

BEFORE THE

Canterbury Regional Council

IN THE MATTER OF

the Environment Canterbury
(Temporary Commissioners
and Improved Water
Management) Act 2010

AND

IN THE MATTER OF

Submission and Further
Submission on Proposed
Variation 1 to the Proposed
Canterbury Land and Water
Regional Plan

**STATEMENT OF REBUTTAL EVIDENCE OF LIONEL JOHN HUME ON BEHALF OF THE
NORTH CANTERBURY PROVINCE OF FEDERATED FARMERS OF NEW ZEALAND**

Dated 8 September 2014

Introduction

1. My name is Lionel John Hume. I have the qualifications and experience described in my evidence in chief dated 29 August 2014. I again agree to comply with the Environment Court Code of Conduct for expert witnesses.

Scope of evidence

2. In this statement of evidence I rebut evidence given by Dr Alison Dewes.

Evidence of Dr Alison Dewes

3. At paragraph 21 Dr Dewes focuses on increased N load without acknowledging that there will also be a greater volume of water which will compensate for the increased load. It is estimated that the net effect of the Central Plains Water Ltd (CPW) scheme will be an additional 225 million m³ of groundwater per year¹. In addition, modelling commissioned by CPW has demonstrated that the N load entering Te Waihora will be less than previously thought because of a reduced contribution from the upper plains. While more precise information has only recently become available, through the evidence of other witnesses, it has previously been recognized that CPW will introduce significant quantities of groundwater into the catchment when it commences operation and progresses through the various stages of its development.
4. At paragraph 22 it is stated that a new entrant under CPW will potentially be able to discharge up to 80 kg N/ha/yr. While such a discharge allowance might theoretically apply to CPW new entrants prior to 1 Jan 2017, my understanding is that the scheme will require new entrants to be consistent with Variation 1 from the outset. To this end, farmers within the scheme will be required to implement an independently audited farm environment plan with appropriate N discharge conditions, from the outset. Any other approach would adversely impact on the development of the scheme and create equity issues within it. In addition, new entrants under CPW are covered by Policy 11.4.17, have to meet GMP by 1 Jan 2017 (Policy 11.4.13(b)) and are subject to the claw-backs in Policy 11.4.14(b).
5. In paragraph 39, the issues of effluent/pathogen runoff, erosion and soil loss, and increased sediment load are referred to. Most of these issues are more prevalent on

¹ Evidence in Chief of Ian McIndoe for Central Plains Water Limited.

heavy soils which Dr Dewes argues should receive a greater share of N discharge and therefore, presumably, should be farmed more intensively. It should also be noted that irrigation will assist with these issues e.g. by ensuring vigorous vegetation cover.

6. In paragraph 41, it is stated that “the move to “active management” for irrigation scheduling is a key mitigation delivering 30 - 50% reductions in nitrogen leaching”. While choosing the “active management” option in Overseer may reduce the Overseer N discharge estimate, it generally does not reflect what happens on-farm because the assumptions about drainage are unrealistic (it is assumed that drainage is less than 5% of the volume of irrigation water applied).
7. In paragraph 44, Dr Dewes suggests that large reductions in N discharge from dairy farms are possible while maintaining or increasing farm profit. She uses three farms to illustrate this. However, these appear to be extreme examples and are unlikely to be generally applicable e.g. one farm cited was converted from border dyke to spray, which most irrigators in Selwyn Waihora have already done.
8. The assertion in paragraphs 73-75, that compliance with GMP/Schedule 24 is simply business as usual is not correct in my opinion. It would represent a substantial improvement for many operators. Also, this assertion is in conflict with claims elsewhere that there is substantial scope for improvement e.g. paragraphs 40 & 44.
9. Dr Dewes’ statement in paragraph 77, that Overseer assumes that “best management practices” are already in place is not universally true, as indicated by her own Appendix 6.
10. In paragraphs 87-89 it is stated that industry derived GMP could simply be nothing more than business as usual. I don’t believe this is fair comment. Some of the practices described as advanced level 1 (Appendix 6 of Dr Dewes’ evidence) would probably be included under GMP. It should be noted, however, that some of those practices would only be applicable in particular sets of circumstances or simply not available e.g. DCD (a nitrification inhibitor).
11. Contrary to the statement in paragraph 91, I do not consider that leading farmers will be substantially penalised if they operating at better than GMP. It is only from now until 2017 that true grand-parenting is in force. From 1 Jan 2017 those farmers under the GMP threshold (operating at better than GMP) will have some ‘headroom’ and consequently have a degree of management flexibility that those at or above the threshold will not have.

12. The examples given in paragraphs 92-93 involve quite radical change and large capital expenditure (e.g. construction and use of loafing barns). This may not be possible for many farmers and will depend on ongoing high prices for dairy products.
13. Figure 5 in paragraph 117 doesn't make sense because it lacks context in terms of the basis on which profit is expressed, soil type and climate, and land use. Without better explanation this information is not meaningful in the context of Variation 1.
14. In paragraphs 121-126 the opinion is expressed that existing farmers will suffer economically by having to create headroom for new (CPW) irrigators. This is in contrast to earlier arguments that reducing N discharge can increase profits. Generally speaking, substantial reductions in N discharge will come with a cost².
15. Figures quoted in paragraph 133 regarding rates of uptake of good irrigation practice are in contrast with earlier statements that good practice is "business as usual".
16. Numbers quoted in paragraphs 136-138 regarding possible reductions in N discharge are a substantially less than quoted earlier (70-80% in paragraph 44) and in my opinion more realistic. However, the feasibility of all reductions need to be considered in the context of particular farm systems and physical environments.
17. Dr Dewes states in paragraph 157 that the zone committee solutions package will result in increased "nitrate levels" in groundwater and shallow wells of 20-25%. It is unclear where she has sourced these figures. If she is referring to nitrate concentrations, there needs to be acknowledgement of the increased volume of water (via CPW) which will come along with intensification as the scheme develops.

² Evidence in Chief of Duncan Smeaton For Fonterra Co-operative Group Limited and DairyNZ