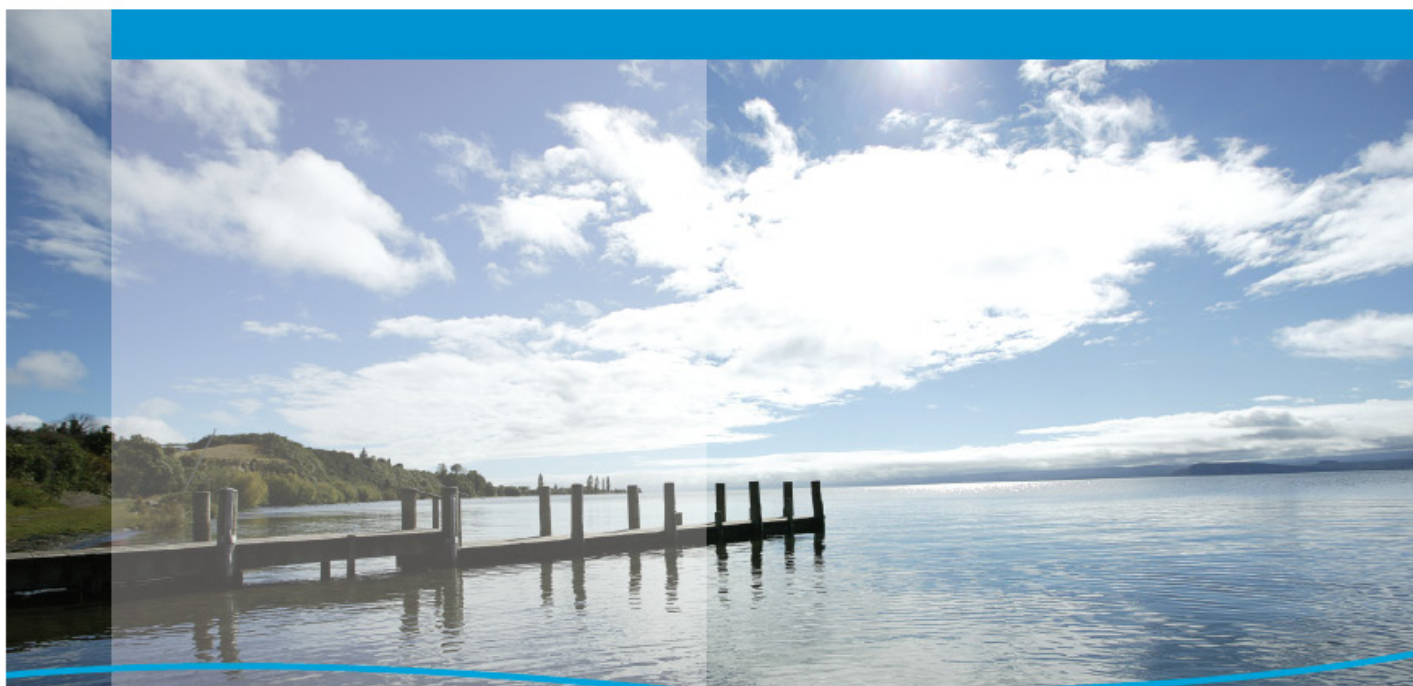


New Zealand Government



Proposed amendments to the National Policy Statement for Freshwater Management 2011

A discussion document

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Contents

Foreword	3
Executive summary	4
1. Introduction	5
2. Why do we need to amend the NPS-FM?	8
3. Options for providing further national direction	12
4. Proposal to amend the National Policy Statement for Freshwater Management	13
4.1 Accounting for water quality and quantity	14
4.2 National Objectives Framework	15
4.3 Compulsory values	23
4.4 National bottom lines	23
4.5 Exceptions to national bottom lines	27
4.6 Articulating tāngata whenua values	29
4.7 Monitoring	30
4.8 Putting it all together	32
5. Implementation	34
6. Future actions on water reform	36
7. What happens next?	37
References	41
Annex 1: Feedback on <i>Freshwater reform 2013 and beyond</i>	42
Annex 2: What is a national policy statement and how is it amended?	44
Annex 3: Proposed amendments to the National Policy Statement for Freshwater Management	46
Glossary of terms used in the National Objectives Framework	76

Foreword

This document follows the March 2013 release of the *Freshwater reform 2013 and beyond* document, which outlined the Government's proposals for reform of our freshwater management system. The changes proposed in this document are the next step in the reform process.

This document represents another critical milestone in the Government's drive to obtain the very best value from our water resources while safeguarding water quality, to provide for the well-being of all New Zealanders and to recognise all of the values we hold for fresh water.

The National Policy Statement for Freshwater Management (NPS-FM) released in 2011 was the Government's first step in improving the way fresh water is managed in New Zealand. The NPS-FM guides and directs the development of freshwater management provisions in regional plans. These plans affect the everyday lives of water users across New Zealand.

The changes proposed to the NPS-FM in this document aim to make the NPS-FM more effective. The Government welcomes your feedback.

Executive summary

In 2011, the Government released a National Policy Statement for Freshwater Management (NPS-FM) that requires regional councils to manage water in an integrated and sustainable way, while providing for economic growth within set water quantity and quality limits. At the time, it was acknowledged that more direction and guidance would be needed to help councils implement the NPS-FM. In addition, some issues have emerged, including:

- some decisions on freshwater management are being made with insufficient information
- there is a lack of clarity about how to manage water to protect community and iwi values
- formulating freshwater objectives that protect communities' values has proved challenging. Costly scientific effort has been duplicated amongst councils. Debate over the science is getting in the way of discussions on values
- there is a lack of national consistency in defining minimum acceptable states for water quality to provide for values of fresh water
- tāngata whenua values for fresh water are not clearly articulated
- there is a need to monitor progress towards achieving freshwater objectives.

These issues may result in decisions that provide insufficient protection for environmental or cultural values, or unnecessarily constrain economic growth and development. In addition, disagreements about decisions can impose additional costs and delays on the planning process, and contested decisions are often transferred to the Courts.

To address these issues, the Government is proposing to amend the NPS-FM. These amendments build on the recommendations of the stakeholder-led Land and Water Forum.

The proposed amendments will ensure that regional councils account for all water takes and sources of contaminants to inform decisions on the setting of freshwater objectives and limits. The proposed amendments also introduce a National Objectives Framework (NOF) to support and guide the setting of freshwater objectives in regional plans. The NOF includes a choice of national values for fresh water, attributes to be managed for each of the values, and an iterative process for how to set freshwater objectives. This first version of the NOF will not be complete, but will be further populated in later versions as the science is progressed.

In addition, the proposed amendments will establish two compulsory national values – ecosystem health and human health for secondary contact – with national bottom lines that provide the minimum level of what is acceptable for freshwater objectives. The existing requirement in the NPS-FM to maintain or improve overall water quality within a region will remain. For waterways that currently breach bottom lines, regional councils and communities can plan to improve the quality over time. Timeframes for adjustment may be long. A framework for deciding on exceptions to the bottom lines is provided for narrowly defined situations where bottom lines would not be met, even in the long-term.

The proposed amendments more clearly articulate tāngata whenua values for fresh water, particularly Te Mana o te Wai. They also provide an approach for monitoring progress towards freshwater objectives.

The proposed amendments to the NPS-FM aim to improve the way fresh water is managed in New Zealand. These proposals are part of the most comprehensive reform of freshwater management in a generation. The Government welcomes your views on the proposals in this discussion document. Details for how to make a submission are in section 7 of this document.



1. Introduction

Background

Fresh water matters to all New Zealanders. It is central to the environment, the economy and our identity. It is a key aspect of who New Zealanders are and what we bring to the world. For Māori, it is a taonga, essential to life and identity. As a nation, the aspirations we have for our water – both in terms of its quality, and how it supports the economy – are high.

Because water is so precious, it is vital that we look after it to achieve sustainable and productive uses that maximise environmental, economic, social and cultural benefits to New Zealanders, now and in the future.

With this in mind, in 2009 the Government set its strategic direction for freshwater reform. Substantial discussion with and among stakeholders, iwi and government has occurred since that time. The Government obtained advice from the Iwi Leaders Group¹ and its advisors, and the Land and Water Forum.² The Land and Water Forum released its first report in 2010 and two subsequent reports in 2012. The Land and Water Forum succeeded in building a consensus on a way forward for freshwater reform. Much of the freshwater policy reform

¹ The Fresh Water Iwi Leaders Groups (ILG) was established in 2007 by the Iwi Chairs Forum to advance the interests of all iwi in relation to fresh water through direct engagement with the Crown. The group comprises the leaders of Ngāi Tahu, Whanganui, Waikato-Tainui, Te Arawa and Tūwharetoa.

² The Land and Water Forum is an independent group of representatives of primary industries, electricity generators, recreational groups, environmental organisations, and iwi, and active observers from regional councils and central government.

being proposed and implemented since 2009 has been built on recommendations of the Land and Water Forum.

How fresh water is managed in New Zealand

In New Zealand, fresh water is managed by regional and unitary councils. In 2011, the Government introduced the National Policy Statement for Freshwater Management (NPS-FM) under the Resource Management Act 1991 (RMA), which outlines national expectations for freshwater management. This was part of a wider programme of work on freshwater management initiatives.

The National Policy Statement for Freshwater Management 2011

The NPS-FM establishes the legal and policy framework for building a national limits-based approach to water management. The NPS-FM requires that overall water quality must be maintained or improved within a region. The NPS-FM also requires that councils safeguard the life-supporting capacity, ecosystem processes and indigenous species (including their associated ecosystems) of fresh water.

By 2030, councils are required to have set freshwater objectives that reflect national and local values. They will need to set flow, allocation and water quality limits to ensure freshwater objectives are achieved. The NPS-FM requires councils to manage fresh water efficiently within set limits and address over-allocation. Councils must manage land use and water in an integrated way. They must also involve iwi and hapū in freshwater decision-making. Councils and communities can choose the timeframes to meet freshwater objectives and limits.

The NPS-FM is at various stages of implementation around the country as regional councils give effect to its policies through regional plans. Three councils intend to implement the NPS-FM in their regional plans by the end of 2014, and the rest have programmes in place for implementing it over a longer time period.

When the NPS-FM came into effect, the Government acknowledged that additional measures would be needed to achieve effective implementation. These additional measures were signalled in early 2013 in the *Freshwater reform 2013 and beyond* document. The changes to the NPS-FM proposed by the Government are part of these additional measures, and are designed to further direct and assist councils to implement the NPS-FM.

Other current proposals for reform of freshwater management

Building on the work of the Land and Water Forum and discussions with iwi leaders, the Government outlined a suite of proposals in the document *Freshwater reform 2013 and beyond* (available on the Ministry for the Environment website) earlier this year. These proposals have been designed to further improve the way fresh water is managed in New Zealand.

In summary, the proposed reforms include:

- amending the NPS-FM as outlined in this discussion document
- including a collaborative planning process for freshwater plan development in the RMA

- strengthening the role of iwi in providing advice and formal recommendations, which a council must consider when drafting plans involving fresh water³
- reviewing the Water Research Strategy
- preparing a range of national guidance materials to support the implementation of the water reform package.

A combination of legislative, regulatory and non-regulatory methods is required to implement these proposed reforms. These are being progressed in addition to the proposal to amend the NPS-FM discussed in this document.

A summary of the feedback on *Freshwater reform 2013 and beyond* is provided in annex 1 of this document.

Importantly, there will still be much more to do. A further suite of freshwater management reforms will follow on from the work outlined above. These were outlined in the *Freshwater reform 2013 and beyond* document.

Purpose of this discussion document

This document sets out the proposed amendments to the NPS-FM, and seeks your feedback. The amendments will:

- ensure freshwater accounting systems are developed to inform decisions on the setting of freshwater objectives and limits
- put in place a National Objectives Framework (NOF) with a suite of national freshwater values, descriptions of certain associated attributes, and a process to use the NOF to support and guide the setting of freshwater objectives
- establish two compulsory national values – ecosystem health and human health for secondary contact recreation – with minimum acceptable states for water quality (national bottom lines), along with a framework for deciding on exceptions to the bottom lines in those few cases where it may be necessary
- more clearly articulate tāngata whenua values for fresh water, particularly Te Mana o te Wai
- provide an approach for monitoring progress towards freshwater objectives.

³ The proposed resource management reforms outlined in the *Resource Management Summary of Reform Proposals 2013* document released in March 2013 includes wider reforms that will provide greater certainty over the role of iwi/hapū in the planning system, and incentivise early engagement between iwi/hapū and councils. The changes support greater consideration of Māori interests in the resource management system, and ensure transparency over how these interests are considered.



2. Why do we need to amend the NPS-FM?

The NPS-FM was a first step towards improving freshwater management in New Zealand. While that was an important move, the Government recognised that further national guidance and support would be necessary to help councils apply it efficiently and consistently.

Areas where further national guidance and direction are needed have emerged, including:

- some decisions on freshwater management are being made with insufficient information
- there is a lack of clarity on how to manage water to protect community and iwi values
- formulating freshwater objectives that protect communities' values has proved challenging. Costly scientific effort to determine the freshwater objectives that correspond to the identified values has been duplicated amongst councils. Debate over the science is getting in the way of the discussions on values
- there is a lack of national consistency in defining minimum acceptable states for water quality to provide for values of fresh water
- tāngata whenua values for fresh water are not clearly articulated
- there is a need to monitor progress towards achieving freshwater objectives.

National direction supports good decision-making and clear accountabilities. Without national direction, there is a risk that councils may make decisions that provide insufficient protection for environmental or cultural values, or alternatively may make overly conservative decisions (limits set which unnecessarily constrain economic growth and development). In addition,

freshwater objectives and limits may be subject to litigation that imposes additional costs and delays and often transfers decisions about freshwater objectives and limits to the Courts.

The proposed amendments would provide clarity and transparency about the required information and processes for setting freshwater objectives. The amendments include the results of scientific analysis to underpin freshwater objective setting for three values: ecosystem health, human health for wading and boating, and human health for contact recreation (eg, swimming). Later amendments will allow the details for other values (eg, fishing, mahinga kai) to be added as the necessary scientific analysis is completed. Providing the processes and scientific analysis to underpin freshwater objective setting in the NPS-FM will improve national consistency and save council resources. This will enable councils to focus on catchment-specific issues when determining the values and uses for fresh water, the future quality of fresh water to aim for, and how to manage resources efficiently and equitably within the limits set.

Some specific issues are described below, and the proposed government responses are outlined in section 4 of this document.

Need for good information

For freshwater objectives and limits set under the NPS-FM to be well-informed, and ongoing management to be effective, there is a need to account for (ie, quantify) all current water takes and sources of contaminants impacting water bodies.

Freshwater accounting provides essential information for current and potential resource users on the amount of resource available in a catchment or freshwater management unit. Accounting can inform communities as to whether water bodies may be used further or when they are approaching full allocation or are over-allocated.

Consultation with a number of regional councils in March-June 2013 has indicated that most councils are accounting for water takes with varying levels of complexity. This reflects the range of resource pressures, capability, capacity, and data availability of regional councils. Accounting for metered water takes will become increasingly accurate as the requirements of the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 progressively take effect. Many councils are also adopting estimation and survey methods to assess unmetered stock and domestic water takes.

In contrast, most regional councils are in the early stages of accounting for contaminant sources. The approaches used vary. Some councils have carried out source analysis in rural catchments using average discharges per hectare from various land uses. Others calculate total loads in the water body, assess loads from monitored point sources, and estimate diffuse sources by calculating the difference. Relatively sophisticated catchment modelling has been used to analyse the sources of contaminants in Lake Rotorua and Lake Taupō.

National guidance and direction on freshwater accounting would improve the robustness of this critical information and also minimise the aggregate national cost of obtaining it.

Need for clarity on processes

A survey of regional councils in December 2012 found that many are finding it difficult to understand how to implement the NPS-FM. There is variation in how councils are currently

going about setting freshwater objectives. Further guidance is needed on the matters that need to be considered when establishing freshwater objectives, and on the processes for identifying values and setting freshwater objectives. The NPS-FM currently provides little support in these areas to councils and collaborative groups that are tasked with developing recommendations on freshwater objectives and limits.

Difficulties formulating freshwater objectives

The 2012 survey of regional councils asked about any difficulties councils were having with interpreting the NPS-FM. All councils cited difficulties with 'defining life-supporting capacity' and seven (out of 16) councils cited uncertainty regarding the difference between numeric freshwater objectives and limits. Half of all councils cited issues with capability and capacity for resourcing the technical investigations and science required to inform freshwater objective and limit setting.

Conducting the scientific and technical work required to underpin freshwater objective setting in every region results in unnecessary repetition of effort. The current process also results in each council having to defend its science and technical work through the plan development process, which is costly for councils, stakeholders and communities.

Central government development of the nationally-applicable technical and scientific aspects of linking values with freshwater objectives is more efficient than councils repeating the same work in each region. For example, the water quality attributes that would enable safe swimming are the same in every region. Incorporating these technical aspects into the NPS-FM would reduce debate and litigation of the science underpinning freshwater objectives in plans.

In addition, the resources and technical capacity necessary to translate the values associated with fresh water into freshwater objectives are substantial. Some councils may not be able to set freshwater objectives that transparently show exactly what changes need to occur to provide for the desired values.

National direction on these aspects would allow regional discussion to focus on community values and the impacts of decisions, rather than on debating the technical detail of how a value is measured and the level at which to set restrictions on contaminants or attributes that affect the value. Regional scientific effort would be focused on aspects that are unique to the catchment or region, and on the economic impacts of proposed objectives, while also working collaboratively with other councils to ensure consistency at a national level. Setting detailed freshwater objectives will make it easier to set limits.

Lack of clearly defined minimum acceptable states for water quality

The NPS-FM does not specify at what level freshwater objectives provide for a community's values. This can create uncertainty and inconsistent approaches to providing for values. The NOF Reference Group recommended that national values of ecosystem health and human health (for secondary contact recreation such as boating and wading) and associated numeric minimums or thresholds (bottom lines) for these values should apply nationally. These recommendations are consistent with the Land and Water Forum proposals.

Without bottom lines, there is uncertainty about the minimum levels at which ecosystem health and human health are provided for. Time and money is spent arguing over what is

appropriate because there are no established scientific bottom lines for the values that communities assign to fresh water.

Tāngata whenua values are not clearly articulated

During the March consultation on the potential water reforms, the Government received feedback from iwi throughout the country that the NPS-FM does not give Te Mana o te Wai sufficient weight. 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).

Providing for Te Mana o te Wai requires maintaining the integrity and mana of the water resource (and consequently all connected resources including land). For Māori and many in the community, this is a primary outcome for managing water and is seen as an overriding goal. Without some recognition of Te Mana o te Wai in the NPS-FM, there is potential that this concept may not follow through to regional plans. Te Mana o te Wai and other tāngata whenua values should be clearly articulated in the NPS-FM.

Need to monitor progress

The NPS-FM does not indicate how regional councils are to monitor their progress towards achieving freshwater objectives. Most regional councils already have monitoring systems in place, but national direction would clarify what is required. Monitoring is essential to determine long-term water quality trends, which inform the council of whether the limits they have set are on track to achieve their freshwater objectives. Councils should have the flexibility to identify representative sites at which they will monitor.

QUESTIONS FOR SECTION 2:

- 1. Have we correctly identified the problems currently associated with implementing the NPS-FM?**
- 2. If not, what problems, if any, have you faced with implementation?**

3. Options for providing further national direction

The Ministry for the Environment and the Ministry for Primary Industries have assessed four options to address the problems outlined in section 2. These options are:

- providing additional guidance material
- creating a new regulatory instrument
- developing a National Environment Standard (NES)
- amending the existing NPS-FM and providing additional guidance.

The options are assessed in the Regulatory Impact Statement and the section 32 evaluation of the proposed amendments, which were released at the same time as this discussion document. They are available on the Ministry for the Environment website. The first three options would not be able to address all the identified problems with the status quo. The preferred option is to amend the NPS-FM and provide additional guidance.

Annex 2 outlines what a national policy statement is and how it is amended.

QUESTIONS FOR SECTION 3:

3. Do you agree that amending the NPS-FM would solve the problems identified in section 2?
4. If not, would additional guidance be sufficient to solve the problems identified?
5. Is there another solution to the problems? Why would that be preferable?

4. Proposal to amend the National Policy Statement for Freshwater Management

Freshwater reform 2013 and beyond outlined the outcomes for freshwater management following the full implementation of reforms. The outcomes included the development of regional plans that are based on sound information, incorporate local values, and are developed with transparent choices in decision-making. The NPS-FM was an important milestone in the process of improving regional planning for freshwater management in New Zealand. The Government is proposing to amend the NPS-FM to make it more effective.

The proposed amendments are outlined below. The proposed drafting for each amendment is provided as annex 3 to this document.

Proposed amendments
1. Requirement to account for water takes and all sources of contaminants (section CC in the proposed NPS-FM).
2. Addition of the NOF including: <ul style="list-style-type: none"> • a menu of values that are important to communities and tāngata whenua (appendix 1 in the proposed NPS-FM) • the associated attributes and attribute states incorporating the science associated with setting freshwater objectives based on the chosen values (appendix 2 in the proposed NPS-FM) • a process for how to use the NOF tables in setting freshwater objectives (policy CA1 in the proposed NPS-FM).
3. Compulsory values of ecosystem health and human health for secondary contact (policy CA1 and appendix 1 in the proposed NPS-FM).
4. 'National bottom lines' for the compulsory values (section CA and appendix 2 in the proposed NPS-FM).
5. An exceptions framework (policy CA2 in the proposed NPS-FM).
6. Clearer articulation of tāngata whenua values for fresh water (preamble and appendix 1 in the proposed NPS-FM).
7. Requirement to monitor progress towards achieving freshwater objectives (section CB in the proposed NPS-FM).

Each proposed amendment is discussed in more detail below. The Government also proposes minor amendments to clarify the wording in some places in the NPS-FM, particularly around councils having regard to the connections between fresh water and coastal water.

4.1 Accounting for water quality and quantity

Making good decisions on freshwater objectives and limits and how to manage within them requires good information on existing resource use. Good information is also required for councils to manage any existing over-allocation. Freshwater accounting is one component of the required information. It requires an assessment of all water takes (including those allowed by regional plan rules, stock and domestic water, and unauthorised takes) and all sources of relevant contaminants (including diffuse discharges⁴). Accounting is a foundation for the iterative decision-making process for councils to set freshwater objectives and limits, and for choosing methods and approaches for managing within those limits. Accounting information can inform communities of water bodies that are over-allocated, or if there is room for further development.

The proposed amendments to the NPS-FM will require councils to:

- establish and operate a water quality and quantity accounting system (policy CC1(a)). Information may include measurements, modelling results or estimates. Information is to be recorded at the level of the freshwater management unit. Freshwater management unit is defined to allow councils to set management units as large or as small as they consider appropriate. For example, a freshwater management unit could be a single catchment, multiple catchments, or part of a catchment. “Freshwater quality accounting system” and “freshwater quantity accounting system” are also defined in the Interpretation section of the NPS-FM
- have accounting systems at a level of detail that is appropriate for the significance of the water quality and quantity issues in each freshwater management unit (policy CC1(b))
- ensure that accounting information is available when setting (or reviewing) limits, and that the information is updated at least every five years for water quality, and annually for water quantity (policy CC2).

A two-year period will be allowed before the accounting requirements take effect. Even after this two-year period, an individual council will only be required to establish and operate accounting systems when they begin setting or reviewing freshwater objectives and limits. This means that councils will have time to collect the data and establish an accounting system for freshwater management units in which limits are to be set or reviewed.

QUESTIONS FOR SECTION 4.1:

Accounting

6. Do you agree with requiring councils to account for all water takes?
7. Do you agree with requiring councils to account for all sources of contaminants?
8. Do you think that the requirements in policies CC1 and CC2 of the proposed NPS-FM amendments have the right balance between national prescription and regional flexibility?
9. Do you think the time period allowed for councils to develop accounting systems is appropriate?

⁴ Diffuse discharges are pollutants sourced from widespread or dispersed sources (eg, from pasture runoff of animal wastes, fertiliser and sediments, as well as runoff of pollutants from paved surfaces in urban areas).

4.2 National Objectives Framework: a framework and process to guide freshwater objective setting

The NPS-FM already requires councils to set freshwater objectives and limits in their regional plans. The proposed changes to the NPS-FM will assist councils in setting freshwater objectives by introducing the NOF into regional planning. The NOF will provide councils with scientific information and a process for setting freshwater objectives. Leading scientists from across New Zealand have been involved in developing and testing the technical information in the NOF, so that it is provided once in the NPS-FM to prevent unnecessary cost and duplication. The NOF provides a framework for choosing values and uses that protect the freshwater environment while allowing allocation of water and its ability to absorb what is discharged into it.

Including the NOF in the NPS-FM will provide councils and communities with:

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

The values, uses, and attributes, and how they would need to be applied are discussed below.

What is a freshwater objective?

An objective is a statement of what will be achieved, or a desired outcome. The NPS-FM defines a freshwater objective as an intended environmental outcome in a freshwater management unit. Freshwater objectives should provide for the values that communities hold for their fresh water. They are a goal or future desired state, not an immediate standard.

Freshwater objectives may be expressed at different levels of detail or precision. They can range from broad narrative freshwater objectives (eg, to provide for secondary contact recreation), to numeric freshwater objectives for specific attributes (eg, to maintain annual median *E. coli* concentrations in the lake at less than 260/100 millilitres). The amendments to the NPS-FM provide a process by which regional councils, iwi, and communities can determine numeric freshwater objectives where this is possible. Numeric freshwater objectives for individual attributes are essential for determining effective limits on resource use.

A choice of values and uses for fresh water

All New Zealanders recognise that there are multiple values to be provided for in water bodies. These may include competing values, and will entail making informed choices about freshwater management. It is proposed that the NPS-FM include a NOF with a menu of values and uses. As part of the freshwater objective setting process, councils and communities must consider all these values and uses and decide whether they apply in each freshwater management unit.

The NOF will include a set of national values and uses outlined in figure 1 (including two compulsory values, outlined below in section 4.3). These are drawn from the preamble of the 2011 NPS-FM and include tāngata whenua values. The list includes values such as contact

recreation (eg, swimming), mahinga kai, food security and irrigation. Two values will be compulsory; other national values must be considered and may be chosen from this list for any particular freshwater management unit. The NOF will guide freshwater objective setting to ensure that the values are achieved to a minimum level (for example, the water body being fit for swimming). In addition to those values in the NPS-FM, regional councils would also be able to adopt other values in their regional plan identified in their planning processes.

Attributes in the National Objectives Framework

Each value will have a number of water quality characteristics, called attributes, which will need to be managed to provide for the value (figure 1). The value chosen determines the attributes that will need to be managed in the freshwater management unit. Some attributes for three of the values are listed in appendix 2 of the proposed amended NPS-FM. Further attributes for values in appendix 1 of the NPS-FM will be added in the future. There is a list of proposed attributes for ecosystem health on page 21.

Each attribute has numbers that correspond with the state (A, B, C or D). The numbers associated with most of the attributes relate to contaminant load. The higher the contaminant load, the lower the water quality state. Taking nitrate toxicity (which is an attribute of ecosystem health) as an example, an A state for a river means that the annual median level is less than 1 mg of nitrate per litre of water (this is the numeric attribute state). At this level, there is no observed effect on any of the species tested. At the other end, a D state means that the level of nitrate is above 6.9 milligrams per litre. Above these levels, the growth of some species becomes significantly impacted, and at higher concentrations (>20 milligrams/litre) there is a risk of death for the most sensitive species. The attributes that currently have numeric states for ecosystem health in rivers also include dissolved oxygen levels below point sources, and a measure of the amount of periphyton (slime) in the river. The attributes that currently have numeric states for ecosystem health in lakes also include chlorophyll *a* (algal biomass), total nitrogen and total phosphorus.

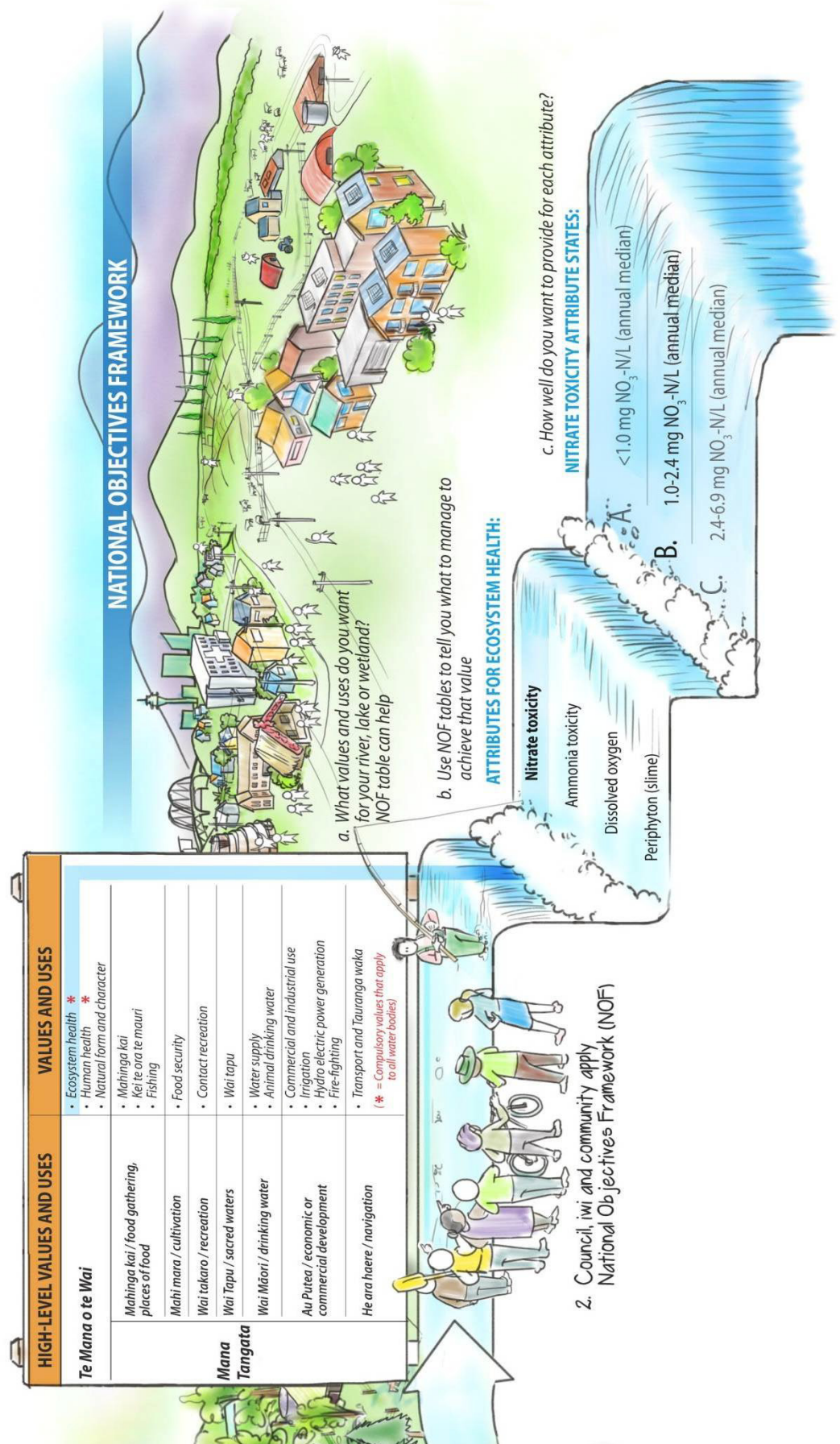
For managing an attribute like periphyton, councils will need to set limits for nutrients like nitrogen or phosphorus and consider management actions such as encouraging increased shading of the river to manage periphyton growth.

A region may choose to manage an attribute to state A, B, or C depending on community aspirations (figure 1). They could not choose the D state as it would not adequately provide for the chosen value. For each attribute, the bottom of state C would be the minimum acceptable state. This means that freshwater objectives would have to be set at or above this level to achieve the corresponding value. The minimum acceptable state is not intended to allow degradation of water quality to this minimum level. Choices about the state must be made in the context of the existing NPS-FM requirement that overall water quality within a region is maintained or improved from the current state.

Maintain or improve

The changes proposed to the NPS-FM will not affect the existing requirement to maintain or improve overall water quality within a region. Councils will continue to have the flexibility to manage their water quality so that overall they are maintaining or improving across a region.

Figure 1: The National Objectives Framework



When a freshwater management unit is currently in the D state, or even if it is in the B or C state but the community wants to improve the existing water quality, the effect on current resource users of improving the water quality may not be immediate. The council could set adjustment times in the plan to enable improvement of water quality over a timeframe that is acceptable to the community.

A process to use for linking values and freshwater objectives

The proposed amendments to the NPS-FM include a process for translating the values associated with fresh water in a region into freshwater objectives. The process will be iterative, as councils and communities revisit previous steps as they consider the environmental and economic impacts of decisions, and the appropriate management methods and timeframes.

Councils will divide their region into freshwater management units for the purpose of planning. The scale of the unit chosen for setting freshwater objectives will be the same as that used for freshwater accounting (section 4.1). Freshwater objectives will apply at the scale of the freshwater management unit.

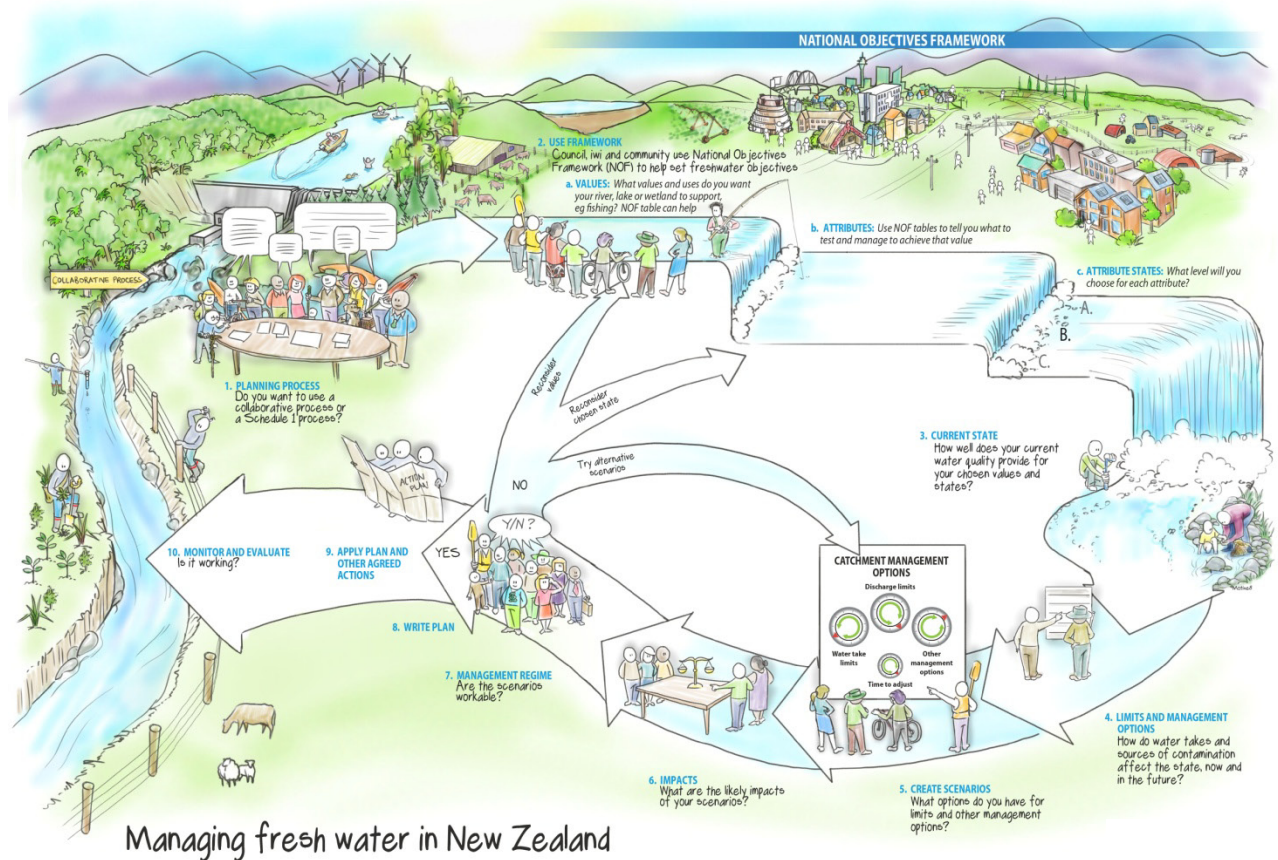
Under the amendments, councils would be required to:

- consider all the values or uses that the freshwater management unit should be managed for (eg, mahinga kai, swimming, irrigation), using the set of national values in the NPS-FM as a starting point, and choose the desired values
- identify the appropriate attributes (eg, *E. coli*, periphyton, dissolved oxygen, etc.) that must be managed to achieve the chosen value. Some may be in the NPS-FM, and the council may have to identify others that are not yet in the NPS-FM (eg, sediment, heavy metals, pH, temperature, invertebrates, etc.)
- choose a desired attribute state for the attributes in the NPS-FM
- develop numeric freshwater objectives for the freshwater management unit at the chosen attribute state, and for any other relevant attributes that are not in the NPS-FM. Numeric freshwater objectives for each attribute allow councils to develop limits to achieve the freshwater objectives. If numeric freshwater objectives cannot be developed, then set narrative freshwater objectives
- as part of an iterative process, consider the following matters when developing freshwater objectives:
 - the current and anticipated future state of the freshwater management unit on the basis of past and current resource use
 - the spatial scale at which freshwater management units are defined (ie, a single water body, part of a water body, or a group of similar water bodies)
 - the limits that would be required to achieve the freshwater objective
 - any choices between the values that the formulation of freshwater objectives and associated limits would require (ie, balancing divergent values or uses)
 - any implications of freshwater objectives (and the associated limits) for resource users and communities, including the actions they take, their investments, ongoing management changes and social and economic outcomes
 - the timeframes for achieving the freshwater objectives (to allow for adjustment), including the ability of regional councils to set long timeframes for achieving targets

- such other matters necessary to giving effect to the NPS-FM, including the requirement to maintain or improve the overall quality of fresh water within a region.

Proposed policy CA1 of the NPS-FM sets out the approach to be followed. This policy directs use of the NOF tables (in proposed appendices 1 and 2 of the NPS-FM), which will assist councils in determining the relevant numeric freshwater objectives for each chosen value of a freshwater management unit. Under the proposed amendments, matters to be considered when setting freshwater objectives would be included in Policy CA1 in the proposed NPS-FM to assist councils in their decision-making about freshwater objectives. The process is shown diagrammatically in figure 2. The NPS-FM would influence steps 2 to 10 in figure 2. An example of the process and alignment with the NPS-FM policies are given in the text box on page 32.

Figure 2: The process for managing fresh water (larger version is reproduced in the back cover)



A partly populated National Objectives Framework

The NOF attribute tables are only partly populated at this stage, with the intention that further additions are made in the future through an amendment to the NPS-FM, possibly in 2016 and 2019. Scientists have agreed on a number of attributes and associated numbers that can currently be applied nationally for ecosystem health, human health for secondary contact recreation, and contact recreation (eg, swimming). Attributes have only been proposed where the science is well developed and scientists agree that they are applicable nationwide. Councils should also set freshwater objectives for attributes that are not yet in the NOF (eg, sediment, heavy metals, pH, temperature, invertebrates, etc.), as these will be important for safeguarding the life-supporting capacity of fresh water.

There is a range of other science work being done to enable further population of the NOF attribute tables over time. The attributes and minimum acceptable states for the other values in appendix 1 may be added to the NPS-FM in the future, when the scientific information to support them is completed. The scientific information used to develop the attribute states is available at www.mfe.govt.nz. It has been tested and agreed upon by groups of experts to ensure transparency and robustness. The research for potential attributes that are to be added in later versions of the NOF will be made available in the future.

Ecosystem health currently includes attributes for rivers and lakes. There are some critical attributes for ecosystem health that are not yet populated such as sediment and macro-invertebrate community measures. Work will continue to develop these attributes so they can be included.

The NPS-FM identifies the need to protect the significant values of wetlands, recognising the vulnerable nature of these ecosystems in parts of the country. Attributes are under development for wetlands with the intention of including them in a subsequent version of the NOF.

The science around ecosystem health for groundwater is in its early stages. As a result, no attributes have been defined for groundwater. Thus the primary control for groundwater will be through how it impacts on ecosystem health for rivers and lakes, and councils will set freshwater objectives for groundwater regionally. Further work will be done to add attributes and numeric states for other national values listed in appendix 1 of the amended NPS-FM in the future.

National Objectives Framework: table of proposed and potential attributes

The following table shows the attributes that are proposed in this amendment (grey boxes). It also indicates the attributes that may be included in future amendments once the science is agreed (white boxes with a tick).

The indicative attributes are based on recommendations from the expert science panels. The two compulsory values are shown, and mahinga kai is included below as an example of the attributes that will be added in the future for this value. Work will continue to determine appropriate attributes for other values. In the meantime, councils will set freshwater objectives for all relevant attributes, both those in the NOF, and those not yet in the NOF.

Grey boxes: attributes with numeric states proposed in Version 1 of the NOF.
 White boxes with a tick: potential attributes under consideration for 2016–2019.
 Blank boxes: attribute not applicable or not available in the near term.

Values	Attributes	Water body type			
		Lakes	Rivers	Wetlands	Groundwater
Ecosystem health	Chlorophyll <i>a</i>	✓		✓	
	Nitrate toxicity	✓	✓		
	Ammonia toxicity	✓	✓		
	Total nitrogen	✓		✓	
	Total phosphorus	✓		✓	
	Dissolved oxygen	✓	✓		
	Periphyton		✓		
	Temperature		✓		
	pH	✓	✓		
	Sediment		✓	✓	
	Invertebrates		✓		
	Fish	✓	✓		
	Salt intrusion				✓
Human health – secondary contact	<i>E. coli</i> – secondary contact	✓	✓	✓	
	Planktonic cyanobacteria	✓	✓		
	Benthic cyanobacteria		✓		
Mahinga kai	Chlorophyll <i>a</i>	✓		✓	
	Nitrate toxicity	✓	✓		
	Ammonia toxicity	✓	✓		
	Periphyton		✓		
	Fish	✓	✓		
	Sediment		✓	✓	
	Cyanobacteria	✓	✓		
	Clarity	✓	✓		
	Heavy metals	✓	✓	✓	
	Organic contaminants	✓	✓	✓	
	Pathogens	✓	✓	✓	

QUESTIONS FOR SECTION 4.2:

National Objectives Framework (NOF)

➤ **Values**

10. Should there be a national set of values as outlined in appendix 1 of the proposed NPS-FM?
11. Are there any additional values that should be included? Why are these values nationally significant/important (recognising that councils can use other values if they wish)?
12. Are there any values that should be deleted from appendix 1 of the proposed NPS-FM and why?
13. Do you agree with the descriptions of the national values in appendix 1 of the proposed NPS-FM?

➤ **Attributes**

14. Do you agree with the attributes associated with the values in appendix 2 of the proposed NPS-FM?
15. Do you agree with the numeric attribute states in appendix 2 of the proposed NPS-FM?
16. Do you agree with the narrative attribute states in appendix 2 of the proposed NPS-FM?

➤ **Timing**

17. Do you agree with putting a NOF in the NPS-FM now, including only the attributes for which there is adequate evidence, and updating it as the scientific basis for further attributes and states becomes available?
18. Or should the Government delay putting the NOF into place until a more comprehensive set of attributes has been developed?

Process for freshwater objective setting

19. Do you agree with having the process requirements to link values and freshwater objectives directed in policy CA1 in the proposed amendments? If not, why not?
20. Do you think the process outlined will work? If not, why not?
21. Do you agree with the proposed matters in policy CA1(f) that must be considered when establishing freshwater objectives? If not, why not?
22. Is it clear that setting freshwater objectives is an iterative process which involves consideration of the impacts of the limits, management methods, and timeframes required to meet a potential freshwater objective?
23. Do you agree that regions should have discretion to determine timeframes for meeting freshwater objectives?
24. Are there any aspects of the process that are not clear?

4.3 Compulsory national values

Some values are so important to all New Zealanders that they are likely to apply to all water bodies. The Land and Water Forum recommended the NPS-FM should include requirements to safeguard human health. The NOF Reference Group recommended making ecosystem health and human health compulsory values throughout New Zealand.

A compulsory value of ecosystem health will contribute to the existing requirement in objectives A1 and B1 of the NPS-FM to safeguard the life-supporting capacity of freshwater ecosystems. The proposed attributes for ecosystem health are:

- chlorophyll *a*, total nitrogen and total phosphorus for lakes
- nitrate toxicity and ammonia toxicity for lakes and rivers
- dissolved oxygen (below point sources) and periphyton for rivers.

To contribute to safeguarding human health, the proposed amendments add a requirement to safeguard human health for secondary contact recreation (eg, boating and wading) to objective A1 in the NPS-FM, and as a compulsory value throughout New Zealand in section CA. For both rivers and lakes, the proposed attributes for human health for secondary contact recreation are:

- *E. coli*
- planktonic cyanobacteria.

These are the attributes that have numeric states ready and have been recommended for the first version of the NOF by expert science panels. More attributes are proposed for the next few versions of the NOF, as indicated in the table on page 21. Councils must set freshwater objectives for other appropriate attributes (eg, sediment, temperature, pH, heavy metals, macro-invertebrate communities) for each freshwater management unit.

The compulsory values contribute to Te Mana o te Wai (the mana of the water), which is explained further in section 4.6 on more clearly articulating tāngata whenua values. Appendix 1 of the proposed NPS-FM also sets out additional values, including tāngata whenua values, that must be considered for managing fresh water. Communities could choose to manage their water bodies for these values, but they would not be required to.

QUESTIONS FOR SECTION 4.3:

Compulsory values in the NPS-FM

25. Do you agree that ecosystem health should be a compulsory value?
26. Do you agree that human health for secondary contact recreation (such as boating and wading) should be a compulsory value?
27. Do you think there should be more compulsory values? If so, what should they be, and why? What attributes should be associated with them?

4.4 National bottom lines

The amended NPS-FM defines minimum acceptable states, called “national bottom lines”, for each of the attributes of the two compulsory values (ecosystem health and human health). The proposed bottom lines are in appendix 2 of the amended NPS-FM. The bottom lines set the minimum level at which the compulsory values are provided for. The quality of most water

bodies is already above the proposed bottom lines. In the few water bodies where the bottom lines are not currently met, freshwater objectives would need to be set at the bottom of the C state or better for all attributes relating to ecosystem health and human health for secondary contact recreation (listed above in section 4.3), unless the criteria for an exception can be met (outlined in section 4.5). It is not intended that water bodies can be degraded down to the bottom lines. Councils must continue to meet the existing NPS-FM requirement to maintain or improve the overall water quality within a region.

Setting national bottom lines provides a degree of protection for values widely held across New Zealand. Having national bottom lines for some key attributes relating to human health and ecosystem health will assist councils and communities by providing clarity on the minimum acceptable states required. This is expected to reduce costs and litigation associated with the preparation of regional plans.

The proposed national bottom lines are those recommended by expert science panels of New Zealand's leading scientists on fresh water, and were tested with the NOF Reference Group. The proposed national bottom lines reflect the consensus reached by the scientific experts involved.

The proposed national bottom lines for ecosystem health are set at a level for those attributes that supports resilient ecosystems. They are set at a level that protects against significant adverse effects, and in some cases are set a safe distance above where you might expect to see irreversible damage to the ecosystem. For ammonia and nitrate toxicity, the bottom lines are set at a level that protects 80 per cent of freshwater species from any effects on growth. This means that nitrate and ammonia levels in the water start affecting the 20 per cent most sensitive species. These 20 per cent most sensitive species may experience some impaired growth. This level is being proposed as the minimum level at which regions can set their freshwater objectives for these attributes. Communities can choose to set freshwater objectives at a higher level to provide greater protection to freshwater species.

The proposed national bottom lines for human health apply to 'secondary contact recreation', which is defined as wading or boating (except boating where there is high likelihood of immersion in the water body). The bottom lines are based on the lower risk of ingesting or inhaling water during secondary contact recreation, compared with activities such as swimming that involve full immersion in the water body. The proposed human health bottom lines are set at 5 per cent infection risk from *E. coli*, and a low risk of health effects from cyanobacteria, when using water for wading or boating. Again, this level is being proposed as the minimum level at which regions can set their freshwater objectives. A more stringent attribute state can be chosen if a lower risk of infection is desired. In addition, contact recreation can still be chosen as a value for a particular freshwater management unit if the community desires a higher level of protection for swimming and other activities that involve full immersion.

National bottom lines will not directly set standards but will inform long-term freshwater objectives. Thresholds for each attribute are an annual median. This means that they would not be measured from a single water quality test, but rather as the median of a number of tests measured at regular intervals over a year. Changes in water quality occur over long periods. Establishing trends is only measurable over a period of years. Therefore communities can expect that improvements will be observable over long time periods.

Where the quality of a given freshwater management unit is below a national bottom line, the proposed amendments require councils to set a freshwater objective at or above the bottom line, and set an initial limit on resource use. Targets would need to be set so that, over an

agreed time period, water quality would improve and the bottom line (and chosen freshwater objective) would be met.

Mitigation options and impacts of choices will vary from region to region. Where management practices or land uses need to change to achieve a bottom line, councils and communities need to determine a longer adjustment period to spread out the costs and minimise disruption during regional plan development. Flexible timeframes for meeting freshwater objectives will enable improvement over a period that is acceptable to communities and minimise the impacts of change.

If a council and community are concerned, however, about the impacts of setting freshwater objectives immediately, then proposed policy CA3 provides a transitional arrangement. The council and community can approach the Government to ask to temporarily set a freshwater objective below a bottom line for an agreed period. If appropriate, the water body would be listed in appendix 4 in the NPS-FM, along with the maximum timeframe for which the transitional arrangement applies. This would need to be done through an amendment to the NPS-FM, and would be consulted on.

Impacts of national bottom lines

The impacts of the bottom lines for attributes that are proposed to be included in the NOF in this amendment have been modelled. The quality of most water bodies in New Zealand complies with the proposed bottom lines. The impacts of future attributes are not known but will be presented when the Government consults on adding these to the NPS-FM in the future.

Measurement and modelling work indicates that for ecosystem health:

- no rivers or lakes breach the proposed ammonia toxicity bottom line
- less than 1 per cent of rivers and lakes breach the proposed nitrate toxicity bottom line
- less than 1 per cent of rivers breach the proposed periphyton bottom line in Wellington and Southland. In the Manawatu-Wanganui region, the bottom lines for periphyton levels are breached at 10 per cent of sites.
- out of 110 monitored lakes in New Zealand:
 - 24 breach the proposed chlorophyll *a* bottom line
 - 26 breach the proposed total nitrogen bottom line
 - 18 breach the proposed total phosphorus bottom line.

Only 3 per cent of lakes are monitored because they are known to have problems or because they are popular recreational sites. A large number of the lakes breaching bottom lines are lowland lakes.

Measurement and modelling work indicates that for human health:

- less than 2.3 per cent of lakes and rivers breach the proposed *E. coli* bottom lines
- 6 out of 68 monitored river sites and 6 out of 16 monitored lake sites breach the proposed cyanobacteria bottom lines.

Very few sites are monitored for cyanobacteria. They are monitored because they are known to have problems with cyanobacteria, or because they are popular recreational sites.

Economic impact studies have been carried out in Southland, Canterbury and Upper Waikato. These regional studies provide valuable information on the likely impacts in a given catchment. The three regions were selected because they:

- face challenges with water quality
- are at an appropriate stage of developing regional plan changes
- have significant dairy expansion underway
- are likely to be the most impacted by proposed national bottom lines.

The **Southland** study provides information on the impact of national bottom lines for both ecosystem health and human health through the attributes of periphyton (slime), nitrate toxicity and microbial contamination (*E. coli*) in rivers. The study evaluated the potential impacts on the agricultural sector, the municipal and industrial sectors and on non-market values. For agriculture, the Southland study tested various scenarios against a 2037 baseline of forecast growth in total agricultural production and in dairying, without action to reduce nutrient leaching. Results of the Southland study indicate:

- the proposed national bottom lines for ecosystem health in rivers that were tested in Southland do not impose costs. Water quality will be maintained above bottom lines for periphyton (slime) and annual median nitrate toxicity under all scenarios tested (including scenarios that expand dairying)
- the status quo requires councils to maintain or improve overall water quality for their regions. Maintained or improved water quality would be achieved under all scenarios tested for periphyton and annual median nitrate toxicity. Dairy growth can be achieved while maintaining or improving water quality
- the proposed national bottom line for human health in rivers (5 per cent or greater risk of infection during secondary contact recreation) is breached at 7 per cent of the monitoring sites tested for *E. coli*. In Southland mitigation measures only on dairy farms will not be sufficient to ensure the *E. coli* national bottom line is met. Fencing of waterways on surrounding sheep and beef farms as well as on dairy farms would be required. The majority of costs for this mitigation would be met by sheep and beef farms, as most dairy farms already have fencing in place.

In **Canterbury**, the Hinds and Selwyn-Waihora zones were studied. The proposed human health national bottom line is currently met in both zones. A number of water bodies in Hinds, however, currently fall below the nitrate toxicity national bottom line for ecosystem health.

The Hinds zone contains the most significant breaches of the nitrate toxicity bottom line in the country and has four out of six of the monitored sites in New Zealand that currently breach the proposed threshold. Meeting national bottom lines in Hinds will require a 45 per cent reduction in nitrate leaching after the expansion of irrigation in the zone and dilution through the release of water from alpine rivers into the catchment. The additional cost of the proposed national bottom line in the Hinds zone is estimated to ultimately be \$22 million per annum or 7 per cent of the zone's projected agricultural net income. This is based on a policy of nutrient trading. Less efficient policies would increase the cost. On-farm mitigation is insufficient to meet the restrictions imposed by the proposed bottom line threshold; these restrictions would likely drive land-use change with some of the anticipated dairy conversion not proceeding.

In Selwyn-Waihora current plan proposals are consistent with meeting nitrate toxicity national bottom lines.

The impacts of national bottom lines in the **Upper Waikato** catchment will be minimal. In the Upper Waikato the proposed bottom lines for ecosystem health are already being met. The national bottom line for *E. coli* (human health) is currently met in all but one monitored site in the Upper Waikato.

The current objectives in the Waikato River Authority's Vision and Strategy (including swimability and mahinga kai) will also likely be more stringent than both the proposed national bottom lines and the requirement in the NPS-FM to maintain overall water quality within the region. The Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010 states at section 12(1)(a) that the Waikato River Authority's Vision and Strategy prevails over any inconsistent provision in a national policy statement.

QUESTIONS FOR SECTION 4.4:

National bottom lines

28. Should there be numeric bottom lines for attributes of the compulsory values?
29. Do you agree with the proposed level at which bottom lines would be set for each attribute of ecosystem health? If not, at what level should they be set?
30. Do you agree with the proposed level at which bottom lines would be set for each attribute of human health for secondary contact recreation? If not, at what level should they be set?
31. Do you agree that transitional arrangements should be provided to allow councils and communities to set objectives below a national bottom line for a short time?

4.5 Exceptions to national bottom lines

Proposed policy CA2 in the NPS-FM would allow a regional council to set a freshwater objective below a national bottom line in narrowly defined situations. Exceptions are needed to recognise circumstances where it is not feasible or possible to improve water quality to the required level. The Land and Water Forum acknowledged the need for exceptions to national bottom lines in certain circumstances.

The proposed circumstances when an exception might apply are where a freshwater management unit:

- is contaminated from natural processes, such as a native bird colony nesting above a river which causes *E. coli* levels to breach national bottom lines for *E. coli*
- 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.

Decisions on whether to allow an exception under these grounds would be made by regional councils as part of the regional planning process. The checks and balances of the planning process would apply to exceptions decided by regional councils, including iwi and public input, submissions, hearings, and possible appeals.

Exceptions are also proposed where water quality is affected by significant existing infrastructure. Such exceptions will likely apply to river reaches that cannot meet bottom lines due to established infrastructure such as hydroelectricity generation or drinking water dams that are authorised to take most or all of the water out of a stretch of river. These sorts of exceptions would only be used in limited situations and would be decided by the Government

rather than regional councils. An amendment to the NPS-FM would be required to create an exception for significant existing infrastructure and the freshwater management unit would be listed in appendix 3 of the NPS-FM. The process would involve public consultation for each exception proposed.

Where an exception to bottom lines is proposed to allow for significant existing infrastructure, the Government will assess the situation using a set of criteria:

1. the need for an exception must arise because of limited efficient or effective management options for significant existing infrastructure
2. the significant existing infrastructure affecting the water body must enable economic benefits that have a significant impact on national or regional GDP
3. 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).

At this point, the Government is consulting on the concept of an appendix of exceptions for significant existing infrastructure in the NPS-FM, and seeking feedback on what might be listed in it. No water bodies will be added to appendix 3 in this amendment of the NPS-FM. There will be further consultation on the specifics of what is included in appendix 3 before the NPS-FM is amended to include them, possibly in 2016-2017.

The Government anticipates there will be very few instances that need an exception and that communities will instead be able to put a plan in place to work toward bottom lines over time.

QUESTIONS FOR SECTION 4.5:

Exceptions framework

32. Do you agree that there could be exceptions where the natural state of the freshwater management unit breaches bottom lines? Where in your region do you think this type of exception might apply?
33. Do you agree that there could be exceptions where historical activities have created impacts on water quality and the reversal of those impacts is not reasonably practicable, either physically or ecologically, even in the long term? Where in your region do you think this type of exception might apply?
34. Do you agree that there could be exceptions for significant existing infrastructure (eg, dams), where a choice is made to manage a freshwater management unit below bottom lines? Where in your region do you think this type of exception might apply?
35. Do you agree that freshwater management units eligible under the first two exceptions above should be decided by regional councils?
36. Do you agree that those freshwater management units eligible for an exception due to the effects of significant existing infrastructure should be decided at a national level and included in appendix 3 of the NPS-FM?
37. What should the criteria be for allowing exceptions due to the effects of significant existing infrastructure?

4.6 Articulating tāngata whenua values

Te Mana o te Wai

One of the clear messages the Government has taken from consultation on the potential water reforms in March 2013 is the need for Te Mana o te Wai to be expressed in the NPS-FM.

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). For Māori and many in the community this is a primary outcome for managing water and is seen as an overriding goal. Without explicit recognition of Te Mana o te Wai in the NPS-FM, there is potential for a lack of recognition of the inherent mana of the water to follow through to regional plans, and then be lost in consideration of resource consent applications.

Te Mana o te Wai could be expressed in a number of different ways and different places in the NPS-FM. The proposed amendments to the NPS-FM to express Te Mana o te Wai are:

- expanding the preamble to articulate the importance of Te Mana o te Wai and how the NPS-FM will contribute to Te Mana o te Wai, recognising the relationship that tāngata whenua have with fresh water
- adding Te Mana o te Wai as a national value in appendix 1 through te hauora o te wai (the health and mauri of water), te hauora o te taiao (the health and mauri of the environment), and te hauora o te tangata (the health and mauri of people), which relate to ecosystem health, human health for secondary contact recreation, and natural form and character and their water quality attributes.

A further option is to include Te Mana o te Wai in Objective A1 in the NPS (see box below). This option has been included in square brackets in the proposed amendments to the NPS-FM because the implications of expressing Te Mana o te Wai in this way are less clear than for other ways of expressing Te Mana o te Wai, and other aspects of the proposed amendments.

The preamble describes the considerable importance of water to New Zealanders and has been written to assist with the interpretation of the NPS-FM. By articulating the importance of Te Mana o te Wai in the preamble, councils and communities will be provided with better direction about how integral Te Mana o te Wai is to the management of fresh water in New Zealand. Councils are able to be guided by the preamble to help them give effect to the NPS-FM in their regional plans. However, it is also possible that councils and communities would remain unsure how to recognise Te Mana o te Wai in their freshwater management roles, by the preamble standing alone without supporting information. This could result in councils either doing no more than they do currently under the status quo, or spending considerable time discussing and debating with the community about what form of recognition is appropriate in their regional plans.

Te Mana o te Wai, as defined in the preamble of the NPS-FM, is represented by the values of ecosystem health, human health, and natural form and character in appendix 1 of the NPS-FM. Two of these values contribute to achieving the objective A1 requirements to safeguard the life-supporting capacity of freshwater and human health for secondary contact recreation. Natural form and character is a value that must be considered under the NPS-FM, and councils, iwi and communities can choose to manage their water bodies for this value. Adding Te Mana o te Wai as a value in appendix 1 of the proposed NPS-FM enables iwi to articulate the value at

a local level, and have it provided for through managing the associated attributes for those values. It provides a more informed platform for conversations between the community, iwi, and councils when councils are changing their regional plans.

Further option for expressing Te Mana o te Wai

In addition to the proposals outlined above, Te Mana o te Wai could potentially be added to objective A1 of the NPS-FM as a matter that must be safeguarded alongside life-supporting capacity and human health for secondary contact. This text, and an associated definition, is included in the proposed amendments to the NPS-FM in square brackets. The Government is seeking feedback on whether this is an appropriate way to express Te Mana o te Wai, in addition to the proposals outlined above.

Adding Te Mana o te Wai as an objective in the NPS-FM would likely have the effect of making natural form and character a compulsory value, as this constitutes part of Te Mana o te Wai through te hauora o te taiao (the health and mauri of the environment).

The Government is seeking feedback on this and other potential implications of including Te Mana o te Wai as an objective in the NPS-FM, such as ease of interpretation in the planning context, expected or unintended consequences, and how including it might change the cost-benefit profile of the amendments (see sections 4.3-4.4).

Articulating tāngata whenua values

The proposed amendments to the NPS-FM incorporate tāngata whenua values into the national values in appendix 1 of the proposed NPS-FM. Appendix 1 uses both te reo Māori and English terms for these values, recognising the broad applicability of most of the values to the whole community (eg, *mahinga kai* or places for food gathering, *wai tākaro* or water used for recreation). The setting of national bottom lines will contribute to specific values of importance to tāngata whenua.

QUESTIONS FOR SECTION 4.6:

Articulating tāngata whenua values

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

4.7 Monitoring

An addition about monitoring plans is proposed in section CB of the NPS-FM. These changes provide an approach for monitoring of progress against freshwater objectives over time, and complement the accounting requirements. Regional councils already have monitoring systems in place and could continue to use these. The changes require regional councils to identify a range of representative sites at which to monitor progress towards (or achievement of) freshwater objectives. The additions also recognise that water quality needs to be monitored for changes in long-term trends.

The tables in appendix 2 of the proposed NPS-FM provide consistency for measuring and monitoring attributes by providing the relevant statistic(s) for each attribute (for example, a median value for an average year, which is averaged over a specified number of years, eg, 5 years). Guidance on monitoring will also be provided in the context of the Ministry for the Environment's broader national environmental monitoring and reporting initiative. The new requirement in the NPS-FM links to this monitoring initiative and can be integrated with councils' existing monitoring programmes. The results of the monitoring will aid public understanding of the existing states of freshwater management units in terms of the national bottom lines, and indicate the progress over time of councils' efforts to maintain or improve the quality of fresh water in their regions.

QUESTION FOR SECTION 4.7:

Monitoring

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

4.8 Putting it all together

Figure 2 and the following text box illustrate how the proposed amended NPS-FM is expected to work within the context of freshwater planning.

How freshwater objectives would be set using the National Objectives Framework	
Steps ⁵	Policy in NPS-FM
<p>1. Preliminary steps:</p> <p>a. <i>Define the boundaries of the freshwater management units in the region for which freshwater objectives will be set.</i></p> <p>b. <i>Consider the current state of the freshwater management units, and how it might change in the future, the values currently provided for, and the level to which they are provided. Consider whether this is acceptable or not to the community.</i></p> <p>2. Determine what the plan will include:</p> <p>a. <i>Consider and select desired values from the list in appendix 1 of the amended NPS-FM (eg, swimming), including the two compulsory values (eg, ecosystem health and human health for secondary contact recreation).</i></p> <p>b. <i>Identify the attributes that need to be managed and the attribute states required from the tables in appendix 2 of the amended NPS-FM (eg, E. coli state B which provides infection risk from E. coli no greater than 1 per cent). The attribute state must be set at C or better. Where the current state is in D, a target and timeframe for meeting the target (and ultimately achieving a C state or better) must be set.</i></p> <p>c. <i>If attributes are not provided in appendix 2, do local work to determine what attributes need to be managed (eg, sediment, heavy metals).</i></p> <p>d. <i>If desired values are not included in appendix 1, do local work to identify any other values and their attributes.</i></p> <p>3. Gather information on resource use, mitigation options and economic data:</p> <p>a. <i>For the attributes that will need to be managed, determine current resource use. Account for all water takes and sources of the relevant contaminants to be managed to achieve the freshwater objectives.</i></p>	<p>CA1(f)(ii)</p> <p>CA1(f)(i)</p> <p>CA1(a,b)</p> <p>CA1(c)</p> <p>CA1(d) A2</p> <p>CA1(c)(i)(B) CA1(c)(ii)</p> <p>CA1(c)(ii)</p> <p>CA1(f)(i)</p> <p>CC1, CC2</p>

⁵ Steps that are included in the proposed amendments to the NPS-FM are italicised. Not all the steps in the Table would be specified in the amended NPS-FM. Some would be included in the Implementation Guidance.

<p>b. <i>Consider the choices and implications for resource users, people and communities for the values and states chosen. This includes social, cultural, environmental, and economic considerations, and determining the economic contribution and potential of activities associated with water, mitigation options available and the cost of these, and how the activities are impacted by changes in water quantity and quality.</i></p>	CA1(f)(iv-v)
<p>4. Undertake iterative testing of desired values and what is required to manage to provide for them (what options for limits and management, economic impacts of different scenarios etc), including consideration of different timeframes for achieving them.</p>	CA1(f)(iii-vii)
<p>5. Write plan provisions, for each freshwater management unit:</p>	
<p>a. <i>Identify the values being managed for (eg, ecosystem health, swimming (contact recreation) in summer and human health during secondary contact recreation at other times of the year).</i></p>	CA1(b)
<p>b. <i>Establish the numeric freshwater objectives required to provide for all identified values (where an attribute is relevant to more than one value, the most stringent state applies). For example, “Ensure periphyton does not exceed 50 mg of chlorophyll a per square metre; ensure E. coli concentrations do not exceed 260/100 mL in summer and 1000/100 mL at other times of the year...”</i></p>	A1, B1, CA1(e)
<p>c. <i>Set the limits and management methods (including rules) required to ensure freshwater objectives will be met.</i></p>	A1, A2, B1, B4
<p>d. <i>Set the timeframes for targets (limits) to achieving the freshwater objective.</i></p>	A2
<p>6. Develop a monitoring plan to monitor progress towards and achievement of freshwater objectives at identified sites that are representative of the freshwater management unit.</p>	CB1

QUESTION FOR SECTION 4.8:

42. Is there anything else you would like to tell us about the issues and proposals in this document?

5. Implementation

Feedback from this consultation will be considered before the Government decides to proceed with amending the NPS-FM. If the Government proceeds, amendments to the NPS-FM will be finalised and the process outlined in annex 2 of this document will be followed.

Guidance

Alongside this process, further work will be undertaken to provide councils, iwi and communities with guidance materials and tools to assist them in effectively implementing the amended NPS-FM. It is expected that implementation guidance will be developed and available if and when the amendments to the NPS-FM take effect. In particular, guidance will be provided on:

- translating the NPS-FM objectives and policies into provisions in regional plans
- the attributes that are intended to be included in the NOF in the future and the science behind the NOF
- freshwater quality and quantity accounting
- having regard to the connections between fresh water and coastal water
- measurement and monitoring requirements, including timeframes for monitoring and how to determine if freshwater objectives are being met or are on track to be met.

Councils would need to give effect to the NPS-FM when they next review a plan, using either the proposed collaborative process or the current RMA Schedule 1 process. The timeframes will vary in different regions, but regional councils must implement the NPS-FM in their regional plans by 2030.

Science

Work will continue to develop and test the scientific information to underpin more attributes in the NOF. The attributes and associated technical information that are robust and ready will be incorporated into later versions of the NOF through an amendment to the NPS-FM.

Appropriate transitional provisions will be provided in the NPS-FM to give councils time to adjust their regional plans (where necessary) to successive additions to the NOF over time.

Review

The implementation and effectiveness of the NPS-FM will be reviewed in 2016. The Minister for the Environment will then consider the need to change the NPS-FM based on this review. This may also be a good opportunity to amend the NPS-FM to include the next version of the NOF.

The broader reform package

The amended NPS-FM and associated implementation guidance are only part of the broader reform package. A number of additional non-regulatory tools are proposed or in development

to support the amended NPS-FM. These were outlined in the *Freshwater reform 2013 and beyond*, and include guidance on:

- converting freshwater objectives to limits
- good management practice toolkits and their application
- use of models in the planning process.

Treaty of Waitangi settlements

Treaty of Waitangi settlement legislation may introduce processes to set objectives for freshwater management. For example, under the *Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010*, the Waikato River Authority's Vision and Strategy has the status of a national policy statement and prevails over any inconsistent provisions in other national policy statements. The Waikato River Authority's Vision and Strategy have greater impact on Waikato's freshwater management than the proposed amendments to the NPS-FM. However, the NPS-FM amendments may assist in providing numeric attributes for achieving the Waikato River Authority's vision.

Water conservation orders

There are 15 water conservation orders (WCOs) in New Zealand, which are in place to recognise and sustain outstanding amenity and intrinsic values of outstanding freshwater bodies. The proposed amendments will not affect existing WCOs because regional policy statements, regional plans, and consent decision-making cannot conflict with the provisions of any relevant WCOs. Therefore, communities undergoing a planning process to establish freshwater objectives and limits will need to ensure that these provide for the provisions of any relevant WCOs in their catchment/region. In hearing and reporting on a proposed WCO, a Special Tribunal must have particular regard to the purpose of WCOs (section 199 of the RMA) and must have regard to the relevant provisions of every national policy statement. The NOF could be used by applicants, submitters and the special tribunal to demonstrate the types of minimum environmental states that are appropriate to provide for the values the WCO application is seeking to sustain.

6. Future actions on water reform

New Zealanders want their freshwater management system to ensure there is sustainable and productive use of New Zealand's freshwater resources. Achieving this requires us all to work together. Many people are already doing just that – through involvement in the Land and Water Forum, industry programmes, community-based initiatives, and council planning processes.

The Government is committed to playing its part as the steward of our freshwater management system. This includes working in partnership with iwi/Māori, councils, and communities to support and evaluate the implementation of the foundational reforms, and progressing work on the full range of reforms proposed in *Freshwater reform 2013 and beyond* while taking into account the feedback received earlier this year.

The Government will continue to work closely with iwi/Māori, councils and other stakeholders as detailed guidance and further reform proposals are developed for consultation. This work will occur over the next few years, with continued priority given to supporting implementation as additional reforms are rolled out.

In 2016, the Government will be undertaking the first review of the NPS-FM (and other foundational reforms). This will allow us to reflect on whether further improvements to our freshwater management system are needed, and how effective implementation is best supported over the coming years as councils work with iwi/Māori and communities to set limits for all freshwater management units by 2030.

7. What happens next?

Making a submission

Any person can make a submission on the subject matter of this document. The questions at the end of each section have been gathered together below to help you to organise your responses.

Please include the following information with your submission:

- a) your name and postal address, phone number, fax number and email address (where applicable)
- b) the title of this document that are making the submission about
- c) your submission, with reasons for your views
- d) any changes you would like made to the national policy statement amendments
- e) the decision you wish the Minister for the Environment to make.

You can complete your submission online at www.mfe.govt.nz. You can also send your submission to Freshwater Reform, Ministry for the Environment, PO Box 10362, Wellington, or by email to watersubmissions@mfe.govt.nz. Submissions must be received no later than 5.00pm on 4 February 2014.

Note: your submission may be subject to release under the Official Information Act 1982 and may be published on the Ministry's website.

If you have questions relating to the proposed amendments or the submission process, you can email watercomments@mfe.govt.nz.

Questions

Your submission can address any issue relating to the proposed amendments to the national policy statement discussion document. The Ministry for the Environment particularly welcomes specific comment on the following questions, which have been highlighted in boxes throughout this discussion document.

- | | |
|-----------------------------------|---|
| Questions for section 2: problems | <ol style="list-style-type: none">1. Have we correctly identified the problems currently associated with implementing the NPS-FM?2. If not, what problems, if any, you have faced with implementation? |
| Questions for section 3: options | <ol style="list-style-type: none">3. Do you agree that amending the NPS-FM would solve the problems identified in section 2?4. If not, would additional guidance be sufficient to solve the problems identified?5. Is there another solution to the problems? Why would that be preferable? |

Proposed amendments to the NPS-FM: accounting

- Questions for section 4.1: accounting
6. Do you agree with requiring councils to account for all water takes?
 7. Do you agree with requiring councils to account for all sources of contaminants?
 8. Do you think that the requirements in policies CC1 and CC2 of the proposed NPS-FM amendments have the right balance between national prescription and regional flexibility?
 9. Do you think the time period allowed for councils to develop accounting systems is appropriate?

Proposed amendments to the NPS-FM: National Objectives Framework

- Questions for section 4.2: NOF Values
10. Should there be a national set of values as outlined in appendix 1 of the proposed NPS-FM?
 11. Are there any additional values that should be included? Why are these values nationally significant/important (recognising that councils can use other values if they wish)?
 12. Are there any values that should be deleted from appendix 1 of the proposed NPS-FM and why?
 13. Do you agree with the descriptions of the national values in appendix 1 of the proposed NPS-FM?
- NOF Attributes
14. Do you agree with the attributes associated with the values in appendix 2 of the proposed NPS-FM?
 15. Do you agree with the numeric attribute states in appendix 2 of the proposed NPS-FM?
 16. Do you agree with the narrative attribute states in appendix 2 of the proposed NPS-FM?
- Timing
17. Do you agree with putting a NOF in the NPS-FM now, including only the attributes for which there is adequate evidence, and updating it as the scientific basis for further attributes and states becomes available?
 18. Or should the Government delay putting the NOF into place until a more comprehensive set of attributes has been developed?
- Processes for freshwater objective setting
19. Do you agree with having the process requirements to link values and freshwater objectives directed in policy CA1 in the proposed amendments? If not, why not?
 20. Do you think the process outlined will work? If not, why not?
 21. Do you agree with the proposed matters in policy CA1(f) that must be considered when establishing freshwater objectives? If not, why not?
 22. Is it clear that setting freshwater objectives is an iterative process which involves consideration of the impacts of the limits, management methods, and timeframes required to meet a potential freshwater objective?

23. Do you agree that regions should have discretion to determine timeframes for meeting freshwater objectives?
24. Are there any aspects of the process that are not clear?
- Questions for section 4.3: Compulsory values
25. Do you agree that ecosystem health should be a compulsory value?
26. Do you agree that human health for secondary contact recreation (such as boating and wading) should be a compulsory value?
27. Do you think there should be more compulsory values? If so, what should they be, and why? What attributes should be associated with them?
- Questions for section 4.4: National bottom lines
28. Should there be numeric bottom lines for attributes of the compulsory values?
29. Do you agree with the proposed level at which bottom lines would be set for each attribute of ecosystem health? If not, at what level should they be set?
30. Do you agree with the proposed level at which bottom lines would be set for each attribute of human health for secondary contact recreation? If not, at what level should they be set?
31. Do you agree that transitional arrangements should be provided to allow councils and communities to set objectives below a national bottom line for a short time?
- Questions for section 4.5: Exceptions to bottom lines
32. Do you agree that there could be exceptions where the natural state of the freshwater management unit breaches bottom lines? Where in your region do you think this type of exception might apply?
33. Do you agree that there could be exceptions where historical activities have created impacts on water quality and the reversal of those impacts is not reasonably practicable, either physically or ecologically, even in the long term? Where in your region do you think this type of exception might apply?
34. Do you agree that there could be exceptions for significant existing infrastructure (eg, dams), where a choice is made to manage a freshwater management unit below bottom lines? Where in your region do you think this type of exception might apply?
35. Do you agree that freshwater management units eligible under the first two exceptions above should be decided by regional councils?
36. Do you agree that freshwater management units eligible for an exception due to the effects of significant existing infrastructure should be decided at a national level and included in appendix 3 of the NPS-FM?
37. What should the criteria be for allowing exceptions based on significant existing infrastructure?

Proposed amendments to the NPS-FM: Tāngata whenua values

- Questions for section 4.6: Tāngata whenua values
38. Do you think the proposed NPS-FM adequately provides for Te Mana o te Wai?
 39. Do you agree with the way tāngata whenua values are described in proposed appendix 1 of the NPS-FM?
 40. Do you support adding Te Mana o te Wai to objective A1 of the amended NPS-FM as a matter that must be safeguarded? What would be the implications of adding this to objective A1 in the NPS-FM?

Proposed amendments to the NPS-FM: Monitoring

- Questions for section 4.7: Monitoring
41. Do you agree with the new section in the NPS-FM requiring monitoring plans? If not, why not?
- Question for section 4.8
42. Is there anything else you would like to tell us about the issues and proposals in this document?

What happens to submissions?

The Ministry will prepare a summary of submissions. The summary will be available through the Ministry's website. Once submissions have been compiled, they will be considered by the Government. If the Government decides to proceed, the process to progress an amendment, outlined in annex 2 of this document, will be followed.

Publishing and releasing submissions

The Ministry may publish all or part of any written submission on its website, www.mfe.govt.nz. Unless you clearly specify otherwise in your submission, the Ministry will consider that you have consented to website posting.

Contents of submissions provided to the Ministry may have to be released to the public under the Official Information Act 1982 following requests to the Ministry. Please advise us if you have any objection to the release of any information contained in your submission, and, in particular, which part(s) you consider should be withheld, together with the reason(s) for withholding the information. The Ministry would take into account all such objections when responding to requests for copies of, and information on, submissions to this document under the Official Information Act.

The Privacy Act 1993 establishes certain principles with respect to the collection, use and disclosure of information about individuals by various agencies, including the Ministry. It governs access by individuals to information about themselves held by agencies. Any personal information you supply to the Ministry in the course of making a submission can be used by the Ministry only in conjunction with the matters covered by this document. Please clearly indicate in your submission if you do not wish your name to be included in any summary of submissions that the Ministry may publish.

References

Land and Water Forum. 2012. Second Report of the Land and Water Forum: Setting Limits for Water Quality and Quantity, and Freshwater Policy- and Plan-Making Through Collaboration. Wellington.

Ministry for the Environment. 2013. *Freshwater reform 2013 and beyond*. Wellington: Ministry for the Environment.

Annex 1: Feedback on *Freshwater reform 2013 and beyond*

Freshwater reform proposals to address the challenges with New Zealand's freshwater management system were proposed in *Freshwater reform 2013 and beyond* released by the Government earlier this year. Feedback on that document generally reflected support across all sectors for the proposals designed to assist with freshwater objective and limit setting (the National Objectives Framework) and freshwater accounting.

There were some specific concerns about how a National Objectives Framework (NOF) would be implemented, and submitters wanted to see more detail on the proposals. These issues are discussed below. The Government considers that the amendments proposed to the NPS-FM (in section 4 of this discussion document) address these remaining matters of concern expressed by stakeholders.

National bottom line as a default

Concerns were expressed that the NOF could result in all water bodies being managed down to the national bottom line. There was also concern that the bottom lines being considered were lower than those in some existing plans.

The existing NPS-FM requires councils to maintain or improve overall water quality within a region, preventing a 'race to the bottom line'. Degraded water bodies will be improved beyond the requirements of national bottom lines if communities and councils decide to do so through the plan development process.

Unreasonable restrictions on resource use

There were concerns that the states or bottom lines might unreasonably restrict use of water or discharges, and there were frequent calls for good analysis of the implications of any bottom lines.

National bottom lines will only affect the use of water where councils have set freshwater objectives that are less stringent than the bottom lines or where water quality is currently below bottom lines. Freshwater objectives set to date in plans have almost all been at least as stringent as the proposed bottom lines. Where bottom lines result in restrictions on the use of water or discharges, adjustment timeframes will allow costs of any restrictions to be spread over time.

Coastal receiving environment

Some feedback raised the need to address the coastal receiving environment, not just the freshwater system itself.

Minor amendments proposed to the NPS-FM and proposed implementation guidance will make the existing requirements clearer, and further work is being carried out to populate the

NOF in relation to the effects of freshwater management on the coastal receiving environment, such as estuaries and lagoons. Further amendments to the NPS-FM are anticipated in future, to include additional values and attributes for these areas in the NOF, as the technical work to define them is completed.

Timing and science

A number of commentators wanted amendments to the NPS-FM to be progressed as soon as possible; however there was recognition that full population of the NOF will take time. There were also comments on the need for robust science and the ability to incorporate new science over time. Many sought the chance to comment on the detail of the NOF before it became a requirement.

The Ministry for the Environment initiated extensive scientific investigation, with the oversight of a science review panel, in collaboration with councils and other key stakeholders to support the proposed reforms. As signalled in March, this document provides the opportunity to comment on the detail of the proposed amendments to the NPS-FM, including the NOF.

Water conservation orders

There were submissions opposing the proposed changes to the Water Conservation Order (WCO) process from a wide range of parties, particularly from environmental NGOs and individuals. The proposals would not have altered any existing WCOs, or reduced the important protections they provide. Rather, the proposals were intended to make sure that new applications (or amendments) would not be used to undermine or derail the proposed collaborative planning process. Following public feedback, however, the Government decided that, given goodwill from stakeholders, the likelihood of having these two parallel processes ongoing at the same time is low. The Government still needs to consider the interaction between the WCO process and our freshwater management system and regional planning. But the Government considers that it would be more appropriate to do this alongside the 2016 review of the NPS-FM, once people can see how implementation of the NPS-FM and the freshwater reforms are progressing.

Te Mana o te Wai/tāngata whenua values

Submissions were generally in support of the NOF, however there were concerns about the need to ensure iwi values are included appropriately to inform decision making. A range of options to provide for iwi values in the NOF were presented. Since public consultation in March, 'Mana Atua' has been replaced by 'Te Mana o te Wai' as a value in the proposed NPS-FM. Te Mana o te Wai is a wide-ranging value or outcome that covers the health of the people, the environment, and the water body itself. The value encompasses, but is not exactly translated by, concepts such as ecosystem integrity and natural state. Unlike Mana Atua, a term used previously, Te Mana o te Wai does not imply a water body is in a pristine state and it does not have strong spiritual connotations.

Annex 2: What is a national policy statement and how is it amended?

What is a national policy statement?

A national policy statement (NPS) is an instrument prepared under the RMA. It enables central government to provide direction that, amongst other things, helps regional and district councils decide how competing national benefits and local costs should be balanced when developing plans and/or making decisions on resource consents under the RMA. An NPS states objectives and policies for matters of national significance that are relevant to achieving the purpose of the RMA.

An NPS operates primarily at the policy and plan development stage but is also relevant in the consideration of resource consent applications. Local authorities are required to 'give effect' to an NPS in their regional policy statements and plans and 'have regard' to an NPS in determining applications for resource consent. An NPS cannot set rules. Rather, its effectiveness relies on councils interpreting and applying its policies (through rules and other provisions in their regional or district plans).

There are four national policy statements in force. These relate to electricity transmission, renewable electricity generation, the coastal environment, and freshwater management.

Process for amending a national policy statement

The Minister for the Environment has the power to review, change or revoke an NPS. When proposing amendments to an NPS, the Minister for the Environment must choose between two processes for consulting on, considering and finalising the proposed amendments. For the proposed amendments to the NPS-FM in this discussion document, the Minister for the Environment has chosen an alternative process established by the Minister for the Environment in accordance with section 46A(1)(b) of the RMA.

In summary, the process includes the following steps:

- consult with the public and take submissions on the proposed NPS
- officials analyse submissions and consider elements in section 51 of the RMA
- based on the above analysis and consideration, officials prepare a report and recommendations to the Minister for the Environment
- the Minister for the Environment considers the report in accordance with section 52 of the RMA
- the Minister for the Environment may make changes as she thinks fit, or withdraw all or part of the proposed amendments to the NPS-FM

- if the Minister for the Environment chooses to progress amendments to the NPS-FM, the Minister for the Environment recommends that the Governor-General approve the amended NPS-FM
- the Minister for the Environment issues and notifies the amended NPS-FM in accordance with section 52(3) of the RMA.

Annex 3: Proposed amendments to the National Policy Statement for Freshwater Management

The following pages show the proposed amendments to the existing NPS-FM. Underlined text indicates proposed new text. Strikethrough indicates proposed deletions.

National Policy Statement for Freshwater Management 2011

Contents

Preamble

Title

Commencement

Interpretation

A. Water quality

Objective A1

Objective A2

B. Water quantity

Objective B1

Objective B2

Objective B3

Objective B4

C. Integrated management

Objective C1

CA. National Objectives Framework

Objective CA1

CB. Monitoring Plans

Objective CB1

CC. Accounting for freshwater takes and contaminant loads

Objective CC1

D. Tangata whenua roles and interests
Objective D1

E. Progressive implementation programme

[Appendix 1: National values and uses for fresh water](#)

[Appendix 2: Attribute tables](#)

[Appendix 3: Freshwater management units eligible for exceptions under Policy CA2\(c\)](#)

[Appendix 4: Freshwater management units and periods of time for transition under Policy CA3](#)

Preamble

Fresh water is essential to New Zealand's economic, environmental, cultural and social well-being. Fresh water gives our primary production, tourism, and energy generation sectors their competitive advantage in the global economy. Fresh water is highly valued for its recreational aspects and it underpins important parts of New Zealand's biodiversity and natural heritage. Fresh water has deep cultural meaning to all New Zealanders. Many of New Zealand's lakes, rivers and wetlands are iconic and well known globally for their natural beauty and intrinsic values.

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.

All New Zealanders have a common interest in ensuring the country's freshwater lakes, rivers, aquifers and wetlands are managed wisely.

New Zealand faces challenges in managing our fresh water to provide for all of the values that are important to New Zealanders. The quality, health, availability and economic value of our fresh waters are under threat. These challenges are likely to increase over time due to the impacts of climate change.

To respond effectively to these challenges and issues we need to have a good understanding of our freshwater resources, the threats to them and provide a management framework that enables water to contribute both to New Zealand's economic growth and environmental integrity and provides for the values that are important to New Zealanders.

[Given the vital importance of freshwater resources to New Zealand and New Zealanders, and in order to achieve the purpose of the Resource Management Act 1991 \(the Act\), the Crown recognises there is a particular need for clear central government policy to set a national direction, though the management of the resource needs to reflect the catchment-level variation between freshwater bodies and different demands on the resource across regions.](#)

This includes managing land use and development activities that affect fresh water so that growth is achieved with a lower environmental footprint.

This national policy statement sets out objectives and policies that direct local government to manage water in an integrated and sustainable way, while providing for economic growth within set water quantity and quality limits. The national policy statement is a first step to improve freshwater management at a national level.

As demand for fresh water increases, it is vital to account for all freshwater takes and sources of relevant contaminants. The freshwater accounting requirements of this national policy statement will provide information for councils to use in establishing freshwater objectives and limits and in targeting their management of fresh water.

This national policy statement provides a National Objectives Framework as a decision support tool to assist regional councils and communities to more consistently and transparently plan for freshwater objectives. The National Objectives Framework underpins community discussions about the desired state of fresh water relative to the current state. New Zealanders generally aspire to high standards for our waterways and outcomes that are better than those achieved under the status quo. Freshwater planning will require an iterative approach that tests a range of possible objectives and means for their achievement, including alternative timeframes, so that the implications of proposed objectives are clear for councils and communities.

The national policy statement sets national bottom lines for two compulsory values – ecosystem health and human health (secondary contact recreation) – and minimum acceptable states for other additional national values. The National Objectives Framework recognises a range of iwi and community values and acknowledges the range of iwi and community interests in fresh water, including environmental, social, economic and cultural values.

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.

National bottom lines will not set standards to be achieved immediately. Where freshwater management units are below national bottom lines, they will need to be improved to at least the national bottom lines over time. It is up to communities and iwi to determine the pathway and timeframe for improving freshwater quality to the required level. Where changes in community behaviours are required, adjustment timeframes should be decided based on the economic impacts that result from the speed of change. Improvements in freshwater quality may take generations depending on the characteristics of each freshwater management unit.

Overall freshwater quality within a region must be maintained or improved. This national policy statement allows some variability in terms of freshwater quality, including between

freshwater management units, as long as the overall freshwater quality is maintained within a region.

Monitoring plans will be practical and affordable. It is not possible for regional councils to monitor every drop of fresh water. Monitoring against freshwater objectives need only be undertaken at representative sites within a region as identified by regional councils. Monitoring plans will also recognise the importance of long term trends in data.

Setting enforceable quality and quantity limits is a key purpose of this national policy statement. This is a fundamental step to achieving environmental outcomes and creating the necessary incentives to use fresh water efficiently, while providing certainty for investment. Water quality and quantity limits must reflect local and national values. The process for setting limits should be informed by the best available information and scientific and socio-economic knowledge.

Once limits are set, freshwater resources need to be allocated to users, while providing the ability to transfer entitlements between users so that we maximise the value we get from water. Where water resources are over-allocated (in terms of quality and quantity) to the point that national and local values are not met, we also need to ensure that over-allocation is reduced over agreed timeframes.

~~Given the vital importance of freshwater resources to New Zealand and New Zealanders, and in order to achieve the purpose of the Resource Management Act 1991 (the Act), the Crown recognises there is a particular need for clear central government policy to set a national direction, though the management of the resource needs to reflect the catchment level variation between water bodies and different demands on the resource across regions. This includes managing land use and development activities that affect water so that growth is achieved with a lower environmental footprint.~~

The New Zealand Coastal Policy Statement 2010 addresses issues with water quality in the coastal environment. The management of coastal water and fresh water requires an integrated and consistent approach.

~~National values of fresh water~~

~~Water is valued for the following uses:~~

- ~~• domestic drinking and washing water~~
- ~~• animal drinking water~~
- ~~• community water supply~~
- ~~• fire fighting~~
- ~~• electricity generation~~
- ~~• commercial and industrial processes~~
- ~~• irrigation~~
- ~~• recreational activities (including waka ama)~~
- ~~• food production and harvesting eg, fish farms and mahinga kai~~
- ~~• transport and access (including tauranga waka)~~

- ~~• cleaning, dilution and disposal of waste.~~

~~There are also values that relate to recognising and respecting fresh water's intrinsic values for: safeguarding the life-supporting capacity of water and associated ecosystems; and sustaining its potential to meet the reasonably foreseeable needs of future generations. Examples of these values include:~~

- ~~• the interdependency of the elements of the freshwater cycle~~
- ~~• the natural form, character, functioning and natural processes of water bodies and margins, including natural flows, velocities, levels, variability and connections~~
- ~~• the natural conditions of fresh water, free from biological or chemical alterations resulting from human activity, so that it is fit for all aspects of its intrinsic values~~
- ~~• healthy ecosystem processes functioning naturally~~
- ~~• healthy ecosystems supporting the diversity of indigenous species in sustainable populations~~
- ~~• cultural and traditional relationships of Māori with fresh water~~
- ~~• historic heritage associations with fresh water~~
- ~~• providing a sense of place for people and communities.~~

~~All the values in both lists are important national values of fresh water.~~

Review

The Minister for the Environment intends to seek an independent review of the implementation and effectiveness of this national policy statement in achieving all its objectives and policies and in achieving the purpose of the Act, no later than five years after it comes into force. The Minister shall then consider the need to review, change or revoke this national policy statement. Collection of monitoring data to inform this review will begin at least two years prior to the review.

This preamble may assist the interpretation of the national policy statement.

Title

This national policy statement is the National Policy Statement for Freshwater Management 2011.

Commencement

This national policy statement will take effect on 1 July 2011.

~~The amendments to this national policy statement notified in the *New Zealand Gazette* on [date] will take effect on [date], unless otherwise specified.~~

Interpretation

In this national policy statement:

“Attributes” are measurable characteristics of fresh water, including physical, chemical and biological properties, which support particular values.

“Attribute state” is the level to which an attribute is to be managed for those attributes specified in Appendix 2.

“Compulsory values” mean the national values relating to ecosystem health and to human health (secondary contact recreation) included in Appendix 1 and for which a non-exhaustive list of attributes is provided in Appendix 2.

“Efficient allocation” includes economic, technical and dynamic efficiency.

“Environmental flows and/or levels” are a type of limit which describes the amount of water in a ~~body of fresh water~~freshwater management unit (except ponds and naturally ephemeral water bodies) which is required to meet freshwater objectives. Environmental flows for rivers and streams must include an allocation limit and a minimum flow (or other flow/s). Environmental levels for other ~~bodies of fresh water~~freshwater management units must include an allocation limit and a minimum water level (or other level/s).

“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.

“Freshwater quality accounting system” means a system that, for each freshwater management unit, records, aggregates and keeps regularly updated, information on the measured, modelled or estimated:

- a) loads and/or concentrations of relevant contaminants;
- b) sources of relevant contaminants; and
- c) where limits have been set, proportion of the limit that is being used.

“Freshwater quantity accounting system” means a system that, for each freshwater management unit, records, aggregates and keeps regularly updated, information on the measured, modelled or estimated:

- a) total freshwater take;
- b) proportion of freshwater taken by each major category of use; and
- c) where limits have been set, the proportion of the limit that has been taken.

“Freshwater objective” describes ~~an~~the intended environmental outcome in a freshwater management unit(s).

“Freshwater take” is a take of ground or surface fresh water whether authorised or not.

“Limit” is the maximum amount of resource use available, which allows a freshwater objective to be met.

“Minimum acceptable state” is the minimum level at which a freshwater objective may be set in a regional plan in order to provide for the associated national value. For those attributes specified in Appendix 2, the minimum acceptable state is specified in Appendix 2.

“National bottom line” means the minimum acceptable state for the compulsory values as specified in Appendix 2.

“National value” means any value described in Appendix 1.

“Outstanding freshwater bodies” are those water bodies identified by a regional policy statement or regional plan as having-with outstanding values, including ecological, landscape, recreational and spiritual values.

“Over-allocation” is the situation where the resource:

- a) has been allocated to users beyond a limit or
- b) is being used to a point where a freshwater objective is no longer being met.

This applies to both water quantity and quality.

“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).

“Target” is a limit which must be met at a defined time in the future. This meaning only applies in the context of over-allocation.

[“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).]

[Note: this definition is not currently proposed but is subject to consultation through section 4.6 of the discussion document]

“Value” means:

- a) any national value; and
- b) includes any value in relation to freshwater, that is not in Appendix 1, which a regional council identifies as appropriate for regional or local circumstances (including any use value).

Terms given meaning in the Act have the meanings so given.

A. Water quality

Objective A1

To safeguard:

- a. the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems, of fresh water;
- b. the health of people and communities as affected by their secondary contact with fresh water; and
- c. [Te Mana o te Wai]

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

[Note: Objective A1(c) is not currently proposed but is subject to consultation through section 4.6 of the discussion document]

Objective A2

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

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

Policy A1

By every regional council making or changing regional plans to the extent needed to ensure the plans:

- a. establish freshwater objectives in accordance with Policies CA1-CA3 and set freshwater quality limits for all ~~bodies of fresh water~~freshwater management units in their regions to give effect to the objectives in this national policy statement, having regard to at least the following:
 - i. the reasonably foreseeable impacts of climate change
 - ii. the connection between water bodies
 - iii. the connections between freshwater bodies and coastal water
- b. establish methods (including rules) to avoid over-allocation

Policy A2

Where ~~water bodies~~freshwater management units do not meet the freshwater objectives made pursuant to Policy A1, every regional council is to specify targets and implement methods (either or both regulatory and non-regulatory) to assist the improvement of water quality in the ~~water bodies~~freshwater management units, to meet those targets, and within a defined timeframe.

Policy A3

By regional councils:

- a. imposing conditions on discharge permits to ensure the limits and targets specified pursuant to Policy A1 and Policy A2 can be met and

- b. where permissible, making rules requiring the adoption of the best practicable option to prevent or minimise any actual or likely adverse effect on the environment of any discharge of a contaminant into fresh water, or onto or into land in circumstances that may result in that contaminant (or, as a result of any natural process from the discharge of that contaminant, any other contaminant) entering fresh water.

Policy A4 and direction (under section 55) to regional councils

By every regional council amending regional plans (without using the process in Schedule 1) to the extent needed to ensure the plans include the following policy to apply until any changes under Schedule 1 to give effect to Policy A1 and Policy A2 (freshwater quality limits and targets) have become operative:

“1. When considering any application for a discharge the consent authority must have regard to the following matters:

- a. the extent to which the discharge would avoid contamination that will have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water and*
- b. the extent to which it is feasible and dependable that any more than minor adverse effect on fresh water, and on any ecosystem associated with fresh water, resulting from the discharge would be avoided.*

2. When considering any application for a discharge the consent authority must have regard to the following matters:

- a. the extent to which the discharge would avoid contamination that will have an adverse effect on the health of people and communities as affected by their secondary contact with fresh water; and
- b. the extent to which it is feasible and dependable that any more than minor adverse effect on the health of people and communities as affected by their secondary contact with fresh water resulting from the discharge would be avoided.

3. This policy applies to the following discharges (including a diffuse discharge by any person or animal):

- a. a new discharge or*
- b. a change or increase in any discharge –*

of any contaminant into fresh water, or onto or into land in circumstances that may result in that contaminant (or, as a result of any natural process from the discharge of that contaminant, any other contaminant) entering fresh water.

4.3. Paragraph 1 of it~~This policy does not apply to any application for consent first lodged before the National Policy Statement for Freshwater Management takes effect on 1 July 2011.~~

5. Paragraph 2 of this policy does not apply to any application for consent first lodged before the 2014 amendments to the National Policy Statement for Freshwater Management take effect on [date] 2014.”

B. Water quantity

Objective B1

To safeguard the life-supporting capacity, ecosystem processes and indigenous species including their associated ecosystems of fresh water, in sustainably managing the taking, using, damming, or diverting of fresh water.

Objective B2

To avoid any further over-allocation of fresh water and phase out existing over-allocation.

Objective B3

To improve and maximise the efficient allocation and efficient use of water.

Objective B4

To protect significant values of wetlands and outstanding freshwater bodies.

Policy B1

By every regional council making or changing regional plans to the extent needed to ensure the plans establish freshwater objectives in accordance with Policies CA1-CA3 and set environmental flows and/or levels for all ~~bodies of fresh water~~ freshwater management units in its region (except ponds and naturally ephemeral water bodies) to give effect to the objectives in this national policy statement, having regard to at least the following:

- a. the reasonably foreseeable impacts of climate change
- b. the connection between water bodies
- b-c. the connections between freshwater bodies and coastal water.

Policy B2

By every regional council making or changing regional plans to the extent needed to provide for the efficient allocation of fresh water to activities, within the limits set to give effect to Policy B1.

Policy B3

By every regional council making or changing regional plans to the extent needed to ensure the plans state criteria by which applications for approval of transfers of water take permits are to be decided, including to improve and maximise the efficient allocation of water.

Policy B4

By every regional council identifying methods in regional plans to encourage the efficient use of water.

Policy B5

By every regional council ensuring that no decision will likely result in future over-allocation – including managing fresh water so that the aggregate of all amounts of fresh water in a ~~water body~~freshwater management unit that are authorised to be taken, used, dammed or diverted – does not over-allocate the water in the ~~water body~~freshwater management unit.

Policy B6

By every regional council setting a defined timeframe and methods in regional plans by which over-allocation must be phased out, including by reviewing water permits and consents to help ensure the total amount of water allocated in the ~~water body~~freshwater management unit is reduced to the level set to give effect to Policy B1.

Policy B7 and direction (under section 55) to regional councils

By every regional council amending regional plans (without using the process in Schedule 1) to the extent needed to ensure the plans include the following policy to apply until any changes under Schedule 1 to give effect to Policy B1 (allocation limits), Policy B2 (allocation), and Policy B6 (over-allocation) have become operative:

- “1. *When considering any application the consent authority must have regard to the following matters:*
 - a. *the extent to which the change would adversely affect safeguarding the life-supporting capacity of fresh water and of any associated ecosystem and*
 - b. *the extent to which it is feasible and dependable that any adverse effect on the life-supporting capacity of fresh water and of any associated ecosystem resulting from the change would be avoided.*
2. *This policy applies to:*
 - a. *any new activity and*
 - b. *any change in the character, intensity or scale of any established activity –*
that involves any taking, using, damming or diverting of fresh water or draining of any wetland which is likely to result in any more than minor adverse change in the natural variability of flows or level of any fresh water, compared to that which immediately preceded the commencement of the new activity or the change in the established activity (or in the case of a change in an intermittent or seasonal activity, compared to that on the last occasion on which the activity was carried out).
3. *This policy does not apply to any application for consent first lodged before the National Policy Statement for Freshwater Management takes effect on 1 July 2011.”*

C. Integrated management

Objective C1

To improve integrated management of fresh water and the use and development of land in whole catchments, including the interactions between fresh water, land, associated ecosystems and the coastal environment.

Policy C1

By every regional council managing fresh water and land use and development in catchments in an integrated and sustainable way, so as to avoid, remedy or mitigate adverse effects, including cumulative effects.

Policy C2

By every regional council making or changing regional policy statements to the extent needed to provide for the integrated management of the effects of the use and development of:

- a) land on fresh water, including encouraging the co-ordination and sequencing of regional and/or urban growth, land use and development and the provision of infrastructure; and
- b) land and fresh water on coastal water.

CA. National Objectives Framework

Objective CA1

To provide for an approach to establishing freshwater objectives for national values and any other values that:

- a. is nationally consistent; and
- b. recognises regional and local circumstances.

Policy CA1

By every regional council applying the following processes in developing freshwater objectives for all freshwater management units:

- a. considering all national values and how they apply to local and regional circumstances;
- b. identifying the values of those freshwater management units, which
 - i. must include the compulsory values; and
 - ii. may include any other national values or other values that the regional council considers appropriate (in either case having regard to local and regional circumstances);
- c. identifying:
 - i. for the compulsory values or any other national value for which relevant attributes are provided in Appendix 2:
 - A. the attributes listed in Appendix 2 that are applicable to each value identified in Policy CA1(b) for the freshwater body type; and
 - B. any other attributes that the regional council considers appropriate for each value identified in Policy CA1(b) for the freshwater body type; and
 - ii. for any national value for which relevant attributes are not provided in Appendix 2 or any other value, the attributes that the regional council considers appropriate for each value identified in Policy CA1(b) for the freshwater body type;
- d. for those attributes specified in Appendix 2, assigning an attribute state at or above the minimum acceptable state for that attribute;
- e. formulating freshwater objectives:

- i. in those cases where an applicable numeric attribute state is specified in Appendix 2, in numeric terms by reference to that specified numeric attribute state; or
 - ii. in those cases where the attribute is not listed in Appendix 2, in numeric terms where practicable, otherwise in narrative terms; and
 - iii. on the basis that, where an attribute applies to more than one value, the most stringent freshwater objective for that attribute is adopted;
- f. considering the following matters at all relevant points in the process described in Policy CA1(a)-(e):
 - i. the current state of the freshwater management unit, and its anticipated future state on the basis of past and current resource use;
 - ii. the spatial scale at which freshwater management units are defined;
 - iii. the limits that would be required to achieve the freshwater objectives;
 - iv. any choices between the values that the formulation of freshwater objectives and associated limits would require;
 - v. any implications for resource users, people and communities arising from the choice of freshwater objectives and associated limits including for actions, investments, ongoing management changes and any social and economic implications;
 - vi. the timeframes required for achieving the freshwater objectives, including the ability of regional councils to set long timeframes for achieving targets; and
 - vii. such other matters relevant and reasonably necessary to give effect to the objectives in this national policy statement, including Objective A2.

Policy CA2

By every regional council ensuring that freshwater objectives for the compulsory values are set at or above the national bottom lines for all freshwater management units, unless:

- a. the existing freshwater quality of the freshwater management unit is already below the national bottom line and that is caused by naturally occurring processes; or
- b. both of the following apply:
 - i. 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;

- ii. the reversal of those impacts is not reasonably practicable, either physically or ecologically, even in the long term; or
- c. the freshwater management unit is listed in Appendix 3.

Policy CA3

A regional council may set a freshwater objective below a national bottom line on a transitional basis for the freshwater management units and for the periods of time specified in Appendix 4.

CB. Monitoring Plans

Objective CB1

To provide for an approach to the monitoring of progress towards, and the achievement of, freshwater objectives.

Policy CB1

By every regional council developing a monitoring plan that:

- a. Establishes methods for monitoring progress towards, and the achievement of, freshwater objectives established under Policies CA1-CA3;
- b. Identifies a site or sites at which monitoring will be undertaken that are representative for each freshwater management unit; and
- c. Recognises the importance of long-term trends in monitoring results.

CC. Accounting for freshwater takes and contaminant loads

Objective CC1

To improve information on freshwater takes and sources of freshwater contaminants, in order to:

- a. ensure the necessary information is available for freshwater objective and limit setting and freshwater management under this national policy statement;
- b. ensure information on resource availability is available for current and potential resource users; and
- c. enable the aggregation of freshwater quality and quantity data for regional and national water management and monitoring purposes.

Policy CC1

By every regional council:

- a. establishing and operating a freshwater quality accounting system and a freshwater quantity accounting system for those freshwater management units where they are setting or reviewing freshwater objectives and limits in accordance with Policy A1, Policy B1, and Policies CA1-CA3; and
- b. maintaining a freshwater quality accounting system and a freshwater quantity accounting system at levels of detail that are commensurate with the significance of the freshwater quality and freshwater quantity issues, respectively, in each freshwater management unit.

This Policy CC1 will take effect on [date to insert, being 24 months from the date of entry into effect of these amendments].

Policy CC2

By every regional council taking reasonable steps to ensure that information gathered in accordance with Policy CC1 is available in a suitable form for the freshwater management units where freshwater objectives and limits have been set; and that:

- a. in terms of information relating to a freshwater quality accounting system established under Policy CC1, the information shall relate to at least five yearly intervals; and
- b. in terms of information relating to a freshwater quantity accounting system established under Policy CC1, the information shall relate to at least one year intervals.

D. Tāngata whenua roles and interests

Objective D1

To provide for the involvement of iwi and hapū, and to ensure that tāngata whenua values and interests are identified and reflected in the management of fresh water including associated ecosystems, and decision-making regarding freshwater planning, including on how all other objectives of this national policy statement are given effect to.

Policy D1

Local authorities shall take reasonable steps to:

- a. involve iwi and hapū in the management of fresh water and freshwater ecosystems in the region
- b. work with iwi and hapū to identify tāngata whenua values and interests in fresh water and freshwater ecosystems in the region and
- c. reflect tāngata whenua values and interests in the management of, and decision-making regarding, fresh water and freshwater ecosystems in the region.

E. Progressive implementation programme

Policy E1

- a. This policy applies to the implementation by a regional council of a policy of this national policy statement.
- b. Every regional council is to implement the policy as promptly as is reasonable in the circumstances, and so it is fully completed by no later than 31 December 2030.
- c. Where a regional council is satisfied that it is impracticable for it to complete implementation of a policy fully by 31 December 2014, the council may implement it by a programme of defined time-limited stages by which it is to be fully implemented by 31 December 2030.
- d. Any programme of time-limited stages is to be formally adopted by the council within 18 months of the date of gazetting of this national policy statement, and publicly notified.
- e. Where a regional council has adopted a programme of staged implementation, it is to publicly report, in every year, on the extent to which the programme has been implemented.
- e.f. Any programme adopted under Policy E1 d) by a regional council is to be reviewed, revised if necessary, and formally adopted by the regional council within 18 months of the date of gazetting of any amendment to this national policy statement to ensure that subsequent planning under that programme can fully implement the new or amended provisions.

APPENDIX 1: National values and uses for fresh water [new amendment]

COMPULSORY NATIONAL VALUES

Contributes to Objectives A1 and B1 and Te Mana o te Wai

Te Hauora o te Wai / the health and mauri of water

Ecosystem health – The freshwater management unit supports a resilient ecosystem specific to that freshwater body type (river, lake, wetland, or aquifer).

Matters to take into account for a resilient aquatic ecosystem are conditions that are likely to cause chronic effects on sensitive flora and fauna, such as high temperatures, low oxygen, changes in freshwater chemistry, high sediment levels, or algal blooms. Other important matters are toxic effects of contaminants, and the essential habitat needs of the flora and fauna. It is also important to recognise that in functioning healthy ecosystems, ecological processes appropriate to the freshwater management unit would be maintained, and there would be a range of healthy indigenous flora and fauna that would naturally live there.

Contributes to Objective A1 and Te Mana o te Wai

Te Hauora o te Tangata / the health and mauri of the people

Human health (secondary contact recreation) – The freshwater management unit will not present unacceptable risks to human health when used for wading or boating (except boating where there is high likelihood of immersion)

In recognising this value, there would be no more than moderate risk of infection or illness to people when wading or boating or involved in similar activities that do not involve immersion in the water. Additionally, other contaminants or toxins, such as toxic algae, would not be present in such quantities that they would harm people. In some freshwater management units, the risk of infection or illness to people would be no greater than what would exist there under natural conditions.

ADDITIONAL NATIONAL VALUES

Contributes to Te Mana o te Wai

Te Hauora o te Taiao / the health and mauri of the environment

Natural form and character – where people value particular natural qualities of the freshwater management unit

Matters contributing to the natural form and character of a freshwater management unit are its visual and physical characteristics that are valued by the community, including its flow regime, colour, clarity, morphology or location. They may be freshwater management units with exceptional, natural and iconic visual features.

Contribute to Mana Tangata

Mahinga kai / food gathering, places of food

Where the flora and fauna of the freshwater management unit can be used for food, or for tools and other products

Mahinga kai – kai are safe to harvest and eat

Mahinga kai generally refers to indigenous freshwater species that have traditionally been used as food, tools, or other resources. Mahinga kai provide food for the people of the rohe and these sites give an indication of the overall health of the catchment.

For this value, kai would be safe to harvest and eat and knowledge transfer is present (intergenerational harvest). In freshwater management units that are highly valued for providing mahinga kai, the desired species are plentiful enough for long-term harvest and the range of desired species is present across all life stages.

Mahinga kai – Kei te ora te mauri (the mauri of the place is intact)

For this value, freshwater resources would be available and able to be used for customary use at some places (but not everywhere). In freshwater management units that are highly valued for providing mahinga kai, resources would be available for use, customary practices able to be exercised to the extent desired, and tikanga and preferred methods are able to be practised.

Fishing – The freshwater management unit supports fisheries of species allowed to be caught and eaten

For freshwater management units valued for fishing, the numbers of fish would be sufficient and suitable for human consumption. In some areas, fish abundance and diversity would provide a range in species and size of fish, and algal growth, water clarity and safety would be satisfactory for fishers. Attributes will need to be specific to fish species - salmon, trout, eels, lamprey, or whitebait.

Contributes to Mana Tangata

Mahi māra / cultivation

This value applies to freshwater management units that can support primary production – the cultivation of crops and the production of food from domesticated animals

Food security – The freshwater management unit supports rural communities to grow food and fibre

Food production as a value has core elements of providing essential services and wellbeing. In providing for food security, rural communities would be able to access sufficient and suitable water to enable them to produce a range of foods and fibre. The attributes will need to be specific to the rural needs in the catchment.

Contributes to Mana Tangata

Wai tākaro / recreation

Where a freshwater management unit is used for recreation (such as swimming), reflecting its social importance

Contact recreation – The freshwater management unit can be used for recreation, including swimming, kayaking, white-water rafting canoeing, waka ama and waterskiing

This value includes recreation where people come into contact with the water, particularly recreational uses where there is a high incidence of ingestion or inhalation of water and water vapour such as swimming and kayaking. In these freshwater management units, health risk assessments of catchment and instream contamination would indicate low risk to the health of those recreational users. Other matters to take into account are the presence of slippery or unpleasant weed growth, and the visual clarity of the water for particular recreational uses. The appropriate quality of water would depend on the extent and kind of recreational use.

Contributes to Mana Tangata

Wai Tapu / Sacred Waters

Encompassing values of tohi (baptism), karakia (prayer), waerea (protective incantation), whakatapu (placing of raahui), whakanoa (removal of raahui), tuku iho (gifting of knowledge and resources for future generations).

Wai tapu – Wai tapu represent the places where rituals and ceremonies are performed.

In providing for this value, the wai tapu would be free from human and animal waste, contaminants and excess sediment, with valued features and unique properties of the wai protected to some extent. Other matters that may be important are that preferred sites are accessible (physically and legally), identified catchments have integrity (there is no artificial mixing of the wai tapu), and identified taonga in the wai are protected.

Contribute to Mana Tangata

Wai Māori / drinking water

The use of freshwater for sustenance

Water supply – water in the freshwater management unit can meet people's potable water needs

Water would be reliable in supply, and be safe for drinking with, or in some areas without, treatment.

Animal drinking water – water is suitable and available for stock to drink

Water would meet the needs of stock, including whether it is palatable, safe, and reliable in supply.

Contribute to Mana Tangata

Āu Putea / economic or commercial development

Where the use of the freshwater management unit provides economic opportunity

Commercial and industrial use – The freshwater management unit provides economic opportunities to people, businesses and industries

Water can provide for commercial and industrial activities. Attributes will need to be specific to commercial or industrial requirements.

Irrigation – water meets irrigation needs

Water would be suitable for irrigation needs. These may range from its suitability for irrigating non-food crops or crops that would be processed before eating, through to food crops, pasture, sports fields and recreational areas.

Hydro electric power generation – The freshwater management unit has physical qualities that are suitable for power generation

The physical qualities, including hydraulic gradient and flow rate, required for power generation would be retained, and water storage for power generation may also be possible.

Fire-fighting – water in the freshwater management unit can meet local fire-fighting needs

Water is available for fire-fighting.

Contributes to Mana Tangata

He ara haere / navigation

The ability of the freshwater management unit to be navigated and connect places

Transport and tauranga waka – The freshwater management unit is navigable for identified means of transport

The freshwater management unit would be navigable, with places to launch waka and water craft, and appropriate places for waka to land (tauranga waka). The freshwater management unit may also connect places and people including for traditional trails and rites of passage, and allow the use of various craft.

APPENDIX 2: Attribute tables [new amendment]

Value	Ecosystem Health		
Freshwater Body Type	Lakes		
Attribute	Chlorophyll <i>a</i>		
Attribute Unit	mg/m ³ (milligrams per cubic metre)		
Attribute State	Numeric Attribute State		Narrative Attribute State
	Annual Median	Annual Maximum	
A	<2	<10	Lake ecological communities are healthy and resilient, similar to natural reference conditions.
B	2-5	10-25	Lake ecological communities are slightly impacted by additional algal and plant growth arising from nutrients levels that are elevated above natural reference conditions.
C	5-12	25-60	Lake ecological communities are moderately impacted by additional algal and plant growth arising from nutrients levels that are elevated well above natural reference conditions.
National Bottom Line	12	60	
D	>12	>60	Lake ecological communities are at high risk of a regime shift to a persistent, degraded state, due to impacts of elevated nutrients leading to excessive algal and/or plant growth, as well as from losing oxygen in bottom waters of deep lakes.

Value	Ecosystem Health		
Freshwater Body Type	Lakes		
Attribute	Total Nitrogen		
Attribute Unit	mg/m ³ (milligrams per cubic metre)		
Attribute State	Numeric Attribute State		Narrative Attribute State
	Annual Median	Annual Median	
	Seasonally Stratified and Brackish*	Polymictic	
A	<160	<300	Lake ecological communities are healthy and resilient, similar to natural reference conditions.
B	160–350	300–500	Lake ecological communities are slightly impacted by additional algal and plant growth arising from nutrients levels that are elevated above natural reference conditions.
C	350–750	500–800	Lake ecological communities are moderately impacted by additional algal and plant growth arising from nutrients levels that are elevated well above natural reference conditions
National Bottom Line	750	800	
D	>750	>800	Lake ecological communities are at high risk of a regime shift to a persistent, degraded state, due to impacts of elevated nutrients leading to excessive algal and/or plant growth, as well as from losing oxygen in bottom waters of deep lakes.

*Intermittently closing and opening lagoons (ICOLs) are not included in brackish lakes.

Value	Ecosystem Health	
Freshwater Body Type	Lakes	
Attribute	Total Phosphorus	
Attribute Unit	mg/m ³ (milligrams per cubic metre)	
Attribute State	Numeric Attribute State	Narrative Attribute State
	Annual Median	
A	<10	Lake ecological communities are healthy and resilient, similar to natural reference conditions.
B	10–20	Lake ecological communities are slightly impacted by additional algal and plant growth arising from nutrients levels that are elevated above natural reference conditions.
C	20–50	Lake ecological communities are moderately impacted by additional algal and plant growth arising from nutrients levels that are elevated well above natural reference conditions.
National Bottom Line	50	
D	>50	Lake ecological communities are at high risk of a regime shift to a persistent, degraded state, due to impacts of elevated nutrients leading to excessive algal and/or plant growth, as well as from losing oxygen in bottom waters of deep lakes.

Value	Ecosystem Health		
Freshwater Body Type	Lakes and Rivers		
Attribute	Nitrate toxicity		
Attribute Unit	mg NO ₃ -N/L (milligrams nitrate-nitrogen per litre)		
Attribute State	Numeric Attribute State		Narrative Attribute State
	Annual Median	Annual 95th Percentile	
A	<1.0	<1.5	99% species protection level: No observed effect on any species tested
B	1.0-2.4	1.5-3.5	95% species protection level: Starts impacting occasionally on the 5% most sensitive species
C	2.4-6.9	3.5-9.8	80% species protection level: Starts impacting regularly on the 20% most sensitive species (12% reduction in growth)
National Bottom Line	6.9	9.8	
D	>6.9	>9.8	Impacts on growth of multiple species, and starts approaching acute impact level (ie risk of death) for sensitive species at higher concentrations (>20 mg/L)

Value	Ecosystem Health		
Freshwater Body Type	Lakes and Rivers		
Attribute	Ammonia Toxicity (Ammoniacal Nitrogen)		
Attribute Unit	mg NH ₄ -N/L (milligrams ammoniacal-nitrogen per litre)		
Attribute State	Numeric Attribute State		Narrative Attribute State
	Annual Median*	Annual 95th Percentile*	
A	<0.03	<0.05	99% species protection level: No observed effect on any species tested
B	0.03-0.24	0.05-0.40	95% species protection level: Starts impacting occasionally on the 5% most sensitive species
C	0.24-1.30	0.40-2.20	80% species protection level: Starts impacting regularly on the 20% most sensitive species (reduced survival of most sensitive species)
National Bottom Line	1.30	2.20	
D	>1.30	>2.20	Starts approaching acute impact level (ie risk of death) for sensitive species

* Based on pH 8 and temperature of 20°C.

Compliance with the numeric attribute states should be undertaken after pH adjustment.

Value	Ecosystem Health		
Freshwater Body Type	Rivers (below point sources)		
Attribute	Dissolved Oxygen		
Attribute Unit	mg/L (milligrams per litre)		
Attribute State	Numeric Attribute State		Narrative Attribute State
	7-day mean minimum (Summer Period: 1 November to 30th April)	1-day minimum (Summer Period: 1 November to 30th April)	
A	>8.0	>7.5	No stress caused by low dissolved oxygen on any aquatic organisms that are present at matched reference (near-pristine) sites.
B	7.0-8.0	5.0-7.5	Occasional minor stress on sensitive organisms caused by short periods (a few hours each day) of lower dissolved oxygen. Risk of reduced abundance of sensitive fish and macroinvertebrate species.
C	5.0-7.0	4.0-5.0	Moderate stress on a number of aquatic organisms caused by dissolved oxygen levels exceeding preference levels for periods of several hours each day. Risk of sensitive fish and macroinvertebrate species being lost.
National Bottom Line	5.0	4.0	
D	<5.0	<4.0	Significant, persistent stress on a range of aquatic organisms caused by dissolved oxygen exceeding tolerance levels. Likelihood of local extinctions of keystone species and loss of ecological integrity.

Value	Ecosystem Health	
Freshwater Body Type	Rivers	
Attribute	Periphyton	
Attribute Unit	mg chl-a/m ² (milligrams chlorophyll-a per square metre)	
Attribute State	Numeric Attribute State	Narrative Attribute State
	Annual Maximum*	
A	<50	Rare blooms reflecting negligible nutrient enrichment and/or alteration of the natural flow regime or habitat.
B	50-120	Occasional blooms reflecting low nutrient enrichment and/or alteration of the natural flow regime or habitat.
C	120-200	Periodic short-duration nuisance blooms reflecting moderate nutrient enrichment and/or alteration of the natural flow regime or habitat.
National Bottom Line	200	
D	>200	Regular and/or extended-duration nuisance blooms reflecting high nutrient enrichment and/or significant alteration of the natural flow regime or habitat.

* Exceeded on no more than 2 occasions, with no exceedances in successive months (based on a monthly monitoring regime)

Value	Human Health (secondary contact recreation)	
Freshwater Body Type	Lakes and Rivers	
Attribute	<i>E. coli</i> (<i>Escherichia coli</i>)	
Attribute Unit	<i>E. coli</i> /100 mL (number of <i>E. coli</i> per hundred millilitres)	
Attribute State	Numeric Attribute State	Narrative Attribute State
	Annual Median	
A	<260	People are exposed to a very low risk of infection (less than 0.1% risk) from exposure to water used for wading or boating (except boating where there is high likelihood of immersion).
B	260-540	People are exposed to a low risk of infection (between 0.1 and 1% risk) from exposure to water used for wading or boating (except boating where there is high likelihood of immersion).
C	540-1000	People are exposed to a moderate risk of infection (between 1 and 5% risk) from exposure to water used for wading or boating (except boating where there is high likelihood of immersion).
National Bottom Line	1000	
D	>1000	People are exposed to a high risk of infection (greater than 5% risk) from exposure to water used for wading or boating (except boating where there is high likelihood of immersion).

Value	Human Health (secondary contact recreation)	
Freshwater Body Type	Lakes and Rivers	
Attribute	Cyanobacteria - Planktonic	
Attribute Unit	Biovolume - mm ³ /L (cubic millimetres per litre) OR Cell Count - cells/mL (cells per millilitre)	
Attribute State	Numeric Attribute State	Narrative Attribute State
	Two Year Average	
A	Biovolume equivalent for the combined total of all cyanobacteria does not exceed 0.5 mm ³ /L OR The cell concentration of total cyanobacteria does not exceed 500 cells/mL	Risk exposure from cyanobacteria is no different to that in natural conditions.
B	N/A	
C	Biovolume equivalent of 0.5 to < 1.8 mm ³ /L of potentially toxic cyanobacteria OR 0.5 to < 10 mm ³ /L total biovolume of all cyanobacteria	Low risk of health effects from exposure to cyanobacteria.
National Bottom Line	Biovolume equivalent of < 1.8 mm³/L of potentially toxic cyanobacteria OR < 10 mm³/L total biovolume of all cyanobacteria	
D	Biovolume equivalent of ≥ 1.8 mm ³ /L of potentially toxic cyanobacteria OR ≥10 mm ³ /L total biovolume of all cyanobacteria	Potential health risks (eg, respiratory, irritation and allergy symptoms) exist from exposure to cyanobacteria.

Value	Contact Recreation	
Freshwater Body Type	Lakes and Rivers	
Attribute	SFRG (Suitability for Recreation Grade)	
Attribute Unit	SFRG	
Attribute State	Numeric Attribute State	Narrative Attribute State
	SFRG	
A	Very Good	Water-quality tests and assessment of potential contamination sources indicate recreational beaches have very low risk of infection. The beach is considered satisfactory for contact recreation at all times.
B	Good	Water-quality tests and assessment of potential contamination sources indicate recreational beaches generally have low risk of infection. The beach is satisfactory for contact recreation most of the time. Exceptions may include following rainfall.
C	Fair	Water-quality tests and assessment of potential contamination sources indicate recreational beaches within this category have a moderate risk of infection. The beach is generally satisfactory for contact recreation, though there are potential contamination sources. Caution should be taken during periods of high rainfall, and contact recreation avoided if water is discoloured.
Minimum acceptable state	Fair	
D	Poor/Very poor	Water-quality tests and assessment of potential contamination sources indicate contact recreation beaches within this category are considered to have high risk of infection. Beaches are generally not okay for contact recreation, particularly by the very young, the very old and those with compromised immunity.

APPENDIX 3: Freshwater management units eligible for exceptions under Policy CA2(c) [new amendment]

[Note: Appendix 3 will list freshwater management units eligible for exceptions under Policy CA2(c). Freshwater management units would be added to this list following further public consultation and an amendment to the National Policy Statement. The freshwater management units on the list will be those affected by significant existing infrastructure, such as hydroelectricity generation or drinking water dams. Policy CA2(c) and this appendix are subject to consultation through section 4.5 of the discussion document]

APPENDIX 4: Freshwater management units and periods of time for transition under Policy CA3 [new amendment]

[Note: Appendix 4 will list freshwater management units and periods of time for which a regional council may set a freshwater objective below a national bottom line on a transitional basis. Freshwater management units would be added to this list following further public consultation and an amendment to the National Policy Statement. Policy CA3 and this appendix are subject to consultation through section 4.4 of the discussion document]

Glossary of terms used in the National Objectives Framework

A number of terms are used in this document to describe different elements of the National Objectives Framework. These include the following key terms.

Attributes – measureable characteristics of fresh water, including physical, chemical and biological properties that support particular values.

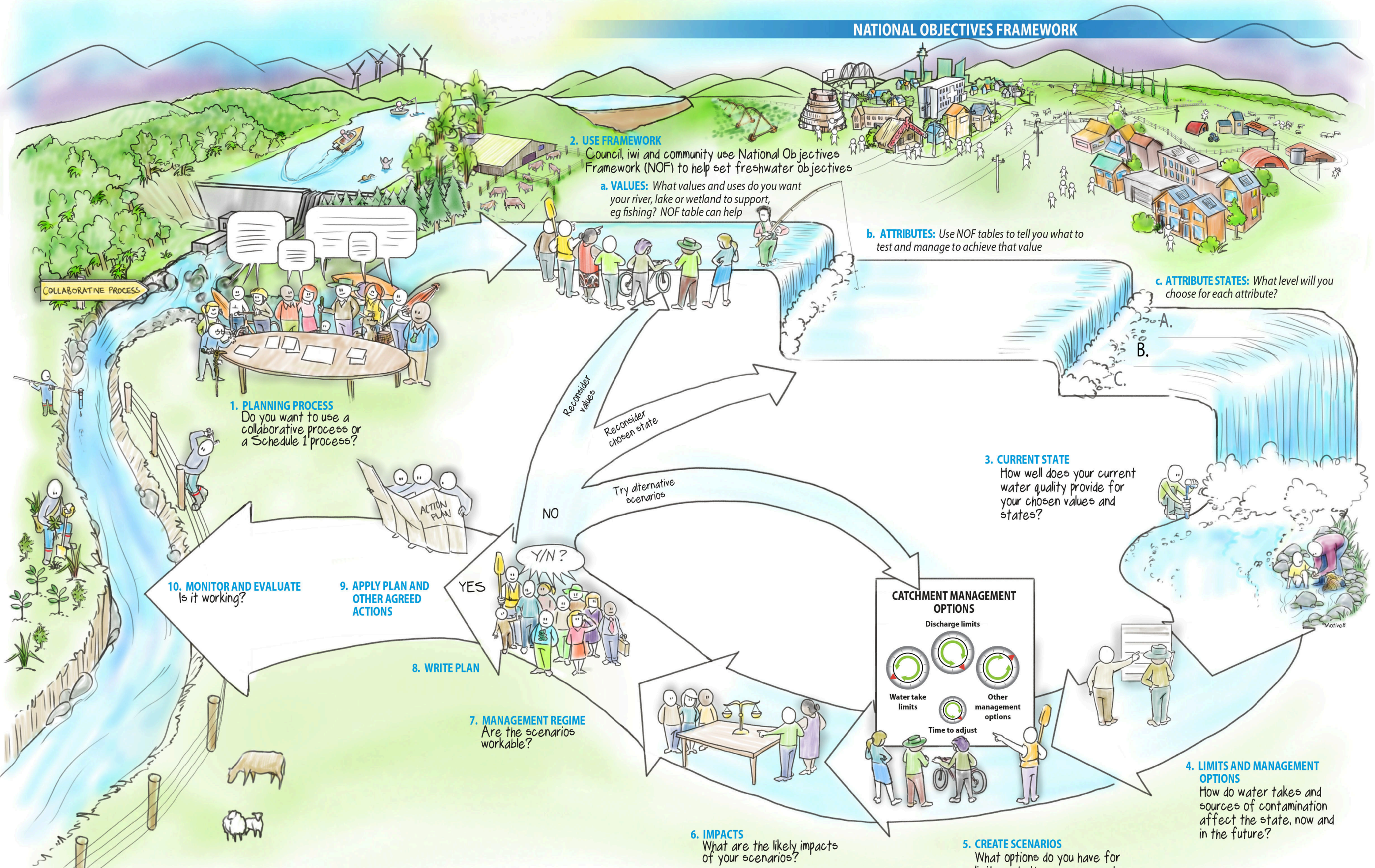
Minimum acceptable state – the minimum level at which a freshwater objective may be set in a regional plan in order to provide for the associated value. For values with attributes listed in appendix 2 of the amended NPS-FM, the minimum acceptable state is defined by the boundary between the C and D states.

National bottom line – the minimum acceptable state for the ecosystem health and human health values as listed in appendix 2 of the amended NPS-FM.

State – a range in the level of an attribute that may be described as a narrative or numerically. Four different states are specified for attributes (A, B, C or D). The term ‘band’, instead of the term ‘state’, was previously used in the development of the National Objectives Framework.

Values – those intrinsic qualities, uses or potential uses that people and communities appreciate about water bodies and wish to see recognised in the on-going management of those water bodies.

Note: a full glossary of NPS-FM related terms was provided in *Freshwater reform: 2013 and beyond*, which can be found at <http://www.mfe.govt.nz/publications/water/freshwater-reform-2013/index.html>.



Managing fresh water in New Zealand