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Subject: Plan Change 7: Opihi Flow and Allocation Working Party (PC7-382) - Evidence in Chief
Date: Friday, 17 July 2020 5:50:39 pm
Attachments: [Evidence of Mark Webb 17.7.20.pdf](#)
[Evidence of Gregory Anderson 17.7.20.pdf](#)
[Evidence of Mark Hawkins 17.7.20.pdf](#)
[Evidence of Grant Porter 17.7.20.pdf](#)
[Evidence of Caroline Saunders 17.7.20.pdf](#)
[Evidence of Murray Bell 17.7.20.pdf](#)
[Evidence of Dan Davies 17.7.20.pdf](#)
[Evidence of Keri Johnston 17.7.20.pdf](#)
[Evidence of Dr Gregory Ryder 17.7.20.pdf](#)
[Evidence of Gregory McAlister 17.7.20.pdf](#)
[Evidence of Timothy Ensor 17.7.20.pdf](#)
[Evidence of Jonathan Sutherland 17.7.20..pdf](#)

Dear Tavisha

We act for the Opihi Flow and Allocation Working Party (**OFAWP**), submitter no. PC7-382.

We **attach** for filing, in relation to the above matter, statements of evidence in chief of the following witnesses on behalf of the OFAWP:

1. Mark Webb (OFAWP representative – Fish & Game);
2. Gregory Anderson (OFAWP representative – North Opuha);
3. Murray Bell (OFAWP representative – Upper Opihi);
4. Deiniol Davies (OFAWP representative – South Opuha);
5. Mark Hawkins (OFAWP representative – Te Ana Wai);
6. Keri Johnston (hydrology);
7. Dr Gregory Ryder (ecology/freshwater quality);
8. Grant Porter (economics);
9. Dr Caroline Saunders (economics);
10. Tim Ensor (planning);
11. Gregory McAlister (drone footage);
12. Johnathan Sutherland (drone footage).

Kind regards,

Georgina Hamilton
Partner



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**BEFORE INDEPENDANT HEARING COMMISSIONERS
APPOINTED BY THE CANTERBURY REGIONAL COUNCIL**

UNDER: the Resource Management Act 1991

IN THE MATTER OF: Proposed Plan Change 7 to the
Canterbury Land and Water Regional
Plan – Section 14: Orari-Temuka-Opihi-
Pareora

**STATEMENT OF EVIDENCE IN CHIEF OF TIMOTHY ALASTAIR DEANS ENSOR
ON BEHALF OF
THE OPIHI FLOW AND ALLOCATION WORKING PARTY (SUBMITTER NO. PC7-
382)**

Dated: 17 July 2020

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1. INTRODUCTION

- 1.1 My full name is Timothy Alastair Deans Ensor. I am currently a Principal Planner with Tonkin & Taylor Limited having previously been employed by AECOM New Zealand Limited and its predecessor, URS New Zealand Limited. I have been a consultant planner for approximately 13 years. Prior to consulting I was employed by Environment Canterbury for approximately two and a half years as a consents planner.

Qualifications and experience

- 1.2 I hold a Bachelor of Science and a Bachelor of Arts with honours majoring in Geography, obtained from the University of Canterbury in 2002. In 2012 I graduated with a Post Graduate Diploma in Planning from Massey University. I am an associate member of the New Zealand Planning Institute.
- 1.3 I have worked throughout the South Island assisting private and public sector clients with obtaining statutory approvals, undertaking environmental impact assessment and policy analysis for projects, and providing expert planning evidence at plan and consent hearings. These clients include the Department of Conservation, the NZ Transport Agency, Environment Canterbury, the Canterbury Aggregate Producers Group, Fulton Hogan Limited and ANZCO Foods Limited.

Background

- 1.4 I am familiar with the provisions of PC7 to which these proceedings relate. I assisted the Opihi Flow and Allocation Working Group (FAWP) through the pre-notification consultation period and assisted with the preparation of submissions.
- 1.5 In preparing my evidence, I have reviewed the relevant parts of the section 32 Report and the section 42A Report. In preparing my evidence, I have also reviewed:
- (a) Evidence of Ms Keri Johnston on behalf of the FAWP
 - (b) Submission on PC7 by Alastair Hay (PC7-249.1)
 - (c) Evidence of Dr Caroline Saunders on behalf of the FAWP

- (d) Evidence of Mr Grant Porter on behalf of the FAWP
- (e) Evidence of Dr Greg Ryder on behalf of the FAWP
- (f) Hayward, S, 2019, Surface water quality and aquatic ecology technical report to support the Orari-Temuka-Opihi-Pareora limit-setting process.
- (g) Robson-Williams, M and Clark, D, 2019 Overview technical report to support the Orari-Temuka-Opihi-Pareora limit-setting process.

Code of Conduct

- 1.6 I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court's Practice Note as updated in 2014. My evidence has been prepared in compliance with that Code. In particular, unless I state otherwise, this evidence is within my area of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

2. SCOPE OF EVIDENCE

- 2.1 This evidence addresses key elements of the PC7 flow and allocation regime as it applies to the tributaries of the Opihi River. Specifically I discuss pro-rata partial restrictions and the relationship between the various water permit types, minimum flows, flow and allocation limits set at or beyond the life of the OTOP sub-regional chapter of the Canterbury Land and Water Regional Plan (LWRP) and the reliance on the interim limit setting methodology in the Proposed National Environmental Standard on Ecological Flows and Water Levels 2008 (pNESEF). Provide an overview of what your evidence addresses in 2-3 short paragraphs.
- 2.2 My evidence is structured as follows:
- (a) Statutory context
 - (b) Pro-rata partial restrictions
 - (c) Minimum flows
 - (d) Minimum flows beyond the life of the OTOP sub-regional chapter

- (e) Interim flow and allocation limit setting methodology
- (f) Policy 14.4.36
- (g) Conclusion

3. EXECUTIVE SUMMARY

- 3.1 The FAWP submitted on several aspects of PC7 as it applies to the tributaries of the Opuha and Opihi Rivers.
- 3.2 The pro-rata partial restrictions included in PC7 do not recognise the relative reliability of AA, BA and AN water permits. PC7 'stacks' the allocation from these permits into an allocation block with pro-rata partial restrictions beginning at the top of the block. This results in restrictions starting earlier than they otherwise should leading to an anticipated resulting loss in productivity. This results in unnecessary economic and social costs that reduce the efficiency of the partial restriction regime.
- 3.3 The flow regime under PC7 introduces three minimum flow steps: 'current' (ORRP), 2025 and 2030 flows. The 2030 flow step has been assessed by Dr Ryder as having limited ecological benefit but by virtue of limiting water available for abstraction or other uses (e.g. artificial freshes) is likely to result in additional economic, social and potentially environmental costs. The 'current' and 2025 flows are acceptable to FAWP and achieve the desired environmental benefit with much less cost.
- 3.4 The PC7 minimum flows have been developed by relying on the interim limit setting methodology contained in the pNESEF. One of the aims of the pNESEF is to set interim limits for flows and/or water levels where limits have not been set through regional plans or water conservation orders. PC7 provides the opportunity to set catchment specific limits based on robust technical information rather than relying on this interim methodology. However, it appears that this opportunity has not been taken to set limits in the OTOP sub-regional chapter.
- 3.5 Including environmental limits beyond the established policy cycle (out to 2030) interferes with the ability of the OTOP sub-regional chapter to adapt as was anticipated by s79(1) of the RMA. Future planning intent can be signalled

through clear objectives and policies while not foreclosing opportunity that may otherwise be restricted through setting longer term limits.

- 3.6 Overall, these factors lead me to conclude the amendments proposed to PC7 by the FAWP in its submission, and specifically the amendments to the proposed flow and allocation regime, will be the most efficient and effective, and therefore the most appropriate to achieve the relevant objectives and the purpose of the RMA.

4. STATUTORY CONTEXT

- 4.1 This section highlights the statutory context for my evidence. The objectives and policies referred to are contained in **Attachment A** to this evidence.

National policy

- 4.2 PC7 must give effect to any relevant National Policy Standard. The National Policy Standard for Freshwater Management 2014 (NPSFW) contains national level objectives and policies and “*provides a National Objectives Framework to assist regional councils and communities to more consistently and transparently plan for freshwater objectives*”.¹ Consequently the NPSFW contains national level objectives for water quantity and quality, and policies addressing the same to assist in achieving these objectives through limit setting and other processes.
- 4.3 Key to setting flow and allocation regimes in the Opihi FMU are Objective AA1 and Policy AA1. Objective AA1 is: “*To consider and recognise Te Mana o te Wai in the management of fresh water.*” Te Mana o te Wai was the subject of some discussion in the s42A report and I have addressed this in my evidence on behalf of the Adaptive Management Working Group.
- 4.4 Objectives A1, A2, A3 and A4 provide national level direction in relation to water quality. These policies are relevant to this evidence in so far as they relate to achieving water quality outcomes through the development and implementation of flow and allocation regimes (as opposed to land use and discharge related limit setting). Objectives A1, A2, A3 and A4 carry several key themes that will be picked up in this evidence: safeguarding the life-supporting capacity of ecosystems and ecosystem processes of fresh water; and enabling

¹ NPSFW, page 4
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communities to provide for their economic well-being in sustainably managing freshwater quality within limits.

- 4.5 Objective B1, B2, B3, B4 and B5 of the NPSFW and associated policies provide direction for PC7 in relation to water quantity. These objectives also carry the key themes identified above and provide additional specific directives of particular relevance to this evidence “to avoid any further overallocation and phase out existing overallocation”.
- 4.6 Of particular relevance to the Opihi FMU given the presence of the Opuha Dam, is Objective B5 which is: *“To enable communities to provide for their economic well-being, including productive economic opportunities, in sustainably managing fresh water quantity, within limits.”* The presence of the dam means that the starting point for certain decisions is not the same as for an FMU without this existing infrastructure.

Canterbury objectives

- 4.7 The NPSFW must be given effect to by the LWRP and therefore PC7. The requirement within the NPSFW to safeguard the life-supporting capacity of ecosystems and ecosystem processes of fresh water is reflected strongly in the LWRP through Objective 3.8 and 3.16. These objectives are also complimented by Objective 3.17 requiring significant indigenous biodiversity values to be protected and Objective 3.19 requiring the protection of the natural character of fresh water bodies.
- 4.8 Objectives 3.7 and 3.12 of the LWRP requires an explicit recognition of the competing interests for fresh water and that regard needs to be had to community outcomes when managing fresh water. The Canterbury Water Management Strategy and the Zone Implementation Programme (ZIP) process is a key element for achieving these objectives.
- 4.9 Objective B5 of the NPSFW is given effect to through Objective 3.11 and 3.12 of the LWRP. As discussed above in relation to Objective B5, the presence of Opuha Dam has a large influence on the approach taken to achieving Objectives 3.11 and 3.12.

Plan change 7

- 4.10 PC7 contains no new objectives, and the objectives in the LWRP are unaltered by PC7. Therefore, for the purposes of S32(1)(b) of the RMA, the objectives of the LWRP are the relevant objectives.
- 4.11 PC7 proposes Policy 14.4.35. This is particularly directive and almost plays the role of an objective in the context of flow and allocation regimes for the Opihi FMU. Policy 14.4.35 is discussed in more detail later but provides a lens through which to view the Objectives of the LWRP in the context of PC7.

5. PRO-RATA PARTIAL RESTRICTIONS

- 5.1 The FAWP has sought an amendment to the notified definition of “Pro-rata partial restriction” in order to appropriately recognise the relative reliability between AA, BA and AN permits that take water from the tributaries of the Opihi River so as to avoid having AA and BA permits entering a pro-rata partial restriction period earlier than is justifiable.²
- 5.2 As discussed in the evidence of Ms Keri Johnston, the key difference between takes affiliated to Opuha Water Limited (OWL) and those that are not, is the level of reliability associated with the take. Those affiliated to OWL enjoy greater reliability due to the investment made in Opuha Dam.
- 5.3 The PC7 definition requires an allocation block consisting of AA, BA and AN permits to be added to the minimum flow in order to determine when partial restrictions should commence. This assumes AN permits have the same reliability as AA permits which as described by Ms Johnston, they do not. It also assumes that minimum flows on the tributary (as opposed to at Saleyards Bridge on the Opihi River mainstem), will have the greatest influence on whether abstraction under an or BN permit can occur. ‘Stacking’ AA, BA and AN permits in this way (treating AA, BA and AN permits as one block) results in partial restrictions for AA and BA permits commencing at higher flows than they should otherwise, with the resulting loss of reliability.

² PC7-382.1
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- 5.4 The proposed amendment to the definition of “Pro-rata partial restriction” offered by the FAWP recognises the difference in reliability between AA, BA and AN permits and introduces a banded allocation block (discussed below).
- 5.5 A submission by Mr Alastair Hay³ confirms the FAWP’s concerns with the notified definition of pro-rata partial restriction. Mr Hay holds a permit and describes in his submission that in his experience AN takes are restricted by the minimum flow on the main stem of the Opihi River at SH1 before AA takes are restricted. Mr Hay also highlights that this regime imposes another level of restriction on AA permit holders.
- 5.6 The s42A officer has rejected the FAWP submission to amend the definition and has stated:

“We do not consider the current provisions are problematic, despite the different effects of the restrictions on AN permits.”⁴

- 5.7 From this comment I assume that the s42A officer has not recognised that adding the AN permits to the AA and BA permits sets the starting point for partial restrictions higher than it otherwise would, and has not recognised the role of minimum flows for the Opihi River at Saleyards Bridge in restricting AN permits.
- 5.8 The s42A report also concludes that the proposed FAWP definition:

“...would add complexity to the concept of pro rata partial restrictions without changing the implementation or effect of the provisions, and risk the tributary minimum flows being breached.”⁵

- 5.9 As discussed above and in Ms Johnston’s evidence, the proposed FAWP definition substantially changes the implementation and effect of the flow and allocation regime by recognising and providing for the differences in reliability afforded to the AA and BA permits due to affiliation with the Opuha Dam. The FAWP amendment effectively creates an allocation block for each tributary consisting of a series of bands. The first band above the minimum flow would consist of the sum of the AA and BA permits, and the second band would consist of the AN permits.

³ PC7-249.1

⁴ S42A report para 9.60.

⁵ S42A report para 9.60

- 5.10 Banded allocation blocks are not a unique concept and apply on a number of rivers in Canterbury. These occur in situations wherever water permits have been granted with differences in reliability. For example, in the Waitaki River, the Ashburton River and the Waimakariri River.
- 5.11 While an additional layer is introduced through the FAWP proposed definition, this is necessary to recognise the relative reliability of takes from the tributaries. The banded allocation block that the proposed amendment introduces is not unique in Canterbury and is recognisable as an approach similar to that occurring on rivers elsewhere in the region. Consequently, my opinion is the proposed amendment to the definition does not introduce undue complexity given the consequences of not appropriately recognising the relative reliability of AA, BA and AN permits.
- 5.12 The proposed FAWP definition does not increase the risk of the tributary minimum flows being breached as the s42A officer claims. Provided all permits are recognised within the allocation block (as a band within the block in the case of the FAWP proposal) above the minimum flow, and are subject to a pro-rata reduction, there is no greater risk of the minimum flows on the tributaries being breached than under the regime proposed under PC7. In addition, all AN permits are subject to a minimum flow on the Opihi River mainstem at SH1. As discussed by Ms Johnston and highlighted in the submission of Mr Hay, the SH1 minimum flow applying to his AN permit not only provides an additional level of protection, but is the defining factor in considering whether the permit is on restriction.
- 5.13 As discussed in the evidence of Mr Grant Porter and Dr Caroline Saunders, the PC7 minimum flows result in a reduction in pasture and crop production with corresponding economic effects. Introducing pro-rata restrictions at a higher flow than is required will likely exacerbate economic and social costs associated with reducing the reliability of water for irrigation. In terms of s32(1)(b)(ii) of the RMA, the amendment to the definition of "Pro-rata partial restriction" proposed by FAWP would remove the economic and social costs associated with earlier restrictions, while not introducing any additional environmental costs as the s42A officer claims. This in my view, improves the efficiency of the pro-rata partial restrictions in achieving objectives.

6. MINIMUM FLOWS

- 6.1 The flow and allocation regimes for the tributaries of the Opihi River contained in PC7 have several steps; current, 2025 and 2030. This stepped approach provides a transition from the current (ORRP) minimum flows through to more restrictive minimum flows. These flow and allocation regimes are contained in Table 14(m) to Table 14(s).
- 6.2 The FAWP submission sought the retention of the Tables 14(m) ,14(n), 14(p), 14(r) and 14(s)⁶ which set out the minimum flow regimes for the North and South Opuha Rivers, the Upper Opihi River and Te Ana Wai respectively, but sought that the tables setting out 2030 minimum flows are deleted⁷. The s42A officer has recommended that Table 14(m) is retained as notified, that amendments are made to Table 14(n), 14(p), 14(r), and that Table 14(s) is deleted. The s42A officers recommended changes effectively remove the ‘current’ flows from PC7, brings the PC7 2025 flows forward so as to apply immediately, and brings the PC7 2030 flows forward to apply at 2025. These amendments have been attributed to the submission of Te Rūnanga o Arowhenua (Arowhenua) and Te Rūnanga o Ngāi Tahu (Ngāi Tahu), and the Royal Forest and Bird Protection Society (Forest and Bird) in the S42A supplementary report.⁸
- 6.3 The Arowhenua/ Ngāi Tahu and Forest and Bird submission suggest that the flows set out in PC7 are not sufficient to maintain natural processes and water levels, prevent nutrient enrichment at the hapua, protect indigenous biodiversity and protect the intrinsic values of water bodies and riparian zones. However, the scope of the Arowhenua/ Ngāi Tahu appears to be limited to the Temuka, Opuha and the Te Ana Wai Rivers.
- 6.4 In his evidence, Dr Greg Ryder has assessed the water quality and ecological conditions for the North and South Opuha Rivers, Upper Opihi River and Te Ana Wai. Dr Ryder’s conclusion is that these rivers “generally exhibit relatively good water quality and ecological conditions”. Dr Ryder has also assessed the minimum flows proposed through PC7 and where possible has compared the ecological differences between the ‘current’ flows, the PC7 2025 flows and the

⁶ The FAWP submission sought amendments to Table 14(s)

⁷ Table 14(o), Table 14(q)

⁸ S42A supplementary report, paragraph 12 and 13, page 3

PC7 2030 flows. Dr Ryder draws the following conclusions in relation to each river:

- (a) **North Opuha** – currently there is no information to indicate that the ecology of the North Opuha River is being adversely affected by summer low flows;
- (b) **South Opuha** – Relative to the current regime, the PC7 2025 and 2030 flows (there is not a significant difference between the two) increase the potential habitat for all fish species and life cycles with significant gains in the winter and shoulder months with 2030 flows providing marginal gains. PC7 2025 and 2030 flows are likely to have little effect on increasing adult brown trout habitat due to the steep and shallow nature of the river;
- (c) **Upper Opihi** - PC7 2025 flows provide good to excellent habitat retention for most species, the PC7 2030 flows provide gains in habitat for adult longfin and shortfin eels, torrentfish, adult brown trout and food producing water; and losses for juvenile longfin and shortfin eels, common and upland bully, Canterbury galaxias and juvenile brown trout;
- (d) **Te Ana Wai** – PC7 2025 and 2030 flows (the flows are the same, but the 2030 regime introduces pro-rata reductions) provide meaningful improvement to habitat conditions for native and salmonid fish populations.

6.5 The general conclusion from Dr Ryders evidence is that the current and 2025 minimum flows proposed through PC7 are adequate, and proposed increases beyond these (2030 flows) have limited ecological benefit. Dr Ryder also makes the comment that in relation to water quality issues including cyanobacteria cover and the occurrence of nuisance periphyton growths in the rivers, this is more a reflection of surrounding land use practices as opposed to abstraction or the current minimum flows.

6.6 The 2030 minimum flows proposed through PC7, and the recommendation by the S42A officer to bring forward the PC7 2025 and 2030 minimum flows, will increase the time that water abstractors will be on restriction as more water is required for river flows, and therefore not available for abstraction. The

economic implications of these minimum flows are addressed in the evidence of Mr Grant Porter and Dr Saunders. Dr Saunders evidence concludes that the PC7 2025 minimum flows will have a direct economic impact (reduction in aggregated farm gross income) of \$1,855,652. In relation to the 2030 minimum flows, the direct economic impact is anticipated to be \$2,596,927.

- 6.7 Based on Dr Ryder's evidence, the PC7 2025 minimum flows safeguard the life-supporting capacity of ecosystems and ecosystem processes and provide sufficient flow and water quality (in relation to temperature) to support fish and benthic invertebrate habitat and requirements⁹. On this basis, it would not seem necessary to introduce a more restrictive minimum flow in order to achieve the relevant objectives.
- 6.8 Retaining the PC7 'current' and 2025 minimum flows only, has lower economic costs than the alternatives, with comparable ecological benefit. On this basis a flow regime including the PC7 current and 2025 minimum flows (but not the 2030 flows) is more efficient in achieving Objective B1 of the NPSFW and Objective 3.8 of the LWRP, better recognises the out-of-stream values associated with freshwater alongside the in-stream values, and the value water provides in allowing communities to provide for their economic well-being¹⁰.
- 6.9 Based on the evidence of Dr Ryder, Mr Porter and Dr Saunders, my opinion is that the PC7 'current' and 2025 minimum flows for the North and South Opuha Rivers, Te Ana Wai and Upper Opihi River are, in terms of S32(1)(b) of the RMA, the most appropriate way to achieve the relevant objectives of the NPSFW and the LWRP. On this basis, reference to the flow and allocation tables setting out the 2030 minimum flows, and any reference to these tables in policies or rules should be deleted.
- 6.10 Mr Porters evidence comments on the viability of farming activities as a result of the minimum flows proposed through PC7. Table 12 of his evidence suggests that several farming types reliant on water from the Te Ana Wai and South Opuha River will not be viable under the 2025 regime and that the 2030 regime also cause viability issues for finishing farms reliant on water from the Upper Opihi River.

⁹ Objective B1 of the NPSFW and Objective 3.8 of the LWRP

¹⁰ Objective B5 of the NPSFW and Objective 3.7 and 3.11 of the LWRP

- 6.11 These conclusions are notable in the context of PC7 Policy 14.4.21, which requires the review of all water permits immediately after PC7 is made operative in order to implement the flow and allocation regimes. s131(1) of the RMA sets out the matters to be considered by the consent authority when reviewing resource consents including: “... *the matters in section 104 and to whether the activity allowed by the consent will continue to be viable after the change*”.¹¹
- 6.12 Given the conclusions of Mr Porter regarding viability, my view is there is the potential for challenge to the PC7 flow and allocation regimes through the resource consent review process.

7. MINIMUM FLOWS BEYOND THE LIFE OF OTOP SUB-REGIONAL CHAPTER

- 7.1 As discussed above, the flow and allocation regimes for the tributaries of the Opihi River contained in PC7 have several steps; current, 2025 and 2030. The minimum flows that will apply from 1 January 2030 will place greater restriction on water abstractors than the ‘current’ minimum flows or the minimum flows scheduled to apply from 1 January 2025. The FAWP submission opposed the inclusion of these 2030 minimum flows within PC7.
- 7.2 Dr Ryder’s evidence concludes that there are limited ecological gains associated with minimum flows above the ‘current’ and 2025 minimum flows contained in PC7. Further, he reports that there are some ecological gains for certain species and losses for others in the Upper Opihi River associated with the 2030 increased minimum flows.
- 7.3 ECan is required to review the OTOP sub-regional provisions in accordance with s79(1) of the RMA. Based on the timeframes set in s79(1), there is an expectation that the required plan review will have commenced prior to 2030. ECan is also required to monitor the efficiency and effectiveness of the OTOP sub-regional provisions in accordance with s35(2)(b) of the RMA. It is anticipated that through this monitoring, and where appropriate state of the environment monitoring as part of obligations under s35(2)(a), ECan will gain a greater understanding of whether the proposed 2030 minimum flows are

¹¹ s131(1)(a) of the RMA
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necessary, and as highlighted by Dr Ryder in relation to the Upper Opihi River, whether the trade-offs that may occur as a result of these flows are desirable.

- 7.4 The planning process under the RMA is adaptive. Policy is set, monitoring is undertaken, the performance of the policy is reviewed, and any adjustments are made to this policy in order to better achieve objectives. By including hard limits beyond the established policy cycle, PC7 interferes with the ability of the OTOP sub-regional chapter to adapt as was anticipated by s79(1) of the RMA. My view is this intended monitoring and review should form the basis for any flow or allocation regime beyond the life of the OTOP sub-regional provisions.
- 7.5 Setting limits beyond the life of a plan can assist the community by signalling the direction that the plan will take or signalling actions that may need to be taken in order to achieve stated objectives. However, my opinion is that adequate direction can be signalled through clear objectives and policies while not foreclosing opportunity that may otherwise be restricted through setting longer term limits (greater than 10 years).
- 7.6 By carefully considering the desired long-term environmental outcomes, describing these as objectives and providing a clear policy directive regarding what steps will be taken to achieve these objectives, numerical limits beyond the plan lifetime become less important. Importantly, this approach provides the opportunity for a more robust set of limits to be incorporated in subsequent plans (if required) based on up to 10 years of plan and environmental monitoring.
- 7.7 PC7 introduces a series of flow and allocation regimes that are different to those contained in the ORRP. It is therefore important to factor in this change (and others introduced through PC7) into any future flow limit setting process. Pre-empting the outcome of the next 10 years of water management in the Opihi FMU misses this opportunity and may lead to unnecessary economic and social costs (those described in the evidence of Dr Saunders). Based on the evidence of Dr Ryder, the increased minimum flows under the 2030 regime will have negligible ecological benefit.
- 7.8 While setting flow limits at or outside the anticipated life of the plan may assist ECan to achieve the requirements of the NPSFW to ensure no decision results

in future over allocation¹², it potentially introduces an overly restrictive set of limits. Decisions regarding limit setting in order to achieve NPSFW objectives¹³ should in my view be made based on the best data available. In terms of the Opihi FMU, decisions should incorporate data associated with the management changes being made through PC7. Setting limits unnecessarily far in the future may pre-empt future national direction including that which may eventuate out of the governments 'Action for Healthy Waterways' work programme.

- 7.9 Overall, my opinion is that setting limits at or beyond the anticipated plan life reduces the efficiency of PC7. There is uncertainty surrounding what the future objectives for the Opihi FMU will be given the current focus on freshwater reform nationally, and the evidence of Dr Ryder demonstrates that the 'current' and 2025 limits in PC7 are adequate to safeguard the life supporting capacity of the Opihi River tributaries thereby meeting current objectives. Therefore, introducing an unnecessarily restrictive set of rules through the 2030 minimum flows reduces the efficiency of the allocation and flow regime by increasing the associated costs (as discussed in the evidence of Dr Saunders), without increasing environmental benefits. On this basis, my opinion is that removing the 2030 limits is appropriate.
- 7.10 The risk of not acting by applying the 2030 minimum flows is relatively low¹⁴. The proposed PC7 2030 minimum flows would only apply at the extreme end of the OTOP sub-regional plan lifetime. This coupled with the allocation status of many of the rivers in the Opihi FMU (indicated by ECan as fully or over allocated)¹⁵ provides very limited opportunity for unanticipated and significant environmental costs to be introduced through new applications to abstract water. The PC7 2025 minimum flows would apply to replacement resource consents providing an increased level of protection than exists currently, and one that has been assessed by Dr Ryder as appropriate.

¹² NPSFW Policy B5

¹³ NPSFW Policy B1

¹⁴ In accordance with S32(2)(c) of the RMA

¹⁵ S32 Report, page 154

8. INTERIM FLOW AND ALLOCATION LIMIT SETTING METHODOLOGY

- 8.1 As discussed above, the FAWP has submitted in opposition to the 2030 minimum flow step. As indicated in several of the supporting technical documents for PC7¹⁶, the limit setting process for PC7 has relied on the interim limit setting methodology contained in the pNESEF.
- 8.2 One of the aims of the pNESEF is to set interim limits for flows and/or water levels where limits have not been set through regional plans or water conservation orders.¹⁷ In this context, PC7 provides the opportunity to set catchment specific limits based on technical studies and analysis¹⁸ rather than rely on an interim methodology. It appears this opportunity has not been taken.
- 8.3 The s42A officer's recommendation is to bring forward the 2030 minimum flows to 2025. This makes a minimum flow set using a draft desktop based methodology, the purpose of which is to provide an interim minimum flow in the absence of a minimum flow set using site specific information, a core component of the OTOP sub-regional chapter. My opinion is this approach undermines the integrity of the OTOP limit setting process and focuses the flow regime for the tributaries of the Opihi River on flows that may not be necessary in order to achieve the relevant objectives.

9. POLICY 14.4.36

- 9.1 The FAWP submitted on Policy 14.4.36 and the specific level of detail contained in Policy 14.4.36 was supported. One change to Policy 14.4.36 suggested in the FAWP submission is the explicit recognition that lake levels are a component of the regime applying to AA, BA, KIL, AN and BN permits. Given Tables 14(m) through 14(y) also contain a lake level restriction, this proposed amendment is in my view appropriate. It provides greater clarity of the role lake levels play in the management of the catchment and avoids the potential confusion that may arise from the disconnect between policy and rule. The

¹⁶ For example: Hayward, S, 2019, Surface water quality and aquatic ecology technical report to support the Orari-Temuka-Opihi-Pareora limit-setting process; Robson-Williams, M and Clark, D, 2019, Overview technical report to support the Orari-Temuka-Opihi-Pareora limit-setting process.

¹⁷ Proposed National Environmental Standard on Ecological Flows and Water Levels 2008, Page ix.

¹⁸ For example: Opihi Catchment Ecological Flow Assessment. Prepared for Environment Canterbury (Jellyman, P, 2018).

proposed amended wording (including amendments sought by the Adaptive Management Working Group Submission) is:

14.4.36 In addition to any river specific environmental flow, Lake level and allocation regime set out in Tables 14(m) to 14(y), differentiate AA, BA, KIL, AN and BN permits by:

- a. AA, BA and KIL permits being subject to an environmental flow and allocation regime on the Opihi mainstem at Saleyards Bridge which reflects water released from the Opuha Dam for the purposes of maintaining environmental flows and provision for the amount of water being abstracted under AA, BA and KIL permits; and*
- b. requiring, when the level of Lake Opuha falls is below RL370, AA and BA permits to be treated as AN and BN permits respectively and to be 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*
- c. AN permits being subject to an environmental flow and allocation regime on the Opihi mainstem at State Highway 1 as set out in Table 14(u), determined taking into account the unmodified flow of the Opihi mainstem; and*
- d. BN permits being subject to an environmental flow and allocation regime on the Opihi mainstem at State Highway 1 as set out in Table 14(y) determined taking into account the recorded (actual) flow.*

10. ACCEPTED RELIEF

10.1 The FAWP supported several provisions in PC7 as notified. This included Policy 14.4.6B and Table 14(y). The S42A officer has recommended that these provisions be retained.

10.2 The rationale for retaining these provisions was set out in the FAWP submission. I have reviewed this rationale and am of the view that retaining the provisions as notified will be efficient and effective in terms of achieving the relevant objectives and will achieve the purpose of the RMA.

11. CONCLUSION

- 11.1 The pro-rata partial restrictions, and 2030 minimum flows proposed through PC7 has the potential to result in additional economic and social costs that outweigh the environmental benefits leading to a flow and allocation regime that is less efficient and effective than it could be.
- 11.2 The amendments proposed through the FAWP submission seek to improve the efficiency of the PC7 flow and allocation regime and are generally supported through the evidence of the FAWP witnesses.
- 11.3 Based on this evidence, my conclusion is that the proposed changes in the FAWP submission and highlighted above are:
- (e) The most appropriate way to achieve the objectives; and
 - (f) Assist in achieving the purpose of the RMA.

TIMOTHY ALASTAIR DEANS ENSOR

17 July 2020

Attachment A – Planning provisions referred to

National Policy Statement for Freshwater Management

A. Water Quality

Objective A1

To safeguard:

- a) the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems, of fresh water; and
- b) the health of people and communities, as affected by contact with fresh water; in sustainably managing the use and development of land, and of discharges of contaminants.

Objective A2

The overall quality of fresh water within a freshwater management unit is maintained or improved while:

- a) protecting the significant values of outstanding freshwater bodies;
- b) protecting the significant values of wetlands; and
- c) improving the quality of fresh water in water bodies that have been degraded by human activities to the point of being over-allocated.

Objective A3

The quality of fresh water within a freshwater management unit is improved so it is suitable for primary contact more often, unless:

- a) regional targets established under Policy A6(b) have been achieved; or
- b) naturally occurring processes mean further improvement is not possible.

Objective A4

To enable communities to provide for their economic well-being, including productive economic opportunities, in sustainably managing freshwater quality, within limits.

B. Water Quantity

Objective B1

To safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water, in sustainably managing the taking, using, damming, or diverting of fresh water.

Objective B2

To avoid any further over-allocation of fresh water and phase out existing over-allocation.

Objective B3

To improve and maximise the efficient allocation and efficient use of water.

Objective B4

To protect significant values of wetlands and of outstanding freshwater bodies.

Objective B5

To enable communities to provide for their economic well-being, including productive economic opportunities, in sustainably managing freshwater quantity, within limits.

Policy B1

By every regional council making or changing regional plans to the extent needed to ensure the plans establish freshwater objectives in accordance with Policies CA1-CA4 and set environmental flows and/or levels for all freshwater management units in its region (except ponds and naturally ephemeral water bodies) to give effect to the objectives in this national policy statement, having regard to at least the following:

- a) the reasonably foreseeable impacts of climate change;
- b) the connection between water bodies; and
- c) the connections between freshwater bodies and coastal water.

Policy B2

By every regional council making or changing regional plans to the extent needed to provide for the efficient allocation of fresh water to activities, within the limits set to give effect to Policy B1.

Policy B3

By every regional council making or changing regional plans to the extent needed to ensure the plans state criteria by which applications for approval of transfers of water

take permits are to be decided, including to improve and maximise the efficient allocation of water.

Policy B5

By every regional council ensuring that no decision will likely result in future over-allocation – including managing fresh water so that the aggregate of all amounts of fresh water in a freshwater management unit that are authorised to be taken, used, dammed or diverted does not over-allocate the water in the freshwater management unit.

Policy B6

By every regional council setting a defined timeframe and methods in regional plans by which over-allocation must be phased out, including by reviewing water permits and consents to help ensure the total amount of water allocated in the freshwater management unit is reduced to the level set to give effect to Policy B1.

Canterbury Land and Water Regional Plan

Objective 3.2

Water management applies the ethic of ki uta ki tai – from the mountains to the sea – and land and water are managed as integrated natural resources recognising the connectivity between surface water and groundwater, and between fresh water, land and the coast.

Objective 3.7

Fresh water is managed prudently as a shared resource with many in-stream and out-of-stream values.

Objective 3.8

The quality and quantity of water in fresh water bodies and their catchments is managed to safeguard the life-supporting capacity of ecosystems and ecosystem processes, including ensuring sufficient flow and quality of water to support the habitat and feeding, breeding, migratory and other behavioural requirements of indigenous species, nesting birds and, where appropriate, trout and salmon.

Objective 3.11

Water is recognised as an enabler of the economic and social wellbeing of the region.

Objective 3.12

When setting and managing within limits, regard is had to community outcomes for water quality and quantity.

Objective 3.16

Freshwater bodies and their catchments are maintained in a healthy state, including through hydrological and geomorphic processes such as flushing and opening hāpua and river mouths, flushing algal and weed growth, and transporting sediment.

Objective 3.17

The significant indigenous biodiversity values of rivers, wetlands and hāpua are protected.

Objective 3.19

Natural character values of freshwater bodies, including braided rivers and their margins, wetlands, hāpua and coastal lagoons, are protected.

Policy 4.62

To prevent the flow falling below a minimum flow for the catchment, due to abstraction, partial restriction regimes for surface water will be implemented. Regimes will be designed to:

- (a) have a single flow monitoring point for the whole catchment that all abstractors are referenced to, with additional flow monitoring points that some or all abstractors are subject to, should the hydrology of the surface waterbody justify it;
- (b) provide for groups of water permit holders in the same sub-catchment to share water when takes are operating under partial restrictions; and
- (c) except if otherwise specified in an applicable sub-region section, implement a stepped or pro rata restriction regime that applies equally to all taking within an allocation limit and does not induce the flow to fall below the minimum flow due to abstraction.