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To: [Mailroom Mailbox](#)
Subject: Submission to PC7 from Central South Island Fish and Game
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Hello

Please find attached a submission from Central South Island Fish and Game in respect of Plan Change 7.

Please contact me with any further questions.

Kind regards

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SUBMISSION FROM: **CENTRAL SOUTH ISLAND FISH AND GAME COUNCIL**

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This submission is made in reference to the Proposed Plan Change 7 to the operative Canterbury Land and Water Regional Plan.

Trade Competition

Pursuant to Clause 6 of Schedule 1 of the Resource Management Act 1991, Central South Island Fish and Game (CSIFG) confirm they could not gain an advantage in trade competition through this submission.

Hearing

CSIFG wish to be heard in support of our submission and will consider presenting a joint case at hearing with others presenting a similar submission.

pp. 

Jay Graybill, Chief Executive
Date: 13 September 2019

ROLE OF FISH AND GAME

Fish and Game Councils are Statutory Bodies with Functions (*inter alia*) under Section 26Q Conservation Act 1987 to:

'manage, maintain and enhance the sports fish and game bird resource in the recreational interests of anglers and hunters...

(b) 'to maintain and improve the sports fish and game resource-

(i) by maintaining and improving access

(c) 'to promote and educate-

(i) by promoting recreation based on sports fish and game

(e) 'in relation to planning-

*(i)'to represent the interests and aspirations of anglers and hunters in the statutory planning process;
and*

(vii)'to advocate the interests of the Council, including its interests in habitats...'

In addition, Section 7(h) of the RMA states that all persons *'shall have particular regard to... the protection of the habitat of trout and salmon.'*

Introduction: The sports fishery and game bird resource in the region

1. The Central South Island Fish and Game regional boundary extends from the south bank of the Rakaia River in the north, to Shag Point in the south and extends westward to include all of the Mackenzie Basin. The geographical diversity of the area offers myriad opportunities for anglers and hunters to recreate around the region.
2. The sports fish and game bird resources of the CSIFG Region are highly valued by our licence holders. In the CSIFG Region there are approximately 20,000 licence holders who are anglers and 2,600 game bird licence holders. Across the entire Canterbury Region, there are over 36,000 anglers and 6,000 game bird hunters who hold licences.
3. The Orari Temuka Opihi Pareora Zone (OTOP), wholly within the CSIFG Region, contains a diverse spectrum of recreational opportunities for both angling and game bird hunting. CSIFG has seen and recorded a reduction in angling days on some of the hill-fed lower and spring-fed plains waterbodies in this area over the last twenty years. The National Angling Survey indicates that usage has declined by 30% in catchments dominated by pasture or cropland. These trends are consistent with national scale analyses of water quality state and trends in

New Zealand lowland rivers that confirm water quality metrics in the pastoral land cover class were low relative to catchments under natural land cover¹.

4. McKinnons Creek is a spring-fed tributary that feeds the lower Rangitata River and is a valued Salmon Spawning Site recognised in Schedule 17 of the Land and Water Regional Plan (LWRP). A volunteer-run salmon hatchery is operated at McKinnons Creek under resource consents held by CSIFG. Macrophytes and sediment cover in the Creek exceed LWRP objectives and high nitrate concentrations do not meet the NPS national bottom line for nitrate toxicity.
5. The Orari River flows from the Hewson Ranges, High Claytons, and Mt Peel foothills area draining steep hill country, and the upper Orari is designated as a High Naturalness Waterbody in the LWRP. The Orari River is the smallest river in New Zealand to sustain a chinook salmon run and it is recognised in Schedule 17 from the mouth upstream some 8 kilometres to Badham Bridge. The middle section often goes dry in the summer with surface flows being lost underground. The lower river, lagoon, and mouth support a valued, local recreational fishery for whitebait, flounder, trout, and sea run salmon, and provides waterfowl habitat for gamebird hunting opportunities. Ohapi Creek, a spring-fed tributary to the Orari, is also recognised in Schedule 17.
6. The Opihi Catchment is comprised of the Te Ana a Wai, Opihi, Opuha, Kakahu, Hae Hae Te Moana, Waihi, and Temuka rivers. Brown trout are widely distributed throughout the Opihi Catchment and rainbow trout are found in Lake Opuha and its tributaries and occasionally in the lower river.
7. The lower section of the Waihi-Temuka is recognised in Schedule 17, as well as the Opihi River from the Temuka River Confluence upstream to Fairlie, the Opuha River Gorge, and the Te Ana a Wai from the confluence with the Opihi upstream to the township of Albury.
8. The Opihi Catchment includes an artificial lake, Lake Opuha, which provides irrigation water to landowners as well as recreational opportunities such as fishing and hunting. The lake itself contains a healthy population of brown and rainbow trout and sustained over 4,000 angling days in the 2014/15 National Angling Survey².
9. The river provides good habitat for game birds and provides well-utilised game bird hunting opportunities during the hunting season. On a national scale, the CSIFG Region supports a healthy game bird population that offers high harvest rates and bag limits.
10. The Pareora River originates in the Hunter Hills and is characterised by long periods of stable flow over the summer period. Areas of the lower Pareora are subject to drying during the summer months, cutting off fish passage and fish migration, and often does not meet the LWRP objectives for macroinvertebrate health. The Pareora River sustains a brown trout fishery with the occasional rainbow trout. The trout spawning that does take place in the river is considered important for the maintenance of the fishery. The results from the most

¹ Unwin, MJ. "Angler usage of New Zealand lake and river fisheries: Results from the 2014/15 National Angling Survey." July 2016, p51.

² Ibid, 133.

recent National Anglers Survey 2014/15 indicate that angler days have dropped considerably, some 96%, compared to 20 years ago³. This can largely be attributed to lower flows and poorer water quality.

11. The Opuha Environmental Flow Release Advisory Group (OEFrag) is a community stakeholder group formed to reach consensus on flow releases from Opuha Dam to meet community needs including irrigation, instream flows, and domestic/industrial users. CSIFG was a member of this group.
12. By tracking weather, climate, rainfall, snow pack, etc, the group was able to anticipate likely “dry” periods and by mutual agreement would recommend to the Canterbury Regional Council to reduce irrigation takes or minimum flows with the goal of preventing the reservoir from depleting its storage before the end of the irrigation season.
13. It was considered that a “dry” reservoir didn’t benefit any community users of Opuha water. Through active monitoring of conditions and applying flexibility and early intervention to conserve storage, OEFrag was able to maintain a connected Opuha/Opihi River System to the mouth over a number of years when strict adherence to consented flow and release conditions would have caused the river to “run dry” and irrigators to “run out of water” before the end of the irrigation season.

General Submission on PC7

14. CSIFG’s submission relates specifically to the provisions affecting activities within CSIFG’s regional boundaries, being the region-wide provisions proposed in Part A and the OTOP sub-regional provisions proposed in Part B.
15. CSIFG supports the intent of the Canterbury Regional Council and the OTOP Zone Committee in developing an integrated catchment land and water plan change to address the resource management issues in the OTOP sub-region to ensure that the catchment’s land and water resources are sustainably managed, and its ecological and recreational values protected. In particular, CSIFG supports the intent of Proposed Plan Change 7 (PC7) to reduce nitrogen leaching from farming activities in high concentration zones and near sensitive and degraded waterways, management of phosphorus in high runoff risk zones, and further restrictions around stock exclusion in springs and drains.
16. PC7, as it specifically relates to the OTOP sub-region, sets provisions that relate to water quality. Given the statutory role of Fish & Game to manage the sports fish and game bird resource, CSIFG seeks provisions to ensure that water quality is maintained or improved where it is degraded, and that water quality limits and freshwater outcomes safeguard life-supporting capacity. CSIFG seeks meaningful improvements to water quality that set a trajectory towards achieving ecosystem health.

³ Ibid.

17. PC7 also sets out an environmental flow and allocation framework for the waterways within the OTOP zone. CSIFG seeks that the framework will improve instream health and provide adequate flows for fish passage and species life cycles, spawning, habitat, and recreational amenity.
18. As PC7 was notified in advance of essential habitat survey data for the mainstem Opihi River becoming available⁴, it is unclear to what extent the proposed environmental flows achieve ecological outcomes. It is also unclear how the flow requirements for the Opihi River have been quantified, and how the “alternative management regime” advances such requirements. CSIFG considers that habitat and ecosystem health and recreational amenity values are important factors to consider when developing an environmental flow regime and allocation framework.
19. The importance of an alternative flow management regime that can respond proactively to the hydrological and climatic-induced conditions in the Opihi Catchment is critical to achieve connectivity and variability as proposed in Policy 14.4.35 and to achieve the aspirations of the OTOP Zone Committee as outlined in Recommendation 5.3.1.
20. CSIFG seeks that the plan has regard for s7 of the Resource Management Act 1991 (RMA) and the protection of the habitat of trout and salmon.

⁴ NIWA report provided to CSIFG by a 3rd party on 5 September 2019.

Annexure A – Submission of Central South Island Fish and Game- Reasons and Decisions Sought

Note: The submission has been set out in an attempt to be user-friendly. The outcomes sought and the wording used is as a suggestion only, where a suggestion is proposed it is with the intention of "or words to that effect."

Section & Page Number	Sub-section/Point	Support/Op pose	Reason (in addition to the above)	CSIFG seeks the following decision (Note: amendments sought to the text of PC7 are shown by additions in <u>underline</u> and deletions by striketrough)
2.9 Definitions				
Definition	Indigenous Freshwater Species Habitat	Support	<p>The intent of the definition better recognises and protects freshwater indigenous species than the status quo and provides the Regional Council with the ability to assess and consider the impacts of water abstraction, gravel extraction, and discharges on indigenous species habitat. This has benefits for all valued freshwater species.</p> <p>CSIFG submits that regard must be given under s7(h) of the Resource Management Act 1991 (RMA) and that Fish & Game, as the statutory managers of the sports fish resource under the Conservation Act 1987, is appropriately consulted where there is a potential for sports fish habitat to be adversely affected. This is expanded upon in related policies below.</p>	Retain.
Section 4 Policies				
Livestock Exclusion from Water Bodies	Policy 4.31	Support	The policy provides better protection for waterway health, aquatic life and ecosystems, and habitat from the adverse effects of stock.	Retain.
Damming and Diversion of Water Bodies	Policy 4.47	Support	The policy recognises the importance of ecological, cultural, recreational and amenity values of a waterbody and the adverse impacts that diversions can have on these values if not managed and considered appropriately.	Retain.

Abstraction of Water	Policy 4.61A	Support	<p>The policy aims to preserve Indigenous Freshwater Species Habitat when considering water abstraction, which would have follow-on benefits for ecosystem health and valued freshwater species.</p>	Retain.
Managed Aquifer Recharge (MAR)	Policy 4.99	Oppose in part	<p>Subclause (b) of the policy seems to provide for MAR if adverse effects will be minimised for any take from a surface water catchment where the environmental flow and water allocation limits are not met.</p> <p>This would not safeguard life-supporting capacity and ecosystem health that is protected by environmental flow regimes (EFRs) and allocation limits, does not give effect to the NPSFM in avoiding further over-allocation, nor give effect to the objectives and policies in the Canterbury Regional Policy Statement related to the management of water quantity.</p> <p>The policy undermines the comprehensive processes undertaken in establishing EFRs for waterbodies in the region.</p>	<p>Delete subclause (b) and add wording as follows (or similar):</p> <p>Improve the quality and/or quantity of groundwater, and any hydraulically connected surface water body, by providing for managed aquifer recharge where: (list clauses a, c, d, e, f, g)</p> <p><u>and avoiding any additional abstraction from a surface water catchment where the environmental flow and water allocation limits are not met.</u></p>
Managed Aquifer Recharge (MAR)	Policy 4.100	Oppose in part	<p>CSIFG is generally supportive of MAR if it is managed appropriately and if it recognises the importance of protecting surface water flows for life-supporting capacity, ecosystem health, and recreational amenity values.</p> <p>Subclause (a) of the policy allows for the over-allocation of surface water if proposals can demonstrate the environmental benefits of MAR to the receiving waterbody outweigh any adverse effects.</p> <p>EFRs and allocation limits are set in plans to help safeguard the life-supporting capacity and ecosystem health of waterways and have undergone comprehensive processes to establish them. The NPSFM objectives and policies requires the avoidance of any further over-allocation of fresh water and to phase out existing over-allocation.</p>	<p>Amend to the following (or similar):</p> <ol style="list-style-type: none"> restrict <u>refuse any new application to take additional water in an over-allocated catchment any further over allocation of surface water to proposals which demonstrate the environmental benefits of the managed aquifer recharge to the receiving waterbody outweigh any adverse effects; and</u> if the applicant holds an existing water permit that authorises the take and use of surface water for irrigation and proposes to use a portion of that water for managed aquifer recharge, require that there is no net increase in the total rate of take or volume of water <u>the portion of water transferred must be for no more than 90% of the previously consented total rate of take or volume of water compared with that authorised under the existing permit.</u>

			The proposed policy is not sustainable management of resources and would undermine the flow regimes set to protect waterbodies.	
Habitat of Indigenous Freshwater Species	Policy 4.102	Oppose in part	<p>CSIFG is supportive of providing for fish passage for valued freshwater species that includes indigenous fish and sports fish species to enable migration to access a range of habitats necessary to support different life stages such as spawning and rearing, feeding, and finding refuge. Fish & Game is a member of the National Fish Passage Advisory Group.</p> <p>The management of indigenous species and sports fish lies outside of the Resource Management Act 1991 (RMA). The Department of Conservation is responsible for indigenous fish species and has a function to protect recreational freshwater fisheries, and the relevant Fish and Game Council is responsible for sports fish species as directed under the Conservation Act 1987. It is also the responsibility of these two statutory agencies to manage the interaction of these species.</p> <p>The Regional Council has prescribed functions under s30 RMA that must give effect to Part 2 with particular regard to be given to the protection of the habitat of trout and salmon under s7(h). Therefore, the Regional Council can manage the habitat of aquatic life that includes water quantity and quality, but not the species themselves. CSIFG considers that setting policy for the installation of structures to interfere with the migration of aquatic life is outside of the Regional Council's responsibilities in terms of provisions in the Regional Plan.</p> <p>CSIFG recognises and supports the exclusion of sports fish in certain areas where the benefits to threatened indigenous fish are great and the adverse impacts on sports fish populations are minimal. CSIFG has approved a number of sports fish barriers in its region to help protect threatened indigenous species. A global consent held by Environment Canterbury, CRC172229 (relevant pages in Appendix 1), with an expiry of 2051, provides for this process to take place with Fish and Game approval after assessment is made on any potential adverse effects to the sports</p>	<p>Amend to (or similar wording):</p> <p><u>Structures enable the safe passage of indigenous fish and sports fish species while avoiding as far as practicable, the passage of any invasive, pest or nuisance fish species pest organisms as defined in the Canterbury Regional Pest Management Plan</u> by</p> <ul style="list-style-type: none"> a) the appropriate design, construction, installation and maintenance of new in-stream structures; and b) the modification, reconstruction or removed <u>removal</u> of existing in-stream structures. <p><i>Advice note: Responsibility for indigenous fish species and fish passage matters resides with the Department of Conservation and the responsibility of sports fish species with the relevant Fish and Game Council as set out in the Conservation Act 1987 and the Freshwater Fisheries Regulations 1983. Species interaction matters are the primary responsibility of the Department of Conservation and the relevant Fish and Game Council.</i></p>

			<p>fishery. At this point in time, CSIFG has supported the proposals that have come forward.</p> <p>The Canterbury Regional Pest Management Plan identifies organisms that are declared as pests and also includes Organisms of Interest (OoI) for those organisms that may cause adverse effects, particularly to biodiversity values and warrant being included on the “watchlist” for ongoing monitoring and future control opportunities. Therefore, this plan is relevant when considering how organisms are classified and managed.</p> <p>In addition to the above, as the policy stands, it would allow for any waterbody in the region to have structures erected that prohibit sports fish passage as the policy itself is not specific to “Indigenous Freshwater Species Habitat”.</p> <p>The policy does not give regard to:</p> <ul style="list-style-type: none"> • s7 RMA that requires particular regard be given to the habitat of trout and salmon • provisions in the LWRP related to the protection of Schedule 17 salmon spawning waters • the Ahuriri and Rangitata Water Conservation Orders that both recognise the outstanding fishery, spawning, and angling values of these waterways. The Rangitata WCO also requires fish passage of salmon to be maintained. • Freshwater Fisheries Regulations 1983 Part 6 • Conservation Act 1987 <p>CSIFG seeks that the policy is amended to accurately reflect the responsibilities of the Regional Council and to give appropriate regard to the statutory agencies tasked with managing freshwater species in New Zealand.</p>	
Submission of Water Quality Data	Policy 4.103	Support	<p>The policy would provide a better inventory of water quality data across the region in an efficient manner. This would enable a more robust assessment of waterbody health and of any trends over</p>	Retain.

			time, making it more efficient to identify areas that are not meeting water quality limits or outcomes.	
Section 5 Region-wide Rules				
Stock Exclusion	Rule 5.71	Support	The rule provides better protection of waterbody health, aquatic ecosystems, and habitat from the adverse effects of stock, and benefits valued freshwater species.	Retain.
Structures	Rule 5.136, 5.137, 5.138, 5.139	Support	The disturbance of the bed of a waterbody can have adverse effects on freshwater habitat. The rule provides protection for valued freshwater species.	Retain.
Structures	Rule 5.140	Support in part	<p>Subclause (3) acknowledges the importance of maintaining fish passage in a waterbody for spawning and life cycles.</p> <p>Subclause (5(b)) describes culvert installation. The clause includes an ‘or’ statement requiring either 25% of the internal width of the culvert is below bed level <i>or</i> is covered with water at the estimated 7DMALF. To ensure fish passage as directed by subclause (3) both requirements are necessary. The natural fall of the bed (25% buried) in the culvert and 7DMALF flow are important for passage at critical low flow periods.</p>	<p>Retain subclause (3).</p> <p>Amend to: 5(b) The culvert is installed so that the base of the culvert is below bed level to an extent that a minimum of 25% of the internal width of the culvert is below the level of the bed of the river <u>and</u> or is covered with water at the estimated 7DMALF; and</p>
Gravel from Lake and Riverbeds	Rule 5.151	Support in part	<p>Subclause (3) acknowledges the importance of maintaining fish passage in a waterbody for spawning and life cycles.</p> <p>Subclause (5(b)) describes culvert installation. The clause includes an ‘or’ statement requiring either 25% of the internal width of the culvert is below bed level <i>or</i> is covered with water at the estimated 7DMALF. To ensure fish passage as directed by subclause (3) both requirements are necessary. The natural fall of the bed (25% buried) in the culvert and 7DMALF flow are important for passage at critical low flow periods.</p>	<p>Retain subclause (3).</p> <p>Amend to: 5(b) The culvert is installed so that the base of the culvert is below bed level to an extent that a minimum of 25% of the internal width of the culvert is below the level of the bed of the river <u>and</u> or is covered with water at the estimated 7DMALF; and</p>

Gravel from Lake and Riverbeds	Rule 5.152	Support	Discharges to a waterway can have adverse effects on freshwater habitat. The rule provides protection for valued freshwater species.	Retain.
Vegetation in Lake and Riverbeds	Rule 5.163	Support	The removal of instream vegetation and any related discharge can adversely affect freshwater habitat by disturbing the bed and the subsequent release of sediment. The rule provides protection valued freshwater species.	Retain.
Earthworks and Vegetation Clearance in Riparian Areas	Rule 5.167	Support	The removal of vegetation in riparian areas and any related discharge can adversely affect freshwater habitat through the destabilisation of surrounding land and the mobilisation of sediment. The rule provides protection for valued freshwater species and their habitats.	Retain.
Earthworks and Vegetation Clearance in Riparian Areas	Rule 5.168	Support	Earthworks near waterbodies and in areas identified as having a high soil erosion risk and any related discharge can adversely affect freshwater habitat. The rule provides greater protection for valued freshwater species and their habitats.	Retain.
Plantation Forestry	Rule 5.189	Support in part	<p>Salmon spawn in some waterbodies near plantation forestry blocks where activities taking place on the blocks such as bed disturbance, vegetation clearance, harvesting or instream diversions could have adverse effects on spawning habitat.</p> <p>Works near these important spawning waters should not take place as a permitted activity given the possible adverse effects on spawning success.</p>	<p>Amend subclause (b) to:</p> <p>(b) the planting, <u>harvesting</u>, replanting, or clearance of vegetation...</p> <p>Amend to include new condition: <u>The activity is not undertaken in a salmon spawning site listed in Schedule 17.</u></p>
Managed Aquifer Recharge (MAR)	Rule 5.191	Support in part	<p>As signalled in the submissions related to Policies 4.99 and 4.100 above, CSIFG is supportive of MAR if the protection of surface waterways in over-allocated catchments can be achieved and the outcomes for those waterways met.</p> <p>Subclause (2) of the rule provides for a take for managed aquifer recharge if it is a replacement of a lawfully established MAR take or if the take, in addition to all existing consented takes, does not result in an environmental flow or allocation limit being exceeded.</p>	<p>Amend Subclause (2) to (or similar wording):</p> <p>...the take, in addition to all existing consented takes, does not result in an any further exceedance of any environmental flow or an allocation limit, or rate of take, or seasonal or annual volume limit set in Sections 6 to 15 of this Plan for that surface water body, <u>or an environmental flow not being met.</u></p>

			The policy is unclear as to whether it applies to a change of use from a consent already held for a surface water take that is not presently granted for managed aquifer recharge but for some other use i.e. irrigation, or if it applies to a new surface water take for further abstraction in an over-allocated catchment. This is important to clarify as the transfer of use in an over-allocated catchment is considered to be quite different to applying for additional water over and above that already consented.	
Managed Aquifer Recharge (MAR)	Rule 5.192	Oppose in part	As submitted at Rule 5.191 and related policies, the rule would provide a consenting pathway (non-complying) to grant a new surface water take for MAR in an already over-allocated waterbody if the proposal demonstrates the benefits outweigh adverse effects. This does not give effect to the NPSFM, CRPS or LWRP to phase out over-allocation.	Amend to: ...that does not meet one or more of the conditions of Rule 5.191, excluding condition 1 <u>or</u> 2, is a non-complying activity.
Managed Aquifer Recharge (MAR)	Rule 5.193	Oppose in part	The rule should not allow for the further over-allocation of water for the purpose of MAR. Flow regimes and allocation limits are set to safeguard life-supporting capacity and ecosystem health. Allowing for a waterbody to be over-allocated is not sustainable planning and does not give effect to the NPSFM, CRPS or LWRP to phase out over-allocation.	Amend to: ...that does not meet condition 1 <u>or</u> 2 of Rule 5.191 is a prohibited activity.
13.4 Policies				
Section 13 Ashburton Policies	Policy 13.4.11	Support	Better defining the provisions and maps around the exclusion of stock from drains is important for landowners to have clarity and certainty around the requirements. The policy framework acknowledges the adverse effects that contaminants entering waterways via overland flow can have on ecosystem health.	Retain.
Hinds Drains	Policy 13.4.22	Support	The policy acknowledges the work and recommendations of the Hinds Drains Working Party.	Retain.

Hinds Drains	Policy 13.4.23	Support	The policy acknowledges the work and recommendations of the Hinds Drains Working Party.	Retain.
13.5 Rules				
Stock Exclusion	Rule 13.5.26	Support	The proposed rule provides greater clarity for landowners around stock exclusion from drains and helps to address contaminants being deposited into waterways via overland flow.	Retain.
13.6 Freshwater Outcomes				
Lower Hinds EFR	Table 13(e)	Support	The table acknowledges the work and recommendations of the Hinds Drains Working Party.	Retain.
14.1A Definitions				
Definitions	New definition for the terms “small artificial fresh” and “large artificial fresh”		<p>Policy 14.4.35 requires water to be released from the dam as artificial freshes to help achieve connectivity and flow variability. In addition to this, there could be benefit in the freshes to help reduce periphyton, assist with river mouth opening and health, and provide for recreational amenity.</p> <p>CSIFG does not consider that the policy provides enough flexibility to be able to target specific environmental health factors and that the quantities of water and timeframes for each release may not be the most appropriate way to achieve environmental outcomes.</p>	<p>Insert new definition as:</p> <p>(a) <u>Small artificial fresh means the voluntary release of 300,000 m³ measured over a 24-hour period at the Opuha Dam Downstream Weir as volume released above the pre-fresh 24-hour average flow at the Weir.</u></p> <p>(b) <u>Large artificial fresh means the voluntary release of 600,000 m³ measured over a 24-hour period at the Opuha Dam Downstream Weir as volume released above the pre-fresh 24-hour average flow at the Weir.</u></p>
14.4 Policies				
Tangata Whenua	Policy 14.4.2	Support	The policy recognises the cultural importance of the OTOP Zone to Ngāi Tahu and provides direction to ensure activities proposed	Retain.

			under the RMA do not have adverse effects on culturally significant sites.	
Tangata Whenua	Policy 14.4.3	Support in part	<p>CSIFG supports water quality and quantities that enable freshwater mahinga kai to be safely gathered, harvested and consumed.</p> <p>Clause (c) of the policy references an allocation of water to be reserved in accordance with Table 14(l) for the enhancement of mahinga kai. However, Table 14(l) makes reference to a “cultural allocation”. It is submitted that the terms align for clarity.</p>	<p>Amend clause (c) to align with Table 14(l):</p> <p>c. reserving an <u>a cultural</u> allocation of water from the Temuka Freshwater Management Unit...</p>
Efficient Use of Water	Policy 14.4.12	Support	The policy directs the efficient use of water by restricting the volume and/or rate of water to that which reflects past use per Method 1 of Schedule 10. This gives effect to the NPSFM and CRPS and the direction to phase out over-allocation.	Retain.
Transfers of Water Permits	Policy 14.4.13	Support	The policy assists with phasing out over-allocation and gives effect to the NPSFM and the CRPS. It recognises in over-allocated catchments the need to surrender a portion of the water to assist in achieving environmental flows and allocation limits and prohibits any transfer in the Temuka FMU, which is considered to be severely overallocated.	Retain.
Out of Catchment Water	Policy 14.4.14	Support in part	<p>The recognition and protection of rūnanga values, customs and culture is appropriate and a policy directing this is supported by CSIFG.</p> <p>Additionally, CSIFG considers it important to recognise the values of the alpine rivers (a likely source of out of catchment water) and the habitats, species, and recreational values that they sustain. While it is not clear at this point where out of catchment water will come from, it is important that provisions are in place to protect waterbodies (as the source for bringing additional water into the OTOP Zone) from over-allocation.</p> <p>Takes from surface water to provide for out of catchment water should only be considered where an environmental flow regime</p>	<p>Include an additional policy as follows (or similar wording):</p> <p>Policy 14.4.14A: <u>Takes from surface water to introduce water from outside the catchment should only be considered where an environmental flow regime and allocation limits for the flow band from which water is sought is established to ensure that no adverse effects arise from further abstraction.</u></p>

			<p>and allocation limits are established for that waterbody and specifically for the flow band from which water is sought to ensure that no adverse effects arise from further abstraction.</p> <p>For example, the Water Conservation Order for the Rangitata River (a possible source of water) is silent on flows and allocation above 110m³/s. Allocation has been granted and stacked up to 132m³/s with a further consent application under appeal. Until this is addressed in a future planning process, it is not sustainable management to continue to allocate more water without a planning framework.</p>	
Livestock Exclusion from Waterbodies	Policy 14.4.15	Support	Excluding stock from waterbodies will help meet water quality outcomes as contaminants arising from stock access to waterways and riparian margins have adverse effects on freshwater habitats and ecosystem health.	Retain.
Livestock Exclusion from Waterbodies	Policy 14.4.16	Support	The protection of rūnanga values through the exclusion of stock from waterbodies will help meet water quality outcomes as contaminants arising from stock access to waterways and riparian margins have adverse effects on freshwater habitats and ecosystem health.	Retain.
Nutrient Management	Policy 14.4.17	Support	The policy requires a resource consent for higher risk activities such as land use in High Runoff Risk Phosphorous Zones related to winter grazing of cattle or deer on properties more than 20ha, and intensive use within Mataitai Protection Zones adjoining surface waterbodies. The policy will help to ensure appropriate management of these sensitive areas to reduce sediment, phosphorous and contaminants to waterways.	Retain.
Nutrient Management	Policy 14.4.18	Support	Improving water quality through nutrient management by requiring nitrogen reductions in high concentration areas and avoiding the granting of resource consents for farming to exceed the Baseline GMP Loss Rate is considered necessary to improve instream health.	Retain.

			<p>Within the Rangitata Orton High Nitrogen Concentration Area, targeted reductions of nitrogen are required to set a trajectory that moves towards ecosystem health. CSIFG submits that these reductions should be robust enough to improve water quality considerably in McKinnons Creek, a spring-fed tributary to the Rangitata River that is recognised in Schedule 17 of the LWRP as a Salmon Spawning Site.</p> <p>The technical reports indicate that McKinnons has a moderate to high cover of emergent macrophytes and has sediment cover that often exceeds LWRP objectives. This is likely to impair water quality and aquatic community health if not addressed. Nitrate nitrogen concentrations in McKinnons are very high and do not meet the national bottom line for nitrate toxicity.</p>	
Nutrient Management	Policy 14.4.19	Support	<p>The policy provides guidance on the reduction of nitrogen loss beyond Baseline GMP Loss Rates in High Nitrogen Concentration Areas and limits the duration of resource consent for farming. This gives effect to the NPSFM and the requirement to reduce over-allocation to safeguard life-supporting capacity and ecosystem health.</p> <p>The policy provides direction and is expected to help improve water quality in valued waterways such as McKinnons Creek, a recognised Salmon Spawning Site in the LWRP.</p>	Retain.
Consent Reviews	Policy 14.4.21	Support	The policy gives effect to the NPSFM and assists in addressing over-allocation to safeguard life-supporting capacity and ecosystem health.	Retain.
Orari Freshwater Management Unit	Policy 14.4.25	Support	The policy recognises the hydrological interaction between groundwater and surface water within the conjunctive use zone and the effects that groundwater abstraction can have on surface water flow. The policy gives effect to the NPSFM.	Retain.
Rangitata Orton High Nitrogen	Policy 14.4.28	Support	The policy recognises the adverse effects that can arise from point source discharges from industrial or trade waste disposal on water quality, life-supporting capacity, and ecosystem health.	Retain.

Concentration Area				
Temuka Freshwater Management Unit Over Allocation	Policy 14.4.30	Support	The rule requires the phasing out of over-allocation, giving effect to the NPSFM. The increase in minimum flows and decrease in allocation, along with pro rata restrictions is expected to result in improvements in surface water flows which will have positive impacts on ecosystem health and aquatic life.	Retain.
Over Allocation	Policy 14.4.31	Support	The policy sets a framework for reviewing water permits if by 2035, the allocation limits have not been achieved. This will help to address the phasing out of over-allocation and give effect to the NPSFM.	Retain.
Transfer of Water Permits	Policy 14.4.32	Support	Avoiding the site to site transfer of a water permit that has a high or moderate stream depletion effect will help address over-allocation, giving effect to the NPSFM, CRPS and LWRP.	Retain.
Cultural Allocation	Policy 14.4.33	Support in part	<p>The policy recognises the importance of the Temuka FMU to Ngāi Tahu and provides for an allocation of surface water for the enhancement of mahinga kai and tangata whenua values.</p> <p>The policy should accurately reflect the terminology used elsewhere in the plan and in the associated Table 14(l) for clarity.</p>	<p>Amend to:</p> <p>Recognise and provide for the cultural importance of the Temuka Freshwater Management Unit to Ngāi Tahu by reserving an a cultural allocation of surface water from the Temuka River for the enhancement of mahinga kai and associated tangata whenua values.</p>
Opihi FMU Surface Water Flows	Policy 14.4.34	Support in part	The objective of the policy is to improve surface water flows in un-augmented rivers with the Opihi FMU. The policy refers to flows related to the Opihi mainstem. If the intent is to improve the flows in the un-augmented rivers, then only those tables should be referred to in the policy, as the Opihi mainstem is an augmented river.	<p>Amend to:</p> <p>Surface water flows in un-augmented rivers within the Opihi Freshwater Management Unit are improved by ensuring all AA, BA, KIL, AN and BN abstractions comply with the applicable environmental flow and allocation regimes set out in Tables 14(m) to <u>14(t) and Table 14(y)</u> by the specified dates.</p>
Opihi FMU Surface Water Flows	Policy 14.4.35	Oppose in part	CSIFG supports the intent of the policy that recognises the importance of connectivity and flow variability for instream health and life-supporting capacity. Flow variability is an efficient means of using environmental flows released from the dam to help	<p>Amend to:</p> <p>Consequential amendments are required to clauses (a) and (c) that delete reference to Table 14(w)</p>

		<p>manage nuisance periphyton and achieve water quality parameters and environmental outcomes. These same sentiments underpinned OEFRAG's approach to managing surface water.</p> <p>Clause (d) does not appear to address and take into account how the lake refills as the policy requires water released for augmentation must equal inflows to the lake.</p> <p>CSIFG supports flow variability through releases from the dam to help achieve improved environmental outcomes. As proposed, clause (e) does not provide flexibility to adapt to river conditions or requirements to help provide for spawning and life cycles of freshwater species. The proposed policy limits the ability to provide flow variability designed for purposes other than periphyton management such as maintaining river mouth health, triggering fish migration or providing for recreational amenity. Freshes may be considered necessary outside of the November to March period specified in the policy; the amendment suggested allows for this to happen in addition to maintaining the requirement of a minimum number of freshes over summer.</p> <p>CSIFG supports the provision in clause (e) to allow for the minimum flow to be reduced for a period of time sufficient to compensate for the volume of water released for the fresh. If proposed changes to Table 14(v) are accepted, it would create a greater gap between Full Availability, Level 1 Regime and Level 2 Regime. Therefore, consequential amendments to this policy would be considered necessary so that the recouping of water only occurs from the next level i.e. if the artificial fresh occurs during the Full Availability Regime, then the flows to recoup should reflect the Level 1 Regime. Likewise, if the artificial fresh occurs during the Level 1 Regime, then the flows to recoup should reflect the Level 2 Regime.</p> <p>Consequential amendments are necessary in clauses (a) and (c) if CSIFG's submission point to delete Table 14(w) is accepted.</p>	<p>(a) ...for Saleyards Bridge as set out in Tables 14(v) and 14(w); and</p> <p>(c) ...for saleyards Bridge as set out in Table 14(v) and 14(w) and includes sufficient water to provide...</p> <p>(d) when the level of Lake Opuha falls <u>is</u> below RL370, water released from the Opuha Dam for augmentation of the Opuha and Opihi mainstems equals the <u>lesser of the Level 2 environmental flows set out in Table 14(v) or the sum of the inflows in to the Lake plus community supplies restricted in accordance with a Water Supply Strategy</u>; and</p> <p>(e) <u>artificial freshes are provided for through the release of flow from the Opuha Dam, and in the period 1 November to 31 March of every year, three releases of water for small artificial freshes of at least 30 cumecs, or alternatively one large and one small artificial fresh, with each artificial fresh being at least one week apart two releases of water where one release is at least 60 cumecs and the other release is at least 30 cumecs, are provided for a duration of not less than two hours, except that:</u></p> <p style="padding-left: 40px;">(i) during any period when the Level 2 flow regime (as set out in Tables 14(v) and 14(w)) applies, <u>the number of artificial freshes shall be reduced as follows:</u></p>
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				<table><tr><th><u>Duration of Level 2 Regime between 1 November and 31 March</u></th><th><u>Minimum Requirements for artificial freshes</u></th></tr><tr><td><u>Up to 1.5 months of Level 2 Regime apply</u></td><td><u>Either 2 small freshes or 1 large fresh</u></td></tr><tr><td><u>More than 1.5 months and up to 3.5 months of Level 2 Regime</u></td><td><u>1 small fresh</u></td></tr><tr><td><u>More than 3.5 months of Level 2 Regime</u></td><td><u>No freshes required</u></td></tr></table> <p><u>and</u></p> <p>(ii) immediately following an artificial fresh, the minimum flow may be reduced to the Level 2 minimum flow set out in Table 14(v) and 14(w) for a period of time sufficient to compensate for the volume of water released for the fresh.</p> <p>If the amendments to Tables 14(v) and 14(w) are accepted, then a further amendment to the clause referred to above (e(ii)) is sought as follows:</p> <p>(ii) immediately following an artificial fresh, the minimum flow may be reduced to:</p>	<u>Duration of Level 2 Regime between 1 November and 31 March</u>	<u>Minimum Requirements for artificial freshes</u>	<u>Up to 1.5 months of Level 2 Regime apply</u>	<u>Either 2 small freshes or 1 large fresh</u>	<u>More than 1.5 months and up to 3.5 months of Level 2 Regime</u>	<u>1 small fresh</u>	<u>More than 3.5 months of Level 2 Regime</u>	<u>No freshes required</u>
<u>Duration of Level 2 Regime between 1 November and 31 March</u>	<u>Minimum Requirements for artificial freshes</u>											
<u>Up to 1.5 months of Level 2 Regime apply</u>	<u>Either 2 small freshes or 1 large fresh</u>											
<u>More than 1.5 months and up to 3.5 months of Level 2 Regime</u>	<u>1 small fresh</u>											
<u>More than 3.5 months of Level 2 Regime</u>	<u>No freshes required</u>											

				<ul style="list-style-type: none"> • <u>the Level 1 minimum flow set out in Table 14(v), when the fresh occurs during the Full Availability Regime; or</u> • <u>the Level 2 minimum flow set out in Table 14(v) and 14(w), when the fresh occurs during the Level 1 Regime</u> <p>for a period of time sufficient to compensate for the volume of water released for the fresh.</p>
Opihi FMU Surface Water Flows	Policy 14.4.36	Support in part	Subclause (b) as currently proposed is unclear in the relationship between AA and BA permits and Tables 14(u) and 14(y) which specify AN and BN permits. For clarity, an amendment is suggested that better ties the referenced permits to the tables specified.	Amend subclause (b) to: (b) requiring, when the level of Lake Opuha <u>is falls</u> below RL370, AA and BA permits <u>to be treated as AN and BN permits respectively and to be</u> subject to an environmental flow and allocation regime on the Opihi mainstem at State Highway 1 as set out in Table 14(u) and Table 14(y), determined taking into account the unmodified flow of the Opihi mainstem; and
Opihi FMU Surface Water Flows	Policy 14.4.37 and 14.4.38	Oppose in part	<p>The principles and benefits of an alternative management regime, referred to in this policy as ‘alternative minimum flow regime’, is recognised and supported in that it provides for more efficient management of lake storage and provision for maintaining environmental flows.</p> <p>The term ‘alternative management regime’ seems to be more consistent with the definition proposed in Section 14.1A Definitions. If there is preference to use ‘alternative minimum flow regime’ in Policies 14.4.37 and 14.4.38, then CSIFG questions whether clause (d) is necessary as it is similar to the definition provided for under ‘alternative management regime’.</p> <p>As proposed in subclause (b) of 14.4.37, an alternative management regime can only be entered into on the 1st of a month</p>	<p>Amend Policies 14.4.37 and 14.4.38 as follows:</p> <p>Establish an alternative minimum flow <u>management</u> regime for the Opihi River at Saleyards Bridge, as set out in Tables 14(v) and 14(w), that;</p> <p>a. may only be implemented through a resource consent; and</p> <p>b. applies from the start of a calendar month to the start of the next calendar month; and</p> <p>eb. may be entered into when two of the specified Level 1 or Level 2 thresholds from the preceding month in Tables 14(x(i), (ii) and (iii)) are met;</p> <p>and</p>

			<p>and must remain until the start of the next month. Therefore, if triggers were reached after the 1st of the month, there is no ability to respond and move into an alternative management regime until the start of the next month. In the meantime, the lake continues to fall. It is considered that the policy as proposed does not provide for a proactive response to changing conditions that may occur within that month.</p> <p>This same rationale applies to Policy 14.4.38 in that if climatic conditions improve during a month where for example, a Level 2 regime has been entered into, there is no ability to come out of the Level 2 regime until the start of the next month, which could unduly stress the rivers.</p> <p>The ability to enter a Level 1 Regime when two of the thresholds are met on any day is considered appropriate and provides for an ability to manage water proactively. Better management of lake storage would occur if the regime applied for a minimum of 14 days before a reassessment of conditions. This provides a more proactive way to manage water quantity and in turn, water quality in drier years.</p> <p>In turn, a Level 2 Regime should take into account the Level 1 Regime and be implemented once the Level 1 Regime has been in place for at least 14 days should the thresholds be met, as the Level 2 triggers reflect worsening inputs to the lake.</p> <p>Amendments to both policies would better ensure that the lake is appropriately managed in very dry or drought years with the ability to continue to provide for the policy directives around connectivity and flow variability.</p> <p>A more detailed exit strategy at Policy 14.4.38 would be helpful to provide better direction. The level of Lake Opuha as it relates to the Level 1 or Level 2 thresholds should drive the exiting of any regime in order to continue to provide connectivity and flow variability in the rivers.</p>	<p>d. takes into consideration the level of water in Lake Opuha, snow pack in the Lake Opuha Catchment, and inflows into Lake Opuha.</p> <p>Amend 14.4.38 to:</p> <p>Where a Level 1 or Level 2 alternative minimum flow management regime is entered into;</p> <p><u>a. the applicable flows set out in Tables 14(v) and 14(w) shall be met for that month a minimum of 14 days; and</u></p> <p><u>b. a Level 2 Regime shall only be entered into after a Level 1 Regime has been in place for at least 14 days; and</u></p> <p><u>c. the need to continue in the alternative minimum flow management regime is reassessed at the conclusion of the 14-day period; and commencement of the next calendar month</u></p> <p><u>d. exiting of the alternative management regime shall occur when the level of Lake Opuha exceeds the applicable Level 1 or Level 2 thresholds.</u></p>
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			Consequential amendments are necessary to take into account CSIFG's submission to delete Table 14(w).	
Opihi FMU Surface Water Flows	Policy 14.4.39	Support in part	<p>The transitioning of flows over 48 hours immediately after commencement of the month provides for a ramping regime to help alleviate fish strandings that may otherwise become isolated in pools should flows drop too quickly between changes in monthly minimum flows.</p> <p>An amendment is required to the policy to reflect the amendments suggested by CSIFG in Policies 14.4.37 and 14.4.38 to enable entry into the alternative management regime more frequently than at the commencement of a month should the thresholds be met. The policy should also clearly recognise the transition between the alternative management regime as well as the monthly minimum flows.</p> <p>Consequential amendments are necessary to take into account CSIFG's submission to delete Table 14(w).</p>	<p>Amend to:</p> <p>In complying with the environmental flow and allocation regime(s) set out in Tables 14(v) to 14(w) and when transitioning between monthly minimum flow requirements at Saleyards Bridge, releases of water from the Opuha Dam may be progressively increased or decreased over a 48-hour period immediately after the commencement of the calendar month <u>and the commencement of the alternative management regime.</u></p>
Opihi FMU Surface Water Flows	Policy 14.4.40	Support	Transferring AA and BA surface water permits to a principal water supplier that will result in a single permit is a more transparent in terms of management and provides greater clarity around consent compliance and consent assessment.	Retain.
Levels Plain High Nitrogen Concentration Area	Policy 14.4.41	Support	The policy recognises the adverse effects that can arise from point source discharges from industrial or trade waste disposal on water quality, life-supporting capacity, and ecosystem health.	Retain.
Cumulative Effects of Small Water Takes	Policy 14.4.42	Support	The policy helps to address over-allocation to safeguard life-supporting capacity and ecosystem health and gives effect to the NPSFM, CRPS, and LWRP.	Retain.
Dams and Damming	Policy 14.4.43	Support	Prohibits damming except where lawfully established prior to 2012 and for community supply. This will help to support fish passage in the catchment and provide for ecosystem health.	Retain.

Augmentation of the South Branch of the Pareora River	Policy 14.4.44	Support	Allowing for augmentation by TDC at rate of 70L/s during Oct/Nov helps meet the minimum flow of the river and recognises the need for adequate flows for ecosystem health.	Retain.
14.5 Rules				
Take and Use Surface Water	Rule 14.5.6	Support	The rule makes it a prohibited activity to take and use surface water in addition to that outlined in the allocation tables and that does not meet the flow regime for that waterbody. This gives effect to the NPSFM to phase out over-allocation.	Retain.
Transfer of Water Permits	Rule 14.5.12	Support	The rule acknowledges and addresses over-allocated catchments and where a catchment is over-allocated, requires a percentage of water to be surrendered, and in the Temuka FMU a transfer is prohibited.	Retain.
Stock Exclusion from Waterbodies	Rule 14.5.25	Support	Excluding stock from waterbodies will help meet water quality outcomes as contaminants arising from stock access to waterways and riparian margins have adverse effects on habitats and ecosystem health.	Retain.
Stock Exclusion from Waterbodies	Rule 14.5.25A	Support	Excluding stock from waterbodies will help meet water quality outcomes as contaminants arising from stock access to waterways and riparian margins have adverse effects on habitats and ecosystem health.	Retain.
Dams and Damming	Rule 14.5.28	Support	The rule prohibits the damming of water in a water body recognised as High Naturalness and gives effect to the objectives and policies in the LWRP and CRPS that seek to protect waterbodies with high values from the adverse effects that can arise from damming.	Retain.
Opihi FMU Augmentation of the main stem of the Opuha and Opihi rivers	Rule 14.5.29	Support in part	The discharge of water from the dam for the purpose of augmenting the Opuha and Opihi mainstems should take into account the alternative management regime as signalled in proposed Policy 14.4.37.	Amend to clause (1) and add an additional clause (4): 1. The discharge complies with the environmental flow and allocation regime(s) set out in Tables 14(v) to 14(w); and

			<p>As a member of OEFRAG, CSIFG considers the group's overall model to have been hugely successful in ensuring the effective management of stored water in Lake Opuha during drier or drought years for the benefit of the Opuha and Opihi rivers and to help maintain connectivity. CSIFG believes that OEFRAG should continue to have an advisory role under PC7 as it relates to flow releases from the dam and the implementation of the alternative management regime.</p> <p>The consent, assumedly to be held by Opuha Water Limited, could enable an appropriate consultation process with local authorities and key stakeholders and give consideration to secondary assessment factors. This kind of framework would mirror the work undertaken in the past by OEFRAG (of which CSIFG was a member) and is viewed as a proactive management style.</p> <p>An additional clause in the rule would provide better certainty for the community around how the discharge of water for augmentation would be considered and carried out. This would also better recognise the environmental, recreational and cultural values associated with augmentation and as recommended in the ZIPA at 5.3.1.</p> <p>Consequential amendments are necessary to take into account CSIFG's submission to delete Table 14(w).</p>	<p>4. <u>An operational management plan is prepared and submitted with the application for resource consent that shall include details of the matters for consideration and a consultation process to assist the consent holder decide:</u></p> <ul style="list-style-type: none"> a. <u>If and when the Level 1 and Level 2 Regimes in Table 14(v) shall be entered and exited; and</u> b. <u>The timing and volume of a release from the Opuha Dam for artificial freshes; and</u> c. <u>The timing of releases from the Opuha Dam for flood buffering purposes; and</u> d. <u>The methodology for flow transitioning between months.</u>
Transfer of AA and BA Water Permits to a Principal Water Supplier	Rule 14.5.31	Support	The rule will allow for a more transparent management of water takes and consent compliance associated with the Opihi Freshwater Management Unit.	Retain.
Dams and Damming	Rule 14.5.34	Support	The rule relates to the replacement of an existing lawfully established activity and appropriately takes into account the importance of fish migration via subclause 4.	Retain.

14.6.2 Environmental Flow and Allocation Regimes				
Temuka FMU Environmental Flow and Allocation Regime- A Permit	Table 14(i)	Support	The table increases minimum flows and decreases allocation over a staged process. The stepped approach proposed is reasonable given the gross over-allocation of the Temuka FMU.	Retain.
Environmental Flow and Allocation Regimes	Tables 14(l), 14(m), 14(n), 14(o), 14(p), 14(q), 14(r)	Support	The regimes better support life-supporting capacity and ecosystem health by providing improvements in flows over the life of the plan. The introduction of Pro Rata Restrictions and Water User Groups is recognised as an important measure for flows in the river and will be beneficial to instream health and valued freshwater species.	Retain.
Te Ana Wai Environmental Flow and Allocation Regime- AA, AN and BA Permits	Tables 14(r) and 14(s)	Support in part	<p>Table 14(r) sets out the EFR and Allocation Limits for AA, AN and BA Permits from 2025. Table 14(s) sets out these same requirements for Step 2 changes, with the only difference being the required Pro Rata partial restriction. The introduction of Pro Rata restrictions is recognised as an important measure for flows in the river and will be beneficial to instream health.</p> <p>Given there is no difference between the two tables bar the addition of pro rata restrictions, it would be simpler to include a further column in Table 14(r) that includes the pro rata restriction and then deleting Table 14(s).</p>	<p>Amend Table 14(r) to: Add an additional column to include the Step 2 changes related to Pro Rata partial restrictions that are provided in Table 14(s).</p> <p>Delete Table 14(s).</p>
Minimum Flow Restrictions in the Opihi FMU for AA and BA Permits (2025)	Table 14(v)	Oppose in part	<p>As proposed, there is not a current regime for the Opihi mainstem between now and 2025. A further table should be included in PC7 that stipulates the flow regime during this time and that provides the community with some assurance. It is assumed that the ORRP will provide for these 'interim' flows.</p> <p>CSIFG supports an adaptive management regime for the Opuha and Opihi mainstems that provides for a tiered approach to environmental flows predicated on the levels of Lake Opuha, snow pack, and inflows to the lake. However, CSIFG has</p>	<p>Amend to:</p> <p>Include a new table in PC7, Table 14(v(i)) that records the current Opihi mainstem environmental flow and partial restriction regime to bridge the gap between current and 2025 (Annexure B).</p> <p>Delete Table 14(v); and Replace Table 14(v) with two new tables:</p>

			<p>concerns around how the proposed alternative management regime was informed and what technical expertise underpinned the framework in terms of the numerical thresholds.</p> <p>The adaptive management regime in PC7 is mirrored on the Draft OEFrag Regime that was developed in 2008 and prepared for OEFrag. The Draft OEFrag Regime was utilised by OEFrag in the dry years since 2008 and was ineffective in achieving the level of water savings required to maintain connectivity and provide for flow variability in the Opihi River mainstem. The 2014/15 water short period highlighted the following weaknesses of the Draft OEFrag Regime (now proposed as the adaptive management regime in PC7):</p> <ol style="list-style-type: none"> 1. the lake level threshold for a Level 1 or Level 2 Regime equates to a lake that is 50% full, which was found to be too low to have a meaningful impact on lake storage; and 2. the reductions in minimum flows set in the Level 1 and Level 2 Regimes are not enough to save water, which would be required for the rivers downstream of the dam to provide for connectivity and variability; and 3. water savings over the winter in a Level 1 Regime were constrained and made it difficult, without a Water Shortage Direction, to increase lake levels to be able to provide for the needs of the environment downstream of the dam. <p>Given the experiences learned through OEFrag, CSIFG is not confident that the alternative management regime proposed in PC7 would provide for the flexibility deemed necessary to take a proactive approach in managing storage in the Lake, would compromise OTOP ZIPA Recommendation 5.3.1, and could not adequately provide for connectivity and flow variability as directed by Policy 14.4.35.</p> <p>CSIFG considers the following as necessary to achieve the outcomes of PC7 and the Recommendation in the ZIPA</p> <ol style="list-style-type: none"> 1. Amendments to the “Full Availability” flows contained in Table 14(v) to: 	<ul style="list-style-type: none"> • Table 14(v(ii)), that details an environmental flow and allocation regime for AA and BA permits in the Opihi FMU from 2025; and • Table 14(v(iii)) that details a partial restriction regime for AA and BA permits in the Opihi FMU from 2025.
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			<ol style="list-style-type: none"> a. provide more water for instream health and recreational amenity during the summer months; and b. ensure appropriate flow for salmon migration (March/April), which was determined in past research to be 6 cumecs at the Opihi River mouth to keep it open. <ol style="list-style-type: none"> 2. Amendments to “Level 1 restriction” as proposed in Table 14(v) to provide more water for the river during the summer than PC7 and to respond to hydrological and climatic conditions in the catchment. 3. Amendments to “Level 2 restriction” as proposed in Table 14(v) to align with historical IFIM habitat modelling and Table 14(u). <p>The partial restrictions proposed in the plan (50% for Level 1 Regime and 75% for Level 2 Regime) do not provide for enough flexibility to respond to changes in hydrological and climatic conditions. The restrictions proposed may curtail the ability for environmental outcomes to be met as detailed in Recommendation 5.3.1 of the ZIPA. CSIFG considers that the partial restrictions proposed do not entertain a full restriction of 100% when lake levels are extremely low (amendment seeking a Level 3 restriction). It is considered appropriate to signal full restrictions in water short years where all water is designated for the benefit of the river and to maintain connectivity.</p>	
Minimum Flow Restrictions in Opihi FMU for AA and BA Permits (2030)	Table 14(w)	Oppose	<p>CSIFG supports the principle of the ZIPA at 5.3.1(e) as follows: <i>All flow gains achieved by minimum flow increases on the Upper Opihi and Te Ana Wai Rivers remaining in the mainstem of the Opihi River, and not being available for abstraction, and should be reflected in the minimum flows measured at Saleyards Bridge.</i></p> <p>It is unclear from the ECan technical reports how the minimum flows set out within Table 14(w) will be achieved as it is understood that they do not reflect the true relationship between flows in the tributaries and those at Saleyards Bridge.</p>	Delete Table 14(w) and include a new Policy to reflect the ZIPA recommendation 5.3.1(e).

			<p>If the relationship between the upper tributaries and Saleyards Bridge is not understood, then a situation could arise where water would have to be released from the dam to meet increasing minimum flows as the minimum flows gained in the tributaries may not be enough to make up the increase in the minimum flow at Saleyards Bridge. It is unclear to CSIFG that if water had to be released from the dam to meet the 2030 minimum flows how this would impact water storage in the lake, which is relied upon and used to provide for connectivity and flow variability and to address instream health in the Opuha and Opihi mainstems. CSIFG also questions how any releases from the dam to meet these flows would affect the frequency of water shortages.</p> <p>CSIFG considers that work must be undertaken by the Regional Council to determine and understand the true relationship between flows in the Upper Opihi and Te Ana Wai rivers and Saleyards Bridge if it has not already been completed. While Table 14(w) seems to stem from the ZIPA recommendation at 5.3.1(e) it is not fully described or made clear in PC7. It is appropriate to include an additional policy to reflect the Zone Committee's recommendation.</p>	
Alternative Management Regime Thresholds	Table 14(x)	Oppose in part	<p>CSIFG supports the alternative management regime framework proposed in PC7 as it provides for a proactive management response to hydrological and climatic conditions in the Opihi catchment.</p> <p>It is unclear how the thresholds identified in Table 14(x) will enable proactive management of the lake given the narrow bands proposed between Level 1 and Level 2 regimes as they relate to inflows and snow storage.</p> <p>CSIFG seeks an alternative flow management regime that recognises and implements ZIPA recommendation 5.3.1 and provides enough water for maintaining connectivity in the Opihi River mainstem 100% of the time by managing the risk of Lake Opuha becoming dry. Optimum lake storage would also provide</p>	<p>Delete Table 14(x); and</p> <p>Replace Table 14(x) with a new table containing a revised set of thresholds for Lake inflows (Table 14(x(i))), snow storage (Table 14(x(ii))), and Lake level (Table 14(x(iii))) as set out in Annexure B, or replace Table 14(x) with an alternative set of revised thresholds to ensure the implementation of the alternative management regime achieves the following outcomes:</p> <ul style="list-style-type: none"> • maintains connectivity of the Opihi River mainstem 100% of the time by managing the risk of Lake Opuha becoming dry; and

			for better recreational use of the lake including boating, fishing, and swimming and would also maintain connectivity between the lake and the spawning tributaries for fish migration.	<ul style="list-style-type: none"> optimises lake storage to minimise the amount of time spent in an alternative management regime scenario.
14.7 Flow Sensitive Catchments				
Flow Sensitive Catchments	14.7	Support	The table includes additional waterways that are subject to corresponding provisions that protect sensitive waterways from adverse effects arising from plantation forestry.	Retain.
14.8 High Naturalness Water Bodies				
High Naturalness Water Bodies	14.8	Support	Milford Lagoon and Orakipaoa Creek are recognised for both high cultural significance and high ecological and biodiversity values. It is appropriate that provisions protect these highly valued areas in the community.	Retain.
Schedule 17 Salmon Spawning Sites				
Salmon Spawning Sites	Schedule 17	Support	CSIFG supports the identification of salmon spawning waters and has been involved in this collaborative process with Environment Canterbury and North Canterbury Fish and Game. The additional waterways provide better protection for salmon spawning waters from the adverse effects of activities that can have adverse effects on habitat and ecosystem health.	Retain.

Annexure B – Decision sought in relation to Tables 14(v) and 14(x)

Table 14(v(i)) Opihi Freshwater Management Unit Environmental Flow Regime – AA and BA Permits Current

River	Location of recorder site, or site where flow is measured	NZTM Map Reference	Lake Opuha	Minimum flow for AA and BA Permits (L/s)												Partial Restrictions
Opihi mainstem	Saleyards Bridge	5098685N 1451845E	Above RL 375m	Jan 3,500	Feb 3,500	Mar 7,500	Apr 8,000	May 4,500	June 4,000	July 4,000	Aug 4,500	Sept 6,000	Oct 8,500	Nov 7,000	Dec 6,000	N/A
			At or below RL 375m, but above RL 370m	3,350	3,350	5,350	5,600	3,850	3,600	3,600	3,850	4,600	5,850	5,100	4,600	50%

Table 14(v(ii)) Opihi Freshwater Management Unit Environmental Flow Regime – AA and BA Permits from 1 January 2025

River	Location of recorder site, or site where flow is measured	NZTM Map Reference	Management Regime	Minimum flow for AA and BA Permits (L/s)												Partial Restrictions
				From 1 January 2025												
Opihi Mainstem	Opuha Dam Downstream Weir	5124591N 1431579E	Full Availability and Level 1 Regime	1,500 plus the sum of the AA and BA allocation block for the Opuha River												N/A
			Level 2 Regime	1,000 plus the sum of the AA and BA allocation block for the Opuha River												N/A
			Lake Opuha level < RL 370m	Discharge from Opuha Dam equals the lesser of the flows prescribed by the Level 2 Regime at Saleyards Bridge or the sum of the inflows to Lake Opuha from the North and South Rivers, and flows required for community supplies restricted in accordance with a Water Supply Strategy												100%
	Saleyards Bridge	5098685N 1451845E	Full Availability	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	N/A
				4,500	4,500	7,000	7,000	4,500	4,000	4,000	4,500	6,000	8,000	7,000	6,000	
			Alternative Management Regime													
Level 1 Regime	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Refer Table 14(v(iii))			
	4,000	4,000	6,000	6,000	4,000	3,500	3,500	4,000	5,000	6,000	6,000	5,000				
Level 2 Regime	3,500												Refer Table 14(v)(iii))			

Table 14(v(iii)) Opihi Freshwater Management Unit - Partial Restrictions for AA and BA Permits from 1 January 2025

<u>Lake Level</u>	<u>Flow regime</u>	<u>Volumetric restrictions (%)</u>											
		<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
N/A	Level 1*	25	25	25	25	50	75	75	75	50	50	25	25
	Level 2[#]	50	50	50	50	75	100	100	100	75	75	75	75
<373m (<5% operational volume available)	Level 3	100	100	100	100	100	100	100	100	100	100	100	100

* Restrictions under a Level 1 Regime shall not apply to water permits to take and use water from the North Opuha, South Opuha, Upper Opihi or Te Ana Wai Rivers.

[#] Under a Level 2 Regime, Level 2 partial restrictions shall apply to water permits to take and use water from North Opuha, South Opuha, Upper Opihi or Te Ana Wai Rivers except when the Lake Opuha Level graph on the Canterbury Regional Council's website indicates the Lake level is rising, in which case partial restrictions for the Level 1 Regime shall apply to these permits.

Table 14(x(i)) Alternative Management Regime Thresholds: Inflows (m³/s)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
Day	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2
1	5.3	3.8	3.9	2.9	3.2	2.5	3.1	2.4	3.2	2.3	3.5	2.7	3.7	2.8	4.0	3.2	4.1	3.2	4.4	3.4	7.1	5.0	7.8	5.3
2	5.3	3.8	3.9	2.8	3.2	2.5	3.1	2.4	3.2	2.3	3.5	2.7	3.7	2.8	4.0	3.2	4.1	3.2	4.5	3.4	7.2	5.1	7.7	5.2
3	5.2	3.7	3.8	2.8	3.2	2.5	3.1	2.4	3.2	2.3	3.5	2.7	3.7	2.8	4.0	3.2	4.1	3.2	4.5	3.5	7.2	5.1	7.7	5.2
4	5.2	3.7	3.8	2.8	3.2	2.5	3.1	2.3	3.2	2.3	3.5	2.7	3.7	2.8	4.0	3.2	4.1	3.2	4.6	3.5	7.3	5.1	7.6	5.2
5	5.1	3.7	3.8	2.8	3.2	2.5	3.1	2.3	3.2	2.4	3.5	2.7	3.7	2.8	4.0	3.2	4.1	3.2	4.7	3.6	7.4	5.2	7.6	5.2
6	5.0	3.6	3.7	2.8	3.2	2.5	3.1	2.3	3.3	2.4	3.5	2.7	3.8	2.9	4.0	3.2	4.1	3.2	4.7	3.6	7.4	5.2	7.5	5.1
7	5.0	3.6	3.7	2.8	3.1	2.5	3.2	2.3	3.3	2.4	3.5	2.7	3.8	2.9	4.0	3.2	4.1	3.2	4.8	3.7	7.5	5.2	7.5	5.1
8	4.9	3.5	3.7	2.7	3.1	2.5	3.2	2.3	3.3	2.4	3.5	2.7	3.8	2.9	4.0	3.3	4.1	3.2	4.9	3.7	7.5	5.3	7.4	5.1
9	4.9	3.5	3.6	2.7	3.1	2.5	3.2	2.3	3.3	2.4	3.5	2.7	3.8	2.9	4.0	3.3	4.1	3.2	4.9	3.7	7.6	5.3	7.4	5.0
10	4.8	3.5	3.6	2.7	3.1	2.5	3.2	2.3	3.3	2.4	3.5	2.7	3.8	2.9	4.0	3.3	4.2	3.2	5.0	3.8	7.6	5.3	7.3	5.0
11	4.8	3.4	3.6	2.7	3.1	2.4	3.2	2.3	3.3	2.4	3.5	2.7	3.8	3.0	4.0	3.3	4.2	3.2	5.1	3.8	7.7	5.3	7.2	5.0
12	4.7	3.4	3.6	2.7	3.1	2.4	3.2	2.3	3.3	2.4	3.5	2.7	3.9	3.0	4.1	3.3	4.2	3.2	5.1	3.9	7.7	5.3	7.2	4.9
13	4.7	3.4	3.5	2.7	3.1	2.4	3.2	2.3	3.3	2.5	3.5	2.7	3.9	3.0	4.1	3.3	4.1	3.2	5.2	3.9	7.8	5.4	7.1	4.9
14	4.6	3.3	3.5	2.6	3.1	2.4	3.2	2.3	3.3	2.5	3.5	2.7	3.9	3.0	4.1	3.3	4.1	3.2	5.3	4.0	7.8	5.4	7.0	4.8
15	4.6	3.3	3.5	2.6	3.1	2.4	3.2	2.3	3.4	2.5	3.5	2.7	3.9	3.0	4.1	3.3	4.1	3.2	5.4	4.0	7.8	5.4	6.9	4.8
16	4.6	3.3	3.5	2.6	3.1	2.4	3.2	2.3	3.4	2.5	3.5	2.7	3.9	3.0	4.1	3.3	4.1	3.2	5.5	4.1	7.9	5.4	6.9	4.7
17	4.5	3.3	3.4	2.6	3.1	2.4	3.2	2.3	3.4	2.5	3.5	2.7	3.9	3.0	4.1	3.3	4.1	3.2	5.6	4.1	7.9	5.4	6.8	4.7
18	4.5	3.2	3.4	2.6	3.1	2.4	3.2	2.3	3.4	2.5	3.5	2.7	3.9	3.1	4.1	3.3	4.1	3.2	5.7	4.2	7.9	5.4	6.7	4.6
19	4.4	3.2	3.4	2.6	3.1	2.4	3.2	2.3	3.4	2.5	3.5	2.7	3.9	3.1	4.1	3.3	4.1	3.2	5.8	4.3	7.9	5.4	6.6	4.6
20	4.4	3.2	3.4	2.6	3.1	2.4	3.2	2.3	3.4	2.5	3.5	2.7	3.9	3.1	4.1	3.3	4.1	3.2	5.9	4.3	7.9	5.4	6.5	4.5
21	4.3	3.1	3.3	2.6	3.1	2.4	3.2	2.3	3.4	2.6	3.5	2.7	3.9	3.1	4.1	3.3	4.2	3.2	6.0	4.4	7.9	5.4	6.4	4.4
22	4.3	3.1	3.3	2.6	3.1	2.4	3.2	2.3	3.4	2.6	3.5	2.7	4.0	3.1	4.1	3.2	4.2	3.2	6.1	4.5	7.9	5.4	6.3	4.4
23	4.3	3.1	3.3	2.5	3.1	2.4	3.2	2.3	3.4	2.6	3.6	2.7	4.0	3.1	4.1	3.2	4.2	3.2	6.2	4.5	7.9	5.4	6.2	4.3
24	4.2	3.1	3.3	2.5	3.1	2.4	3.2	2.3	3.4	2.6	3.6	2.7	4.0	3.2	4.1	3.2	4.2	3.3	6.3	4.5	7.9	5.4	6.1	4.2
25	4.2	3.0	3.3	2.5	3.1	2.4	3.2	2.3	3.4	2.6	3.6	2.7	4.0	3.2	4.1	3.2	4.2	3.3	6.3	4.6	7.9	5.4	5.9	4.2
26	4.1	3.0	3.2	2.5	3.1	2.4	3.2	2.3	3.4	2.6	3.6	2.7	4.0	3.2	4.1	3.2	4.3	3.3	6.4	4.6	7.9	5.4	5.8	4.1
27	4.1	3.0	3.2	2.5	3.1	2.4	3.2	2.3	3.4	2.6	3.6	2.7	4.0	3.2	4.1	3.2	4.3	3.3	6.5	4.7	7.9	5.3	5.7	4.0
28	4.1	3.0	3.2	2.5	3.1	2.4	3.2	2.3	3.4	2.6	3.6	2.8	4.0	3.2	4.1	3.2	4.3	3.3	6.6	4.8	7.8	5.3	5.6	4.0
29	4.0	2.9	3.2	2.5	3.1	2.4	3.2	2.3	3.5	2.6	3.7	2.8	4.0	3.2	4.1	3.2	4.3	3.4	6.7	4.8	7.8	5.3	5.4	3.9
30	4.0	2.9			3.1	2.4	3.2	2.3	3.5	2.6	3.7	2.8	4.0	3.2	4.1	3.2	4.4	3.4	6.8	4.9	7.8	5.3	5.3	3.8
31	3.9	2.9			3.1	2.4			3.5	2.6			4.0	3.2	4.1	3.2			7.0	4.9			5.2	3.7

Table 14(x(ii)) Alternative Management Regime Thresholds: Snow storage (Mm³ of water equivalent)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
Day	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	14.7	27.0	19.5	24.4	17.9	17.8	13.7	9.8	6.7
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.3	15.0	27.0	19.5	24.3	17.8	17.6	13.5	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.6	15.2	27.1	19.5	24.1	17.8	17.4	13.3	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.9	15.4	27.1	19.5	23.9	17.7	17.1	13.1	0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.2	15.6	27.2	19.5	23.7	17.6	16.9	12.9	0.0	0.0
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.4	15.8	27.2	19.5	23.5	17.5	16.6	12.7	0.0	0.0
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.7	16.0	27.2	19.5	23.3	17.4	16.4	12.4	0.0	0.0
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.0	16.2	27.2	19.5	23.1	17.4	16.1	12.2	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.3	16.4	27.2	19.5	22.8	17.3	15.9	12.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.6	16.6	27.2	19.4	22.6	17.2	15.6	11.7	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.9	16.8	27.1	19.4	22.4	17.1	15.3	11.4	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.2	17.0	27.1	19.4	22.2	16.9	15.1	11.2	0.0	0.0
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.5	17.3	27.0	19.3	22.0	16.8	14.8	10.9	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.8	17.5	26.9	19.2	21.8	16.7	14.5	10.7	0.0	0.0
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.1	17.6	26.8	19.1	21.6	16.6	14.3	10.4	0.0	0.0
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.3	17.8	26.7	19.1	21.4	16.4	14.0	10.2	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.5	18.0	26.6	19.0	21.2	16.3	13.7	10.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.7	18.1	26.5	18.9	20.9	16.2	13.5	9.7	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.9	18.2	26.4	18.8	20.7	16.1	13.2	9.5	0.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.1	18.4	26.3	18.8	20.5	15.9	12.9	9.3	0.0	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.3	18.5	26.2	18.7	20.3	15.8	12.7	9.0	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.6	18.6	26.1	18.7	20.1	15.6	12.4	8.8	0.0	0.0
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.8	18.8	25.9	18.6	19.8	15.5	12.1	8.6	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.0	18.9	25.7	18.5	19.6	15.3	11.8	8.3	0.0	0.0
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.1	19.0	25.6	18.4	19.4	15.1	11.5	8.1	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.3	19.1	25.4	18.4	19.2	15.0	11.3	7.8	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.5	19.2	25.2	18.3	19.0	14.8	11.0	7.6	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.6	19.3	25.0	18.2	18.7	14.6	10.7	7.4	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.7	19.4	24.8	18.1	18.5	14.4	10.4	7.2	0.0	0.0
30	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.8	19.4	24.6	18.0	18.3	14.2	10.1	6.9	0.0	0.0
31	0.0	0.0			0.0	0.0			0.0	0.0			0.0	0.0	26.9	19.5			18.1	14.0			0.0	0.0

Table 14(xiii)) Alternative Management Regime Thresholds: Lake level (masl)

	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
Day	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2	L1	L2
1	388.3	387.0	387.0	385.5	385.0	383.3	383.3	381.4	384.2	382.4	385.5	383.9	387.0	385.5	387.9	386.5	388.5	387.2	389.2	387.9	389.8	388.5	389.2	387.9
2	388.3	386.9	386.9	385.4	385.0	383.3	383.4	381.4	384.2	382.5	385.5	383.9	387.0	385.5	387.9	386.6	388.6	387.3	389.2	387.9	389.7	388.5	389.1	387.9
3	388.2	386.9	386.8	385.3	384.9	383.2	383.4	381.5	384.3	382.5	385.6	384.0	387.0	385.6	387.9	386.6	388.6	387.3	389.2	387.9	389.7	388.5	389.1	387.8
4	388.2	386.8	386.8	385.3	384.9	383.2	383.4	381.5	384.3	382.6	385.6	384.0	387.0	385.6	388.0	386.6	388.6	387.3	389.2	388.0	389.7	388.5	389.1	387.8
5	388.1	386.8	386.7	385.2	384.8	383.1	383.5	381.5	384.4	382.6	385.7	384.1	387.1	385.6	388.0	386.6	388.6	387.3	389.2	388.0	389.7	388.5	389.1	387.8
6	388.1	386.7	386.6	385.1	384.8	383.0	383.5	381.6	384.4	382.6	385.7	384.1	387.1	385.7	388.0	386.6	388.7	387.3	389.3	388.0	389.7	388.4	389.0	387.8
7	388.0	386.7	386.6	385.1	384.7	383.0	383.5	381.6	384.5	382.7	385.8	384.2	387.1	385.7	388.0	386.7	388.7	387.4	389.3	388.0	389.6	388.4	389.0	387.7
8	388.0	386.6	386.5	385.0	384.7	382.9	383.5	381.6	384.5	382.7	385.8	384.3	387.2	385.7	388.1	386.7	388.7	387.4	389.3	388.1	389.6	388.4	389.0	387.7
9	388.0	386.6	386.4	384.9	384.6	382.9	383.6	381.7	384.5	382.8	385.9	384.3	387.2	385.8	388.1	386.7	388.7	387.4	389.3	388.1	389.6	388.4	388.9	387.7
10	387.9	386.5	386.4	384.8	384.6	382.8	383.6	381.7	384.6	382.8	385.9	384.4	387.2	385.8	388.1	386.7	388.7	387.4	389.3	388.1	389.6	388.4	388.9	387.6
11	387.9	386.5	386.3	384.8	384.5	382.7	383.6	381.7	384.6	382.9	386.0	384.4	387.3	385.8	388.1	386.8	388.8	387.5	389.4	388.1	389.6	388.3	388.9	387.6
12	387.8	386.5	386.2	384.7	384.4	382.7	383.7	381.8	384.7	382.9	386.0	384.5	387.3	385.9	388.1	386.8	388.8	387.5	389.4	388.1	389.5	388.3	388.9	387.6
13	387.8	386.4	386.2	384.6	384.4	382.6	383.7	381.8	384.7	383.0	386.1	384.5	387.3	385.9	388.2	386.8	388.8	387.5	389.4	388.2	389.5	388.3	388.8	387.5
14	387.7	386.4	386.1	384.5	384.3	382.6	383.7	381.8	384.8	383.0	386.1	384.6	387.4	385.9	388.2	386.8	388.8	387.5	389.4	388.2	389.5	388.3	388.8	387.5
15	387.7	386.3	386.0	384.5	384.3	382.5	383.7	381.9	384.8	383.1	386.2	384.6	387.4	386.0	388.2	386.9	388.8	387.5	389.4	388.2	389.5	388.3	388.8	387.5
16	387.7	386.3	385.9	384.4	384.2	382.4	383.8	381.9	384.8	383.1	386.2	384.7	387.4	386.0	388.2	386.9	388.9	387.6	389.4	388.2	389.5	388.2	388.7	387.5
17	387.6	386.2	385.9	384.3	384.2	382.4	383.8	381.9	384.9	383.2	386.3	384.8	387.5	386.0	388.2	386.9	388.9	387.6	389.5	388.2	389.4	388.2	388.7	387.4
18	387.6	386.2	385.8	384.2	384.1	382.3	383.8	382.0	384.9	383.2	386.3	384.8	387.5	386.1	388.3	386.9	388.9	387.6	389.5	388.3	389.4	388.2	388.7	387.4
19	387.5	386.1	385.7	384.1	384.1	382.2	383.9	382.0	385.0	383.3	386.4	384.9	387.5	386.1	388.3	386.9	388.9	387.6	389.5	388.3	389.4	388.2	388.7	387.4
20	387.5	386.1	385.7	384.1	384.0	382.2	383.9	382.0	385.0	383.3	386.4	384.9	387.5	386.1	388.3	387.0	388.9	387.7	389.5	388.3	389.4	388.1	388.6	387.3
21	387.4	386.0	385.6	384.0	384.0	382.1	383.9	382.1	385.0	383.4	386.5	385.0	387.6	386.2	388.3	387.0	389.0	387.7	389.5	388.3	389.4	388.1	388.6	387.3
22	387.4	386.0	385.5	383.9	383.9	382.1	383.9	382.1	385.1	383.4	386.5	385.0	387.6	386.2	388.3	387.0	389.0	387.7	389.6	388.3	389.3	388.1	388.6	387.3
23	387.4	385.9	385.5	383.8	383.8	382.0	384.0	382.1	385.1	383.5	386.6	385.1	387.6	386.2	388.4	387.0	389.0	387.7	389.6	388.4	389.3	388.1	388.6	387.2
24	387.3	385.9	385.4	383.7	383.8	381.9	384.0	382.2	385.2	383.5	386.6	385.1	387.7	386.3	388.4	387.1	389.0	387.8	389.6	388.4	389.3	388.1	388.5	387.2
25	387.3	385.8	385.3	383.7	383.7	381.9	384.0	382.2	385.2	383.5	386.7	385.2	387.7	386.3	388.4	387.1	389.0	387.8	389.6	388.4	389.3	388.0	388.5	387.2
26	387.2	385.8	385.2	383.6	383.7	381.8	384.1	382.2	385.2	383.6	386.7	385.2	387.7	386.3	388.4	387.1	389.1	387.8	389.6	388.4	389.3	388.0	388.5	387.1
27	387.2	385.7	385.2	383.5	383.6	381.7	384.1	382.3	385.3	383.6	386.8	385.3	387.8	386.4	388.4	387.1	389.1	387.8	389.7	388.4	389.2	388.0	388.4	387.1
28	387.1	385.7	385.1	383.4	383.6	381.7	384.1	382.3	385.3	383.7	386.8	385.3	387.8	386.4	388.5	387.1	389.1	387.8	389.7	388.5	389.2	388.0	388.4	387.1
29	387.1	385.6	385.0	383.3	383.5	381.6	384.1	382.3	385.4	383.7	386.9	385.4	387.8	386.4	388.5	387.2	389.1	387.9	389.7	388.5	389.2	387.9	388.4	387.0
30	387.0	385.6			383.4	381.5	384.2	382.4	385.4	383.8	386.9	385.4	387.8	386.5	388.5	387.2	389.1	387.9	389.7	388.5	389.2	387.9	388.4	387.0
31	387.0	385.5			383.4	381.5			385.4	383.8			387.9	386.5	388.5	387.2			389.7	388.5			388.3	387.0

RESOURCE CONSENT CRC172229

Pursuant to Section 104 of the Resource Management Act 1991

The Canterbury Regional Council (known as Environment Canterbury)

GRANTS TO:	Canterbury Regional Council
A LAND USE CONSENT (S9&13):	To install barriers to fish passage to protect threatened populations of native fish and invertebrates.
COMMENCEMENT DATE:	18 Oct 2016
EXPIRY DATE:	18 Oct 2051
LOCATION:	Canterbury Region

SUBJECT TO THE FOLLOWING CONDITIONS:

Scope

- 1 The works shall be limited to the construction, use, maintenance and removal of fish passage barriers within any waterway in the Canterbury Region.
- 2 Works may not occur within the areas demarcated 'A' on Plan CRC172229, which forms part of this consent.

Advice note: For the purposes of this consent the installation of a perched culvert, which may impound a quantity of water upstream of the intake, is not classified as 'damming' water.

- 3 The works shall only be carried out if it has been identified that:
 - a. A population of non-diadromous/migratory fish/invertebrates are being threatened by piscivorous predation and/or competition;
 - b. In the opinion of a suitably qualified person this is the most suitable method of protecting the non-diadromous fish/invertebrate species at the particular site.

Advice Note:

- c. A 'suitably qualified person' is a surface water scientist appointed or approved by the Canterbury Regional Council or the Department of Conservation.
- d. Such suitably qualified person may determine that other permissions are required under the Conservation Act (Freshwater Fisheries Regulations).

Pre-works

- 4 The consent holder shall alert the following parties at least fifteen working days prior to any of the works authorised by condition (1) of this consent:

- a. The Canterbury Regional Council, Attention: Regional Leader Monitoring and Compliance;
- b. The Canterbury Regional Council, Attention: Regional Harbourmaster's Office;
- c. The nearest office of the Department of Conservation.

This notification shall include the date and location of the intended works.

- 5 Prior to the construction of any new fish barrier the consent holder shall obtain the written authorisation of the following parties:
- a. The landowner.
 - b. Fish & Game New Zealand
 - c. The Papatipu Runanga

A copy of each written authorisation shall be provided to the Canterbury Regional Council, Attention: Regional Leader Monitoring and Compliance, prior to the commencement of works at that location.

- 6 Prior to undertaking any works at a site, the consent holder shall check whether the site is listed on the Canterbury Regional Council Listed Land Use Register (LLUR). If the site is registered on the LLUR, the consent holder shall contact the Canterbury Regional Council's Contaminated Sites team to discuss the proposal, and act on their advice with respect to any potential hazards.
- 7 This consent does not authorise any activity listed in the Canterbury Regional Council's Flood Protection and Drainage Bylaw 2013. Any activity that contravenes the Bylaw (or any replacement Bylaw) will require the consent holder to apply for an Authority under that Bylaw.
- 8 Other permissions may be required for this activity under the Conservation Act 1987, the Reserves Act 1977 and the Freshwater Fisheries Regulations 1983. When required by these regulations, the consent holder shall, in liaison with the Department of Conservation, identify and obtain such permissions prior to the installation of any new fish barrier.

During works

- 9 Works in flowing water shall be minimised.
- 10 To prevent the spread of pest species, including but not limited to Didymo, the consent holder shall ensure that activities authorised by this consent are undertaken in accordance with the Biosecurity New Zealand's hygiene procedures and that machinery shall be free of plants and plant seeds prior to use in the riverbed.

Advice Note: the most current version of these procedures may be accessed from the Biosecurity New Zealand website <http://www.biosecurity.govt.nz>.

- 11
- a. All practicable measures shall be undertaken to prevent oil and fuel leaks from vehicles and machinery.
 - b. There shall be no storage of fuel or refuelling of vehicles and machinery within 20 metres of the bed of a waterway.