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 Plan Change 1 to the Hurunui and Waiau River Regional Plan

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

Dated 4 October 2019

Introduction

Qualifications and experience

1. My name is Lionel John Hume. I hold B.Ag.Sc and M.Sc. (First Class Hons) degrees from Massey University and a Ph.D. (Plant Science) from Lincoln University. I am employed as a Senior Policy Advisor, by Federated Farmers, based in Ashburton.

2. I previously worked as a scientist for the Department of Scientific and Industrial Research (New Zealand Soil Bureau/DSIR Land Resources) in the areas of plant nutrition and soil fertility. Specific areas of scientific research experience include:
    a. nutrient uptake and use by plants – particular emphasis on nitrogen and phosphorus;
    b. nutrient availability from soils;
    c. effects of soil acidity (particularly aluminium toxicity) on nutrient uptake and symbiotic nitrogen fixation;
    d. nutrient, water and management factors affecting the growth and competitiveness of major weed species;
    e. effects of soil physical properties on plant growth; and
    f. experimental design and data analysis.

3. I have been a board member of Irrigation New Zealand for over 10 years (2006 – 2018).

4. I am a member of the NZ Institute of Agricultural and Horticultural Science, the NZ Society of Soil Science and the Agronomy Society of NZ.

5. Currently I am a member of Federated Farmers' Regional Policy team and have ten years experience of working with regional planning processes, including the Canterbury Natural Resources Regional Plan (from submission through to resolution of High Court appeals); development of the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 and membership of the implementation taskforce for those regulations; the development of catchment-based flow and allocation plans for several Canterbury catchments; the development of the Canterbury Water Management Strategy; the Canterbury Regional Policy Statement and Land and Water Regional Plan processes, including several catchment based limit-setting processes culminating in the establishment of sub-regional plans.

Overview

6. Federated Farmers supports the intent of Proposed Plan Change 1 to the Hurunui and Waiau River Regional Plan (HWRRP), to make dryland farming a permitted activity, within specified constraints.

7. General submissions (some with regard to the section 32 evaluation) by North Canterbury Fish & Game and Forest & Bird sought to challenge assumptions about the potential contribution of winter grazing to "off-farm losses" and the adequacy of analysis/modelling of nutrient losses, and advocated a more precautionary approach.

8. Federated Farmers believes that modelling was done in a thorough and transparent way, with involvement of the Zone Committee and the Hurunui Science Stakeholder Group.

9. One of the key ways that dryland farms could significantly increase their nutrient discharge would be by growing fodder crops and doing intensive winter grazing of cattle. It is proposed that a permitted activity threshold of 10% of land area be established, to limit the extent and environmental impact of winter grazing, along the lines of Plan Change 5 to the Canterbury Land and Water Regional Plan (10 ha up to 100 ha of land area, 10% of land area between 100 – 1000 ha, capped at 100 ha). The flexibility provided by this narrative definition of permitted activity status will be extremely useful to dryland farmers by providing flexibility to accommodate the normal cyclical nature of farming, including responses to constantly changing climatic and market conditions (as illustrated by the associated evidence statement of Mr Dan Hodgen).

10. There was concern that, if all farmers increased their winter grazing up to the 10% threshold, the nutrient load limits for the Hurunui River would be exceeded. However, it has been convincingly demonstrated that it is very unlikely that there would be an increase of this magnitude. There simply isn't demand for it and many farmers choose not to engage in intensive winter grazing.

11. Ten years of Beef+Lamb NZ data (2006 – 20016) showed that there was no long term trend in dryland winter forage area, despite year to year fluctuations (of up to 30%) around the long term average of 1.9% of land area (presentation by Ned Norton, 7 March 2018). Farm survey work done for the Hurunui District Landcare Group showed that an unlikely worst case scenario would be an increase in the winter forage area of 50% across all dryland farms in the catchment (1.9% to 2.9% of the total farm area in forage) (workshop

presentation by Josh Brown, 29 January 2018). Multiple lines of evidence indicate that future increases in N loss from farming properties under the proposed 10% winter grazing threshold, are likely to be small (in the order of 0–3%) (Ned Norton – workshop presentation, 29 January 2018).

12. Therefore, Federated Farmers supports the recommendation to make no changes in response to general submissions by North Canterbury Fish & Game and Forest & Bird seeking to challenge assumptions about the relative potential contribution of winter grazing to "off-farm losses", the adequacy of analysis/modelling of nutrient losses and advocating a more precautionary approach.

Policy 5.3C

13. Policy 5.3C provides for the ongoing operation of low intensity dryland farms without the need for a resource consent, recognising the relatively small contribution of dryland farming to in-river nutrient concentrations. We support the recommendation to essentially retain the policy in its notified form. With regard to the request by two submitters to replace the word *small* by the word *lesser*, in reference to the contribution of dryland farming to in-river nutrient concentrations, we support the recommendation to retain the word small because the contribution is small, in both relative and absolute terms.

14. Federated Farmers supports the amendment to refer to the Jed River and its tributaries. This is appropriate because the Jed River has its own exit to the sea (as opposed to being a tributary of the Hurunui or Waiau Rivers), and provides consistency with the rules (specifically Rule 10.1A) which apply to the Jed River catchment, as indicated by the Nutrient Management Area shown on Map 4.

15. Therefore, Federated Farmers supports the recommendation to retain Policy 5.3C in its notified form, but including the recommended additional reference to the Jed River and its tributaries.

General submissions on rules

16. Emu Plains Irrigation Incorporated requested that the plan change only proceed if the combined cumulative effects of the increase in discharge of nutrients to the Waiau Uwha River (by dryland farmers, consented discharges and discharges that have been applied for prior to the notification of Plan Change 1) is acceptable. Further, Emu Plains requested

that, if there was an increased risk of periphyton growth as a result of those discharges, the Plan Change be amended to constrain the discharge from dryland farming, so that periphyton growth is maintained within acceptable limits. As stated previously, modelling has indicated that Plan Change 1 will have little or no impact on nutrient discharge from dryland farming (and therefore little or no impact on periphyton growth). Any attempt to specifically link an increase in periphyton growth with the implementation of Plan Change 1 would be fraught with difficulty given the myriad of factors which influence periphyton growth. Therefore, Federated Farmers supports the recommendation not to amend Plan Change 1 in response to these submissions.

Proposed Rule 10.1A

17. Federated Farmers' ongoing concern about Rule 10.1A is the potential for information entered into the Farm Portal to become the subject of an official information request under the Local Government Official Information and Meetings Act 1987. The confidentiality of private information (both personal and business) must be protected.

18. Part b) of the rule requires the preparation and implementation of a Management Plan in accordance with Schedule 6. We acknowledge the benefit of the Management Plan process but are concerned about the confidentiality of information contained in management plans. If the plans or information from them are in the possession of Environment Canterbury, they can potentially be the subject of an official information request under the Local Government Official Information and Meetings Act 1987. Again, the confidentiality of private information (both personal and business) must be protected. In this context, we support the statements that the Management Plans *will be viewed only* and that the *Canterbury Regional Council will not retain copies of the Management Plan.*

19. We appreciate reassurance in the Officer Recommendations contained in the section 42A Report that Management Plans will not be retained by Council. However, it was also stated that Council may be required to hold some information regarding Management Plans in instances "where there is a compliance proceeding" or "for the purposes of keeping track of monitoring".

20. The retention of information for the above purposes, especially for the purposes of "keeping track of monitoring" should be very limited in nature. Every effort should be made to ensure that this is the case and that the retention of information that can be linked with individual properties is minimised.

21. In its submission, Federated Farmers expressed concern that some dryland farmers may not be comfortable with the process of registering in the Farm Portal and preparing a management plan, and requested that support be available to assist such people. In response, the reporting officer stated that "The CRC has an extensive work programme and resourcing, including a dedicated zone team, in place to assist farmers to comply with Management Plan and Farm Portal requirements". That being the case, Federated Farmers requests that a statement to that effect, along with dedicated resourcing, will be incorporated into the Environment Canterbury Annual Plan for 2020/21 and into the Long Term Plan the following year.

Definition of Low Intensity Dryland Farming

22. Federated Farmers sought amendment to the definition of Low Intensity Dryland Farming to specify that properties under 100 ha in area are able to use up to 10 ha for winter grazing, consistent with the narrative permitted activity thresholds in Plan Change 5 to the Canterbury Land and Water Regional Plan. We appreciate and support the reporting officer's recommendation that the definition be amended to that effect. As stated above, the flexibility provided by this narrative definition of permitted activity status will be extremely useful to dryland farmers by providing flexibility to accommodate the normal cyclical nature of farming, including responses to constantly changing climatic and market conditions. Further, as also stated above, multiple lines of evidence indicate that future increases in N loss from farming properties under the proposed 10% (Plan Change 5) winter grazing thresholds, are likely to be small (in the order of 0–3%) (Ned Norton – workshop presentation, 29 January 2018).

23. Emu Plains Irrigation Incorporated requested that: if the combined cumulative effects of the increase in discharge of nutrients to the Waiau Uwha River (by dryland farmers (pursuant to Plan Change 1), consented discharges and discharges that have been applied for prior to notification of Plan Change 1) will result in an increased risk of periphyton growth, then the definition of Low Intensity dryland Farming should be amended to limit the increase in dryland discharge, so that periphyton growth will be maintained within acceptable limits.

24. As stated previously, modelling has indicated that Plan Change 1 and the definition of Low Intensity Dryland Farming will have little or no impact on nutrient discharge from dryland farming (and therefore little or no impact on periphyton growth). Any attempt to specifically

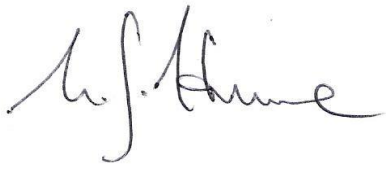
link an increase in periphyton growth with the implementation of Plan Change 1 would be fraught with difficulty given the myriad of factors which influence periphyton growth. Therefore, Federated Farmers supports the recommendation not to amend the definition in response to these submissions.

Definition of Winter Grazing

25. Federated Farmers requested that the definition of Winter Grazing be expanded to include the consumption of *supplementary feed that has been brought onto the property*, consistent with the definition in Plan Change 5. In response, the reporting officer correctly points out that it is "common practice for Low Intensity Dryland Farming activities to feed out supplementary feed such as hay or baleage over winter months" and that "it is good practice for this feeding to occur in different locations to avoid damage to pasture". It is further stated that "reporting on this area would not necessarily provide an accurate picture of the type of "high risk" winter grazing the CRC considers is important for the purpose of accounting for nutrient losses at the catchment scale". In response to that point, any feeding of supplementary feed that was not *break-fed* would not fall within the definition of Winter Grazing and therefore would not have to be reported. Our request to amend the definition (consistent with Plan Change 5) was to enable brought-in supplementary feed to be used along with the in-situ crops in any situation where additional nutrition is needed e.g. as the result of an extreme weather event.

Conclusion

26. Federated Farmers thanks the Hearing Panel for the opportunity to present this evidence statement.



Dr Lionel Hume
4 October 2019