

Tabled at hearing on 19 November 2015

IN THE MATTER of the Resource Management Act 1991
AND

IN THE MATTER of the hearing of submissions on
Proposed Plan Change 3 to the Land and
Water Regional Plan

BY **OTAIO WATER USERS GROUP**

Submitters

TO **CANTERBURY REGIONAL COUNCIL**

Local Authority

SUMMARY OF EVIDENCE OF KERI JOY JOHNSTON

Dated: 18 November 2015

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INTRODUCTION

1. My name is Keri Johnston.
2. My Brief of Evidence addressed the following areas:
 - 2.1 The Proposed Otaio Environmental Flow and Allocation Regime;
 - 2.2 Impacts of Reduced Reliability of Supply;
 - 2.3 The take and use of water for domestic and stock water purposes;
 - 2.4 Updates to Overseer; and
 - 2.5 Nutrient Rules.
3. The purpose of this summary is to highlight points raised in my Brief of Evidence.

THE PROPOSED OTAIO ENVIRONMENTAL FLOW & ALLOCATION REGIME

4. The proposed Otaio environmental flow and allocation regime is very much a 'package'. Therefore, for it to be work, all components of the 'package' need to be carried forward – it is an “all or nothing” situation.
5. The key components of the package are outlined in my evidence, under paragraph 12.
6. It is important to note that the implementation of the proposed environmental flow and allocation regime is staged in order to give users time to adjust, and implement any off-set measures that will be required to counter reduced reliability of supply as a result of the minimum flow. In short:
 - 6.1 Users are given until 2019 before the minimum flows and flow sharing regimes apply.
 - 6.2 Allocation does not have to reduce until 2021, and this is done in two stages.
 - 6.3 'B' allocation and Deep Groundwater is available straight away.

7. I would like to draw your attention to the 'B' allocation block. Ensuring there is no priority between 'B' allocation users is an important element of the 'B' flow and allocation regime. In paragraphs 18 to 20 of my evidence, I highlight the issue with the stacking approach that is often used for consenting purposes. OWUG envisaged all of the user's sharing and managing the allocation block by a water user's group to ensure that the 'B' environmental flow and allocation regime was complied with.
8. Achieving this effectively is a key component of the allocation package that helps mitigate the loss of reliability as a result of the minimum flow regime.
9. Recognising that the Otaio system is effectively a large complex groundwater system, another important element of the 'B' allocation block was to facilitate aquifer recharge by only allowing the takes to occur during the winter months when flows were above the winter minimum flow, and a corresponding groundwater level trigger. From paragraphs 23 to 26 of my evidence, I have suggested some re-wording of the surface water rules (Rules 15.5.27 to 15.5.37 and Table(j)). This purpose of the re-wording was to capture the groundwater trigger level for 'B' takes, to acknowledge the links between these rules, and to include a new schedule that will provide certainty for how the actual flow is determined for the purpose of pro-rata restrictions.

THE IMPACTS OF REDUCED RELIABILITY OF SUPPLY

10. There is no doubt that implementation of the minimum flow restrictions will severely impact on the reliability of supply for existing users.
11. I want to highlight the fact that reliability of supply is not just about instantaneous rate of take and the availability of water at any given time. It is also about the ability to use water across the entire irrigation season when it is needed.
12. Reliability of supply for OWUG is currently around 65%. This is largely caused by the self-limiting nature of the existing water takes. Their ability to access water is throttled by the nature of the hydrological system.

13. However, their current permits allow them to continue to take water throughout the season. Lower volumes of water still help sustain their pasture and crops. This is in contrast to the proposed allocation package which will completely cut off supply when the river is at 90 l/s. This will reduce the reliability of supply to 51%.
14. The fact that no water may be extracted below 90l/s has significant implications and is a stark contrast between the current self-limiting arrangement and the proposed allocation regime.
15. However the acceptability of this minimum flow is dependent on a suite of other mechanisms that allow OWUG to mitigate against the reduced reliability – the 'package'.
16. This is important for the members of OWUG who have agreed to a flow and allocation regime that will, undoubtedly affect their reliability of supply. The members are reliant on the package options available to them, such as the ability to transfer to deep groundwater, or take surface water 'B' allocation into storage, in order to offset reduced reliability of supply. These are detailed in my evidence, and are summarised as follows.

Enabling the use of the Deep Groundwater

17. Table 15(l) creates a new allocation of deep groundwater. It is intended that holders of permits for surface water or stream depleting ground water could 'swap' to deep groundwater.
18. In my view, the current approach stated in the section 42A report does not incentivise a consent holder to swap from surface water to deep groundwater. In fact the effect is probably a disincentive to swap because it requires transfer to a more expensive water source for no improved reliability.
19. Therefore the volume that can be transferred to deep groundwater should be based on efficient water demand going forward, not based on past use of self-limiting takes, with already poor reliability of supply. This is not a reflection of actual demand or the volume required for optimal efficiency.

20. One matter I do accept is that the intention of transferring to deep groundwater is not to enable wholesale expansion of irrigation area. The transfer to deep groundwater should be to enable the same area of land to be irrigated reliably and efficiently.

Is the allocation deep groundwater allocation for the Otaio Zone sufficient?

21. I have previously assessed the required deep groundwater allocation for OWUG members. I did this during the zone committee process. I suggested an allocation of 3 million m³ per year. This assessment was provided to the Canterbury Regional Council. The draft plan allocates 2.65 million m³ per year. There is no explanation as to how that allocation was determined.

22. It is my view that the allocation of 2.65 million m³ per year in Table 15(l) is not a sufficient volume for the transfer of surface water permits to deep groundwater. The allocation should be 3.00 million m³ per year as per my assessment.

The Otaio Groundwater Allocation – Table (k)

23. The Otaio Groundwater Allocation is considered by the Canterbury Regional Council to be fully allocated. I undertook a detailed desktop assessment of the allocation for the zone during the zone committee process and this was provided to the Council. My assessment determined a current total allocation of 4.61 million m³ per year.

Restrictions on Site to Site Transfers

24. Aside from allowing surface water and shallow groundwater permits to be transferred to deep groundwater, restrictions on site to site transfers is the only other mechanism that will help reduce the 'A' allocation for the Otaio River. The reasons for restricting transfers are simple – to prevent presently unused water being transferred to another site, where is then fully utilised. Preventing transfers allows some allocated but under-utilised water to be clawed back.

25. I agree that restricting transfers rather than a blanket prohibition does have merit. In my view, before any transfer is authorised the following matters need to be addressed:

- 25.1 That the use of water at the new site is reasonable for its intended purpose;
- 25.2 All potential effects at the new site are addressed, including effects such as well interference; and
- 25.3 The transfer will not give rise to any cumulative adverse effect, including reducing the reliability of supply for any other lawfully established water take.

26. At paragraph 71 of my evidence, I proffer alternate wording for the transfer rules, which I consider achieves the matters outlined above.

THE TAKE AND USE OF WATER FOR DOMESTIC AND STOCKWATER PURPOSES

27. It is vital that you understand that the allocation limits for the Otaio River have been determined by calculating the rates allocated by existing resource consents to take and use water. Therefore, permitted uses (such as those taking water for domestic and stock water, relying on the provisions of S14(3)(b) of the RMA) have not been included within the allocation limits.

28. Also all of the discussions that have taken place between Ecan and stakeholders regarding the allocation regime is on the basis that the allocation limits relate to irrigation supply only, all of which are consented takes. It is noted that during the allocation discussions, a conscious decision was made not to include CRC981876.1 held by Waimate District Council in the allocation calculations because it is for community supply purposes and should not be made to comply with allocation limit and minimum flow and partial restriction flow regime.

29. Adding stock and domestic supply into the mix at this point represents a dramatic change to the regime.

30. If consent is required for these purposes, there is some ambiguity over which Regional Rules actually do apply as stated in paragraphs 76 to 79 of my

evidence and the resultant issues that this could cause (paragraphs 80 to 88 of my evidence).

31. In many instances, council's interpretation of S14(3)(b) would mean that, if the rate and volume required exceeded permitted activity limits, resource consent would be required. However, in the instance that the catchment limits (Table 15(h)) or groundwater allocation zone limits (Table 15(k) or 15(l)) are exceeded, then it is prohibited to apply for resource consent. The implications of stock and drinking water being included within the allocation blocks for the catchment has not been adequately assessed as it was not the intention during the zone committee process.

OVERSEER & NUTRIENT MANAGEMENT

32. Many submitters have raised concerns regarding the changes to Overseer versions resulting in different nitrogen leaching rates, such that targets or limits specified in the Plan are unable to be met despite improvements in farming practices. The consequence of this is that it may increase the number of consents required, and prohibit a wider range of farming activities than is necessary or was anticipated.
33. My evidence brings to the Commissioners attention the issues with Overseer being updated regularly. From a regulatory perspective, the solution proffered in the Section 42A report to address this issue, being the inclusion of a new policy, does not adequately address the uncertainty that changing versions creates in a resource consent environment, and the onus that such an approach places on an applicant to "prove their case".
34. I also have questioned the fact that the updated Table 15(m) and 15(n) N loss figures, are unchanged as a result of changing from Overseer 6.1.3 to Overseer 6.2. Results obtained indicate that the differences between the two models are significant, with increases in the order of 38%.
35. A disconnect exists between the load limit tables in the plan and the version of Overseer used to determine that limit. This is the case for Table 15(p) whose limits were determined using Overseer 6.0, whereas Tables 15(m) and 15(n) have used Overseer 6.2.

36. It is my view that the where Overseer limits are used in the plan, they must be updated every time that Overseer changes. If they are not, operators who may be permitted one day may become prohibited the next. This level of uncertainty is untenable.

Keri Johnston



Date 18 November 2015