject to different duties and frameworks to those prescribed by the Companies Act 1993, and the supporting legislation will set out the specific duties and framework that applies to the members of the entities.
68. The proposed ownership structure for the entity has no shareholding like you would see with a typical company structure, instead certain governance rights (like those seen in a traditional shareholding structure) are conferred by legislation, and exercised local authority representatives acting collectively with mana whenua as a Representative Group.
69. This approach has several advantages:
 - it removes the expectation that ownership provides some level or form of financial benefit, such as a dividend (and associated pressures on consumer prices and prioritisation of dividends over investment);
 - it helps to achieve balance sheet separation as local authorities do not have a financial interest in the entity;
 - with owners listed in statute, it is more difficult to divest that ownership right as it would require legislative change, offering a protection against privatisation;
 - there is no need to adjust shareholding levels to reflect different levels of investment in local authority areas over time; and
 - local authorities still have governance rights and other levers of influence to promote and protect community interests.

70. A number of potential entity ownership options, that have been used both domestically and internationally, were considered in addition to our proposed ownership structure.
71. Corporate models, including different shareholding structures, were considered but these models did not align as well with key objectives of the Reform Programme. They also had potential disadvantages when considered against our proposed ownership structure, including the potential tension between large, medium, and small owners in relation to control and influence expectations in the governance structure, and an inconsistency with the public ownership/protection against privatisation dynamic.
72. Our proposed governance structure, the degree of influence contemplated by both local authorities and mana whenua, and the intended charging, funding, and financing arrangements (including the absence of a dividend paying structure) lends itself towards a bespoke statutory entity where the functions and powers of the entity are outlined in legislation.
73. A corporate entity with a shareholding structure subject to New Zealand companies' legislation was not seen as the best way to give effect to the proposed entity structure because provisions would have to be reworked to give effect to the intended arrangements. This structure would also potentially create a confusing basis for the creation of entities with an appropriate charging, funding, and financing structure, within the regulatory landscape being proposed for entities, does not necessarily require either shareholders or equity capital.
74. However, subject to any restrictions around asset sales or transfers, we note that individual projects delivered by entities could be structured in a way that utilises special purpose vehicles.
75. In addition to the issue of shareholding vs non-shareholding ownership structures, the issue of Crown involvement in the governance of the entity was considered. Various options, from a Crown shareholding structure, to a form of step-in or intervention rights were considered, including the Crown Entities Act, Infrastructure Funding and Financing Act 2020, and the Local Government Act.
76. These frameworks provide useful precedents, and the general concepts are familiar to local authorities and other stakeholders. Given the ownership preferences outlined above, combined with the 'no dividend' approach, protections on privatisation, and the regulatory environment that entities will operate in, a form of step-in regime is the **preferred option**.
77. The Infrastructure Funding and Financing Act 2020 Crown Manager regime, supplemented with a risk-based approach Crown Manager appointment, was seen to provide a graduated risk regime for three waters service delivery. This graduated risk regime recognises other intervention and compliance options in the proposed water service delivery system, such as standards and economic regulation.

Governor influence

78. Scenario two was developed with a lower degree of Governor influence than the base case. The key area of differentiation with scenario two is that here would be no Letter of Expectations from the Representatives and the entities would not be required to consider the Representatives' comments on their statements of intent, therefore less Governor influence.
79. Scenario three was developed with a higher degree of Governor influence than the base case. The key areas of differentiation are:
 - Representatives would have approval rights over the entities' Statements of Intent including pricing principles and investment decisions;

- there would be no Independent Selection Panel and Representatives vote on the appointment of entity Board members; and
 - Representatives could vote to remove the entity's Board chair or members.
80. A lower level of Governor influence and the presence of an Independent Selection Panel was assessed as being better aligned with the reform objectives and key features required of entity design, in particular balance sheet separation and competency-based governance arrangements.
81. Standard and Poor's confirmed in their Rating Evaluation Service that the base case and scenarios two, four, and six would achieve balance sheet separation. Therefore, resulting in Standard and Poor's removing revenues, expenses, and debt associated with the three waters assets that would be transferred to entities, from local authorities.
82. Conversely, scenarios three and five contained a level of local authority influence over and likelihood of support of entities that was assessed by Standard and Poor's as being sufficiently high that balance sheet separation would not occur, and removal of revenues, expenses, and debt associated with three waters assets would not be achieved. This would lead to contingent liabilities in respect of three waters infrastructure being added back into the Standard and Poor's assessment of local authorities.

Level of Crown involvement and support

83. As part of the Reform Programme, we investigated different Crown support options for entities.
84. Key considerations for the provisions (and level) of any Crown support include:
- ensuring balance sheet separation from local authorities is achieved;
 - balancing the risk to the Crown (for example, natural disaster risks);
 - recognising likely Crown response in the event of financial distress;
 - improving financial outcomes for entities; and
 - focussing the risk mitigation approach of entities.
85. Under status quo local authority service delivery arrangements, water services benefit from existing Crown support to local government, including through:
- the Civil Defence Emergency Management Act 2002¹⁹⁶; and
 - a liquidity facility provided to the Local Government Financing Authority.
86. It is worthwhile noting that a review is being undertaken in relation to the appropriateness of the Civil Defence Emergency Management Act 2002 in the context of the current local authority approach and policies in relation to insurance, and risk appetite, management, and mitigation. Any recommendations or change of approach from the status quo arrangements should consider the impact on entities.

¹⁹⁶ Following an emergency, current Central Government policy is to fund 60 percent of eligible costs (above the Local Authority's threshold) to rebuild or repair damaged essential infrastructure.

87. Options for Crown support for the new entities were considered that differed from the status quo outlined above. These options included: debt management office on lending, and the provision of partial or full guarantees with respect to the financial obligations of entities by central government. These options could have yielded a potential reduction in financing cost to the entities, however, they are not currently available to local authorities under the status quo. It is important to note that those options represent a substantial change in the Crown's signaled level of support for entities and local authorities.
88. When taken as a package, an extension of the policy of coverage to entities similar to the Civil Defence Emergency Management Act 2002, where central government takes responsibility for reinstatement of assets over and above what can be reasonably obtained from commercial insurance markets. Alongside the provision of a liquidity facility to entities that is like that provided to Local Government Financing Authority, was determined to achieve the outcomes for the Reform Programme. It is important to note that this position would not represent a material change to the level of support that the Crown currently provides to the local government sector, and would not necessitate a level of control from the Crown that would be required if there were higher levels of support.
89. A review is underway of the appropriateness of the Civil Defence Emergency Management Act 2002 in the context of the current local authority approach and policies around insurance, and risk appetite, management, and mitigation. Any recommendations or change of approach from the status quo arrangements should consider the impact on water service entities.
90. The status quo Civil Defence Emergency Management Act 2002 insurability arrangements should apply to entities if no such acceptable and bankable arrangements are able to be structured in during any transition phase, or until any amended or replacement arrangements are put in place.
91. Further details, and work with the Treasury, is required to agree the commercial and financial arrangements and structure that should apply to any liquidity facility provided to the entities. The provision of a liquidity facility of this nature delivers a credit rating uplift to AA+, which is crucial to ensuing strong support from the capital markets.
92. In addition to the support outlined above, it is also proposed that legislation to establish the entities will include a clause that enables the Crown to lend money to an entity on commercial terms. This would be conditional on whether it is in the public interest to do so, or to meet a temporary shortfall in a timely manner, similar to that currently proposed in the enabling legislation for Local Government Financing Authority, the Local Government Borrowing Act 2011.

Options analysis

93. The criteria for assessment is based on the Strategic RIA evaluation criteria, which are shown in Table 12.

Table 31: Assessment criteria.

Criteria	Description
Improves economic efficiency	The extent to which a scenario leads to the entity operating with greater efficiency
Supports a financially sustainable system	The extent to which a scenario addresses the ability of water service entities to fund and finance new investment
Improves infrastructure delivery	The extent to which a scenario enables faster and smarter investment by water service entities in three waters infrastructure
Improved decision making and performance	The extent to which a scenario supports a more transparent and accountable structure that drives better decision making and improved performance
Ease of implementation	The extent to which a scenario is easily implemented from the current state to the fully operational water service entities

94. The following evaluation criteria scoring system, similar to that used in the Strategic RIA, is employed, as identified in Table 13.

Table 32: Evaluation Criteria scoring scale.

Score	Description
✓✓	Very strong alignment with criteria
✓	Strong alignment with criteria
0	No alignment with criteria
×	Weak alignment with criteria
xx	Very weak alignment with criteria

95. This analysis is set out in Table 14 below.

Table 33: Analysis of options entity design and structure.

Scenarios	Improves economic efficiency	Balance sheet separation and supports financially sustainable system	Improves infrastructure delivery	Improved decision making and competency based governance arrangements	Ease of implementation
Base case <i>(Preferred option)</i>	✓✓ Combination of economic regulation, reasonably sized entities, operational and financial autonomy, and policy clarity should lead to improved efficiency.	✓✓ Standard and Poor’s has indicated the base case is likely to be considered separate from local authority balance sheets, and have minimal to no impact on the Crown and the Local Government Funding Agency.	✓✓ Entities able to invest in infrastructure effectively and responsively, taking into account broader interests of local authorities.	✓✓ Entity structure provides much higher degree of independent governance and the utilisation of a director selection process that drives independent, competency-based appointment to enable improved decision-making and better governance. Balances political influence with operational independence for entity board.	0 Legislation and bespoke arrangements required to effect reform programme from status quo arrangements.

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Scenarios	Improves economic efficiency	Balance sheet separation and supports financially sustainable system	Improves infrastructure delivery	Improved decision making and competency based governance arrangements	Ease of implementation
<p>Scenario two – low governor influence</p>	<p>✓✓</p> <p>Combination of economic regulation, reasonably sized entities, operational and financial autonomy, and policy clarity should lead to improved efficiency.</p>	<p>✓✓</p> <p>Standard and Poor’s has indicated the base case is likely to be considered separate from local authority balance sheets, and have minimal to no impact on the Crown and the Local Government Funding Agency.</p>	<p>✓</p> <p>Legislation and regulatory landscape guides delivery. Local authorities able to contribute to direction but cannot mandate infrastructure delivery. Onus on entity to balance requirements of multiple stakeholders.</p> <p>Risk that entities may have weakened accountability to local communities balanced by regulatory environment, consumer voice, and entity accountability.</p>	<p>✓✓</p> <p>Entity structure provides much higher degree of independent governance and the utilisation of a director selection process that drives independent, competency-based appointment to enable improved decision-making and better governance.</p>	<p>0</p> <p>Legislation and bespoke arrangements required to effect reform programme from status quo arrangements.</p>
<p>Scenario three – high governor influence</p>	<p>✓</p> <p>Combination of economic regulation, reasonably sized entities, operational and financial autonomy, and policy clarity should lead to improved efficiency.</p> <p>However, greater levers for political influence may result in entities operating at a less efficient level.</p>	<p>x</p> <p>Scenario three represents an increased level of council influence over the entity board compared with the base case. This is likely to result in status quo balance sheet treatment of the entity’s liabilities assessed as being contingent liabilities on local authority balance sheets.</p>	<p>0</p> <p>Infrastructure delivery likely to be subject to similar levels of political pressure to current state. Risk that investment decisions do not reflect need / are sub-optimal.</p> <p>Similar to the status quo position.</p>	<p>x</p> <p>Risk that greater political influence might dilute the benefits of creating operationally and financially independent water service entities when it comes to decision-making, particularly around pricing and investment.</p>	<p>0</p> <p>Legislation and bespoke arrangements required to effect reform programme from status quo arrangements.</p>

Scenarios	Improves economic efficiency	Balance sheet separation and supports financially sustainable system	Improves infrastructure delivery	Improved decision making and competency based governance arrangements	Ease of implementation
Scenario four – central government support	✓✓ Combination of economic regulation, reasonably sized entities, operational and financial autonomy, and policy clarity should lead to improved efficiency.	✓✓ Standard and Poor’s has indicated the base case is likely to be considered separate from local authority balance sheets, and have minimal to no impact on the Crown and the Local Government Funding Agency. Crown support arrangements provides entities with a credit ratings uplift that could better support delivery of current and future investment needs compared to the base case and two.	✓✓ Entities are able to invest in infrastructure effectively and responsively, taking into account broader interests of local authorities. Onus on entity to balance requirements of multiple stakeholders.	✓✓ Entity structure provides much higher degree of independent governance and the utilisation of a director selection process that drives independent, competency-based appointment to enable improved decision-making and better governance. Balances political influence with operational independence for entity board.	0 Legislation and bespoke arrangements required to effect reform programme from status quo arrangements. Increased level of Crown support draws from status quo arrangements. No increased implementation risk associated with this characteristic.

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Scenarios	Improves economic efficiency	Balance sheet separation and supports financially sustainable system	Improves infrastructure delivery	Improved decision making and competency based governance arrangements	Ease of implementation
<p>Scenario 5 – alternative ownership structure</p>	<p>✓</p> <p>Combination of economic regulation, reasonably sized entities, operational and financial autonomy, and policy clarity should lead to improved efficiency.</p> <p>Risk of contingent liabilities appearing on local authority balance sheets may impede efficiency gains or restrict investment.</p>	<p>x</p> <p>Depending on shareholding structure adopted, this scenario may represent a level of council influence over the entity, resulting in the entity's liabilities assessed as being contingent liabilities on local authority balance sheets.</p>	<p>0</p> <p>Due to potential shareholding structure, there is a risk that investment is focused on metro areas, ignoring other areas of need. This be partially mitigated by regulation.</p>	<p>x</p> <p>Risk that council weightings might lead to politicised or sub-optimal investment decisions, particularly where a single council had a large shareholding.</p>	<p>x</p> <p>Legislation and bespoke arrangements required to effect reform programme from status quo arrangements.</p> <p>Additional complexity required to give effect to shareholding arrangements, particularly as investment levels vary across local authority areas – shareholdings may need to adjust overtime.</p>

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Scenarios	Improves economic efficiency	Balance sheet separation and supports financially sustainable system	Improves infrastructure delivery	Improved decision making and competency based governance arrangements	Ease of implementation
<p>Scenario 6 – higher number of entities</p>	<p>xx</p> <p>As per WICS analysis, a 13-entity scenario is likely to lead to significant efficiency savings being left on the table.</p>	<p>✓✓</p> <p>Standard and Poor’s has indicated the base case is likely to be considered separate from local authority balance sheets and have minimal to no impact on the Crown and the Local Government Funding Agency.</p>	<p>✓</p> <p>Legislation and regulatory landscape guides delivery. Local authorities able to contribute to direction but cannot mandate infrastructure delivery.</p> <p>Onus on entity to balance requirements of multiple stakeholders.</p> <p>Potential issues and inefficiencies from increased number of entities contributing to a lack of scale to ensure effective delivery.</p>	<p>✓✓</p> <p>Entity structure provides much higher degree of independent governance and the utilisation of a director selection process that drives independent, competency-based appointment to enable improved decision-making and better governance.</p> <p>Balances political influence with operational independence for entity board.</p>	<p>0</p> <p>Legislation and bespoke arrangements required to effect reform programme from status quo arrangements.</p> <p>Increased number of entities also potentially adds to complexity in implementation phase.</p>

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Preferred option

96. New water service entities are proposed to be established, with a non-shareholding ownership structure, no dividend payments being required to be paid to territorial authorities, and Independent Selection Panels. The base case entity design is expected to best meet the reform objectives, when compared to the alternative available options. As shown by the analysis in Table 3 above, the **preferred option** (base case) provides for the best outcomes across all the relevant criteria:
- Improves economic efficiency;
 - Balance sheet separation and supports a financially sustainable system;
 - Improves infrastructure delivery; and
 - Improved decision making and competency-based governance arrangements.
97. However, the proposed design of new water services entities must not be considered in isolation and must be considered in the context of the Strategic RIA and the Detailed Chapters (especially *Detailed Chapter 4: Entity regulation, system stewardship, and system direction*, *Detailed Chapter 5: Mechanisms for consumer and community voice and influence*, and *Detailed Chapter 6: Strengthening the role of iwi/Māori in the three waters system*).

Rating agency assessment

98. We have engaged with a rating agency to test the options developed for entity design. There are two key aspects as to why the rating agency assessment is important to consideration of entity design options:
- a credit rating of a water entity can optimise its ability to raise debt and minimise its cost of borrowing; and
 - more importantly, a rating agency assessment of a water entity also can impact whether debt of the water entity is brought back onto the relevant council's balance sheet, and therefore, is included in the debt to revenue ratio that informs a rating agency assessment of the relevant council.

Background to rating agency assessment

99. The rating agency assessment methodology aims to understand the links between local authorities and water entities, and the likelihood that a council will provide support to water service entities¹⁹⁷.
100. As part of the assessment of new water service entities, Standard and Poor's considered two components that contribute to the likelihood of the water service entity receiving extraordinary support, and therefore, the extent to which it is a contingent liability for a local authority or the government. These are explained below and in Figure 6:
- **Importance of the water entity to the local authority.** A water service entity managing water assets will likely be assessed as very important or critical to the local authority, as water assets are viewed as a key public service, essential to public health and the local economy; and

¹⁹⁷ By comparison, Moody's considers whether a water entity is self-supporting and whether its debt can be classified as off-balance sheet. The primary consideration is whether entities are considered self-supporting, generating sufficient funds to support their operations, and whether they are financially sustainable in the absence of any ongoing direct subsidy from a local government entity.

- **Link between the water entity and the government.** As the importance will likely be rated high, it means that the link between the water service entity and the government will need to be assessed at the lower end of Strong or Limited, in order to be separated from the debt burden on their associated local authority.

Figure 21: Standard and Poor’s matrix for assessing the likelihood of extraordinary support

Likelihood of extraordinary government support		Importance of the GRE’s role to the government			
		Critical	Very important	Important	Limited importance
Link between the GRE and the government	Integral	Almost certain	Extremely high	High	Moderately high
	Very strong	Extremely high	Very high	High	Moderately high
	Strong	High	High	Moderately high	Moderate
	Limited	Moderately high	Moderately high	Moderate	Low

101. The link essentially considers the influence of local authorities over water service entities (by considering governance rights and the legislative / regulatory environment).
102. In considering the link between local authorities and water service entities, Standard and Poor’s apply judgement, but will consider:
 - All key scenarios where extraordinary support may be required (for example natural disaster, drought, asset failure, economic downturn, etc.);
 - Whether legislation, contract, or moral recourse to the local authority is created in the relevant scenario. Moral recourse is difficult given subjectivity and will require detailed testing with Standard and Poor’s;
 - Whether Crown will provide support rather than local authority.
103. Therefore, to achieve balance sheet separation we will need to demonstrate to the satisfaction of Standard and Poor’s that the overall structure will not create moral recourse to local council and there are alternative providers of support for all key "extraordinary" scenarios.
104. A key component to the rating agency determination of the strength of the link, and whether balance sheet separation is achieved or not, is whether the water service entity has a clear corporate governance set-up with independent management making autonomous decisions (i.e., whether they can be governed and managed independently, versus a high degree of shareholder and stakeholder control and influence).

Outcome of rating agency assessment

105. The feedback to date indicates that the base case is likely to be considered separate from local authority balance sheets, and have minimal to no impact on the Crown and the Local Government Funding Agency. The structure would also be sufficiently credit worthy to deliver current and future investment needs. We expect this structure would have a bbb- (investment grade) standalone credit profile with an uplift to AA (very strong). This reflects an excellent business risk profile, aggressive financial risk profile, and a one notch downgrade for the financial policy modifier.
106. Scenarios two, four, and six are also likely to achieve similar outcomes. However, these scenarios do not deliver on the reform outcomes as effectively or require more substantial Crown support.
107. Scenario three, which represents an increased level of council influence over the entity board compared with base case, is likely to result in status quo balance sheet treatment of the entity's liabilities assessed as being contingent liabilities on local authority balance sheets. Scenario five is likely to have a similar outcome to scenario three. These scenarios are unlikely to provide the entities with sufficient financial capacity to meet investment needs, therefore, the base case is the **preferred option**.
108. The preferred structure is also expected to achieve balance sheet separation under the Moody's and Fitch rating methodologies, as the entities would be 'self-supporting'. Moody's and Fitch exclude government-related entities from the credit rating assessment for local government, where the entity has enough revenue and is unlikely to require support.

Transition considerations

109. There is a need for a transition process to ensure policy decisions are supported by a smooth transition, and that the implementation approach is efficient, effective, and minimises disruption to communities and consumers.
110. The transition period identified comprises all activities required to help the smooth transition from the status quo to fully operational water service entities. Transition activities will also need to manage and mitigate transition risks to ensure the transition objectives are delivered, and the reforms are implemented effectively and on time.
111. The transition activities have been identified through detailed planning and analysis and precedents from previous New Zealand amalgamations (including Auckland Council, Fire and Emergency New Zealand, and Te Pukenga/New Zealand Institute of Technology). New Zealand electricity reform and health sector reform have also been considered in developing transition activities.
112. The 'core' transition activities will be focussed on ensuring the water service entities are able to commence operations from July 2024, while minimising disruption to communities and consumers. In summary, some of the key activities relate to:
 - ensuring effective implementation of the recognition of iwi/Māori rights and interests in the Reforms;
 - establishing the water service entity governance structures;
 - population of the new organisation structure through staff transfer and recruitment processes; and
 - operational tasks related to communications, customer services, community engagement, operations management, asset management, construction delivery, regulatory, finance and treasury, digital and systems, legal and private, and community supplies.

113. Note that transition and implementation is further detailed in *Chapter 7: Transition and Implementation*.

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Detailed Chapter 3 Appendix 1: Design of water service entities internationally and in New Zealand

Entity / Jurisdiction	Background	Purpose and objectives	Legal form	Governance	Strategy	Accountability
Scottish Water	<ul style="list-style-type: none"> • Scottish Water provides drinking water and wastewater services on behalf of the Scottish government. • Scotland also has a drinking water quality regulator, an Environmental Protection Agency, and an economic regulator (WICS) which as part of its functions represents the interests of consumers. • Scottish Water receives loans from the Scottish government or institutions approved by Scottish government. 	<ul style="list-style-type: none"> • General purpose is to provide drinking water and wastewater services and is prescribed in primary legislation. • Economic, efficient, and effective exercise of functions including reasonable steps to develop commercial value of assets and expertise. • Other objectives also focus on the interests of customers, supporting renewable energy, sustainable development, public access to land, and health outcomes. 	<ul style="list-style-type: none"> • Owned by the Scottish government (Scottish Ministers). • Statutory corporation with the powers and functions comprehensively defined in empowering legislation. • No ability to transfer or divest ownership, and no provision for shareholders. 	<ul style="list-style-type: none"> • The Chair and other Non-Executive Members are appointed by Scottish Ministers. • Executive Members are appointed by Scottish Water after receiving consent to their appointment from Scottish Ministers. The CE appointment is approved by Scottish Government. • Executive Board appointments are based on merit and candidates will be considered against objective criteria. • Duty on directors to ensure financial statements are correct, commercially prudent, and safeguard the assets of the business. 	<ul style="list-style-type: none"> • Scottish water has a high control relationship between Scottish Ministers and the Board. • Operates within a strategic framework set by Ministers. • Ministers can direct the board (subject to appropriate safeguards in certain circumstances) and approve corporate plan and business plan. • Body corporate responsible for budget and employs staff • Annual reports and financial accounts are prepared by the Board and tabled in Parliament. 	<ul style="list-style-type: none"> • Directly accountable to Ministers, and through Ministers to Parliament. • Preparation of a Customer Standards Code approved by WICS and a consultation code. • As Scottish Water is not a company registered under the Companies Act, the Financial Conduct Authority (FCA) listing rules are not applicable and an Annual Consultative Meeting with stakeholders is held in place of an Annual General Meeting.
Victoria Water Corporations	<ul style="list-style-type: none"> • Urban (Regional) Water Corporations in Victoria provide water and sewerage services in regional cities and towns across the state. • Victoria has a drinking water quality regulator, an Environmental Protection Agency, and an economic regulator which as part of its functions represents the interests of consumers. • Victoria water corporations receive loans from the state government via the State Capital Programme. 	<ul style="list-style-type: none"> • Primary interests related to the entities purpose are set out in the statement of obligations to the Government Owned Businesses. • Operate as efficiently as possible consistent with sound commercial practice. • Manage its business operations to maintain the long-term financial viability of the Corporation. • Manage water resources in a sustainable manner that enhances environmental outcomes and amenity in urban and rural landscapes. • Effectively integrate economic, environmental and social objectives into business operations. • Expressed via a Statement of Obligations, Water Service Agreement, and an Annual SpE. 	<ul style="list-style-type: none"> • Owned by State Government. • Ownership is expressed directly through the primary legislation. 	<ul style="list-style-type: none"> • The Board of a water corporation typically consists of seven non-executive directors with a presiding chair, plus the managing director of the water corporation who is appointed by the Board. • The Minister for Water appoints all directors, including the chair. 	<ul style="list-style-type: none"> • The Minister of Water sets performance expectations through a SpE, which outlines policy areas that warrant attention within a given planning year. • The Minister appoints directors, can give directions, request information, and initiate reviews. • Strategy is advanced by the Board and the company consistent with the Statement of Obligations and the LOE. 	<ul style="list-style-type: none"> • The Board of a public entity is accountable to the responsible Minister for conducting its functions. • The Corporation must develop and make available to the public: terms of reference for the role of customer committees, and open and transparent processes under which the Corporation will engage customers and the community in its planning processes.

Entity / Jurisdiction	Background	Purpose and objectives	Legal form	Governance	Strategy	Accountability
TasWater	<ul style="list-style-type: none"> Formed as an incorporated company following the amalgamation of three Tasmanian Water and Sewerage Corporations which were owned by local government in their respective regions. From commencement, TasWater has been owned by Tasmania's 29 councils, with the State Government also becoming a shareholder in early 2019. 	<ul style="list-style-type: none"> Principal objectives are provided for in primary legislation and include: efficiently provide water and sewerage functions, encourage water conservation, the demand management of water and the re-use of water on an economic and commercial basis, and to be a successful business. Commercially, TasWater is expected to operate with good commercial practice with sustainable returns to its council's shareholders. 	<ul style="list-style-type: none"> Governed by the Corporations Act 2001. Owned by Tasmania's 29 councils and the State Government and act as shareholders. Members are precluded from disposing of shares by statute. Dividends may be paid to the Council shareholders as determined by the Board. The Crown is not entitled to any dividend. 	<ul style="list-style-type: none"> Each member of Tas Water must appoint a person as their representative to the Owners' representative group (ORG). A Selection Committee (comprised of 5 Council & 1 Crown owner representatives) reviews the appointment of directors. Board is made up of a Chairman and six non-executive directors. The Board is skills based, independent and appointed by the Board Selection Committee, under delegation from the ORG. 	<ul style="list-style-type: none"> The Board approves the strategy for the company through 10-year long-term strategic plans. Under the Corporations Act, TasWater must also develop a corporate plan (which is subject to consultation with stakeholders and voted on at the AGM) which identifies strategic and operational plans over a five-year period. A SpE communicates the shareholders performance expectations and strategic priorities to the Board. 	<ul style="list-style-type: none"> The Board is ultimately accountable to the ORG. Tasmanian Economic Regulator establishes and administers a Customer Service Code. TasWater is required to meet the customer-related standards, procedures, practices and conditions for regulated services as set out by the code. Consumers have recourse to the Ombudsman if dissatisfied with how a complaint has been dealt with by TasWater.
Dŵr Cymru Welsh Water	<ul style="list-style-type: none"> Welsh Water is a 'not-for-profit company' which has been owned by Glas Cymru since 2001. Welsh Water does not have shareholders, and any financial surpluses are reinvested in the business for the benefit of customers. 	<ul style="list-style-type: none"> To provide high quality and better value drinking water and environmental services to enhance the wellbeing of their customers and the communities they serve. The Welsh Water model combines commercial rigour and discipline of a corporate entity, with access to competitively priced finance, whilst having a single focus on acting in the best interests of consumers. 	<ul style="list-style-type: none"> Welsh Water is a company limited by guarantee which has no shareholders and its corporate governance functions are the responsibility of the Board. Membership is made up of individuals drawn from across their supply area (or have a strong connection with it) who carry out a governance role. As there are no shareholders, any dividend declared is reinvested back into the business. 	<ul style="list-style-type: none"> The Board comprises a majority of independent non-executive directors and its members. Members have no financial stake in the business and play a secondary governance role. They are selected by an independent selection panel. Members are not representatives of outside stakeholder groups but are unpaid individuals whose duty it is to promote the good running of the company in the interests of consumers. Members at any time shall not exceed 200. The Board can also dismiss members. The Company may by resolution appoint or remove any person who is willing to act to be a Director. There are competency-based appointments to Board by Board nomination committee. 	<ul style="list-style-type: none"> Every 5 years the Board develops a detailed business plan which is subject to customer consultation. This plan is also submitted to Ofwat (the economic regulator) as part of the Price Review process. A longer term 25-year plan ensures that the Board can continue to provide excellent and affordable services well into the future. These plans sit within the wider context of the Welsh Government's Wellbeing of Future Generations Act 2015. 	<ul style="list-style-type: none"> Members hold the board to account through the AGM process. Members are crucial to the continued good governance by ensuring that the people leading the company are clearly and demonstrably accountable.

Entity / Jurisdiction	Background	Purpose and objectives	Legal form	Governance	Strategy	Accountability
<p>Ontario Clean Water Agency (OCWA)</p>	<ul style="list-style-type: none"> OCWA is an operational enterprise agency established in 1993 under the Capital Investment Plan Act (CIPA). As a service company, it does not own the water assets. Provides operation, maintenance and management services for more than 450 water and waste water treatment facilities in the province on behalf of about 200 municipalities. Can also provide financing for municipalities investing in capital infrastructure. This can help those clients spread out major expenditures over a number of years to help them better manage their cash flow. 	<ul style="list-style-type: none"> Main objectives are to: assist municipalities, the Government of Ontario and other persons to provide water and sewage works by financing, planning, developing, building and operating those works and services, financing and promoting the development of new technologies, and carry out their activities in a way that protects human health and the environment. It sells goods and services to the public in a commercial manner. 	<ul style="list-style-type: none"> Provincial government is the owner of OCWA which is established in primary legislation. When ordered to do so by the Minister of Finance, a corporation shall pay into the Consolidated Revenue Fund a proportion of its surplus funds as determined by the Minister of Finance. Monitoring and ownership agency is the Ministry of the Environment. 	<ul style="list-style-type: none"> Administered by a Board of Directors, the members of which are appointed by the Lieutenant-Governor-in-Council on the recommendation of the Premier of Ontario and the Minister of the Environment, Conservation and Parks. The Board is comprised of both public servants and independent members. The basis of competency for directors is extensive including the ability to communicate, knowledge of the sector, and experience and ability to objectively balance competing interests. 	<ul style="list-style-type: none"> The Board is responsible for the overall supervision of the affairs of OCWA including setting strategic direction, monitoring agency performance and ensuring appropriate systems and controls are in place. 	<ul style="list-style-type: none"> The Board is accountable to the Provincial Legislature through the Minister of the Environment, Conservation and Parks. Report on facility performance to employees, clients and stakeholders. Produce a three-year Business Plan that is submitted annually to the Minister of Environment, Conservation and Parks for approval and posted publicly. Have annual attest audits conducted by the Office of the Auditor General and periodic Value for Money audits. Accountability to consumers lies with the municipality.
<p>Crown Entity Company (CRI) – New Zealand</p>	<ul style="list-style-type: none"> Examples of Crown Entity Companies in New Zealand include Radio New Zealand, AgResearch, and TVNZ. Crown Research Institutes are the most prevalent examples of Crown Entity Companies (of which there are seven currently). 	<ul style="list-style-type: none"> Usually prescribed in the primary legislation. Also have principles for operation which are similar to those in SOEs (with some notable differences). 	<ul style="list-style-type: none"> Incorporated under the Companies Act as limited liability companies and wholly owned by the Crown. Maintain long-term financial viability. Have a range of non-commercial objectives (eg. pursue excellence, be a good employer, sense of social responsibility) A Crown entity company must have a constitution. Ownership is held equally between 2 shareholding Ministers. One of these must be the Minister of Finance. Letters of Expectation may set out decision-making: <ol style="list-style-type: none"> Shareholder Ministers decisions are joint. Some items would require approval of full Cabinet. 	<ul style="list-style-type: none"> Directors of Crown Research Institutes are appointed by the Governor-General, on the recommendation of the responsible Ministers, in the case of a Director of an independent Crown entity. The shareholding Ministers may remove a director by shareholder resolution in accordance with the Companies Act 1993. There are range of reasons for disqualifying people from being Directors. The Board of a statutory entity must ensure that the statutory entity performs its functions: <ol style="list-style-type: none"> efficiently and effectively; in a manner consistent with the spirit of service to the public; and in collaboration with other public entities. 	<ul style="list-style-type: none"> Each year, the shareholding Ministers lay out their expectations for the Crown Research Institutes in an 'Operating Framework'. Shareholding Ministers must participate in the process of setting the company's strategic direction and performance expectations, and monitoring the company's performance. 	<ul style="list-style-type: none"> Board members are accountable to the two shareholding Ministers for performing their duties. Crown entity companies are accountable to shareholders through obligations set out in the Companies Act 1993. Crown entity companies are directly accountable to customers because customers make decisions about whether or not to fund the company's work based on the quality of its outputs. (for example, providing research grants to a Crown Research Institute). Crown entity companies are generally not providing a monopoly service so are accountable via normal market mechanisms.

Entity / Jurisdiction	Background	Purpose and objectives	Legal form	Governance	Strategy	Accountability
<p>Watercare (CCO)</p>	<ul style="list-style-type: none"> Watercare is a Council-controlled organisation (CCO) fully owned by Auckland Council. Watercare became a CCO in 2012 when the Auckland supercity was established. 	<ul style="list-style-type: none"> Provide essential water and wastewater services, protect public health and help communities to flourish. Manage operations efficiently with a view to keeping the overall costs of water supply and wastewater services to its customers (collectively) at the minimum levels consistent with the effective conduct of its undertakings and the maintenance of the long-term integrity of its assets. The objectives, obligations and rules relating to Watercare are prescribed in the Local Government (Auckland Council) Act 2009. 	<ul style="list-style-type: none"> Watercare is a limited liability company registered under the Companies Act 1993. Ownership by Auckland Council is expressed directly in legislation (LGACA 2009). 	<ul style="list-style-type: none"> Auckland Council appoints directors. (The Appointments, Performance Review and Value for Money Committee). The Board of directors appoints the CE. Board members hold office at the pleasure of the council and may be removed at any time by council resolution. All board appointments will be made on the basis of the skills, knowledge and experience which the board as a whole requires to be effective. 	<ul style="list-style-type: none"> The role of the council is to set the strategic direction, plans and expectations for CCOs. The Governing Body is responsible for developing plans and strategies that CCOs must give effect to. Each CCO is required by statute to give effect to the aspects of the Long-term Plan relevant to it. The expectation that CCOs will adhere to, give effect to and act consistently with council policies, plans and strategies is addressed through: annual review via the letters of expectation, statement of intent process, the Long-term Plan processes and the quality policy guidelines for Auckland Council. 	<ul style="list-style-type: none"> The Board of Watercare is accountable to the Governing Body of Auckland Council. The CCO Accountability Policy (which is part of the Long-term Plan) sets out how the council expects each CCO to contribute to achieving the outcomes of the Auckland Plan 2050 and the associated Development Strategy, along with several other relevant strategies and plans. A customer contract sets out Watercare's obligations to its customers and customer responsibilities. That contract is a legally binding document.

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Detailed Chapter 3 Appendix 2: Full description of six entity design scenarios

*Shaded boxes set out differences against the base case scenario

Key features	Base case	Scenario two low governor influence	Scenario three high governor influence	Scenario four central government support	Scenario five alternative ownership structure	Scenario six higher number of entities
Number of Water Service Entities	<ul style="list-style-type: none"> Envisages three water service entities. 	As per base case	As per base case	As per base case	As per base case	<ul style="list-style-type: none"> Envisages 13 water service entities.
Ownership structure	<ul style="list-style-type: none"> Entity established under statute with no shareholding ownership structure. Relevant Local Authorities and iwi/Māori will appoint representatives to Representative Group. 	As per base case	As per base case	As per base case	<ul style="list-style-type: none"> Ownership given effect to through a statutory entity with a corporate/shareholding ownership structure. Shareholding corresponds to asset value. Metro Council has larger proportional shareholding, assume 49% of total shares with proportionate ability to appoint Representatives / influence Governor voting. 	As per base case
Ownership of water assets	<ul style="list-style-type: none"> Assets owned by water service entities. 	As per base case	As per base case	As per base case	As per base case	As per base case
Purpose, functions and primary objectives	<ul style="list-style-type: none"> Purpose and primary objectives set by legislation. GPS developed to provide direction to water service entities, and guidance to wider sector on objectives and priorities for the water service entities. 	As per base case	As per base case	As per base case	As per base case	As per base case
Setting of strategic direction	<ul style="list-style-type: none"> SOI drafted by water service entities in response to LOE from Representatives. Comments on SOI from Representatives that need to be considered but no approval right. 	<ul style="list-style-type: none"> No LOE from Representatives Comments from Representatives on SOI but no approval right. No requirement for water service entities to consider comments. 	<ul style="list-style-type: none"> SOI drafted by water service entities in response to LOE from Representatives. Representatives have approval right over SOI. 	As per base case	As per base case	As per base case
Appointment of Representative Group	<ul style="list-style-type: none"> Representatives appointed by relevant Local Authorities and iwi/Māori, subject to legislative requirements (e.g., independence requirements). 	As per base case	As per base case	As per base case	As per base case	As per base case
Representative Group decision-making powers	<ul style="list-style-type: none"> Provide the water service entities with a LOE that will influence the SOI that a water service entity produces. Establish and monitor the Independent Selection Panel (ISP) that appoints and removes members to the water service entity Board. The remainder of powers will generally be exercised by the Boards of the water service entity. 	<ul style="list-style-type: none"> Establishing and monitoring the ISP that appoints members to the water service entity Board only. The remainder of powers will generally be exercised by the Boards of the water service entities. 	<ul style="list-style-type: none"> As per base case but Representative Group will have an approval right over SOI. 	As per base case	As per base case	As per base case
Independent selection panel	<ul style="list-style-type: none"> The role of the ISP is to ensure that independent, competent and appropriately qualified people are appointed to the key governance position of the Board of water service entity. ISP members and chair appointed by Representative Group, with a legislative requirement that ISP members be independent and appropriately qualified. Governor Representatives may remove an ISP member via a vote, with the threshold for that vote expected to be high (e.g., special majority). 	As per base case	As per base case	As per base case	As per base case	As per base case

Key features	Base case	Scenario two low governor influence	Scenario three high governor influence	Scenario four central government support	Scenario five alternative ownership structure	Scenario six higher number of entities
Appointment of Water Service Entity Board	<ul style="list-style-type: none"> ISP appoints Board members, also utilising skills matrix. ISP members will have duties to consider when making Board appointments. 	As per base case	<ul style="list-style-type: none"> No ISP. Nominations for members by Representatives, subject to independence requirements. Governor Representatives vote on water service entity Board member appointments. 	As per base case	As per base case	As per base case
Removal of Water Service Entity members	<ul style="list-style-type: none"> Only ISP able to initiate the removal of the chair or a Board member and/or assess a member as being fit for the position, with ISP having the discretion to ultimately remove a member. 	<ul style="list-style-type: none"> Only ISP able to initiate the chair or a member be removed and/or assess a member as being fit for the position. ISP (not Representatives) has the discretion to ultimately remove a director. 	<ul style="list-style-type: none"> No ISP. Representatives can vote to remove chair or members. 	As per base case	As per base case	As per base case
Appointment of management	<ul style="list-style-type: none"> Water service entity Board appoint (and can remove) CEO and Executive Management. 	As per base case	As per base case	As per base case	As per base case	As per base case
Setting of pricing methodology	<ul style="list-style-type: none"> Pricing methodology set by water service entity in accordance with principles outlined in legislation. Requirement for water service entities to demonstrate the extent to which their pricing methodology is consistent with the pricing principles (including the reasons for any inconsistency). 	<ul style="list-style-type: none"> As per base case but no LOE ability to influence methodology. 	As per base case	As per base case	As per base case	As per base case
Prioritisation of pricing principles	<ul style="list-style-type: none"> WSE prioritises pricing principles. No approval by Representatives (but could influence through LOE). 	<ul style="list-style-type: none"> As per base case but no LOE ability to influence methodology. 	<ul style="list-style-type: none"> Water service entity prioritises pricing principles. Approval right by Representatives. 	As per base case	As per base case	As per base case
Prioritisation methodology for infrastructure investment	<ul style="list-style-type: none"> Water service entities produces prioritisation methodology. No approval of prioritisation methodology by Representative Group (but methodology could be influenced by the LOE). WSE responsible for decisions relating to the prioritisation of investment (noting below that water service entity will need to balance growth requirements with purpose and objectives, LOE, SOI and the requirements of other stakeholders). 	<ul style="list-style-type: none"> As per base case but no LOE ability to influence methodology. 	<ul style="list-style-type: none"> Water service entity produces prioritisation methodology. Approval right by Representatives. 	As per base case	As per base case	As per base case
Approval of key documents	<ul style="list-style-type: none"> Water service entity prepares, and Board approves, key documents. Representative Group will be consulted on but will not have an approval right over the form of the FPP, with the ability for the Representative Group to comment on the FPP. Comments received must be considered by the water service entity. Importantly, this means that local authorities will not have an approval right or right to direct the water service entity on pricing/charging decisions. Aspects of key documents reviewed and approved by water quality and economic regulators. 	<ul style="list-style-type: none"> Comments received from Representative Group on key documents are received. No requirement for water service entity to consider comments. 	As per base case, but Representatives have approval right over major investment decisions.	As per base case	As per base case	As per base case
Water service entity operational and financial decision-making	<ul style="list-style-type: none"> Water service entity Board and Management has autonomy for operational and financial decision-making. 	As per base case	As per base case	As per base case	As per base case	As per base case

Key features	Base case	Scenario two low governor influence	Scenario three high governor influence	Scenario four central government support	Scenario five alternative ownership structure	Scenario six higher number of entities
Spatial planning and infrastructure delivery	<ul style="list-style-type: none"> Water service entity able to balance growth requirements with purpose and objectives, LOE, SOI, and the requirements of other stakeholders 	As per base case	As per base case	As per base case	As per base case	As per base case
Government support	<ul style="list-style-type: none"> Legislative amendment to extend the CDEM arrangement to apply to Water service entities. Enabling legislation includes a clause that enables the Crown to lend money to a water service entity if it is in the public interest to do so, or to meet a temporary shortfall in a timely manner (consistent with LGFA’s enabling legislation (the Local Government Borrowing Act 2011) and informed by the applicable constraints on such lending in this Act (e.g., such lending must be on commercial terms). 	As per base case	As per base case	As per base case. However, Scenario 4 includes the provision by the Crown of a liquidity facility that can be accessed by a water service entity.	As per base case	As per base case

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Chapter 4: Entity regulation, system stewardship, and system direction

1. This chapter concerns the regulatory oversight of new water services entities, and regulatory stewardship and oversight of the new three waters system in its entirety.
 - Part A is concerned with regulatory oversight of water services entities;
 - Part B assesses options for strengthening the regulatory stewardship of the new three waters system; and
 - Part C assesses options for providing ongoing direction in support of common outcomes and a consistent regulatory approach across the system for delivering three waters services.

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Part A: Regulation of water service entities

Economic regulation

2. Evidence from overseas jurisdictions, and other utility sectors in New Zealand, is clear that economic and consumer protection will play a critical part in a well-functioning three waters system overseen by three to four large water services entities, each operating as a monopoly within their boundaries.
3. Economic and consumer protection will do this by protecting and enhancing the long-term interests of consumers, and providing system-wide performance information that will be utilised by a range of system players and stakeholders including for system stewardship and monitoring purposes.
4. In particular, economic regulation, alongside quality regulation provided by Taumata Arowai, will drive water services entities to achieve:
 - efficient pricing, procurement, and asset management practices;
 - incentives to invest and innovate; and
 - the provision of services at a quality and level of resilience that reflects consumer and wider community demands.
5. Effective economic regulation is therefore an integral part of the overall reform package. It will support and reinforce good governance – another essential component of the reforms – by shining a light on the relative performance of water services entities, and strengthening the reputational incentives on boards to deliver services that meet consumer demands.
6. In turn, economic regulation will need to be supported by high-quality governance arrangements, and a strong and enduring consumer and community voice throughout the three waters system.
7. Economic regulation would play a critical role in protecting consumer interests and providing high-quality performance information. Cabinet has agreed, in principle, that:
 - an economic regulation regime will be employed in a reformed New Zealand three waters sector; and
 - an information disclosure regime that allows the performance of entities to be compared will apply, at a minimum, to a substantively reformed three waters sector¹⁹⁸.
8. Further work needs to be undertaken to explore and consult on the options for an appropriate economic regulation and consumer protection regime and advise on a proposed approach including assessment of regulatory impacts. Regulatory design issues include considering who would be regulated, what form of regulation should apply, key requirements, who the economic regulator would be, and how the regulator would be funded. It will be important to consult consumers on the consumer-facing aspects of the proposed regulatory tools.
9. Responsibilities relating to economic regulation fall within the portfolio responsibilities of the Minister of Commerce and Consumer Affairs. The preparation of advice would be led by the Ministry of Business, Innovation and Employment (MBIE) in consultation with the Department and the Treasury. An indicative timetable has been prepared with a view to:
 - issuing a discussion paper in October 2021;
 - seeking Cabinet policy decisions in April 2022 (including a RIA);
 - introducing legislation in mid to late 2022, with anticipated enactment in late mid to late 2023; and

¹⁹⁸ [CAB-20-MIN-0521.01 refers]

- implementation of the first regulatory cycle from 1 July 2024 to align with the ‘go live’ date of the new water service entities.
10. This work will also include the development of advice and proposals relating to consumer protection mechanisms for the new three waters system. Ensuring consumer rights are protected is an important part of the overall reform package, which complements and enhances the mechanisms for ‘community and consumer voice’ that are proposed for water services entities (see *Detailed Chapter 5: Mechanisms for consumer and community voice and influence*). In addition to provisions that apply to new water services entities to protect the rights of their customers, there is a need to consider which protections should apply to any non-participating local authorities and private schemes.
11. The overall aim is to design a consumer protection and economic regulation system that affords appropriate protection to all consumers. Mechanisms that will be considered include:
- the design of an appropriate dispute resolution process;
 - the establishment of a consumer advocacy council (or the extension of an existing body) to provide expert advocacy on behalf of consumers;
 - options to protect consumers who are vulnerable due to their age, health, disability, or financial position;
 - an ability for a regulator to mandate service quality codes; and
 - a process for setting prices and transparency requirements.

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Part B: System stewardship

Context and defining the problem / opportunity

12. The policy proposals represent a high profile, transformational series of reforms, which are of high interest to a range of Ministers and government agencies, all local authorities and communities, iwi/Māori, industry stakeholders, and the general public.
13. This reform is large and complex. Its implementation including the transition of water services from councils to new water services entities will take several years to achieve. It will require extensive specialist support and advice on a vast array of matters, with many components being designed and delivered in parallel.
14. It is vital that all elements of the reform package are designed and implemented effectively. This includes the establishment and ongoing operation of new water services entities and the design, implementation, and operation of quality and economic regulatory functions. There will be risks to the reform objectives in the medium-to-longer-term if transition is not managed well. This is covered further in *Chapter 7: Transition and Implementation*, coming with later advice.
15. The service delivery reforms are also part of a wider, interconnected programme of reforms. In addition to the implementation of the three waters regulatory reforms and establishment of Taumata Arowai, the Government is proposing changes to the resource management system.
16. Strengthened stewardship arrangements in the three waters service delivery and (related) regulatory system will help to ensure that all reform components implemented and are operating effectively together to deliver on reform outcomes; through (a) transition and establishment of the new system; and (b) post establishment to ensure that the new system is performing and contributing to desired outcomes:

- **During establishment**

Stewardship and related functions are a core element of the effective design and delivery of the reform programme throughout the establishment and transition phase. This phase will extend from policy decisions, through to 'day one' of the new water services entities – currently anticipated to be 1 July 2024 – and for a year beyond that point.

Broadly speaking, the establishment and transition phase involves significant policy, operational and legislative design work relating to the creation of the new service delivery entities and regulatory model. There are likely to be a large number of issues and risks that will need to be managed, and many areas of interest to Ministers.

During this phase, stewardship will play an important role in managing the interface between Ministers, policy advice and the institutions involved in the transition process. It will help to ensure there is bigger picture oversight and coordination across multiple elements of the reform programme, and connections with other parts of the three waters system. This includes the development of the new economic regulation regime, design of the consumer protection policy proposals, and reforms and priorities in other portfolios (including the resource management reforms).

- **Post establishment**

Good regulatory stewardship is the foundation of a long-term, whole-of-system, proactive, and collaborative approach to ongoing monitoring, review, oversight and advice on performance of the new three waters system. Stewardship is a statutory obligation for public service agencies, and part of the Government Expectations for Good Regulatory Practice.

17. Through these reforms, the Government has high expectations for achieving long-term benefits and improved outcomes for all New Zealanders. It will be important to ensure these benefits are fully realised and sustained over time, and that the system can adapt, and continues to be fit for purpose. Inadequacies in stewardship arrangements were also identified as problematic by the Inquiry into Havelock North Drinking Water¹⁹⁹ and early findings of the Three Waters Review²⁰⁰.
18. This is an opportunity to ensure effective oversight and stewardship are embedded in the three waters system over both implementation and the long-term. This is critical if there is to be ongoing improvement, and a proactive approach to performance monitoring and risk management, which is well-coordinated across multiple agencies.

Approach to option development and analysis

19. The design and establishment of system stewardship options requires consideration of broader policy, institutional, and governance impacts that are not readily quantifiable.
20. In order to develop and assess options, we have adopted the following approach:
 - identification of critical issues, based on the nature of the sector, current stewardship arrangements and the reform proposals, that will have implications for the optimal design of system stewardship arrangements;
 - analysis of the functions that are likely to be required of system stewardship;
 - development of principles to guide the design and establishment of system stewardship arrangements;
 - development and analysis of options; and
 - recommended option and implementation considerations.

Critical issues for design and establishment of system stewardship functions

21. The following (Table 15) are critical considerations to inform the design and establishment of system stewardship functions and the associated implications for developing options.
22. The policy proposals represent a high profile, transformational system-wide reform, of high public interest and scrutiny (demanding big picture oversight, clear lines of accountability, and support for political management).
23. These critical considerations highlight the scale and complexity of the reform programme, which requires:
 - substantial and specialist support for design, implementation, and transition; and
 - significant coordination to consider interests and achieve effective connections / relationships to existing areas of policy and operational interests between new entities, especially public health, environment, infrastructure, and economic performance.

¹⁹⁹ 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)

²⁰⁰ April 2018 Cabinet paper, Review of Three Waters Infrastructure: Key Findings and Next Steps, [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-Waters-Review-Cabinet-papers-April-2018/\\$file/Review-of-three-waters-infrastructure-key-findings-and-next-steps-April-2018-a.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-Waters-Review-Cabinet-papers-April-2018/$file/Review-of-three-waters-infrastructure-key-findings-and-next-steps-April-2018-a.pdf)

24. This is a multi-year reform programme, over which significant elements of policy design, legislative enactment and support for implementation of different components will be occurring in parallel. It will therefore involve sustained and agile support for political management and coordination across Ministerial portfolios.
25. It will be important that the reform programme continues to consider and respond to iwi/Māori interests and local government interests.

Table 34: Critical issues for consideration in design of stewardship arrangements

Critical issues	Implications
<p>Significant public interest considerations</p> <ul style="list-style-type: none"> • A large and complex system with strong links to outcomes important for all New Zealanders. • Government is making a major political and fiscal ‘investment’ in reform, with high expectations of benefits. • Performance of the three waters system will have implications for health, environmental, and economic outcomes. • Almost all New Zealanders rely on three waters services, and are affected by system performance. • Changes in performance will have health, environmental, and economic consequences (expected to be positive). • It will take time (measured in years) before all the benefits of reform are seen. In the short-term, the costs of reform will likely be more noticeable than the benefits. • All local authorities and communities will be impacted by system reform. If things go wrong, financial costs to households could increase, more people may get sick or even die, and environmental quality could deteriorate. • System reform will crystallise major infrastructure funding deficits. • More than 75,000 small community and privately-owned drinking water supplies will be regulated for the first time. • Iwi/Māori have substantive Treaty of Waitangi/Te Tiriti o Waitangi and other interests in reform (Te Mana o te Wai). 	<p>Stewardship arrangements need to build in capability to:</p> <ul style="list-style-type: none"> • Understand a complex system. • Advise on overall system performance. • Tell a performance story of how each of the various regulatory components is performing to contribute to changes in the performance of water services and (over time) the implications of these changes for health, environmental, and economic outcomes important to New Zealanders. • Do this proactively so that system design can be corrected in response to unforeseen or emerging issues.

Critical issues	Implications
<p>Interfaces with other systems and policy interests</p> <ul style="list-style-type: none"> • The three waters system interfaces with the policy and regulatory interests of: <ul style="list-style-type: none"> ○ multiple government departments; ○ local government, with implications for the future role of territorial authorities; and ○ iwi/Māori interests in water, and the Crown’s Treaty/Tiriti obligations. • The process of review and policy development has involved all of the above, with advice to Ministers on three waters reform, led and coordinated by the Department. • Three waters reform is occurring in parallel to reforms of adjacent regulatory systems, including resource management and health. 	<p>Stewardship arrangements need to build in capability to:</p> <ul style="list-style-type: none"> • Identify, understand, and give effect to multiple interests in the three waters system. • Consider and accommodate these interests in advice on system design and performance. • Make and support appropriate connections to related regulatory systems, and work productively with stewards of those systems.
<p>A major, multi-year, transformational reform programme</p> <ul style="list-style-type: none"> • The new three waters system is still being designed, and will: <ul style="list-style-type: none"> ○ evolve and change over the next few years as it moves through policy design to implementation to BAU; and ○ take some years before all reform components are implemented and before consumers see tangible benefits in terms of better health, environmental, and economic outcomes. • System reform commenced in 2017 and is unlikely to be fully implemented before 2024. It involves: <ul style="list-style-type: none"> ○ significant policy design work involving multiple agencies and Ministers; ○ considerable support for legislation and enabling regulations; and ○ much work to establish new regulatory functions, transition units/entities, and the establishment of new water services entities. • While implementation has commenced with establishment of Taumata Arowai and progress with the Water Services Bill, there remains much substantive work to complete before decisions on structural reform will be fully implemented. • Policy development is being led and coordinated by the Department, working closely with a range of government agencies, and local government representatives. 	<p>System stewardship functions will be established while the system is still being designed and implemented. The focus and organisation of these functions will evolve and change over time.</p> <ul style="list-style-type: none"> • Initially, there will need to be a close relationship between the stewardship function and the current policy design function in the Department with focus on system design, implementation, policy, and regulatory coordination. • Over time, demand for system performance monitoring, evaluation, and reporting will become important, with a particular initial focus on transition.

Critical issues	Implications
<p>New water services entities</p> <ul style="list-style-type: none"> • It is proposed that new water services entities will be statutory entities, but not Crown entities, and: <ul style="list-style-type: none"> ○ their objectives, functions, and governance will be provided for in law; and ○ ownership and governance will likely be independent of central government and the Crown. • While the performance of water services entities will be critical to system outcomes, government will not directly intervene in their operation. Instead, it will support their establishment through a transitional unit and regulate their operation through Taumata Arowai and an economic regulator. • A critical focus of stewardship will be the initial monitoring of establishment work. Over time, the focus will shift to understanding the impact that new regulation is having for the performance of these entities. 	<p>System stewardship will need to:</p> <ul style="list-style-type: none"> • focus on the design, establishment, and regulation of new water services entities; • be able to proactively report and advise on the effectiveness of policy and regulatory interventions for the performance of services delivered by non-government statutory entities; and • have access to information on both the performance of water service entities and those charged with their establishment and regulation.
<p>No single ‘natural’ home for three waters stewardship</p> <ul style="list-style-type: none"> • Three waters system stewardship does not fit neatly within the mandate of any single existing agency. • While advice on reform and system design is being led out of the Department, this is mainly because of the Department’s role and interest in local government – and the Minister of Local Government’s responsibilities relating to Taumata Arowai and the service delivery reform programme. • Over the period of policy design, establishment, and transition, there will continue to be a very significant local government interest, including in the broader ‘future for local government’. • Over time, the focus of the stewardship interest will increasingly be on the impact of water services for health, environmental, economic, and other outcomes. 	<p>There is no single natural home to lead or locate three waters system stewardship.</p> <ul style="list-style-type: none"> • Over the period of transition, implementation, and establishment of new water services entities there will continue to be a significant and wide-ranging central and local government interest in the reforms, across a number of organisations. These interests will change over time. • Stewardship arrangements will need to reflect and accommodate both the range of interests, and the changing nature of these interests.

Functions required for system stewardship

26. A functional analysis of the core groups of activities that need to be performed by a stewardship role are presented below, Table 16. This analysis draws attention to the wide variety of functions that will be required, each with specialist skills and capabilities required, and with the potential for these functions to evolve over time as the system itself evolves (e.g., with the introduction of economic regulation).

Table 35: Functional analysis of the core groups of activities that need to be performed by a stewardship role.

Functions	Activities	Notes
<p>System advice (focus on how all system components fit and work together to influence performance of water services for health, environmental, and economic outcomes).</p>	<ul style="list-style-type: none"> • Advice on system design including system level outcomes, objectives, and expectations, and any required by the development of a Government Policy Statement. • Advice on system performance (intervention logic, monitoring, evaluation, and reporting), including the performance and contribution of particular system components and implications for whole of system performance and design. • Advice on performance levers and their application. • Advice on Māori interests in the three waters system (Te Mana o te Wai). • Advice on regional and local interests in the three waters system. • Stewardship and management of whole of system data. 	<ul style="list-style-type: none"> • System design is currently the focus of a dedicated team in the Department. • Need to develop whole of system intervention logic as the basis for identification of system level performance indicators and monitoring. • Need to consider how to give effect to iwi/Māori interests, including Te Mana o te Wai, in whole of system stewardship advice.
<p>Policy coordination (leadership and support for the coordination of policy advice to Ministers, including for the administration of legislation and regulations relating to specific system components and their interfaces to other systems).</p>	<ul style="list-style-type: none"> • Leadership and coordination of advice to Ministers on matters specific to the three waters system (ensuring health, environmental, and other policy interests are brought to three waters policy advice and decision making). • Advice and support for administration of three waters legislation and regulations. • Advice on implications of related areas of policy for the three waters system (RMA reform for instance). 	<ul style="list-style-type: none"> • Currently being provided by a dedicated team in the Department, working closely with officials from MoH, MFE, and MBIE. • Workload related to support for legislation and associated regulations will grow and become substantial over the next two years. As reforms are implemented and new entities are established, there will likely continue to be a need for a focus on statutory administration (including making and amendment of regulations).

Functions	Activities	Notes
<p>Regulatory coordination (including support for good regulatory and operational practice), to achieve aligned and coordinated operation across Taumata Arowai, the future economic regulator, the transition authority, and to ensure effective interfaces with adjacent regulatory systems including, resource management.</p>	<ul style="list-style-type: none"> Regulatory charter review and management. Alignment across regulators through letters of expectation, etc. Support for regulatory good practice and coordination across regulators. Support for coordinated approaches to sector engagement and communications across regulators. Stewardship and management of access to system level and shared data sets. 	<ul style="list-style-type: none"> Need for this will increase with establishment of economic regulatory functions. Also needs to consider coordination with regulatory roles of regional councils and other regulators. Need to consider relationship of this coordination function to Crown entity monitoring functions.
<p>Crown entity monitoring and vote administration</p>	<ul style="list-style-type: none"> Letters of performance expectations, annual reports, and other performance reporting documents. Appropriations. Appointment processes for boards and advisory groups. Support for select committee review. Advice on and support for use of performance levers. 	<ul style="list-style-type: none"> Cabinet has already decided that the Department will monitor Taumata Arowai. Depending on the location of economic regulation, the monitoring function is likely to sit with MBIE.
<p>Ministerial support</p>	<ul style="list-style-type: none"> Communications support. Support for Ministerial correspondence, PQs, OIA requests etc. 	<ul style="list-style-type: none"> Demand will be high over the period of implementation.

Defining the principles required for stewardship design, establishment, and governance

27. Based on the critical issues identified above and functional analysis of what stewardship will require, we have developed the following principles for the design, establishment, and governance of longer-term stewardship arrangements:






- Contribute to improved system performance, through clear accountabilities (including for whole of system oversight, system design, and performance), while reinforcing accountabilities within the system for the performance of particular components.
- Mitigate the risk of poor system performance through the early detection of issues and advice on how to correct these issues.
- Internalise (rather than marginalise) different policy perspectives and interests.
- Support effective operational and policy interfaces, by identifying interfaces and supporting aligned operation.
- Agility and responsiveness to change.
- Recognise the interests of iwi/Māori, local government, and consumers in three waters services and regulation.

- Contribute to Ministerial, Parliamentary, and public confidence in system performance.
28. The focus of stewardship functions will change as the reforms progress through implementation and establishment into a more stable ‘business as usual’ environment. Initially there will be a strong alignment between stewardship functions focused on system design and performance, and the role of the three waters policy team in the Department. This team is advising Ministers on system design, transition, and implementation (as well as Taumata Arowai).
29. In addition to ongoing demand for advice on system design and implementation, policy leadership and coordination for the drafting of legislation, regulations, support for legislative processes, and Ministerial support, there will be additional requirements related to:
- Development of a system outcomes / intervention framework, to provide the basis for the monitoring of implementation and future system performance.
 - Support for the development of the proposed Government Policy Statement for the water services entities (described below).
 - Advice on establishment and transitional matters, including the establishment of transition units/entities, and transition board appointment processes.
 - Likely high and increasing demands for Ministerial support related to implementation and transition of new water services entities.
 - Communications and stakeholder engagement management and support.
30. Given the likely change in focus, interests, and roles over time, this RIA focuses on analysis of the stewardship arrangements that are likely to be required over the transition phase of the reform programme (i.e., the next three to five years).

Development of options

31. We have looked at options for stewardship across five broad parameters:
- **Ministerial oversight:** who has Ministerial responsibility for oversight of the three waters system?
 - **Governance of stewardship functions:** which department(s) has, or shares, accountability for stewardship and what mechanisms are put in place to reflect the relevant interests in the system?
 - **Giving effect to local government and iwi/Māori interests:** to what extent and how is the stewardship function required to give effect to these interests?
 - **Organisation of stewardship function:** how are stewardship functions organised and carried out?
 - **Resourcing requirements.**
32. There are a range of options for stewardship arrangements, and many variations within these. Table 17 summarises the options on a spectrum, from a more informal and/or distributed model of stewardship to a more centralised and/or formal model – including formalised mechanisms for managing and/or governing system stewardship arrangements.

Table 36: Three waters stewardship option range.

	Options range		
Ministerial oversight	Different Ministers have specific accountabilities for particular system components. Coordination occurs through usual processes (e.g., Cabinet).		Lead Minister with overall system responsibility and accountability. Formal mechanisms for Ministers with interests in parts of the system to work together (e.g., Cabinet-agreed groups, specific Cabinet committee).
Governance	Voluntary coordination and cooperation between agencies (e.g., informal cross-agency groups). Reliance on BAU processes and requirements.		Formal governance and accountability mechanisms to support a coordinated, whole of system approach across agencies and delivery of shared outcomes (e.g., joint board).
Organisation of stewardship functions	Distributed, based on existing portfolio and organisational responsibilities. Informal, ad hoc approaches to coordination between agencies.		Agreed/formalised 'lead agency' with specific accountabilities for providing whole of system oversight, performance monitoring, and regulatory coordination. Individual agencies still have a specific responsibilities, but are expected to operate in a coordinated manner. Use of formal mechanisms and levers (e.g., Government Policy Statements, regulatory charters, agency charters, memorandum of understanding, letter of cooperation).
Resourcing requirements	Accommodated within business as usual.		Additional resourcing required to support formalised arrangements and delivery of specific stewardship functions.
Recognising local government, iwi/Māori, and consumer interests	Through informal engagement and consultation, at the discretion of Ministers and officials operating under standard Cabinet guidance.		Through formal mechanisms for incorporating external perspectives and interests (e.g., appointments to joint boards).

Analysis of options

33. As noted earlier, to lift the performance of the system, it is proposed that seven principles are used to determine the efficacy of potential options for stewardship arrangements in the longer term. Collectively, these principles respond to specific problems noted above, and also align with the Assessment Framework used in the Strategic RIA, see Table 18.
34. Many of these principles can also provide a helpful basis for considering how to approach stewardship in the transition phase. However, it is important to note that the nature of the stewardship roles and functions during transition and in the longer term will be different, including a different focus and emphasis – and the need for different levers and mechanisms. This means that some of the principles are likely to be less important or relevant during the transition. It also means that some of the formal mechanisms that feature in the right-hand side of the spectrum are more appropriately considered as part of a long-term approach.

Table 37: Alignment of stewardship assessment framework to Strategic RIA assessment framework.

Stewardship Assessment Framework	Maps to	Relevant Strategic RIA Assessment Framework
Support improved system performance and proactive risk management – helping to improve confidence in the system.	<i>Directly maps to</i> <i>Broadly maps to</i>	Improved decision making and performance. Improves effective infrastructure delivery. Improves economic efficiency.
Give effect to different policy interests.	<i>Broadly maps to</i>	Improved decision making and performance.
Support effective operational and policy interfaces.	<i>Broadly maps to</i>	Ease of implementation. Improved decision making and performance.
Give effect to iwi/Māori, local government, and consumer interests.	<i>Directly maps to</i>	Uphold iwi/Māori rights and interests.

35. The following evaluation criteria scoring system is then employed as identified in Table 19. This is the same as the Strategic RIA assessment criteria scoring scale.

Table 38: Evaluation Criteria scoring scale.

Score	Description
✓✓	Much better than the status quo
✓	Better than the status quo
0	About the same as the status quo
×	Worse than the status quo
xx	Much worse than the status quo

36. To enable an analysis, we have identified two broad options from the spectrum outlined above:

- a distributed / less formal approach – akin to the left-hand side of the spectrum; and
- a more formal approach, including a lead agency to provide a coordination role and potentially other mechanisms (such as a Government Policy Statement). This approach is closer to the middle / right of the options spectrum, but does not include all of the features on the right-hand side, given the arrangements being considered are for the transition period only.

37. This analysis is set out in Table 20 below.

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Table 39: Analysis of options for stewardship function.

Options / Principles	Distributed / less formal approach	More formal approach/mechanisms including lead agency
<p>Supports improved system performance and proactive risk management – building confidence in the system</p>	<p>x</p> <p>The three waters system is a complex system that requires a high degree of alignment across its various system components (quality and economic regulation for instance). Distributed stewardship carries the risk that critical interfaces between system components and whole of system performance will not be adequately addressed (especially important over the period of establishment and initial operation).</p> <p>Places high demands on agencies to operate collaboratively in support of whole of system stewardship.</p> <p>High risk that issues for system performance related to critical interdependencies and relationships between key system components will not be identified early enough and will fall between the specific areas of interest of different agencies. Also, agencies will not be able to develop adequate joint responses to such issues because of vertical focus on specific interests. Particular issues or risks to whole of system performance might be missed or discounted by particular agencies and connections not made to the interests of other agencies.</p>	<p>✓✓</p> <p>Lead agency with overall accountability for the system, including its performance, is likely to provide the most effective basis for improved system performance.</p> <p>Demand for coordinated and aligned advice through the period of system design and implementation will likely put pressure on the lead agency to provide high levels of support to achieve joined up system design, policy advice, coordinated regulation, and support to Ministers over periods of implementation and transition.</p> <p>Effectiveness will depend in large part on the lead agency being adequately resourced with both the capacity and capability needed to provide necessary system leadership and.</p>
<p>Give effect to different policy interests</p>	<p>0</p> <p>Vertical policy interests likely to be given effect to, but potentially at the cost of whole of system interests. To mitigate this risk, agencies will need to invest in effective coordination mechanisms.</p>	<p>✓</p> <p>Likely to result in the best weighing of specific policy and whole of system interests, but dependant on the effectiveness of coordination mechanisms and the role of lead agency.</p> <p>Risk that whole of system interests may dominate over particular policy interests.</p> <p>Ability to adequately give effect to different policy interests will depend on the strength of collaborative mechanisms and expectations / accountabilities put in place by the system steward.</p>

Options / Principles	Distributed / less formal approach	More formal approach/mechanisms including lead agency
<p>Support effective operational and policy interfaces</p>	<p>x</p> <p>Risk that each agency will focus on its specific vertical interests to the detriment of effective operational (and policy) interfaces. A heavy reliance on agencies seeing the need for coordinating mechanisms and jointly providing for these (as no one agency accountable for making it happen).</p>	<p>✓</p> <p>Provided agencies can achieve a high degree of collaborative working with the ability to make connections across system components. Also, if a lead agency is sufficiently tasked and resourced to support this.</p>
<p>Give effect to Māori, local government and consumer interests</p>	<p>x</p> <p>Limited ability to consider system outcomes holistically and how these impact on Treaty/Tiriti partners and other affected parties.</p>	<p>✓</p> <p>Requires lead agency to work with other agencies to ensure a joined up and effective approach to giving effect to external interests. More likely if this a function of the lead agency to support and if the lead agency is adequately resourced to provide such support.</p>

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Recommended approach and implementation considerations

38. Our recommendations focus on stewardship requirements over the transition period. We also briefly consider longer term requirements, but propose that future arrangements are developed, assessed and confirmed near the end of the transition period. This will ensure arrangements are appropriate for the new system, as it looks at that point in time.

Recommended approach during transition phase

39. The focus of stewardship will change over the next five years, as:
- we move from transition to implementation of the service delivery reforms, and the new water services entities begin operating;
 - local government interests in the entities mature, and change from being service delivery providers to ‘guardians’ of the entities on behalf of their communities;
 - Taumata Arowai becomes a fully operational regulator and the new regulatory regime it oversees takes effect;
 - the proposed economic regulatory regime is established and begins operating; and
 - the proposed reforms to the resource management system take effect.
40. All of these factors – combined with the need to ensure there is an ongoing focus on performance and accountability – will mean that Ministerial and agency interests in the three waters system will develop further, and are likely to change over time. This is why specific long-term arrangements for system stewardship are not being considered, assessed or proposed at this time.
41. The Minister for Local Government has been assigned responsibilities for leading the three waters reforms, and will continue to work closely with the group of Three Waters Ministers as this reform programme is developed and implemented, including throughout the transition phase.
42. During the transition, the Department of Internal Affairs would support the Minister in this work – in relation to the policy, legislation, and implementation work, for example. The recommended approach includes the Department continuing in the ‘lead agency’ role it has been performing in the three waters reforms to date – including in relation to system stewardship.
43. During the transition phase, it is envisaged the Department would undertake essential stewardship functions relating to three waters system oversight and coordination, including:
- ongoing monitoring of the transition process;
 - reviewing the transition arrangements once they expire and considering the lessons learned; and
 - working with other agencies to identify, develop, and begin to implement appropriate longer-term stewardship arrangements and mechanisms.
44. The Department would continue to work collaboratively with many other interested agencies and stakeholders – particularly the MBIE, MfE, MoH, and the Treasury. The Department will not cut across other agencies’ responsibilities, but rather coordinate and consider the range of portfolio interests that are relevant to the three waters service delivery and regulatory reforms.

45. As discussed further below, it is also proposed that a Government Policy Statement is developed in relation to three waters services and infrastructure provision – as a formal mechanism for enhancing the Government’s stewardship role. This would start being developed during the transition phase, so it is in place for when the new service delivery system takes effect. This would be the main vehicle for the coordination and expression of Ministerial interests and expectations relating to the new water services entities, and is an integral part of the overall reform package.

Implementation and longer-term considerations

46. Further work will be undertaken during the transition phase to identify an appropriate approach to organising stewardship functions and governance arrangements in the longer term. This work would reflect the principles described earlier.
47. It is anticipated that a range of options will be explored. There may be a need to establish formal mechanisms for ensuring there is appropriate collaboration, coordination and accountability across many regulatory agencies and other interested parties. For example, regulatory charters are often used to support effective coordination between multiple regulators. This mechanism would be considered in relation to Taumata Arowai and the proposed economic regulator.
48. Further thought should be given to mechanisms for ensuring strong coordination of interests, including:
- the role of letters of expectations to articulate shared system outcomes, agreed by Ministers;
 - regular meetings of Three Waters Ministers to provide a mechanism for alignment and coordination of whole of system advice to Cabinet;
 - chief executives of agencies with interests in particular system components working collaboratively, under the direction of Ministers, in support of shared system outcomes;
 - convening a chief executives Board to provide for governance and coordination of advice and support to Three Waters Ministers (and across regulatory operations); and
 - including in the Terms of Reference for the chief executives board a requirement to give effect to iwi/Māori and local government interests.

Part C: Government policy direction relating to the three waters system

Context and defining the problem / opportunity

49. There is an ongoing interest in ensuring the new three waters system is fit for purpose, and contributing to reform objectives intended outcomes. The complexity and scale of the reform, public ownership of essential utilities, intended contribution to multiple wellbeing outcomes and devolved governance all result in the need to be able to direct entities on matters related to national outcomes and priorities.
50. There is significant public interest in the provision of three waters infrastructure services. While the new entities will be operationally independent, government will have an ongoing interest in ensuring that their operation is aligned to the achievement of intended reform outcomes and objectives.
51. As the reform progresses through establishment to the ongoing operation of mature entities, governments will want to ensure their operation aligns to outcomes and objectives important to the national interest in addition to the interests of their local governor's. These interests may evolve or change in significance over time, such as interests related to equitable access to services, Treaty/Tiriti considerations, or alignment to national development priorities.
52. The complexity and scale of the reform and its implementation also mean that national guidance or direction may be required to clarify what needs to be focused on over the period of establishment to achieve intended reform outcomes and objectives, because the transition from the current system to the new system will be a very large and complex undertaking.
53. A lack of information on condition of assets, a significant catch-up investment programme, and high public expectations will all place significant pressure on new governance and management structures of the new entities. While the planning and regulatory system will have key influence over the investment programme for the new entities, the regulatory regime is also relatively new with two new regulators; Taumata Arowai, and an economic regulator.
54. Outside of the regulatory system, there are also a range of wellbeing issues that are important considerations for the development and delivery of three waters infrastructure and services over the longer term. These include specific outcomes relating to public health, the environment, housing and urban development, climate change mitigation and adaptation, water security, resilience to natural hazards, and social wellbeing (such as, equity of access to services and levels of service).
55. A Government Policy Statement for the three waters system is intended to complement the approach to system regulation and stewardship to provide both; (a) a mechanism to support both effective transition to the new three waters system and; also (b) effective ongoing operation and alignment to national outcomes, by:
 - providing strategic policy direction to the new water services entities relating to three waters infrastructure and the new service delivery system; and
 - providing more certainty to everyone operating in the three waters system, or receiving services from the three waters system, about the outcomes the new water service entities are expected to deliver on.
56. The intent is that the Government Policy Statement would provide high-level strategic direction and deal with cross-cutting matters – covering issues that are not already provided for in regulation or addressed through entity governance and other mechanisms. It would not be pitched at an operational level or concern specific projects and would be directed only at the water services entities – not at other water service providers, or regulators. It would not be intended to cover wider policy settings surrounding the three waters system. For example, environmental policy would continue to be set through the broader resource management system.

57. The absence of a mechanism to provide national strategic direction entails considerable risks associated with the water service entities and, to a lesser extent, local authorities being responsible for decisions that have broader policy and wellbeing implications at a national level. This includes the risk of local policy and wellbeing outcomes that are inconsistent with national policy interests and the risk of water service entities losing trust and good will as a result of decisions that impact on national policy objectives.

Design principles and process for developing national policy direction

58. A mechanism for providing policy direction will need to have the following characteristics to be effective, which may be prescribed in legislation in some form:
- **Responsiveness:** reviewed and updated regularly to ensure the objectives and priorities it contains are relevant to an evolving three waters system; and to ensure it is responsive to the national and local context, by being built on strong engagement with central and local government, the private sector, iwi/Māori, and communities.
 - **Transparency:** so that the process for developing direction, determining national objectives and priorities, and considering the implications of decisions (such as, costs and trade-offs) are well understood and visible to the public and a check on unnecessary central influence in the operation of water services entities.
 - **Accountability:** so that the outcomes that are expected to be delivered are measured and published; and responsibility for the achievement of those outcomes sits with the bodies that are able to contribute.
 - **Wellbeing-focus:** a focus on wellbeing and takes account of both national and local interests and outcomes.
 - **Interface with other interests:** the process for developing or reviewing national policy direction would need to be undertaken with a strong interface between key Ministers and government agencies, regulators, and local government.
59. It is proposed that responsibility for issuing government policy direction would lie with the Minister responsible for the administration of the water services entities legislation, but its development will require direct engagement with other key portfolio interests. These are likely to include: Local Government, Environment, Health, Housing, Urban Development, Infrastructure, Transport, Commerce and Consumer Affairs, and Māori Development.
60. The development of any statement/direction would also include a requirement to seek advice from regulators on the effectiveness and/or implications of proposed objectives or policies; for example, the impact on public health and the environment, and implications for the costs and affordability for consumers. Advice on the above would be published to provide transparency around priorities, their implications and any trade-offs.

Options for a mechanism for government policy direction

61. There are two broad options, based on currently established mechanisms in other sectors, for providing government policy direction for the system. These are:
- National Policy Statement type instruments that prescribe the direction/objectives and/or the accepted practices and standards to achieve these. Examples include the *National Policy Statement on Freshwater Management* and the *National Policy Statement on Electricity Transmission*.

- Government Policy Statement type instruments that sets out high level policy objectives and guidance, with less prescription on the tasks, actions, and activities required to achieve them.

62. The above design principles are proposed to differentiate between the two options.
63. Collectively, these principles respond to specific problems noted above, and have alignment to the Assessment Framework used in the Strategic RIA. A map of these linkages is provided in Table 21.

Table 40: Alignment of government policy direction assessment framework to Strategic RIA assessment framework.

Stewardship Assessment Framework	Maps to	Relevant Strategic RIA Assessment Framework
Responsiveness	<i>Broadly maps to</i>	Improved decision making and performance. Improves effective infrastructure delivery. Uphold iwi/Māori rights and interests.
Transparency	<i>Broadly maps to</i>	Supports a financially sustainable system.
Accountability	<i>Broadly maps to</i>	Improved decision making and performance. Supports a financially sustainable system.
Wellbeing-focus	<i>Broadly maps to</i>	Improved decision making and performance. Improves economic efficiency.
Interface with other interests	<i>Broadly maps to</i>	Improved decision making and performance. Uphold iwi/Māori rights and interests.

64. The following evaluation criteria scoring system has been employed as identified in Table 22. This is similar to the Strategic RIA assessment criteria scoring scale.

Table 41: Evaluation Criteria scoring scale.

Score	Description
✓✓	Very strong alignment with design principle
✓	Strong alignment with design principle
0	No alignment with design principle
x	Misalignment with design principle
xx	Strong misalignment with design principle

65. This analysis is set out in Table 23 below.

Table 42: Analysis of options for government policy direction mechanism.

Options / Principles	National Policy Statement	Government Policy Statement
Responsiveness	<p>x</p> <p>A more prescriptive instrument like a National Policy Statement will be less responsive to change and require a longer time-frame to develop.</p>	<p>✓</p> <p>A Government Policy Statement is developed over a relatively shorter time-frame and there is flexibility over when and how often it is issued.</p>
Transparency	<p>0</p> <p>The transparency around the process for developing a National Policy Statement will need to be set out in legislation, but in principle there is no reason why it should not be able to be developed in a transparent way to the public.</p>	<p>0</p> <p>The transparency around the process for developing a government policy statement will need to be set out in legislation but in principle there is no reason why it should not be able to be developed in a transparent way to the public.</p>
Accountability	<p>x</p> <p>A National Policy Statement places greater accountability with Government due to its more prescriptive nature (i.e., Government has to get the standards/practices right in its decision-making). However, some of these decisions are likely to be best left to water service entities who have competency-based boards and operational independence.</p>	<p>✓</p> <p>A Government Policy Statement stops short of prescribing specific practices and activities for water service entities. In setting out broad policy direction and guidance on trade-offs and prioritisation decisions, it leaves operational decisions in the hands of water service entities as to how they can best deliver on the prescribed objectives. Accountability is likely to come in the form of performance measures and reporting in statutory documents like the Statement of Intent and Annual Report.</p>
Wellbeing-focus	<p>0</p> <p>A National Policy Statement sets consistent standards and practices across different water service entities and therefore limits consideration of local wellbeing.</p>	<p>✓</p> <p>A Government Policy Statement enables local wellbeing considerations to be taken account as it sets out policy direction for water service entities who can determine how best to meet those given their local context.</p>

Options / Principles	National Policy Statement	Government Policy Statement
Interface with other interests	<p>x</p> <p>Likely to be constrained to one primary policy interest (e.g., environmental interests).</p> <p>However, this could be dealt with through the design of the instrument.</p>	<p>✓</p> <p>Broad scope of the instrument allows for consultation and engagement with multiple interests as required.</p>

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66. Based on the options analysis above, a Government Policy Statement is the preferred option for the type of mechanism for providing national policy direction. This is because it is best aligned to the proposed approach to entity governance. While providing for direction on matters important to the reform objectives and national outcomes, it stops short of prescribing specific practices and activities for water service entities.
67. In setting out broad policy direction and guidance on trade-offs and prioritisation decisions, it leaves operational decisions in the hands of water service entities as to how they can best deliver on the prescribed objectives. It also enables entities to determine how to give effect to national outcomes while also giving effect to local wellbeing considerations.

Development and analysis of options for design of a Government Policy Statement

68. There are two broad options in considering the design of a Government Policy Statement instrument, informed by the level of influence it exerts on the system. These are shown in Table 24 below.

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Table 43: Government Policy Statement design options.

Options	Option one: Directive	Option two: Guiding
Purpose	<ul style="list-style-type: none"> Provide direction to the system (i.e., water service entities have to give effect to it). 	<ul style="list-style-type: none"> Provide guidance to the system (i.e., water service entities have to take it into account).
Content	<ul style="list-style-type: none"> High level national direction to new water service entities that is consistent with the water service entities statutory purpose, objectives, and functions. Inform and guide the decisions, and actions, of the water services entities in fulfilling their statutory purpose and objectives. System and entity-specific objectives, including trade-offs. Strategic policies. Performance measures (linked to system-wide outcomes). 	<ul style="list-style-type: none"> Could include same content as Directive Government Policy Statement.
Relationship with regulators	<ul style="list-style-type: none"> Requirement to seek advice from regulators on the implications of desired national objectives. Advice should be published to provide transparency around priorities and how these have been set. 	<ul style="list-style-type: none"> Broad requirement to engage with three waters regulators.
Engagement and consultation	<ul style="list-style-type: none"> Wide (requirement to consult publicly). <p style="text-align: center;">AND/OR</p> <ul style="list-style-type: none"> Targeted (requirement to consult with specified departments). Targeted consultation with water service entities. 	<ul style="list-style-type: none"> Targeted (requirement to consult with specified departments or stakeholder). Targeted consultation with water service entities.
Interaction with water service entities prioritisation	<ul style="list-style-type: none"> Water entity will be required to identify how (within multi-region) they will give effect to Government Policy Statement through key planning and accountability documents. Governance group may consider Government Policy Statement national direction when setting local priorities and outcomes. 	<ul style="list-style-type: none"> Water entities required to take into account Government Policy Statement through key planning and accountability documents. Governance group may consider Government Policy Statement national direction when setting local priorities and outcomes.

69. The directive approach is preferred because it provides for stronger influence and accountability on matters important to the national interest. It is acknowledged that there is risk with this approach in that it may be seen to undermine devolved accountability and decision making. That said, the direction is intended to be used to clarify high level national outcomes and to provide direction on matters important to the achievement of desired outcomes. To that end, the proposed transparency requirements for the making of the direction are intended to be a check and balance on its application. In short, the trade-offs between the two approaches boils down to a trade-off between the following:
- national versus local influence on system outcomes;
 - political versus water service entity accountability for balancing system outcomes; and
 - the extent of the transactions and compliance costs introduced to the system.
70. This is illustrated in Table 25 below.

Table 44: Assessing options against trade-offs.

	Option one: Directive	Option two: Guiding
Strong national influence	✓	X
Strong local influence	X	✓
Political accountability for trade-offs	✓	X
Water service entity accountable for trade-offs	X	✓
High transactions / compliance costs	✓	X

71. A directive Government Policy Statement would:
- provide stronger influence for setting national direction; and
 - place responsibility for trade-off decisions on elected representatives (who reflect public attitudes/values).
72. However, it would impose high transactions and compliance costs on the system and will require greater resource and effort from within Government and regulators.
73. A guiding Government Policy Statement would:
- enable stronger local influence; and
 - impose lower transactions / compliance costs.
74. However, it would be a weaker lever for national direction and risks confidence in the water service entities by requiring them to make decisions that trade-off government and shareholder objectives.
75. On balance, a directive Government Policy Statement is preferred to enable national direction to be provided by Ministers on trading off system outcomes that are in the national interest. It also provides more certainty for the water service entities around expectations. That, in turn, provides more clarity to the wider community about what they are expected to deliver.

76. While this option would incur higher transactions and compliance costs, it is likely to enhance system performance and ensure accountability for trade-off decisions is held by elected officials, not the water service entities.

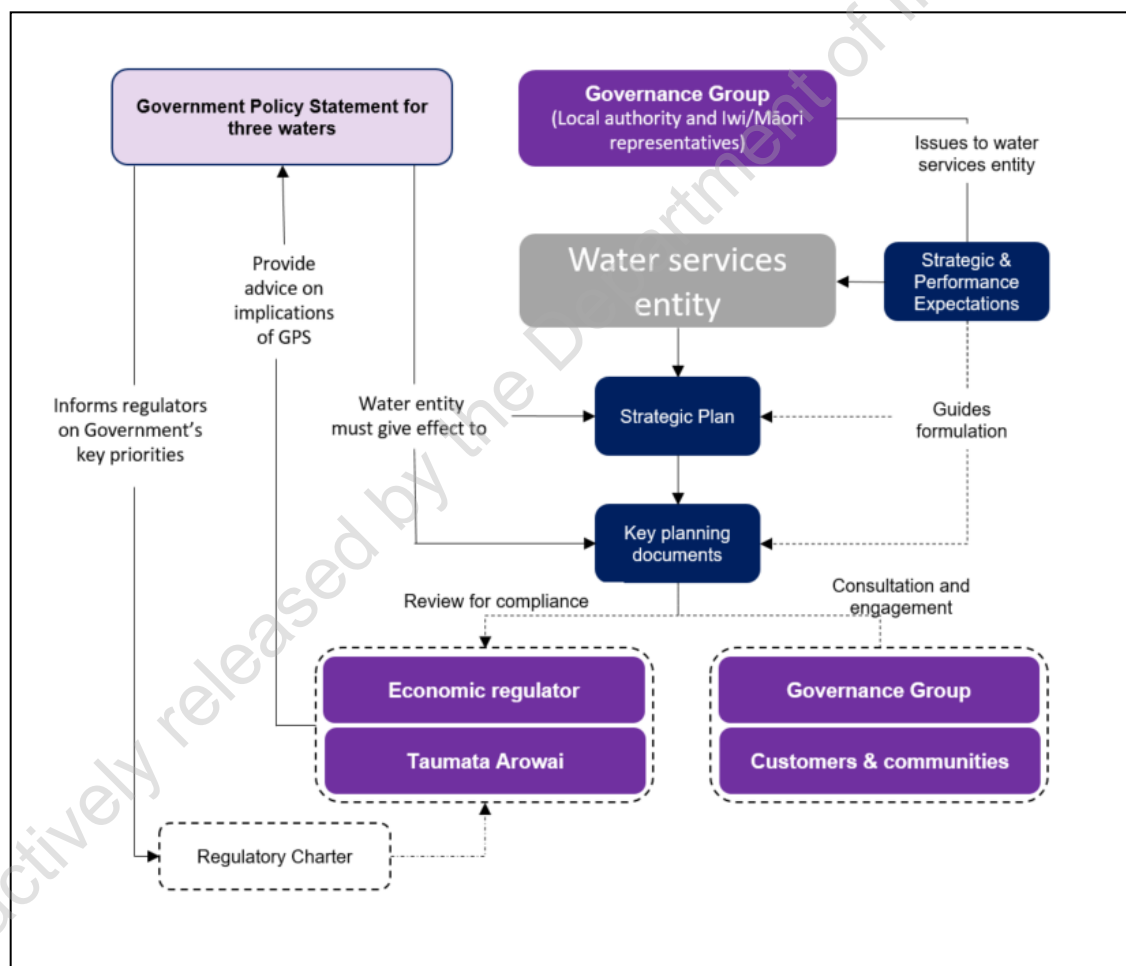
Recommended option and implementation considerations

77. The way new water services entities plan for and prioritise investment in infrastructure and services will have a significant impact on national and local interests, across all aspects of economic, environmental, social, and cultural wellbeing. However, there will be some important challenges that will need to be considered and managed, including:
- the size of the three waters investment deficit, and affordability and supply chain considerations will require the entities to prioritise what they can deliver and when, especially in the early years of the reforms;
 - the risk that different roles and accountabilities of regulators and land use planning authorities will have competing priorities and level of service objectives; and
 - the investment focus and/or requirements in the entities will change over time, as the three waters system transitions and the most urgent infrastructure upgrades are completed.
78. A Government Policy Statement would provide a responsive and transparent mechanism to support the Government stewardship role, and to address these challenges. In particular, it would:
- provide high-level policy direction to the new water services entities about national outcomes and priorities for the three waters infrastructure and services. This would support the entities to prioritise investment – helping to deal with timing and phasing issues from a practical perspective;
 - inform and guide the decisions and actions of water services entities in fulfilling their statutory purpose and objectives; and
 - provide 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. This could include, for example, any government expectations for addressing inequalities and/or extending supplies to under-served communities.
79. There are risks associated with the introduction of an instrument like a Government Policy Statement, primarily around the extent to which multiple interests in the system are represented and accounted for, and the level of influence Government exerts on decisions by water services entities.
80. These risks can be mitigated through the design and execution of the process for developing a Government Policy Statement, including necessary checks and balances to ensure that any direction provided by government takes account of broader interests within the system, is informed by robust advice, and that the system enables transparency and accountability around decisions taken in the development of the Government Policy Statement. This could include requiring that:
- key Ministers and agencies, regulators, and local government are consulted through the process for developing the Government Policy Statement;
 - the government seek advice from regulators on the implications of desired national objectives (e.g., impact on public health, environment, and costs and affordability for consumers);

- such advice be published to provide transparency around priorities, implications, and trade-offs; and
- the content of a Government Policy Statement be limited to high-level strategic direction and guidance, for instance around:
 - national outcomes and objectives;
 - guidance on prioritisation of objectives; and
 - expectations for addressing inequalities and/or extending supplies to under-served communities.

81. Figure 7 below sets out how a Government Policy Statement could work in practice:

Figure 22: Relationship between the Government Policy Statement and other key instruments within the proposed new three waters services system.



82. Under this approach, the Government Policy Statement would set out national objectives and priorities to provide direction on strategic priorities – and the water services entities would be required to give effect to the Government Policy Statement.

83. The water services entities would retain operational autonomy in how they will give effect to the directions in the Government Policy Statement. A Statement of Strategic and Performance Expectations would support the entities to align national and local priorities, and the interdependencies between regulatory strategies and responses, and land use and growth planning. Both these documents will support the new water service entities to apply an investment prioritisation methodology.
84. In addition, a Regulatory Charter could describe system objectives, and how regulators will work together to achieve them, and develop a collective view on longer-term strategic priorities. This will be explored further during the transition phase of the reforms, and as part of the consideration of longer-term system stewardship arrangements.
85. Further work is required to determine the exact form of a Government Policy Statement and how it will interact with other planning instruments in practice. It is anticipated that the legislative provisions for the Government Policy Statement will focus on the first principles identified above, particularly around the design principles and development process.

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Chapter 5: Mechanisms for consumer and community voice and influence

Scope of the chapter

1. This chapter will consider the options for how consumers and communities are involved and have influence in the system for delivering three waters services.
2. The options proposed cover mechanisms designed to enable both consumers and community groups to have an effective voice in the system. The mechanisms aim to ensure the water service entities take into account the possible wide range of interests between individual consumers and different community groups when making business decisions.
3. When considering the options and mechanisms that should be in legislation, a balance was made between incorporating enough legislated mechanisms to ensure the entities will effectively take into account their consumers and communities and aiming to not mandate too much too soon at the risk of over complicating the system.
4. The preferred options have therefore been chosen as the necessary mechanisms for entities to implement, while leaving room for some flexibility and innovation from the entities overtime as they discover what methods work for their region.
5. Other mechanisms, more specifically to protect common consumer interests and needs, are being designed later in the reform programme, as they more appropriately sit along the economic regulation work led by the Ministry of Business, Innovation and Employment (MBIE) later in 2021. This will likely cover decisions that the new water services entities make in relation to service levels, and price and quality outcomes, as well as protections such as having a customer contract or establishing a vulnerable consumer policy.

Context and problem definitions

6. Currently, decisions around pricing and levels of service in relation to three waters services are made by local authorities, in consultation with their local communities.
7. This process, while it may have its challenges (as noted throughout this chapter), enables local communities to have input into decisions and to hold decision-makers to account (with their votes).
8. Existing reporting obligations, however, currently do not provide consumers and other interested stakeholders with meaningful information on the delivery and performance of three waters services, in a way that appropriately promotes transparency, accountability, and performance improvement over time.
9. One of the findings from the 2017 Three Waters Review was that existing reporting obligations do not provide consumers and other interested stakeholders with meaningful information on the delivery and performance of three waters services in a way that appropriately promotes transparency, accountability and performance improvement over time.
10. In addition, three waters service suppliers have strong natural monopoly characteristics that can lead to a lack of investment and innovation, and inefficient and/or poor-quality services being delivered to end consumers.

11. Acknowledging these strengths and weaknesses present in the current system, the Reform Programme presents several opportunities for communities and consumers to receive increased levels of service, be part of an increasingly responsive system, and have a better understanding of and influence over the performance of their three waters services supplier.
12. To realise these opportunities, the design of the new system needs to ensure there are appropriate mechanisms for consumer and community voice incorporated throughout the entity and system design.
13. While related to community voice, the consumer protections and economic regulation workstream is being led by the Ministry of Business, Innovation and Employment, and further advice on that will follow later in 2021. This will provide a range of policy proposals designed to protect consumer needs and the economic regulator will be designed to ensure the entities are acting in the best interests of their consumers.
14. The transfer of three waters delivery function from local authorities to water service entities creates an opportunity to strengthen the level of influence that local communities and consumer groups are able to exert on the way these services are planned, managed, funded, and delivered.

Outcomes sought to enhance consumer and community voice and influence

15. For the past three and a half years, the Department of Internal Affairs (the Department) has been exploring the challenges and opportunities facing the three waters system. Through this work, a complex set of issues are proposed to be addressed relating to the delivery of three waters services, and to deliver better outcomes for New Zealand's people, environment, and economy.
16. These reforms are based around a number of core components, that form an integrated package, and need to be implemented together in order to achieve the maximum impact and desired outcomes. The core components that relate to community voice and influence include mechanisms to provide for direct community and consumer input into the new entities, and to recognise the rights and interests of iwi/Māori.
17. An additional core component of the reforms relates to the introduction of economic regulation – this will incorporate information disclosure and the consideration of price quality regulation. If price quality regulation is introduced it will ensure the new entities are operating efficiently, performing effectively, and charging a fair price to consumers. However, this will form part of the work being led by MBIE later in 2021, along with the proposed introduction of mechanisms for protecting consumers.
18. The purpose of the new entities would be to provide safe, reliable, and efficient water services. Flowing from this are high-level objectives relating to consumer and community voice and influence, which form the basis of assessment criteria to evaluate the proposed options, of:
 - protecting and promoting public health and the environment;
 - promoting the social, economic, environmental, and cultural wellbeing of communities in the present and for the future;
 - acting in the best interests of customers and communities;
 - ensuring equitable access to affordable three waters services;
 - improving transparency about, and accountability for, the delivery and costs of three waters services; and

- providing mechanisms for enabling iwi/Māori rights and interests, and giving effect to Te Mana o te Wai (to the extent Te Mana o te Wai applies to the duties and functions of the entities).
19. The structure of the new water service entities will need to be able to deliver these objectives, while also providing for consumer protection and accountability mechanisms. This means that the entities cannot operate in a vacuum, and accountabilities must be built into the water service delivery system. Entities could be subject to:
- **consultation requirements** on entities when developing their strategic direction, investment plans, and proposed prices or charges;
 - mechanisms that **enable communities and consumers to participate** in entities' decision-making processes;
 - **economic regulation** to protect consumer interests and to act as a driver of efficiency gains over time; and
 - **protections** for vulnerable consumers.
20. The detailed decisions around economic regulation and consumer protection (the last two bullet points above) will be made later in 2021 by MBIE, once the number of water services entities is known.
21. When it comes to how much consumers and communities are able to influence water service entities, this analysis is based on the entity design options available to the Government, as set out in *Detailed Chapter 3: Establishment of new water services entities*. This analysis is therefore based on a relative trade-off in terms of marginal increases in consumer and community voice, relative to the status quo.
22. The policy analysis and decision making on this topic is therefore primarily about how many mechanisms we want to mandate upfront, as opposed to assessing options or trade-offs within each policy decision. This has led to the analysis being more descriptive, as opposed to analytical in some places.
23. Although the scope for variation in the design of consumer and community voice mechanisms within the new water service entities is relatively narrow, the importance of these mechanisms in the system for delivering three waters, warrants this analysis. Our approach to assessing options has therefore focused on testing the relative level of influence across each option, against the high-level objectives relating to consumer and community voice and influence as outlined in paragraph 18 above.

Options analysis and evaluation

Development of potential policy options to improve consumer and community voice in the three waters system

24. There are three key proposals to enhance consumer and community voice within the entity design, which are woven into the governance arrangements:
- entities to be required to **engage on the key business documents** that impact consumer and communities, **to publish those documents**, and to **report on how the feedback was incorporated** into final decision making;
 - mana whenua and local authority **representatives on the Representative Group** to act on behalf of their communities when performing their functions; and

- for entities to **establish a consumer forum** to assist with effective and meaningful engagement.
25. Each of these options is described further below. Evaluation of these options was conducted against the following criteria, flowing from the high-level objectives described above, as follows, and illustrated in the tables below:
- promoting transparency;
 - promoting accountability;
 - supporting the entities to fulfil their statutory objectives – including acting in the best interests of consumers and communities, and promoting community wellbeing; and
 - understanding community views and preferences.

Assessment of potential policy options to improve consumer and community voice

26. The design of consumer and community voice options requires consideration of broader policy, institutional, and governance impacts that are not readily quantifiable, therefore, this multi-criteria evaluation was chosen, and the scoring scale shown in Table 26 was used.

Table 45: Evaluation Criteria scoring scale.

Score	Description
✓✓	Very strong alignment with criteria
✓	Strong alignment with criteria
0	No alignment with criteria
×	Weak alignment with criteria
xx	Very weak alignment with criteria

Engagement on key documents

27. Consumer and community voice is currently addressed by local authorities through consultation and engagement on their Long-Term Plans, as required under the Local Government Act 2002.
28. Some sort of replacement consultation and engagement mechanism will need to be incorporated into the new water service entities, to enable consumers and communities to influence how the entities provide three waters services. Primarily, this will be through consultation and engagement on the preparation of key documents, including:
- investment prioritisation methodology;
 - asset management plan;
 - pricing methodology; and
 - funding and pricing plan.

29. More detail on key document development and accountabilities for water service entities are outlined in Appendix 1. Accountability and transparency are both enhanced for consumers and communities through engagement, and visibility of key documents developed by the water service entities. As outlined in the Strategic RIA, the requirement for information disclosure in the airline sector noted that there were unanimously positive effects on the quality of service provision. Also, WICS found transparency / information disclosure mechanisms to be the most effective tool for holding the water service entity to account.
30. It is also expected that improved transparency of decision-making and performance would lead to greater system stewardship of three waters service delivery. The three options around consultation, engagement, reporting, and publishing are:
- no consultation or engagement requirements;
 - economic regulation encouraging water service entities to consult with communities on key documents; or
 - legislated requirement for water service entities to engage on key documents and a requirement for entities to publish these documents. **(Preferred approach)**
31. These consultation, engagement, reporting, and publishing requirements would provide consumers and communities with opportunities to give direct feedback to the entities before any final decisions are made. For example, this would allow for individuals or community groups, serviced by the entity, to be able to provide direct feedback on how investment should be prioritised over the relevant time periods. The entities will then be required to take this feedback into account before finalising the documents.
32. To increase transparency and accountability, the entities will also be required to publish the final documents, and report on how they incorporated the consumer and community feedback into their final decisions. This will be an important mechanism for the smaller consumer and community groups, who are concerned their voice and feedback will be lost amongst those from larger metros.
33. The preferred approach for legislated requirements for consumer and community engagement on key documents is the strongest mechanism available and provides a legal framework of checks and balances to ensure it is effective.
34. Legislated requirements for all entities will ensure consistency between entities and regions and will provide certainty to consumers of a minimum level of engagement and transparency. These mechanisms are also designed to enable flexibility in the form and style of engagement, to provide for innovation, allow incentives through economic regulation and to encourage high quality engagement. This is illustrated in the evaluation in Table 27 below.

Table 46: Evaluation of options to engage on key documents.

Options	Promoting transparency	Promoting accountability	Supporting the entities to fulfil their statutory objectives	Understanding community views and preferences
No consultation or engagement requirements	x	x	xx	x
Economic regulation encouraging consultation	0	0	✓	✓
Legislative requirement to engage	✓	✓	✓	✓

Representatives on the Representative Group

35. Local authorities currently represent their communities which informs how they provide three waters service, and they are held accountable at the local government elections (to varying degrees of success).
36. The water service entities will be independent of local government, and therefore, there needs to be a mechanism to keep them accountable to the consumers and communities they will serve.
37. A Representative Group provides an opportunity for the local authority and mana whenua representatives to communicate expectations on behalf of their communities directly to the water services entities. The three options around how this mechanism will help the consumer and community voice to influence the water service entities are set out below:
- no Representative Group;
 - the Representative Group is made up of local government and mana whenua representatives appoints the Independent Selection Panel that appoints the board of water service entities; or
 - the Representative Group is made up of local government and mana whenua representatives appoints the Independent Selection Panel AND they issue a Statement of Strategic Performance Expectations to guide entities' behaviours and decisions, which water service entity will have to respond with a Statement of Intent. (**Preferred approach**).
38. This preferred approach would provide a mechanism for the inclusion of more local and regionalised priorities and objectives to guide entities' behaviours and decisions, alongside any national direction set. For example, it could set out how the entities are to engage with and account for the range of community interests within their entity's geographic area. This is illustrated in the evaluation in Table 28 below.
39. During sector and iwi engagement in March, local authority and mana whenua representation on the Representative Group was consistently ranked as one of the most effective proposals for consumer and community influence. Many council members see this as an opportunity through which local government can retain some of their current role in the new system.

Table 47: Evaluation of options for representatives on the Representative Group.

Options	Promoting transparency	Promoting accountability	Supporting the entities to fulfil their statutory objectives	Understanding community views and preferences
No Representative Group	x	x	xx	x
Representative Group includes local govt. and mana whenua reps. which appoints Independent Selection Panel	0	✓	✓	0
As above (local government and mana whenua representatives which appoints Independent Selection Panel), plus SoE	✓	✓	✓	✓

Establishment of a Consumer Forum(s)

40. The final mechanism proposed to improve the consumer and community voice being heard by water service entities is the development of a consumer forum by each water service entity, which would serve as a core avenue for entities engaging with consumer and community representatives.
41. It is proposed that a consumer forum for each water services entity would consist of an elected chair and community representatives with appropriate experience and expertise. They would be mandated to help provide for the views and interests of consumers and community members on key business documents (e.g., future service levels, investment priorities, and how much we all should pay for water and waste water services), by undertaking their own research and engagement. This would be in addition to any engagement undertaken directly by the water services entity.
42. The exact functions of the forum would not be prescribed in legislation, to enable flexibility over time for the water services entity (and the economic regulator) to figure out what the most effective form and use for the forum is. For example, in Scotland the Customer Forum has been established for a specific purpose, to act as the principal means through which customer's views are incorporated into the Strategic Review Process, and it works together with Scottish Water to agree to that document each review period.
43. The three options related to a consumer forum are set out below:
 - don't establish a consumer forum;
 - water service entity encouraged to establish a consumer forum as a result of the economic regulatory regime put in place; or

- legislative requirement for each water service entity to establish a consumer forum (**Preferred option**).
44. The preferred proposal of a legislated requirement to establish a consumer forum would assist with the communication and engagement on the technical aspects of the key business documents, and would ensure a wide range of consumer interests are being considered by the entity when finalising important decisions. Requiring this through legislation will also ensure a consistent approach to engagement is being undertaken across all entities. This is illustrated in the evaluation in Table 29 below.
45. Consumer forums have been used successfully overseas, in Australia and Scotland for example, and through engagements with these jurisdictions have been recommended as an effective mechanism here. Officials from MBIE have also advised that this kind of provision would sit alongside, and complement, a provision in the economic regulation regime that would require the economic regulator to appropriately incentivise high quality consumer engagement.

Table 48: Evaluation of options for a consumer forum.

Options	Promoting transparency	Promoting accountability	Supporting the entities to fulfil their statutory objectives	Understanding community views and preferences
No Consumer Forum	x	x	xx	x
Consumer Forum encouraged via economic regulation	✓	✓	✓	✓
Consumer Forum legislated	✓	✓✓	✓✓	✓✓

Recommendations and implementation considerations

46. The new water service entities must have operational and financial autonomy. However, the importance of water services for public and environmental health, and to enable urban development means there is strong public interest in how the entities set objectives and priorities.
47. The new water service delivery system is proposed to include requirements for the new entities to engage in a meaningful and effective manner with their consumers and communities on the preparation of key documents which will impact those consumers and communities. This will provide consumers and communities with opportunities to give feedback to the entities before those key documents are finalised.
48. To increase transparency and accountability, it is proposed that the entities should be required to publish the final documents and report on how they incorporated the consumer and community feedback into their final decisions. This will be an important mechanism for the smaller consumer and community groups, who are concerned their voice and feedback will be lost amongst those from larger metros.

49. Importantly, the proposed structure provides for local government and mana whenua representation on Representative Groups of water services entities.
50. It is proposed that the new entities will also be required to establish consumer forums which will serve as a core avenue for engaging with consumer and community representatives.

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Detailed Chapter 5 Appendix 1: Water services entity key document development and accountabilities

Key documents that directs or guides the strategic direction of the entity	Role of the Crown	Responsibilities of Representative Group (local authorities and mana whenua)	Responsibilities of entity board and entity	Role of community
Government Policy Statement (GPS): clarifies objectives and priorities for all entities (ensuring reform objectives are delivered over time).	Develop and issue	Give effect to via the Statement of Strategic Performance Expectations.	Give effect to via the Statement of Intent.	Published document – public can hold water entity to account.
Statement of Strategic Performance Expectations: provides collective governance expectations regarding how the objectives and priorities for the entity are delivered. The board must take the Statement of Strategic Performance Expectations into account when producing their Statement of Intent, and the entity must report against the performance indicators set out in the Statement of Strategic Performance Expectations.	None	Develop and issue	Respond to via the Statement of Intent and report against expectations annually.	Published – public can hold water entity to account.
Statement of Intent: the primary accountability document for water service entity board, produced in response to the Statement of Strategic Performance Expectations. This sets out how the entity will deliver the objectives and priorities in accordance with the GPS and Statement of Strategic Performance Expectations.	Direct via GPS	Influence via the Statement of Strategic Performance Expectations.	Requirement to produce in response to the GPS and Statement of Strategic Performance Expectations. The entity is required to deliver against this document.	Published – public can hold water entity to account.
Asset Management Plan: outlines the investment priorities for the entity and describes how the entity will operate, maintain, and renew its existing assets and provide new assets over a 10-year period. The Asset Management Plan is required to be in accordance with the Statement of Intent.	Influence via GPS Review (via regulators)	Consulted	Requirement to produce in accordance with Statement of Intent and consult appropriately. The entity is required to deliver against this document.	Consulted

<p>Funding and Pricing Plan: describes how the entity intends to fund and finance its business activities (including the Asset Management Plan) over a 10-year period. The Funding and Pricing Plan is required to be in accordance with the Statement of Intent.</p>	<p>Influence via GPS Review (via regulators)</p>	<p>Consulted</p>	<p>Requirement to produce in accordance with Statement of Intent and consult appropriately. The entity is required to deliver against this document.</p>	<p>Consulted</p>
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Chapter 6: Strengthening the role of iwi/Māori in the three waters system

1. Introduction of new legislative, governance, and management arrangements within the Reform Programme will give rise to interests related to Article Two of the Treaty of Waitangi/Te Tiriti o Waitangi. These reforms sit within the broader context of the reform of the resource management system and issues associated with water allocation.
2. This chapter considers the options for strengthening the role for iwi/Māori in the three waters system.
3. It identifies and seeks to understand iwi/Māori rights and interests in the new three waters service delivery model. It outlines how rights and interests have been considered in relation to the proposed reforms. It explains the proposed mechanisms for addressing iwi/Māori rights and interests in the new service delivery model.
4. The analysis has been informed by an ongoing programme of engagement with iwi/Māori. We have also been assisted by a Technical Working Group, comprising iwi/Māori expertise in the subject matter covered by the analysis.

Context

5. Water is a taonga of 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 Crown also has broad responsibilities to protect taonga, the exercise of tino rangatiratanga and kawanatanga, and the Principles of the Treaty.
6. For the past three and a half years, we have been exploring the challenges and opportunities facing the three waters system. Through this work, we are seeking to address a complex set of systemic issues relating to the regulation, funding, financing, and provision of drinking water, wastewater, and stormwater services (the three waters). This is critical for public health and wellbeing, environmental outcomes, economic growth and job creation, housing and urban development, climate change adaptation, and mitigating the effects of climate change and natural hazards.
7. An important part of this work has been to ensure recognition of the rights and interests of iwi/Māori in the three waters. The reforms also need to be considered within a broader context. Māori express a relationship with water as kaitiaki.
8. 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.
9. A clear concern from iwi/Māori is that all proposals need to uphold, align, and integrate with the Treaty of Waitangi/Te Tiriti o Waitangi 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 or no three waters services.

General considerations relating to Treaty of Waitangi/Te Tiriti o Waitangi

10. How the Crown engages with iwi/Māori on the three waters reforms, and how the interests of iwi/Māori are recognised through the reforms, is not only important to ensure effective public policy decision making, but also from a Māori/Crown relationship perspective. This also ensures the Crown meets its obligations under the Treaty of Waitangi/Te Tiriti o Waitangi.
11. Crown Law advice is that there are two significant Treaty principles applicable to the Three Waters Review: partnership and active protection. The principle of partnership requires the Treaty of Waitangi/Te Tiriti o Waitangi partners to act reasonably and with good faith to each other. The duty of good faith includes a requirement that the Crown take reasonable steps to make informed decisions on matters that affect Māori interests.
12. Failure to meet those obligations would undermine the Māori/Crown relationship and creates a litigation risk for the Crown. The risk is greater in the Waitangi Tribunal given its jurisdiction is broader than the Courts. The Waitangi Tribunal would likely link a claim about the three waters to its National Freshwater and Geothermal Resources Inquiry (Wai 2358).
13. A further consideration is that iwi/Māori rights and interests in anything water-related are broad and integral. Water is a taonga, and the holistic Māori world view resists separating out parts of water or the environment (or compartmentalising through portfolio-related reviews or work programmes). It is therefore beholden on the Crown to acknowledge this wider context and understand how three waters reform and development of a new system of service delivery sits within this te ao Māori context.
14. This tension has been difficult to navigate. While we have examined iwi/Māori rights and interests within the narrower scope of three waters infrastructure provision and service delivery, we have also sought to ensure that the mechanisms for expressing rights and interests through the service delivery reform proposals do not pre-empt or limit what might be provided for through other water or resource management related reforms.
15. More comprehensive recognition of iwi/Māori rights and interests will be done through resource management reform, and reforms related to the allocation of freshwater. Notwithstanding this complexity, reforms of the three waters system provide the opportunity for a step change in the way iwi/Māori rights and interests are recognised throughout this system. This includes proposed new mechanisms to influence strategic decision making and investment prioritisation with regards to service delivery, and changes to the regulatory environment, as provided for by Taumata Arowai and the Water Services Bill.

How iwi/Māori rights and interests have been recognised in the three waters reform work to date

Early engagement on the three waters reform

16. Engagement with iwi/Māori on the three waters service delivery reforms is a continuation and extension of a multi-year programme of engagement undertaken through the Three Waters Review, which included the establishment of Taumata Arowai and a suite of regulatory reforms.
17. The groups targeted for engagement included a range of perspectives, to help understand Māori interests in the three waters. Groups included Kāhui Wai Māori, the Māori freshwater forum, and a group of iwi representatives from key regions. Case studies of rural communities with a high Māori population that face three waters issues have also contributed to this understanding.

18. Te Mana o te Wai has been an important vehicle for the Government to engage with Māori during the creation of Taumata Arowai and development of the Water Services Bill. Māori have consistently identified improving water quality and ecosystem health as a priority, and their feedback on the Three Waters Regulatory Reform proposals reflected these concerns. Key concerns included:
- that the proposals need to uphold Te Mana o te Wai, and promote a holistic approach to water (including having one regulator with oversight over all three waters);
 - that mātauranga Māori should be given equal weight to scientific knowledge (recognising that these are not mutually exclusive) throughout the system;
 - to enable kaitiakitanga aspirations at a catchment-by-catchment level; and
 - protecting existing Treaty of Waitangi/Te Tiriti o Waitangi settlement arrangements.
19. These concerns were viewed alongside other impressions, including:
- recognition of the case for change regarding the decline of water quality and poor environmental outcomes; and
 - general openness to change from current service delivery arrangements (although there are differences of opinion in the nature of that change).

Recognition of rights and interests in the establishment of Taumata Arowai

20. As the Three Waters Service Delivery Reforms are part of broader reforms relating to the entire three waters system, it is important to understand how rights and interests have been recognised in other parts of the system. In the establishment of Taumata Arowai, iwi/Māori rights and interests have been recognised via:
- a statutory objective to give effect to Te Mana o te Wai;
 - statutory operating principles, which relate to partnering and engaging meaningfully and early on with Māori, including informing how Taumata Arowai can:
 - give effect to Te Mana o te Wai; and
 - understand, support, and enable the exercise of mātauranga Māori and tikanga Māori and kaitiakitanga.
 - collective board knowledge and experience relating to the Treaty of Waitangi/Te Tiriti o Waitangi and its principles, and perspectives of Māori and tikanga Māori;
 - collective duties on the board to maintain systems and processes to ensure Taumata Arowai has the capability and capacity to:
 - uphold the Treaty of Waitangi/Te Tiriti o Waitangi and its principles;
 - engage with Māori and to understand perspectives of Māori;
 - a Māori Advisory Group.
21. The Māori Advisory Group is charged with advising Taumata Arowai and the board on Māori interests and knowledge as they relate to the objectives, functions, and principles of Taumata Arowai. This includes:
- developing and maintaining a framework that provides advice and guidance on how to interpret and give effect to Te Mana o te Wai; and

- providing advice on how to enable mātauranga Māori, tikanga Māori, and kaitiakitanga to be exercised.

Hui-ā-motu September-October 2020

22. The approach to the recognition of rights and interests in the service delivery reforms followed a similar pathway to that of the earlier regulatory reforms, and involved iterative engagement with iwi/Māori.
23. In September and October 2020, officials from the Department and Taumata Arowai Establishment Unit held successive hui-ā-motu and virtual hui with iwi/Māori across the country, alongside informal meetings.
24. General feedback from these engagements was that, from a te ao Māori perspective of water issues, the proposed reform of three waters service delivery arrangements is narrowly focused, given it is targeted to address immediate concerns about drinking water safety, and the performance of wastewater and stormwater systems.
25. Iwi/Māori also told us they wanted to be involved at all levels of the reform programme and with the new water services entities, once established. In particular, they wanted to be involved in the 'nitty gritty' aspects where they can provide the greatest change on issues that relate to their communities – such as decisions relating to the operation of a wastewater treatment plant. They also meant this in terms of their own organising structures, for example that groups/bodies other than statutorily recognised entities/iwi authorities, are able to influence decision-making and undertake functions at the whānau and hapū level – not necessarily through their own iwi office, which is the current practice.
26. During this engagement, we focused on equitable outcomes in the proposed new water services entities as a mechanism for recognising rights and interests. Ensuring that policy options for the new entities provide for equitable services to iwi, hapū, and Māori is paramount.

Further engagement – including March 2021 workshops

27. Through the early engagement on the service delivery reforms in mid-2020, iwi representatives were invited to targeted stakeholder workshops, which included break-out sessions for iwi/Māori perspectives. Discussions were informative and insightful, but attendance of iwi representatives was low – half (or fewer, in some places) of those invited have attended. For this reason, additional, dedicated resources were brought in to the reform programme, and a range of engagement techniques have been used – including formal meetings and informal conversations.
28. To support and guide this work, we have created a te ao Māori Technical Working Group (Technical Working Group), comprising of members from across a wide-range of technical, industry, governance, and iwi/Māori work experience and backgrounds. These experts have been engaged for their technical knowledge and do not participate as decision-makers for their respective iwi.
29. As the service delivery reform proposals started to take shape, a further round of engagement in partnership with iwi/Māori was proposed. Alongside the Joint Central/Local Government Three Waters Reform Steering Committee, we undertook a series of workshops with local government and iwi/Māori throughout March 2021.

30. These workshops were an opportunity to discuss and test initial thinking about possible mechanisms for recognising iwi/Māori rights and interests in the service delivery reforms. The options discussed included mechanisms relating to:
- **statutory recognition** of both the Treaty of Waitangi/Te Tiriti o Waitangi and Te Mana o te Wai in legislation.
 - **recognition that water services sit with a wider Te ao Māori framework**, including support for capacity and capability, and application of mātauranga Māori.
 - **creation of new mechanisms to enable iwi/Māori to directly influence outcomes for Māori** including proposals around water service entity governance, board competencies, and a direct mechanism for mana whenua in the form of Te Mana o te Wai statements and protections for Māori consumers.
 - **opportunities to improve wider outcomes for Māori**, including recognition of the need for improved service for marae and papakāinga, and opportunities for partnership in delivery.
31. We are continuing to engage with iwi/Māori on the issues raised. This will continue over the course of the reform period and well into the transition. Treating these discussions as an ongoing partnership approach, rather than discrete engagement, is consistent with the shift we would like to see continue through to the transition approach, and to help shape the future culture of service delivery in terms of a Treaty of Waitangi/Te Tiriti o Waitangi partnership approach.

Rights and interests analysis

Article one – A right to govern

32. A key part of developing the new service delivery system is ensuring that it does not prejudice settlement legislation that has been developed. Obligations in relation to settlement legislation that exist in relation to three waters services that are currently held by local authorities will be transferred to the water services entities.
33. Through the course of engagement, we have heard arguments that these proposals should not progress until the question of ownership of wai has been resolved, and that decisions relating to the role of iwi/Māori in the management of freshwater need to be clarified before developing a new system for three water service delivery. Iwi/Māori have voiced their frustration and dissatisfaction with the Treaty of Waitangi/Te Tiriti o Waitangi partnership approach, and cultural responsiveness from territorial authority water service delivery arrangements, and the impact that has on water quality, service quality and environmental outcomes.
34. We have taken the stance that the new arrangements for three waters service delivery, and the new water services entities, will need to operate irrespective of the ownership of water and the resource management system. The proposals outlined in my accompanying papers discuss the interaction with the broader regulatory system. We do not anticipate that possible changes to the resource management system will materially alter the ability of the new three waters system and entities to operate. Any changes are likely to complement and bring further clarity to the operation of the three waters service delivery system.

Article two – consideration of tino rangatiratanga

35. The proposals we are putting forward provide for increased ability for iwi/Māori to exercise rangatiratanga in relation to the regulation, funding, financing, and provision of three waters services. In the current system, iwi/Māori do not have a clearly defined or consistent role, either as decision makers or by providing direction on the provision of three waters services.
36. We have considered several mechanisms to provide for rangatiratanga in the new system for three waters services delivery. These include a mana whenua group at the governance level of the water services entities, with equal rights to territorial authorities, and with the ability to issue 'Te Mana o te Wai statements' to the entities.
37. The objectives for the Crown/Māori relationship within the three waters service delivery reforms, described above, guided the development and analysis of these mechanisms. Recent engagement with iwi/Māori has also informed refinement of their design.

Article three – the rights of Māori as citizens

38. Finally, the rights and interests of Māori as consumers of water services need to be considered, predominantly under Article Three of the Treaty of Waitangi/Te Tiriti o Waitangi. There are good reasons for general mechanisms of consumer protection and advocacy to specifically address the interests of Māori, particularly as they relate to historic inequity and the specific interests of Māori who are not mana-whenua within the boundary of a specific entity, including urban Māori.
39. Key issues that have been examined in the context of our Treaty of Waitangi/Te Tiriti o Waitangi partnership approach include:
 - the need to consider whether the specific interests of Māori as consumers need to be provided for in the design of consumer protection mechanisms; and
 - that Māori have the ability to access the economic benefit that will arise from the significant investment activity and jobs growth, including the need to consider the opportunity for Māori in any workforce transition plan.
40. The Treaty of Waitangi/Te Tiriti o Waitangi analysis to date is presented below. Table 30 highlights how we have considered the rights and interests. It has been informed by recent engagement and the specific advice from our Technical Working Group.

Table 49: Analysis of rights and interests.

Right	Considerations	Interest analysis	Commentary
<p>Article two – Rangatiratanga</p> <p>Māori will have the right to make decisions over resources and taonga which they wish to retain</p>	<ul style="list-style-type: none"> • Are there options for Māori to exercise rangatiratanga while recognising the right of the Crown (including through local government) to govern? • What role is there for Māori in design and implementation? • Does the reform offer an opportunity to enhance Māori wellbeing or build Māori capability and capacity? 	<ul style="list-style-type: none"> • Iwi/Māori have expressed dissatisfaction with the Treaty of Waitangi/Te Tiriti o Waitangi partnership approach and cultural responsiveness of current territorial authority delivery. This includes understanding and application of mātauranga Māori frameworks as they apply in place (hapū/whānau level). • Introduction of new, legislative, governance and management arrangements will give rise to interests in oversight opportunities. • Iwi/Māori have expressed interest in ownership (including investment), governance, board appointments and board composition. 	<ul style="list-style-type: none"> • Iwi/Māori interests related to issues related to Article Two sit within the broader context of reform of the resource management system and issues associated with water allocation. • Given the nature of the proposed statutory entities, traditional ownership and governance tools are likely to be less influential compared to other reforms. For example – there are unlikely to be shares that can be traded and valued. • Opportunities will exist to materially improve the connection between Iwi/Māori rights and interests as they relate to Mana Whakahaere, Kaitiakitanga, Manaakitanga on the delivery of services. It is likely that a new instrument is required. • Water services entities will be operating within a legislative environment containing several Treaty of Waitangi/Te Tiriti o Waitangi related statutory references. A new statutory Treaty of Waitangi/Te Tiriti o Waitangi reference will be required and will need to reflect the appropriate hierarchy particularly in relation to the Water Services Bill and proposed amendments to the RMA.
<p>Article three – Rights as Citizens</p> <p>Implicit assurance that rights will be enjoyed equally by Māori with all New Zealanders. This may warrant special measures to ensure equal enjoyment of benefits.</p>	<ul style="list-style-type: none"> • What are the implications for equitable outcomes? • What considerations should support legal values including natural justice, due process, fairness, and equity including through regulatory processes? • What does a tikanga lens bring to consideration of the issues? 	<ul style="list-style-type: none"> • Iwi/Māori raised the importance of ensuring that water services are affordable for all. • Iwi organisations have raised the potential for Māori to benefit from alternative delivery mechanisms more directly (e.g. jobs, social enterprise). • Iwi organisations have also expressed a desire to invest in the water infrastructure sector. 	<ul style="list-style-type: none"> • Consumer protections will need to ensure issues of equity, particularly as it applies to rural and remote communities (particularly marae or papakāinga supplies), are adequately addressed. • Some iwi/Māori have raised the opportunity to encourage maximum local job creation and be supported such as social procurement and skills matching services. • Issues related to how water services entities are able access funding including equity partners/investment sources.

What is the problem/opportunity?

41. The current system for delivering three waters services and infrastructure does not enable iwi/Māori to have a strong voice and influence on decisions that affect them.
42. Based on our engagement with iwi/Māori, several themes have emerged:
 - **Partnership** – iwi and Māori shared resounding support for a stronger partnership between tangata whenua and the Crown, with the need to have the Treaty of Waitangi/Te Tiriti o Waitangi embedded more explicitly throughout the reform process and beyond.
 - **Participation** – iwi and Māori shared concerns regarding their ability to participate and engage in this kaupapa. Currently, there is insufficient capacity and capability for many iwi, hapū, and Māori to engage. Support needs to be given to develop Māori capacity and capability to participate.
 - **Protection** – iwi and Māori called for protection of their rights, roles, and responsibilities as tangata whenua particularly for protection around their cultural assets. Iwi and Māori also want to see protections against privatisation of water services.
 - **Recognition of cultural values** – iwi want to see their mātauranga-ā-iwi incorporated within the three waters reform process and Taumata Arowai's regulatory regime. In relation to entity design, iwi and Māori do not want to see catchments broken and have a strong preference for the entity boundaries to adhere to the 'ki uta ki tai' concept. Additionally, iwi, hapū, and Māori do not want their whakapapa/iwi/hapū boundaries to be separated by the new entities.
 - **Use mana enhancing processes** – iwi see the reform as an opportunity to work together to design something that works better than the status quo for iwi, hapū, whanau, and small rural communities.
43. Specific issues facing iwi/Māori include:
 - **Resourcing, capacity, and capability** – the reform offers a step change in the relationship between iwi/Māori and the three waters service delivery system. As a result, iwi/Māori have expressed concerns about their capacity and capability to prioritise and contribute to these reforms and the new system once it is in operation.
 - **Inclusion of mātauranga** – mātauranga Māori will play an important role in the future success of the broader system. This is already evidenced in our approach to improving fresh water outcomes. Iwi/Māori have raised the importance of providing for mātauranga Māori knowledge, cultural indicator frameworks, and appropriate measurement approaches to sit alongside proposed new performance measurement approaches.
 - **Protection of existing arrangements** – iwi/Māori have noted that Mana Whakahono-ā-Rohe agreements should transfer to the new service delivery system and that existing settlements are protected and provided.
 - **Mana whenua representation** – the opportunity to increase strategic influence for iwi/Māori gives rise to issues of representation, including through the transition. This is particularly important given that iwi/Māori experience of water service delivery is likely to be at a whānau/hapū level. Achieving this within larger water entities will be critical.

- **Rohe/takiwā boundaries** – the importance of taking a ki uta ki tai approach to the determination of entity boundaries, linking rohe/takiwā by whakapapa where possible.
- **Te Mana o te Wai** – enabling the individual expression of Te Mana o te Wai to sit within a broader national framework.
- **Entity ownership** – dissatisfaction with the current ownership arrangements and the degree to which reform perpetuates local government ownership of the entity. This reflects a common iwi/Māori perspective on the primacy of the Treaty of Waitangi/Te Tiriti o Waitangi partnership being directly with the Crown.
- **Prioritisation** – concerns around the prioritisation of investment works and how community needs will be addressed.
- **Economic opportunity** – recognition that significant investment requirements will be rich with economic opportunity, both in terms of direct investment, and Māori enterprise being involved more directly in water service delivery.

Objectives for the Crown/Māori relationship within the three waters service delivery reforms

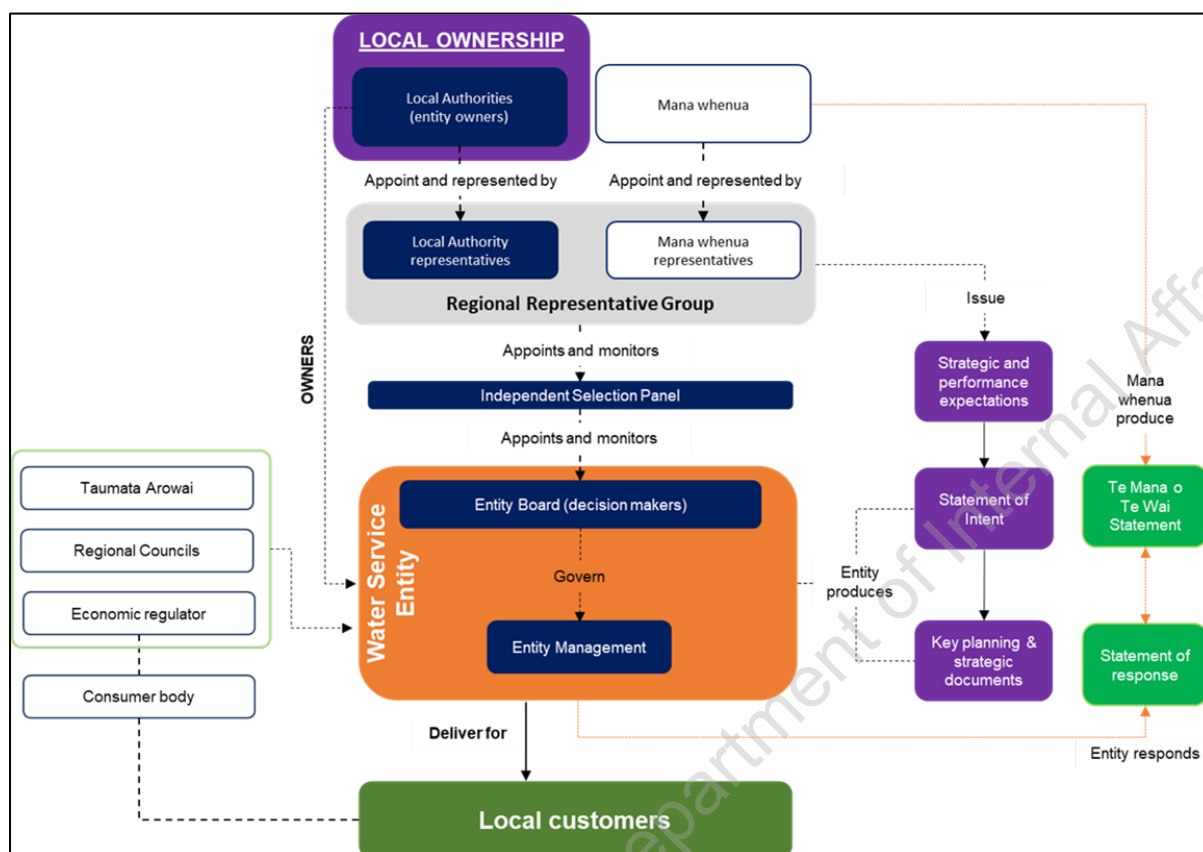
44. The Government's ambition for progressing service delivery reform sits within a broader Treaty of Waitangi/Te Tiriti o Waitangi partnership context. Discussions with Ministers have confirmed the following key objectives to support our advice in the context of the wider Crown/Māori relationship:
- **Enable greater strategic influence:** enable iwi/Māori to have greater strategic influence to exercise their rangatiratanga over water services delivery, including through enhanced capacity and capability.
 - **Integrated within a wider system:** ensure that the rights and interests of iwi/Māori are analysed within a wider system, including issues related to allocation and the future of the Resource Management Act, but specifically focussing on issues that relate to the establishment of water services entities and delivery of water services.
 - **Reflective of a Te ao Māori perspective:** recognise the holistic manner (environmental, cultural, spiritual, economic) in which water is viewed using te ao Māori perspectives and Te Mana o te Wai, including ki uta ki tai, consistent with rohe/takiwā or whakapapa links.
 - **Supporting clear accountabilities:** ensure roles, responsibilities, and accountability for the relationship with the Treaty of Waitangi/Te Tiriti o Waitangi partner is clear throughout the wider system, and that capacity and capability is available to honour the Crown's Treaty of Waitangi/Te Tiriti o Waitangi obligations.
 - **Improving outcomes at a local level:** provide a step change improvement in delivery of water services for iwi/Māori at a local level, including through enhanced capacity and capability and improved wellbeing.
45. These Crown/Māori relationship objectives sit alongside the broader three waters reform objectives, proposed options to recognise rights and interests in the reform programme will be analysed against both objectives. The analysis also seeks to reconcile these objectives and highlight relevant tensions where they may exist.

Options analysis

Development of potential policy options to recognise rights and interests

46. The introduction of new legislative, governance, and management arrangements to deliver water services, provide an opportunity to include mechanisms for the recognition of iwi/Māori rights and interests in the new three waters system. These include interests related to Article Two of the Treaty of Waitangi/Te Tiriti o Waitangi. These sit within the broader context of reform of the resource management system and issues associated with water allocation.
47. We have considered options within various components of the design of the new system, including:
- the broader statutory framework;
 - governance and opportunities for greater strategic influence;
 - governance and establishing representative rights;
 - Board arrangements;
 - kaitiakitanga; and
 - community and consumer input.
48. Each of these components are discussed in greater detail in the subsequent sections.
49. The proposed mechanisms relate mainly to the design of the new entities and to the role of iwi/Māori in influencing the direction of these entities. As indicated in the diagram (**Figure 8**) and sections below, key mechanisms within the structure of the new water services entities include:
- statutory recognition of the Treaty of Waitangi/Te Tiriti o Waitangi and Te Mana o te Wai in legislation;
 - a mana whenua group at the oversight level, with equal rights to territorial local authorities (with a kaupapa Māori selection method for this group);
 - requirements that the board of the entity, collectively, has competencies relating to the Treaty of Waitangi/Te Tiriti o Waitangi, mātauranga Māori, tikanga Māori, and te ao Māori;
 - requirements that the board of the entity has specific expertise in supporting and enabling the exercise of mātauranga Māori, tikanga Māori, and kaitiakitanga with respect to the delivery of water services;
 - Te Mana o te Wai statements, which would be issued to the entity by the mana whenua group, and would require a statement of response from the entity board; and
 - requiring the water services entities to fund and support capability and capacity of mana whenua to participate in relation to three waters service delivery.

Figure 23: Proposed water services entity structure.



50. There is also a need to align with the broader regulatory framework within which the new water services entities will operate. This includes statutory recognition of both the Treaty of Waitangi/Te Tiriti o Waitangi and Te Mana o te Wai in legislation.

The broader statutory framework

51. The regulatory system within which three waters services are provided is in varying stages of reform. A consistent guiding principle we have brought to our work together is that Government will want to ensure Treaty of Waitangi/Te Tiriti o Waitangi and Te Mana o te Wai are appropriately referenced within the broader legislative framework. This is reflected in the establishment of Taumata Arowai and the Water Services Bill.

52. For the proposed water services entity legislation, two distinct Treaty of Waitangi/Te Tiriti o Waitangi references are preferred:

- A statutory reference to the principles of the Treaty of Waitangi/Te Tiriti o Waitangi, which should focus on the conduct of the entities and other system participants, including their capacity to be a good Treaty of Waitangi/Te Tiriti o Waitangi partner. Our preference is that this approach be broadly consistent with the approach we have taken with the recent establishment of Kāinga Ora and Taumata Arowai.
- A statutory reference to Te Mana o te Wai that should be sufficiently and practically applied to ensure mana is able to be exercised at an iwi/hapū and even whānau level, primarily through the creation of the mechanism outlined below – the ‘Te Mana o te Wai statement’. This will provide alignment and continuity with the broader regulatory system.

53. This second statutory reference needs to sit within a moving system, which recognises that giving effect to Te Mana o te Wai is a requirement in the Water Services Bill and the National Policy Statement for Freshwater Management. This will likely be reinforced through Te Mana o Te Taiao statutory obligations under the proposed reform to the Resource Management Act 1991. It will be important to ensure that the hierarchy of statutory obligations to Te Mana o te Wai does not provide confused accountabilities in an already complex system.

Governance and the opportunity for greater strategic influence

54. Introduction of new legislative, governance, and management arrangements will give rise to renewed interests in ownership and oversight opportunities to provide an ability for iwi/Māori to have greater strategic influence on water outcomes.
55. The proposed water services entities will not have standard commercial ownership arrangements. For example, under our current proposals, the entities would not have shares or shareholders, so shares will not be able to be traded and will therefore have no value. With a small number of entities across the country, multiple local authorities will have represented interests on a Regional Representative Group.
56. Cabinet has already made it clear it wants to put in place a range of statutory protections against privatisation. While many iwi/Māori do not consider iwi ownership as ‘private ownership’, we have not considered policy options that would enable transfer of ownership of the proposed water services entities to iwi. Rather the intention is that these entities be deemed to remain in public ownership, and iwi/Māori be provided with a joint oversight role.
57. Iwi/Māori have raised a desire for the new water services entities to be co-governed. This has also been raised by some local government sector representatives.
58. It is expected that the governance framework for water services entities will include relevant governance instruments such as a Government Policy Statement, Letter of Expectation, and Statement of Intent. The intention is that this framework will include prohibitions on share transfer, divesting ownership, sale of assets, and dividend payments in respect of the water services entities.
59. We propose that local government interests be expressed through a representative ‘Representatives Group’ that will have limited decision-making powers, with the majority of decision-making rights being exercised by an independently-appointed, competency-based, professional board. This ‘low control’ structure is considered to better enable the structural separation required to create independent balance sheet capacity in the water services entities and is currently being tested through credit rating agency engagement.
60. We have developed several options for iwi/Māori to influence the strategic framework within which the water services entities operate. Options are outlined in **Table 32** and include:
- no role in oversight, as issues raised by iwi/Māori are addressed in other parts of the regulatory and provision system;
 - oversight within a single joint Representatives Group for each entity;
 - oversight in separate Representatives Groups, where each group has additional responsibilities, but key governance instruments are jointly agreed; or
 - creation of a Mana Whenua Forum (or similar) to directly influence the board of the water entities outside of a traditional governance arrangement (**option for use in engagement**).

61. We have tested these concepts with our Technical Working Group. They acknowledged that the constraints on ownership controls required to achieve operational and financial independence are weak, but believe iwi/Māori will likely still have an expectation of ownership and oversight.
62. On balance, officials currently favour a suite of mechanisms that enable whānau, hapū, and iwi Māori to directly influence the strategic priorities of the board, including through a Mana Whenua Forum. We consider this would best address the issues related to a step change in a Treaty of Waitangi/Te Tiriti o Waitangi partnership approach, and the Treaty of Waitangi/Te Tiriti o Waitangi and cultural responsiveness of water services entities. It will also be a critical mechanism to support the board to give effect to Te Mana o te Wai.
63. Some iwi/Māori have raised the question of whether there is an opportunity to invest in water services entities. As a general proposition, the entities will have flexibility in relation to how and where they source debt finance, subject to delivering efficient outcomes (amongst other objectives).
64. Iwi/Māori are a potential source of finance. It is recognised that iwi/Māori bring a different perspective, including considerations of intergenerational benefits and outcomes that may be aligned to wider reform programme objectives. Separate to issues of ownership, there is no reason why iwi/Māori should not be a source of debt finance to the proposed entities or in relation to specific projects that the entities will deliver. Ultimately, this will be a decision for each entity's board.

Governance and establishing representative rights

65. The proposed water services entities will need to be of a significantly larger scale than current service delivery arrangements, to provide scale benefits in service provision and infrastructure investment. Our analysis is focussing on between three and five entities across the country, noting Ministers have previously expressed a preference for three to five entities. Within the boundaries of each of these entities there will be multiple rohe/takiwā.
66. Consistent with the conclusions of the *New directions for resource management in New Zealand* (Randerson Review), engagement with iwi/Māori has highlighted the reality of kaitiakitanga, as it relates to the provision of water services, and often operates at a hapū or whānau level. It is also important to ensure the proposed water services entities are not in a position to determine who represents mana whenua interests.
67. Officials from the Ministry for the Environment (MfE) are actively considering options to improve resource management tools related to mana whenua involvement into a single, integrated, partnership process at a regional level. This will assist in improving issues as they relate to the powers and functions that will result from resource management reform. The proposed water services entities will operate within the environmental regulatory system; however, it will also be important they have a direct relationship with mana whenua given the significance of water from a te ao Māori perspective.
68. A range of options have been considered with the objective of providing the most effective representative interest for mana whenua. These are set out in **Table 32** include:
 - mana whenua self-declare in a manner similar to the current Te Kahui Māngai approach;
 - mana whenua are identified through a kaupapa Māori process once entities are established;
 - Post Settlement Governance Entities are utilised; or

- Post Settlement Governance Entities provide a transition to representation via a kaupapa Māori process.
69. A transitional approach has been proposed, guided by the appointment of independent facilitators within the boundary of each entity. Such facilitators would be deeply experienced, expert in tikanga and Te Ao Māori, with sufficient mana to support mana whenua arrive at an appropriate representative model. To ensure that the transition is still guided by iwi/Māori, it is proposed that Mana Whenua interests in the short term be reflected to mirror our approach to Treaty of Waitangi/Te Tiriti o Waitangi settlement with mandated entities including both pre and post settlement entity structures.
70. This approach has been tested through engagement. Some iwi/Māori were keen to ensure that Post Settlement Governance entities be time limited providing this function.
71. The Technical Working Group concurs that this is a complex area, but have urged us not to be prescriptive to ensure a process of self-determination occurs and providing sufficient time and resource be set aside to enable this to occur. They were particularly interested in an option, or transition to an option, that enables early influence of iwi/Māori on the board through the formative establishment period. This is important to ensure that the culture and capacity of the water services entities is prioritised early in the process.

Board arrangements

72. A central way for Te Mana o te Wai to be embedded as an operating principle of the entity is to ensure the board is adequately competent, as a Treaty of Waitangi/Te Tiriti o Waitangi partner, and with expertise in accessing mātauranga Māori, tikanga Māori, and te ao Māori to inform the water entities activities. It is currently proposed that the board will be appointed via an Independent Selection Panel rather than directly through owners' representatives.
73. Options we have considered in ensuring the board is competent to improve outcomes for iwi/Māori are set out in **Table 31**, and include the following competencies for board directors:
- no specific competency required;
 - general Treaty of Waitangi/Te Tiriti o Waitangi competency;
 - mātauranga Māori, tikanga Māori, and te ao Māori competency; or
 - collective competency in the Treaty of Waitangi/Te Tiriti o Waitangi, with specific competency in mātauranga Māori, tikanga Māori, and te ao Māori (**option for use in engagement**).
74. These matters would be considered during board appointment processes. A similar approach has been taken in relation to Taumata Arowai.

Kaitiakitanga and Te Mana o te Wai statements

75. Consistent with feedback we have received from the engagement to date, Te Mana o te Wai is exercised in place, whereas kaitiakitanga is more likely to be exercised at a hapū/whānau level with respect to the provision of water services. The ability to connect governance with delivery on the ground will require the proposed water services entities to make a difference in place at a hapū/whānau level. This will primarily be achieved through the preparation of asset management plans and the process that guides investment decision making.
76. Options for expression of kaitiakitanga considered are set out in **Table 32**, and include:

- rely on existing mechanisms, including input into spatial plans, district plans, resource management mechanisms, and the proposals included in the resource management reforms;
 - a new statutory mechanism requiring water entities to each prepare a statutory plan that addresses Te Mana o te Wai; or
 - a new statutory mechanism that enables mana whenua to prepare a ‘Statement of Te Mana o te Wai’ (or similarly titled document), and requires each water services entity to provide a formal response within a prescribed timeframe.
77. Rather than statutorily prescribe the requirements of an expression of kaitiakitanga, our preference is to enable mana whenua to express this in a manner that aligns with their mātauranga-a-iwi. It is proposed that the legislation broadly describe the mechanism and identify existing statutory documents that may serve as Te Mana o Te Wai statements where mana whenua decide they adequately reflect. For example, the legislation could identify that Iwi Management Plans, Cultural Impact Statements, Statements of Mana Whenua, or any other statement agreed as representing Te Mana o Te Wai as guided by the Mana Whenua Forum.
78. Our preference is to enable mana whenua to prioritise their capacity and capability to this kaupapa through a flexible mechanism where the onus of response shifts to the water services entity. This would include a mechanism by which mana whenua may influence outcomes relating to service level and coverage.
79. Furthermore, we need to ensure that the entities themselves are able to prioritise and invest at a scale and pace we have not seen in this sector to date. Officials engaged in issues related to statutory reference, and iwi/Māori, recognise the importance of this recognition. On balance, the water services entities will be required to give effect to Te Mana o te Wai through:
- involving mana whenua including through support (funding, capacity, time) for the establishment of a mana whenua group within their entity boundary;
 - ensuring board competencies reflect general competence in the principles of the Treaty of Waitangi/Te Tiriti o Waitangi and specific expertise in supporting and enabling the exercise of mātauranga Māori, tikanga Māori, and kaitiakitanga with respect to the delivery of water services; and
 - maintaining systems, processes, and support to enable the aspirations of mana whenua, including through receiving and providing a response to mana whenua Te Mana o te Wai statements.
80. The proposed Te Mana o te Wai statements could also be used by mana whenua to express their interest in participating within the broader water services delivery system. The statements could be holistic, enabling Māori to express a broad wellbeing approach, consistent with a te ao Māori approach to such matters, including economic, cultural, social, and environmental expectations.
81. Such statements could contain economic aspirations with respect to Māori enterprise and job creation, particularly – but not exclusively – in areas related to mātauranga Māori expertise. This would require response from the water services entity as set out above, that does not prescribe solutions, but would present the shift in integrated partnered delivery that in combination with the other legislative settings above, would be a material step change to current arrangements.

Community and consumer input

82. Māori have interests as consumers and community members within the water services system. There is evidence of historical inequities in investment for remote and rural communities, as well as interests raised by urban Māori that are separate to the interests raised by mana whenua. Māori are also more likely to be over-represented in vulnerable community groups. For that reason, the consumer interests of Māori are likely to require specific attention across the regulatory system. We have considered two main options:

- consider Māori consumers on the same basis as other consumers in the design of consumer advocacy mechanisms; or
- provide for Māori to be represented as specific consumers with the consumer mechanisms (**option for use in engagement**).

Assessment of options

83. Each of the options have been assessed against the objective (Table 31 shows key for assessment) and are shown in Table 32 below.

Table 50: Scoring scale for the assessment framework.

Score	Description
Green	Meets objectives
Yellow	Partially meets objectives
Red	Does not meet objectives

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Table 51: Assessment of options for improved iwi/Māori role in three waters.

Design Feature	Option 1	Option 2	Option 3	Option 4
<p>GOVERNANCE <i>What is the of mana whenua role in Governance</i></p>	<p>NO OVERSIGHT ROLE FOR MANA WHENUA Iwi/Māori have no direct role influencing governance of water services entities</p>	<p>OVERSIGHT WITH LOCAL AUTHORITIES Iwi/Māori interests are represented alongside local government in a single Representatives Group with equal rights</p>	<p>JOINT OVERSIGHT Iwi/Māori interests are represented alongside local government in a separate Forum that comes together with a Local Council Forum on significant strategic issues like the SOI/LOE. Representation on the Representatives Group would be equal. Both the Mana Whenua Forum and the Local Government Forum could also have other functions.</p>	<p>MANA WHENUA FORUM DIRECTLY INPUTS TO BOARD Iwi/Māori are not represented within the Representatives Group, and instead have a statutorily prescribed direct relationship with the Board.</p>
<p>GOVERNANCE - comments</p>	<p>It is likely that the governance framework for water services entities will include instruments such as a Government Policy Statement (GPS), Letter of Expectation (LOE) and Statement of Intent (SOI). This statutory framework will include prohibitions on share transfer, divesting ownership, sale of assets and dividend payments for a given entity. For that reason, options of direct ownership of the water services entities by iwi/Māori have not been explored.</p> <p>Our current thinking is that local government interests will be addressed through a representative Representatives Group that will have limited decision-making powers, with the majority of decision-making rights being exercised by the Board. This structure will better enable the structural separation required to create independent balance sheet capacity in the water services entities.</p> <p>Iwi/Māori have raised opportunity for oversight as a mechanism to achieve strategic influence. However, in the proposed entities traditional governance levers are more limited than other governance structures. I have therefore analysed a broader range of options for iwi/Māori to influence the strategic framework within which the entities operate.</p> <p>Any option also needs to be considered from a regulatory system perspective including connections to Government decisions on water allocation as well as the review of the Resource Management Act 1991</p>			
<p>BOARD ARRANGEMENTS <i>What are the Board competency requirements?</i></p>	<p>NO SPECIFIC COMPETENCY No specific Treaty of Waitangi/Te Tiriti o Waitangi or te ao Māori competency required of Directors.</p>	<p>GENERAL TREATY OF WAITANGI COMPETENCY A specific requirement for Treaty of Waitangi/Te Tiriti o Waitangi competency</p>	<p>MĀTAURANGA MĀORI, TIKANGA MĀORI AND TE AO MĀORI COMPETENCY A specific competency requirement related to prescribed areas of te ao Māori competency.</p>	<p>COLLECTIVE COMPETENCY A collective Treaty of Waitangi/Te Tiriti o Waitangi Board competency with a specific competency related to Mātauranga Māori knowledge</p>

<p>BOARD ARRANGEMENTS - comments</p>	<p>It is proposed that the competency based professional Board for each water services entity be appointed by an Independent Selection Panel. A central way for Te Mana o te Wai to be embedded as an operating principal of the entity is to ensure that the Board is adequately competent both as a Treaty of Waitangi/Te Titiri o Waitangi partner, and with expertise in accessing mātauranga Māori, tikanga Māori and Te ao Māori knowledge to inform the water entities activities.</p>			
<p>ESTABLISHING MANA WHENUA INTERESTS <i>How would a multi-regional entity identify which mana-whenua have interest within their boundary?</i></p>	<p>MANA WHENUA - SELF DECLARED Mana-whenua groups are identified, consistent with current RMA processes via mechanisms like Te Kahui Wai Māngai.</p>	<p>MANA WHENUA – WITH SUPPORT FOR A KAUPAPA MĀORI APPROACH Mana whenua groups are identified through kaupapa Māori process once entities are established</p>	<p>POST SETTLEMENT GOVERNANCE ENTITIES Mana whenua interests are represented by post-settlement iwi authorities</p>	<p>TRANSITION: PSGES UNTIL A KAUPAPA MĀORI PROCESS CONFIRMS INTEREST A combined option whereby PSGEs operate as a mana-whenua forum for a transitional period until a kaupapa Maori process for mana-whenua can occur</p>
<p>ESTABLISHING MANA WHENUA INTERESTS - comments</p>	<p>The proposed water services entities will need to be significantly larger scale than current service delivery arrangements to provide scale benefits in service provision and infrastructure investment. Our analysis is focussing on between 2-6 entities across the country. Within the boundaries of each of these entities there will therefore be multiple rohe/takiwā.</p> <p>Consistent with the conclusions of the Randerson Review, engagement with iwi/Māori has highlighted that kaitiakitanga as it relates to the provision of water services often operates at a hapū or whānau level. It is also important to ensure that the proposed entities are not in a position of determining who represents mana-whenua interests. Officials from MFE are actively considering options to improve RMA tools related to mana whenua involvement into a single integrated partnership process. The proposed entities will operate within the environmental regulatory system, however it will also be important that they have a direct relationship with mana whenua given the significance of water from a Te ao Māori perspective.</p>			
<p>KAITIAKITANGA MECHANISM <i>How will hapū/whānau level be able to influence the water services entities outcomes</i></p>	<p>EXISTING MECHANISMS Article I. Rely on existing mechanisms such as input into spatial plans and mechanisms the Resource Management Act (and its replacement) to adequately address environmental effects.</p>	<p>NEW STATUTORY REQUIRED PLANS Article II. Require water services entities to prepare statutory plans that addressed Te Mana o te Wai.</p>	<p>TE MANA O TE WAI STATEMENTS AND RESPONSE Article III. Enable mana whenua to provide a statement of mana whenua (with flexibility to determine form) and require water entities to respond to that statement</p>	<p>Article IV.</p>

<p>KAITIAKITANGA MECHANISM - comments</p>	<p>Consistent with feedback, Te Mana o te Wai is richly experienced in place and kaitiakitanga is more likely to be exercised at a hapū/whānau level. The ability to connect governance with delivery on the ground will require the proposed water services entities to make a difference in place at a hapū/whānau level. This will primarily be achieved through the preparation of asset management plans and investment decision making tools. Rather than statutorily prescribe the requirements of the plan, our preference is to enable mana-whenua to prioritise their capacity and capability to this Kaupapa through a flexible mechanism where the onus of response shifts to the entity.</p>		
<p>COMMUNITY AND CONSUMER INPUT <i>How will Māori input as consumers</i></p>	<p>MĀORI AS CONSUMERS Article V. Māori consumers have access to the same consumer advocacy and inputs as other consumers</p>	<p>REPRESENTATIVE CONSUMER INTERESTS ARTICLE VI. The needs of Māori are particularly highlighted in the design of consumer advocacy instruments to recognise, and not perpetuate historic inequities.</p>	
<p>COMMUNITY AND CONSUMER INPUT - comments</p>	<p>Māori have interests as consumers and community members within the water service system. There is evidence of historical inequities in investment for remote and rural communities. Māori are also more likely to be over-represented in vulnerable community groups. For that reason, the consumer interests of Māori are likely to require specific attention across the regulatory system.</p>		

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Recommendations

84. The Three Waters Service Delivery Reform presents an opportunity to strengthen the role of iwi/Māori in the three waters system.
85. The key mechanisms to do this include:
- statutory recognition of the Treaty of Waitangi/Te Tiriti o Waitangi and Te Mana o te Wai in legislation;
 - a mana whenua group at the governance level, with equal rights to territorial local authorities (with a kaupapa Māori selection method for this group);
 - requirements that the board of the entity, collectively, has competencies relating to the Treaty of Waitangi/Te Tiriti o Waitangi, mātauranga Māori, tikanga Māori, and te ao Māori;
 - requirements that the board of the entity has specific expertise in supporting and enabling the exercise of mātauranga Māori, tikanga Māori, and kaitiakitanga with respect to the delivery of water services;
 - Te Mana o te Wai statements, which would be issued to the entity by the mana whenua group, and would require a statement of response from the entity board; and
 - requiring the water services entities to fund and support capability and capacity of mana whenua to participate in relation to three waters service delivery.
86. The combination of these mechanisms aims to make a step change in the way iwi/Māori are engaged in the three waters system.

Chapter 7: Transition and implementation

Coversheet: Decision on the reform of three waters service delivery arrangements (Detailed Chapter 7: Transition and implementation)

Advising agencies	Department of Internal Affairs
Decision sought	Policy decisions on the transition and implementation of the proposed three waters service delivery arrangements
Proposing Ministers	Minister of Local Government

Overview of this Regulatory Impact Assessment

Cabinet considered policy options to reform three waters service delivery in mid-June 2021. A Regulatory Impact Assessment (RIA) informed the decision on whether and how to improve the system for delivering three waters services. It comprised:

- A Strategic RIA assessing the rationale for reform; and
- Six detailed analyses (chapters) of each of the core design choices the Government needs to make to ensure the package of policy proposals delivers the intended outcomes.

This is the final (seventh) chapter of the RIA, which supports the fourth Cabinet paper on Three Waters Reform. This chapter focuses on the transition from the status quo of water services being delivered by local authorities, to these services being delivered by the new water service entities proposed in the earlier papers. It also includes a couple of other proposals to support a smooth transition.

Detailed Chapter 7: transition and implementation, includes the following sections:

- Part A: The approach to managing the transition;
- Part B: Amending the Water Services Bill to extend the length of the transition period for unregistered drinking water suppliers; and
- Part C: Proposal to improve wastewater regulation.

“Transition” does not include the policy, legislative, or stewardship activities that will continue to be delivered by the Department, or activities discussed in *Detailed Chapter 4: Entity regulation, system stewardship, and system direction*.

Transfer guidelines are out of scope for this chapter. Transfer guidelines will eventually provide local authorities, iwi/Māori, and the public with an overview of how water service operations will be transferred, and the approach that will facilitate that transfer.

The Department is solely responsible for the analysis and advice set out in this RIA, except as otherwise explicitly indicated.

Quality Assurance Reviewing Agency:

A joint panel with representatives from the Treasury’s Regulatory Quality Team (RQT), the Ministry for the Business, Innovation and Employment, and the Department of Internal Affairs has reviewed the Regulatory Impact Assessment (RIA).

Quality Assurance Assessment:

The panel considers that it **meets** the Quality Assurance criteria.

Reviewer comments and recommendations:

The chapter presents a clear and convincing case for the overall transition approach and for the extended transition period for unregistered drinking water suppliers. The proposal to improve wastewater regulation may have benefited from further analysis given the possible significance of impacts on regulated parties, but overall the analysis in the chapter is robust and supported by the quality of the Strategic RIA and Detailed RIA for the overall reform package.

Responsible Manager (signature):



Allan Prangnell
Executive Director Three Waters
Department of Internal Affairs

The scope and contents of this chapter

1. This chapter focuses on the transition from the status quo of water services being delivered by local authorities, to these services being delivered by the new proposed water service entities.
2. The chapter includes the following sections:
 - Part A: The approach to managing **the transition**.
 - Part B: Amending **the Water Services Bill** to extend the length of the transition period for unregistered drinking water suppliers.
 - Part C: Proposal to improve **wastewater regulation**.
3. “Transition” does **not** include the policy, legislative, or stewardship activities that will continue to be delivered by the Department of Internal Affairs, or activities discussed in *Detailed Chapter 4: Entity regulation, system stewardship, and system direction*.
4. Transfer guidelines are out of scope for this chapter. Transfer guidelines will eventually provide local authorities, iwi/Māori, and the public with an overview of how water service operations will be transferred, and the approach that will facilitate that transfer. A summary of issues that could be included in the transfer guidelines is provided in **Appendix 1**.

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Part A: The approach to managing the transition

Context

5. As noted in the Strategic RIA, New Zealand’s three waters system needs major, transformational reform. Latest estimates indicate that an investment of \$120B to \$185B is needed to replace and refurbish the existing infrastructure, upgrade three waters assets to meet drinking water and environmental standards, and provide for future population growth. Eliminating this infrastructure deficit and meeting future growth requirements could take 30 to 40 years, and will be beyond the funding and operational capacity of most councils and communities under current arrangements²⁰¹.
6. A core element of the proposed response to this challenge is establishing three or four large water services entities, with sufficient balance sheet capacity to raise debt to fund these investment requirements and smooth the cost of this investment over time.²⁰² This chapter uses the term “transition” to refer to the processes and activities needed to transition from the status quo, where 67 local authorities provide water services, to that future state involving a small number of large water service entities.

Timeframe for the transition

7. We recommend that the transition be substantially completed by 1 July 2024, to ensure water service entities can become operational and take over the service delivery responsibilities from local authorities from that date.
8. That recommended “go live” date of 1 July 2024 aligns with the 2021–2024 long-term planning cycle for councils, and so would facilitate a smooth transition from local authorities to the new entities.
9. Local authorities will need to continue to provide three waters services until the transfer date of 1 July 2024, to minimise the disruption to communities, and to ensure they meet any investment commitments. Relevant regulatory requirements would continue to apply to local authorities throughout this period.

Overall transition approach

The key activities and policy objectives of the overall transition approach

10. The transition is very large in both size and scope: it involves amalgamating the water-related workforce, assets, liabilities, and revenue of 67 local authorities into three or four entities. This represents approximately 4,900 people²⁰³, \$64B of assets²⁰⁴, \$5B to \$7B of debt, and \$2.6B in annual revenue²⁰⁵.
11. Implementing these reforms will be a highly complex and challenging process. It will involve a range of transition activities and tasks, and will require a number of significant risks to be managed.

²⁰¹ Water Industry Commission for Scotland (2021). Economic analysis of water services aggregation. Phase 2.

²⁰² [DEV-20-MIN-0099 refers]

²⁰³ Deloitte (2021). Industry Development Study and Economic Impact Assessment.

²⁰⁴ Water Industry Commission for Scotland (2020). Phase 1 analysis

²⁰⁵ Includes developer contributions and grants

The key activities during the transition

12. The key activities will be:
 - establishing the new entities (initially as establishment entities), including setting up governance and organisational structures;
 - managing staff transfer and recruitment processes;
 - ensuring the components of the reforms that recognise the rights and interests of iwi/Māori are implemented effectively – including in relation to the proposed governance role of mana whenua;
 - ensuring that local authorities continue to deliver water services, and invest in those services and infrastructure, until the new entities begin to operate;
 - managing the transfer of assets and liabilities from local authorities to the new entities – including identifying the assets and liabilities to be transferred;
 - managing local authority transition activities;
 - establishing technical structures, policies and procedures to ensure water services are not disrupted during the transition (this includes policies for asset management and planning; operations management; regulatory functions; and delivery and procurement)
 - preparing the new entities for their communications, customer service, and community engagement functions; and
 - preparing the new entities to have other functions necessary to enable them to successfully deliver water services – including financial and treasury, charging and pricing, legal, risk, insurance, data, and digital and information technology systems and processes.
13. The focus of this section is on how best to govern and allocate necessary transition activities between central government and local communities, to ensure an effective approach to transition is achieved, in line with the government’s objectives for the reform of three waters service delivery.

Lessons from other amalgamations and reform processes

14. For guidance on this transition process, we reviewed a number of amalgamations and reform processes, from here and overseas. These included the amalgamations of Auckland Council, Fire and Emergency New Zealand, and Te Pūkenga/New Zealand Institute of Technology, New Zealand electricity reform, and water reform in Tasmania and Scotland.
15. Although none of those involved a New Zealand amalgamation of the scale and complexity of the current three waters reform, we were able to draw some lessons from them. We concluded that in the New Zealand water service delivery transition it will be important to:
 - be realistic about the time needed to complete key tasks and achieve objectives;
 - establish an authoritative, empowered body to manage the transition;
 - manage and monitor decisions by existing local authority service providers during the transition;
 - plan the implementation well and communicate effectively around it; and

- involve members of the proposed new water service entities in key decisions, such as shaping the entity's direction and culture, and selecting the chief executive.

The policy objectives for the transition

16. Drawing on those lessons, we propose the following objectives for the transition:
- As a priority, ensure that the transition and implementation of the service delivery reforms are smooth, efficient, and effective, so that they minimise disruption to communities and consumers.
 - Establish water service entities that have the capabilities and operational frameworks to deliver effectively on their purpose and high-level objectives set out in the enabling legislation.
 - Provide as much certainty for affected staff as reasonably possible, and enable the transfer of relevant staff to the new water services entities to support operational commencement.
 - Work collaboratively with local government and iwi/Māori, and ensure they are well supported to participate fully and effectively – both in the transition, and in the new system once it is operational.
 - Maintain clear and effective communications with local government, iwi/Māori, the public, and key stakeholders throughout the transition.
 - Achieve the Government's ambitions to significantly improve the safety, quality, resilience, accessibility, and performance of three waters services, in a way that is efficient and affordable for New Zealanders.
17. These transition objectives will be used to analyse the options for the transition approach.

The success of the reforms will depend on a highly collaborative, partnership-based approach to working with iwi/Māori and with local authorities

18. Participation by local authorities and by iwi/Māori in the transition is critical to ensuring their interests are recognised in all transition decision-making and to ensuring that the new water service entities are set up for success. The proposed approach to the transition ensures a continued partnership between central government, iwi/Māori, and local authorities.
19. We propose that during the transition process:
- local authorities continue their existing role and continue to be responsible for providing water services (under the existing local government legislative framework), and
 - a tailored regime be developed to support the involvement of iwi and Māori throughout the transition.

Involving local authorities in transition decisions and activities while they continue to provide water services

20. It will be important for local authorities to continue to be responsible for providing water services during the transition, to minimise the risk of disruption.

21. However, this will create the need for oversight of local authorities during the transition.
22. Because most of the practical expertise relating to water services currently sits with local government, we also propose that local authorities be closely involved in the following transition activities:
 - **Governance of the establishment entities** – Local authorities should assist in appointing the board of the establishment entities.
 - **Staff secondment** – Local authority employees, contractors and advisors can provide relevant local experience and expertise.
 - **Advisory roles** – We expect that local authorities will form advisory groups to the national transition unit and the establishment entities. The specific names for the group and role will be developed with local authorities; however, we intend for all activities that are critical to the transition to be tested through these groups.
 - **Workstream participation** – Each workstream would have a working group in which local authority staff with relevant expertise would participate.
23. This approach will have resourcing implications for local authorities, who will be expected to continue to deliver water services as normal until the new water services entities ‘go live’ date, as well as undertaking their other responsibilities.
24. Providing reasonable financial support to local authorities will be important to ensure there is no disruption to water services, and to enable local authority staff to participate fully and meaningfully in the transition. Financial support is likely to represent the costs associated with providing additional resource to local authorities, based on the time spent by their staff working on transition, and administrative costs associated with the transition process.
25. Funding will be required for the establishment of multi-regional water service entities and the transfer of assets, liabilities, staff and services from local authorities to those entities as part of the three waters service delivery reform programme. A mechanism to provide for this funding has been previously agreed by Cabinet.

Ensuring that iwi/Māori are well-supported to participate in the transition and the reformed system, and that the new entities will be effective Treaty partners

26. There are two distinct transition considerations to enable a Treaty/Tiriti partnership-led approach to the reform:
 - ensuring iwi/Māori are well supported to contribute to the new roles created through the reform process, including joint oversight of the water services entities, and exercising kaitiakitanga under the Te Mana o te Wai mechanisms;
 - ensuring the new water services entities are set up to be effective Treaty partners, which are well-informed and influenced by iwi/Māori – insofar as the entities and their boards will be required to give effect to Te Mana o te Wai, and understand, support, and enable mātauranga Māori and tikanga Māori and kaitiakitanga to be exercised throughout their organisations, and when engaging with iwi/Māori.

27. It is proposed that the Minister for Local Government undertakes a key role in engaging with iwi/Māori as Treaty/Tiriti partners to get these processes underway. It is recommended that a hui is undertaken within the boundary of each of the entities in July/August 2021, proximate to our reform announcements. These hui, provide an opportunity to outline the key mechanisms provided, and make announcements related to funding for the transition and to the appointment of Crown/Māori Relationship Leads.
28. The role of the Crown/Māori Relationship Leads will be to act as a bridge between the national transition unit and the kaupapa Māori process within each entity. It is proposed these Relationship Leads report to the Minister for Local Government and the Minister for Māori Crown Relations to provide a direct communication mechanism. They would be Ministerially-approved appointments, employed by the Department, and have a small secretariat office hosted by the Department.
29. Financial support for the kaupapa Māori process in these circumstances is appropriate, to cover the actual and reasonable expenses incurred as part of any hui related events, and a small fund per entity boundary to enable iwi/Māori to access expert advice. This funding has already been set aside within previous budget decisions for transition funding.
30. It is proposed that the timeframe for the kaupapa Māori process provides for two years, plus one year by agreement of Minister for Local Government and Minister for Māori Crown Relations. Until that time, transitional representation can be provided by Post Settlement Governance Entities or those entities who have the mandate to negotiate settlement on behalf of iwi/hapū.
31. The reforms proposals outlined in *Chapter 6: Strengthening the role of iwi Māori in the three waters system* include provisions for iwi/Māori to issue Statements of Te Mana o te Wai. Given this mechanism will be required by the Crown in statute, it is reasonable that the Crown supports iwi/Māori to understand the likely requirements of the mechanism. As a transition minimum, it is proposed that the establishment entities use Iwi Management Plans to guide their understanding of relevant Te Mana o te Wai considerations, unless iwi/Māori within their boundary offer an alternative.
32. Long term, it is proposed that each water services entity would provide financial support to a 'Mana Whenua' type forum in its area, which would be funded on a similar basis to the Auckland Council Independent Māori Statutory Board. That is set out in a multi-year funding agreement, which provides for reasonable costs, including a secretariat, iwi/Māori governance operations, establishment of committees, and a nominated amount to support seeking and obtaining advice.
33. Finally, the reforms will require a large increase in capacity and capability from iwi/Māori, and a need to ensure that the water services entities are culturally responsive through the transition and from establishment. As such, it is proposed that the Department work with iwi/Māori to inform an iwi/Māori workforce plan. I expect early investment should be undertaken to support the move to joint oversight and the new governance role that iwi/Māori will have.

Developing options for the overall transition approach

34. It will be necessary to set up unique organisational arrangements to successfully manage the complex transition to the new water service system.
35. The three options (explored in more detail in **Table 33**) are:
 - **Option one: A nationally led transition** – where all transition decisions and activities are undertaken by a national agency or unit

- **Option two: A locally led transition** – where all transition decisions and activities are undertaken by establishment entities at the local level
- **Option three: A combined national and local approach** – where transition decisions and activities are carried out by a combination of a ‘national transition unit’ and three or four local ‘establishment entities’ (one for each of the new water service entities).

36. Later in this chapter, we analyse some more micro design considerations within the overall transition approach.

Table 52: Transition approach options.

	Option one: A nationally led transition	Option two: A locally led transition	Option three: A combined national and local approach
Description	All transition activities follow a common, nationally consistent and coordinated approach.	All transition activities are undertaken by the establishment entity for each new water service entity using a local developed approach that is tailored to the relevant entity.	Transition activities are undertaken jointly by a national transition unit and a local establishment entity.
Timing	Able to begin immediately after a Cabinet decision to proceed with reform.	Delayed so that the establishment entities can be formed.	The transition unit can begin work immediately after a Cabinet decision to proceed with reform.
Accountability	Minister of Local Government.	Either the Minister of Local Government, or joint oversight by the council and iwi.	Minister of Local Government (to ensure clear accountability for the combined approach).

37. Those three options would have some common elements:

- Transition activities would be carried out by highly experienced and capable staff. Staff from local government would be directly involved to provide technical expertise and institutional knowledge.
- Transition activities would be overseen by robust governance, including board members (or their equivalent) with the appropriate expertise.
- The structures for partnering and engaging with councils and with iwi/Māori would be separate from the governance and decision-making structures.

Analysis of the options for the overall transition approach

38. The scoring scale for analysis, shown in **Table 34** below, is the same as has been used elsewhere in this RIA.

39. We have analysed the three options, shown in **Table 35**, against the transition objectives set out in paragraph 16.

Table 53: Evaluation criteria scoring scale.

Score	Description
✓✓	Very strong alignment with the criteria
✓	Strong alignment with the criteria
0	No alignment with the criteria
×	Weak alignment with the criteria
××	Very weak alignment with the criteria

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Table 54: Analysis of options for overall transition approach.

	Option one: A nationally led transition	Option two: A locally led transition	Option three: A combined national and local approach
Smooth transition minimising disruption to communities and consumers	x Less local input creates greater risk of local disruption.	✓ Greater local input reduces risk of local disruption.	✓✓ Local input augmented with national support to ensure protection for all communities/consumers.
Transition and implementation approach that is efficient and effective	✓ Less cost of national approach, partially offset by less effectiveness from reduced local input.	x Significantly greater cost due to replication of tasks which can effectively be undertaken nationally.	✓✓ Greater cost of dual approach, expected to be offset by greater effectiveness from allocative efficiency.
Entities set up to deliver their purpose and high-level objectives	✓ Purpose and objectives were developed nationally and will be the focus of transition.	0 Local leadership could lead to transition objectives inconsistent with purpose and objectives.	✓✓ Purpose and objectives were developed nationally however will benefit from local input.
A collaborative approach with local government and iwi/Māori	✓ Relatively independent from option as driven by the approach taken.	✓ Relatively independent from option as driven by the approach taken.	✓✓ Combined approach provides greater opportunity for collaboration.
Clear and effective communications with local authorities, iwi/Māori, the public, and key stakeholders throughout	✓ Relatively independent from option as driven by the approach taken.	✓ Relatively independent from option as driven by the approach taken.	✓ Relatively independent from option as driven by the approach taken.
Deliver the Government's ambitions	✓✓ National leadership will ensure Government ambitions and transition objectives are consistent.	x Local leadership could lead to transition objectives which do not align with Government ambitions.	✓✓ National leadership will ensure Government ambitions and transition objectives are consistent.

The preferred option for the overall transition approach

40. We propose the preferred option for the transition is **option three: A combined national and local approach**. The transition activities would be carried out by a combination of a single 'national transition unit', and three or four local establishment entities (one for each of the new water services entities).
41. The national transition unit and establishment entities would be accountable to the Minister of Local Government. We also propose an extensive role for iwi/Māori and for local authorities in the transition.

42. The main reason for having both a central transition unit and local establishment entities is that for some transition activities a common and consistent (national) approach will be more effective and efficient than a dispersed approach, while other activities are more appropriately carried out locally on behalf of the water service entities.
43. A combined national and local approach to the transition also aligns better with iwi/Māori having extensive roles in the transition. Iwi/Māori generally see local government as part of the Crown, alongside other institutions such as the courts. They see local government as making day-to-day decisions on behalf of central government within iwi rohe, and therefore see both central and local government as their Treaty/Tiriti partner.

Activities for which a nationally led approach will be more appropriate

44. Activities that need to be carried out nationally could include: determining the basis for the transfer of assets, liabilities and/or staff; procuring consistent IT systems for all of the entities; and charging and pricing analysis or the initial capital raising (this is preliminary and subject to further work).
45. A national approach to those activities would help ensure our objectives for the reforms are delivered and deadlines are met. It will enable continued Ministerial oversight of the reform programme, which is vital for effective risk management, system stewardship, and accountability. It will also ensure there are close connections with the policy and legislative development work.

Activities for which a locally led approach will be more appropriate

46. Activities that would be more appropriately carried out locally on behalf of the new water services entities could include: determining the executive management structure; developing the first asset management plan; deciding the culture, vision, and branding of the organisation; and any other tasks that need to be carried out in partnership with particular local authorities and iwi or hapū.
47. A local approach to those activities would ensure there is ongoing accountability for key decisions and that local knowledge and understanding are incorporated. This work is likely to involve the implementation in practice of nationally agreed principles or approaches.

Why an entirely national approach would not be appropriate

48. Option one: A nationally led transition has a number of important benefits, including:
 - ensuring that the Government's ambitions for the three waters reforms and its objectives for the Crown/Māori relationship are achieved;
 - providing consistency for all local authorities, consumers and communities, and ensuring that all local authorities are treated fairly in the transfer and that conflicts of interest are managed and resolved independently;
 - providing clear oversight; and
 - cost efficiency, ensuring that there is appropriate oversight of any Crown funding for the transition and that value for money is delivered.

49. However, an entirely nationally led transition process would mean that key decisions would not always take account of local interests and circumstances, and would not be made close to the communities who will govern the water service entities, which would reduce accountability. Under an entirely national approach, decisions would not have the benefit of the valuable knowledge held by local authorities, who are the current three waters service providers, and of iwi/Māori, and this could lead to disruptions for consumers and communities once the water service entities become operational.
50. A completely nationally led process would also undermine a Treaty/Tiriti partnership approach to the transition, because, as explained above, iwi/Māori see their Treaty/Tiriti partner as both central and local government. In an entirely national approach the valuable relationships between local authorities and iwi would be lost, including both formal Treaty/Tiriti relationships and informal ones.

Why an entirely local approach would not be appropriate

51. Option two: A locally led transition is limited as it could result in the purpose of the reforms no longer being front and centre. The Minister of Local Government and the Department have led this work for a long time with consistent aspirations, and changing the decision makers for transition could compromise the reform. For example, if the new governors did not support greater debt funding, progress towards reducing the infrastructure deficit would be significantly limited.
52. A completely local approach is also likely to be less efficient, as various transition activities would have to be designed and done three or four times, and to distract councils from providing water services through the transition.

Different options within a combined national and local approach to the transition

53. Within a combined national and local approach to managing the transition there are different options for the form and function of the central transition unit and the establishment entities. Those options will be explored over the next few sections.

National component of the combined transition approach:

The national transition unit

54. So that the transition is led in a nationally consistent and coordinated way, we propose that a national transition unit be established.

The national transition unit's main activities

55. The national transition unit's main activities would be to:
 - support the standing up of the establishment entities
 - deliver and coordinate an establishment process that ensures the transition objectives are considered when key decisions are made
 - provide continuity through the reforms and ensure the decisions made so far are reflected throughout the transition

- provide central leadership and coordination for communications and engagement with stakeholders
- connect the transition with the further policy and legislative work
- monitor the establishment entities
- allocate transition activities between the transition unit and the establishment entities based on a set of allocation principles (described in paragraph 98); and
- efficiently perform the activities allocated to the national transition unit.

Options for the form of a national transition unit

56. Given the transition objectives set out in paragraph 16, we considered the following three primary options for the organisational form of a national transition unit:

- **Option one: A business unit** of the Department.
- **Option two: A departmental agency**, hosted by the Department.
- **Option three: A statutory entity.**

57. Those three options are described in detail in **Table 36** below.

58. We considered but discarded a range of other organisational forms – from private structures to other machinery of government structures – because they wouldn't be able to adequately support the central transition unit's proposed functions. The other government structures considered focused on the main organisational choices of functions inside the executive branch:

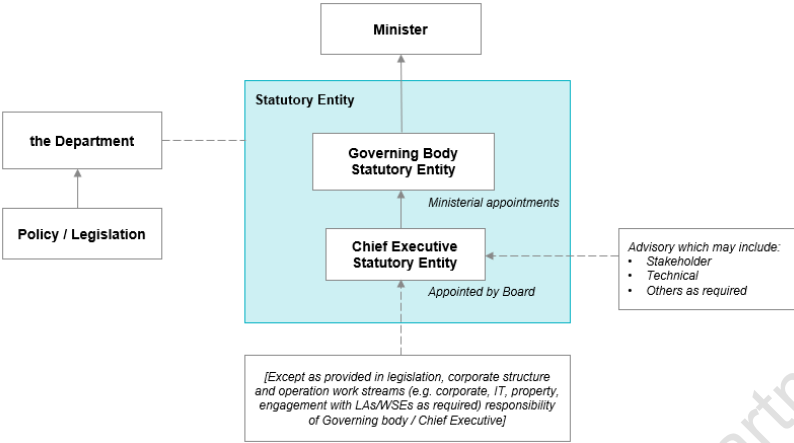
- **Government departments other than the Department.** The agencies that were considered include the Ministry of Business, Innovation and Employment (MBIE), the Treasury, Ministry for the Environment (MfE), and the Ministry of Housing and Urban Development (MHUD). Whilst these agencies have connection to the Three Waters Reform, it is challenging to see the rationale for any other department (other than the Department) considering the work and knowledge the Department has in the Three Waters Reform and local government. The primary accountability for delivery of the Three Waters Reform Programme sits with the Department, through the Minister of Local Government, and the Department has demonstrated appropriate collaboration with other key agencies such as the Treasury and MBIE.
- **Crown agent / Crown entities.** The nature of the activities to be carried out by the transition unit need to implement the policy decisions led by the Department – in this regard it is preferable that the Three Waters Reform Programme, including transition, is subject to an ongoing high degree of Ministerial oversight and decision making through the Minister of Local Government, the Three Waters Ministers, and Cabinet.
- **Crown Infrastructure Partners (CIP) or the Infrastructure Commission.** The transition activities are not considered to be within the core capability or functions of these independent organisations. It is also likely to divert them from their key purpose.
- **Other commercial functions.** It is inappropriate to burden the transition unit with commercial objectives in addition to the transition objectives. This could compromise the transition activities and lead to the creation of less effective water service entities.

Table 55: Descriptions of options for the national transition unit.

Option	Sample organisational diagram	Description of structure
<p>A department business unit <i>(Preferred option)</i></p>	<p>Example</p> <p>An example of this model is the Taumata Arowai Establishment Unit. This was set up in the Department of Internal Affairs to establish Taumata Arowai and ensure the new agency would be able to operate fully when the Water Services Bill comes into force.</p>	<ul style="list-style-type: none"> • All transition functions would be housed in a new dedicated business unit within the Department, separate from its other business units. • The unit would be the direct responsibility of, and report to, the Chief Executive of the Department. The Chief Executive would be accountable to the Minister. • A new Deputy Chief Executive could potentially be appointed. They would take the role of Head of Transition and be responsible for the unit’s day-to-day functions. They would be appointed by the Chief Executive, and would report to and be accountable to the Chief Executive. • The Chief Executive and the Head of Transition could each be supported by independent advisory or transition boards as needed. We would recommend that some of the existing board members move into this function. • The business unit would work closely with the policy and legislation leads within the Department. The unit would exist only for the term of the transition (expected to be three years).

Option	Sample organisational diagram	Description of structure
<p>A departmental agency</p>	<p>Examples</p> <p>These include:</p> <ul style="list-style-type: none"> • the Cancer Control Agency • the National Emergency Management Agency • the Office for Māori Crown Relations / Te Arawhiti, and • the Social Wellbeing Agency. <p>The departmental agency is a fairly new model, and we have found no examples of it being used for transition or establishment purposes.</p>	<ul style="list-style-type: none"> • A dedicated transition unit is established as a departmental agency hosted within the Department (under the Public Service Act 2020). • Cabinet determines the role, scope, and function of the departmental agency. • A separate Chief Executive is appointed for the departmental agency by the Public Service Commissioner, with the responsibilities of a chief executive in the public service, reporting directly to the Minister (which may or may not be the Minister for Local Government). • The Chief Executive of the Department (as host agency) is not responsible for carrying out the functions of the departmental agency, but retains some responsibility (depending on how the agency is set up) as head of the host department and will continue to lead the policy, legislation and stewardship work. • The Chief Executive of the departmental agency can use appropriations administered by the Department under delegation from the Department’s Chief Executive, who is responsible for what is achieved with the appropriation. • This structure provides for strong ministerial oversight and accountability, and a greater degree of autonomy compared to a central government agency.

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Option	Sample organisational diagram	Description of structure
<p>A statutory entity</p>	 <p>Example</p> <p>An example of this is the Auckland Transition Agency. This was an independent body with a board that was accountable to a Minister. It included an independent board chair. This was the model recommended by a Royal Commission as best suited to the requirements of the reform. The Commission expected the new agency to be empowered by legislation.</p>	<ul style="list-style-type: none"> • A statutory entity is established by legislation and is separate from the Department. • A shadow board might be established before the agency's board is formally appointed under the legislation (for example, the shadow board established before the Infrastructure Commission's enabling legislation came into effect). • Legislation provides for Ministers to appoint the members of a governing body of the entity, and for that governing body to appoint a Chief Executive. • The entity's governing body is responsible and accountable for exercising the powers and performing the functions and duties given to the statutory entity under the legislation. • The corporate structure of the entity (for example, Head of Transition project leads, and an executive team structure) is the responsibility of the governing body and the Chief Executive. • The entity's lifespan can be specified in the legislation. • Its relationship with the Department can be set through legislation or by other tools such as Letters of Expectations.

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Analysis of the options for the national transition unit

Relevant design principles (assessment criteria) for the national transition unit

59. We have identified those components of the transition objectives (see paragraph 16) that are relevant as design principles for assessing the options for the form of the national transition unit. We concluded that achieving the other components of the transition objectives would not depend on the form of the national transition unit.
60. The following are the four design principles we have formulated based on the relevant components of the transition objectives, with relevant factors included each of the four principles:
- **A smooth transition that minimises disruption to communities and consumers.**
 - The complexity of the process to establish the national transition unit.
 - The time required to establish the unit.
 - **A transition and implementation approach that is efficient and effective.**
 - Dedicated resources available to focus on transition activities.
 - Able to accommodate the limited lifespan of a national transition unit
 - Shared services with the Department to support transition functions (for example, Human Resources and Information Technology).
 - **Entities set up to deliver their purpose and high-level objectives and to deliver the Government's ambitions.**
 - A close relationship with the policy and reform functions of the Department and Minister of Local Government.
 - **A collaborative approach with local government and with iwi and Māori.**
 - The ability to access independent advisory boards as needed.

Assessment framework

61. We used the design principles identified in paragraph 60 to assess each option. These principles do not map, either directly or broadly, to the Assessment Framework used in the Strategic RIA. However, they do align with expectations under the Public Service Commission guidance, *Machinery of government supplementary guidance: Main organisational design choices*, which sets out the key principles for the choice of organisational form for non-commercial functions within the Executive branch.
62. The following evaluation criteria scoring system, shown in **Table 37**, is then employed for most of the criteria. The exceptions to this use of this scale is the 'complexity' and 'speed of establishment' criteria – these have the same directional scoring but different descriptors (for example, "Quick" replaces the descriptor "Strong alignment" for the assessment of the speed of the establishment process).

Table 56: Evaluation criteria scoring scale.

Score	Description
✓✓	Very strong alignment with criteria
✓	Strong alignment with criteria
0	No alignment with criteria
×	Weak alignment with criteria
××	Very weak alignment with criteria

Analysis

63. A summary of the scoring for each option is provided in **Table 38** below. More detailed supporting evidence is then provided in paragraphs 64 to 67. This analysis has been drawn from a ‘strengths and weaknesses’ analysis provided in **Appendix 2**.

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Table 57: Summary analysis of the formation of a national transition unit.

Policy objective / Design principle	Option one: A departmental business unit	Option two: A departmental agency	Option three: A statutory entity
Complexity of process to establish the national transition unit.	✓ Only requires reorganisation of the Department.	0 Cabinet approval of purpose, scope, and functions and sharing arrangements required.	x Primary legislation required to establish new statutory entity.
Time required to establish the national transition unit.	✓ Only requires resourcing of unit.	0 In addition to above, time required for appointments process.	x In addition to above, time required for appointment process.
Dedicated resources available to focus on transition functions.	✓ Relatively independent from option as driven by resourcing decision.	✓ Relatively independent from option as driven by resourcing decision.	✓ Relatively independent from option as driven by resourcing decision.
Able to accommodate the limited lifespan of a central transition unit.	✓ Can be dissolved once transition complete.	✓ Can be dissolved once transition complete.	✓ Can be dissolved once transition complete.
Shared services with the Department to support transition functions (for example, Human Resources and Information Technology).	✓ Part of the Department therefore can utilise shared services.	✓ Part of the Department therefore can utilise shared services.	x Separate entity will need to put in place potential shared services.
Close relationship with policy and reform functions of the Department and Minister of Local Government.	✓✓ Close connection through the Department which could include consistent personnel.	✓ Separate Chief Executive and resourcing process means less consistency / relationship links.	x Separate entity loses relationship with policy and reform functions.
Ability to access independent advisory boards as needed.	✓ Relatively independent from option as driven by advisory approach.	✓ Relatively independent from option as driven by advisory approach.	✓ Relatively independent from option as driven by advisory approach.

64. In identifying a preferred option for the form of the national transition unit, we have been guided by the following four key questions and issues:

- the nature of the relationship between the Department and the Minister of Local Government and the national transition unit including the level of direction and involvement in the transition, establishment, and implementation functions that Department and the Minister of Local Government wish to retain;
 - the nature of the relationship between the national transition unit and the Department doing the policy, legislative, and stewardship work;
 - whether the timetable for reform and the type of functions to be carried out warrant the time and the complex process required for setting up a new unit or entity; and
 - whether it is important to have consistency in personnel between the current team working on the reform process and the staff of the new national transition unit team, at governance, executive, and management levels.
65. The key factor in deciding between the two departmental options (options one and two) on the one hand and the statutory entity option (option three) on the other is the extent to which any independence from ministerial direction is needed. We concluded that a close relationship to the Executive (including the Executive's ability to easily direct the agency or entity) is more important to successfully delivering the transition objectives than independence from the Executive.
66. The subsequent choice between business unit and departmental agency centres on which of these two options is more efficient administratively. We concluded that the ability to begin transition activities immediately once Cabinet has made a decision is most important for achieving the transition objectives, and this is best achieved through a business unit.
67. On balance, we concluded that a departmental business unit is likely to be most effective in delivering the reforms and achieving the transition objectives, and is most consistent with the Public Service Commission guidance.

Recommendation that the national transition unit be a business unit of the Department of Internal Affairs

68. We recommend that all of the national transition unit's activities be housed in a **new dedicated business unit within the Department**, separate from the other business units – including the current three waters policy team.
69. The unit would be the responsibility of, and report to, the Chief Executive of the Department.

Why a departmental business unit: Summary of reasons

70. For the following reasons a departmental business unit is the organisational form that is most likely to be effective:
- A high level of central influence is critical to achieving the reform objectives. We expect the Minister of Local Government to have an important role in governing the transition unit.
 - The Department will carry out ongoing policy, legislative, and stewardship activities in any event, and so it will be important for the national transition unit to have a close working relationship with the Department.
 - It is critical to that the transition activities begin as soon as possible, and this is best achieved through a departmental unit, which would not require any enabling legislation.

- We propose that the national transition unit oversee local authorities' delivery of water services during the transition, using a combination of bespoke legislative oversight powers provided for in enabling legislation, and its existing oversight powers under the Local Government Act 2002, to ensure that local decisions do not compromise the reform. The Department currently has a good reputation with local authorities, and this should support the local government sector having confidence in the Department.
 - Consistency in key personnel between the current three waters reform team and the new national transition unit team will support better continuity and efficiency, and a good working relationship between the two teams.
71. All of those factors will be vital if we are to deliver our reform objectives, keep to the proposed timetable, and build confidence across the local government sector without compromising the transition.
72. The proposed departmental business unit approach is intended to give effect to central leadership and coordination over the transition process, provide appropriate controls to protect consumers and communities, and provide appropriate involvement for local authorities and iwi/Māori through the appointment of the board of the establishment entities.
73. Over the transition period, there will be the need for a high degree of political management and second-order policy decisions, and therefore very efficient and quick feedback from the transition and establishment machinery to the Executive.
74. A departmental agency or a statutory entity would be broadly expected to perform functions similar to a departmental unit but would take longer to establish, for no significant gain. It would also not have as close a relationship with the Department and the Minister, and therefore the risk of the transition and implementation not achieving the policy objectives of the reform would be high.

Local component of the combined transition approach – establishment entities

75. The combined transition approach is made up of a national transition unit and local establishment entities. This section examines the form and function of the establishment entities.

The role of the local establishment entities

76. The local establishment entities will be key to ensuring decisions are made and owned by the water services entities, and to embedding enduring accountability arrangements that are specific to each entity.
77. We propose that an establishment entity be set up for each water service entity, to carry out those transition activities that are important for ongoing accountability for operational decisions, and also those transition activities that should be carried out by the water service entities for administrative purposes (for example, entering into long-term contracts or employment of staff). This is likely to include the practical implementation of nationally agreed principles set by the national transition unit. This will require a multi-regional understanding.

Options for the establishment entities

78. As previously noted, many of the organisational characteristics of the new water service entities are canvassed in *Detailed Chapter 3: Establishment of Water Service Entities*. Those characteristics have informed the options analysis in this chapter for the form of the local establishment entities.
79. There are some options to consider when developing the establishment entities:
- **Option one: Time-limited entities** that do not go on to become functional water service entities; and
 - **Option two: Shadow entities** that do go on to become “go live” water service entities.

Relevant design principles (assessment criteria) for the local establishment entities

80. We have identified those components of the transition objectives (see paragraph 16) that are relevant as design principles for assessing the options for the establishment entities. These are:
- A smooth transition that minimises disruption to communities and consumers.
 - A transition and implementation approach that is efficient and effective.
 - Entities set up to deliver their purpose and high-level objectives and deliver the Government’s ambitions.
 - A collaborative approach with local government and with iwi/Māori.
 - Clear and effective communications with local government, iwi/Māori, the public, and key stakeholders throughout.
 - Deliver the Government’s ambitions.

Analysis

81. The options are assessed against the policy objectives for the development of the establishment entities set out above. These do not map directly, or broadly, to the Assessment Framework used in the Strategic RIA.
82. The scoring scale for analysis, shown in **Table 39** below, is the same as has been used elsewhere in this RIA.

Table 58: Evaluation criteria scoring scale.

Score	Description
✓✓	Very strong alignment with criteria
✓	Strong alignment with criteria
0	No alignment with criteria
×	Weak alignment with criteria
××	Very weak alignment with criteria

83. A summary of the scoring for each option is provided in **Table 40** below. More detailed supporting evidence is then provided in paragraphs 84 to 95.

Table 59: Summary of the analysis of the formation of the establishment entities.

	Option one: Time limited entities that do not go on to become functional water service entities	Option two: Shadow entities that do go on to become “go live” water services entities
Smooth transition minimising disruption to communities and consumers	✓ Relatively independent from option as driven by how activities are undertaken.	✓ Relatively independent from option as driven by how activities are undertaken.
Transition and implementation approach that is efficient and effective	xx Less efficient as two entities are established for every water entity and less effective as ongoing accountability for establishment entity decisions is diminished.	✓✓ Only one entity is established for every water entity and greater effectiveness from ongoing accountability of entity decisions.
Entities set up to deliver their purpose and high-level objectives	0 Transition from establishment entity to water service entity risks delivery of objectives.	✓✓ Removing the transition from establishment entity to water service entity reduces transition risks.
A collaborative approach with local government and iwi/Māori	✓ Relatively independent from option as driven by how collaboration is undertaken.	✓✓ Collaboration improved as engagement is with ongoing entity.
Maintain clear and effective communications with local government, iwi/Māori, the public, and key stakeholders throughout	0 Communications may be less effective as the establishment entity is not the ongoing water service entity.	✓✓ Communication improved as communications are considered as being made by the ongoing entity.
Deliver the Government’s ambitions	✓ Relatively independent from option as driven by how activities are undertaken.	✓✓ Outcomes improved through continuity of entity and associated accountability.

The advantages of a time-limited entity

84. The one advantage of having time-limited entities is that the process of setting them up would be faster and less complex than for shadow entities.

The advantages of a shadow entity that becomes the water service entity

85. The advantages of having shadow entities are that:

- during the transition the shadow entity would establish the direction, culture, and relationships of the future water service entity, so that those tasks will have already been achieved when the water service entity becomes operational;
- a shadow entity will also be more administratively efficient at the end of the transition process, in that less time will be lost moving to the permanent water service entity and the shift to the permanent entity will be smoother;
- this approach will reduce administration costs;
- this approach will also make it easier to coordinate the transfer of interests, assets, and liabilities; and
- the shadow entity will build relationships with local iwi during the transition and will continue those relationships as the permanent entity, rather than the permanent entity having to build new relationships.

We recommend option two, the shadow entity

86. We concluded that developing the direction and culture of the future water service entities is the most important task in setting them up to be successful and in achieving the transition objectives.
87. We therefore recommend that the establishment entities be set up as **early establishment water service entities** – that is, each of them would be a shadow entity that becomes the permanent water service entity at the end of the transition. In this way, the critical work of developing the permanent entity's direction and culture will already have been achieved when the permanent entity becomes operational.
88. The establishment entities would not be responsible for delivering water services. However, we propose that legislation sets them up in such a way that they can become the permanent water service entities from the operational commencement date.
89. The national transition unit will be accountable to the Minister of Local Government for the initial work to set up the establishment entities. The transition unit will support the Minister's relationships with each of the establishment entities and therefore with the future water service entities.
90. There should be mechanisms for the shadow establishment entity to collaborate with iwi/Māori and with local authorities.
91. The early establishment of the water service entities will mean the broader entity design features will apply unless there are aspects specifically provided for during the transition. We propose that the following amendments apply during the transition to ensure the establishment entities are fit for purpose:
 - Responsibility for water service delivery would remain with local authorities until the water service entities begin operating, given the establishment entities will not be ready to carry out these operations during the transition.
 - The water service entities' statutory purpose, objectives, and operating principles would be tailored to reflect the establishment entities' roles and objectives during transition.
 - The governance and accountability arrangement would be amended to reflect the proposed central leadership and coordination over the transition process. The aspects we are proposing to modify are outlined in **Table 41** below.

Table 60: Proposed establishment entities governance and accountabilities – during the transition.

Key decisions	Establishment entities description
Accountability	The establishment entities are directly accountable to the Minister of Local Government (including through a Letter of Expectations issued by the Minister).
Reporting	Report to Minister of Local Government with any exceptional items, regular meetings, and final report.
Independent Selection Panel	The currently proposed enduring mechanism for appointment of directors to the board of the water service entity is through an independent selection panel that is established by the Representatives. This is explained in more detail in <i>Detailed Chapter 3: Establishment of new water service entities</i> .
Board competency requirements	Based on legislated regime with amendment by the Minister of Local Government to reflect transitional competencies required.
Board size	Three to six directors.
Chief Executive Officer appointment	Appointment by the Minister of Local Government, through a process led by the national transition unit, and involving consultation with local authorities and iwi/Māori. This person will be appointed until at least 1 July 2025 to provide certainty and continuity through the transition process, and first year of operations. (Note that an alternative job title may be applied to recognise the non-permanent nature of the role.)
Finance approvals	Funding requiring approval from the Minister of Local Government and Minister of Finance. Funding will form part of the budgeted establishment, transition, and implementation costs or via repayable Crown loan.
Finance and treasury	Ensuring that the necessary accuracy, quality, and control are achieved in all financial transactions, treasury management, and management reporting from operations commencement, and overview of risk and audit requirements.
Audit and information	Subject to auditor-general, Official Information Act, and Ombudsmen (to the extent this is not already provided for in enabling legislation).

92. This approach is intended to provide for appropriate Ministerial and centralised leadership and coordination over the transition process; appropriate controls to protect consumers and communities; and appropriate involvement of local authorities and iwi/Māori through the board appointment processes.
93. It is proposed that the transitional chief executive for each of the water service entities will be appointed by December 2021. The early appointment of transitional chief executives is supported by the sector to provide greater certainty through transition and accelerate the process. It is also proposed that the transitional chief executive will report to the transition unit 'shadow board' until the establishment entity board is appointed (expected to broadly align with the passing of legislation and the formation of establishment entities).
94. The relationship between the transitional chief executives and senior council water executives will be critical to the success of the reform. This will be of particular concern where senior council water executives have aspirations to become chief executives of the permanent water services entities. The same is true of governance roles in the future water service entities.

95. The initial governance arrangements for the water service entities, from operational commencement, may also require modification from the ongoing regime, to provide for appropriate Ministerial and centralised leadership and coordination that ensures the transition objectives are delivered. Any modifications would be made in the proposed second bill to provide flexibility to recognise progress made in the transition.

How a combined approach would lead to a smooth transition

Transition activities will need to be distributed between the national transition unit and establishment entities

96. We recommend that the national transition unit have overall responsibility for allocating transition activities between itself and the establishment entities, to ensure there is clear accountability and responsibility throughout the transition. In making those decisions the national unit should consult with the establishment entities. Any significant disputes could be escalated to the Minister of Local Government if necessary and as a last resort.
97. To provide certainty about how tasks would be allocated, we have developed a set of principles to be applied by the national transition unit:
98. To provide certainty about how tasks would be allocated, we have developed a set of principles that would be applied by the central transition unit:
- **Effective** – Carrying out each transition task in a way that delivers the reforms and achieves the transition objectives must be the primary focus throughout the transition.
 - **Efficiency** – Transitioning from the current system of 67 local authorities providing water services to a multi-regional water entity model will require a large amount of work in a relatively short time. It will be critical that tasks are carried out as efficiently as possible, to minimise the overall cost of the transition.
 - **Deliverable** – Given the large amount of work to be done in this phase, it will be critical to ensure there is capacity to complete the transition process in the proposed timeframes so that operations can begin on 1 July 2024.
 - **Accountability** – The new water services entities should be accountable for delivering water services once they are fully operational. This should also include accountability as a Treaty/Tiriti partner and accountability for meeting the Treaty/Tiriti objectives of the Crown and Māori.
 - **Support** – Consistent support from local authorities, iwi/Māori, and the public will be critical for ensuring the reforms are successful.
 - **Continuity** – Given the length of the transition phase, there is a risk a lack of continuity of services for communities and consumers, both during and after the transition process. This risk needs to be minimised.

Key risks and challenges for the national transition unit and local establishment entities

99. The national transition unit and the establishment entities are likely to face a range of risks and challenges until the water service entities “go live” in 2024. For example, they will need to collaborate to ensure that:
- workforce issues (relating to local authorities, water service entities, and the transition unit and establishment entities) are understood and managed well;

- local authorities continue to invest appropriately in three waters assets despite losing the power to make decisions from 2024;
- local authorities do not commit water service entities to unreasonable commercial contracting positions during 2021–2024, and that local authorities consult with establishment units before they make any significant commercial decisions;
- decisions made by local authorities in this period do not materially prejudice the transition – this is important to ensure consistency for all councils and to protect customers and communities;
- local authorities provide them with the information they need, and that information systems are standardised appropriately; and
- they identify other relevant three waters systems and processes that are appropriate to transfer to the water service entities.

Consultation and engagement

100. The approaches proposed have been tested with local government representatives, through the Joint Three Waters Central/Local Government Steering Committee and technical reference groups. It has generally been acknowledged that there is a need for central government leadership and coordination to ensure the transition objectives and reforms are delivered. However, it is clear that there also needs to be an ongoing collaborative, partnership-based approach with local government throughout the transition.
101. There have also been high-level discussions with the Iwi/Māori Technical Reference Group, with a particular focus on achieving the reforms within the proposed timeframe, while enabling a mana-enhancing process to be led by iwi/Māori as it applies to the kaupapa Māori aspects of the reform programme.

Implementation

102. We propose that the national transition unit begin work shortly after Cabinet decisions on the reforms in mid-2021. The unit would work closely with the three waters policy team, and would exist only for the term of the transition, which is expected to be approximately three years. The establishment entities would begin after legislation is passed and they would transform into functional water service entities on the proposed “go live” date of 1 July 2024.
103. This is an ambitious yet achievable timeframe, which will require the national transition unit and establishment entities to progress much of their work in parallel.
104. It is intended that a Water Services Entities Bill will give effect to the policy decisions around the creation and structural design features of the new water services entities, and their purpose, objectives, and operating principles.
105. It is also proposed that the Water Services Entities Bill includes certain details relating to the transition, such as:
 - clarifying the key functions and duties of the national transition unit and establishment entities – to ensure transparency and accountability regarding their roles and scope;
 - recognising iwi/Māori roles in the transition, including in relation to interests in the governance of the new water services entities;
 - confirming that the existing roles and obligations of local authorities relating to water service delivery would continue to apply during the transition period;

- obliging local authorities to disclose indicative water charges to ratepayers/consumers on rates invoices during the transition, for information; and
 - the making of transitional regulations.
106. It is also proposed that the Water Services Entities Bill include express legislative provisions to place certain obligations and restrictions on local authorities, and give certain powers to the national transition unit. These provisions are needed to facilitate the transition, and ensure local authorities do not act in ways that are inconsistent with the transition objectives. These would be there as a 'backstop' only, and are not intended to interfere with the day-to-day operations of local government.
107. The proposed legislative provisions would be based on similar powers that were held by the Auckland Transition Agency during the Auckland Governance Reforms – under the Local Government (Tamaki Makaurau Reorganisation) Act 2009.
108. The legislation will also need to require local authorities to continue to perform their functions relating to water services during the transition phase and, in particular, meet any commitments in long-term plans (up to the 'go live' point of the new water services entities). This duty to co-operate will include obligations on local authorities to:
- undertake certain activities to facilitate the transition and transfers to the new entities;
 - cooperate with requests for the reasonable secondment of staff, and
 - respond to requests to provide information relating to water services, including requesting.
109. The national transition unit will need to be empowered to perform oversight and planning functions and activities relating to the delivery of water services, which are currently outside the scope of the role and powers of the Department. This will ensure local authorities (or their council-controlled organisations) do not make decisions or enter into legal arrangements that significantly prejudice the reorganisation of water services during the establishment phase. Examples might include long-term contractual arrangements that would ultimately require a water services entity to "gold-plate" water services in a particular area, or entering into significant loans for water assets that will be passed over to an entity.
110. In particular, there is a proposal to empower the national transition unit and establishment entities to:
- request/require the provision of relevant information from local authorities;
 - require the reasonable involvement in the transition of staff from local authorities (or council-controlled organisations);
 - enable or require oversight or involvement by the national transition unit in local authority (or council-controlled organisation) decisions about water services and assets;
 - undertake planning for the initial period of operation of the water services entities and develop initial planning documents for the entities (which comply with the proposed permanent requirements relating to these documents);
 - develop plans for how the transfer from local authorities to water services entities will take place, including the transfer of assets, property, staff, customers, processes, and all other matters relating to water service delivery; and
 - manage other matters that may arise during the transition period, such as the ability to make interim appointments, or deal with the vesting of assets.

111. It is proposed to write provisions into the Bill that modify local authority statutory requirements relating to water infrastructure and financial planning during the transition, and address the planning obligations relating to water service delivery that may be disrupted by the reforms.
112. An important function of the national transition unit and establishment entities will be to manage and mitigate transition risks to ensure the transition objectives are delivered. The transition workstream within the current reform programme have developed a preliminary strategic risk register associated with transition activities and risks (included as **Appendix 3**). Once established, the national transition unit will undertake detailed transition planning which will include updating this strategic risk register and the creation of a more comprehensive ‘detailed risk register’ for ongoing project transition risk management in accordance with best practice.
113. The preliminary strategic risk register highlights several material transition risks which will need to be carefully managed and mitigated through the transition process. We have drawn out three of the more critical risks below with suggested mitigations:
- **Depth of leadership and availability:** There is a limited specialised pool of workforce with large scale transformation and water industry experience at both the board and senior management level. This can be mitigated through a robust recruitment process undertaken both domestically and overseas with realistic expectations regarding compensation required;
 - **Loss of and competition for workforce:** There will be competition between local authorities, the transition unit, the establishment entities, Taumata Arowai, the sector, and wider industry for talent. A comprehensive approach to talent retention within the water delivery sector will be critical to delivering the transition objectives. The transition workstream within the current reform programme, working with local authorities, has commenced development of this approach. This will be handed over to the national transition unit (the Industry Transformation Strategy) whose governance includes members of both the Department and Taumata Arowai. The approach will involve ensuring a partnership approach between government participants²⁰⁶ is taken on a best for New Zealand basis. This includes management of the allocation of the workforce to the various activities that are required through transition. That funding within the transition budget is appropriately and efficiently allocated to talent retention (and acquisition) and that mitigations are put in place to manage competition from the broader sector and wider industry; and
 - **Continued and growing support for reform:** Reform success is dependent on ongoing and growing support for reform from local authorities, iwi/Māori, the sector, and the public. This needs to be delivered through effective communications and engagement throughout the transition. This includes being realistic regarding what can be achieved by water service entities immediately following the transfer, and in the short to medium term after the transfer. This risk will need to be managed throughout the transition and one of the transition objectives was selected for this purpose.

²⁰⁶ “Government participants” in this context refers to local authorities, the transition unit, the establishment entities, and Taumata Arowai.

Summary of recommendations

114. The preferred option for the transition is a combined approach, and within this combined approach the **preferred option** for the national transition unit is a departmental unit.
115. A departmental unit was deemed the best option to achieve the objectives of a smooth transition because it would comparatively simpler and faster to set up, and it would have alignment with the Department and the Minister of Local Government to ensure policy and implementation would have continuity.
116. The **preferred option** for the establishment entities is shadow entities that go on to become functional water entities.
117. The establishment entities are proposed to be set-up as early establishment water service entities to reduce administration costs and avoid short term statutory entities. This will assist with coordinating the transferring of interests, assets, and liabilities. There will also be mechanisms for iwi/Māori and local authority collaboration.

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Part B: Amending the Water Services Bill to extend the transition period for unregistered drinking water suppliers

Context

118. As noted in the Strategic RIA, the introduction of a new regulatory framework for drinking water, through the Water Services Bill, is part of the suite of actions underway to address the problems identified with the three waters system.
119. Decisions to provide for this new regulatory framework were made before proposals were developed to reform the delivery of water services by local authorities. These decisions were made on the basis that there were an estimated 2,000 unregistered drinking water suppliers that would be brought into the new regulatory system.
120. Currently, 67 local authorities provide drinking water services to 85% of New Zealanders, with drinking water to other New Zealanders being provided by community, private, and Crown-owned and operated supplies.
121. The Strategic RIA and *Chapter 3: Design of new water services entities* of the detailed RIA assesses the choices around the purpose, function, and design of new water service entities to meet the reform objectives. The legislation required to establish the new entities will follow policy decisions, meaning that by mid-2024 water services to most New Zealanders will be provided by three or four large water service entities rather than 67 local authorities.
122. It has also been decided that these water service entities will take over local authority responsibilities and duties²⁰⁷ to communities served by private and community-provided drinking water suppliers.
123. In the early part of this reform programme, a risk-based approach to the transition period was agreed, based on the best information available at that time (2019). This resulted in the proposal for the early registration of all local authority and larger water supply schemes, and requirements for these large schemes to comply with new regulatory requirements by the end of the first year. Smaller schemes, typically serving fewer than 500 consumers, were to have up to five years to be registered and compliant with new regulatory requirements.
124. Through recent analysis by Beca²⁰⁸, it has now become clear that the number of unregistered drinking water suppliers is much larger than originally thought: it is estimated to be more than 75,000. As a result, implementing the new regime is a much larger task than originally assumed. Further, because local authority duties for small community and private water supplies will be transferring to water service entities, they will have weak incentives in the period to mid-2024 to work with and shore up supply arrangements if some private and community suppliers decide to cease supply because of the new regulatory requirements.
125. The Water Services Bill includes timeframes within which drinking water suppliers will need to register with Taumata Arowai and comply with the new regulatory requirements. For suppliers serving less than 500 consumers, this “transition window” is currently set at five years – this includes an estimated 75,000 or more small private, rural, and community supplies, and marae, most of which are not currently registered or regulated. By the end of Year 5 they would have to show they comply with all regulatory requirements.
126. The Department proposes to extend the transition window for all unregistered drinking water suppliers (many of whom are small suppliers serving less than 500 people) from five years to seven years and to require these suppliers to register by the end of ‘Year 4’ of the new regime. In practice, this would mean that currently unregistered suppliers would be required to:

²⁰⁷ These are duties on local authority to inform themselves of private supply arrangements and to work with communities and suppliers to ensure continuity of safe drinking water supply to communities in cases where private suppliers are unable to do so.

²⁰⁸ Beca. Small Drinking Water Supplier Analysis – Report – 5 February 2021.

- register with Taumata Arowai towards the end of 2025; and
 - comply with all Water Services Act requirements toward the end of 2028.
127. It will also mean that local authorities' responsibilities and duties for private and community water supply schemes will have transferred to new water services entities before the required registration by 2025. This means that if community and private operators choose to cease supplying drinking water, new water service entities will be able to work with them, and the communities they serve, to shore up alternative supply arrangements.
128. This approach will better align the transition for the drinking water regulatory system with the establishment of the new water service entities. It will provide those entities, and Taumata Arowai, with the time they need to develop mechanisms to properly support unregistered drinking water suppliers and the communities they serve.

Proposal to extend the transition period for unregistered suppliers to seven years

129. In 2019, Cabinet²⁰⁹ made decisions on the Water Services Bill, including that unregistered suppliers would have five years to fully comply with all new regulatory requirements, and that local authorities would have new duties to work with private and community water suppliers, and the communities they serve, if they are unable to continue supplying safe drinking water.
130. The 2019 Cabinet paper identified the regulator's initial focus would be implementing the core components of the regulatory system, working with suppliers to build capability and understanding, and investigating and addressing serious cases of non-compliance.
131. It was also noted in the 2019 Cabinet paper that there is a need for further work to determine the phasing of implementation for suppliers that are not currently covered by the regulatory system, particularly very small suppliers. This included ensuring regulatory requirements are designed in a way that reflects proportionality, with specific consideration to be given to the implications for marae, particularly those in remote locations.
132. In 2019 it was estimated that approximately 2,000 unregistered drinking water suppliers would be brought in to the regulatory system. Importantly, the 2019 Cabinet paper sought agreement to include the five-year transition arrangements in the Water Services Bill, subject to further advice relating to the phasing and proportionality of regulation for very small suppliers. Since 2019, further work has been done to more accurately estimate the number of unregistered drinking water suppliers across New Zealand. While exact numbers are unknown, latest estimates suggest there are potentially 75,000 to 130,000 unregistered drinking water suppliers across New Zealand²¹⁰. This is significantly more than the 2,000 unregistered suppliers estimated in 2019.
133. In addition, broader policy development across the Three Waters Service Delivery Reforms has made it clear that the capacity for both the regulator (Taumata Arowai) and regulated (in this case, unregistered suppliers) to comply with the new regime within the previously agreed transition window is not feasible. The proposal is to extend the transition window for unregistered suppliers into the regime from five to seven years, to cater for the large number of unregistered drinking water suppliers and for the shift in local authority duties to new water service entities. In this scenario, unregistered suppliers would be required to register with Taumata Arowai by the end of Year 4 (2025) of the new regime.

²⁰⁹ [CAB-19-MIN-0332 refers]

²¹⁰ Beca. Small Drinking Water Supplier Analysis – Report – 5 February 2021.

134. This will better align the transition with the establishment of the water service entities, and give those entities and Taumata Arowai time to establish tools and strategies to properly support or absorb the small suppliers.
135. “Day 1” for water service entities is proposed to be 1 July 2024. Unregistered suppliers will be required to register towards the end of 2025, and to comply with the Water Services Bill towards the end of 2028. If some unregistered suppliers decide to cease supply in response to these new duties, new water service entities will take over local authority duties and work with the affected communities to shore up supply arrangements.
136. From a practical perspective, the activities that will need to take place to ensure the successful transition of unregistered suppliers into the regime include:
- identifying all unregistered suppliers;
 - communicating with unregistered suppliers about what they are required to do (the new duties under the Water Services Bill);
 - providing guidance and support to unregistered suppliers to ensure they know what is required of them, and how best to meet the new requirements;
 - getting all unregistered suppliers registered;
 - Taumata Arowai working with unregistered/recently registered suppliers to provide them with support and get them up to speed with the new regime; and
 - Taumata Arowai will need to establish its monitoring and enforcement functions, including finding third parties to provide assurance monitoring, and Authorised Persons to undertake this role.
137. This would be part of a broader support package to small drinking water suppliers during the transition to new water services entities under the Three Waters Reform Programme.
138. Small suppliers represent a significant compliance challenge for the existing regime, and managing them effectively is critical to the success of the new service delivery system. There is a real risk that some small suppliers will choose to cease supply rather than comply, especially if they do not have the time and support they need to comply.
139. The existing five-year transition window that was agreed in 2019 was based on limited data relating to the number and characteristics of unregistered suppliers – the number is likely to be significantly higher than originally estimated. In addition, Taumata Arowai has been funded to a lower level than originally proposed, meaning it has less capacity to support greater numbers of small suppliers to register and demonstrate compliance with new regulatory requirements.

Approach to developing and analysing the options

140. The final design of the Water Services Bill is currently being informed through the Select Committee process. However, further information gathered through policy development for three waters service delivery options has presented better options than those agreed by Cabinet in 2019.
141. In order to develop and assess options, we have adopted the following approach:
- identification of critical issues (based on the nature and scale of the problem), the current arrangements, and the proposed future arrangements;
 - analysis of the compliance requirements for unregistered drinking water suppliers;
 - development and analysis of options; and

- presentation of the recommended option and implementation considerations.

Critical issues for determining the proposed transition period for unregistered drinking water suppliers

142. **Table 42** below sets out the critical considerations for determining the transition period for unregistered suppliers to register and comply with the Water Services Bill.

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Table 61: Critical issues for designing a transition period for unregistered suppliers.

Short term consequences (2021-2024)	Longer term consequences (beyond 2024)	Implications for Taumata Arowai
<ul style="list-style-type: none"> • Water services to less than 15% of the population are provided by very small community and privately owned and operated suppliers – most of whom are unregistered drinking water suppliers and unknown to the Ministry of Health and Taumata Arowai. • While the Water Services Bill provides for a five-year transition (registration by end of Year 1), a considerable amount of activity will be required to ensure that thousands of currently unregistered suppliers know the specifics of what is required of them. It is likely that many will look to their local authority or Taumata Arowai for information and assurance. • Many unregistered suppliers will be limited in their technical ability to interpret and implement regulatory requirements. • Concerns for the cost of regulation will result in incentives for some unregistered suppliers to: <ul style="list-style-type: none"> ○ Hide from regulation by not registering with Taumata Arowai. ○ Stop being suppliers of drinking water. ○ Turn to local authorities for operational support or to take over their operation. • While local authorities are required by the Water Services Bill to inform themselves about community and private suppliers, and work with suppliers that are finding it difficult to maintain supply, many will be ill prepared or reluctant to do this, given they know that these requirements will transfer to new water service entities by mid-2024. <p>Taumata Arowai will not have the resources to support unregistered suppliers to meet proposed regulatory requirements in a five-year transition period.</p>	<ul style="list-style-type: none"> • Within five years of commencement all unregistered suppliers will be required to comply with all regulatory requirements including the requirement to have a water safety plan. • Local authorities' statutory responsibilities and obligations for small private and community-owned drinking water supplies will have shifted to new water service entities. • An unknown number of small suppliers will probably look to new water entities either for operational support, or to take over their supply operations. • The remaining private and community suppliers will probably look to plumbers, rural pump suppliers, and engineering firms for support and advice. • These trades and professions will, in turn, look to Taumata Arowai for guidance and support. Taumata Arowai in turn is likely to require some of these trades and professions to be authorised under the Water Services Bill, in order to demonstrate their capability to provide that support. <p>Taumata Arowai will be under pressure to provide cost-effective and standardised means for unregistered small supply schemes to comply with regulatory requirements, and to implement the authorisations framework provided by the Water Services Bill.</p>	<ul style="list-style-type: none"> • Taumata Arowai must effectively communicate and set expectations for small suppliers, with a view to reducing short-term anxiety and providing reassurance for the implementation of longer-term regulatory change. • Taumata Arowai's approach to working with small private and community schemes will be very different from its approach to working with new water service entities. • The approach to small suppliers will be based on: <ul style="list-style-type: none"> ○ Clear, practical, and cost-effective requirements, including acceptable solutions. ○ Working with plumbers, pump suppliers, and others to build capacity and capability to support small suppliers (through an authorisations framework). ○ Providing sufficient time for capacity and capability to be built. ○ Effective communications. • Work by Taumata Arowai, the Department, the proposed national transition unit, and the water services sector will be needed to provide options for how some private and community owners will transfer operation of small supply schemes to new water service entities. • A decision will also be required on whether water services entities might provide operational support to small suppliers or be 'authorised' for the purposes of performing some regulatory roles on behalf of Taumata Arowai. <p>A reasonable period of time will be needed to provide for this transition and associated work.</p>

Development of options

143. In considering options for the appropriate deadline for unregistered drinking water suppliers to comply with the new requirements, we have looked across four broad parameters:

- Efficiency;
- Effectiveness;
- Ease of implementation; and
- Giving effect to the rights and interests of iwi/Māori.

Options analysis

144. The criteria for assessment are based on the Strategic RIA evaluation criteria, as shown below in **Table 43**.

Table 62: Assessment criteria.

Criteria	Description
Improves economic efficiency	The extent to which a transition timeframe leads to the entity operating with greater efficiency.
Improves infrastructure delivery	The extent to which a transition timeframe enables faster and smarter investment by water service entities in three waters infrastructure.
Ease of implementation	The extent to which a new regulatory regime is easily implemented from the current state to the fully operational water service entities, both for local authority suppliers and unregistered drinking water suppliers.
Give effect to iwi/Māori interests.	The extent to which a transition timeframe leads to upholding the interests of iwi/Māori, including Te Mana o Te Wai.

145. **Table 44** below shows evaluation criteria scoring system used in this analysis. The scoring system is similar to that used in the Strategic RIA.

Table 63: Evaluation Criteria scoring scale.

Score	Description
✓✓	Very strong alignment with criteria
✓	Strong alignment with criteria
0	No alignment with criteria
×	Weak alignment with criteria
xx	Very weak alignment with criteria

146. This analysis is set out in **Table 45** below.

Table 64: Analysis of options for unregistered drinking water suppliers' compliance with the Waters Service Bill (Act).

Option	Improves economic efficiency	Improves infrastructure delivery	Ease of implementation	Give effect to iwi/Māori interests.
<p>Status quo (five-year transition)</p>	<p>0</p> <p>Unregistered drinking water suppliers may choose to cease supplying water due to challenges to comply with new regulatory requirements within five years, resulting in additional burden on local authority suppliers during the period of their transition to new water services entities.</p> <p>Taumata Arowai will require additional resources to administer regulatory requirements.</p>	<p>0</p> <p>Resources that need to be focussed on establishment of new water services entities may be disproportionately diverted to responding to issues and concerns related to unregistered suppliers and compliance with new regulatory requirements, resulting in risks to the implementation of water services reform.</p>	<p>0</p> <p>Insufficient time for all unregistered drinking water suppliers to be registered and become compliant with new regulatory requirements.</p>	<p>0</p> <p>Limited ability to consider system outcomes holistically and how these impact Treaty/Tiriti partners and other affected parties.</p>
<p>Seven-year transition (preferred option)</p>	<p>✓</p> <p>Unregistered drinking water suppliers can efficiently meet the new requirements to become compliant.</p>	<p>✓✓</p> <p>Unregistered drinking water suppliers have adequate time to upgrade their infrastructure and meet the new legislative requirements.</p>	<p>✓</p> <p>Sufficient time for all unregistered drinking water suppliers to become compliant.</p>	<p>✓</p> <p>Provides sufficient time to consider system outcomes holistically and how these impact Treaty/Tiriti partners and other affected parties.</p>

Option	Improves economic efficiency	Improves infrastructure delivery	Ease of implementation	Give effect to iwi/Māori interests.
15-year transition	✓ Unregistered drinking water suppliers can meet the new requirements to become compliant, over 15 years, resulting in cost savings compared to the seven-year period.	× Upgrades and maintenance is deferred due to the longer time period to comply.	✓✓ Sufficient time for all unregistered drinking water suppliers to become compliant.	× Provides excessive time to consider system outcomes holistically and how these impact Treaty/Tiriti partners and other affected parties, resulting in poor outcomes to persist for longer than necessary.

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Consultation and engagement

147. Nearly 1,000 submissions were received on the Water Services Bill, including a number that said that it was important to properly align the transition period for unregistered suppliers with the establishment of new water services entities.
148. Ongoing consultation and engagement with Taumata Arowai has resulted in support for the proposed transition timeframe to be extended from five to seven years, to give unregistered suppliers enough time to comply with their new regulatory responsibilities.

Recommended option and implementation considerations

149. The **preferred option** is to **extend the transition timeframe to seven years**. This will be vital for the unregistered suppliers to operate successfully within the reformed three waters service delivery system. Supporting unregistered suppliers to transition to the new regime and comply will be a significant challenge.
150. The new water services entities will have an important role to play, particularly in assisting unregistered suppliers that are struggling to comply with their new regulatory responsibilities. However, it will be important that the entities are not overwhelmed by this challenge, particularly given the other issues they will face as they begin operating.
151. The timeframe for the transition to the new regime needs to strike the right balance between giving suppliers sufficient and reasonable time to comply, and not excessively prolonging the undesirable outcomes generated by the existing regime.
152. The proposed extension of the transition timeframe will ensure the service delivery reforms are supported by a smooth, effective, and efficient transition and implementation, with minimal disruption to communities and consumers. A realistic timeframe will also ensure that suppliers have the operational frameworks and mechanisms they need to effectively deliver on their statutory obligations.
153. This approach will better align the transition to the new drinking water regulatory system with the establishment of the new water services entities. It will provide those entities, and Taumata Arowai, with the time needed to develop the mechanisms needed to properly support unregistered supplies.
154. The proposed extra time will be vital, as identifying and supporting unregistered suppliers to enter and achieve compliance with new regulatory requirements to provide safe drinking water will be a significant challenge. The extra time will also mean that new water services entities will be able to pick up the roles that had been envisaged for local authorities, in ensuring the supply of safe drinking water to communities served by those suppliers that may be struggling to comply new regulatory responsibilities. It will also help ensure an orderly handover of responsibilities to communities served by small suppliers from local authorities to newly established water services entities.
155. Extending the transition to seven years will also provide more time for iwi/Māori to identify their interests in and engage with smaller water suppliers in giving effect to Te Mana o te Wai in their supply of drinking water.
156. The integration within the wider system is important to ensure that the rights and interests of iwi/Māori are accommodated within a wider system, including issues relating to freshwater allocation and the reforms of the resource management system.

157. Also, the recently announced Review into the Future for Local Government is further justification to extend the transition window by two years. The Review is due to be complete by 30 April 2023, and the final outcome of the Review and any next steps will not be known until then. Therefore, combined with the wider transition of three waters service delivery to new water services entities, local authorities will benefit from having extra time to aid with the transition for unregistered suppliers to enter the regime over a slightly extended timeframe.
158. Monitoring, review, and evaluation of the transition to the new regime will be ongoing, and the Department will work closely with Taumata Arowai, and other relevant regulators, to ensure the system remains fit for purpose.
159. The extension from five to seven years would be incorporated into the Water Services Bill by Supplementary Order Paper during the Committee of the whole House stage.

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Part C: A proposal to improve wastewater regulation

The context and the opportunity

160. In July 2019 Cabinet agreed to a suite of regulatory reforms to the three waters²¹¹. The reforms resulted in Taumata Arowai being established as an independent three waters regulator and the development of the new three waters regulatory regime under the Water Services Bill.
161. The Water Services Bill contains **monitoring and reporting on environmental performance of wastewater** and stormwater functions, empowering Taumata Arowai to:
- provide **transparency** about—
 - the environmental performance of wastewater and stormwater networks and network operators; and
 - the extent to which wastewater and stormwater **networks are complying** with applicable standards, conditions, or requirements (whether under legislation or as part of a resource consent); and
 - the extent to which wastewater and stormwater network operators are **avoiding, remedying, or mitigating any adverse effects on the environment** arising from the operation of wastewater and stormwater networks; and
 - enabling **comparisons** to be made between the performance of different wastewater networks and network operators; and
 - enabling **comparisons** to be made between the performance of different stormwater networks and network operators; and
 - enabling the identification of, and development of advice and guidance on,—
 - **good practices** that relate to the **design, management, and operation of** wastewater and stormwater networks; and
 - **risks and issues** that relate to performance and practice.
162. The Water Services Bill assigns Taumata Arowai a national oversight role, where it sets and publishes national expectations and guidance for local authorities' approaches to compliance, monitoring, and enforcement for wastewater systems. Taumata Arowai will also develop a register of wastewater networks and collect, validate, analyse, and publicly report infrastructure performance metrics.
163. The existing provisions in the Bill relating to wastewater and stormwater will not come into force until two years after royal assent, to allow Taumata Arowai to prioritise drinking water regulation.
164. The Bill does not change existing setting for environmental regulation. Regional councils will maintain their role as environmental regulators of wastewater discharges into the environment. Any discharge from a wastewater treatment plant will require a resource consent, and receiving environment outcomes (and requirements) will continue to be regulated by regional councils.
165. The July 2019 Cabinet decisions also included agreeing to Taumata Arowai working with MfE to progress a National Environmental Standard for wastewater discharges and overflows, (in particular, setting new minimum standards on wastewater discharges, and targets for significant reduction of overflows).

²¹¹ [CAB-19-MIN-0332 and CAB-19-MIN0506 refer]

166. Further work by the MfE on the development of a National Environmental Standard has not yet been progressed, due to the reforms to the broader resource management system, the development of a national planning framework, and a recognition that an alternative approach, set out below, may be more effective.
167. In response, Ministers agreed in principle that a stronger role for Taumata Arowai in wastewater regulation to encourage greater coordination between Taumata Arowai, Regional Councils, and the new water service entities, improve the consistency of regulation, and provide timely direction to the sector that will support the significant infrastructure programme is required.
168. The proposal would expand the role and powers of Taumata Arowai in the Water Services Bill in relation to the development of environmental performance measures as the relates to wastewater, to enable Taumata Arowai to set:
- **Infrastructure performance standards:** Taumata Arowai could set infrastructure performance standards that will be incorporated in resource consents as minimum requirements. These standards would encompass areas like end-of pipe discharges, trade waste, biosolids, air discharge, and energy carbon requirements, and could prohibit discharges at a national level. Regional councils could continue set more stringent standards to reflect receiving environment characteristics as part of the consenting process.
 - **Infrastructure targets:** Taumata Arowai could set targets to lift the performance of wastewater systems in areas that require a longer-term focus; for example, how to implement new requirements to give effect to Te Mana o te Wai, or progressive lowering of frequency of overflows into freshwater or the coast. These targets would provide direction to the new water services entities to help them plan for future infrastructure improvements.
 - **Wastewater network risk management plans:** There would be new requirements for every wastewater network to have a catchment-based risk management plan, which would be reviewed by Taumata Arowai. This requirement would be similar to the existing requirement for water service entities to have water safety plans, but water service entities who be able to operate across catchments. The Wastewater network risk management plans will provide a mechanism for water entities, Taumata Arowai, and the regional councils to work together at catchment-level to plan for infrastructure upgrades, and consider the number and location of wastewater plants.
169. This proposal will not change existing requirements for wastewater discharges. Subject to future reforms, the framework for managing and regulating the effects of wastewater discharges on freshwater ecosystems will continue to be subject to any national direction such as the National Policy Statement for Freshwater Management (developed by MfE), and regional councils would continue to regulate receiving environment outcomes and be the consent authorities.

The problem

170. The **core problems** facing the regulatory system are affecting the sector's ability to respond to the regional and national infrastructure and performance deficit in our wastewater treatment systems. Those problems include:

- **Inconsistent approach to the consenting process, discharge conditions, and limits** for wastewater plants. There is significant variation between and within regions, with no clear correlation between common characteristics such as receiving environment, the type of wastewater treatment plant, or the duration of consents. This bespoke approach to regulation means that consenting processes are time-consuming and expensive, with many councils having to re-start consenting processes multiple times. This makes it difficult for delivery agencies to capture the operational, delivery, and supply chain efficiencies that rely on scale, coordination, and a consistent approach to regulatory standards.
- **A significant infrastructure deficit.** There is a bow wave of re-consenting facing wastewater treatment plants, with 25% of wastewater treatment plants running on expired consents, and 60% requiring new consents in the next decade²¹². To meet regulatory requirements, many of those wastewater treatment plants will need significant upgrades. The multi-regional scale of the water service entities is expected to create opportunities to procure and deliver infrastructure at scale, but the lack of consistent approaches to regulation makes it difficult to standardise technology (subject to population and receiving environment) to maximise supply chain efficiencies and reduce costs.
- **Significant performance gaps across the existing regulatory system.** The approach to compliance and enforcement taken by regional councils and (in relation to trade waste) territorial authorities is highly variable. Around half of the regional councils “prohibit” wastewater overflows, while also acknowledging that these overflows are inevitable with the underlying infrastructure and happen regularly. That variability is reflected in approaches to compliance monitoring, with most regional councils using a compliance grading system, but with no consistency between those systems or even with the national guidance on compliance monitoring developed by MfE. There is no transparency across the system, leaving multiple problems hidden.
- **New requirements to give effect to Te Mana o te Wai** are likely to present real problems for many councils who will need to engage in challenging conversations with mana whenua, and upgrade plants or change their practices to meet the aspirations of iwi/Māori.
- **The regulation and performance of New Zealand’s wastewater systems have fallen significantly behind international good practice**, with minimum discharge standards, catchment-wide infrastructure planning, and benchmarking all absent in New Zealand.

171. There also needs to be clearer disincentives for local authorities to continue on a “business as usual” approach with wastewater. It needs to be clear that wastewater will be subject to stronger regulation as councils move to make decisions about whether to participate in the government’s reforms to the service delivery system.

172. The multi-regional scale of the new water entities means that will be able to plan, develop, and invest in wastewater treatment plants in ways that are not currently possible. However, the current issues with regulation described above make it difficult for the new water service entities to capture the operational, delivery, and supply chain efficiencies that are enabled by the service delivery reform.

²¹² 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)

173. Finally, community conversations about wastewater upgrades are challenging, because of the wide range and nature of issues they cover, particularly from a Te Ao Māori perspective. New requirements to give effect to Te Mana o te Wai are likely to present real problems for many councils who will need to engage in challenging conversations with mana whenua, and upgrade plants or change their practices to meet the aspirations of iwi/Māori. Furthermore, the expectations of iwi/Māori for environmental outcomes are higher than those used for economic modelling meaning investment requirements are likely to be higher than WICS base estimates. Clearer direction from central government about standards and targets for wastewater infrastructure will help with these conversations as new statutory requirements to give effect to Te Mana o te Wai are implemented.

Identifying the relevant policy objectives and design principles

174. We propose that the following three policy objectives be used to assess potential options:

- Improving the efficiency of the wastewater regulatory system.
- Creating greater consistency in wastewater regulation across the country.
- Making the wastewater system more responsive to the rights interests of iwi/Māori.

The three objectives align with core problems and the RIA assessment criteria

175. Those policy objectives respond to the specific core problems noted above, as shown in **Table 46** below.

Table 65: Alignment of wastewater regulation policy objectives with core problems.

Core problems with wastewater regulation	...Policy objectives
A significant infrastructure deficit. Significant performance gaps across the existing regulatory system. The regulation and performance of New Zealand's wastewater systems have fallen significantly behind international good practice.	Improving the efficiency of the wastewater regulatory system.
Inconsistent approach to the consenting process, discharge conditions, and limits.	Creating greater consistency in wastewater regulation across the country.
New requirements to give effect to Te Mana o te Wai.	Making the wastewater system more responsive to the rights and interests of iwi/Māori.

176. The three policy objectives also align with the Assessment Framework used in the Strategic RIA. A map of these linkages is provided in **Table 47** below.

Table 66: Alignment of wastewater assessment framework to Strategic assessment framework.

Policy objectives		Relevant Strategic RIA Assessment criteria
Improving the efficiency of the wastewater regulatory system.	<i>Broadly maps to</i>	Supports a financially sustainable system. Improves economic efficiency.
Creating greater consistency in wastewater regulation across the country.	<i>Broadly maps to</i>	Improves infrastructure delivery. Improved decision making and performance.
Making the wastewater system more responsive to iwi/Māori rights and interests.	<i>Directly maps to</i>	Upholds the rights and interests of iwi/Māori.

Achieving the three policy objectives is expected to lead to a better delivery system and better outcomes

177. Wastewater providers rarely upgrade their wastewater treatment plants before their consents expire. New consent conditions generally reflect increased community and legislative expectations, requiring upgrades to wastewater treatment plants that achieve better environmental outcomes and treatment performance.
178. A stronger leadership role for Taumata Arowai in wastewater regulation would support the sector to improve consistency of regulatory approach, encouraging greater coordination between Taumata Arowai, Regional Councils, and the new water service entities.
179. A strengthened regulatory system and greater coordination will also support more strategic engagement between regulatory agencies and community, about the opportunities and impacts of wastewater discharge on water bodies. Greater consistency around core standards will also enable regional councils in particular to focus effort on receiving environment outcomes to address poor environmental outcomes and inefficiencies in wastewater treatment persisting over a longer period.
180. However, if the policy objectives above are achieved improvements in the wastewater regulatory regime are expected to occur and in turn improvements in the wastewater network and treatment systems.

Identifying the options

181. Three potential options have been identified for the future of wastewater regulation including the status quo. The options are set out in **Table 48** below. More detail on each option is in paragraphs 187 to 229.
182. For all options, it is assumed that the delivery of wastewater services is transferred to the new water services entities.
183. The options analysed include:
- **Option one: The status quo.** There are not nationally consistent wastewater standards, meaning that environmental standards, resource consents, and conditions continue to be delivered regionally.

- **Option two: MfE develops a National Environmental Standard on wastewater.** This is delayed by at least three to five years because of MfE’s priorities around resource management reform.
- **Option three: Taumata Arowai takes on a greater role in wastewater regulation.** This includes developing infrastructure performance standards and infrastructure targets, requiring wastewater network risk management plans, and having greater powers around monitoring and reporting (described in more detail in paragraph 215). Regional councils will remain the environmental regulator and grant and monitor resource consents for discharges of wastewater from wastewater treatment plants.

Table 67: Wastewater regulation - options development.

	Option one: The status quo/ counterfactual: No national standards, ad hoc resource consenting	Option two: MfE develops wastewater National Environmental Standard	Option three: Taumata Arowai takes greater role in wastewater regulation
Description of option	<p>Wastewater providers continue to seek resource consents from regional councils when they expire.</p> <p>No national standards to guide this process.</p>	<p>MfE develops a wastewater National Environmental Standard that guides regional councils on granting resource consents for wastewater.</p> <p>This will be delayed due to the resource management reforms, meaning this will not be in place for at least three to five years, and will still rely on regional implementation).</p>	<p>Taumata Arowai takes on a greater role (above current oversight role outlined in the Water Services Bill) in wastewater regulation, including developing infrastructure performance standards, infrastructure targets, wastewater network risk management plans, and carrying out national level monitoring and reporting on wastewater system performance.</p> <p>Regional councils will remain the environmental regulator and grant and monitor resource consents for discharges of wastewater from wastewater treatment plants.</p>

Analysis of the options

184. As noted above, we propose that the following three policy objectives be used to assess the options:

- improving the efficiency of the wastewater regulatory system;
- creating greater consistency in wastewater regulation across the country; and
- making the wastewater system more responsive to the rights and interests of iwi/Māori.

185. **Table 49** below shows the evaluation criteria scoring system used to assess the options. This is the same as the Strategic RIA assessment criteria scoring scale.

Table 68: Evaluation criteria scoring scale.

Score	Description
✓✓	Much better than the counterfactual
✓	Better than the counterfactual
0	About the same as the counterfactual
×	Worse than the counterfactual
××	Much worse than the counterfactual

186. A summary of the scoring for each option is provided in **Table 50** below. More detailed supporting evidence is provided after that.

187. The headline finding is that transferring the responsibility for and powers around wastewater regulation to Taumata Arowai best meets the policy objectives.

Table 69: Summary analysis of wastewater regulation options.

Policy objective	Option one: The status quo/ Counterfactual: no national standards, ad hoc resource consenting	Option two: MfE develops wastewater National Environmental Standard	Option three: Taumata Arowai takes greater role in wastewater regulation
Improving the efficiency of the wastewater regulatory system	0	✓ (with caveat that the timing of this is unknown)	✓✓
Creating greater consistency in wastewater regulation across the country	0	✓ (with caveat that the timing of this is unknown)	✓✓
Making the wastewater system more responsive to iwi/Māori rights and interests	0	0	✓✓

Option one: The status quo / Counterfactual

188. Wastewater discharge is regulated by the Resource Management Act 1991. Resource consents are required in order to discharge contaminants to the land, freshwater, or the coast, and these are granted and enforced by regional councils. Discharge consents can be granted for up to 35 years. However, consents may be issued for shorter periods depending on the age and condition of the wastewater treatment plant, the quality of the discharge, and the receiving environment.
189. Discharge consents for wastewater treatment plants, and wastewater generally, include conditions relating to the quality and quantity of discharge. Consent conditions will typically include maximum flow rates, and the maximum amounts of some contaminants such as nitrogen, phosphorous, suspended solids, faecal microbes, heavy metals, and other hazardous substances.
190. They can also include requirements to monitor impacts of the discharge on receiving environments, including limits on the level of degradation that can occur. However, this form of regulation does not regulate the performance of the wastewater network and infrastructure, including the level and method of treatment.
191. Unlike drinking water there is no national standard for wastewater treatment, and the level of treatment (and effluent produced by a wastewater treatment plant), will depend on the resource consent conditions on effluent discharge. Consent conditions on wastewater treatment plants appear to be set in a piecemeal way, defined by each regional council, without systematic regulation and differing widely from plant to plant.
192. The high levels of variation in the regulation of wastewater treatment plants mean that benchmarking, performance comparison, or national reporting is challenging under current arrangements. The way in which consent conditions are framed often means results of monitoring are not always clearly linked to an assessment of compliance. This makes these conditions difficult to enforce because of the difficulty of determining if or when a consent has been breach²¹³. A lack of consistent or systemic regulation in this area increases the costs of both obtaining consents, and meeting consent requirements. This is a significant problem, almost two thirds of the wastewater treatment plants currently operating need to obtain new resource consents within the next 10 years²¹⁴.
193. There are significant challenges around consenting wastewater treatment plant discharges, which, even for small wastewater discharges can take between two and four years²¹⁵. The cost of obtaining resource consents can also be significant. Obtaining new consents for an existing plant will cost at least several hundred thousand dollars per plant and up to several million for larger plants in the main centres²¹⁶. These costs can be incurred in engaging technical specialists to assess environmental effects and required plant upgrades, consulting with tangata whenua and other potentially affected parties, peer review by the consenting authority, and sometimes Environment Court (or higher) appeals. Wastewater discharges, particularly to freshwater, are of significant interest to communities (particularly Māori), and resource consent applications are often challenged.

²¹³ GHD, Boffa Miskell (2019). National stocktake of municipal wastewater treatment plants.

[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)

²¹⁴ Water New Zealand (2021). National Performance Review 2019-20. Available at

<https://www.waternz.org.nz/NationalPerformanceReview>.

²¹⁵ GHD, Boffa Miskell (2018). Cost estimates for upgrading wastewater treatment plants to meet objective of the NPS Freshwater.

[https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/\\$file/Costs-of-wastewater-upgrades-GHD-Boffa-Miskell-Final-report-Oct-2018.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/$file/Costs-of-wastewater-upgrades-GHD-Boffa-Miskell-Final-report-Oct-2018.pdf)

²¹⁶ GHD, Boffa Miskell (2019). National stocktake of municipal wastewater treatment plants.

[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)

194. Reconsenting wastewater treatment plants, and the consequent requirement to upgrade discharge quality, appear to be the most common trigger for investment to improve wastewater treatment systems. However, this means that wastewater improvements occur only at the level of the individual treatment plant, resulting in inefficient management, procurement, and design of wastewater systems.
195. Another indicator of the consenting challenges is the increasing number of wastewater systems that are operating on expired discharge consents. Nearly a quarter of wastewater treatment plants (73 plants) are currently operating on expired consents, with the average time operating on an expired consent being four years. Some plants have been operating on expired consents for significantly longer, with one plant operating on a consent that expired in 1999²¹⁷.
196. There appears to be a range of reasons for this including, the capacity and capability of small councils to manage the consenting processes, lengthy and often difficult consultation processes, challenges with meeting community expectations within affordability constraints, and the need to continue to provide wastewater services to protect public health even when consent has expired²¹⁸.
197. Enforcement of consent conditions is inconsistent and rare. The number of reported abatement notices, infringement notices, enforcement orders, or successful prosecutions related to wastewater treatment plants consents is consistently low²¹⁹.
198. Continuing with the status quo of relying on the resource consenting system to regulate wastewater with no national guidance would continue to result in wastewater regulation falling behind best practice, with wastewater treatment plants operating on expired consents or not complying with their consent conditions. Improvements to wastewater would continue to be plant by plant, which is inefficient and ineffective. This will lead to continued degradation of freshwater and the ocean from wastewater discharge and outcomes that are not acceptable to the public or iwi/Māori.
199. A stronger role for Taumata Arowai in wastewater regulation creates an opportunity to improve the consistency of regulation, and support coordination between regulators (Taumata Arowai, an economic regulator, and regional councils), and the water service entities.

Option two: MfE develop wastewater National Environmental Standard

200. This option is to progress work on developing a National Environmental Standard for the treatment of wastewater discharges and the management of wastewater overflows (a wastewater National Environmental Standard). This would be developed in accordance with the requirements of the section 46A of the Resource Management Act 1991.
201. This regulatory proposal would be progressed alongside the Essential Freshwater programme by MfE.
202. The proposed National Environmental Standard would include:
 - criteria and methods for setting consent conditions on discharges;

²¹⁷ GHD, Boffa Miskell (2019). National stocktake of municipal wastewater treatment plants.

[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)

²¹⁸ GHD, Boffa Miskell (2019). National stocktake of municipal wastewater treatment plants.

[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)

²¹⁹ GHD, Boffa Miskell (2018). Cost estimates for upgrading wastewater treatment plants to meet objective of the NPS Freshwater.

[https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/\\$file/Costs-of-wastewater-upgrades-GHD-Boffa-Miskel-Final-report-Oct-2018.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/$file/Costs-of-wastewater-upgrades-GHD-Boffa-Miskel-Final-report-Oct-2018.pdf)

- standards for effluent quality;
 - methods for monitoring compliance;
 - approaches for incorporating culturally acceptable wastewater treatment processes; and
 - a requirement to develop a wastewater network strategy.
203. Standardising consent conditions would provide greater consistency within and between regions and across the country. That would allow meaningful comparison with water quality attributes and national bottom lines in the National Policy Statement for Freshwater Management and would improve compliance and enforceability.
204. Having greater consistency in the parameters monitored, compliance limits, and the way in which parameters are measured would improve compliance and enforceability and make national comparisons easier to compile.
205. Greater consistency in monitoring requirements may also make monitoring and reporting for consent holders simpler and more streamlined, potentially leading to cost savings.

MfE view a National Environmental Standard for wastewater is limited

206. The Department has consulted MfE on the best approach to regulate the wastewater sector and they outlined some limitations they saw with a National Environmental Standard.
207. Since 2019, Resource Management Reform has advanced, and MfE have indicated that developing a new piece of national direction, such as a National Environmental Standard, is not achievable before the Resource Management Act is replaced.
208. MfE conducted scoping and engagement work on a potential National Environmental Standard after this was signalled in the Action for Healthy Waterways consultation in 2019. Based on this analysis and engagement, officials' advice is that the Water Services Bill provides a better instrument to deliver timely direction for the sector.
209. It is expected that the new National Planning Framework, within which a national direction for wastewater would sit, could take up to five years to be fully operational. This means that a National Environmental Standard is unlikely to provide timely support for the wastewater sector. The timeframe could be longer as, following the resource management reforms, the relative priority of this work will need to be evaluated against other work on the MfE's policy work programme.
210. Therefore, the timeline for when a wastewater National Environmental Standard would be developed and implemented is unknown.
211. MfE have also indicated that there are limitations around the use of National Environmental Standards for wastewater regulation. They have outlined that effects of wastewater discharges on freshwater ecosystems are managed through national direction under the Resource Management Act including the National Policy Statement for Freshwater Management. However, end of pipe standards are not directly about environmental effects, they are about infrastructure performance so sit best outside the Resource Management Act.
212. Therefore, a National Environmental Standard is limited in scope for addressing the regulatory problems facing the wastewater sector as it would focus on discharges to the environment and not the quality and effectiveness of the infrastructure.

213. MfE have also indicate that while a National Environmental Standard would provide national direction, it would still need to be implemented by regional councils, under their interpretation, so there would still be issues around national consistency in regulation of wastewater.
214. While engagement with stakeholders and iwi partners indicated agreement in principle for greater central direction for wastewater, they also raised concerns about the workability of a National Environmental Standard. These included concerns that:
- standardising minimum treatment parameters would not adequately reflect the highly variable character of receiving environments; and
 - infrastructure under-investment would continue to prevent councils from upgrading their wastewater facilities in time to give effect to a National Environmental Standard once it is operational.
215. MfE have indicated that they will continue to explore options for improving wastewater management, acknowledging that the format of the Resource Management Act and national direction instruments may change. We will also progress work on guidance and engagement to support uptake of best practice.

Option three: Taumata Arowai takes on greater role in wastewater regulation (preferred option)

Leveraging the opportunity provided through reform to address significant challenges facing wastewater

216. A National Environmental Standard for wastewater was an important part of the response Cabinet agreed in 2019 to the challenges facing the wastewater sector²²⁰. However, MfE has indicated that National Environmental Standard for wastewater would not be an effective tool to address significant systemic problems in the wastewater system.
217. Our engagement with regional councils and local authorities indicates that local government would welcome greater central direction, and many local authorities are expecting it.
218. Advice from the Department on this topic over the last three years, supported by research reports by GHD and Boffa Miskell²²¹, have painted an overall picture of systemic failure. The wastewater system faces challenges that are significantly greater - both in terms of regulatory failure, and the infrastructure upgrades required - than the systemic failures identified for drinking water by the Havelock North Inquiry.
219. Failing to act now will miss the opportunity to capitalise on a change point in the system. The establishment of multi-regional water service entities will create a real opportunity on the service provision side of the equation. They will be able to plan, develop, and invest in wastewater treatment networks in a way not possible for local authorities, taking advantage of scale efficiencies (including procurement and operational efficiencies), balance sheet power, standardisation of wastewater treatment plant technologies, and investment at a catchment level.

²²⁰ [CAB-19-MIN-0332 refers]

²²¹ See for example, GHD, Boffa Miskell. (2019). Cost estimates for upgrading wastewater treatment plants that discharge to the ocean. [https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/\\$file/Report-2-Cost-Estimates-for-Upgrading-WWTps-that-Discharge-to-the-Ocean.pdf](https://www.dia.govt.nz/diawebsite.nsf/Files/Three-waters-documents/$file/Report-2-Cost-Estimates-for-Upgrading-WWTps-that-Discharge-to-the-Ocean.pdf)

220. However, the entities need a regulatory system that properly supports this investment response – setting much clearer infrastructure requirements so they can plan, make good investment decisions, and have more focussed engagement with communities, including iwi/Māori.
221. Finally, community conversations about wastewater upgrades are difficult, particularly with iwi and Māori. Clearer direction from central government about standards and targets for wastewater infrastructure will help with these conversations as new statutory requirements to give effect to Te Mana o te Wai are implemented.

*Giving Taumata Arowai greater powers in wastewater regulation is the **preferred option***

222. We propose that the role of Taumata Arowai in relation to wastewater should be reoriented and expanded under the Water Services Bill (done through a supplementary order paper in the committee of the whole House stage).
223. Existing functions under Water Services Bill for Taumata Arowai is for them to keep a register of all wastewater networks and develop environmental measures for wastewater networks. Taumata Arowai is required (in the Water Services Bill) to...“develop, publish, and maintain **environmental performance measures** for wastewater and stormwater network” (ss 140(1)).
224. The difference/expansion from the current requirements for Taumata Arowai under the Water Services Bill is that Taumata Arowai would also have the power to require regional councils to include those measures to be incorporated in resource consents, not that it would have the power to create those environmental measures (it already has that in the Bill).
225. Additionally, under this proposal, Taumata Arowai would have greater powers to set standards and set risk management plans for wastewater **infrastructure** (and the environmental impact of the wastewater network). These are specific powers that would be directed at wastewater infrastructure. Broader outcomes for receiving environments would continue to be regulated by regional councils as they are now with national direction provided by MfE.
226. We propose that the requirement should continue that any discharge from a wastewater treatment plant must have a resource consent, and that receiving environment outcomes (and requirements) should continue to be regulated by regional councils as they are now. However, Taumata Arowai should have powers to develop and set:
 - **Infrastructure performance standards:**
 - Incorporated into resource consents as minimum requirements.
 - Could include: end-of-pipe standards, prohibition of problematic discharges at a national level (such as Mortuary waste).
 - Regional councils could set more stringent standards to reflect receiving environment characteristics.
 - Infrastructure performance standards could also consider broader issues including areas like trade waste, biosolids, air discharge, and energy carbon requirements, and could prohibit problematic discharges at a national level.
 - **Infrastructure targets:**
 - Targets to lift the performance of wastewater systems in areas that require longer term focus.

- For example, how to implement requirements to give effect to Te Mana o te Wai or progressive lowering of frequency of overflows.
 - **Wastewater network risk management plans:**
 - A requirement for every wastewater network to have a risk management plan, audited by Taumata Arowai.
 - This would incentivise catchment level planning of infrastructure alongside rationalising the number of plants and their configuration.
 - It could also help to drive better outcomes for overflows.
 - **Monitoring and reporting:**
 - The national-level monitoring and reporting powers in the Water Services Bill would need to be broadened to encompass the infrastructure performance standard, and to ensure the system is more transparent.
 - This would provide stronger oversight of the wastewater regulatory system.
227. Under this proposal, Taumata Arowai would **require regional councils to include conditions (relating to minimum standards) in any resource consent for wastewater discharge.**
228. This proposal is not to create a parallel consenting system, but that a key objective of a stronger role for Taumata Arowai in wastewater regulation creates is to improve the consistency of regulation, and support coordination between regulators (Taumata Arowai, regional councils, and a future economic regulator), and the water service entities. The problem we are seeking to address is that:
- The different regional approaches to consenting and lack of certainty/consistency around consent processes (and conditions), means that there is a bespoke approach to the design, development and delivery of wastewater treatment systems makes it very difficult to capture the operational, delivery and supply chain efficiencies that rely on scale, coordination, consistent standards and greater certainty (is a key opportunity from the service delivery reform).
229. We did consider whether other organisations could take on this wastewater regulatory role, for example the Environmental Protection Agency (EPA). However, the EPA in New Zealand does not have a very strong role in environmental regulation and protection but rather has a much more limited role, with specific functions related to things like hazardous substances, marine consents in the Exclusive Economic Zone, and administration of Board of Inquiry processes. The EPA, in its current form, does not have a wider role (or the resources) to provide enforcement of resource consent conditions (and regional council rules and policies).
230. We have concluded that Taumata Arowai is best placed to perform these functions over time because:
- They fit well with Taumata Arowai’s statutory mandate relating to wastewater;
 - Taumata Arowai is building a strong culture based around engaging with iwi and Māori and giving effect to Te Mana o te Wai. Combined with the role of its Māori Advisory Group and the skills required on its board, this means Taumata Arowai will be best placed to lead the national-level discussion on how to give effect to Te Mana o te Wai in the challenging environment posed by wastewater;
 - Taumata Arowai will be ready to direct its resources to wastewater as water services entities are being established. It will therefore be in a good position to set the regulatory framework to drive (and provide certainty for) the entities’ asset management plans; and

- Taumata Arowai's focus on the three waters means it is unlikely to deprioritise or lose focus on its stewardship of wastewater regulation over time.

Implementation

231. The current Water Services Bill (clause 2) provides for its provisions, including Taumata Arowai's oversight and monitoring responsibilities, to come into effect by one or more commencement orders (or two years after Royal assent if no commencement order is made). That commencement mechanism therefore provides some flexibility about when those oversight and monitoring responsibilities are activated.
232. Further work is required to assess the potential cost implications of the proposal, which is highly dependent on number, range, and scope of any infrastructure performance standards or targets that are developed.
233. Currently, the Water Services Bill requires Taumata Arowai to develop, publish, and maintain environmental performance measures for wastewater and stormwater networks. The quantum of work required to develop, and engage on the development of environmental performance measures, is expected to be similar to that required for the development infrastructure performance standards and targets which we are proposing here, although our expectation is that the engagement requirements will be more significant.
234. It is important to note that the legislative provisions relating to Taumata Arowai's wastewater-related functions would not be commenced until two years following enactment of the Bill.
235. This is relevant to the transition and implementation of the proposed new wastewater regulatory regime. The key points are:
 - The existing two-year timeframe is a default position, but there should be flexibility to allow for the possibility that this timeframe could be extended.
 - When to bring the provisions into effect will be influenced by the following factors, and will require a balance between them:
 - **The development (and engagement) on wastewater infrastructure performance standards by Taumata Arowai.** Part of the reason for delaying the oversight provisions is so that Taumata Arowai is able to prioritise drinking water. This is still an appropriate timeframe, but developing and engaging around new wastewater infrastructure performance standards will take time (for example, previous National Environmental Standards by MfE have taken at least 18 to 24 months to prepare). Therefore, between the work required to prepare the standards, and the need to prioritise drinking water, the earlier estimate of two years may not be sufficient to allow for these standards to be developed. Flexibility should be retained to extend or shorten the timeframe if necessary.
 - **The transition timeframes.** There is a balance during the transition period between the effort expected of local authorities in the transfer of three waters responsibilities and consenting of new infrastructure, and when that is going to be transferred to water services entities. Ideally the implementation of the wastewater infrastructure performance standard would align with the transfer of responsibility.

- **The need for urgent upgrades.** There will be some wastewater treatment plant consents already awaiting approval, and where upgrades need to be advanced urgently. In the drafting of the legislation there will need to be some consideration of whether to apply the national wastewater infrastructure standards (as soon as they are ready) to those consent applications or to allow the existing consenting process to continue. That might require some flexibility in the timeframe for implementing and applying the standards.

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Detailed Chapter 7 Appendix 1: Transfer guidelines – Indication of matters to be covered

While certain aspects of the transition require a nationally-consistent and fair approach, each local authority will have a different set of circumstances relating to its people, assets, liabilities, and contracts. The Department will work with each local authority to help effect the transfer in a manner that is best for them, in accordance with the overarching transfer guidelines.

The transfer guidelines are likely to cover the following topics (noting this could change as the productions of guidelines is undertaken):

- **transitional obligations and powers** - will cover transitional obligations placed on the local authorities or new water service entities and transitional powers / rights of the national transition unit and establishment entities, required to deliver a smooth transition and protect customers and communities.
- **transfer mechanics** - will outline the approach to the identification and subsequent transfer of the key elements of the local authorities' water services operations such as assets, contracts, and employees. These mechanics are intended to be sufficiently high level to provide appropriate flexibility in the transfer process.
- **transfer payments** - will cover the payments that will be made to individual local authorities for the transfer. This will be subject to Cabinet decisions, however, at this stage is expected to include identification of debt related to three waters investment and any incentive payment determined by Cabinet.
- **disputes resolution** - will set out a process for resolving operational disputes between local authorities, the national transition unit, and establishment entities. Given the complex nature of the transition, disputes are inevitable, and it will be critical that the disputes resolution regime provides an effective mechanism to resolve disputes efficiently and in a manner that is consistent with facilitating the achievement of the transition objectives. This will not provide a mechanism for disputing decisions made by Cabinet.

Detailed Chapter 7 Appendix 2: National Transition Unit Options Assessment - Strengths and Weaknesses Analysis.

Option	Strengths / advantages	Weaknesses / disadvantages
A departmental business unit	<ul style="list-style-type: none"> • Low level of complexity and can be promptly established within the current framework. • Speed of appointments, which are the responsibility of the Chief Executive of the Department. • Close connection/interface with the reform programme at the Department that allows the ability for close interaction with the policy, legislative, and stewardship work. • Dedicated Deputy Chief Executive as part of leadership team assists with understanding of the change across the Department. • Ability to have consistency of personnel from the reform programme, if desirable. May be easier to resolve conflicting priorities/trade-offs between Department interests and shared interests. • Retains close relationship with the Minister. • Independent advice able to be accessed through advisory board structure. • Structure accommodates limited life span of the establishment unit which is expected to be disestablished when the transition, establishment, and implementation functions are substantially complete. 	<ul style="list-style-type: none"> • Likely to require the Head of Transition (Deputy Chief Executive) and their reports to be dedicated resource and not have broader roles within the Department. • Full responsibility for delivery remains with the Department, which must then have adequate resources and funding to deliver. • Public perception, that a national transition unit within a central government agency compromises the transition and is not truly independent.

<p>A departmental agency</p>	<ul style="list-style-type: none"> • Clear establishment of a separate unit with dedicated chief executive, budget, and resources. • Recognises low level of operational connection with other functions of the Department and the difference between implementation and policy/legislative functions. • Retains close relationship with Ministers. • Allows shared services (e.g., Human Resources, Information Technology) with the Department as host agency. • Independent advice able to be accessed through advisory board structure. • Structure accommodates limited life span of the establishment unit which is expected to be disestablished when the transition, establishment, and implementation functions are substantially complete. 	<ul style="list-style-type: none"> • Time cost and resource required for establishment, including Cabinet approval of purpose, scope, and functions, and the requirement for an Order in Council. • Losing connection/interface with the ongoing reform programme being managed by the Department (policy, legislation, and stewardship). • Complexity of arrangements including arrangements between the Department as host agency and the departmental agency regarding respective roles and responsibilities and working arrangements between the host agency and departmental agency, which is also subject to Ministerial approval). • Time required for appointments process (Chief Executive of Departmental Agency) and the process being managed externally from the Department by the Public Services Commission. It took a year for the appointment of the Infrastructure Commission Chief Executive following establishment. • Careful consideration required as to whether the relative size and/or nature of the substantive functions warrant the creation of a new entity and appointment of an additional public service Chief Executive.
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<p>A statutory entity</p>	<ul style="list-style-type: none"> • Clear establishment of a separate entity with clear objectives and responsibility, resourced, and funded to have the capacity and capability for delivery (including chief executive, budget, and resources). • Governance decisions able to be made by a board of experts appointed on the basis of specialist experience for example in establishing or merging organisations and change management. Appointment of a board that is independent and focussed on the transition project. • Greater scope for bespoke arrangements. 	<ul style="list-style-type: none"> • Time cost and resource required for establishment through primary legislation initial establishment requires legislation, however, all options will require legislation to provide for powers (e.g., oversight of some local authorities’ decisions and processes during the transition period). • Likely to mean you need a transition unit prior to the true transition unit being established. • Separation from policy responsibility for the Three Waters Reform programme with the Department. • Time required for appointments process of governing body and chief executives. • Careful consideration is required as to whether the decisions to be made in governing the functions of the unit should be arms’ length from the Minister, and are of a type that benefit from independent governance. • Careful consideration required as to whether the relative size and/or nature of the substantive functions warrant the creation of a new entity and appointment of an additional public service governing body and Chief Executive.
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Detailed Chapter 7 Appendix 3: Three Waters Reform Programme Establishment, Transition, and Implementation - Strategic Risks Register

Risk ²²²	National Transition Unit	Water Service Entities	Underlying Issues	Suggested pathway/ approach	Lead Role
Depth of leadership and availability - Board level	x		<ul style="list-style-type: none"> Limited specialised pool of resource with large scale water industry experience 	<ul style="list-style-type: none"> Create opportunities for exposure to large utilities. Work programme for specific water utilities training. Leverage Watercare and overseas opportunities. 	<ul style="list-style-type: none"> National Transition Unit
Depth of leadership and availability - senior management	x		<ul style="list-style-type: none"> Limited executive pool of resource with large scale water industry experience 	<ul style="list-style-type: none"> Create a leadership development strategy and consider additional training capability and exposure. Provide a framework and pathway for all training / education programmes. Leverage Watercare and overseas opportunities to train key high potential staff in the sector. 	<ul style="list-style-type: none"> National Transition Unit
Loss of senior and technical management from local authorities		x	<ul style="list-style-type: none"> Loss of critical staff impacts local authorities' ability to operate effectively. 	<ul style="list-style-type: none"> Accelerate high potential staff training. 'Lock in' key resources with career pathways and/or incentive schemes. 	<ul style="list-style-type: none"> National Transition Unit
Ensuring pipeline of people skills and capability to fill roles (technical)		x	<ul style="list-style-type: none"> Aging workforce. Scale of expected activity. Loss of capacity due to change (additional net loss). 	<ul style="list-style-type: none"> Development of competency framework (training programme). Investigate/promote water industry as career choice in schools. Communicate certainty of roles and set expectations for future landscape. 	<ul style="list-style-type: none"> Industry Transformation Strategy

²²² Risks are not listed in any particular order.

Transitioning of local authorities to their new operating environment	x	x	<ul style="list-style-type: none"> • Potential minimal local authority consideration of 'life after water'. • Impact on existing roles (reduction). 	<ul style="list-style-type: none"> • Develop new approaches for local authorities through consultation. • Consider services/central resourcing model as a result of reform. 	<ul style="list-style-type: none"> • To be determined (TBD)
Continued local government support within regions		x	<ul style="list-style-type: none"> • 67 local authorities with upcoming 2022 elections with continued uncertainty. 	<ul style="list-style-type: none"> • Develop framework to engage with local authorities at a councillor and officer level. • Develop and execute key messages. • Provide support for change management (i.e., Employee Assistance Programme services for wellbeing etc.) 	<ul style="list-style-type: none"> • TBD
Iwi engagement	x	x	<ul style="list-style-type: none"> • Iwi are not engaged in Three Waters Reform due to competing priorities (e.g. RM reform) <p>Iwi lack the capability and capacity to engage with Three Waters Reform.</p>	<ul style="list-style-type: none"> • Early and continued awareness and engagement programme. • Reinforce importance of Three Waters Reform. • Ensure iwi/Māori are supported to engage in Three Waters Reform. • Engage Iwi Chairs and CEOs on a regular basis. 	<ul style="list-style-type: none"> • National Transition Unit
Ineffective transition to Economic Regulation	x	x	<ul style="list-style-type: none"> • No water specific economic regulation experience in New Zealand. • Unclear hierarchy around regulation in New Zealand. 	<ul style="list-style-type: none"> • Work with WICS (and others) to develop framework and build expertise. • Utilise work from Watercare on what economic regulation could look like in New Zealand. 	<ul style="list-style-type: none"> • National Transition Unit
Ability to meet community expectations on service from day one		x	<ul style="list-style-type: none"> • Generally, New Zealanders are not aware of what reform means • Loss of local voice and control 	<ul style="list-style-type: none"> • National communications campaign. • Set service expectations at a national level. 	<ul style="list-style-type: none"> • National Transition Unit

Ability to meet community expectations on service from years 3 to 5		x	<ul style="list-style-type: none"> • Generally, New Zealanders are not aware of what the impact of the Three Waters Reform will be. • Loss of local voice and control. 	<ul style="list-style-type: none"> • National communications campaign. • Enhance understanding of environmental benefits to be received under reform. 	<ul style="list-style-type: none"> • National Transition Unit
Ability to meet community expectations on price		x	<ul style="list-style-type: none"> • Generally, New Zealanders are not aware of what the impact of the Three Waters Reform will be. • Loss of local voice and control. 	<ul style="list-style-type: none"> • National communications campaign. • Develop frameworks and pathways for pricing expectations. 	<ul style="list-style-type: none"> • National Transition Unit
Data protection (privacy and cyber) during transition	x	x	<ul style="list-style-type: none"> • Additional National/Regional entities increases opportunities for data transfer and loss. 	<ul style="list-style-type: none"> • Monitor risks and advise on best practice/standards. 	<ul style="list-style-type: none"> • National Transition Unit
Stranded costs left with local authorities	x	x	<ul style="list-style-type: none"> • Local authority support costs to manage water entities inside Councils are no longer required. 	<ul style="list-style-type: none"> • Plan and framework supporting the reduction in stranded costs (i.e., reducing labour costs over time). • Provide wellbeing support framework. 	<ul style="list-style-type: none"> • TBD
Rates do not decrease as a result of removing water and wastewater from local authority charges		x	<ul style="list-style-type: none"> • Local authorities remove water charges and subsequently do not reduce rates as such the overall cost to consumers increases. 	<ul style="list-style-type: none"> • Provide evidence of changes and impacts across New Zealand. • Develop expectations of Three Waters Reform. • Communicate key messages. 	<ul style="list-style-type: none"> • Water service entities
Overemphasizing the poor job that local authorities have undertaken in water management	x		<ul style="list-style-type: none"> • Selling reform on the poor job that the previous owners (i.e., local authorities) undertook. 	<ul style="list-style-type: none"> • Consistent clear messaging speaking to overall benefits. 	<ul style="list-style-type: none"> • National Transition Unit

Shared services setup is a failure	x		<ul style="list-style-type: none"> Attempts to create shared services fail due to any number of reasons (i.e., poor planning / execution / lack of buy-in etc.). 	<ul style="list-style-type: none"> Provide a framework for delivery of services for new water service entities. 	<ul style="list-style-type: none"> National Transition Unit
Sufficient construction capacity from day one (build)	x	x	<ul style="list-style-type: none"> Number of construction companies to deliver all that is required on day one Developing a model that continues to utilise local constructors in rural townships Workforce constraints (i.e., staff, contractors and consultants). 	<ul style="list-style-type: none"> Work with industry associations (i.e., Construction Accord develops a strategy to service New Zealand and regions). Set a clear expectation of what is required (i.e., provide a pipeline of work (with certainty) from day one). Set a clear expectation of the sustainable use of local suppliers and 'localism'. 	<ul style="list-style-type: none"> National Transition Unit
Sufficient construction capacity from years 3 to 5 (build)	x	x	<ul style="list-style-type: none"> Number of construction companies of scale to deliver long term programmes. Allowing international entities to enter the market without compromising local skills and capability. Workforce constraints and building capability. Long term ability to deliver major programmes of underinvestment in the water sector. 	<ul style="list-style-type: none"> Construction Accord develops a strategy to service New Zealand and regions. New Zealand Trade and Enterprise target international players for NZ Inc. opportunity. 	<ul style="list-style-type: none"> Infrastructure Commission

Sustaining the construction sector up to day one	x	x	<ul style="list-style-type: none"> • Councils stopping maintenance programmes (to save money and becomes a new water service entity problem). • Construction and maintenance industries lays off staff due to inactivity. 	<ul style="list-style-type: none"> • Issue rules/ mandates/ authorisations around spend activity to Councils. • Provide an avenue for contractors / consultants / maintenance providers to engage with the National Unit (i.e., setup an industry panel for advice / support / development of guidelines). • Inform industry associations of opportunities in the water sector. 	<ul style="list-style-type: none"> • National Transition Unit
Sustaining the engineering consultant sector up to and from day one	x	x	<ul style="list-style-type: none"> • Engineering consultants (i.e., BECA, Aecom, Aurecon, GHD, Jacobs, etc.) lay off staff because activity is halted as the new water service entities take time to understand the new operating position / model / framework. 	<ul style="list-style-type: none"> • Issue rules / mandates / authorisations around spend activity to local authorities. • Key messaging that it is 'business as usual' in terms of operations. 	<ul style="list-style-type: none"> • National Transition Unit
Sufficient engineering capacity (design)	x	x	<ul style="list-style-type: none"> • No competency standardisation. • Limited number of 'trusted' engineering companies. 	<ul style="list-style-type: none"> • Engineering associations (i.e., Engineering New Zealand, to develop competency-based standards). • Understand current capacities and capabilities within industry – Water New Zealand. 	<ul style="list-style-type: none"> • Association of Consulting and Engineering New Zealand

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