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24 April 2025

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Tēnā koutou katoa,

**Waikato Regional Council Submission on the proposed wastewater environmental performance standards**

Thank you for the opportunity to submit on the proposed wastewater environmental performance standards. Please find attached the Waikato Regional Council's (the Council's) submission, formally endorsed by the Council's Strategy and Policy Committee on **14 April 2025**.

Should you have any queries regarding the content of this document please contact Joao Paulo Silva, Senior Policy Advisor, Policy Implementation directly on (07) 9497179 or by email [joapaulo.silva@waikatoregion.govt.nz](mailto:joapaulo.silva@waikatoregion.govt.nz).

Ngā mihi nui,

A handwritten signature in black ink, appearing to read "Tracey May".

Tracey May  
**Director Science, Policy and Information**

## **Submission from Waikato Regional Council on the proposed wastewater environmental performance standards**

### **Introduction**

1. We appreciate the opportunity to make a submission on the proposed wastewater environmental performance standards.
2. Waikato Regional Council (the Council) recognises that there could be challenges addressing upgrades or renewals for wastewater treatment plants and networks and that proposed national wastewater environmental performance standards (the Standards) could help mitigate these challenges.
3. Our submission reinforces Council's position, as stated in our submission on the Local Government (Water Services) Bill<sup>1</sup> (the Bill), remains. Council's position is that wastewater standards should not prevail over existing discharge quality or negate key provisions in the Resource Management Act 1991 (RMA) related to discharges and their receiving environment. In addition, we consider that a case-by-case assessment, that accounts for localised effects and specific merits of an application, should determine the assessment and duration of a resource consent, as opposed to the suggestion of a 35-year blanket approach for renewing consents.
4. The Council considers that high quality water is essential for having a prosperous region, a healthy community as well as a thriving environment and economy. Therefore, it is essential to appropriately manage wastewater to provide for the wellbeing of our communities. Wastewater management translates in significant investments and work from central government, local authorities, communities, landowners, as well as sectors who make significant contribution to national economy.
5. The Council has unique Treaty Settlement responsibilities that we must meet as a result of Crown decisions, we consider very difficult to see how the Standards as drafted enables council to reconcile compliance with both statutory obligations under Treaty Settlement legislation and what is being proposed. The Council needs to safeguard itself against potential confusion in implementation of the Standards and seeks the Authority to provide clarity, including that the Council will not carry any liability for non-compliance with statutory responsibilities under any Acts.
6. For regionally monitored rivers, our internal data shows that 40-60% of the Waikato sites already have significant adverse effects on aquatic ecosystems from nitrogen and phosphorous. The Standards should, at least hold discharge quality at the levels of stringency they are now. If not, then water quality across the region will deteriorate and the percentage of waterways across the region experiencing significant adverse effects will only worsen.
7. Providing for the setting of environmental performance standards for wastewater that prevail over rules relating to resource management by Order in Council, risks the statutory power in the Bill being inconsistent with fundamental constitutional principles, including the rule of law. This provision limits local government authorities' ability to deliver on the expectations set with the community through the RMA's consultation processes. Decisions on plan rules (which include activity status) are normally the result of the democratic process under Schedule 1 of the RMA and judicial ruling by the Environment Court. Having the ability to prepare environmental performance standards that could be contrary to the outcome of the plan-making process, whilst limiting the ability of councils to have more stringent rules, is likely to infringe on the principle of natural justice.
8. We seek the opportunity to participate in the development of the actual Standards and/or to provide comment on the draft Standards. Additionally, the Council wishes to be heard in support to this submission.

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<sup>1</sup> [Waikato Regional Council submission on the Local Government \(Water Services\) Bill](#)

## Summary

9. In summary, the Council's submission:

- a) Reiterates some of our previous comments raised in our submission on the Bill - **wastewater standards should not prevail over local authorities' plan rules or RMA national direction and that a case-by-case assessment should determine the duration of a resource consent, instead of having a 35-year blanket approach for renewing consents.**
- b) Recommends amendments to the Standards to help mitigate concerns in terms of **the Council not being able to meet its Treaty Settlement obligations**
- c) Provides a range of examples highlighting that the **wastewater standards we have now in the region via consents are of better quality than of those in the proposed Standards** and provides a table with current consenting standards examples in the Waikato region in Attachment 3
- d) Raises concerns regarding the **loss of water quality in the region as a result of the Standards being implemented**
- e) Recommends amendments to help avoid re-consenting of wastewater treatment plants lowering their quality to meet the new Standards
- f) Provides **commentary on conflicts with the resource consenting process and on the 35-year blanket approach for renewal of consents**
- g) Provides detailed feedback and recommends improvements to the Standards in Table 1
- h) Answers some of the questions listed in the discussion document and recommends improvements to the Standards in Table 2
- i) Provides the following attachments:
  - Attachment 1 – Te Ture Whaimana, Vision and Strategy, Area
  - Attachment 2 – Te Kaupapa Kaitiaki, Taupo Catchment Plan, Area
  - Attachment 3 – Current consenting standards examples in Waikato Region – Discharge to Water.

## Submitter details

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## Water quality and Treaty Settlement obligations

### **Implementing the Standards for discharges to freshwater, will result in water quality losses across the Waikato region.**

Many existing municipal wastewater discharges have contaminant standards in their existing consents or current applications which are of higher quality than what the Standards would require. The Standards would undo significant work and investment already undertaken by territorial authorities and encouraged by the Council, in upgrading wastewater treatment plant discharges.

**Enabling municipal water discharges to be less restrictive will cause inequality** by shifting costs from the point-sources dischargers to the non-point sources discharges to cope with the losses in water quality. This will add pressures on our rural communities and rate payers.

To help mitigate these issues, we recommend amendments to the Standards at paragraph 25, including a new standard and a new exception for discharges to land and water with an alternative option.

We recommend the Authority clarifies the relationship between the wastewater standards and Treaty Settlement obligations including Te Ture Whaimana. The proposed standards will conflict with the existing Treaty Settlement obligations to be met in the Waikato, Waipā and Taupō catchments, including meeting Te Ture Whaimana and Te Kaupapa Kaitiaki objectives.

The Standards will prevent regional councils from assessing cumulative catchment impacts if an applicant meets the requirements in the Standards. We recommend the Authority includes a mechanism in the Standards allowing regional councils to assess cumulative impacts from a catchment perspective.

### Treaty Settlements

10. The Council acknowledges that the discussion document recognises the duties on regional councils and other decision makers to have regard to existing Treaty Settlement arrangements, including those that cover the Waikato and Waipā River catchments, and Taumata Arowai (the Authority) is still engaging with iwi in these catchments where there are specific settlements to uphold and that engagement will inform the Minister on how the Wastewater Environmental Standards (the Standards) could apply where there are settlement obligations.
11. Notwithstanding the above, we consider it challenging to navigate how the Standards could be applied where discharges are to freshwater, or to land where contaminants may enter freshwater, while meeting the existing Treaty Settlement obligations in the Waikato, Waipā and Taupō catchments at the same time. We consider that the Standards conflict with existing Treaty Settlement obligations as set out below. This could place the Council in an untenable position of risk, where we would be non-compliant with one legislation in order to comply with another legislation.
12. Additionally, we acknowledge that the Standards make reference to consider existing Treaty Settlement arrangements, but it does not consider Deeds of Settlement signed by the Crown or under negotiation but not yet in legislation, such as the Hauraki Deeds (Pare Hauraki collective and individual iwi pending deeds), Ngati Te Ata, West Coast Harbours Settlement and Ngati Koheriki. We recommend the Authority to also consider these deeds and to clarify how these will be addressed by the Standards.

### Te Ture Whaimana

13. Te Ture Whaimana o Te Awa o Waikato (Vision and Strategy) is acknowledged as the primary direction setting document for the Waikato and Waipā River catchments, it arises from the Treaty

Settlement Acts and is imbedded in the Waikato Regional Policy Statement. The overarching purpose of each of these settlements includes an aspect related to restoring the health, wellbeing and/or quality of the rivers for present and future generations. Flowing from this, the Vision and Strategy has objectives which include restoration and protection of the health and wellbeing of the Waikato River, recognition and avoidance of cumulative effects, and recognition that the river system is degraded and should not be required to absorb further degradation as a result of human activities.

14. In practice, case law<sup>2</sup> has established that those objectives require consent applicants to provide an aspect of 'betterment' in proportion to the activity they propose where their activity potentially impacts the waterways in the Waipā and Waikato River catchments. This is a contribution to working towards the protection of the river system, and its restoration (i.e. improvement). The Vision and Strategy area of the Waikato and Waipā River catchments comprises approximately one third of the Waikato Region as a whole, see **Attachment 1**.
15. We understand that the Standards are 'environmental performance standards' issued under the Water Services Act and are not National Environmental Standards (NES) issued under the RMA. While Te Ture Whaimana prevails over NES, this type of secondary legislation is not mentioned in the Treaty settlement legislation. As Te Ture Whaimana is the primary direction setting document for the Waikato and Waipa catchment and should there be any inconsistency between it and any other policy direction Te Ture Whaimana prevails, we recommend the Authority clarifies the relationship between the wastewater standards, Treaty Settlement obligations and the statutory responsibilities that council has to implement Te Ture Whaimana.

#### Te Kaupapa Kaitiaki – Taupō Catchment Plan

16. The catchment of Lake Taupō, see **Attachment 2**, is the subject of the Ngāti Tūwharetoa Claims Settlement Act 2018 (NTCSA). NTCSA required the establishment and implementation of Te Kaupapa Kaitiaki, Taupō Catchment Plan, November 2022 (TKK). NTCSA stipulates that until the Council has met its obligations to recognise and provide for the vision, objectives, desired outcomes, and values of TKK in its planning documents (which hasn't yet occurred), the Council must, when deciding or processing an application for resource consent, "have particular regard to" TKK. To "have particular regard to" imposes a high test and creates a duty to make inquiry of relevant matters to be considered and carefully weighed in coming to a decision. An inability for consideration and weighing of relevant matters to influence the outcome of a decision undermines the duty to "have particular regard to" TKK.
17. The application of the proposed wastewater Standards to discharges to water and land without ability to apply more stringent standards, does not allow the Council to meet its obligations to "have particular regard to" the Objectives and desired outcomes of TKK established under Treaty Settlement. The vision of TKK is "*A healthy Taupō catchment that is capable of sustaining the whole community and that is managed in a manner that reflects Ngāti Tūwharetoa tikanga.*" Objectives of TKK include health and wellbeing of the environment, life giving waters and customary food gathering. The Outcomes desired by the objectives, relevant to the proposed Standards, include: "*The health and wellbeing of the environment is nurtured and sustained,*" "*Water and water bodies are managed in accordance with the hierarchy and principles of Te Mana o te Wai,*" "*Improved water quality and the life supporting capacity of water bodies,*" and "*Reduced nitrogen and pathogen levels and nutrient discharges to Lake Taupō.*"
18. In addition, the Taupō catchment is the subject of targeted catchment-only rules to protect the near-pristine waters of Lake Taupo and reduce the development impacts from nitrogen and phosphorus on water quality. The targeted rules focus in on on-site wastewater discharges and the discharges associated with farming and rural activities that lead to nitrogen and phosphorus entering water. Rules for biosolids discharge to land are also automatically Discretionary Activities, reflective of the

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<sup>2</sup> Puke Coal Ltd v Waikato Regional Council [2014] NZEnvC 223

pumice soils and high potential for discharges to land to enter groundwater and then surface water. While onsite wastewater activities are outside the scope of the proposed Standards, the application of less stringent standards to municipal discharges in the Taupō catchment for discharges to water, land and of biosolids to land, would undermine the work and progress made over recent years in protecting and enhancing the water quality of Lake Taupō.

19. Additionally, the Standards could also have an impact in the significant investments the Council made alongside Taupo District Council, the Crown, and local iwi to address Lake Taupo's restoration (approximately \$80million). This includes Protecting Lake Taupo<sup>3</sup>, a strategy guiding action to protect the lake. After this, new Waikato Regional Plan rules were developed to cap the amount of nitrogen leaching from the land, with a public fund (administered by the Lake Taupō Protection Trust) established to assist in achieving the required reduction of nitrogen. The aim to reduce nitrogen levels by 20% has been achieved, however there is a need to remain constantly vigilant. The Taupo catchment has an intricate Nitrogen allocation/trading framework. Decisions that are made contrary to the existing regional plan provisions will create significant issues for all who operate within the catchment. We recommend that the Standards must not impact the work that has been undertaken in the catchment, nor should they override the Lake Taupo provisions of the Operative Regional Plan.

#### Water Quality and Consent Examples

20. Across the region – even outside special areas such as the Taupō and Waikato and Waipā catchments – through iwi and community consultation and engagement, and encouraged and supported by the Council, territorial authorities progressively work towards their wastewater discharges being treated to improved quality over time and have made investment and commitments associated with that. The Council has been systematically strengthening the limits of consents over time with a view to improvement of the water quality across the whole region and this is accepted by territorial authorities. Many existing municipal wastewater discharges have one or multiple contaminant standards in their existing consents or current applications which are higher quality than what the Standards would require. Application of the Standards would undo a lot of work and investment already undertaken by territorial authorities and encouraged by the Council, in upgrading wastewater treatment plant discharges. The tables in **Attachment 3** give examples of a range of relevant existing consents and proposals, including information on when the consent was granted and examples both inside and outside the Waikato, Waipā River and Taupō catchments.
21. Examples of note include:
  - 1) **Raglan:** discharge to the Coastal Marine Area (CMA) which when granted in 2005 was more restrictive than the proposed Standards and the community have had a desire for better water quality – that consent is likely to be replaced by a discharge to land in the near future.
  - 2) **Cambridge:** an example of iwi consultation in a wastewater consent process where discharge is to the Waikato River. Waipā District Council, through iwi and community consultation has committed to an upgrade which will provide discharge quality much more stringent than the proposed Standards, and on the basis of the commitment and investment in technology and improved quality a 35-year term was granted.
  - 3) **Hamilton City:** has a 20-year consent for discharge to the Waikato River. This is a high dilution environment and current consent limits are considerably lower than the Standards for Carbonaceous Biochemical Oxygen Demand (CBOD), Total Suspended Solids (TSS) and E.coli, while Total Nitrogen (TN) and Total Phosphorus (TP) are managed by load. While the conditions for TN and TP only specify load limits, the actual discharge concentrations are measured via monitoring. From this data (in attachment 3) we can see that actual TN is less than a third of the standard, and TP is only 8% of the proposed Standards. Additionally, the actual discharge for CBOD and TSS concentrations are around

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<sup>3</sup> [The people need the water, but now the water needs the people – Protecting Lake Taupo](#)

half their consented limits, which as already noted are considerably lower than the proposed Standard.

4) **Matarangi:** a discharge to the CMA and replacement applications are currently in a hearing adjournment, however, CBOD, TSS and ammoniacal nitrogen in the expired consent were already more stringent than the Standards, while enterococci was higher. The proposed new conditions for the renewal are considerably more stringent than the Standards for all parameters. Dilution and discharge timing are key issues being traversed in this small upper estuarine receiving environment.

5) **Turangi:** an example of a complex situation. The discharge currently operates under s124 since its expiry in 2018. The Standards are more stringent than those conditions except for E.coli. An active consultation process, including iwi, has been ongoing in previous years with a desire for the discharge to be moved from fresh water to land. A location for potential discharge to land was identified and under investigation, however, recent financial constraints removed it as an option from the Taupō District Council Long Term Plan. Taupō District Council is currently working with the consultation parties to look at options for continued discharge to water. The discharge point is to fresh water that would be considered a low dilution environment, however, it is in the catchment of, and close proximity to, Lake Taupo which has a particular iwi and regulatory focus on limiting N and P as noted above.

6) **Taupō:** discharge to land with a 24-year duration and its two discharge locations are located outside the Taupo catchment (but within Te Ture Whaimana applicable area). To obtain betterment, significant N reduction was achieved by gaining more land for disposal.

7) **Catchment approach - Matamata-Piako District Council (MPDC):** currently in a notified consent process for all wastewater treatment plants (WWTPs) within that District. The district council proposes upgrades to treatment plants throughout the district on a staggered basis. In part it proposes to manage the effect on the environment through management of total load of nutrients discharged. This is an important consideration in the Hauraki Gulf catchment. However, not all contaminant concentration limits will meet the proposed Standards. Te Aroha currently has limits more stringent than the proposed Standards, with the exception of some high flow discharges which use an old oxidation pond. This contingency discharge would not meet the proposed Standards but is proposed to be phased out within ten years. Also in the district, Tahuna is a small community with a modern WWTP discharging to a small stream. Except for ammoniacal nitrogen, all parameters are more restrictive than the proposed Standards.

22. As mentioned earlier, the Council's internal data shows that for regionally monitored rivers 40-60% of the Waikato sites already have significant adverse effects on aquatic ecosystems from nitrogen and phosphorous. If the Standards do not, at the least, hold discharge quality at the levels of stringency they are now, then water quality across the region will deteriorate and the percentage of waterways across the region experiencing significant adverse effects, and the degree of those effects, will only worsen.
23. On the basis of all the above, we consider that implementing the Standards for discharges to fresh water, without the ability to make them at least as stringent as current consent conditions across the region and to require additional improvements in the Waikato, Waipā and Taupō catchments is unacceptable. We are concerned that the Standards will result in water quality losses across the Waikato Region. In the Waikato, Waipā and Taupō catchments, the Standards will prevent the Council from meeting its Treaty Settlement obligations and complying with Court directions.
24. Additionally, we consider that addressing cumulative adverse impacts is another key issue with implementing the Standards. The Standards will not allow regional council discretion to assess cumulative catchment impacts if an applicant meets the requirements in the Standards. We consider that the catchment approach we have for MPDC above is a great example of collaboration and

managing effects from a catchment perspective. We recommend the Authority includes a mechanism in the Standards allowing regional councils to assess cumulative impacts from a catchment perspective.

Proposed amendments to improve workability:

25. Under the Bill any consent granted must include a condition with “*requirements that are no more or less restrictive than is necessary to give effect to the wastewater environmental performance standard (unless an exception applies).*” The Council has made its position clear on its submission to the Bill that wastewater standards should not prevail over local authorities’ plan rules, Resource Management Act 1991 (RMA) provisions or national direction. Implementing the Standards will result in water quality losses in the Waikato region. However, we consider that if the government decides to proceed with the proposed regulatory approach, then amending the Standards could help mitigate some of the issues listed above. Therefore, we recommend amending the Standards to incorporate the following as either part of the Standards, or as specific exceptions:

1 A new standard for discharges to water and land:

We recommend including a new standard requiring that notwithstanding any other listed standard, no renewal or replacement consent for discharge in any of the water or land categories may be granted at a concentration less restrictive than a previous consent for that activity for any parameter in the Wastewater Environmental Standards.

2 A new exception for discharges to water and land:

We recommend including a new exception that in the Waikato River, Waipā River, and Lake Taupō catchments, the Standards does not apply.

As an alternative to an exception to exclude the Waikato/Waipā/Taupō catchments from the Standards, we suggest that an additional standard could be added to address Te Ture Whaimana (Vision and Strategy) and Te Kaupapa Kaitiaki:

In the Waikato River, Waipā River and Lake Taupō catchments:

- (a) In addition to 1(A new standard for discharges to water and land), we recommend that renewal or replacement consents are required to include standards that provide betterment to receiving water quality compared with their previous discharge activity; and
- (b) We recommend that new discharge activities are required to include standards, and offsetting or compensation, to demonstrate overall betterment to the receiving catchment proportionate to their proposed activity.

26. Part 1 (A new standard for discharges to water and land) above would ensure that water quality gains already made around the country via wastewater discharge improvements are, at a minimum, not lost. It would also prevent existing consent holders from replacing their consents years early in order to obtain the easier discharge parameters in the Standards, and it provides certainty to both territorial authorities and the community. The second part (proposed new exception) would mean that Treaty Settlement obligations in the Waikato Region would be met, including the aspirations to work towards restoration of the health, wellbeing, and associated quality of water in relevant catchments.

Concluding comments on water quality

27. It has been suggested by the drafters of the Standards during webinars that if the Standards are applied across the board there will be “unders and overs” with a few existing plants where the Standards discharge quality is lower than an existing consent and the Standards are designed to be protective of the environment. The attached table (Attachment 3) of existing consents and proposals indicates that scenarios where the Standards are lower (less stringent) than existing consents may be more widespread than is being expressed, the outcome being losses of water quality improvement across the Waikato Region if the Standards are applied. The Standards also don’t provide for technology developments as they occur, or a catchment-wide approach (such as Matamata-Piako District is undertaking), that can currently be considered in the usual RMA process. We also consider that having “unders and overs” is contrary to decisions from the Court in regard to the

implementation of the Vision and Strategy. Furthermore, if the standards are lower quality standards for point source activities, then there is a risk that the issue will need to be addressed by others, such as primary sector industry.

28. Whilst the Standards leave the ability open to a territorial authority to operate at a better quality discharge standard than their consent issued under the Standards requires, this will be voluntary. This will create a scenario of greater burden for dischargers to which the standard doesn't apply (e.g. industrial). This is because when a consent authority considers the cumulative effect of another entity's proposed discharge that is not subject to the Standards, when considering all other discharges to the system and cumulative effects of load, etc., regional councils will need to consider a municipal discharge at the levels it is consented for (i.e. at the Standards) and lawfully able to discharge at, rather than any voluntary better quality they may choose to discharge at.
29. In addition, we consider that enabling municipal wastewater discharges (point-source discharges) to be less restrictive through the Standards will cause inequality. This will incur in losses of water quality and consequently non-point source discharges in rural communities such as farms will end up bearing the costs of the decline of water quality by consequently needing to have more stringent conditions to cope with the water quality losses. In essence the Standards will result in a shift on costs from the point-sources dischargers to non-point sources discharges. This is not in alignment with the polluter pay principle, which dictates that those responsible for environmental pollution should bear the costs associated with preventing, controlling, and remedying that pollution, as well as the societal costs it imposes.
30. The Authority should consider all the great work that has been undertaken to improve water quality across the region and ensure this is not lost by enabling larger polluters with less stringent wastewater requirements. Our small communities, rate payers and farmers also have a key role contributing to water quality. The council has an information hub<sup>4</sup> for informing farmers around best practices to improve water quality.

#### Discharges to land

31. In terms of discharges to land, we looked at doing a similar exercise as was carried out for discharges to water, to compare what the proposed numeric limits of the Standards would mean in comparison to existing resource consent conditions. This was not possible because information we have for existing consents does not readily provide the ability to assess or define soil class as per the consultation document. In addition, hydraulic limits in consents are variably expressed as an hourly, daily or weekly limit, with contaminant limits often expressed as daily, weekly or yearly load limits.
32. Notwithstanding the above WRC can generally support the approach of setting standards for discharge to land due to the up front site assessment of site and soils required, and provided the site and soil assessment includes all relevant risk factors, including those risks to ground and surface water, and that conditions can be included to address potential long-term effects of discharge on soils.

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<sup>4</sup> [Farmers' hub | Waikato Regional Council](#)

## Consent Process

**We consider that the Bill and the Standards bring a level of uncertainty and confusion** by having some parameters set without assessment and while the remaining parameters are to be addressed as part of the usual resource consent process.

**We recommend** that the Standards state specifically that sections 105 and 107 of the RMA still apply to assessment of parameters not included in the Standards and apply to the assessment of cumulative effects of parameters that are included in the Standards.

33. The Council considers that there is a lack of clarity as to how the consent process for discharges to water or land works when some parameters are listed in the Standards, and other parameters are to be continued to be addressed through the usual resource consenting process.
34. This lack of clarity arises in conjunction to the Bill, at Part 5, Subpart 7 (Amendments to the RMA), as introduced in December 2024. As drafted, the Bill would introduce changes to the RMA, including RMA s105 (consideration of the receiving environment) and s107 (discharge permit bottom lines). According to the Bill, sections 105 and 107: *“do not apply if an application is for an activity that is regulated by a wastewater environmental performance standard... and the application complies with the relevant environmental performance standard.”* [bold added for emphasis].
35. This means that if a discharge can comply with the Standards for the specific parameters it covers, then s105 and s107 do not apply to the **whole activity** for which an application is made, including consideration of other contaminants or effects not covered by the Standards. Effects not covered by the Standards (page 21 of the discussion document) include cumulative effects, metals, and bioaccumulation in organisms. Cultural effects are not mentioned but are often linked to discharge quality effects. All of these aspects would require an assessment of the sensitivity of the receiving environment to properly consider effects through the “usual resource consenting process” and each has the potential to contribute to s107 effects.
36. We recommend that the Standards state specifically that sections 105 and 107 of the RMA still apply to assessment of parameters not included in the Standards and apply to the assessment of cumulative effects of parameters that are included in the Standards.
37. Additionally, consultation webinars have indicated that the Standards allows regional councils to set either volume or load limits in consent conditions. We note that setting restrictive volume or load conditions as a way to address cumulative or sensitive receiving environment effects potentially frustrates a consent when applied in conjunction with the Standards, but trying to achieve a load comparative of a higher quality standard. Frustrating the consent could occur by disallowing the full volume to be discharged each day thus creating storage issues at the site and potential inability to discharge all treated wastewater, and/or restricting load either means the full discharge cannot be released or a higher quality discharge will be required despite conditions that meet the Standards. We consider that this is not an efficient or transparent way to manage effects and has the potential to be so restrictive that it prevents the consent holder from carrying out the actual approved activity for which consent is granted.
38. Finally, we consider that the Standards should provide for the continuous monitoring of the receiving environment. We recommend confirming that regional councils will still have the discretion to include receiving environment monitoring in conditions of consent for a discharge to land or water. We note that the discussion document states the Standards will “not require” receiving environment monitoring. We acknowledge that data from this monitoring will not be able to be used to review discharge standards in conditions to make them more restrictive than the Standards even if an adverse effect is occurring. Additionally, if this is no longer required as part of a condition of consent it could mean that our state of the environment monitoring responsibilities will increase, this is an

unintended consequence that could result in an increase in an unfunded mandate. This again, goes against the government's own principle of polluter pays. We recommend the Authority considers this issue and clarify how this will work in practice. We discuss this further at pages 16-17 of table 1.

### 35-year Consent Term

**The Council reiterates its position** in its submission to the Bill, requesting that the proposed clause on 35-year consent duration be removed to allow for case-by-case assessments. Our opinion remains unchanged, **and we urge** the Authority to reconsider this approach. **We stress** the wastewater is a complex matter that requires case-by-case considerations.

If the clause is not removed, **we strongly recommend** that regional councils should still be able to review consent conditions and require conditions that are more restrictive than the Standards when monitoring data indicates the discharge is having unacceptable adverse effects on the environment.

40. We consider that if existing or improved discharge quality is not enabled by the proposed Standards for discharges to both water and land, a 35-year term would result in backwards steps in consented water quality across the region (and country). Further, it will pass on the task of improvements to the next generation. We also consider that it places a greater burden and obligation on other non-municipal dischargers to provide improvement, for example under s107 and/or when considering cumulative effects.
41. The Council included discussion on the 35-year term in its submission on the Bill, however, at that time the commentary was made without having any detail on what the Standards themselves might contain. In that submission the Council noted that setting a 35-year consent duration via legislation will not allow for local nuances in the state of the environment and changes in technology. Operationally, the Council does currently grant wastewater discharges for the maximum duration (such as in Cambridge) where there is a commitment to, and investment in infrastructure for, improved discharge quality. On the other hand, where sites are not proposing upgrades, or using limited technology, or effects are more significant, consent durations may be shorter.
42. A significant difference between current consents and those proposed under the Standard, is that review conditions can act as a backstop for changing discharge standards if monitoring data indicates the discharge is having unacceptable adverse effects on the environment. Under the Standards this option is not available for the key discharge parameters which will be set in the Standards. As per the Council's submission on the Bill, the Council has requested that the proposed clause on 35-year duration be removed to allow for a case-by-case assessment, that accounts for localised effects and specific merits of an application, to determine the duration of a resource consent. Our opinion remains unchanged, and we urge the Authority to reconsider this issue. If the 35-year clause remains we strongly recommend the Authority allows regional councils to still be able to review consent conditions and require conditions that are more restrictive than the requirements in the Standards when monitoring data indicates the discharge is having unacceptable adverse effects on the environment.
43. To finish, we consider that consents via case-by-case assessments can assess the lifetime of an asset and as a result able to provide certainties for investment. A 35-year blanket approach would not consider the lifetime of the infrastructure. We recommend the Authority to consider this issue and also provide an avenue for assessing the lifetime of the infrastructure.

**Table 1 - Specific Comments on Consultation Discussion Document Content**

Discussion Document Section	Page	Consultation comments
<i>6 Discharge to Water</i>		
Waikato Context		
<p>The Waikato Regional Plan currently has the following rules that apply to municipal discharges of treated wastewater to water or wetlands:</p> <ul style="list-style-type: none"> <li>• <b>Discretionary Activity</b> (rule 3.5.4.5) for the discharge of any contaminant into water, or onto land which may result in that contaminant entering water. This applies for any discharge not specifically provided for by another rule, and apart from 3.5.4.6 below there is no other rule relating to community or municipal treated wastewater discharges to water</li> <li>• <b>Non-complying Activity</b> (rule 3.5.4.6) for the discharge of contaminants(...) into Natural State Water Bodies or wetlands that are areas of significant indigenous vegetation and/or significant habitats of indigenous fauna or cave entrances or lakes (excluding artificial lakes and Lake Rotoaira)</li> </ul> <p>The Coastal Plans have the following rules:</p> <ul style="list-style-type: none"> <li>• Operative WRCP <ul style="list-style-type: none"> <li>- <b>Discretionary Activity</b> (rule 16.3.8) for any discharge of human sewage to the CMA (except from ships), which has not passed through soil or wetlands,</li> <li>- <b>Discretionary Activity</b> (rule 16.3.9) for any discharge of human sewage to the CMA has first passed through soil or wetlands.</li> <li>- <b>Prohibited Activity</b> (rule 16.3.11) for the discharge of any human sewage except from ships and offshore installations, into the Firth of Thames area of significant conservation value (ASCV 9) as marked on maps in the plan</li> </ul> </li> <li>• Proposed WRCP <ul style="list-style-type: none"> <li>- <b>Discretionary Activity</b> (rule WD-R10) for the discharge of treated sewage to the CMA (rule has legal effect).</li> </ul> </li> </ul>		
Proposed approach: discharge to water environmental performance standard for wastewater treatment plants	19, 20	<p><u>We recommend</u> that for clarity the Standards should state explicitly that the RMA activity status for discharges to water under the Standards are determined by any relevant regional plan and relevant National Environmental Standard.</p> <p>The Bill proposes a new clause in the RMA (proposed new s138(2A)(b)) where a wastewater environmental performance standard <i>“may specify...the activity status under the Resource Management Act 1991 that an activity will have if it is performed in accordance with the standard.”</i> We note that for discharges to water and land the proposed Standards does not specify the activity status, while for biosolids and overflows and bypasses activity the status is proposed by the Standards. Where the Standards does not specify activity status, the usual planning instruments of regional plans, coastal plans, and relevant National Environmental Standards, determine activity status.</p>
Proposed approach: discharge to water	19, 20	<p><u>We recommend</u> that for clarity the Standards states that the receiving environment type under the Standards is determined via the dilution ratio at the point of discharge, i.e. end of pipe.</p>

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environmental performance standard for wastewater treatment plants		<p>The dilution approach does not take account of different discharge mechanisms at the point of discharge and how this affects the receiving environment at the point of discharge and near field. For example:</p> <ul style="list-style-type: none"> <li>• The mixing profile in a river where discharge is via a mid-stream diffuser, and mixing occurs quickly, will be quite different to a bankside pipe or rock outfall; and</li> <li>• Many Waikato lakes are shallow so the plume a discharge generates is different to a deep lake.</li> </ul> <p>For the examples given above, the “flow” of two water bodies or lakes may be the same, but the effects may be quite different due to the mixing profiles.</p>
Discharge to water environmental performance standard will specify receiving environment types	19	<p><u>We recommend</u> that for avoidance of doubt in applying the Standards, it should specify that the dilution ratio is calculated based on flow at the location of the end of pipe. In addition, the dilution ratio flow parameter should also be determined taking into account climate change for the duration of the consent as low flows are anticipated to get lower as temperatures rise.</p>
Parameters and numeric limits for discharges to water	21	<p><u>We recommend</u> the Authority provides further clarity on how applicants and regional councils are to address effects and contaminants that are not covered by the proposed Standards. We also seek clarity regarding potential conflicts as set out in the questions below.</p> <p>The consultation document makes reference in several places to those effects and contaminants not covered by the Standards will “<i>therefore continue to be addressed by regional councils during the consenting process,</i>” “<i>where contaminants are not covered by the standard (for example, heavy metals), the usual resource consenting process would apply</i>” (p.21), “<i>any matters not covered by wastewater standards will continue to be set through the existing resource consent process as they are now</i>” (executive summary, p.5), and “<i>all other matters go via usual RMA process</i>” (proposal on a p.7) [bolding added for emphasis].</p> <p>Several issues arise from this:</p> <ol style="list-style-type: none"> <li>1 In general, the consideration of the effects of other contaminants will require an assessment of the sensitivity of the receiving environment to that contaminant. As consulted on, the Bill makes changes to RMA s105. Section 105(1) includes a requirement that a consent authority must have regard to “the nature of the discharge and the sensitivity of the receiving environment to adverse effects.” The proposed amendment to s105 includes a new subsection where s105(1) and (2) “<i>do not apply if an application is for an activity—(a) that is regulated by a wastewater environmental performance standard ... and the application</i></li> </ol>

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		<p><i>complies with the relevant environmental performance standard.”</i> As this disapplication applies to the whole “activity”, i.e. the discharge in its entirety, then our interpretation is that regional councils can have no regard to s105 for the whole activity. This is contrary to the commentary of the discussion document which indicates that for parameters not included in the Standards the “usual RMA consent process” will apply. <u>We recommend</u> clarifying how the Bill will apply in this regard.</p> <p>2 A similar issue to RMA s105 arises in relation to s107, which sets ‘bottom line’ effects for discharge activities. The Bill proposes to modify the RMA with a new subsection where s107(1) <i>“does not apply if an application is for an activity—(a) that is regulated by a wastewater environmental performance standard ... and the application complies with the relevant environmental performance standard.”</i> As noted above in relation to s105, if this disapplication applies to the whole “activity” as it reads, ie the discharge in its entirety, then our interpretation is that the consent authority is restricted to not have the ability to consider s107 at all. Again, this is contrary to the commentary of the Consultation Document which indicates that for parameters not included in the Standards the “usual RMA consent process” will apply. <u>We recommend</u> clarifying how the Bill will apply in this regard.</p> <p>3 Volume of discharge and/or nutrient load to the receiving environment: As mentioned above, consultation webinars have indicated that the Standards allows regional councils to set either volume or load limits in consent conditions. We note that setting restrictive volume or load conditions as a way to address cumulative or sensitive receiving environment effects potentially frustrates a consent when applied in conjunction with the Standards, but trying to achieve a load comparative of a higher quality standard. Frustrating the consent could occur by disallowing the full volume to be discharged each day thus creating storage issues at the site and potential inability to discharge all treated wastewater, and/or restricting load either means the full discharge cannot be released or a higher quality discharge will be required despite conditions that meet the Standards. We consider that this is not an efficient or transparent way to manage effects and has the potential to be so restrictive that it prevents the consent holder from carrying out the actual approved activity for which consent is granted.</p> <p>4 Cultural effects are an effect of a discharge and are not covered by the proposed Standards for the consent process. It is not clear how cultural effects should be addressed by an applicant or consent authority where cultural effects are intrinsically linked to the discharge quality, including parameters in the Proposed Standards.</p>
Treatment requirements for discharges to open ocean	21	<p>The consultation document states that: <i>“This is on the assumption that discharges to ocean and coastal receiving water will be milli screened to removes solids, as is common in wastewater treatment plants in New Zealand.”</i></p> <p>We consider it inappropriate that this should be an assumption. therefore, <u>we recommend</u> that the requirement for milli screening should be an explicit condition of the Standards for these receiving environments, rather than an assumption.</p>

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		<p>We recommend assessing sensitive receiving environments and having these as exceptions in the Standards. For example, the proposed Waikato Regional Coastal Plan has The Firth of Thames and Whiritoa Lagoon are identified as degraded water bodies. Activities within these areas need to demonstrate they are not contributing to further water quality degradation.</p>
<p>Exceptions to the proposed Standard</p>	<p>22 wetlands</p>	<p><u>We support</u> that the Standards for discharges to water do not apply where discharges are to wetlands and the exceptions in the Standards.</p> <p>However, <u>we recommend</u> that the definition of wetland types be clarified in the Standards <u>and recommend excluding</u> the discharge to land or water to any natural RMA or NPS-FM wetland, or wetland constructed for compensation or offsetting, from the Standards to be assessed under the usual RMA process.</p> <p><u>We also recommend</u> that where a wetland is constructed as part of the treatment system then the outflow(s) from the wetland are considered the receiving environment and need to address discharges to both water (at the outflow of the constructed wetland) and land/groundwater (if unlined).</p> <p><u>We seek clarification</u> in relation to discharges to wetlands under the Standards for discharge to land. The commentary on page 26 indicates that “Discharge to wetlands” that are unsealed are being included in the proposed Standards for discharges to land but doesn’t specify that ‘natural wetlands’ (i.e. those that aren’t constructed wetlands as part of treatment) are not included.</p> <p>A natural wetland (i.e. RMA “wetland” or NPS-FM “natural inland wetland”) would not be sealed, however, the Council would not support natural wetlands being the receiving environment for treated human effluent being assessed under the proposed Standards. Wetlands constructed for the purpose of offsetting or compensating for loss of natural wetlands are also not an appropriate receiving environment for treated human effluent. As noted in the “Context” row above, in the Waikato Regional Plan any discharge of treated human effluent to a wetland is a Non-Complying Activity. Under the NES for Freshwater this would also be a Non-Complying Activity under Regulation 54(d) for the discharge of water within a natural inland wetland where there is a hydrological connection between the discharge and wetland, the discharge will enter the wetland, and the discharge will (or be likely to) change the water level range or hydrological function of the wetland.</p> <p>When referring to “natural wetland” in the proposed Standards, clear reference and definition needs to be made as to what is being referred to as a subset of the formal definitions of “wetland” and “natural inland wetland” in the RMA and NPS-FM respectively.</p>

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		We understand that where a discharge is via a wetland the actual discharge into the receiving environment will be a combination of discharge to groundwater and a water body. Currently the Standards doesn't address this where the discharge from a wetland is to a surface water body because 'natural wetlands' are excluded from discharge to water (page 22), and 'wetlands' including (but not limited to) constructed wetlands are included in discharge to land (page 26).
Exceptions to the proposed Standard	22 Other	<p><u>We recommend</u> the following amendments and inclusion to the Standards:</p> <ol style="list-style-type: none"> <li>1 Excluding discharges to lakes and ponds from the Standards and to be assessed under the usual RMA process</li> <li>2 Including an approach to bankside discharges which assumes a lower immediate dilution factor</li> <li>3 Defining "particular parameter" and "naturally high levels" in connection to the exception to the Standards: <i>"discharges to a waterbody that has naturally high levels of a particular parameter"</i></li> <li>4 Retaining the exception for discharges to waterbodies that meet Attribute Band A under the NPS-FM as they are in a natural, undegraded state. We note that the Waikato Regional Plan makes discharges of contaminants to "Natural State Water Bodies" which are mapped within the Plan as Non-Complying and it is appropriate to assess all discharge parameters as Non-Complying going forward for these water bodies regardless of their status under the NPS-FM</li> <li>5 Including an exception for discharges to water that enter karst ecosystems or cave systems. These should be excluded from the Standards. We consider that these systems have unique and sensitive environments that should be assessed on a case-by-case basis.</li> </ol>
Parameters covered by the discharge to water standard (including the rationale, measurement and numeric limits)	23	<p><u>We recommend</u> defining the term "annual" where an "annual" median or 90<sup>th</sup> percentile is the statistical basis for the measurement unit. For example, annual can be interpreted as a calendar year, the financial year, or annual from the date of commencement of a particular consent or any period of 365 days. We consider that consent commencement is not necessarily useful in instances where the commencement date is different to the consent authority decision date, e.g. an upgrade could be required before the Standards can be complied with (please see further discussion on this below), or an appeal or objection delays the commencement date of the activity after a decision.</p> <p><u>We recommend</u> making it explicit in the Standards that for the "Open Ocean" environment where a contaminant is in the Standards but "not applicable" that that parameter can then be assessed under the usual RMA process and condition limits included where appropriate for site specific scenarios. In addition, as mentioned above, we recommend assessing sensitive receiving environments and having these as exceptions in the Standards. For example, the proposed Waikato Regional Coastal Plan has The Firth of Thames and Whiritoa Lagoon are identified as degraded water bodies. Activities within these areas need to demonstrate they are not contributing to further water quality degradation.</p>
Compliance, monitoring and	24	<u>We recommend</u> confirming that regional councils will still have the discretion to include receiving environment monitoring in conditions of consent for a discharge to land or water. We note that the discussion document states the Standards will "not require"

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reporting requirements		<p>receiving environment monitoring. We acknowledge that data from this monitoring will not be able to be used to review discharge standards in conditions to make them more restrictive than the Standards even if an adverse effect is occurring. Additionally, if this is no longer required as part of a condition of consent it could mean that our state of the environment monitoring responsibilities will increase, this is an unintended consequence that could result in an increase in an unfunded mandate. This goes against the government's own principle of polluter pays. We recommend the Authority considers this issue and clarify how this will work in practice.</p> <p>We consider that receiving environment monitoring will be required by the consent authority for discharges to water for one or more of the following reasons:</p> <ul style="list-style-type: none"> <li>- Identify actual effects on the environment of parameters not included in the Standards, which could be used for consideration in any opportunity for review of the consents; and</li> <li>- Identify actual effects on the environment of parameters included in the Standards to understand long term (beneficial or detrimental) implications of applying the Standards at a specific location and its cumulative effects, and actual effects where a treatment plant may choose to discharge at a more stringent level than the Standards or their conditions apply, and any improvements in the receiving environment following an upgrade to meet the Standards.</li> </ul>
Compliance, monitoring and reporting requirements	24	<p><u>We recommend</u> clarifying the parameters where continuous monitoring will be required for treatment plant discharges, including whether this will comprise continuous monitoring of E.coli and Enterococci.</p> <p><u>We recommend</u> defining the need for continuous monitoring on the basis of mean annual cBOD<sub>5</sub> receipt rather than population numbers.</p> <p>We consider that using a population number to define the size of a treatment plant that will require continuous monitoring is not consistent with the commentary on using population number in relation to small wastewater treatment plants. The population size alone does not take into account where a wastewater treatment plant receives waste from significant industrial or trade-waste sources which may warrant continuous monitoring for that reason despite a lower population.</p>
A discharge to water standard for small wastewater treatment plants	25	<p>The Council is supportive of a separate set of Standards for small communities based on CBOD influent loads, but it is difficult to comment in relation to small WWTPs in general given that changes to the default standards have not yet been defined.</p> <p><u>We recommend</u> clarifying the statement relating to small treatment plants that service small communities and often consist of oxidation ponds that <i>“these plants generally have a low impact on the receiving environment, particularly in relation to nutrients, compared to other sources in the surrounding catchment.”</i> It is not clear what the basis of this statement is and although we support</p>

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		<p>the general premise, actual effects are currently considered on a case-by-case basis. As a consent authority, we routinely weigh cost versus affordability for small communities when considering their discharge proposals and their impact on the specific environment in a Best Practicable Option approach. We note that these small community discharges:</p> <ul style="list-style-type: none"> <li>- Often discharge to smaller water ways which means the impact on the receiving environment has the potential to be greater in relation to concentration and loads.</li> <li>- Have limited treatment ability as acknowledged in the consultation document.</li> </ul>
<i>7 Discharge to Land</i>		
Waikato Context		
<p>We note that the Waikato Regional Plan currently has the following rule that applies to municipal discharges of treated wastewater to land:</p> <ul style="list-style-type: none"> <li>• <b>Discretionary Activity</b> (rule 3.5.4.5) for the discharge of any contaminant into water, or onto land which may result in that contaminant entering water. This applies for any discharge not specifically provided for by another rule, and there is no other rule relating to community or municipal treated wastewater discharges to land.</li> </ul>		
What is a 'discharge to land' from a wastewater treatment plant?	26	<p>We recommend that for clarity the Standards should state explicitly that the RMA activity status for discharges to land under the Standards are determined by any relevant Regional Plan and relevant National Environmental Standard.</p> <p>The Bill proposes a new clause in the RMA (proposed new s138(2A)(b)) where a wastewater environmental performance standard <i>"may specify...the activity status under the Resource Management Act 1991 that an activity will have if it is performed in accordance with the standard."</i> We note that for discharges to water and land it is not proposed for the Standards to specify the activity status, while for biosolids and overflows and bypasses activity status is proposed. Where the Standards does not specify activity status the usual planning instruments of Regional Plans, Coastal Plans, and relevant National Environmental Standard, determine activity status.</p>
What is a 'discharge to land' from a wastewater treatment plant?	26	<p>We recommend amending the Standards clarifying that discharges to a wetland should not be considered a discharge to land where the wetland has not been constructed specifically for the purpose of wastewater treatment, or where there is a subsequent discharge out of the wetland to a water way.</p> <p>This follows from the concerns raised regarding wetlands noted above under <i>Discharges to Water</i>. The consultation document identifies that discharge to wetlands will be applied under the Standards as a discharge to land "where wetlands are unsealed and unlined" as "some or all of the discharge will infiltrate through the base of the wetland."</p> <p>We do not support the discharge to a wetland being considered as a "discharge to land" under the proposed Standards where it has not been constructed specifically for the purpose of wastewater treatment, or where there is a subsequent discharge out of the wetland to a water way. This is because:</p>

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		<p>a) The discharge may have ecological or hydraulic effects on the wetland and these potential adverse effects should be assessed on a case-by-case basis.</p> <p>b) The discharge through a wetland may not be the final receiving environment, whether a constructed ‘treatment’ wetland, or a ‘natural’ wetland, and treated waste could all or partially then enter a waterway. A natural wetland (i.e. RMA “wetland” or NPSFM “natural inland wetland”) would not be sealed, however, WRC would not support natural wetlands being the receiving environment for treated human effluent being assessed under the proposed Standards. The discharge to land standards are not designed to manage effects on surface water.</p> <p>c) As noted in the “Context” row above, in the Waikato Regional Plan any discharge of treated human effluent to a wetland is a Non-Complying Activity. Under the NES for Freshwater this would also be a Non-Complying Activity under Regulation 54(d) for the discharge of water within a natural inland wetland where there is a hydrological connection between the discharge and wetland, the discharge will enter the wetland, and the discharge will (or be likely to) change the water level range or hydrological function of the wetland.</p> <p>d) When referring to “natural wetland” in the proposed Standards, clear reference needs to be made as to what is defined as a subset of the formal definitions of “wetland” and “natural inland wetland” in the RMA and NPS-FM respectively.</p> <p>Further, <u>we recommend</u> clarifying in the Standards that a discharge via a cultural “land contact” structure (e.g. rock outfall) prior to entering a waterway does not constitute a discharge to land but should be considered as a discharge to water (usually bankside).</p>
Rapid infiltration basins are not covered by the Standard	27	We support the exclusion of rapid infiltration basins from the Standards. We consider that this disposal’s design and operation acts as a much more direct pathway for contaminants to enter groundwater (as can wetlands as noted above) and potentially to surface water ways.
Tables	29	We suggest using a unique identifying word to categorise the three classifications of land based on site capability and risk categories. We consider that using “Class” as the terminology to designate combinations of Site capability and Risk as ‘Class 1’, ‘Class 2’, etc may cause ambiguity given that land is also classified as ‘Class 1’, ‘Class 2’ land under the New Zealand Land Resource Inventory Land Use Capability classifications.
Management and Operation Plans and Monitoring and reporting requirements	30	<p><u>We recommend</u> including a requirement under the proposed reporting requirements to report on identification and implementation of actions taken in response to soil infiltration capacity being compromised due to situations such as weather and blockages. This should apply to all discharge to land arrangements.</p> <p>We consider that the plans should also require the inclusion of details of recording the identification and carrying out of responses based on site restrictions and inspections. or example, recording how actions will be proposed and recording actions taken, if the</p>

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		land is found to have reached its infiltration capacity or is otherwise compromised due to situations such as weather or a blockage, or if contaminants have accumulated in the soil. That is an adaptive management approach to responding to inspections and monitoring.
<i>8 Beneficial Reuse of Biosolids</i>		
Waikato Context		
<p>The Waikato Regional Plan currently has the following rules that applies to discharges of biosolids to land:</p> <ul style="list-style-type: none"> <li>• <b>Permitted Activity</b> (rule 3.5.6.2) for the discharge of sludges and liquids from activated sludge treatment processes onto or into land outside the Lake Taupo Catchment and any consequent discharge of contaminants to air</li> <li>• <b>Controlled Activity</b> (rule 3.5.6.3) for the discharge of sludges and liquids from activated sludge treatment processes onto or into land outside the Lake Taupo Catchment and any consequent discharge of contaminants to air</li> <li>• <b>Discretionary Activity</b> (rule 3.5.6.4) for the discharge of biosolids into water or onto or into land that does not comply with Rules 3.5.6.2 and 3.5.6.3.</li> </ul>		
General comment		<p>The Council is generally supportive of setting of standards for reuse of biosolids and formalising appropriate guidelines and standards for contaminants and stabilisation. However, <u>we recommend</u> some changes to the activity status for disposal. We consider that there is a wide range of contaminants possibly present in biosolids, and the site suitability for disposal is not only an initial consideration, it also requires monitoring and management. Therefore, the activity status should be modified.</p> <p><u>We recommend the following changes to the activity status:</u></p> <ul style="list-style-type: none"> <li>- Grade A1 biosolids disposal to be a Controlled Activity,</li> <li>- Grade B1 to be a Restricted Discretionary Activity, and</li> <li>- Grade A/B2 to be a Discretionary Activity.</li> </ul> <p>An example of why monitoring and management are important is that across the Waikato region in volcanic areas the concentrations of arsenic in soils may be naturally high. Depending on the soil type, arsenic can be immobilised and accumulate, or leach potentially to groundwater. At some point, the combination of the nature of the biosolids and the soil type and accumulation may mean the site is no longer suitable to avoid long term application leading to land contamination. Therefore, we consider it more appropriate to assess these factors through the consent process, ensuring appropriate consent conditions are in place.</p>
Grading system	33	<p>In addition to the system for grading biosolids, <u>we recommend</u> including the following requirements in the Standards, for:</p> <ul style="list-style-type: none"> <li>- Assessing contaminant levels in receiving soils to determine suitability of the site before any biosolids are added– that the method of applying biosolids to land include mixing with site soils</li> <li>- Monitoring of receiving site soils over time to ensure they do not exceed soil biological health levels</li> <li>- Per-and poly-fluoroalkyl substances (PFAS) limits to be part of the Standards from the start</li> </ul>

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		- Monitoring to include emerging contaminants so that when standards are available for these existing levels will be known.
Consenting Approach	33	<p>We note a potential inconsistency in the second sentence under this heading under the current proposed activity status regime. <u>We suggest</u> it should read as follows:  <i>“Verified monitoring and sampling of the biosolid products will be a condition of the reuse as either a Permitted, or <del>Restricted</del> Discretionary Controlled Activity.”</i></p> <p>We note that if the activity status structure suggested above is adopted as suggested above then this sentence would refer to Controlled or Restricted Discretionary activities.</p>
Examples of qualifying criteria for the reuse of biosolids	34	<p>We note that the blue table includes examples of qualifying criteria for the reuse of biosolids. The first example reads: <i>“Biosolid application must be to land only and must avoid groundwater or surface water contamination.”</i></p> <p><u>We recommend</u> refining this criterion or providing a definition. For any discharge to land where there is no impermeable liner and bunding there is potential for contaminants to migrate to ground and/or surface water, so the criteria to “avoid” groundwater or surface water contamination may not be achievable, but criteria to minimise this to an acceptable level would be more practical. For example, for various soil types, the minimum depth between biosolids application and groundwater level.</p>
<b>9 Overflows and Bypasses</b>		
<b>Waikato Context</b>		
<p>Current rules that apply to bypasses and overflows of untreated human waste are:</p> <ul style="list-style-type: none"> <li>• Waikato Regional Plan: Discretionary Activity (rule 3.5.4.5) of a contaminant into water, or onto land, in circumstances which may result in that contaminant entering water.</li> <li>• Coastal Plans have the following rules: <ul style="list-style-type: none"> <li>○ Operative WRCP: Prohibited Activity (rule 16.3.10) for the discharge of untreated sewage to the CMA, except from ships</li> <li>○ Proposed WRCP: Prohibited Activity (rule WD-R13) for the discharge of any other human sewage to the CMA not authorised by other rules of this plan (rule has legal effect).</li> </ul> </li> </ul>		
General comment		<p>The Council is generally supportive of setting a Controlled Activity arrangement for overflows and bypasses from existing wastewater networks with a risk-based approach, with good notification and reporting procedures, and while working towards reducing or eliminating incidences of overflow or bypass.</p> <p>We consider that Hamilton City Council (HCC) is a good example in the Waikato Region of how overflow and bypass incidents can be monitored, managed, reported and addressed. HCC has a consent condition on its main wastewater discharge consent that requires monthly monitoring and reporting on overflow events at its 135 pump stations. An additional 5-year agreement with WRC outside</p>

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		<p>the consent sets out an agreed more frequent level of reporting and response, and prioritised upgrades. We note that this management is not consented, and the Council currently considers any overflow or bypass incident on a case-by-case basis. Practice by other territorial authorities is inconsistent across the region where there are no direct requirements to report. Most pump stations, however, do have monitoring.</p> <p><u>We recommend</u> that the Standards should clarify that a territorial authority can and should apply for one global consent for all potential overflows and bypasses from a single wastewater network. This would provide for one Management Plan for the whole network system and cover all pumpstations and managed overflow/bypass points as well as unmanaged points and unexpected system failures and events such as broken pipes within the network.</p> <p>In addition, <u>we recommend</u> that new wastewater networks, overflows and bypasses should be a Discretionary Activity so that the context of engineered or managed bypass or overflow locations can be considered in context of the location and the nature of the receiving environment. For example, so that a consent authority can ensure that no new overflow or bypass locations (excluding system failures or breakages) would cause discharge to high quality or sensitive receiving environments.</p>
Proposed approach for managing overflows	36	<p>The first sentence under this heading reads: <i>“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.”</i> We consider that the term “within their means” is not clear in this context.</p> <p><u>We recommend</u> that the Standards should make it clear that network operators should not have the ability to defer or avoid minimum requirements that would otherwise apply including the requirement to have a Risk Management Plan, that it includes an improvement plan for reducing risk of overflows and bypasses, or the need to obtain a resource consent, on the basis of financial impact.</p>
Wastewater Network Risk Management Plans	37	<p>The Council supports that network operators should identify how risks and hazards including overflows will be managed, and in addition recommends the management plan also identifies how these risks and hazards will be <u>reduced</u>.</p> <p>Similarly, the list of what the plans should include, contains: <i>“(d) a summary of approaches taken by the network operator to manage, control, monitor or eliminate risks: approaches for managing overflows are likely to differ depending on the size, scale and complexity of the wastewater network, as well as the resourcing and funding available to the network operator.”</i> <u>The Council recommends</u> that the summary of approaches taken by the network operator should include: <i>“to manage, control, monitor, <u>reduce</u> or eliminate risks: (...)”</i></p>

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		<p>We consider that these changes acknowledge that network operators manage risks and hazards from overflows, and in an ideal world will eliminate the risk of overflows. In practice, in the first instance, alongside managing overflows, all steps to reduce the incidence and risk of overflows is positive to progress towards the ultimate goal of eliminating the risks of and from overflows by ensuring they never happen.</p>
Wastewater Network Risk Management Plans	37	<p><u>We recommend</u> that the Wastewater Network Risk Management Plans should also include a requirement to identify and report on how unanticipated overflows or bypasses will be managed to minimise or mitigate effects on the environment. This should include a commitment to actioning and reporting on mitigating the effects of discharges in the event of system or asset failure (e.g. damaged/broken pipe) in both the short and long term.</p> <p>The management plan should identify key personnel and communication lines when a system or asset failure occurs. This would include reporting on actions to address both the immediate halt of the discharge (e.g. temporary bypass, sucker truck) and the long term solution to cease the discharge (e.g. repair or replace affected pipe or asset) and any other actions that can be taken to minimise environmental effects while a discharge is occurring (e.g. diversion to a less sensitive environment, containing floatable material with booms, notifying the public, request for public to conserve water, etc).</p>
We would like your feedback on the following questions	38	<p><u>The Council supports</u> setting all wastewater network overflows as controlled activities. As noted above, under the relevant Waikato Regional Plan and Coastal Plans, overflows of untreated human wastewater are currently a Discretionary or Prohibited Activity. Under the Regional Plan, while the activity status is Discretionary, in practice given these discharges should not be occurring, no councils have sought to have their overflows and discharges of untreated or partially treated wastewater authorised. Therefore, if the Standards come into force, transitional arrangements would need to be provided to allow time for territorial authorities to prepare and lodge applications including preparation or updating Wastewater Network Risk Management Plans. As noted above, these Management Plans should include improvement plans in place that provide for investment over time to reduce, eventually eliminate wherever possible, overflows and bypasses. Those applications would then need to be processed. Regarding transition arrangements, providing two years for applications to be lodged is considered to be sufficient.</p>
Monitoring and reporting requirements	39	<p>In relation to telemetry, <u>we recommend</u> clarifying the Standards on the following matters:</p> <ul style="list-style-type: none"> <li>• The consultation document states that telemetric monitoring will be required for <i>“all engineered overflow points or discharge points that are classified as high risk in wastewater risk management plans.”</i> <ul style="list-style-type: none"> <li>○ <u>We recommend</u> defining what is considered as “high risk” in this context.</li> <li>○ <u>It is unclear</u> if it relates to one or more, or a combination of, factors such as volumes, number of overflows, the receiving water environment etc.</li> </ul> </li> </ul>

Discussion Document Section	Page	Consultation comments	
		<ul style="list-style-type: none"> <li>It is unclear if telemetric monitoring means telemetry directly to the regional council. Currently in many cases where territorial authorities have existing telemetry, the information only goes to their own council and is not necessarily reported to the regional council.</li> </ul>	
<i>Arrangements for wastewater treatment plants operating under RMA section 124</i>			
S124	40	The Council is generally supportive of a 2-year maximum cover period in terms of s 124 of the RMA. We are generally supportive that this provision does not commence for five years as this will enable the new Standards to be embedded, as well as legacy applications to be worked through, and applications expiring in the next few years to be processed before this additional constraint is included.	
Additional Arrangement required		<p><u>We recommend</u> incorporating an exception into the Standards with a specific set of criteria related to upgrades where a less restrictive standard (but not less restrictive than the expired consent) may apply for a time specified in the conditions of a new consent while an upgrade is being implemented, but not exceeding a maximum period identified in the Standards.</p> <p>We consider that the Standards does not address the situation where, to meet the Standards, an upgrade to a treatment plant will be required. The Local Government (Water Services) Bill December 2024 requires that consent “must include, as a condition of granting the consent, requirements that are no more or less restrictive than is necessary to give effect to the wastewater environmental performance standard (unless an exception applies).” This does not provide the ability for a less restrictive standard to be a condition of consent for a limited time until an upgrade is completed and operational.</p>	
<i>Appendices</i>			
Appendix 1	41, 42	We suggest the following changes to definitions if they are to be included in the Standards, explanations included:	
	<i>Term</i>	<i>Suggested change (shown tracked)</i>	<i>Explanation</i>
	Application method	<del>Application</del> <u>Treatment</u> Method	The description of this term indicates it is referring to the method used for a technique or approach used to treat wastewater. Using the word “application” becomes confusing in this context where the word already also applies to 1) a resource consent application, and 2) the method by which wastewater is applied to land i.e. “application of treated wastewater” as the phrase is used in the definition for “Baseline Assessment.” Further, we consider that adding a third meaning could lead to misinterpretation and is not necessary.
	Bypass	<p><b>Proposed definition</b></p> <p>An intentional diversion of partially treated wastewater from a portion of the treatment facility.</p>	<u>We suggest</u> deleting the final sentence as it is explanation rather than definition.

Discussion Document Section	Page	Consultation comments	
		<p>A bypass may <del>also</del> occur in a controlled way if operators need to release to shut down equipment for repairs, and there is no way to reroute the wastewater. <del>Consents may provide specific timings, frequencies, circumstances and reporting requirements.</del></p>	
	Discharge	<p><b>Municipal wastewater discharge</b>  <del>Volume of treated w</del> Wastewater that is released from a wastewater treatment plant into the receiving environment, <u>or bypasses the treatment plan into the receiving environment as an overflow</u></p>	<p>We consider it confusing having a definition different to the existing RMA definition (discharge includes emit, deposit, and allow to escape) and when it is a general term used more broadly and in other contexts (e.g. industrial).</p> <p><u>We suggest</u> renaming the term to clarify it is referring to discharges of municipal wastewater, removing the reference to volume, which is not relevant, and removing “treated” so that the term also encompasses partially treated overflows, with additional text to capture bypasses so that all municipal wastewater discharges covered by the Standards are addressed in the definition.</p>
	Overflows	<p>Engineered overflow points are designed and intended to act as an emergency relief valve during instances of capacity overload in the network, whereas unconstructed overflow points are not <del>(but inadvertently performs</del> this function.</p>	<p><u>We suggest</u> minor format/typographical changes to the last sentence.</p>
	Periphyton	<p>A group of organisms in aquatic environments specialised to live on and exploit much larger (usually inert) surfaces. Groups of organisms include fungi, bacteria, protozoa, and algae. <del>The most conspicuous group is the algae and this group is usually the focus of most studies of periphyton.</del></p>	<p>We consider that the struck-out text is explanation rather than definition and suggest removing it.</p>

Discussion Document Section	Page	Consultation comments	
	Primary Treatment	Remove “the” from the last sentence	<u>We suggest</u> a minor typographical change.
	Receiving Environment	<del>Any waterbody receiving discharge from a wastewater treatment plant.</del> <u>includes, but is not limited to, any water body (such as a river, lake, wetland or aquifer) and the coastal marine area (including estuaries) or land</u>	The current definition is confusing and will cause ambiguity and uncertainty considering that a definition already exists in the NPS-FM. The NPS-FM definition works in the context of the Standards for discharges to water. Therefore, the receiving environment definition also needs to include land in the context of the Standards.

**Table 2 – Questions from the Discussion Document**

Question	WRC answer
<i>General</i>	
1. Do you agree with the areas the first set of standards are proposed to cover?	While the Council broadly agrees with the four areas covered by the Standards, the Standards as set out in the discussion document has the potential to adversely affect water quality across the Waikato Region and does not provide the ability to meet Settlement Treaty obligations. Please refer to the body of the submission for further context and suggested amendments to address these matters.
2. What areas should we prioritise to introduce wastewater standards in future?	We consider that overall, the wastewater Standards should have mechanisms to be reactive, adapting to changes in climate, population growth and new contaminants.  Further, we consider that the Authority has an opportunity to continue to address unresolved Māori rights and interests in water through systemic reform, Treaty settlements, and operational practice, with wastewater standards reform playing a role in this process. Partnership models can support shared decision-making and clarify Treaty commitments, while recognising joint management in legislation may provide certainty.
3. What topics should we cover in the guidance material to support implementation of the standards?	<u>We recommend</u> favouring refining the Standards instead of relying on guidance. We consider that guidance has a limited role in the New Zealand system. In a recent decision, the Environment Court reiterated that guidance, whilst helpful, is not legally binding. <sup>5</sup> The effectiveness of any guidance provided by the Authority will largely depend on the willingness of local government to consistently implement that guidance.

<sup>5</sup> Gray v Dunedin City Council [2023] NZEnvC 45.

Question	WRC answer
4. Are there particular groups we should work with to develop guidance and if so, who?	We consider that regional councils should be included considering their key role in implementing the Standards as well as iwi groups, territorial authorities and other network operators. Further, there is a need to work with sector stakeholders as there may be unintended consequences of the implementation of these provisions that may require additional mitigation and remediation activities to be adopted by primary industry activities operating within a catchment.
5. How should factors such as climate change, population growth, or consumer complaints be addressed when considering a 35-year consent term?	The Council reiterates its position as per our submission to the Bill requesting that the proposed clause on 35-year consent duration to be removed to allow for case-by-case assessments. Our opinion remains unchanged, and <u>we urge the Authority to reconsider this issue</u> . There are many factors, including climate change, population growth, or consumer complaints that can (and most likely will) change in a 35-year timeframe that can only be addressed by enabling regional councils to undertake case by case assessment. Please refer to the body of this submission for more context.
<i>Discharge to water</i>	
6. How should we consider checks and balances to protect against situations where the degree of microbial contamination may change throughout the duration of a consent.	<p><u>We recommend</u> specifically including areas of mahinga kai harvesting as an area of exception from the Standards as well as delimiting areas and/or distances from receiving environments, similar to what is being done for distance to water intake source for human consumption. We also recommend including areas of recreation as areas for exceptions.</p> <p>We are concerned about the assumption in the proposed Standards that dilution of the proposed discharges will be sufficient to protect the state of the environment. Because there are no requirements to monitor downstream, to check if the assumptions are being met, we will be left without a metric to check for Te Mana o te Wai being upheld. <u>We recommend</u> the Standards to enable downstream monitoring in connection with discharges to water and consideration of cumulative effects in the downstream environment.</p> <p>In addition, <u>we suggest</u> that real-time microbial monitoring should be required, with clear compliance thresholds that align with Te Mana o te Wai. This should be focused on the pathogenicity of those microorganisms in addition to the total numbers. Further, <u>we recommend</u> that adaptive management plans should include iwi participation in risk assessment and response planning to maintain environmental integrity and Treaty obligations.</p> <p>The Standard also needs checks and balances to manage cumulative effects from discharges. <u>We urge</u> the Authority to clarify how regional councils are supposed to manage the cumulative effects without discretion to be no more or less restrictive than the Standards.</p> <p>We noted that the proposed Standards for discharges to water vary depending on the immediate receiving environment, but do not consider the impact on downstream water bodies. The discussion document states that councils will continue to manage “cumulative effects of the nutrient load of the discharge, which may impact downstream water bodies.” However, it is not clear how regional councils are to manage the cumulative effects of the contaminant load on</p>

Question	WRC answer
	<p>downstream water bodies when resource consents for wastewater discharges can be no more or less restrictive than the Standards.</p> <p>In addition, the regulatory impact assessment (RIS) states that the Standards have been developed “at pace” and information on the environmental impacts is lacking. The approach in the Standards relies on dilution ratio to manage the environmental impacts of discharges to water. At the same time, as highlighted above, the Bill amends section 105 of the RMA so that regional councils will no longer have regard to “<i>the sensitivity of the receiving environment to adverse effects</i>” when considering a discharge permit for wastewater. The Bill also amends section 107 to allow councils to grant discharge permits for wastewater which will cause significant adverse effects on aquatic life, changes in colour or visual clarity, or make the water not suitable for animal drinking etc. Therefore, we have significant concern in terms of adverse effects from cumulative impacts.</p>
<p>7. Are the areas for exceptions appropriate to manage the impacts of discharges and do you anticipate implementation challenges?</p>	<p>We acknowledge that attribute bands are applied to sites, and not to water bodies. This means a river can have several sites graded in different bands. In addition, different parameters can have different bands. If Total Phosphorus (TP) is graded ‘A’ and Total Nitrogen (TN) is graded ‘B’ band, it is not clear if it still qualifies for exception under the proposed Standards. Therefore, <u>we recommend</u> clarifying the Standards ensuring cumulative impacts in the receiving bodies are considered while preserving the health of the water bodies. Table 1 and the body of our submission provide further feedback in connection to exceptions.</p>
<p>8. How should the exceptions be further defined to ensure there are no unintended consequences?</p>	<p>We consider that the exceptions could be defined taking into account the overall load (e.g. nutrients), instead of attribute bands or dilution ratio. <u>We recommend</u> further defining the exceptions considering the overall load instead of attribute bands or dilution ratio. The exceptions relating to wetlands and “hard bottomed or rocky streams” also need clarification.</p>
<p>9. Are the treatment limits, and monitoring and reporting requirements proportionate to the potential impacts of the different discharge scenarios?</p>	<p>No. It is not clear why lakes have the same conditions as moderate diluted rivers, unless the Standards should be read as only lakes with a dilution ratio of &gt; 50 should be discharged into. We are unsure what the Standards are prescribing for. Is every lake considered &gt; 50, and therefore you can discharge to every lake, or is it that only lakes &gt; 50 are acceptable receiving waterbodies for wastewater plant effluent.</p> <p>We consider that the first option is unreasonable given the wide range of lake conditions. However, the second option would mean wastewater plants would have to calculate the dilution for their receiving environments, which is not what we read in the proposed Standards. Therefore, <u>we recommend</u> clarifying the Standards requiring wastewater plants to calculate the dilution for their receiving environments.</p> <p>Additionally, the assumption that ocean and coastal receiving waters are screened to remove solids does not explain why only ammonia and enterococci are proposed to be monitored. We consider that estuaries should have an E. coli standard</p>

Question	WRC answer
	<p>as well, in line with the Standards for recreation use. The Microbiological guidelines<sup>6</sup> state that for estuaries we should monitor E. coli and enterococci, as they are the more relevant indicator according to salinity. Therefore, the Standards should default to indicating both in estuaries. <u>We recommend</u> having aligned Standards for estuaries and for recreational uses, including monitoring of E. coli standards.</p> <p><u>We recommend</u> that the treatment limits should align with Te Mana o te Wai, ensuring protection of ecosystems and culturally significant sites. Regional flexibility should allow for local conditions and iwi input. Monitoring requirements should integrate scientific methods with mātauranga Māori indicators for effective oversight.</p>
<p>10. What benefits and challenges do you anticipate in implementing the proposed approach? Are there particular matters that could be addressed through guidance material?</p>	<p>As mentioned in Question 3, guidance is not legally binding and therefore we consider it more appropriate to fix the Standards instead of addressing issues through guidance. We consider that there will be many challenges on implementing the approach taken by the Standards, including the following.</p> <p>We consider that the calculation of dilution ratio is not clear, particularly in using “volume” for discharge from the wastewater plant. It is not clear if the dilution ratio is to be calculated for any other receiving environment, apart from river. We question if the Standards are considering that all lakes and estuaries have the same dilution ratio. We disagree with this approach and <u>recommend</u> clarifying this. In addition, we note that the units in the Standards are proposed in mg N/L and that can be confusing, especially when ammonia nitrogen can be higher than total nitrogen. The NPS-FM uses mg NH4/L for ammonia units. We recommend having alignment with the national direction.</p> <p>In addition, suggesting that a Quantitative Risk Management Assessment (QRMA) may be developed in the future introduces variability and uncertainty that is not addressed; it could be that the QRMA might enable using more or less stringent standards. We also consider that TN should specify that is kjeldahl,<sup>7</sup> otherwise the values of ammonia &gt; total will cause confusion. Therefore, <u>we recommend</u> clarifying the scope of the QRMA and specifying that TN should be addressed as kjeldahl.</p> <p>In terms of estuaries and coastal waters, we understand that the processes of mixing and transport are complex; at local scales, mixing and transport are important factors in the advent of coastal pollution, impacting water quality, and aquaculture if present. It also impacts behaviour changes with the time of year due to seasonal fluctuations. At global scale, climate change with sea level rise and extreme weather are additional factors. Therefore, these factors are critical</p>

<sup>6</sup> <https://environment.govt.nz/publications/microbiological-water-quality-guidelines-for-marine-and-freshwater-recreational-areas/>

<sup>7</sup> The kjeldahl nitrogen is a way of measuring nitrogen made up of both organic nitrogen and ammonia, whereas total nitrogen is the sum of nitrate (NO3), nitrite (NO2), organic nitrogen and ammonia. The discussion document has all units in mg N/L so having areas where the ammonia concentration (expressed in mgN / L) is > that the total nitrogen (expressed in mg N /L) is confusing.

Question	WRC answer
	<p>to the dynamics of these systems given their close association with water quality, pollutants, and primary production.<sup>8 9</sup> The controlling mechanisms of mixing and transport vary between different coastal systems as well as within an individual system due to complex interactions with local topography and hydrodynamic processes<sup>10 11</sup> that operate over a wide range of spatiotemporal scales, incorporating the effects of tides,<sup>12 13</sup> runoff,<sup>14 15</sup> winds,<sup>16</sup> wave-current interactions,<sup>17 18 19</sup> stratification,<sup>20 21</sup> and extreme storms.<sup>22 23</sup> Mechanisms controlling mixing and transport also affect sediments, playing a fundamental role in the morphological changes seen in these areas. Additional complexities arise from the impact of direct</p>

- <sup>8</sup> Whitney, M.M., Garvine, R.W., 2006. Simulating the Delaware Bay buoyant outflow: Comparison with observations. *J. Phys. Oceanogr.* 36. <https://doi.org/10.1175/JPO2805.1>
- <sup>9</sup> Kang, X., Xia, M., Pitula, J.S., Chigbu, P., 2017. Dynamics of water and salt exchange at Maryland Coastal Bays. *Estuar. Coast. Shelf Sci.* 189. <https://doi.org/10.1016/j.ecss.2017.03.002>
- <sup>10</sup> Ganachaud, A., Wunsch, C., 2000. Improved estimates of global ocean circulation, heat transport and mixing from hydrographic data. *Nature* 408. <https://doi.org/10.1038/35044048>
- <sup>11</sup> Prandle, D., 2006. Dynamical controls on estuarine bathymetry: Assessment against UK database. *Estuar. Coast. Shelf Sci.* 68. <https://doi.org/10.1016/j.ecss.2006.02.009>
- <sup>12</sup> Allen, G.P., Salomon, J.C., Bassoullet, P., Du Penhoat, Y., de Grandpré, C., 1980. Effects of tides on mixing and suspended sediment transport in macrotia
- <sup>13</sup> Cheng, P., De Swart, H.E., Valle-Levinson, A., 2013. Role of asymmetric tidal mixing in the subtidal dynamics of narrow estuaries. *J. Geophys. Res. Ocean.* 118. <https://doi.org/10.1002/jgrc.20189>
- <sup>14</sup> Horner-Devine, A.R., Hetland, R.D., MacDonald, D.G., 2015. Mixing and transport in coastal river plumes. *Annu. Rev. Fluid Mech.* <https://doi.org/10.1146/annurevfluid-010313-141408>
- <sup>15</sup> Simonsen, M., Lind, O.C., Saetra, Ø., Isachsen, P.E., Teien, H.C., Albretsen, J., Salbu, B., 2019. Coastal transport of river-discharged radionuclides: Impact of speciation and transformation processes in numerical model simulations. *Sci. Total Environ.* 669. <https://doi.org/10.1016/j.scitotenv.2019.01.434>
- <sup>16</sup> Wang, J., Kuang, C., Chen, K., Fan, D., Qin, R., Han, X., 2022. Wave–current interaction by Typhoon Fongwong on saline water intrusion and vertical stratification in the Yangtze River Estuary. *Estuar. Coast. Shelf Sci.* 279, 108138. <https://doi.org/10.1016/j.ecss.2022.108138>
- <sup>17</sup> Röhrs, J., Christensen, K.H., Vikebø, F., Sundby, S., Saetra, Ø., Broström, G., 2014. Wave-induced transport and vertical mixing of pelagic eggs and larvae. *Limnol. Oceanogr.* 59. <https://doi.org/10.4319/lo.2014.59.4.1213>
- <sup>18</sup> Polton, J.A., Lewis, D.M., Belcher, S.E., 2005. The role of wave-induced Coriolis-Stokes forcing on the wind-driven mixed layer. *J. Phys. Oceanogr.* 35. <https://doi.org/10.1175/JPO2701.1>
- <sup>19</sup> Rodriguez, A.R., Giddings, S.N., Kumar, N., 2018. Impacts of Nearshore Wave-Current Interaction on Transport and Mixing of Small-Scale Buoyant Plumes. *Geophys. Res. Lett.* 45. <https://doi.org/10.1029/2018GL078328>
- <sup>20</sup> Ivey, G.N., Winters, K.B., Koseff, J.R., 2008. Density stratification, turbulence, but how much mixing? *Annu. Rev. Fluid Mech.* 40. <https://doi.org/10.1146/annurev.fluid.39.050905.110314>
- <sup>21</sup> Lu, C., Chen, Y., Zhang, C., Luo, J., 2013. Steady-state freshwater-seawater mixing zone in stratified coastal aquifers. *J. Hydrol.* 505. <https://doi.org/10.1016/j.jhydrol.2013.09.017>
- <sup>22</sup> Mahapatra, D.K., Rao, A.D., Babu, S. V., Srinivas, C., 2007. Influence of coast line on upper ocean’s response to the tropical cyclone. *Geophys. Res. Lett.* 34. <https://doi.org/10.1029/2007GL030410>
- <sup>23</sup> Kang, X., Xia, M., 2020. The Study of the Hurricane-Induced Storm Surge and Bay-Ocean Exchange Using a Nesting Model. *Estuaries and Coasts* 43. <https://doi.org/10.1007/s12237-020-00695-3>

Question	WRC answer
	<p>and indirect anthropogenic activities that alter sea level rise rates, sedimentation, and erosion, which in turn modify the mixing and transport processes.<sup>24 25 26</sup></p> <p>At local scales, mixing and transport are important factors in coastal pollution and water quality. At the same time, large-scale global changes caused by increased concentrations of anthropogenic carbon dioxide may lead to changes in coastal and estuarine boundaries and forcing conditions, which can in turn modify mixing and transport processes. Such physical changes could subsequently change biogeochemical cycling and ecosystem health in ways that are difficult to predict.<sup>27</sup> If the Standards assume a simple mixing model, then perverse outcomes are likely and therefore, assumptions around dilution need to be more conservative. As a result, <u>we recommend</u> fully investigating the impacts from mixing and transport in association with dilution factors for discharges in water and adopting a more conservative approach.</p> <p>An additional issue related to the management implications is the role of storms on mixing and transport processes in coastal and estuarine systems as these events are major natural hazards that have significant impacts in coastal regions. In addition to intense wind and surge, storms can dramatically modify hydrography and circulation, potentially shifting the trajectory of seasonal conditions and/or contributing to subsequent compound events. Furthermore, increased storminess under changing climate scenarios is expected to have permanent effects on coastal dynamics.</p> <p>We also consider it important to connect the hydraulic component with the land. Some parts of the land (Critical Source Areas) contribute greater proportions of contaminants. Also, some areas of land contribute greater proportions (volumes) of runoff and drainage (Hydrologically Sensitive Areas).</p> <p><u>We recommend</u> investigating relevant work on identifying hydraulically sensitive areas.<sup>28 29</sup> This will provide the Authority with evidence on identifying hydraulically sensitive areas.</p>

<sup>24</sup> Ensing, E., de Swart, H.E., Schuttelaars, H.M., 2015. Sensitivity of tidal motion in wellmixed estuaries to cross-sectional shape, deepening, and sea level rise: An analytical study. *Ocean Dyn.* 65. <https://doi.org/10.1007/s10236-015-0844-8>

<sup>25</sup> Prandle, D., Lane, A., 2015. Sensitivity of estuaries to sea level rise: Vulnerability indices. *Estuar. Coast. Shelf Sci.* 160. <https://doi.org/10.1016/j.ecss.2015.04.001>

<sup>26</sup> Rapuc, W., Arnaud, F., Sabatier, P., Anselmetti, F.S., Piccin, A., Peruzza, L., Bastien, A., Augustin, L., Régnier, E., Gaillardet, J., Von Grafenstein, U., 2022. Instant sedimentation in a deep Alpine lake (Iseo, Italy) controlled by climate, human and geodynamic forcing. *Sedimentology* 69. <https://doi.org/10.1111/sed.12972>

<sup>27</sup> Dzwonkowski, B., Kang, X., Sahoo, B., Veeramony, J., Mitchell, S. and Xia, M., 2023. Mixing and transport in estuaries and coastal waters a special issue in *Estuarine Coastal and Shelf Science*. *Estuarine, Coastal and Shelf Science*, 288, p.108370.

<sup>28</sup> [Improving the identification of hydrologically sensitive areas using LiDAR DEMs for the delineation and mitigation of critical source areas of diffuse pollution - ScienceDirect](#)

<sup>29</sup> [A national-scale high-resolution runoff risk and channel network mapping workflow for diffuse pollution management - ScienceDirect](#)

Question	WRC answer
11. How should we define small plants and what changes to the default standards should apply to them?	It is not clear how the monitoring frequency, defined in terms of population will be considered for small treatment plants that are defined in terms of Carbonaceous Biochemical Oxygen Demand (cBOD). <u>We recommend</u> clarifying this point.
12. What feedback do you have for managing periphyton in hard bottomed or rocky streams or rivers?	<u>We recommend</u> including a clear definition for “hard bottomed” or “rocky” streams.
13. What detail should be covered in guidance to support implementing this approach for managing periphyton?	<u>We recommend</u> stating explicitly in the Standards (not just in guidance) that nitrogen and phosphorus limits are to be set on the basis of a site-specific risk assessment.
<i>Discharge to land</i>	
14. Are the proposed parameters appropriate to manage the impact of wastewater discharges to land?	<p>We consider that the parameters for groundwater under the ‘monitoring and reporting requirements’ are reasonable. However, there is little detail to indicate what they will be assessed against. The discussion document mentions “<i>compliance against parameters in applicable standards to regional council and the Water Services Authority</i>”. We query who will decide what the “applicable standards” are and at what location will they be assessed (i.e. in off-site monitoring wells). <u>We recommend</u> that compliance is assessed by regional councils on a case-by-case basis.</p> <p>We consider that soils and land vary considerably when assessing discharges to land. For example, topography, hydrodynamic processes in soils, hydrophobicity and climate change, including drought and extreme weather events as well as soil stratification, biological activity, sedimentation and erosion all add to the complexity of managing discharges to soil. Therefore, we consider that the spatial variance means using average values to inform wastewater discharge parameters is likely to have unintended consequences on difficult soils, e.g. gleys, while underutilising soils best able to treat discharges. We consider that site assessment is critical to better identify the characteristics of soil and its capacity as a receiving environment. Therefore, we support having requirements for site assessments on a case-by-case basis.</p> <p><u>We recommend</u> that the Standards should prioritise land-based disposal, reflecting Māori preferences. They must prevent contaminants from entering groundwater or waterways. Risk assessments should be rigorous, with iwi engagement guiding implementation where land-based disposal is feasible. Where full land-based disposal is impractical, hybrid systems should be considered, integrating both land and water treatment options to minimise environmental and cultural impacts.</p>
15. What benefits and challenges do you anticipate in implementing the proposed approach? Are there other particular	The complexity of soils will make using generalisations challenging. <u>We support</u> having a risk management assessment for each site and that the loading rates vary based on the overall site class determined by the risk management assessment. We note that land discharges are designed so that further treatment occurs throughout the transport through the soil,

Question	WRC answer
<p>matters that could be addressed through guidance material?</p>	<p>vadose zone and groundwater. This involves complex processes with many variables of influence and each site will still need to be assessed on its merits. Therefore, we support requiring site-specific assessments on a case-by-case basis.</p> <p>We consider that the guidance should clarify who is responsible for reviewing the baseline assessment and risk screening. <u>We recommend</u> that regional councils should be responsible for this.</p> <p>In addition, <u>we recommend</u> the guidance material covers the number of monitoring wells required with reference to the load and size of the discharge area (other than just minimum well numbers), in addition to monitoring well construction.</p> <p><u>We also recommend</u> the guidance material specifies that groundwater monitoring is undertaken in accordance with NEMS Water Quality Part 1 - Sampling, Measuring, Processing and Archiving of Discrete Groundwater Quality Data. We consider that groundwater monitoring is not a straightforward process, and the sampling process needs to be undertaken properly to ensure samples are representative.</p>
<p>Other comments - Appendix 4 (Detail of the proposed approach for discharges to land)</p>	<p>We consider that the baseline assessment should also consider climate change (i.e. groundwater levels may rise in coastal areas due to sea level rise, increasing the risk of discharge to land).</p> <p><u>We recommend</u> defining hydraulic conductivity quantitatively or using aquifer material (e.g. sand) to assign categories. The terminology currently in the document (e.g. moderate, rapid, slow draining, etc.) is too subjective. Our comments are based on the assumption that the hydraulic conductivity refers to that of the aquifer receiving the effluent and recommend this is clarified in the document. Additionally, we recommend including the vadose zone material in the factors considered for the site-specific assessment. This would align with the Microbial Risk Assessment tool<sup>30</sup> for assessing the risk to human health from the discharge of microbial pathogen to land.</p> <p><u>We recommend</u> the approach considers the distance between a receptor (e.g. drinking water well) and the discharge in the factors considered in the site-specific assessment.</p> <p><u>We also recommend</u> that the groundwater assessment should also mention that it should be undertaken by a suitably qualified and experienced person. Currently, the discussion document only requires this for the soils assessment.</p>
<p><i>Beneficial reuse of biosolids</i></p>	
<p>17. What matters of control or restricted discretion should sit with consenting</p>	<p><u>We recommend</u> that:</p>

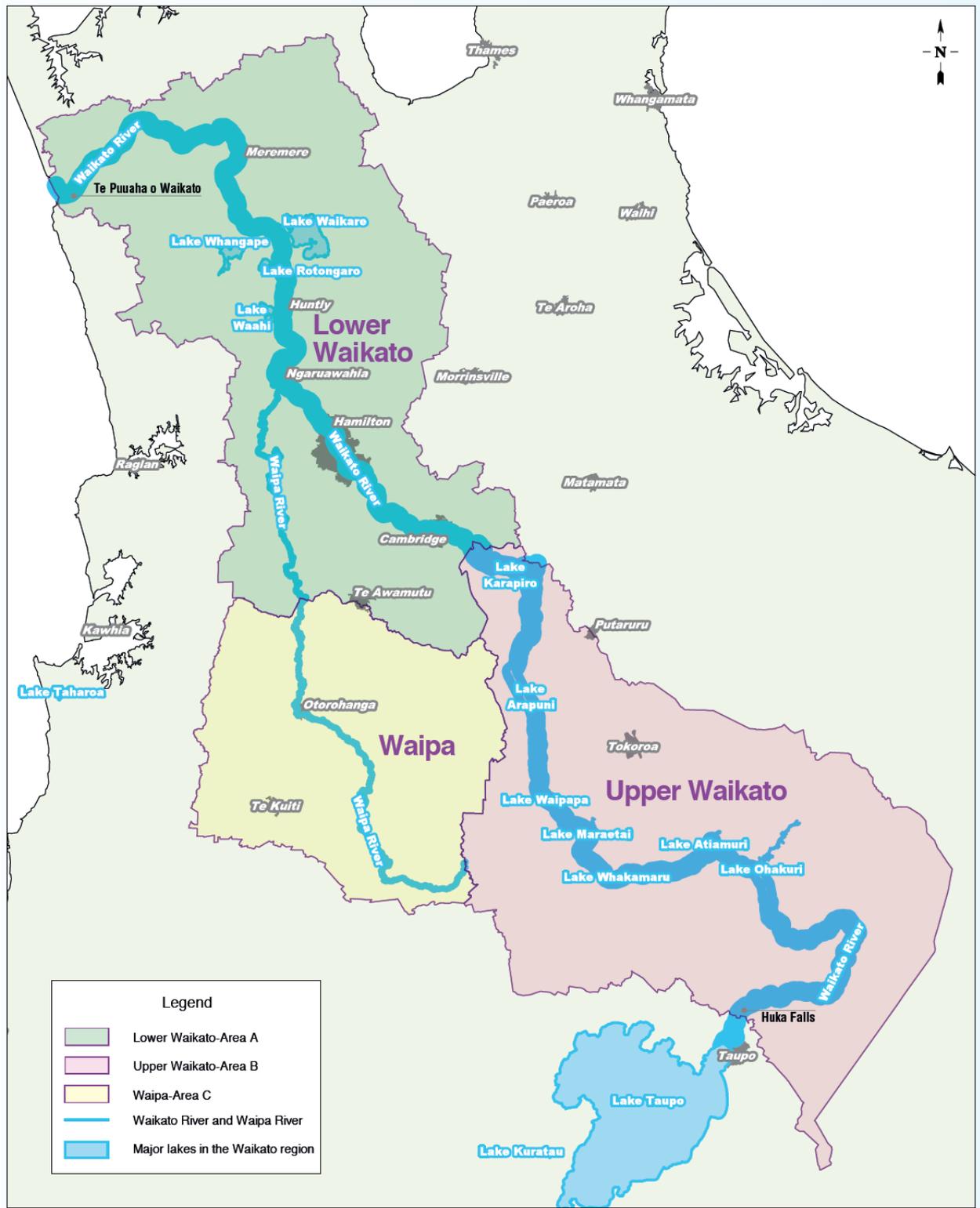
<sup>30</sup> [MRA Tool · Streamlit](#)

Question	WRC answer
<p>authorities to manage the reuse of biosolids?</p>	<p>(a) the Grade A1 contaminant limits are reduced to ensure sufficiently low level of effect to allow its application as a permitted activity; or</p> <p>(b) application of Grade A1 is made a controlled or restricted discretionary activity allowing for control or discretion over slope of land, distance from surface water and groundwater and requirements around baseline soil monitoring and ongoing soil monitoring and mixing techniques to ensure that land application is not restricting future land use or having potential to contaminate surface or groundwater.</p> <p>We consider that all of the examples of qualifying criteria that are listed would be appropriate for controlled or restricted discretionary rules. In addition to this, it would be important to have criteria around mixing techniques and depth of incorporation. However, the most important criteria in addition to the nitrogen loading and pathogen stabilisation is the other contaminant concentration levels. For example, The Grade 1 contaminant limits proposed through the current revision of the Biosolids guidelines for cadmium, chromium, copper, mercury, and nickel are too high to allow consideration for application as a permitted activity.</p> <p>Evidence is needed from long-term soil monitoring of application sites that have been subject to repeated application of biosolids at high contaminant levels similar to the proposed A1 limits showing that the soils continue to meet the applicable human health and environmental protection criteria. This evidence does not yet seem to be available and therefore the potential for significant adverse effects on the environment cannot be ruled out if biosolids are poorly managed. Normally a regional council would need to undertake a section 70 assessment under the RMA to determine this before being confident it could be undertaken as a permitted activity.</p> <p>We consider that overall, the regulations should require ongoing monitoring and restrict biosolids use near culturally significant areas and food production sites. In addition, TA should conduct periodic reviews of scientific evidence to update controls. Iwi partnership arrangements should inform management to ensure cultural considerations are addressed.</p>
<p>18. What should the permitted activity standards include?</p>	<p>We consider that if an application of biosolids is to be allowed as a permitted activity (PA), then in addition to pathogen stabilisation to Grade A, contaminant limits would need to be much lower than currently proposed in the revised Biosolids Guidelines. Otherwise, you would need to specify all of the qualifying criteria within the PA rule such as baseline soil monitoring, ongoing soil monitoring to ensure consistency with the Ecological soil guideline values, setback distances from waterways and from low groundwater tables and mandatory reporting to regional council and also have restrictions on application rates.</p>
<p>19. How should contaminants of emerging concern in biosolids be addressed in the short-term?</p>	<p><u>We recommend</u> that both Option one and two are considered for future management of biosolids. Gathering information on key emerging contaminants in biosolids will be important to help understand existing ranges and trends which will be</p>

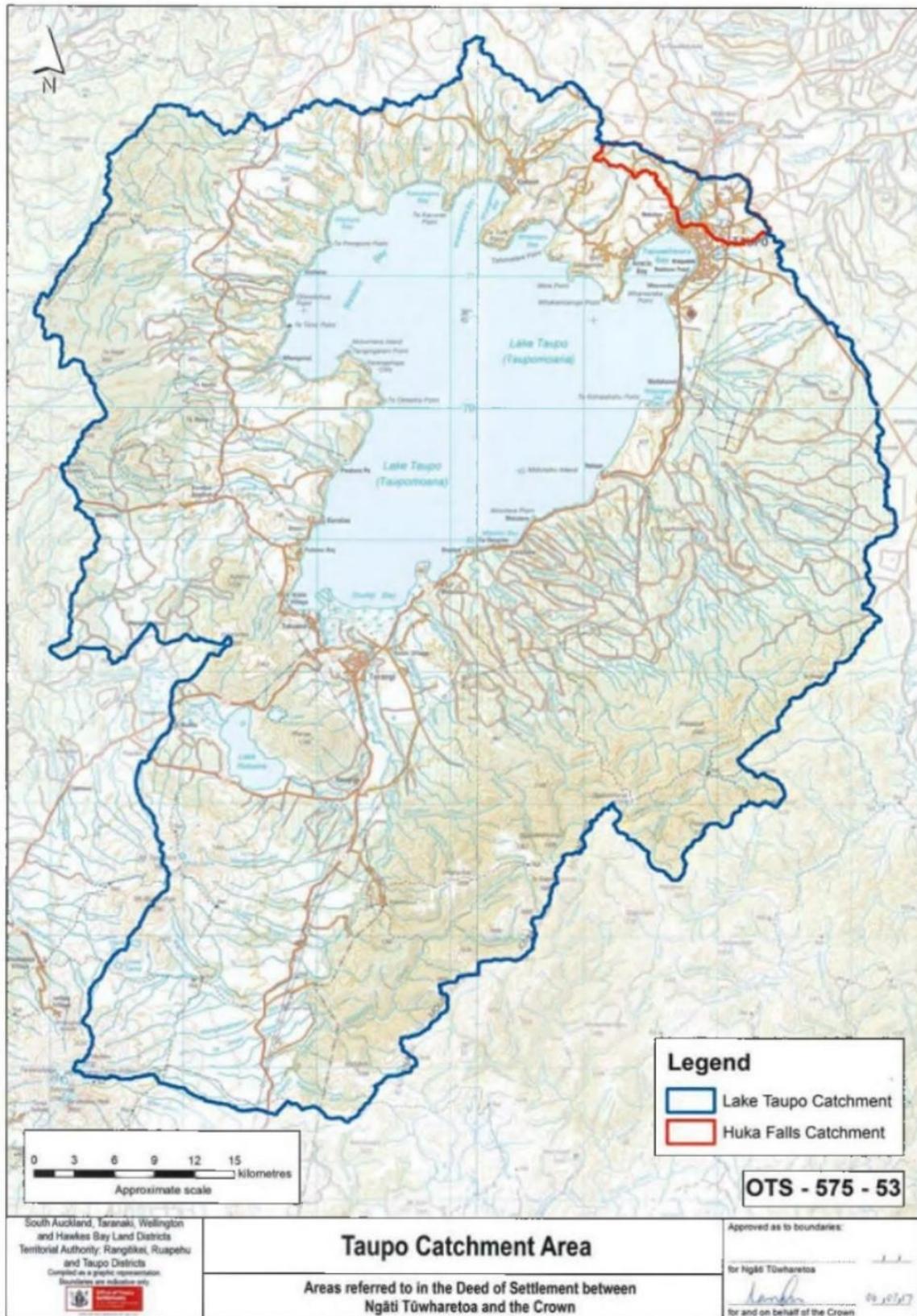
Question	WRC answer
	<p>useful for informing limit setting at a later date as health and ecological protective guidelines become available as well as lab methods.</p> <p>However, per- and poly-fluoroalkyl substances (PFAS) should be included as an emerging contaminant that needs to be included in limits as of now. The PFAS NEMP 3.0 has restricted and unrestricted PFAS limits for biosolids. Standard lab methods for PFAS analysis are also available at most NZ labs. The revised biosolids guidelines don't include limits for PFAS but PFAS has been shown to be consistently present in biosolids so it should be a specified contaminant limit. Therefore, <u>we recommend</u> including PFAS as an emerging contaminant in the wastewater Standards as of now.</p> <p><u>We recommend</u> that polycyclic aromatic hydrocarbons (PAHs) should remain as contaminants that are controlled through an upper limit under the biosolids guidelines. While not a contaminant of emerging concern, this is a traditional contaminant of concern. We understand that the current revised biosolids guidelines has removed these from the contaminant list but there is insufficient evidence to support this. For example, 12 member states of the EU still retain a limit for PAHs. Further, we haven't seen any published information regarding NZ biosolids with regards to levels being low enough to not consider including a limit for them.</p>
<i>Overflows and bypasses</i>	
22. How should Wastewater Risk Management Plans relate to existing risk management planning tools, and if the Local Government (Water Services) Bill proceeds, stormwater risk management plans?	<u>We recommend</u> that Wastewater Risk Management Plans should integrate with existing regional and stormwater plans, explicitly embedding Te Mana o te Wai and the hierarchy of obligations it establishes. Collaboration between iwi, councils, and the Authority will ensure effective risk mitigation and accountability.
24. We understand wastewater risk management plans are already required in some regions – what approaches have worked well and where is there room for improvement?	We consider that wastewater risk management plans could cover public health protections, environmental safeguards, overflow frequency limits, emergency response, and monitoring requirements. Iwi partnership should be included in consent conditions to uphold Māori values in wastewater management.
32. Do you support establishing a framework that determines how overflows are managed based on risk?	Yes. A risk-based framework ensures proportionate management responses clearly set out in Risk Management Plans. We consider that Māori assessments of cultural risk should be embedded, with clear criteria for high-risk areas, appropriate control measures, and transparent reporting.
<i>Arrangements for wastewater treatment plants operating on section 124, Resource Management Act 1991</i>	

Question	WRC answer
33. How long should wastewater treatment plants be able to operate under section 124 of the RMA once wastewater standards have been set?	We consider that the transition should occur within a set period (up to five years) to allow infrastructure upgrades while maintaining environmental and cultural standards and after that, we support a 2 year limit on ability to operate under s124 RMA.

# Attachment 1 – Te Ture Whaimana, Vision and Strategy, Area



**Attachment 2 – Te Kaupapa Kaitiaki, Taupo Catchment Plan, Area** (note red line denotes overlap with Te Ture Whaimana catchment)



### Attachment 3 – Current consenting standards examples in Waikato Region – Discharge to Water

**Red** formatting indicates consent is more stringent than proposed Standard (i.e. **the Standard would lower the discharge quality**)

**Green** formatting indicates consent is less stringent than the proposed Standard (i.e. **the Standard would improve the discharge quality**).

#### Estuaries

Name		Waikato /Waipa or Lake Taupo Catchment?	CBOD (annual median mg/L)	TSS (annual median mg/L)	TN (annual median mg/L)	TP (annual median mg/L)	Amm N (annual 90%ile mgN/L)	Enterococci (annual 90%ile cfu/100mL)	Notes
<b>Proposed Standards</b>			20	25	10	10	15	2000	
<b>Matarangi</b>	Current <sup>31</sup>	No	5	15	-	-	3	3000*	*95 <sup>th</sup> percentile limit for faecal coliforms
	Proposed		5	5	5	1.7	2.5	1000	Significant upgrade proposed plus future growth
<b>Raglan</b>	Current <sup>32</sup>	No	10	20	-	-	-	43	
	Proposed		To be confirmed						Land based disposal expected in amended application

#### Lakes

Name		Waikato /Waipa or Lake Taupo Catchment?	CBOD (annual median mg/L)	TSS (annual median mg/L)	TN (annual median mg/L)	TP (annual median mg/L)	Amm N (annual 90%ile mgN/L)	E.coli (annual 90%ile cfu/100mL)	Notes
<b>Proposed Standards</b>			15	15	10	3	3	6500	
<b>Te Kauwhata</b>	Current <sup>33</sup>	Waikato River	10	15	8	5.6	-	1500	New MABR plant and ongoing community consultation regarding replacement consent

<sup>31</sup> Matarangi WWTP, granted in 2013, 7-year duration.

<sup>32</sup> Raglan WWTP, granted in 2005, 15-year duration.

<sup>33</sup> Te Kauwhata WWTP, granted in 2013, 15-year duration

## Rivers – Low Dilution

Name		Waikato /Waipa or Lake Taupo Catchment?	CBOD (annual median mg/L)	TSS (annual median mg/L)	TN (annual median mg/L)	TP (annual median mg/L)	Amm N (annual 90%ile mgN/L)	E.coli (annual 90%ile cfu/100mL)	Notes
<b>Low Dilution (Assumed)</b>									
<b>Proposed Standards</b>			10	10	5	1	1	1300	
<b>Benneydale (small)</b>	Current <sup>34</sup>	No	no median	no median	-	-	26	-	Has summer discharge to land. May be a higher dilution due to small discharge volume
	Proposed		20	30	-	1.5	26	500	Imhoff tank system retained due to cost to small community
<b>Tahuna (small)</b>	Current <sup>35</sup>	No	2	5	8	1.7	5	400	Conservatively estimated at low dilution
<b>Matamata</b>	Current <sup>36</sup>	No	5	10	15	-	10	100	
	Proposed		5	5	20	-	20	100	Proposes reduced load limits rather than concentration, to allow for forecast population growth.
<b>Morrinsville</b>	Current <sup>37</sup>	No	10	15	20	-	5	500	
	Proposed		10	15	20	-	5	500	Proposes reduced load limits rather than concentration, to allow for forecast population growth.
	Proposed		2	5	8	1.7	5	400	

<sup>34</sup> Bennydale WWTP, granted 2010, 15-year duration

<sup>35</sup> Tahuna WWTP, granted 2008, 20-year duration

<sup>36</sup> Matamata WWTP, granted 2009, 15-year duration

<sup>37</sup> Morrinsville WWTP, granted 2009, 15-year duration

Name		Waikato /Waipa or Lake Taupo Catchment?	CBOD (annual median mg/L)	TSS (annual median mg/L)	TN (annual median mg/L)	TP (annual median mg/L)	Amm N (annual 90%ile mgN/L)	E.coli (annual 90%ile cfu/100mL)	Notes
<b>Low Dilution (Assumed) continued.</b>									
<b>Proposed Standards</b>			10	10	5	1	1	1300	
<b>Turangi</b>	Current <sup>38</sup>	Lake Taupo	15	20	8	1.7	5	400	Dilution may be outside standards. Stream enters significant wetland
	Proposed		To be confirmed						
<b>Tokoroa</b>	Current <sup>39</sup>	Waikato River	12	12	1.8	8	8	150	
<b>Pukekohe</b>	Current <sup>40</sup>	Waikato River	5	5	-	-	2.3	-	Conservatively Low Dilution - immediate discharge to Parker Lane Stream, prior to High Dilution at Waikato River Daily load limits for TN and TP. Median limit for E.coli
<b>Waihi</b>	Current <sup>41</sup>	No	40	110	15	5.7	16	20000	
	Proposed		20	35	Not proffered	1.4	8	5000	A short term consent sought for a District Wide Wastewater Strategy development.
<b>Coromandel</b>	Current <sup>42</sup>	No	10	10	-	-	10	1000	

#### Rivers – Moderate Dilution

<sup>38</sup> Turangi WWTP, granted 2003, 15-year duration

<sup>39</sup> Tokoroa WWTP, granted 2021, 35-year duration

<sup>40</sup> Pukekohe WWTP, granted 2017, 35-year duration

<sup>41</sup> Waihi WWTP, granted 2002, 20-year duration

<sup>42</sup> Coromandel WWTP, granted 2012, 15-year duration

Name		Waikato /Waipa or Lake Taupo Catchment?	CBOD (annual median mg/L)	TSS (annual median mg/L)	TN (annual median mg/L)	TP (annual median mg/L)	Amm N (annual 90%ile mgN/L)	Ecoli (annual 90%ile cfu/100mL)	Notes
<b>Moderate Dilution (Assumed)</b>									
<b>Proposed Standards</b>			15	15	10	3	3	6500	
<b>Te Aroha</b>	Current <sup>43</sup> MBR only	No	5	7	-	-	2	500	Complex situation as has both MBR and pond discharges (“combined”). Pond discharge will be removed in ~10 years
	Current Combined							100,000	Combined MBR + pond have 95th percentiles. (high flow contingency)
	Proposed		5	7	-	-	-	500 (100,000)	Load limits are proposed in current consent process rather than concentration limits.

#### Rivers – High Dilution

Name		Waikato /Waipa or Lake Taupo Catchment?	CBOD (annual median mg/L)	TSS (annual median mg/L)	TN (annual median mg/L)	TP (annual median mg/L)	Amm N (annual 90%ile mgN/L)	Ecoli (annual 90%ile cfu/100mL)	Notes
<b>High Dilution (Assumed)</b>									
<b>Proposed Standards</b>			20	30	35	10	25	32500	
<b>Cambridge</b>	Current <sup>44</sup>	Waikato River	20	20	-	-	-	126	Load limits instead of concentration limits for TN, TP and Amm N
	Staged upgrade		5	5	-	-	-	14	
<b>Hamilton</b>	Current <sup>45</sup>	Waikato River	10	15	-	-	-	126	Load limits rather than concentrations.
	Measured		5	7	9.6	0.8	1.8		2023/24 measured values for comparison

<sup>43</sup> Te Aroha WWTP, granted 2015, 20-year duration

<sup>44</sup> Cambridge WWTP, granted 2023, 35-year duration

<sup>45</sup> Hamilton WWTP, granted 2007, 20-year duration

Name		Waikato /Waipa or Lake Taupo Catchment?	CBOD (annual median mg/L)	TSS (annual median mg/L)	TN (annual median mg/L)	TP (annual median mg/L)	Amm N (annual 90%ile mgN/L)	Ecoli (annual 90%ile cfu/100mL)	Notes
Huntly	Current <sup>46</sup>	Waikato River	30	100	20	8	20		E.coli has a median only (126)
Thames	Current <sup>47</sup>	No	20	60	25	3.5	29	10000	Into tidal influenced section of Waihou River

<sup>46</sup> Huntly WWTP, granted 2011, 18-year duration

<sup>47</sup> Thames WWTP, granted 2021, 20-year duration