

Proposed Plan Change 7 to the Canterbury Land and Water Regional Plan

Responses to Questions of Hearing Commissioners on Council Reply Report

24 February 2021

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Questions relating to the Section 42A Reply Report:

Reply Report Paragraph	Question	Response
2.7	Does this apply to submission points for protection of waipuna beyond the boundaries of the OTOP subregion?	<p><i>Response - WW</i></p> <p>No, the rationale set out in paragraph 27 of the Reply Report is not intended to apply to submission points seeking the protection of waipuna beyond the boundaries of the OTOP subregion.</p> <p>These submission points would be considered out of scope.</p>
2.27	Is a definition for both mana whenua and tangata whenua provided in the CWLRP and if not and if both terms are used in the plan, would it be useful for readers if definitions were included?	<p><i>Response – MMC/WW</i></p> <p>‘Mana whenua’ and ‘tangata whenua’ are not defined in Section 2.9 of the CLWRP, or in PC7.</p> <p>However, the meaning of the term ‘mana whenua’ is explained under Section 1.3.1 of the CLWRP (Key Partnerships). As the term is not used in any provisions in the CLWRP or PC7, and is already described in the Plan, Officers consider that its omission from the definitions does not affect the implementation, or understanding, of the provisions for users.</p> <p>‘Tangata whenua’ appears in several provisions in the CLWRP and PC7. Officers consider that it may be useful for readers to have the term clearly defined in the Plan. However, Officers note there is limited scope in submissions to do so.</p>

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		<p>‘Tangata whenua’ is defined in the RMA and CRPS. Some definitions from the RMA are reproduced in Section 2.9 of the CLWRP for information purposes, however plan users can always refer to these higher documents in cases where RMA definitions have not been included.</p> <p>CRC could seek to include a definition for tangata whenua as part of a future plan change to the CLWRP to make this information more accessible for plan users.</p>
<p>2.34 2.58-2.69 2.73</p>	<p>As the Regional Council has to ‘give effect to’ the content of the three priorities of Te Mana o te Wai in the NPSFM 2020, and has also to ‘have particular regard to’ the vision and principles of the CWMS, primary principle 2 of which states first and second order priorities, do the officers advise that those different sets of priorities are consistent and compatible? If not, which set of priorities is to prevail?</p>	<p><i>Response - WW</i></p> <p>Primary principle 2 of the CWMS relates to the regional approach, and provides that the planning of natural water use is guided by the following:</p> <p><i>First order priority considerations: the environment, customary uses, community supplies and stock water</i> <i>Second order priority considerations: irrigation, renewable electricity generation, recreation, tourism and amenity</i></p> <p>By contrast, the hierarchy of obligations within Te Mana o te Wai requires the Council to first prioritise the health and well being of water bodies and freshwater ecosystems (before the second and third priorities relating to the health needs of people (such as drinking water) and the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future, respectively).</p> <p>Primary principle 2 of the CWMS and the hierarchy of obligations in Te Mana o te Wai may not necessarily be consistent and compatible in all circumstances (for example, if the full allocation of a water resource is required for the health and well being of a water body and freshwater ecosystem, it may not be possible to provide for customary uses, community supplies and stock water at the same time).</p> <p>Ultimately, the requirement to ‘give effect to’ a document is a far stronger direction than the requirement to ‘have particular regard to’ a document. Accordingly, in circumstances where principle 2 of the CWMS and the hierarchy of obligations in Te Mana o te Wai are not consistent and compatible, the requirement to ‘give effect to’ the NPSFM 2020 will prevail.</p>
<p>2.72</p>	<p>“optional collaborative planning process...”</p> <p>Is this a reference to the process formerly authorised by an</p>	<p><i>Response - WW</i></p> <p>Yes, the phrase “optional collaborative process” was referring to the process formerly authorised by an earlier version of section 80A of the RMA. Officers acknowledge that the collaborative planning process has subsequently been</p>

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	<p>earlier version of section 80A of the RMA? If so, what is the effect on the officers' advice by that version of section 80A having been replaced by section 22 of the RMAA 2020 with effect from 1/07/2020?</p>	<p>removed from the RMA, with the replacement of section 80A by section 22 of the RMAA 2020 with effect from 1 July 2020.</p> <p>However, the fact that the collaborative planning process has been removed from the RMA does not affect the officers' advice, namely that the Council's decision not to utilise an optional collaborative planning process previously provided for under Schedule 1 of the RMA does not affect the legitimacy of the ZC process (which was not an "optional collaborative process" formerly authorised by an earlier version of section 80A of the RMA) or the weight to be given to the ZIPA.</p>
2.77	<p>Does CRC have a function to ensure "adequate water supply" (which would appear to refer to water supply infrastructure such as wells, reservoirs and pipes) or does it have a function to sustainably manage water resources in rivers and aquifers?</p>	<p><i>Response – WW</i></p> <p>Under the RMA, regional councils have primary responsibility for maintaining and enhancing the quality and quantity of water in their regions (s 30 RMA). Their functions include controlling:</p> <ul style="list-style-type: none"> • The use of land for the purpose of maintaining and enhancing the quality and quantity of water in water bodies (s 30(c) RMA) • The taking, use, damming, diversion, quantity, level, and flow of water in any water body (s 30(e) RMA) • The discharge of contaminants into or onto land, air, or water and discharges of water into water (s 30(f) RMA) • The introduction or planting of any plant in, on or under a bed of a water body to maintain and enhance the quality and quantity of water in that water body (s 30(g) RMA) • The allocation of natural resources, including water (s 30(fa) RMA) <p>Territorial authorities are responsible for the provision of local water supply infrastructure (noting the ability of territorial authorities to require development contributions for, relevantly, network infrastructure (meaning the provisions of roads and other transport, water, wastewater, and stormwater collection and management) under section 199 of the Local Government Act 2002 (LGA)).</p> <p>Further, a district council must also, from time to time, assess the provision of water services (defined in section 124 of the LGA as "means water supply and wastewater services" and water supply "means the provision of drinking water to communities by network reticulation to the point of supply of each dwellinghouse and commercial premise to which drinking water is supplied") in its district for the purpose of assessing,</p>

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		<p>from a public health perspective, the adequacy of water services including the extent to which the services meet the applicable regulatory standards (see sections 125-126 of the LGA).</p>
2.110	<p>Is the word 'not' in this sentence an error?</p>	<p><i>Response - WW</i></p> <p>Yes. The sentence should read, "Rayonier New Zealand Limited and Port Blakely Limited accept that the Council does have jurisdiction to propose rules that are more stringent than the NESPF in PC7."</p>
4.12	<p>In the last sentence of this paragraph, the officers observe that fully giving effect to Te Mana o te Wai will require a further and comprehensive plan review. Would that review need to be preceded by a review of the CRPS?</p>	<p><i>Response – MMC</i></p> <p>Changes to the Regional Policy Statement (CRPS) are anticipated through the NPSFM 2020 in (at a minimum) clauses 3.2, 3.3 and 3.5. Those steps do not necessarily entail a "review" of the CRPS under section 79 of the RMA.</p> <p>That said, the matters addressed by clauses 3.3, 3.4 and 3.5 of the NPSFM 2020 set an overall direction and therefore would logically precede, or at least be contemporaneous with, any plan change to give full effect to the NPSFM 2020.</p>
6.15	<p>Do the officers advise that inserting '5.68' in Rule 14.5.25 would be authorised by Sched 1 cl 16(2)? If so, what is the reasoning supporting that advice?</p>	<p><i>Response - WW</i></p> <p>Clause 16(2) of Schedule 1 to the RMA provides that a local authority may make an amendment, without using the Schedule 1 process, to its proposed policy statement or plan to alter any information, where such an alteration is of minor effect, or may correct any minor errors.</p> <p>Given that the omission of the reference to Rule 5.68 is critical to the rule cascade for stock exclusion, and essentially makes Rule 14.5.25 moot, we consider that clause 16(2) of Schedule 1 could be relied on to insert the cross-reference to Rule 5.68 in Rule 14.5.25.</p> <p>The alteration is considered to be of minor effect, particularly as PC7 contains a note ahead of the Stock Exclusion from Waterbodies provisions, which provides, "Regional Rules 5.68, 5.69, 5.70, 5.71 (Stock Exclusion) apply in the Orari-Temuka-Opihi-Pareora sub-region" and "Rule 14.5.25 applies in addition to Regional Rules 5.68, 5.69, 5.70, 5.71". As such, it was already signalled in the notified version of PC7 that Rule 5.68 was intended to apply in addition to Rule 14.5.25. The omission of the reference to Rule 5.68 in Rule 14.5.25 is considered to be a minor error, capable of being corrected through the use of clause 16(2), Schedule 1.</p>

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8.15	This paragraph contains advice conditional on there being scope. Is there a plausible train of reasoning for concluding that the Council has scope to make those amendments?	<p><i>Response – WW</i></p> <p>No, the Officers do not consider that there is scope to make the amendments discussed in paragraph 8.15.</p>
9.17	<p>Have diffuse discharges of sediment into waterways from forestry activities been successfully monitored to date in Canterbury?</p> <p>Has any successful enforcement action ever been taken by CRC in reliance on such monitoring?</p>	<p><i>Response – AR</i></p> <p>Yes - to a limited degree. CRC staff visually assess for any diffuse discharges of sediment into waterways from forestry operations when monitoring for compliance with the NES-PF regulations for harvesting, earthworks, river crossings and forestry quarrying activities.</p> <p>To date, diffuse sediment discharge monitoring of TSS and visual clarity has not been undertaken by CRC staff unless the forestry operator holds a resource consent to discharge sediment-laden water. This could be attributed to funding constraints as CRC currently cannot charge resource users for monitoring permitted activity rules in the CLWRP.</p> <p>Successful monitoring of diffuse sediment discharges is reliant on a monitoring regime (sediment limits and monitoring points) that clearly determines the source of the sediment discharge. A recent example (late 2018) is a resource consent granted to discharge sediment to surface water associated with harvesting in the top reaches of a catchment. The consent conditions specify the use of a comparative catchment adjacent to the site with similar land use (pre-soil disturbance) and aspect to obtain an ‘upstream’ visual clarity standard (needed to monitor percentage changes in visual clarity).</p> <p>No – to my knowledge, there has been no successful enforcement action taken by CRC in reliance on water quality monitoring of diffuse sediment discharges from forestry operations.</p>
14.33	Can the officers please explain how not amending the baseline period as sought by Hort NZ will give better effect to the NPSFM 2020?	<p><i>Response – MMC</i></p> <p>Officers consider that the Hort NZ request could lead to retrospective legalisation of increased losses from some existing operators and new entrants. The Officer’s approach enables increases from new entrants to be managed through a resource consent process. This level of management of any increased losses is considered to be better aligned with the</p>

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		NPSFM 2020, particularly Policies 5 and 13, that essentially require the improvement of water quality where it is degraded or there are deteriorating trends, or maintenance of water quality where it is not degraded.
14.45	<p>If we were to consider the NCheck system as an alternative approach:</p> <ul style="list-style-type: none"> • Is there scope to include provisions in the Plan to enable it? • If there is scope can the officers please provide suitable wording for some enabling provisions? 	<p><i>Response – MMC</i></p> <p>Officers consider the submissions on this topic are somewhat non-specific, in that the submitters tend to suggest what they don't want, rather than request specific changes to the Plan. The most relevant submission points that could give scope to make this change are:</p> <ul style="list-style-type: none"> • PC7-185.7 Balle Bros Group - Amend Plan Change 7 so that Overseer modelling is not required for commercial vegetable growing operations. • PC7-206.6 Turley Farms Ltd - Amend Plan Change 7 to apply a more scientific method for tallying nutrient losses. <p>Officers note that the definition of "Baseline GMP Loss Rate" is: Means the average nitrogen loss rate below the root zone, as estimated by the Farm Portal, for the farming activity carried out during the nitrogen baseline period, if operated at Good Management Practice.</p> <p>NCheck is accessed via the Farm Portal, but its usage has been limited to certain circumstances, primarily based on the formal approvals for NCheck. Officers consider NCheck could be approved for use for this purpose within the Farm Portal, without requiring specific changes to Plan provisions. Further, Officers do not recommend specifically referencing NCheck in the Plan rules or definitions, as it currently has specific and time-defined usage approval.</p>
15.15	Is the possible inclusion of controls in a future plan change (which may or may not happen) a sound basis for decision-making on submissions?	<p><i>Response – WW</i></p> <p>The possible inclusion of controls in a future plan change is not a sound basis for decision-making on submissions, in the absence of methods that regulate the activity.</p>
22.6	Do you think that consistent wording will be helpful – (i.e.) cumecs per second to litres per second?	<p><i>Response – MMC</i></p> <p>Yes, consistent terminology would be more helpful. The use of m³/s (or cumecs) throughout this section of the report reflects the terminology used, and relief sought, in Dr Drinan's Evidence in Chief on behalf of DOC.</p> <p>In the context of paragraph 22.6, 1.4 m³/s can also be read as 1400 L/s.</p>

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23.2	<p>If, as you say in aggregate, the amount of water abstracted is sobering, will the 2 suggested options be a significant improvement to what is left in the river and which option will provide the most significant improvement?</p>	<p><i>Response – MMC</i></p> <p>None of the options are considered to be a ‘significant improvement’ in the amount of water left in the river. The options that are considered to be better for the river are those that are recommended in the final officer recommendations version of PC7 and are:</p> <p>For the AA, AN blocks and community supplies for the Opihi and its tributaries (and including the BA block for the tributaries) we recommend Option (a), being the PC7 notified amounts. This will result, over time, in some additional water being left in the river.</p> <p>For the BA and BN blocks for the Opihi and its tributaries (just the BN block for the tributaries) we recommend Option (d), which reduces the block sizes to amounts already granted in resource consents. This will prevent more water being taken from the river.</p>
23.6	<p>In the third sentence the officers state their acceptance that community water supplies are likely to be a second-order priority in the NPSFM framework.</p> <p>In that the supply is for domestic use, that may be so.</p> <p>In that the supply is for commercial and industrial uses, should it be classified as a third priority?</p>	<p><i>Response – MMC</i></p> <p>Yes, commercial and industrial uses are a third-order priority under Objective 1 of the NPSFM 2020. However, in practice, officers understand that many community supplies are unable to separately manage commercial and industrial uses within a supply system, particularly in urban areas. Requirements to supply fire-fighting water in urban areas (which are normally part of the same system) further complicates this.</p>
23.20	<p>How likely is it that a permit from a river would be transferred to the Lake given that to access Lake water one would presumably need to own land adjacent to the Lake?</p>	<p><i>Response – DC/MMC</i></p> <p>Officers consider that takes directly from Lake Opuha may be sought by a wider group of applicants than just adjacent landowners. For example, it is possible that water could be delivered to other parts of the Opuha Water Limited scheme via a pipeline. This is confirmed in paragraph 8.32 of Ms Crossman’s Evidence in Chief for Opuha Water Limited, where she describes opportunities for future infrastructure developments which could provide water to tributary abstractors sourced directly from Lake Opuha.</p>

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24.21	What is the basis for the 1400 L/s figure?	<p><i>Response – DC/MMC</i></p> <p>1400 L/s is the existing allocation limit for the Orari River in Table 15 of the CLWRP. This limit applies 3 years from when the Plan was made operative, and was set based on the modelling described in Appendix 3 of the Section 42A Report – Volume 3 (For Hearing Group 3) for the pCLWRP (April 2013).</p> <p>This memorandum is titled “<i>LWRP S42a Report Group 3 Appendix 3 Orari Hydrology Memo</i>”, and can be accessed on the Environment Canterbury website.</p>
27.6-27.7	Would the viewpoints of Genesis and Nga Runanga for more direct exclusion of bringing water from the Upper Waitaki Catchment be supported by para 3.31 of the NPSFM 2020?	<p><i>Response – MMC/WW</i></p> <p>Clause 3.31 of the NPSFM 2020 recognises five large hydro-electricity generation schemes, including the Waitaki Scheme.</p> <p>Clause 3.31(2) requires that, when implementing any part of the NPSFM as it applies to an FMU or part of an FMU affected by a Scheme, regional councils must have regard to the importance of the Scheme’s:</p> <ul style="list-style-type: none"> <i>(a) contribution to meeting New Zealand’s greenhouse gas emission targets; and</i> <i>(b) contribution to maintaining the security of New Zealand’s electricity supply; and</i> <i>(c) generation capacity, storage, and operational flexibility.</i> <p>Clause 3.31 also allows regional councils to set target attribute states below national bottom lines in limited circumstances prescribed in this clause¹.</p> <p>Officers consider that clause 3.31 of the NPSFM 2020 is intended to recognise the importance of the Waitaki Scheme in the Waitaki FMUs. However, Officers do not consider that the OTOP FMU is “affected” by the Waitaki schemes. Therefore, inserting plan provisions in the OTOP FMU (i.e. an ‘avoid’ policy and prohibited activity rule as requested by Genesis) to manage potential effects within the Waitaki FMUs is not what officers consider clause 3.31(2) applies to.</p> <p>As discussed in the Section 42A and Reply Reports, any proposal to introduce water into the OTOP sub-region from the Upper Waitaki catchment would require a plan change. Officers consider it is more appropriate for any such proposals and associated changes to environmental flow and allocation</p>

¹ Clauses 3.31(3) and (4) of the NPSFM 2020.

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		limits to be assessed against the provisions of the NPSFM 2020 at this time.
30.26	If the Panel was to amend Rule 14.5.9 as shown, how many existing permit holders would be affected by it?	<p><i>Response – DC/MMC</i></p> <p>According to Memo 7 in the appendix of the “<i>Hydrology technical report to support the Orari-Temuka-Opihi-Pareora limit-setting process</i>” (Clark, 2019), there are 22 consents in the Opihi catchment and 20 in the Temuka catchment who could be affected by the rule.</p> <p>There are also consent holders in both catchments who do not have minimum flows on their existing consents but will likely require them when their consent is renewed, regardless of whether Rule 14.5.9 is amended. When consents are renewed, they will likely be required to complete a physical stream depletion test which may influence their degree of connection under either the 30 day, 150 day, or amended rule.</p>
30.26	Is the Officer saying that if by agreeing to this bespoke rule, it will set a precedent and open a door for other similar situations to have their own bespoke rule and even though the bespoke rule will not reduce over allocation?	<p><i>Response – MMC</i></p> <p>Yes, that is a likely outcome. However, officers are more concerned that by including bespoke rules that enable renewals on the same or similar terms and conditions will delay progress toward giving effect to Te Mana o te Wai. Officers acknowledge that PC7 does impose significant impacts on some consent holders who have been operating without minimum flows or without a partial restriction regime in their existing resource consents.</p>
30.28	Is your recommendation to omit an improvement to the Plan here (you say Mr Willis’ amendments do capture the correct application of the provisions) consistent with your recommendation to include an improvement at paragraph 30.19?	<p><i>Response – TS.</i></p> <p>The Officers’ recommendation at paragraph 30.19 of the Section 42A Report was in response to evidence from Mr Willis, who raised concerns with moderate stream depleting groundwater takes being subject to minimum flow restrictions. Officers agreed with Mr Willis that this was inconsistent with the approach set out in Schedule 9 of the CLWRP, and recommended that his requested relief be adopted to improve the provisions and ensure consistency within the wider Plan.</p> <p>In terms of the recommendation at paragraph 30.28, Officers considered that Rules 14.5.9 to 14.5.11 were already adequately clear for plan users to determine the situations in which certain conditions are applicable, and to navigate to the relevant activity status. While acknowledging that the relief advanced by Mr Willis does correctly set out when the relevant rules would apply, Officers are of the opinion that the</p>

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		<p>notified provisions are already sufficiently clear without the need for any additional wording. Thus, no further changes were recommended.</p> <p>However, should the Hearing Panel share the same concerns as Mr Willis regarding the clarity of these provisions, Officers consider that the wording for the redrafted rules provided by Mr Willis is appropriate².</p> <p>If the Hearing Panel does amend Rules 14.5.10 and 14.5.11 to provide for Mr Willis' proposed amendments, Officers recommend that the equivalent rules within the Waimakariri sub-region (Rules 8.5.10 and 8.5.11) also be amended for consistency.</p>
31.26	<p>If the Panel agrees with the recommended amendments to Policy 14.4.20A should Policy 8.4.27 be similarly amended as a consequence?</p>	<p><i>Response - LM/AF</i></p> <p>Yes – the policies are intended to achieve the same outcome, and therefore should have similar amendments.</p> <p>In relation to clause (b), Officers note that the intent of Policy 8.4.27 was to provide an extension of timeframes only in exceptional circumstances³, based on the understanding that some farmers within the proposed Nitrate Priority Area had already implemented some farming practices during the baseline period that are considered to be more effective than GMP for reducing nitrogen losses. The nitrogen loss mitigations implemented during the baseline period affects the starting point for nitrogen loss reductions. As such, Officers consider that 8.4.27(b) should retain reference to the baseline period.</p> <p>Officers also consider that the reference to the baseline period should also be retained in 14.4.20A for the reason given above, and to maintain consistency between Sections 8 and 14.</p> <p>The Officers' revised recommendation is as follows:</p> <p><u>8.4.27</u> <u>Where an application for a land use consent for a farming activity demonstrates the nitrogen loss rate reductions required by Policy 8.4.26(c) are unable to be achieved by the dates specified in Table 8-9, only consider granting an-any application for an extension of time to achieve those reductions where will be considered having regard to:</u></p>

² As set out in Mr Willis' Evidence in Chief (at page 12), and supplementary document "Response to Commissioner van Voorthuysen's query regarding Rule 14.4.10", on behalf of Fonterra.

³ Rec 3.9 of the Waimakariri ZIPA

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		<p>a. the Baseline GMP Loss Rate and the level of any an enduring nitrogen loss rate reduction <u>below the Baseline GMP Loss Rate</u> has already been achieved; and</p> <p>b. the nature and extent of any mitigations implemented during the nitrogen baseline period, <u>mitigations that are more effective better than Good Management Practice, and the extent to which these have been effective in at</u> minimising nitrogen losses have been implemented; and</p> <p>c. <u>an extension is necessary to maintain a farming activity's financial viability by spreading the capital and operational costs of achieving the nitrogen loss rate reductions and the benefit (in terms of maintaining a farming activity's financial viability) of spreading that investment over time;</u> and</p> <p>d. <u>the nature, sequencing, measurability, effectiveness and enforceability of any steps proposed to achieve the nitrogen loss rate reductions;</u> and</p> <p>e. <u>progress made towards achieving nitrate nitrogen limits and targets in Tables 8-5, 8-6, 8-7 and 8-8.</u></p> <p><u>14.4.20A Where an application for a land use consent for a farming activity demonstrates the nitrogen loss rate reductions required by Policy 14.4.20(c) are unable to be achieved by the dates specified in Table 14(zc), only consider granting an any application for an extension of time to achieve those reductions where will be considered having regard to:</u></p> <p>a. the Baseline GMP Loss Rate and the level of any an enduring nitrogen loss rate reduction <u>below the Baseline GMP Loss Rate</u> has already been achieved; and</p> <p>b. the nature and extent of any mitigations implemented during the nitrogen baseline period, <u>mitigations that are more effective better than Good Management Practice, and the extent to which these have been effective in at</u> minimising nitrogen losses have been implemented; and</p> <p>c. <u>an extension is necessary to maintain a farming activity's financial viability by spreading the capital and operational costs of achieving the nitrogen loss rate reductions and the benefit (in terms of maintaining a farming activity's financial viability) of spreading that investment over time.; and</u></p>

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		<p>d. — the nature, sequencing, measurability, effectiveness and enforceability of any steps proposed to achieve the nitrogen loss rate reductions; and</p> <p>e. — progress made towards achieving nitrate nitrogen limits and targets in Tables 14(a) to 14(g).</p>
31.29	Can the officers please provide wording for amendments to Policy 14.4.28 and Table 14(zc) to enable the Panel to better consider this option?	<p><i>Response – LM</i></p> <p>Officers apologise for an error in paragraph 31.29 of the Reply Report and note that the reference to Policy 14.4.28 should refer to Policy 14.4.18.</p> <p>The requested amendments have been provided below. These consist of:</p> <ul style="list-style-type: none"> • Amendments to clauses (a) and (c) of Policy 14.4.18 • Inserting a new policy (Policy 14.4.19A) • Inserting a new Schedule (Schedule 33) <p>The amendment to Policy 14.4.18(a) provides a direct link to the exception and is consistent with 14.4.18(b).</p> <p>A consequential amendment to Policy 14.4.18(c) is appropriate to clarify that the exception is only to the nitrogen loss reductions in Table 14(zc) and not the policy direction on consent durations in areas where nitrogen loss reductions are required.</p> <p>The exception is provided as a new policy (Policy 14.4.19A). Officers did not consider it appropriate to include the exception in Policy 14.4.18 because it is inconsistent with the intent of that policy to improve water quality. Inserting a new policy is also consistent with the other nutrient management exemption provisions (Policies 14.4.20 and 14.4.20A).</p> <p>A new schedule (Schedule 33) would be included in PC7 listing the Legal Description (Lot/DP number) of properties which are intended to be subject to this exception. RSIL’s evidence to date has not provided a list of the properties. If this schedule is to be added, Officers consider it would be more appropriate if this information is provided by the submitter.</p> <p>For clarity, Officers would also like to restate the recommendation in the Reply Report (paragraph 31.34) that the relief requested by RSIL on this matter (including the alternative relief provided below) is rejected, as Officers consider it is inconsistent with policy direction in the NPSFM 2020, the CRPS and the CLWRP.</p>

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		<p><u>14.4.18</u> Water quality is improved in the Orari, Opihi and Timaru Freshwater Management Units by:</p> <ul style="list-style-type: none"> a. requiring further reductions of nitrogen losses in defining the Rangitata Orton High Nitrogen Concentration Area, Fairlie Basin High Nitrogen Concentration Area and Levels Plain High Nitrogen Concentration Area within which targeted reductions of nitrogen in accordance with Table 14(zc) are required except where Policy 14.4.19A applies; and b. avoiding the grant of any resource consent that will result in the nitrogen loss calculation from a farming activity exceeding the Baseline GMP Loss Rate, except where Policy 14.4.20 applies; and c. limiting the duration of any resource consent for a farming activity in the Rangitata Orton High Nitrogen Concentration Area, Fairlie Basin High Nitrogen Concentration Area or Levels Plains High Nitrogen Concentration Area to no more than ten years. <p><u>14.4.19A</u> In the Rangitata Orton High Nitrogen Concentration Area only consider granting an application for a land use consent for a farming activity which does not require further reductions in nitrogen losses in accordance with Table 14(zc) where;</p> <ul style="list-style-type: none"> a. the land use occurs on land listed in Schedule 33; and b. the nitrogen loss rate does not exceed the Baseline GMP Loss Rate. <p><u>Schedule 33 Legal Descriptions of land for Policy 14.4.19A(a)</u> <u>Lot xxxxx DP xxxxxx</u> <u>Lot xxxxx DP xxxxxx</u> <u>Lot xxxxx DP xxxxxx</u> ... </p>
33.5	You say that the provisions in Section 8 do not prevent a consent applicant applying for a water permit with a different minimum flow site should that	<p><i>Response - AF</i></p> <p>There are no proposed provisions within Section 8 of the LWRP that enable that to occur or direct a decision maker to favourably consider such an application. However, regionwide Policy 4.62 provides the necessary direction to decision makers on resource consent applications on this matter.</p>

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	<p>be preferred by the consent applicant. Are there any Plan provisions that enable that to occur or that direct a decision-maker to favourably consider such an application?</p>	<p>Policy 4.62 states: <i>To prevent the flow falling below a minimum flow for the catchment, due to abstraction, partial restriction regimes for surface water will be implemented. Regimes will be designed to:</i></p> <ul style="list-style-type: none"> <i>(a) have a single flow monitoring point for the whole catchment that all abstractors are referenced to, with additional flow monitoring points that some or all abstractors are subject to, should the hydrology of the surface waterbody justify it;</i> <i>(b) provide for groups of water permit holders in the same sub-catchment to share water when takes are operating under partial restrictions; and</i> <i>(c) except if otherwise specified in an applicable sub-region section, implement a stepped or pro rata restriction regime that applies equally to all taking within an allocation limit and does not induce the flow to fall below the minimum flow due to abstraction.</i>
33.19	How does a river become substantially over allocated?	<p><i>Response – AF and MM</i></p> <p>The specific reasons for a river becoming over allocated are difficult to determine on a river by river basis. In general, rivers become over allocated for the following reasons:</p> <ul style="list-style-type: none"> • Recalculation of stream depletion contribution. • In some rivers the <u>average</u> rate of take was used to estimate allocation limits; based on sum of allocated amount at a particular time. The currently accepted methodology for this calculation is to use the sum of <u>maximum</u> rates. • WRRP and NRRP water takes above allocation limit were ‘non-complying’, rather than ‘prohibited’, hence a consenting pathway was available for limits to be exceeded. • Plans that preceded the WRRP/LWRP did not contain allocation limits, leading to consents being granted without regard to the total allocation.
33.19	Realistically what impact will this have on the riverine ecosystem, given the Cust River is	<p><i>Response – AF</i></p> <p>The proposed provisions in Section 8 includes methods to reduce over-allocation⁴. It is anticipated that these methods will assist with phasing out some over-allocation during the</p>

⁴ For any waterbody that is over-allocated, region-wide Policy 4.50 applies. In addition to this direction, the proposed provisions in Section 8 sets out additional methods to phase out over-allocation, including the direction set out in the following proposed policies:

- 8.4.15 (substitution of existing surface water takes with deep groundwater);
- 8.4.18 (restrictions on water permit transfers); and
- 8.4.24 (efficient use of water)

Reply Report Paragraph	Question	Response
	substantially over allocated and this situation will not improve until a re-evaluation of the flow and allocation regime against the NPSFM 2020 criteria, is undertaken?	<p>nominal 10-year life of the plan. While Officers are unable to determine the extent of over-allocation recovered during this period, it is anticipated that any phasing out of over-allocation will have a positive impact on the freshwater ecosystem.</p> <p>Officers agree that a re-evaluation of the flow and allocation regime against the NPSFM 2020 criteria will likely result in further improvements being required.</p>
33.20	How many B block abstractors take water from the Cust River?	<p><i>Response – AF</i></p> <p>The Waimakariri Resource Consent Inventory (Vattala, D. 2019), states that there are two existing water permits that make up the B allocation for the Cust River. These relate to two separate abstractors. Details of these permits are set out in Table 4 of the Reply Report (at page 133).</p>
34.4	<p>How much of the 700 L/s A allocation for the Cam River/Ruataniwha is currently allocated?</p> <p>Does providing a combined A Block and mahinga kai allocation limit that is 69% higher than the recommended ecological allocation give effect to NPSFM 2020 Objective 2.1(1)(a)?</p> <p>Is a take for mahinga kai enhancement a NPSFM 2020 Objective 2.1(1)(c) matter?</p> <p>Is the reduction in reliability for existing A block consent holders a NPSFM 2020 Objective 2.1(1)(c) matter?</p>	<p><i>Response – AF/MM</i></p> <p>At page 394 of the Section 32 Report, the current allocation from the A block of the Cam River/Ruataniwha is identified as 350 L/s out of the existing limit of 700 L/s in the WRRP. This estimate is the most accurate and up to date information available.</p> <p>The estimate of current allocation in the Section 32 Report took into account the changes to allocation that occurred since the 2019 Resource Consents Inventory (which had data from Nov 2017) and adjusted to reflect the LWRP methodology for determining stream depletion effects.</p> <p>Objective 2.1 of the NPSFM 2020 reads:</p> <p><i>(1) The objective of this National Policy Statement is to ensure that natural and physical resources are managed in a way that prioritises:</i></p> <p><i>(a) first, the health and well-being of water bodies and freshwater ecosystems</i></p> <p><i>(b) second, the health needs of people (such as drinking water)</i></p> <p><i>(c) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.</i></p> <p>As discussed in paragraph 34.3 of the Reply Report, the ecological allocation recommendation for the Cam River/Ruataniwha is 311 L/s. Therefore, allowing abstraction</p>

Reply Report Paragraph	Question	Response
		<p>above this ecological allocation is unlikely to give effect to Objective 2.1(1)(a) of the NPSFM 2020.</p> <p>In terms of where certain activities fall under the hierarchy of obligations set out in Objective 2.1, this matter was raised during questioning of Ngā Rūnanga’s witnesses at the hearing on 30 September 2020. Mr Winchester, on behalf of Ngā Rūnanga, noted that it was not explicit and there was no caselaw.</p> <p>It is the Officers’ view that a take for mahinga kai enhancement is likely to be a matter covered by Objective 2.1(1)(c), as it primarily relates to “cultural well-being”. However, setting an environmental flow and allocation for a river that prioritises the health and well-being of water bodies and freshwater ecosystems could also be beneficial for mahinga kai enhancement. Officers also note that arguments have been raised by some vegetable growing submitters that fresh fruit and vegetable supply is a health need under Objective 2.1(1)(b). It is likely that a similar argument could be made for mahinga kai enhancement, depending on how it is used.</p> <p>Officers consider a reduction in reliability for existing A block consent holders would be a matter covered by Objective 2.1(1)(c) of the NPSFM 2020.</p>
38.5	Please clarify what the Freshwater Outcome for Tutaepatu Lagoon will be, with regard to planktonic cyanobacteria and total cyanobacteria?	<p><i>Response – AF/JA</i></p> <p>The Freshwater Outcome for Tutaepatu Lagoon is proposed to be retained as notified because there is no scope in submissions to change it. This equates to: ‘10 or 1.8 mm³/L of potentially toxic cyanobacteria’.</p> <p>It is measured as a maximum value, whereas the NPSFM Table 10 metric for Cyanobacteria (planktonic) is an 80th percentile. As a result, this places the Freshwater Outcome in the equivalent range of a B-Band to C-Band threshold as per NPSFM Table 10.</p>
38.13	It remains unclear how the DIN vs nitrate nitrogen conundrum will be resolved in practice given that the DIN limits will be exceeded well before the NN limits are reached (notwithstanding their	<p><i>Response – AF/JA</i></p> <p>From a technical perspective, the removal of nitrate nitrogen limits of 1.0 mg/L or less in Table 8-5 will still be consistent with the NPSFM 2020 as long as the DIN limits are retained. Nitrate is generally the majority component of DIN in Canterbury rivers (the other much smaller components being nitrite-N and ammoniacal-N). In this case, DIN limits fit within the A-Band nitrate toxicity thresholds as detailed in NPSFM Table 6 and effectively maintains water quality and the current</p>

Reply Report Paragraph	Question	Response
	<p>different median timescales). If the NN limits were removed wherever the DIN limit is less than 1 mg/L would the Plan still give effect to the NPSFM 2020?</p>	<p>level of aquatic species protection (i.e. >99% of species) from the effects of nitrate toxicity.</p> <p>Clause 3.10 of the NPSFM 2020 provides for the identification of attributes and their baseline states, or other criteria for assessing achievement of environmental outcomes. For each value that applies to an FMU or part of an FMU, the regional council must use all the relevant attributes identified in Appendix 2A and 2B for the compulsory values listed (except where specifically provided otherwise). Ecosystem health is a compulsory value (identified in Appendix 1A) and therefore applies to every FMU (see clause 3.9 of the NPSFM 2020). Nitrate (toxicity) is identified in Table 6 of Appendix 2A, with an attribute unit of nitrate nitrogen mg/L.</p> <p>Given the compulsory nature of the NPSFM 2020 in this regard, Officers consider it is necessary to retain limits in respect of nitrate nitrogen in order to give effect to the NPSFM 2020.</p>
38.23	<p>In terms of your phrase “appropriate to set limits for its management”, what documented management outcomes are you referring to in light of the evidence from Mr Webster on behalf of Templeton Pegasus Limited that the primary purpose of the Lake is for stormwater management?</p>	<p><i>Response – AF/JA</i></p> <p>The <i>Pegasus Lake and ECMA Management Plan (October 2016)</i> is cited as Appendix 3 as a component of Mr Webster’s evidence. This document provides context relevant to the management of the lake including a background on the lake use (Section 3.0), lake management objectives (Section 4.0), and resource consent conditions for the lake (Appendix B).</p> <p>The Management Plan highlights that the lake receives a component of groundwater inflow and surface water inflow from adjacent surface water catchments in addition to urban stormwater inflows. It also details the use of the lake for second contact recreation (e.g. kayaking and sailing) and events involving primary contact recreation (e.g. triathlons). The Management Objectives provide a performance benchmark for the lake relating to ‘recreational water contact’.</p> <p>This document may be revised regularly, but it is unknown whether a more recent version is available to that presented by Mr Webster (dated October 2016). Since this document was published, the consents for the lake have been transferred from Todd Property Pegasus Town Ltd (CRC135321 - CRC135323) to Templeton Pegasus Ltd (CRC210131, CRC210113 & CRC210133). The conditions of the new consents replicate the conditions of the expired consents. The conditions require that the water quality of the lake is suitable for the activity and uses for which the lake and its water are proposed in the Lake Management Plan to be used for, and is</p>

Reply Report Paragraph	Question	Response
		generally suitable for secondary contact recreation (condition 8 of the above-mentioned resource consents).
38.28	Is it known what the anticipated time frame is for WHO to provide direction on the MAV (and the corresponding DWSNZ) for nitrate nitrogen concentrations in drinking water?	<p><i>Response – AF</i></p> <p>There is no information available on the likely timeframes for WHO to provide direction on the MAV for nitrate nitrogen concentrations in drinking water.</p>
38.30	It may be accepted that there was very little Canterbury specific evidence presented at the hearing about stygofauna and microbial ecosystems in groundwater and spring-fed streams, given this information gap, will council investigate, gather and collate more information about these microbial ecosystems in preparation for the full review of the CLWRP to give effect to the NPSFM 2020?	<p><i>Response – AF</i></p> <p>Officers understand that Environment Canterbury staff are currently working with ESR to develop research to investigate groundwater ecosystems.</p>
39.40 39.53	Given the recommended amendments to Table 8-9 in Appendix A whereby the five sub-areas would have identical N loss reductions (arguably rendering the reasons in paragraph 39.40 for retaining the sub-areas somewhat moot), and in light of the evidence from submitters expressing	<p><i>Response – AF</i></p> <p>Officers recommend retaining the NPA sub-areas in Section 8 on the basis that there is a need to ensure even distribution of reductions in nitrogen losses across the NPA to ensure progress is made towards improving water quality for all receptors.</p> <p>At paragraph 8.130 on page 401 of the s42A report, Officers state:</p> <p><i>Removing the sub-areas from PC7 and allowing the management of nitrogen losses on an aggregated basis (either by an irrigation scheme or a Farming Enterprise) could result in greater reductions occurring in a concentrated part of the NPA,</i></p>

Reply Report Paragraph	Question	Response
	<p>concerns about the sub-areas creating division in the farming community, can the officers please further explain the rationale for retaining the sub-areas in Table 8-9?</p>	<p><i>and lesser reductions occurring in other areas, meaning that the necessary progress is not made towards achieving all the water quality targets and limits.</i></p> <p>This rationale still applies, despite the sub-areas having identical nitrogen loss reductions. It is the Officers understanding that the concerns about the sub-areas creating division in the farming community were primarily related to the extent of the reductions required for the different sub-areas. Officers suggest that there may be less division amongst the community if the reductions are equal for the five sub-areas.</p>
39.84	<p>Can the officers please provide wording for the Plan provisions that would amend the “floor” so that it does work as intended?</p>	<p><i>Response – AF</i></p> <p>As described at paragraph 39.83 of the Reply Report, a key issue with the “floor” is that the relationship between the reductions per stage and the time it takes to reach a 20kg N/ha/year floor is not linear. The suggested amendments below are based on the Officer’s recommendations to remove the nitrogen loss reductions beyond 2040 from Table 8-9, and that the reductions should be 20% by 2030 (first stage) and another 10% by 2040 (second stage) for dairy farming land uses. Officers can provide an amended solution to reflect the provisions as notified, should the Panel not agree with the Officer recommendations.</p> <p>The relationship between the nitrogen floor and the reduction in nitrogen loss is set out in Appendix A, and has been used to determine the amended floor (reflected in the provisions below).</p> <p><u>8.4.25 Nitrate-nitrogen limits for the Waimakariri Sub-region are achieved, and risks of degraded water quality in potential future impacts on the nitrate-nitrogen concentrations of waterbodies outside the Waimakariri Sub-region are managed by:</u></p> <p>a. further restricting, relative to the region-wide rules, the area of land used for a farming activity as a permitted activity, and the area of winter grazing that may occur as a permitted activity; and</p> <p>b. requiring, within the Nitrate Priority Area, further reductions in nitrogen loss from farming activities (including farming activities managed by an irrigation scheme or principal water supplier) in accordance with Table 8-9, provided that any further stage of reduction required is greater than the nitrogen floor in</p>

Reply Report Paragraph	Question	Response											
		<p>accordance with Table 8-9A 3 kg of nitrogen per hectare per year for dairy, or 1 kg of nitrogen per hectare per year for all other farming activities.²⁰⁷</p> <p>Table 8-9: Nitrate Priority Area Staged Reductions in Nitrogen Loss for Farming Activities, Farming Enterprises and Irrigation Schemes [recommended amendments to note 3]</p> <p><i>3 The percentage reductions required by Table 8-9 are only to be applied to farming activities that require resource consent for farming land use and where the required reduction for each stage is greater than the nitrate floor specified for the farming type in Table 8-9A 3 kg nitrogen per hectare for dairy, and 1 kg per hectare for all other farming activities</i></p> <p>Table 8-9A: Nitrate Floor</p> <table border="1" data-bbox="667 1014 1380 1328"> <thead> <tr> <th data-bbox="667 1014 858 1193" rowspan="2">Farming type</th> <th colspan="2" data-bbox="858 1014 1380 1193">Percentage reductions required by Table 8-9 are to be applied where the required reduction for each stage is greater than the following Nitrogen Loss</th> </tr> <tr> <th data-bbox="858 1193 1129 1238">By 1 January 2030</th> <th data-bbox="1129 1193 1380 1238">By 1 January 2040</th> </tr> </thead> <tbody> <tr> <td data-bbox="667 1238 858 1283">Dairy</td> <td data-bbox="858 1238 1129 1283">5 kg N/ha year</td> <td data-bbox="1129 1238 1380 1283">2.86 kg N/ha/year</td> </tr> <tr> <td data-bbox="667 1283 858 1328">All other</td> <td data-bbox="858 1283 1129 1328">1 kg N/ha/year</td> <td data-bbox="1129 1283 1380 1328">1.05 kg N/ha/year</td> </tr> </tbody> </table>	Farming type	Percentage reductions required by Table 8-9 are to be applied where the required reduction for each stage is greater than the following Nitrogen Loss		By 1 January 2030	By 1 January 2040	Dairy	5 kg N/ha year	2.86 kg N/ha/year	All other	1 kg N/ha/year	1.05 kg N/ha/year
Farming type	Percentage reductions required by Table 8-9 are to be applied where the required reduction for each stage is greater than the following Nitrogen Loss												
	By 1 January 2030	By 1 January 2040											
Dairy	5 kg N/ha year	2.86 kg N/ha/year											
All other	1 kg N/ha/year	1.05 kg N/ha/year											
39.102	To clarify, are the reasons for not including a new Cam River/Ruataniwha protection zone as recommended by Te Ngai Tuahuriri Runanga, because their planning evidence lacked specific technical analysis and particularly when comparing it with Te Aka Aka Coastal Protection Zone which mostly contains more stringent provisions?	<p><i>Response – AF</i></p> <p>The reasons given in the s42A for not including a new Cam River/Ruataniwha protection zone, as requested by Te Ngāi Tūāhuriri Rūnanga, were on the basis that the submission did not include specific proposed provisions and it was difficult to determine the viability of any new protection zone.</p> <p>The evidence presented by the submitter included some additional information, including that the provisions should be the same those which apply to the Te Aka Aka Coastal Protection Zone and identifying the area to which they should apply.</p> <p>The discussion at paragraph 39.102 of the Reply Report highlights that the evidence presented by the submitter did not include sufficient information to assess the requested amendments. Officers note that identifying a new management area with more stringent farming land use provisions at the hearing stage of the process raises concerns</p>											

Reply Report Paragraph	Question	Response
		about natural justice for landowners within that area and their ability to participate in the public hearing process for changes that may impact them.

Questions relating to Appendix A of the Section 42A Reply Report:

Provision	Question	Response
Rules 5.189B and 5.190A	The authors have recommended a 'controlled activity' status for planting new areas of plantation forestry within flow sensitive catchments. How appropriate is a controlled activity status given the potential adverse effects of plantation forestry (e.g. effects on flow) and given consent cannot be refused?	<p><i>Response – AR</i></p> <p>The 'controlled' activity status of Rules 5.189B and 5.190A is considered appropriate, within the scope of PC7.</p> <p>Rules 5.189B and 5.190A replicate and replace existing Rule 5.73, which has a controlled activity status that provides certainty that resource consent will be granted.</p> <p>The scope of this PC7 topic was to simplify the planning framework for plantation foresters while ensuring the more stringent CLWRP rules are retained (in accordance with Regulation 6 of the NESPF). The scope did not extend to reconsidering the effects of forestry on water yield (including a review of the conditions and activity status of existing Rules 5.72 to 5.74 and the mapping of flow sensitive catchments).</p>
Rules 5.190A and 5.190B	The rules regulating the planting of carbon sinks have a narrow application, only applying to carbon sinks grown within a flow sensitive catchment. Is it deliberate that carbon sinks outside of flow sensitive catchments are not subject to restriction (e.g. limits on discharge quality, limits on the area of forest grown?)	<p><i>Response – AR</i></p> <p>Yes, it is deliberate that PC7 does not propose bespoke rules for carbon sink forestry operations (being those specifically planted and managed for a carbon sink and not regulated by the NESPF). They will be subject to the same restrictions on activities as currently apply in the CLWRP (e.g. limits on the concentration of total suspended solids associated with vegetation clearance under Rule 5.167).</p>
Policies 8.4.15 and 8.4.16	Policy 8.4.15 enables surface water takes, or stream-depleting groundwater takes with a direct, high, or moderate stream depletion effect to be	<p><i>Response – AF</i></p> <p>Yes, Officers consider that such an amendment would be an improvement to Policy 8.4.16 (to recognise and provide for the types of applications envisioned under Policy 8.4.15). While there are no submissions seeking such changes to Policy 8.4.16, the changes could be made using Schedule 1, Clause 16</p>

Provision	Question	Response
	<p>'substituted' for a groundwater take with a low stream depletion effect. We understand this policy is intended to assist with phasing out of overallocation of surface water.</p> <p>However, Policy 8.4.16 directs all applications for water permits to be refused, except in the limited circumstances set out in clauses (a) and (b) of the policy. Given the enabling provisions of Policy 8.4.15, should clause (b) of Policy 8.4.16 be amended to recognise the type of applications described in 8.4.15?</p>	<p>as the amendments would remove unintended conflict between the two policies.</p> <p>The suggested amendments are shown in tracked changes below:</p> <p><u>8.4.16 Avoid the grant of any water permit for the take and use of surface water or stream depleting groundwater until the freshwater outcomes in Tables 8(a) and 8(b) are met for that surface waterbody, except where:</u></p> <p><u>a. the take will replace an existing lawfully established take affected by the provisions of section 124 - 124C of the RMA or meets the criteria set out in Policy 8.4.15; or</u></p> <p><u>b. the take and use is for a community water supply, enhancement of mahinga kai, environmental enhancement (including managed aquifer recharge or targeted stream augmentation), or the take is non-consumptive.</u></p>
Table 8-4	<p>Note 1 beneath Table 8-4 describes the circumstances under which access to the 'Transfer Permit Allocation' block is available.</p> <p>These circumstances appear to be different those described in Policy 8.4.15. Should they be the same, and if so what change should be made?</p>	<p><i>Response – AF</i></p> <p>Yes, Note 1 beneath Table 8-4 as currently worded is not consistent with the amendments to Policy 8.4.15 recommended by the Officers.</p> <p>To ensure consistency between these provisions, Officers suggest the following updated wording for Note 1 (<u>updates in blue</u>):</p> <p><u>1. The Transfer Permit Allocation is only available to holders of existing surface water or stream-depleting groundwater permits with a direct, high or moderate stream depletion effect in over-allocated surface water catchments who propose, by way of a consent application, to replace their existing take for a take from Deep G groundwater that has a low stream depletion effect.</u></p>
Rule 13.5.30A	<p>The chapeau in Rule 13.5.30A is different to the chapeau of Rule 13.5.30. Given 13.5.30A is a 'dropout rule' from 13.5.30, should the chapeau</p>	<p><i>Response – AR</i></p> <p>The chapeau of Rule 13.5.30A is the same as that of prohibited activity Rule 13.5.31, which is the existing 'dropout rule' for Rule 13.5.30. PC7 amends the rule and condition references in Rule 13.5.31.</p>

Provision	Question	Response
	<p>be the same? Does Rule 13.5.30A cover the same scenario described in 13.5.30 (i.e. the taking and use of groundwater with the Valetta and Mayfield-Hinds Groundwater Allocation Zones that will substitute an existing surface water permit or groundwater permit with a direct, high, or moderate stream depletion effect)?</p>	<p>I consider it is good planning practice for the chapeau of both 'dropout rules' (Rules 13.5.30A and 13.5.31) to be the same as Rule 13.5.30. If the chapeau of Rule 13.5.30A is amended, so too should Rule 13.5.31. However, there are no submissions that directly seek these amendments, and on this basis no change is recommended. If the Panel were of mind to make these amendments, scope could potentially be derived from the submission of Hort NZ (PC7-356, page 2) seeking general improvements in readability of PC7.</p>
<p>Policy 14.4.35(d)</p>	<p>Clause (d) of the policy uses the phrase 'of the following year'. Is this phrase referring to a year that follows the type of event described in clause (c)?</p>	<p><i>Response – MMC</i></p> <p>No. Clause (d) is about the need to release flushing flows over the summer period – nominally “1 November to 31 March of the following year”.</p>
<p>Policy 14.4.35(e)</p>	<p>Is it correct to refer to a minimum flow in terms of being 'available' or is it more appropriate to instead refer to when the minimum flow is in effect?</p> <p>For example:</p> <p><u>a two-tiered minimum flow regime is established for the Opihi River at Saleyards Bridge, with the lower-tier minimum flow in effect only available when:</u></p> <p>Should the second instance of 'are' in clause 1 of Policy 14.4.35(e) be replaced</p>	<p><i>Response – MMC</i></p> <p>In terms of the first question, yes, “in effect” is a more appropriate term.</p> <p>In terms of the second question, yes, those changes correct an error and improve the clarity of the policy.</p>

Provision	Question	Response
	<p>with 'at or'? Would it more appropriate to replace the term 'levels' with 'the thresholds' as follows?</p> <p><u>1. any two of the following are are at or below the thresholds levels specified in Table 14(x):</u></p>	
<p>Rule 14.5.29</p>	<p>Condition 1 of Rule 14.5.29 requires the discharge to comply with the environmental flow and allocation regime. However, given the proposed regime <u>compels</u> the Dam operator to release water would the condition be more appropriately worded as follows:</p> <p><u>The discharge Water discharged from the Opuha Dam complies with the environmental flow and allocation regime(s) set out in Tables 14(v) to 14(w);</u></p>	<p><i>Response – MMC</i></p> <p>Yes.</p> <p>Officers note that there is limited scope for this change in submissions on the rule. However, it is possible that scope for this amendment could be provided for as consequential relief to the redrafted Policy 14.4.35 (Forest & Bird PC7-472.178-181).</p>

Appendix A:

Proposed Plan Change 7 to the Canterbury Land and Water Regional Plan

Relationship between the proposed Waimakariri nitrogen “floor” and reductions in nitrogen losses

23 February 2021

Author: Amber Kreleger

Introduction

The evidence presented by Ms Ruston (on behalf of AsOne Inc) at the Hearing for Plan Change 7 to the Land and Water Regional Plan (LWRP) identified implementation issues with the proposed nitrogen floor included in Section 8 of the LWRP. In light of this evidence, and in response to questions from the Hearing Panel, Officers have provided amended provisions to the Hearing Panel which ensure that the nitrogen floor works as it is intended.

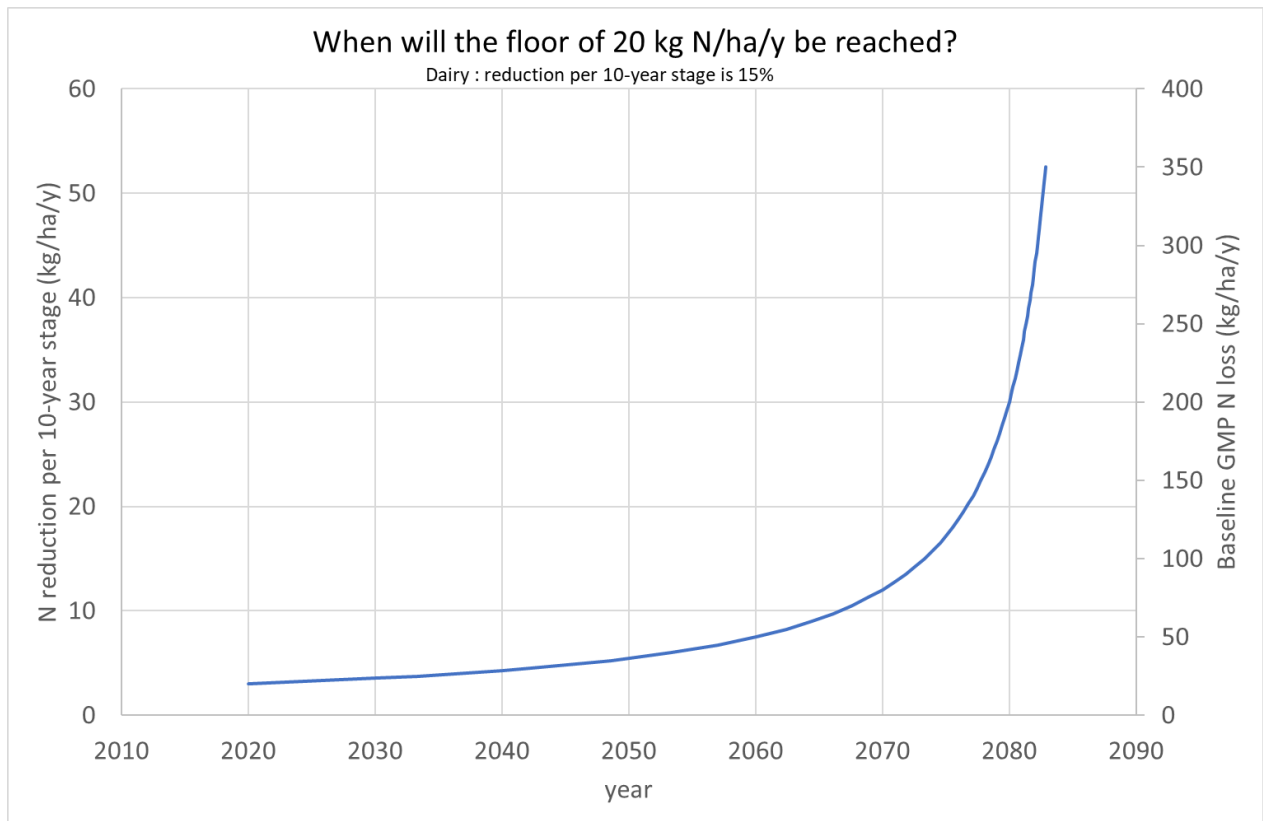
As described in the Reply Report, the relationship between the reductions per stage and the time it takes to reach a 20kg N/ha/year floor is not linear. This memorandum describes that relationship and identifies the reduction in nitrogen loss below which the percentage reductions are not required to meet a floor of 20kg N/ha/year.

Nitrogen floor vs N-loss relationship with a set 15% loss reduction for dairy per 10-year stage

How this works is explained as follows: each 10-year stage an N-loss reduction is achieved of 15% of Baseline GMP, until the total N-loss from the property is 20 kg/ha/year. This means that:

- A baseline GMP N-loss of 30 kg/ha/yr, will have a set reduction of 4.5 kg/ha/yr for each 10-year stage (15%) and it will take **2.2 stages** to reach the floor of 20 kg/ha/year $((30-20)/4.5=2.2)$
- A baseline GMP N-loss of 50 kg/ha/yr, will have a set reduction of 7.5 kg/ha/yr for each 10-year stage (15%) and it will take **4 stages** to reach the floor of 20 kg/ha/year $((50-20)/7.5=4)$
- A baseline GMP N-loss of 100 kg/ha/yr, will have a set reduction of 15 kg/ha/yr for each 10-year stage (15%) and it will take **5.3 stages** to reach the floor of 20 kg/ha/year $((100-20)/15=5.3)$.

The relationship between Baseline GMP/N-loss reduction and time when the N-loss floor is reached is not linear, see graph below.



This means that a farm will reach the floor at the given time in the chart when N-loss reductions are at or below the amount in the table below.

20 kg N/hay floor reached in year based on the reduction per 10-year stage:

	2030	2040	2050	2060	2070	2080
Dairy (15%)	3.53 kg/ha/y	4.29 kg/ha/y	5.45 kg/ha/y	7.50 kg/ha/y	12.0 kg/ha/y	30.0 kg/ha/y
Other (5%)	1 kg/ha/y	1.05 kg/ha/y	1.11 kg/ha/y	1.18 kg/ha/y	1.25 kg/ha/y	1.33 kg/ha/y

Nitrogen-floor with a 20% loss reduction for dairy in the first 10-year stage and a 10% loss reduction the second stage

The current Officer recommendation is to increase the N-loss reduction in the first stage with 20% instead of 15% and reduce the N-loss reduction in the second stage to 10% instead of 15%, which still means a combined reduction of 30% in two 10-year stages. This increases the nitrate-floor in the first stage from 3.53 kg/ha/y to 5.0 kg/ha/y and decreases the floor in the second stage from 4.29 kg/ha/y to 2.86 kg/ha/y.

20 kg N/hay floor reached in year based on the reduction per 10-year stage:

	2030	2040

Dairy	5.0 kg/ha/y (20%)	2.86 kg/ha/y (10%)
Other (5%)	1 kg/ha/y	1.05 kg/ha/y

How this works is as follows:

- A baseline GMP N-loss of 26 kg/ha/yr, will have a 20% reduction of 5.2 kg/ha/yr for the first stage, which is above the nitrate floor of 5.0 kg/ha/yr and requires another reduction stage. In the second stage, the 10% reduction will be 2.6 kg/ha/yr, which is below the nitrate floor of 2.86 kg/ha/yr and no more reductions after 2040 are to be expected.
- A baseline GMP N-loss of 24 kg/ha/yr, will have a 20% reduction of 4.8 kg/ha/yr for the first stage, which is below the nitrate floor of 5.0 kg/ha/yr and no more reductions after 2030 are to be expected.
- A baseline GMP N-loss of 30 kg/ha/yr, will have a 20% reduction of 6.0 kg/ha/yr for the first stage, which is above the nitrate floor of 5.0 kg/ha/yr and requires another reduction stage. In the second stage, the 10% reduction will be 3.0 kg/ha/yr, which is above the nitrate floor of 2.86 kg/ha/yr and further reductions after 2040 are potentially required.