



SUBMISSION TO THE MINISTRY FOR THE
ENVIRONMENT

on

FRESHWATER REFORM

by

THE FERTILISER ASSOCIATION OF NEW ZEALAND

4 FEBRUARY 2013

FANZ' member companies are Ballance Agri-Nutrients Ltd and Ravensdown Fertiliser Co-operative Ltd

Introduction

- I. The Fertiliser Association of New Zealand ('FANZ') is a trade association representing the New Zealand manufacturers of superphosphate and nitrogen fertilisers. The Association has two member companies – Ballance Agri-Nutrients Ltd and Ravensdown Fertiliser Co-operative Ltd. Both these companies are farmer owned co-operatives with some 45,000 farmer shareholders. FANZ member companies supply over 98% of all fertiliser used in New Zealand. This represents a \$2 billion market share. There are super-phosphate manufacturing plants located in Mt Maunganui, Invercargill, Napier, Dunedin and Christchurch. New Zealand's only ammonia-urea manufacturing plant is located at Kapuni, South Taranaki. The companies each have networks of fertiliser storage, distribution and dispatch facilities across New Zealand. In total the companies employ more than 1450 staff across their organisations.
- II. To promote good management practices, FANZ and its member companies develop training programmes, codes of practice and industry information fact sheets. They fund research, partner with government on research and development projects and work closely with other organisations in the agricultural sector on industry-good issues. Industry research and development spending exceeds \$16 million per annum. This includes funding for OVERSEER®.
- III. OVERSEER® is an agricultural management tool which assists farmers and their advisers to examine nutrient use and movements within a farm to optimise production and environmental outcomes. The computer model calculates and estimates the nutrient flows in a productive farming system and identifies risk for environmental impacts through nutrient loss, including run-off and leaching, and greenhouse gas emissions. OVERSEER® is jointly owned and funded by the Ministry for Primary Industries, AgResearch and FANZ.
- IV. FANZ supports and encourages an environmentally responsible science-based approach to nutrient management and its regulation. FANZ member companies provide product that is critical to New Zealand farming systems along with research that supports both environmentally sustainable farming practices and government's export growth agenda. FANZ is influential across all agricultural sectors, including dairy, sheep, beef, arable and horticulture.
- V. In developing this submission FANZ member companies were consulted and provided industry expertise and advice. Member companies may make their own submissions specific to the view of their individual operations. FANZ also consulted with other representatives of primary sector industries.
- VI. The following comments and submissions are made with reference to the questions and numbering set out in the proposed amendments to the National

Policy Statement for Freshwater Management 2011, discussion document (NPS-FM).

- VII. The objectives set out in the NPS-FW are commendable. FANZ shares and applauds government's commitment to:
- a. a nationally consistent approach that recognises regional and local circumstances; and
 - b. providing an approach to the monitoring of progress towards, and the achievement of, freshwater objectives; and
 - c. improving information on freshwater takes and sources of freshwater contaminants; and
 - d. provide for the involvement of iwi and hapū, and to ensure that tāngata whenua values and interests are identified and reflected in the management of fresh water, including associated ecosystems, and decision-making regarding freshwater planning, including on how all other objectives of the NPS-FW are given effect to.

Submissions on the proposed amendments to the National Policy Statement for Freshwater Management 2011 – discussion document

1. *Q. 1. Have we correctly identified the problems currently associated with implementing the NPS-FM?*
 - 1.1. FANZ supports and encourages a consistent, environmentally and socially responsible, science-based approach to nutrient management and its regulation.
 - 1.2. FANZ submits that government has gone a long way toward correctly identifying the problems currently associated with implementing the NPS-FM.
 - 1.3. FANZ submits that the objectives and attributes set out in the NPS-FM appear designed to account for nutrient loads that may be contributed from agricultural sources. It does not appear that environmental impacts from other sources will be adequately accounted for without amending the NPS-FM to include additional biological indicators of eco-system health.
2. *Q. 2. If not, what problems, if any, have you faced with implementation?*
 - 2.1. FANZ submits that there are already practical issues manifesting in respect of implementation. FANZ notes that the NOF Reference Group recommended that national values of ecosystem health and human health, for secondary contact recreation, and associated numeric thresholds for these values should apply nationally. FANZ is

concerned that certain Regional Councils are already proposing to set compulsory values at primary contact recreation (swimming) level for all waterways in their region without taking proper account of the social and economic ramifications of their proposals. This appears to show poor regard for both national consistency and section 32 considerations.

2.2. FANZ submits that discussion documents and draft plans issued by councils should set out the compulsory values described in the NPS-FM as a starting point during consultations.

2.3. FANZ submits that setting highly aspirational values that are inconsistent with national policy at the outset of local government consultations is more likely to polarise stakeholder views and result in litigious activity. Local government inconsistency with national policy is not conducive to good collaborative discourse or good environmental outcomes.

2.4. FANZ submits that further and more detailed guidance from government will be required regarding interpretation and implementation of the NPS-FM to avoid exacerbating implementation issues that are already apparent.

3. *Q. 3. Do you agree that amending the NPS-FM would solve the problems identified in Section 2?*

3.1. FANZ is of the view that amending the NPS-FM would go a long way to solving the problems identified in Section 2.

3.2. FANZ submits that the preferred option is to amend the NPS-FM and provide additional guidance. FANZ is of the view that further guidance is needed and that such guidance should be clear and specific about:

3.2.1. process, especially the collaborative process

3.2.2. matters that must be considered, and

3.2.3. matters that must not be considered. Please refer also to our comment about guidance at 12.5 of this submission.

3.3. FANZ member companies provide product and technical knowledge that is critical to New Zealand farming systems along with research that supports both environmentally sustainable farming practices and government's export growth agenda. FANZ is influential across all agricultural sectors, including dairy, sheep, beef, arable and horticulture. On that basis, FANZ submits that if the collaborative process is not well described and engaged in by councils and zone committees, vital primary industry sources of knowledge and technical expertise about nutrient management could be diminished or lost.

3.4. FANZ submits that many section 32 analyses carried out at local government level in the past have been little more than equivocal narrative loosely based on the topics of costs and benefits.

3.5. FANZ submits that sound section 32 analyses will be required under the NPS-FM to enable the various limit-setting processes.

3.6. FANZ submits that clear guidance and direction to local government will be required:

- regarding how the new amended provisions of the RMA should be interpreted; and
- describing the rigorous standards necessary for carrying out an adequate section 32 analysis, and
- to ensure national consistency.

4. *Q. 7. Do you agree with requiring councils to account for all sources of contaminants?*

4.1. FANZ supports the requirement for councils to account for all sources of contaminants.

4.2. FANZ submits that “all sources” in this context must mean all sources, including point source discharge, non-point source discharge, partially diffuse point source discharge and naturally occurring nutrient loads.

4.3. FANZ member companies currently assist land managers with nutrient management planning. A nutrient management plan is a written plan that describes how the major plant nutrients (nitrogen, phosphorus, sulphur and potassium, and any others of importance to specialist crops) will be managed annually on a particular area or property. Nutrient management plans are implemented to optimise productivity, to reduce nutrient losses and to avoid, remedy or mitigate adverse effects on the environment. In doing so, nutrient management plans currently provide a means of accounting for nutrient loss at farm level. FANZ recommends that government avoid wasteful repetition of services by utilising industry initiatives that are currently under way.

4.4. FANZ submits that naturally occurring nutrient loss from native bush, de-stocked tussock country and wetlands – particularly those with significant avian populations should be accounted for along with other point source and non-point source discharges.

4.5. FANZ submits that nutrient loss and contamination from: urban sources, non-farming commerce and industry, road runoff, and townships should be accounted for along with other point source and non-point source discharges.

4.6. FANZ submits that council's accounting systems be robust enough to account for all environmental stresses, not just those that can be attributed to agriculture.

Values

5. *Q. 10. Should there be a national set of values as outlined in appendix 1 of the proposed NPS-FM?*

5.1. FANZ supports the intention to provide national consistency across the range of values managed for by councils.

6. *Q. 11. Are there any additional values that should be included? Why are these values nationally significant/important (recognising that councils can use other values if they wish)?*

6.1. FANZ submits that an additional value of economic wellbeing should be included. Economic wellbeing is more than food production and food security. There are integral links between social, environmental and economic wellbeing. Economic wellbeing is vital to the overall wellbeing of communities through, inter alia, higher levels of education, employment and individual and community self-esteem. Economic wellbeing is therefore inextricably linked to desirable social and environmental outcomes.

7. *Q. 13. Do you agree with the descriptions of the national values in appendix 1 of the proposed NPS-FM?*

7.1. FANZ submits that the description of Au Putea "where the use of the freshwater management unit provides economic opportunity" be expanded in its description to include economic wellbeing in its full sense. It should be clear that economic wellbeing is crucial to achieving healthy, prosperous, inclusive and environmentally sustainable communities.

Attributes

8. *Q. 14. Do you agree with the attributes associated with the values in appendix 2 of the proposed NPS-FM?*

8.1. FANZ gives qualified support to the proposed framework but notes that biological attributes are under-represented within the framework. Human activities may alter the physical, chemical or biological processes associated with water resources and thus modify the resident biological community. Biological attributes are therefore, crucial in assessing these alterations because they directly measure the condition of the resource at risk while standardised values for chemical attributes may fail to recognise natural variations in water chemistry.

8.2. Introduced flora and fauna, including brown trout, rainbow trout, perch, gambusia, rudd, catfish, koi carp, and tench cause significant environmental stresses across a broad range of aquatic systems.

8.3. ¹The landscape-scale effect of predation pressure from trout on the population integrity and distributions of non-diadromous galaxiids in high-country streams of the South Island, New Zealand have been assessed by the Department of Conservation. The Department's assessment confirms that brown trout and rainbow trout predate upon indigenous fishes to the detriment of the indigenous fish populations, and are therefore, detrimental to aquatic systems overall.

8.4. FANZ submits that more robust science and increased monitoring of both indigenous and introduced species is required to account for the relationship between indigenous and introduced species and the resulting effect on various aquatic systems.

9. *Q. 15. Do you agree with the numeric attribute states in appendix 2 of the proposed NPS-FM?*

9.1. FANZ generally supports the proposed attributes, their narrative descriptors and numeric bands but recommends the development of an attribute for Macroinvertebrate Community Index (MCI) for the reasons given at 21 of this submission. Attributes should also be developed for introduced species, particularly those that are invasive or predate upon indigenous populations.

9.2. FANZ supports the proposed numeric bands, while noting that the proposed D Band trigger (6.9mg/L) for nitrate toxicity is conservatively calibrated.

10. *Q. 16. Do you agree with the proposed narrative attribute states in appendix 2 of the proposed NPS-FM?*

10.1. FANZ submits that the narrative attribute states require amendment to more accurately describe ecosystem health of the various freshwater body types by clarifying risks and impacts for indigenous species.

Timing

11. *Q. 17. Do you agree with putting a NOF in the NPS-FM now, including only the attributes for which there is adequate evidence, and updating it as the scientific basis for further attributes and states becomes available?*

11.1. FANZ supports the intention to proceed with putting a NOF in the NPS-FM now and updating as science is developed and work proceeds. Some Regional Councils appear to have anticipated the NOF and work is currently under way at regional level. On that basis, delay does not appear to be a practical option.

¹Effects of introduced trout predation on non-diadromous galaxiid fish populations across invaded riverscapes, Darragh J. Woodford and Angus R. McIntosh, Department of Conservation.
<http://www.doc.govt.nz/Documents/science-and-technical/sfc320entire.pdf>

11.2. However, FANZ is of the view that production of a completed package of legislative reforms, NPS-FM amendments and guidance material to provide clarity and certainty is now a matter of urgency.

Processes for freshwater objective setting

12. *Q. 19. Do you agree with having the process requirements to link values and objectives directed in policy CA1 in the proposed amendments? If not, why not?*

12.1. FANZ supports the inclusion of process requirements in policy CA1 on the basis that it they should assist in regional implementation.

12.2. FANZ is of the view that the diagram at Figure 2: Managing Fresh Water in New Zealand and the supporting You Tube video are very well done.

12.3. FANZ submits that with the tools provided by the NPS-FM there is a real opportunity to benefit from a higher level of engagement with fellow stakeholders through the collaborative process.

12.4. FANZ submits that some councils are currently employing collaborative processes competently and to good effect. Others are not.

12.5. FANZ submits that adequate regulatory guidance about the collaborative process is currently conspicuous by its absence and will be very welcome when it appears.

13. *Q. 21 and 22. Do you think the processes outlined will work? If not, why not? Do you agree with the proposed matters in policy CA1(f) that must be considered when establishing freshwater objectives? If not, why not?*

13.1. Under policy CA1(f)(v), regional councils must consider the implications for “*actions, investments, on-going management changes and any social and economic implications*” when identifying freshwater values. However, there is no policy that requires councils to consider the views of the communities they serve when they consider these implications.

13.2. FANZ submits that policy CA1 be amended to expressly require councils to consult with their communities and collaborate with stakeholders when applying processes to develop freshwater objectives for freshwater management units.

14. *Q. 22. Is it clear that setting freshwater objectives is an iterative process which involves consideration of the impacts of the limits, management methods, and timeframes required to meet a potential freshwater objective?*

14.1. The NPS-FM refers expressly to iterative decision making processes eight times. FANZ submits that this is adequate for clarity.

15. *Q. 23. Do you agree that regions should have discretion to determine timeframes for meeting freshwater objectives?*

15.1. FANZ agrees that communities should have discretion to determine the timeframes for meeting freshwater objectives as part of a collaborative processes, which should include robust section 32 analysis.

16. *Q. 24. Are there any aspects of the process that are not clear?*

16.1. FANZ submits that a requirement and process for councils to consult with communities and collaborate with stakeholders is not clear in the policy and that the policy should be amended to make these requirements and processes clear.

Compulsory values

17. *Q. 25. Do you agree that ecosystem health should be a compulsory value?*

17.1. FANZ agrees that ecosystem health should be a compulsory value but has concerns about how ecosystem health is assessed.

17.2. FANZ submits that additional biological attributes are crucial in assessing ecosystem health because they directly measure the condition of the resource at risk while standardised values for chemical attributes may fail to recognise natural variations in water chemistry.

17.3. FANZ recommends that the NPS-FM be amended to include additional biological attributes, including MCI.

18. *Q. 26. Do you agree that human health for secondary contact recreation (such as boating and wading) should be a compulsory value?*

18.1. FANZ agrees that human health for secondary contact recreation (such as boating and wading) and ecosystem health should be compulsory values.

18.2. FANZ submits that other national values should not be compulsory, but part of the portfolio assessment by councils and communities. Decisions on how and where these other values are expressed across a catchment should properly be the subject of intimate local engagement to arrive at an overall balance sensitive to community and context.

18.3. FANZ submits that further development of banded frameworks for a wider range of values and attributes, including biological attributes, might assist communities in the decision-making process.

19. *Q. 27. Do you think there should be more compulsory values? If so, what should they be, and why? What attributes should be associated with them?*

19.1. FANZ submits that the compulsory values set out in the NPS-FM are sufficient to achieve the purpose of the document.

National bottom lines

20. *Q. 28. Should there be numeric bottom lines for attributes of the compulsory values?*

20.1. FANZ generally supports the use of numeric bottom lines to define the attributes of compulsory values.

20.2. FANZ submits that the NPS-FM should further clarify the necessity for the banded framework, including any bottom lines, to be supported by robust science that is calibrated to indigenous species and focused on effects.

20.3. FANZ submits that annual medians and maximums are not appropriate for assessing compliance in a dynamic freshwater system. FANZ recommends that rolling 3-5 year timeframes be used.

20.4. FANZ notes the Ministry for the Environment's Proposed amendments to the National Policy Statement for Freshwater Management 2011 – section 32 evaluation, at page 25, where it states, “An aggregated national estimate of the benefits and costs of the proposed amendments to the NPS is difficult for two principle reasons:

- there is no national-level information on the opportunity costs of establishing the national objectives framework and requiring compliance with the national bottom lines for ecosystem health and human health
- there are no nationwide economic impact studies on the costs and benefits of meeting bottom lines (regional case studies have been done where monitoring shows bottom lines are not currently met).

20.5. FANZ submits that for the sake of consistency across regions, fiscal prudence and to avoid repetition of services central government needs to carry out a nationwide section 32 evaluation of the benefits and costs of meeting bottom lines.

21. *Q. 29. Do you agree with the proposed level at which bottom lines would be set for each attribute of ecosystem health? If not, at what level should they be set?*

21.1. In relation to Question 29, FANZ submits in support of the view provided by DairyNZ, which is as follows:

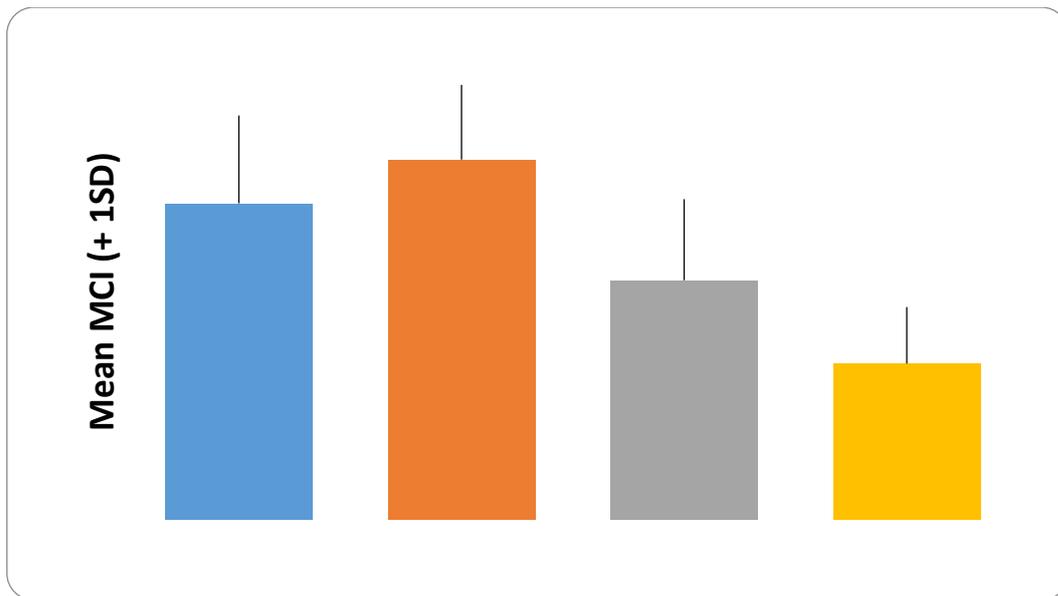
Macroinvertebrate Community Index (MCI)

21.1.1. The first iteration of the NOF has excluded macroinvertebrate indicators of ecosystem health. It is [our] view that this is a significant oversight. Biotic indices of ecosystem health are used throughout the world. In New Zealand the Macroinvertebrate Community Index (MCI; developed for

stony streams in Taranaki in the mid-1980s) is routinely used by regional councils, consultancies and researchers for monitoring the health of hard and soft-bottomed streams². In addition, nationally-accepted bands for MCI already exist and are consistent with the NOF banding approach. Attribute states are defined as A (MCI \geq 120), B (100 \leq MCI<120), C (80 \leq MCI<100) and D (MCI<80).

21.1.2. The recently released National River Health Indicator dataset³ contains averaged MCI values for 1034 monitored sites from throughout NZ. Analysis of this dataset shows a strong relationship between dominant land cover upstream on the monitoring site and mean MCI (see Figure below). This indicates that MCI is a good discriminator of land use pressures on freshwater ecosystems – an important criterion for any indicator.

21.1.3. Overall, 12% of the 1034 monitored sites breached the proposed bottom line (see Table below). No Natural land cover sites breached the bottom line, whereas 6, 16 and 48% of Exotic forest, Pasture and Urban sites, respectively, breached the bottom line.



Dominant land cover	No. sites	% 'A' band	% 'B' band	% 'C' band	% 'D' band
Exotic Forest	47	43	36	15	6
Natural	281	55	38	7	0
Pasture	679	7	41	36	16
Urban	27	0	4	48	48

² A soft-bottomed variant of the MCI was developed in 2007. (Stark, J. & Maxted, J. (2007). A biotic index for New Zealand's soft-bottomed streams. NZ J. Marine & Freshwater Research. 41:43-61)

³ <http://www.mfe.govt.nz/environmental-reporting/fresh-water/river-condition-indicator/index.html>

Total	1034	22	39	27	12
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21.1.4. Outcome sought:

- Include MCI in the attribute tables for the NOF.
- Adopt the established bands i.e.

A	>120
B	100-119
C	80-99
D	<80

- It is recommended that monitoring occur annually during summer low flows and sampling methods be consistent with the accepted national protocols⁴.
- If acceptable following MfE analysis of national compliance and associated economic impacts, adopt 80 as a suitable national bottom line.

22. *Q. 30. Do you agree with the proposed level at which bottom lines would be set for each attribute of human health for secondary contact recreation? If not, at what level should they be set?*

22.1. FANZ supports the proposed bottom lines for human health for secondary contact recreation.

23. *Q. 31. Do you agree that transitional arrangements should be provided to allow councils and communities to set objectives below a national bottom line for a short time?*

23.1. FANZ supports the provision of transitional arrangements to allow the setting of objectives below national bottom lines for a short time.

Exceptions Framework

24. *Q. 35 & 36. Do you agree that freshwater management units eligible under the first two exceptions above should be decided by regional councils? Do you agree that those freshwater management units eligible for an exception due to the effects of significant existing infrastructure should be decided at a national level and included in appendix 3 of the NPS-FM?*

24.1. The work of regional councils requires collaboration with stakeholders, including territorial authorities. Any decisions regarding

⁴ Stark, J.; Boothroyd, I.; Harding, J.; Maxted, J.; Scarsbrook, M. 2001. Protocols for sampling macroinvertebrates in wadeable streams. Ministry for the Environment. New Zealand Macroinvertebrate Working Group Report No. 1. 57 p.

exceptions must be seen to be objective. The close collaboration required at regional level may not lend itself well to the appearance of objectivity.

24.2. FANZ submits that for the sake of national consistency any exemptions to national bottom lines be made at a national level by central government.

Articulating Tāngata Whenua values

Q. 38, 39 and 40. Do you think the proposed NPS-FM adequately provides for Te Mana o te Wai? Do you agree with the way Tāngata Whenua values are described in proposed appendix 1 of the NPS-FM? Do you support adding Te Mana o te Wai to objective A1 of the amended NPS-FM as a matter that must be safeguarded? What would be the implications of adding this to objective A1 in the NPS-FM?

24.3. FANZ is not able to ascertain or make specific comment on the potential implications of including Te Mana o te Wai as an objective in the NPS-FM.

24.4. FANZ is of the view that the underlying values within agriculture share much in common with Tāngata Whenua values. Farmers and all those who assist them as stewards of the land are aware that it is their responsibility to ensure that the land and the water are managed productively and sustainably now and for future generations.

Monitoring

Q. 41. Do you agree with the new section in the NPS-FM requiring monitoring plans? If not, why not?

24.5. FANZ supports a requirement for monitoring plans and recommends that a preference for biological monitoring be indicated.

ENDS

Contact: [withheld]