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Subject: Submission on LWRP variation 3
Date: Sunday, 24 May 2015 7:48:50 p.m.
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[Otaio Water User Group Submission May 2015- Final Lodged.pdf](#)

Please find submission attached lodged on behalf of the Otaio Water User Group.



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FOR OFFICE USE ONLY

Submission on Proposed Variation 3 to the Proposed Canterbury Land and Water Regional Plan

Submitter ID:

File No:

Form 5: Submissions on a Publicly Notified Proposed Policy Statement or Regional Plan under Clause 6 of Schedule 1 of the Resource Management Act 1991

Return your signed submission by 5.00pm Monday 25 May 2015 to:

Freeport 1201 Proposed Canterbury Land and Water Regional Plan
Environment Canterbury
P O Box 345
Christchurch 8140

Full Name: Otaio Water User Group _____ **Phone (Hm):** _____

Organisation*: _____ **Phone (Wk):** 033088587 _____

* the organisation that this submission is made on behalf of

Postal Address: c/ Haidee McCabe, PO Box 2193, Washdyke, Timaru **Phone (Cell):** 021686006 _____

_____ **Postcode:** 7984 _____

Email: haidee@irricon.co.nz _____ **Fax:** _____

Contact name and postal address for service of person making submission (if different from above):

Trade Competition

Pursuant to Schedule 1 of the Resource Management Act 1991, a person who could gain an advantage in trade competition through the submission may make a submission only if directly affected by an effect of the proposed policy statement or plan that:

- a) adversely affects the environment; and
- b) does not relate to trade competition or the effects of trade competition.

Please tick the sentence that applies to you:

- I could not gain an advantage in trade competition through this submission; or
- I could gain an advantage in trade competition through this submission.

If you have ticked this box please select one of the following:

- I am directly affected by an effect of the subject matter of the submission
- I am not directly affected by an effect of the subject matter of the submission

Signature:

Date: 24th May 2015

(Signature of person making submission or person authorised to sign on behalf of person making the submission)

Please note:

(1) all information contained in a submission under the Resource Management Act 1991, including names and addresses for service, becomes public information.

- I do not wish to be heard in support of my submission; or
- I do wish to be heard in support of my submission; and if so,
- I would be prepared to consider presenting your submission in a joint case with others making a similar submission at any hearing

| (1) The specific parts of the Proposed Plan that my submission relates to are: | | (2) My submission is that: | | (3) I seek the following decision from Environment Canterbury: |
|--|---------------------|----------------------------|--|--|
| Section & Page # | Sub-section / Point | Support/ Oppose | Reason | |
| Section 15 – Entirety | Section 15 | Support | The plan is supported in its current form by Otaio Water User Group (OWUG) on the understanding that it will achieve the a level of 75% reliability of supply for existing irrigators in this catchment while achieving realistic and appropriate freshwater objectives for the catchment. At present there is no minimum flow restrictions on this river. Before stringent minimum flows and allocations are introduced, options must be available for the irrigators to achieve an acceptable reliability of supply. These options have been developed through consultation and include A water into storage, B Block water and the ability to transfer surface water to deep groundwater. | Any aspects of the plan or proposed changes to the plan that do not support or achieve the outcomes sought by OWUG' are opposed. |
| | Section 15 | Support | OWUG is aware of the issues generated by implementing the various plans, when the first consent application is processed under the Operative Plan. Therefore, we have requested that ECan Investigating Officers, who process consents, carry out a number of test scenarios, to ensure the plan as written actually gives effect to the intent. This needs to be commenced promptly so the information is available prior to the hearing and to support this submission. | In the event ECan's testing of several consent scenarios identifies any problems with the practical application of the plan provisions to achieve the stated objectives which are supported by OWUG, any necessary amendments are made to the plan's provisions to ensure the plan functions as intended |
| 15 – Pg1-3 | 15A | Support in part | This introduction provides a good overview of the area. The requirement for maintenance of a 90% level of protection for the Northern Streams area appears to be relatively conservative with respect to nitrate toxicity, but a reasonable limit/target for Northern Streams. It is however not apparent where in the plan this narrative requirement is transformed into a measurable | Maintain wording as notified. However, seek clarification as to where in the plan the 90% level of protection is transformed to a numerical limit |

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| | | | numerical limit. | |
| 15-Pg3 | 15.1 | Support | Definitions of the plan are an important element of the plan. | Maintain wording as notified |
| 15 – Pg 5 | 15.3 | Oppose | <p>Table 15(a) presents freshwater outcomes to be achieved by 2030.</p> <p>In the heading row of Table 15(a) in relation to QMCI (under Ecological Indicators) the sub-heading wording is cut off (“[min” is all that appears in the PDF). To be consistent with Variation 1 and that proposed by ECan in Variation 2 of the pLWRP, it should have the sub-heading “80% of samples in 5 year period”.</p> <p>Table 15(a) specifies the outcome for temperature as a maximum, which could conceivably be a brief one-off event with little ecological consequence. Additionally, a maximum temperature of 20°C in hill-fed rivers could typically occur relatively frequently, and therefore this outcome is unlikely to be met now or in the future for these types of rivers.</p> <p>In the heading row of Table 15a in relation to cyanobacteria cover it should refer to "Cyanobacteria mat cover > 3mm thick [max. cover of bed] (%)". The addition of ">3 mm thick" to the heading would bring the outcome in line with the wording of the New Zealand periphyton guidelines, as have also been used for the filamentous outcome in Table 15(a). As it is currently worded there is no clarification in Table 15(a) of what thickness of cyanobacterial mat the outcome refers too, and consequently the presence of 50% cover of even a very thin cyanobacterial mat (e.g. < 1mm) could be taken to not meet the outcome. This is overly restrictive. The footnotes to Table 15(a) specify the percentage of samples that are to meet the outcome for the periphyton indicators chlorophyll <i>a</i> and filamentous algae, however no clarification is provided for the percentage of samples that are required to meet the cyanobacteria outcome.</p> | <p>Correct the heading row of Table 15(a) in relation to the QMCI indicator to read “<i>QMCI [min 80% of samples in 5 year period]</i>”</p> <p>Set a more appropriate temperature outcome in Table 15(a) for the hill-fed management unit than a maximum of 20°C.</p> <p>Change the heading row of Table 15(a) in relation to cyanobacteria cover to read "<i>Cyanobacteria mat cover > 3mm thick [max. cover of bed] (%)</i>". Specify a percentage of samples that are to meet the outcome.</p> <p>The cultural health indicator in Table 15(a) should not be included as it is written as a qualitative indicator, but re-written as a quantitative outcome</p> |

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| | | | The cultural health indicator in Table 15(a) should not be included as written as a qualitative indicator, but re-written as a quantitative outcome. As it stands it is not clear how mahinga kai will be monitored to determine if the outcome is being achieved. | |
| 15 – Pg 5 | 15.4.1 | Support | Support the improvement of water quality through realistic Good Management Practice | Maintain current wording |
| 15 – Pg 5 | 15.4.2 | Oppose | The nitrogen load limits within Table 15(o) and 15 (p) are based on Overseer modelling, which as outlined in the submission on Policy 15.4.5-15.4.7 is considered to be flawed. It is therefore not possible to comment on the appropriateness of these limits without more detailed information and certainty on annual loads in rivers and streams. | The loads determined in Table 15 (o) and 15 (p) need resolved and certain, before load limits on streams and rivers can be established. |
| 15 – Pg5 | 15.4.3 | Oppose | It is not clear what the purpose of this policy is. Nitrogen is expected to move between the Hill Areas and Plains Areas as water moves downstream, it is not clear how having this policy will avoid this nitrogen movement. | Clarify intent of this policy |
| 15 – Pg5 | 15.4.4 | Oppose | Support the use of GMP and FEP to improve water quality on <u>all</u> farms. | Reference to all farms to be included in the policy, point b) |
| 15 – Pg5 | 15.4.5 through to 15.4.7 | Oppose | Oppose all nutrient management policies and rules within this plan for the following reasons: <ul style="list-style-type: none"> • The Overseer version has changed since notification of this plan and therefore output figures from Overseer have changing substantial with refinement of inputs to Overseer. As a result the Overseer figures set in the plan as Nitrogen caps in the relevant Tables are out of date and are not considered achievable or relevant with the latest version of Overseer. • It must be fully understood what the new version of Overseer does for all farming types, to determine new and | Outcome sort: The Overseer version to determine these Nitrogen Caps must be specified clearly in the plan and Tables. The plan needs to accommodate changing Overseer versions and therefore Nitrogen Caps must be able to be updated within a schedule or by some other effective means by a group established for this role and in agreement with |

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| | | | <p>appropriate Nitrogen caps for the catchment that are able to be changed with new Overseer versions</p> <ul style="list-style-type: none"> • S-Maps soils have changed which had been used within Overseer therefore changing the outputs and Nitrogen Caps for the catchment. There are numerous concerns on the accuracy of inputs used within Overseer to determine the Nitrogen caps • Much of the polices and rules are circular, <p>The mechanism put in place for nutrient management must give significant consideration to the financial viability of properties that also provides certainty (continuous change does not) in order to achieve improved environmental outcomes sort.</p> <p>If changes are to be made, this needs to be worked through and agreement reached prior to a hearing.</p> | <p>ECan. Given the concerns with Overseer, potentially MGM with Flexibility caps be used instead.</p> |
| 15-Pg6 | 15.4.10 through to 15.4.13 | Oppose | <p>Some properties are located within more than one Surface Water Allocation Zone, therefore it must be clearly set out as to how this is dealt with under this policy. Is it required that Overseer must be split out for each of the Zones to show compliance with nutrient loads within each zone, if the nutrient loads are different. The scale of the maps means it is difficult to identify what properties are affected by this.</p> | <p>Therefore we are seeking that if the Zones are different nutrient loads, that this can be averaged across the zones, rather than having the minimum or having to show specific compliance with each zone. It needs to be stipulated that the Farm Enterprise can cover more than one Zone, and if loads are different these are averaged.</p> |
| 15-Pg6 | 15.4.14 | Support in part | <p>What we are seeking in the previous point, means consistency with this policy, by treating a Farming Enterprise and Nutrient Group the same as an Irrigation Scheme.</p> | <p>Therefore we are seeking that if the Zones are different nutrient loads, that this can be averaged across the zones, rather than having the minimum or having to show specific compliance with each zone. It needs to be stipulated that the Farm</p> |

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| | | | | Enterprise can cover more than one Zone, and if loads are different these are averaged. |
| 15-Pg7 | 15.4.17 | Oppose | Support the use of GMP and FEP to improve water quality on <u>all</u> farms. | Maintain wording as notified with the addition of <u>all</u> farms. |
| 15-Pg7 | 15.4.18 | Support | This policy is supported as often works in waterways, affects the natural flow, particularly minimum flow sites and the ability to access surface water abstractions. Careful control on such work is therefore important | Maintain wording as notified |
| 15-Pg7 | 15.4.19 | Oppose | Additional wording is required in point b) to specify that financial viability of the scheme for the applicant must come into consideration. Support point d) as this allows for renewal of existing consents specifically. | Maintain wording as notified with the addition of the following wording to b) "taking into account the financial viability for the property concerned" |
| 15-Pg8 | 15.4.21 | Oppose | This needs to be clarified. The intent is to avoid allocating additional water from the zones, but this should not preclude a consent holder applying the water onto new land areas provided that only x hectares (where x = the consented area in hectares) of the entire property are irrigated in any one year. The irrigated land area can change from year to year and flexibility is essential particularly for cropping | Maintain wording as notified with the addition of further clarity to b) - for determining the annual volume but water may be spread over a greater or different land area. |
| 15-Pg8 | 15.4.22 | Support | Support a framework actually being set out for this | Maintain wording as notified |
| 15-Pg8 | 15.4.23 | Oppose | This provides no incentive reduce the surface water allocation by transferring to deep groundwater. Many A consents are old and have system capacity issues, where by the current annual volume (consented or allocated) is low or cannot be achieved by physical constraints. When transferring to deep groundwater applicants must be able to overcome this given the significant cost of the transfer. Therefore by considering the land area intended to be irrigated means a fair control is put in place | Maintain wording as notified with a change to remove "volume" and replace with "consented irrigated area" in the first section of the rule. |
| 15-Pg8 | 15.4.24 | Oppose | Support as provision is made if you are in a water user group which provides much more flexibility. If you are not working in a | Include stepped reductions set out in Table (i) |

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| | | | water user group the minimum flow restrictions in Table (i) need to be more restrictive as detailed in the submission on Table (i) | |
| 15-Pg8 | 15.4.25 | Oppose | Additional wording is required in point b) to specify that financial viability of the scheme for the applicant must come into consideration. Practicality of the scheme for each property also must be given consideration. Going into irrigation schemes leads to intensification, and usually an increase in Overseer outputs, escalating catchment water quality issues. | Maintain wording as notified with the addition of the following wording to “taking into account the financial and practical viability for the property concerned” |
| 15-Pg8 | 15.4.26 | Oppose | Oppose the seasonal volume part of this policy – if there is an allocation limit and a minimum flow then a seasonal volume is not relevant or justified | Delete seasonal volume |
| 15-Pg8 | 15.4.27 | Support | Support the clarification and definition of what is considered to be surface water and groundwater within Flow Protection Zones. | Maintain wording as notified |
| 15-Pg8 | 15.4.28 | Support | Support as this ensure the existing water users are protected with Flow Protection Zones, as they take from shallow groundwater aquifers that are recharged by high flow Otaio River events. Ensuring the groundwater levels are adequate before any taking of B water means existing users are protected | Support wording as notified |
| 15-Pg8 | 15.4.29 | Support | Support the addition of this policy to provide options for abstractors to increase reliability of supply with the coming minimum flows. Time must be given to allow consent holders to put such plans in place. | Support wording as notified. |
| 15-Pg9 | 15.4.30 | Support | Support wording as notified as stopping transfers to other properties is the best way to start reducing the over allocation, than allowing a greater uptake by transferring. | Maintain wording as notified |
| 15-Pg9 | 15.4.31 | Support | Support, efficient community water is essential | Maintain wording as notified |
| 15-Pg9 | 15.4.33 | Oppose | The utilisation of water through a Water User Group is crucial in the Otaio in order reduce the allocation based on a weekly volume. . Table 15 h) and Table 15 i) are supported with the modification to the non-water user part of the table as suggested in Policy 5.4.24 | Maintain wording as notified with the addition of stepped % reductions set out in Table (i) for Non-water User Group. |

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| | | | The accepting of this minimum flow regime by the Otaio Water User Group, has the potential to be highly restrictive during prolonged dry years as we have seen this year. The group understand the need for reducing allocation but given the majority taken from shallow ground water and the river is naturally dry through the mainstem for a significant portion, there are certainly reservations and apprehension. The agreement to this is only on the basis that there are viable options such as A and B water storage and the ability to transfer to groundwater. The push to these costly options or irrigation scheme, means land use intensification change will be inevitable. | |
| 15-Pg9 | 15.4.34 | Support | Telemetry is essential to manage water within over-allocated catchments | Maintain wording as notified |
| 15-Pg9 | 15.4.35 | Oppose | Agree with a) but for b) 10 years is too restrictive considering the economic investment. A plan has to be reviewed every 10 years but a consent can be reviewed and brought into line with a new plan regardless. Suggest this is amended to at least 15years | Change b) to 15 years rather than 10 years. |
| 15-Pg10 | 15.5 | Support | Support the table setting out what rules prevail in relation to the Region-wide rules. Where this is set out in the rules, it needs to ensure this is legally binding | Maintain wording as notified |
| 15-Pg10-16 | 15.5.1-15.5.18 | Oppose | <p>Oppose all nutrient management policies and rules within this plan for the following reasons:</p> <ul style="list-style-type: none"> The Overseer version has changed since notification of this plan and therefore output figures from Overseer have changing substantial with refinement of inputs to Overseer. As a result the Overseer figures set in the plan as Nitrogen caps in the relevant Tables are out of date and are not considered achievable or relevant with the latest version of Overseer. It must be fully understood what the new version of Overseer does for all farming types, to determine new and appropriate Nitrogen caps for the catchment that are able | <p>Outcome sort: The Overseer version to determine these Nitrogen Caps must be specified clearly in the plan and Tables. The plan needs to accommodate changing Overseer versions and therefore Nitrogen Caps must be able to be updated within a schedule or by some other effective means by a group established for this role and in agreement with ECan.</p> |

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| | | | <p>to be changed with new Overseer versions</p> <ul style="list-style-type: none"> • S-Maps soils have changed which had been used within Overseer therefore changing the outputs and Nitrogen Caps for the catchment. There are numerous concerns on the accuracy of inputs used within Overseer to determine the Nitrogen caps • Much of the polices and rules are circular, <p>The mechanism put in place for nutrient management must give significant consideration to the financial viability of properties that also provides certainty (continuous change does not) in order to achieve improved environmental outcomes sort.</p> <p>If changes are to be made, this needs to be worked through and agreement reached prior to a hearing.</p> <p>Some properties are located within more than one Surface Water Allocation Zone, therefore it must be clearly set out as to how this is dealt with under this policy. Is it required that Overseer must be split out for each of the Zones to show compliance with nutrient loads within each zone, if the nutrient loads are different. The scale of the maps means it is difficult to identify what properties are affected by this.</p> | <p>Given the concerns with Overseer, potentially MGM with Flexibility caps be used instead</p> <p>Therefore we are seeking that if the Zones are different nutrient loads, that this can be averaged across the zones, rather than having the minimum or having to show specific compliance with each zone. It needs to be stipulated that the Farm Enterprise can cover more than one Zone, and if loads are different these are averaged.</p> |
| 15 – Pg14-15 | 15.5.22 – 15.5.23 | Oppose | Unsure what these policies are actually in relation to..... | Clarify the intent of this policy |
| 15- Pg17 | 15.5.26 | Oppose | Clarification is needed that Tables (g) to (i) relate to irrigation water only and that stock/domestic water is outside of the allocation. This is important given ECan now often require consent for stock water and washdown water if it is not for an individual. It seems the reliance on S14 3) b of the RMA is no | <p>Modify the wording as follows: “the take and use of groundwater for irrigation with a high....”</p> <p>Additional rule included that</p> |

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| | | | <p>longer sufficient with ECan interpretation. With this rule making anything in addition to these tables as prohibited it means that many uses operating as permitted water under Regional LWRP without consent could suddenly be prohibited.</p> <p>Furthermore that minimum flows must not relate to reasonable and efficient stock, domestic and washdown water as this must be able to continue during low flow conditions for animal welfare and hygiene reasons.</p> <p>Provision must be made for users to still be able to take limited amounts of groundwater as provided for by the regional LWRP. The list above this rule identifying Regional Rules that apply, needs to include Rules 5.113 and 5.114. Furthermore it needs to be legally robust.</p> | <p>provided for reasonable and efficient amount of water to be taken without the need for minimum flows to apply if it is for the purpose of animal welfare and hygiene reasons.</p> <p>The list above this rule identifying Regional Rules that apply, needs to include Rules 5.113 and 5.114</p> |
| 15- Pg17 | 15.5.27 | Oppose | <p>Condition 2) of this rule is actually promoting inefficient water use, by pushing irrigators to irrigate, to hang onto annual volume rather than using it as and when required. How does this lead to cooperation within a water user group.</p> | <p>Consideration should only be given to water useage and the reasons fully understood. If it is not complied with here it ends up being prohibited under Rule 15.5.29 which is no acceptable.</p> |
| 15- Pg18 | 15.5.28 | Support in part | <p>Support providing the wetlands are not just generically determined through ECan GIS without real consideration of what the values actually are.</p> | <p>Clarification on the reference to wetland is required.</p> |
| 15- Pg18 | 15.5.29 | Oppose | <p>Support in the fact this means no more allocation to a water body. However changes are essential to make such a Rule acceptable as per points in 15.5.26 and 15.2.27</p> | <p>Modify the wording in Rule 15.5.26 amended to “the take and use of groundwater for irrigation with a high....”</p> <p>Additional rule included that provided for reasonable and efficient amount of water to be taken without the need for minimum flows to apply</p> |

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| | | | | <p>if it is for the purpose of animal welfare and hygiene reasons.</p> <p>The list above this rule identifying Regional Rules that apply, needs to include Rules 5.113 and 5.114</p> |
| 15- Pg18 | 15.5.30 | Oppose | <p>The comments re Policy 15.4.2 are relevant – there needs to be clarification that “no increase in the area of land to be irrigated” does not preclude previously unirrigated land from being irrigated. So no increase in area refers to an area (in hectares) rather than a specific land parcel.</p> <p>Point 2 re discretion – needs to include another point considering the financial availability</p> | <p>Delete 2) ii) as it is the volume that is key not how much land is irrigated.</p> <p>Point 2 re discretion – needs to include another point re financial availability</p> |
| 15- Pg19 | 15.5.31 | Oppose | <p>In its present form, the Rule only allows new takes in the Waihao GAZ and replacement consents “outside the Waihao GAZ”. No mention of potential takes outside of any groundwater allocation zone.</p> <p>There needs to be a rule making takes outside of the present groundwater allocation zones to be non-complying activities</p> | <p>Oppose. Delete prohibited and replace with non-complying as per LWRP rules</p> |
| 15- Pg19 | 15.5.32 | Oppose | <p>Above this rule, it clarifies that Rules 5.113 and 5.114 applies which is a relief but it needs to be ensured that this is legally robust.</p> | <p>Support with changes to include timing of use – which is Condition 4 from Rule 15.5.30</p> |

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| | | | Condition 6 relating to annual volumes being calculated in accordance with method 1 of schedule 10 needs to be changed to allow the timing of use of the methods as per condition 4 of Rule 15.5.30 | |
| 15- Pg19 | 15.5.33 | Oppose | Support if rule 15.5.32 is changed as referred to above | Support if rule 15.5.32 is changed as referred to above |
| 15- Pg19 | 15.5.34 | Oppose | Reference is required to ensure this Rule does not relate to B Block water as when first reading was our initial reaction. Therefore reference to Table (i) is essential to avoid any confusion. | Reference is required to Table (i) |
| 15- Pg20 | 15.5.35 | Support in part | Support providing the wetlands are not just generically determined through ECan GIS without real consideration of what the values actually are. | Clarification in relation to the wetlands is required. |
| 15- Pg20 | 15.5.36 | Oppose | Reference to Table (i) is essential to avoid any confusion. | Reference is required to Table (i) |
| 15- Pg20 | 15.5.37 | Oppose | Water into storage as restricted discretionary is fair for B water into storage. This rule needs to specify reference to Table (j) so it is clear it is for B water only. It must include Policy 15.4.28 which sets a minimum groundwater depth on bore J39/0255. If this is not included within a Rule, how can this be enforced and this was a key aspect of agreeing to the B Block minimum flow and allocation. Furthermore to ensure equity amongst all users the minimum flow established must apply to all consents and not stacking of the minimum flow for subsequent consents. | Include reference to Table (j). Include another condition 4) that says “ for all takes in relation to Table (J), in addition to a minimum flow of 780l/s for all users, the depth to water in bore J39/0255 is higher than 3 metres below ground level |
| 15- Pg21 | 15.5.38 | Support | Support | Maintain wording as notified |
| 15- Pg21 | 15.5.39 | Support | Support as stops transfers in over-allocated catchment which increases usage. | Maintain wording as notified |
| 15- Pg21 | 15.5.40 | Support | Support as stops transfers in over-allocated catchment which increases usage. | Maintain wording as notified |
| 15 – Pg | 15.5.42 | Support | Support | Maintain wording as notified. |

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| 15- Pg22 | 15.6 Table15(a) | Oppose | <p>Table 15(a) presents freshwater outcomes to be achieved by 2030.</p> <p>In the heading row of Table 15(a) in relation to QMCI (under Ecological Indicators) the sub-heading wording is cut off (“[min” is all that appears in the PDF). To be consistent with Variation 1 and that proposed by ECan in Variation 2 of the pLWRP, it should have the sub-heading “80% of samples in 5 year period”.</p> <p>Table 15(a) specifies the outcome for temperature as a maximum, which could conceivably be a brief one-off event with little ecological consequence. Additionally, a maximum temperature of 20°C in hill-fed rivers could typically occur relatively frequently, and therefore this outcome is unlikely to be met now or in the future for these types of rivers.</p> <p>In the heading row of Table 15a in relation to cyanobacteria cover it should refer to "Cyanobacteria mat cover > 3mm thick [max. cover of bed] (%)". The addition of ">3 mm thick" to the heading would bring the outcome in line with the wording of the New Zealand periphyton guidelines, as have also been used for the filamentous outcome in Table 15(a). As it is currently worded there is no clarification in Table 15(a) of what thickness of cyanobacterial mat the outcome refers too, and consequently the presence of 50% cover of even a very thin cyanobacterial mat (e.g. < 1mm) could be taken to not meet the outcome. This is overly restrictive. The footnotes to Table 15(a) specify the percentage of samples that are to meet the outcome for the periphyton indicators chlorophyll <i>a</i> and filamentous algae, however no clarification is provided for the percentage of samples that are required to meet the cyanobacteria outcome.</p> | <p>Correct the heading row of Table 15(a) in relation to the QMCI indicator to read “<i>QMCI [min 80% of samples in 5 year period]</i>”</p> <p>Set a more appropriate temperature outcome in Table 15(a) for the hill-fed management unit than a maximum of 20°C.</p> <p>Change the heading row of Table 15(a) in relation to cyanobacteria cover to read "<i>Cyanobacteria mat cover > 3mm thick [max. cover of bed] (%)</i>". Specify a percentage of samples that are to meet the outcome.</p> <p>The cultural health indicator in Table 15(a) should not be included as written as a qualitative indicator, but re-written as a quantitative outcome.</p> |

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| | | | <p>The cultural health indicator in Table 15(a) should not be included as written as a qualitative indicator, but re-written as a quantitative outcome. As it stands it is not clear how mahinga kai will be monitored to determine if the outcome is being achieved.</p> | |
| 15- Pg24 | 15.6 Table15(c) | Oppose | <p>Table 15(c) presents water quality limits for rivers.</p> <p>The relevance of Table 15(c) in terms of the Variation 3 policies and objectives is not clear. There is no specific reference to Table 15 (c) in the Variation 3 policies and therefore no link as to how they are to be interpreted and whether they are limits that have any ecological significance.</p> <p>Table 15(c) presents water quality limits for DRP, DIN and ammoniacal nitrogen for individual rivers. The approach taken in Table 15(c) of setting specific limits for individual rivers and streams is in contrast to that taken for other pL&WRP variations, which usually provide one limit for group of like rivers (e.g., hill-fed upper, hill-fed lower, lowland springs, etc.). In taking this individual approach (and as stated in Table 15(c) footnote 'a'), nutrient concentration limits for DRP and ammonia listed in Table 15(c) are based on measured monitoring data for each river. However that is not a typical or appropriate approach for setting a water quality limit. For example, the New Zealand periphyton guidelines (Biggs 2000) are usually used to provide guidelines on upper limits for DRP and DIN concentrations to manage against nuisance periphyton growths.</p> <p>The DRP, DIN and ammonia limits presented in Table 15(c) are related to the annual median concentration. Having a limit based on this timeframe is not useful in terms of detecting a change that could have an ecological consequence. For example, periphyton (algae) respond very quickly to DRP concentration changes and growth can quickly increase, resulting in increased cover and</p> | <p>Explain the link between Table 15(c) limits and plan policies and objectives.</p> <p>Clarify why approach to limit setting differs from that in other pL&WRP variations.</p> <p>'Limits' presented in Table 15(c) would be more appropriately written as targets.</p> <p>Reference the source of the data that the limits in Table 15(c) are based on.</p> |

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| | | | <p>biomass over a period of days. Therefore having a DRP limit based on an annual median concentration does not appear to make ecological sense. Annual median concentrations are more appropriate for ‘target’ rather than limit setting. The ecological relevance of limits set as the annual 95th percentile for DIN and annual maximum for ammonia is also not clear.</p> <p>Table 15(c) footnote ‘a’ states that the limits for DRP and ammoniacal nitrogen are based on the current measured state using data for the period July 2007 to February 2012, however no reference for the source of this data is provided. Appendix Two of the limiting setting process report “Predicting consequences of future scenarios: surface water quality and associated values” (Kelly 2015) presents measured data for DIN and DRP, but no measured data is presented for ammoniacal nitrogen. In fact ammoniacal nitrogen is barely discussed in the limit setting technical report. The measured DRP data presented in Appendix 2 is stated to cover the period July 2007 to February 2013, however the Table 15(c) footnote states that only data from July 2007 to February 2012 was used in setting the limits. It is not explained why the most recent data has been excluded from the limit setting.</p> <p>Section 15 states that there is a goal to maintain a protection level of 90% nitrate toxicity in the Northern Streams area. It is not apparent how this narrative has been transformed into the numerical (concentration) limits for presented in Table 15(c).</p> | |
| 15 Pg25 | – 15.6 Table15(e) | Oppose | Table 15(e) sets water quality limits for groundwater. The pL&WRP initially included a table of outcomes for shallow groundwater Table 1c, which included some limits the same as those specified in Table 15(e) (e.g., maximum nitrate-N <11.3 mg/L, E. coli median concentration <1 organism/100mL) and are | Clarify if the numerical values in Table 15(e) are limits (as indicated in the table title) or alternatively targets (as indicated within the table). |

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| | | | <p>related to the NZ drinking water standards. Table 1c has however been removed from the decisions version of the pL&WRP.</p> <p>The heading for Table 15(e) identifies the numerical values in the table to be limits, however the title for the heading row refers to the values as ‘targets’. It is therefore not clear from Table 15(e) if the values are to be applied as limits or targets.</p> | |
| 15 Pg26 | – 15.6 Table 15(f) | Support | Support community water being identified specifically | Maintain table as notified |
| 15 Pg29 | – 15.6 Table 15(h) | Support | Support the regime set out within this table on the basis that provision is made for abstractors to go to A and B water into storage and transfer to deep groundwater being options they can put in place to overcome reliability of supply issues.. A lot of work went into developing this strategy for this catchment in particularly the solution of the restrictions on a weekly volume since the majority are shallow groundwater abstractions that require high rates of take for a short period of time. This was is considered to be the most effective way to manage the Otaio River catchment. | Maintain table as notified. |
| 15 Pg30 | – 15.6 Table 15(i) | Oppose | <p>Pro-rata reductions for non-water user group members is not supported and we consider this should be stricter with stepped reductions.</p> <p>Clarification is needed that in 2030 that the reduced minimum flows are a direct result of reduced allocation. Furthermore there is no minimum flow specified where non-water user group abstractions have to stop.</p> <p>The Water Use Group section is supported as it allows users to work as a group efficiently and manage water on a weekly volume basis. At the various minimum flow levels the group can reduce the take to the specified rates and volumes to manage water effectively.</p> | <p>Column with Reduce take by: replace “pro-rata” with “stepped reductions”</p> <p>Amend the table for non-water user group consents as follows: Flow at 500 l/s, reduce to 50% Flow at 90 l/s – cease take.</p> |

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| 15 Pg31 | – | 15.6 Table(j) | Oppose | Support with the additional advice note below the table that “all user are to have the minimum flow of 780l/s so there is no priority amongst users” | Add advice note: “all user are to have the minimum flow of 780l/s so there is no priority amongst users” |
| 15 Pg32 | – | 15.7.5 Table(k) | Oppose | It is suggested that ideally numbers should be included in the plan. This may have been simply because Ecan have not yet calculated what the “sum of granted water permits at 1 May 2015” actually is. | Amend the table by including the calculated updated sum of granted water permits and ensure this is accurate. |
| 15 Pg32 | – | 15.7.5 Table(l) | Support | It is considered that for the Otaio this provides sufficient water for those who want to transfer to deep groundwater | Support table as notified |
| 15 Pg32 | – | 15.7.6 Table 15(m) through to (p) | Oppose | Oppose as the table does not specify the version of Overseer used and also for the reasons set out earlier in relation to Rules 15.5.1-15.5.18 | Include version of Overseer and changes as suggested in Rules 15.5.1-15.5.18 of this submission |
| 15 Pg33 | – | 15.8 | Oppose | Support Otaio Gorge but not St Andrews Stream. No one within this catchment knows where this stream or sub-catchment is? | Delete or clarify St Andrews stream, whereby it can be considered whether this is appropriate. |
| 15 Pg34 | – | 15.9 | Support | Support above Otaio as High Naturalness waterbodies. | Maintain Table as notified |
| 3 | | Schedule 24b | Support | Support definitions | Maintain definitions as notified |