April 2025

Water Services Authority - Taumata Arowai
Wellington

Send via email: korero@taumataarowai.govt.nz

Otago Regional Council submission on Proposed Wastewater Environmental Performance Standards – Discussion Document

Introduction

1. Otago Regional Council (ORC) welcomes the opportunity to submit on the proposed Wastewater Environmental Performance Standards (the proposed standards). The management of discharges of contaminants into or onto land or water is a core function of regional councils under Section 30 of the Resource Management Act 1991 (RMA).

2. ORC has been working closely with territorial authorities (TAs), mana whenua, and communities in Otago to achieve good environmental outcomes by better managing the effects of the establishment, maintenance and operation of public wastewater networks and wastewater discharges across the region.

3. Because of our efforts in constantly improving the environmental performance of public wastewater networks, and our responsibilities under the Local Government Act 2002, and the RMA, we have a strong interest in the proposed standards and ensuring these deliver on their purpose.

4. We recognise that there are ongoing challenges for public wastewater network operators with respect to the cost of operating, maintaining and upgrading these facilities. These challenges are particularly arduous for smaller districts with a limited rate payer base or for cities or districts that are experiencing rapid growth. However, it is clear from recent engagement with our iwi partners and communities on the development of a regional planning framework for Otago that people expect healthy environments and want to avoid or reverse environmental degradation.

5. We consider the proposed standards, subject to any further changes outlined in our submission, will support public wastewater network operators in planning for future investment and will ensure that the quality of wastewater discharges will be brought up to a minimum acceptable standard that is in line with the public's expectation.

6. If Taumata Arowai has any questions in respect to the requests or recommendations of this submission, ORC staff and Councillors would welcome discussing those with Taumata Arowai staff.

Yours sincerely

Lloyd McCall
Deputy Chairperson Otago Regional Council

STRUCTURE OF THIS SUBMISSION

7. Our submission is structured into two sections.

8. Section One describes the current situation in Otago with respect to the management of activities covered by the proposed standards and outlines our key feedback with respect to the intent and overarching principles that underpin the proposal.

9. Section Two contains ORC's responses to the questions in Taumata Arowai's Discussion Document *Consultation on proposed wastewater environmental performance standards*. These responses set out the issues identified with the current proposal and outline suggested amendments.

SECTION I

<u>Overview of established activities covered by the proposed standards in an Otago Context</u>

10. The proposed standards cover activities where resource consents are commonly sought for wastewater treatment plants, specifically:
    (i) discharges to water for a range of parameters and receiving environments,
    (ii) discharges to land,
    (iii) disposal of biosolids, and
    (iv) arrangements for wastewater network overflows and management of bypasses.

11. The sections below provide an overview of the extent to which each of these activities are currently undertaken in Otago and outlines relevant considerations for the management of these activities.

12. The Otago region comprises five territorial authorities, Waitaki, Dunedin, Clutha, Central Otago, and Queenstown Lakes. As of 1 April 2025, there were 31 discharge consents for reticulated wastewater networks across these five districts. Of these, 15 are consents for discharges to fresh water and 12 are consents for discharges to land. The remaining 3 consents authorise discharges to coastal water.

13. Discharges of wastewater to water and to land from public wastewater networks are occurring throughout Otago. An appraisal of how the proposed standards might impact on the management and operation of public wastewater networks in Otago and on the scale or nature of environmental effects associated with these activities is included in this submission.

Discharges to water

14. Over the last two decades, ORC has been working with territorial authorities to gradually improve the quality and, where practicable, reduce the volume of direct discharges of human wastewater to water. This approach is now also being embedded in ORC's planning framework, and specifically the provisions in the proposed Regional Policy Statement for Otago 2021 (pORPS), which seek to minimise the adverse effects of direct discharges of wastewater to fresh water by phasing out existing direct discharges of wastewater to water to the extent practicable.[1] In line with this approach, ORC has also been granting consents for the

[1] PORPS Policy LF-FW-P16

discharge of treated wastewater to water with conditions that encourage network operators to investigate options to shift from a discharge to water to a discharge to land.[2]

15. There are several drivers behind this approach.

16. One key driver is the need to ensure that Māori freshwater values are identified and provided for and activities, such as direct discharges of human wastewater to waterbodies, are better managed to reduce the adverse impacts of these activities on the Mauri of freshwater and mahika kai and taoka species.

17. Another key driver is the growing awareness within Otago's communities about the potential impacts of wastewater discharges on freshwater and coastal water, and their aspiration to safeguard the diverse values that are supported by our waterways. These community aspirations have now been embedded in the pORPS' policy framework, which seeks to maintain the health of Otago's water ways (or improve freshwater ecosystem health where these waterways are degraded) and ensure that resources harvested from our water bodies are safe for human consumption.[3]

18. As stated previously, the pORPS requires that direct discharges of wastewater to water bodies are phased out to the extent reasonably practicable. This direction recognises that in many instances, wastewater discharges to land have greater public health and safety, cultural and ecological benefits than discharges of wastewater to water. It also acknowledges that this is not always the case, and there may be situations where the discharge to water is warranted because of practical constraints, including environmental conditions, technological or financial constraints or public health and safety risks.

19. As currently proposed, the monitoring requirements and the process for determining the limits for discharges to land in the proposed standards appear to be more complex and onerous than the monitoring requirements and the process for determining limits for discharges to water. ORC is concerned that this imbalance may inadvertently result in some network operators opting for discharges to water over discharges to land. ORC would like Taumata Arowai to consider this risk and amend the proposal so that the monitoring requirements and process for determining limits are equivalent across both types of discharge. This would mean an assessment would determine where the discharge is more appropriate to, rather than having the standards factor into that assessment.

20. ORC's approach for managing direct discharges of wastewater from public wastewater networks to water has been to set minimum end-of-pipe discharge thresholds, meaning compliance with these thresholds can be monitored immediately before any discharge to water occurs. This approach ensures that the receiving environment is not overly relied on for dilution and recognises that the dilution ratio of water bodies can vary depending on several factors, including fluctuations of inflow rates and temporal changes in water quality. The proposed standards are consistent with this approach.

21. However, the proposed standards for discharges to water do not require monitoring of receiving environment upstream of the discharge point and downstream of the mixing zone. We consider that amending the standards to also require monitoring of the receiving environment upstream of the discharge point and downstream of the mixing zone is

[2] Resource Consent RM21.566.01
[3] PORPS Policy LF-FW-P7

appropriate. Such a monitoring approach would be aligned with the monitoring requirements set in the conditions of various resource consents for discharges of wastewater to water in Otago.[4]

22. ORC staff have assessed whether the proposed standards would result in an enhancement of the treatment quality of consented discharges from public wastewater treatment plants in the region and consequently an improvement of the water quality in receiving water bodies. The outcomes of this assessment, which are included in *Attachment 1: Comparison of consented limits and proposed criteria for discharges to water*, can be summarised as follows:

    a. Generally, when compared to similar statistics on current consents in Otago, the proposed criteria in the national standard are more stringent. Exceptions to this include:
        (i) consents for discharges to the open coast, where the limits in some of ORC's consents are more stringent, and
        (ii) several historic consents granted that are more stringent for E. coli.
    b. Consents granted by ORC generally put in place (through consent conditions) various additional parameters and distributional statistics that are currently not included in the proposed standards. Often these consent conditions also require upstream/downstream paired monitoring. These practices are likely to provide a greater level of protection against short term and long-term effects compared to the single distributional statistics/criteria and monitoring requirements set under the proposed national standard.
    c. The proposed criteria are intended to provide suitable levels for recreation post-dilution. This means that the criteria allow for high contaminant concentration values and localised effects to be seen at the point of discharge, but presume that water will be suitable for recreation (130 CFU/100ml) after mixing. However, this assumption only holds true if the water used for diluting has low to no E. coli at the point of discharge and no cumulative impact is occurring. If the receiving environment does contain E.coli, the likely result will mean that the proposed discharge criteria would result in exceedance of contact recreation criteria after mixing.

23. Considering the above, ORC recommends that the proposed standards be amended to not allow for a reduction in the treatment quality of the discharge in instances where these discharges are currently subject to limits (set as consent conditions) that exceed those required under the national standards.

24. More detailed feedback on the proposed standards for discharges to water is included in Section II of our submission, which sets out ORC's answers to the consultation questions in the Discussion Document.

Discharges to Land

25. Compared to many other regions in the country, Otago has a higher percentage of lower-class soils under the Land Use Capability (LUC) national database and Manaaki Whenua S-Map spatial database. The region also has a higher percentage of soils with a lower hydraulic

[4] Receiving water body monitoring upstream and downstream of the discharge point creates visibility of the impacts of the activity on the receiving environment and allows for a better understanding of the adequacy of the discharge limits in terms of delivering on the expected environmental outcomes. It also helps to determine the degree to which the water quality downstream of the discharge point is influenced by the wastewater discharge itself or by ambient water quality conditions or other contaminant discharges further upstream of the wastewater discharge.

assimilative capacity. When applying the risk screening and site capability assessments proposed in the national standards, several of the region's existing wastewater treatment plants are likely to be categorised as Class 2 and higher, which requires greater stringency for Total Nitrogen (TN) and Total Phosphorus (TP) loading rates and E. Coli concentration limits than the Class 1 thresholds.

26. When considering the assimilative capacity of the soils, the proposed standards do not account for very free draining soils with stony matrices (usually shallow topsoil over gravel and sand subsoils), which are common in parts of Central Otago. These soils typically have little assimilative capacity and are associated with a higher risk of nitrogen and phosphorus leaching.

27. Furthermore, the proposed standards only refer to low-rate infiltration arrangements onto or into land. Other land application systems, such as rapid infiltration basins and recycled treated wastewater for non-potable reuse (irrigation of sports fields or parks etc.), are currently not included in the proposed standards. This oversight is an issue, because there are currently a significant number of rapid infiltration systems for discharges in large parts of Central Otago and ORC would welcome guidance or minimum standards for these systems. It is also not clear how the standards' risk screening assessment tool must be applied to determine the risk category that would apply to a treatment facility, as this tool is not available yet.

28. ORC considers that where existing wastewater systems in Otago fail to meet the proposed wastewater standards, the most likely remediation to ensure compliance with the proposed standards would be to increase the size of the disposal beds by a magnitude of 2 to 3, and/or increase the application areas for cut and carry land treatment irrigation systems.

29. ORC staff have assessed whether the proposed standards for discharges to land would result in an enhancement of the treatment quality of existing discharges. The outcomes of this assessment, which are included in *Attachment 2: Comparison of consented limits and proposed criteria for discharges to land*, show that in most cases, when compared to similar statistics on current consents in Otago, the proposed criteria in the national standard are more stringent. However, when assessing how the proposed discharge to land standards are to be applied to various existing networks in Otago, it is difficult to quantify the need for further public investment in this infrastructure and predict the environmental outcomes that can be expected under these standards. This is because the current proposal fails to outline how the standards are to be applied in various situations. This uncertainty could further contribute to network operators choosing to discharge wastewater to water instead of to land.

30. ORC consider that the proposed standards for discharges to land should be amended to make include minimum standards (or guidance) for rapid infiltration systems for wastewater discharges and include additional criteria for the site capability risk assessment in order to ensure that the standards are more reflective of the lower-class LUC soils, which are predominant in various areas in Otago.

31. More detailed commentary and feedback on the proposed standards for discharges to land is included in Section II of our submission.

Biosolids

32. Biosolids are defined in the 2024 N*etwork Environmental Performance Measures Guide* as "*solids or semi-solids (sludge) from the wastewater treatment process, which have been physically and/or chemically treated to produce a semi-solid, nutrient-rich product*". Globally, there is an increasing awareness about the potential benefits offered by the reuse of well managed and appropriately treated biosolids, including their ability to improve soil conditions. Despite this, a relatively high proportion of biosolids in New Zealand continues to be disposed to landfills.

33. At present, there are no known instances of beneficial reuse of biosolids in Otago and the operative Regional Plan: Waste for Otago (Waste Plan) does not have a management framework that specifically addresses the management of biosolids.

34. In the Otago region, biosolids are almost exclusively disposed of at land fill sites, with the only exception being biosolids and sludge from the Dunedin City Council's Tahuna Wastewater Treatment Plant, which are being disposed of in a fluidised bed incinerator located onsite.

35. Under the Waste Plan, biosolids can be disposed of at landfills with the only conditions being that they meet the definition of cleanfill and no sediments enter into any water body.[5] This management approach is not considered robust as the discharge or disposal of biosolids is currently not subject to any human health or environmental criteria.

36. The lack of a fit for purpose policy and rule framework for managing biosolids is recognised as a gap in the operative regional planning framework for Otago. Therefore, ORC welcomes national standards that adequately manage the risks and adverse effects associated with the discharge or disposal of biosolids and that promote their beneficial reuse.

37. The proposed standards for the beneficial reuse of biosolids seek to introduce a grading system that differentiates between organic products that are of low risk and those that contain pathogens and/or contaminants that may pose a risk to receptors. The proposed standards use this grading system to determine the activity status for the discharge, with the disposal of biosolids characterised by low contaminant levels, low pathogen content and subject to an approved pathogen reduction process being classified as a permitted activity status, and discharges that do not meet these criteria being a controlled or restricted discretionary activity. In addition, the proposed standards set out various monitoring and reporting requirements.

38. In the Otago region, there is currently only one known consent for the discharge of biosolids. This consent authorises the discharge of biosolids in a disposal bed, by burying this matter in geotex bags on site. The proposed standards will ensure a monitoring programme and risk-based management system will be in place for land disposal, at levels more stringent than current.

39. Biosolids often contain a wide range of contaminants, including pathogens, macronutrients, micronutrients, heavy metals, microplastics and per- and polyfluoroalkyl substances. Unfortunately, only a few of these contaminants are considered in the grading system proposed in the standards. Our knowledge of these contaminants and the risks that these substances pose to the environment and the public health and safety is constantly evolving

[5] Regional Plan: Waste for Otago, Rule 7.6.3

and currently not well understood. ORC considers that a good record of the exact location of the disposal sites and the type and volume of contaminants that are discharged into the environment is essential to ensure that current practice does not jeopardise the management of these disposal sites in the future.

40. In addition, and as previously noted in our submission (see paragraphs 25 and 26), many parts of Otago contain vulnerable soils that would require a higher level of site-based investigation and more detailed criteria to ensure appropriate loadings.

41. Therefore, ORC recommends that the standards be amended so that the discharge of biosolids is not provided for as a permitted activity, but always requires a consent as a controlled or restricted discretionary activity. The consenting process will ensure that the management of the biosolids takes into account local conditions and that records will be available on the type, volume and location of contaminants that are being discharged.

42. Further commentary on this topic is included in Section II of our submission.

Overflows

43. At present, there is only one consented overflow activity in Otago.

44. Wastewater overflows in the Otago region often occur at the oxidation pond early in the treatment process. ORC's experience is that while some overflows have t occurred because of influx and infiltration (I&I) issues caused by a climate event (heavy rainfall event) or a natural hazard, many have also occurred due to poor plant management.

45. ORC anticipates that the risk of so-called "dry-water" overflows occurring, due to plant failure or insufficient plant capacity during peak sewage inflows, will continue to exist as infrastructure ages and population growth, leading to increased network inputs. In addition, climate change is likely to result in more extreme weather events, which in turn may increase the frequency of "wet-weather" overflows.

46. ORC's pORPS sets a direction that requires the implementation of methods that:

    a. progressively reduce the frequency and volume of wet weather overflows; and[sic]
    b. minimise the likelihood of dry weather overflows.[6]

47. ORC's operative Regional Plan: Water for Otago (Water Plan) does not contain a robust framework for managing overflows and bypass infrastructure. This creates uncertainty for both operators and regulators in terms of:

    a. the matters that need to be considered when processing applications for these activities; and
    b. the environmental outcomes that are expected to be achieved.

48. The proposed standards provide an opportunity to set a national performance framework for overflow activities, and this is supported by ORC. Clear national direction will assist collaboration between operators and regulators to ensure appropriate plant and infrastructure

[6] pORPS, Policy LF-FW-P16

design and development and implantation of effective risk mitigation measures and processes to manage overflow contingencies.

49. ORC also recommends the proposed standards are amended to ensure that applications for overflows and bypasses are at all times managed as a restricted discretionary or discretionary activity (and not as a controlled activity). This will allow consent authorities to decline consent applications, which may be appropriate where operators do not adequately provide for mitigation measures to reduce the risk or volume of overflows or where viable alternatives have not been given proper consideration.

50. Further commentary on this topic is included in Section II of our submission.

Support for the intent of the Proposed Environmental performance Standards

51. Overall, ORC supports the outcomes the proposed standards seek to achieve, which is to:
    - support environmental outcomes; and
    - drive cost and time efficiencies; and
    - support owners of networks to better plan for the cost of infrastructure; and
    - save time for territorial authorities as owners of the public infrastructure, and for regional councils as regulators.

52. ORC considers that these outcomes have important benefits for network operators, regulators, end-users and the wider community. Regulators and network operators have an interest in working under a regulatory framework that allows for resource consenting processes to be undertaken in an efficient and cost-effective manner, while also ensuring that resource use does not stand in the way of achieving environmental outcomes that reflect the communities' aspirations.

53. We recognise the proposed standards provide the opportunity to achieve greater consistency in how wastewater streams are managed, thus creating efficiencies in regulatory process. For example, the proposed standards with respect to the use of biosolids could assist ORC address the gap in its current management framework, while engendering innovation in the development of more effective and efficient wastewater management solutions that reduce costs to network operators.

54. We also recognise the proposed standards can play a positive role where improvements in the environmental performance of public wastewater networks are required but have not been progressed in the absence of a fit for purpose planning framework. In these circumstances, the introduction of the proposed standards will set a clear expectation for operators to achieve these standards.

Key Messages with respect to the Proposed Standards

55. The following paragraphs set out some of ORC's key considerations and concerns with respect to the proposed standards. Often our concerns relate to the lack of flexibility within the framework set by the standards and the inability of regional councils to introduce conditions that require either higher or lower levels of treatment than those required under the specific parameters (and corresponding limits) included in the proposed standards.

56. Our key considerations and concerns are the following:
    - No ability to consider local environmental conditions or instream values.

- No ability to consider community and mana whenua values, views and aspirations.
- Risk of decreased performance and degradation.
- No clear alignment with current legislation or national direction
- Risk of inequity between resource users.
- Lack of flexibility when setting consent durations.

Considering local environmental conditions and freshwater values

57. The proposal outlines a limited number of circumstances within which water bodies are exempt from the proposed standards. However, these exceptions are unlikely to recognise every situation in which an exemption from the standards for a receiving water body is considered appropriate.[7] ORC considers that the current proposal is too rigid and may fail to recognise and provide for local environmental conditions. A few examples where the one-size-fits-all approach may not be appropriate, and bespoke wastewater standards are more likely to safeguard the ecosystem health of these water bodies or the values they currently support are shown below.
    - Various Otago rivers are in public conservation land (with some of these contributing flows to the region's iconic lakes). While these water bodies are regarded to be in a natural and unmodified state, they would fail to meet the thresholds required to be exempt from the standards. Attachment 3 gives an overview of examples of unmodified rivers that fail to meet the threshold.
    - Many water bodies in different parts of the region have primary contact recreation sites. However, the standards do not allow for these values and the public health risk associated with wastewater discharges in the vicinity of primary contact sites to be considered.
    - Otago is home to various threatened species some of which are endemic to the region. Otago's rivers also provide habitat for taoka species and support mahika kai practices. However, the standards do not allow for the impacts of wastewater discharges on threatened or taoka species habitat or on mahika kai practices to be considered.

Providing for community or mana whenua aspirations

58. ORC considers that it is important that regional councils are provided with the ability to set bespoke wastewater environmental performance standards in their regional plans, that reflect the aspirations and expectations of mana whenua or local communities.

59. In recent years, ORC has been engaging with local communities in Otago to make sure community aspirations are clearly articulated within the long-term visions, objectives and environmental outcomes of the pORPS and any future regional plans. To ensure that mana

[7] The proposed standard will not apply in the following situations:

- discharges to a waterbody that meets the requirements of Attribute Band A for all attributes contained in Appendix 2A and Appendix 2B of the NPS-FM.
- discharges to rivers or streams with very low dilution (with a dilution ratio of <10).
- discharges from a wastewater treatment plant directly to an aquifer (commonly known as deep well injection).
- discharges to natural wetlands (i.e., those which are not part of the treatment process for the wastewater discharge).
- discharges within the following proximities:
- 1,000m upstream or 100m downstream of human drinking water abstraction points in rivers
- 500m radius from human drinking water intakes in lakes ~ 1,000m upstream of any tributaries that discharge to lakes within the 500m radius from intakes
- discharges to a waterbody that has naturally high levels of a particular parameter.

whenua aspirations and interests are adequately provided for in our regional planning instruments, ORC has also entered a partnership with Kāi Tahu ki Otago and Ngai Tahu Ki Murihiku, who have developed their own natural resource management plans based on a Te Ao Māori viewpoint.

60. ORC considers that if the proposed standards are to contribute meaningfully to the ethos of the *Local Water Done Well* program, then these standards need to consider 'local' ambitions and efforts and enable communities to 'do water well' within their local context. This is especially important for communities where investment decisions have already been made that seek to achieve discharge standards that exceed those set out in the proposed standards.

61. ORC acknowledges that providing regional councils with discretion to set bespoke wastewater standards (that differ from the national standards) can result in a requirement for network operators to achieve higher levels of treatment or discharge quality (than those set in the national standards), and therefore trigger the need for capital investment. However, this will also allow for the setting for lower standards in circumstances where this is justified. For example, in situations where network operators are under-resourced and cannot afford the necessary investment to achieve the proposed national standards and where the discharge of treated wastewater poses little risk to the receiving environment or the values supported by it, setting lower treatment quality requirements may be appropriate.

Risk of decreased environmental performance and water quality degradation

62. Current direction for the management of freshwater in Otago's pORPS requires that the health and well-being of water bodies and freshwater ecosystems is maintained or, if degraded, improved.[8] This direction is consistent with the national direction set in the current National Policy Statement for Freshwater Management (NPSFM 2020).[9]

63. ORC submits that regional councils should be allowed to set more stringent environmental performance standards for wastewater discharges to water where the proposed national standards are unlikely to prevent (further) degradation of the receiving water body. This is particularly the case in situations where a plant is already subject to higher quality treatment or discharge limits under the conditions of their current consent. ORC considers that provision should be made for councils to carry over the limits in existing consent conditions in replacement consents, rather than being able to manage to less stringent standards.

64. Flexibility for regional councils to set more stringent limits than those set in the national standards should also be allowed where such limits are required to ensure that the health and well-being of water bodies and freshwater ecosystems, beyond the mixing zone, is either maintained or improved where necessary, to meet national bottom lines or any other relevant target states for that water body expressed in a regional planning instrument.

---

[8] pORPS, LF–FW–P7 – Fresh water.

[9] Policy 11, NPSFM 2020. This policy states: *Freshwater is allocated and used efficiently, all existing over-allocation is phased out, and future over allocation is avoided*. Freshwater quantity and quality is over-allocated where freshwater use exceeds a limit, for example, if the amount of water that is currently being taken from a river or is sought to be taken exceeds the amount that has been identified as being able to be taken while ensuring the health of the waterbody. Until limits are set for a waterbody, it is considered to be over-allocated if it is in a degraded or a degrading state.

No clear alignment with other legislation or national direction

65. The discussion in paragraphs 62 to 64 above highlights the potential tension between the proposed national standards (and how the limits and loadings set in them are to be applied) and the direction set for freshwater management in the current NPSFM 2020.

66. The NPSFM 2020 requires that Freshwater is managed through a National Objectives Framework (NOF) to ensure that the health and well-being of:
    - Degraded water bodies and freshwater ecosystems is improved
    - Other water bodies and freshwater ecosystems is maintained and improved if communities choose to improve it.

67. The NOF sets out the process for preparing regional freshwater plan content and at a high-level the required management approach and content. At each stage of the NOF process, regional councils must engage with communities and tangata whenua and apply the hierarchy of obligations, the first being the health of freshwater.

68. Other requirements under the NPSFM 2020 are:
    - Tangata whenua are actively involved in freshwater management (including decision making processes), and Māori freshwater values are identified and provided.[10]
    - The loss of river extent and values is avoided to the extent practicable.[11]
    - The national target as set out in Appendix 3 of the NPSFM for water quality improvement is achieved.[12] This national target is to increase proportions of specified rivers and lakes that are suitable for primary contact to at least 80% by 2030, and 90% no later than 2040, but also to improve water quality across all categories.

69. ORC considers that it is not clear how the national standards allow for these NPSFM requirements to be given effect to in decision-making.

70. A similar issue arises with respect to the management of water bodies that are subject to a water conservation order (WCO). There are two relevant WCOs in Otago:
    - Water Conservation (Kawarau) Order 1997; and
    - Water Conservation (Mataura River) Order 1997

71. WCOs place certain restrictions and obligations on the exercise of ORC's functions under the RMA in relation to these water bodies, to preserve them in their natural state or protect their outstanding values. These restrictions and obligations also relate to the maintenance of particular water quality standards and the management of discharges to the water bodies protected by a WCO. It is not clear how ORC can meet its obligations under the relevant WCOs if the framework as proposed in the national standards were to come into force.

Inequity between resource users

72. ORC is concerned that where national direction or regional planning instruments set objectives, outcomes or target states for receiving environments that are unlikely to be met by the discharge limits or loadings set in the proposed standards, other resource users or

[10] Policy 2, NPSFM 2020

[11] Policy 7, NPSFM 2020

[12] Policy 12, NPSFM 2020

landholders may be required to compensate for this and further reduce the impacts of their activities to ensure these objectives, outcomes or target states are met. This situation would create an unfair regime between consent holders or resource users in a catchment whereby other activities that have comparatively lesser impacts on the environment are disproportionally restricted or penalised because of the proposed standards.

73. The standards also set a dual standard for treatment quality based on ownership (and irrespective of the scale or impacts of the discharge), by only applying to public infrastructure. However, ORC considers that there is little reason for exempting private or community-owned wastewater treatment networks from the proposed standards, particularly if these networks are of similar scale to public infrastructure. Not applying the national standards to private or community-owned schemes may also become an impediment for private or community-owned schemes to connect to a public network and/or for its ownership to be transferred to a local authority. Finally, where private infrastructure with treatment quality that fails to achieve the standards is being vested in council it could result in the cost of any necessary upgrades to be transferred from the end-users of that private network to the wider community or non-users.

74. In ORC's view both matters can be best addressed by ensuring the standards apply to both public and privately owned networks and providing regional councils with the flexibility to impose standards that ensure that the controls and costs imposed on resource users within a catchment are proportional to the impacts of their activities.

Lack of flexibility when setting consent durations

75. ORC recognises the benefits of long-term consents for infrastructure providers, including wastewater network operators. We also acknowledge that significantly reducing the duration of consents can create challenges for these network operators, particularly when it comes to the long-term planning and budgeting of the establishment, expansion, upgrade or operation of this infrastructure.

76. Therefore, ORC agrees that provision should be made for wastewater networks to be consented for a longer term when their design, operation and location ensures that these activities:

    a. do not pose a risk to the public health and safety; and
    b. do not materially impact on the health of the environment; and
    c. allow for the objectives and target states set in national direction or regional planning instruments to be achieved within the set timeframes.

77. However, in circumstances where the achievement of these outcomes is uncertain, a timely re-evaluation of an operation may be needed to ensure its environmental effects are adequately managed. While councils can undertake consent review processes in cases where the environmental performance needs to be improved, these processes often result in significant costs to regulators and consent holders. Further, the requirement to consider the financial viability of the activity under RMA s131 is likely to constrain the ability of regulators to set environmental conditions or manage the effects of discharges through a consent review process.

78. Hence, we recommend amending the standards to allow councils to grant resource consents for wastewater infrastructure for a shorter term, for a narrow range of reasons. Examples of situations where a short-term consent may be appropriate include the following:

    a. Where the impacts on the receiving environment or public health and safety are uncertain.
    b. Where a short-term consent is required to allow for development of or transition towards a longer-term solution.[13]
    c. Where the receiving environment is degraded and needs to be improved to achieve the objectives and environmental outcomes set in a national direction or regional planning instrument.

Conclusion

79. In summary, ORC is supportive of the initiative to set a nationally consistent framework of environmental performance standards for public wastewater networks.

80. However, ORC does consider that without greater flexibility in the application and implementation of the standards, regional councils are at risk of not meeting community expectations and mana whenua aspirations and failing to achieve the goals and objectives articulated in current national direction and our regional plans.

81. To address this issue, ORC recommends the following key amendments to the proposed standards:

    a. Amend the national standards so they apply as:
        i. national bottom lines, that must be achieved, but can be replaced by more stringent regional limits or standards where these are appropriate; or
        ii. default standards that must be achieved where regional planning instruments do not set standards for these activities (but can be replaced by more stringent or less stringent limits or standards once these are set in a regional planning instrument).
    b. Amend the national standards so they allow regional councils to set bespoke limits in the following circumstances:
        i. Where bespoke limits are needed to achieve the pORPS visions and regional plan objectives, environmental outcomes and target attribute states (set through engagement with communities and mana whenua)
        ii. Where bespoke limits are needed to achieve national bottom lines
    c. Amend the national standards so they do not allow for a reduction in the treatment quality of the discharge in instances where these discharges are currently subject to more stringent limits set as consent conditions.
    d. Amend the standards so regional councils are provided with discretion to grant consent with a duration of less than 35 years.

82. Additional amendments suggested by ORC are outlined in Section II of this submission, where we set out our responses to the consultation questions included in Taumata Arowai's

[13] For example, where the infrastructure needs to be upgraded, but a transition period needs to be provided for, or where the infrastructure is be relocated out of an area subject to a significant natural hazard risk, but a transition period needs to be provided for. This is particularly the case for rural communities in Otago.

Discussion Document *Consultation on proposed wastewater environmental performance standards*.

SECTION II – CONSULTATION QUESTIONS

GENERAL

Do you agree with the areas the first set of standards are proposed to cover?

83. ORC supports the setting of environmental performance standards for public wastewater networks (treatment plants and infrastructure) and considers that these standards should also apply to privately owned or community-owned networks

84. Further efforts should also be made to ensure the treatment quality of discharges from small wastewater treatment plants is, over time brought up to a standard that is similar to that required for treatment plants currently covered by the national standards. However, a sufficiently long transition timeframe may need to be provided for, recognising the challenges many small communities face when it comes to securing sufficient funding for plant or infrastructure upgrades (This is discussed in greater detail in paragraphs 105 to 107 below).

85. As outlined in the consultation materials released by Taumata Arowai, achieving good environmental outcomes is a key driver behind the setting of the proposed national standards. ORC considers that it will be challenging to achieve good outcomes if not all wastewater network operators are subject to the same or similar treatment quality standards.

What areas should we prioritise to introduce wastewater standards in future?

86. ORC supports setting environmental performance standards for septic tanks in the future.

What topics should we cover in the guidance material to support implementation of the standards?

87. ORC suggests that the implementation guidance should cover the following topics or include the following content:

Process-related topics

i. Guidance on how to consider the proposed standards when preparing and evaluating Assessments of Environmental Effects (AEEs) in support of an application, particularly in situations where other aspects of a proposal for a wastewater discharge requires the consideration under standard consenting process. (E.g. Should any effects caused by the discharge of contaminants covered by the proposed standards be disregarded when considering effects on water quality? Should consent officers only consider effects caused by contaminants that are not subject to the national standards?)
ii. Guidance on how to assess and manage the cumulative effects of contaminant discharge.
iii. Examples of how to determine the dilution ratio for discharges to water.
iv. Clarity on the minimum/maximum timeframes for processing applications for discharges of wastewater, biosolids disposal and the management overflows and bypasses.
v. Clarity on matters that can/can't be considered when processing applications for:

a. controlled activities, such as applications for wastewater overflows and bypass consent applications, or
b. restricted discretionary activities.

vi. Guidance on how non-water quality related matters provided for in regional plan provisions can be considered when processing applications for controlled or restricted discretionary activities. (e.g. requirements to ensure there is no scouring or flooding of other properties).
vii. Guidance on how the standards relate to other legislation (e.g. s107 of the RMA) or relevant national direction or legislation (e.g. NPSFM, Water Conservation Orders).

Science-related topics

viii. Guidance on the use of a consistent framework for confirming the grades of biosolids.
ix. Guidance on the use of the risk framework tool for setting limits for discharges to land that is yet to be developed.
x. Guidance on how to determine a scientifically robust 7-day Mean Annual Low Flow (7dMALF) at the point of discharge and clarification on the appropriateness of the use of modelled 7dMALF estimates).
xi. Guidance on which type of percentile is to be used.
xii. Guidance on how to determine the periphyton exemption.

Are there particular groups we should work with to develop guidance and if so, who?

88. ORC considers that (at a minimum) the following stakeholders should be involved in the development of guidance:

i. Local authorities (i.e. regional councils and district councils); and
ii. Mana whenua (i.e. local iwi), due to their interest in water, and to ensure that their natural resource management plans are given due consideration in planning and decision-making processes.

How should factors such as climate change, population growth, or consumer complaints be addressed when considering a 35-year consent term?

89. ORC considers that climate change factors should be considered in the following context:

i. Impacts of climate change on health of the receiving environment; and
ii. Impacts of climate change on design, location, operation and performance of wastewater treatment plants and associated infrastructure.

90. Impacts of climate change on the health of the receiving environment should be considered when setting discharge limits (discharge rates and loadings). These limits should account for the risk that contaminant discharges pose in light of climate change effects on receiving water bodies such as, reduced water yield (reduced dilution), increased water temperature (higher risk of algae blooms).

91. Impacts of climate change on design, location, and operation and performance of the infrastructure should be considered at the consenting stage. Specifically, the planning framework should allow for the consideration of appropriateness of the location and

design specifications of the proposed infrastructure and adequacy of risk management measures, such as overflow management plans, during consenting process.

92. Population growth is another matter that should be considered at the consenting stage. Given the expected lifespan of wastewater treatment infrastructure, the planning framework should allow decision-makers to consider the adequacy of the capacity of the network in light of future growth projections for the service area when considering applications for discharges from these networks. ORC would welcome the availability of a nationally consistent method for calculating population growth.

93. ORC considers that consumer complaints are best addressed by the network operator, due to resourcing to administer and resource any necessary responses. However, it would be appropriate to provide consenting authorities with the discretion to set conditions for operators to have appropriate complaint resolution procedures and require periodical reporting on complaint numbers and actions taken.

Discharge to Water

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.

94. ORC recommends that the proposed standards allow for the setting of multiple distributional criteria, instead of only a median or 90th percentile, to reduce the risk of potential chronic effects from sustained moderate to high contaminant levels, or the risk of acute effects from rare but extremely high contaminant levels. For instance, geometric means are often combined with maximums or percentiles to minimise the risk of chronic and acute effects respectively.

Are the areas for exceptions appropriate to manage the impacts of discharges and do you anticipate implementation challenges?

95. ORC considers that any exceptions from the national standards should be laid out clearly in the standards to avoid situations where they are applied incorrectly when interpreting the standards or when preparing or processing consent applications. Clarity around when and where exceptions apply will support efficient implementation of the standards, reduce the cost and complexity of consent processes and contribute to good environmental outcomes, which are key drivers of the proposal.

96. ORC staff have identified that the exception to the standards described in the proposal as *an exception that applies to wastewater discharges to a waterbody that already has naturally high levels of a particular parameter* is not clear.

97. Discharges to “pristine” water bodies are also proposed to be excluded from the national standards. “Pristine water bodies” are defined by the proposed standards as having all attributes complying with the A-band in Appendix 2A and 2B of the NPSFM 2020. This description is problematic. For instance, in Otago several rivers and streams in the upper Lakes region are generally considered to be pristine (i.e. unmodified or impacted by pollutants caused by human activity) but will fail to comply with the A bands, lesser bands or even national bottom lines for some contaminants. In many cases, these rivers fail to

comply with the B-band for macroinvertebrate attributes due the cold, low productivity, nature of these rivers. Examples of this situation are included in Attachment 2.

98. The NPSFM 2020 recognises that "pristine" water bodies may fail to achieve A-bands for Appendix A and 2B attributes and addresses this by providing a framework for managing water bodies impacted by "naturally occurring processes". [1] However, the consultation documents released in support of the proposed wastewater environmental performance standards do not currently discuss the role that naturally occurring processes may play in the attribute states of pristine water bodies.

99. A potential consequence of this omission within the framework of the proposed national standards is that the current proposal may allow for the discharge of treated wastewater to these unmodified water bodies at a standard that is inappropriate and may result in their degradation.

100. Considering the above, ORC submits that the proposal should be amended to allow for exemptions or the setting of bespoke limits in rivers and streams that are generally considered to be pristine (i.e. unmodified or impacted by pollutants caused by human activity) but fail to comply with the A-bands for Appendix A and 2B attributes in the NPSFM 2020.

How should the exceptions be further defined to ensure there are no unintended consequences?

101. ORC recommends that the standards be amended so that:

    i. More clarity is provided around the criteria that should be applied to determine whether a water body classifies as a waterbody that has naturally high levels of a particular parameter (and is exempt from the proposed standards); and
    ii. They provide for a process that allows for the identification of pristine or unmodified water that fail to comply with the A-bands for attributes listed in NPSFM 2020 Appendices A and B or water bodies that have significant or outstanding values (e.g. ecological, recreational, cultural or natural character values) and should be exempt from the national standards. One option for such a process could be the inclusion of these water bodies in a Schedule of a regional planning instrument.

102. ORC further considers that it would be beneficial if the national standards (or any guidance documentation associated with these) include a methodology for determining appropriate limits based on actual monitoring data for pristine water bodies or for waterbodies that have naturally high levels of a particular parameter and are exempt from the proposed standards.

---

[1] The term naturally occurring process is defined in Clause 1.4 of the NPSFM 2020 as follows: "*means a process that occurs, or would occur, in the absence of human activity*". Clause 3.32 of the NPSFM 2020 further addresses naturally occurring processes.

Are the treatment limits, and monitoring and reporting requirements proportionate to the potential impacts of the different discharge scenarios?

103. With respect to the proposed treatment limits, ORC considers that the proposed microbiology standards are very lenient and do not align with the Ministry for the Environment's Microbiological water quality guidelines for marine and freshwater recreational areas, which aim to protect human health by using E. coli and Enterococci as indicator species of faecal bacteria.

104. ORC recommends that the standards be amended to:

    i. Include a methodology that recognises performance based on actual monitoring data; and
    ii. Require that, for any reconsenting, future performance is based on the actual baseline, even if this baseline exceeds the national standard. This will ensure environmental gains that have been achieved are sustained.

105. With respect to the monitoring and reporting requirements in the proposed standards, ORC considers the following:

    i. The national standards should require the setting of standardised monitoring conditions to ensure consistency in interpretation and quick and efficient implementation. These should be developed through collaboration with regional councils and form part of the standards for the following three scenarios: continuous monitoring, fortnightly monitoring, monthly monitoring
    ii. The national standards should set out a framework (of include standard consent conditions) for what is required to be included in annual compliance reporting against specified parameters.
    iii. The national standards should include requirements relating to third party auditing, i.e. a requirement for the audit results to be provided to regional councils and Water Services Authority within a timely manner.
    iv. The monitoring requirements under the standards should be changed to a 12 monthly rolling average. Under the current proposal, the annual limits can only be assessed at the end of the year. This means that councils will only get notifications at the end of the year. A 12 monthly rolling average will allow for compliance to be assessed in any month of the year.
    v. The national standards should include requirements that provide for the monitoring of the water quality in the receiving environment. This is particularly the case if the limits and loadings prescribed by the standards seeks to ensure that all discharges from public wastewater treatment plants achieve, after reasonable mixing, the thresholds set for relevant parameters under the water quality guidelines for contact recreation.
    vi. The standards should include a monthly sampling requirement for smaller wastewater treatment plants. (For small plants, the proposed standards require monthly reporting but do not explicitly require monthly sampling.)
    vii. The proposed standards do not appear to require Discharge Volume Measurement (DVM) across all plant sizes. ORC considers that it would appropriate to amend the proposal, so the standards require DVM at 15-minute intervals from verified meters for all plant sizes.

viii. The standards should be amended to allow for resampling to confirm exceedances of limits. ORC currently allows consent holders to undertake resampling to confirm exceedances of limits. The resampling is then used in place of original sample in statistical calculations. This practice gives the consent holder a chance to reduce or eliminate the potential for sampling error while not adding extra data points of non-compliance.

What benefits and challenges do you anticipate in implementing the proposed approach? Are there particular matters that could be addressed through guidance material?

106. ORC recommends that the guidance material provides clarity or confirmation as to whether the standards apply in the following instances:

    i. Wastewater discharges into artificial ponds or other artificial waterbodies. ORC considers that such discharges should be exempt from the standards and should be managed through provisions set under the standard RMA process for plan development.
    ii. Wastewater discharges into a modified water body, i.e. a natural water body that has been modified (e.g. Lake Hawea).
    iii. Wastewater discharges into an artificial reservoir/lake created by a dam but located in a natural water body (e.g. Lake Dunstan). If the standards are intended to cover wastewater discharges into an artificial reservoir/lake created by a dam but located in a natural water body, clarity needs to be provided as to whether the lake or river categories of the standards apply. If the river categories apply to wastewater discharges into an artificial reservoir/lake created by a dam and located in a natural water body, guidance needs to be provided as to how 7dMALF must be determined.

How should we define small plants and what changes to the default standards should apply to them?

107. The current standards only apply to public wastewater networks and provides for more lenient requirements where the discharge is associated with existing small wastewater treatment plants.

108. However, ORC does consider that there are risks associated with the approach established by the standards for managing discharges from small plants. These risks are the following:

    i. Setting more lenient standards for existing wastewater treatment plants could disincentive the upgrade of these plants to achieve a higher level of environmental performance.
    ii. Although the potential impacts of discharges from small plants on the health of environment are likely to be less than those associated with wastewater discharges from a larger plant, the cumulative effects of discharges from small plants can still result in degradation of the receiving environment.
    iii. Where small plants discharge contaminants into small waterbodies, there is a risk that the more lenient standards for these plants will have proportionately a greater impact on these waterbodies, given smaller water bodies typically have less ability to assimilate the contaminants.

109. ORC considers that there are various options for addressing the risks associated with more lenient requirements for small plants and recommends amending the framework for managing these plants in the national standards to include one or more (or combination) of the following options:

    i. **Setting specific standards based on assimilative capacity.**
    For example, different standards for different classes of receiving water bodies could be set for discharges from small plants with the classification of these environments being based on assimilative capacity and/or water body type
    ii. **Setting minimum treatment thresholds or design standards.**
    Minimum operational requirements and minimum treatment components (such as screening and minimum residence time of wastewater) could be required for small plants that opt to be subject to more lenient standards.
    iii. **Allowing for transition timeframes.**
    The standards could allow for transition timeframes that recognise the challenges for small communities when it comes to securing funding for public infrastructure.

What feedback do you have for managing periphyton in hard bottomed or rocky streams or rivers?

110. RC further considers that there would be benefits in setting TN and TP consent conditions by managing periphyton through bespoke risk assessments.

What detail should be covered in guidance to support implementing this approach for managing periphyton?

111. It would be useful to clarify in the guidance the following matters:

    i. The grounds on which the exemption applies (In Otago, the exemption would apply to most streams/rivers.)
    ii. A suitable methodology for the risk assessment. This would support national consistency in approach.
    iii. How situations where nutrient reductions are required for phytoplankton or macro-algae growth in downstream receiving environments (such as estuaries or lakes) should be considered alongside the periphyton criteria.

Discharge to Land

Are the proposed parameters appropriate to manage the impact of wastewater discharges to land?

112. ORC considers that the hydraulic loading parameters are likely to be too narrow and based on soils that are not representative of the southern region. This may mean that the standards will fail to adequately account for key characteristics that determine every soil's ability to assimilate. Examples where the hydraulic loading parameters are likely to be inadequate are stony soils and soils which are free draining and have shallow topsoils on gravels. On these soils leaching is far higher. However, often these soils can be found

at or in the vicinity of wastewater treatment plant sites as the latter are often located near waterways.

113. ORC further considers that there would be benefits in having consistent standards as minimum requirements for Biological Oxygen Demand (BOD5) and Total Suspended Solids (TSS) for discharges of wastewater to land. All wastewater discharges will contain TSS and BOD5 and consent conditions that set limits for BOD5 and TSS are common on consents authorising discharges to land. Having minimum standards set at national level would avoid the need for case-by-case assessments of these contaminants. While the management of these contaminants should be part of every discharge to land application, consent authorities should be provided with the discretion to set site-specific limits, as high TSS levels can alter soil composition (affecting plant growth and soil health) and high BOD5 levels can alter microbial activity and nutrient balance.

114. ORC considers that the exclusion of heavy metals and contaminants of emerging concern (CEC) from the proposed limits is not problematic as these can be managed under the RMA on a case-by-case basis when considering the composition of wastewater inflows.

115. The proposed standards set loading rates for Nitrogen (N or TN) (500kg/ha/year) and Phosphorus (P) (75kgP/ha/year) for class 1 soils. These rates will assist with ensuring that the concentrations of other contaminants in the wastewater are also limited and do not become a concern. Given the stringency of the proposed standards for TN and TP, it can be expected that the levels of BOD5, TSS and heavy metals in the wastewater will also be reduced.

116. ORC is also concerned that the proposed standards for discharges of wastewater to land will ultimately result in higher mean loadings of contaminants in the biosolids/sludge generated from by the wastewater treatment. This is because the biosolids guidelines applied by the proposed standards are more permissive than the proposed standards for discharges of wastewater to land. We consider that the health of some of Otago's soils could be at risk if the planning framework for managing biosolid disposals is inadequate.

117. Finally, as stated previously in Section I of this submission, ORC considers that the process for determining the limits for a discharge to land consent alongside the standard monitoring requirements for such consents appear to be substantively more complex and greater than what is required for discharges to water. This may result in higher costs for applicants associated with the preparation and processing of resource consent applications as well as ongoing monitoring costs.

What benefits and challenges do you anticipate in implementing the proposed approach? Are there other particular matters that could be addressed through guidance material?

118. Key challenges and risks associated with the proposed approach include the following:

    i. The standards do not adequately account for less common soil types (low assimilation capacity) and rapid infiltration systems (common in Central Otago).
    ii. The risk screening assessment tool has not been developed, so it is difficult to assess how easily this tool can be used.

iii. The loading rate restriction may require wastewater treatment plans to develop extra storage capacity given the abundance of lower-class soils in the region, requiring additional capital input.

Are the monitoring and reporting requirements proportionate to the potential impacts of the different discharge scenarios?

119. Our feedback provided with respect to the monitoring and reporting of discharges to water (see paragraphs 103 to 105 above) equally applies to discharges to land.

120. In addition, ORC considers that having a standard that requires nutrient loadings to be monitored or assessed over a 12-month rolling average would allow compliance to be assessed at any time rather than once at the end of the year.

121. ORC also considers that while the hydraulic loading rates proposed in the standard are set at hourly rate, there is no proposed monitoring requirement for discharge volumes. We therefore recommend that the standards require monitoring for discharge volumes at 15-minute intervals to ensure compliance monitoring can be accurately undertaken.

122. Finally, ORC recommends that the monitoring and reporting requirements and the development and implementation of the management and operation plan, required under the standards, are included in standard conditions that can be applied to discharge consents. These standard conditions will make application preparation and processing less complex and will ensure consistency in terms of compliance and reporting. In situations where variations to the standard conditions are required, the standards should provide consent authorities with sufficient guidance.

123. The standard conditions should also clearly state how the loadings must be calculated[2] and where N and P are to be measured for end-of-pipe calculations.

124. The greater the use of standard conditions, the greater the likelihood of the national standards achieving their goals in terms of cost and time efficiencies and consistency across the country. If the standards only state what is required without being prescriptive in terms of the conditions that need to be applied to a consent, the risk for inconsistency in implementation of the standards increases.

Beneficial Reuse of Biosolids

What matters of control or restricted discretion should sit with consenting authorities to manage the reuse of biosolids?

125. In line with a submission to Water NZ from the Land Managers Forum on the draft guidelines (2025), ORC recommends that all biosolid discharges should be given a controlled and restricted discretionary activity status. This is because of the vulnerability

[2] 80 For example: A standard condition could state: *….shall be determined monthly using on the daily flow data collected for the relevant month multiplied by that month's Total Nitrogen concentration and summed for the preceding 12 months.*

and lower classes of soils that can be found in the Otago region and the fact that these soils have more specific needs than most other regions in New Zealand.

126. Matters of control or discretion that should sit with consenting authorities to manage the reuse of biosolids include the degree of treatment and annual loading.

127. The standards that apply to the treatment quality and annual loading rate are very site-specific. The loadings and application limits for TN, TP and E. coli in the proposed standards for discharges to land will assist with reducing the concentrations of other contaminants, such as TSS and BOD5, in wastewater. However, this is also likely to result in higher concentrations of these contaminants in biosolids. The *Guidelines for the Safe Application of Biosolids to Land in New Zealand* (the Guidelines), which are the basis for the proposed standards for the disposal of biosolids, are generally more permissive than the standards for discharges to land. As biosolids are almost exclusively disposed of to landfills and/or buried there are currently very few controls for the management of biosolids specified in consent conditions in Otago.

128. Specifically for Otago soils, the proposed N loading limit infers greater risks for both N and P losses with further treatment required to mitigate these risks.

What should the permitted activity standards include?

129. ORC recommends that all disposal of biosolids is consented as a controlled or restricted discretionary activity, rather than permitted activity. The appropriate management of potential impacts of disposal of biosolids is too complex to be provided for through a permitted activity status and consenting will allow for environmental impact assessments to be undertaken that consider varying site and soil conditions.

130. Other reasons why ORC does not support having a permitted activity status in the proposed standards for the disposal of biosolids are the following:

    i. The N limit of 200kgN/ha/year averaged over 2 years, proposed in the Standards as the primary land application control for load setting and based on the draft *Beneficial Use of Biosolids and other Organic Materials on Land (Good Practice Guide)* does not adequately account for:
        1. The oversupply of N at times when agronomic requirements of a site are low.
        2. Differing mineralisation rates in soils plus changing mineralisation rates as soils gain higher organic loadings.
        3. The control on timing of applications with respect to the relationship between N leaching and soil temperature
    ii. The N-based approach to biosolid management creates a risk of providing P in excess of plant requirements, meaning P is likely to build up in the soil and is therefore of greater risk to loss.
    iii. The proposed approach does not align with industry best practice, as the Guidelines for the Safe Application of Biosolids to Land in New Zealand (the Guidelines) recommend the development of an Environmental Management

plan (EMP) and a Land Application Site Management plan (LASMP), including a Nutrient Management plan. [3]

iv. The varying sensitivity of the environment requires a greater degree of regulatory oversight to ensure adverse effects are adequately managed.
v. Biosolid application to land is excluded from the MfE Hazardous Activities and Industries List (HAIL) if used as a soil conditioner and a pastoral land use remains. However, the current Grade 1 Contaminant limits indicate that the biosolids could overtime pose a risk to the environment. Without sufficient monitoring this could result in the need for future remedial action or elevated soil disposal costs if there is a change in land use.

131. Overall, ORC considers that the framework for managing biosolid disposal should:

i. be based on industry best practice; and
ii. allow for the consideration of more site-specific criteria around hydraulic loadings, especially where soils have low P retention capacity and lower clay content; and
iii. ensure that N applications and rates are tailored to a site's crop requirements. (This is especially so for Otago soils, which have lower assimilative characteristics than other regions.); and
iv. consider the timing of application, with storage requirements required when soils are unable to receive applications.

132. Finally, ORC considers that the limits set for Grade 1 Contaminants exceed the values recommended under the ecological soil guidelines developed by regional councils to protect the environment. These higher limits do not encourage industry to minimise contaminant levels in biosolids and improve the risk for public health and safety and environmental health associated with the land application of biosolids.

How should contaminants of emerging concern in biosolids be addressed in the short-term?

133. Our knowledge of CECs is continuing to evolve. There are several CECs often present in biosolids that are currently unregulated, for example micro- and nano-plastics and PFAS. Not knowing the sites where biosolids that may contain these CECs are deposited presents a risk to local communities as further consideration and management of these CECs and their effects may be required at some point in the future.

134. ORC recommends that the framework in the national standards provides for the recording and transfer of key information to the consent authority, including information on the types and quantities of CECs disposed of and the location of the disposal site.

[3] Note that the development and implementation of Environmental Management plans, Land Application Site Management plans and Nutrient Management plans are often compulsory documents for dairy effluent consents authorised by various regional councils in New Zealand.

Overflows and Bypasses

Is the current definition of overflow fit-for-purpose, and if not, what changes do you suggest?

135. ORC is supportive of the proposed definition.

Does the proposed definition of bypasses adequately cover these situations, and if not, what changes do you suggest?

136. ORC is supportive of the proposed definition.

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?

137. ORC supports the standardisation of guidelines as to how authorities deal with infiltration of the wastewater networks. Infrastructure management and identification of areas of concern would benefit from a systematic means of prioritisation based on previous experiences and advice. This will help network operators develop risk management plans appropriately.

138. ORC also supports a framework that seeks the integration of risk management plans across the areas of stormwater, drinking water and wastewater infrastructure management and provides for reasonable transition timeframes where network operators already have existing risk management planning tools in place.

What should be covered in guidance to support developing wastewater risk management plans?

139. ORC considers the following matters should be included in the wastewater risk management plans:

    i. Evaluating how susceptible the plant's infrastructure and operations are to natural hazards such as earthquakes, floods, hurricanes, and wildfires and develop a comprehensive emergency response and post disaster recovery plan.
    ii. Planning for electricity outages is essential for wastewater risk management. Ensure the availability of backup power sources, such as emergency generators, to maintain critical operations during power outages. Establish communication protocols with electric providers, local agencies, and the public. Ensure the wastewater plant is on the priority list for power restoration.
    iii. Critical parts and spares - Stockpile essential equipment and supplies needed for emergency repairs and operations. E.g. back up UV bulbs
    iv. Evaluating the risk of wastewater contamination for downstream users. Identify sensitive receptors and water users, including drinking water sources, fisheries, and hatcheries. Establish a communication procedure/protocol.
    v. Regularly maintenance of equipment and replacement of critical parts before they reach their expected end of life.
    vi. Securing fencing around plants to prevent illegal dumping (which can affect plant performance).

vii. Identification and management of potential contaminating inputs into the network (which can affect plant performance) E.g. meat processing plants, industrial areas etc. Potential to issue pre-discharge limits under trade waste bylaw.
viii. Identification of all performance monitoring/reporting/notification requirements under relevant environmental consents.
ix. Roster for out of hours response to complaints/plant failures

We understand wastewater risk management plans are already required in some regions – what approaches have worked well and where is there room for improvement?

140. ORC staff are not aware of wastewater risk management plans required across wastewater treatment plants in Otago but are not opposed to the. However, there may be some overlap with the current consented requirements to provide and follow a site-specific operations and management (O&M) manuals.

How should Wastewater Risk Management Plans interact with the proposed consenting pathways for overflows and bypasses?

141. ORC considers that the development and implementation of Wastewater Risk Management Plans can be best ensured by:

i. Setting minimum standards and requirements that must be met by Wastewater Risk Management Plans to ensure that these are adequate and effective; and
ii. Providing for a formal approval process for Wastewater Risk Management Plans by the relevant consent authority; and
iii. Making the implementation of Wastewater Risk Management Plans mandatory through the setting of consent conditions.

Do you support setting all wastewater network overflows as controlled activity?

142. ORC supports providing for wastewater network overflows as a consented activity (as opposed to prohibiting or permitting this activity). This is because the requirement to obtain a consent for authorising overflows and bypasses will require network operators to:

i. Consider the impacts of overflow events on the receiving environment and affected communities; and
ii. Work together with consent authorities, network users and affected communities to develop adequate strategies, plans and actions to reduce and better manage the impacts and frequency of overflow events.

143. ORC considers that the controlled activity status is not an appropriate activity status for this activity for the following reasons:

i. Consent authorities must always grant consent for a controlled activity. However, in our view consent authorities must be given the discretion to decline proposals for overflows/bypasses where these would pose an undue or unreasonable risk to the health of the receiving environment and/or community and where reasonably practicable alternatives for the proposed discharge exist. For example, the consent authority should be able to decline applications for the discharge of untreated or partially wastewater to a water body that supports

significant mana whenua or community values if there are better alternatives in the form of other nearby water bodies that are less valued by mana whenua or the community.

ii. The consent authority can impose conditions on the consent, but only for those matters over which control is reserved. ORC considers that overflows can have wide-ranging and significant impacts on communities and the natural environment, and that the effective management of overflows can be complex and influenced by unique local conditions. There is a risk that the matters of control stated in any rule framework may not be sufficiently broad enough to allow for the management of all relevant matters.

144. In addition, ORC recommends that the consenting framework in the proposed standards should only allow for the granting of consents that authorise overflows or the operation of bypasses due to "emergency events" that cause the plant to exceed its capacity (which may include extreme wet weather events). There should not be a consenting pathway that authorises overflows caused by poor on-site management or a failure to address inflow and infiltration (I&I) into the network under normal circumstances. (see also paragraph 148 below)

What matters of control should remain with consenting authorities to reduce the impact and frequency of overflows and bypasses?

145. ORC considers that the following matters should remain within the control of consenting authorities:

i. Volume limits on overflows.
ii. Controls on capacity of bypasses.
iii. Procedures for monitoring and reporting an overflow event.
iv. Requirements on consent holders to undertake effective engagement with end-users to prevent overflows. (e.g. educational campaigns).
v. Requirements on inflow and infiltration management (e.g. development and implementation of a bypass/overflow management plan).

146. ORC supports the inclusion of the above matters within the framework of the national standards for wastewater but considers that these standards should only be mandatory for councils that do not already have a framework in place for managing overflows and bypasses.

Are there examples of existing approaches to managing overflows that would work well as matters of control?

147. Across all public wastewater networks in Otago, there is currently only one consent that authorises the discharge of wastewater due to overflows. This consent provides for the discharge of untreated wastewater via a bypass associated with the Milton wastewater treatment plant. The consent provides for the screening of wastewater flows and only authorises the discharge of untreated wastewater during wet weather events that cause the plant to exceed its capacity. As the operational capacity of the wastewater treatment plant, is confirmed, it is possible to determine whether an overflow event is authorised by this consent.

What other factors need to be considered when making overflows and bypasses a controlled activity? What matters would be helpful to address through guidance?

148. As stated previously in paragraphs 142 and 143, ORC supports a consenting framework for overflows and bypasses but considers that the controlled activity status is not an appropriate activity status for this activity as consent authorities must be given the discretion to decline proposals for overflows and/or bypasses. Factors that need to be considered in decision-making on proposals for overflows and bypasses include the following:

i. **Authorisation of overflows due to "emergency events"**
Overflows or bypasses at a plant should not occur due to poor on-site management, delayed investment or failure to address inflow and infiltration (I&I) into the network under normal circumstances. Therefore, ORC recommends that overflows and bypasses should only be provided for if they occur due to "emergency events" that cause the plant to exceed its capacity." This limitation should be reflected in the conditions of the consent to enable regulatory authorities to take compliance action if the condition is not complied with. The standards should include a definition of the term "emergency events".

ii. **Capacity**
The plant's operational capacity must be established and clearly referred to in the bypass/overflow consent, so the circumstances can be established when a bypass event is warranted. (See "definition of an emergency event" above). ORC does not support the use of bypass consents to allow for poor asset management or decision-making on land use. Therefore, the capacity of the plant should be considered before any further development is considered and connected to that WW network and its effects of the likelihood of the duration and frequency of overflow events.

iii. **Inflow and Infiltration (I&I) Management**
To reduce the likelihood overflows, all sites connected to the network should manage their own contributions to the network and should be held accountable for failing to do this. A bypass/overflow management plan that identifies and addresses the sources of I&I into the network will assist with reducing the likelihood of overflows. ORC recommends that further guidance is provided on how to identify I&I sources and implement measures that mitigate or reduce the risk of these sources causing or contributing to overflow events

iv. **Monitoring & Reporting**
The standards should require implementation of a robust system for monitoring and reporting overflows and bypasses. The monitoring system should ensure that a warning system is put in place for these events and that overflows are measured using at least an electromagnetic flow meter (not a V-notch weir, etc.) calibrated to be within +/- 5% accuracy, with recalibration required every 5-7 years. Additionally, a comprehensive reporting system should be implemented that includes sampling, information provision for downstream water users/takers, and notification of relevant authorities, regulators and other parties (e.g. the local pollution hotline).

v. **Screening**

The granting of a consent to provide for overflows should be predicated upon meeting a requirement that wastewater flows are screened before arriving at the bypass point. This will reduce the amount of solid waste that enters the receiving environment and therefore assist with reducing the impacts of overflow events.

vi. **Signage**
Clear and effective signage must be placed in prominent locations so it can be easily seen by water users and the general public. The signage should contain essential information that clearly states that this is an overflow location of untreated or partially human wastewater. Good signage will also assist emergency responders and encourage the public to report any observations.

What transition arrangements should apply for scenarios where Regional Councils already have consenting pathways for overflows?

149. ORC supports the setting of a default rule framework for managing overflows and bypasses in the national environmental performance standards for wastewater that applies in circumstances where regional plans do not have a rule framework in place to manage such activities. However, ORC considers that:

i. where regional council already have plans in place that manage these activities the rule framework for managing overflows and bypasses in the national environmental performance standards for wastewater should not override the regional plan provisions; and
ii. regional councils should be provided with the discretion to develop a regional framework for managing overflows and bypasses that replaces the national standards.

150. Applying the default rule framework for managing overflows and bypasses in the national standards described above removes the need to provide for transitional arrangements to implement this aspect of the national standards for wastewater.

What matters should be covered in guidance material to support monitoring and reporting requirements?

151. The following matters should be covered in guidance material to support monitoring and reporting requirements:

i. **Monitoring**
The guidance should ensure the development implementation and use of robust monitoring systems for overflows and bypasses. For example, these should be alarmed and measured using at least an electromagnetic flow meter (not a V-notch weir, etc.) calibrated to within +/- 5% accuracy, with recalibration required at least every 5-7years.

ii. Reporting:
The guidance should ensure the development implementation and use of robust reporting systems for overflows and bypasses and should cover the following matters:

- Sampling;

- Information provision and reporting to downstream water users/takers; and
- Information provision and reporting to relevant local authorities, regulators and the local pollution hotline.

iii. **Cleaning programmes:**
The guidance should include information on pump station and/or network "pinch point" monitoring and encourage the proactive removal of blockages before an overflow occurs.

Do you support establishing a framework that determines how overflows are managed based on risk?

152. In principle, ORC supports a framework that determines how overflows are managed based on risk. A risk-based approach will allow network operators to allocate limited resources in an efficient manner by focussing on minimising the risk of overflows in areas where these events pose the greatest risk to public health and the environment. However, ORC also considers that there are receiving environments where the risk of overflows should be avoided, rather than minimised or managed. Examples of this are iconic or pristine water bodies, areas close to a human drinking water intake or water bodies that provide habitat for endangered species. Eliminating the risk of controlled or uncontrolled overflows in these receiving environments can be better achieved by elevating the proposed activity status from controlled activity to a restricted discretionary or discretionary activity.

Arrangements for wastewater treatment plants operating on section 124, Resource Management Act 1991

How long should wastewater treatment plants be able to operate under section 124 of the RMA once wastewater standards have been set?

153. ORC supports limiting the maximum duration that a wastewater treatment plant can operate for under RMA section 124. Amending legislation to restrict this period to a maximum of two years (with this arrangement not commencing until 5 years after the standards are set) appears reasonable. However, ORC further considers that the standards should provide clarity around the following matters:

i. The actions that must be taken or the process that must be followed if after the conclusion of this 2-year period a replacement consent has not been issued. Cessation of the right to continue to operate under an expired consent if a replacement consent has not been granted within a two-year period would require the discharge to cease. This is likely to have significant practical and health implications for operators, affected communities and regulators. Therefore, it may be sensible to provide pathways for seeking extensions to the two-year timeframe, particularly where delays in issuing the consent are likely to occur due to factors outside of the control of the network operator or the consent authority.
ii. Confirm that the two-year time limit to the right to continue to operate under an expired consent commences on the date the application was lodged.