

IN THE MATTER

of the Resource
Management Act 1991
(RMA)

AND

IN THE MATTER

of the Proposed
Variation 5 to the
Canterbury Land and
Water Regional Plan

TO BE HEARD BY

Canterbury Regional
Council

**Statement of Rebuttal Evidence by Gregory Philip Sneath
on Behalf of the Fertiliser Association of New Zealand**

5 AUGUST 2016

Submitter ID: 51972

Qualifications and Experience

1. My full name is Gregory Philip Sneath. I graduated from University of Queensland, with a Bachelor of Agricultural Science, with Honours.
2. I am currently employed as Executive Manager with The Fertiliser Association of New Zealand. I have been with The Fertiliser Association of New Zealand for over 10 years, and have certificates of completion for both the Intermediate and Advanced courses in Sustainable Nutrient Management in New Zealand Agriculture, at Massey University.
3. Representing the Fertiliser Industry I have engaged with Regional Council staff throughout New Zealand involved in the disciplines of policy, land management and science. I have participated in stakeholder workshops, advisory groups and industry consultations in relation to nutrient management and the development of Regional Plans, including engagement within the pan sector industry groups addressing the Proposed Canterbury Land and Water Regional Plan, Tukituki Proposal, Otago Regional Council Plan Change 6A, Southland Regional Council Land and Water Group, Greater Wellington Regional Plan Stakeholder groups, Horizons One Plan development and others. I have participated in the Reference Group for the Matrix of Good Management (MGM) Project.

Introduction

4. My rebuttal Evidence relates principally to Paragraph 43 of the Evidence in Chief (EIC) provided on behalf of:

North Canterbury and Central South Island Fish and Game Councils, by Scott Pearson and Angela Christensen.

5. In this paragraph the authors state that for the reasons given in previous paragraphs, (paragraphs 41- 42), the most consistent and equitable approach for all land users in determining a consenting pathway is through application of the Farm Portal and that :

“...an alternative approach will not ensure sustainable integrated management of Freshwater. This could occur by compromising the Baseline GMP loss rate as a limit; undermining the ability of the portal to adequately assess cumulative impacts (associated with catchment wide nutrient management); and reduce the potential efficiencies gained through the proposed consenting pathway.”

Rebuttal Statement

6. I do not agree with the assertion that the proposed approach will ensure the sustainable integrated management of freshwater, and that an alternative approach

will not.

7. I do not agree that without the Farm Portal and the proposed approach, the Baseline GMP loss rate as a limit is necessarily compromised or that assessment of the cumulative impacts (associated with catchment wide nutrient management) will be will be necessarily compromised.
8. In contrast, based on the evidence of Dr Metherell and Ms Harris, the reliance of the Farm Portal itself, without an alternative, could itself give rise to the concerns expressed above by Mr Pearson and Ms Christensen by *“compromising the Baseline GMP loss rate as a limit; undermining the ability of the portal to adequately assess cumulative impact “* [meaning N loss rather than impact, because understanding ‘impact’ requires a further assessment using the N loss estimates].
9. Reliance on the Farm Portal will likely compromise these very factors of GMP Baseline N loss, and catchment accounting because, in the first instance, as Dr Metherell describes [Paragraph 15] *“ There are some farm systems for which it is impossible or extremely difficult to model accurately in Overseer. These include systems which are not currently included in the Overseer model including outdoor pigs and free range poultry, and many mixed farming systems “*. In the second instance, the fertiliser proxy, (and irrigation proxies), introduce increased levels of variability and inconsistencies. As the evidence of Dr Metherell [Paragraph 36] shows, *“wide discrepancies between actual N usage and the GMP N fertiliser proxy predicted N requirement, cast serious doubt on the validity of the N fertiliser proxies when applied to a specific farm.”*
10. This concern is substantiated by the evidence of Ms Harris, [Paragraph 151] which shows that for some farms: *“Good Management Practice Loss Rate is well in excess of what can realistically be achieved, even under the strictest adherence to Agreed GMPs”* i.e. Some farms will be unable to comply due to variability in the Farm Portal values rather than any failing in the farm practices or operation.
11. It is with respect, that I submit that while there is good will to utilise the Farm Portal, the evidence suggests that to rely on the Farm Portal process without an alternative also being available, will itself result in the compromised application of GMP Baselines and Catchment Accounting, which is the very concern raised in the submission by Mr Pearson and Ms Christensen.

Discussion on Variation in Data inputs

12. Paragraph 41 of the EIC of Mr Pearson and Ms Christensen expresses concern about variation by practitioners in the input of farm information into OVERSEER giving potential for unreasonable flexibility, (to the point of deliberately “gaming”), with resultant uncertainties in cumulative results. This is then presented [paragraph 43] as a reason for following the proposed approach and not providing for an alternative approach.

13. I do not agree that the Farm Portal approach will reduce variation in OVERSEER inputs.
14. I do not agree that consistency in OVERSEER inputs and in the extreme case, protection from 'gaming' can be provided by the Farm Portal. The Farm Portal does not dictate the inputs for the "actual" Farm Nutrient Budget, but rather uses the inputs to derive selected GMP input values.
15. While some objectivity might be attributed to the Farm Portal which takes OVERSEER input data and then generates the GMP input data for certain parameters, the evidence of Dr Metherell shows that the proposed approach for Fertiliser GMP rates introduces an additional layer of variability into OVERSEER and thereby introduces another level of uncertainty and error beyond the normal uncertainty limits of OVERSEER.
16. That is, the proxies such as the fertiliser proxy have been shown by Dr Metherell's evidence to increase the variation and uncertainty in GMP N loss, not reduce it.
17. The seriousness of the implications of this variability is supported by the evidence of MS Harris which show that even under the most strict adherence to agreed GMP s some farms will not be able to meet the N loss values derived by proxies.
18. Therefore I suggest that risk of variability in inputs is not a reason to rely entirely on the proposed approach.
19. Never the less, FANZ retains some sympathy with the concerns raised about variability in application of OVERSEER. FANZ has sought in its EIC that Nutrient Budgets produced for regulatory purposes are produced by, or are overseen by, a Certified Nutrient Management Adviser. This assurance programme provides confidence that the practitioner is competent, current and accountable in the use of OVERSEER.
20. In combination with the existing requirement to use OVERSEER Best Practice Data Input Standards, a requirement to use a Certified Nutrient Management Adviser will help address many of the concerns raised in the submission by Mr Pearson and Ms Christensen about variability in inputs into the OVERSEER model.
21. Further it is anticipated that Nutrient Budgets produced for regulatory purposes will be open to interrogation and review by Regional Council staff and independent auditors. That is, any nutrient budget still has to be seen by the Regional Council consenting team with audits before consent is granted, so there are checks and balances already in place. Having the nutrient budget prepared by a Certified Nutrient Management Adviser gives all parties a level of assurance on the competence, currency and accountability of the Nutrient Management Adviser supplying the Nutrient Budget.
22. The Nutrient Management Adviser Certification Programme was established with an

Advisory Group with very wide representation, including from MPI, Regional Council, research organisations, primary sector groups and Fish and Game, and was well supported. The Standards Setting group includes a range of individuals with expert knowledge in Overseer and farm systems, including primary sector industry and university staff. It is administered by a Board of Management and includes a formal complaints process.

23. It remains an important component of the Nutrient Management Adviser Certification Programme that there is on-going professional development for certified advisers, and a formal complaints process which on receipt of a complaint, can provide for interrogation of nutrient management advice, professional conduct and technical expertise. The formal complaints process can compel further training to retain certification as a Certified Nutrient Management Adviser, or, if warranted, can revoke the certification.
24. It should be noted as presented in my EIC, [Paragraph 104], OVERSEER Data Input Standards were developed to : *“give expert users guidance for data inputs that consistently achieve the most meaningful results. They have not been developed to teach users how to operate OVERSEER, nor have they been designed as an auditing system.”* That is, OVERSEER Data Input Standards are one component in the provisions to reduce variability in application of OVERSEER.
25. FANZ has sought in its EIC the requirement to use Certified Nutrient Management Advisers, as this, in combination with the requirement to use OVERSEER Data Input Standards, is believed to provide the best possible framework to provide for the consistency and accountability such as that being sought in the EIC by Mr Pearson and Ms Christensen.

Discussion on validation

26. Paragraph 42 of the EIC of Mr Pearson and Ms Christensen also implies that use of the Farm Portal provides an overarching method and will reduce the validation issues it associates with OVERSEER for Canterbury soils.

“Several submitters in opposition to the portal have argued that it is not adequately validated for nutrient losses. This same argument could be applied to the use of Overseer in general on Canterbury soils, given the large variations observed in modelled results shown by Alison Dewes (EIC Rebuttal for Variation 1, paragraph 9, 2014). Moving the process back to incremental consent applications, will not solve the validation issues and be more likely to increase them, due to the lack of an overarching method, as provided by the portal.”

27. I do not agree that the overarching method as provided by the Farm Portal provides a solution or can be compared to validation issues as implied in the above statement. OVERSEER has been accepted by many as a world class model for

understanding nutrient cycling on farm systems on an annual average basis. It is accepted as the model of choice.

28. I do not accept that the EIC of Mr Pearson and Ms Christensen is appropriately qualified to draw comparisons between the validation of OVERSEER for Canterbury soils and the validation of the Farm Portal nutrient losses.
29. The technical details specific to validation in its true sense are best addressed by modelling technical experts, however the “validation issues”, implied in the above statement are interpreted to relate to confidence in application of the modelling outcomes.
30. As noted above, with the evidence of Dr Metherell, the variation introduced by the Farm Portal proxies increases variability and uncertainty in the outcomes and does not reduce it. It may be considered the “validation issues” or confidence in application of the model are best addressed by reducing sources of variability and ensuring consistency in inputs and the approach to the modelling.
31. As discussed in the sections above, this level of confidence in the application of the model is best achieved by;

Providing for an alternate pathway for farm systems which cannot use the Farm Portal to generate a GMP N loss value or a Baseline GMP N loss value, or where the Farm Portal is shown to be inadequate in generating the GMP N loss values,

and requiring that,

OVERSEER Nutrient Budget reports and nutrient loss calculations required for regulatory purposes should be developed by, or their development should be overseen by, a Certified Nutrient Management Adviser.

Concluding comment

32. Thank you for the opportunity to present this rebuttal evidence before the Hearing Panel for Proposed Variation 5 of the Canterbury Land and Water Regional Plan.

End



Greg Sneath

Executive Manager

The Fertiliser Association of New Zealand

5 August 2016