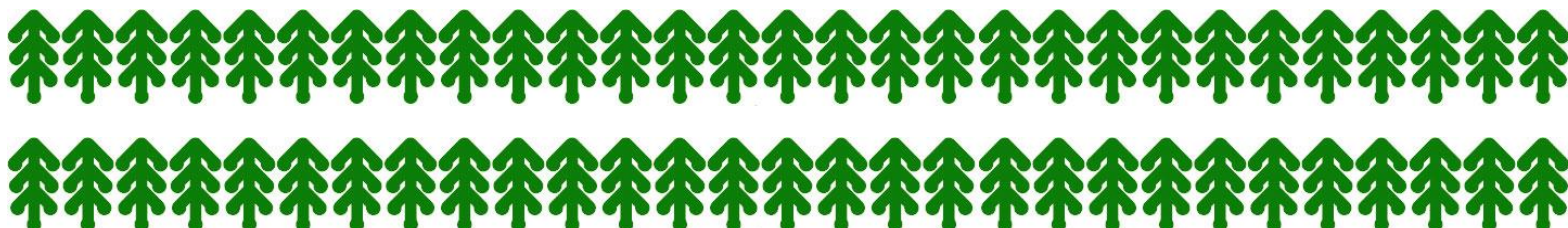




# Submission on Clean Water Consultation Document and Amendments to the National Policy Statement on Freshwater Management

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## INTRODUCTION

1. **The New Zealand Forest Owners Association Incorporated (NZFOA)** is the representative membership body for the commercial plantation forest growing industry. NZFOA members are responsible for the management of approximately 1.2 million hectares of New Zealand's plantation forests and over 80% of the annual harvest.
2. NZFOA is a foundation partner in the Land and Water Forum small group.

## GENERAL COMMENT

3. NZFOA considers the Freshwater NPS would significantly benefit from inclusion of a statement (possibly included in the Preamble) that acknowledges the benefit of afforestation (either planted exotics, or natives) in improving water quality. Afforestation (establishing planted forests) typically displaces livestock, and in doing so, largely eliminates inputs of nitrogen and e-coli and markedly reduces sediment and phosphorous loadings, while providing a range of ecosystem services (although an optimal model for quantifying these benefits is yet to be fully developed).
4. NZFOA considers that the proposed NPS revision fails to target the correct water bodies. Our understanding from NIWA is that 77% of the contaminant load on waterways originates from first order streams. The proposed legislation uses fourth order water bodies as the starting point for water quality regulation. However, there is a very strong ecological case to move attention and regulation to capture first order streams.
5. **Recommendation** - The regulation to capture all order streams

### (3.1) SWIMMABILITY (AND MAHINGA KAI)

6. The NZFOA recommends that the objective of swimmability be expanded to include an objective of "safe for food gathering – mahinga kai" in all rivers except during flood events.
7. The NZFOA does not accept the logic of the government's current argument that improving the 'swimmability' of large waterbodies will result in all tributaries becoming swimmable. Many smaller tributaries flow directly into lakes or into the sea, rather than into fourth order rivers. Furthermore, it is quite conceivable that that a smaller tributary may not be suitable for primary contact recreation, but the dilution effect means that a larger receiving waterway remains swimmable. It does not follow that compromised water quality is acceptable in first, second or third order tributary streams if dilution will prevent a breach of standards in a larger stream.
8. **Recommendation** – To include an objective of "safe for food gathering-mahinga kai" and to include all order streams.

### (3.2) MONITORING MACROINVERTEBRATES (MCI)

9. The NZFOA endorse and support the Land and Water Forum's call for the addition of MCI monitoring in appropriate rivers and streams as part of councils' assessment of the national value of ecosystem health. However, it is not clear if **every** appropriate river is required to be monitored. If so this would be an extremely costly unjustifiable measure.

10. However, the NZFOA notes that the monitoring network in catchments dominated by plantation forests is very sparse (with the exception of Bay of Plenty who have improved the representation of planted forests in their network). Reliance on modelling does not provide correct information as to the effects of native, exotic forest, pastoral or urban land use.
11. **Recommendation** – Require monitoring sites to be a locations that properly describe the MCI categorisation, that is, exotic forest monitoring sites should be located in exotic forests.

### **(3.3) MAINTAIN OR IMPROVE**

12. The directive that councils must have Plan provisions to 'maintain or improve' all water quality parameters listed in the NOF at the scale of the FMU creates a challenge for forest owners. The dilemma is that planted forests yield very high water quality during the growing phase (water quality indices and MCI is generally indistinguishable from those in native forests). After harvest, there is inevitably a degradation for a year or two (i.e. one or two years in 30), with water temperature, total water yield, peak flows and suspended sediment, and nitrate yields all increasing and geomorphic thresholds on hill country reducing and then recovering after replant.
13. The changes to the physical hydrology that follow harvest are beyond the control of the person or company undertaking the harvest. For example, harvesting locally eliminates both tree canopy interception of incoming rain and tree transpiration. This means that in drier districts in particular (say less than 1200mm annual rainfall) typically around 30% more rain reaches the soil profile with less moisture then lost to tree transpiration. This results in increased through flow in the vadose zone, and higher and quicker flood peaks in storms and shorter recessions (i.e. less base flow after storms).
14. The increase in nitrate is still low in comparison with other land uses. However, there is no ability to mitigate such loss other than not harvesting at all.
15. **Recommendation** - Alter the directive to "maintain or improve taking into account temporal effects".

### **(5) STOCK EXCLUSION**

16. The NZFOA endorse and support the addition of stock exclusion enacted by way of a National Regulation.
17. NZFOA strongly recommends that the National Regulation require a minimum fence setback of at least five (5) metres to provide a vegetated shaded buffer zone between water bodies and all cultivated or stocked land, in part to retard overland flow. This buffer allows for contaminated and sediment laden water to infiltrate into macropores in the less compacted soils that will develop in the riparian zone in the fenced off area. A similar provision is included in the draft NES-Plantation Forestry, and should be applied consistently to other land uses.
18. NZFOA does not share the Land and Water Forum position on stock exclusion. The Forum recommends that the most effective set back from a waterway is developed depending on the slope of the surrounding land and the nature of the waterway.

19. The Forum propose that this would be determined by an on-farm assessment required as part of Good Management Practise (GMP). NZFOA sees little evidence of good management practise to date with few first order hill country streams currently fenced. On easier country many stock exclusion fences being at risk of undermining from lateral bank erosion, or failing to exclude stock because they have been undermined, because in the absence of regulations, many such fences have been positioned too close to the top of the stream bank.
20. The NZFOA support the requirement to include only 'permanently flowing waterways', but does not support the regulation to only apply once the stream is "wider than 1m or deeper than 40cm" because water quality can easily be degraded by stock accessing smaller head water streams and equally small drains on farmed land.
21. The proposed stock exclusion regulation must clarify the requirements for steep or rolling country, because stock need to be excluded along the entire length, not just in the sections of first order streams that exceed one (1) metre in width.
22. Five (5) metre setbacks do not provide adequate protection from stream bank collapse and the effects of high rainfall or flood events – setbacks are only intended to reduce basic overland flow contamination. A NIWA report into optimum setback distances concluded that five metres was the minimum distance for efficacy for all productive land uses.
23. NZFOA considers it is prudent to apply setbacks now. Should future analysis determine that setbacks are required, it would place a burden on farmers, ratepayer and taxpayer funded fencing schemes and other land users to move fences back from water bodies. It makes sense to pre-empt this possibility by providing for setbacks now.
24. **Recommendation** – require a five metre set back for stock from all permanent rivers, streams and drains.

**(APPENDIX 1) COMMENT ON AMENDMENTS TO THE NATIONAL POLICY STATEMENT - FRESHWATER MANAGEMENT**

25. **Objective A. Water Quality A2.** NZFOA suggests the additional text under Objective A2 which states "*then providing for economic well-being, including productive opportunities within environmental limits*" should specifically refer to the text in the Preamble to the document (see below) that states "*the pace of these changes should take into account economic impacts*".
26. This will ensure that the text in A2 is clear, unambiguous, and aligns with the text of the Preamble. This will avoid any other interpretations of 'economic well-being' and provide guidance for regional councils.

National bottom lines in the national policy statement are not standards to aim for. Where freshwater management units are below national bottom lines they must be improved to at least the national bottom line, or better, over time. It is up to communities and iwi, through councils, to determine the pathway and timeframe for ensuring freshwater management units meet the national bottom lines. Where changes in the way communities use water are required, the pace of those changes should take into account economic impacts. Improvements in freshwater quality may take generations depending on the characteristics of each freshwater management unit.

27. The references to 'economic well-being' that should be aligned with, or refer to the text in the Preamble, are also included in:
- B1
  - CA2 (f) iaaab
28. NZFOA considers that the proposed transition timeframes could be reduced to around eight years from now (2025) in order to provide momentum for step change in freshwater management.

### **A COMMENT ON SEDIMENT**

29. NZFOA and the forest growing sector are committed to, and actively support, all measures to manage sediment. NZFOA endorses the construct of the National Environmental Standard for Plantation Forestry (NES-PF) which codifies current forest industry GMP/BPOs for erosion and sediment control as Permitted Activity conditions.
30. NZFOA considers that there is major scientific difficulty for the National Objectives Framework (NOF) that underpins the NPS-FW to ever be able to address or respond to the variety of sediment loads naturally occurring in New Zealand rivers, which can vary from 30 to 60,000 tonnes per square km per year on the highly erosive East Coast down to 1 to 10 tonnes per square km per year in much of Otago.
31. There is a further problem with attribution, especially in relation to sediment derived from stream bank erosion (undercutting in high flows leading to bank collapse. Because these matters are not easily resolved, NZFOA agree that it is premature to contemplate inserting sediment into the NOF or the NPS-FW.

Thank you for the opportunity to comment on the proposed changes.



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