

# **Report and recommendations on the proposed amendments to the National Policy Statement for Freshwater Management and public submissions**

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# Contents

|                   |   |    |
|-------------------|---|----|
| Glossary of terms | v   |    |
| 1                 | Introduction  | 7  |
|                   | Background  | 7  |
|                   | Submissions   | 8  |
|                   | Major themes from submissions   | 8  |
|                   | Summary of recommendations  | 11 |
| 2                 | Preamble  | 15 |
| 3                 | Te Mana o te Wai  | 16 |
| 4                 | Ecosystem Health  | 22 |
|                   | Ecosystem health as a compulsory national value   | 22 |
|                   | Scope and description of ecosystem health   | 22 |
|                   | Attributes for ecosystem health   | 24 |
| 5                 | Human Health  | 29 |
|                   | Objective A1 and secondary contact  | 29 |
|                   | Human health (secondary contact recreation) as a compulsory national value  | 30 |
|                   | Attributes for human health (secondary contact recreation)  | 33 |
| 6                 | Freshwater management units   | 38 |
| 7                 | Objective to maintain or improve overall freshwater quality within a region and protect outstanding freshwater bodies | 40 |
|                   | Objective A2 — maintain or improve overall freshwater quality within a region   | 40 |
|                   | Objectives A2(a) and B4 — Significant values of outstanding water bodies  | 41 |
| 8                 | Coastal Water   | 43 |
| 9                 | National Objectives Framework   | 45 |
|                   | The approach to setting freshwater objectives (Objective CA1, Policy CA1 and Appendices 1 and 2)                      | 45 |
|                   | Exceptions (Policy CA2)   | 50 |
|                   | Transitional Provisions (Policy CA3)  | 56 |
| 10                | Monitoring Plans  | 58 |
| 11                | Accounting for freshwater takes and contaminants  | 60 |
|                   | Objective CC1   | 60 |

|    |   |    |
|----|---|----|
|    | Policy CC1                              | 61 |
|    | Policy CC2                              | 61 |
|    | Title of Part CC                        | 62 |
| 12 | Progressive implementation programme    | 63 |
| 13 | Additional National Values (Appendix 1) | 65 |
|    | Overview                                | 65 |
|    | Natural form and character              | 66 |
|    | Mahinga kai and fishing                 | 67 |
|    | Food security                           | 67 |
|    | Contact recreation                      | 68 |
|    | Wai Tapu                                | 69 |
|    | Water supply                            | 70 |
|    | Animal drinking water                   | 70 |
|    | Irrigation                              | 70 |
|    | Hydro electric power generation         | 71 |
|    | Fire-fighting                           | 71 |
| 14 | Values not proposed for Appendix 1      | 72 |
| 15 | Attributes not proposed for Appendix 2  | 73 |
| 16 | Resource Management Act Part 2 Analysis | 74 |

# Glossary of terms

|        |  |
|--------|--|
| LAWF   | Land and Water Forum                                     |
| LGNZ   | Local Government New Zealand                             |
| MCI    | Macroinvertebrate Community Index                        |
| NES    | National Environmental Standard                          |
| NOF    | National Objectives Framework                            |
| NPS-FM | National Policy Statement for Freshwater Management 2011 |
| NZCPS  | New Zealand Coastal Policy Statement 2010                |
| NZFSS  | New Zealand Freshwater Sciences Society                  |
| RMA    | Resource Management Act 1991                             |
| SFRG   | Suitability for Recreation Grade                         |



# 1 Introduction

1. This report provides recommendations to the Minister for the Environment on proposed changes to the National Policy Statement for Freshwater Management 2011 (NPS-FM). Each section of the report provides:
  - an explanation of the proposals from Amendments to the National Policy Statement to Freshwater Management 2011 (the discussion document)
  - a summary and analysis of submissions
  - recommendations to the Minister for the Environment.

## Background

2. The proposed amendments to the NPS-FM are part of the Government's broader package of freshwater reforms which include a new collaborative planning model, a National Objectives Framework for freshwater management (NOF), and managing to quality and quantity limits.
3. The package of freshwater reforms builds on the work of the Land and Water Forum (LAWF). In 2009 the Government commissioned advice from the LAWF on how to improve freshwater management in New Zealand. The Forum delivered three reports and over 150 recommendations.
4. The detail of the proposed amendments has been informed by advice from the NOF Reference Group. The NOF Reference Group includes representatives from regional councils, NGOs, industries and the science community. The proposals are underpinned by expert advice from a range of science panels, who were overseen by a Science Review Panel. Over 60 scientists have been involved, including independent scientists, and scientists from leading research institutes, iwi, and regional councils.

## Process for amending the National Policy Statement

5. The statutory requirements for amending a national policy statement are set out in the Resource Management Act 1991 (RMA). For the proposed amendments to the NPS-FM the Minister for the Environment chose to establish a process in accordance with section 46A(1)(b). The process includes:
  - public consultation
  - written submissions, and
  - a report and recommendations to the Minister for the Environment of the submissions and subject matter of the NPS-FM (this Report).
6. The Minister for the Environment is required to consider this report and may then make changes or no changes as she sees fit, or withdraw all, or part of the proposed amendments.
7. If the Minister for the Environment decides to proceed with the amendments, a further evaluation must be undertaken in accordance with section 32AA of the RMA. The Minister for the Environment must have particular regard to the further evaluation when deciding whether to recommend the NPS-FM amendments to the Governor-General. If

approved by the Governor-General, the NPS-FM will be issued by notice in the Gazette, provided to the House of Representatives and publicly notified.

8. In addition, submitters will be provided with a summary of the recommendations from this report and the decisions on the recommendations, including reasons for not adopting any recommendations.

## Submissions

9. The proposed amendments to the NPS-FM were publicly notified on 7 November 2013. Submissions were invited during the period 7 November 2013 to 4 February 2014. Public meetings and hui were held across New Zealand. In total 7,151 submissions were received. Of those, 6426 were form submissions and 725 were unique.

### Unique submissions

10. The majority of the 725 unique submissions were from individuals. Also represented were the Local Government, Primary Industry, Energy and Business sectors, as well as Māori/iwi and NGOs. Overall, the unique submissions were supportive of the intent of the amendments and the process used to develop them. Unique submissions were received from the sectors shown in Table 1.

**Table 1: Summary of unique submissions by sector**

| Sector group                  | Submissions |
|-------------------------------|-------------|
| Individual                    | 529         |
| Māori/iwi                     | 35          |
| Local Government/Council      | 25          |
| Primary Industry              | 25          |
| Energy Sector                 | 10          |
| Business                      | 13          |
| Research Scientist/Consultant | 10          |
| NGO                           | 58          |
| Other                         | 20          |
| <b>TOTAL</b>                  | <b>725</b>  |

### Form submissions

11. The 6,426 form submissions received were based on four campaigns by the Green Party of Aotearoa New Zealand, Environmental Fertilisers, Fish and Game New Zealand, and the Working Waters Trust.

## Major themes from submissions

### Primary and secondary contact recreation

12. The proposed amendments included a new Objective A1(b) requirement to safeguard the health of people and communities as affected by their secondary contact with fresh water. Human health (secondary contact recreation) was also proposed as a compulsory



national value with an associated national bottom line. Secondary contact recreation was described as wading and boating. It was proposed that regional councils would have to consider a separate value for primary contact recreation such as swimming and decide where in each region to provide for that value.

13. The majority of unique submissions and all form submissions opposed setting the compulsory national value for human health at the level of secondary contact recreation. The most common request in submissions was for the compulsory national value to be set at a level that would allow water to be suitable for swimming.

### **Ecosystem health**

14. All submissions on ecosystem health agreed that it should be a compulsory national value with national bottom lines. However, there were some differences about how it should be described and which attributes should be included.

### **Missing attributes in the NOF**

15. While the majority of submissions on the NOF are supportive, concerns have been raised regarding the attributes that were not proposed to be included.
16. A number of submissions focused on the need to consider the effects of phosphorus and nitrogen as nutrients in determining ecosystem health in both lakes and rivers. The NOF proposed attributes for nitrate toxicity in rivers and total nitrogen and total phosphorus in lakes.
17. Direct measures of nutrients in rivers were not proposed as attributes. However, regional councils would need to consider the effect of nutrients through the proposed periphyton attribute and bottom line. Periphyton (slime) is an indicator of nutrients and grows where nutrients are in abundance. Periphyton is proposed and provides a mechanism to manage the effects of nutrients.
18. There was widespread support for using the Macroinvertebrate Community Index (MCI) as an indicator of ecosystem health in rivers. Submissions noted that MCI is an excellent indicator of ecosystem health and is already monitored by most regional councils.
19. Macroinvertebrates as measured by MCI are small insects that live in freshwater. Their presence and relative abundance can be used as measure of the overall health of a water body.
20. Many submissions also noted the importance of sediment as an attribute of ecosystem health, with some submissions seeking inclusion of an attribute now or as a priority in future.

### **Exceptions to national bottom lines**

21. The majority of submissions that commented on exceptions were opposed as a whole or for anything other than exceptions where the natural conditions of a water body do not meet bottom lines. Many submissions asked that exceptions be kept to a minimum and described as narrowly as possible to maintain the integrity of the system overall.
22. Many submissions requested that “any exemptions to the rules should be limited to a list of specific water bodies” or that all exceptions be decided nationally. Other recommendations to narrow the application of exceptions included definitions for terms used in the NPS-FM.
23. The Energy Sector was concerned that in the absence of exceptions for significant existing infrastructure, there could be short term impacts on hydroelectricity generation,

economic implications arising from the need to replace lost generation, and ultimately increased electricity costs for consumers. Submissions from the sector generally request a list of infrastructure to be included in the NPS-FM as exceptions immediately.

### **Te Mana o Te Wai**

24. The proposed amendments included a description of Te Mana o te Wai in the Preamble of the NPS-FM and three national values in Appendix 1 were proposed to contribute to Te Mana o te Wai.
25. A high percentage of submissions commented on the way Te Mana o te Wai might be included in the NPS-FM. A number of submissions stated that Te Mana o te Wai needs to be in the body of the NPS, not just the Preamble and Appendix.
26. Another group of submissions identified risks with the inclusion of Te Mana o te Wai. Submissions noted the ambiguities around the status of Te Mana o te Wai and the national values that contribute to it, particularly natural form and character. Submissions identified significant costs to implement a requirement to safeguard Te Mana o te Wai.
27. Many submissions identified limitations in the proposed definition of Te Mana o te Wai in both the Interpretation and in the proposed linking of Te Mana o te Wai to three national values. A high percentage of Iwi/Māori submissions stated the need to allow for flexibility so that local tāngata whenua can define and express their values for fresh water differently.
28. A number of submissions, mostly from Iwi/Māori, offered an alternative approach of including Te Mana o Te Wai in a high level overarching purpose, statement, korowai, or objective of the NPS-FM.

### **Maintain or improve overall**

29. Many submissions sought clarification about the operation of the requirement to maintain or improve the overall quality of fresh water within a region. Suggestions included linking the requirement to maintain or improve to specific management units, attributes, or bands of the NOF (for example A, B, C). No changes were proposed for this requirement. Guidance about the implementation of this requirement will be provided to regional councils.

### **Monitoring and Freshwater Accounting**

30. The majority of submissions support the requirement for regional councils to undertake freshwater accounting for all water takes and sources of contaminants and for this information to be available when setting freshwater objectives. There is a similar level of support for the requirement that regional councils develop monitoring plans to measure progress toward and achievement of freshwater objectives.
31. Some submissions sought clarification of the timing for undertaking freshwater accounting. A number of Local Government submissions also noted that there will be costs involved to establish and operate freshwater accounting systems.

### **Out of scope submissions**

32. A number of submissions commented on matters outside the scope of the proposed amendments to the NPS-FM. For example many submissions were received on the collaborative planning process and the links between collaborative planning and the NPS-FM. The Government has indicated an intention to progress a statutory collaborative

planning process through an amendment to the RMA. Out of scope comments are not addressed in this report.

## Summary of recommendations

33. Following analysis of submissions, some changes are recommended to the proposed NPS-FM amendments. For some recommendations, more than one option is presented for consideration.
34. Below is a summary of the substantive recommendations in this report. The recommendations and options are discussed further in the chapters of this report. Minor or technical drafting changes to clarify the intent of the proposed amendments are not included here, nor are recommendations to develop implementation guidance. Development of guidance should be sequenced according to priority and need.
35. Unless otherwise stated, the recommendation is to proceed with the amendments as proposed in the discussion document.

### **Preamble**

Amend the proposed Preamble to reflect the final amendments to the NPS-FM.

### **Te Mana o te Wai**

EITHER

Describe Te Mana o te Wai in the Preamble as proposed

OR

Add an overarching purpose, statement, objective, or korowai to the NPS-FM to provide a language for tāngata whenua and communities to express their collective values using Te Mana o Te Wai or any other appropriate expression. Amend Appendix 1 to show that all values can contribute to the overarching statement

### **Objective A1**

Amend proposed Objective A1(b) to safeguard the health of people and communities, at a minimum, as affected by their secondary contact with fresh water

### **National Objectives Framework**

Amend proposed Policy CA1 to require regional councils to set freshwater management units and ensure that freshwater bodies are included in water management units

### **Exceptions to national bottom lines**

Add a definition of “existing water quality” to the Interpretation for Policy CA2(a) and (b) to clarify that it means the water quality at the time objectives and limits are being set

EITHER

Add a definition of ‘historical activities’ to the Interpretation for Policy CA2(b)(i) to clarify how exceptions for historical activities are to be applied

OR

Delete proposed Policy CA2(b)(i) noting that if necessary, the NPS-FM can be amended again to provide an exception for any unanticipated situations by listing them in an appendix

### **Freshwater accounting**

Amend the title of proposed Part CC to “Accounting for freshwater takes and contaminants”

Amend proposed Policy CC2 to clarify that accounting information must be available for objective and limit setting

**Progressive implementation**

Amend proposed Policy E1 so that all regional councils may adopt staged implementation programmes within 18 months of any amendments to the NPS-FM

EITHER

Proceed with the proposed deadline for implementation of the NPS-FM by 2030

OR

Amend Policy E1 to reduce the proposed deadline for implementation to 2025, while allowing a 2030 deadline in limited circumstances

**Values (Appendix 1)**

Amend all the proposed values in Appendix 1 to:

- consistently describe both the quality and quantity aspects of each value
- rationalise the structure and headings of Appendix 1
- clarify the value descriptions

*Ecosystem health*

Amend the proposed compulsory national value of ecosystem health to:

- describe healthy ecosystems first before describing the matters to take into account
- add additional matters to the value description, including macroinvertebrates

*Human health*

EITHER

Proceed with the proposed compulsory national value of human health (secondary contact recreation)

OR

Develop a compulsory national value of human health for recreation that combines the proposed compulsory value of human health (secondary contact recreation) and the additional value of contact recreation

*Food security*

Merge or revise the proposed additional national value of food security with the additional national values for irrigation and animal drinking water to avoid duplication

*Water supply*

Amend the proposed additional national value of water supply to ensure it is not read narrowly as only relating to drinking water.

*Fire-fighting*

Delete the proposed additional national value of fire-fighting because section 14 of the RMA already explicitly provides for the use of water for firefighting

*Wai Tapu*

Amend the additional national value of wai tapu to remove the reference to site accessibility (physically and legally)

**Attributes (Appendix 2)**

*Attributes for Ecosystem Health*

Amend the proposed Chlorophyll *a* attribute for lakes to name it Phytoplankton

Amend the nitrate toxicity attribute so that it only applies to rivers

Amend the ammonia toxicity attribute to use an annual maximum

Amend the periphyton attribute to use an annual maximum that is exceeded no more than once per year, and providing different assessment for naturally productive rivers

*Attributes for Human Health and/or Contact Recreation*

Amend the proposed cyanobacteria attribute so that it only applies to lakes and lake fed rivers and uses a statistical measure of the 80<sup>th</sup> percentile

Delete the proposed Suitability for Recreation Grade (SFRG) attribute for contact recreation and replace it with an *E. coli* attribute

EITHER

Proceed with the proposed *E. coli* attribute for human health (secondary contact recreation) but amend the narrative attribute description state to align with the 25 per cent water ingestion rate used

OR

Amend the proposed *E. coli* attribute to use a sampling metric of the 80<sup>th</sup> percentile and a water ingestion rate of 10 per cent, which lowers the proposed national bottom line from 1,000 to 1,500 *E. coli* per 100 ml

OR

Combine the proposed *E. coli* attribute for human health (secondary contact recreation) with the recommended *E. coli* attribute for contact recreation, and retain a bottom line relating to secondary contact.

## 2 Preamble

36. The Preamble provides context, background, and plain English descriptions of the objectives and policies in the NPS-FM. The Preamble does not impose legal obligations but can guide decision-makers and help to clarify the Government's intent.
37. The proposed amendments to the NPS-FM include substantial changes to the Preamble. These changes reflect the scale of the proposed amendments across the objectives and policies in the NPS-FM. The proposed Preamble also deletes the list of National values of fresh waters. National values are proposed to be more fully described in Appendix 1 of the NPS-FM.
38. Submissions have suggested a number of changes to the proposed Preamble. These suggestions have been considered in the analysis of the wider NPS-FM amendments. The Preamble will reflect the final amendments to the wider NPS-FM.

### **Recommendation**

Amend the Preamble to reflect the final amendments to the NPS-FM.

### 3 Te Mana o te Wai

39. The proposed amendments to the NPS-FM seek to more clearly articulate tāngata whenua values for fresh water, particularly Te Mana o te Wai.
40. Te Mana o te Wai is proposed to be expressed in the NPS-FM by:
  - expanding the Preamble to articulate the importance of Te Mana o te Wai, and
  - identifying three national values in Appendix 1 that contribute to Te Mana o te Wai: ecosystem health, human health for secondary contact recreation, and natural form and character.
41. The discussion document also sought feedback on an option to include a requirement to safeguard Te Mana o te Wai in Objective A1 of the NPS-FM along with a definition of Te Mana o te Wai. This option was included in square brackets and was not proposed by the Government.
42. In total, 153 submissions commented on the concept of Te Mana o te Wai.

#### Te Mana o te Wai in the Preamble

43. The discussion document proposed the following amendments to the Preamble of the NPS-FM to articulate Te Mana o te Wai as follows:

*For tāngata whenua, the national bottom lines will contribute to the protection of Te Mana o te Wai. Te Mana o te Wai represents the innate relationship between te hauora o te wai (the health and mauri of water) and te hauora o te taiao (the health and mauri of the environment), and their ability to support each other, whilst sustaining te hauora o te tangata (the health and mauri of the people). Managing for Te Mana o te Wai requires the maintenance of appropriate freshwater quality and quantity, and improvement where these are below expected levels. Iwi and hapū have a kinship relationship with the natural environment, including fresh water, through shared whakapapa. Iwi and hapū recognise the importance of fresh water in supporting a healthy ecosystem, including human health, and have a reciprocal obligation as kaitiaki to protect freshwater quality.*

44. Sixteen submissions commented specifically on this proposed text and a majority of them expressed general support.
45. Some submissions emphasised the importance of ensuring that Te Mana o te Wai is not just expressed in the Preamble but also incorporated throughout the body of the NPS-FM. The rationale is to give more legal weight to Te Mana o te Wai. Other submissions preferred that Te Mana O Te Wai be included in the Preamble but not elsewhere in the NPS-FM because Te Mana o Te Wai is a holistic concept that cannot easily be quantified and deconstructed into individual components.
46. A number of submissions recommended alternative language such as Te Mauri of te Wai be incorporated into the Preamble rather than, or as well as, Te Mana o te Wai. The reasons given included:
  - mana is something that a person or entity might have, whilst mauri refers to the life force that energises and binds a system



- te Mauri o te Wai recognises the whakapapa links of people and the environment to various waterways and the need to manage these collectively so as to facilitate integrated management
  - tāngata whenua values incorporate spiritual values as well as Te Mana o Te Wai.
47. Because of the range of different views from tāngata whenua groups about how to express their values for fresh water it will be challenging to give a fixed national meaning to the concept of Te Mana o te Wai through the Preamble or elsewhere. Any description of Te Mana o Te Wai in the Preamble needs to allow for different expressions of tāngata whenua values.
48. Ultimately, the Preamble should reflect decisions about the inclusion of Te Mana o Te Wai throughout the NPS-FM. To align with the recommendations in the rest of the Report, we recommend that the Preamble discuss the way all values may collectively contribute to Te Mana o te Wai and recognise the significance of fresh water for all New Zealanders.
49. We recommend retaining the text on the relationship iwi and hapu have with freshwater by way of whakapapa and kaitiaki obligations.

### **Recommendation**

Amend the Preamble to reflect the final amendments to the NPS-FM.

### **Te Mana o te Wai in the national values of Appendix 1**

50. The proposed amendments to the NPS-FM incorporate tāngata whenua values into the national values in Appendix 1. An overarching heading, “Contributes to Te Mana o te Wai”, is proposed to apply to three of the national values in Appendix 1. The three national values are ecosystem health, human health (secondary contact recreation) and natural form and character.
51. Thirty-five submissions commented specifically on the way that Te Mana o te Wai is proposed to be included in Appendix 1. A slim majority generally opposed the way tāngata whenua values are described in Appendix 1.
52. Many submissions thought that linking Te Mana o te Wai to three national values would unduly limit the regional expression of tāngata whenua values by individual iwi or hapū. Submissions also noted that linking Te Mana o te Wai to three values could compromise the holistic nature of the concept.
53. Other reasons for not supporting Te Mana o te Wai in Appendix 1 included:
- issues with the inclusion of “natural form and character” as a component of Te Mana o te Wai (particularly if combined with Objective A1 to safeguard Te Mana o te Wai)
  - the unquantifiable nature of Te Mana o te Wai
  - a preference for different language in Appendix 1 such as Te Mauri o te Wai
  - a preference that Appendix 1 is framed as New Zealand values, not values unique to Māori.
54. There is no one-size-fits-all expression to encapsulate tāngata whenua values for fresh water and many iwi and hapū would have difficulty accepting an expression of their values prescribed by central government or any other external group.
55. The values in Appendix 1 need to allow for flexibility so that local tāngata whenua can define and express their values for freshwater. Te Mana o Te Wai should not be linked to

only three national values. Tāngata whenua should be free to choose which values are important to them and choose how to express those values collectively, whether as Te Mana o Te Wai, Te Mauri o te Wai, or otherwise.

### **Recommendation**

Structure Appendix 1 so that any values can be linked to Te Mana o te Wai or other expressions of a community's collective values for fresh water.

### **Te Mana o te Wai in Objective A1**

56. The discussion document sought feedback on a further option to include a requirement to safeguard Te Mana o te Wai in Objective A1(c) of the NPS-FM. This option was included in square brackets in the proposed NPS-FM as it was not proposed by the Government.
57. Fifty-three submissions commented specifically on this option. Submissions ranged from total support, to conditional support, to concern and opposition. The main concerns were:
  - the ambiguity that would result in interpreting Objective A1(c), particularly in relation to the status of the natural form and character value and whether that would operate as a third compulsory value with bottom lines
  - difficulties for councils in implementing the objective, the unquantifiable costs involved, and the potential for litigation.
58. Another reason given for opposing the inclusion of Te Mana o te Wai in Objective A1 was a preference for an overarching purpose, statement, objective, or korowai for Te Mana o te Wai. The Freshwater Iwi Leaders Group supported including Te Mana o te Wai in this way. This option is discussed further under the heading below *Other ways to incorporate tāngata whenua values*.
59. A requirement to safeguard Te Mana o te Wai would likely prove difficult to implement. In particular, there would be significant ambiguity around the status of the natural form and character value. This value is proposed to be optional but it also contributes to Te Mana o te Wai. Including a requirement to safeguard Te Mana o te Wai could potentially be interpreted as elevating natural form and character to a similar status as the compulsory values. It would be up to regional councils and the Courts to decide how to safeguard Te Mana o te Wai.
60. Elevating natural form and character to the status of a compulsory national value could result in significant costs to regional councils and resource users. The exact costs are unquantifiable given that numeric attributes and bottom lines have not been developed and tested for natural form and character.
61. Given the uncertainty, potential costs, and implementation difficulties, inclusion of Objective A1(c) to safeguard Te Mana o Te Wai is not recommended.

### **Recommendation**

Delete Objective A1(c) as included in square brackets in the discussion document.

### **Definition of Te Mana o te Wai**

62. The discussion document included a possible definition for Te Mana o te Wai to accompany the optional Objective A1(c) of the NPS-FM. Like the option for Objective A1,

the definition of Te Mana o te Wai was included in square brackets and not proposed by the Government. The definition was:

*["Te Mana o te Wai" represents the innate relationship between te hauora o te wai (the health and mauri of water) and te hauora o te taiao (the health and mauri of the environment), and their ability to support each other, whilst sustaining te hauora o te tangata (the health and mauri of the people).]*

63. Twenty submissions commented specifically on the definition of Te Mana o te Wai. Some submissions stated a preference for defining tāngata whenua values at a regional or iwi level. Other issues raised by submitters about the definition of Te Mana o te Wai are similar to those mentioned under the previous sections on Te Mana o te Wai in Objective A1 and Te Mana o te Wai in the national values of Appendix 1.
64. As discussed above, there is no one-size-fits-all expression to encapsulate tāngata whenua values for fresh water, and many iwi and hapū would have difficulty accepting an expression of their values prescribed by central government or any other external group. Introducing a definition of Te Mana o te Wai could have significant but uncertain cost implications, for the same reasons discussed in the section on Te Mana o te Wai in Objective A1.
65. Due to the limitations of the definition and potential costs and implementation issues associated, a definition of Te Mana o te Wai is not recommended.

### **Recommendation**

Delete the definition of Te Mana o Te Wai as included in square brackets in the discussion document.

### **Other ways to incorporate Te Mana o te Wai**

66. Fifty-nine submissions suggested alternative approaches for including tāngata whenua values or Te Mana o te Wai in the NPS-FM. Suggestions included:
  - making Te Mana o te Wai a compulsory national value in the NPS-FM with associated attributes
  - linking more compulsory national values to Te Mana o te Wai, particularly values of importance to tāngata whenua such as contact recreation, mahinga kai, and wai tapu
  - including Te Mana o te Wai as an additional value in the NPS-FM to enable community identification with that value where relevant
  - identifying tāngata whenua values at a local level then requiring councils to state in plans how the identified values will be provided for
  - including Te Mana o te Wai in Policy D1(c) directing local authorities to take reasonable steps to reflect tangata whenua values such as Te Mana o te Wai and interests in the management of, and decision-making regarding, fresh water and freshwater ecosystems in the region
  - using different terminology either instead of, or as well as, Te Mana o te Wai (for example Te Mauri o te Wai, Mana Atua, kaitiakitanga, manakitanga, rangatiratanga, and whanaungatanga)
  - including Te Mana o te Wai directly after “safeguard” in both Objective A1 and Objective B1

- referring to Iwi Management Plans and obliging councils to support implementation of freshwater objectives in Iwi Management Plans
  - developing a national outcome, objective, or korowai for Te Mana o Te Wai that sits above the NPS-FM objectives and policies as recommended by the Freshwater Iwi Leaders Group and many Iwi/Māori submissions.
67. The submissions highlight the wide range of opinions regarding how tāngata whenua values are best expressed. Many different values are important to different groups and values are expressed collectively in a range of different ways. The need for regional variation in the expression of tāngata whenua values suggests that a flexible or high-level approach is needed.
68. The concept of an overarching purpose, statement, korowai, or objective that sits above the NPS-FM objectives and policies could provide a solution. An overarching objective could provide a language for talking about tāngata whenua and community values holistically, using either Te Mana o Te Wai or other language that the community considers appropriate. An overarching statement that includes Te Mana o Te Wai, may bring together the range of values tāngata whenua and communities have for freshwater, including environmental, economic, cultural, and social values.
69. An overarching purpose, statement, objective, or korowai for the whole NPS-FM needs to be inclusive of all communities and allow for collective values to be expressed by both tāngata whenua and the broader community.
70. To support implementation of any overarching purpose, statement, korowai, or objective it is recommended that guidance be provided to regional councils. To implement the overarching statement councils will implement the objectives and policies in the rest of the NPS-FM (including Objective D). The language of the overarching statement can usefully frame the regional discussion and identification of community and tāngata whenua values holistically. However, use of this language would not be mandatory.
71. An overarching statement that includes Te Mana o te Wai would provide greater flexibility and certainty regarding costs and implementation than other alternatives. Including Te Mana o Te Wai as a compulsory or additional value in Appendix 1 would need an associated value description which faces the same challenges as defining Te Mana o Te Wai described above. Additionally, the NPS-FM should not limit the expression of tāngata whenua values to just those described in the value. Furthermore, it is unclear at this stage how attributes for a Te Mana o Te Wai value would differ from attributes under existing values.
72. Iwi Management Plans already carry statutory weight in the planning process and do not need to be referred to in the NPS-FM. The RMA describes an Iwi Management Plan as "...a relevant planning document recognised by an iwi authority and lodged with the council". Iwi Management Plans must be taken into account when preparing or changing regional policy statements and regional and district plans (see sections 61(2A)(a), 66(2A)(a), and 74(2A)). Therefore both the NPS-FM and Iwi Management Plans inform regional planning.

### **Recommendation**

EITHER

Proceed with the description of Te Mana o te Wai in the Preamble

OR

Add an overarching purpose, statement, objective, or korowai in the NPS-FM to provide a way for tāngata whenua and communities to express their collective values using Te Mana o Te Wai or any other expression.

### **Treaty of Waitangi and broader rights and interests**

73. The Preamble of the current NPS-FM includes a paragraph about the importance of the Treaty of Waitangi:

*The Treaty of Waitangi (Te Tiriti o Waitangi) is the underlying foundation of the Crown-iwi/hapū relationship with regard to freshwater resources. Addressing tāngata whenua values and interests across all of the well-beings, and including the involvement of iwi and hapū in the overall management of fresh water, are key to meeting obligations under the Treaty of Waitangi.*

74. Twenty-one submissions commented on the Treaty and iwi or Māori rights and interests in fresh water. A number of submissions supported the text in the Preamble of the NPS-FM acknowledging the Treaty of Waitangi.
75. Other submissions sought amendments to the Preamble of the NPS-FM to expand the discussion of the Treaty. The matters that submissions recommended for discussion in the Preamble included an explanation of tino rangatiratanga, fresh water as a taonga, and the principles of the Treaty of Waitangi and iwi rights and interests more broadly.
76. A number of iwi submissions noted the need for further work with the Crown and Freshwater Iwi Leaders Group to develop options to recognise the full range of iwi rights and interests, establishing a process and timeframes in the first instance. Other iwi submissions also noted that the NPS-FM must not prejudice the ability of iwi or Māori to claim rights and interests in fresh water.
77. The text in the Preamble on the Treaty of Waitangi is the original text from the 2011 NPS-FM. There is no proposal to change this text. The Preamble will continue to acknowledge the Treaty of Waitangi as the foundation of the Crown–iwi/hapū relationship with regard to fresh water.
78. Further work is likely to be required to satisfactorily address the issue of iwi rights and interests. The Government outlined a suite of proposals in the document *Resource Management Summary of Reform Proposals 2013*. The wider package of reforms will provide greater certainty over the role of iwi and hapū in the planning system, and incentivise early engagement. Many of these reforms are outside the scope of the current changes to the NPS-FM but will contribute to the overall approach to iwi rights and interests.

### **Recommendation**

Retain the text in the Preamble on the Treaty of Waitangi.

## 4 Ecosystem health

79. Objectives A1 and B1 of the NPS-FM currently include a high level requirement for councils to safeguard life-supporting capacity, ecosystem processes and indigenous species (including their associated ecosystems) in sustainably managing fresh water. The proposed amendments provide a compulsory national value to assist councils in achieving Objectives A1 and B1.
80. The proposed amendments relating to the value of ecosystem health are:
- defining “ecosystem health” as a compulsory value in the Interpretation
  - requiring (in Policy CA1) that the compulsory values are identified in each freshwater management unit, with objectives set for those values above the national bottom line for the attributes listed in Appendix 2<sup>1</sup>
  - describing the ecosystem health compulsory value in Appendix 1
  - providing seven attributes for ecosystem health in Appendix 2.

### Ecosystem health as a compulsory national value

81. Approximately a quarter of unique submissions commented on the inclusion of ecosystem health as a compulsory national value. All of those submissions agreed that ecosystem health should be a compulsory national value.
82. This agreement was qualified by some submissions, which stated that the compulsory value should be applied appropriately and carefully implemented. Submissions emphasised the merit of looking at the purpose of the RMA when implementing the compulsory value, particularly enabling people and communities to provide for their social and economic wellbeing.

#### **Recommendation**

Proceed with ecosystem health as a compulsory national value.

### Scope and description of ecosystem health

83. The proposed Appendix 1 of the NPS-FM includes a broad description of the compulsory national value of ecosystem health.
84. Twenty-two submissions discussed the scope and description of the ecosystem health compulsory national value. They questioned whether the definition is broad enough to reflect the concept but also tight enough to avoid multiple interpretations.

#### **Expanding the description of ecosystem health**

85. A number of the submissions suggested expanding the scope and description of ecosystem health to specifically include coastal ecosystems, physical habitats, biodiversity and ecological integrity.

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<sup>1</sup> Freshwater objectives must also be set to maintain or improve overall freshwater quality within a region.

86. Including coastal ecosystems specifically in the description of ecosystem health is not recommended. The interface with coastal water is discussed further in Chapter 8 of this report.
87. The description of ecosystem health in the proposed Appendix 1 already includes “essential habitat needs” as important matters to be taken into account. Concepts such as biodiversity and ecological integrity are already implicitly covered by the ecosystem health value. A healthy ecosystem will contribute to achieving and maintaining biodiversity.

### **Suggestion for other values related to ecosystem health**

88. Some submissions suggested including additional values to those proposed. These submissions discussed both compulsory and additional national values. The values suggested directly relate to ecosystem health, such as protection of endangered or threatened aquatic species and critical habitats.
89. Indigenous flora and fauna is an integral part of Objectives A1 and B1 of the NPS-FM and is already included in the description of the ecosystem health value.
90. It is more appropriate to refer to indigenous species in the description of ecosystem health than in an additional national value for indigenous or threatened species or habitats. The attributes that contribute to both values would be very similar and for simplicity they would be best combined. To protect specific species higher states of the ecosystem health attributes may be set as objectives by a regional council and community.

### **Preamble list of “National values of fresh water”**

91. The current NPS-FM’s Preamble contains a list of national values of fresh water. The amendments to the NPS-FM propose to delete this list and replace it with the national values listed in proposed Appendix 1.
92. A small number of submissions mentioned the removal of the national values from the Preamble and replacement with the compulsory value of ecosystem health in Appendix 1. There were concerns that some of the values in the current Preamble may not have been adequately captured in the proposed set of values in Appendix 1.
93. The national values of fresh water previously identified in the Preamble to the NPS-FM, do not require regional councils to take any action. By reflecting these values in the proposed Appendix 1, regional councils and communities must consider all values and at a minimum apply the compulsory values under proposed Policy CA1.

### **Wetlands and groundwater**

94. Submissions queried how the NPS-FM relates to wetlands and groundwater and also the relationship to estuaries or other downstream water bodies.
95. A number of submissions questioned whether ecosystem health as it is proposed should be a compulsory value for all groundwater.
96. There are currently no attributes prescribed for wetlands or groundwater. Further work is needed to develop attributes for wetlands. The Government has signalled that national bottom lines for wetlands will be introduced, along with other critical attributes, after future consultation.
97. Regional councils will still have to consider the groundwater input to surface water bodies as part of integrated management under Objective C1 of the NPS-FM. This is particularly



important when they determine the nutrient load and volume contribution from groundwater as part of freshwater accounting and when setting limits.

98. The NPS-FM applies only to freshwater, not coastal waters like estuaries. National direction on management of estuaries is provided in the New Zealand Coastal Policy Statement rather than the NPS-FM. However, regional councils will still have to consider the effects of the use of fresh water on coastal water (including estuaries) as part of integrated management under Objective C1 of the NPS-FM. The Government has acknowledged that there are significant information gaps in setting objectives for estuaries which will require continued research to fill.

### Recommendation

Amend the description of the ecosystem health value to describe healthy ecosystems first and more fully before discussing matters to take into account.

## Attributes for ecosystem health

99. The discussion document proposed amendments to the NPS-FM including a partial list of attributes that provide for the ecosystem health value. Table 2 shows the attributes proposed.

**Table 2: Proposed attributes for the ecosystem health value**

|  | Lakes | Rivers |
|--|-------|--------|
| Chlorophyll <i>a</i>                   | ✓     |        |
| Nitrate toxicity                       | ✓     | ✓      |
| Ammonia toxicity                       | ✓     | ✓      |
| Total nitrogen                         | ✓     |        |
| Total phosphorus                       | ✓     |        |
| Dissolved oxygen (below point sources) |       | ✓      |
| Periphyton                             |       | ✓      |

### Chlorophyll *a*, total nitrogen, and total phosphorus in lakes

100. Attributes were proposed for Chlorophyll *a*, total nitrogen, and total phosphorus in lakes to support the ecosystem health value. Ten submissions specifically commented on these attributes and all expressed support for inclusion of these attributes.
101. A number of technical points were raised about how attributes in lakes should be used in combination with each other and how to manage shallow lakes appropriately.
102. These technical issues can be best addressed through guidance to assist regional councils with effective implementation.
103. Following receipt of submissions, the Science Review Panel advised that the Chlorophyll *a* attribute be renamed “phytoplankton”. This brings the terminology in line with the periphyton attribute for rivers. Chlorophyll *a* is a measure of the presence of both periphyton and phytoplankton.



104. Total nitrogen and total phosphorus are recommended to provide a level of precaution against excessive phytoplankton growth resulting from conditions when Chlorophyll *a* concentrations do not reflect nutrient concentrations or loads.

### **Total nitrogen and total phosphorus in rivers**

105. Direct measures of nutrients (nitrogen and phosphorus) in rivers were not proposed as attributes under ecosystem health. Attributes were proposed for periphyton and for nitrate as a toxic contaminant rather than as a nutrient.
106. Numerous submissions requested attributes that directly measure nutrients (nitrogen and phosphorus) in rivers and stated that dealing with nitrate toxicity is not sufficient to support the ecosystem health value. This includes from submissions received using the forms of both the Green Party of Aotearoa New Zealand and the Working Water Trust.
107. Following submissions, the Science Review Panel and NOF Reference Group advised that direct measures of nutrients in rivers are not always required and cannot be developed nationally with any scientific robustness. Regional councils need to consider setting objectives and limits in relation to nutrients (together with other relevant driving factors like flow and shading) to meet the periphyton objectives.
108. Managing the effects of nutrient inputs will generally be required (via limits) to meet objectives set for the proposed periphyton attribute. In any cases where nitrogen may not affect periphyton, the nitrate toxicity attribute would be relevant to manage direct toxic effects of nitrate.
109. By including periphyton as an attribute with a national bottom line in rivers the NPS-FM amendments contain a mechanism to limit problem nutrients as requested by submissions.
110. It is recommended that guidance clarify the interrelationship between periphyton, nutrients, and nitrate toxicity when setting freshwater objectives. However, total nitrogen and total phosphorus attributes for rivers are not recommended.

### **Nitrate toxicity**

111. This attribute was proposed for inclusion in the NPS-FM to support the ecosystem health value in both rivers and lakes.
112. Some submissions expressed support for the attribute and the national bottom line, while others expressed concerns that the level of the proposed national bottom line would not protect all species.
113. The national bottom line and states reflect the New Zealand and Australian methodology for species protection. The thresholds above the bottom line are set to protect against impacts on growth and reproduction. The bottom line has been set at the 80 per cent species protection level against chronic effects, and is a safe distance above lethal thresholds. The bottom line is highly protective of most species and for the twenty percent most sensitive species the impacts will be some reduction in growth.
114. Submissions also noted that nitrate toxicity is not required in lakes as the proposed total nitrogen attribute provides a more stringent bottom line. Nitrate toxicity is therefore redundant in lakes due to the inclusion of total nitrogen.
115. It is therefore recommended that the proposed nitrate toxicity attribute be amended so that it is limited to rivers.

## **Ammonia toxicity**

116. An ammonia toxicity attribute was proposed for inclusion in the NPS-FM to support the ecosystem health value in both rivers and lakes.
117. One submission challenged the numbers for the proposed attribute states and presented alternatives. Following submissions, the Science Review Panel provided advice on the ammonia toxicity attribute. The submission proposes levels of protection based on the United States Environmental Protection Agency methodology with a focus on acute (lethal) effects, which would be less protective than the proposed attribute table in the amendment. The proposed attribute table is based on accepted Australia and New Zealand methodology, consistent with the approach adopted for nitrate toxicity.
118. The Science Review Panel has advised that an annual maximum is more appropriate for ammonia toxicity than the 95<sup>th</sup> percentile measure. This is because ammonia levels in streams may present as short term spikes. There is a narrow buffer between chronic and acute effects from ammonia and the annual maximum also offers better protection than a 95<sup>th</sup> percentile.
119. The impacts of moving to an annual maximum measurement are not significant. Point source dischargers such as sewage or meat processing plants are the main source of ammonia. Discharges such as these are currently managed to meet a median value, and avoid short term spikes. Moving from a 95<sup>th</sup> percentile to a maximum would not significantly change these management approaches, although it may tighten them in some isolated cases.
120. Amending the ammonia toxicity attribute to use an annual maximum is recommended.

## **Dissolved oxygen in rivers**

121. Under the ecosystem health value, an attribute was proposed for dissolved oxygen in rivers below point sources.
122. Some submissions supported the inclusion of this attribute. However, many submissions commented on the restriction of this attribute to only point sources and asked that it be applied to rivers as a whole. Some submissions noted that discharge consents apply to point source discharges and were concerned that this measure would impose additional costs on consent holders.
123. Dissolved oxygen is a fundamental aspect of ecosystem health and can be impacted by other pressures not just point sources. Inclusion as a limited attribute under the current amendment is a step towards its ultimate inclusion for all sources. Further monitoring is required to better understand the drivers and impacts for a dissolved oxygen attribute to cover all waters.
124. Submissions requested more detail on the monitoring requirements for this attribute and noted the additional burden this may place on councils and consent holders.
125. Targeted rather than permanent monitoring may be sufficient to demonstrate that this objective is met. It is recommended that guidance is developed to support councils in applying appropriate monitoring to ensure data quality and avoid excessive burden. The NPS-FM cannot direct where the costs of measuring this attribute would fall.

## **Periphyton in rivers**

126. A periphyton (slime) attribute was proposed for rivers to support the ecosystem health value in the NPS-FM.

127. Submissions expressed general support for the periphyton attribute. Technical submissions on the details of the monitoring and methodology were received.
128. There are different methods for monitoring periphyton. A measure of milligrams Chlorophyll *a* per square metre was proposed but the alternative is a visual cover assessment. The Chlorophyll *a* measure will be required for setting objectives as it can be linked more closely to ecosystem health and used for limit setting. However, to not overly burden regional councils, monitoring methods can pragmatically include a visual assessment. Guidance on monitoring periphyton is recommended to assist regional councils so they can target the most appropriate monitoring.
129. A number of submissions questioned the evidence underpinning the periphyton attribute and the associated national bottom line. The concerns relate to the evidence linking ecological effects to the bottom line. Clarification was requested about the number and duration of periods over which periphyton objectives could be exceeded.
130. Further work was undertaken on the proposed requirement in the discussion document that a periphyton objective be measured by an annual maximum that is exceeded no more than twice and not in consecutive months. The Science Review Panel has advised that the statistical measure be amended so that the periphyton objective is measured by an annual maximum that is exceeded no more than once per year, but that naturally productive rivers may be assessed differently to account for the natural presence of higher periphyton levels.
131. This reduces the impact of the periphyton attribute for 3 per cent of rivers nationally. The change means there will be more effective allowance for natural exceedence.
132. An amendment to the periphyton attribute is recommended so that it is measured by an annual maximum that is exceeded no more than once per year, but providing for naturally productive rivers to be assessed differently.

### **Macroinvertebrate community index**

133. The proposed amendments did not include an ecosystem health attribute for biological communities such as the Macroinvertebrate Community Index (MCI). The discussion document acknowledged that MCI could be added in a later amendment.
134. A significant number of submissions wanted MCI included in some way in the NPS-FM. Submissions suggested including MCI either as a monitoring method or as an attribute for ecosystem health.
135. MCI is a valuable tool and a good overall indicator of ecosystem health. The science panels have developed a potential national bottom line and attribute states for MCI. However, there are a wide range of factors that affect the numbers and diversity of macroinvertebrates present in fresh water, which makes it difficult to use MCI as a basis for limit setting. At a national level it is impossible to quantify the impact of an MCI national bottom line.
136. The greatest value in MCI is as an indicator of ecosystem health and as a measure of performance, not as an attribute to drive limit setting. However, there is currently no feasible option to include MCI in the NPS-FM as a monitoring requirement rather than an attribute. Under the RMA the purpose of a national policy statement is to state objectives and policies for matters of significance that are relevant to achieving the purpose of the RMA. A national policy statement cannot include rules or methods. To require regional councils to monitor MCI would be ultra vires and cannot be done through the NPS-FM. Other regulatory tools could be investigated to require the monitoring of MCI, for

example regulations under section 360 of the RMA. The signalled RMA reforms could also allow for the inclusion of MCI as a monitoring requirement in the NPS-FM in future.

137. For the proposed amendments, it is recommended that the value description of ecosystem health signal the importance of MCI and that guidance be developed to assist regional councils that choose to monitor MCI and provide the science already developed. This may help to reduce time and money spent on scientific work for MCI in each region.

### **Other potential ecosystem health attributes**

138. Many potential attributes were not proposed for inclusion at this time. The discussion document indicated that further attributes would be developed for future amendments. Many submissions recommended the inclusion of further attributes for ecosystem health now rather than later. Submissions stated that fundamental attributes were missing including suspended and deposited sediment, measures of biology (MCI and fish indices), temperature and pH. A number of submissions suggested narrative attributes where numbers are yet to be developed.
139. These attributes have not been fully developed or fully tested and so are not proposed to be included in the current amendments. Whilst there may be strong links to ecosystem health for other attributes, nationally applicable and scientifically robust numeric attributes cannot be defined at this time.
140. Recognition of these aspects of ecosystem health in the description of the value may help to signal the importance of considering these issues in setting objectives to achieve the value. Regional councils and communities can use their own attributes in addition to those in the NOF and may need to consider further attributes in some cases to meet the high level requirement in Objective A1(a) to safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems, of fresh water. Adding narrative attributes without numbers would not provide any further certainty.
141. It is recommended that macroinvertebrates be mentioned explicitly in the description of the ecosystem health value.

#### **Recommendation**

Rename the Chlorophyll *a* attribute for lakes as Phytoplankton.

Amend the nitrate toxicity attribute so that it only applies to rivers

Amend the ammonia toxicity attribute to use an annual maximum rather than the 95<sup>th</sup> percentile

Amend the periphyton attribute to use an annual maximum that is exceeded no more than once per year, but providing for naturally productive rivers to be assessed differently

Amend the value description for ecosystem health to reference additional matters to take into account, including macroinvertebrates

# 5 Human Health

142. The proposed amendments relating to the value of human health (secondary contact recreation) are:

- Adding a new clause to Objective A1
- Defining “secondary contact” in the Interpretation
- Defining “compulsory values” as including “human health (secondary contact recreation)” in the Interpretation
- Requiring (in Policy CA1) that the compulsory values are identified in each freshwater management unit, with objectives set for those values above the national bottom line for the attributes listed in Appendix 2<sup>2</sup>
- Describing the human health (secondary contact recreation) value in Appendix 1
- Adding two attributes for human health (secondary contact recreation) in Appendix 2.

## Objective A1 and secondary contact

143. The proposed amendment is to add Objective A1(b) as follows:

*To safeguard*

*a. ...*

*b. the health of people and communities as affected by their secondary contact with fresh water*

*in sustainably managing the use and development of land, and of discharges of contaminants”*

144. The proposed definition of secondary contact in the interpretation is:

*“Secondary contact” means contact with fresh water that does not involve immersion and includes wading or boating (except boating where there is high likelihood of immersion).*

145. There were 13 unique submissions directly related to the proposed amendment to Objective A1. The majority opposed it. The submissions in opposition, including from the LAWF, wanted the objective to refer either to human health generally, or to primary contact. Some primary sector submissions supported the value as proposed for secondary contact recreation, rather than a broad requirement to safeguard human health generally.

146. The policy intent of the amendment was that there would be a mandatory requirement for regional councils to set freshwater objectives in their regional plans to safeguard human health, and the level at which the objective was set, would, as a minimum, provide no more than moderate risk to people when they came into contact with the water while wading or boating.

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<sup>2</sup> Freshwater objectives must also be set to maintain or improve overall freshwater quality within a region.

147. Consultation on the amendments showed that the use of the terms “secondary contact” and “boating and wading” has contributed to an incorrect perception among many submitters that water in all rivers and lakes will be fit for wading and boating only. In practice, water quality varies from very low through to very high and the associated risks depend on both the level of contamination in the water and the level of exposure to the person coming into contact with the water. Further, councils cannot set objectives that allow water quality to degrade from their current state, unless it is consistent with Objective A2 to maintain and improve overall water quality within a region.
148. The setting of freshwater objectives required by Policy CA1 will not be done in isolation of the other requirements of the NPS-FM or the RMA, including councils’ obligations under section 32 of the RMA, specifically the requirement to assess the extent to which the objective is the most appropriate way to achieve the purpose of the Act. This means that the level of acceptable risk of infection presented by a water body is a policy decision that councils and communities must make when giving effect to Objective A1, done within the context of what is necessary to allow people to provide for their social and economic wellbeing.
149. It is recommended that Objective A1(b) be amended to more clearly convey that secondary contact is *at least* what is required. In many freshwater management units the health of people and communities will also be safeguarded for primary contact activities.

#### **Recommendation**

Amend proposed Objective A1(b) to clarify that the objective is to safeguard the health of people and communities, at a minimum, as affected by their secondary contact with fresh water.

## **Human health (secondary contact recreation) as a compulsory national value**

150. Making human health (secondary contact recreation) a compulsory national value has two consequences. These are:
- councils will be required to set freshwater objectives in their regional plans using the human health (secondary contact recreation) attributes listed in Appendix 2 (see proposed Policy CA1)
  - freshwater objectives must be set above the national bottom line for the attributes listed in Appendix 2<sup>3</sup> (see proposed Policy CA1).
151. Human health (secondary contact recreation) is described in Appendix 1 under the heading Te Hauora o te Tangata/the health and mauri of the people.

### **Submissions**

152. Of the 725 unique submissions received, 75 per cent commented on setting the compulsory value for human health at the level of secondary contact recreation.
153. Overall, 15 per cent of the unique submissions on this issue supported setting the compulsory value for human health at the level of secondary contact recreation, while 84 per cent were opposed. Individuals were overwhelmingly opposed to having the compulsory value for human health set at secondary contact, as were the majority of

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<sup>3</sup> Freshwater objectives must also be set to maintain or improve overall freshwater quality within a region.

NGOs and iwi groups. Other sectors had a more mixed response with Local Government and some Primary Sector submissions supporting the proposal for secondary contact recreation.

154. The most common request in submissions was for the compulsory value to be set at a level that would allow water to be suitable for swimming, with many also asking for fishing, food gathering and some for drinking water quality as a compulsory value.
155. All the form submissions (6426 in total) commented on the proposal to make human health (secondary contact recreation) a compulsory national value. All form submissions asked that New Zealand waters to be clean enough for swimming. Submissions using the Fish and Game New Zealand form added that all New Zealand waters should be fishable and safe for food gathering.
156. The common themes in the submissions opposing the value being set at secondary contact recreation were:
  - free use of the outdoors, especially for swimming and picnicking, is widely valued by New Zealanders, and should be able to be enjoyed by future generations
  - people's health shouldn't be adversely affected by their contact with water in rivers and lakes
  - clean rivers are valuable to New Zealand's tourism industry, including for international fishers, and the economy generally
  - the low thresholds for this value would not incentivise the clean-up required of many degraded rivers.

## Explanation

157. The compulsory value for human health (secondary contact recreation) describes a maximum health risk that people would be exposed to when coming into contact with fresh water, limited to activities where there is unlikely to be full body and head immersion in the water. The maximum level of health risk is specified by the national bottom line. Objectives set at a level higher than the national bottom line provide a lower level of risk for the same range of activities, but could also be used to describe the same risk for a wider range of activities.
158. Councils and communities will make decisions about the level of human health protection that is appropriate for each water management unit through the regional plan development process. All freshwater objectives set in regional plans for human health protection will be informed by the descriptions about the level of risk to human health given in Appendix 1 of the NPS-FM. The levels of risk were determined according to people's likely exposure to micro-organisms from inhaling or swallowing water.
159. Under the proposed framework, councils *must* set objectives for human health (secondary contact recreation) and *may* set objectives for swimming or other recreational activities where people's contact with water is greater than boating or wading. If councils choose to set an objective for swimming, Policy CA1 requires them to use the proposed Suitability for Recreation Grade (SFRG) attribute. The SFRG includes a requirement to set an objective using *E. coli* – the same attribute used for the compulsory value (the SFRG attribute for the contact recreation value is discussed further in Chapter 13).
160. It will be up to the councils and communities to decide what values apply to particular water bodies, and at what level they want to set the *E. coli* objective. Their decision will take into account the current state of the water, how the overall quality of freshwater will be maintained or improved within a region, and what implications their choices will have



on the affected communities. If they choose to apply the value for contact recreation to the water management unit, that value (and the different *E. coli* states) will take precedence over any objective for secondary contact recreation.

## Options

161. Options to address submissions on the human health value include:

- i. **Proceed with human health (secondary contact recreation)** value and retain the additional contact recreation value as proposed.
- ii. **Amend the value of human health to provide for general recreation** at different levels of contact with fresh water, making it clear that it ranges from low contact activities such as boating and wading to high contact activities such as swimming. Delete the additional value of contact recreation.

162. A third option would be to make contact recreation a compulsory value. It is up to councils and communities to decide where to provide for contact recreation taking into account the implications their choices will have for the community. The cost of moving to a contact recreation compulsory national value has not been assessed but would be significant. Consideration of this option is not recommended.

## Impacts of the value options

163. If the human health (secondary contact recreation) and contact recreation values are kept separate (option i):

- Human health (secondary contact recreation) *must* be provided for in all freshwater management units by setting objectives based on the attributes provided in Appendix 2.
- The same national bottom line for *E. coli* would remain.
- The same bottom line for planktonic cyanobacteria would remain.
- Contact recreation *must* be considered separately in all freshwater management units under Policy CA1.
- Contact recreation *may* be provided for where a council and community chooses.

164. If a compulsory value is developed of human health for general recreation (option ii):

- Human health *must* be provided for in all freshwater management units by setting objectives based on the attributes provided in Appendix 2.
- The same national bottom line for *E. coli* would remain.
- The same bottom line for planktonic cyanobacteria would remain
- The contact recreation national value would be deleted. Contact recreation need not be considered separately in all freshwater management units under Policy CA1 but would be part of the compulsory human health value.
- To provide for contact recreation a council and community would have to set objectives based on an attribute state higher than the national bottom line (bottom of the B state or better).

165. If a joint value is to be developed this could align more easily with a combined *E. coli* attribute table as discussed below.



## Recommendation

EITHER (option i)

Proceed with the human health (secondary contact recreation) value and additional contact recreation value as proposed.

OR (option ii)

Develop a joint value of human health for recreation that accommodates human health for different levels of contact with freshwater ranging from low contact activities such as boating and wading to high contact activities such as swimming.

## Attributes for human health (secondary contact recreation)

166. The proposed amendment to define human health (secondary contact recreation) as a compulsory value requires councils to set freshwater objectives in their regional plans based on attributes specified in Appendix 2 of the NPS-FM.
167. Two attributes for human health (secondary contact recreation) are proposed: *E. coli* and planktonic cyanobacteria. For each attribute there is a unit (for example *E. coli* per 100 ml) and a statistical measure (for example annual median).
168. *E. coli* is a bacterium commonly found in the gut of warm blooded organisms including humans. *E. coli* survives outside the body for a limited time, making it a useful indicator of faecal presence and therefore of disease-causing organisms that may be present in faecal matter.
169. Cyanobacteria (often called blue-green algae) are part of many aquatic ecosystems. Cyanobacteria species are known to contain natural toxins, which are a threat to humans and other animals.

### *E. coli*

170. There were 20 submissions about the *E. coli* attribute, with a slim majority in opposition. Submissions questioned or opposed the use of an annual median as the statistical measure for *E. coli*. Suggested alternatives were the 80<sup>th</sup> or 95<sup>th</sup> percentile, or a geometric mean. The reasons given were that the 95<sup>th</sup> percentile provides a more precautionary approach, and is consistent with the current New Zealand bathing water guidelines.<sup>4</sup>
171. The New Zealand Freshwater Sciences Society (NZFSS) provided a comprehensive submission, that stated:  
  
*“Using an annual median sample statistic to assess the state of a water body for secondary contact recreation means that there can be a high chance (up to 50%) that the risk stated in the document has been exceeded. For example, for a river that is just compliant with the national bottom line, there is up to 50% likelihood that real risk of infection is greater than the stated 5%. In contrast the bathing water guidelines are applied using a 95 percentile statistic; this means that there is a low chance that in such cases the real risk is greater than the nominal 5%.”*
172. Following submissions, the Science Review Panel considered that the level of health risk allowed by using the median as the statistical measure was inconsistent with what is used

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<sup>4</sup> Ministry for the Environment and Ministry of Health (2003). Microbiological Water Quality Guidelines for Marine and Freshwater Recreational Areas.

nationally and internationally for swimming and drinking water. With the median, half the samples could be higher than the objective, and half less. At times when the *E. coli* concentration is higher than 1,000 (the national bottom line), people would be exposed to a greater level of health risk than the stated 5 per cent. Using a higher percentile would mean that fewer samples would be allowed to exceed 1,000 and still achieve the objective.

173. Additionally, the narrative description for the attribute “People are exposed to ‘x’ risk of infection from exposure to water used for wading or boating (except boating where there is high likelihood of immersion)” was not well aligned with the way the breakpoints for the states were calculated. That calculation used the same model as is used for estimating health risks associated with primary contact, but used a water ingestion rate 25 per cent of what is used for swimming. American studies show that activities with low likelihood of immersion (like boating and wading) have a water ingestion rate closer to 10 per cent of what is ingested during swimming.
174. In light of submissions on the proposed *E. coli* attribute, the Science Review Panel considered using the median, 80<sup>th</sup> and 95<sup>th</sup> percentiles as the sampling statistic. In their view, an 80<sup>th</sup> percentile provides a sufficient level of statistical confidence for managing health risk across all waters, while the median does not provide a sufficient level of confidence that the value would be met. The 95<sup>th</sup> percentile provides a higher level of statistical confidence that the value is being provided for, but requires 30 - 40 sample results to calculate. The 80<sup>th</sup> percentile can be determined with 12 sample results and provides a good level of confidence that the value is being provided for incorporating annual variability.
175. One of the technical concerns raised in submissions can be addressed by changing the statistical measure from the median to the 80<sup>th</sup> percentile. This is a more conservative measure and more sites nationally will be in the D state.
176. The second concern raised was the lack of alignment between the description of the likelihood of immersion and the model used to calculate the national bottom line and other states break points. If the breakpoints were to be amended to align with the narrative description, that is, with low risk of ingesting water then the national bottom line for *E. coli* would increase from 1,000 to 1,500 per 100 mL.
177. If these two technical corrections were progressed, the effect would be an increase in the number of sites in the D state but the increase in *E. coli* could create a public perception that the bottom line is more lenient.
178. There are various combinations of three options to consider:
  - i. **The *E. coli* attribute as proposed but described more accurately.** Keep the statistical measure at the median, leave the breakpoints based on a water ingestion rate of 25 per cent (the bottom of the C state stays at 1,000 *E. coli* per 100 ml) and change the description to align with the 25 per cent ingestion rate used to calculate the proposed breakpoints.
  - ii. **Change the statistical measures** to the 80<sup>th</sup> percentile and include the breakpoints based on an ingestion rate of 10 per cent (this changes the bottom of the C state from 1,000 to 1,500 *E. coli* per 100 ml, but there would be fewer samples allowed to exceed 1,500 *E. coli*).
  - iii. Combine the attribute table for contact recreation with the *E. coli* attribute table for human health (secondary contact recreation) and reflect changes based on consideration of options i and ii above.

## Impacts of the *E. coli* options

179. Retaining the attribute as proposed (option i) does not change the anticipated impacts. There would be a better alignment of the narrative description with the numeric attribute states and the national bottom line would stay the same.
180. If the statistical measure was changed to the 80th percentile and breakpoints based on a water ingestion rate of 10 per cent (option ii):
- There will be more sites in a D state than when using an annual median, requiring councils in those areas to implement measures to decrease the *E. coli* loads.
  - There would be an improved statistical confidence that the value is being provided for, and that at the national bottom line the risk of infection from water bodies when boating or wading is no more than 5 per cent.
  - The wider community may view this as appearing to lower the bottom line for *E. coli* from 1,000 to 1,500 per 100 ml. This perception may persist even if the sampling statistic is changed to the more precautionary 80<sup>th</sup> percentile and a greater number would be in D state.
181. If the proposed attribute tables for contact recreation and human health (secondary contact recreation) are merged (option iii):
- The same national bottom line as the proposed amendment is retained but it won't provide for full immersion activities and this will need to be explicit in the narrative description. For activities where there is more than secondary contact with fresh water a higher percentile sampling statistic would apply.
  - There may be changes to the impacts as assessed for the proposed amendments if the national bottom line also changes.
  - The annual median or 80<sup>th</sup> percentile statistical measure (depending on combination of options) would be required in every water management unit nationally
  - If councils choose to manage a particular water management unit for activities with a high likelihood of immersion (for example swimming, kayaking, water skiing) they will need to use the 95<sup>th</sup> percentile for assessing whether the chosen attribute state is met, rather than the median. This aligns with national and international practice.
  - Swimming is a common aspiration, and putting swimming in the table at the A and B states, presents it as an aspiration. However, under Policy CA1 the requirement to consider the additional value of contact recreation (swimming) will no longer apply.

## Recommendation

EITHER (option i)

Proceed with the *E. coli* attribute as proposed but amend the narrative attribute state to align with the 25 per cent ingestion rate

OR (option ii)

Amend the *E. coli* attribute to make the sampling metric the 80<sup>th</sup> percentile while using an ingestion rate of 10 per cent (this weakens the national bottom line from 1,000 to 1,500 *E. coli* per 100 ml)

OR (option iii)

Amend the *E. coli* attribute so that it applies to human health for both primary and secondary contact recreation (employs two different statistical measures depending on the level of recreation being provided for)

## Cyanobacteria

182. There were 14 submissions about planktonic cyanobacteria. Concerns were raised that few councils have long-term data, that it is not applicable to all rivers, that using a two-year average is not appropriate, and that the threshold values differ from those in the interim Cyanobacteria guidelines.<sup>5</sup>
183. The threshold values in the Cyanobacteria guidelines were designed to trigger a series of management actions when there is a single exceedance. The amendment proposed to apply these same values as two-year averages, but subsequent testing shows that two-year averages are inappropriate as a basis to assess values for human health.
184. When using a two-year average, sites that pose a significant health risk for extended periods of time were commonly categorised as of a better quality than the reality. For these reasons, using the higher percentile approach is preferred. An 80<sup>th</sup> percentile provides a sufficient level of statistical confidence for managing health risk across all lakes, and can be calculated from at least 12 samples collected over 3 years.
185. Monitoring data is available from two regions with known cyanobacteria issues and significant recreational use. Changing to an 80<sup>th</sup> percentile does not significantly alter the number of those monitored sites that are currently below the proposed national bottom line. The change will provide statistical confidence in assessing the objective but is unlikely to result in any change in impacts.
186. The analysis of this attribute has been undertaken in relation to planktonic cyanobacteria in lakes and lake-fed rivers, rather than rivers generally. Removing the application of this attribute to all rivers is recommended. Note that benthic (attached to river bed) cyanobacteria present a risk to human health in rivers, however, the Science Review Panel has advised that there is not sufficient evidence to derive an attribute for benthic cyanobacteria at this time.
187. The planktonic cyanobacteria attribute applies to any form of contact with freshwater. If an option to combine the human health (secondary contact recreation) and contact

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<sup>5</sup> Ministry for the Environment and Ministry of Health (2009). New Zealand Guidelines for Cyanobacteria in Recreational Fresh Waters – interim guidelines.

recreation values is progressed then planktonic cyanobacteria will apply to that new combined value.

**Recommendation**

Amend the cyanobacteria attribute so that it only applies to lakes and lake-fed rivers.

Amend the sampling metric for the cyanobacteria attribute from a two-year average to an 80<sup>th</sup> percentile.

# 6 Freshwater management units

188. “Freshwater management unit” is a term introduced by the proposed amendments to the NPS-FM. It replaces relevant references to water bodies and is defined in the Interpretation as:

*“Freshwater management unit” is the water body, multiple water bodies or any part of a water body determined by the regional council as the appropriate spatial scale for setting freshwater objectives and limits and for freshwater accounting and management.*

## Scale of freshwater management units

189. The definition is intentionally flexible enough that regional councils have the ability to determine the spatial scale at which freshwater objectives and limits are set. The scale of the unit chosen for planning will be the same as that used for the purpose of freshwater accounting and monitoring.

190. The majority of submissions relating to the scale of freshwater management units support regional councils being able to set freshwater management units beyond the individual water body scale.

191. Some submissions (mainly individuals) oppose regional councils being able to set freshwater management units beyond the individual water body or catchment scale because of the perceived risks for effective management of water. In particular, they are concerned that deterioration in the water quality of some water bodies would be disguised by some form of “averaging” or “off-setting”.

192. A small number of submissions identified risks where freshwater management units are set at too small a scale, such as multiple costly collaborative processes and complexity in determining limits for hydro generation schemes spanning multiple freshwater management units.

193. Limiting the scale of freshwater management units could create a risk that units would not be appropriate for the region, iwi, communities or the resource users. In some circumstances, it may be appropriate for a regional council to manage hydrologically unrelated water bodies in one freshwater management unit. For example:

- hydro generation schemes may span multiple catchments
- separate pristine mountain streams may be effectively managed as one unit, having the same needs
- communities may consider separate catchments related in some other way.

194. Changing the definition of “freshwater management unit” is not recommended. To help assist regional councils in setting appropriate freshwater management units that facilitate effective freshwater management, guidance should include examples for setting freshwater management units.

## Requirement to set freshwater management units

195. Five local government bodies, including Local Government New Zealand (LGNZ), request clarification on whether all water bodies within a region must be included within a freshwater management unit. They identified an issue with the proposed amendments,

which suggests that freshwater management units need not be set at all or that freshwater bodies may be left out of freshwater management units. An amendment is recommended to require regional councils to set freshwater management units and ensure that all freshwater bodies within a region are included in freshwater management units.

### **Substitutions of terms**

196. Proposed amendments include the substitution of the terms “bodies of fresh water” and “water bodies” for the new term “freshwater management units” where they occur throughout the NPS-FM. No submissions were received on these substitutions. Proceeding with this substitution of terms is recommended.

#### **Recommendation**

Proceed with the proposed definition of “freshwater management unit”.

Proceed with the proposal to substitute the terms “bodies of fresh water” and “water bodies” for “freshwater management units” throughout the NPS-FM.

Amend proposed Policy CA1 to require regional councils to set freshwater management units and ensure that all freshwater bodies are included in water management units.

# 7 Objective to maintain or improve overall freshwater quality within a region and protect outstanding freshwater bodies

## Objective A2 — maintain or improve overall freshwater quality within a region

197. Objective A2 of the NPS-FM is that “The overall quality of fresh water within a region is maintained or improved...” The current implementation guide of the NPS-FM states that:

*“Objective A2 recognises that a bottom line of at least maintaining all aspects of water quality everywhere is not possible. It does not require every degraded waterbody will be cleaned up, some will remain in their current state; the objective-setting process will determine which ones. The Objective allows for some variability in water quality as long as the overall water quality is maintained in a region. Objective A1 must also be met.”*

198. There were no changes proposed to the objective to maintain or improve overall water quality within a region. The discussion document explicitly stated that the existing requirement would be unaffected by amendments and that councils will continue to have the flexibility to manage their water quality so that overall they are maintaining or improving across a region. Despite this, a total of 91 unique submissions commented on this objective.

199. In the absence of further consultation, changes to the ‘maintain or improve’ objective are not proposed at this time.

### Interpretation of Objective A2

200. Submitters expressed a range of views on Objective A2. Submissions suggested clarifying Objective A2 by:

- describing how the ‘maintain or improve’ objective interacts with attribute states, for example whether freshwater quality staying anywhere within B state would qualify as maintaining
- describing how trade-offs in water quality might occur across different attributes in different freshwater management units
- describing the point in time from which freshwater quality needs to be maintained or improved.

201. Submissions expressed concern that some freshwater management units may be allowed to deteriorate (down to the national bottom line), as long as the sum of water quality within a region is at least maintained.



202. Some submissions did not consider off-sets between separate freshwater management units to be practicable or desirable. Their reasons included:
- objectives for water management units within a region will not all be set at the same time
  - given the range of values and attributes for different water bodies, it would be very difficult to calculate or audit water quality overall across a region
  - it could lead to inequity between resource users in different freshwater management units
  - allowing degradation could undermine the intent of the freshwater reforms.
203. A number of submissions considered that water quality should be maintained or improved in each individual freshwater management unit, rather than across the entire region. Some submissions also recommended that each individual attribute be maintained or improved.
204. The proposed amendments make no connection between the ‘maintain or improve’ objective and the attribute states in the NOF. Allowing movement within an attribute state would be too flexible due to the breadth of some attribute states (for example the B band for *E. coli* is from 260-540 *E. coli*/100mL). This could allow significant degradation in water quality by up to double without any requirement to balance that degradation with improvements elsewhere in a region.
205. To maintain or improve overall water quality in an individual freshwater management unit a council and community would have to assess the current state at the time of setting objectives and limits and then set objectives at or above the current state (and the national bottom lines).
206. If a council and community decided to balance freshwater quality across a region there will be an evidential burden to show that across the region a balance or net improvement is achieved. This would be a challenging task between freshwater management units or different attributes.
207. Guidance is recommended for regional councils to clarify the policy intent of balancing freshwater quality between freshwater management units across a region.

## Objectives A2(a) and B4 — Significant values of outstanding water bodies

208. The proposed amendments to Objective A2(a) read:

*The overall quality of fresh water within a region is maintained or improved while:*

- protecting the ~~quality~~ significant values of outstanding freshwater bodies;*
- protecting the significant values of wetlands; and*
- improving the quality of fresh water in water bodies that have been degraded by human activities to the point of being over-allocated.*

209. Similar amendments were proposed for Objective B4, which reads:

*“To protect significant values of wetlands and outstanding freshwater bodies.”*

210. Less than 20 submissions were received relating to the significant values of outstanding freshwater bodies.

211. Many submissions expressed uncertainty about the meaning of “significant values” and “outstanding water bodies”, including whether “significant values” are different to values as defined under the NPS-FM.
212. Objectives A2(a) and B4 do not diminish the responsibilities of regional councils in relation to fresh water planning overall. Outstanding freshwater bodies are a limited class of freshwater bodies intended to attract additional protection over and above other fresh water bodies.
213. If outstanding freshwater bodies are identified, their significant values should be protected under objectives A2(a) and B4. “Significant values” are an intentionally limited class of values. The additional protection afforded to outstanding freshwater bodies should not apply to all values, but only to those which relate to it being outstanding. For example, a stream may be identified as an outstanding freshwater body for its recreational values. Human health values may contribute to this and may warrant additional protection.
214. Defining “significant values” within the NPS-FM would provide little value. What is a significant value will vary from region to region and between freshwater bodies, any definition would be broad and non-specific. Regional councils and communities are better placed to define the significant values relevant to any outstanding freshwater bodies, bearing in mind regional circumstances.
215. To help regional councils identify outstanding freshwater bodies and define the relevant significant values, implementation guidance is recommended on Objectives A2(a) and B4.

### **Recommendations**

Proceed with Objectives A2 and B4 as proposed.

## 8 Coastal water

216. Proposed amendments to policies A1 and B1 require councils to have regard to the connections between fresh water and coastal water when setting freshwater objectives, limits, and environmental flows or levels.
217. Proposed additions to Policy C2 also require councils to make or change regional policy statements to the extent needed to provide for the integrated management of the effects of the use and development of land and fresh water on coastal water.

### **Estuaries and coastal water in the NPS-FM**

218. Submissions indicated support in principle for integrated management of fresh water that has regard to the connections between fresh water and coastal water. However, there is some confusion around the extent to which the NPS-FM regulates management of coastal water including estuaries.
219. A total of 57 unique submissions commented on coastal water. The majority requested additional content relating to estuaries and coastal water within the NPS-FM, and expressed concern about the lack of national bottom lines for estuaries.
220. Estuaries are specifically excluded from the definition of fresh water under the RMA. The New Zealand Coastal Policy Statement 2010 (NZCPS) includes objectives and policies in relation to estuaries and other coastal water.
221. Even though the proposed NPS-FM excludes coastal water, regional councils can establish objectives, set limits, and define values and attributes that consider the receiving coastal environment, including estuaries. The proposed NPS-FM amendments reinforce this approach by encouraging the integrated management of fresh water including the interactions between fresh water, land, associated ecosystems and the coastal environment.
222. The LGNZ submission recognised that it is difficult to set attributes for estuaries nationally and until the science is settled, estuaries should be a local decision.
223. We recommend progressing with the amendments to policies A1, B1, and C2. No further amendments are recommended.

### **Stronger consideration of connections**

224. Submissions requested changes to the wording of policies A1 and B1 so that regional councils 'take into account' the connections between freshwater bodies and coastal water, rather than merely 'having regard to' the connections.
225. Under proposed Policy C2(b) regional policy statements must provide for the integrated management of the effects of the use and development of land and fresh water on coastal water. Regional plans must in turn give effect to regional policy statements and manage effects on coastal water. Therefore further amendments are not recommended.

### **Guidance**

226. Some submissions requested guidance on proposed amendments relating to coastal water and the relationship between the NZCPS and the NPS-FM. Developing implementation guidance on these matters is recommended.

**Recommendation**

Proceed with policies A1, B1, and C2 as proposed.

# 9 National Objectives Framework

227. The proposed amendments to the NPS-FM sought to assist councils in setting freshwater objectives by introducing the National Objectives Framework (NOF) into regional planning.

228. Including the NOF as a policy in the NPS-FM would provide councils and communities with:

- a process for setting freshwater objectives at the chosen attribute states to provide for the chosen values of freshwater management units (proposed Part CA)
- a set of freshwater values and uses with narrative descriptions of each (proposed Appendix 1)
- a set of attributes associated with some of the values and uses, and ranges of numbers that represent different states for which attributes may be managed (proposed Appendix 2).

229. This chapter focuses on issues relating to the concept of the NOF, the process for setting freshwater objectives (proposed Part CA), and the issues that cut across all national values and attributes in the proposed appendices. Issues relating to specific values or attributes are discussed in Chapters 4, 5 and 13.

## The approach to setting freshwater objectives (Objective CA1, Policy CA1 and Appendices 1 and 2)

230. Proposed Policy CA1 sets out the process to be followed by regional councils and communities in developing freshwater objectives using:

- two compulsory national values (Appendix 1)
- additional national values that must be considered and may be provided for in any freshwater management unit (Appendix 1)
- the ability for regional councils and communities to identify and adopt other values (Policy CA1(b)(ii))
- a partial table of attributes for three of the national values (Appendix 2)
- a range of numeric states (A, B, C or D) for each attribute (Appendix 2)
- a minimum acceptable state or national bottom line for each attribute (the bottom of C state).

### General support for the NOF

231. A total of 158 unique submissions commented on the NOF. The clear majority supported the proposal.

## **Scope of the NOF**

232. Some submissions wanted the NOF to do more than proposed, for example by including more compulsory national values, higher attribute states and national bottom lines, or more additional national values.
233. The proposed national bottom lines for ecosystem health and human health are addressed in Chapters 4 and 5. The national values are addressed in Chapter 13.

## **National bottom lines generally**

234. Some submissions expressed concern that the implementation of the NOF could lead to further deterioration in water quality because regional councils might see the national bottom lines as a target and manage freshwater quality down to the national bottom lines.
235. The risk of this occurring is mitigated by Objective A2 of the current NPS-FM, which requires regional councils to maintain or improve the overall quality of freshwater within a region.
236. Submissions suggested amending Policy CA1(d) to ensure that a freshwater objective is set at or above the current state of the freshwater management unit. This is not recommended as it would be more restrictive than what is intended under Objective A2 of the NPS-FM and prevent balancing of freshwater quality across a region. Objective A2 is discussed further in Chapter 7.
237. Guidance for regional councils and freshwater users is recommended to emphasise that national bottom lines are not targets, there is an objective to maintain or improve overall water quality within each region, and regional councils and communities are still expected to set freshwater objectives to meet their aspirations.

## **National bottom lines in national environmental standards**

238. Some submissions recommended that national bottom lines be specified in national environmental standards.
239. National environmental standards provide specific rules. Regional councils must give effect to the NPS-FM in their plans. In comparison, the RMA states that councils must observe national environmental standards. This is because standards are not incorporated within plans. Standards do not allow for community decision-making. The NOF is intended to direct freshwater plan development, not cut across it. In many cases national bottom lines will not drive plan development as the existing water quality is better than the bottom lines.
240. The existence of the current NPS-FM also means that delivering the NOF via the existing national tool is simpler and more effective than a separate NPS-FM and national environmental standards that set bottom lines.

## **Priority of values**

241. Some submissions commented on the priority of national values, particularly the lack of direction about how to resolve differences between competing values.
242. Submissions also expressed concern that economic interests might override environmental and cultural values.
243. Some submissions considered that the NPS-FM may be interpreted as giving the “additional national values” in Appendix 1 a higher priority than values identified by regional councils.

244. The additional national values identified in proposed Appendix 1 of the NPS-FM cover a wide range of cultural, social, environmental and economic values. All additional national values must be considered by regional councils and communities. Regional councils and communities may choose to apply any additional national value as appropriate.
245. Regional councils and communities have the discretion to identify values other than the additional national values. Once values are identified there is nothing in the NPS-FM to suggest that some values take precedence over others (apart from the national bottom lines associated with compulsory national values).
246. The NPS-FM does not provide direction on the choices between values. Those decisions are best made regionally through community engagement with the planning process. Values cannot be prioritised nationally as they will carry different weight for different communities.
247. No changes are recommended to proposed Policy CA1. However, implementation guidance could provide information on how communities and regional councils might undertake the necessary analysis of costs and benefits and make choices between values when developing freshwater objectives.

### **Principles for selecting values**

248. Submissions from the NGO sector recommended principles against which values will be selected, with the overriding objective being sustainable management as defined in section 5 and supported by sections 6 and 7 of the RMA.
249. The NPS-FM is a policy tool under the RMA; regional councils must make all decisions on their regional plans in accordance with Part 2 of the RMA. There would be no additional benefit in the NPS-FM repeating this requirement.

### **Numeric or narrative objectives**

250. LGNZ sought clarity about whether numerical objectives have precedence over narrative objectives. Three other submissions suggested that where nationally applicable numeric limits are not yet available, tight narrative descriptions should be included.
251. Policy CA1 specifies that where there are numeric attributes in Appendix 2 they should be used in providing for a value. Where numeric attributes are not in Appendix 2, numeric objectives should be set where practicable, otherwise they may be set in narrative terms.

### **Links with the RMA**

252. Submissions raised the following points about the links between the NOF and the RMA:
- It is not clear whether a freshwater objective formulated under the NOF is also an objective for the purpose of section 67 of the RMA (ie, an objective in a regional plan).
  - There is no apparent correlation between the national values and attributes in the NOF, and section 69 and Schedule 3 of the RMA, which sets out water quality classes.
  - The NOF should clearly incorporate the evaluation report requirements under section 32 of the RMA.
253. The NPS-FM is silent on how freshwater objectives are expressed within regional plans and it is open to regional councils to determine their appropriate place within the plan. Plan structures vary from council to council. For some plans, freshwater objectives may sit best at the level of policies in plans, for others they may be better as objectives.

Prescribing where freshwater objectives sit in plans could undermine broader regional planning structures and is not recommended.

254. Section 69 and Schedule 3 of the RMA are not commonly used in freshwater planning in setting rules about water quality. Section 69 and Schedule 3 relate to rules while the NPS-FM directs objectives and policies in plans. Section 69 states that where the rules in Schedule 3 are not adequate or appropriate they need not be used. Should proposed amendments to the NPS-FM be introduced, it is highly unlikely that any regional council would use Schedule 3 to set rules in addition to the freshwater objectives required by the NPS-FM. The Government has also signalled that these sections will be removed from the RMA in future to provide clarity.

255. It is not necessary to expressly mention section 32 of the RMA in the proposed Policy CA1 as the RMA requires compliance with section 32 independently.

### **Timing of introduction**

256. A small number of submissions commented specifically on whether the NOF should be introduced now or later. Those supporting introducing the NOF now consider that:

- further delay would risk ongoing regional variation, planning effort, costs, and infrastructure investment uncertainty
- improving water quality is urgent.

257. Submissions suggested that the introduction of the NOF should be delayed until the attributes under consideration at a national level are more developed. Other submissions considered that introducing the NOF now could pose the following risks:

- it could undermine the work of proactive councils, iwi, and communities who have already developed regional values and attributes
- it could result in duplication of efforts as missing attributes are developed
- plan changes subsequent to NOF updates would result in investment uncertainty.

258. The attributes included in this version of the NOF have been considered carefully by a large number of scientists and other stakeholders. Further delay in introducing the NOF would continue the status quo and would not address the risk of inconsistent and potentially ineffective approaches to setting objectives for freshwater bodies.

259. To mitigate the risk that any regional council duplicates planning efforts as attributes are developed, it is recommended that Government signal attributes that are under development and timing for potential inclusion in future iterations of the NOF.

### **Process for updating the NOF**

260. Some submissions would like to see the NOF updated regularly, for example annually or at least sooner than 2016. However, Local Government and some Primary Industry submissions indicated opposition to further changes to the NPS-FM in the next five years and sought greater certainty regarding the process so that investment decisions could be timed accordingly. Submissions also sought clarification and transparency regarding the process for updating the NOF.

261. The process of updating the NOF has to comply with the statutory requirements in sections 46 to 54 of the RMA. This will in itself limit the timing of future updates.

262. The continuing development of the NOF influences the way in which regional councils develop and update their plans. Being transparent about the process of updating the NOF



would minimise the risk of regional council inefficiencies in timing their planning processes.

263. Further work is recommended to develop and notify a forward work programme for development of NOF attributes.

### **Timeframes for meeting freshwater objectives**

264. Under the proposed NOF, regional councils have the discretion to determine timeframes for meeting freshwater objectives. Some submissions agreed that regions should have discretion to determine timeframes for meeting freshwater objectives. Other submissions suggested that timeframes for meeting freshwater objectives should be subject to conditions, such as a maximum time limit.

265. Submissions expressed concern that objectives would not be treated seriously or with urgency and that regional councils or lobby groups could create unacceptable delays.

266. Regional councils and communities have the best understanding of their local circumstances, their objectives, the appropriate adjustment timeframes, and acceptable costs. Changes to freshwater quality will happen in the long-term and in some cases at significant costs to communities. Giving communities the flexibility to choose the timeframe for achieving freshwater objectives acknowledges this reality.

267. Having a fixed timeframe could undermine the effectiveness of the NOF in improving water quality. If the timeframe is not long enough, communities may find it difficult to set ambitious freshwater objectives. Alternatively, they may not be able to meet their targets within a set timeframe. Having a fixed timeframe could also lead to disproportionate, an otherwise avoidable, costs to communities.

268. No changes are recommended to the proposed discretion to determine the timeframe for meeting freshwater objectives.

### **Policy CA1(f)**

269. A number of submissions raised concerns about the interpretation of Policy CA1(f). Other submissions suggested additional considerations, including:

- ecological, recreational or cultural implications
- impacts on regional and national economies
- tāngata whenua relationships or Treaty of Waitangi settlements
- cumulative effects.

270. These matters are covered by Part 2 of the RMA already. The NPS-FM is a tool under the RMA and regional councils are required to consider Part 2 of the RMA when developing freshwater objectives. It is not necessary to repeat all the matters a regional council must consider in Policy CA1(f).

### **Recommendation**

Proceed with Policy CA1 as proposed (noting that Chapter 7 of this report recommends an amendment to Policy CA1 in relation to freshwater management units).

## Exceptions (Policy CA2)

271. Proposed Policy CA2 in the NPS-FM would allow a regional council to set a freshwater objective below a national bottom line in three situations, where a freshwater management unit:

- is contaminated from natural processes, or
- has been subject to historical activities that have created lasting impacts on water quality, and the reversal of those impacts is not reasonably practicable, either physically or ecologically, even in the long term, or
- is listed in Appendix 3 (intended to cover significant existing infrastructure).

272. The first two grounds for an exception would be decided by regional councils during freshwater planning. Freshwater management units eligible for an exception because of significant existing infrastructure will be listed in Appendix 3 of the NPS-FM following further consultation.

273. In total, 279 unique submissions and 6252 form submissions commented on exceptions to national bottom lines.

### Exceptions generally

274. Submissions were mixed, some expressed general support for the proposed exceptions framework, while others either opposed the exceptions framework as a whole or stated that there should be no exceptions to national bottom lines. Some submissions also recommended that exceptions apply for a limited time.

275. Many submissions expressed concern about the proposed exceptions framework and asked that exceptions be kept to a minimum and described as narrowly as possible to maintain the integrity of the system overall. Some Primary Sector submissions recommended that there be no exceptions other than where natural conditions breach bottom lines.

276. A small group of submissions sought additional exceptions for different types of activity or industry, while a proportionate number of submissions specifically opposed any extension of exceptions to cover other industry or activity.

277. Even in circumstances where achieving national bottom lines will be a challenge, there is flexibility for councils and communities to set realistic adjustment timeframes. For example, taking into account the life of a piece of infrastructure or the raising of funds and development of technology to remediate historical degradation.

278. To operate as intended exceptions should be kept narrow and ideally there will be very few exceptions. Communities will instead put a plan in place to work toward bottom lines over time. Extending the exceptions framework to other industry or activity risks undermining the NOF and bottom lines.

279. The proposed exceptions are intended to provide for those situations where, despite the use of long timeframes, the difficulties or impossibility of remediating historical harm or the benefits of significant infrastructure are such that a bottom line may never be met. Exceptions are not needed where a bottom line is currently breached and a community works towards objectives in the long term.

### National or regional decisions

280. Some submissions recommended that all exceptions be decided by a national body. A total of 78 unique submissions and 6252 form submissions stated that “Any exemptions

to the rules should be limited to a list of specific water bodies.” A smaller group of submissions stated that local communities needed to be involved in decision-making.

281. Deciding all exceptions locally or nationally, whether listed in the NPS-FM or otherwise, is not recommended. The proposed exceptions framework includes a regional decision-making process for some exceptions and national decision-making for others. The distinction recognises that for significant existing infrastructure the decision is not based on evidence of the difficulty or impossibility of meeting a national bottom line but rather on the significant economic and social benefits of infrastructure such as hydroelectricity generation. To prevent undermining the national bottom lines, this value judgement should be made nationally through an amendment to Appendix 3 of the NPS-FM following public consultation. As the process is rigorous and resource intensive for central government, it would not be an efficient or effective option for all exceptions.
282. Where a freshwater management unit is considered for an exception, the checks and balances of the regional planning process still apply, including submissions, hearings, and possible appeals.

### **Exceptions for natural processes (Policy CA2(a))**

283. Proposed Policy CA2(a) allows regional councils to set objectives below a national bottom line where existing freshwater quality is already below a national bottom line and that is caused by naturally occurring processes, for example a native bird colony nesting above a river which causes high *E. coli* levels.
284. The majority of submissions on this point supported exceptions for naturally occurring processes. Submissions were split over the decision-maker for these exceptions.
285. Some submissions recommended clarification and definition of terms used in Policy CA2(a). The majority asked for a definition of “naturally occurring processes” with some giving an example of introduced bird species and where the effects of introduced bird could be considered natural. Clarification was also sought on how to determine “existing freshwater quality”.
286. There will be some situations where existing water quality does not meet bottom lines due to naturally occurring processes. A number of submissions provided examples of where such exceptions might apply. If the NPS-FM includes national bottom lines, it needs to include a mechanism to cover these limited situations.
287. The proposed criteria for this exception mean that decisions will be based on evidence of the causal link between the naturally occurring process and the resulting water quality. Without this link, it will be difficult for a council to justify the application of the exception to a community. It is recommended that councils and communities make these decisions. The alternative of amending the NPS-FM for each exception would involve significant time and resources for what should be a technical science informed decision specific to local circumstances. A community could still drive improvements in freshwater quality where possible and the requirement to maintain or improve overall water quality (Objective A2) will still apply.
288. A definition for “naturally occurring processes” would only repeat the ordinary meaning of the term and would not add clarity to Policy CA2(a). A definition for “existing water quality” is recommended to clarify that “existing water quality” would be linked to the point in time when freshwater objective and limits are set.

## **Recommendation**

Proceed with Policy CA2(a) as proposed.

Add a definition for “existing water quality” in the Interpretation.

### **Exceptions for historical degradation (Policy CA2(b))**

289. Proposed Policy CA2(b) allows regional councils to set objectives below a national bottom line where both of the following apply:

- impacts of historical activities in the freshwater management unit have caused the existing freshwater quality of the freshwater management unit to be below the national bottom line, and
- the reversal of those impacts is not reasonably practicable, either physically or ecologically, even in the long term.

290. The majority of submissions opposed exceptions for historical activities as proposed. Reasons included:

- a desire to improve any impacts on water quality no matter how difficult
- fear of a rush on this type of exception
- concern that highly resourced parts of a community could effectively lobby for an exception while others will struggle to do so.

291. Submissions were split over the decision-maker for these exceptions.

292. Many submissions looked at ways to refine and clarify this exception so that it will be applied narrowly and in limited situations. A group of submissions, including the Parliamentary Commissioner for the Environment, recommended that the term “historical activities” be defined so that it is clear at what point in time an activity must have ceased in order to be historical.

293. Some submissions expressed concern about the wording of this exception, particularly the phrase “not reasonably practicable, either physically or ecologically, even in the long term”. Submissions stated that the wording lacked clarity and could be open to abuse. One group of submissions recommended narrower wording so that an exception could only apply where the reversal of impacts cannot be achieved, even in the long term, without creating even worse environmental effects.

294. Some Local Government submissions recommended that the exception be clarified to include municipal water supply and storm water or waste water activities. Other submissions stated the opposite, that the exception should not include these sorts of activities.

295. As proposed this exception gives councils discretion to decide what is “not reasonably practicable, either physical or ecologically, even in the long term”. Regional planning decisions are made under Schedule 1 of the RMA, which provides for community engagement and rigorous testing of proposals.

296. If a decision were to be made nationally, the only mechanism available is a further amendment to the NPS-FM to list the exceptions in an appendix. A national policy statement cannot delegate decisions to a Minister or other national body. The process to add exceptions for historical activities via an NPS-FM amendment would be resource intensive but would provide certainty and limit the potential for broad interpretation by regional councils in implementing the exception.

297. Keeping this exception narrow is desirable. However, the exception cannot be narrowed to apply only where improvements to freshwater quality are impossible. Everything is possible in theory, given unlimited time, resources, and a lack of ecological constraints. The use of the term “not reasonably practicable” seeks to acknowledge that although remediation is always possible there may be situations where to do so would be exceedingly onerous.
298. Another potential limitation would be to narrow the application of the exception to situations where the reversal of impacts cannot be achieved, even in the long term, without creating even worse environmental effects. This is effectively one half of the proposed exception (not reasonably practicable ecologically). This option would effectively narrow the exception. However, there may be merit in retaining a mechanism for councils to set objectives below bottom lines where remediation is not reasonably practicable physically.
299. Defining the term “historical activities” would usefully clarify the point in time by which an activity must have ceased in order to be historical. It is recommended that “historical activities” be defined as activities which ceased prior to the amended NPS-FM coming into effect. The exception is not intended to apply to ongoing activities such as waste water and storm water activities. Guidance is recommended to assist local government in managing these activities over the long term.
300. As recommended in relation to exceptions for natural processes, the term “existing water quality” can be defined to mean the water quality at the point in time when freshwater objectives and limits are set. The definition would apply to exceptions under both Policy CA2(a) and (b).
301. There are limited examples of where an historical exception might reasonably apply. Even where historical degradation is identified, it is difficult to assess whether a regional council, would:
- set an objective above bottom line and slowly work towards remediation over time as resources and technology become available, or
  - apply the exception and set an objective to maintain existing water quality below the bottom line for some attributes.
302. There are examples of successful long term remediation under the contaminated sites remediation fund. Tui Mine is one recent example where, with considerable resourcing from central and local government, remedial works have been undertaken and affected water bodies are expected to return to a high quality over time. However, it is more difficult to find examples where remediation would necessarily cause greater ecological harm or be a physical impossibility.
303. Given the uncertainty regarding the application of this exception, one option is to delete the exception entirely. However, we note that this may result in unintended consequences and costs if unforeseen circumstances arise and there is no exception provided. Should situations be identified as suitable for this sort of exception, there is always the ability for the Government to amend the NPS-FM to specifically provide for the exception by listing it in an Appendix.
304. Guidance is recommended to assist regional councils in deciding where these exceptions might apply.

## Recommendation

EITHER

Define the term “historical activities” as activities that ceased prior to the promulgation of the amended NPS-FM (i.e. July 2014)

OR

Delete Policy CA2(b)(ii) (unanticipated situations can be added as exceptions listed in Appendix 3 if required at a later date)

## Exceptions for significant existing infrastructure (Policy CA2(c))

305. Proposed Policy CA2(c) allows regional councils to set objectives below a national bottom line where a freshwater management unit is listed in Appendix 3 of the NPS-FM.

306. The discussion document indicated that specific freshwater management units eligible for an exception would be added to Appendix 3 based on a set of criteria such as:

- the need for an exception must arise because of limited efficient or effective management options for significant existing infrastructure
- the significant existing infrastructure affecting the water body must enable economic benefits that have a significant impact on national or regional GDP
- the economic benefits can only be realised if the objectives for the water body are set below bottom lines (ie, setting a long-term objective at or above bottom lines will not provide the same or similar economic benefit).

307. The Government consulted on the concept of an appendix of freshwater management units eligible for an exception because of significant existing infrastructure in the NPS-FM, and sought feedback on what might be listed in it. However, the discussion document noted that specific situations would not be added to Appendix 3 in this amendment of the NPS-FM. There will be further consultation on what is included in Appendix 3.

308. Submissions were evenly divided on whether there should be exceptions for freshwater management units affected by significant existing infrastructure. Submissions from the Energy Sector strongly supported the exceptions and asked that their own infrastructure be listed in Appendix 3 as soon as possible.

309. Submissions were split on the decision-maker for these exceptions.

310. A number of submissions expressed uncertainty regarding the process and criteria for deciding and listing freshwater management units eligible for an exception in Appendix 3. Submissions recommended a range of measures to improve clarity and decision-making under this exception, including:

- a process for amending Appendix 3 administered by the Environmental Protection Authority
- exceptions (or different bottom lines) for any catchments defined as hydrologically modified
- criteria set out in the NPS-FM.

311. While natural and historical exceptions would be decided on the basis of evidence as to the natural conditions or feasibility of remediation, Policy CA2(c) involves a value judgement on the extent to which significant benefits mean a water body need not be managed to national bottom lines over time. There are some situations where it will be in

the national interest to allow certain benefits rather than meet national bottom lines. Such a value judgement warrants a national level decision on where it is worth allowing exceptions to national bottom lines.

312. The only mechanism available under the RMA to provide for national decisions on exceptions to bottom lines in the NPS-FM is through amendments to the NPS-FM itself to list exceptions. The purpose of national policy statements is to state objectives and policies for matters of national significance that are relevant to achieving the purpose of the Act. Through those objectives and policies it direct councils to include objectives and policies in their policy statements and plans. A national policy statement cannot delegate decisions to a Minister or any other central government entity. An amendment to the RMA would be needed to enable any other process for national decision making and is not recommended.
313. Similarly, the purpose of a national policy statement is not to direct central government. Criteria for central government decision-making could not be included in the NPS-FM. Furthermore, any criteria would have no effect in practice, as they would not restrain in any way the ability of a future government to amend the criteria and Appendix 3. However, Policy CA2(c) could usefully be amended to describe the content of Appendix 3 and make the link between the listed infrastructure and fresh water management units, which will be decided at a regional level. It is recommended that any amendments to proposed Policy CA2(c) be progressed following further consultation on the list of exceptions in Appendix 3.
314. There is currently limited information about the criteria under which infrastructure exceptions might be decided. The discussion document consulted on the framework for exceptions but indicated that further public consultation would be required prior to finalising any list of exceptions. It is recommended that this later consultation set out the rationale for the amendment to Appendix 3 and describe in more detail why certain exceptions (and not others) are proposed.
315. The benefit of listing exceptions in an Appendix of the NPS-FM is the high degree of certainty provided. Decisions would be made once, transparently at a national level, avoiding case by case decision-making and litigation over exceptions. Once an appendix was finalised, there would be a high degree of certainty for infrastructure operators. The list would provide clear guidance on where exceptions apply and therefore there would be less perception that bottom lines may be undermined.
316. Energy Sector submissions expressed concern about the process of introducing national bottom lines and adding exceptions for significant existing infrastructure to Appendix 3 at a later date. This process could result in a period over which there are bottom lines in the NPS-FM but not exceptions. It is recommended that the list of exceptions in Appendix 3 be progressed as a priority.

### **Recommendation**

Progress consultation on Policy CA2(c) and Appendix 3 as a priority.

### **Broader exceptions**

317. A small number of submissions recommended that the exceptions for significant existing infrastructure apply more broadly to other industries, activities, or types of infrastructure. Examples included:
- road networks



- artificial water bodies formed in old open pit mines
- storm water, waste water, and other piped urban water systems
- significant industry such as meat processing plants
- significant regional economic activity.

318. Another small group of submissions sought to reframe exceptions more widely than exceptions to national bottom lines, for example as an exception from the planning process in Policy CA1 or a prohibition on regional councils setting any objectives or limits that impede the operation of significant existing infrastructure.

319. Further consultation on the exceptions in Appendix 3 is recommended. However, the exceptions in the NPS-FM cannot be stretched to exclude certain activities or freshwater management units from the planning process as a whole or prohibit regional councils setting any objectives or limits that might affect any activity. The NPS-FM is subordinate to the RMA, which requires regional plans to manage resources, including fresh water.

## Transitional Provisions (Policy CA3)

320. Policy CA3 allows a regional council to set a freshwater objective below a national bottom line, on a transitional basis, for a set period of time. The freshwater management units concerned and their timeframes for transition will be specified in Appendix 4 of the NPS-FM.

321. The discussion document clarifies that Policy CA3 may be used where a regional council or community are concerned about the impacts or feasibility of setting an objective to meet a national bottom line and work towards that objective over a transitional period. If appropriate the freshwater management unit and timeframe would be listed in Appendix 4 of the NPS-FM after consultation. In this case, the regional council may temporarily set a freshwater objective below a bottom line for the agreed duration.

322. There were 146 submissions on Policy CA3. Submissions were split on whether transitional arrangements should be provided for within the NPS-FM. Individuals tended to support the proposal, while it was opposed by the LAWF, LGNZ, and other submissions from the Local Government and Primary sectors.

323. Submissions that signalled support for Policy CA3 did so either because they supported specified 'staggered compliance targets' to be achieved within a set timeframe, or because the policy could mitigate the costs of improving expensive infrastructure.

### Timeframes

324. Many that supported the amendment thought that the duration of any transitional period should be limited to a short time (some specified 5 years or less).

325. The short timeframe identified by submitters (5 years or less) is unlikely to be sufficient to achieve desired water quality improvements. For example, water quality 'lags' (generally due to the movement of nitrates through the groundwater system) can be in the order of 50 – 100 years. Short timeframes for setting an objective below a national bottom line would also drive multiple plan changes in quick succession to reflect whether a transitional period applies. This would be inefficient and unnecessary, considering that councils could simply set an objective above the national bottom lines and work towards it over a long timeframe; in some cases there could be minimal progress in the first few years (for example, as groundwater lags have an effect).



## Need for Policy CA3

326. The submissions opposed to Policy CA3 considered it to be redundant because regional councils can set long timeframes for achieving freshwater objectives. Some were also concerned that the introduction of interim targets would create uncertainty and undermine Objective A2 to maintain or improve water quality.
327. LGNZ noted that Policy CA3 would add unnecessary costs and complicate the planning process. Similarly, if Policy CA3 were introduced, central government would duplicate regional discussions on timeframes to meet objectives, as a statutory process would be required every time a freshwater management unit is proposed to be added to Appendix 4.
328. Options for Policy CA3 include:
- i. proceed with Policy CA3 as proposed
  - ii. allow a regional council and community to decide where and for how long freshwater objectives may be set below a national bottom line for a defined transitional period (for example no more than 10 years)
  - iii. delete Policy CA3.
329. Proceeding with the policy as proposed (option i) would allow an objective to be set below the bottom line for a limited time. The process would involve an amendment to the NPS-FM. It would provide for situations where setting an objective at or above national bottom lines is not feasible, as progress towards the objective is not realistic in the short term. A listing in the NPS-FM would provide surety for councils and communities that setting an objective below a national bottom line has been rigorously tested and is acceptable.
330. Enabling regional decisions (option ii) would make it difficult to hold regional councils accountable to the transition period imposed. If this option were to progress, the period of time would need to be restricted by criteria in the NPS-FM so that it could only apply for a certain number of years and only once. This option is not recommended.
331. If proposed Policy CA3 were deleted (option iii) regional councils could still employ long timeframes to achieve freshwater objectives where they are not already met. The community may also choose a staged approach with interim targets and a management plan to achieve freshwater objectives gradually over time. However, this option may provide less assurance to regional councils and communities that a long-term staged approach is acceptable.

### **Recommendation**

Proceed with Policy CA3 as proposed.

# 10 Monitoring Plans

332. The proposed amendments include Objective CB1 “to provide for an approach to monitoring progress towards, and achievement of freshwater objectives.” In addition, proposed Policy CB1 requires every regional council to develop a monitoring plan. The plan must do three specific things:

- establish the methods that will be used for monitoring
- identify representative monitoring sites for each freshwater management unit
- recognise the importance of long term trends in monitoring.

## **General support for monitoring but guidance is needed**

333. Submissions indicate clear support for Objective CB1. However, many submissions requested guidance including, criteria for selecting monitoring sites, detail on what and how to monitor, and clarification regarding the links between monitoring and accounting requirements.

334. Monitoring is already required of regional councils under the RMA. Policy CB simply restates the importance of monitoring and sets some necessarily broad expectations. A national policy statement cannot prescribe the methods by which regional councils undertake monitoring. The details of a monitoring plan are at the discretion of regional councils, including the selection of representative sites.

## **Tāngata whenua values**

335. Submissions from Iwi/Māori stated that monitoring plans should include a requirement to monitor against tāngata whenua values. LGNZ submitted that guidance on monitoring against tāngata whenua values would be useful.

336. Freshwater objectives established under proposed policies CA1 – CA3 will include objectives based on tāngata whenua values. Therefore, such monitoring is inherently a part of the proposal already. We do not recommend any further amendments.

## **Monitoring of aquatic insects**

337. Many submissions (including form submissions) requested that the NOF include rules to ensure monitoring of aquatic insects as an indicator of river health.

338. The inclusion of MCI in the NPS-FM is discussed further in Chapter 4 of this report.

## **Consistency with other national monitoring initiatives**

339. Many submissions stressed the importance of consistency with other, ongoing national monitoring initiatives<sup>6</sup> to reduce duplication and costs. Several submissions also queried the ability to nationally aggregate data if monitoring sites are selected by councils using different approaches.

340. The monitoring data collected by regional councils will be a valuable resource and could inform environmental reporting nationally. Ongoing work is recommended to investigate how best to utilise monitoring data nationally.

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<sup>6</sup> For example the Environmental Reporting Bill.

## **Resourcing**

341. Submissions noted the cost associated with additional monitoring. Questions were asked about who would pay and requested that the additional costs of monitoring be passed on in a fair and equitable way to ratepayers and resource users.

342. It is not the role of a national policy statement to address these issues. Costs are evaluated under section 32 of the RMA.

### **Recommendation**

Proceed with Part CB as proposed.

# 11 Accounting for freshwater takes and contaminants

343. The proposed amendments include a new Objective CC1 and policies CC1 and CC2 on freshwater accounting.

## Objective CC1

344. Proposed Objective CC1 requires councils to improve their information on water takes and sources of contaminants to:

- ensure they have the necessary information for setting objectives and limits
- ensure there is information on resource availability
- enable the aggregation of freshwater data for regional and national monitoring purposes.

### General support for accounting but guidance needed

345. The majority of submitters agree with requiring councils to account for freshwater quality and quantity in their regions. From a total of 209 submissions, just eight disagreed due to the costs of accounting, mistrust of regional councils, or an assumption that freshwater accounting repeats the requirements of section 35 of the RMA.

346. Submissions clearly indicated support for requiring councils to undertake freshwater accounting but sought guidance on how accounting should be undertaken. There were also requests for more prescription within the NPS-FM itself.

347. The development of guidance is recommended to support regional councils in establishing and operating freshwater accounting systems of an appropriate scale.

### Objective CC1 (c)

348. Several submissions from Local Government raised questions about Objective CC1(c) on the aggregation of data regionally and nationally. The submission from LGNZ stated that aggregation of data:

*“... is unlikely without a nationally consistent approach to the identification of Freshwater Management Units, and protocols for measurement of inputs and outputs. There is a risk of duplication/inconsistency/inefficiency if councils proceed with accounting systems for water quality before the framework and understanding about monitoring and accounting systems is properly developed at the national level.”*

349. Submissions from other sectors sought clarification on how the accounting and monitoring requirements fit together. Other submissions emphasise the importance of alignment with other national monitoring initiatives and proposed monitoring frameworks, including the Resource Management (Measurement and Reporting of Water Takes) 2010 Regulations.

350. Objective CC1(c) recognises that regional accounting systems will result in a useful data set nationally. The extent to which the data is comparable nationally may be dependent on the consistency in regional approaches to accounting. However, putting in place rigid

accounting methods is not possible via a national policy statement and would risk constraining regional councils. A flexible approach is necessary to enable accounting to be scaled to the significance of issues in any freshwater management unit. Likewise, flexibility for identifying freshwater management units is discussed further in Chapter 6.

## Policy CC1

351. Policy CC1 has two parts. It requires every regional council to:

- establish a freshwater quality and quantity accounting system for freshwater management units where freshwater objectives and limits are being set (or reviewed)
- to do this at a level of detail which reflects the extent or seriousness of the issues affecting the freshwater management unit.

352. Councils do not have to cover the whole region in an accounting system from the outset but can progressively include areas of the region over time as they embark on setting objectives and limits. The NPS-FM currently requires objectives and limits to be set by 2030, so at the latest freshwater accounting systems will be in place throughout regions by 2030.

353. Policy CC1 will apply two years after the amendments come into effect. This grace period allows councils time to establish quality and quantity accounting systems for plan changes in the short term.

### **Time period allowed for councils to develop accounting systems**

354. Most submissions from Local Government agreed with the timeframe to develop accounting systems, with the exception of two councils. In contrast, the majority of NGOs and individuals wish to see councils start accounting immediately.

355. Further amendments to the timeframes for freshwater accounting are not recommended.

## Policy CC2

356. Policy CC2 requires councils to take reasonable steps to collect the information relating to freshwater quality in a suitable form and that it relate to at least five-yearly intervals. Councils would also be required to collect information on freshwater quantity, but it would relate to at least annual intervals.

357. The requirement to have annual records of water quantity reflects (in part) current requirements of the Resource Management (Measurement and Reporting of Water Takes) Regulations promulgated under section 360 of the RMA.

358. The reasoning behind requiring water quality data to be available at least every five years is to allow for the intensive information gathering and modelling exercise that may be required. It would be onerous to expect councils to conduct this across a region annually.

### **Collection and reporting of data**

359. Submissions noted that the costs of obtaining accounting data will be passed on to ratepayers and resource users and stated that these costs should be “fair and reasonable”. However, the disbursement of costs cannot be prescribed by a national policy statement. Instead this is a matter for regional councils to consider.

360. Many submitters requested that the data be provided to the public in a readily available format. Several submitters also requested that the information be provided to the public

or that the policy have a reporting requirement added to it. However, submissions from the Energy Sector noted that any information of a sensitive commercial nature should be withheld from the public domain.

361. A national policy statement cannot contain rules or methods for reporting requirements. The way freshwater accounting information is ultimately provided to the community will need to be flexible and relevant to each council as they approach setting objectives and limits for each freshwater management unit.

### **Need for accounting information before setting objectives and limits**

362. Some submitters pointed out that accounting information is needed prior to setting objectives and limits and as such should be available to the community when engaged in a plan development process.

363. To make this clear and better align with Policy CC1, an amendment to Policy CC2 is recommended to clarify that information should be available where freshwater objectives and limits are being set.

## **Title of Part CC**

364. An amendment is recommended for the proposed title of Part CC. The word “loads” should be removed from the title in recognition of the fact that contaminants may not always be identified as loads.

### **Recommendation**

Amend the title of proposed Part CC to “Accounting for freshwater takes and contaminants”.

Proceed with proposed Policy CC2, with minor amendments to clarify that accounting information must be available for objective and limit setting.

# 12 Progressive implementation programme

365. Part E specifies that the NPS-FM must be fully implemented as soon as reasonably practicable, or no later than 31 December 2030. Where councils cannot implement the NPS-FM by the end of 2014, they must adopt a programme of time-limited stages against which they must report annually on their progress. Any staged implementation programme must have been formally adopted by councils within 18 months of gazettal of the NPS-FM.
366. The amendment proposed at Policy E1(f) allows councils implementing the NPS-FM through a programme of time-limited stages to review, and if necessary, revise their programme of time-limited stages when the NPS-FM is amended. This must be done within 18 months of any amendment to the NPS-FM being gazetted.
367. Submissions noted that proposed Policy E1(f) is limited in application to only those councils that have already adopted staged implementation programmes. Submissions have identified an oversight within the proposed amendments. Regional councils may have commenced or completed implementation of the existing NPS-FM policies by 31 December 2014. They may not have adopted staged implementation programmes within the initial 18-month window, and programmes can no longer be adopted. Currently, these regional councils are not able to adjust implementation timeframes where impacted by amendments to the NPS-FM.
368. Amendments are recommended to address this oversight and allow all regional councils to adopt staged implementation programmes within 18 months of any amendments to the NPS-FM.

## Recommendation

Amend policy E1 so that all regional councils may adopt staged implementation programmes within 18 months of any amendments to the NPS-FM.

## Full implementation by 2030

369. Under Policy E1(b), the NPS-FM must be fully implemented as soon as reasonably practicable, or no later than 31 December 2030.
370. A number of submissions commented that the deadline for full implementation by 2030 is too long, and that further degradation of freshwater may occur in the interim. Some submissions specified dates for full implementation, for example by 2020 or 2025.
371. In December 2013, the Ministry for the Environment conducted an online survey, which indicated that the majority of councils are on track to fully implement the NPS-FM by 2025. A deadline for full implementation of the NPS-FM by 2025 may better reflect the actual progress anticipated.
372. Land use change and over-allocation in the short-term may be better addressed through a reduced implementation deadline. These pressures, if unaddressed, may result in a worsening of water quality in the short to medium-term and make the job of maintaining

or improving water quality much harder in the longer-term, ultimately increasing the costs of full implementation.

373. Despite arguments for faster implementation, it is important that the quality of freshwater plans is not compromised by the speed of progress. Setting freshwater objectives and limits under the NPS-FM is not a simple task.
374. Two options are recommended. One option is to retain the 2030 deadline for full implementation noting that councils are on track to complete implementation before this date. The other is to amend Policy E1 so the deadline for full implementation is 2025, unless this timeframe would result in a lower quality plan or costs that cannot be met by the regional council (in which case the deadline would be 2030).
375. Regional councils will be the most affected by any change to the deadline for implementation of the NPS-FM. As such, further, targeted engagement with regional councils is recommended, prior to final decisions, to inform consideration of these options.

### **Recommendation**

EITHER

Proceed with Policy E1(b) as proposed

OR

Reduce the deadline for full implementation to 2025, while allowing a 2030 deadline in limited circumstances.



# 13 Additional national values (Appendix 1)

## Overview

376. Proposed Appendix 1 of the NPS-FM provides a list of national values and uses for fresh water. This chapter addresses the descriptions of the additional national values in proposed Appendix 1. The compulsory national values are discussed in chapters 4 and 5 of this report.

### Structure, labelling, and grouping of values

377. Some submissions were confused about what the values in Appendix 1 include. For example, whether the strapline under the main value headings is also a part of the value as a whole. The multiple headings also make the name of each value uncertain.

378. We recommend integrating the straplines into the body of the values themselves and rationalising the overall structure and headings throughout Appendix 1.

### Water quantity in value descriptions

379. Submissions noted that some values, such as food security, refer to sufficient access to water or security of supply. Submissions were concerned that such references could have implications for access rights or allocation of freshwater.

380. The national values in Appendix 1 should describe values rather than imply rights to freshwater over and above other values or uses. There is a water quantity aspect to all values, for example you need a certain amount of water with which to irrigate crops as well as an amount to support an ecosystem or for recreation. The descriptions of values throughout Appendix 1 should consistently describe both the quality and quantity component of the value so as not to imply that some values or uses of water have greater allocation rights. The difficult discussions and choices between values and uses will happen amongst communities and (apart from the compulsory national values) the NPS-FM should not imply any priority of values.

381. Amendments to the values in Appendix 1 are recommended to consistently describe both the quality and quantity aspects of each value.

#### Recommendation

Amend all the proposed values in Appendix 1 to:

- consistently describe both the quality and quantity aspects of each value
- rationalise the structure and headings of Appendix 1
- clarify the value descriptions.

## Natural form and character

### Compulsory or additional value

382. A small group of submissions asked that the additional value of natural form and character be made a compulsory national value.
383. Section 6(a) of the RMA requires the preservation of the character of lakes and rivers to be protected and this is reinforced through the inclusion of the additional value 'natural form and character'. As an additional value this must be considered by councils when setting freshwater objectives.
384. Many freshwater bodies are already modified in some ways for various purposes, such as hydroelectricity generation or flood prevention. It may be necessary to modify some freshwater bodies in the future for similar purposes. In such circumstances, the benefits may outweigh the cost of protecting its natural form and character. Communities would therefore need the flexibility to decide which value is paramount. It is recommended natural form and character remain an additional value rather than become a compulsory national value.

### Flow regime

385. Two submissions from the Energy Sector raised concerns about the inclusion of "flow regime" as a matter contributing to the "natural form and character" because existing hydroelectricity infrastructure unavoidably alters the natural form and character (ie, the flow regime) of a freshwater management unit. They submitted that if a community chose to value a water body for its apparent natural form and character over its existing hydroelectric generation contribution, the ability to manage that river for hydro generation would be at risk.
386. It is recommended that "flow regime" be retained in the description of the natural form and character value. Flow regime is an essential part of the natural form and character of a freshwater body. The choices and balance between values such natural form and character and hydroelectric power generation will need to be considered by councils and communities. The fact that some values will not always be compatible does not mean they should be excluded from Appendix 1.

### Consistency with New Zealand Coastal Policy Statement

387. Submissions from Local Government noted that the natural form and character value proposed is different to the similar term "natural character" in the New Zealand Coastal Policy Statement.
388. The term "natural character" in the New Zealand Coastal Policy Statement also appears in section 6 of the RMA. The meaning of the term has evolved through case law. As a value in the NPS-FM it may be beneficial to retain slightly different terminology. The value refers to specific characteristics of fresh water and is broad enough for communities to identify with any particular natural quality of a freshwater management unit. It would not be beneficial for the value to be narrowed or read differently due to changes in case law.
389. Some of the matters covered by "natural character" in the New Zealand Coastal Policy Statement are part of other national values in the proposed NPS-FM. For example, the biophysical and ecological aspects are covered by the compulsory national value of ecosystem health. Retaining a different term for the value is recommended.

### **Recommendation**

Proceed with an additional national value of natural form and character.

## **Mahinga kai and fishing**

### **Compulsory or additional values**

390. A total of 98 submissions commented on mahinga kai or fishing. A majority of those that commented asked that all fresh water in New Zealand be fishable and safe for food gathering (in effect, compulsory national values for mahinga kai and fishing).
391. Submissions requested that rivers and lakes be habitable to trout, salmon and native species, safe for fishing, and that the fish taken from them be safe for consumption. Some submissions also emphasised the importance of recreational fishing to tourism.
392. Mahinga kai and fishing are relevant to matters of national significance under Part 2 of the RMA. However, a compulsory national value for mahinga kai or fishing is not recommended. Not all the fresh water in New Zealand is valued for fishing or mahinga kai. Attributes have not yet been developed for these values and the cost of providing for the values everywhere is unknown. Councils and communities are required to consider these additional national values and provide for them where appropriate.

### **Attributes**

393. A small group of submissions suggested that attributes for mahinga kai be included in NPS-FM. The discussion document indicated a range of potential attributes that will be considered for mahinga kai in future. Ongoing work is recommended to develop attributes for additional national values.

### **Recommendation**

Proceed with additional national values for mahinga kai and fishing.

## **Food security**

394. Of the submissions which commented on the food security value some suggested that it be a compulsory national value. However, the majority opposed including the value at all because:
- the value overlaps with the “animal drinking water” and “irrigation” values
  - the value implies a greater need for freshwater than other values.
395. Using water to grow food or fibre crops under this value is no different to using water under the irrigation or animal drinking water values. The words “rural communities would be able to access sufficient and suitable water” imply rights to water rather than values or uses of water. Apart from the compulsory national values, the values in Appendix 1 should be described in a way that avoids any prioritisation. The identification of values and choices between them is a task for councils and communities who best understand how values apply locally.
396. We recommend that the proposed additional national value of food security be reworded or merged with the irrigation and animal drinking water additional national values.

## Recommendation

Merge the proposed additional national value of food security with the additional national values for irrigation and animal drinking water.

## Contact recreation

397. The contact recreation additional national value is described in Appendix 1 of the NPS-FM, and is the only additional national value that has an attribute specified in the Appendix 2. The attribute included for contact recreation is the Suitability for Recreation Grade (SFRG).
398. Chapter 5 of this report addresses those submissions supporting primary contact recreation as a compulsory national value. Chapter 5 also discusses options for combining the values and attributes for primary and secondary contact recreation.
399. The SFRG is a combination of an indicator bacteria (*E. coli*) measurement and a qualitative assessment of contaminant sources in the catchment.
400. The catchment inspection provides contextual information to help understand the potential health risks from disease-causing organisms that may be present in the water body, such as *Giardia*, that may not be well associated with the indicator bacteria *E. coli*. The SFRG attribute was proposed because it reflects the existing international and national guidelines for managing human health risk in recreational waters.

### The SFRG attribute

401. Some submissions were opposed to using SFRG as the attribute for contact recreation. Those opposed included submissions from Local Government, which stated that more work is needed on SFRG in the New Zealand guidelines.
402. One of the key themes in submissions was that *E. coli* should be used as the attribute for contact recreation rather than SFRG. The reasons given were that SFRG is not numeric, is overly conservative, and needs to be reviewed.
403. Some submissions also noted that the SFRG attribute provides little information about the different states and relies on prior knowledge of how SFRG operates.
404. There are good reasons to use *E. coli* levels alone as the attribute for contact recreation. Using *E. coli* would provide a clearer numeric attribute upon which to base freshwater objectives. It would also be easier to set limits based on an *E. coli* measurement rather than setting limits to address assessed catchment risk.
405. The Science Review Panel preferred using *E. coli* alone as the attribute for contact recreation. However, they noted that catchment inspections should be encouraged because they are a vital piece of information that contributes to managing health risks. If *E. coli* is to be used as the attribute for contact recreation without the catchment assessment component of SFRG then guidance is recommended to reinforce the ongoing value of catchment inspections for the purpose of managing day to day human health risks. This day to day risk management may be independent of long-term freshwater objective setting.

### Minimum acceptable state

406. Some submissions are concerned that the “fair” grade of SFRG is too low for a minimum acceptable state.
407. The minimum acceptable state is based on a 1 to 5 per cent infection risk. This is consistent with the New Zealand primary contact recreation guidelines which are based on World Health Organisation practice. The Science Review Panel consider that the minimum acceptable state is valid based on its consistency with existing guidelines.

### Further attributes for contact recreation

408. Some submissions noted that attributes for water clarity, cyanobacteria and periphyton are missing and should be included.
409. Periphyton was proposed as an attribute for ecosystem health and will be managed everywhere as part of the proposed compulsory national value. Levels of periphyton suitable for contact recreation may be different. We recommend future work on a periphyton attribute for contact recreation.
410. Using benthic cyanobacteria as an attribute for contact recreation is also not recommended at this stage because of the limited data available. However, we recommend future work nationally on the attribute, drivers of benthic cyanobacteria, and the impacts of a minimum acceptable state.

#### Recommendation

Amend the attribute for contact recreation so that it is based on *E. coli* alone.

Note that options for combining the contact recreation attribute with the attributes for human health (secondary contact recreation) are discussed in Chapter 5 along with an option to retain a separate the additional national value for contact recreation.

## Wai Tapu

411. One submission suggested that the use of water for ceremonial purposes (such as tohi, pure, iriiri) should also be included in the value. We consider the description of wai tapu is broad enough to encompass a wide range of ceremonial purposes.
412. The description of the wai tapu value includes the words “preferred sites are accessible (physically and legally)”. While we acknowledge that values cannot be realised in a water body if it is inaccessible, access rights are not something that can be changes through the NPS-FM. Deletion of these words is recommended as they do not relate to the value of the water itself and the value description cannot be used to alter legal or property rights. Other NOF values (for example contact recreation) do not include elements of physical and legal accessibility.

#### Recommendation

Proceed with the additional national value of wai tapu but delete the reference to site accessibility (physically and legally).

## Water supply

### Link with drinking water standards

413. A small group of submissions asked for consistency between the water supply value and the Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007 (drinking water NES) and World Health Organisation standards. One submission asked that reference to water “safe for drinking without treatment” should be removed because source water should not have to comply with drinking water standards.
414. There are currently no attributes included for the water supply value. Any attributes that are developed will need to be consistent with the drinking water NES and take into account existing guidelines and drinking water standards.

### Compulsory or additional value

415. A number of submissions wanted water supply to be a compulsory national value or stated that all waters should be safe for drinking.
416. We do not recommend making water supply a compulsory national value. There are currently no attributes proposed for the water supply value and the costs of a compulsory value have not been quantified.

### Water supply for domestic use

417. Submissions commented that the “Wai Māori/drinking water” heading in this section could be interpreted narrowly as just drinking water, to the exclusion of other uses of domestic water supply such as cleaning, sanitation, and gardening.
418. We recommend the value be amended to be broad enough in scope to include the range of uses for domestic water from large municipal supplies to small scale supplies. The values should not be narrowed to imply that all water taken for domestic or municipal supply is used for drinking.

#### Recommendation

Amend the proposed water supply value to ensure it is not read narrowly as only relating to drinking water.

## Animal drinking water

419. One submission suggested that the animal drinking water value be a compulsory national value and specify animal drinking water as being a priority take.
420. Not all water bodies in New Zealand are used for animal drinking water. Attributes for this value have not been developed. The impact of making animal drinking water a compulsory national value is unknown and it is not recommended.

## Irrigation

421. One submission suggested that irrigation be a compulsory national value. Not all water bodies in New Zealand are used for irrigation. Attributes for this value have not been developed. The impact of making irrigation a compulsory national value is unknown and it is not recommended.

## Hydro electric power generation

### Different types of generation

422. Submissions from the Energy Sector noted that the additional national value of hydro electric power supply is described too narrowly and should also include water valued for geothermal and thermal electricity generation.
423. Various types of electricity generation use fresh water and value it accordingly. Recognising those values alongside hydro electric power generation means the values would be grouped according to the end purpose for the fresh water (electricity generation).
424. However, amending the additional national value is not recommended. Hydro electric power generation can be seen as an independent value because it includes unique qualities such as hydraulic gradient. By comparison, the way in which water is used for geothermal and thermal power generation is similar to that for other industrial activities. The additional national value of commercial and industrial could cover these uses of water for cooling in power generation.

## Fire-fighting

425. Submissions questioned the proposal to group the value of fire-fighting under the heading “Āu Putea/economic or commercial development”.
426. This value can be deleted from Appendix 1 as section 14(3) of the RMA already explicitly provides for the use of water for firefighting. A broader value for domestic and municipal water supply would also cover water used for firefighting.

### **Recommendation**

Delete the proposed additional national value of fire-fighting.

# 14 Values not proposed for Appendix 1

427. Submissions suggested adding further values to the list of proposed national values in Appendix 1 of the NPS-FM. The suggested values that are linked to Te Mana o te Wai are discussed in the Chapter 3, while those closely related to the ecosystem health value are discussed in Chapter 4. The remaining suggested values are discussed in this chapter.
428. Submissions suggested the following values be added to Appendix 1: aquaculture, commercial fishing, tourism, historic heritage, dilution and disposal of waste or storm water, threatened species, and variations on natural character and ecosystem health.
429. In assessing whether a value should be included in Appendix 1 and the appropriateness of the value description relevant matters to consider include:
- a. Whether the value is an intrinsic value of the water body itself, or is a use that relies on the water body, and can be used to describe qualities or characteristics of the water that support the value or use
  - b. Whether the value reflects and helps clarify matters in Part 2 of the RMA
  - c. The value should not imply a priority over other values, especially the compulsory values
  - d. Values should not duplicate one another, although some overlap in attributes for different values is anticipated
  - e. Whether the value broad enough to encompasses the different ways people express the value and the different water bodies to which it might apply
  - f. Whether the value could be linked to attributes so that freshwater objectives can be set in regional plans
  - g. The value should not be highly localised.
430. Adding further values is not recommended. The list of additional national values is not exhaustive. Regional councils and communities can identify and provide for other values as needed.



# 15 Attributes not proposed for Appendix 2

432. Submissions suggested adding more attributes to the proposed Appendix 2 of the NPS-FM. Suggested attributes for Te Mana o te Wai are discussed in Chapter 3, while those closely related to the ecosystem health value are discussed in Chapter 4. The remaining suggested attributes are discussed in this chapter.

433. We have used the following criteria were used to guide the assessment of each proposed attribute:

1. Link to the National value
  - Is the attribute required to support the value?
  - Does the attribute represent the value?
2. Measurement and band thresholds
  - Are there established protocols for measurement of the attribute?
  - Do experts agree on the summary statistic and associated time period?
  - Do experts agree on thresholds for the numerical bands and associated band descriptors?
3. Relationship to limits and management
  - Do we know what to do to manage this attribute?
  - Do we understand the drivers associated with the attribute?
  - Do quantitative relationships link the attribute state to resource use limits and/or management interventions?
4. Evaluation of current state of the attribute on a national scale
  - What do we know about the current state of the attribute at a national scale?
  - Is there data of sufficient quality, quantity and representativeness to assess the current state of the attribute on a national scale?
5. Implications of including the attribute in the NOF
  - Do we understand/can we estimate the extent (spatial), magnitude, and location of failures to meet the proposed bottom line for the attribute on a national scale?

434. Adding further attributes is not recommended at this time. Only a partial list of attributes is proposed in this amendment. As indicated in the discussion document further work will be undertaken to add further attributes to the NPS-FM in the future. An independent review of the NPS-FM is already planned for 2016 and there may be an opportunity to add further attributes at that time. Settling robust science nationally, looking at management scenarios, and testing the impact of any attribute is an intensive process and should not be ignored.

Regional councils and communities can develop further attributes to address local matters in the absence of nationally defined attributes.

# 16 Resource Management Act

## Part 2 Analysis

435. This chapter looks specifically at the proposed amendments to the NPS-FM and how they contribute to achieving the purpose and principles of the RMA. Existing provisions of the NPS-FM that are not proposed to be amended are not reassessed here. The earlier chapters of this report provide additional details on how the proposed amendments contribute to achieving Part 2 of the RMA. An evaluation of the proposed amendments had been undertaken in accordance with section 32 of the RMA. A further evaluation under section 32AA will also be undertaken once final decisions have been made.
436. In providing an analysis of whether the proposed amendments achieve Part 2 of the RMA, the focus is on the intent of the NPS-FM objectives. The NPS-FM policies are not specifically singled out as their purpose is to implement the objective and therefore support it in its intent. The proposed amendments are intended to form a cohesive process for how to set freshwater objectives as is already required of regional councils under the NPS-FM.
437. The proposed NPS-FM objectives assessed here can be summarise as those applying to the national objectives framework (CA1), freshwater accounting requirements (CC1) and a direction for how to monitor progress toward and achievement of freshwater objectives (CB1). The monitoring requirement of the NPS-FM does not in itself achieve the purpose of the RMA as monitoring is already required. However, it does provide an approach for how to monitor progress toward and achievement of the NPS-FM objectives that contribute to achieving sustainable management.
438. Table 3 outlines how the proposed amendments contribute to promoting the purpose of the RMA – the sustainable management of natural and physical resources – in this case freshwater resources.

**Table 3: Purpose of the RMA**

| <b>439. Purpose of the RMA (s 5(1)) to promote the sustainable management of natural and physical resources</b>   |   |
|---|---|
| <b>Section 5 (2) sustainable management means managing the use, development and protection of natural and physical resources in a way or at a rate which...</b> | Regional councils are already required to set freshwater objectives and limits in regional plans in order to manage fresh water in their regions. The amendments to the NPS-FM provide a planning framework to assist councils in setting effective freshwater objectives and limits so as to better achieve sustainable management of fresh water resources. |
| <b>Enables people and communities to provide for their social, economic and</b>   | The proposed NOF contains social, economic and cultural, values and uses for water. Taking a nationally consistent approach to describing these values and uses will provide certainty for people, communities and resource users and   |

|   |   |
|---|---|
| <p><b>cultural well-being, and</b></p>  | <p>allow a consistent platform for discussion about the regional and local expression of values.</p> <p>It will increase the transparency of the discussions between communities and councils because the values chosen by communities will be clearly linked to the associated freshwater objectives and the effect of the consequent limits will be more apparent. This will provide for comprehensive discussions of the effects of freshwater objective and limits on social, economic and cultural well-being <b>Objective CA1.</b></p>  |
| <p><b>Enables people and communities to provide for their health and safety, while;</b></p>                             | <p>The proposed NOF contains national values and uses relating to the health and safety of communities, including the compulsory national value - human health (secondary contact recreation) which must be provided for, as well as additional national values such as recreation and water supply which must be considered and applied where appropriate. <b>Objective CA1.</b></p>   |
| <p><b>Sustaining the potential of natural and physical resources to meet needs of future generations (s5(2)(a))</b></p> | <p>The freshwater accounting provisions require the gathering of information to assist in setting effective freshwater objectives with limits to achieve them. Limit setting is fundamental to sustaining the potential of natural and physical resources to meet the needs of future generations. <b>Objective CC1.</b></p> <p>The proposed national objectives framework includes national values that relate to sustaining the potential of natural and physical resources (ecosystem health, natural form and character). The mandatory national bottom lines for ecosystem health will ensure that irreversible change does not occur, thus sustaining natural resources to meet the needs of future generations <b>Objective CA1.</b></p> |
| <p><b>Safeguarding the life-supporting capacity of air, water, soil and ecosystems (s5(2)(b))</b></p>                   | <p>The proposed NOF specifies sets of nationally agreed attributes that contribute to the protection of life-supporting capacity. The mandatory bottom lines for ecosystem health will contribute to ensuring that the life-supporting capacity of water and ecosystems is safeguarded <b>Objective CA1.</b></p> <p>The freshwater accounting requirements will ensure regional councils have a total picture of all water taken from a resource and the contaminants entering the freshwater system. With this knowledge appropriate limits</p>  |

|  |  |
|--|--|
|  | on resource use can be set that will safeguard the life-supporting capacity of fresh water <b>Objective CC1</b> .  |
| <b>Avoid, remedy or mitigate adverse effects of activities on the environment (s5(2)(c))</b> | <p>The improved information base generated by the freshwater accounting requirements is essential for improved water management in terms of understanding current pressures and resource availability. This information will facilitate good decision making on further resource use that ensures adverse effects are avoided. It will assist with identifying areas of over allocation and sources of undue contaminant loading that can then be avoided, remedied or mitigated. The thresholds set for each of the attributes are based on avoiding, remedying or mitigating the effects of activities <b>Objective CC1</b>.</p> <p>The requirement to set a freshwater objective above the bottom line (even where it is not currently met) and work over time to achieve it will ensure that adverse effects on the environment are remedied or mitigated. <b>Policy CA1(d)</b>.</p> |

### Matters of national importance

440. In achieving the purpose of the RMA, the matters of national importance in section 6 must be recognised and provided for. The proposed amendments include several elements that directly relate to matters in section 6, including:

- s6(a) The preservation of the natural character of the coastal environment, wetlands, and lakes and rivers**
- s6(b) the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development**
- s6(c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna**
- s6(e) the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga**

441. The National Policy Statement relates to water bodies as defined in the RMA<sup>7</sup> and as such does not directly include objectives and policies for the coastal environment. However, the proposed amendments strengthen the existing requirement to improve integrated management of freshwater including the interactions with the coastal environment with the addition of Policy A1(a)(iii) and Policy C2(b) and so provide for s6(a). The NPS-FM already requires the significant values of wetland to be protected.

442. The national objectives framework contains tables of values and uses, including one for 'natural form and character', which must be considered when setting freshwater objectives and so supports the requirement of s6(a).

<sup>7</sup> In the RMA water body is defined as "freshwater or geothermal water in a river, lake, stream pond, wetland or aquifer, or any part thereof, that is not located within the coastal marine area".

443. Objective B4 requires regional councils to protect the significant values of outstanding water bodies and so directly provides for s6(b).
444. The amendments contribute to s6(c) through Objective A2 which requires the protection of significant values of outstanding water bodies. Habitats of indigenous vegetation and fauna (including aquatic) whether significant or not, are addressed through Objective A1 and the compulsory value of ecosystem health with attendant attributes. These amendments will contribute to ensuring the values outlined in s6(c) are provided for consistently throughout the country.
445. The proposed amendments support the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga. The proposed amendments to the NPS-FM incorporate tāngata whenua values in the national values in Appendix 1. The proposed amendments require councils and communities to consider these values when setting objectives and limits for fresh water. National bottom lines will contribute to tāngata whenua values and freshwater objectives may also be set to provide for specific values of importance to tāngata whenua.
446. Chapter 3 also discusses options for including Te Mana o te Wai in the NPS-FM.

### **Other matters**

447. In achieving the purpose of the RMA, particular regard must be given to the matters listed in section 7. The national objectives framework addresses or provides for several of these matters, including:

**s7(a) kaitiakitanga**

**s7(c) the maintenance and enhancement of amenity values**

**s7(d) intrinsic values of ecosystems**

**s7(f) maintenance and enhancement of the quality of the environment**

**s7(h) the protection of the habitat of trout and salmon**

**s7(j) the benefits to be derived from the use and development of renewable energy**

448. The NOF contains a table of values or uses that must be considered when setting freshwater objectives (Appendix 1 of the NPS-FM). The compulsory national value of ecosystem health that must be provided for with attributes to guide freshwater objective setting to achieve those values specifically contributes to (d)(f) and (h) above. The addition of ecosystem health as more than an objective (as it is in the current NPS-FM) but a specific value that must have a freshwater objective and limits to achieve it, contributes to achieving the sustainable management of the intrinsic values of ecosystems. Additional values that councils and communities must consider when setting freshwater objectives include, recreation (c), natural form and character (c)(d), fishing (h), hydroelectric power generation (j), and tāngata whenua values such as mahinga kai and wai tapu (a).
449. The objective and policies proposed in Part D of the NPS-FM also provide for the involvement of iwi and hapū and ensure tāngata whenua values and interests are identified and reflected in the management of, and decision-making for, fresh water (contributing to (a) above).

450. The freshwater accounting requirements provide for the additional section 7 matters listed below:

**s7(b) The efficient use and development of natural and physical resources**

**s7(g) Any finite characteristics of natural and physical resources**

451. The freshwater accounting amendment to the NPS-FM will achieve this by ensuring councils have a comprehensive understanding of the finite amount of water resource available to be used and the finite ability of the water resource to absorb contaminants (s7(g)). They will use this information to more efficiently allocate fresh water resources, and identify where further allocation of freshwater may be available s7(b)).

### **Treaty of Waitangi**

452. Section 8 of the RMA requires all persons exercising functions and powers under it to take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

453. The recognition of the Treaty of Waitangi in the Preamble of the NPS-FM is not recommended to change. The Treaty of Waitangi is the underlying foundation of the Crown–iwi/hapū relationship with regard to freshwater resources. Addressing tāngata whenua values and interests across all of the well-beings, and including the involvement of iwi and hapū in the overall management of fresh water, are key to meeting obligations under the Treaty of Waitangi.

454. No amendments are recommended to Part D of the NPS-FM, which would continue to support and clarify the Treaty obligations of regional councils under the RMA.

### **Conclusion**

455. The NPS-FM is subject to the RMA, including Part 2. The NPS-FM needs to be consistent with the purpose of the RMA. The proposed amendments promote the purpose of the RMA by providing further direction on how to give effect to it through policy statements and plans. We are satisfied that the proposed objectives and policies of the NPS-FM promote the purpose of the RMA and will assist councils in giving effect to its provisions.