Submission on:

1. Action for Healthy Waterways: Discussion on National Direction for Freshwater;
2. Draft National Policy Statement for Freshwater Management;
3. Proposed National Environmental Standards for Freshwater; and
4. Draft Stock Exclusion Section 360 Regulations

To: Freshwater Submissions, Ministry for the Environment

From: Lauriston Farm Improvement Club (inc)

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INTRODUCTION

1. Established in 1956 the Lauriston Farm Improvement Club (LFIC) is a farmer owned co-operative that employs professional farm management advisers.

2. From early beginnings in the late 1950’s where the LFIC comprised of 30 members farming 5,700 hectares, the club now has a membership comprising of 154 members\(^1\) farming a total area of 55,000 hectares.

FOCUS OF LFIC SUBMISSION

3. Our submission will focus on the requirement to meet the Dissolved Organic Nitrogen (DIN) target;

STAG considers that the current attributes and bottom lines are insufficient to provide for ecosystem health. It has proposed a new bottom line for nitrogen in rivers at an annual median of 1.0 milligrams per litre of dissolved inorganic nitrogen (DIN) which is a different measure to the toxicity attribute. STAG proposes a bottom line for phosphorus in rivers at an annual median of 0.018 milligrams per litre of dissolved reactive phosphorus (DRP).

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4. Under the Canterbury Land and Water Regional Plan, the Hinds/Hekeao catchment, an area bounded by the Hinds and Rangitata Rivers has gone through a collaborative process called Plan Change 2 (PC 2). The summary of the requirements around nutrient limits set out by the Zone Committee are as follows:

A target of 6.9mg/L nitrate-nitrogen within shallow groundwater, far exceeding the maximum allowable value for drinking water of 11.3mg/L, and a reduction from current levels of 9.0mg/L.

a. To achieve this a 45% reduction in nitrogen loss is required. This is to be done over a managed time frame:

i. Operating at Good Management Practice by 2017
ii. Further reductions of 15% by 2025
iii. 25% by 2030
iv. 36% by 2035

b. Further to achieving this is the inclusion of the Managed Aquifer Recharge Collaborative Community Project, whereby water is returned to underground aquifers from surface water sources, essentially giving up water rights for the betterment of water quality.

c. Some of our membership operate their businesses in this area and are committed to meeting these requirements; however, these targets are far more attainable that those levels within the MFE proposal

5. LFIC member properties are also in the Selwyn/Te Waihora catchment. It is proposed under Plan Change 1 that this area reduces its N loading to 22% of the current level, which is a target of 3.4mg/L of N in Te Waihora. The National Policy Statement of Freshwater Management recommended that this be reduced further to 0.8 mg/L of N in Te Waihora.

\(^1\) Membership is on a unit basis – whereby 1 Unit entitles the member to 32 hours service per year. Some members elect to buy more than 1 unit, and some less.
a. At these recommendations there is significant concern of the economic impact and social wellbeing of the catchments.

6. It is widely considered that the target of 6.9mg/L nitrate-nitrogen is equivalent to 6mg/L of DIN
   a. The collaboratively agreed reduction (PC 2) from 9.0mg/L to 6.9mg/L is a reduction of 23% (or 76% of the existing levels). To reduce further from a comparable 6 mg/L DIN to 1mg/L DIN is a reduction of 83% (or 17% of the existing target)

BACKGROUND

7. Mid Canterbury is an area bounded by the Rangitata and Rakaia Rivers, the main divide and the Pacific Ocean. A total area of 617,500 hectares, a significant area being considered foothills and hill country topography.

8. The total irrigated farmland in Mid Canterbury is 200,000 hectares.

9. 90% of the LFIC members are within 30 minutes of the major servicing town of Mid Canterbury, Ashburton, population of 18,000.

10. All but a very small minority of the properties are fully or partially irrigated, most being from farmer owned irrigation schemes.

11. As part of the schemes they have completed Nutrient Budgets and Farm Environment Plans, following this they have all been audited in the last three years.

12. All these results have been graded either and A or B, with those graded B steadily moving towards an A grade in subsequent audits.

13. The LFIC membership comprises of the following land classes:
   a. Dairy (platform and self-contained) 15,400 hectares
   b. Mixed (Arable and Dairy support) 40,000 hectares

14. Thanks to the collegial nature of the organisation many of the businesses trade goods and services between themselves, in addition to sales to third parties.

15. The LFIC member properties are broken down as follows with respect to area:
   a. Between 0 and 300 hectares 74 unique farms
   b. Between 300 and 600 hectares 68 unique farms
   c. Over 600 hectares 12 unique farms

16. The LFIC member properties are often multi-generational, and can be broken down as follows:
   a. 1st Generation 37 families
   b. 2nd Generation 81 families
   c. 3rd Generation 26 families
   d. 4th Generation 10 families

17. Simply put, the LFIC membership base is made up of smaller, but intense, multi-generational farming businesses.

18. LFIC member properties employ the equivalent of 568 people, this comprising of both owner/operators, but also some businesses employing many people.
   a. The equivalent of roughly half the size of Rakaia, a smaller service town in Mid Canterbury

19. LFIC member properties operated via the owner/operator model, but also the staff members they employ have 240 school aged children at local schools.
20. Farm gate income is significant and is broken down as follows;
   a. Dairy businesses\(^2\) $ 180 million
   b. Mixed $ 151 million
21. Farm gate expenditure, this comprising of farm inputs, services, wages, standing charges, is also significant:
   a. Dairy businesses $ 109 million
   b. Mixed $ 98 million
22. A significant portion of the $ 109m of dairy business farm gate expenditure will contribute towards the farm gate income of the mixed farm business's income as outlined in point 14.
23. The farm gate expenditure of $ 98m resulting from the mixed businesses will be directly spent in the local economy
24. The value of land owned by members of LFIC is also significant;
   a. Dairy businesses\(^3\) $ 693 million
   b. Mixed businesses\(^4\) $ 1.48 billion

**LFIC POSITION**

25. We believe (in part) due to the lack of transparency in any of the documents there is significant risk to our members in the areas summarised in points 7-24.
26. We have not undertaken any case study modelling due to the time constraints imposed through this process.
27. It has been recorded on Page 86 of the Action for Healthy Waterways document that a 76% reduction in Nitrogen and a 50% reduction in Phosphorus is required to meet NPS-FM bottom line objective for Te Waihora.
28. Whilst this number refers to the Selwyn/ Te Waihora Zone specifically, and not necessarily our member properties, the theme is important to consider;
   a. How does an individual property understand their actual contribution to the zonal load expectations when targets are measured in actual readings, but farm systems analysis is done via a model, that at best is only a prediction;
      i. Overseer has limitations around the modelling work required – to the extent that Ecan have developed an “alternative pathway model” to establish a position with respect to N leaching on mixed properties (46% of our members).
   b. We believe our members exhibit sound farming principles
   c. If nitrogen losses present in their systems, they could come from three sources:
      i. Excessive Nitrogen application before plant uptake being leached following a drainage event
      ii. Excessive mineralisation within the soil prior to the next crop taking it up in a plant available form
      iii. Leaching from animal urine
   d. Of our members, 46% of these properties undertake a “mixed” system, where there is still significant work being done to accurately assess the effects of;
      i. Mineralisation of nitrogen following crops such as Clover or Peas, before a cereal or grass
      ii. Wintering animals and the relationship between N leaching and the uptake following the subsequent crop

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\(^2\) Based on $ 6.50 per kgMS FGMP and 30c per kgMS stock sales. No dairy company dividend.
\(^3\) 15,400 hectares @ $ 45,000 per hectare
\(^4\) 40,000 hectares @ $ 37,000 per hectare
iii. The benefit of alternative species in a sward (applies to dairy systems as well)

29. As a group, the challenge we have from analysing a farm systems approach is what relationship does the issues outlined in 28 c. have to the outcomes recommended in the proposals.

30. We know from a high-level perspective that new technology and changes to farm systems will drive improved outcomes, but to what extent and how quickly, when prediction tools may or may not reflect reality.

31. To that end, we will make some broad assessments for purposes of this submission.

ASSESSMENTS

Our view of the effect of the proposals (and relating them back to the current parameters) are as follows:

32. It is likely that dry land sheep farming and afforestation would become the dominant land use. It is difficult to understand the exact reduction in gross farm income, but if one assumes the carrying capacity required to meet the proposed outcomes (accepting that this is a broad view) needs to be approximately 5 stock unit (SU) equivalents per hectare at a farm gate income of $150 per SU.

33. This would mean an income of $750 per hectare.\(^5\)

34. We would expect farm gate income to fall significantly from $207 million, on average $5,975 per hectare, to approximately $41m, a reduction of $166m.

35. Due to the low-income nature of such a farm system, fixed costs (such as administration, rates, insurance, compliance) combined with variable costs as a percentage of total income would increase significantly, to a range of approximately 80-90% of gross farm income.

36. This leaves an Earnings before Interest, Tax, Personal Drawings of $125 per hectare at best.

37. On an averaged sized property of 350 hectares a total amount of $43,750.

38. Most of our members currently pay interest on some type of debt. Let’s assume an average debt of $8,000 per hectare (allowing for recent capital improvements and family succession over the last ten years). Let’s assume the lender doesn’t write off this debt.

39. Therefore, after interest costs of $400 per hectare, leaves most operations in a loss situation of around $275 per hectare, or in deficit of $96,000 before personal drawings.

40. At this point the scenario would unfold as follows;
   a. Land values on the 55,000 hectares would fall from $2.173 billion dollars to $650 million dollars, approximately $1.5 billion in value lost
   b. The lenders would need to write off all debt which could be in vicinity of $440m
   c. Farm gate income derived in Mid Canterbury from our member properties would fall by $166m
   d. Farm gate expenditure would fall from $207m to $35m, a reduction of $172m from the Mid Canterbury economy
   e. Very few of the existing members could continue to operate their properties
   f. They would therefore need to seek the unemployment benefit until they found extra work, this could amount to 568 people per week at $195 per person for a total amount of $5.8m on an annualised basis. This area would go from being one of the very best employment rates in the country to being heavily reliant on state support.

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\(^5\) It would be ambitious to think a mixed arable farm could comply with such regulations under the current models due to the significant mineralisation from farm systems that is predicted under the current models.
41. Properties that have been owned by the same family for 2-4 generations will be at risk of needing to be sold
42. Families with the 240 school aged children will need to relocate
43. It needs to be remembered at this point that LFIC members only account for less than 25% of the total area in Mid Canterbury, so the figures above only a fraction of the likely outcome that would be.

SUMMARY

44. As a group we feel very strongly about this proposal due the demise of our members, the local community and the wider New Zealand economy, both in terms of economic impact and social wellbeing.
45. The agricultural sector is already under significant pressure due to regulatory reforms in recent years, low product prices, softening equity positions and bio-incursions.
46. There is too much risk to proceed with the proposal without full clarity around:
   a. Effects to farm systems on any proposed catchment load and waterway outcomes
   b. A full economic analysis of the effects from a micro and macro perspective
47. We wish to be heard in any submission process
48. We are happy for our submission to be made publicly available