Water Services Authority
Taumata Arowai

Regulatory Impact Statement: Wastewater standards

Decision sought	Cabinet's authorisation is sought for submission to the Executive Council of the Local Government (Water Services) Wastewater Environmental Performance Standards Regulations 2025 (the regulations). These regulations will be made through an Order in Council under section 138 of the Water Services Act 2021, to establish the first set of national wastewater environmental performance standards (wastewater standards), including: • discharge of treated wastewater to water • discharge of treated wastewater to land • beneficial reuse of biosolids, and • monitoring and reporting requirements for wastewater network overflows and bypasses
Agency responsible	Water Services Authority - Taumata Arowai
Proposing Ministers	Hon Simon Watts, Minister of Local Government
Date finalised	13 October 2025

Authorise for submission to the Executive Council of the Local Government (Water Services) Wastewater Environmental Performance Standards Regulations 2025, to establish the first set of national wastewater environmental performance standards (wastewater standards), including:

- discharge of treated wastewater to water
- discharge of treated wastewater to land
- beneficial reuse of biosolids, and
- monitoring and reporting requirements for wastewater network overflows and bypasses.

Summary: Problem definition and options

What is the policy problem?

The effects-based approach to consenting wastewater treatment plants and networks under the Resource Management Act (RMA) 1991 is costly, time-consuming, and has led to high variability in the consent conditions applied across the country, a lack of transparency, patchy compliance, and inconsistent and sometimes poor public health and environmental outcomes.

Approximately 21 percent of wastewater treatment plants are operating on expired consents. This is due to capacity and capability constraints of small councils to manage the consenting process, as well as affordability constraints to design and build infrastructure to meet bespoke and varying community expectations.

Approximately 60 percent of wastewater treatment plants will require reconsenting in the next decade which is a significant national infrastructure challenge. Operating on expired consents is a significant indicator of public health and environmental risk.

What is the policy objective?

The objectives for this work are framed under the Local Water Done Well context.

The main strategic objective is to ensure that wastewater infrastructure can be managed and maintained in a cost effective, proportionate, and sustainable way.

To achieve this, we have set out three connected policy objectives:

- financially sustainable water services
- regulatory efficiency, compliance and reducing regulatory burden, and
- maintaining acceptable public health and environmental outcomes.

What policy options have been considered, including any alternatives to regulation?

Section 138 of the Water Services Act 2021 enables the Water Services Authority (the Authority) to make wastewater standards. Wastewater standards may include (but are not limited to) discharges to air, water, or land; biosolids and other byproducts from wastewater; energy use; and waste that is introduced by a third party into a wastewater network.

This RIS assesses the standards in two parts:

Part A (pages 31 – 35): What categories of standards should be developed? This focuses on what categories of standards should be initially developed – this assessment formed the basis for the interim RIS and supported the release of the discussion document in February 2025. For readability purposes, we have summarised this assessment. It was recommended that standards were prioritised for discharges to land, discharges to water, the beneficial reuse of biosolids and the monitoring and reporting requirements for wastewater network overflows and bypasses.

Part B (pages 34– 69): What are the main design choices for each standard? This focuses on the regulatory impact of these four standards that will be recommended to Cabinet Legislation Committee, following ministerial policy decisions that were made post discussion document.

For **Part B** the RIS assesses the regulatory impact of the four recommended standards that Cabinet Legislation committee will be authorising, across a spectrum of regulatory options:

Standards	Option one: Counterfactual - No standards are introduced	Option two: Low intervention option	Option three: Balanced option (recommended)	Option four: Precautionary standard option
Discharge of wastewater to water	No standards would be introduced for discharges to water (counterfactual).	Low regulatory intervention with a small number of receiving environments, low levels of treatment and small parameters of treatment. Little tailoring available to protect receiving environments.	Balanced regulatory intervention with moderate number of receiving environments and balanced levels of treatment and treatment parameters. Additional tailoring available through risk assessments for higher risk environments.	Precautionary regulatory intervention with high numbers of receiving environments, high level of treatment and high parameters of treatment tailored to protect all receiving environments.
Discharge of wastewater to land	No standards would be introduced for discharges to land. Consents considered in bespoke ways. (counterfactual).	Low regulatory intervention with significant levels of nutrients to be discharged to land under a broad range of environmental conditions regardless of soil type, a simplified site assessment and very few monitoring requirements.	Balanced regulatory intervention with a standard that allows for discharges to a range of site types (calibrated to assimilative capacity) and treatment requirements that will support public health and environmental outcomes.	Precautionary regulatory intervention with low levels of nutrients to be discharged to land (high pre-treatment would be mandatory), high tailoring to environmental conditions (for example soil types), highly detailed site assessments and high monitoring requirements.
Beneficial reuse of biosolids	No standards would be introduced for the beneficial reuse of biosolids (counterfactual).	Low regulatory intervention with biosolids allowed to be applied to land with minimal processes or grading.	Balanced regulatory intervention with a balanced grading system for processing biosolids, including additional requirements where biosolids have a lower grade and monitoring and reporting requirements tailored to the grade of the biosolid.	Precautionary regulatory intervention with very high levels of processing, strict grading requirements for multiple contaminants (including contaminants of emerging concern), and strict monitoring requirements for the health of land and soil.
Monitoring and reporting requirements for wastewater network overflows and bypasses	No standards would be introduced for overflows (counterfactual).	Low regulatory intervention minimal reporting requirements only required in highest risk situations (when habitable floors are flooded, or where there are significant public health risks on beaches).	Balanced regulatory intervention with a risk-based approach to monitoring and reporting overflows and bypasses.	Precautionary regulatory intervention with high levels of monitoring and reporting across all levels of risk, strict limits on overflows, and a containment standard.

What consultation has been undertaken?

The Authority consulted publicly on the proposed wastewater standards between 24 February 2025 and 24 April 2025, through a discussion document and webinars. The consultation process was supported by targeted engagement and the publication of an interim Regulatory Impact Statement, of which this RIS builds on.

There was a high level of engagement from key stakeholders throughout the 8-week consultation phase, with over 150 submissions received from councils, industry

stakeholders, iwi and hapū, and individuals. The majority of submissions supported the intentions of Minister's preferred option in the Cabinet paper, with particularly strong endorsement from territorial authorities and council-controlled organisations. Regional councils and iwi and Māori acknowledged the challenges in the existing system but expressed a preference for retaining the status quo of place-based approaches or rebalancing the proposals in a way that is tailored to particular situations, and water bodies rather than standardisation.

Prior to public consultation, the Authority worked closely with councils and key stakeholders to develop the initial options for wastewater standards. Advice on initial proposals and the risk management framework for the standards was commissioned from engineering and environmental science experts. This advice was informed by existing arrangements in New Zealand and overseas. A Technical Review Group met weekly between September and December 2024 to support the proposal's development.

Engagement was also undertaken with local hapū and iwi to develop case studies about recent wastewater arrangements to better understand Māori values and perspectives how existing arrangements have reflected these perspectives.

The case studies developed with local hapū and iwi are not the same as the case studies developed for this RIS or for small plants to assess potential efficiencies and savings / costs associated with meeting the standards. The case studies developed to support the RIS are discussed below.

Is the preferred option in the Cabinet paper the same as preferred option in the RIS?

Yes.

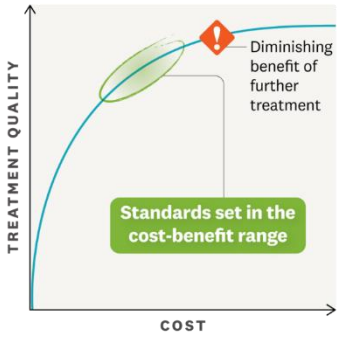
For **Part A,** the Authority recommends option two, which is the same option in the Cabinet paper, because it best meets the policy objectives and corresponding assessment criteria in the timeframes available. Option two will address key challenges in the regulatory system by promoting efficiency, and support consistency and transparency in public health and environmental performance across New Zealand, while providing a relatively quick and practical approach to implementation. Over time, option two will also support standardisation of infrastructure and its operation, promoting further efficiencies.

Overall, this option finds a balance between achieving the greatest amount of standardisation within the timeframes available before the Local Government (Water Services) Act is enacted. It prioritises the wastewater standards that most effectively manage the challenges facing the consenting of wastewater networks, together with risks to public health and the environment – discharges to land and water, biosolids and monitoring and reporting requirements for overflows and bypasses. It is considered that this option will lead to more confidence in investment decisions and promote standardisation of design, procurement, material selection, and construction of treatment plants.

This option does not set standards for discharges to air, energy use, or waste that is introduced by a third party into a wastewater network. These matters will be considered on a case-by-case basis by regional councils as they are now. Decisions on future standards will be made as part of the work programme of the Authority.

For **Part B,** the Authority recommends option three for all four standards – the balanced regulatory approach. The Authority considers that these options, developed for the authority by freshwater science, engineering and water industry experts reflect the appropriate mix of treatment quality and cost before there is diminishing benefit of further treatment – a concept shown in the figure below.

Figure 1: Diminishing benefit of further treatment



In particular:

- For the **discharge to water standard**, option three is recommended because it offers a balanced and pragmatic regulatory approach that effectively manages the trade-offs between environmental and public health outcomes, cost efficiency, and feasibility. By introducing a moderate number of receiving environment categories, it allows for tailored treatment that reflects local conditions while benefiting from standardisation. Treatment levels for key contaminants are calibrated to manage risks without imposing excessive costs, and the inclusion of enforceable compliance parameters strengthens accountability. While option four would deliver the highest environmental and health protections, it is less feasible due to its significant cost burden, which could lead to non-compliance and delays. Conversely, option two is more affordable but would result in poorer outcomes and increased environmental pressure. Option three strikes the right balance - supporting improved wastewater management, enabling efficient infrastructure planning, and enhancing transparency and accountability, including for Māori, iwi and hapū, while remaining achievable for most councils.

- For the **discharge to land standard**, option three is the best choice because it strikes a practical and sustainable balance across the competing priorities of public health, environmental protection, feasibility, and efficiency. While option four offers the highest standards, its complexity and cost would limit uptake and lead to widespread non-compliance, undermining its intended benefits. Option two, though simpler, lacks the necessary environmental safeguards and could result in long-term harm and costly remediation. In contrast, option three enables a broader implementation of well-managed discharge to land schemes by tailoring requirements to site-specific conditions, supporting both short- and long-term outcomes. It also enhances accountability through transparent reporting and aligns with Māori, iwi, and hapū aspirations for land-based solutions.

- For the **beneficial reuse of biosolids standard**, option three is the strongest choice because it delivers a balanced, scalable, and practical framework for biosolids management that supports both environmental protection and operational feasibility. While option four offers the highest level of public health and environmental protection, its complexity and cost would limit implementation, especially for lower-grade biosolids, which would likely end up in landfills, an outcome contrary to environmental outcomes. Option two,

though more feasible in the short term, lacks the long-term sustainability and robustness needed for effective biosolids management. In contrast, option three introduces a structured grading system that tailors requirements to biosolid quality, streamlines planning and consenting, and ensures accountability through proportionate monitoring. It also aligns with Māori, iwi, and hapū aspirations by enabling responsible land application and reducing reliance on landfill disposal.

- For the **monitoring and reporting requirements for wastewater network overflows and bypasses standard**, option three is preferred because it introduces a proportionate, risk-based framework for monitoring and reporting overflows and bypasses, significantly improving public health and environmental protection while remaining feasible and efficient for councils to implement. While option four offers the highest level of protection, its cost and complexity make it unrealistic for most councils in the short term, and option two, though more practical for resource-limited councils, lacks the oversight and data quality needed to support long-term infrastructure planning and environmental outcomes. Option three strikes the right balance by supporting accountability, enabling targeted investment, and aligning with Māori, iwi and hapū aspirations, while avoiding the impracticality of option four and the underperformance risks of option two.

Summary: Minister's preferred option in the Cabinet paper

Costs (Core information)

This RIS uses case studies to illustrate the types of costs associated with the typical consenting process and how the preferred option could impact these costs, and detailed technical advice to understand the costs and benefits of the various options against the evaluation criteria.

The costs under the preferred options package, across both Part A and Part B, are likely to fall as follows:

- The Authority will incur costs associated with developing and setting standards, as well as costs associated with more comprehensive system oversight.
- Some water service providers are likely to incur one-off costs to transition to the new standards process. Some water service providers are also likely to experience additional costs associated with meeting any increases in quality standards, and any increase in monitoring and reporting requirements, however it is assumed that for most, the costs will be lower than consenting under the current resource management system.
- The standards introduce lower acceptability for poor outcomes from wastewater infrastructure. This means councils may need to deal with significant legacy issues such as deferred maintenance, poorly understood networks, low / inconsistent levels of capability around operation of plants, and failure to desludge treatment ponds when they require consenting under the standards.

- Regional councils will incur one-off costs to transition to the new standards, including educating consent officers and stakeholders about the standards.
- Specialists supporting services such as engineers, lawyers, and surveyors may experience a decline in demand due to reduced requirements for specialist assessments. However, the potential to standardise materials and processes could open avenues for future business and industry-wide efficiencies.
- There may also be continuing cost implications associated with not having a complete set of standards under the preferred option, as some aspects of wastewater plant consenting will remain under normal resource management process, potentially adding complexity for regional councils in processing consents. This area could be mitigated through future standards that form part of the Authority's forward work programme.
- Existing Treaty obligations are not intended to be impacted under the preferred option. The ability for iwi and hapū to influence treatment levels relating to specific consent conditions controlled by the standard will reduce. Instead, we expect higher compliance with treatment requirements, and greater accountability (transparency of information) to iwi and hapū about compliance and enforcement.
- No additional costs are anticipated for water users including consumers and communities.

Benefits (Core information)

The Authority's preferred option package, across Part A and Part B, will address key challenges in the regulatory system by promoting efficiency and supporting consistency and transparency in public health and environmental performance across New Zealand.

Significant efficiencies are expected due to the reduction in the need for specialist assessments (such as an assessment of environment effects) and bespoke plant design, especially for renewals. Consent process efficiencies are estimated to save between 25 to 40 percent of typical consent-related costs while also reducing the time required to seek new or renewed consents. For small plants serving fewer than 1000 people, analysis indicates substantial cost reduction across the entire lifecycle of small wastewater treatment plants in the order of 40 percent to 60 percent for consenting and design. The greatest benefits come from reduced reconsenting costs for existing wastewater treatment plants and networks, aiding long-term planning and investment.

The benefits are likely to fall as follows:

- Water service providers are likely to experience a reduction in certain consenting costs, as well as a reduction in staff time spent on re-consenting. Greater standardisation provides the potential for scale benefits in plant design and delivery, and consistency from standards is likely to enable more efficient and nationally comparable compliance monitoring.
- Regional Councils are likely to experience a reduction in staff time spent processing consents, and greater consistency from standards will enable more efficient compliance monitoring.
- Water users, including consumers and communities, stand to benefit from the potential for cost savings to be passed on to consumers, as well as improved public health and environmental outcomes through more effective and sustained investment in wastewater treatment.
- Iwi and Māori will retain the ability to work with territorial authorities and regional councils in areas that are not subject to standardisation – for example, to make decisions about the treatment arrangements that are implemented and how they are configured. Greater transparency around monitoring and reporting will improve the ability of iwi and Māori to ensure that infrastructure owners and regional

councils are held accountable for compliance with consents and associated enforcement action.
- There will be improved national system oversight. The Authority and Commerce Commission will be able to monitor national consistency, implement benchmarking, and implement more transparent performance measurement and reporting.
- Supporting industries (engineers, lawyers, surveyors) may see greater scope for innovation and investment due to longer-term certainty.

Balance of benefits and costs (Core information)

Based on the available information, the benefits of the Minister's preferred option are likely to outweigh the costs.

Implementation

The wastewater standards for discharge to water and discharge to land will be implemented through future resource consents for wastewater treatment plants, as they come up for renewal or are sought for new plants.

Wastewater standards for biosolids application to land will be implemented as a permitted activity where biosolids are processed to the highest grade. Where biosolids are processed to a lower grade, the application to land will be implemented through resource consents.

Wastewater standards for network overflows and bypasses of plants will be implemented through future resource consents as they come up for renewal, or through new consents where they are not currently consented.

Regional councils will remain the primary regulator for wastewater networks and continue to be the consenting authority. They will implement the standards through consents and consent conditions and continue to be responsible for monitoring and enforcing consent compliance in line with their functions under section 30 of the RMA.

The Authority will provide oversight of the environmental performance of publicly owned wastewater networks. The Authority will support regional councils with the implementation of the national wastewater environmental performance standards by providing direction and comprehensive guidance as well as setting clear expectations. The Commerce Commission will provide economic regulation of wastewater treatment plants and networks.

Transitional arrangements are proposed for wastewater treatment plants operating on expired consents where renewal applications have already been lodged (known as 'in flight consents'). Consents granted before the new wastewater standards take effect will be granted under current RMA arrangements, while those granted after must comply with the new standards.

Additionally, a two-year limit is proposed on operating under expired consents, effective three years after wastewater standards commence. This would give councils a total of five years to transition away from reliance on section 124 of the RMA.

Limitations and Constraints on Analysis

Limitations

The RIS has been developed in parallel with the wastewater standards development process.

Limited information is available on the state of existing wastewater infrastructure, the levels of locally set conditions and requirements to mitigate impacts on the environment. Compliance data is not available nationally. There is also limited information on the approach that regional councils will take to requirements in consents in future if

wastewater standards were not implemented. This area is affected by ongoing reform of the RMA and associated national directions.

The information and analysis behind these proposals has relied on the following:

- Background literature including a comprehensive report prepared for the Ministry for the Environment by Beca, GHD, and Boffa Miskell, and two previous external reports prepared for the Department of Internal Affairs by GHD and Boffa Miskell. These reports provided advice on how New Zealand could create a strong and sustainable wastewater sector, given affordability constraints facing communities.
- Technical reports supported the development of what each of the proposed standards should look like and how they should be implemented, covering discharge to water, discharge to land, beneficial reuse of biosolids, and risk-based monitoring and reporting arrangements for overflows.
- Case studies of wastewater treatment arrangements to better understand Māori values and perspectives relating to wastewater treatment and how existing arrangements have reflected these perspectives.
- Insights from a Technical Review Group (discussed further below).
- Workshops with key stakeholders with expertise in areas relating to the proposed standards and any refinements to proposals.
- Additional expert technical advice for the proposed discharge to water and discharge to land standards proposing detailed treatment limits for both areas, how receiving environments should be categorised, and a "small plant" standard that is tailored to plants serving populations of 1,000 or less.
- The national Wastewater Consents database and a detailed stocktake of small wastewater treatment plants completed by Beca for the Water Services Authority to inform the proposed standards and future priorities for wastewater infrastructure.[1]
- Case studies – as outlined below.

Case study approaches have been used to quantify impacts as far as possible

Two groups of case studies were commissioned to provide information to support the analysis in this RIS:

- Case studies were developed as part of the analysis presented in the interim RIS that was released as part of the discussion document, identifying costs and benefits associated with the consenting process as a result of proposals relating to wastewater standards. These case studies found that the proposed standards could save between 25 to 40 percent of typical consent-related costs while also reducing the time required to seek new or renewed consents (see **Appendix D in the Interim RIS** for the full set of case studies, including the approach taken and the relevant assumptions**)**; and

[1] Beca Limited, Small Wastewater Treatment Plant Stocktake (2025)

- Further case studies were commissioned by the Department of Internal Affairs following release of the discussion document to understand cost efficiencies relating to consenting and infrastructure upgrades for small treatment plants drawing on case studies from Southland, Horowhenua and Thames Coromandel District Councils. This study has indicated that with the small plant standard in place, cost savings of 40 to 60 percent could be achieved in the design and consenting phases for small wastewater treatment plants (see **Appendix B** for a summary of these case studies and the findings).

These case studies were undertaken given the data and information limitations around wastewater in New Zealand.

Both sets of case studies have been used throughout the RIS analysis.

Assumptions

Our key assumptions include:

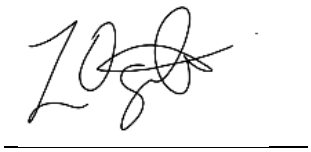
- It has been assumed that **broader resource management regulatory requirements and processes will continue to apply** to matters relating to the design and operation of wastewater services that are not covered by the proposed wastewater standards, and that regional councils will continue to administer resource management consent requirements
- We have assumed that the process for developing the **wastewater standards will provide for a similar, or greater, level of public health protection at the aggregate level** than the current effects-based system. This is because treatment limits, particularly for indicator pathogens, will be deliberately calibrated to receiving environment sensitivity, and quantitative microbial risk assessment will continue to form part of the determination of treatment requirements for discharges from plants. Alongside this, broader changes made as part of the proposals means there will be more consistency across the country in terms of compliance with treatment limits.
- When considering the counterfactual, we have **considered current practice and known implementation challenges** in the system – alongside the existing legislative framework (the Water Services Act and the Local Government (Water Services) Act.
- We have assumed that a **wastewater provider is already renewing or applying for a consent for a wastewater treatment plant** when assessing the options. The costs of the plant's capital and operational expenditure, which would be needed in any situation, are not the subject of this RIS. The assessment focuses on consenting the plant under the RMA with the standards in place, compared to the counterfactual where current RMA consenting applies.
- We have assumed that when a consent is about to expire or a plant is end-of-life, the **operator would plan to upgrade their plant** and invest in a more modern approach, taking into account community expectations relating to wastewater treatment and any relevant regulatory requirements (for example, the National Policy Statement for Freshwater Management or the National Coastal Policy Statement). We have assumed that the Authority, the

Commerce Commission, and regional councils will be **adequately resourced** to ensure that water service providers comply with regulatory requirements.

- It has been assumed that the wastewater standards will have **indirect and direct impacts**. For example, aspects of the analysis assume that the standards will create an enabling environment for greater standardisation of plant infrastructure and its operation. This is an indirect impact of standardising treatment requirements for wastewater treatment plants.

I have read the Regulatory Impact Statement and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the preferred option.

Responsible Manager(s) signature:



Zoe Ogilvie-Burns
Acting Head of Systems, Strategy, and Performance

13/10/2025

Quality Assurance Statement

Reviewing Agency: Department of Internal Affairs	**QA rating:** partially meets

Panel Comment:

The Department of Internal Affairs' Regulatory Impact Analysis (RIA) panel (the Panel) has reviewed the 'Wastewater standards' RIS in accordance with the quality assurance criteria set out on the Ministry for Regulation website.
The Panel members for this review were:

- Nick Law, Policy Manager (Chair)
- Graham Nielsen, Senior Policy Analyst
- Adan Suazo, Principal Policy Analyst
- Segfrey Gonzales, Policy Analyst (Secretariat)

The Panel assessed the RIS for the purpose of supporting policy approvals to draft an Order in Council for wastewater standards.

The Panel considers that the information and analysis summarised in the RIS partially meets the quality assurance criteria.

The Panel felt the RIS provided a clear account of the background to the package of legislative proposals covered, including previous Cabinet decisions to release a discussion document and advice that would inform the preparation of technical details and the final

standards. The RIS acknowledges constraints about current infrastructure and its effectiveness.

The RIS provides an assessment of options for which standards to adopt at this stage based on the benefits they would provide. It then undertakes a high-level assessment of the degree of standardisation and the impact on efficiency and effectiveness of each of the standards in diverse environments. The technical details of wastewater standards themselves were outside the scope of the Panel's review. Gaps in information about quantified and monetised benefits resulted in unevenness in the extent to which the Panel found the analysis convincing.

The size and technical nature of the document heighten the importance of the Cover Sheet in making key information available to Ministers. The Panel felt it did provide a useful and clear summary of the analysis of the proposal and a reasonable identification of the limitations and risks.

On this basis, we believe that, despite some deficiencies in the information which resulted in limitations in the analysis provided, the RIS informs Ministers about those, the risks, and the likely effectiveness of proposals such that they can make a reasonably informed decision about the policy approvals to issue instructions to draft an Order in Council.

Nick Law

Chair of the Department of Internal Affairs' RIA Panel

10 /October / 2025

Section 1: Diagnosing the policy problem

What is the context behind the policy problem and how is the status quo expected to develop?

Wastewater treatment in New Zealand

Territorial authorities operate wastewater treatment plants and networks in New Zealand

1. Most wastewater is domestic sewage that is produced by households from water use in kitchens, bathrooms, laundries, and toilets. Domestic wastewater flows through networks of pipes and pump stations to central wastewater treatment plants, where it is treated before being discharged to land or water. Sludge from wastewater treatment plants is disposed of in a variety of ways, including as part of remediation of land or disposal in a landfill.
2. Industrial and commercial industries sometimes discharge wastewater into council networks (trade waste), but this is usually first treated on site. Some households treat wastewater using on-site septic tank systems rather than through a connection to a municipal network. Septic tanks and onsite systems are out of scope.
3. According to the Public Register of Wastewater Networks, there are 334 publicly owned wastewater treatment plants across New Zealand, which are owned and/or operated by councils, their council-controlled organisations, or by Crown agencies like the Department of Conservation and the New Zealand Defence Force. All 67 territorial authorities operate one or more wastewater treatment plants.
4. Approximately 50 percent of wastewater treatment plants service populations of less than 1,000 people. Small-scale wastewater treatment plants tend to have relatively simple technology, often involving passive biological processes such as oxidation pond-based systems, which often cannot perform to the same standard as more technologically sophisticated plants serving larger communities.
5. A small plant stocktake[2] assessed 168 small plants and found that 63 percent provided compliance limits for effluent discharge as consent conditions. A quarter of the small plants required certain parameters to be monitored, but did not set a compliance limit. 12 percent of small plant consents had no limits or monitoring requirements.
6. In some areas, such as Southland, the cost of consenting and upgrading treatment plants presents challenges because there is a small or declining ratepayer base and geographic constraints mean amalgamating treatment plants is often not feasible.[3]
7. The treatment of wastewater results in the production of effluent (treated wastewater) and sludge and/or biosolids (treated/processed sludge). Most of the plants in New Zealand discharge to water (232). The remainder discharge to land, with some of those arrangements involving discharge to water for part of the year. Of those plants serving communities of 1,000 or less, approximately half discharge to water and half to land.
8. There are a number of different ways that sludge and/or biosolids produced by wastewater plants are processed or disposed of. The treatment applied is dependent on the type of sludge or biosolids, the cost to treat, and the final disposal route. Around 40 percent of the biosolids produced in New Zealand goes to landfill or “monofils”,

[2] Beca, 2025 Small Wastewater Treatment Plant Stocktake, prepared for Taumata Arowai

[3] The Southland Economic Project.

which are landfills that are intended to be used for only one type of waste.[4] Disposal to landfill is costly and many landfills are already at capacity meaning the opportunity for beneficial reuse is lost. For many rural councils, sludge and/or biosolids are disposed of at the wastewater treatment plant site, as they have available land, and it is more cost effective. However, this storage of sludge and/or biosolids creates a legacy issue, as at some point there will no longer be space to hold this material.

The existing legislative and regulatory framework

The Water Services Authority – Taumata Arowai is the water services regulator for New Zealand

9. The functions and powers of the Authority are set out in the Taumata Arowai – the Water Services Regulator Act 2020 and the Water Services Act. Alongside its regulatory functions relating to drinking water quality, the Authority is responsible for oversight of environmental performance, publicly owned drinking water, wastewater, and stormwater networks.

10. The Water Services Act empowers the Authority to exercise the following functions relating to these networks:

    - setting environmental performance measures, which local authorities and Crown Infrastructure Owners must monitor for and report against annually
    - publishing annual reports to provide transparency about the environmental performance of networks, including the extent to which networks are complying with applicable standards, conditions, and requirements
    - establishing and maintaining public registers for wastewater and stormwater networks
    - setting wastewater and stormwater standards that regional councils must give effect to when issuing resource consents
    - setting targets in relation to environmental performance of networks, and
    - setting requirements and issuing guidance for network operators to develop wastewater risk management plans.

Wastewater standards and risk management plans are provided for under the Water Services Act

11. Wastewater standards can be made following public consultation, including with wastewater network operators, regional councils, and any other person that the Authority considers appropriate. Wastewater standards may include (but are not limited to) requirements, limits, conditions, or prohibitions related to activities associated with wastewater networks. This includes discharges land, air, or water; biosolids and any other byproducts from wastewater; energy use; and waste that is introduced by a third party into a wastewater network (for example, trade waste).

12. Wastewater standards may only apply to public networks (that is, one that is owned by a territorial authority or its service delivery arm such as a council-controlled organisation, or government departments, and or the New Zealand Defence Force).

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4 *Trends in the New Zealand Biosolids Industry: The Australia and New Zealand Biosolids Partnerships Survey* (2024), Marcus Richardson (Stantec), Catherine Vero (Ekistica), Rob Tinholt (Australia New Zealand Biosolids Partnership).

They do not apply to privately owned networks or onsite systems that treat wastewater collected within the same property boundary (for example, septic tanks).

13. Wastewater standards are ‘absolute’ requirements. This means that a regional council cannot impose conditions that are more, or less, restrictive than the standards.

14. The Water Services Act also empowers the Authority to require council network operators to have a comprehensive wastewater network risk management plan. These plans require network operators to:

    - identify any hazards that relate to the wastewater network
    - assess any risks that are associated with those hazards
    - identify how those risks will be managed, controlled, monitored, or eliminated, and
    - include any wastewater environmental performance measures, standards, or targets made by the Authority and how the measures, standards, or targets will be met.

The Water Services Act regulates wastewater in tandem with the RMA

15. The RMA is New Zealand’s overarching resource management legislation which seeks to achieve environmental and cultural outcomes while providing for the social and economic wellbeing of communities, as well as the health and safety of residents. The RMA takes an effects-based approach to management of the environment. The framework involves a hierarchy of policies and plans, with consents being required for certain activities, like wastewater treatment. This planning framework and consent conditions set the requirements for how effects of particular activities are managed.

16. Consent processes often require a bespoke or case-by-case approach to the design and operation of a wastewater plant(s) and networks, which seek to ensure that there are limits placed on the environmental impact of a plant, or that areas of risk are monitored.

17. Wastewater treatment plants typically require multiple consents, which are granted and enforced by regional councils. These can fall into the following categories:

    - consents for new wastewater treatment plants and networks
    - consents for renewals where an upgrade to the treatment facilities is required
    - consents for renewals where no upgrade is required, and
    - consents for networks (note, very few councils operate with network consents).

18. For some arrangements, land use and pipe outlet structure consents are also required, such as coastal permits for structures in coastal marine areas, land use consents, and contaminated sites. Consents can also be required for wastewater overflows, usually via network consents (reticulation network, pipes, manholes, outfalls) which permit the discharges.[5]

19. The RMA provides a range of environmental controls for wastewater discharges entering different receiving environments not currently covered by the wastewater

[5] A wastewater overflow happens when wastewater spills out from manholes, overflow points, or pump stations. Overflows are usually caused by something blocking the wastewater mains which causes wastewater to back up behind the blockage, fill the pipes, and overflow out of the manholes upstream of the

standards. Future wastewater standards may cover some of these matters (e.g. volume and other contaminants). At present consent authorities maintain control over:

- The **location of wastewater discharges**. The specific location of the discharge point required to achieve the dilution ratios described in the standards would need to be specified in the consent.
- The **timing of wastewater discharges**. Consent authorities could set conditions for discharging to land when there is a low flow in a river, or timing a discharge to an estuary during the outgoing tide.
- Limits for **contaminants not currently covered by the standards** e.g. discharges to air, recycled treated wastewater for non-potable use, endocrine disruptors, heavy metals and PFAS. Note that wastewater discharges to air and discharges of other contaminants can be covered in subsequent wastewater standards.

20. There are also opportunities within the standards to tailor treatment limits for particular situations where there is elevated public health or environmental risk:
    - A quantitative microbial risk assessment (QMRA) is required where a discharge to water is within 4km of a shellfish bed. The QMRA will set the treatment limits for pathogens.
    - A periphyton risk assessment is required where a discharge to water is to a hard bottom stream. The periphyton risk assessment will set the treatment limits for total nitrogen and total phosphorous, with the maximum treatment set at the limits of technology.
21. The biosolids and overflow standards set resource consent activity status which provide an opportunity for further regulatory control by consent authorities.
22. The resource management system works closely with the management of wastewater discharges in drinking water source catchment areas. The water regulatory system provides for source water risk management plans that surround a source of drinking water which require regional councils to publish information on the quality and quantity of drinking water source annually.
23. Consents can be granted for 35 years but are normally issued for shorter periods dependent on factors such as the age and condition of the plant, the discharge and its receiving environment, planned and funded upgrades and community preferences.
24. **Appendix B** of the interim RIS provides a detailed outline of the consenting process, including for the current settings, as well as for the changes outlined in the *Local Government (Water Services) (Repeals and Amendments) Act*. **Appendix C** of the interim RIS supplemented this with further detail on the costs associated with each stage (excluding implementation).

Reform of the RMA is currently underway

25. The RMA will be replaced by two new Bills set to be introduced before the end of the year: **a Natural Environment Act** – focused on managing the natural environment and **a Planning Act** – focused on planning to enable development and infrastructure.
26. The proposed legislation intends to narrow the scope of the effects the resource management system controls. It sets the enjoyment of private property rights as the guiding principle and shifts from a precautionary approach to a more permissive

blockage, and the wastewater system becoming inundated with stormwater and groundwater during wet weather events which can cause its capacity to be exceeded.

approach. The future resource management system will also regulate aspects of discharges and receiving environments

27. These reforms propose new measures which will impact the management of wastewater discharges, primarily through regional planning under the proposed Natural Environment Act. National direction, and national environmental standards, and a more permissive regime for activities where standards are met will be introduced. The wastewater standards align with this approach. Other tools impacting the management of wastewater include:

    - **Environmental limits** - to set expectations for the quality of the environment so that the cumulative load of contaminants from all users/activities can be capped and managed in a way that protects water quality. This will allow for efficient allocation approaches such as trading.

    - **An allocations framework** – will allocate resource use for activities within a defined allocatable quantum. Public wastewater discharges may be classified as part of the human need/public health allocation within the water allocation framework. Since the wastewater standards have primacy over resource management policies and plans this would give discharges from public wastewater treatment plants 'as of right' status.

    - **A refresh of the National Policy Statement for Freshwater Management** which will continue to guide policy decisions for protecting water quality.

    - **Spatial planning** which will clarify water services planning and capacity and help direct development (and discharges) away from sensitive receiving environments.

    - An **exemptions pathway for managing the effects of critical infrastructure**. Providing for wastewater discharges from wastewater treatment plants could be seen to have parallels with the exemptions that will be provided for the effects of critical infrastructure.

Legislative change under Local Water Done Well

The Local Government (Water Services) (Repeals and Amendments) Act 2025 amends some of the provisions relating to wastewater standards

28. Wastewater standards are a core aspect of Local Water Done Well, the Government's approach to addressing long-standing water infrastructure challenges. In July 2024, Cabinet agreed to make changes to how wastewater standards will be implemented through resource consents (CAB-24-MIN-0277.3 refers). These changes are being implemented through the Local Government (Water Services) (Repeals and Amendments) Act which was enacted in August 2025.

29. The main areas of change that relate to wastewater standards are as follows:

    - **An absolute standard approach based on a variety of receiving environments:** Changes were made to the RMA to ensure regional councils cannot depart from the wastewater standards unless on an 'exceptions' basis. This means that regional councils will be unable to set requirements that are more or less restrictive than those specified in wastewater standards.

    - **Exceptions regime:** While the wastewater standards are intended to create certainty and national consistency, there will be cases where a standard may be inappropriate. In situations where an exception applies, the existing resource

consent process is reverted to. To maximise the benefits of the wastewater standards, including cost savings, exceptions are intended to be minimal.

- **Consent duration:** Where wastewater infrastructure has been renewed or upgraded to meet wastewater standards, a 35-year consent duration would apply.
- **Standards will take precedence over national directions and plans:** Where there is inconsistency between a wastewater standard and a national direction or plan made under the RMA, the wastewater standard will prevail[6].
- **Standards will be made by Order in Council:** To align with the process of making drinking water standards, the wastewater standards will be made by Order in Council and considered by Cabinet.
- **Change in approach to Te Mana o te Wai[7]:** The Water Services Act requirements for decision-makers to give effect to Te Mana o te Wai has been replaced with an operating principle requiring the Authority to take account of any national direction (including the National Policy Statement for Freshwater Management) and regional plans when partnering or engaging with Māori.
- **Infrastructure design solutions:** The Authority will be able to set comprehensive infrastructure performance design and operating requirements for wastewater treatment plants to enable greater standardisation and faster, efficient consenting.

30. The Local Government (Water Services) Act also includes changes that aim to reduce the cost and burden for councils and wastewater network operators associated with complying with the Water Services Act 2021. The changes are embedded into the standards design and include:
    - ensuring the Authority takes cost into account, including when performing and delivering its objectives, functions and duties, and
    - ensuring the regulatory framework is proportionate to the scale, complexity, and risk profile of relevant wastewater services, including the consideration of cost and affordability for the consumers.
31. Local Water Done Well requires territorial authorities to develop plans to deliver water services in financially sustainable ways, while complying with minimum regulatory requirements such as the wastewater standards assessed in this RIS.
32. Over time, territorial authorities will be regulated by the Commerce Commission, who will determine whether charges for water services are sufficient to cover the costs of providing water services to regulated levels of quality. The Local Government (Water

[6] **Note** where the inconsistency is a result of the relevant document giving effect to Te Ture Whaimana o Te Awa o Waikato – the Vision and Strategy for the Waikato River, this provision shall not apply.

[7] Te Mana o te Wai is a core concept in New Zealand's freshwater management. It emphasises the importance of protecting the health and well-being of freshwater bodies and ecosystems.

Services) Act also includes provisions for interventions in local authorities unable to deliver water services that are financially sustainable.

What is the policy problem or opportunity?

Consenting is costly and variable and does not always address public health and environmental risks

33. The current consenting of wastewater treatment plants under the RMA is costly, time-consuming, and has led to high variability in consent conditions, with inconsistent and sometimes poor public health and environmental outcomes.

34. Plants operating on expired consents are a significant risk to public health and the environment. There are currently 70 wastewater treatment plants discharging to water with expired consents (approximately 21 percent of all wastewater treatment plants).[8] The average time a plant has been operating on an expired consent is five years, and the longest is 24 years. Common factors that prevent consent renewal include plant and infrastructure being at the end of their life cycle and/or requiring extensive upgrades that present affordability challenges for communities.

35. A stocktake of wastewater treatment plants identified reasons for wastewater treatment plants operating on expired consents. These included the capacity and capability of small councils to manage the consenting process, lengthy and/or difficult consultation processes, and affordability constraints to meet community expectations.[9]

36. When wastewater networks are not properly managed it can lead to various health issues and risks. This can include:

    - exposing communities to disease-causing pathogens causing illness,
    - increasing the risk of water-borne diseases travelling through a community in disaster situations, and
    - increasing pollution in rivers, lakes, and coastal areas which can harm aquatic ecosystems, disrupt local wildlife, and degrade natural habitats.

37. Overflows occur where untreated wastewater discharges from a network into the environment and are often due to blockages, plant or equipment damage, or when stormwater or ground water enters the network. Overflows tend to occur more frequently in older, poorly maintained networks. With the effects of climate change, including increased and more extreme rainfall, overflows will likely increase.

38. GHD and Boffa Miskell completed a study for the Department of Internal Affairs in 2019 into the regulation, extent, and control of wastewater overflows in New Zealand.[10] This study found that:

    - there is considerable variability in the regulation of wastewater overflows
    - there are no common definitions of overflows, with councils employing different ways of counting overflows
    - councils have varying degrees of knowledge of their wastewater networks including where overflows occur (uncontrolled) and what events trigger them

8 Water Services Authority Database of Wastewater Resource Consents (2025).

9 Source: National stocktake of municipal wastewater treatment plants (2019)

10 Source: Wastewater Sector Report, Ministry for the Environment (2020)

- only 19 of the 34 councils that participated in the study had overflows monitoring in place and the levels of coverage and sophistication varied widely. Many rely on telemetered systems for pump stations and public complaints reporting elsewhere in the network (only two participants had electronic monitoring at constructed overflow points). The minority of councils have conducted network modelling.
- in terms of reducing overflows, councils are on a journey of continual improvement, and few councils are working towards a set target of overflow reductions
- there is a significant lack of alignment between regional plan rules and the reality of wastewater overflows in regions where they are prohibited.

39. The study found that with better knowledge of networks and upgrades to infrastructure, the frequency of wastewater overflows could be significantly lowered in many communities, while safeguarding public health and the environment. Alongside this, community and iwi expectations about overflows now express a preference for little or no discharge of sewage into freshwater or onto land or beaches. For Māori, there is widespread abhorrence of discharge of sewage to water, both for cultural and spiritual reasons, alongside the risks posed to mahinga kai.
40. Current monitoring practices, knowledge of networks, and the wide range of approaches to regulation of wastewater overflows mean that under current settings, it would not be possible to benchmark regions or engage in basic performance improvement metrics to drive better performance. Consistency in approach across all these areas would lead to considerable benefits.
41. A standardised approach to consenting wastewater treatment plants can more effectively address environmental and public health risks, streamline consent processes, and reduce the costs and time needed for design, consenting, and the ongoing operation of wastewater networks.

The effects-based approach to consenting under the RMA is costly, time-consuming, and has led to significant variation in consent conditions

42. The RMA framework focuses on assessing the actual and potential effects of an activity on the environment, rather than regulating the activity itself. To implement this framework, councils need a detailed understanding of the receiving environment and the impacts that the proposed activity will have on that environment. Councils can then impose consent conditions to avoid or mitigate the impacts that an activity will have on the receiving environment.
43. In theory, the case-by-case approach under the RMA enables councils to tailor consent conditions to local environmental sensitivities and public health protection. However, in practice, the effectiveness of providing this protection is variable. The high levels of variability in consent conditions for wastewater treatment plants are not driven

by consistent systemic factors. For example, they do not correlate to plant age, plant capability, the receiving environment, or public health considerations.[11]

44. The current approach has three main issues which are discussed in detail below:

There are significant costs in investigating and agreeing the effects of a proposed activity for a consent

45. The consenting process for infrastructure such as wastewater is complex, time-consuming, and expensive. Costs are often incurred through:

- engaging technical specialists to assess environmental effects and required plant upgrades,
- consultation with the community, mana whenua and other affected parties,
- peer review by the regional council, and
- at times, Environment (or higher) Court appeals.

46. A 2021 report prepared by the New Zealand Infrastructure Commission – Te Waihanga.[12] found the cost of consenting to be considerably higher in the waste and water sectors, largely due to the amount of expert advice and engagement required. The report also found that the most significant indirect costs were those associated with delay (e.g. construction costs rise).

47. Public notification is at the discretion of the regional council. Where an activity has more than minor effects or is subject to 'special circumstances', a regional council may decide to notify the public and call for submissions on the proposal. A regional council can also choose to limit notification and submissions to a particular group of people that have more than a general interest in the effects of an activity. Public notification can also be requested by an applicant where there are likely to be adverse effects on certain parties, or where positive submissions are expected and can support the decision to grant an application.

48. These costs create a barrier and disincentive for renewals, as seen in the numbers of expired consents.

There is significant variation in wastewater treatment requirements across the country

49. The effects-based framework to consenting has resulted in significant variability in wastewater treatment requirements and consent conditions across the country and don't appear to be driven by consistent system factors, such as receiving environments. Each regional council has unique arrangements and policy settings to give effect to policies and rules in regional plans:

- Resource consents are developed, assessed, and monitored on a case-by-case basis.
- The conditions applied to each consent vary, including monitoring and reporting requirements. This affects the quality of data available and transparency regarding wastewater system performance. Poor articulation and framing of

11 Source: National stocktake of municipal wastewater treatment plants (2019)

12 New Zealand Infrastructure Commission, Te Waihanga. (2021). *The cost of consenting infrastructure projects in New Zealand*. https://media.umbraco.io/te-waihanga-30-year-strategy/py0p420w/the-cost-of-consenting-infrastructure-projects-in-new-zealand.pdf

consent conditions can make them unenforceable or can lead to expensive legal disputes.

- The limits that apply to wastewater discharges can vary based on local conditions or community preferences (this is the case even when wastewater treatment plants of similar scale and complexity discharge to similar receiving environments).
- Varying consenting approaches are taken to wastewater overflows, which can create significant public health risk and risks to wildlife, aquaculture, and the environment. Some councils prohibit overflows (removing controls available through consenting), while others require resource consents or treat overflows as emergency discharges. Even if consenting is in place, risk-based monitoring and reporting arrangements are inconsistent and are often not implemented. Many overflows are not consented at all.

50. There has been no national direction, for example under the RMA, on wastewater to address this variation resulting in significant uncertainty and risk for operators. Variable approaches to consenting also have impacts on providers, including:
    - creating uncertainty for the planning and operating of wastewater infrastructure,
    - increasing the costs and time of consent process, and
    - creating significant variations in the performance requirements and design of network infrastructure and plants to mitigate effects on receiving environments.
51. Customised solutions reduce any economies of scale for plant design, procurement, and operator capability/training. Standardisation, on the other hand can provide significant benefits to designing and consenting infrastructure.

There is a lack of transparency about wastewater system performance

52. Current data and monitoring makes it impossible to benchmark wastewater infrastructure performance as is common practice in other infrastructure sectors. The variation in monitoring and reporting requirements, particularly for overflows and assets, has impacted the overall transparency of wastewater system performance precluding national oversight. While there are reporting platforms, such as reporting to WaterNZ, these are voluntary in nature.
53. Lack of transparency makes it difficult to quantify risk and determine whether networks are meeting the necessary environmental and public health outcomes.

Councils are operating within funding and financing constraints

54. The construction, operation, maintenance, and upgrade of wastewater treatment plants is generally funded through council rates or wastewater charges.
55. Several water services across the country have not been adequately maintained or renewed, and constraints on existing council balance sheets limit the ability of councils to borrow money to invest in water services. Combined with often insufficient pricing of these services through rates and charges, it becomes challenging to generate the necessary revenue to cover the whole of life costs of providing water services.
56. Local Water Done Well introduces economic regulation, and this will require councils to operate water services in ways that are financially sustainable. Over time this will address some these funding and financing constraints.

Over the next 10 years at least 57 percent of wastewater treatment plants will come up

for consent renewal and there is an opportunity to streamline the process

57. Much of the wastewater infrastructure in New Zealand was built 30-40 years ago, is approaching the end of its useful life, and already needs upgrades. Many networks have limited capacity to accommodate population growth, which requires both the upgrade of plants to deal with increasing demand, and also increases the rate and frequency of overflows. Within the next 10 years, approximately 57 percent of wastewater treatment plants will come up for consent renewal.[13]

58. Alongside renewals, new (and upgraded) wastewater treatment plants will also be needed to service urban development and housing growth. In Auckland, for example, there are a number of areas where there are current wastewater network constraints impacting development, such as the Hibiscus Coast and Warkworth.[14]

59. The large number of upcoming renewals will cause a consenting burden on councils as well as communities that engage with the consenting process, often on a voluntary basis. There is an opportunity to implement an absolute standard approach ahead of the wave of consents coming up for renewal to:

- give clear expectations to communities about wastewater treatment,
- streamline consent processes (design, engagement, and reduce cost of consultants and council staff time),
- improve the quality and amount of data available regarding system performance to enhance transparency,
- provide certainty to territorial authorities as owners of networks so they can plan for the cost of infrastructure,
- enable efficiencies in infrastructure design and procurement, and
- provide consistency for operator and compliance officer training and development.

What objectives are sought in relation to the policy problem?

60. Local Water Done Well sets a clear direction for developing an enduring and sustainable framework for local council ownership and control of water services, with strict rules for water quality and ongoing investment in water infrastructure.

61. Cabinet noted that upgrading public wastewater treatment plants is one of the greatest infrastructure challenges facing New Zealand. The proposed wastewater standards will address this by:

- reducing regulatory burden,
- delivering much greater standardisation of treatment systems and related infrastructure,
- enabling cost efficiencies in the design, build and operation of wastewater systems, and

13 Water Services Authority stocktake of wastewater treatment plant consents (2025).

14 Network capacity in Auckland

- providing councils with greater certainty of costs through standardisation and longer-term consent durations.

62. A core feature of Cabinet and Ministerial policy is that wastewater standards must ensure a balance between:

    - cost effective solutions for councils and ratepayers in renewal or construction of wastewater infrastructure, and
    - protection of environmental and public health outcomes

Three connected policy objectives

63. With this context in mind, the main strategic objective is to ensure that wastewater infrastructure can be managed and maintained in a cost effective, proportionate, and sustainable way.

64. To achieve this, we have set out three connected policy objectives to guide the analysis:

    - **Financially sustainable water services** by:
        - providing greater certainty of regulatory requirements to make it easier and less risky for local water service providers to plan for future investments in local water services infrastructure, and
        - enabling cost and timing efficiencies in wastewater design and operation through standardisation of performance requirements leading to scale efficiencies and benchmarking.
    - **Regulatory efficiency**, compliance, and reducing regulatory burden through:
        - increasing system capacity to address upcoming reconsenting,
        - simplifying and standardising regulatory requirements for the design and operation of wastewater services infrastructure,
        - simplifying regulatory processes by reducing the need for difficult and complex regulatory decisions and judgments,
        - standardisation of consent conditions and reporting requirements in consents for wastewater discharges, and
        - increasing transparency in reporting.
    - **Maintaining acceptable public health and environmental outcomes** through water service organisations' compliance with an appropriate set of standards for the performance of wastewater services.

What consultation has been undertaken?

Public consultation was undertaken on the proposed wastewater standards

65. The Authority consulted publicly on the proposed wastewater standards between 24 February 2025 and 24 April 2025.There was a high level of engagement from key stakeholders throughout the 8-week consultation phase, with approximately 150 submissions received from councils, industry stakeholders, iwi/ hapū, and individuals.

The majority of submissions supported the standards outlined in the discussion document, which reflect option two in this RIS.

66. During consultation, the Authority actively engaged with stakeholders. This included a series of 17 webinar information and Q&A sessions tailored for specific stakeholder groups, attracting around 400 attendees across the series. Recordings of these sessions shared online were viewed 479 times. Additional meetings were held on request, including with councils, engineering and industry groups and iwi.

67. Feedback from engagement is summarised in section two with further detail in **Appendix D**.

Prior to public consultation, the Authority worked closely with councils and key stakeholders to develop the options for wastewater standards

68. The Authority engaged with industry experts, key stakeholders, and partners to develop the options for wastewater standards. Advice on initial proposals for the standards was commissioned from engineering and environmental science experts, that looked to both existing arrangements in New Zealand and overseas examples.

69. A Technical Review Group was also established and met weekly between September and December 2024 to support the wastewater standards work programme. This group was comprised of technical experts including representatives from local governments, industry, and Water New Zealand. The Group provided advice on whether the standards are technically fit for purpose – specifically, whether they target the appropriate contaminants and are workable for infrastructure requirements and consenting processes.

70. The Authority also engaged directly with territorial authorities in their capacity as network operators, and with regional councils as consenting authorities to enable priorities and concerns of these councils to be incorporated in the standards. Feedback from councils included:

    - Smaller councils often have a small rating base and declining or spread-out populations. Many are concerned about affordability and ensuring that wastewater standards are tailored to the specific characteristics of their plants.

    - Larger councils have a focus on planning for infrastructure resilience to support population growth and there is positive feedback about the ability of standards to enable better funding and financing of infrastructure, particularly combined with 35-year consent durations.

    - Regional council representatives are cautiously optimistic about proposals but have noted that there needs to be clear direction on how the standards interact with existing national direction and regional plans, together with consenting processes. This has been incorporated into the Local Government (Water Services) (Repeals and Amendments) Act. Alongside this, regional council representatives have said that proposals should ensure that treatment requirements imposed for wastewater treatment plants should continue to be sensitive to differences in, and manage impacts relating to, receiving environments.

The Authority also engaged with local hapū and iwi to develop case studies

71. Engagement was undertaken with local hapū and iwi to develop a series of case studies about wastewater arrangements that had been implemented throughout New Zealand (note, these case studies are not the same as those developed for this RIS and outlined in subsequent sections). Participants were given the opportunity to

provide suggestions, add additional material, and verify the gathered information prior to drafting the case studies. Participants were invited to comment and provide feedback on the draft reports.

72. Members of the Technical Review Group were provided with copies of the case studies in their review capacity which informed their discussions. Kahu Environmental were commissioned to test the draft proposal with iwi Māori practitioners. Their report is part of the technical advice the Authority received.

73. Alongside gathering participants' views, the Authority also engaged with representatives from the relevant territorial authorities and regional councils to hear their perspectives on wastewater arrangements and engagement with iwi and hapū.

Following consultation, the Authority worked to refine aspects of the standards with stakeholders to test refinements are practical and address issues raised in engagements

74. Feedback received during consultation identified several areas for refinement, such as treatment limits for discharges to water. To refine these elements, the Authority commissioned additional technical advice and tested early iterations of the advice with potentially impacted stakeholders. This included engagement on:

- **Amending treatment limits for discharge to water standards to be more stringent:** a key theme from consultation was that the treatment limits for open ocean discharges were too permissive and would not adequately protect the environment. The Authority tested refined treatment limits, alongside additional upper limits for some contaminants, with key stakeholders including regional council scientists. The amended limits were also compared to existing consent limits and compliance information to ensure they balance environmental protection and are practical to meet.
- **Developing a new nearshore category for discharges to water:** this was developed in response to feedback that the open ocean category should be refined and a new category added for inshore coastal areas. The updated approach was tested with Timaru and Bluff councils, which both have plants that would fall into the nearshore category. The qualifying criteria and treatment limits for the new category were achievable for both plants, provided the limits only apply to municipal waste streams (as intended).
- **Expanding the standard to apply to very low dilution receiving environments:** the Authority received requests from councils that the standards include very low dilution receiving environments, to maximise the benefits of certainty provided through standardisation. The approach for these receiving environments reflects best practice in current resource consents and was tested with relevant councils, such as Kapiti Coast District Council, to ensure it was appropriate.

75. We set out more detailed feedback and subsequent refinements in section 2.

Section 2: Assessing options to address the policy problem

What criteria are used to compare options to the status quo?

76. This section outlines **five key criteria** for which the options will be assessed across both Part A and Part B of the RIS, drawing on the objectives discussed above. These are summarised in the table below.

77. These criteria aim to draw out the key choices available when considering the approach to implementing the standards. These criteria are equally weighted; that is, no one criterion is more or less important than the others.

Table 1: Assessment criteria

Criteria	Description	Link to objectives
Protects public health and the environment	The extent to which the option results in protection of public health and the environment.	Directly links to the objective of protecting public health and the environment.
Efficiency	The extent to which the option enables efficiencies in the design, consenting, and the ongoing operation of water services.	Directly links to the objectives of: • reducing regulatory burden through increased administrative efficiency in regulatory requirements and processes; and • financially sustainable water services by providing a more certain and less risky regulatory environment to enable better planning and investment decisions in local water services.
Accountability	The extent to which the option strengthens providers' accountability to the public for the quality of wastewater services, compliance with consent and regulatory requirements and public access to information.	Directly links to the objective of protecting public health and the environment. Also links to the regulatory efficiency objective in terms of transparency in reporting.
Feasibility	The extent to which an option can be implemented in a way that considers real-world constraints and practicalities, including the complexity of the system and the Ministerial preferences that standards will be put in place as soon as practicable.	Links to all of the objectives and provides an assessment of how practical the options are to implement and administer effectively.
Provides for Māori, iwi, and hapū interests in water	The extent to which an option impacts the nature of the relationship between councils and iwi and hapū, including the impact of decision-making regarding water bodies of significance to Māori.	Links to the objective of protecting public health and the environment. Also links to the efficiency (financial sustainability) and accountability (public transparency) objectives.

What scope will options be considered within?

78. The table below summarises what is considered in and out of scope for this RIS and the proposals assessed. The sections below expand on some of these matters.

Table 2: In and out of scope

In scope
The scope / coverage of matters that the wastewater standards relate to as set out in section 138 of the Water services Act (discharges to air, water, or land; biosolids and any other byproducts from wastewater; energy use; and waste that is introduced by a third party into a wastewater network).
The approach to determining the wastewater standards, such as treatment quality requirements, or frameworks that could apply as part of a resource consent.
The scope of exceptions from the wastewater standards requirements, as provided for under the Local Government (Water Services) (Repeals and Amendments) Act 2025.
The approach to the implementation, administration, and compliance with the proposed wastewater standards, including the timeframe for implementation and transition of the standards.
Treaty of Waitangi related commitments, such as the commitments that councils might have in the provision of wastewater services to Māori, which could be included in Treaty settlements or otherwise agreed with iwi.
Out of scope
Policy decisions that are being implemented as part of the Local Government (Water Services) Act, for example changes to legislation to provide for an absolute standard approach.
As options assessed in this RIS are constrained by section 138 of the Water Services Act, it does not include options for wastewater standards to be set through the RMA (for example, as part of a National Environmental Standard). Therefore, the resource management system, including role of regional councils in administering resource consent requirements and associated consent processes, is out of scope.
Regulation of stormwater discharges.
Other water and resource management requirements, such as those contained in the Freshwater Policy Direction.
Proposed infrastructure design solutions and national engineering standards, which are provided for in the Local Government (Water Services) (Repeals and Amendments) Act 2025.
Additional consents that make up the suite of consents required to upgrade and operate a wastewater treatment plant (for example, structures, noise, and land use).

The absolute national standard approach has been decided

79. In July 2024, Cabinet agreed to changes to the legislative framework that applies to wastewater standards in the Water Services Act and the RMA. Since then, the Local Government (Water Services) (Repeals and Amendments) Act 2025 has been passed which gives effect to these policy proposals.

80. These proposals include an absolute standard approach – under which regional councils cannot impose more, or less, restrictive consent conditions in relation to the matters covered in the standards.

81. This RIS is focused on the **implementation of the absolute standard**, including scope and coverage, as opposed to the policy decisions regarding the broader

legislative framework that are being implemented as part of the wider legislative process.

The options sit under a prescribed legislative framework

82. Options assessed in this RIS are constrained by section 138 and 139 of the Water Services Act which detail provisions relating to wastewater environmental performance standards that may include (but are not limited to) requirements, limits, conditions, or prohibitions – as set out above. Under Section 139 of the Water Services Act, wastewater network operators must prepare and implement a risk management plan for the operator's wastewater network.

The counterfactual assumes that a wastewater provider is already renewing or applying for a consent for a wastewater treatment plan

83. The options are assessed against the counterfactual, which assumes that a wastewater provider is already renewing or applying for a consent for a wastewater treatment plant. The costs of the plant's capital and operational expenditure, which would be needed in any situation, are not the subject of this RIS. The assessment focuses on consenting the plant under the RMA with the standards in place, compared to the counterfactual where current RMA consenting applies.

Approaches and lessons from international examples were considered

84. Wastewater standards are common in many of the jurisdictions that New Zealand compares itself to, including the European Union (EU), the United Kingdom, Australia, and Canada. Internationally, the protection of public health is the key driver for setting wastewater discharge regulations, closely followed by environmental protection. A phased introduction of standards is common approach to support the feasibility, fiscal planning, and upgrade prioritisation. For example, the EU has applied standards to different sizes of treatment plants to be achieved over different timeframes.

85. In many jurisdictions, there is a population (or population equivalent) or flow (volume) component for setting standards, dependent on discharge type. While there are different approaches to setting, implementing, and enforcing standards, there is widespread use of central parameters.

86. There are well-established monitoring and reporting requirements for overflows in many international jurisdictions that provide detailed information on overflow events – for example, the number, location, and volume of overflows.

87. The proposed standards consider these international examples as well as our localised context in both design and implementation.

It is intended that existing Treaty settlement obligations will continue to apply

88. Across the proposals to implement wastewater standards, it is intended that existing Treaty settlement obligations will continue to apply. The proposals are not intended to impact the Authority's obligations to Māori or councils' obligations under the RMA when deciding resource consent applications.

89. Most, if not all, iwi have a connection to a body of water whether it is a river, lake, sea, or spring. Māori view water holistically, focusing on the interconnected rights, relationships, practices, tikanga, knowledge, and whakapapa of a waterbody and the wider environment. In this context, iwi/Māori interests in water services are broad.

90. The Authority must ensure that its performance and delivery of its objectives, functions, and duties are guided and informed by the operating principles in section 18

of the Taumata Arowai – the Water Services Regulator Act 2020.These operating principles include:

- building and maintaining credibility and integrity, so that the Authority is trusted by Māori, and
- partnering and engaging early and meaningfully with Māori.

91. Decision-makers under the Water Services Act have explicit statutory obligations under Treaty settlement agreements with iwi in the Waikato-Waipā, Whanganui and Whangaehu catchments.

92. The relationship between Māori, the environment, and the Treaty is integrated into the overall environmental management system through the principles in Part 2 of the RMA. The RMA's mechanisms require these principles to be applied in several different situations. For example, when drafting district and regional plans, councils must give effect to these priorities and consult with tangata whenua. In addition, councils must consider the principles when deciding on resource consent applications.

93. Under the Local Government Act 2002, local authorities are required to establish and maintain processes to ensure Māori participation, consider ways to build Māori capacity for engagement, and provide relevant information to Māori. Where significant decisions are proposed in relation to land or water where Māori have a special connection, the Local Government Act 2022 imposes engagement requirements. The Act sets out that these requirements will continue under any changes to service delivery in this area.

Part A and Part B

94. The options assessment of this RIS is split into two parts:

- **Part A: What categories of standards should be developed?** This focuses on what categories of standards should be initially developed – this assessment formed the basis for the interim RIS and supported the release of the discussion document in February 2025.
- **Part B: What are the main design choices for each standard?** This focuses on the key design choices and impacts of the four standards that will be recommended to Cabinet Legislation Committee, following ministerial policy decisions that were made post discussion document.

95. Both parts of the RIS use the same evaluation criteria and aim to achieve the same objectives.

96. **Part B** is the primary focus of Cabinet's decision to authorise the submission to the Executive Council of the Local Government (Water Services) Wastewater Environmental Performance Standards Regulations 2025 (the regulations). These regulations effect the national wastewater environmental performance standards (wastewater standards) in the following areas:

- discharge of treated wastewater to water (fresh and marine)
- discharge of treated wastewater to land
- beneficial reuse of biosolids, and
- monitoring and reporting requirements for wastewater network overflows and bypasses.

Part A – What categories of standards should be developed?

What options are being considered?

97. This section assessed three potential strategic options to implement wastewater standards:

- **Option one: No standards are implemented (counterfactual).** As the legislative provisions for wastewater standards in the Water Services Act are permissive rather than mandatory, under this option no wastewater standards are implemented. Wastewater service providers would continue to be regulated as they are now under the RMA for all environmental effects.
- **Option two: Standards are only initially implemented for discharges to land and water, beneficial reuse of biosolids, and monitoring and reporting requirement for overflows and bypasses (recommended)**. Under this option, a prioritised set of wastewater standards that are provided for under the Water Services Act would be implemented that cover the main activities associated with a wastewater network. The standards for wastewater discharges to land and water would differentiate between the specific characteristics of receiving environments by classifying them in a way that reflects the risk, sensitivity and assimilative capacity of those receiving environments.
- **Option three: Standards are implemented together for all matters provided for under the Water Services Act.** Under this option, there would be implementation of as many wastewater standards to be considered under consents for wastewater treatment plants as possible (discharges to land, air, and water; reuse of biosolids, energy use, and waste that is introduced by a third party into a wastewater network).

98. These options and the options assessment presented, formed the basis of the interim RIS and the release of the Discussion document in February 2025. Rather than repeat the earlier analysis, we have provided a summary assessment table.

Table 3: Strategic options assessment table

	Option one – No standards introduced (counterfactual)	Option two – Standards are only initially implemented for discharges to land and water, beneficial reuse of biosolids, and monitoring and reporting requirement for overflows and bypasses (the Authority's preferred option)	Option three – Standards are implemented together for all matters provided for under the Water Services Act
Public Health and Environment Protection: The extent to which the option results in protection of public health and the environment.	0 The effects-based approach is expensive and unpredictable in the environment and public health protection provided. There is considerable variation consent conditions across the country, including variability in the extent to which conditions adequately protect public health and the environment. While many newer plants offer improved public health and environmental performance, a large number of mainly older schemes are operating on expired consents and some smaller plants that are not meeting necessary standards.	+ More consistency and transparency of discharge limits and consent conditions over time. Biosolid standard has the potential to minimise dumping at landfills resulting in better protection of public health and environment. Requiring operators to assess and categorise overflows and bypasses is likely to increase effectiveness by standardising the approach to overflows across the country and ensuring that all operators take a risk-based approach to managing overflows and bypasses.	++ Increased standardisation of a broader range of matters considered during the consenting of wastewater schemes. We have assumed that an absolute standard approach will drive national consistency to provide for a similar, or greater, level of public health protection overall than what is delivered under the counterfactual.
Efficiency: The extent to which the option enables efficiencies in the design, consenting and ongoing operation of water services. simplifies regulatory processes and requirements and reduces associated regulatory costs.	0 High consenting costs (both time and financial cost), due to reliance on specialist assessments. Extensive consultation and notification requirements increase time and costs of consenting as well as increase risk of litigation. Current process provides very little certainty and predictability for providers in terms pf planning, design and operation, which are a barrier to long-term investment. driven the customised design of treatment plants, which does not support or encourage scale efficiencies in design, procurement, or operator capability and training.	+ Likely to lead to savings by reducing the need for specialist assessments of receiving environments to determine consent conditions and requirements. Scope of the standards would not impact other requirements such as discharge to air and land use. Efficiencies in the consent process could save between 25 to 40 percent of typical consent-related costs while also reducing the time required to seek new or renewed consents. Greatest benefits likely from the reduced reconsenting for existing treatment facilities. The proposed standards should reduce the regulatory risk of associated investments and benefit the long-term planning for infrastructure. It is also likely to provide foundation for scale efficiencies and drive industry and other initiatives to standardise infrastructure design, products, and methods. For small plants, analysis indicated that standards could reduce costs of consenting and design across the life of wastewater treatment plants by 40 percent to 60 percent or approximately $300,000 per project. New monitoring and reporting requirements for overflows and bypasses will increase costs for those functions.	++ Greater savings in terms of time and cost associated with the consenting process may be achieved under this option due to an increase in standardisation across a broader range of matters. These savings are likely to be greater for renewals than for new consents. Efficiencies in the consent process could save between 25 to 40 percent of typical consent-related costs while also reducing the time required to seek new or renewed consents. Greatest benefits likely to come from the reduced need to reconsent existing treatment facilities. The proposed standards should remove some of the regulatory risk out of associated investments and benefit the long-term planning for infrastructure. It is also likely to provide foundation for scale efficiencies and drive industry and other initiatives to standardise infrastructure design, products, and methods. Option involves a high degree of change from the current process, it's possible that the regulatory efficiencies gained may be limited due to the need for councils and interested parties to adapt to the new system.
Accountability: The extent to which the option strengthens accountability of providers in terms of compliance with consents and public access to information.	0 Variation in consent conditions and requirements has resulted in challenges with monitoring and enforcement. There is also variation in monitoring and reporting of network overflows. Difficult to compare the relative performance of environment and public health impacts across providers. Public information about the performance of wastewater networks is hard to find and difficult to be assured that wastewater treatment plants are meeting the necessary environmental and public health outcomes.	+ Drives consistency in monitoring and reporting requirements, reducing variability across the country. Standardised monitoring and reporting requirements are likely increase transparency and accountability in relation to wastewater system performance. Requiring operators to assess and categorise overflows and bypasses according to risk, as well as carry out enhanced monitoring and reporting, is likely to increase accountability through better systematic monitoring and oversight over overflows and bypasses. Cost savings reduce barriers to compliance.	++ Increase in standardisation of conditions including monitoring and reporting requirements for a broader range of matters in addition to the prioritised standards is likely to drive even more consistency and increase accountability of providers. Cost savings reduce barriers to compliance.
Feasibility: The extent to which an option can be implemented in a way that takes into account real-world constraints and practicalities.	0 System is understood but requires extensive resources to administer and engage with. Does not take into account the Ministerial direction to have wastewater standards put in place.	+ Given the complexity of the current process, any changes would require time and guidance to implement. Notwithstanding the complexity of the changes, it is considered that this option can be effectively implemented within the timeframes set. This option finds a balance between achieving the greatest amount of standardisation within the timeframes available and achieves this by prioritising the changes that most effectively manage the risk to public health and the environment.	-- As this option results in a high degree of change from current practice, it would require significant effort from Councils to implement effectively in terms of informing/educating stakeholders of the new regime and adjusting council processes. Due to resource constraints, this option is unlikely to be effectively implemented within the timeframes set.
Provides for Māori, iwi and hapū interests in water: The extent to which can option impacts the nature of the relationship between councils and iwi/hapū, including the impact decision-making regarding water bodies of significance	0 Existing partnership, co-management arrangements remain in place. While Māori, iwi and hapū can have input into several different matters under the current consenting process, time, resource and funding commitments are high and there is no guarantee that their desired outcome will be pursued.	- Not intended to impact existing Treaty obligations or other obligations regarding decision-making around water services or the management of water bodies of significance. However, this option will reduce the ability of iwi and hapū to influence treatment outcomes "at place". Areas covered by the standards will be fixed by the standard. This will reduce the ability of mana whenua to exercise kaitiakitanga. Iwi / Māori will have significantly greater information about compliance of plants and networks with consents, thus increasing their ability to hold infrastructure owners and regional councils accountable for compliance and enforcement.	-- Not intended to impact existing Treaty obligations or other obligations regarding decision-making around water services or the management of water bodies of significance. This option will reduce the ability of iwi and hapū to influence treatment outcomes "at place" to the greatest extent. It would result in most or all treatment requirements covered by the standards, together with many areas of a plant's operation, becoming fixed, thus significantly minimising the ability of mana whenua to exercise kaitiakitanga through influencing treatment outcomes and the overall health and wellbeing of land and water.
Overall assessment	0	+	+

What option is likely to best address the problem, meet the policy objectives, and deliver the highest net benefits?

99. Cabinet agreed on the Authority's recommended **option two**, which is to implement standards for discharges to land, water and biosolids, and monitoring and reporting of overflows and bypasses through consents. This is the preferred option because it best meets the objectives relating to wastewater standards, given available resources.

100. While option three scored higher across several of the assessment criteria and is likely to produce marginally better public health and environmental outcomes, it is not considered feasible due to higher cost to develop and implement.

101. Option two will address key challenges in the regulatory system by promoting efficiency, and support consistency and transparency in **public health and environmental performance** across New Zealand. The standards have codified current practices in WWTP discharge consenting, so this provides a relatively quick and practical approach to implementation. Implementing a wastewater standard for biosolids will promote beneficial reuse and reduce landfill dumping. Requiring standardised assessment and categorisation of overflows and bypasses will improve their management nationwide as well as increase transparency.

102. Option two expects significant **efficiencies** with reduced need for specialist assessments, especially for renewals. Efficiencies in the consent process could save between 25 to 60 percent of typical consent-related costs. Longer term consents reduce time and costs required to seek consents renewals. The greatest benefits come from reduced reconsenting time and costs for existing facilities, aiding long-term planning and investment and design certainties.

103. In terms of **accountability**, option two promotes national consistency in monitoring and reporting for prioritised standards, enhancing transparency and accountability in wastewater system performance, especially for overflows. Requiring operators to assess and categorise overflows is expected to improve accountability through better systematic monitoring and oversight.

104. For **feasibility,** the proposed changes under option two will require councils to invest significant effort to educate stakeholders about the new regime. This option is considered feasible as it can be effectively implemented within the set timeframes. Option three on the other hand, would result in a much higher degree of change from the status quo. It would require much more effort from councils to implement effectively and is unlikely to be achievable within the timeframes.

105. This option, as well as option three, are not intended to impact existing **Treaty obligations** or other obligations regarding decision-making around water services or the management of water bodies of significance. However, this option will reduce the ability of iwi and hapū to influence treatment outcomes "at place", though to a lesser extent than option three. From a te ao Māori perspective this will reduce the ability of mana whenua to exercise kaitiakitanga and will be unlikely to meet expectations.

106. Option two would also significantly promote transparent monitoring and reporting requirements for all aspects of wastewater treatment plants and overflows, thus

strengthening accountability of infrastructure owners and regional councils to iwi and hapū.

107. Overall, option two finds a balance between achieving the greatest amount of standardisation within the timeframes available, by prioritising the standards and changes that most effectively manage the risk to public health and the environment - discharges to land, water, biosolids, as well as monitoring and reporting requirements for overflows and bypasses. It is considered that this option will lead to more confidence in investment decisions and promotes standardisation of design, procurement, material selection and construction of treatment plants.

108. While this option does not set standards for air, energy, or waste that is introduced by a third party into a wastewater network, these matters are listed for potential future standards in section 138 of the Water Service Act.

Part B – Content of the standards

109. Following the release of the discussion document, policy decisions were made by the Ministers of Local Government and Resource Management reform about changes to some aspects of the proposals in response to feedback provided through submissions and further technical expert advice.

110. The power to make these policy decisions was delegated to these Ministers by Cabinet. This included areas such as changes to treatment limits, monitoring and reporting arrangements, and how areas like risk management might apply to the proposals. The development of the standards was informed by **expert advice and the latest science to find an appropriate balance between protecting environment and health and providing for cost efficiencies of standardisation.**

111. The section below focuses on Cabinet's decision to authorise the submission to the Executive Council of the Local Government (Water Services) Wastewater Environmental Performance Standards Regulations 2025 (the regulations), which the first set of national wastewater environmental performance standards (wastewater standards). It does so by:

- assessing the main design choices for each of the four standards that are recommended to Cabinet and
- comparing the preferred option that is recommended to Cabinet Legislation Committee to a continuum of other options to understand their regulatory impact against the counterfactual.

112. It also sets out the feedback received through the discussion document processes across all four standards, and highlights the changes made in response.

Standard setting principles

113. Based on the statutory framework and the objectives set out in section 1 (including alignment with Government priorities), a number of key principles were used to inform the development of the standards and their requirements:

- standardisation across wastewater plants and networks,

- cost effectiveness of treatment requirements,
- improved environmental and public health outcomes,
- ease of use and implementation, and
- improved transparency and accountability.

114. These principles are aligned with the assessment criteria set out in the table below:

Table 4: Principles alignment to criteria

Criteria	Description	Link to principles
Protects public health and the environment	The extent to which the option results in protection of public health and the environment.	The extent to which the content and requirements of standards improve both environmental and public health outcomes.
Efficiency	The extent to which the option enables efficiencies and cost savings in the design, consenting, and the ongoing operation of water services.	The extent to which content and requirements of standards, including treatment limits, are cost effective and balance the trade-off of improved treatment quality and the cost of plant upgrades.
Accountability	The extent to which the option strengthens providers' accountability to the public for the quality of wastewater services, compliance with consent and regulatory requirements and public access to information.	The extent to which the standards promote improved transparency and accountability, and compliance with requirements for resource consents.
Feasibility	The extent to which an option can be implemented in a way that considers real-world constraints and practicalities, including the complexity of the system and the Ministerial preferences that standards will be put in place as soon as practicable after the enactment of the Local Government (Water Services) Act.	The extent to which the standards are easy to implement and will result in necessary upgrades and renewals needed.
Provides for Māori, iwi, and hapū interests in water	The extent to which an option impacts the nature of the relationship between councils and iwi and hapū, including the impact of decision-making regarding water bodies of significance to Māori.	The extent to which the standards uphold the interests of iwi / Māori, and Treaty settlement obligations to specific iwi and hapū.

How we assessed the standards

115. To assess the regulatory impact of the wastewater standards that have been proposed, a continuum of options for regulatory intervention has been developed to provide a comparison to the preferred option. These options range from the counterfactual, low intervention, a balanced approach and a precautionary standard.

116. These are summarised in the table below:

	Option one: No standards (counterfactual)	Option two: Low regulatory intervention	Option three: Balanced regulatory intervention (recommended).	Option four: Precautionary regulatory intervention
General description	For all counterfactual options, no standards would be introduced, and the current RMA consenting processes would continue to apply.	Low regulatory intervention options reflect an approach that minimises the shift to a new regulatory approach.	Balanced regulatory intervention options rely on technical advice to achieve a balance between cost effectiveness, environmental and public health outcomes, and simplicity in implementation.	Precautionary regulatory intervention options seek to support a full transition to a new regulatory approach and deliver significant improvements to environment and public health outcomes.
Discharge of treated wastewater to water	No standards would be introduced for discharges to water (counterfactual).	Low regulatory intervention with a small number of receiving environments, low levels of treatment and small parameters of treatment. Little tailoring available to protect receiving environments.	Balanced regulatory intervention with moderate number of receiving environments and balanced levels of treatment and treatment parameters. Additional tailoring available through risk assessments for higher risk environments.	Precautionary regulatory intervention with high numbers of receiving environments, high level of treatment and high parameters of treatment tailored to protect all receiving environments.
Discharge of treated wastewater to land	No standards would be introduced for discharges to land. Consents considered in bespoke ways. (counterfactual).	Low regulatory intervention with significant levels of nutrients to be discharged to land under a broad range of environmental conditions regardless of soil type, a simplified site assessment and very few monitoring requirements.	Balanced regulatory intervention with a standard that allows for discharges to a range of site types (calibrated to assimilative capacity) and treatment requirements that will support public health and environmental outcomes.	Precautionary regulatory intervention with low levels of nutrients to be discharged to land (high pre-treatment would be mandatory), high tailoring to environmental conditions (for example soil types), highly detailed site assessments and high monitoring requirements.
Beneficial reuse of biosolids	No standards would be introduced for the beneficial reuse of biosolids (counterfactual).	Low regulatory intervention with biosolids allowed to be applied to land with minimal processes or grading.	Balanced regulatory intervention with a balanced grading system for processing biosolids, including additional requirements where biosolids have a lower grade and monitoring and reporting requirements tailored to the grade of the biosolid.	Precautionary regulatory intervention very high levels of processing, strict grading requirements for multiple contaminants (including contaminants of emerging concern), and strict monitoring requirements for the health of land and soil.
Monitoring and reporting requirements for wastewater network overflows and bypasses	No standards would be introduced for overflows (counterfactual).	Low regulatory intervention minimal reporting requirements only required in highest risk situations (when habitable floors are flooded, or where there are significant public health risks on beaches).	Balanced regulatory intervention with a risk-based approach to monitoring and reporting overflows and bypasses.	Precautionary regulatory intervention with high levels of monitoring and reporting across all levels of risk, strict limits on overflows, and a containment standard.

Discharge of treated wastewater to water

Summary of the standard

Discharge to water standard will categorise receiving environments

117. The proposed discharge to water standard classifies receiving environments by their risk, sensitivity and assimilative capacity, creating five freshwater and four marine water receiving environments. Categorising receiving environments by risk enables the standard to be responsive to diverse environmental, ecological and geographic circumstances. Exceptions to the standards are outlined below.

118. The standards set out specific treatment requirements for each class of receiving environment to mitigate risks to the environment (for example, nutrients) and public health (for example, pathogens). The standards set out a proportionate and standardised approach to monitoring and reporting to facilitate full compliance and a national performance picture. Regional councils would continue to administer resource consents for wastewater treatment plants, but they would not be able to set consent conditions that either directly or indirectly require higher or lower levels of wastewater treatment than required by the treatment limits set in the standards.

119. A dilution approach (as a proxy for mixing) is proposed because it is simple, is understood by regulators and operators, and removes the need for more complex (and costly) dispersion modelling. This is reflected in its frequent use in other jurisdictions (including Canada, USA, and the European Union).

Parameters and numeric limits for discharges to water

120. The proposed discharge to water standard sets treatment limits by concentration for total suspended solids, carbonaceous biochemical oxygen demand (cBOD5), nutrients, and pathogens (E. coli and enterococci). Other contaminants (such as heavy metals, plastics, PFAS or pharmaceuticals) can continue to be addressed by regional councils who may set treatment requirements for these contaminants as long as they don't amend the limits covered by the standard.

121. Proposed treatment limits are specific to each receiving environment reflecting the risks. Discharges to open ocean experience a higher rate of mixing and dispersion, are subject to stronger tidal and wind currents, and less frequent public access to the discharge point, therefore less stringent controls for fewer contaminants are proposed.

122. However, recognising that treated wastewater can harm public and environmental health, particularly from eating contaminated shellfish, the standards introduce a trigger to tailor pathogen limits. Where a discharge point to water is within 4km of a shellfish bed, a Quantitative Risk Management Assessment (QRMA) would be triggered and be used to determine more stringent limits for pathogens (including, but not limited to, enterococci and *E. coli*). The use of the QMRA assessment ensures public health risks are acceptably managed.

123. Another alternative to the default limits is a periphyton risk assessment to better protect freshwater bodies and manage periphyton growth. This risk assessment is triggered if

the discharge is to hard bottomed rivers or streams and can be used to determine the treatment limits for nutrients up to the practical limits of technology.

Monitoring and reporting requirements

124. To provide confidence in standards' implementation and compliance, network operators will be required to engage a third party, on an annual basis, to independently certify compliance with matters covered by the standard, including monitoring and reporting requirements. All discharge to water standards set monitoring and reporting requirements which will include:

- the parameters to be measured using concentration measures,
- monitoring the discharge at the discharge point ('end of pipe' monitoring),
- monitoring requirements are set out in the table of parameters and are based on either the 90th percentile or annual median or both, and
- the frequency of monitoring is proportionate to the size and complexity of a wastewater treatment plant (see table).

Table 5: Monitoring frequency

Size of population served	Frequency of monitoring
Greater than 10,000.	Daily monitoring
Between 1,000 and 10,000 people.	Fortnightly monitoring
1000 people or fewer	Quarterly monitoring

125. The following reporting requirements will apply to all parameters:

- Any breach of a parameter must be reported by an operator to the relevant regional council as soon as reasonably possible after the breach is detected.
- An operator must publish compliance against parameters in applicable standards on a monthly basis, on a publicly available website maintained by the operator, and provide the report to the relevant regional council.
- Annual reporting is required of compliance against parameters in applicable standards to regional councils and the Water Services Authority.

Exceptions to the standard

126. Where the proposed standard does not apply, any treatment requirements would be determined by regional council as part of a standard RMA consenting process.

127. The proposed standard will not apply in the following situations:

- discharges to a pristine waterbody that meets the requirements of Attribute Band A for all attributes contained in Appendix 2A and Appendix 2B of the NPS-FM

- discharges from a wastewater treatment plant directly to some special environments (such as geothermal water, aquifers (commonly known as deep well injection), and karst)
- discharges to natural wetlands which are not part of the treatment process for the wastewater discharge
- bypasses from a wastewater treatment plant (this is covered by the overflows and bypasses standard)
- discharges within the following proximities: 1,000m upstream or 100m downstream of human drinking water abstraction points in rivers, and 500m radius from human drinking water intakes in lakes ~ 1,000m upstream of any tributaries that discharge to lakes within the 500m radius from intakes, and
- discharges to a waterbody that has naturally high levels of a particular parameter.

How the standards were refined following consultation

128. Most submission feedback related to the proposed discharge to water standard. Further technical advice was sought on refinement suggested through submissions. The risk management framework for the standards remains.

Changes to drive further standardisation

129. The proposed standards framework outlined areas where risk assessment or exceptions could be used to tailor arrangements to ensure that discharges do not risk public and environmental health. Many territorial authorities suggested ways that risk assessments or exceptions could be standardised or narrowed and argued this was needed to lower cost and time relating to consenting and infrastructure and increase the standardisation benefits. Refinements have been developed so the standards cover a wider range of discharge arrangements and standardise the consenting process as much as possible.

130. Regional councils, iwi / Māori and some other submitters (such as the Parliamentary Commissioner for the Environment) said standardisation should be reduced as much as possible to ensure that resource consenting continues to place a high emphasis on tailoring of consent conditions to different water bodies, expert technical advice and community engagement. These submissions run counter to the overall policy intent and would reduce the intended benefits of driving infrastructure standardisation, reducing barriers to non-compliance and maximising cost and time efficiencies in resource consenting. There was support from regional councils in standardising consent conditions related to monitoring and reporting.

131. The Authority progressed changes (e.g. to the periphyton risk assessment process) and clarity of a specific assessment process (e.g. Land risk assessment processes and the QMRA to ensure public health and mahinga kai values). Triggers are set to be responsive to the environment as well as maintain standardisation, as broadly as possible. This included inclusion of rapid infiltration systems and two new categories of

water body: nearshore coastal water bodies, and very low dilution receiving environments.

Refinement of the proposed small plant standard

132. The discussion document proposed a dedicated discharge to water standard for existing small plants (e.g. servicing fewer than 1,000 people). The proposed small plant standard removed nitrogen and phosphorous treatment limits and sought feedback on other standardisation opportunities proportionate to small plants.

133. Many territorial authorities, particularly those with a number of small plants, strongly supported the small plant standard and suggested refinements to its application definitions. There were also requests to employ other legislative arrangements to incentivise cheaper standardised technology solutions and modular arrangements (such as infrastructure design solutions).

134. Territorial authorities generally supported no treatment limits for nutrients, and suggested reduction of other treatment requirements (e.g. total suspended solids). Regional councils, industry submitters and iwi generally opposed the more permissive approach to contaminant limits, on the basis of environmental and public health protection. Submitters also expressed concern about seasonal or tourism related spikes in population and resultant spikes in contaminant levels, as plant capacity is exceeded during peak times increasing risks to environmental and public health.

135. The Authority made a number of changes to this standard in response to the feedback, including:

- ensuring that the criteria to determine whether a small plant qualifies for the standard are practical and easy to apply,
- ensuring that the monitoring and reporting requirements for qualifying small plants are proportionate to their impact and practically feasible, and
- other technical changes proposed by councils relating to how small plants operate (for example using a measurement-based rather than set interval approach to de-sludging maintenance)

Treatment limits

136. There was high interest in submissions about the proposed treatment limits in the discharge to water standard. Most territorial authorities considered the treatment limits were at a level that reflected a balance between cost effectiveness and protection of public health and the environment and did not propose significant change in this area. A number of territorial authorities requested limits for additional contaminants, to provider greater certainty and minimise areas for regional council discretion. Some suggested changes were informed by a council's own existing treatment arrangements.

137. Iwi / Māori submissions generally proposed significantly higher treatment requirements if discharges to water couldn't be avoided.

138. Regional councils also proposed higher treatment requirements and tended to have a focus on the cumulative impacts of particular contaminants (such as nitrogen in farming-based catchments). They also proposed that, where an existing consent had higher levels of treatment for a particular contaminant, it should be "grandparented"

(i.e. retained) when a new consent is issued. This proposal would detract from the benefits of standardisation.

139. Based on submissions from infrastructure owners and further technical advice, the Authority's overall assessment was that the proposed treatment limits (alongside the triggers for further assessments) reflect a balance between cost effectiveness and protection of public health and the environment. The wastewater standards treatment limits are comparable to those in current consents, where they are set. However, there will be "unders and overs" in comparison with individual consent limits, as current consenting is driven by a broad range of factors.

Water body categories

140. The proposed discharge to water standard categorises water bodies and proposes treatment requirements (measured at the end of the pipe) increasing as the sensitivity the water body increases from low (open ocean) to very high (lakes and estuaries).

141. Submissions requested more clarity regarding the definitions of water bodies. Particular plants were identified as having incorrect mixing assumptions. These were primarily in the ocean and low energy coastal categories. For example, discharges from the Timaru and Bluff wastewater treatment plants were in the low energy coastal category but discharge into high mixing environments. Based on ocean modelling, a new category of water body: *nearshore coastal* was developed to cater for discharges that discharge to high energy environments close to shore.

142. Some councils requested that the standards framework should expand to cover discharges to very low dilution waterbody. The initial proposals excluded these arrangements so they would be covered by default resource consenting processes.

143. The Authority worked with these councils to better understand the nature of these plants. Further technical advice was received and tested. To enable greater standardisation, more stringent treatment limits were developed to address the higher level of risk, acknowledging that water would not be reliably available to mix with the discharge.

Assessment of the regulatory impact

144. Four options were developed to test the main parameters of the discharge to water standard, including the number of receiving environments and the calibrations of associated conditions and limits to assess the regulatory impact:

- **Option one**: No standards (counterfactual).
- **Option two: Low regulatory intervention** – small number of receiving environments, low levels of treatment and small parameters of treatment.
- **Option three: Balanced regulatory intervention (recommended)** – moderate number of receiving environments and balanced levels of treatment and treatment parameters.
- **Option four: Precautionary regulatory intervention** – high numbers of receiving environments, high level of treatment and high parameters of treatment.

Option one: No standards (counterfactual)

145. Under this option, no standards would be introduced for discharges to water. Consents for the activity of discharging to water would continue to be issued with bespoke terms and conditions set by the relevant consenting authority.

Option two: Low regulatory intervention

146. Under this option, a standard is set at a low level of regulatory intervention which is closer to the counterfactual – a blunt approach. The standard thresholds would be low and generally achievable for most plants and at a low cost (both upfront and ongoing operations) to water service providers. This assumes that providers would treat the standard as minimum expectation and assuming discretion by councils to increase interventions. There would be little tailoring available to protect receiving environments.

147. A standard under this option would provide for a small number of receiving environment categories on which standards are based. There would be low levels of treatment limits (including nutrient treatment such as nitrogen, phosphorous and ammoniacal nitrogen and pathogen treatment). There would also be fewer parameters of treatment. Under this option there would also be minimal reporting requirements only required in highest risk situations, and no improvement requirements.

Option three: Balanced regulatory intervention (recommended)

148. Under this option, a standard would be set at a level that balances the trade-off between protective factors for public health and the environment, with cost and operational efficiencies and feasibility. They would be informed by technical and expert advice and be informed by current practice. Some councils will face upgrade costs depending on their starting position, while others who are already operating at the standard level will not.

149. Under this option a moderate number of receiving environments categories would be set to enable some tailoring of treatment parameters while retaining the benefits of standardisation. This approach strikes a balance between tailoring treatment requirements to the sensitivities of different reeving environments while enabling efficiencies and costs savings through standardisation and adequate treatment levels for most environments. Pristine waterbodies, natural wetlands and drinking water sources are exempt from the standards.

150. There would be a balanced level of treatment limits, for example, pathogen treatment (disinfection) would aim to reflect a balance between ensuring that public health is protected in a cost-effective way, with high levels of disinfection of wastewater discharges only required where there are significant risks to public health – for example

protecting recreational use of waterways, with targeted risk assessment required where shellfish gathering occurs.

151. Under this option, treatment requirements would be put in place for parameters that are not always regulated or monitored, with the aim to enable a more accurate assessment of wastewater treatment compliance.

152. There would also be additional tailoring available through risk assessments for higher risk environments.

153. Monitoring requirements for parameters that are not currently tracked in all consents would be introduced to enable assessments of wastewater treatment performance at the point of discharge.

Option four: Precautionary regulatory intervention

154. Under this option a standard would be set at a stringent level that prioritises environmental outcomes over cost (both upfront and ongoing operations). This means that this option would be a significant ‘step up’ for many councils.

155. There would be a high number of receiving environment categories introduced as part of the standard.

156. Treatment limits would be set at a precautionary level, for example, high levels of treatment of total suspended solids would be required to ensure clarity of discharges, high levels of nutrient treatment would be required, and high levels of disinfection of wastewater discharges would be mandatory. Limits would be imposed on as many contaminants as possible – for example, there would be treatment limits for emerging contaminants such as PFAS and microplastics, and heavy metals.

157. Treatment requirements would be set for a large number of contaminants and numerous receiving environment categories would enable significant tailoring.

Table 6: Discharge to water standard assessment

	Option one: No standards (counterfactual)	Option two: Low regulatory intervention	Option three: Balanced regulatory intervention (recommended).	Option four: Precautionary regulatory intervention
Public Health and Environment Protection: The extent to which the option results in protection of public health and the environment.	0 If no standards are introduced, existing systemic issues with public health and environmental impacts can be expected to continue. This would include an inconsistent approach to treatment requirements for wastewater discharges across consents, with some consents requiring little or no treatment of wastewater before discharge. Impacts to waterways and other receiving environments continue to lack consistency or predictability, depending on the approach to consenting taken by the relevant consenting authority (for example the responsible Regional Council). High levels of non-compliance with consents would continue in many areas. This would mean that persistently elevated environmental and public health risks will continue in many areas of New Zealand if no discharge to water standards are introduced. A high proportion of wastewater treatment plants are operating on expired consents, together with plants operating on short term bridging consents. These plants tend to have a high impact on the environment and public health given, the age of the consents and mismatch between consenting conditions and "good" levels of treatment. Across the country, public health and environmental outcomes vary significantly, with some areas experiencing minimal risk while others face very high levels.	- A small number of receiving environment categories would result in a simplified approach to standardisation of treatment of wastewater that delivers lower costs to water service providers through standardisation and low treatment requirements but leads to treatment levels that are not responsive or appropriate for the environmental and public health risks present. This mismatch means that risks would not be appropriately managed, with some areas receiving adequate treatment while others are under protected. The low levels of treatment of wastewater would be low cost for councils and ratepayers, it would have significant environmental and public health consequences. For example, low levels of treatment of total suspended solids would lead to cloudy discharges and increase the risk of partially treated or filtered sewage entering water bodies. Similarly, low levels of nutrient treatment would exacerbate environmental pressures in already stressed catchments, contributing to algal blooms, harming aquaculture and ecosystems, and threatening drinking water sources. Under this option there would be low levels of pathogen treatment or disinfection of wastewater. Low levels of treatment for contaminants such as *E. coli* would pose serious public health risks, including increased illness from recreational water use or shellfish collection. Under this option, standards would set treatment limits for as few contaminants as possible. This approach would mean that a larger number of unregulated contaminants continue to be managed through the Resource Management framework, resulting in inconsistent outcomes and variability across regions.	+ The moderate number of receiving environment categories would enable responsiveness to different circumstances, while also ensuring that the benefits of standardisation are realised. Treatment of wastewater would be set at a level that strikes a practical balance between cost effectiveness, public health and environmental outcomes. For example, appropriately calibrated treatment of total suspended solids would be required to ensure that wastewater is filtered before entering water bodies, while not being set at a level that is so high that it is unaffordable for communities. This approach supports ecosystem health and reduces risks to aquaculture and drinking water sources. Under this option pathogen treatment (disinfection) limits would reflect a balance between ensuring that public health is protected in a cost-effective way, with high levels of disinfection of wastewater discharges only required where there are significant risks to public health. The proposed treatment requirements for parameters and the shift to end-of-pipe monitoring strengthens operational accountability and ensures that consent conditions are more enforceable. As a result, the system moves towards clearer responsibility and improved compliance, ultimately supporting healthier communities and ecosystems.	++ The high number of receiving environment categories would result in the highest possible tailoring of treatment requirements to local environmental conditions, enabling responsiveness to catchment-specific settings. The approach to treatment limits would support the delivery of high-quality environmental and public health outcomes to the highest level, ensuring that ecosystems are protected to the fullest extent, and that water bodies are safe to swim in and gather shellfish. This option would ensure that wastewater treatments would have a minimal impact on water bodies and would lift catchment health. If effectively implemented, it has the potential to achieve the highest level of environmental and public health protection across all available options, but with significance dead weight costs from applying to environments that do not need such high levels of protections. This comprehensive approach strengthens environmental and public health safeguards for the most sensitive environments, results in little additional benefit for less sensitive environments and high dead weight cost. Many councils will not be able to afford treatment or monitoring of a wide range of contaminants in this way. Again, this approach could lead to high levels of non-compliance, where treatment limits for those contaminants that are more expensive to treat are not met.

Efficiency: The extent to which the option enables efficiencies in the design, consenting and ongoing operation of water services and simplifies regulatory processes and requirements and reduces associated regulatory costs.	0 Under this option, inefficiencies that are a feature of the existing system would be expected to continue. The current system is marked by high levels of inefficiency, particularly in the consenting process for wastewater plants discharging to water. These plants are frequently reconsented for very short durations—often through bridging consents—which results in bespoke designs and unique processes for each facility. This fragmented approach imposes significant costs, time burdens, and regulatory complexity, making the overall system highly inefficient.	+ This option would result in some improvements in efficiency when compared to the existing system but would maintain some inefficiencies. There would also be some perverse outcomes. Wastewater treatment plants would be operating inefficiently, largely due to a lack of flexibility in the regulatory system under this option – more so than options three and four. The application of as small number of receiving environment categories would be a poor fit with the diversity of actual receiving environments, resulting in inappropriate treatment levels. This "one size fits all" approach to receiving environments fails to reflect local conditions leading to either over-treatment or under-treatment. As a result, costs spent on wastewater treatment would not be proportionate to the environmental or public health risks. Some areas would see unnecessary investment in excessive treatment, while others may be under-treated, meaning costs spent are not achieving the intended purpose or delivering value. The burden of managing impacts would be shifted to other aspects of the system. For example, environmental degradation may need to be addressed through catchment management (and restrictions on other users), and public health risks may be mitigated through increased reliance on hospital care. This indirect management of consequences undermines the overall effectiveness of the system. However, as with option 3 and 4, this option still provides for a clearer framework for councils to understand infrastructure demands and the associated cost pressures, enabling more effective planning and funding of new infrastructure.	++ Under this option, treatment limits would be set at a level that reflects a balance of cost effectiveness, public health and environmental protection. The efficiencies realised from standardisation would be realised to the highest level. While this option still reduces the flexibility in the regulatory system, there would be a moderate number of receiving environment categories that would drive standardisation in resource consenting processes and infrastructure upgrades, while continuing to provide flexibility for different receiving environments. This option provides a clearer framework for councils to understand infrastructure demands and the associated cost pressures, enabling more effective planning and funding of new infrastructure. By reducing the need for specialist assessments of receiving environments to determine consent conditions, it streamlines the consenting process and generates cost savings. Greater certainty around consent conditions also supports operational and administrative efficiencies. Councils and service providers can better anticipate requirements, leading to improved investment planning and more reliable delivery of infrastructure projects. Standardising treatment outcomes encourages efficiency of scale and design, including the adoption of modular infrastructure solutions. This reduces complexity and supports consistent performance across regions, making the system more cost-effective over time.	+ This option would result in some improvements to efficiency when compared to the existing system but would result in some inefficiencies. Standardisation would result in more efficient consenting processes and enable modular design of infrastructure. However, if there are a high number of receiving environment categories, varied outcomes are likely to be a continued feature of the system. Applying a high level of treatment across all wastewater treatment plants may lead to inefficiencies, particularly where the receiving environment does not require such stringent standards. Over-treatment in these cases may offer diminishing environmental and public health benefits while significantly increasing both operational and capital costs. Additionally, a larger number of standards and treatment parameters can compromise the benefits of standardisation. This undermines the potential for a streamlined approach and limits the market's ability to adopt standardised infrastructure solutions.
Accountability: The extent to which the option strengthens accountability of providers in terms of compliance with consents and public access to information.	0 Under this option, problems with accountability that are a feature of the existing system can be expected to continue. Under the existing arrangements, compliance reporting for wastewater treatment plants is patchy and inconsistent, with some operators not providing clear and publicly available information about compliance with consents. Without some standardisation this would be expected to continue in many areas. The current system demands high levels of engagement to support consenting processes, yet it lacks the transparency and consistency required for meaningful accountability. Information on compliance with consent conditions is often incomplete or poorly maintained, and enforcement practices vary significantly across regions. Without a national view of compliance outcomes or the ability to benchmark performance, it is difficult to assess how effectively councils are managing wastewater infrastructure. While the bespoke, place-based nature of existing arrangements allows communities to engage deeply in decisions about treatment before discharge to water, the absence of national benchmarking and comparison means there is no clear picture of compliance, and accountability remains limited.	+ Under this option, there would be some improvements to accountability. However, fewer receiving environments would reduce transparency and accountability of providers. When standards are applied uniformly without regard to local conditions, they may fail to reflect the expectations and needs of the community—particularly in areas where environmental and public health risks are more pronounced. This disconnect can undermine trust and make it harder for communities to hold providers to account, particularly where outcomes don't align with local priorities or concerns. Minimal reporting requirements only required in highest risk situations, would mean that while compliance would likely be easy to achieve, there would be minimal visibility of performance across different receiving environments. Many plants would also continue to have high public health and environmental impact, leading to poor environmental and public health outcomes. For example, insufficient nutrient or pathogen treatment can lead to degraded water quality and increased risks of illness, especially in communities that rely on water for recreation or food gathering. This would drive a perversity in accountability where high compliance would not reflect good system performance or good outcomes. Community concerns are likely to persist under this option, as it may be seen as failing to meet expectations for water quality and health protection. A limited number of treatment parameters also means that many contaminants may not be adequately addressed, perpetuating existing gaps in accountability.	++ This option significantly enhances transparency around infrastructure performance, enabling effective national benchmarking to identify which councils are delivering strong outcomes for their communities. By making performance data more visible, it empowers both regulators and the public to assess how well councils are managing wastewater systems. The shift to end-of-pipe monitoring builds greater transparency in how individual treatment plants are performing, which may lead to enforcement. As a result, the system moves towards clearer responsibility and improved compliance, ultimately supporting healthier communities and ecosystems. However, under this option communities will be further removed from decision-making. Overall, this standard provides a mechanism for greater transparency about plant performance, which leads to significantly higher accountability in this area. This option also provides significantly greater opportunity for oversight—ensuring that infrastructure performance is not only monitored but also acted upon.	+ This option offers greater transparency compared to the counterfactual, as precautionary treatment standards set a clear benchmark for environmental and public health outcomes. Some operators may struggle to meet these high treatment limits, resulting in ongoing non-compliance and potential reputational or regulatory challenges. A high degree of variation across different plants will make it difficult to compare performance consistently. This lack of uniformity can hinder public understanding and complicate communication about system effectiveness and accountability. Additionally, the complexity of the regulatory framework introduces a significant burden for councils and service providers. Navigating multiple requirements and compliance pathways can be resource-intensive and may reduce the efficiency and clarity of the overall system.
Feasibility: The extent to which an option can be implemented in a way that	0	++	+	-

takes into account real-world constraints and practicalities.	Retention of the status quo has low feasibility given the number of factors that demonstrate regulatory failure, patchy and often poor environmental outcomes, and a mismatch between the aspirations of communities and overall system performance and transparency. The current system is increasingly unsustainable due to aging infrastructure and growing regulatory pressures. High levels of community engagement and aspirations often result in existing plants remaining unconsented, as regulatory barriers prove difficult to navigate. The freedom to choose from unlimited treatment approaches has led to a fragmented landscape, heavily reliant on specialist input and custom-built infrastructure. This bespoke nature of design and delivery makes it difficult to establish a standardised market in a non-standardised environment, reinforcing dependence on design and engineering consultants and other technical specialists.	This option presents the potential for lower upfront investment costs, as some treatment plants may not be required to upgrade their equipment. The absence of improvement requirements can make upgrades more feasible for councils and service providers working within tight budgets. However, these savings may be offset by external costs associated with poor environmental and public health outcomes. Low levels of treatment can lead to increased risks, such as waterborne illness or ecosystem degradation, which may ultimately result in higher costs for healthcare and catchment management.	This option prioritising the most impactful changes, it enables a more efficient rollout of improved wastewater management practices. However, cost impacts will vary between councils—some plant infrastructure may face stricter limits for some contaminants, others more lenient as a “case by case” consenting system moves to a standardised one. Treatment thresholds have been carefully balanced and informed by current practice and analysis. This ensures a fair and efficient transition to the new standard. Aspects of the standards such as specific provisions for small plants and limited exceptions ensure that standardisation is achievable without compromising practicality. While network operators will still engage with communities on wastewater arrangements, the range of matters for discussion with be limited. The standards will provide certainty about treatment options and corresponding costs.	Under this option increased treatment requirements will result in very high costs and the need for more specialist equipment, making implementation challenging for many wastewater treatment plants. For many communities, the financial burden will be unaffordable, resulting in non-compliance and delays in infrastructure upgrades. This option is not considered feasible. The regulatory demands associated with higher treatment standards also introduce significant complexity. Enhanced monitoring and reporting requirements—particularly for water quality—can be costly and resource-intensive. This is especially problematic for remote communities, where laboratory capacity is limited and access to technical expertise may be constrained.
Provides for Māori, iwi and hapū interests in water: The extent to which can option impacts the nature of the relationship between councils and iwi/hapū, including the impact decision-making regarding water bodies of significance	0 Current system puts high demand on engagement with iwi and Māori to engage at all stages – many do so on unpaid of voluntary basis. However, this is seen as integral to iwi to exercise kaitiakitanga and a desirable part of the new system.	- Iwi are unlikely to support an option that may result in lower levels of treatment for wastewater that is discharged to water. Iwi will continue to have the ability to influence/engage on factors such as options for treatment, location, technology and configuration of infrastructure (exposer to rock channel) at the planning and design stage.	0 While this option is not intended to impact existing Treaty obligations or other obligations regarding decision-making around water services or the management of water bodies of significance, it will reduce the ability of iwi and hapū to influence treatment limits “at place”. Iwi will continue to have the ability to influence/engage on factors such as options for treatment, location, technology and configuration of infrastructure (exposer to rock channel) at the planning and design stage. Requirements for consented activities covered by the standards will be fixed by the standard. From a te ao Māori perspective this will reduce the ability of mana whenua to exercise kaitiakitanga. Iwi / Māori will have significantly greater information about compliance of plants and networks with consents, thus increasing their ability to hold infrastructure owners and regional councils accountable for compliance and enforcement.	+ This option would achieve aspirations of iwi / Māori for very high treatment of wastewater where discharge to water is unavoidable. While Iwi will continue to have the ability to influence/engage on factors such as options for treatment, location, technology and configuration of infrastructure (exposer to rock channel) at the planning and design stage, requirements for consented activities covered by the standards will be fixed by the standard. From a te ao Māori perspective this will reduce the ability of mana whenua to exercise kaitiakitanga. Iwi / Māori will have significantly greater information about compliance of plants and networks with consents, thus increasing their ability to hold infrastructure owners and regional councils accountable for compliance and enforcement

What option is likely to best address the problem, meet the policy objectives, and deliver the highest net benefits?

158. The Authority recommends **option three,** a balanced regulatory approach with a moderate number of receiving environment categories, and balanced levels of treatment and treatment parameters.

159. Option three **strikes a practical and effective balance the trade-offs between environmental and public health outcomes, with cost efficiency, and feasibility**. It is the approach that will deliver the most benefit for stakeholders (including councils, communities and the environment) while managing costs.

160. For **public health and environmental outcomes**, by introducing a moderate number of receiving environment categories, it allows for tailored treatment requirements that reflect local conditions while still benefiting from standardisation. Treatment levels for key contaminants such as total suspended solids, nutrients, and pathogens are calibrated to manage risks effectively without imposing excessive costs on councils. The regulation of compliance parameters and end-of-pipe monitoring strengthens accountability and enforcement, supporting healthier communities and more resilient environments.

161. While option four would present the best for public health and environmental outcomes, with higher protections, this option is less **feasible** and would come with significant costs to councils, and for many communities, the financial burden will be unaffordable, resulting in non-compliance and delays in infrastructure upgrades. Option two on the other hand, while the most feasible and cost effective for many councils, would present significantly worse outcomes for public health and the environment, and potentially exacerbate existing environmental pressures.

162. The cost to implement option three will be dependent on the case – there will be councils who will need to upgrade to meet standard, and some will already be meeting the standards, so would require no or limited upgrades. However, we consider that option three hits the right balance of public health and environmental outcomes, while also offering a practical pathway to improved wastewater management that accounts for real-world constraints, carefully balances current practice and aligns to comparable international examples.

163. All options will deliver **efficiencies** in design, consenting, and operation of wastewater service to some extent. Under option three, the moderate number of receiving environment categories enables standardisation while maintaining flexibility for local conditions. Councils benefit from a clearer framework for infrastructure planning and funding, reducing the need for bespoke assessments and enabling cost-effective modular solutions. Treatment limits are set to balance affordability with environmental and health outcomes, supporting efficient investment and reliable infrastructure delivery. This approach reduces complexity, enhances predictability, and supports consistent performance across regions, making the system easier to manage and more cost-effective over time.

164. Option three also significantly strengthens **accountability** by introducing transparent performance monitoring and enforceable consent conditions. The inclusion of new parameters not currently tracked allows for more accurate assessment of wastewater treatment at the point of discharge. Councils and service providers are held to clearer standards, empowering regulators and communities to assess performance and demand improvements. Again, while option four provides for more stringent monitoring and reporting requirements, some operators may struggle to meet these high treatment limits, resulting in ongoing non-compliance and potential reputational or regulatory challenges.

165. Option three also supports **Māori, iwi and hapū interests** by improving transparency and accountability in wastewater management. Although the standardisation of treatment limits reduces the ability of mana whenua to influence decisions “at place,” it

enhances access to compliance information, empowering iwi and hapū to hold councils accountable. This supports the exercise of kaitiakitanga through informed oversight and advocacy. However, option four would achieve aspirations of iwi / Māori more than option three due to the very high treatment of wastewater where discharge to water is unavoidable.

Discharge of treated wastewater to land

Summary of the standard

166. Approximately 35 percent of wastewater treatment plants discharge treated wastewater to land. The proportion of discharge to land arrangements is highest for small plants, with approximately 50% of plants serving populations of 1000 or less discharging to land.

167. Currently, there are no standardised consent conditions for treated wastewater discharged to land. This creates variation in what contaminants are covered in consents and what limits apply. This impacts the ability of network operators to plan, design and operate wastewater infrastructure, often resulting in a need for extensive specialist reports that have a significant financial and time cost.

168. The proposed standard for discharge of wastewater to land uses a risk-based framework to determine the suitability of land, treatment requirements for classes of land, requires management and operational plans and sets out monitoring and reporting requirements.

169. The standard will set limits for the application of total phosphorus, total nitrogen and *E. coli*. Other parameters, such as total suspended solids and heavy metals, are not directly covered by the proposed standard, either because they are not relevant for discharges to land, or because we currently do not have supporting data to determine an appropriate standardised treatment limit. The standard will apply to both low-rate infiltration arrangements and rapid infiltration systems. Rapid Infiltration Systems were added following consultation to increase the scope of the standards.

Risk-based framework

170. A risk-based framework will be used to determine a risk class for the land which will then set treatment requirements and application limits that apply. The risk-based approach is comprised of three components:

- **A desktop feasibility assessment** of prospective land. This assessment will consider items such as underlying geology and groundwater, physical attributes of the site such as topography and size, and current or proposed land uses.
- **A risk screening assessment** which generates a score to indicate the risk category. Risk screening involves applying a qualitative risk assessment tool, to identify pathways for contaminants to reach a receptor as a result of the discharge. This will consider environmental, public health, and social risks. A risk category between 1 – 4 will be assigned.
- **A site capability assessment** will involve a detailed check of key factors to understand the capability of the site to receive and manage a discharge. This will consider the proposed application method, detailed groundwater and soil

assessments, and possible options for mitigating the effects of a discharge. A site capability category between 1 – 4 will be assigned.

171. Combining the risk and site capability categories will then determine the overall Class for the site, and the subsequent loading rates and numeric limits that apply as illustrated in the table A and table B below:

Table 7: Numeric limits for treated wastewater discharged onto or into land (slow rate infiltration)

Standard class	Total Nitrogen (kg / ha / yr)	Total Phosphorus (kg / ha / yr)	*E. coli* (cfu/100ml in treated wastewater) Restricted Public Access	*E. coli* (cfu/100ml in treated wastewater) Restricted Public Access
1	550	110	No limit	<1
2	250	50	<2,000	<1
3	150	30	<1,000	<1

Table 8: Numeric limits for treated wastewater discharged onto or into land (rapid infiltration)

Standard class	Total Nitrogen (kg / ha / yr)	Total Phosphorus (kg / ha / yr)	*E. coli* (cfu/100ml in treated wastewater)
1	20,000	7,000	100,000
2	10,000	3,000	10,000
3	4,000	1,000	1,000

Management and operational plans

172. All consents for discharge of wastewater to land will be required to develop and implement a Management Plan and an Operations and Maintenance Manual. These documents should include detail about: site restrictions; site inspection requirements (general site operation); management requirements and recommendations; maintenance and contingency requirements; and environmental monitoring and reporting requirements.

Monitoring and reporting arrangements

173. All discharge to land arrangements will have monitoring and reporting arrangements which will include the following aspects:

- Groundwater and soil monitoring.
- Any breach of a parameter must be reported by an operator to the relevant regional council as soon as reasonably possible after the breach is detected.
- An operator must publish compliance against parameters in applicable standards on a monthly basis, on a publicly available website maintained by the operator, and provide the report to the relevant regional council. Water quality monitoring and groundwater monitoring results should also be published and shared with the relevant regional council.
- Annual reporting is required of compliance against parameters in applicable standards to regional council and the Water Services Authority. To provide

confidence in how the standards are implemented, network operators will be required to engage a third party, on an annual basis, to audit compliance with matters covered by the standard, including monitoring and reporting requirements.

How the standard was refined following consultation

174. There was support across submitters for the proposed discharge to land standard. Councils with existing discharge to land schemes (such as Manawatū District Council and Opotiki District Council) provided feedback. For these councils, retaining an existing scheme is the most cost-effective approach, and their submissions suggested ways to ensure that the standard applies to their plants.

175. Other stakeholder groups (such as the Land Treatment Collective, an organisation made up of professionals who specialise in discharge to land) made submissions about refinement of the detail of the standard. Iwi and Māori submitters were supportive of more discharge to land schemes and emphasised the importance of avoiding excessive regulatory burden to ensure discharge to land arrangements were not disincentivized by the regulatory system.

176. Following the consultation period, the Authority obtained further technical advice and worked with councils and stakeholders to ensure opportunities for further standardisation were leveraged. The Authority identified changes to help ensure the standard is practical and tailored to existing council arrangements. These include:

- ensuring the arrangements work for “dual discharge” schemes, such as those in the Manawatū, which discharge to land for some of the year, and to water when land discharge is not possible,
- expanding the standard to cover rapid infiltration schemes – such as those in Opotiki District,
- revising annual nitrogen and phosphorus loading rates for discharge to land schemes as some submitters said that the proposed rates should be further tested and verified to ensure that this approach is appropriate (for example, in relation to different soil types), and
- technical changes to the site-specific risk assessment and an operations and management plan for discharge to land schemes.

Assessment of the regulatory impact

177. We developed four options to test the main parameters of the discharge to land standard, including the level of nutrients, environmental conditions and monitoring requirements, to assess the regulatory impact:

- **Option one**: No standards (counterfactual)
- **Option two: Low regulatory intervention** – Significant levels of nutrients to be discharged to land under a broad range of environmental conditions regardless of soil type, a simplified site assessment and very few monitoring requirements.
- **Option three: Balanced regulatory intervention (recommended)** – Standard that allows for discharges to a range of site types (calibrated to assimilative capacity) and treatment requirements that will support public health and environmental outcomes.
- **Option four: Precautionary regulatory intervention** – Low levels of nutrients to be discharged to land (high pre-treatment would be mandatory), high tailoring to

environmental conditions (for example soil types), highly detailed site assessments and high monitoring requirements.

Option one: No standards

178. Under this option, no standards would be introduced for discharges to land. Consents for the activity of discharging to land would continue to be issued with bespoke terms and conditions set by the relevant consenting authority.

Option two: Low regulatory intervention

179. Under this option, a standard is set at a low level of regulatory intervention which is closer to the counterfactual. As with the discharge to water standard, under this option, this standard would be set at a low level of regulatory intervention which is closer to the counterfactual – a blunt approach. The standard thresholds would be low and generally achievable for most plants and at a low cost (both upfront and ongoing operations) to water service providers.

180. There would be **significant levels of nutrients** discharged to land under a broad range of environmental conditions with less regard to soil type and assimilative capacity, due to a simplified site assessment. There would be fewer monitoring requirements.

Option three: Balanced regulatory intervention

181. Under this option, a standard would be set at a level that balances protective factors with cost and operational efficiencies and feasibility. As with the discharge to land standard, they would be informed by technical and expert advice and be informed by current practice. Some councils will face upgrade costs depending on their starting position as few councils have adopted discharge to land.

182. This option would involve a standards regime that is based on **comprehensive site and environmental risk assessmen**t so that the scheme can be properly designed. It would allow for discharges to a range of site types, calibrated to assimilative capacity. Nutrient and phosphorous loading limits would be calibrated to assimilative capacity of the soil and other factors such as distance to groundwater. Pathogen treatment limits would be required only in situations where there are public health risks (such as where discharge arrangements combine with public access, such as a golf course).

183. Monitoring requirements would be proportionate to risk and to support public health and environmental outcomes, and an operations and management plan would be required, to ensure the scheme is well managed over time.

Option four: Precautionary regulatory intervention

184. Under this option a standard would be set at a stringent level that prioritises environmental outcomes. This option would involve a precautionary framework of standards for discharge to land, with **high pre-treatment of nutrients and pathogens before discharged to land, low annual loading rates, high levels of tailoring to environmental conditions** (for example soil types), highly detailed site assessments and high monitoring requirements.

185. This approach would use a detailed site assessment to identify specific suitable sites, would require high treatment levels and extensive monitoring requirements.

Table 9: Discharge to land standard assessment

	Option one: No standards (counterfactual)	Option two: Low regulatory intervention	Option three: Balanced regulatory intervention (recommended).	Option four: Precautionary regulatory intervention
Public Health and Environment Protection: The extent to which the option results in protection of public health and the environment.	0 The approach to discharge to land schemes varies significantly across different regions, which means that impacts to public health and the environment also vary, and often require highly bespoke. Some areas have complex risk management approaches, others have minimal risk assessment and management and treatment requirements are highly variable. Some schemes have operated successfully for long periods and are sustainable in terms of their impact on the environment and public health. In other areas, discharge to land schemes either fail or do not result in the environmental outcomes that were expected, notwithstanding significant investment. In some examples this can result in significant environmental impact such as contamination of land (where a scheme has to be abandoned), risk of contamination of ground water, and odour or dispersal issues that affect local communities	- This option is likely to result in poorer public health and environmental outcomes due to its minimal regulatory oversight and limited safeguards. Allowing significant levels of nutrients to be discharged to land under a broad range of environmental conditions can lead to overloading of the discharge site and/or build-up of toxic contaminants. These impacts are especially concerning in sensitive catchments or areas with poor soil absorption capacity. This option is also likely to have a high risk of scheme failure, because overloading and limited monitoring arrangements will mean that schemes may not be properly managed, with the discharge site being abandoned and potentially contaminated. Under this option, simplified site assessments and minimal monitoring requirements further reduce the system's ability to detect and respond to environmental or public health risks.	++ This option support public health and environmental outcomes to the highest extent, by promoting well-managed schemes that are sustainable in the long term. It would also enable infrastructure owners to investigate and implement land discharge in situations where it is affordable and practical, thus ensuring the highest proportion of schemes are implemented in a viable way. By setting clear limits on nutrient discharge and tailoring requirements to environmental conditions, it supports a more risk-responsive approach.	+ This option would deliver the highest level of public health and environmental protection for those sites where discharge to land schemes were implemented. High pre-treatment, low nutrient discharge limits, detailed site assessments, and strict monitoring requirements—including consideration of soil types—ensure that risks are thoroughly managed. The inclusion of emerging contaminants like PFAS and microplastics further strengthens safeguards. However, it is likely this framework would lead to a "gold standard" for discharge to land being the only option. Fewer schemes would be implemented because of the requirements of the standard, and there are likely to be higher levels of non-compliance. This means that, while this option would have high levels of public health and environmental protection for some schemes, there would be fewer schemes overall, with most schemes continuing to discharge to water.
Efficiency: The extent to which the option enables efficiencies in the design, consenting and ongoing operation of water services. simplifies regulatory processes and requirements and reduces associated regulatory costs.	0 Under this option, inefficiencies that are a feature of the existing system would be expected to continue. The current system is marked by high levels of inefficiency, particularly in the consenting process for discharge to land schemes. This results in highly bespoke designs and unique processes for each facility. This fragmented approach imposes significant costs, time burdens, and regulatory complexity, making the overall system highly inefficient. It also limits opportunities for standardised infrastructure design and planning.	+ Under this option there are some efficiency gains. Standardisation of the arrangements relating to discharge to land schemes would support short-term efficiency by allowing nutrient discharge under broad environmental conditions with simplified site assessments and minimal monitoring. This reduces regulatory burden and costs, particularly for smaller councils. However, the lack of environmental tailoring and oversight may result in poor outcomes that require costly remediation, undermining long-term efficiency.	+ Under this option, efficiency gains are realised. Clear requirements for site and environmental risk assessment will mean that infrastructure owners can assess the viability of a discharge to land scheme early in the planning process and proceed through consenting with certainty. Standardisation of treatment requirements will support consistent and scalable infrastructure design. The proportionate monitoring and reporting framework will ensure that sites are well managed, while reducing an unnecessary monitoring that does not lead to good environmental outcomes.	0 High pretreatment, low nutrient discharge limits, detailed site assessments, and high monitoring requirements introduce significant complexity and cost. While it may drive environmental and public health outcomes, affordability of design and implementation of schemes would be a challenge under this option. It would also impose a significant regulatory burden that would increase planning and design requirements, slow down consenting, increase operational costs, and make infrastructure delivery more challenging—particularly for resource-constrained councils.
Accountability: The extent to which the option strengthens accountability of providers in terms of compliance with consents and public access to information.	0 Under this option, problems with accountability that are a feature of the existing system can be expected to continue. Under the existing arrangements, compliance reporting for discharge to land schemes is patchy and inconsistent, with some operators not providing clear and publicly available information about compliance with consents. Without some standardisation this would be expected to continue in many areas. The current system demands high levels of engagement to support consenting processes, yet it lacks the transparency and consistency required for meaningful accountability. Information on compliance with consent conditions is often incomplete or poorly maintained, and enforcement practices vary significantly across regions. Without a national view of compliance outcomes or the ability to benchmark performance, it is difficult to assess how effectively councils are managing wastewater infrastructure. While the bespoke, place-based nature of existing arrangements allows communities to engage deeply in decisions about discharge to land schemes, the	+ Under this option, there would be some improvements to accountability. Low levels of pretreatment of wastewater would be required, and high levels of loading onto land would be permitted, which means that compliance would be easy to achieve. However, many schemes would continue to have high public health and environmental impact, leading to poor environmental and public health outcomes. This would drive a perversity in accountability where high compliance would not reflect good system performance or good outcomes. Community concerns are likely to persist under this option, as it would likely result in failure of schemes that were otherwise compliant with regulatory standards. A limited number of treatment parameters also means that many contaminants—especially emerging ones—may not be adequately addressed, perpetuating existing gaps in accountability.	++ This option enhances transparency significantly around scheme performance, requiring compliance to be reported regularly with national benchmarking to identify which councils are delivering strong outcomes for their communities. By making performance data more visible, it empowers both regulators and the public to assess how well councils are managing wastewater systems. Under this option communities will be further removed from decision-making because standards will set national requirements for schemes that cannot be tailored through community input. Overall, however, this scheme strikes a balance between significant increases around transparency and scheme performance, promotion of sustainable arrangements over the long term, and national standardisation.	+ This option offers better transparency compared to the counterfactual, as precautionary treatment standards set a clear benchmark for environmental and public health outcomes. Strict discharge limits, detailed site assessments, and comprehensive monitoring—including for emerging contaminants—ensure robust oversight. The extensive reporting requirements enhance transparency and allow for meaningful public scrutiny. However, many schemes may struggle to meet these high treatment and monitoring requirements, resulting in ongoing non-compliance and potential reputational or regulatory challenges. The variation across different schemes will make it difficult to compare performance consistently. This lack of uniformity can hinder public understanding and complicate communication about system effectiveness and accountability. Additionally, the complexity of the regulatory framework introduces a significant burden for councils and service providers. Navigating multiple requirements and compliance pathways can be resource-intensive and

	absence of national benchmarking and comparison means there is no clear picture of compliance, and accountability remains limited.			may reduce the efficiency and clarity of the overall system
Feasibility: The extent to which an option can be implemented in a way that takes into account real-world constraints and practicalities.	0 Retention of the status quo has low feasibility given the number of factors that demonstrate regulatory failure, patchy and often poor environmental outcomes, documented examples of scheme failure or poor performance, and a mismatch between the aspirations of communities and overall system performance and transparency. The current system is increasingly unsustainable due to aging infrastructure and growing regulatory pressures. High levels of community interest and aspiration mean there is a significant engagement burden imposed on councils when seeking to develop discharge to land schemes. The freedom to choose from unlimited treatment approaches has led to a fragmented landscape, heavily reliant on specialist input and custom-built infrastructure. This bespoke nature of design and delivery makes it difficult to establish a standardised market in a non-standardised environment, reinforcing dependence on design and engineering consultants and other technical specialists.	0 The simplified site assessments and minimal monitoring requirements reduce administrative and technical demands, making it easy to implement. However, high loading limits regardless of soil type, together with minimal monitoring requirements, will inevitably lead to scheme failure and contamination of land in the long term in circumstances where the scheme was compliant with regulatory settings. This would lead to high costs for communities, poor credibility for the regulatory system overall, and environmental risks that are difficult to manage over time.	++ This option is the most feasible of all options. By setting clear requirements for site and environmental risk assessments, this option represents a practical approach for infrastructure owners to assess the viability of a discharge to land scheme early in the planning process and proceed through consenting with certainty. Standardisation of treatment requirements will support consistent and scalable infrastructure design. Comprehensive site assessment at the outset, combined with monitoring and good operations and management, will result in the highest proportion of sustainable schemes to be implemented where practical and affordable.	- Under this option, high pretreatment, low annual loading rates, highly detailed risk assessment will result in very high costs and the need for more specialist equipment, making implementation challenging. For many communities, the financial burden will be unaffordable, resulting in non-compliance and delays in infrastructure upgrades. This option is not considered feasible. The regulatory demands associated with higher treatment standards also introduce significant complexity. Enhanced monitoring and reporting requirements for soil monitoring and water quality can be costly and resource-intensive. This is especially problematic for remote communities, where laboratory capacity is limited and access to technical expertise may be constrained.
Provides for Māori, iwi and hapū interests in water: The extent to which can option impacts the nature of the relationship between councils and iwi/hapū, including the impact decision-making regarding water bodies of significance	0 Iwi / Māori generally support a discharge to land approach in preference to discharge to water. Under the status quo, discharge to land schemes are deterred by potential high costs including a need to purchase expensive land and to commission extensive specialist engineering reports.	0 While this option may be simple for councils to access, making it attractive, the lower treatment requirements are unlikely to meet Māori aspirations around public health and environmental protection.	++ Iwi / Māori generally support a discharge to land approach in preference to discharge to water. This option will best support councils to pursue a discharge to land approach, meeting Māori aspirations for minimisation of discharge to water.	+ Treatment of wastewater to a high level meets iwi/Māori aspirations around environmental and public health protection. However, the high cost of compliance under this option would make it less likely for councils to choose a discharge to land approach.

What option is likely to best address the problem, meet the policy objectives, and deliver the highest net benefits?

186. The Authority recommends option three, a balanced standard that categorises land following assessments for suitability and assimilative capacity; allows for discharges to a range of land classes and sets and treatment and monitoring and reporting requirements that will support public health and environmental outcomes.

187. Option three offers a balanced and practical framework for regulating discharges to land, based on existing examples. It manages impacts on public health and environmental outcomes while remaining feasible and cost-effective for councils.

188. Option four provides for the best in terms of **public health and environmental outcomes** for those sites where discharge to land schemes is implemented. However, fewer schemes would be implemented because of the requirements of the standard, and there are likely to be higher levels of non-compliance. This means that, while this option would have high levels of public health and environmental protection for some schemes, there would be fewer schemes overall, with most schemes continuing to discharge to water. Therefore, option three presents the best outcomes, by promoting well-managed schemes that are sustainable in the long term. Treatment requirements for this option were informed by technical experts who considered current practice and comparable international examples to support their recommendations.

189. Options two and three both deliver **efficiency** gains by streamlining the design, consenting, and operation of discharge to land schemes. Standardisation of the arrangements relating to discharge to land schemes would support short-term efficiency by allowing nutrient discharge under broad environmental conditions with simplified site assessments and minimal monitoring. However, under option two, the lack of environmental tailoring and oversight may result in poor outcomes that require costly remediation, undermining long-term efficiency. Option four is the least efficient due to its complexity and cost.

190. Option three significantly strengthens **accountability** by embedding transparency and national benchmarking into the regulatory framework. Regular reporting on scheme performance enables both regulators and the public to assess how well councils are managing wastewater systems. While community input is reduced due to standardisation, greater transparency of performance data empowers communities to hold providers accountable. Option two would also see improvements in accountability but may trade off good system performance or environmental and public health outcomes. Option four on the other hand would have the most stringent requirements, but schemes may struggle to meet the higher treatment and monitoring requirements, resulting in ongoing non-compliance and potential reputational or regulatory challenges.

191. Option three is also the most **feasible**. By setting clear requirements for site and environmental risk assessments, this option represents a practical approach as infrastructure owners can assess the viability of a discharge to land scheme early in the planning process and proceed through consenting with certainty. Whereas option four, as noted above, will result in very high costs and the need for more specialist equipment, making implementation challenging. For many communities, the financial burden will be unaffordable, resulting in non-compliance and delays in infrastructure upgrades. Option two on the other hand, while having lower intervention, would likely lead to scheme failure and contamination of land in the long term in circumstances where the scheme was compliant with regulatory settings.

192. Option three best supports **Māori, iwi and hapū aspirations** by enabling a viable and sustainable shift from discharge to water to discharge to land. It aligns with the preference for land-based discharge while ensuring that environmental and public health protections are maintained. This supports a more respectful and responsive relationship between councils and iwi/hapū, grounded in shared goals for

environmental stewardship and community wellbeing. While option three also would also meets iwi/Māori aspirations around environmental and public health protection, the high cost of compliance under this option would make it less likely for councils to choose a discharge to land approach.

Beneficial reuse of biosolids

Summary of the standard

193. Biosolids are a nutrient and energy-rich by-product of the wastewater treatment process and are predominantly a mix of water and organic materials. New Zealand's current regulatory settings for managing biosolids generally do not provide for their reuse, but when managed and treated appropriately, biosolids have a range of benefits. To remedy this, the proposed standards for beneficial reuse of biosolids aim to enable biosolids to be applied to land, while managing the risks to protect environmental, cultural and public health.

194. The standard will be based on the 2025 Guidelines for the Beneficial Use of Biosolids on Land in New Zealand. The guidelines (first established in 2003) aim to implement best practice arrangements, informed by international approaches, with the latest revision of these guidelines being subject to extensive technical review and engagement with sector experts.

195. Key features of the proposed standard are:

- A grading system will be used based on the level of risk to determine the consenting activity status (e.g. permitted, restricted discretionary, etc).
- Exclusion periods will apply where biosolids have a lower pathogen grade depending on the land use – for example, where there is public access, or for permitted types of horticulture or agriculture.
- The nitrogen application rate for biosolids must not exceed, at maximum, an average of 200kg total nitrogen per hectare per year.

Grading system identifies risk and categorises the biosolids

196. The proposed grading system categorises biosolids into two grades:

- Stabilisation grade, A or B. This is determined by the pathogen content of the product and whether methods have been used to make the biosolids less attractive to pests and other pathogen-carrying organisms.
- Contaminant grade, 1 or 2. This is determined by the levels of metals and organic contaminants in the product.

197. Confirmation of pathogen and contaminant grades will require two sets of sampling:

- Verification sampling demonstrates whether a treatment process is producing a final product of consistent quality and is typified by a high-frequency sampling regime.
- Routine sampling is required to demonstrate continued compliance with the product standards.

Consenting approach

198. Application of highest grade biosolids to land will be treated as a permitted activity. The use of lower grade biosolids will be a controlled or discretionary activity.

How the standard was refined following consultation

199. This proposed standard received the lowest amount of feedback, with submitters generally in favour of the proposals. The standard is based on guidelines that have already received extensive consultation and technical review. Some submitters requested additional information about areas such as biosolids grades, site criteria and exclusion zones. A lot of the information requested is provided in the Water NZ guidelines, which will support implementation of the standard.

200. Submitters supported a future work programme for the Authority to continue to work with other agencies (such as the Environmental Protection Agency) and to monitor the impact of contaminants of emerging concerns such as PFAS. The final version of the guidelines (published after consultation) contained requirements for PFAS, based on advice from the New Zealand and Australian Environmental Protection Agencies. The Authority has included these requirements in the final standard.

201. Only minor technical changes to the proposed wastewater standard for biosolids were required. The Authority will continue to work closely with councils, Water NZ and industry leaders to ensure that implementation guidance supporting the standard is clear and comprehensive.

Assessment of the regulatory impact

202. We developed four options to test the main parameters of the beneficial reuse of biosolids standard, including processing, grading and monitoring requirements, to assess the regulatory impact:

- **Option one**: No standards (counterfactual)
- **Option two: Low regulatory intervention** – Biosolids allowed to be applied to land with minimal processes or grading.
- **Option three: Balanced regulatory intervention (recommended)** – Balanced grading system for processing biosolids, including additional requirements where biosolids have a lower grade and monitoring and reporting requirements tailored to the grade of the biosolid.
- **Option four: Precautionary regulatory intervention** – Very high levels of processing, strict grading requirements for multiple contaminants (including contaminants of emerging concern), and strict monitoring requirements for the health of land and soil

Option one: No standards

203. Under this option, no standards would be introduced for the beneficial reuse of biosolids to land. Consent conditions for the activity of beneficial reuse of biosolids would continue to be set a case-by-case basis with optional guidance available from Water NZ.

Option two: Low regulatory intervention

204. Under this option, a standard is set at a low level of regulatory intervention which is closer to the counterfactual. Under this option, biosolids would be applied to land with **minimal processes or grading**, and the threshold for applying biosolids to land as a permitted activity would be lowered.

205. Monitoring requirements would be minimal, with simplified site assessments and minimal monitoring requirements

Option three: Balanced regulatory intervention

206. Under this option, a standard would be set at a level that balances protective factors with cost and operational efficiencies and feasibility. This option would establish a

grading system for processing biosolids, including classes based on the quality of the biosolids, and additional requirements for lower grade biosolids

207. Monitoring and reporting requirements would be tailored to the grade of the biosolids and become increasingly stringent for lower grades. The standard would be based on longstanding Water NZ guidelines (in place since 2003) that have been tested and comprehensively reviewed and updated.

Option four: Precautionary regulatory intervention

208. Under this option a standard would be set at a stringent level that prioritises environmental outcomes. This option would provide for high levels of processing and strict grading requirements for a broad range of contaminants, including microplastics. Only highly graded biosolids could be applied to land under this approach. This option would also include strict monitoring requirements for the health of land and soil, including detailed site assessments.

Table 10: Beneficial reuse of biosolids standard assessment

	Option one: No standards (counterfactual)	Option two: Low regulatory intervention	Option three: Balanced regulatory intervention (recommended).	Option four: Precautionary regulatory intervention
Public Health and Environment Protection: The extent to which the option results in protection of public health and the environment.	0 If no standards are introduced, existing systemic issues can be expected to continue. There is currently little beneficial reuse of biosolids at a national level. A small number of councils have implemented arrangements, with the majority continuing to store wastewater sludge at the site of a treatment plant or dispose at a landfill. These options have high environmental impact and can lead to contaminated sites or pollution of groundwater. Some landfills are required to take more household rubbish to "balance" the proportion of sludge going to landfill. This creates perverse incentives where councils are incentivised to increase the levels of household rubbish to maintain the arrangements. Many small-scale wastewater treatment plants using oxidation ponds are not desludged regularly, despite operational expectations. This leads to reduced treatment performance and increased concentrations of contaminants, heavy metals, and odour. The age and profile of this sludge typically means it isn't appropriate to reuse as biosolids or would require significant treatment (at considerable expense). In some regions, landfills are not accepting sludge – meaning the sludge is often transported to other regions. Given the frequency and regularity of sludge production (i.e., wastewater is continually generated), routine out-of-town trips have an environmental impact (e.g., emissions from trucks).	- The option likely results in the poorest public health and environmental outcomes due to its minimal regulatory oversight and limited safeguards. Allowing biosolids to be applied to land with minimal grading will create risks of overloading of the application site and/or build-up of toxic contaminants. These impacts are especially concerning in sensitive catchments or areas with poor soil absorption capacity. While this option would enable biosolids to be applied to land in a wider range of circumstances, the longer-term outcomes for environmental and public health could mean higher contamination making this option unsustainable. For small plants that are not regularly desludged, the lower grading requirements may enable this sludge to be minimally treated and reused as biosolids. This would exacerbate the risk of environmental contamination, as the age and profile of this sludge often means it is inappropriate to use it as biosolids. This option is also likely to have a high risk of land contamination, because overloading and limited monitoring arrangements will mean that schemes will not be properly managed, with the application site being abandoned and potentially contaminated. Under this option, simplified site assessments and minimal monitoring requirements further reduce the system's ability to detect and respond to environmental or public health risks. An increased risk of contamination will mean that biosolids cannot be applied to land for extended periods of time, reducing the opportunity for biosolid use in the longer term and potentially triggering a need for more biosolids to go to landfill. It would also impact the feasibility of other activities on or near biosolids application sites, for example, recreational activities or growing crops.	+ This option will result in the highest level of environmental and public health protections by promoting well-managed land application arrangements that are sustainable in the long term. It would enable infrastructure owners to minimise dumping at landfills resulting in better use of the resource and protection of public health and environment. This provides options for disposing of biosolids instead of storing it onsite or avoiding desludging of ponds. Wastewater operators would have greater certainty about the consenting pathways available to them and the corresponding level biosolids need to be processed to. The standard encourages biosolids producers to achieve the highest grade, which represents the best public health and environmental outcome. This option includes requirements for PFAS, which are a component of the 2025 guidelines and reflect advice from the New Zealand and Australian Environmental Protection Agencies. While the standard would not set requirements for all contaminants of emerging concern, it takes a precautionary approach to managing PFAS. Under the option, the Authority would take a watching brief approach to managing other contaminants of emerging concern. The standard would be updated as evidence becomes available and there is scientific consensus on how these contaminants should be managed.	+ This option would deliver the highest level of public health and environmental protection where biosolids land application was implemented. High processing and grading requirements, detailed site assessments, and strict monitoring requirements—including consideration of soil types—ensure that risks are thoroughly managed. The inclusion of contaminants of emerging concern such as microplastics and endocrine disruptors further strengthens safeguards. For several contaminants of emerging concern, there is not scientific consensus about the appropriate limits or acceptable levels for biosolids. This would mean requirements would take a precautionary approach, which may be disproportionate to the impact of these contaminants. Laboratory testing capacity in New Zealand is not widely commercially available for contaminants of emerging concern (other than for PFAS), which would make it impractical for operators to meet testing requirements. However, it is likely this framework would lead to a "gold standard" for biosolids land application. Fewer schemes would be implemented because of the requirements of the standard, and there are likely to be higher levels of non-compliance. This means that, while this option would have high levels of public health and environmental protection for some schemes, there would be fewer eligible schemes overall. A large proportion of lower grade biosolids would have to go to landfills or remains onsite or in ponds. In some regions, existing uses of biosolids (e.g. for land rehabilitation in Auckland) may no longer be permitted due to more stringent requirements.
Efficiency: The extent to which the option enables efficiencies in the design, consenting and ongoing operation of water services. simplifies regulatory processes and requirements and reduces associated regulatory costs.	0 The existing arrangements are highly inefficient, and this is unlikely to change if the status quo remains in place. The existing arrangements are expensive for councils – disposal of biosolids to landfill is a costly option, and many landfills are nearing capacity and increasingly limiting acceptance. As not all landfills accept biosolids, some councils are forced to transport them out of region, incurring significant costs. The existing arrangements effectively impose a barrier to councils when considering other options, as they have to implement new arrangements in the absence of a supporting regulatory framework. This has led to councils continuing with highly inefficient options rather than seeking resource consents to reuse biosolids. Storage of sludge onsite represents a significant legacy cost to councils who now face highly expensive options to dispose of toxic waste.	+ Under this option there are some efficiency gains. There would be short-term efficiency through simplified processes and minimal grading or monitoring. It reduces administrative and operational costs, making it potentially attractive for councils in the short term. However, the absence of robust controls increases the risk of poor environmental and public health outcomes, which can lead to higher long-term costs. Transporting biosolids to distant landfills due to limited acceptance also undermines efficiency, especially for remote councils.	++ Under this option, the greatest efficiency gains are realised. Clear requirements for biosolids management that are based on a well-understood existing framework will mean that councils can implement new arrangements for disposal of biosolids as quickly and easily as possible, with relative confidence that the arrangements will not contaminate land. Where biosolids achieve the highest grade, operators would be enabled to store and discharge biosolids as a permitted activity. This creates a streamlined process for councils, as no resource consent is required. The proportionate monitoring and reporting framework will ensure that sites are well managed, while reducing an unnecessary monitoring that does not lead to additional environmental benefits. The biosolids grades set out in the standards allows for the diversion of a significant amount of sludge from landfill, while maintaining a protective approach to prevent contamination or overuse of land.	- High grading and processing requirements, detailed site assessments, and high monitoring requirements introduce significant complexity and cost. While it may drive high environmental and public health outcomes, affordability of design and implementation of schemes would be a challenge under this option. It would also impose a significant regulatory burden that would increase planning and design requirements, slow down consenting, increase operational costs, and make infrastructure delivery more challenging—particularly for resource-constrained councils. The stringent grading requirements would likely achieving the highest grade (and the benefit of permitted activity status) is unachievable for many operators. This option would likely require significant operational uplift for many councils, to ensure that sludge was treated to a high level. Many councils may opt to continue sending sludge to landfill rather than investing in the upgrades required to meet this standard.

Accountability: The extent to which the option strengthens accountability of providers in terms of compliance with consents and public access to information.	0 Under this option, problems with accountability that are a feature of the existing system can be expected to continue. While many councils continue to store sludge in ways that are expensive and risky, this is largely hidden from public view. There is little evidence that regional councils are taking steps to address legacy sludge issues. Communities face high costs that they are largely unaware of and carry the legacy burden of contaminated sludge that will need to be dealt with by councils at some stage. Very few councils have adopted biosolids management practices that would be considered normal practice in other countries.	0 Accountability remains low under this option. Minimal grading and monitoring requirements mean that providers are not consistently held to measurable standards. Public visibility into biosolids management is limited, and enforcement is likely to be inconsistent. While slightly more structured than the counterfactual, it still lacks the mechanisms needed to ensure transparency or enable meaningful public scrutiny.	+ A graded system tailored to biosolid quality ensures that providers are subject to appropriate monitoring and reporting requirements. Public access to compliance data is more feasible. The framework supports clearer expectations and enables communities to hold providers accountable for environmental and public health outcomes and will promote establishment of cost-effective schemes that are transparent to ratepayers. As part of this option, operators would be required to develop and implement a biosolids application management plan. This would need to be certified by a regional council prior to the storage and discharge of biosolids and periodically recertified.	+ Strict grading and comprehensive monitoring—including for emerging contaminants like endocrine disruptors and microplastics—ensure robust oversight. The detailed reporting requirements provide transparency and allow for public scrutiny of both infrastructure performance and environmental impacts. However, the complexity of the system may make it harder for smaller providers to comply, potentially undermining consistency in enforcement.
Feasibility: The extent to which an option can be implemented in a way that takes into account real-world constraints and practicalities.	0 Without intervention, existing challenges to beneficial reuse of biosolids are likely to persist. Councils will increasingly become less able to dispose of sludge to landfill over time, with few alternative options available in the absence of a clear regulatory framework to provide them with certainty about good ways to process and reuse biosolids.	+ While this option is feasible in the short term, especially for smaller councils or regions with limited resources, it would not be sustainable in the long term. Minimal grading and monitoring requirements reduce the administrative burden and make compliance straightforward. However, minimal processing and grading, limited monitoring and reporting, and the lack of oversight may lead to inconsistent practices and environmental harm, which could become difficult to manage over time.	++ This option is realistic and feasible. It introduces a structured yet flexible framework that is based on accepted guidelines for reuse of biosolids. It will provide a clear framework that councils can implement with confidence, knowing that the environmental and public health risks have been considered and are set at a national level. New schemes can be scaled according to biosolid grade and local capacity. Tailored monitoring and reporting requirements make it practical for a range of providers, including smaller councils. It supports consistent implementation and allows for local responsiveness.	+ This option is feasible but will result in fewer biosolids schemes being established because of the cost and complexity of the arrangements. High levels of processing, strict grading for multiple contaminants, and intensive monitoring requirements demand significant investment, technical expertise, and laboratory capacity. These requirements may be difficult to meet, particularly for remote or resource-constrained communities. While it sets a high bar for environmental and public health outcomes, its complexity and cost make widespread implementation challenging.
Provides for Māori, iwi and hapū interests in water: The extent to which can option impacts the nature of the relationship between councils and iwi/hapū, including the impact decision-making regarding water bodies of significance	0 At a general level, dumping sludge in landfill does not represent a positive environmental outcome and therefore we consider the status quo is not particularly beneficial to iwi/Māori.	0 This option represents only a minor lift from the status quo and may in fact facilitate contamination of land. Therefore, we do not consider this approach to be acceptable to Māori.	++ This option represents the best opportunity to divert sludge from landfill while maintaining a graded approach to treatment requirements. Therefore, we consider this approach to be positive for Māori. During engagement to inform the standards, we heard many iwi and hapū object to sludge being transported and disposed of in areas outside of where it is generated (i.e., where landfills aren't accepting sludge). This option provides a pathway for transforming sludge to biosolids and reusing it near where it is produced.	+ This approach represents high treatment requirements which we consider would be welcomed by Māori, however it is likely to result in sludge continuing to be dumped in landfill which is not a positive environmental outcome.

What option is likely to best address the problem, meet the policy objectives, and deliver the highest net benefits?

209. The Authority recommends option three, a balanced regulatory intervention including a grading system for biosolids, consent classes based on the quality of the biosolids, and additional requirements for lower grade biosolids and monitoring and reporting requirements tailored to the grade of the biosolid.

210. Option three is recommended because it introduces practical grading system for biosolids that supports both environmental protection and operational feasibility.

211. Option three provides a balanced approach to biosolids management that supports long-term **public health and environmental protection**. By introducing a structured grading system based on updated Water NZ guidelines, it ensures that biosolids are treated and applied to land in a way that reflects their quality and associated risks. Lower grade biosolids are subject to additional requirements, while higher-grade materials are encouraged to be used through clear standards. While option four would deliver the highest level of public health and environmental protection, there would likely be fewer eligible schemes overall. A large proportion of lower grade biosolids would continue to go to landfills or remain onsite or in ponds.

212. Option two and three would deliver greater **efficiency** gains by establishing a clear, scalable framework for biosolids management. But as option 3 is paired with higher protections, this will support councils to implement new arrangements with confidence, knowing that the standards are based on well-understood practices and tailored to biosolid grades. This reduces the need for bespoke designs and complex consenting processes, streamlining infrastructure planning and delivery. The proportionate monitoring and reporting requirements ensure that resources are focused where they are most needed, avoiding unnecessary costs while maintaining environmental safeguards. Option four would be the least efficient due to high grading and processing requirements, detailed site assessments, and high monitoring requirements and would introduce significant complexity and cost.

213. Both options three and four strengthen **accountability** by linking biosolid grading to tailored monitoring and reporting requirements. This ensures that providers are held to appropriate standards and that compliance data is accessible to the public. While option four introduces strict grading and comprehensive monitoring to ensure robust oversight, the complexity of the system may make it harder for smaller providers to comply and therefore have the potential to undermine enforcement consistency.

214. Option three is the most **feasible** for widespread implementation as it builds on existing guidelines and practices, making it familiar and accessible to councils. The grading system allows for flexibility in treatment and application, enabling schemes to be scaled according to local capacity and biosolid quality. Option two is feasible for councils but only in the short term, especially for smaller councils or regions with limited resources, and would not be sustainable in the long term. Option four is also feasible but would result in fewer biosolids schemes. High levels of processing, strict grading for multiple contaminants, and intensive monitoring requirements demand significant investment, technical expertise, and laboratory capacity.

215. Option three also best supports **Māori, iwi and hapū aspirations** by enabling the diversion of sludge from landfill while maintaining a protective approach to land

application. The graded framework ensures that environmental and public health risks are managed and protect land and water. While option four has the higher treatment requirements which we consider would be welcomed by Māori, it is likely to result in sludge continuing to be dumped in landfill which is not a positive environmental outcome.

Monitoring and reporting requirements for wastewater network overflows and bypasses

Summary of the standard

216. The Authority is proposing a risk-based approach, that gives network operators the tools to prioritise addressing overflows based on the risk, impact and likelihood of overflows, within their means. The proposed requirements would apply to all wastewater network overflows, including those from combined wastewater and stormwater networks.

217. The overflows and bypasses standard will require comprehensive monitoring and reporting for overflows based on risk, with the highest risk overflows reported directly to communities in a transparent way. This will improve network information and help identify improvements. Network operators will also be required to publicly report on all bypasses, to notify the public when they happen as well as how and when they were resolved.

218. The standard introduces a consenting pathway for overflows and bypasses, which will create greater consistency and transparency in how overflows are planned for, recorded and reported. The standard specifies the matters of control for consenting authorities. Overflow reduction plans may be set through consent conditions.

How the standard was refined following consultation

Wastewater risk management plans

219. Submitters sought clarification on how the overflows standard would relate to wastewater risk management plans, which can be required under section 138 of the Water Services Act 2021. Over time, the overflows standard could be complemented with risk management plans. The Authority will do more work before confirming the timing of wastewater risk management plans, which could coincide with stormwater network risk management plans due by September 2028.

Suggestions for future work to reduce overflows and bypasses over time

220. Submissions reflected a high interest in further regulating of overflows and bypasses, to address the environmental and public health risks.

221. The proposed standard is focused on ensuring good data on overflow is available. This data could form the basis for future regulatory interventions

Assessment of the regulatory impact

222. We developed four options to test the main parameters of the monitoring and reporting requirements for wastewater network overflows and bypasses standard, including the reporting requirements and potential interventions, to assess the regulatory impact:

- **Option one**: No standards (counterfactual)
- **Option two: Low regulatory intervention** – Minimal reporting requirements only required in highest risk situations (when habitable floors are flooded, or where there are significant public health risks on beaches).
- **Option three: Balanced regulatory intervention (recommended)** – A risk-based approach to monitoring and reporting overflows and bypasses.
- **Option four: Precautionary regulatory intervention** – High levels of monitoring and reporting across all levels of risk, strict limits on overflows, and a containment standard.

Option one: No standards

223. Under this option, no standards would be introduced for monitoring and reporting of overflows and bypasses. The approach to monitoring and reporting overflows and bypasses would continue to be highly varied across regions, impairing the consistency of public health protection approaches, and preventing national benchmarking.

Option two: Low regulatory intervention

224. Under this option, a standard is set at a low level of regulatory intervention which is closer to the counterfactual. This option would aim target only high-risk situations and be easily implemented by councils.

225. This option would include minimal requirements only required in highest risk situations (when habitable floors are flooded, or where there are significant public health risks on beaches). This option would set monitoring and reporting requirements for only the highest risk overflow and bypass scenarios.

Option three: Balanced regulatory intervention

226. Under this option, a standard would be set at a level that balances protective factors with cost and operational efficiencies and feasibility.

227. This approach would provide a risk-based approach to monitoring and reporting overflows and bypasses, with additional requirements where there is significant environmental or public health risk. This option would build off risk management approaches that councils are already familiar with (such as drinking water management).

Option four: Precautionary regulatory intervention

228. Under this option a standard would be set at a stringent level that prioritises environmental outcomes.

229. This approach would provide for high levels of monitoring and reporting across all overflows and bypasses, regardless of risk level. It would also introduce limits on overflows and provide containment requirements.

Table 11: Monitoring and reporting requirements for wastewater network overflows and bypasses standard assessment

	Option one: No standards (counterfactual)	Option two: Low regulatory intervention	Option three: Balanced regulatory intervention (recommended).	Option four: Precautionary regulatory intervention
Public Health and Environment Protection: The extent to which the option results in protection of public health and the environment.	0 If no standards are introduced, existing systemic issues with public health and environmental impacts can be expected to continue. This would include an inconsistent approach to management of overflows both across networks and through different consenting arrangements. In some regions, overflows are prohibited which means there is a disincentive to report when and where overflows happen. Many networks do not have good monitoring and reporting arrangements in place for overflows, meaning that the public are exposed to risk of contact with contaminated sewage with little or no information or warning.	+ This option would be an improvement on current practices and would result in public health and environmental risks being managed to a greater extent. However there would continue to be environmental or health risks from overflows, as council owners would only prioritise maintenance and upgrade of networks on voluntary basis.	++ This option would significantly improve the current state and result in better management of the public health and environmental impacts of overflows. By requiring operators to assess and categorise all overflows and bypasses, communities will be better informed about why overflows happen. The implementation of the standard will provide significantly better information for providers to: understand their networks; engage in hydrological modelling; prioritise maintenance and upgrade of networks; and decrease public health and environmental impacts. Regional councils would maintain discretion about how to address future overflows. This option would build a rich evidence base of overflows and bypasses, which would support regional councils to determine an approach for future overflows.	+ This option would deliver the highest level of public health and environmental protection for those networks where the arrangements were implemented. However, it is likely this framework would lead to a “gold standard” for management of overflows would be unrealistically high for councils to implement. It would take a long time for many councils to upgrade their networks, and the associated monitoring and reporting arrangements, and would be extremely expensive given the fact most of the infrastructure is underground. This means that, while this option would have high levels of public health and environmental protection, most councils would take a long time to become compliant.
Efficiency: The extent to which the option enables efficiencies in the design, consenting and ongoing operation of water services. simplifies regulatory processes and requirements and reduces associated regulatory costs.	0 The existing arrangements are highly inefficient, and this is unlikely to change if no action is taken. For many councils there is effectively a barrier when considering better monitoring and reporting of overflows, as this would significantly increase the profile of a highly undesirable activity that would be very expensive to address. This is particularly an issue in regions where overflows are prohibited, as there is a disincentive for council operators to record or publish information about overflows. In other regions, many councils rely on verbal reporting, which means overflows are typically underreported. This lack of recording and reporting means there is limited scrutiny of actions taken to reduce overflows.	+ Under this option there are some efficiency gains. There is short-term efficiency by limiting reporting to only the highest-risk scenarios, which reduces regulatory burden and costs, particularly for smaller councils. However, the minimal oversight may result in underreporting and poor data quality, making it harder to design resilient infrastructure or plan upgrades effectively. This will be more inefficient in the longer-term, as network operators will tend to take a patchwork approach to fixing overflows as they happen – rather than address the root causes.	++ Under this option, the greatest efficiency gains are realised. It prioritises monitoring and reporting based on risk, which is a highly efficient way to target improvements. It will also provide councils with significantly better information about overflows, enabling a consistent high-quality data base to be developed. Once reliable and comparable data is available, more informed choices about the management of overflows and bypasses can be made, supported by more advanced and sophisticated evidence such as hydrological modelling.	- While this option may drive high environmental and public health outcomes, however, affordability of design and implementation to comply with comprehensive and precautionary overflows regulation would be a significant challenge for most councils.
Accountability: The extent to which the option strengthens accountability of providers in terms of compliance with consents and public access to information.	0 Under this option, problems with accountability that are a feature of the existing system can be expected to continue. Many councils have minimal monitoring and reporting arrangements in place for overflows, meaning that their frequency and impact are largely hidden from public view. Some councils have implemented highly transparent arrangements based on risk, but this is the exception, not the norm. For those councils that do not gather or publish good information about frequency of overflows, maintenance and upgrade requirements are not well understood by ratepayers. For many councils, significant cost implications are hidden from view.	0 Accountability remains low under this option. While there would be some minimal risk assessment, reporting and monitoring requirements, reporting arrangements for the significant majority of overflows would remain voluntary and are likely to continue to be hidden from view. Cost efficiencies wouldn’t be driven as councils would continue to not understand their networks – resulting in a lower degree of public transparency. It will continue to be difficult to compare the relative performance of environment and public health impacts across providers.	++ Requiring operators to assess and categorise overflows and bypasses according to risk, as well as carry out enhanced monitoring and reporting, will increase accountability through better systematic monitoring and oversight over overflows and bypasses. This will be targeted at areas of highest risk, which will ensure accountability where vulnerability is the greatest. Public reporting of overflows will ensure that communities better understand the frequency, impact and underlying causes of overflows, positioning them to hold councils to account. This option will enable systematic benchmarking of network performance in a way that is currently not possible for most councils. Regional councils would have discretion to take further steps, such as requiring overflow reduction plans.	+ This option offers high transparency compared to the counterfactual, as it would involve precautionary levels of monitoring and reporting across all levels of risk. There would also be frequency limits placed on overflows which would mean there would be the potential for compliance action where the limit was breached. However, implementing these arrangements would be a significant challenge for most councils who would take decades to put them in place and comply. This means that while accountability would be high at a future point, there would be a long time period where the full benefit of the standard was not realised.

			Matters of control available to regional councils would leverage the information that is available through increased monitoring and reporting.	
Feasibility: The extent to which an option can be implemented in a way that takes into account real-world constraints and practicalities.	0 The continuation of the status quo has low feasibility. Many councils continue to be unaware of the frequency of overflows or the underlying root causes (poor maintenance, inflow and infiltration). There is increasing community pressure for councils to upgrade their infrastructure, particularly where overflows are high frequency or pose risks (for example, to swimming areas or aquaculture). While councils could continue with existing arrangements, they would also have poor information to target maintenance and upgrade at areas of highest need or risk.	++ This option is feasible but would only provide a short-term response. Minimal reporting requirements, triggered only in high-risk situations such as flooding of habitable floors or significant public health risks, reduce administrative and operational demands. This option is practical for councils with limited resources and can be implemented quickly. However, its simplicity may limit its effectiveness in driving consistent improvements and may lack credibility over time as communities continue to become aware of overflows that are not part of the framework.	+ This option is feasible for councils to implement and represents a proportionate response. Councils are familiar with risk management and will be able to implement a risk-based framework based on similar approaches in other areas (such as drinking water management). A risk-based approach to monitoring and reporting allows for targeted resource use and avoids overburdening providers. It is adaptable to different regional capacities and supports consistent implementation. While it requires moderate investment in systems and processes, it is achievable and sustainable across a range of contexts.	- A precautionary standard would not be feasible for most councils in the short term and could take many decades and significant investment to implement. This option will be a hard adjustment for most councils, requiring considerably more funding to be allocated to wastewater networks. A one-size-fits-all approach to reducing overflows fails to consider the nuances or different starting points of individual councils. High levels of monitoring and reporting across all risk levels, strict overflow limits, and a containment standard demand significant investment, technical expertise, and operational capacity. Smaller or resource-constrained councils may struggle to meet these requirements, and the complexity of implementation could lead to delays or non-compliance.
Provides for Māori, iwi and hapū interests in water: The extent to which can option impacts the nature of the relationship between councils and iwi/hapū, including the impact decision-making regarding water bodies of significance	0 Iwi and Māori are dissatisfied with the status quo which results in highly variable but often poor monitoring and reporting of overflows and bypasses, which in turn increases risks to public health and the environment.	- This approach would be unlikely to provide the public health, and environmental benefits aspired to by iwi and Māori. It may also result in a reduced ability for Māori to influence local decision-making regarding management of overflows and bypasses.	+ This option will provide Māori communities significantly more information about overflows and will be a real step forward to enabling these communities to exercise kaitiakitanga responsibilities by holding councils more accountable for reducing frequency or preventing them altogether. However, this option does not go far enough for many Māori, who would prefer elimination of all overflows from water bodies.	+ Of all the options, this option is likely to realise Māori aspirations to the greatest extent. It would provide communities with significantly more information about overflows, set limits on overflows that are enforceable, and include measures like containment that will be effective over time in reducing or removing overflows. However, this would take many years for most councils to implement and so will likely result in frustration from many Māori who would prefer elimination of all overflows from water bodies as soon as possible.

What option is likely to best address the problem, meet the policy objectives, and deliver the highest net benefits?

230. The Authority recommends option three, a balanced regulatory intervention with a proportionate risk-based approach to monitoring and reporting overflows and bypasses.

231. Option three is the best choice because it introduces a proportionate, risk-based framework for monitoring and reporting overflows and bypasses, **significantly improving public health and environmental protection while remaining feasible and efficient** for councils to implement.

232. Option three would require operators to assess and categorise overflows and bypasses, then it introduces monitoring and reporting proportionate to the actual risk posed. This approach enables communities to be better informed about overflow and bypass events and how to avoid exposure, particularly in high-risk areas. It also provides councils with the data needed to understand their networks, prioritise upgrades, and reduce overflow frequency over time. Option four would deliver the highest level of public health and environmental protection if it were implemented but would be too ambitious for most councils to meet in the near term. Therefore widespread compliance would be slow to achieve, compromising outcomes.

233. Option three also delivers the greatest **efficiency** gains by aligning regulatory effort with actual risk. Councils can focus resources on the most critical areas, avoiding unnecessary monitoring while still improving network performance. This targeted approach reduces regulatory burden, streamlines operations, and supports cost-effective upgrades. Option two also sees some efficiency gains, by limiting reporting to only the highest-risk scenarios, which reduces regulatory burden and costs, particularly for smaller councils. However, the minimal oversight may result in underreporting and poor data quality, making it harder to design resilient infrastructure or plan upgrades effectively. Option four is the least efficient as the affordability of design and implementation to comply with comprehensive and precautionary overflows regulation would be a significant challenge for most councils.

234. Option three and four both improve **accountability**. Option three strengthens accountability by mandating systematic monitoring and reporting of overflows and bypasses based on risk, which ensures communities receive timely and relevant information about overflow events, empowering them to hold councils accountable. Public reporting and benchmarking of network performance become possible, enabling comparisons across regions and driving improvements. Option four goes further and includes precautionary levels of monitoring and reporting across all levels of risk and frequency limits placed on overflows. This means that there would be the potential for compliance action where the limit was breached. However, implementing these arrangements would be a significant challenge for most councils who would take decades to put them in place and comply.

235. Option two is the most feasible and practical option for councils with limited resources and could be implemented quickly. Minimal reporting requirements, triggered only in high-risk situations such as flooding of habitable floors or significant public health risks, reduce administrative and operational demands. Option four is the least feasible, given the current state. The precautionary standard would be difficult for most councils to implement in the short term, requiring decades of investment, significant funding, and

technical capacity to meet strict monitoring, reporting, and containment requirements. Option three strikes a balance, by allowing for targeted resource use and avoiding overburdening providers. It is adaptable to different regional capacities and supports consistent implementation.

236. Both options three and four support **Māori, iwi and hapū aspirations** by providing significantly more information about overflows and enabling communities to exercise kaitiakitanga. However, both have limitations. Option three does not go far enough for many Māori, who would prefer elimination of all overflows from water bodies, and option four would take many years for most councils to implement and so will likely result in frustration from many Māori who would prefer elimination of all overflows from water bodies as soon as possible. Option two is unlikely to provide the public health, and environmental benefits aspired to by iwi and Māori.

What are the marginal costs and benefits of the option under Part A and Part B?

237. The impact analysis below provides a qualitative assessment of the impacts of the proposed new wastewater standards and sits across both Part A and Part B of this RIS. Cost and benefits are only expected when a provider applies for a new consent.

238. As noted in the limitations, we have used a case study approach (see Appendix D in the interim RIS) for quantification.

Table 12: Assessment of costs and benefits

Affected groups *(identify)*	**Comment** *nature of cost or benefit (eg, ongoing, one-off), evidence and assumption (eg, compliance rates), risks.*	**Impact** *$m present value, for monetised impacts; high, medium or low for non-monetised impacts.*	**Evidence Certainty** *High, medium, or low, and explain reasoning in comment column.*
Additional costs of the preferred option compared to taking no action			
Water service providers (public supplies only)	• Costs are only borne if plant consents need renewal. One-off costs incurred to transition to new standards process • Additional costs to meet quality standards (if they increase) • Additional costs to meet compliance and reporting regime	Low	Low – full extent of costs not fully known
Water users / consumers / communities	• No further additional costs anticipated – subject to analysis of possible health and environmental outcomes under conditions imposed under the standard, particularly for consumers of small wastewater treatment plants	Low	Low – needs to be determined based on the new standard
Regional Councils	• One-off costs incurred to transition to new standards process • Costs of monitoring and enforcement across a fuller range of parameters	Low	Low – this cost will be mitigated by implementation support
Water Services Authority	• Costs of developing and setting standards • Costs of more comprehensive system oversight	Medium	Medium

Supporting services (engineers, lawyers, surveyors)	• Loss of business in short term but made up for within 5 years as all expired consents must be renewed • Costs of transitioning to new standards process • Potential to standardise materials and supplies generating future business • Losses as fewer consents required.	Medium	Medium – based on case studies in **Appendix D in the interim RIS** and existing knowledge of consent costs
Iwi and Māori	• Existing Treaty obligations not intended to be impacted • Existing partnership and co-management arrangements may need to be reviewed by councils and iwi or hapū. • Ability to influence treatment levels "at place" will reduce	Low	Low – further work required to review existing obligations and commitments
Total monetised costs		Nil	Nil
Non-monetised costs		**Low to medium**	**Low to medium**
Additional benefits of the preferred option compared to taking no action			
Water service providers (public supplies only)	• Reduction in consenting costs, for example, the analysis on small plants reveals that national standards could result in substantial cost reduction across the entire lifecycle of wastewater treatment plants in the order of 40 percent to 60 percent for consenting and design and reduce costs by approximately $300,000 per project • Reduction in staff time spent on reconsenting • Certainty for investment planning • Greater consistency from standards likely to enable more efficient compliance monitoring • Potential for scale benefits in delivery resulting from greater standardisation	Medium to high	Medium – See case studies in **Appendix D in the interim RIS and C in this RIS.**

Water users / consumers / communities	• Opportunity for cost savings to be passed on to consumers • Greater transparency and consistency enabling more effective and sustained investment in improved waste treatment and freshwater quality • Improved public health outcomes (as discussed in the options analysis)	Low to medium	Medium
Regional Councils	• Reduction in staff time spent processing consents • Greater consistency from standards likely to enable more efficient compliance monitoring	Low to medium	Medium
Water Services Authority	• Enables national oversight over wastewater performance • Ease of performance measurement and reporting	Low	Medium
Supporting industries (engineers, lawyers, surveyors)	• Greater consistency in the medium to long-term, support cheaper design processes • There will be greater scope for innovation and investment associated as there will be longer-term certainty	Low to medium	Low
Iwi and Māori	• Iwi retain ability to work with Councils on acceptable approaches • Earlier and simpler iwi and hapū engagement with wastewater consenting • Greater transparency and consistency for improved wastewater treatment, freshwater quality, and public health outcomes	Low	Low to medium
Total monetised benefits		Nil	Nil
Non-monetised benefits		**Medium to high**	**Medium**

Section 3: Delivering an option

How will the proposal be implemented?

239. The wastewater standards for discharges to water and land will be implemented through wastewater treatment plant resource consents as they come up for renewal or are sought for new plants. Given the transitional timelines, we expect to see over 100 plants being renewed within 5 years.

240. Wastewater standards for biosolids application to land will be implemented as a permitted activity where biosolids are processed to the highest grade. Lower grade biosolids will be implemented through resource consents.

241. Wastewater standards for network overflows and bypasses of plants will be implemented through future resource consents as they come up for renewal, or through new consents where overflows are not currently consented.

Implementation responsibilities

242. Regional councils remain the primary regulator for wastewater networks. They will implement the standards through consents and consent conditions and continue to be responsible for monitoring and enforcing consent compliance in line with their functions under section 30 of the RMA.

243. Regional councils will continue to work with network operators on operational matters such as the location, timing, and method of wastewater discharges under the appropriate standard including the ability to phase in upgrades.

244. Alongside this, the Authority will:

- provide oversight of the environmental performance of publicly owned wastewater networks,
- support implementation by providing direction and comprehensive guidance as well as setting clear expectations,
- publish periodic reporting on network performance, and gather data from network operators for this purpose, and
- review the impact of the implementation of standards and identify whether other interventions can result in better outcomes (such as reviewing standards, developing new standards, or other statutory tools).

245. The Commerce Commission will provide economic regulation of wastewater treatment plants and networks.

Transitional arrangements

246. Consents notified or granted before the standards are in place are not affected by these proposals until they are renewed. Any consent that is notified or granted after the wastewater standards are in place would need to give effect to the new standards. Over 100 plants will be consented in the next five years.

247. Where applications relate to upgrades to existing plants (as opposed to entirely new facilities), upgrades in infrastructure and operating procedures may be phased in. This provides additional flexibility for infrastructure providers.

248. Section 124 of the RMA enables wastewater treatment plants to continue to operate on expired consents as long as an application to renew the consent has been made at least 6-months prior to the expiry date of the original consent. There is currently no limit

to how long plants may operate on an expired consent – the average timeframe is five years, with some plants operating under this provision for over two decades.

249. The discussion document proposed placing a two-year limit on treatment plants operating on expired consents to take effect five years following the standards enactment. Submitters provided a range of opinions on this proposal, from maintaining the current setting to supporting expiry with timeframes of between two and seven years suggested. Some submitters considered limits for operating on section 124 should be brought in earlier than the five years proposed, if there was ability to provide for gradual compliance as part of consent decision-making. Submitters generally agreed that while two years would stimulate prompt action, it might also cause issues for funding, bottlenecks for consenting, non-compliance issues, design, procurement and it might not be feasible for applicants who may need to lodge several applications in a short amount of time.

250. It is considered that the proposal for a two-year cap on the use of section 124, plus the ability to phase in upgrades provides a balance between operational flexibility; and a strong incentive to progress consents efficiently.

251. The Local Government (Water Services) (Repeals and Amendments) Act provides that wastewater network consents that expire within the first three years following commencement of the Act will have the duration of those consents extended, so that they expire three years after the commencement of the Act. The proposed standards align with this arrangement, which means the two-year cap on use of section 124 will take effect three years after the wastewater standards are commenced. Councils will therefore have five years before they can no longer rely on section 124.

Level of investment and timing of costs

252. The level of investment required to comply with the standards is not directly related to the standards themselves. Rather it depends on the current operation and performance of the plants. Newer or recently consented plants are more likely to meet the treatment limits in the standards already. If a plant is currently operating at a comparable level to the proposed standards and needs a new consent, then limited additional investment will be needed. If a plant has several years left to run on their current consent, then that operator will not be impacted until their consent expires. For communities that haven't invested in wastewater treatment recently, upgrades would have been needed for all options.

253. The proposed standards for water will set limits across multiple parameters and monitoring will be required to understand compliance. Current consents do not usually control for all of these parameters or could use different measures (e.g. faecal coliforms rather than *E. coli*). While a plant's process will likely treat for a parameter, the limit may not be set or measured as part of a consent condition. These factors make a national view of upgrade requirements difficult to assess and cost. However, the technical advice has worked to codify current arrangements, so that the proposed standards are balanced with the ability of current technology to meet the standards, while also uplifting the overall performance of the system nationally. In addition, submissions indicated territorial authorities considered the treatment limits were at an appropriate level.

Ongoing implementation risks and challenges

254. Further implementation risks need to be managed and mitigated through the implementation of the standards.

255. Firstly, there is a risk that councils will generally not have the ability to respond the standards. Councils may have legacy issues such as deferred maintenance, poorly understood networks, poor monitoring approaches, low / inconsistent levels of capability around operation of plants, and failure to de-sludge treatment ponds. As part of this, there is a risk that councils will not have the financial ability, and capital, to

respond to new wastewater standards. This risk is common across all options including the status quo.

256. There is also the risk of ongoing variability in implementation across regional councils /unitary authorities. This risk is mitigated through implementation support and ongoing partnerships between local government and the Authority. The standards are being implemented in a changing water services environment which present challenges and opportunities. As part of the Local Water Done Well and legislative changes discussed above, approximately 65 percent of councils are establishing multi council water service organisations. Resource management reform may change or compliance and enforcement functions that currently sit with regional councils.

257. Finally, due to the scope of the standards affecting discharges to land and water, beneficial reuse of biosolids, and monitoring and reporting requirements for wastewater network overflows and bypasses, there is an inherent risk of 'dual consenting'. This will happen when consents applications have other activities to manage not covered by the standards such as discharges to air and other contaminants. This creates complexity in the consenting approval processes.

Implementation support package

258. To support the overall implementation of the standards and address the implementation challenges, the Authority is developing an implementation support package.

259. Implementation was not outlined in detail in the discussion document. However, feedback was received on the importance of taking a risk-based, practical approach with realistic timelines and guidance for implementation. It was also noted that guidance should include best practices for data collection, analysis, and reporting, incorporating tikanga or mātauranga Māori-based approaches.

260. The Authority will incorporate these elements as part of an implementation support package, which will be phased to initially focus on the processes and guidance needed by territorial authorities and regional councils to implement the standards to achieve the Government's priorities, and to inform interested parties (such as communities) about how wastewater standards are designed to work.

261. The Authority will work with territorial authorities, regional councils, industry experts and other stakeholders to develop fit for purpose materials. This support package will be an ongoing project with prioritisation of resources based on the areas of best value and highest need.

How will the new arrangements be monitored, evaluated, and reviewed?

Overarching approach to monitoring, evaluation and review

262. Regional councils maintain responsibility for monitoring and enforcing consent compliance including auditing compliance with resource consents. In time, this will be complimented by the Authority's oversight functions outlined in para 243.

263. The counterfactual makes it difficult to know whether wastewater treatment plants are meeting the necessary environmental and public health outcomes. A lack of national consistency in consent conditions means the relative performance of environment and public health impacts across providers cannot be compare making it difficult for the Authority to fulfil some of its key functions such as:

- identifying and monitoring matters that affect the environmental performance of wastewater networks, including current and emerging contaminants, and

- providing oversight of and information to central and local government about compliance, monitoring, and enforcement of standards and other statutory requirements effecting wastewater networks and wastewater network operators.

264. To ensure standards remain fit-for-purpose, the Authority will establish an ongoing work programme to evaluate the impact of the standards and identify whether other interventions (such as changes to existing standards, implementation of new standards, or use of other statutory tools in the Water Services Act) can result in better outcomes.

265. The wastewater standards will also require periodic review to enable risks to receiving environments or public health to be managed, and to take advantage of new technology. This is consistent with current RMA approaches for wastewater plants that often include technology review clauses.

New monitoring and reporting requirements under the wastewater standards

266. Wastewater standards include monitoring requirements to assure compliance with the standard. These requirements are critical to the standards and have been summarised already within each standard above.

267. Standardising monitoring and reporting arrangements will increase accountability of providers and improve the Authority's ability to determine whether or not providers are meeting the necessary public health and environmental outcomes.

268. Submissions generally supported the proportionate or risk-based monitoring and reporting requirements proposed for the standards. Some councils were concerned about the increased costs associated with increased monitoring, and the upgrades of infrastructure where necessary to implement the new arrangements. Submitters demonstrated general support for:

- clear, risk-proportionate and standardised monitoring framework with less monitoring for smaller networks,
- realistic timelines and guidance for implementation, especially where monitoring infrastructure is not currently in place,
- transparency and public access to data, including sharing overflows data with mana whenua and affected communities, and
- standardisation of monitoring arrangements to ensure that there are consequences where limits in resource consents are breached.

Appendix A: Glossary

- **Beneficial reuse**: The practice of reusing treated wastewater or biosolids for beneficial purposes, such as irrigation or as fertilizer.
- **Biosolids**: Treated sludge from wastewater treatment plants that can be reused, often as fertilizer.
- **Consent**: Official permission granted by a regional council under the RMA to discharge wastewater into the environment.
- **Consent conditions:** Section 108 of the RMA allows councils to include conditions on resource consents. Conditions include standards, terms, restrictions or prohibitions specified in a consent following the written decision to grant the consent.
- **Discharge**: The release of treated or untreated wastewater into the environment, typically into bodies of water or onto land.
- **Infrastructure design solutions**: a statutory instrument in the Local Government (Water Services) Act that will enable implementation of standardised designs and operating requirements for wastewater treatment plants, particularly for small-scale systems.
- **National environmental standards**: Standards can be set under the RMA to provide consistent environmental protection across New Zealand.
- **Overflows**: Instances where untreated or partially treated wastewater spills out of the system, often due to blockages or excessive stormwater entering the network.
- **Oxidation pond**: A type of wastewater treatment system that uses natural processes involving algae and bacteria to treat wastewater.
- **PFAs**: Per- and polyfluoroalkyl substances are a large, complex group of synthetic chemicals.
- **Public notification**: The process of informing the public about a proposed activity, such as a new wastewater discharge, and inviting submissions or objections.
- **Quantitative Microbial Risk Assessment** (QMRA) is a modelling approach used to estimate the human health risks from exposure to microorganisms like bacteria, viruses, and protozoa in various environments.
- **Receiving environment**: The natural environment (land, water, or air) that receives discharges from wastewater treatment plants.
- **Resource Management Act 1991 (RMA)**: New Zealand's primary legislation for environmental management, including the regulation of wastewater discharges
- **Wastewater risk management plan**: A plan required by the Water Services Act for wastewater network operators to identify, assess, and manage risks associated with their networks.

- **Wastewater environmental performance standards**: the Water Services Authority are empowered to make wastewater environmental performance standards under the Water Services Act. These standards may include (but are not limited to) requirements, limits, conditions, or prohibitions related to activities associated with wastewater networks, including plant infrastructure.
- **Te Mana o te Wai**: A concept in New Zealand's freshwater management regime that emphasizes the health and well-being of freshwater bodies and ecosystems.
- **Wastewater treatment plant**: A facility designed to treat wastewater to process sewerage and remove contaminants before it is discharged into the environment.
- **Water Services Act 2021**: Legislation that sets out the functions and powers of the Water Services Authority, including the oversight of environmental performance of wastewater and stormwater networks.
- **Water Services Authority - Taumata Arowai**: The regulatory body responsible for overseeing the environmental performance of New Zealand's drinking water, wastewater, and stormwater networks.

Appendix B: Summary of the wastewater standards cost efficiency case studies – Small Treatment Plant

Scope and approach

269. The purpose of the report was to develop case studies that highlight potential cost and time efficiencies in designing, consenting, constructing, and operating small wastewater treatment plants under new national wastewater environmental performance standards.

270. The report focuses on evaluating how proposed national wastewater environmental performance standards could improve cost and time efficiencies in the lifecycle of small wastewater treatment plants serving populations of 1,000 or fewer.

271. The case studies examine how the proposed standards impact each stage of wastewater treatment plant development, including regulatory approvals, financial planning, and long-term sustainability.

272. The case studies included:

- Southland District Council
- Horowhenua District Council
- Thames Coromandel District Council

273. Key areas of investigation included:

- evaluating how national standards influence cost savings across the wastewater treatment plant lifecycle, from design and consenting to construction and operations
- examining economies of scale, procurement efficiencies, and workforce development strategies
- assessing modular design solutions available in New Zealand
- conducting a stocktake of existing small wastewater treatment plants
- identifying regulatory benefits and mapping their realisation for the Department of Internal Affairs and the Water Services Authority – Taumata Arowai
- arrangements for risk-based monitoring and reporting for wastewater network overflows and bypasses
- the potential opportunities arising from Supervisory Control and Data Acquisition and telemetry
- existing Treaty Settlement obligations but noting that the proposed consenting process will still involve mana whenua
- implications related to Te Mana o te Wai
- the impact of Statutory Acknowledgements under the Ngai Tahu Claims Settlement Act 1998. The treatment of Statutory Acknowledgements under Local Water Done Well legislation has yet to be determined, and

- considerations of air, energy, or waste introduced by third parties into a wastewater network

274. The report was developed under tight time constraints using a high-level desktop review and literature analysis to provide contextual background. It draws on contributions from Southland, Horowhenua, and Thames Coromandel District Councils, offering insights into the operational and regulatory challenges of small wastewater treatment plants.

275. Modular plant manufacturers were consulted for commercial perspectives, particularly regarding the broader adoption of modular systems. Technical input was provided by McConnell Dowell, while the Water Services Authority supported the report with data and background information. BECA contributed by sharing previous work and reviewing the report.

276. The report acknowledges several limitations that affect the depth and generalisability of its findings. The desktop review was high-level, relying on readily available documents, primarily from the Department of Internal Affairs. Due to time constraints, the case studies were not extensively refined, and the analysis was based on information available up to the end of March 2025. Participating councils found it challenging to estimate cost and time efficiencies, particularly for infrastructure design solutions that are still under development.

277. While the report offers indicative insights, it may not reflect the unique circumstances or achievable outcomes for all councils operating small wastewater treatment plants.

278. Additionally, the findings are framed within the context of an ongoing consultation process, meaning that the proposed performance standards may still change. Therefore, while the report provides valuable guidance, its conclusions should be interpreted with caution and adapted to local conditions and future regulatory developments.

Summary of key findings

279. The analysis reveals that national standards could result in substantial cost reduction across the entire lifecycle of wastewater treatment plants in the order of 40 percent to 60 percent for consenting and design, with the main (but not only determinant) being if the discharge is to land or water. This would potentially reduce costs by approximately $300,000 per project, with the projected cost savings for consenting and design for the 48 plants having expired consents amounting to $16.8m. The total projected cost reduction for consenting and design for the further 62 plants that have consents expiring by 2030 amounts to $21.7m.

280. Equally, the potential time reduction would be significant particularly for the consenting and design processes. The case studies strongly suggest that the current time periods could again be reduced by between 40 percent to 60 percent which in many cases would remove years from the overall process. Again, the extent of the time reduction is dependent upon whether the discharge is to land or water.

281. The case studies also identify common challenges potentially faced by councils, including the increased complexity of operations and potential operational cost increases. Southland District Council, in particular, anticipates higher ongoing operational costs due to additional reporting requirements and more complex monitoring procedures, while Horowhenua District Council expressed concerns over community consultation during the consenting process. However, both councils report

benefits from simplified design and consenting timelines, which contribute to overall project delivery time reductions.

282. A notable trend across all case studies is the adoption of modular treatment plants, which present long-term cost savings and scalability, particularly for smaller communities. Thames Coromandel District Council's experience with the Matarangi Wastewater Treatment Plant exemplifies this shift. The Matarangi plant, challenged by seasonal population fluctuations, struggles with effluent quality and regulatory compliance, particularly for nutrient discharge and pathogen control. However, the proposed standards offer a framework for more predictable and cost-effective solutions. Thames Coromandel District Council, like the other case study councils, anticipates potential cost savings and improved project delivery through national standardisation, despite concerns regarding discharge limits and community impact.

283. In summary, implementing national environmental performance standards for wastewater treatment plants can significantly improve both cost-efficiency and project delivery timelines for small communities. By adopting standardised, modular designs and streamlining regulatory processes, better alignment of infrastructure investment with actual demand can be achieved, ensuring compliance while avoiding over-investment in oversized infrastructure. The insights from the case studies indicate that while challenges remain, the adoption of national standards will offer long-term financial and operational benefits, fostering more resilient and cost-effective wastewater management systems.

Appendix D: Condensed summary of feedback from submissions

A fuller report on engagement will be released on the Water Services Authority's website at the time the standards are enacted.

Discharge to Water

Receiving environments for discharge to water

Submitters and shared groupings	What we heard through submissions
Territorial authorities and regional councils	Some submitters requested clarity and additional guidance about how the seven categories of receiving environments will be defined and applied through resource consent applications. Some territorial authorities suggested refinements to how the open ocean category is determined. This included adding a category for inshore coastal areas, which are relatively common receiving environments in existing resource consents.
Iwi and hapū	Some submitters were concerned that using dilution ratio alone to differentiate receiving environments would not sufficiently consider cumulative effects on receiving environments. There were concerned that cultural considerations had not informed the receiving environment categories.
Territorial authorities	Many territorial authorities expressed support for expansion of standardisation, to deliver enhanced cost-efficiencies and certainty: including: • ensuring that standards cover the largest range of receiving environments possible – e.g. very low dilution receiving environments; • standardise additional risk assessment requirements such as the periphyton risk assessment for hard bottom streams; and • standardisation of monitoring and reporting requirements, with consideration of the practicality of requirements for continuous monitoring.

Exceptions to the discharge to water standard

Submitters and shared groupings	What we heard through submissions
Territorial authorities, consenting authorities, industry bodies	Many submitters suggested additional exceptions, often to correspond with categories of waterbodies that are managed through existing planning instruments. Examples include: • catchments with existing nutrient budgets • outstanding freshwater bodies • aquaculture areas • waterbodies with water conservation orders.
Iwi and hapū	Iwi and hapū asserted that exceptions were insufficient and proposed additional carveouts for pristine waterbodies or sites of cultural significance. There were requests to involve iwi and hapū if an exception for pristine waterbodies was added.
Territorial authorities	A subset of territorial authorities requested the list of exclusions was reduced, to further streamline the consenting process and gain the full benefits of standards.

Small plant discharge to water standard

Submitters and shared groupings	What we heard through submissions
Territorial authorities	There was in-principle support to establish a small plant standard, given the unique characteristics of these treatment arrangements. There were requests for standardised technology solutions and package-type arrangements, to enable councils to move away from relying on consultants to design small plants.
Territorial authorities and industry bodies	These submitters suggested alternative ways of defining small wastewater treatment plants, to ensure it is practical and easy to apply (for example, by population or connections rather than influent load). There were also requests to develop tailored requirements for very small plants, as well as small plant arrangements that discharge to land.

Iwi and hapū, consenting authorities	Submitters expressed concern about the cumulative effects on waterbodies, and that reduced treatment requirements may incentivise a proliferation of small plants, particularly in situations where larger plants and more advanced treatment are appropriate.

Treatment limits

Submitters and shared groupings	What we heard through submissions
Industry bodies, consenting authorities, iwi and hapū	There were requests for more stringent treatment limits and additional parameters to be included in the open ocean receiving environment. There was a view that the treatment limits for the open ocean receiving environment category were not stringent enough and would not adequately protect the environment. Some submitters strongly objected to less stringent *E. coli* limits for smaller communities, especially where discharging to low dilution rivers and streams. Similarly, there were requests to re-examine *E. coli* and enterococci limits for all receiving environments and understand how they relate to recreational bathing guidelines.
Territorial authorities, consenting authorities, iwi and hapū	There was widespread support for using quantitative microbial risk assessments to determine pathogen limits in shellfish gathering sites. Submitters requested clarification on when these assessments are triggered, and explicit direction about how communities, including iwi and hapū, will be involved. There were also requests to expand risk assessments requirements, to include historic and future shellfish beds, and to review risk assessments at regular intervals.
Territorial authorities, consenting authorities, iwi and hapū	Some submitters supported using site-specific assessments to determine nitrogen and phosphorous treatment requirements for hard-bottomed, algae-prone rivers and streams. There were requests to further standardise the proposed approach, through using a risk matrix with fixed limits depending on periphyton growth.
Industry bodies, territorial authorities consenting authorities	Various submitters recommended the discharge to water standard is expanded to include additional metrics, alongside the existing concentration limits. Suggestions included establishing daily maximum limits and introducing seasonally variable limits.

Discharge to Land

Exclusions to the discharge to land standard

Submitters and shared groupings	What we heard through submissions
Iwi and hapū	Baseline assessments will be used to determine attributes of land to avoid compromising cultural heritage, traditional land use practices, and respect the values of local communities. These submitters sought clarification on what exclusions apply and suggested the matters covered in a baseline assessment be expanded to identify areas of cultural significance. Where sites of cultural are found, treated wastewater should not be discharged.
Consenting authorities	Submitters from this group support the exclusion of category five land from the standards. In situations where potential sites are deemed unsuitable for discharging treated wastewater, this should be managed by consenting authorities through the default resource consenting process.

Baseline and site-specific risk assessment

Submitters and shared groupings	What we heard through submissions
Territorial and consenting authorities	Suitable sites will progress to more detailed risk screening and site-specific assessments. Submitters offered technical advice and suggestions around specifics of discharging to land. This included feedback on how to align requirements with existing limits (for example, nitrogen).
Territorial authorities, iwi and hapū	Territorial authorities and iwi submitters alike shared a strong desire for more guidance and tools to support pre-consenting and risk assessment stages.
Industry bodies	Submitters from this group provide examples of existing guidance to support the discharge to land standard and its implementation.

Treatment and application limits

Submitters and shared groupings	What we heard through submissions
Industry bodies	Submitters suggested additional clarity to ensure parameters and limits in the standard reflect local attributes and are aligned with other settings and parameters (for example, caution against taking a blanket approach for hydraulic loading for all soil types in New Zealand, a maximum could be applied). Broadly submitters thought that the nutrient loads, limits and hydraulic loading were too permissive.
Iwi and hapū, territorial authorities	Network operators echo the submissions of iwi and hapū in providing ability for local factors to be monitored effectively and changing conditions to be accommodated on a case-by-case basis. Additionally, the proposed Standards also do not set daily or annual limits and do not account for other influencing factors such as heavy rainfall events.
Territorial authorities	Councils operating rapid infiltration schemes proposed expansion of standardisation to cover them, and proposed ways to do this based on their existing operations and available information about environmental impact.

Management and operations plans

Submitters and shared groupings	What we heard through submissions
Iwi and hapū	Submissions raised the importance of incorporating existing arrangements in the management and operations planning process required by a discharge to land standard (for example, regional, catchment and iwi\ hapū management plans)
Territorial authorities, consenting authorities	Council submissions noted that similar plans already exist for discharges to land and could be used as a starting point for what is required by the standard.

Beneficial reuse of biosolids

Submitters and shared groupings	What we heard through submissions
Consenting authorities, territorial authorities, iwi and hapū, industry bodies	Submitters generally supported the proposed grades for biosolids. Some submitters suggested alternate arrangements for activity status across categories (for example provision of odourless biosolids should receive permitted activity). Iwi and hapu support removing permitted activity status for all biosolids application or at least including limits on contaminants, application rates and monitoring requirements. Other suggestion to improve the Standards include clearly defined grades, sites accumulation limits and exclusion zones.
	Concern continually raised about cumulative effects and catchment scale impacts of nutrient loading in discharge to land standard. Submitters across the system contributed to that concern through raising the need for clarification regarding contaminant thresholds crossing regional boundaries and how might be monitored.
	Support for removing permitted activity consenting pathways for all biosolid applications to ensure that cultural and community values are respected and upheld and contaminants of emerging concern are captured.
	Submitters provided feedback on the need to ensure the Standards provide discretion for exclusion zones for the level of contaminants, and testing, monitoring and reporting on these, as well as controls on odour. Suggestion that maintaining controlled or restricted discretionary consent conditions as a way of maintaining this.
	Submitters supported future work programme to address contaminants of emerging concern in biosolids.

Management of overflows and bypasses

Risk-based approach

Submitters and shared groupings	What we heard through submissions
Territorial authorities, consenting authorities, iwi and hapū	There was widespread support to managing overflows and bypasses through a risk-based approach, as it enables territorial authorities to prioritise managing overflows within their resource constraints. While there was support for a risk-based framework, consenting authorities emphasised network operators should not be able to defer or avoid minimum requirements. These include developing wastewater risk management plans and obtaining resource consents.
Iwi and hapū, territorial authorities	A small number of submitters suggested the standard limit the frequency of overflows or introduce limits for acceptable levels of inflow and infiltration in a network.

Controlled activity status

Submitters and shared groupings	What we heard through submissions
Consenting authorities, territorial authorities	A large number of submitters supported making overflows a controlled activity. Overflows are a reality of wastewater management in New Zealand and internationally, particularly in times of rainfall or asset failure. Submitters requested clarity about how the proposed approach aligns with proposed changes to the resource management framework to remove controlled activity status.
Iwi and hapū, consenting authorities	It is more appropriate to manage overflows and bypasses as a restricted discretionary activity. This would allow regional councils to decline consents where overflows and bypasses pose an unreasonable risk to the health of the receiving environment.
Iwi and hapū, consenting authorities	The standard should require territory authorities to hold a single, global consent for overflows and bypasses in a wastewater network.
Iwi and hapū, industry bodies	A smaller group of submitters were concerned that managing overflows and bypasses as a controlled activity fails to adequately manage the effects. Overflows and bypasses should not be an accepted part of wastewater network management, particularly where they are created by constrained capacity.