

**From:** [Jeff Page](#)  
**To:** [Mailroom Mailbox](#)  
**Subject:** PC5 to CLWRP: Submission of Meridian Energy  
**Date:** Friday, 11 March 2016 11:51:50 a.m.  
**Attachments:** [Meridian Energy Limited - Submission Proposed Plan Change 5 Final 110306.pdf](#)

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Please find attached.

Kindly confirm receipt.

Regards

Jeff

**Jeff Page – Environmental Strategy Manager**

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**SUBMISSION ON THE PLAN CHANGE 5 TO THE CANTERBURY LAND AND  
WATER REGIONAL PLAN UNDER CLAUSE SIX OF THE FIRST SCHEDULE TO  
THE RESOURCE MANAGEMENT ACT 1991**

**To:** Canterbury Regional Council  
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**Name:** Meridian Energy Limited  
PO Box 2146  
**CHRISTCHURCH 8140**

Attention: Jeff Page, Environmental Strategy Manager  
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Meridian Energy Limited (Meridian) makes the submission on Plan Change 5 to the Canterbury Land and Water Regional Plan set out in the **attached** document.

Meridian confirms its submission does not relate to trade competition or the effects of trade competition.

Meridian would like to be heard in support of its submission

If other persons make a similar submission then Meridian would consider presenting joint evidence at the time of the hearing.

A handwritten signature in black ink, appearing to be 'Jeff Page', written in a cursive style.

For and behalf of Meridian Energy Limited

Dated this 11<sup>th</sup> day of March 2016

## OVERVIEW OF SUBMISSION

1. Meridian Energy Limited ('Meridian') is listed on the New Zealand Stock Exchange (NZX) and Australian Securities Exchange (ASX) and is a mixed ownership model company, 51% owned by the New Zealand Government.
2. Meridian's core business is the generation, marketing, trading and retailing of electricity and the management of associated assets and ancillary structures in New Zealand. Meridian is the single largest generator of electricity in New Zealand.
3. Meridian's interest in Proposed Plan Change 5 (PC5) to the Canterbury Land and Water Regional Plan (CLWRP) stems from its ownership of six power stations within the Waitaki catchment that make up part of the Waitaki Power Scheme.
4. The Waitaki Power Scheme consists of eight power stations, four canal systems and numerous dams, weirs, gates and other control structures that operate as a linked hydro-electricity generation chain. This chain includes; large modified storage lakes, a series of diversions via canals, and a cascade of in-river dams. The scheme was progressively constructed between 1928 and 1985.
5. The Waitaki Power Scheme is the largest hydro-electric power scheme in New Zealand, with controllable and flexible generating capacity of 1,723MW. This scheme contributes on average some 18% of New Zealand's annual electricity supply, although at times this can be as high as 30% of the national requirement. Lakes Tekapo and Pukaki provide approximately 2,500GWh of energy storage capacity, almost 60% of New Zealand's hydro storage. The scheme supports the HVDC link, which is connected to the South Island transmission network at the site of Benmore Power Station. In addition, the scheme provides essential ancillary services to the electricity system in relation to frequency keeping, spinning reserve, over frequency reserve and voltage support.
6. The continued development, operation, maintenance and upgrading of Waitaki Power Scheme are matters of national significance (National Policy Statement for Renewable Energy Generation 2011 and Canterbury Regional Policy Statement 2013). The Waitaki Power Scheme is to be enabled (CLWRP, Objective 3.3) and considered part of the existing environment (CLWRP, Policy 4.51). PC5 must give effect to and implement these statutory documents, policies and provisions. Ensuring good water quality is achieved is important to the effective and efficient operation of the Waitaki Power Scheme.
7. Relevant to the preparation of regional plans are both the National Policy Statements for Freshwater (NPSFW) 2014 and the National Policy Statement on Renewable Electricity Generation (NPSREG) 2011. PC5 must give effect to National Policy Statements as required by section 62(3) of the Act.
8. The objective of the NPSREG is "to recognise the national significance of renewable electricity generation activities by providing for the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities, such as the proportion of New Zealand's electricity generated from renewable energy sources increases to a level that meets or exceeds the New Zealand Government's national targets for renewable electricity generation."

9. The NPSREG also:
- recognises the benefits of renewable electricity generation activities
  - acknowledges the practical limitations of achieving New Zealand's target for electricity generation from renewable resources, including maintaining generation output
  - acknowledges the practical constraints associated with the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities in particular the need to locate the renewable electricity generation activity where the renewable energy resource is available
  - guides the management of reverse sensitivity effects on renewable electricity generation activities
  - directs the incorporation of provisions for renewable electricity generation activities into regional policy statements and regional and district plans
  - provides for the development, operation, maintenance and upgrading of existing and new hydro-electricity resources.
10. In addition to the Government initiatives outlined above, sections 7(i) and 7(j) of the RMA expressly require all persons exercising functions and powers under it to have particular regard to the effects of climate change and the benefits to be derived from the use and development of renewable energy. These include having particular regard to these matters in the preparation of regional and district planning documents.
11. Any regional plan policy and rule framework must recognise and provide for the national significance of the on-going operation, maintenance and development of existing renewable generation assets.
12. Given the above, and in addressing the document as notified, Meridian has identified a number of provisions that should be improved to either achieve greater consistency with the purpose of the RMA and with current superior RMA policy.
13. The changes proposed in PC5 that are of primary interest to Meridian relate to ensuring the Waitaki Nitrogen Load Limits are accurately accounted for and not exceeded; seeking clarity in the provisions supporting an adaptive management approach; ensuring the water quality outcomes are appropriate, recognising naturally occurring processes and variation; ensuring water quality outcomes and limits are set for all appropriate locations; and that the Waitaki Power Scheme is appropriately recognised. Meridian seeks the relief set out below, any relief of similar effect, and any consequential amendment necessary in response to Meridian's submission.
14. Meridian's requests for specific relief outlined below should not be taken as limiting the general submissions and requests for relief set out in this section.
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## DETAIL OF SUBMISSION

Specific Plan Provision	Submission	Decision Sought [new text shown as <u>underlined</u> and deleted text shows as <del>strike-through</del> ]
<p>Nitrogen Load Limits: Schedule 27</p>	<p>In the Haldon and Mid-Catchment Zones, based on the portion of the nitrogen load limit that has not yet been utilised, Schedule 27 is to be used to estimate the land-based amount of nitrogen available to a farming activity for further intensification in each Zone – the Upper Waitaki Nitrogen Headroom per property.</p> <p>Meridian is not opposed to the identification of the Headroom in the Haldon and Mid-Catchment Zones. Nor does it have any interest in how any available headroom is to be distributed or allocated amongst potential users, provided the total nitrogen load limit for each Zone is not exceeded.</p> <p>As proposed, Meridian considers that the methodology set out in Schedule 27 to calculate of the Headroom per property is flawed. This is because, for farming activities or farming enterprises, until Rules 15B.5.20 to 15B.5.23 become operative and apply to all resource consent applications (e.g. Section 88A of the RMA does not apply), consents have been, or could be, granted for more than the Nitrogen Headroom available to that property. For example, Meridian is aware of a number of consents that sit outside the referenced land use patterns within Schedule 27.</p>	<p><b>Amend</b> Schedule 27 to ensure that:</p> <ul style="list-style-type: none"> <li>- the total Nitrogen load limits for the Haldon and Mid-Catchment Zones are not exceeded as a result of any individual or combination of land-based Nitrogen losses; and</li> <li>- the Upper Waitaki Nitrogen Headroom available per property at any time has taken into account the Nitrogen losses associated with any existing consent granted, existing consent already lodged with Environment Canterbury, potential consents that could be lodged, and any property allowance with additional Nitrogen losses.</li> </ul>

<b>Specific Plan Provision</b>	<b>Submission</b>	<b>Decision Sought [new text shown as <u>underlined</u> and deleted text shows as <del>strike through</del>]</b>
	<p>In addition, the discharge consent rules for irrigation schemes (Rules 15B.5.8 and 15B.5.9) are not subject to a Headroom per property condition (notwithstanding Policy 15B.4.18(b)).</p> <p>Further, the rules within PC5 which have immediate effect do not preclude the granting of resource consents in circumstances that could lead to nitrogen discharges being consented that do not fall within the Upper Waitaki Nitrogen Headroom per property.</p> <p>The risk of the above is that it is feasible that consents have been granted, or for additional consents to be granted, with nitrogen losses that have not been accounted for when setting the per property Headroom allowance by way of Schedule 27. If this is the case then, in order to ensure the overall Nitrogen load limits are not exceeded, the per property (or per hectare) Headroom calculation may need to be adjusted.</p> <p>Meridian seeks to ensure that, irrespective of how the Headroom is to be distributed, the total land-based Nitrogen load from all existing or future farming activities does not result in nitrogen losses and Nitrogen loads in excess of those anticipated within the Haldon or Mid-Catchment Zones.</p>	

Specific Plan Provision	Submission	Decision Sought [new text shown as <u>underlined</u> and deleted text shows as <del>strike-through</del> ]
<p>Nutrient Load Limits: Policies</p> <p>Policy 15B.4.16</p> <p>Policy 15B.4.18</p> <p>Policy 15B.4.20</p> <p>Policy 15B.4.21</p> <p>Policy 15B.4.22</p>	<p>Within PC5 a number of provisions reference either the Nitrogen Load Limits (in Table 15B(f)) or the Upper Waitaki Nitrogen Headroom available to a property or group of properties.</p> <p>Meridian seeks to ensure that the Waitaki Nitrogen Load Limits in Table 15B(f) are recognised within the relevant provisions as being the absolute limits that are not to be exceeded and that action is required to achieve this. The nitrogen load limits for areas in the Waitaki sub-region have been calculated as the absolute limits not to be exceeded in order to achieve the outcomes and limits for the waterbodies in those areas. This is set out in 15.7.4 and Table 15B(f).</p> <p>Whereas some policies and rules in PC5, (for example, for aquaculture, community waste water and industrial discharges, or for some Zones) require the relevant nitrogen load limits not to be exceeded, for farming activities in the Haldon and Mid-Catchment Zones, it is the estimated Headroom for a property that is referred to.</p> <p>The changes Meridian is seeking will provide greater clarity within the policy provisions that the total Nitrogen Load Limits for the relevant zones are not to be exceeded, irrespective of how any allocation or distribution of Nitrogen Headroom occurs, and that that the provisions within PC5 clearly state this policy direction.</p>	<p><b>Amend</b> Policy 15B.4.16 as follows:</p> <p>Within the Waitaki Sub-region, resource consents granted for the use of land for farming activities and the associated discharge of nutrients are restricted to a term of no more than 15 years and include conditions that enable a review of the resource consent under section 128(1)(a) of the RMA where an exceedance of the <u>outcome or limits in Tables 15B(a), 15B(b), 15B(c), 15B(d), and 15B(e), and 15B(f)</u> is identified.</p> <p><b>Amend</b> Policy 15B.4.18 as follows:</p> <p>Within the Waitaki Sub-region, water quality is maintained by requiring:</p> <p>(a) <u>notwithstanding (ai) and (b) below, cumulatively with nitrogen losses from all other farming activity in the Zone, the nitrogen loss from properties partially or fully supplied with water from a scheme, will not result in the nitrogen load limits specified in Table 15B(f) for the Ahuriri, Haldon and Mid-Catchment Zones being exceeded; and</u></p> <p>(ai) any application for resource consent for the discharge...</p> <p><b>Amend</b> Policy 15B.4.20 as follows:</p>

Specific Plan Provision	Submission	Decision Sought [new text shown as <u>underlined</u> and deleted text shows as <del>strike-through</del> ]
		<p>Freshwater quality is maintained in the Upper Waitaki Freshwater Management Unit by:</p> <p>(a) <u>avoiding total nitrogen loss from farming activities in the Ahuriri, Haldon Zone or Mid Catchment Zones that will result in the nitrogen load limits specified in Table 15B(f) being exceeded;</u></p> <p>(ai) restricting increases in nitrogen losses from farming activities in the Haldon Zone or Mid Catchment Zone to a limit not exceeding the Upper Waitaki Nitrogen Headroom; and</p> <p><b>Amend</b> Policy 15B.4.21 as follows:</p> <p>Maintain water quality in the Upper Waitaki Freshwater Management Unit by restricting the sharing of nitrogen losses between properties and requiring that:</p> <p>(a) <u>notwithstanding (ai) to (d) below, cumulatively with nitrogen losses from all other farming activity in the Zone, the combined nitrogen loss calculation from the properties forming the Nutrient User Group that are located with the Ahuriri, Haldon or Mid-Catchment Zones, will not result in the nitrogen load limits specified in Table 15B(f) for those Zones being exceeded; and</u></p> <p>(ai) the property is part of a Nutrient User Group; ...</p> <p><b>Amend</b> Policy 15B.4.22 as follows:</p>



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		<p>(a) in the Haldon Zone and the Mid Catchment Zone, by requiring farming activities that exceed the average nitrogen loss that occurred between 1 January 2011 and 31 December 2015 to restrict their nitrogen losses to no more than 1.6kgN/ha/yr above the Nitrogen Baseline; and</p> <p>(b) in the Ahuriri Zone, by requiring farming activities to restrict their nitrogen losses to no more than the average nitrogen loss rate that occurred between 1 January 2011 and 31 December 2015, or the nitrogen baseline, <u>whichever is the lesser; and</u></p> <p><del>(c) notwithstanding (a) and (b), by avoiding total nitrogen loss from farming activities in the Haldon, Mid-Catchment or Ahuriri Zones that will result in the nitrogen load limits specified in Table 15B(f) being exceeded.</del></p>
<p>Nitrogen load limits: Rules</p> <p>Rule 15B.5.8</p> <p>Rule 15B.5.9</p> <p>Rule 15B.5.10</p> <p>Rule 15B.5.20</p> <p>Rule 15B.5.21</p>	<p>Consistent with the two submission points above, Meridian seeks to ensure that the Waitaki Nitrogen Load Limits in Table 15B(f) are also protected within the relevant rules.</p> <p>The nitrogen load limits have been calculated as the absolute limits not to be exceeded in order to achieve the outcomes and limits for the waterbodies in those areas. Meridian recognises that requiring cumulative compliance with the Waitaki Nitrogen Load Limits in Table 15B(f), as a condition within rules, would result in difficulties for individual consent applicants. Meridian recognises that PC5 employs the Upper</p>	<p><b>Amend</b> Rule 15B.5.8 to insert a new clause as follows:</p> <p><del>(2) the nitrogen loss calculation for the property does not result in the total Nitrogen Headroom for all farming properties within the Haldon or Mid Catchment Zones, calculated in accordance with Schedule 27, being exceeded.</del></p> <p><b>Amend</b> Rule 15B.5.9 as follows:</p>

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	<p>Waitaki Nitrogen Headroom per property, established through Schedule 27, as an equivalent condition within the relevant rules.</p> <p>As a result of Meridian’s concerns with the accuracy of the methodology in Schedule 27, and whether or not it accurately incorporates the total land-based Nitrogen load from all existing or future farming activities, Meridian considers that relevant rules should include a condition requiring cumulative compliance with the total Nitrogen Headroom for all farming properties within each Zone.</p> <p>The changes Meridian is seeking will provide greater certainty within the rules that the total Nitrogen Load Limits for the relevant zones will not be exceeded, and that the provisions within PC5 capture the cumulative nitrogen losses from farming activities within each Zone.</p>	<p>The discharge of nutrients onto or into land where the property is supplied with water by an irrigation scheme or principal water supplier that does not meet conditions <u>1 and 2</u> of Rule 15B.5.8 is a prohibited activity.</p> <p><b>Amend</b> clause 15B.5.10(5) as follows:</p> <p>(5) The aggregated nitrogen loss calculation for the properties located within the Haldon or Mid-Catchment Zone does not exceed the aggregate of the Upper Waitaki Headroom available for those properties <u>and does not result in the total Nitrogen Headroom for all farming properties within the Zone, calculated in accordance with Schedule 27, being exceeded;</u> and.</p> <p><b>Amend</b> clause 15B.5.20(2) and <b>add</b> new matters of discretion as follows:</p> <p>(2) the nitrogen loss calculation for the property does not exceed the Upper Waitaki Nitrogen Headroom available to the property <u>and does not result in the total Nitrogen Headroom for all farming properties within the Zone, calculated in accordance with Schedule 27, being exceeded;</u> and</p> <p>The exercise of discretion is restricted to the following matters:</p>

Specific Plan Provision	Submission	Decision Sought [new text shown as <u>underlined</u> and deleted text shows as <del>strike through</del> ]
		<p>8a <u>That the total of the Upper Waitaki Nitrogen Headroom for all farming activities within the Haldon Zone or Mid-Catchment Zone is not exceeded; and</u></p> <p>8b <u>That the calculated nitrogen loss from the farming activity, in combination with calculated nitrogen losses from all other farming activities in the Zone, does not result in the relevant Nitrogen Load Limits set out in Table 15B(f) being exceeded; and</u></p> <p><b>Amend</b> Rule 15B.5.21(2) as follows:</p> <p><u>(2) the nitrogen loss calculation for the farming enterprise does not exceed the sum of the Upper Waitaki Nitrogen Headroom available to the properties forming the farming enterprise; and does not result in the total Headroom for all farming properties in the Zone, calculated in accordance with Schedule 27, being exceeded; and</u></p>
<p>Nitrogen Baseline v Baseline GMP Loss Rate within the Ahuriri Red Zone and Kellands Pond/Wairepo Arm Lake Zone after 30 June 2020:</p>	<p>Meridian understands that in some circumstances the Baseline GMP loss rate could exceed the Nitrogen Baseline.</p> <p>It is concerned that within those environments that are already fully allocated for nutrient loss, the result will be a worsening (due to over allocation) of water quality outcomes.</p>	<p><b>Amend</b> Policy 4.37(a) as follows:</p> <p>(a) avoiding the granting of any resource consent that will allow the nitrogen losses from a farming activity to exceed the Baseline GMP Loss Rate, <u>or the Nitrogen Baseline, whichever is the lesser</u>, except where Policy 4.38A applies.....</p>

Specific Plan Provision	Submission	Decision Sought [new text shown as <u>underlined</u> and deleted text shows as <del>strike through</del> ]
<p>Policy 4.37(a)</p> <p>Policy 15B.4.20(b)</p> <p>Policy15B.4.21(b)</p> <p>Rule 50.50A (condition 2)</p> <p>Rule15B.5.10 (conditions 4 and 6)</p> <p>Rule 15B.5.15 (condition 2)</p> <p>Rule 15B.5.16 (condition 2)</p>		<p><b>Amend</b> Policy 15B.4.20(b) as follows:</p> <p>(b) avoiding the granting of any resource consent that will allow nitrogen losses from farming activities in the Ahuriri Zone or Upper Waitaki Hill Zone to exceed the Baseline GMP Loss Rate <u>or Nitrogen Baseline, whichever is the less</u>, except where Policy 15B4.13 applies and</p> <p><b>Amend</b> Policy 15B.4.21(b) as follows:</p> <p>(b) all of the properties forming the Nutrient User Group are located within the Ahuriri Zone, and the combined nitrogen loss calculation from those properties does not exceed their combined Baseline GMP Loss Rate <u>or the combined Nitrogen Baseline, whichever is the lesser</u>; or</p> <p><b>Amend</b> Rule 5.50A, condition 2, as follows:</p> <p>2. Until 30 June 2020, the nitrogen loss calculation for the part of the property within the Lake Zone does not exceed the nitrogen baseline, and from 1 July 2020 the <u>lesser of the Nitrogen Baseline or Baseline GMP Loss Rate</u>.</p> <p><b>Amend</b> Rule 15B.5.10, Condition 4, as follows:</p>

Specific Plan Provision	Submission	Decision Sought [new text shown as <u>underlined</u> and deleted text shows as <del>strike through</del> ]
		<p>4. The aggregated nitrogen loss calculation for properties located within the Ahuriri Zone does not exceed the aggregate of the <u>lesser of the Baseline GMP Loss Rate or Nitrogen Baseline</u> for those properties; and</p> <p><b>Retain</b> Rule 15B.5.10, Condition 6</p> <p><b>Amend</b> Rule 15B.5.15, condition 2, as follows:</p> <p>2. Until 30 June 2020, the nitrogen loss calculation for the part of the property within the Ahuriri Zone or Upper Waitaki Hill Zone does not exceed the nitrogen baseline, and from 1 July 2020 the <u>lesser of the Nitrogen Baseline or Baseline GMP Loss Rate</u>; unless the nitrogen baseline was lawfully exceeded prior to 13 February 2016, and the application for resource consent demonstrates that the exceedance was lawful; and</p> <p><b>Amend</b> Rule 15B.5.16, condition 2, as follows:</p> <p>2. Until 30 June 2020, the nitrogen loss calculation for the part of the property within the Ahuriri Zone or Upper Waitaki Hill Zone does not exceed the Nitrogen Baseline, and from 1 July 2020 the <u>lesser of the Nitrogen Baseline or Baseline GMP Loss Rate</u>; unless the Nitrogen Baseline was lawfully exceeded prior to 13</p>

Specific Plan Provision	Submission	Decision Sought [new text shown as <u>underlined</u> and deleted text shows as <del>strike through</del> ]
		February 2016, and the application for resource consent demonstrates that the exceedance was lawful.
<p>Adaptive management: Policy 15B.4.20(d)</p>	<p>Meridian supports the policy recognition for adaptive management. The consistent adoption and implementation of an adaptive management approach as conditions of consent has been key to a number of the Upper Waitaki Water consents having been granted.</p> <p>Meridian seeks that Policy 15B.4.20(d) be changed to recognise a greater range of matters that have formed part of the adaptive management approaches implemented on existing resource consents.</p> <p>The current policy only references Water Quality Limits, not outcomes. A number of matters key to an effective adaptive management approach, such as periphyton, are included in the outcomes and should be given policy recognition, as should ensuring the Waitaki Nitrogen Load Limits in Tables 15B(f-h) are not exceeded.</p> <p>Further, given the importance of the adaptive management approach greater specificity of the key matters should be identified in the policy. This will provide greater clarity and assist in the implementation of the provision.</p>	<p><b>Amend</b> Policy 15B.4.20(d) as follows::</p> <p>(d) applying to any resource consent granted for the use of land for a farming activity, or any permit granted for a discharge associated with an aquaculture operation or community wastewater activity, adaptive management conditions in accordance with the water quality limits <u>and outcomes</u> set out in Tables <u>15B(a), 15B(b), 15B(c),15B(d) and 15B(e), and to achieve the Waitaki Nitrogen load limits in Tables 15B(f)-(h).</u> which include:</p> <ul style="list-style-type: none"> <li>(i) <u>ensuring appropriate monitoring of the receiving environment</u></li> <li>(ii) <u>imposing early warning triggers, where appropriate</u></li> <li>(iii) <u>achieving consistency across all consents within the same environment</u></li> <li>(iv) <u>identifying responsibilities and actions if exceedances occur.</u></li> </ul>
<p>Freshwater outcomes and limits:</p>	<p>Meridian is concerned that natural environment in the Waitaki Catchment, including the natural influences of the glacial</p>	<p><b>Insert</b> a new policy – Policy X to read:</p>

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<p>New Policy X</p> <p>Amendment to Tables 15B(a) and 15B(b)</p>	<p>origin of the water in the Waitaki Rivers and Lakes and natural variation within this environment, mean a number of the Freshwater Outcomes in Tables 15B(a) and 15B(b) will not be capable of being achieved. Examples of these include QMCI, Dissolved Oxygen, Temperature, Chlorophyll, Lake SPI and Fine Sediment.</p> <p>Providing recognition of naturally occurring processes gives effect to the Policy CA3(a) of the National Policy Statement for Freshwater Management 2014.</p> <p>The policy sought will enable consideration of the influence of these naturally occurring processes, including natural variation, on the achievement Freshwater outcomes and limits.</p> <p>Further, the Freshwater outcomes should be amended to recognise the particular naturally occurring processes and variation within the Waitaki Sub-Region mean the outcomes contained in Plan Change 5 are not able to be fully achieved for the Upper Waitaki Catchment.</p>	<p><u>Within the Waitaki sub-region Freshwater Management Units, when implementing Policies 4.1 and 4.2 recognise that the existing freshwater quality in the lakes and rivers is influenced by naturally occurring processes, including the glacial origin of the water, and natural variation.</u></p> <p><i>and</i></p> <p><b>Amend</b> the Freshwater Outcomes for Rivers and Lakes (Tables 15B(a) and 15B(b) in a manner consistent with Appendix 1 to this submission.</p>
<p>Waitaki Power Scheme:</p> <p>New Policy X1</p>	<p>While introductory material to PC5 recognises the use of water in the Waitaki catchment for hydro-electricity generation through the Waitaki Power Scheme, there is currently no policy recognition provided to this national value as</p>	<p><b>Insert</b> a new Policy X1 after policy 15B.4.5 as follows:</p> <p><u>Management of freshwater quality in the Waitaki Sub-region identifies and provides for the national value of the existing</u></p>

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	<p>recognised in the National Policy Statement for Freshwater Management.</p> <p>Section 2 of the CLWRP provides that the more specific sub-region provisions will take precedence. This brings into question the weight that ought to be accorded to CLWRP 'parent' policies (other than the strategic policies), including Policy 4.51.</p> <p>Policy 4.9(b) identifies that sub regional sections will identify and provide for ...economic values .... PC5, unless amended, does not implement this policy.</p> <p>In order to ensure that the CLWRP is capable of effective and consistent administration it is appropriate to provide policy recognition within Chapter 15 to the Waitaki Power Scheme. This policy recognition will give effect to the NPSREG. It will also give effect to the NPSFW by recognising one of the national values identified for this sub-regional section of the CLWRP.</p>	<p><u>hydro-electricity generation from the Waitaki Power Scheme, including as provided for in Policy 4.51.</u></p>
<p>Upper Ohau River:</p> <p>New Provision</p> <p>Table 15B(a) new footnote</p>	<p>The Upper Ohau River flows are affected by existing hydro-electricity infrastructure. It is appropriate to recognise the implication of these flows on the achievement of the Freshwater Outcomes for the Waitaki Rivers.</p>	<p><b>Insert</b> a new footnote into 15.B6 – Table 15B(a) as follows:</p> <p><u>6 Excludes the Upper Ohau River to the extent that the achievement of any outcome in this waterbody is affected by the effects of existing hydroelectricity infrastructure on river flows</u></p>



Specific Plan Provision	Submission	Decision Sought [new text shown as <u>underlined</u> and deleted text shows as <del>strike through</del> ]
<p>Lake Ruataniwha:</p> <p>New Provisions Table 15B(b) Table 15B(d)</p>	<p>Lake Ruataniwha has not been included into either Table 15B(b) or Table 15B(d).</p> <p>Ensuring appropriate water quality outcomes and limits within Lake Ruataniwha is important. This lake has important recreational and hydro generation values.</p>	<p><b>Amend</b> Table 15B(b) to ensure that Lake Ruataniwha is included as an Artificial Lake – on-river with the same outcomes as for Lake Benmore at Haldon Arm – other than the TLI for Lake Ruataniwha is to be set at 1.7, being consistent with the source lakes of Lakes Tekapo, Pukaki and Ohau.</p> <p>The measurement location shall be at the Ruataniwha Dam.</p> <p><b>Amend</b> Table 15B(d) to include Lake Ruataniwha as an Artificial Lake – on-river with the same limits as for Lake Benmore at Haldon Arm – other than the TLI for Lake Ruataniwha is to be set at 1.7.</p> <p>The measurement location shall be at the Ruataniwha Dam.</p>
<p>Water quality outcomes and limits for Kellands Pond and Wairepo Arm:</p> <p>Table 15B(b) Table 15B(d)</p>	<p>Water quality outcomes are proposed for Kellands Pond and Wairepo Arm (Table 15B(b)) but not water quality limits (Table 15B(d)).</p> <p>Noting Section 3.1 in Shaw and Palmer 2015, the water quality outcome for these water bodies in Table 15B(b) is not consistent with the operative policy of “preventing any increases in loss” (Policy 4.37) and the proposed amendment of that policy in PC5 being “freshwater quality is improved”. The outcome specified would provide for an increase in nutrient loss and further decrease in water quality.</p>	<p><b>Amend</b> Table 15B(b) to provide for an outcome TLI Kellands Pond and Wairepo Arm of a maximum of 3.2, or any less (high water quality) TLI.</p> <p><b>Amend</b> Table 15B(d) to provide for Kellands Pond (map reference: 1365979 5090899) and Wairepo Arm (map reference 1366937 5090850) to have:</p> <ul style="list-style-type: none"> <li>• TLI: 3.2</li> <li>• TP: &lt;20</li> <li>• TN: &lt;350</li> <li>• Chl-a: &lt;2 (annual median), &lt;10 (annual maximum)</li> </ul>

Specific Plan Provision	Submission	Decision Sought [new text shown as <u>underlined</u> and deleted text shows as <del>strike through</del> ]
	Given that these water bodies are within a Lake Zone, it is appropriate water quality limits be set.	<ul style="list-style-type: none"> <li>• Ammoniacal Nitrogen: &lt;0.03 (annual median), &lt;0.05 (annual maximum) or better (stricter water quality limits).</li> </ul>
Definition of Principal Water Supplier	Meridian seeks certainty that the PC5 provisions do not impose any obligation on a party that conveys water, but has no responsibility for its subsequent use, to be held responsible for undertaking nitrogen loss calculations and nutrient management for activities over which it has no influence.	<b>Amend</b> the definition of Principal Water Supplier so as to ensure that a party with no influence or responsibility for the water's subsequent use cannot be held responsible for nutrient management.

**Appendix 1: Amended Tables 15B(a) and (b) in response to submission point “Freshwater outcomes and limits”**

Table 15B(a) : Freshwater Outcomes for Rivers in the Upper Waitaki Freshwater Management Unit to be achieved by 2030

Freshwater Management Unit	River Type	Ecological Health Attributes			Macrophyte Attributes		Periphyton Attributes		Siltation Attribute	Human Health for Recreation Attributes			Tangata Whenua Attribute			
		QMC <sup>2</sup> (min score)	Dissolved oxygen (min saturation [%]) - Daily median or equivalent	Temp. (Max) [degrees C] 90 <sup>th</sup> percentile for daily max assessed on an annual basis	Emergent macrophytes [max bed cover of %]	Total macrophytes bed [max cover of %]	Chlorophyll a [mg chl-a/m <sup>2</sup> ] <sup>5</sup>	Filamentous Algae >20mm [max cover of bed]	Fine sediment <2mm diameter [max cover of bed] [%] <u>Excludes rivers naturally influenced by glacial flour</u>	Cyano-bacteria mat cover [%]	SFR G3	E.Coli [E.coli/100ml] Annual Median 95th Percentile				
Natural State	Rivers are maintained in a natural state															
Upper Waitaki	Alpine-upland	6	90	20	No Values Set	No Values Set	50	10	10	20	Good	<260	Freshwater mahinga kai species sufficiently for abundant customary gathering, water quality is suitable for their safe harvesting, and they are safe to eat			
	Hill-fed upland								15							
	Hill-fed lower								200					30	50	Good to Fair
	Lake-fed <sup>1</sup>								10					50 <sup>4</sup>	Good	
Spring-fed upland	20	30	50	10	20	Good	<260									
Valley and Tributaries	Hill-fed lower	5	70	20	No Values Set	No Values Set	200	30	15	50	Good to Fair	<540		Freshwater mahinga kai species sufficiently for abundant customary gathering, water quality is suitable for their safe harvesting, and they are safe to eat		
	Lake-fed								10		Good					
	Spring fed plains								20		No Value Set					
Hakataramea	Hill-fed lower	6	90	20	No Value Set	No Value Set	200	30	15	50	Good to Fair	<540			Freshwater mahinga kai species sufficiently for abundant customary gathering, water quality is suitable for their safe harvesting, and they are safe to eat	
	Spring-fed lower basin	5							30		30					10
Northern Fan Catchment	Hill-fed lower	6	70	20	No Value Set	No Value Set	200	30	15	50	Good to Fair	<540				Freshwater mahinga kai species sufficiently for abundant customary gathering, water quality is suitable for their safe harvesting, and they are safe to eat
	Spring-fed plains	5							30		50					

Table 15B(b) : Freshwater Outcomes for Lakes in the Upper Waitaki Freshwater Management Unit to be achieved by 2030

Lake Type	Lakes	Ecological Health Attribute			Eutrophication Attribute	Visual Quality Attribute	Human Health for Recreation Attribute			Tangata Whenua Attribute	
		Dissolved Oxygen (min saturation) [%]	Temp. (max) [° C]	Lake SPI <sup>4</sup> [min grade]			TLP [max. annual average]	Colour	Cyanobacteria [either mm <sup>3</sup> /L or cells/mL] [90 <sup>th</sup> percentile]		SFRG
					Annual median	95th percentile					
Natural state	Dumb-bell Lake Tasman Lake Blue Lake Hooker Lake	Lakes are maintained in a natural state									
Large High Country Lakes	Lake Tekapo/Takapo Lake Ōhau Lake Pukaki	70% - hypolimnion/ 90% epilimnion	19	Excellent Excludes lakes naturally influenced by glacial flour	1.7 for all lakes	Lakes are maintained in a natural state	<0.5mm <sup>3</sup> /L biovolume equivalent for all cyanobacteria or <500 cells/mL of total cyanobacteria	Good-Fair	<260	<260	Freshwater mahinga kai species sufficiently abundant for customary gathering, water is suitable quality for their safe harvesting, and they are safe to eat.
Small to medium sized high country lakes	Lake Alexandrina Lake McGregor Lake Middleton			High	Lake Alexandrina 3.1 Lake McGregor 3.2 Lake Middleton 3.6						
Artificial lakes - on-river	Lake Benmore Lake Aviemore Lake Waitaki				Lake Benmore at Haldon Arm 2.7 Lake Benmore at Ahuriri Arm 2.9 Lake Benmore at Dam 2.7						
Artificial Lakes Other	Kellands Pond Wairepo Arm	20% hypolimnion	Suitable for the purpose of the Lake	Suitable for the purpose of the Lake	4 for all Lakes	Natural colour of the lake is not degraded by more than 5 Munsell Units		Suitable for the purpose of the Lake			