



Environment Institute  
of Australia and  
New Zealand Inc.

Ministry for the Environment  
and  
Ministry for Primary Industries

**EIANZ SUBMISSION**  
On  
**Next Steps for Freshwater**

**22 April 2016**



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## Executive Summary

The Environment Institute of Australia and New Zealand Inc. (EIANZ) is an Australasian institute which represents environmental practitioners committed to the protection and enhancement of the environment for future generations through leadership in avoidance and mitigation of harms and adaptation to change.

On all issues and all projects the Institute advocates ethical good practice and environmental management delivered by competent and well credentialed environmental practitioners.

As an organisation committed to the protection and enhancement of the environment for future generations, the **EIANZ supports:**

Proposals 1.1-1.3 and 1.5-1.8 listed in the 'Next Steps for Freshwater' consultation document.

As an organisation committed to fostering good practice based on honest, objective and well-founded environmental practice and on scientific evidence, the **EIANZ is concerned that:**

For Proposal 1.4, the ability for a macroinvertebrate measure, if included in the NOF as an attribute, to be achievable. The ability to control and influence such a large number of complex biotic and abiotic factors that influence macroinvertebrate communities will be difficult if not impossible. In practice, even if water quality attributes are achieved it may not follow that macroinvertebrate measures will be met (and vice-versa). EIANZ is concerned that the uncertainties associated with proposal 1.4 will not be helpful to decision-making nor will it be in the best interest of encouraging good practice.

Although EIANZ supports proposal 1.8, we see a risk in that the simple act of fencing and excluding stock from waterways precludes the enhancement of these waterways by other means, in particular the planting of a vegetated riparian buffer. Although excluding stock has benefits there is a danger that this act alone will see the 'job done'. EIANZ consider that this will not be the case and further measures and initiatives will be required. In particular, EIANZ would support the requirement for appropriate riparian planting on the streamside of the required fence.

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## 1. Environmental Association of Australia and New Zealand (EIANZ)

The EIANZ champions good practice and strong ethical standards as the foundation of good practice environmental management. It also champions the rule of law.

The EIANZ is the leading professional body for environmental practitioners in Australia and New Zealand, promoting independent and interdisciplinary discourse on good practice environmental management, and holding its members accountable to the EIANZ *Code of Ethics and Professional Conduct*. As environmental practitioners, members of EIANZ are experts in local government, biological, physical and social sciences, planning, resource management, legal representation and many are experienced at the decision-making processes of resource consent hearings, Environment Court and Board of Inquiry. Most of the membership is employed by Councils, Consultants, Universities and government departments and are actively involved in day-to-day management and decision-making on environmental matters such as freshwater resources of New Zealand. A number of members are accredited as independent hearings commissioners through the 'Making Good Decisions' programme.

The EIANZ and its membership is concerned about the declining quality and health of New Zealand's freshwater resources, including the decline in 'life supporting capacity', biodiversity and the limitations placed on recreational use of this prime resource in New Zealand. The EIANZ and its membership welcome the opportunity to submit comments and recommendations on the 'Next Steps for Freshwater in New Zealand'- NPS-FM. In our submission below we make several general comments on matters in the consultation document as well as responses to specific matters raised in the consultation document. We limit our submission to the 'Freshwater and our environment' section of the consultation document as this part is most relevant to the good environmental management practice mandate of EIANZ.

We record here that EIANZ made an earlier submission on the 'Proposed Amendments to the National Policy Statement for Freshwater Management 2011: A Discussion Document' (submission dated 4 February 2014).

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## **2. General comments**

The EIANZ supports the Government initiative to provide further policy direction and guidance for Councils and water managers that will further support improvement of management of freshwater in New Zealand. Like many New Zealanders, the EIANZ is concerned about the continuing deterioration of New Zealand's freshwater resources and the decreased ability of New Zealanders to utilise these freshwater resources in a sustainable manner for current and future generations.

The EIANZ understands that the proposed 'Next Steps' in the consultation document aim to strengthen the requirements for improved water quality, clarify matters that may be included in the NPS-FM, as well as providing more detail on exceptions to the national 'bottom lines' and how national standards will apply to coastal lagoons. EIANZ supports the continuing refinement and clarification of policy and guidance on matters that will improve the quality of freshwaters in New Zealand.

## **Freshwater and our environment**

### **3. 'Maintain or improve overall' water quality**

Whilst the NPS\_FM requires regional councils to at least maintain overall water quality, the NPS\_FM provides very little direction on how it is to be done, or how to decide when it has been achieved. EIANZ considers that a greater guidance is required and that the NPS\_FM should allow for sufficient flexibility for councils when applying water quality management.

EIANZ supports the move to the use of 'freshwater management units' as the scale for applying 'overall quality of freshwater' test, and the appropriate scale to measure the achievement of 'overall quality of freshwater'. The preference for the use of FMUs contrasts with the current wording in the NPS-FM which focuses on the 'region' as a whole for 'overall water quality'. The use of FMUs means focusing on a scale where results are more likely to be achieved and measurable and is the scale at which communities view freshwater quality and can set objectives and limits.

Proposal 1,2 makes reference to amendments to the NPS-FM that will clarify the mechanisms and provide flexibility to ensure water quality is maintained or improved.

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Specifically EIANZ considers that the clarification of the use of attributes within specific bands is helpful for decision-making and informing stakeholders of the quality of freshwater.

**EIANZ supports proposals 1.1 and 1.2** in the Consultation Document with the former amending the NPS-FM so that the requirement to maintain and improve water quality would apply within a FMU rather than across a whole region, and the latter intended to provide clarity about the methods used to determine how fresh water quality is maintained and improved.

#### **4. Macroinvertebrate Community Index as a measure of water quality**

The Macroinvertebrate Community Index (MCI) was developed as an indicator of water quality<sup>1</sup>, and has been widely used in water quality monitoring programmes throughout NZ since the mid-1980's. Macroinvertebrates in general are regarded as good 'integrators' of environmental condition by way of their diverse biology, habitat requirements and tolerance and sensitivities to water quality condition. As an indicator, the MCI can flag of a number of stressors in the environment (including water quality) and is often used more broadly as an indicator of overall ecological health<sup>2</sup>. As the behaviour of the MCI is reasonably well understood<sup>3</sup>, the EIANZ supports the use of the MCI as an indicator or measure of performance of water quality and ecological health. We also note that the MCI is one of a number of indicators that can be used as measures of ecological health, some using the same macroinvertebrate community as used in the MCI (e.g., EPT, taxa number). These additional ecological indicators make use of algal productivity, fish and bacteria; as well as functional indicators of ecological health.

EIANZ is aware that the issue of inclusion of the MCI as an attribute in the National Objectives Framework (NOF) received some substantial coverage in scientific circles and even reached the media at the time of the proposed amendments to the NPS-FW. In our submission on the NOF, EIANZ also submitted on this matter and argued that the MCI should be included as an attribute in the NOF.

Notwithstanding that submission, **EIANZ supports the proposal (1.3)** that the MCI

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<sup>1</sup> Stark, J. D. 1985: A macroinvertebrate community index of water quality for stony streams. Water and soil miscellaneous publication 87.

<sup>2</sup> Boothroyd, I. K. G.; Stark, J. 2000: Use of invertebrates in monitoring. In Collier, K. J.; Winterbourn, M. J. Eds. New Zealand stream invertebrates: ecology and implications for management. New Zealand Limnological Society, Christchurch. Pp. 344-373.

<sup>3</sup> Stark, J. D. 1993: Performance of the macroinvertebrate community index: effects of sampling methods, sample replication, water depth, current velocity and substratum on index values. New Zealand Journal of Marine and Freshwater Research 27: 463-478.

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would better serve as a mandatory method of monitoring ecosystem health (as it is currently used) although we suspect that the MCI is so widely used that a mandatory requirement may not be necessary. Some members of EIANZ have significant expertise in the use of MCI and recognise the difficulty in setting a limit or suite of limits using MCI. Our knowledge of the behaviour of the MCI and the multitude of factors (beyond water quality) that influence it, mean reaching specific MCI limits (that might be applied in NOF) may not be achieved even if water quality is improved; hence our caution in recommending it as a limit in the NOF.

**EIANZ urges caution in proposal 1.4**, which suggests that work will continue on the potential benefits of a macroinvertebrate measure as an attribute in the NOF. As suggested above, factors influencing the presence and/or absence of macroinvertebrates in a location are complex and many. The ability to control and influence such a large number of complex biotic and abiotic factors will be difficult if not impossible. As a consequence that ability to achieve specific macroinvertebrate measures is fraught with difficulty. In practice, even if water quality attributes are achieved it may not follow that macroinvertebrate measures will be met.

## **5. Significant infrastructure and water quality**

Policy needs to be abundantly clear on its intent and clear on how it is anticipated it will be implemented. EIANZ finds that several policies within the NPS-FM introduce concepts that although defined in the document do little to provide guidance on implementation. There is a risk that there will be great variation in the implementation of NPS-FM by regional councils across New Zealand and that consequently, the NPS-FM will fail to achieve its objectives.

Accordingly **EIANZ supports proposal 1.5** that provides greater clarification that requires Councils to gather further evidence before allowing exceptions as outlined in Appendix 3 of the NPS-FM.

EIANZ also supports the requirement that any recommended exceptions will require public consultation.

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## 6. Coastal lakes and lagoons

EIANZ supports the clarification that intermittently closing and opening lakes and lagoons (ICOLLs) will be subject to the attributes of NOF as per the amended NPS-FM.

Accordingly, EIANZ supports the proposed amendment to the NPS-FM so that water quality attributes, including their bottom lines, apply to lakes and lagoons that intermittently open (and close) to the sea (proposal 1.6).

**EIANZ supports proposals 1.6 and 1.7.**

## 7. Stock exclusion from water bodies

The EIANZ champions good science as the foundation of good practice in environmental management. The scientific evidence for improved water quality resulting from the exclusion of stock from waterways is well advanced and well understood in New Zealand. The dairy industry has its own voluntary code for keeping stock out of waterways, and Councils have policy and regulations that support exclusion of stock. Although much progress has been made with the exclusion of stock from waterways, EIANZ considers that there is still much to be done.

We note that the intention is to exclude stock from water bodies on flat land and lowlands and rolling hills (<15° slope), typically the preferred topography for dairy farming. We support this intention as a practicable and achievable objective that will have significant benefits for water quality in these environments.

EIANZ supports the requirement for permanent fencing (except where a natural barrier is present) but we note that it is not the intention of the stock exclusion to require a riparian buffer. Although the benefits of a vegetated riparian buffer are well known, and EIANZ submits that where possible, fencing be accompanied by effective planting of riparian margins.

The criteria for the selection of water bodies includes permanent streams (>1 m wide and 0.3 m deep). However, EIANZ submits that the benefits to water quality will be greatly enhanced if the criteria for the selection of waterways are extended to significant seepage areas. Seepage areas, often located alongside or draining into permanent streams, are often accessible to stock, but also provide a direct flowpath to streams. Continuing to allow stock access to these seepage areas will see the continuation of inputs that are detrimental to water quality in our waterways.

Accordingly **EIANZ supports proposal 1.8** and the intention of Government to regulate to exclude dairy cattle on milking platforms from water bodies by 1 July 2017 as a significant measure but is not a final measure in the aim of improving the quality of freshwater in New Zealand.

EIANZ further submits that specific wording be provided that makes clear that stock exclusion through fencing should be regarded as a minimum measure. Without wishing to see an over-complication of policy and rules, it may be that in specific regions, habitats, soil types or landforms, additional measures to enhance water quality should also be mandatory

## **8. Conclusion**

As a leading professional body representing environmental practitioners in Australia and New Zealand, the EIANZ advocates ethical good practice in environmental management delivered by competent and well credentialed environmental practitioners. To that end, our submission on this consultation document focuses on the way in which the proposals will in practice be supported by good science delivered by competent, ethical professionals.

### **EIANZ therefore supports:**

Proposals 1.1-1.3 and 1.5-1.8 listed in the 'Next Steps for Freshwater' consultation document.

### **EIANZ is concerned that:**

For Proposal 1.4, reliance on a macroinvertebrate measure, as an attribute of NOF may not always be achievable. The ability to control and influence such a large number of complex biotic and abiotic factors that influence macroinvertebrate communities will be difficult if not impossible. In practice, even if water quality attributes are achieved it may not follow that macroinvertebrate measures will be met (and vice-versa). EIANZ is concerned that the uncertainties associated with proposal 1.4 may detract from its usefulness in the decision-making process and may not be in the best interest of good practice.



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Although EIANZ supports proposal 1.8, we see a risk in that the simple act of fencing and excluding stock from waterways precludes the enhancement of these waterways by other means, in particular the planting of a vegetated riparian buffer. Although excluding stock has benefits there is a danger that this act alone will see the 'job done'. EIANZ consider that this will not be the case and further measures and initiatives will be required. EIANZ consider that this will not be the case and further measures and initiatives will be required. In particular, EIANZ would support the requirement for appropriate riparian planting on the streamside of the required fence.



Dr Ian Boothroyd FRSB, CBiol, MEIANZ, CEnvP, MRSNZ  
President, NZ Chapter EIANZ