

**From:** [John Chapman](#)  
**To:** [Mailroom Mailbox](#)  
**Subject:** PC7 submission Chapman  
**Date:** Friday, 13 September 2019 2:17:24 PM  
**Attachments:** [PC7 submission - John Chapman.pdf](#)

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Submission for PC7

From John Chapman

**SUBMISSION ON PROPOSED PLAN CHANGE 7 TO THE CANTERBURY LAND AND WATER REGIONAL PLAN**

*Clause 5 First Schedule, Resource Management Act 1991*

**TO:** Proposed Plan Change 7 to the Canterbury Land and Water Regional Plan

Environment Canterbury  
PO Box 345  
Christchurch 8140

By email: [mailroom@ecan.govt.nz](mailto:mailroom@ecan.govt.nz)

**Name of submitter:**

- 1 Name: *J.L. Chapman*  
Address: *Waitohi R.D.25, Temuka*  
Contact: *John Chapman*  
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**Trade competition statement:**

- 2 *J.L. Chapman* could not gain an advantage in trade competition through this submission.

**Proposal this submission relates to is:**

- 3 This submission is on proposed Plan Change 7 (PC7) to the Canterbury Land and Water Regional Plan (PC7).

**Wish to be Heard:**

- 4 I wish to be heard in support of this submission.  
5 I would be prepared to consider presenting a joint case with others making similar submissions at the hearing.

*Signature*

John Chapman

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*Signature*

John Chapman

*Date: 13 September 2019*

## **Submission**

### Background

The farming operation is arable cropping ,dry dairy stock and beef finishing. We have 288 OWL shares which can be used over 500ha .We are foundation contributors to the Opuha water scheme and intent was to mitigate extreme dry periods rather than changing to dairy. The main soil type is Waitohi clay loam and this needs to be treated with care especially when wet so our water requirements can be later seasons and will likely be compromised by PC7.

**PLAN CHANGE 7 - REASONS FOR SUBMISSION AND DECISIONS SOUGHT BY *J L Chapman***

The specific provisions of PC7 that my submission relates to are:		My submission is that:		I/we seek the following decisions from Environment Canterbury (ECan)
Section & Page Number	Sub-section/ Point	Oppose/ support (in part or full)	Reasons	
<b>14.4 Policies</b>				
<b>Opihi Freshwater Management Unit: Surface Water Flows</b> (pages 140-141)	14.4.35	Oppose in part	<p>As an OWL shareholder, I/we support the intent of Policy 14.4.35, to maintain connectivity and flow variability in the augmented Opuha and Opihi rivers. This aligns with the way OWL has been operating the Opuha dam, and the ethos of the OEFRAG approach to managing the Opihi River over the years, including in particular, during the severe water short years of 2014, 2015 and 2016.</p> <p>I/we support clause (b) which specifies that the flows at Saleyards bridge should be measured on a 24-hour average with instantaneous variance of not greater than 500l/s below the minimum flow. From an operational point of view this is a practical and efficient approach.</p> <p>In terms of clause (e) relating to fresh management, I/we understand that the Adaptive Management Working Group (AMWG) have been working to develop an artificial fresh regime to most efficiently manage periphyton and achieve improved environmental outcomes. I/we support the AMWG's proposals and submission in this regard.</p>	Adopt the decisions sought in the AMWG's submission on PC7 relating to artificial freshes.
	14.4.37 and 14.4.38	Oppose in part	<p>I/we support the approach adopted by PC7 of enabling the implementation of an alternative management regime for the Opihi River mainstem, which takes into account the available water within the Lake Opuha catchment, through a discharge consent held by the Opuha Dam operator.</p> <p>I/we are, however, very concerned about the implications of clause (b) of Policy 14.4.37 and Policy 14.4.38 for the efficient and effective management of the Opihi River.</p> <p>The requirements of clause (b) that an adaptive management regime (i.e. Level 1 or Level 2 flow regime) could only be entered at the start of a calendar month and must remain in place for the whole month fails to recognise that climatic conditions and water demand can change significantly over a month. These requirements would lead to delayed intervention, which in turn is more likely to lead to a fully drained Lake and associated loss of minimum flow control. For example, if the Level 1 regime thresholds are crossed a day after the first day of the month, Policy 14.4.37(b) would result in a month's delay in moving into a Level 2 regime - a month's delay is considerable.</p>	<p>Adopt the decisions sought in the AMWG's submission on PC7 relating to Policies 14.4.37 and 14.4.38 to provide for the following:</p> <ul style="list-style-type: none"> <li>• The ability to enter into an adaptive management regime on any day if the requisite thresholds are met;</li> <li>• If an adaptive management regime is entered, the adaptive management regime must apply for a minimum of 14 days; and</li> <li>• The ability to enter into a Level 2 Regime only if a Level 1 Regime has been in place for at least 14 days;</li> <li>• The adaptive management regime "exit" thresholds are the equivalent of the Level 1 and Level 2 Lake level entry thresholds.</li> </ul>

			<p>I/we also believe there is no valid reason to delay exiting a regime until the start of the next calendar month if conditions indicate that abstractions and minimum flows are likely to be able to be met for the upcoming months. This delay could be up to a month, would provide no appreciable benefit but would cause unnecessary stress to the Opuha and Opihi river systems and abstractors.</p> <p>I/we understand that the AMWG have been working to develop an adaptive management regime that is based on being able to enter the regime on any day if the requisite thresholds are met. I/we also understand the group have been considering an 'exit' strategy – i.e. when an alternative management regime can be lifted. I/we consider these essential amendments in order to ensure the storage in the Lake Opuha is able to be managed in order to achieve connectivity and variability, and completely support the AMWG in their proposal.</p>	
<b>14.5 Rules</b>				
<b>Augmentation of the main stem of the Opuha and Opihi Rivers</b> (page 155)	14.5.29	Oppose in part	<p>I/we wish to highlight the crucial role OEFRAG has historically had in the management of flow releases from the Opuha Dam. The OEFRAG model has been hugely successful in ensuring the effective management of stored water in Lake Opuha during water short periods for the benefit of the Opuha and Opihi river systems and abstractors. This is largely due to the breadth of local knowledge, experience and technical expertise held by its members. I/we strongly believe that OEFRAG should continue to have an advisory role under PC7 on the implementation of an adaptive management regime.</p> <p>I/we understand that the AMWG are proposing that this advisory role be detailed within an operational management plan that would be submitted by OWL in its application for a discharge consent. This seems a logical and practical way of providing certainty to OEFRAG membership, and the wider community, that consultation will occur before any Level 1 or Level 2 regime is implemented.</p>	Adopt the decisions sought in the AMWG's submission on PC7 relating to Policy 14.5.29, to require that an operational management be required as part of a resource consent application that includes details of the matters for consideration and a consultation process with OEFRAG to assist in the decision of if and when the Level 1 and Level 2 regimes should be entered into or exited.
<b>14.6 Allocation and Water Quantity Limits</b>				
<b>14.6.2 Environmental Flow and Allocation Regimes</b>	Table 14(v): Minimum Flow Restrictions in the Opihi Freshwater Management Unit for AA and BA Permits (2025)	Oppose in part	<p><u>Adaptive management regime</u></p> <p>I/we strongly support the inclusion of an adaptive management regime for Opuha and Opihi rivers in PC7 which proposes a tiered approach to environmental flows that would apply according on Lake Opuha levels, snow pack and inflows to Lake Opuha, based on the concepts developed by the AMWG prior to the notification of PC7.</p> <p>I/we are, however, concerned that the proposed adaptive management regime has simply been copied and pasted from an application for a plan change back in 2008, that was drafted by OEFRAG. While I/we appreciate that this '2008 application' would have reflected best knowledge at the time, 11 years on our knowledge and experience has greatly improved, especially in light of the dry period of 2014-16. I we understand that the '2008 application' was trialled by OEFRAG in 2014/15, but it was ineffective because:</p> <ul style="list-style-type: none"> <li>The lake level threshold for moving into a Level 1 Regime or Level 2 Regime equates to 50% full, which is too low to make any meaningful impact on Lake storage (i.e. it is too little to late).</li> </ul>	Delete the partial restriction in Table 14(v) and adopt the decisions sought in the AMWG's submission on PC7 relating to the partial restrictions for AA and BA permits at Saleyards Bridge, which provide for variable monthly restrictions, as detailed in Table 14(v(iii)) of the AMWG's submission.

- The reductions in minimum flows through the Level 1 and Level 2 Regimes would not be enough to make meaningful water savings, for subsequent use for the benefit of the downstream environment and abstractors.
- The ability to make water savings under a Level 1 Regime between April and August is severely constrained. In this regard it is noted that in 2015, WSD were in place for much of the winter in order to reduce the minimum flows prescribed by the ORRP and improve the likelihood of a full Lake at the start of the 2015/16 season, to meet the needs of the downstream environment and abstractors.

I/we very much doubt that PC7's adaptive management regime would enable the flexibility required for proactive management of available storage in the Lake Opuha catchment. I/we anticipate that we will just have to resort back to relying on Water Shortage Directions into the future.

I/we understand that the AMWG have identified a set of revisions to PC7 that it believes will achieve the outcomes sought by PC7, which include:

- (a) Amendments to the "full availability" flows proposed in Table 14(v), which
  - Provide more water for the river environment during the summer months (by moving water from the shoulder periods to Jan/Feb); and
  - Ensure sufficient flows for salmon migration (Mar/Apr) and whitebait migration (particularly Oct) (i.e. flows will be maintained at SYB during these critical periods at greater than 6 cumecs, which prior research has indicated is the flow required to maintain the mouth of the Opihi river open).
- (b) Amendments to the "Level 1 Restriction" flows proposed in Table 14(v), which also provide more water for the river environment during the summer than PC7 and otherwise respond to changing climatic conditions in the catchment; and
- (c) Amendments to the "Level 2 Restriction" flows proposed in Table 14(v), to align with PC7's proposed 2022 Opihi mainstem environmental flow requirements for AN permits of 2.6 cumecs at Stage Highway 1 (Table 14(u) and historical IFIM habitat modelling).

I/we support these proposed revisions.

Partial Restrictions

The approach taken to restrictions under PC7 represents a significant change from the present planning and consenting framework under the ORRP. I/we accept that the ORRP regime's 50% restriction when Lake Opuha reached RL375m was too late to make any measurable benefit (i.e. in terms of water savings). However, the approach under PC7 of linking a "Level 1 Restriction" to a flat 50% restriction and a "Level 2 Restriction" to a flat 75% restriction, will have significant consequences for the irrigators.

			<p>This is too harsh and fails to recognise the benefits of the Opuha Dam which irrigators own and have funded.</p> <p>Alternatively, I/we believe that the restriction regime should recognise the criticalities between river demand and irrigation for different times of the year (i.e. variable monthly restrictions). It should also provide for exemption for AA and BA permit holders in the North Opuha, South Opuha, Upper Opihi and Te Ana Wai Rivers which have lower reliability as a result of tributary-specific environmental flow regimes.</p> <p>I/we are also very concerned about the implications of the proposed partial restrictions being a daily 24 hour volumetric restrictions. This fails to recognise the operational constraints of the irrigation infrastructure of consent holders. It would also lead to gross inefficiencies in terms of water released from the Dam if, for example, a 50% restriction was in place and shareholders could only irrigate 12 out of the 24 hours. From our experience in the dry period of 2014-16, a restriction regime based on a fortnightly volumetric restriction led to a 'smoother' operation of the dam and greater water efficiency. I/we are sure that OWL and irrigators could provide the necessary real time information to ECan to provide them comfort from a compliance point of view.</p>	
	Table 14(w): Minimum Flow Restrictions in the Opihi Freshwater Management Unit for AA and BA Permits (2030)	Oppose	<p>I/we oppose the minimum flows under "Level 1 Restriction" and "Level 2 Restriction" in Table 14(w) for the reasons addressed above in relation to Table 14(v).</p> <p>I/we also fundamentally oppose the provision in Table 14(w) for increases in the "full availability" environmental flows beyond those proposed in Table 14(v), which would take effect from 2030. I/we understand that these increases in "full availability" environmental flows in Table 14(w) are intended to reflect the flow gains in the tributaries (Upper Opihi and Te Ana Wai) from increased minimum flows in 2030. I/we would argue, however, that this is not hydrologically correct, it has no underlying scientific rationale and does not appear to have been informed by any detailed analysis. As I/we understand it, the proposed "full availability" environmental flows for 2030 have a number of significant issues:</p> <ul style="list-style-type: none"> <li>• It fails to recognise that the relationship between flows in the tributaries (Upper Opihi and Te Ana Wai rivers) and saleyards bridge is much more complex than the 1:1 ratio assumed in Table 14(w).</li> <li>• It would result in approximately 5.2 million cubic metres (on average per year) of additional water released from Opuha Dam to meet this increased minimum flow, as the AMWG's analysis indicates additional water from the Upper Opihi and Te Ana Wai would only be flowing 1% of the time. The release of this extra water would reduce the availability of stored water volume in Lake Opuha for environmental and irrigation releases by approximately 8% per year on average, which may increase the frequency of water shortages into the future.</li> <li>• the approach raises issues of equity as PC7 does not include a similar increase in the environmental flows for AN Permits.</li> </ul>	Delete Table 14(w) in its entirety



			I/we also understand, from ecological work that the AMWG advisers have undertaken, that for the physical habitat of most native fish species, juvenile brown trout and salmonid spawning, increasing the minimum flows is actually detrimental.	
	Table 14(x): Alternative Management Regime Triggers	Oppose in part	<p>I/we have concerns about the thresholds proposed in Table (x) and how they may be implemented in the future. As an example, the Lake Level trigger for a level 1 regime is at 50% full. Our experience of 2014/15 is that this is fundamentally flawed and does not provide for early enough intervention. Overall, I/we believe that the thresholds in PC7 are too conservative to enable the proactive management of flows in the Opihi River.</p> <p>I/we understand the AMWG have agreed on an alternative set of thresholds for Lake level, snow storage and lake inflows and I/we support these.</p>	Delete Table 14(x) and adopt the decisions sought in the AMWG's submission on PC7 relating to the alternative management regime triggers, which presents a revised set of thresholds for lake level, snow storage and lake inflows.