

Tabled at Hearing on 18 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 HAIDEE JANE MCCABE

Dated: 18 November 2015

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INTRODUCTION

1. I prepared a Brief of Evidence dated 28 October 2015. This is a summary of this brief, highlighting the key points.

Plan Development Process

2. My evidence outlines the active role OWUG (Otaio Water User Group) contributed through the development of Plan Change 3. This involved numerous meetings with ECan and stakeholders, with OWUG engaging technical support to primarily deal with water quantity. The key focus was to maintain current levels of reliability, understanding change was also inevitable.
3. The parties have worked together with the objective of ensuring robust data was available for the formulation of the Plan. Key concepts developed during this process were:
 - a. Swapping shallow/surface water to deep groundwater.
 - b. The need for more deep ground allocation
 - c. Gravel accumulation and the effect on the Otaio River.
 - d. The Gorge being the correct location for the minimum flow site with the need to understand the relationship with the lower catchment (Summer Monitoring Programme).
 - e. Discussion on what values needed to be protected given the river goes dry.
 - f. Understanding existing water quality
 - g. Over allocation given the default position was huge reductions in allocation (400l/s to 32 l/s) and the implementation of a minimum flow as currently there is none.
 - h. Discussion was also had regarding maximum versus average rates of take
 - i. Irrigation restrictions on 7 day volumes to maintain high flow rates for a short duration.
 - j. Development of a B Block allocation with a minimum flow and groundwater bore level to protect aquifer recharge.

4. OWUG drafted a Proposed Flow Regime similar to what was notified by the plan. The key differences between what was notified and what OWUG proposed are as follows:
 - a. How annual volumes for the transfer of surface water to deep groundwater were to be calculated (actual use rather than reasonable use).
 - b. The inclusion of stockwater in the allocation limits.
5. The final surface water allocation agreed was for **irrigation consents only**. There was never any discussion about the inclusion of stockwater (the S42A report was a surprise!).
6. Many decisions were made without the final technical reports needed to support these decisions late in the process, including the minimum flow. As a result OWUG has doubts and on hearing the farmer evidence if not regrets, agreeing to the minimum flow of 90l/s when the reliability of supply and economic analyses shows that it has a major impact on their businesses. This led to the consideration of 75 l/s minimum flow with a 50l/s shared allocation, which was not considered ecologically appropriate. The 90 l/s flow was considered necessary to minimise the river disconnect and protect the refuge habitat at the Mouth.
7. After the plan was notified, OWUG started to have input to the nutrient matters facing the catchment, at an expert level and during the hearing process given the potential implication of the Plan on OWUG members and wider users within the community.

Main OWUG Issues

Minimum Flow

8. The reliability of supply without a minimum flow is low, approximately 65%. However farmers have adapted their operations to manage within these constraints. With a minimum flow of 90l/s, reliability decreases to approximately 51% and hence why OWUG pursued considering options for a small amount of water to be taken at a lower minimum flow of 75l/s to finish high value crops.

9. The implications of the flow regime in this Plan result in serious financial consequences and farmers must now look for alternatives to sustain irrigation which have been built into the plan as a "package". The ecological benefits of the minimum flow as outlined by Dr Ryder are not considered significant.

7 Day Volumes

10. A key tool for OWUG is the ability to self-manage flow restrictions on 7 day volumes, maintaining the high flowrate is essential for OWUG users but it is not required for a continuous period over a week and reflects the self-limiting catchment characteristics.

Transfers

11. Any increased usage of consented allocation is of considerable concern to OWUG given the over-allocation status. Transferring consented allocation to new land must not allow increased usage. Those who are using existing consents have invested significant capital in infrastructure and the entire farming operation is reliant on the limited water available. Reliability of supply will already be compromised by the minimum flow so allowing transfers that increase usage means decreased reliability to those actually irrigating already.

A permits to storage

12. Given the reduced reliability of supply caused by the proposed flow regime and the need to decrease the allocation from surface water over time, it was imperative that existing irrigators have the ability to develop some level of on farm storage. As a result a higher winter minimum flows has been developed to protect spawning and aquifer recharge. This option is a win for both the irrigators and the environment as water is stored in winter meaning less water abstracted during summer low flow conditions.

B permits

13. When determining the B permit regime, the key was to ensure existing A permit users were not adversely affected or recharge of

the shallow groundwater aquifer that supplies the existing A Block irrigators. The B permit allocation was formed as follows:

- a minimum flow of 780l/s, and
- groundwater recharge level for Bore J39/0255 of - 3mtrs
- limited B Block allocation of 1,000 l/s split for new and existing users.

14. The Plan currently has this regime reflected in policy only and it is essential this is carried through into the rules. An essential part of the B allocation is that there is to be **no stacking** of the allocation on the minimum flow, to provide for reliability of supply to all users.

Transfer to Deep Groundwater

15. Given the proposed reduction in surface water allocation, transferring to deep groundwater is essential. The cost to transfer to deep groundwater is substantial however it frees up surface allocation and therefore increases reliability to those who still use it.
16. It is crucial the volume of water is able to be applied for is sufficient to encourage farmers to make the switch and must be based on reasonable use to incentivise the transfer (not demonstrated use) and as discussed during the plans development.

Nutrients

17. The key perspective of OWUG is that the Plan must be robust and allow for updates in Overseer versions within the rule framework for not just the catchment loads but at a farming level. There must be links between the Plan's load limits and the Overseer versions.
18. Consideration must also be had, to whether these catchment loads means water quality limits/targets can be achieved with new irrigation within these catchments. What happens if water quality levels degrade, is it the new users who must alter their operations to address cumulative effects? Has this really been thought about in the development of the Plan and does the Plan provide a framework to manage this?

19. These issues become particularly acute with changes in the versions of Overseer which have consequences for compliance with the rules despite no change to on farm management. An existing farmer may go from permitted one day to needing consent the next. This level of uncertainty is hugely problematic.
20. Another point is whether nutrient management is based on soil types, which are allocated different N limits, with farms often encompassing several soil types. Meaning another layer of complexity with Overseer needing to be managed at block level rather than farm.

Water Quality

21. Through this process OWUG have been asking if the water quality parameters to be measured are appropriate, and the levels achievable with GMP considering the nutrient loads being set and the current state of the Otaio River.
22. A number of recommendations and clarifications have been made in Dr Ryders evidence. It is concerning that limits in Table 15 c) are already being exceeded. However, it is expected that implementation of GMP and a minimum flow will help achieve these levels. However it remains unclear the consequence of expanded new irrigation within the Otaio catchment and how this will affect water quality.

Additional Comments

23. I also wish to confirm the Otaio River daily mean flow rates viewed in the video presented today from ECan as follows:
 - 20 September 2014 – 155l/s
 - 24 September 2014 – 108 l/s
24. Furthermore attached is an updated Otaio catchment farm location plan as some consents were missing from the plan.

Haidee Jane McCabe

18 November 2015

**OWUG – Otaio Catchment Farm Locations
(Amended)**

