

Submission on proposed plan change 8 (Discharge management) to the Otago Regional Plan: Water for Otago

Name of submitter:

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Trade competition statement:

1. DairyNZ could not gain an advantage in trade competition through this submission.

Proposal this submission relates to is:

2. This is a submission on proposed Plan Change 8 (PC8) to the operative Otago regional plan: Water for Otago
3. DairyNZ wishes to be heard in support of this submission.

Submission

4. This submission is structured as follows:
 - 4.1. Introduction and background to DairyNZ, including an overview of DairyNZ's commitment to working with dairy farmers to identify Good farming principles and to support the implementation of these practices on-farm to minimise impacts on the environment;
 - 4.2. DairyNZ's overall position and comments on PC8 (discharge management);
 - 4.3. The specific relief sought by DairyNZ, contained within Table 1.

Introduction

5. DairyNZ welcomes the opportunity to submit on the Proposed Plan Change 8 to the operative Regional Plan: Water for Otago. We acknowledge the time constraints for the development of the proposed plan changes and that they are interim changes meant to address certain water quality issues while the new Land and Water Plan for Otago is developed. We also acknowledge ORC's work with stakeholders when developing the proposed plan change.
6. DairyNZ is the industry good organisation representing New Zealand's dairy farmers. Funded by a levy on milk-solids and through government investment, our vision is for New Zealand dairy

farming to have the world's most competitive and responsible dairy farming. DairyNZ's work includes research and development to create practical on-farm tools, leading on-farm adoption of farming within limits, promoting careers in dairying, and advocating for farmers with central and local government.

7. The Dairy Tomorrow Strategy: The Future of New Zealand Dairying makes a firm commitment to the communities that dairy farmers are part of, and to the environment that communities value. DairyNZ supports the development of a resource management framework that achieves the sustainable management of natural and physical resources in an efficient and equitable way, whilst enabling social, cultural and economic wellbeing of people and communities.
8. This submission has been developed on behalf of dairy farmers and incorporates the views of dairy farmers as far as possible.

Overall position and comments

9. DairyNZ is supportive of all dairy farmers following the national agreed Good Farming Practice Principles (GFP)¹ and that any regional rules should be aligned with the Principles to create an incentive for farmers to improve management practices in line with GFP². The new proposed rules for effluent storage and application, and intensive grazing and stock exclusion is an important effort to align the Otago rules with what is currently in place for neighbouring regions and with GFP.
10. The section 32 Evaluation Report points out the lack of information for Otago regarding the effect of rural land uses on water quality (point 3.4.3.6, s32 Evaluation report). To increase knowledge around this will be an important step which needs to be taken to create effects-based rules in the new Land and Water plan. As it is now, the proposed rules can only be assumed to be effective since the extent of the environmental problem the rules are supposed to solve, is largely unknown.
11. We agree with the conclusion from the ORC that there is a gap in the existing plan when it comes to managing discharges from some farming practices. The recently released national regulations under Action for Healthy Waterways³ will now have to be adopted by regional councils. For that reason, DairyNZ recommends that ORC aligns the proposed rules for intensive grazing and stock exclusion as much as possible with the central government regulations, and consult with key stakeholders about the practicalities and timeframes for implementation. Key points which aligns this plan change with the new national regulations are set out under the subheadings *Stock exclusion* and *Intensive grazing* and in table 1.

Stock exclusion

12. The proposed plan change does not set out by which means dairy cattle should be excluded from rivers, lakes, and wetlands. For example, fencing requirements are not mentioned therefore setback could be by any means. Aligning this with the national regulations would clarify what is required by farmers. DairyNZ supports not having to move permanent fences that have already been erected. Dairy farmers have already made important voluntary investments to exclude cattle from significant (>1m) waterways under the Sustainable Dairying: Water

¹ <https://www.mfe.govt.nz/fresh-water/we-all-have-role-play/land>

² It is preferred to use GFP rather than GMP (good management practice).

³ *Resource Management (stock Exclusion) Regulations 2020* and *Resource Management (National Environmental Standards for Freshwater) Regulations 2020*.

Accord⁴, and the rules should not penalise early adopters by requiring fences to be moved for negligible environmental improvement. This would also align with the acknowledgement of this specific point in the regulations established under the Action for Healthy Waterways.

13. Once FW-FPs are introduced, consideration of risks to all waterways can determine whether existing permanent fences may be required to move over time.

Intensive grazing

14. The proposed rule for intensive grazing requires at least a 10 metre vegetated buffer strip between the intensively grazed area and any water body. There are two main problems with the condition as it is proposed: the definition of water body and the 10 metres vegetated strip.
15. The use of the term 'water body' in this context is not appropriate. It is defined in the operative plan as; "water body is fresh water or geothermal water in a river, lake, stream, pond, wetland, or **aquifer** that is not located within the coastal marine area".
16. To include aquifers in the requirement for vegetated buffer strips would mean that intensive grazing cannot be undertaken at all where there is a groundwater aquifer underlying the paddocks. This would make the policy unimplementable and impractical. We recommend deleting the term "water body" and replacing it with the same language as for the NES for freshwater, that is; "rivers, lakes, wetlands and drains".
17. This amendment would however, mean that a buffer strip should be left between the intensive grazing area and 'drains'. This too would be impractical to implement. As a consequence of this, we recommend the requirements for a 10 metre buffer strip be amended to align with the 5 metre requirements in the NES for freshwater (subpart 3, clause 26, para 4(d))⁵. We do not consider that this would have a detrimental effect on water quality improvements, as research has demonstrated that a 5 metre buffer strip combined with excluding stock from grazing of critical source areas when planted with forage crops, will provide adequate protection of water ways and avoid contaminant loss. A 10 metre set back would have significant implications for loss of grazing land with marginal environmental gain.
18. Scientific review of buffer widths has demonstrated varied effectiveness for removing sediment over a wide range of set-back widths. Evidence⁶ suggests that most sediment attenuation from overland runoff will be within the first 5 metres of a grass filter strip and this assumes that overland runoff is uniform across a slope. In reality, most runoff will not be uniform across a slope and will converge in run-off channels as swales and critical source areas. Therefore, more effort should be put into managing these landscape features as opposed to having wider buffers throughout a paddock. DairyNZ therefore seeks a 5 metre buffer from rivers, lakes, wetlands and drains as this will more appropriately balance the management of environmental effects with

⁴<https://www.dairynz.co.nz/environment/environment-policy-and-leadership/sustainable-dairying-water-accord/>

⁵ Resource Management (National Environmental Standards for Freshwater) Regulations 2020: <http://www.legislation.govt.nz/regulation/public/2020/0174/latest/LMS364099.html>

⁶<http://agis.ucdavis.edu/publications/2010/A%20Review%20of%20Vegetated%20Buffers%20and%20a%20Meta-analysis%20of%20Their%20Mitigation%20Efficacy%20in%20Reducing%20Nonpoint%20Source%20Pollution.pdf>

the practical and economic implications of buffer requirements, and be consistent with the new NES for Freshwater.

Effluent storage

19. We understand that the proposed plan change is an interim change and that the whole plan will be redone and notified in 2023 by ORC. In the meantime, we would like to point out the importance for ORC to provide guidance on the rules and how to interpret them.
20. Concerns from dairy farmers have been raised around the consenting process and how ORC will manage the increased number of applications. The staged application timeframes might not be enough to avoid delays when processing applications. DairyNZ therefore seeks clear guidance from ORC on what is needed in a consent application, especially on required timeframes for physical work and the requirements for the management plan for the animal waste system.
21. The requirements for having a management plan for the animal waste system is set out in rules 14.7.1.1 and 14.7.2.1 and is also used as matter of discretion for the consent authority when assessing a discharge consent to apply effluent under rule 12.C.2.5. This rule requires the quality of the management plan to be assessed. There are problems with using an ambiguous word like 'quality' and it leaves little certainty for the applicant on what to include in the management plan to reach the quality level anticipated by ORC. DairyNZ recommends a method is included in the plan that requires ORC to develop a template together with relevant primary industry representatives. The existing industry template could be used as a base for that work⁷.

Discharge of effluent

22. Policy 7.D.7(d) states that any new discharge to land will be required to use low rate effluent application, and any existing discharges will be "encouraged" to transition to low rate. The low rate application will be implemented through the discharge rule 12.C.2.5. However, there is no guidance on the low depths and rates of effluent required for the consent to be granted and low rate effluent application is not defined in the glossary.
23. Calculations in the Dairy Effluent Storage Calculator (DESC) have recently been updated to meet the requirements of the soil risk framework⁸ and better reflect industry guidelines when irrigating on low risk soils.
24. Low rate applications can be a way of decreasing runoff when irrigating farm dairy effluent (FDE) on certain soil types and under certain conditions but might not be necessary on low risk soils. According to the soil risk framework, on low risk soils the recommended maximum depths that should be irrigated with a high rate tool, is the same as for a low rate tool. The FDE soil risk framework states that using a high rate tool, up to 25 mm can be applied when suitable soil water deficits occur, whereas a 10 mm application depth is appropriate when the soil is at field capacity. These are the same recommended depths as for the low rate tool.
25. Low rate FDE irrigation comes with its own challenges and in general, is more expensive to implement than traditional irrigation methods, and with potentially no environmental gain for low risk soils

⁷ <https://www.dairynz.co.nz/publications/environment/effluent-management-plan-poster/>

⁸ <https://www.dairynz.co.nz/publications/environment/pocket-guide-to-determine-soil-risk-for-fde-application/>

26. If FDE irrigation was undertaken in accordance with the soil risk framework, no low rate condition would be required. Since the DESC already incorporates the soil risk framework, we recommend it being used in a rule framework as guidance for the application depths and rates.

Thank you once again for the opportunity to provide feedback on Plan Change 8 to the Otago regional plan: Water for Otago. We would welcome further discussion on our submission. Contact details for this submission are:

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Yours sincerely,

A handwritten signature in black ink, appearing to read 'Jenny Cameron', with a large, stylized initial 'J'.

Jenny Cameron

General Manager, Responsible Dairy

DairyNZ Ltd

Table 1. Specific relief sought by DairyNZ. The structure of the table follows the structure of the notified plan change. Amendments proposed to the text of PC 8 are shown with deletions struck out and additions underlined.

Page number	Provision	Support or Oppose	Decision Sought	Reason for submission
	General comment regarding the term 'storage pond'.	Oppose	Clarify that solids storage areas are not considered to be a storage pond. <i>Alternative relief,</i> Amend the proposed rules for discharge and storage and replace 'storage pond' with 'effluent pond'.	It is unclear if a solids storage area would fall within the definition of a storage pond. From a practical point of view solids storage areas cannot have the same requirements as separated/unseparated liquid effluent storage ponds. The term storage pond is not used in the IPENZ Practice notes. To change to effluent pond would align with industry standards and make the terminology clearer.
12	Policy 7.D.7(a)	Support in part	(a) Requiring animal waste systems to be designed, constructed and located appropriately and in accordance with best practice <u>good- practice industry standards;</u>	To change the wording would align better with using the IPENZ Practice notes as referred to in the corresponding rule 14.7.2.1(c).
13	Policy 7.D.7(d)	Support in part	(d) Requiring low-rate effluent application <u>based on the soil risk framework</u> for any new discharge of animal waste to land and encouraging the transition to low-rate <u>using the soil risk framework for</u> effluent application for existing discharges of animal waste to land.	Low-rate effluent application is not defined in the glossary and it is uncertain what this will mean in terms of practical implications for farmers. It has challenges and will not be appropriate in all circumstances. Using the soil risk framework as a guide will better align application practice with the use of the Dairy Effluent Storage Calculator.
13	Policy 7.D.8(a)	Support in part	Provide for the upgrading of existing animal waste systems that do not meet the standards of Rule 14.7.1.1 by:	The policy outlines that all storage ponds should eventually meet the permitted activity conditions in rule 14.7.1.1. Limited cases might exist where the storage might not be able to comply completely with

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			(a) Granting resource consents only where consent applications contain a timebound action plan for upgrading the existing animal waste system so that it meets the standards of Rule 14.7.1.1 <u>or equivalent outcomes</u> as soon as possible;	the conditions but can show minimal effects on the environment and meet the desired outcome. The policy should provide for those cases.
17	12.C.1.4 (c)	Oppose	The discharge does not occur within 50 <u>20</u> metres of the boundary of the property on which the animal waste is generated, or beyond that boundary.	<p>We assume this requirement is meant to minimise effects (for example risk of effluent being spread outside of its intended area) on neighbouring properties. The buffer width is set regardless of land use on the neighbouring property. Some other councils allow spreading of FDE up to private (not public) property boundaries providing it maintains a buffer from residences. If the property on the other side is farm land, and not a residence, a smaller buffer would be appropriate to reach the intended outcome of the condition. We propose changing this to 20 m to align with the approach from other regional councils, for example Environment Southland.</p> <p>We also propose to delete the requirement to not spread beyond the property boundary since this would prohibit the transfer of effluent between properties which sometimes occurs.</p>
18	Discharge rule 12.C.2.5(i)	Support in part	(i) The application depth and rate <u>based on the soil risk framework</u> ;	The low rate application, as outlined in policy 7.D.7(d) will be implemented through the discharge rule 12.C.2.5. The lack of guidance in terms of how

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				<p>low depths and rates of effluent will be required for the consent to be granted, leaves uncertainty for the applicant. Low rate (and subsequent low depth) application is also not necessary on low-risk soils in order to minimize runoff.</p> <p>We propose inserting a reference to the soil risk framework as guidance.</p>
18	Discharge rule 12.C.2.5(vi)	Oppose	<p>(vi) Quality of, and compliance with, a management plan for the animal waste system <u>including the information in provided template;</u></p> <p>Insert as a <u>Method other than Rules</u> <u>The Otago Regional Council will develop a template and guidance for the content of an animal effluent management plan in consultation with relevant primary industry groups or adopt existing industry plans such as the DairyNZ template.</u></p>	<p>The term 'quality' can be ambiguous. We propose to include a new method which states that ORC should work with the industry to develop/adopt an appropriate guide which could be based on the existing DairyNZ management plan.</p> <p>The DairyNZ template: https://www.dairynz.co.nz/media/5787433/effluent-management-plan-poster.pdf</p> <p>We also propose deleting the wording 'and compliance with' since this can only be fulfilled for replacement consents, and not for new discharge permits since the plan encourages applications for effluent storage consents and effluent discharge consents at the same time.</p>
20	Rule 14.7.1.1 I(i)	Oppose in part	(i) Pond drop tests of the storage pond(s) every three years <u>except for ponds with an effective leak detection system;</u> and	If the pond meets condition (b) (i) by being synthetically lined and having a leak detection system, it should not need to have a pond drop test completed every three years. We propose to insert an exception for ponds with an effective leak detection system in place.

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				We support the drop test requirement for ponds not lined with a synthetic liner or without a leak detection system.
21	Rule 14.7.2.1(b)(iii)	Support in part	(b) The storage pond is either: (i) Fully lined with an impermeable synthetic liner and has an effective leak detection system that underlies the storage pond; or (ii) Of concrete construction; or (iii) Is an above-ground tank; or and (c) The design of the animal waste system has been certified as being in accordance with IPENZ Practice Note 211 and IPENZ Practice Note 27	Replace the word 'and' with 'or' to allow new a storage pond to be constructed with a clay liner, as provided for by the IPENZ Practice Notes. We also would like to point out an error in the reference in condition (c), which should refer to IPENZ Practice Note 21, not 211.
21	Rule 14.7.2.1 (d)(iii)	Oppose	(iii) Within 50 metres of any bore or soak hole;	The way the definition of the animal waste system is written it will include effluent collected at the dairy shed, including yards, sand traps and sumps. The distance requirements set out in this condition might mean that these types of collections will be prohibited since the farm bore on many properties is located closer to the dairy shed than 50 metres. We propose to delete this condition since the potential adverse effects could be assessed on a case by case basis under one of the matters (f) the council have restricted its control to.

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22	Rule 14.7.2.1(ii)	Oppose in part	(ii) Pond drop tests of the storage pond(s) every three years <u>except for ponds with an effective leak detection system</u> ; and	<p>If the pond meets condition (b) (i) by being synthetically lined and having a leak detection system, it should not need to have a drop test completed every three years. We propose to insert an exception for ponds with an effective leak detection system in place.</p> <p>We support the drop test requirement for ponds not lined with a synthetic liner or without a leak detections system.</p>
22	Rule 14.7.2.1(e)	Oppose	<p>In granting any resource consent under this rule, the Otago Regional Council will restrict the exercise of its control to the following:</p> <p>(e) Quality of, and implementation of, a management plan for the animal waste system including the information in provided template which requires pond drop tests of the system's storage pond(s) every three years;</p> <p>Insert as a <u>Method other than Rules</u> <u>The Otago Regional Council will develop a template and guidance for the content of an animal effluent management plan in consultation with relevant primary industry groups or adopt existing industry plans such as the DairyNZ template.</u></p>	<p>As pointed out previously, there is a need for greater clarity around what is required for the management plan. We propose to include a new method which states that ORC should work with the industry to develop/adopt an appropriate guide which could be based on the existing DairyNZ management plan.</p> <p>The DairyNZ template: https://www.dairynz.co.nz/media/5787433/effluent-management-plan-poster.pdf</p> <p>We also propose to delete the requirements around a pond drop test, since this is already stated as a condition in the rule. This is also an example of information that should be covered by a guidance document or template.</p>

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25	Schedule 18. Requirements	Support in part	An anemometer is installed for the duration of the test and wind speed <u>should not exceed an hourly average of 10 metres per second</u> is at 10 metres per second or less for at least 24 hours during the test.	10m/sec is a wind speed of 36km/hour. The Beaufort Scale lists 36km/hour at the top end of “fresh”. It will be quite easy to have a gust within the 24 hour period exceeding 36km/hour therefore failing the testing requirements.
25	Schedule 18. Criteria	Support in part	Clarify basis for setting criteria for passing a pond drop test.	DairyNZ supports the clear outline of which criteria should be met to be able to pass a pond drop test. However, it is unclear what the criteria for passing a pond drop test is based on or which reference have been used to develop the criteria. We would like this to be clarified to create more certainty around the values used. The criteria should be based on industry standards as far as possible.
26	Schedule 19A	Oppose	Replace the current way of calculating daily waste volume with the following: <u>Daily waste volume m³ = Maximum cow numbers x 70l/cow</u> Or <u>Daily waste volume (m³) = Maximum cow numbers x water use per milking x number of milking per day</u>	The calculation is a way of deciding when a farmer will need to apply for a resource consent for storage or discharge. To increase the understanding for the calculations some changes should be done. The generally accepted water use is 70l/cow/day or 35 l/milking , and not the 50l/cow used in the calculation. To make the calculation more accurate, it should be changed.
29	Chapter 21. Glossary. Definition of Suitably Qualified Person	Retain	Retain the wording of the definition as it is.	We support the definition of “suitably qualified person”. We would also like the council to supply a list with name and contact information for suitably qualified persons as soon as possible. This will be important to

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				facilitate the certification of the effluent storage ponds.
33	Policy 7.D.9(a)	Support in part	Enable farming activities while reducing their adverse environmental effects by: (a) Promoting the implementation of good management practices <u>Good farming principles</u> (or better) to reduce sediment and contaminant loss to water bodies;	DairyNZ supports the inclusion of Good management practice but proposes to use the term Good Farming Principles instead. They were developed through a partnership between primary sector organisations, regional councils and Government. The principles were updated from the 2015 Industry-Agreed Good Management Practices Relating to Water Quality.
34	Policy 7.D.9(d)	Support in part	(d) Managing the risk of sediment run off <u>and contaminant losses</u> from farming activities by: (i) Implementing setbacks from water bodies and establishing riparian margins, and (ii) Limiting areas and duration of exposed soil;	The farming practices mentioned in (i) and (ii) could also have a positive impact on reducing nutrient losses and other contaminants to water ways. To add the underlined text in the policy would make this relationship clearer.
34	Policy 7.D.9(d)(i)	Oppose in part	(i) Implementing setbacks from water bodies <u>any river, lake or wetland</u> and establishing riparian margins, and	The term water body is not appropriate to use here. Replace with any river, lake or wetland to better align with the corresponding rule and national regulations.
41	Rule 14.6.1.1(b)	Support	Retain as is.	Critical source areas can potentially be a significant source of nutrient losses and we support not grazing cattle on forage crops in these areas during winter.
41	Rule 14.6.1.1(c)	Support in part	(c) Stock are progressively grazed (break-fed or block-fed) from the top of a slope to the bottom of a slope <u>or a 20 metre</u>	Under some conditions winter grazing on a slope (from top to bottom) as a mandatory condition could be problematic and compromise broader animal welfare objectives. To add an alternative, without

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			<u>'last-bite' strip is left at the base of the slope;</u>	increasing environmental risk, we propose to add an option of leaving a 20 metre strip at the base of the slope.
41	Rule 14.6.1.1 (d)	Oppose	<p>(d) A vegetated strip of at least 10 metres is maintained between the intensively grazed area and any water body, and all stock are excluded from this strip during intensive grazing.</p> <p>Replace with: <u>livestock must be kept at least 5 m away from the bed of any river, lake, wetland, or drain (regardless of whether there is any water in it at the time).</u></p>	<p>We propose deleting this condition entirely and replacing with the corresponding condition in the Resource Management (NES for Freshwater) Regulations 2020 (regulation 26(4)(d)).</p> <p>Reasons: There are two main problems with the condition as it is proposed: the definition of water body and the 10 metres vegetated strip. See also explanation under the heading <i>Intensive grazing</i>.</p>
47	Rule 13.5.1.8A(b)	Support in part	<p>Add a condition (iii):</p> <p><u>Existing permanent fences at the date of plan notification do not need to be moved until the replacement date.</u></p> <p>Add a definition of permanent fence:</p> <p><u>In this rule, permanent fence means—</u></p> <p><u>(a) a post and batten fence with driven or dug fence posts; or</u></p> <p><u>(b) an electric fence with at least 2 electrified wires and driven or dug fence posts; or</u></p> <p><u>(c) a deer fence.</u></p>	<p>Add a condition incorporating the national stock exclusion regulation part 1, concerning fencing to clarify how existing fences should be handled under the new rule. This could be included as a whole or with words to the same effect as proposed.</p> <p>Further, add a definition of permanent fences incorporating the national stock exclusion regulation part 1.</p>

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50	Chapter 21, glossary. Definition of Dairy cattle	Oppose	<p>Replace the definition of dairy cattle with the definition in the Resource Management (Stock Exclusion) Regulations 2020 and add a definition for dairy support cattle.</p> <p><u>dairy cattle</u>— <u>(a) means cattle that are farmed for producing milk; and</u> <u>(b) includes—</u> <u>(i) any bull on the farm whose purpose is mating with those cattle;</u> <u>and</u> <u>(ii) unweaned calves of those cattle; but</u> <u>(c) does not include dairy support cattle</u></p> <p><u>dairy support cattle</u> means cattle that— <u>(a) are farmed for producing milk but are not being milked (for example, because they are heifers or have been dried off); and</u> <u>(b) are grazed on land that is not grazed by dairy cattle</u></p>	<p>The definition of dairy cattle could mean that dairy cattle not on a dairy platform but for example on another property for fattening, would also be required to be excluded from rivers and wetlands under this rule. The way dairy cattle is defined in the Resource Management (Stock Exclusion) Regulations 2020 means that if they are not for the purpose of producing milk, they will fall under the definition for beef cattle and the same requirements for stock exclusion will apply.</p> <p>According to the Resource Management (Stock Exclusion) Regulations 2020, ‘beef cattle means cattle that are reared for producing meat’, which could also include cows of dairy breed if they are not for the purpose of producing milk.</p>