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He Ārahitanga mō Te Anga Whāinga ā-Motu o te NPS-FM

Guidance on the National Objectives Framework of the NPS-FM



Ministry for the
Environment
Manatū Mō Te Taiao



Te Kāwanatanga o Aotearoa
New Zealand Government

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Purpose

This guidance clarifies the policy intent and expectations for applying the **National Objectives Framework (NOF)**. The NOF sits within part 3, subpart 2 of the **National Policy Statement for Freshwater Management 2020** (amended 2023) (**NPS-FM**).

It is mainly aimed at councils implementing the NPS-FM and those they work with to implement the NOF, but is also useful for anyone involved in regional freshwater management. In particular, the NPS-FM includes processes for more involvement of tangata whenua, including in decision-making processes, to the extent they wish to be involved.

This guidance identifies the important links and interactions between the fundamental concept of Te Mana o te Wai and other key requirements in the NOF and the wider NPS-FM. It also covers common interpretation queries about NOF policies.

The Ministry for the Environment has worked with experts, and consulted with a targeted group of councils, environmental organisations, mātauranga Māori experts and iwi technicians to write this guidance.

What this guidance does not cover

- Every requirement in the NPS-FM: councils must give effect to all other parts of the NPS-FM, as well as the NOF.
- Guidance on specific technical methods: this is being developed separately.
- Applying the NPS-FM to resource consents: this guidance is currently being considered.

Legal status

This guidance has no legal status.

Although guidance from the Ministry cannot provide legal interpretation on Resource Management Act 1991 (RMA) national instruments, or overrule legal decisions, it clarifies the policy intent of those instruments as originally intended. Updates may be made to the guidance in response to legal decisions, but you should always seek your own legal advice to ensure you are up to date.

Contact us

If you have queries in relation to this guidance, please email freshwater@mfe.govt.nz.

Introduction

An improved approach to managing freshwater

Freshwater ecosystems in many parts of Aotearoa New Zealand have continued to deteriorate, in some cases, alarmingly so, despite direction in the RMA and the previous NPS-FM. Some water bodies have more significant challenges than others.

The NPS-FM is part of the [Essential Freshwater](#) reform package, intended to protect and improve rivers, streams, lakes and wetlands in Aotearoa. The package was released in 2020 and amended in 2023.

The aim of the Essential Freshwater package of regulations is to:

- stop further degradation of the country's freshwater
- take immediate steps to improve water quality within five years
- reverse past damage to bring waterways and ecosystems to a healthy state within a generation.

2023 amendments

The Government updated the Essential Freshwater 2020 regulations (including the NPS-FM) in February 2023, to support their effective implementation, and in response to consultation feedback. Changes to the NOF provisions were made to improve clarity, reduce complexity and correct some errors, without fundamentally changing the freshwater-policy direction. The Ministry's website provides [further information on the amendments to freshwater regulations](#).

The NPS-FM is a regulation made under the RMA. It provides national direction that regional councils must apply through their regional policy statement and regional plans, and city and district councils through their district plans. The NPS-FM 2020 replaced the NPS-FM 2017.

Te Mana o te Wai

At the core of the NPS-FM is the concept of Te Mana o te Wai, which underpins the entire freshwater management system.

The NPS-FM applies regionally and accounts for the differences between regions and catchments. However, territorial authorities must also use Te Mana o te Wai as the fundamental concept when making decisions that affect freshwater environments, including urban growth and zoning, and managing land use and activities that affect freshwater. For more information, see the Essential Freshwater [Te Mana o te Wai factsheet](#).

Te Mana o te Wai

E tohu ana te Mana o te Wai i te hira waiwai (te mana) o te wai. Koia te ariā matua, te korowai rānei, o te mōkī Wai Māori Waiwai, e noho ana hei tūāpapa ki ngā āhuetanga katoa o te whakahaere wai māori, taea noatia ngā wāhanga katoa o te NOF [...] Mā ana mahi whakahaere i te wai māori, ka whakarite ka tiakina te hauora me te toiora o te wai, mā reira e whakaratohia ai ngā hiahia a te tangata, i mua i te tuku i ētahi atu momo whakamahi i te wai.

Te Mana o te Wai refers to the vital importance of water and is the central concept, or korowai, of the Essential Freshwater package. It underpins all aspects of freshwater management, including all parts of the National Objectives Framework [...] When managing freshwater, it ensures the health and well-being of the water is protected, then human health needs are provided for, before enabling other uses of water.

Source: [Te Mana o te Wai factsheet](#) (Ministry for the Environment, 2020)

Although Te Mana o te Wai has been part of the NPS-FM since 2014, the direction as to how Te Mana o te Wai must be applied in the current NPS-FM is substantially different. This guidance clarifies the intent of this new direction and seeks to minimise ambiguity through practical advice on applying the NOF. Clarifying relevant policies and clauses will help those involved in planning to understand what is required, including the expectations, opportunities and roles in the process.

What is expected of councils implementing the NPS-FM?

Timeframe

Under the RMA, regional councils must notify a regional plan and regional policy statement (or changes to existing ones) that give effect to the NPS-FM by 31 December 2024. They must submit that plan to the Chief Freshwater Commissioner, and the plan must then go through the freshwater planning process.

This timeframe is a big change from the longer period in previous versions of the NPS-FM. It will require more focus and resources, and local authorities may have to work with incomplete or imperfect information. The NPS-FM acknowledges this and provides for the use of best information available (see the section [Clause 1.6: Best available information and the NOF](#)).

More information

Legislation requirements:

- [RMA section 80A and Part 4 of Schedule 1](#).

Essential Freshwater policies and regulations implementation guidance:

- [Freshwater planning process factsheets](#).

Tangata whenua

Councils must actively involve tangata whenua in freshwater management, including in decision-making processes, to the extent that tangata whenua wish. Councils may need to look more holistically at their processes and relationships to engage with tangata whenua (see the section [Clauses 3.2 and 3.4: Active involvement of tangata whenua and engagement with the wider community](#)).

Communities

Councils must also engage with the wider community.

What about city and district councils?

District plans must be reviewed and, if necessary, amended to give effect to the NPS-FM “as soon as reasonably practicable”.

The NPS-FM applies to all freshwater, and Te Mana o te Wai is relevant to all resource management where it affects freshwater, including in city and district planning.

Clause 3.5 Integrated management requires a ki uta ki tai (integrated approach) to give effect to Te Mana o te Wai. It also sets out requirements relevant to city and district councils. This includes encouraging the coordination and sequencing of urban growth, and promoting positive effects and managing adverse effects of urban development on freshwater bodies.

To give effect to Te Mana o te Wai, councils must consider matters such as how urban growth and increases in impervious surfaces will impact on stormwater flows, how stormwater affects the water bodies it is discharged to, and methods to manage urban growth and stormwater discharge. The identification and control of urban growth areas must prioritise the health and well-being of water bodies.

What about plan changes already under way?

Some plan changes and new regional plans that began under previous versions of the NPS-FM are still in progress. These can continue. Councils must consider the 2020 NPS-FM, and assess whether it is within the scope of submissions to amend the proposed plan, to give effect to the NPS-FM through the process that is underway.

Ongoing implementation

Getting the planning framework right is just the first step. Implementing the plans and giving effect to Te Mana o te Wai will require a lot of work, good relationships, and both existing and new tools. Consents, monitoring, reporting and enforcement will need to be ongoing and focused on giving effect to Te Mana o te Wai.

The Ministry also has a role as steward of the freshwater management system. It provides guidance to councils implementing the NPS-FM 2020 and other national regulations as intended, such that freshwater outcomes will be achieved.

Tangata whenua

Ongoing involvement of tangata whenua in freshwater management should form a part of early and continuing discussion about applying the NPS-FM. This includes decision-making processes around formal arrangements to share or hand over management, and decision-making responsibility. Any such arrangements will form part of the ongoing implementation of the NPS-FM.

Transitional support

When big changes to activities are needed to achieve the long-term vision for a freshwater management unit (FMU), this will require support and good evidence-based information on sustainable future management.

Implementation road map

A road map could set out:

- milestones towards the long-term vision and outcomes in the regional policy statement and plan
- any reductions in water takes or discharges.

This will give the community greater certainty about planning for change, and spending.

Monitoring

Councils must monitor both resource use and the state of freshwater. Monitoring should include mātauranga Māori, and may involve tangata whenua. The council must analyse trends and take action if the current plan settings are not achieving the environmental outcome set for each value (clause 3.9) and ultimately the long-term vision. For more information, see sections [Clause 3.9: Identifying values and setting environmental outcomes as objectives](#), [Clause 3.18: Monitoring](#), [Clause 3.19: Assessing trends](#) and [Clause 3.20: Responding to degradation](#).

Using this guidance

This guidance initially focuses on the NPS-FM provisions that must be applied at each stage of the NOF and that are critical to successful implementation of the NOF. This includes the requirements of Te Mana o te Wai, the long-term visions for freshwater, tangata whenua involvement, integrated management and the use of best-available information.

The guidance then sets out the steps of the NOF. This includes explanation of policy intent, as well as suggestions for best practice for setting limits on resource use and identifying environmental flows and take limits.

References in this guidance to 'clause', 'part', 'subpart', 'objective' or 'policy' relate to the respective clause, part, and so on, in the NPS-FM (using the same terminology as in the NPS-FM). References in this guidance to 'section' mean sections of this guidance and not the NPS-FM.

Clauses 3.2 and 3.4: Active involvement of tangata whenua and engagement with the wider community

NPS-FM

Clause 3.2: Te Mana o te Wai

- (1) Every regional council must engage with communities and tangata whenua to determine how Te Mana o te Wai applies to water bodies and freshwater ecosystems in the region.
- (2) Every regional council must give effect to Te Mana o te Wai, and in doing so must:
 - (a) actively involve tangata whenua in freshwater management (including decision-making processes), as required by clause 3.4; and
 - (b) engage with communities and tangata whenua to identify long-term visions, environmental outcomes, and other elements of the NOF; and
 - (c) apply the hierarchy of obligations, as set out in clause 1.3(5):
 - (i) when developing long-term visions under clause 3.3; and
 - (ii) when implementing the NOF under subpart 2; and
 - (iii) when developing objectives, policies, methods, and criteria for any purpose under subpart 3 relating to natural inland wetlands, rivers, fish passage, primary contact sites, and water allocation; and
 - (d) enable the application of a diversity of systems of values and knowledge, such as mātauranga Māori, to the management of freshwater; and
 - (e) adopt an integrated approach, ki uta ki tai, to the management of freshwater (see clause 3.5).
- (3) Every regional council must include an objective in its regional policy statement that describes how the management of freshwater in the region will give effect to Te Mana o te Wai.
- (4) In addition to subclauses (1) to (3), Te Mana o te Wai must inform the interpretation of:
 - (a) this National Policy Statement; and
 - (b) the provisions required by this National Policy Statement to be included in regional policy statements and regional and district plans.

NPS-FM

Clause 3.4: Tangata whenua involvement

- (1) Every local authority must actively involve tangata whenua (to the extent they wish to be involved) in freshwater management (including decision-making processes), including in all the following:
 - (a) identifying the local approach to giving effect to Te Mana o te Wai
 - (b) making or changing regional policy statements and regional and district plans so far as they relate to freshwater management
 - (c) implementing the NOF (see subclause (2))
 - (d) developing and implementing mātauranga Māori and other monitoring.
- (2) In particular, and without limiting subclause (1), for the purpose of implementing the NOF, every regional council must work collaboratively with, and enable, tangata whenua to:
 - (a) identify any Māori freshwater values (in addition to mahinga kai) that apply to any FMU or part of an FMU in the region; and
 - (b) be actively involved (to the extent they wish to be involved) in decision-making processes relating to Māori freshwater values at each subsequent step of the NOF process.
- (3) Every regional council must work with tangata whenua to investigate the use of mechanisms available under the Act, to involve tangata whenua in freshwater management, such as:
 - (a) transfers or delegations of power under section 33 of the Act
 - (b) joint management agreements under section 36B of the Act
 - (c) Mana Whakahono ā Rohe (iwi participation arrangements) under subpart 2 of Part 5 of the Act.
- (4) To avoid doubt, nothing in this National Policy Statement permits or requires a local authority to act in a manner that is, or make decisions that are, inconsistent with any relevant iwi participation legislation or any directions or visions under that legislation.

Policy intent

The NPS-FM requires councils to engage with communities when implementing the NOF. The NPS-FM also has specific obligations about actively involving tangata whenua in the management of freshwater, which go beyond the general duty to engage with communities. This is a necessary part of giving effect to Te Mana o te Wai. The obligations are set out in clause 3.2 and clause 3.4.

The active involvement of tangata whenua should be to the extent they wish. It does not create an obligation on tangata whenua to engage in any particular way. Councils should take direction from tangata whenua to determine how much they wish to be involved.

Tangata whenua should be invited to develop and implement mātauranga Māori tools for monitoring. Regional councils must also work collaboratively with tangata whenua and enable them to identify Māori freshwater values and to be actively involved in decision-making processes relating to Māori freshwater values, to the extent that they wish.

Regional councils must work with tangata whenua to investigate other formal mechanisms to share or transfer decision-making and management of freshwater. Any decisions the council makes about those formal mechanisms must be transparent, and information about the decisions, what was considered and the reasons they were made, must be publicly available.

These obligations are in addition to any already existing in other legislation, including Te Ture Whenua Māori Act 1993, the Local Government Act 2002, Treaty settlement legislation, iwi participation legislation and the Treaty of Waitangi. Additional obligations may also be set out in existing Mana Whakahono ā Rohe agreements and joint management agreements.

When working with tangata whenua, councils have to recognise and provide for the relationships of Māori and their culture and traditions with their ancestral lands, waters, sites, wāhi tapu (sacred places) and other taonga.

The involvement of tangata whenua should not end when the freshwater plan is written. Tangata whenua should be involved (to the extent they wish) in monitoring, reviewing and updating the planning framework, in response to new information.

Councils are required to engage with communities, too. Not all parts of the community with interests in freshwater have equal opportunities to engage; they may lack access to resources and experts. Councils should be mindful of these inequities in engagement with both tangata whenua and communities, and endeavour to provide engagement opportunities and an even playing field, as far as possible.

Best practice

Active involvement of tangata whenua in writing plans and decision-making processes requires respectful and trusting relationships between tangata whenua and councils. Councils should focus on building knowledge and capacity within staff and governance, to allow these relationships to grow, as well as creating processes and mechanisms for involvement.

Tangata whenua have the expertise and mātauranga Māori to be involved in freshwater management. They are the only people who can identify Māori freshwater values and who share or hold certain information or knowledge. Best practice engagement on this reflects te ao Māori (a Māori world view). Councils should have robust mechanisms to protect sensitive intellectual property.

The issues, aspirations and kaupapa of tangata whenua about freshwater may already be clearly set out in existing documents, such as iwi management plans, reports on significant sites and Waitangi Tribunal reports. Council staff should be familiar with this before seeking more information from tangata whenua.

Tangata whenua may be well resourced to participate and share their mātauranga Māori, or may need assistance and resources to enable them to be involved to the extent they wish. Councils should work with tangata whenua to identify and remove any barriers to their participation. That may mean providing resources or access to technical experts.

Where practical, it is best practice for councils to map out all engagement needs to determine how best to sequence or combine engagement on regional matters. Many national reforms are being implemented, requiring tangata whenua engagement in different regional and district plan processes. Staging engagement appropriately can minimise capacity issues within iwi and hapū communities. Importantly, although the NPS-FM requires quality engagement, it does not prescribe exactly how this must be done.

The process of engagement, active involvement, collaboration and decision-making should be mana enhancing. It must be informed by the principles of mana whakahaere, kaitiakitanga and manaakitanga (these are set out in clause 1.3(4) of the NPS-FM). Mechanisms to achieve this should be discussed with tangata whenua.

Monitoring programmes

Involvement in developing and running monitoring programmes is a tangible way for tangata whenua to exercise kaitiakitanga and take part in the ongoing implementation of the NPS-FM. It can help tangata whenua connect to their water bodies, and, in doing so, provide for their well-being. Monitoring methods should incorporate mātauranga Māori to the extent tangata whenua wish. Tangata whenua are the group that hold the expertise to monitor and report on those matters. They may also wish to be involved in monitoring and reporting on other attributes.

Further reading

Further information to support implementation:

- [Implementing mahinga kai as a Māori freshwater value](#), Chapter 5: Engaging with tangata whenua
- [Mana Whakahono ā Rohe guidance](#).

Clause 1.3: The fundamental concept of Te Mana o te Wai and its use in the NOF

NPS-FM

Clause 1.3: Fundamental concept – Te Mana o te Wai

Concept

- (1) Te Mana o te Wai is a concept that refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. It protects the mauri of the wai. Te Mana o te Wai is about restoring and preserving the balance between the water, the wider environment, and the community.
- (2) Te Mana o te Wai is relevant to all freshwater management and not just to the specific aspects of freshwater management referred to in this National Policy Statement.

Framework

- (3) Te Mana o te Wai encompasses 6 principles relating to the roles of tangata whenua and other New Zealanders in the management of freshwater, and these principles inform this National Policy Statement and its implementation.
- (4) The 6 principles are:
 - (a) Mana whakahaere: the power, authority, and obligations of tangata whenua to make decisions that maintain, protect, and sustain the health and well-being of, and their relationship with, freshwater
 - (b) Kaitiakitanga: the obligations of tangata whenua to preserve, restore, enhance, and sustainably use freshwater for the benefit of present and future generations
 - (c) Manaakitanga: the process by which tangata whenua show respect, generosity, and care for freshwater and for others
 - (d) Governance: the responsibility of those with authority for making decisions about freshwater to do so in a way that prioritises the health and well-being of freshwater now and into the future
 - (e) Stewardship: the obligations of all New Zealanders to manage freshwater in a way that ensures it sustains present and future generations
 - (f) Care and respect: the responsibility of all New Zealanders to care for freshwater in providing for the health of the nation.
- (5) There is a hierarchy of obligations in Te Mana o te Wai that prioritises:
 - (a) first, the health and well-being of water bodies and freshwater ecosystems
 - (b) second, the health needs of people (such as drinking water)
 - (c) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future

Policy intent

What is Te Mana o te Wai?

Te Mana o te Wai draws on well-established te ao Māori concepts. It recognises the mana and mauri of water, and the relationship between water and tangata whenua. It refers to the vital importance of water. Te Mana o te Wai requires that we first protect the health and well-being of water and then provide for people's needs, before enabling other uses of water. By protecting the health and well-being of our freshwater, we contribute to the protection of the health and well-being of our people.

Te Mana o te Wai expresses the special connection all New Zealanders have with freshwater. The health and well-being of freshwater is at the centre of all management decisions, working towards restoring and protecting the mauri of freshwater.

Te Mana o te Wai has implications for the relationships between local authorities and tangata whenua, and the involvement of tangata whenua in managing freshwater.

Applying Te Mana o te Wai locally

The requirement to give effect to Te Mana o te Wai is set nationally, but it will be applied locally. Councils, through active involvement with tangata whenua, and engagement and discussion with communities, will determine how to apply Te Mana o te Wai locally, based on the visions and tikanga of its people.

Determining how to apply Te Mana o te Wai locally is the vital first step in implementing the NPS-FM. It will be difficult to give effect to Te Mana o te Wai if it is not clear what it means in a particular location.

Regional councils must include an objective in the regional policy statement that describes how the management of freshwater in the region will give effect to Te Mana o te Wai. This does not need to 'define' Te Mana o te Wai but it must describe how management will give effect to it. This could include outcomes for the freshwater itself, how decision-making should occur, or how to enhance or restore relationships with freshwater.

What has changed since 2014?

Te Mana o te Wai was first included in the NPS-FM in 2014. This NPS-FM recognised the national significance of Te Mana o te Wai by recognising a variety of related values. This was strengthened by amendments made to the NPS-FM in 2017, which set out an intention to put the health and well-being of freshwater bodies at "the forefront of discussions and decisions about freshwater". An objective and policy were added at that time, requiring councils to "recognise and consider" Te Mana o te Wai.

The NPS-FM contains a cascading set of provisions – from the general to the specific. In respect of Te Mana o te Wai, the NPS-FM framework moves from general matters of principle to more specific policies that apply the principles, and then to even more specific provisions on how local authorities must give effect to Te Mana o te Wai in practice. No single reference or clause in the NPS-FM referring to Te Mana o te Wai should be read in isolation from the overall framework of the NPS-FM or the RMA that governs it.

The NPS-FM 2020 strengthens and clarifies Te Mana o te Wai by:

- placing it as the fundamental concept for freshwater management
- setting out its six principles
- incorporating the hierarchy of obligations inherent in Te Mana o te Wai into the sole objective of the NPS-FM
- requiring that freshwater is managed in a way that “gives effect to Te Mana o te Wai” ([Policy 1, p 10](#)).

The fundamental concept – Te Mana o te Wai

Clause 1.3 sets out the fundamental concept of Te Mana o te Wai. It requires that the needs and mauri of water drive freshwater-management decisions.

To learn more, see this [series of short videos](#) funded by the Ministry and produced by Kāhui Wai Māori.

Mauri

Te Mana o te Wai protects the mauri of the wai. Mauri is not defined in the NPS-FM. It is a te ao Māori concept that speaks both to the life energy that flows through all things and the interconnectedness of all things.

In te ao Māori, a Māori world view, freshwater comes from the parting of Ranginui (sky father) and Papatūānuku (earth mother). These gods share a whakapapa (genealogy) with Māori people, and this underpins the connected relationship that Māori have with the natural environment – mountains, forests and waters. All these elements are therefore related and hold their own mauri (life force), a mauri that must continue in order to propagate life.

Source: [Stepping into freshwater](#) (Ministry for the Environment, 2020)

Six principles

The principles of Te Mana o te Wai underscore the importance of whakapapa in protecting mauri.

- Mana whakahaere, kaitiakitanga and manaakitanga are rights and obligations of tangata whenua to manage, protect and use freshwater that derive from their whakapapa relationship to that wai.
- Governance, stewardship, and care and respect: these reflect the role of all other New Zealanders.

These principles should be reflected in the local expression of Te Mana o te Wai, including planning and ongoing implementation.

Restoring the balance

Clause 1.3 refers to “restoring and preserving the balance between the water, the wider environment, and the community”. The reference to ‘balance’ isn’t intended to signal a trade-off between Te Mana o te Wai and other goals. It emphasises that healthy

freshwater is a prerequisite for a healthy wider environment and community, and that it is vital to keep those elements in balance.

Hierarchy of obligations

Te Mana o te Wai has a hierarchy of obligations. This hierarchy is incorporated into the objective of the NPS-FM.

1. The first priority is the health and well-being of the water body, ahead of any human uses of that water.
2. The second is people's health needs (such as drinking water).
3. The third is providing for other types of well-being.

Applying the hierarchy of obligations

The hierarchy requires a fundamental change to the way in which some resource managers have considered managing freshwater. It requires us to identify what is needed to give effect to Te Mana o te Wai, before deciding what other values can be accommodated in the catchment. The starting point is providing for the well-being of the water body not the current state of allocation or considering 'how much are we willing to give up?'.

Te Mana o te Wai does not require all activities to come to a halt, nor that all water bodies must be restored to a pristine state before other needs in the hierarchy can be addressed (ie, drinking water). However, it requires you to understand existing pressures and prioritise the hierarchy based on what is there, and also requires that decisions are made that provide for activities without detracting from Te Mana o te Wai. In degraded water bodies this will require changes to current resource use, to restore Te Mana o te Wai. New development may proceed but in a way that gives effect to Te Mana o te Wai. This means economic gain, urban development or lifestyle activities cannot come at the expense of the health of a water body.

Priority 1 – The health and well-being of water bodies and freshwater ecosystems

The first priority has two components:

- the health and well-being of water bodies, and
- the health and well-being of freshwater ecosystems.

Health and well-being of water bodies

The health and well-being of the wai itself as an interconnected whole, with mana of its own, must be provided for as a first priority. This includes its metaphysical aspects and its physical being. Providing for this will overlap with providing for a healthy ecosystem, but providing for the mauri of a water body may mean going beyond the concept of ecosystems. For example, providing for a water body to express its natural form and character by moving within its bed, or changing course or connecting with riparian areas, will be a necessary part of providing for the mana of some rivers. Part of this ability to move and express form will be captured by the 'habitat' component of ecosystem health. However, it may encompass wider considerations of the intrinsic value of the river.

Understanding what the holistic health and well-being of a water body means, and how to express it, will come from conversations with tangata whenua when gaining a local understanding of Te Mana o te Wai. Tangata whenua may use integrated concepts like mahinga kai¹ to indicate the overall health of the water. The description of the mahinga kai value in appendix 1A of the NPS-FM includes “kei te ora te mauri (the mauri of the place is intact)” for this reason.

One way to ensure the health and well-being of water bodies is by applying the NOF. Policy 5 in the NPS-FM requires that this is at least maintained, and, in some circumstances, improved. For more detail, see the section [Policy 5 and the direction to ‘maintain or improve’](#) in this guidance.

Health and well-being of freshwater ecosystems

The definition of healthy freshwater ecosystem in appendix 1A of the NPS-FM describes some aspects required under this priority:

In a healthy freshwater ecosystem, all 5 biophysical components are suitable to sustain the indigenous aquatic life expected in the absence of human disturbance or alteration (before providing for other values).

This indicates a high standard of health is expected – merely ‘surviving’ will not be enough – but it does not necessarily mean a water body must be pristine or returned to a pre-human state. For more on the five components, see the [ecosystem health factsheet](#).

The national bottom lines in appendix 2A of the NPS-FM indicate that a state below them will not achieve a healthy ecosystem. However, although the state of health appropriate to a particular water body, and the time taken to achieve it, is a choice for tangata whenua and communities to consider through the NOF process, the final decision-making on this lies with councils.

Priority 2 – The health needs of people

This priority comes after providing for the water body itself and before providing for any other use.

Any measures to meet people’s needs must not degrade the mauri of any natural freshwater body. If they do (eg, taking water for town supply when the river is at low flow, so that the river dries up), councils must change their management to restore the mauri.

Previous versions of the NPS-FM referred to the need to “safeguard the health of people and communities” as affected by secondary contact (NPS-FM 2014 version) or any contact with freshwater (2017 amendments) *alongside* safeguarding freshwater ecosystems. The NPS-FM now gives the well-being of the water body priority over the health needs of people.

¹ Mahinga kai generally refers to freshwater species that have traditionally been used as food, tools or other resources. It also refers to the places those species are found and to the act of catching or harvesting them.

Drinking water

For human health, the reference to health needs is intended to include drinking water. Councils should identify water bodies that are sources of drinking water and ensure the water quality remains suitable. This is supported by the regulations in the National Environmental Standard for Sources of Human Drinking Water 2007.

Other uses

Municipal takes include multiple uses, among them drinking water, but Councils also routinely take water for commercial use or irrigation. Priority 2 does not apply to these takes as a whole, although parts, eg, those that relate to drinking water, will apply. In practice, drawing a distinction between the final use that potable water is put to in a municipal supply situation will be a challenge. However, councils should consider ways to distinguish between these different uses. Interpretations of the hierarchy of obligations in plans and policy statements should not be diluted by providing for 'other uses' of municipal water takes, with a blanket assumption they fall under priority two.

Waste discharge

The health needs of people were not intended to extend to water bodies carrying away waste. Sewage discharges to water are not directed to have higher priority than any other kind of discharge, when considering what a water body can assimilate. The community may choose to prioritise those discharges when allocating contaminant discharges among users in the third priority. However, this is not required in order to give effect to the second priority. This consideration may extend to decisions on when and if to reduce some discharges ahead of others.

Mahinga kai

Where the compulsory value mahinga kai involves people undertaking cultural harvest of food, councils should ensure the water quality supports that practice, and that the food is safe to eat.

Swimming and other immersion

People's health needs may include swimming and other contact with water, for example, cultural practices that require immersion. Councils, after actively involving tangata whenua and engaging the community, need to decide if this constitutes a 'need'. The local understanding of Te Mana o te Wai will inform this decision. Many tangata whenua will consider safe contact with water an essential health need, consistent with Te Mana o te Wai and the relationship of Māori with water in that rohe.

For recreational or cultural immersion, the water quality should be safe. The national bottom lines and national target for safe swimming in appendix 3 of the NPS-FM help ensure this.

Priority 3 – Social, cultural and economic well-being

After meeting the first two priorities, councils, tangata whenua and the wider community need to provide for other social, economic and cultural well-being, now and into the future. This can only be to the extent they do not compromise the higher priorities. For example, Appendix 1B lists "other values that must be considered" when determining values for an FMU. Appendix 1B values include, among others, "Animal drinking water",

“Irrigation, cultivation, and production of food and beverages”, “Commercial and industrial use” and “Fishing”. If identified, these values must be provided for within the limits set to achieve priority 1 and 2.

Policy 15 in the NPS-FM requires an enabling approach, within the constraints of the higher priorities. This requires conversations about:

- what is needed to provide for well-being
- how to reach multiple goals
- allocating resources, particularly where water bodies are over-allocated or degraded.

In some places, it will require plans to reduce contaminants or water use (‘claw back’).

To prioritise well-being now and in the future, councils must consider the foreseeable needs of future generations. This means maintaining options for using resources, access to resources and their quality; this is a part of sustainable management.

What does this mean when considering values?

Values of water bodies must be identified as part of the NOF. This will involve deciding the extent to which particular values are provided for, especially when water is scarce, over-allocated or degraded.

Priority 1 and the objective of the NPS-FM call for prioritising values that contribute to the water body’s health and well-being over those that do not.

Some values clearly sit under priority 1, for example, ecosystem health and threatened species. For other values, only certain components may be relevant. For example, where ‘natural form and character’ contribute to the health and well-being of the water body, this should be a first priority.

Further reading

Further information to support implementation:

- [Te Mana o te Wai implementation](#)
- [Te Mana o te Wai factsheet](#)
- [Ecosystem health factsheet](#)
- [Te Mana o te Wai Fund.](#)

Other relevant regulations:

- [National Environmental Standards for Sources of Human Drinking Water.](#)

Policy 3 and clause 3.5: Integrated management – ki uta ki tai

NPS-FM

Clause 2.2: Policies

[...]

Policy 3: Freshwater is managed in an integrated way that considers the effects of the use and development of land on a whole-of-catchment basis, including the effects on receiving environments.

Clause 3.5: Integrated management

- (1) Adopting an integrated approach, ki uta ki tai, as required by Te Mana o te Wai, requires that local authorities must:
 - (a) recognise the interconnectedness of the whole environment, from the mountains and lakes, down the rivers to hāpua (lagoons), wahapū (estuaries) and to the sea; and
 - (b) recognise interactions between freshwater, land, water bodies, ecosystems, and receiving environments; and
 - (c) manage freshwater, and land use and development, in catchments in an integrated and sustainable way to avoid, remedy, or mitigate adverse effects, including cumulative effects, on the health and well-being of water bodies, freshwater ecosystems, and receiving environments; and
 - (d) encourage the co-ordination and sequencing of regional or urban growth.
- (2) Every regional council must make or change its regional policy statement to the extent needed to provide for the integrated management of the effects of:
 - (a) the use and development of land on freshwater; and
 - (b) the use and development of land and freshwater on receiving environments.
- (3) In order to give effect to this National Policy Statement, local authorities that share jurisdiction over a catchment must co-operate in the integrated management of the effects of land use and development on freshwater.
- (4) Every territorial authority must include objectives, policies, and methods in its district plan to promote positive effects, and avoid, remedy, or mitigate adverse effects (including cumulative effects), of urban development on the health and well-being of water bodies, freshwater ecosystems, and receiving environments.

Policy intent

Ki uta ki tai is the recognition and management of the interconnectedness of the whole environment, from the mountains, springs and lakes, down the rivers to hāpua (lagoons), groundwater, wahapū (estuaries) and to the sea. The local interpretation will vary according to tangata whenua views. Some may use different concepts with similar meaning.

Ki uta ki tai informs how we give effect to Te Mana o te Wai. It is not defined in the NPS-FM, but clause 3.5 clarifies that councils must take an integrated approach. Policy 3 also requires that:

Freshwater is managed in an integrated way that considers the effects of the use and development of land on a whole-of-catchment basis, including the effects on receiving environments.

To give effect to the NPS-FM:

- councils that share jurisdiction over a catchment must cooperate in the integrated management of the effects of land use and development on freshwater
- district and city councils must change their plans to address the adverse effects of urban development on water bodies. This will influence urban growth planning, including how councils give effect to the National Policy Statement for Urban Development (NPS-UD).

In line with the concept of ki uta ki tai, the NPS-FM applies to all freshwater (including groundwater) and, to the extent they are affected by freshwater, to receiving environments. This may include estuaries and the wider coastal marine area (see the section [Clause 1.5: Application](#)).

Best practice

Councils should work together, alongside tangata whenua, to plan for growth while giving effect to Te Mana o te Wai. As well as regional plans, other RMA and non-RMA provisions can support integrated management, for example, stormwater management plans that identify future upgrades and expansions across regions and districts functions.

Although the NPS-FM does not mention other pieces of national direction specifically, councils still have obligations to implement all national direction instruments according to the terms of those instruments.

For example, councils must give effect to both the NPS-FM and the NPS-UD, in order to provide space for housing while protecting freshwater resources. Councils should give effect to the more general directives in the NPS-UD in a way that meets the more specific environmental protection directives of the NPS-FM. Giving effect to Te Mana o te Wai in an urban-planning context will require more strategic planning, about where and what sort of development is appropriate. Reducing land available at one site, because of freshwater constraints, may result in more intensive housing elsewhere. Actively involving tangata whenua in these decision-making processes to give effect to Te Mana o te Wai and restoring the mauri of the wai is very important. It is also an opportunity to seek and apply mātauranga Māori perspectives to wider planning.

There will inevitably be interactions that need to be managed when considering how to give effect to the NPS-UD, the NPS-FM and the National Policy Statement for Highly Productive Land 2022 (NPS-HPL). The rules and targets set by councils to implement the NPS-FM must be met when implementing the NPS-HPL. And where required, there are special provisions in the NPS-HPL, which provides a pathway for the retirement of land from land-based primary production for the purpose of improving water quality.

For example, consenting decisions at the local level, made in relation to highly productive land (HPL), will need to consider the regional plan changes that set nutrient limits under the NPS-FM. The distribution of water and nutrient allocations should consider the current use of HPL for land-based primary production. Discussions may need to be had with territorial authorities as to the impact that enabling land-based primary production in a particular catchment may have on water quality, and as to whether limits and environmental outcomes for that FMU will be achieved.

Integrated management in regional plans

Plan makers must consider the different values, outcomes and limits of a resource, and include provisions that have regard to these overlapping or competing demands.

In addition, clause 3.11(8) of the NPS-FM states that regional councils (when setting TASs as part of the development of regional plans) must, among other matters, consider the connections of water bodies to receiving environments (such as estuaries and coastal waters), and the respective environmental outcomes of these downstream receiving environments (see [Clause 3.11: Setting target attribute states](#)).

When developing regional plans, the 'Integrated management' heading is the strategic and integrated focus of the plan. This location provides for overarching policies relating to the strategic management of a region's resources, such as of land, water and coastal environments.

For more information on regional policy statement and regional plan structures, see [the guidance on the Ministry's website](#).

Further reading

Further information to support implementation:

- fact sheet on [territorial authorities and ki uta ki tai](#)
- guidance on [Māori participation and perspectives](#)
- guidance on [coastal environments where it relates to integrated management](#), p 7–8.

Clause 1.5: Application

NPS-FM

Clause 1.5: Application

- (1) This National Policy Statement applies to all freshwater (including groundwater) and, to the extent they are affected by freshwater, to receiving environments (which may include estuaries and the wider coastal marine area).

Policy intent

Clause 1.5 states that the NPS-FM applies not just to freshwater but to all receiving environments affected by freshwater, which may include coastal waters.

A receiving environment includes any water body (such as a river, lake, wetland or aquifer) and the coastal marine area (including estuaries). Policy 3 in the NPS-FM also gives strong direction to protect receiving environments, and clause 3.5 directs councils to recognise the interconnectedness of the whole environment, down rivers, to the sea including lagoons and estuaries.

These clauses draw a connection between fresh and coastal waters, which would otherwise be managed by different parts of the planning framework. This helps to give effect to Te Mana o te Wai, recognising the inherent connections of freshwater bodies to each other (rivers to lakes to groundwater) and to the coast (estuaries, lagoons and open sea), as an indivisible whole.

The NPS-FM applies to receiving environments, such as estuaries and coastal waters where they are connected and affected by freshwater inputs. Councils will need to ensure that limits set are sufficient to achieve environmental outcomes for estuarine and certain downstream coastal waters. For instance, due to the cumulative effect of upstream inputs, it may be that, in order to meet outcomes of a given coastal environment, a more stringent limit is needed for an upstream river – that is, than would otherwise be required to achieve a freshwater TAS for that upstream river alone.

Best practice

Plan content must also give effect to the New Zealand Coastal Policy Statement when freshwater affects coastal outcomes. For example, sediment attributes, and limits on sediment discharges, should be set at a level that does not significantly increase sedimentation in coastal water (Policy 22 of the New Zealand Coastal Policy Statement).

An important first step for coastal environments will be identifying the coast as a receiving environment and the coastal outcomes affected by freshwater. Councils should then look up the catchment and identify actions that need to be taken through land and freshwater management that will achieve the coastal outcomes, and incorporate them into the freshwater planning process.

For example, some estuarine ecosystems are particularly sensitive to sediment loads because of their limited ability to flush sediment out. In comparison, the smaller streams that feed into the estuary can flush sediment regularly with rainfall. This may call for more stringent controls on sediment-generating activities than would be necessary if only the values of the river (not the connected estuary) were considered.

Policy 5 and the direction to ‘maintain or improve’

NPS-FM

Clause 2.2: Policies

Policy 5: Freshwater is managed (including through a National Objectives Framework) to ensure that:

- the health and well-being of degraded water bodies and freshwater ecosystems is improved, and
- the health and well-being of all other water bodies and freshwater ecosystems is maintained and (if communities choose) improved.

Clause 1.4: Interpretation

[...]

degraded, in relation to an FMU or part of an FMU, means that as a result of something other than a naturally occurring process:

- (a) a site or sites in the FMU or part of the FMU to which a target attribute state applies:
 - (i) is below a national bottom line; or
 - (ii) is not achieving or is not likely to achieve a target attribute state; or
- (b) the FMU or part of the FMU is not achieving or is not likely to achieve an environmental flow and level set for it; or
- (c) the FMU or part of the FMU is less able (when compared to 7 September 2017) to provide for any value described in Appendix 1A or any other value identified for it under the NOF

degrading, in relation to an FMU or part of an FMU, means any site to which a target attribute state applies is experiencing, or is likely to experience, as a result of something other than a naturally occurring process, a deteriorating trend (as assessed under clause 3.19)

Policy 5 directs a key outcome: to improve degraded water bodies, and maintain all other water bodies, or improve them if communities so choose.

‘Degraded’ water bodies are those that:

- do not meet a prescribed national bottom line; or
- if a target attribute state (TAS) has been set, are not achieving it; or
- if an environmental flow and level have been set, are not achieving or are not likely to achieve these; OR
- are less able to provide for any value identified under the NOF process than they were on 7 September 2017. An exception is for water bodies affected by naturally occurring processes that would occur in the absence of human activity.

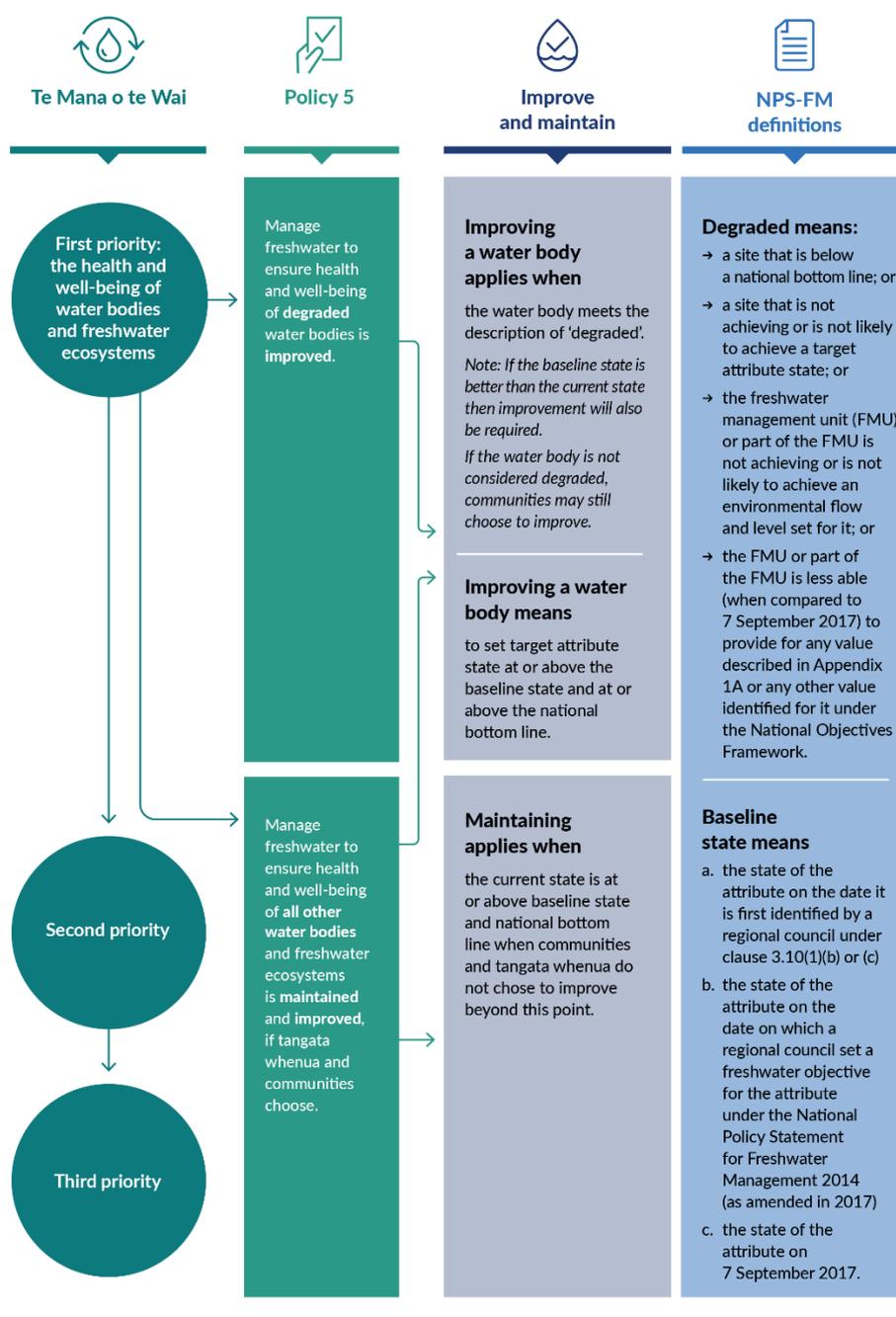
One element of the test for degrading is if a water body is below its TAS. A TAS must be set at or above the attribute’s ‘baseline state’. The baseline state is the best state out of the following:

- the state of the attribute on the date it is first identified by a regional council, or
- the state of the attribute on 7 September 2017, or
- whenever the regional council set a freshwater objective for that attribute under the previous NPS-FM.

For more on TASs and baseline states, see the section [Clause 3.12: Achieving TASs and environmental outcomes](#).

Figure 1 sets out the policy direction and definitions of Policy 5.

Figure 1: Maintain and improve – Policy 5



Under Policy 5, and these definitions, water bodies must be at least maintained. Maintenance within a band is not provided for, as it was in previous versions of the NPS-FM, and so degradation within a band is not provided for.

Water bodies may not be allowed to decline below their baseline state, and if they are below the national bottom line they must be improved (at least to the national bottom line). Communities may also choose to improve them above their baseline state and above national bottom lines. For example, they may want to restore the water quality of a stream that has been degraded for many years, so that it is safe to swim in.

The direction to maintain and improve water bodies has a profound effect on all decisions about freshwater: it does not allow decision-makers to let water bodies decline. For example, you may not put additional pollution into a water body. There is no 'pollution headroom' in a water body, you can only add contaminant discharges if you remove, reduce or fully mitigate the effect of the existing discharges of that contaminant.

Spatial and temporal scale of Policy 5

The direction of Policy 5 to 'maintain or improve' applies across the whole region, across the entire freshwater management unit and over time. It is not appropriate to:

- maintain or restore one tributary of a water body while degrading another
- allow a water body to degrade and then improve it later.

Unlike previous versions of the NPS-FM, the current version does not take an 'overall' or 'unders and overs' approach to 'maintain or improve'. This is not consistent with the requirement to give effect to Te Mana o te Wai in all water bodies.

Take action on degradation

Policy 13 of the NPS-FM requires councils to monitor water bodies and to act if there is degradation or a deteriorating trend. (For direction on deteriorating trends, see the section [Clause 3.20: Responding to degradation.](#))

Clause 1.6: Best available information and the NOF

NPS-FM

Clause 1.6: Best information

- (1) In giving effect to this National Policy Statement, local authorities must use the best information available at the time, which means, if practicable, using complete and scientifically robust data.
- (2) In the absence of complete and scientifically robust data, the best information may include information obtained from modelling, as well as partial data, local knowledge, and information obtained from other sources, but in this case local authorities must:
 - (a) prefer sources of information that provide the greatest level of certainty; and
 - (b) take all practicable steps to reduce uncertainty (such as through improvements to monitoring or the validation of models used).
- (3) A local authority:
 - (a) must not delay making decisions solely because of uncertainty about the quality or quantity of the information available; and
 - (b) if the information is uncertain, must interpret it in the way that will best give effect to this National Policy Statement

Policy intent

Clause 1.6 of the NPS-FM provides direction on how local authorities should proceed in the absence of complete and scientifically robust data. This requirement to use the best information applies to local authorities when implementing all parts of the NPS-FM (including when identifying take limits and managing attributes affected by nutrients), rather than just to specific parts.

This requirement in the preliminary provisions of the NPS-FM (Part 1) applies to local authorities when implementing *all* parts of the NPS-FM (including when identifying take limits and managing attributes affected by nutrients), rather than just to specific parts. It makes it clear that local authorities can use a range of information sources and must not delay making decisions solely because of uncertainty about the quality or quantity of the information available. For instance, where that information is incomplete, uncertainty about its quality or quantity must not be a reason to delay decisions giving effect to the NPS-FM.

Councils should reduce any uncertainty as much as practicable by improving monitoring or analysing data. Doing nothing because of a lack of information is not an acceptable option.

This clause speaks to aspects of the precautionary principle and requires action even where there may be uncertainty about data or the outcomes that will be achieved.

Councils must interpret uncertain information in the way that will “best give effect to this National Policy Statement”. The fundamental concept, objective and policy direction of the NPS-FM is to give effect to Te Mana o te Wai. This means that information must be interpreted in a way that provides first for the health and well-being of the water body.

Situations that can cause uncertainty include:

- no information
- imperfect information (eg, about cause–effect pathways)
- uncertainty from measurement errors or inherent randomness
- ambiguity or varied interpretations.

There may not be enough information if, for example, the monitoring record is short or incomplete. This may make it difficult to determine the current or baseline state of water quality. This will be common for relatively new or newly applied attributes (for example, Fish Index of Biotic Integrity (IBI)) or novel mātauranga Māori attributes that have not been routinely observed before.

This direction emphasises a theme throughout the NPS-FM: knowledge systems other than complete Western scientific data have value and should inform decisions about freshwater. This importantly includes mātauranga Māori, and can also include other local knowledge that has been robustly gathered and validated.

Best practice

Uncertainty about data or expected outcomes warrants a precautionary approach, rather than using it as a reason to not act or to gather more information before acting. This can mean you take action before there is certainty about outcomes, or that you build a more conservative buffer into a TAS to ensure the health and well-being of the water body.

For limit setting, this may be particularly relevant when linking the achievement of the instream TASs to a restriction on land use or land use practice. For example, it may not be possible to predict with complete scientific certainty that a rule with a limit on stocking rates will achieve x milligrams of chlorophyll-a in a particular lake. However, where the best information available shows a link between the stocking rate and the drivers of chlorophyll-a, and national data shows that reductions in those drivers can be expected as a result of a particular practice, this could be enough to justify limit setting via land use rules.

Councils may set up expert panels to advise on interpreting or applying available information, interpreting national data sets in the local context, or the likely effects of management approaches. The panels should incorporate experts in both Western science and mātauranga Māori, to integrate knowledge across a range of values.

To reduce uncertainty over time, councils can increase monitoring and improve understanding about interactions and the models that estimate them. When new or improved information arises, councils should review their freshwater plans and adjust their actions to reflect that new information.

Best information available and use of models

Where possible, use real data, rather than modelled. However, models will be required to identify and understand relationships between values and attributes, and to calculate catchment-scale interactions. Only use modelled data where other types are not available.

Councils will have to use modelled information in many circumstances. For example, if there is no flow recorder on a river, modelled information from another catchment can provide an understanding of important flow attributes and their timing. Some information will have to be modelled or estimated for future states, for example, projections about how future climate will affect flow levels.

Applying mātauranga Māori can also involve models. These can range from conceptual models of relationships within a catchment, to quantitative models developed by tangata whenua.

Although no models are prescribed for use, it is best practice to ensure they meet certain standards so they will provide quality outputs. For the purpose of the NPS-FM, this includes:

- integrating a range of different values, including Māori values, and relationships in a system
- inputting both quantitative and qualitative data
- using data that is representative of the catchment or water body type where possible. National data sets can also be useful, and may be necessary, where local data is absent or poor
- using evidence-based climate projections
- identifying sources of uncertainty (such as through global sensitivity analysis) and taking action to reduce these
- ensuring all parts of the model, including all assumptions and uncertainties, are clearly set out and transparently reported.
- ensuring the information, including modelled data, is representative of the environment and receiving environment. This may include episodic events or total cumulative load to the receiving environment, rather than relying on base flow calculations.

Weather data: averaging events

Weather data should capture storminess and dry periods rather than averaging these across the year. Averaging weather events can have significant effects on the modelled contribution of contaminants in a catchment.

For example, high *Escherichia coli* (*E. coli*) loads are carried from pasture and stormwater in storm events. Storms may cause contaminants to bypass riparian barriers and concentrate in overland flow paths. Not modelling the transport of *E. coli* in storms could indicate that riparian and stock exclusion measures are more effective than they are.

Other measures, such as critical source area management, may have a bigger impact on *E. coli* levels in those circumstances. Where models do not account adequately for

localised variability, the outputs may not account for localised issues. This is especially important for larger freshwater management units or catchments with varied rainfall and land types. For example, if nutrient management tools average nitrogen outputs across different land types, the results may not account for localised increases in contaminants.

Further reading

Further information to support implementation:

- [Communicating and managing uncertainty when implementing the NPS-FM, and the theory behind it.](#)

Key research relevant to best available information:

- [Freshwater science–policy interactions in Aotearoa-New Zealand: lessons from the past and recommendations for the future.](#)

NOF and section 32 of the RMA

Resource Management Act 1991

This box sets out the main parts of section 32 relevant to this guidance. To understand all the requirements, see the full text.

32 Requirements for preparing and publishing evaluation reports

- (1) An evaluation report required under this Act must—
 - (a) examine the extent to which the objectives of the proposal being evaluated are the most appropriate way to achieve the purpose of this Act; and
 - (b) examine whether the provisions in the proposal are the most appropriate way to achieve the objectives by—
 - (i) identifying other reasonably practicable options for achieving the objectives; and
 - (ii) assessing the efficiency and effectiveness of the provisions in achieving the objectives; and
 - (iii) summarising the reasons for deciding on the provisions; and
 - (c) contain a level of detail that corresponds to the scale and significance of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the proposal.
 - (2) An assessment under subsection (1)(b)(ii) must—
 - (a) identify and assess the benefits and costs of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions, including the opportunities for—
 - (i) economic growth that are anticipated to be provided or reduced; and
 - (ii) employment that are anticipated to be provided or reduced; and
 - (b) if practicable, quantify the benefits and costs referred to in paragraph (a); and
 - (c) assess the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions.
- (...)

Policy intent

Section 32 of the RMA is integral to transparent, robust decision-making on RMA plans and policy statements.

It requires councils to:

- examine the objectives of plans and policy statements (and changes to them), to understand the extent to which they are the most appropriate way to achieve the purpose of the RMA
- examine the other provisions (policies, rules and methods), to understand the extent to which they are the most appropriate way to achieve the objectives

- examine different ‘reasonably practicable’ options for achieving the objectives of the plan or policy statement
- assess the efficiency and effectiveness of the provisions in achieving the objectives
- for efficiency, identify and assess the benefits and costs of new policies and rules, for the community, the economy and the environment
- document the analysis, so stakeholders and decision-makers can understand the rationale and evidential basis for policy choices
- assess the risk of acting or not acting if there is uncertain or insufficient information
- fully integrate section 32 evaluations into decision-making throughout the planning process, and not view it as merely a reporting requirement to complete at the end of the process
- carry out evaluations under section 32 throughout plan development
- ensure that the plan gives effect to the NPS-FM, including:
 - the objective: to align management of natural and physical resources with Te Mana o te Wai
 - the policies: including Policy 15, which specify communities are enabled to provide for their social, economic and cultural well-being in a way that is consistent with this National Policy Statement
- understand the likely benefits and costs of options to give effect to the NPS-FM, and determine the most appropriate methods to achieve the objectives of the plan
- understand the economic and employment consequences of different choices and when to ‘trade off’ values in the same NPS-FM objective priority
- document decision-making, to show compliance with the NPS-FM and transparently communicate the rationale behind decisions.

How does Te Mana o te Wai relate to section 32?

Te Mana o te Wai is the fundamental concept at the heart of the NPS-FM. All decisions about freshwater should give effect to Te Mana o te Wai. This includes decisions during analyses under section 32. This means:

- decisions about the appropriateness of options must prioritise the health and well-being of the water body and freshwater ecosystems, over other uses
- assessments of risk should follow the direction in clause 1.6 about best information (see the section [Clause 1.6: Best available information and the NOF](#))
- assessments should not include options (eg, for TASs, limits, rules or policies) that do not give effect to Te Mana o te Wai (because these would not give effect to the NPS-FM and achieve sustainable management)
- outcomes that give effect to Te Mana o te Wai cannot be ‘traded off’ against those that do not, even if these have lower costs.

It is not consistent with the NPS-FM to lessen the economic impact of an action rather than maintain or restore the mauri of a water body. It is consistent with the NPS-FM to choose the option with the least economic impact to give effect to Te Mana o te Wai.

How does the ‘best information’ requirement relate to section 32?

The section 32 evaluation must take into account the risk of acting or not acting where there is uncertain or insufficient information.

Clause 1.6 of the NPS-FM, ‘Best information’, contains direction on what decisions to make when there is uncertain or insufficient information (see the section [Clause 1.6: Best available information and the NOF](#)).

There may not be enough information to assess, for example, the current or baseline state of water quality for a particular attribute, if little or no monitoring has been undertaken. This will be common for relatively new or newly applied attributes (such as ecosystem metabolism, deposited sediment, or novel mātauranga Māori attributes) where these have not been routinely observed in the past.

Uncertainty may arise when there is no information, imperfect information (eg, about cause–effect pathways), or uncertainty from measurement errors or inherent randomness, or the information is ambiguous or could be interpreted in different ways.

The NPS-FM makes it clear that:

- local authorities should base decisions on the best available information and not delay decisions because of imperfect information. A decision to do nothing because there is a lack of information is not an acceptable option
- the risk assessment required by section 32 must assess that risk in the way that will best give effect to the NPS-FM. The fundamental concept, objective and overall policy direction of the NPS-FM is to give effect to Te Mana o te Wai. Information must be interpreted in a way that provides first for the health and well-being of the water body.

Best practice

Robust section 32 analysis is essential for making informed decisions about different options in regional plans and policy statements.

Regional plans and policy statements must give effect to the NPS-FM (ie, give effect to Te Mana o te Wai). A plan or policy statement cannot have plan provisions that, together, do not achieve this.

This does not mean that water must be pristine and that communities do not have choices. Any choices and analysis should focus on:

- the most appropriate objectives to give effect to Te Mana o te Wai and the purpose of the RMA
- how to achieve the objectives of the plan
- how long it will take to achieve them.

Analysing what objectives to set

The objectives of the plan or regional policy statement must achieve the purpose of the RMA. The NPS-FM sets out objectives and policies for doing this. It is clear and directive that councils must give effect to Te Mana o te Wai, and that the health and well-being of water bodies and freshwater ecosystems have first priority in any decisions.

Options for objectives should not include those that are not consistent with Te Mana o te Wai or that do not give the water first priority. This means that options in the analysis that trade off Te Mana o te Wai for other outcomes need to be eliminated early in the process.

For example, setting a TAS at the current state (rather than above the current state) may provide for existing economic values, while setting them at or above the current level could 'lose' a potential economic opportunity. It is not consistent with Policy 5 (requiring councils to at least maintain water quality) to choose the first option – declining water quality but more economic activity – as it would not give effect to the NPS-FM.

Some traditional economic tools for analysing options can focus on optimising social benefits, and may involve trading off, for example, a healthy environment against economic growth. This will not give effect to the NPS-FM, so take care when choosing economic analysis tools for section 32 analyses.

Analysing how to achieve objectives

Section 32 analysis is essential for making good, informed decisions about the costs and benefits of different options.

All options must achieve the objectives of the plan or policy statement and, give effect to Te Mana o te Wai. Eliminate options that do not early in the analysis.

The 'status quo' option

The exception is to include the status quo option, to compare the costs of different options with the current situation. This can highlight the amount of change required. For example, comparing the cost of improved sediment control with that of current measures will clarify the change in expected costs to reduce sediment to give effect to Te Mana o te Wai. The analysis should make clear when the status quo is not a viable option (eg, when it is not consistent with Policy 5 because the current state is below the national bottom line).

Costs and benefits

Not all costs and benefits are quantifiable, and those that are, cannot necessarily be monetised. The analysis should use a broad definition of costs and benefits, even if they cannot be directly compared.

The analysis can also compare where costs and benefits will fall. Different methods may place costs on different parts of the community. Clear analysis will allow discussion about who should bear the costs. For example, reductions in contaminants entering a river could come from changes to the source (eg, factories, sewage treatment, stormwater pipes, land use) or by building treatment wetlands to remove contaminants after they have been discharged. These different methods will come at different costs for each type of

discharge. Understanding and analysing the costs will inform the decision about the efficiency of the different options and who will bear that cost (the discharger or the wider community).

How long?

Section 32 analysis can inform discussion about timeframes, for example, how long it will take to achieve goals consistent with Te Mana o te Wai. A good understanding of costs can aid the discussion about aspirational goals, such as how long it should take to improve water quality. An improvement in five years may be expensive, but spreading the costs over 30 years may affect how, and on whom, those costs fall.

A point to consider is the cost of delaying action. If a water body is nearing an ecological tipping point, avoiding possibly irreversible degradation may require faster change.

For longer-term goals, consider the impacts of climate change. Weather patterns are likely to change in future, and the impact of higher rainfall or more frequent droughts should be part of decisions about delaying action.

Care should be taken when using economic tools to assess the impact of taking time to implement an action. High discount rates for understanding economic activity over time may undervalue the current environmental quality in favour of investing money elsewhere.

The section 32 analysis should include qualitative costs or costs that are difficult to monetise, for example, the cost to the environment of delaying change, if a persistent degraded state leads to the extinction of local species.

Further information to support implementation

- [A guide to section 32 of the Resource Management Act](#)

Clause 3.3: Long-term visions for freshwater

NPS-FM

Clause 3.3: Long-term visions for freshwater

- (1) Every regional council must develop long-term visions for freshwater in its region and include those long-term visions as objectives in its regional policy statement.
- (2) Long-term visions:
 - (a) may be set at FMU, part of an FMU, or catchment level; and
 - (b) must set goals that are ambitious but reasonable (that is, difficult to achieve but not impossible); and
 - (c) identify a timeframe to achieve those goals that is both ambitious and reasonable (for example, 30 years after the commencement date).
- (3) Every long-term vision must:
 - (a) be developed through engagement with communities and tangata whenua about their long-term wishes for the water bodies and freshwater ecosystems in the region; and
 - (b) be informed by an understanding of the history of, and environmental pressures on, the FMU, part of the FMU, or catchment; and
 - (c) express what communities and tangata whenua want the FMU, part of the FMU, or catchment to be like in the future.
- (4) Every regional council must assess whether each FMU, part of an FMU, or catchment (as relevant) can provide for its long-term vision, or whether improvement to the health and well-being of water bodies and freshwater ecosystems is required to achieve the vision.

Policy intent

Long-term visions are a critical part of the NPS-FM. Including them is one of the key changes in this version of the NPS-FM. They provide for long-term planning, beyond the 10-year review cycle of individual plans.

The vision should set an ambitious but achievable goal that represents what communities and tangata whenua want to see for their water bodies.

Long-term visions must set out the ambitious, but reasonable, timebound goals for the freshwater in an FMU or catchment. A single regional long-term vision is not allowed.

Councils must develop their vision through engagement with communities and the active involvement of tangata whenua. Councils should give enough information for tangata whenua and communities to understand what will be an 'ambitious but reasonable' vision for the FMU, and an appropriate timeframe. An understanding of the current state of the water bodies and the pressures on them will inform this. An understanding of the history of a water body can inform what is possible for the future.

Councils must set out whether the FMU can currently provide for its vision, or whether improvements are required. This indicates at a high level if there is over-allocation and when it will be addressed.

Why are long-term visions important?

Long-term visions direct the other steps in the NOF process. At each step the council must demonstrate how it is achieving the vision:

- environmental outcomes for values, clause 3.9(5)(b)
- TASs (but may do so by setting 10-year interim goals), clause 3.11(7)
- limits on resource use, clause 3.14(2)(a)(ii)
- environmental flows and levels, clause 3.16(2)(a).

Councils must also assess their progress in regular state-of-the-environment reports, clause 3.30(2)(a)(i).

Best practice

The NPS-FM requires the active involvement of tangata whenua (to the extent they wish) and engagement with the community when developing long-term visions, but it does not prescribe how and when to do this.

For this engagement, councils may include other aspects of giving effect to the NPS-FM. However, the various parts of the NPS-FM plan framework should be developed sequentially and also provide the opportunity to re-visit parts of the NOF (iterative process). While it would not be appropriate to draw up limits and then retro-fit a vision to suit these, an iterative process means that once the limits needed to achieve outcomes and values are established, the community may then weigh up the relative costs and benefits and seek to change the values and TASs accordingly.

Documents such as Waitangi Tribunal reports and iwi management plans may already describe the aspirations of tangata whenua for water bodies. Councils should engage with iwi and hapū on this information, because it may inform their long-term visions. The historic state of water bodies will also be informative. Communities often aspire to returning water bodies to a state they remember enjoying in their childhood, for example, being able to swim in a particular river again.

The objectives for the Essential Freshwater package may indicate a 'reasonable' timeframe for certain goals. The package had an objective to:

- stop degradation immediately
- reverse it in the short to medium term
- restore the health of water bodies in a generation.

Long-term visions that set both long- and short-term goals and timeframes may be appropriate. For example, some aspects of a vision may be achievable in the short term and others may take longer. Setting different timeframes avoids delaying short-term goals if other goals will take longer to achieve. This may be the case where different parts of an

FMU are in different states, or where goals for water quality can be reached sooner than for water quantity.

If the water body is nearing an ecological tipping point, after which recovery is difficult, councils could include a very short-term goal to halt this decline. They could then set a longer-term goal to move the water body away from this high-risk state, which might include progressive stages of improvement. This should align with the ultimate, aspirational goal and timeframe that gives effect to Te Mana o te Wai, as decided with tangata whenua and the community.

Further information to support implementation

- [NPS-FM vision-setting webinar](#)
- [NOF resources](#)

Clause 3.6: Transparent decision-making

NPS-FM

Clause 3.6: Transparent decision-making

- (1) This clause applies to all decisions made by regional councils in giving effect to this National Policy Statement, including but not limited to decisions relating to clauses 3.4 and 3.15.
- (2) Every regional council must:
 - (a) record matters considered and all decisions reached; and
 - (b) specify the reasons for each decision reached; and
 - (c) publish the matters considered, decisions reached, and the reasons for each decision, as soon as practicable after the decision is reached, unless publication would be contrary to any other legal obligation.
- (3) In this clause, decision includes a decision not to decide on, or to postpone deciding, any substantive issue and, in relation to decisions about mechanisms to involve tangata whenua in freshwater management, includes a decision to use or not use a mechanism.
- (4) The obligation in this clause is in addition to any other requirement under the Act relating to processes for making or changing regional policy statements or regional plans; but where the requirements of this clause are already met by complying with the requirements under the Act (for example, by publishing a report under section 32 of the Act), no additional action is required by this clause.

Policy intent

Clause 3.6: Transparent decision-making applies to all decisions made in implementing the NPS-FM. It requires councils to publish the matters they have considered and the reasons for the decisions reached.

The intent of this clause is to ensure that all decisions made in giving effect to the NPS-FM are recorded. This is particularly important for decisions made under the NPS-FM – such as about tangata whenua involvement and developing action plans – which may not be adequately recorded by other processes associated with the development of a regional plan (ie, hearings under Schedule 1 of the RMA or a regional council’s evaluation report prepared under section 32 of the RMA). How councils give effect to other parts of the NPS-FM (eg, limit setting), should already be transparent in the content of regional plans and supporting documents, and adequately addressed by such processes.

Existing processes under the RMA can continue to be the mechanism by which decision-making is made transparent (further supported by the ability to appeal or judicially review decisions, and by the Local Government Official Information and Meetings Act 1987).

Clause 3.6 does not provide additional reporting requirements, where processes already provide a requirement to record the decision-making. The intent is to make clear that requirements under this clause are an addition to other statutory requirements, but that councils do not need to double-up recording requirements, where there are overlaps of statutory requirements.

Best practice

Clause 3.6 is most relevant to tangata whenua involvement in freshwater management (more specifically, clause 3.4(3)) and in preparing action plans (clause 3.15). Importantly, it applies to all parts of the NPS-FM – as made clear in the NPS-FM amendments of February 2023.

Related to this, is clause 3.2(2)(b), which requires councils to engage with tangata whenua and communities to identify all elements of the NOF. In order to engage with all parties properly, councils should ensure that all parties have access to the relevant information required to gain an understanding to contribute. For best practice implementation, the points below should be considered (but these considerations are not limited to these points).

- In order to have transparent decision-making, councils need to show their decision-making process, rationale and evidence throughout the entirety of the NOF process.
- Information made available should be tailored to the specific needs of tangata whenua.
- Information should be accessible to as many people as possible, noting that it will not be practical for councils to tailor all types of information and data to a lay/non-technical audience (eg, complex modelling decisions).
- All the necessary information and the decision-making process must be able to be accessed by those with some technical understanding. To ensure information can be widely interpreted, it should clearly provide the following:
 - the methodology (including key assumptions), the inputs of data and the rationale for both (including transparency around the data inputs and how they are sourced for any output models used to set limits)
 - where data is incomplete (ie, from national databases) and what assumptions or allowances have been made based on the limitations of that data
 - how the Te Mana o te Wai hierarchy approach has been provided for
 - the evidential link between each of the NOF steps (as set out in [figure 3](#)). This means considering and documenting the following: How do TASs achieve environmental outcomes and how do limits achieve TASs? How will limits be managed sequentially and over time to fit in with the long-term-vision timeframes? What was the rationale for the timeframes decided upon?
 - certainty that limits imposed, and associated actions and methods that will be used to achieve those limits, give effect to Te Mana o te Wai. For instance, the contaminant load limit required to meet the water-body outcomes should be provided, not simply the ‘methods’, and should include the suite of rules that will achieve the limit.

Further information to support implementation

- Exposure draft of proposed changes to the NPS-FM and NES-F

The NOF within the NPS-FM

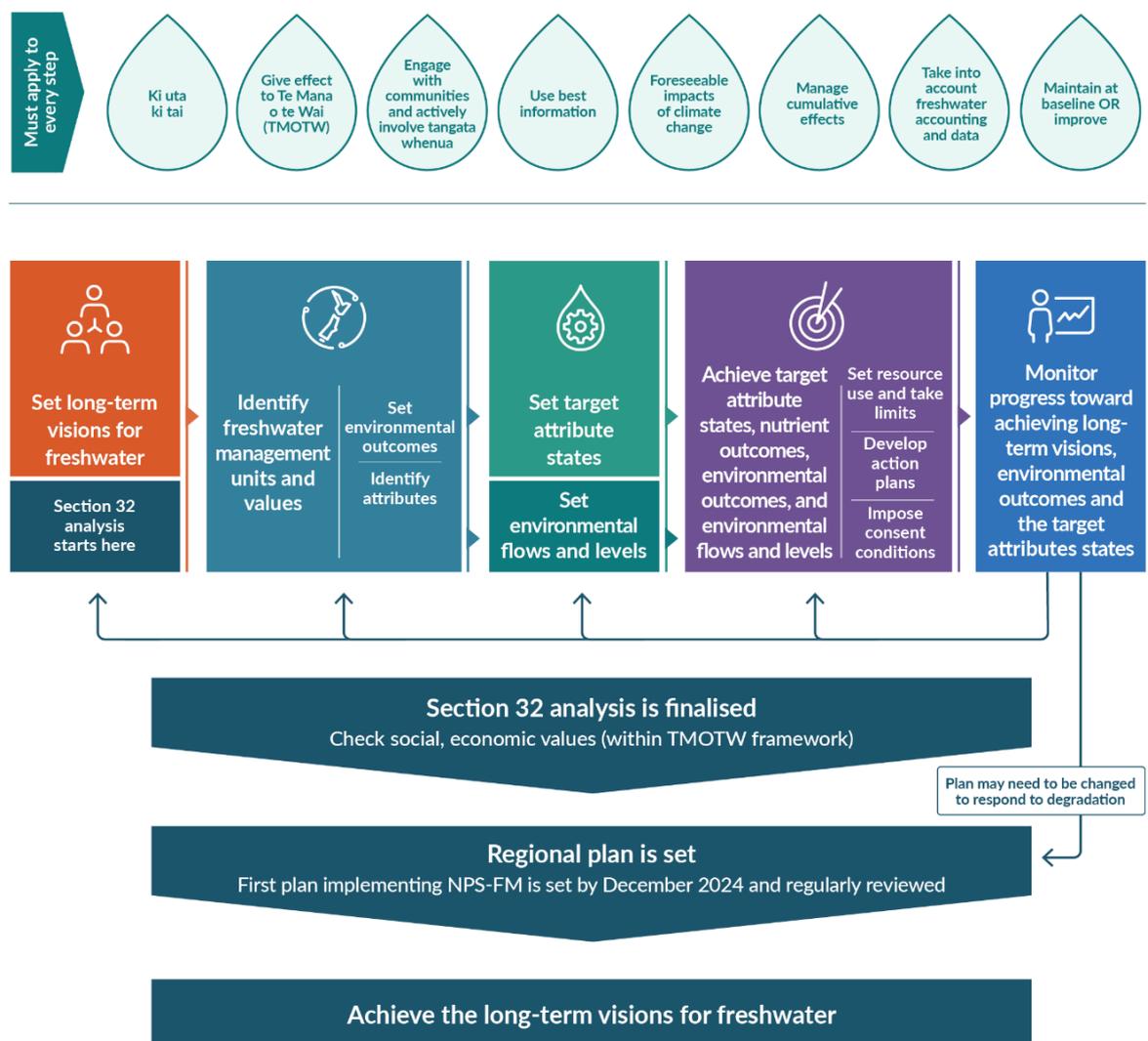
This guidance is intended for councils, tangata whenua and interested parties from communities.

Whereas the NPS-FM only directs councils – it clarifies their rights and roles, including their obligations towards others in the NPS-FM – the purpose of this guidance is to inform tangata whenua and other interested parties from the community of the extent of their rights to be involved in this process.

The remainder of this document provides guidance on subpart 2 of the NPS-FM, which sets out councils’ obligations to successfully implement the NOF. Each section that follows corresponds to a clause of subpart 2 of the NPS-FM.

Figure 2 shows a high-level overview of councils’ obligations when implementing the NOF and serves as a roadmap through the remainder of this guidance.

Figure 2: High-level overview of the NOF process



Clause 3.7: NOF process

NPS-FM

Clause 3.7: NOF process

- (1) At each step of the NOF process, every regional council must:
 - (a) engage with communities and tangata whenua; and
 - (b) apply the hierarchy of obligations set out in clause 1.3(5), as required by clause 3.2(2)(c).
- (2) By way of summary, the NOF process requires regional councils to undertake the following steps:
 - (a) identify FMUs in the region (clause 3.8)
 - (b) identify values for each FMU (clause 3.9)
 - (c) set environmental outcomes for each value and include them as objectives in regional plans (clause 3.9)
 - (d) identify attributes for each value and identify baseline states for those attributes (clause 3.10)
 - (e) set TAS, environmental flows and levels, and other criteria to support the achievement of environmental outcomes (clauses 3.11, 3.13, 3.16)
 - (f) set limits as rules and prepare action plans (as appropriate) to achieve environmental outcomes (clauses 3.12, 3.15, 3.17).
- (3) The NOF also requires that regional councils:
 - (a) monitor water bodies and freshwater ecosystems (clauses 3.18 and 3.19); and
 - (b) take action if degradation is detected (clause 3.20).

Policy intent

When implementing the NOF, councils and tangata whenua must apply the hierarchy of obligations in clause 1.3(5), as discussed in the section [Clause 1.3: The fundamental concept of Te Mana o te Wai and its use in the NOF](#).

At each step in the process, the NPS-FM directs councils to:

- involve tangata whenua to the extent they wish
- collaborate with tangata whenua and enable them to identify and manage Māori values
- engage with communities.

Councils must also:

- use a ki uta ki tai, integrated, approach, manage cumulative effects and take into account the challenges and changing circumstances of climate change
- use the best available information and not delay until they can acquire better, more or other data
- maintain the health and well-being of water bodies and freshwater ecosystems at the baseline level

- improve the health and well-being of water bodies and freshwater ecosystems if it is below a national bottom line, or if so desired by tangata whenua or communities.

The NOF process outlines the steps to achieve the long-term visions for freshwater in a region. It instructs councils to set out a roadmap from the current state of its water bodies to the aspirational visions and transparent goals. This includes measurable interim steps of targets and timeframes, and a feedback loop to allow for adjustments if the process does not stay on track.

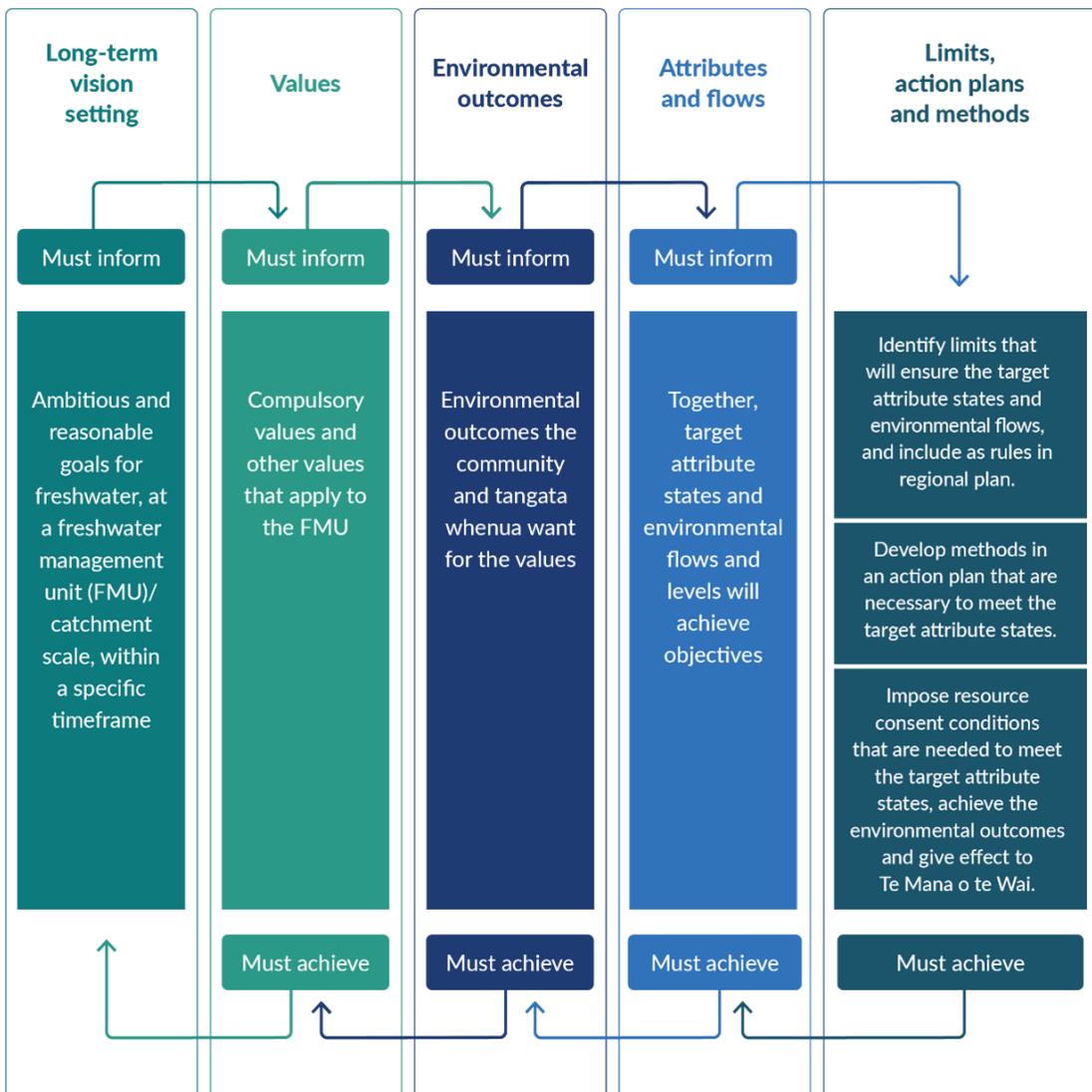
Cascading steps

To meet the NOF requirements, councils must follow a series of steps. These lead to a suite of plan provisions, each giving effect to the one preceding it. This forms a cascade:

Long-term vision — values — environmental outcomes — flows/levels and TAS — limits and action plans (see figure 3).

Some steps are required to be recorded in the regional plan as specific plan elements (eg, environmental outcomes as objectives and limits, and environmental flows and levels as rules), or in the regional policy statement (long-term visions). The inclusion of action plans in the regional plan is optional (clause 3.15(4)).

Figure 3: Freshwater NPS-FM cascade from vision setting to methods



Steps in the process

1. **Identify FMUs (clause 3.8) and set long-term vision (clause 3.3).**
2. **Identify values (clause 3.9).** These must include the four **compulsory national values** (appendix 1A), plus any other applicable **national value** (appendix 1B) and any other values identified.
3. **Set environmental outcomes.** Councils then set out the intended state of the ecosystem for each value that applies to an FMU (or part of an FMU). These outcomes must be expressed as objectives in the regional plan (clause 3.9) and must achieve the long-term vision set out as an objective in the Regional Policy Statement (clause 3.3).
4. **Identify attributes and baseline states.** The council identifies attributes for all values that can measure the extent to which environmental outcomes are achieved. All relevant attributes from appendices 2A and 2B for the compulsory values must be used, additional attributes may also be identified for both the compulsory and other values. The baseline state must be established for each attribute ('baseline state' is defined in clause 1.4).
5. **Set TASs.** The council must set target attribute states for all attributes that are relevant to each value, in order to reach the environmental outcomes in an FMU. The TASs in appendices 2A and 2B must be expressed in the units mentioned in the respective table. TASs must be set at the baseline state or better (clause 3.10 and definitions 1.4) and above the national bottom line if one is specified (unless an exception applies as per clause 3.31, 3.32 or 3.33). Attributes related to the value 'human contact' must be set above the baseline state (clause 3.11(3)).

Each TAS must have a **timeframe** for achieving it. If this is longer than 10 years, councils must set interim TASs as stepping stones to the final TAS.
6. **Set environmental flows and levels.** Councils must also set flows and levels, to achieve the outcomes for the water quantity component of ecosystem health (and any other values where that component is relevant), and for all relevant long-term visions (clause 3.16).
7. **Achieving TASs and environmental flows and levels.** To achieve TASs councils need to set limits, prepare action plans and may impose consent conditions. For attributes in appendix 2A, councils must set limits on resource use. For attributes in appendix 2B, councils must prepare action plans. For environmental flows and levels, councils must set water take limits. For all other attributes, councils may set either of these to achieve the TAS. Further limits, action plans and consent conditions may be set additionally to help achieve all these TASs. Any limits need to be included in the regional plan (clause 3.14 and clause 3.17).

To achieve TASs and environmental flows and levels, councils must:

- set limits on resource use
- set limits on water takes
- prepare action plans
- and may set consent conditions.

8. **Monitor and feedback loop.** Councils will set up a monitoring programme (clause 3.18) that will measure environmental state of the water bodies and freshwater ecosystems by monitoring attributes to assess whether they are on track to reach the TASs. Councils will assess trends (clause 3.19) and adjust the limits, action plans and consent conditions where necessary (clause 3.20).

The feedback loop in step 7 is a repetitive cycle taken on a regular basis (eg, monthly monitoring and annual reporting on data) with assessments of whether attributes are tracking along their (interim) targets. Reviews are required at least every five years.

Best practice

Councils must set goals in a transparent manner. The roadmap through interim TASs should show realistic, achievable steps over regular intervals, with an equitable distribution of the requirements for improvement.

Best practice is to frontload the burden of improvement and have regular and transparent communications with the public about how the region's water bodies and ecosystems are tracking towards the TAS and environmental outcomes, and how these all reflect the long-term vision.

The steps to the interim targets must be on a pathway to reach the long-term outcomes, taking into account:

- specific local circumstances, such as lag times
- the types of species present
- climate change
- other influences outside the council's direct control.

Lookup tables

Councils could include a lookup table in their regional plans that set out the long-term vision, environmental outcomes and TASs, broken down into interim targets for fixed periods.

Clear timeframes

In the lookup table, each TAS is anchored to its timeframes. When the monitoring outcomes are placed next to the lookup table, councils can show in a transparent way whether the state of the water bodies and ecosystems is on track. An example of a lookup table for the interim TAS for dissolved oxygen is discussed in [table 1](#).

When limits are set, these can also be usefully included in lookup tables, clarifying the reductions in time and the long-term transition needed.

Further information to support implementation

- [National Objectives Framework process](#)
- [District plans and territorial authorities factsheet](#)
- [Webinar on the changes from the NPS-FM 2017 to the NPS-FM 2020](#)

Clause 3.8: Identifying FMUs and special sites and features

NPS-FM

Clause 3.8: Identifying FMUs and special sites and features

- (1) Every regional council must identify FMUs for its region.
- (2) Every water body in the region must be located within at least one FMU.
- (3) Every regional council must also identify the following (if present) within each FMU:
 - (a) sites to be used for monitoring
 - (b) primary contact sites
 - (c) the location of habitats of threatened species
 - (d) outstanding water bodies
 - (e) natural inland wetlands.
- (4) Monitoring sites for an FMU must be located at sites that are either or both of the following:
 - (a) representative of the FMU or relevant part of the FMU
 - (b) representative of one or more primary contact sites in the FMU.
- (5) Monitoring sites relating to Māori freshwater values:
 - (a) need not comply with subclause (4), but may instead reflect one or more Māori freshwater values; and
 - (b) must be determined in collaboration with tangata whenua

Clause 1.4: Interpretation

[...]

freshwater management unit, or FMU, means all or any part of a water body or water bodies, and their related catchments, that a regional council determines under clause 3.8 is an appropriate unit for freshwater management and accounting purposes; and **part of an FMU** [referred to as sub-FMU in this document] means any part of an FMU including, but not limited to, a specific site, river reach, water body, or part of a water body.

Policy intent

FMUs must be identified, as a prerequisite to all other steps in the NOF. An FMU (or part of it) is the primary unit in which activities are managed and monitored under the NPS-FM.

Councils must determine how to define their FMUs, and the location of their monitoring and primary contact sites, provided these are representative of the FMU or relevant part of it. In practice, this allows for significant variation from place to place. The council must actively involve tangata whenua and engage with communities when doing this, and they

must collaborate with tangata whenua to determine monitoring sites relating to Māori freshwater values.

Identification method

The NPS-FM does not mandate a single correct or preferred way to identify FMUs. Each FMU should reflect the unique circumstances of each region. These will dictate what target attributes, freshwater environmental objectives, limits and flows to set. The definition of FMUs is intentionally flexible, so councils can determine the spatial scale best suited to their region. The FMUs (one or more) in a region must include all freshwater bodies.

Scale

The FMUs in a region will determine the scale at which to set a vision, or environmental outcome, for an attribute. For example, for periphyton (the slime and algae on the beds of streams and rivers), councils must set an environmental objective, and instream nutrient concentrations to achieve these objectives, for all FMUs.

A long-term vision or limit can be set at the FMU scale or part of an FMU (a catchment or subset of catchments). They cannot be set at a larger scale than one FMU. All other steps of the NOF are similarly set at an FMU or part of an FMU scale.

It might be that in any given FMU an attribute, such as deposited fine sediment, provides for more than one value (eg, human contact and mahinga kai). In this case, it is the most stringent TAS relevant for either of these values that must be achieved. If a less stringent TAS is applied, the plan cannot reach all community values and objectives.

Monitoring sites

Each FMU should have one or more monitoring sites. Councils are required to monitor and report on the achievement of long-term visions and TASs, so will need monitoring sites to do this. The sites must be representative of all or part of the FMU. If the FMU has primary contact sites, at least one representative monitoring site must be identified for that value.

NPS-FM

Clause 1.4: Interpretation – primary contact site

Primary contact site means a site identified by a regional council that it considers is regularly used, or would be regularly used but for existing freshwater quality, for recreational activities such as swimming, paddling, boating or watersports, and particularly for activities where there is a high likelihood of water or water vapour being ingested or inhaled.

FMUs and monitoring sites provide data and information to help set baseline states and TASs. They will influence limits on resources, and setting flows and levels.

Monitoring sites for Māori freshwater values (including mahinga kai values) do not have the same requirements. They differ in two main ways:

1. they do not need to be representative of all or part of the FMU
2. they do not need to be representative of a primary contact site.

Monitoring sites for Māori freshwater values must be determined in collaboration with tangata whenua.

Best practice

Managing freshwater is inherently linked to managing the land that feeds into the freshwater body, or the catchment, that supplies it. The NPS-FM requires councils to manage freshwater and land use in an integrated and sustainable way (ki uta ki tai). Councils should consider the surrounding land use and its effect on freshwater bodies, when identifying FMUs. A catchment or sub-catchment is a good scale to begin assessing FMU boundaries.

When setting FMU boundaries, councils should work with tangata whenua and the community to consider:

1. the hydrological, geographical, social, political and cultural characteristics of the region, including the cultural connections of tangata whenua and communities to place
2. practical issues with managing freshwater to give effect to the NPS-FM, which may result in sub-dividing or grouping the units further, after considering these characteristics.

Factors to consider when determining FMU boundaries may include:²

- intensive pastoral development
- prominent geophysical features, such as being prone to erosion
- location of aquifers and connection to groundwater and surface water
- urban issues affecting water quality
- a current or historic mahinga kai site or other cultural areas of significance
- degraded freshwater bodies that may need specific management methods
- hapū or iwi rohe boundaries, which reflect relationships between tangata whenua and place, and may aid discussions about the transfer of powers or other mechanisms under clause 3.4(3).

This approach allows councils to tailor the limits and management methods to the values and outcomes for each FMU.

Coastal water

The NPS-FM does not require councils to include coastal water in FMUs, or to set freshwater objectives and limits for it. However, it requires that, when setting freshwater

² See the [guide to freshwater management units](#).

objectives and limits, councils take a ki uta ki tai approach and have regard to connections between freshwater and coastal water. This may mean decisions about managing freshwater will be driven in part by intended outcomes in coastal water (eg, to provide for mahinga kai).

When identifying FMUs, councils should consider any connections between freshwater bodies and coastal water. For example, where several rivers meet in an estuary, a council may decide to group the rivers together in one FMU, so that any management decisions for the FMU align with the outcomes for the estuary.

Scale for target attribute states and limits

The scale for setting TASs and limits does not have to be synched with whole FMUs. TASs and limits can apply to part of an FMU, or the same TAS or limit may be set for multiple FMUs.

Each FMU will have a bundle of TASs applied to it, at least one for each relevant attribute.

Determining the area for a TAS will depend more on the characteristics of the water bodies than for the land type. A tributary that has a different ecosystem and land use from other tributaries and mainstem of a river system might have different requirements for a TAS.

Limits and/or action plans may need to be more granular at the sub-catchment scale, because catchments have many different areas with varied land characteristics. A catchment may have forest-covered hill slopes, then plains with clay soil and other areas with stony, free-draining soil. Councils should tailor the intervention to these varied features.

Further information to support implementation

- [A Guide to Identifying Freshwater Management Units Under the National Policy Statement for Freshwater Management 2014](#)
- [River Environment Classification New Zealand](#)

Clause 3.9: Identifying values and setting environmental outcomes as objectives

NPS-FM

Clause 3.9: Identifying values and setting environmental outcomes as objectives

- (1) The compulsory values listed in Appendix 1A apply to every FMU, and the requirements in this subpart relating to values apply to each of the 5 biophysical components of the value Ecosystem health.
- (2) A regional council may identify other values applying to an FMU or part of an FMU, and must in every case consider whether the values listed in Appendix 1B apply.
- (3) The regional council must identify an environmental outcome for every value that applies to an FMU or part of an FMU.
- (4) The regional council must include the environmental outcomes as an objective, or multiple objectives, in its regional plan.
- (5) The environmental outcomes must:
 - (a) describe the environmental outcome sought for the value in a way that enables an assessment of the effectiveness of the regional policy statement and plans (including limits and methods) and action plans in achieving the environmental outcome; and
 - (b) when achieved, fulfil the relevant long-term visions developed under clause 3.3 and the objective of this National Policy Statement.

Policy intent

Councils must include all environmental outcomes as objectives in their regional plans.

All councils must apply the four compulsory values listed in appendix 1A of the NPS-FM to every FMU:

- human contact
- threatened species
- mahinga kai
- ecosystem health.

Ecosystem health

This has five biophysical components. For each FMU, councils must apply the four compulsory values, and support ecosystem health by managing each of the five biophysical components.

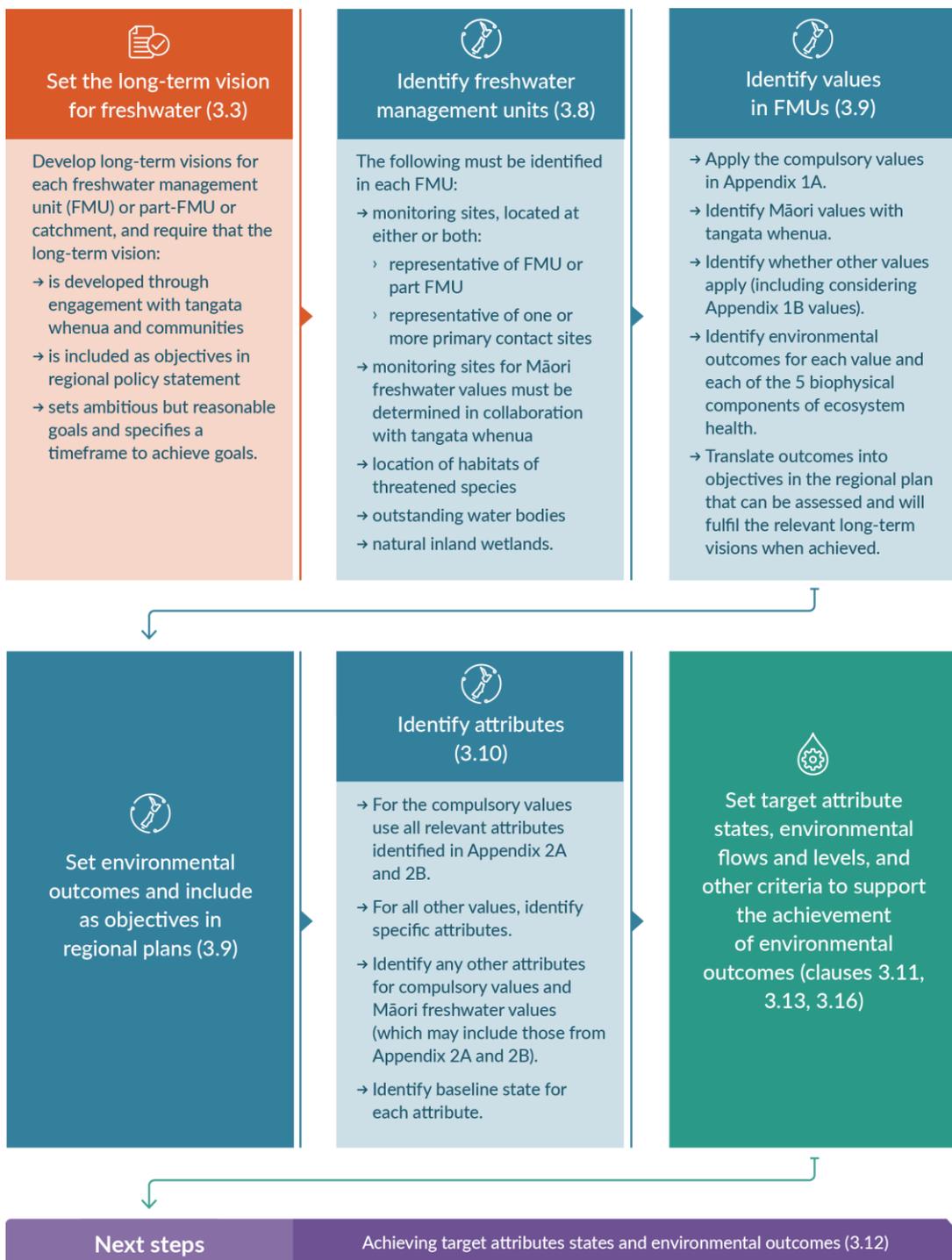
Also consider each of the nine values listed in appendix 1B of the NPS-FM, and determine for each FMU whether they apply. The value of hydro-electric power generation, for example, only needs to be considered for FMUs that are or could be used for this, while

keeping in mind the specifications for the five large hydro-electric generation schemes mentioned in clause 3.31. As a second example, councils only need to consider irrigation in FMUs that are currently valued for irrigation, or may be in the future.

Council must engage with the community to identify values, and collaborate with tangata whenua to identify Māori values.

For each value that applies to an FMU or part of an FMU, councils must describe an environmental outcome so that it is possible to assess if, and when, it is achieved. The outcomes must jointly fulfil the long-term visions. Figure 4 shows how clause 3.9 and the following clauses lead the councils from identifying values to setting target attribute states.

Figure 4: From values to target attribute states



Best practice

Values (other than the four compulsory values, which apply everywhere) can apply to all or part of an FMU. Non-compulsory values like 'natural form and character' may apply to water bodies covered by water conservation orders or where communities identify characteristics listed in the value and want these protected. The values, and where they apply, should be clearly set out in the regional plan.

Maps or other new data-display tools may be useful, either in the plan or online, showing the values and where they apply. This kind of detail will help the council and community envisage the environmental outcomes and eventual limits, and assist future decisions on resource consents.

Further information to support implementation

- [Implementing mahinga kai as a Māori freshwater value](#)
- [Guidance on values and attributes in the National Objectives Framework](#)
- [Webinar on vision setting and value identification](#)
- [Example of mapping values from Environment Southland: Share your wai](#)

Clause 3.10: Identifying attributes and their baseline states, or other criteria for assessing achievement of environmental outcomes

NPS-FM

Clause 3.10: Identifying attributes and their baseline states, or other criteria for assessing achievement of environmental outcomes

- (1) For each value that applies to an FMU or part of an FMU, the regional council:
 - (a) must use all the relevant attributes identified in Appendix 2A and 2B for the compulsory values listed (except where specifically provided otherwise); and
 - (b) may identify other attributes for any compulsory value; and
 - (c) must identify, where practicable, attributes for all other applicable values; and
 - (d) if attributes cannot be identified for a value, or if attributes are insufficient to assess a value, must identify alternative criteria to assess whether the environmental outcome of the value is being achieved.
- (2) Any attribute identified by a regional council under subclause (1)(b) or (c) must be specific and, where practicable, be able to be assessed in numeric terms.
- (3) Every regional council must identify the baseline state of each attribute.
- (4) Attribute states and baseline states may be expressed in a way that accounts for natural variability and sampling error.

Policy intent

This clause consists of two steps:

1. **identify attributes** (or alternative criteria), then
2. **identify the baseline states of each attribute.**

Identify attributes

Compulsory attributes are listed in appendices 2A and 2B of the NPS-FM. However, councils may identify additional attributes for compulsory values, and must identify attributes for all other values where practicable.

Attribute states must be specific and, where possible, assessable in numeric terms. If attributes cannot be identified or are insufficient, councils can use alternative criteria for assessing the achievement of the outcomes.

Council plans must set baseline and target states for all their appendix 2A and relevant appendix 2B attributes. Some attributes also need target nutrient states (see clause 3.13).

The NPS-FM does not identify any attributes for the compulsory value of mahinga kai. Councils and tangata whenua must collaborate to identify the attributes that will represent this and other Māori values at place.

Identify baseline states

The second step is to **identify the baseline state of each attribute**.

This crucial step in the NOF cascade sets a benchmark against which councils must either maintain or improve the health and well-being of the water body and freshwater ecosystem.

The box here sets out that the baseline state is the best of the three options.

NPS-FM

Clause 1.4: Interpretation

baseline state, in relation to an attribute, means the best state out of the following:

- (a) the state of the attribute on the date it is first identified by a regional council under clause 3.10(1)(b) or (c)
- (b) the state of the attribute on the date on which a regional council set a freshwater objective for the attribute under the National Policy Statement for Freshwater Management 2014 (as amended in 2017)
- (c) the state of the attribute on 7 September 2017

Some councils may not have monitored the attribute before. They may also have monitored an attribute infrequently, or used a different protocol than specified in the NPS-FM, or only in some FMUs.

If current data is insufficient to ascertain an attribute's baseline, set the baseline using the best information available at the time. This may include modelling, partial data and local knowledge. Councils may gather new information and data (numeric or narrative) to inform baseline states.

Best practice

Useful attributes

Some potential attributes may be challenging to monitor over time. Others may be less useful when determining limits on resources and flow levels.

Below are features to consider when choosing attributes. They should be simple and practical to monitor and report on:

- specific and, where practicable, can be converted to numbers (eg, qualitative data translated into a Likert scale as is sometimes used in cultural health indicators)

- measurable over time, with a robust and repeatable method
- relevant to specific water bodies and catchments
- inform understanding achievement of environmental outcomes and long-term visions.

Mahinga kai

Points for tangata whenua, councils and communities to consider.

- Mahinga kai attributes and TASs should be developed as fully as possible by December 2024, so that they contribute to the determination of limits and action plans. If there is not enough information to assess the value, alternative criteria must be developed. This will mean using the best information available, with a commitment to improve information-gathering on the attribute.
- Attributes at a smaller spatial scale than an FMU may be appropriate. Some will be most relevant at the hapū or whānau level and should be applied and monitored at this scale.

Natural state

Councils may need to account for the natural state of a water body when expressing baseline and attribute states. For example, some rivers with glacial flour may have naturally higher turbidity than other rivers. Natural state is dependent on the river's geomorphology, location and other environmental characteristics. A field investigation combined with historical research may be needed.

Alternative criteria

Other criteria may be used to assess achievement of outcomes. This includes cultural health indicators, opportunities and use by the public (eg, is the site being used for swimming?), or other social indicators based on experience, such as a community satisfaction survey.

Determining the baseline state

The baseline state of an attribute may vary across an FMU. For example, water quality may be 'better' where the catchment is forested and decline as the river moves downstream into lowland or urban areas. The baseline state should be determined as close as possible to the location where current or future monitoring sites will be located. Baseline states may vary in different locations across an FMU, just as the TAS may vary. This reflects the different values in different locations.

Further information to support implementation

- [Guidance on values and attributes in the National Objectives framework](#)
- [Guidance on the ecosystem health value](#)
- [Guidance on the threatened species value](#)
- [Guidance on the mahinga kai value](#)
- [Guidance on the human contact value](#)

Clause 3.11: Setting target attribute states

NPS-FM

Clause 3.11: Setting target attribute states

- (1) In order to achieve the environmental outcomes included as objectives under clause 3.9, every regional council must:
 - (a) set a target attribute state for every attribute identified for a value; and
 - (b) identify the site or sites to which the target attribute state applies.
- (2) The target attribute state for every value with attributes (except the value human contact) must be set at or above the baseline state of that attribute.
- (3) The target attribute state for the value human contact must be set above the baseline state of that attribute, unless the baseline state is already within the A band of Tables 9 or 10 in Appendix 2A, as applicable.
- (4) If the baseline state of an attribute is below any national bottom line for that attribute, the target attribute state must be set at or above the national bottom line (see clauses 3.31, 3.32, and 3.33 for exceptions to this).
- (5) Every target attribute state must:
 - (a) specify a timeframe for achieving the target attribute state or, if the target attribute state has already been achieved, state that it will be maintained as from a specified date; and
 - (b) for attributes identified in Appendix 2A or 2B, be set in the terms specified in the relevant Appendix; and
 - (c) for any other attribute, be set in any way appropriate to the attribute.
- (6) Timeframes for achieving target attribute states may be of any length or period but, if timeframes are long term:
 - (a) they must include interim target attribute states (set for intervals of not more than 10 years) to be used to assess progress towards achieving the target attribute state in the long term; and
 - (b) if interim target attribute states are set, references in this National Policy Statement to achieving a target attribute state can be taken as referring to achieving the next interim target attribute state.
- (7) Every regional council must ensure that target attribute states are set in such a way that they will achieve the environmental outcomes for the relevant values, and the relevant long-term vision.
- (8) When setting target attribute states, every regional council must:
 - (a) have regard to the following:
 - (i) the environmental outcomes and target attribute states of any receiving environments
 - (ii) the connections between water bodies
 - (iii) the connection of water bodies to receiving environments; and
 - (b) take into account results or information from freshwater accounting systems (see clause 3.29).

Policy intent

What is a target attribute state?

A target attribute state (TAS) is the state of the attribute that needs to be achieved in order to fulfil the associated objectives, outcomes, values and vision. For most values, regional councils will need to establish one or more attributes and set a TAS.

A TAS must only be set once appropriate attributes have been identified for assessing values. A TAS sets out a council's end goal for an attribute in a specified location and when that will be achieved by.

Where do they apply?

A TAS may be different at different locations, and councils must set out the location that each applies to. Together, the bundle of TASs for a location should achieve the environmental outcomes for the values at that location, and the long-term vision, and consider all connected and receiving water bodies.

What are the requirements?

A TAS must be set for every attribute identified for a value, including those in appendix 2A and appendix 2B of the NPS-FM. The attribute tables in these appendices list attributes for four of the five biophysical components of 'ecosystem health' (not flows) and for the value 'human contact', for rivers and lakes.

TASs for attributes in these appendices must be expressed by the appropriate unit in the relevant table. In the case of periphyton, TASs are required for all FMUs, along with instream nutrient concentrations.

A TAS must be set at or above the relevant baseline state (clause 3.10 and definitions in clause 1.4) for all or part of the FMU or catchment where it has been set. It should always be set at or above the national bottom line (unless exceptions apply, see clause 3.11). This helps to achieve the direction in Policy 5 of the NPS-FM, to at least maintain the health and well-being of water bodies and, where they are degraded, improve them. (For a definition of degraded, see the section [Clause 3.20: Responding to degradation.](#))

The compulsory attributes for the value of human contact do not have a national bottom line. For these attributes, councils must, however, set a TAS higher than the baseline (ie, improvement must be required) unless the baseline state is already within the 'A' band of table 9 or table 10 in appendix 2A of the NPS-FM.

Timeframes

A TAS must link to a timeframe for achievement. For timeframes longer than 10 years, councils must set interim target states, at intervals of no longer than 10 years, as stepping stones.

Councils are restricted in setting their TASs by the requirement to maintain or improve: maintain at baseline, or improve to the national bottom line if the baseline state is worse than the national bottom line, or improve to a more ambitious target. However, the timeframes can be more flexible. Councils can set these to make their TAS achievable, and to spread the task of improvement over the current or future generation of resource users.

Best practice

If a TAS is achievable in 10 years (eg, because the water body is not degraded), or the improvement is achievable within 10 years, there is no requirement to set interim target states.

For degraded water bodies, the pathway through interim TASs does not have to be a straight line. Councils should take into account lag times and the local circumstances of their ecosystems and water bodies.

Frontloading improvements

In most cases, it is best to frontload any improvements rather than leaving the largest amount of change till later. The state of water bodies improves sooner if this is done, which will have immediate benefits for ecosystem health and help give effect to Te Mana o te Wai.

Frontloading improvements also takes into account the needs of future generations, because it does not leave the bulk of the work to them. In addition, if monitoring shows that a water body is not on track, changes can happen sooner (and it may still be possible to meet the timeframe) than if a big change is set close to the end goal. In a ‘frontload’ scenario, the improvements pathway would look more logarithmic (taking the largest leaps first) rather than exponential (leaving the largest improvements to last).

Table 1 shows an example for interim TASs for dissolved oxygen for a water body that is degraded. The baseline state of this example is 5.0 milligrams per litre (mg/L) as a seven-day minimum over the summer period. The current state in 2024 is 3.0 mg/L. The TAS is to achieve ≥ 8.0 mg/L as a seven-day minimum over the summer period by 2050. The interim TASs are set up so that the largest improvements are made in the first years, because the council has determined there is some low hanging fruit in the form of improvements that can be made. The council acknowledges it may be hard to make the final improvements required to achieve the TAS, so it has stretched out the timeframe to allow for the final improvements to be made in smaller increments.

Table 1: Lookup table with interim target attribute states (TASs) for dissolved oxygen milligrams per litre (mg/L)

Timeframe	Interim TASs (mg/L)	Required improvement over five years (mg/L)
Summer period ending in 2030	≥ 5.0	2
Summer period ending in 2035	≥ 6.6	1.6
Summer period ending in 2040	≥ 7.4	0.8
Summer period ending in 2045	≥ 7.8	0.4
Summer period ending in 2050	≥ 8.0	0.2

For each TAS, it is advisable to have a lookup table, similar to table 1, with the timeframe and pathway to reach the final target. Use these tables to provide transparency to resource users on the size and timeframe of improvements required, and to compare findings from regular monitoring, to assess whether the water body is on track to achieve its TAS or further action is required.

Even though TASs are location specific, councils can group them together for simplicity (eg, setting a TAS for a specific attribute at the same level for each lake within an FMU).

Further information to support implementation

- [Guidance on values and attributes in the National Objectives Framework](#)
- [Guidance and factsheets on the NPS-FM nutrients attributes](#)
- [Guidance on the sediment attribute](#)

Clause 3.12: Achieving TASs and environmental outcomes

NPS-FM

Clause 3.12: How to achieve target attribute states and environmental outcomes

- (1) In order to achieve target attribute states for the attributes in Appendix 2A, and the nutrient outcomes needed to achieve target attribute states (see clause 3.13), every regional council:
 - (a) must identify limits on resource use that will achieve:
 - (i) the target attribute states, and
 - (ii) any nutrient outcomes needed to achieve target attribute states; and
 - (b) must include those limits as rules in its regional plan; and
 - (c) may prepare an action plan; and
 - (c) may impose conditions on resource consents to achieve target attribute states or any nutrient outcomes needed to achieve target attribute states.
- (2) In order to achieve target attribute states for the attributes in Appendix 2B, every regional council:
 - (a) must prepare an action plan for achieving the target attribute states within a specified timeframe; and
 - (b) may identify limits on resource use, and include them as rules in its regional plan; and
 - (c) may impose conditions on resource consents to achieve target attribute states.
- (3) In order to achieve any other target attribute states or otherwise support the achievement of environmental outcomes, a regional council must do at least one of the following:
 - (a) identify limits on resource use and include them as rules in its regional plan
 - (b) prepare an action plan
 - (c) impose conditions on resource consents to achieve target attribute states.
- (4) Where the same attribute provides for more than one value, it is the most stringent target attribute state applying to those values that must be achieved.

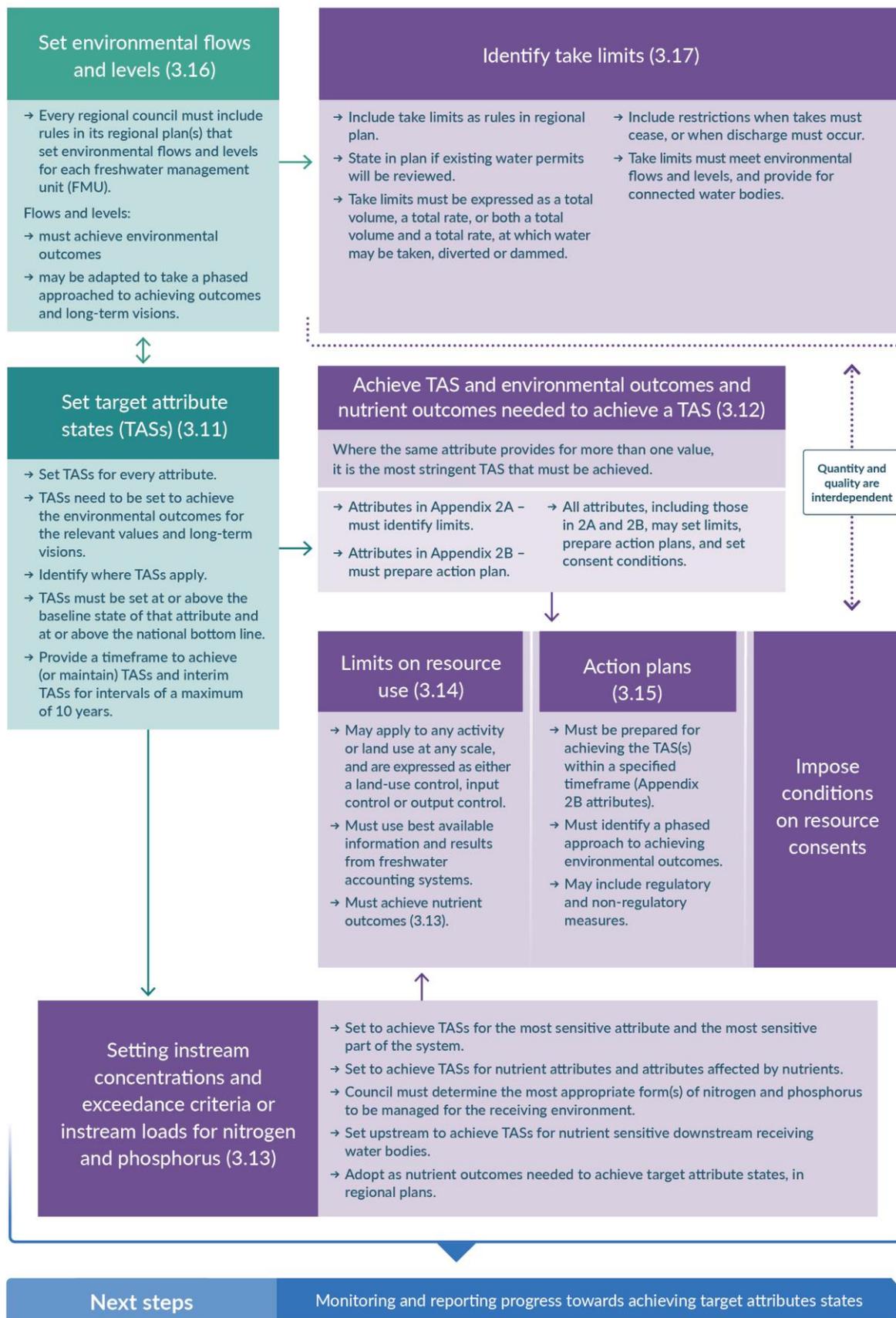
Policy intent

Once councils have set their TASs and the nutrient outcomes needed to achieve TASs, they must put in place methods to achieve these within the timeframes – refer to [Clause 3.11: Setting target attribute states](#). Clause 3.12 lists three methods:

- limits on resource use
- action plans
- conditions on resource consents.

Figure 5 outlines the process for achieving target attribute states and environmental outcomes.

Figure 5: Achieving target attribute states and environmental outcomes



As shown in [figure 5](#), there are specific minimum requirements for attributes in appendix 2A, appendix 2B and the attributes chosen by councils. Councils may always choose additional methods to support reaching the TASs and the nutrient outcomes needed to achieve TASs.

More direction

Setting limits: see clause 3.14 and section [Clause 3.14: Setting limits on resource use](#) of this guidance.

Action plans: see clause 3.15 and section [Clause 3.15: Preparing action plans](#) of this guidance. Councils must decide on the most appropriate method after engaging with the community and, for attributes affecting Māori values, in collaboration with tangata whenua. The decision must ensure the TASs are reached within the timeframes. It will be guided by assessment of the most effective and efficient method as required by section 32 of the RMA.

When an attribute provides for more than one value, the methods must achieve the most stringent one.

Nitrogen and phosphorus concentrations

For nutrient concentrations and exceedance criteria for nitrogen and phosphorus, see clause 3.13 and section [Clause 3.13: Special provisions for attributes affected by nutrients](#) of this guidance.

Best practice

In addition to the requirements in clause 3.12, there are other aspects to consider when choosing methods to reach a TAS.

- The methods have to influence – either directly or indirectly – the state of the targeted attributes, with the expectation to reach this within the timeframe set under clause 3.11, and the long-term vision.
- Reaching the long-term vision and environmental outcomes will likely require interim steps, with each TAS paced out in smaller increments, such as 5- or 10-year steps. To provide transparency for resource users and the community, it is good practice to prepare a lookup table showing the interim steps, timeframes and, where possible, the intended methods.
- The various methods affect the environment and resource users in different ways, each with benefits and challenges.
 - Limits as rules in plans are a stringent restriction on resource users, which could have substantial and direct results.
 - Action plans can be more collaborative, involving a large section of the community. Councils can tailor required actions to ability and capacity. A drawback is that they could take more time. They describe a regional council's commitment to and planned actions for an FMU's attributes.
- When weighing up the pros and cons of the three methods, the hierarchy of Te Mana o te Wai still applies. Councils must only consider combinations of methods that are expected to improve the health of the freshwater body and ecosystems in line with the TAS.

- Given councils have limited resources, they may need to initially prioritise interventions that will achieve multiple TASs and/or prevent ecological tipping points (ie, nutrient-load reductions). All attributes set for compulsory values will need to adhere to the timeframes under clause 3.11(5).

Choosing the set of methods

The process of choosing (a set of) methods follows several steps. The aim is to come to a bundle of methods (including the required methods as per clause 3.12), that together achieve the TAS while fulfilling Te Mana o te Wai.

Step 1. Determine whether you need to use a limit or an action plan. Attributes in appendix 2A of the NPS-FM, and nutrient outcomes needed to achieve TASs (under clause 3.13), require limits. Attributes in appendix 2B require an action plan.

Step 2. Consider whether other, non-compulsory, methods are necessary or useful.

Step 3. Determine effectiveness and efficiency, including costs and benefits, of each method, both regulatory and non-regulatory.

Step 4. Use a process of elimination to find the right combination of methods to achieve the TAS. Which are most effective at achieving ecosystem health (priority 1)? If more than one combination is equally effective, which best serves human health needs (priority 2)? If there is still more than one combination left, what is the effect on social, economic and cultural well-being (priority 3)?

It is useful to do these steps in parallel for each TAS. Opportunities may arise for synergy, where a method for achieving one also contributes to achieving another.

These decisions should always:

- apply the Te Mana o te Wai hierarchy of obligations
- prioritise methods that achieve the health and well-being of the water body and its ecosystems, ahead of those that prioritise other values.

Example: Choosing a set of methods to achieve the target attribute state (TAS) of Fish Index of Biotic Integrity (F-IBI)

This example follows steps 1 to 4.

Step 1

Value: Ecosystem health

Environmental outcome for that value in that place: A thriving aquatic health that has high integrity of fish community, and with habitat and migratory access that has minimal deviation from their natural state.

Attribute: Fish index of biotic integrity (F-IBI)

TAS: To achieve an F-IBI of at least 34 (Band A) in identified rivers of high ecological value, by 2035.

The F-IBI attribute requires an **action plan**³.

³ Fish IBI is an Appendix 2B attribute and as per 3.12 (2), in order to achieve the target attribute states for the attributes in Appendix 2B, every regional council must prepare an action plan for achieving the target attribute states within a specified timeframe.

Step 2

Other methods that could contribute to achieving the TAS for F-IBI.

- Set limits in the regional plan on water takes at, and upstream of, habitat locations, enforcing fish passage requirements, or set minimum widths for riparian strips.
- It may be necessary to set consent conditions for activities in the bed of the river or in the riparian area, to minimise habitat disturbance for fish and contribute to a more thriving fish community.

Step 3

Determine for each method:

- effectiveness in achieving the outcome
- effectiveness in achieving other environmental outcomes for other values (prioritising ecosystem health then human health)
- effects on social, economic and cultural well-being
- speed and timeframes for each of these
- who will be affected by each method
- how the effectiveness of these methods may interact.

A conclusion could be that the TAS could be achieved by the following four combinations of methods:

- 1 an action plan and a limit on water takes upstream of the habitat
- 2 an action plan and consent conditions on water takes upstream of the habitat
- 3 a limit on water takes and resource use upstream and at the location of the habitat
- 4 an action plan, a limit on water takes and consent conditions.

Step 4

Select a combination of methods to achieve this TAS for F-IBI.

- Combination 1 is expected with reasonable certainty to achieve the TAS in the set timeframe.
- Combination 2 has a large lag time in its effectiveness, because the conditions will not apply to current consents. There is substantial uncertainty as to whether this combination will support the health and well-being of the ecosystem to the extent required in the TAS.
- Combination 3 is ruled out because only combinations that contain an action plan can be considered.
- Combination 4 is expected with reasonable certainty to achieve the TAS in the set timeframe.

Steps 1 and 4 are the most likely candidates to consider. Both provide for the health and well-being of the water body and the ecosystem. However, combination 4 allows for a less strict limit on water takes for the drinking water supply of the nearby town in times of drought. Combination 4 provides better for the health needs of people (second priority of obligations under Te Mana o te Wai) and is chosen over the other combinations in this example.

Further information to support implementation

- [Fact sheets and guidance on limits setting and action plans](#)
- [National Objectives Framework process guidance](#)
- [Example of action plan for a value: Fish passage action plan template](#)

Clause 3.13: Special provisions for attributes affected by nutrients

NPS-FM

Clause 3.13: Special provisions for attributes affected by nutrients

- (1) To achieve a target attribute state for any nutrient attribute, and any attribute affected by nutrients, every regional council must, at a minimum, set appropriate instream concentrations and exceedance criteria, or instream loads, for nitrogen and phosphorus.
- (2) Where there are nutrient-sensitive downstream receiving environments, the instream concentrations and exceedance criteria, or the instream loads, for nitrogen and phosphorus for the upstream contributing water bodies must be set so as to achieve the environmental outcomes sought for the nutrient-sensitive downstream receiving environments.
- (3) In setting instream concentrations and exceedance criteria, or instream loads, for nitrogen and phosphorus under this clause, the regional council must determine the most appropriate form(s) of nitrogen and phosphorus to be managed for the receiving environment.
- (4) Every regional council must adopt the instream concentrations and exceedance criteria, or instream loads, set under subclauses (1) and (2) as nutrient outcomes needed to achieve target attribute states.
- (5) Examples of attributes affected by nutrients include periphyton, dissolved oxygen (Appendix 2A, Tables 2 and 7 and Appendix 2B, Tables 17, 18, and 19), submerged plants (invasive species) (Appendix 2B, Table 12), fish (rivers) (Appendix 2B, Table 13), macroinvertebrates (Appendix 2B, Tables 14 and 15), and ecosystem metabolism (Appendix 2B, Table 21).

NPS-FM

Clause 1.4: Interpretation

Nutrient outcomes needed to achieve target attribute states means the instream concentrations and exceedance criteria, or instream loads, for nitrogen and phosphorus, adopted under clause 3.13(4)

Policy intent

The intent of clause 3.13 is to manage nutrients as part of achieving the overall value of 'ecosystem health'. The policy achieves this by directing councils to manage the amounts of nitrogen (N) and phosphorus (P) in water bodies. The policy recognises that monitoring and managing N and P provides for ecosystem-health outcomes for a range of nutrient-affected attributes, which may include attributes such as, periphyton, dissolved oxygen and macroinvertebrates.

The amount of nitrogen and phosphorus in water bodies must be set to achieve TASs for:

- nutrient attributes N and P. For example, when setting environmental levels, N and P are set below the ammonium-toxicity bottom line.
- nutrient-affected attributes (clause 3.13 (5)). For example, nutrient levels should be set so that Macroinvertebrate Community Index (MCI) TASs are not exceeded.

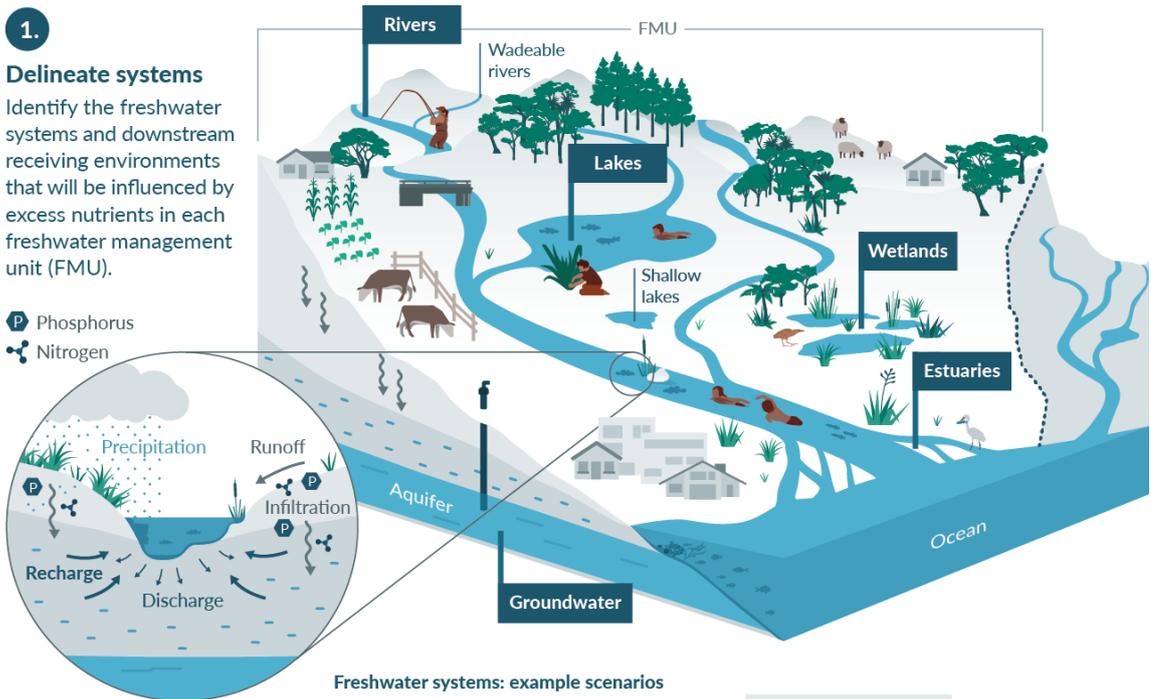
Clause 3.13 of the NPS-FM is part of the process for achieving TASs, environmental outcomes and long-term visions.

What are the requirements for regional councils?

To provide for the compulsory value of ecosystem health, regional councils must:

- set instream concentrations and exceedance criteria, or instream loads (referred to below as 'nutrient criteria') for N and P that are sufficient to achieve:
 - the TAS for any nutrient attribute and nutrient-affected attributes under either appendix 2A or 2B (except where specifically provided otherwise)
 - any environmental outcomes sought for the nutrient-sensitive downstream receiving environments.
- set limits on resource use in regional plans to achieve any nutrient criteria needed to achieve TASs (clause 3.12(1))
- establish methods for monitoring progress towards achieving TASs and environmental outcomes.

Figure 6: Setting nutrient criteria to achieve NPS-FM target attribute states



	Rivers	Rivers	Lakes/Lake-fed rivers	Rivers/Groundwater
2. Identify values Identify values in systems that may be compromised by excessive nutrients.	 Ecosystem health	 Ecosystem health	 Human contact	 Drinking water
3. Select attributes Select attributes to best represent values (in Appendix 2A and 2B of the NPS-FM, or other).	 Macroinvertebrate Community Index	 Periphyton	 Cyanobacteria (planktonic)	 Nitrate concentration
4. Set nutrient criteria Set nutrient criteria for relevant forms of nitrogen and phosphorus to achieve target attribute states for all nutrient and nutrient-affected attributes.	Median DIN ¹ and DRP ² targets based on instream concentration thresholds	Median DIN ¹ and DRP ² targets based on instream concentration thresholds	Annual TN ³ and TP ⁴ catchment loads to achieve instream concentration thresholds	Nitrate maximum acceptable value
5. Achieve nutrient outcomes Determine what nutrient reductions are required to meet all nutrient criteria, to protect upstream and downstream freshwater environments.	Reductions required to reach target states		Most restrictive	No reductions needed

Please note: To illustrate the overall policy intent, this diagram simplifies the variety of attributes and complex relationships that need to be considered when using a ki uta ki tai (mountains to sea) integrated approach for setting nutrient criteria and nutrient reduction targets in freshwater systems. For example, there may be many more values and attributes that need to be considered, and nutrient criteria for an attribute may vary for the same water body within an FMU.

¹ DIN: Dissolved inorganic nitrogen, ² DRP: Dissolved reactive phosphorus, ³ TN: Total nitrogen, ⁴ TP: Total phosphorus

Best practice

Protecting the most sensitive part of the system

In practice, managing nutrients in order to achieve all TASs in an FMU, or part of an FMU, means the most sensitive attribute (with the most stringent TAS) will determine the overall nutrient criteria. Attributes that are most sensitive to nutrients will likely show up in the most sensitive part of the freshwater system, such as in downstream receiving environments. For example, it might be that the TAS for MCI in a downstream river determine the nutrient concentrations (N and P) you need to set and adopt as nutrient outcomes to achieve all other TASs.

The choice of nutrient criteria is important when determining how to regulate and cap contaminant loads. This is because different attributes respond to nutrients in different ways, and nutrients will behave differently in different parts of the freshwater system. See [figure 6](#) for how to determine nutrient criteria for the most sensitive TASs.

Effective nutrient management

Clause 3.13 applies to all nutrient-affected attributes across all freshwater ecosystems and freshwater bodies.

Example: Choosing nutrient criteria for attributes

The attributes that councils and communities choose to measure and monitor will depend on factors like the part/type of water body and the water body substrate. Within a given FMU (or sub-FMU), whether the river is soft-bottomed (silty and muddy) or hard-bottomed (stony and gravelly) will help to determine the attributes chosen, as different stream types support some attributes and not others.

For example, a council choosing nutrient criteria for a representative soft-bottomed stream needs to take into account that this stream type does not commonly support periphyton growth. In this situation, it will be likely that there are other attributes that are more limiting than periphyton, and it is advised that the council should focus on other nutrient attributes and/or nutrient-affected attributes when setting nutrient criteria.

Timeframes

There is no set timeframe for achieving TASs under clause 3.13. Councils need to set nutrient outcomes needed to achieve TASs for both upstream contributing water bodies and nutrient-sensitive downstream receiving environments, and work towards these over time (with interim states set for no longer than 10 years).

The timeframes will vary between regions and FMUs (or sub-FMUs), depending on the region's existing land use, as well as other factors. Refer to clause 3.11 when identifying sites and applying a specific timeframe for achieving TASs (see [Clause 3.11: Setting target attribute states](#)).

Downstream receiving environments

Where an FMU contains nutrient-sensitive downstream receiving environments, such as lakes and estuaries, councils must set targets for N and P to provide for these ecosystems. A compulsory attribute is already in place for total N and total P in lakes, however, estuaries and groundwater do not have pre-defined N attributes.

Nutrient outcomes for upstream contributing water bodies must consider the environmental outcomes for nutrient-sensitive downstream receiving environments, including the coastal environment. Councils must set concentrations that protect a specific attribute state (eg, MCI) and ensure that nutrient concentrations set are stringent enough to achieve the objectives for downstream receiving environments.

In addition to lakes, other receiving environments that should be considered include:

- streams or rivers in downstream FMUs
- estuaries
- wetlands (in some instances)
- groundwater (as a receiving environment that may be valued for drinking water – nutrient attributes or attributes affected by nutrients may need to be identified).

As best practice, councils should holistically consider all the nutrient-affected attributes, the environmental outcomes for downstream receiving environments and upstream contributing water bodies (clause 3.13(4)), and take into account the interactions of the various attributes.

Nutrient-affected attributes

N and P should not be managed in isolation. When implementing clause 3.13 and the NPS-FM, the focus should be on achieving all TASs (eg, for periphyton, MCI, all other attributes affected by nutrients) and providing for ecosystem health more broadly. This is why councils need to determine nutrient criteria in the context of all TASs and efforts to achieve ecosystem health.

While nutrient attributes reflect/describe the ecosystem-health measures of the nutrient within the water body, there are many complex and interacting factors that influence ecosystem health in freshwater systems. For example, flows, temperature and dissolved oxygen will affect periphyton growth and therefore affect ecosystem health; these attributes will also need to be managed to achieve TASs and provide for ecosystem health.

Clause 3.13(5) gives examples of other attributes affected by nutrients, for instance, macroinvertebrate measures and Fish IBI. These are the water quality measures that have direct links to impact on aquatic ecosystems.

This is not a closed list; there will be other parts of ecosystems that may be affected by nutrients, which councils may choose to determine criteria for and protect. And, although the measures for TASs in clause 3.13 must be achieved, there may be other metrics (such as species populations) for measuring and accounting for the effects of nutrients on ecosystems.

Clause 3.13 does not prohibit using attribute measures for managing instream nutrient concentrations. Councils can determine whether ecosystem health has been achieved by assessing whether TASs/interim TASs have been met for attributes in appendix 2A and 2B of the NPS-FM, as well as any other attributes identified by councils and communities as part of their NOF processes.

Periphyton

Periphyton is one of many attributes for managing nutrients (see clause 3.13(5) for further examples).

Where periphyton is present, setting outcomes to manage periphyton alone will not necessarily lead to improvements in the overall health of freshwater and freshwater ecosystems.

In setting the nutrient criteria for a water body, councils should identify the attribute that is most sensitive to the effects of eutrophication. In rocky bottom streams, councils can measure periphyton, but must also measure other attributes; this is because periphyton may not be the most restrictive or sensitive of the attributes, and therefore managing periphyton may not achieve the TAS for other attributes.

Mahinga kai

The attributes that councils and tangata whenua identify for the compulsory value of mahinga kai are likely to include attributes affected by nutrients. Interactions within an ecosystem are complex and, although there is not always data and science to support this, the assumption can be made that nutrient concentrations are likely to affect aspects of mahinga kai, such as relative abundance of fish, biodiversity, and the ability to carry out customary practices.

Further information to support implementation

- **Guide to setting instream nutrient concentrations**

This is the primary reference for setting instream nutrient concentration and exceedance criteria. It explains the policy settings for nutrients, how to derive concentrations for managing any other nutrient attribute/attribute affected by nutrients (ie, periphyton) and how to derive the relevant concentrations for downstream receiving environments. It is an update of the 2018 document, 'A draft technical guide to the Periphyton Attribute Note', which was part of NPS-FM 2017.

- **Technical report on derivation of nutrient criteria for achieving periphyton biomass objectives using regional council data**

This report has information on the derivation of the model of lookup tables on the stressor-response relationship between nutrients and periphyton biomass across various River Environment Classification (REC) classes.

- **Guidance on lookup tables for setting nutrient targets for periphyton (version 2)**

This document and the one above form an update on the models used to inform the Essential Freshwater economic-impact analysis, to aid in implementing clause 3.13 and achieve periphyton TASs.

- **Good practice for setting instream nutrient concentrations for other nutrient-affected attributes**

This guidance addresses the gap in the previous two documents, by focusing on the other nutrient-affected attributes in the NPS-FM, and their ecological relationships to each other and to nutrients. It highlights the conceptual models for nutrient effects and pathways for setting instream nutrient concentrations to manage these other attributes. It covers setting concentrations and exceedance-criteria TASs for the following attributes:

- fish
- macroinvertebrates
- ecosystem metabolism
- dissolved oxygen.

- **Webinar on the National Objectives Framework**

This webinar sets out the main steps required for the NOF, with a focus on flows and attribute identification, including nitrogen, phosphorus and sediment.

Clause 3.14: Setting limits on resource use

NPS-FM

Clause 3.14: Setting limits on resource use

- (1) Limits on resource use may:
 - (a) apply to any activity or land use; and
 - (b) apply at any scale (such as to all or any part of an FMU, or to a specific water body or individual property); and
 - (c) be expressed as any of the following:
 - (i) a land-use control (such as a control on the extent of an activity)
 - (ii) an input control (such as an amount of fertiliser that may be applied)
 - (iii) an output control (such as a volume or rate of discharge); and
 - (d) describe the circumstances in which the limit applies.
- (2) In setting limits on resource use, every regional council must:
 - (a) have regard to the following:
 - (i) the long-term vision set under clause 3.3
 - (ii) the foreseeable impacts of climate change; and
 - (b) take into account results or information from freshwater accounting systems.

Policy intent

Limit setting is one of the last steps in the NOF process. It must be done well for the instream TASs and concentrations to jointly achieve the environmental outcomes.

This step has proven to be complex and difficult. A robust set of regulatory limits will control cumulative effects, because they clearly set out when and how to stop allocating or using the resource. They also clarify how much resource use to reduce in over-allocated catchments, to achieve the sustainable amount of resource use that will meet water body outcomes.

What is resource use?

The phrase 'resource use' has been part of the definition of a limit since the first Freshwater NPS in 2011. It links back to the purpose of the RMA to promote sustainable management, which means managing the use, development and protection of natural and physical resources.

A limit on resource use is defined in clause 1.4 as "the maximum amount of resource use that is permissible while still achieving a relevant target attribute state or a nutrient

outcome needed to achieve a target attribute state (see clauses 3.12 and 3.14)”. It is intended to be directly about use of resources, and specifically restricting the amount of that use, so that a particular environmental outcome or TAS is achieved and maintained over time.

‘Resource use’ can encompass many different types of use and can relate to:

- how those uses are undertaken (eg, management practices)
- where they occur (eg, not on certain soil types or near sensitive locations)
- when they occur (eg, the time of year or flow of river when a use can or cannot be undertaken)
- what use can be undertaken or if it should occur at all (eg, prohibited activities).

For **water quality**, the concept of resource use is potentially broad. Examples could include:

- limits in quantity and timing of the discharge of a contaminant (so as not to overburden a water body’s capacity to absorb a contaminant such as nitrogen)
- restrictions on land use or land use practices (eg, a limit on the amount, timing, seasonality, minimum soil temperature for applying fertiliser or grazing)
- a maximum stocking rate on certain soils, in certain locations or at certain times of the year
- restricting access to waterways for stock (ie, a minimum limit or requirements for kilometres fenced or length of riparian margin planted)
- point-source limits on wastewater discharges.

The methods to set limits must:

- not be open to manipulation, leading to further leaching
- be transparent so that all assumptions are known and the on-farm actions can be identified and quantified
- control the contaminant effectively.

What is a limit on resource use?

Limits on resource use are a tool to achieve a TAS and a nutrient outcome needed to achieve a TAS. This leads to a cascade of desired consequences:

1. determining the state of water body and ecosystem
2. producing the environmental outcome or nutrient outcome for the values
3. achieving the long-term vision
4. giving effect to Te Mana o te Wai.

Limits on resource use

A limit on resource use is defined as the maximum amount of resource use that is permissible while still achieving the relevant TAS and nutrient outcomes needed to achieve a TAS. It enables communities to use resources, but limits use to a level that can support the health and well-being of freshwater.

Limits on resource use can apply to a whole region, all or part of an FMU, or even a specific water body or individual property.

Types of limit

The limits can apply to input, output or land use.

- Point-source discharges (eg, from a factory) or input controls, such as stocking rate, have the benefit of being easier to measure.
- Output controls are harder to measure for diffuse discharges, but give the user more flexibility on how to achieve the allocated use.
- Land use controls are easy to measure and can have a big impact. However, they have a higher impact on the current users if their land use is restricted.

Examples of limits:

- the total annual load of phosphorus or nitrogen contributed to a catchment over a year
- the amount of nitrogen fertiliser that can be applied per hectare per year, in which season and under which weather conditions
- the number of stock units per hectare by soil type
- the riparian setback needed to achieve the sediment and Fish Index of Biotic Integrity attribute states.

Requirements

Limits on resource use must:

- be based on the best information available and take into account monitoring and accounting information
- focus on the future, taking into account the long-term vision and foreseeable impacts of climate change
- be rules in the regional plan
- meet the instream concentrations and exceedance criteria, or instream loads, for nitrogen and phosphorus.

Resource use is often discussed in terms of discharge of contaminants. However, councils should take a broader view of resource use to set limits for some attributes.

Limits versus other controls

In the past, some councils have mistakenly assumed that controls set on a water body are limits. However, this is where TASs and maximum concentrations are set (eg, the maximum instream *E. coli* concentration at a specified location). These are not limits. The limit for *E. coli* will be the total set of rules in the regional plan, which limit resource use to achieve the in-water body TAS for *E. coli*.

How much use to provide for?

The amount of resource use allowed must ensure that the TASs and Te Mana o te Wai are achieved. A limit cannot, individually or cumulatively, allow the TASs to be undermined or prevent them being achieved in the timeframe set.

Limits and over-allocation

There is a strong link between limits on resource use and the direction in Policy 11 in the NPS-FM to avoid over-allocation and to phase out existing over-allocation.

Over-allocation is defined (in part) as a situation where resource use exceeds a limit. Once a limit is set, the regional council must ensure it is not exceeded. If it is currently exceeded, the council must phase out the over-allocation. This is done using a 'sinking-lid' limit: a limit that caps the use at the level it is currently allocated (or used, if not all allocated resource is used), and lowers the limit in steps over time. This way, the limit will be lowered gradually to allow for the allocation to be clawed back from current users, or not renewed up to the point where the resource is no longer allocated.

Example: Fencing

Limit: A total allowable length of unfenced riparian margin.

If stock access to water is thought of as a 'use of the resource', then by restricting that access we are imposing a 'limit' on stock access to rivers (to reduce faecal contamination).

The limit might be expressed as '50 per cent of stream length in a catchment must be fenced'. Individual farmers could 'trade' fencing extents.

Conversely, a limit might be expressed as a prohibited activity with a zero allocation.

Example: Stocking rate

Limit: A maximum stocking rate to meet an *E. coli* freshwater objective.

If grazing is the 'resource use' and a maximum stocking rate for the catchment is stipulated, that is a 'limit'.

Best practice

Principles for setting limits on resource use

Although the NPS-FM gives councils flexibility in limit setting, the NPS-FM framework provides guiding principles.

- In some places, limits have favoured the status quo land use, and the control methods gave resource users a high degree of flexibility and certainty. Te Mana o te Wai requires that certainty is now given to the water body. Councils should favour limits and tools most likely to achieve outcomes, particularly for at-risk or highly sensitive water bodies.
- A limit is about the amount of resource use. It is linked to, but different from, the in-water outcome (by the TAS, nutrient outcome and environmental outcomes). A limit should direct or restrict resource use.

- The suite of limits should be considered together to achieve the TAS or a nutrient outcome needed to achieve the TAS.
- A limit restricts resource use where this could otherwise prevent the TAS from being achieved. For example, limits on activities that generate sediment, such as earthworks, will achieve the TAS for deposited sediment.
- Limits must address the cumulative impact of multiple resource users over time. For example, limits requiring good management practice for earthworks will only be effective if they address the amount or area of earthworks being undertaken in a catchment, at a particular time.
- A limit should be underpinned by the best available information from monitoring, freshwater accounting systems, climate change predictions and other modelling tools.
- Once a limit on resource use is set, councils may need to allocate the ‘amount of resource use’ between users. But they are two consecutive processes that should not be confused.
- Where allocation of resource use is required, the NPS-FM does not prescribe a particular method beyond the obligations imposed to give effect to Te Mana o te Wai.
- The limit must be clearly stated as a rule in the regional plan. It should set out the point at which resource use must cease or be further restricted, to avoid over-allocation. This may require strict rules and restrictive activity statuses – such as, prohibiting further allocations beyond the limit, and permissions and consent requirements for uses where there is degradation and over-allocation that needs reducing, and a pathway to achieve this.
- Difficult decisions and hard conversations are necessary where there is severe over-allocation and land use change, or land use intensity has to be reduced. These decisions should be made openly during the plan-making process, with the scrutiny of a hearing panel. They should be set out in rules, not deferred and delegated to individual decision-makers through consents and farm plans. This would place an unreasonable responsibility and burden on individuals, which is likely to lead to: status quo bias, poor transparency about whether the actions required on-farm will achieve freshwater goals, and inequitable application of limits.
- A limit can be on any type of resource use, as long as there is a link (direct or indirect) between the use and the TAS, or a nutrient outcome needed to achieve the TAS. This may require different ways of thinking about resource uses that either generate or mitigate contaminants.
- Rules should meet regulatory best practice, including being enforceable.

Example: Applying fertiliser

Applying fertiliser to land may be prohibited above a certain amount per hectare, or at certain times of the year, or in certain weather conditions.

The regional council will set the maximum amount, and its conditions, at a level that allows the water body to meet the TAS within the timeframes.

Scale

A limit may be defined at different scales, including:

- individual users (eg, a maximum discharge rate for individual locations)
- FMU (eg, a maximum stocking rate per hectare).

Steps for determining a limit

The steps could include the following.

- Identify the contaminant load that will meet the desired TAS.
- Identify the current contaminant sources and amount, to either:
 - maintain the resource use, if maintenance of current state is the goal (noting that achieving baseline states, or locations with long lag times, may require further reduction of resource use), or
 - improving degraded or over-allocated water bodies, and setting the starting point for reductions.
- Identify the complete set of limits and actions that will ‘hold’ the current contaminant loads. Where reductions are required, set out the complete set of actions (land use practices, extent and intensity) to meet the reductions.
- Establish a rules framework and cascade:
 - prohibit use above and beyond the limit
 - set a transitional pathway for over-allocation, allowing reductions from the current state.

Relationship between TASs and limits

TASs and limits are two essential components of the NPS-FM 2020. They are sometimes thought of in the same way, but in the NPS-FM they are about different things, and the distinction is important.

A **TAS** is a measurable description of the intended instream state, the freshwater and the ecosystem. It is expressed in units as in the attribute table of the NPS-FM (eg, mg/L).

A **limit** is a restriction on an amount of resource use, which allows that TAS to be achieved, and nutrient outcomes needed to achieve a TAS.

Limits are not set on measures of water body health (or instream concentrations) but on the activities that affect those measures.

In setting a limit to achieve a TAS, the main question is: ‘What actions must we take or restrict to achieve the TAS?’. For example, a limit is not the amount of deposited sediment in a river. It is the constraints that have to be put on resource use so the amount of deposited sediment is no higher than the TAS for that location. This will require limits on sediment generating activities, such as on the amount or scale of earthworks or vegetation clearance in a catchment, or requiring sediment detention. Deposited sediment is also influenced by flows, so councils must set environmental flows and take

limits at a level that allows sediment to be flushed from the river, before it reaches a level that would breach that of the TAS.

It may be hard for councils to estimate what the effect on deposited sediment will be, if these changes are made. This means that the first time limits and other methods are set, they may be based on very general estimates and assumptions that the methods will be a move in the right direction toward the TAS. As indicated in the earlier detail on [Clause 1.6: Best available information and the NOF](#), uncertainty about data or expected outcomes warrants a precautionary approach. This can mean building a more conservative buffer into a limit, to ensure the incremental movement towards achieving a TAS.

When more information becomes available from monitoring, councils can adjust their limits and methods to increase the likelihood of reaching the TAS. This finetuning of the limits and other methods to achieve the desired outcome is an iterative process, one that will be informed by both monitoring data and new knowledge that may become available.

For some types of resource use, a limit will need to achieve multiple target states.

Example: Limits affecting multiple target attribute states (TASs)

Limits on **sediment-producing activities** will help to achieve the TAS for:

- deposited sediment
- suspended fine sediment (visual clarity)
- dissolved reactive phosphorus (because phosphorus is bound in sediment), and
- periphyton.

A direct relationship between limit and attribute is not required, rather a suite of limits will achieve a suite of TASs.

When a limit helps to reach multiple TASs, it should be set at a level to meet the most stringent for that location. This way all target states will be achieved.

Maximum amount of resource use

The first step is to understand the current amount of use. A second step is to establish the maximum amount of resource use that could occur while still meeting the TAS.

[Figure 7](#) shows that the current resource use only informs the starting point for making reductions. It is not material to deciding the sustainable maximum amount of contaminant or whom the resource use should be allocated to and in what quantity.

A limit must be expressed as a rule in a regional plan. Whether or not it has been exceeded is important to understanding if over-allocation has occurred. However, over-allocation can also occur when a limit has not been exceeded, in the case of degradation (see clause 1.4). To be a 'good' rule, and to allow an assessment of over-allocation, it must be possible to objectively measure, survey or estimate a limit. It should be clear, certain and capable of consistent interpretation. Where possible, a limit should be based on a numeric or other quantifiable amount.

To determine the limit for a resource, councils and tangata whenua must use the best information available. The total allocated limits on a resource must add up to no more than the total amount of resource use that a catchment's water body can assimilate. That

means using limits that only control a part of the use of a resource will not be effective nor sufficient. Uncertain estimates must err on the side of caution, to protect the health and well-being of water bodies and freshwater ecosystems.

Achieving a TAS and the long-term vision

The purpose of a limit is to ensure a TAS or a nutrient outcome needed to achieve a TAS is met or achieved within the timeframe. Without limits on resource use set through rules in a regional plan and – where necessary – restrictions on consents, TASs are just numbers in the plan, with no clear pathway to achieve them. Therefore, an effective limit must have a direct or indirect link with a TAS.

For some attributes that relationship is obvious, such as limits to the amount of nutrients in point source discharges to achieve the TAS for nutrient levels in rivers.

For other attributes this relationship is not so direct. For example, to achieve a TAS for dissolved reactive phosphorus, an appropriate limit might be restricting land use practices that generate sediment containing phosphorus. Interim TASs need to be set for all the intermediate steps to achieve the long-term vision and environmental outcomes.

Interim target attributes are treated the same as the ultimate TAS (clause 3.11(6)(b)) so limits must be set that achieve each interim target over time. Limits do not have to achieve the ultimate TAS immediately, stricter limits can be phased in over time, so long as the interim targets are met. This allows for spreading change over time, which will assist with the transition when large changes to resource use are needed.

A limit places constraints on resource users. These do not have to all come into effect at the same time. But clarity about what future reductions and allocations to expect will give greater certainty to both current and future users to plan for their resource use.

If a limit is placed on stocking units, these reductions can be gradual, giving land users clarity on the scale of these reductions for more effective business planning.

The NPS-FM only requires limits be set through rules in the regional plan. This is sometimes misunderstood to mean that these limits are only set for the time that the plan is in force. TASs will often need more time – or the life cycles of multiple plans – to achieve the long-term vision, so rules that set limits will be set without an end date. During each plan review, limits will need to be reassessed to establish whether they are set at the right level to achieve the TASs.

The likelihood of having to reassess the limits to accommodate the effects of climate change, or because better information is available establishing the relationship between the pressures and the instream state, should be identified when the limits are first established and set in regional plans or on resource consents. This will help reduce expectations that the limits will be permanent. Without this critical information, resource users in highly over-allocated catchments may mistakenly believe they will not face further future reductions. Although councils may not yet know the future levels needed for the limits and other methods, they should reveal the reductions in contaminant load to meet final target states. This information is required in the RMA section 32 analysis. However, it should be kept front of mind and may be best placed in action plans. This should set out future 'end-state' limits and future contaminant loads

and constraints with likely associated land use, and reveal the extent of expected changes to intensity and land use.

Impacts of climate change

Considering the impacts of climate change when setting limits is one element of achieving Policy 4 of the NPS-FM. This policy is to ensure that all freshwater is managed as part of New Zealand's integrated response to climate change.

When setting limits, the regional council must have regard to the foreseeable impacts of climate change (ie, adapting to climate change).

Given the recent evidence towards more frequent and severe weather events in New Zealand, failure to consider the effects of climate change will lead to poor planning and poor implementation of the NPS-FM.

For example, when planning for the maximum amount of water takes, also consider available modelling on the frequency of drought in the future. Drought will change the amount of water that can be allocated to sustain (maintain or improve) aspects of freshwater and freshwater ecosystems.

Councils should also consider the expected frequency of floods when deciding on methods to achieve outcomes that could mitigate climate change effects, such as restoring wetlands or larger riparian margins.

How to determine the appropriate limit

Limits must be set to meet the TASs. This does not necessarily equate to one limit for each TAS. Rather, the set of limits (together with the action plans and consent conditions) should lead to a set of target states. These in turn lead to achievement of the freshwater objectives.

There may be situations where a TAS requires a range of limits to meet it, or one limit might meet several TASs. What matters is whether the set of limits in combination with any relevant action plan or consent condition will achieve the corresponding set of target states.

Generally speaking, each TAS should be met via a combination of limit rules, action plans and other methods. In other words, meeting the limit may require a suite of regulatory and non-regulatory methods.

The following questions should be considered.

- Do you have complete information? If not, use the best information available. The lack of sufficient information cannot be a reason to delay limit setting. When the best information available still includes uncertainty, interpret it in a way that best gives effect to Te Mana o te Wai. In other words, when there is uncertainty, apply the precautionary principle and 'err on the side of caution' for the health and well-being of the water bodies and freshwater ecosystems.

- Do you already have freshwater objectives (based on the NPS-FM 2017), TASs and limits in your plan? If so:
 - Do they give effect to Te Mana o te Wai?
 - Have you set environmental outcomes and TASs for all compulsory values in appendix 1A?
 - Have you set limits for all the attributes (appendix 2A) that require them? And does the best available information indicate that these limits will achieve all these target states?
 - Do they fit together to reach environmental outcomes and the long-term vision?
 - How likely is it that the TASs will be met in their timeframes? And is adequate monitoring in place to track and confirm this?
 - Are the limits expressed in such a way, and supported by policy, that stops resource use and does not allocate new resource use when the limit is reached (avoids over-allocation)?
- Which types of resource use (eg, water abstraction, discharges, land use), including permitted use, cumulatively affect a TAS? And will individuals deciding on resource use (eg, land users and their advisors) have enough information to predict if their activities will fit within their allocated limits?
- What is the maximum amount of resource available, what resource use is currently taking place, and what use could be allowed in the future? Also consider any fluctuations and uncertainties with these quantifiable amounts.
- Which method will you use to allocate the resource under the various potential users (eg, through a formal allocation system, rules on activity status, or some other method to determine how to spread the reduction across multiple users)?
- Is there complete information to calculate a maximum amount of resource use, with evidence to link it to the TAS? If information is incomplete or uncertain, have you taken a precautionary approach (prioritising the health and well-being of the water body and its ecosystems)?
- If you are setting limits on multiple sets of resource use, all achieving the TAS within the timeframe, analyse each combination using the tests in section 32 of the RMA. Section 32 requires an assessment of the effectiveness and efficiency (including costs and benefits) of different options to achieve the plan’s objectives. Understanding effectiveness and efficiency will help councils choose the most appropriate set of limits. See also the section [NOF and section 32 of the RMA](#) of this guidance.
- Is a limit the only incentive (or disincentive) to drive the behaviour change that meets the TAS? What other incentives – action plans, consent conditions – could contribute?

Limit setting: A challenging step

Limit setting is the step in the NOF where planning decisions begin to directly affect resource users. It is where decisions are made that will determine who will be most affected in the community and how and to whom the cost is allocated of achieving the environmental outcomes the community seeks. It is therefore the most challenging and potentially controversial step in the ‘values–environmental outcomes–limit-setting’ cascade.

Clarity for users and the community

It is best practice to give maximum clarity to the community and resource users. Where there is over-allocation, and reductions in contaminant loads are required, it is best practice to ensure that the complex and challenging decision-making process around what actions are required to achieve these are clearly identified in the plan, rather than devolved to individual decision makers through consents or farm plans. The plan should provide as much clarity as possible on the required reductions, and on possible changes in land use, land intensity and practice changes.

‘Adding up’ limits

It must be likely that limits ‘add up’ to not more than the total contaminant load required to meet the TAS, and that they will be hard and enforceable. In the past, limits have not added up from the farm scale (individual resource use allocation) to the catchment load scale (total limit). Even though every attempt should be made to set a limit as accurately as possible, it will always be an estimate. ‘Adding up’ the allocated uses (and loads) should use the best available information and best estimates.

However, once the best estimate is agreed, with enough certainty that it will achieve the TAS, councils must provide a high degree of certainty that the rules themselves will achieve the load limit or reduction.

Effective limits and good management practice

Councils need to create a hard limit to ensure there are no unintended cumulative effects. To do this, Good Management Practice (GMP) may often not be enough, because it does not address the scale of the activity in the catchment.

The choice of method, or combination of methods, is also important when determining how to regulate and cap contaminant loads. For instance, using GMP on its own will not create a hard limit. It may result in a useful and tangible set of reductions to address some portion of over-allocation, if the standards are clear and enforceable and applied well, but GMPs are practice standards and do not generally ‘limit’ either the extent or intensity of land uses.

Limits should be applied to three critical parameters of resource or land use to be effective. These are controls on: land use **practice**, and the **extent** and **intensity** of land uses where they leach contaminants beyond the land’s assimilative capacity.

Final decisions on limit

Limit setting is highly technical and requires analysis by experts including scientists, planners, economists, mātauranga Māori experts and consenting officers.

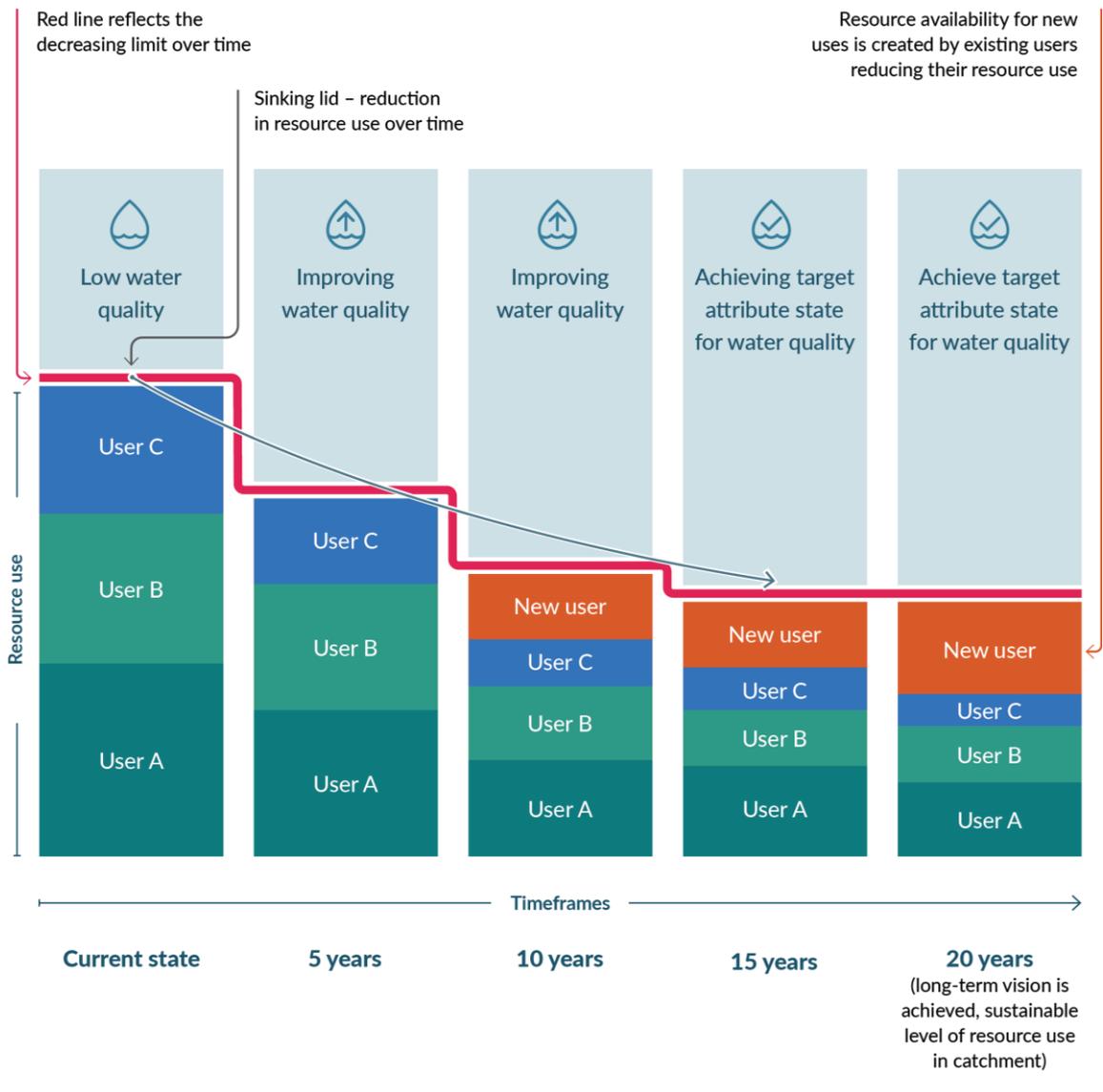
The complete set of limits and methods must meet all the TASs, which (alongside take limits) will achieve the environmental outcomes. Ultimately, these will achieve the long-term vision and give effect to Te Mana o te Wai and its hierarchy of priorities.

What about new resource users?

A TAS must be set at baseline state or better, and the health and well-being of water bodies must be at least maintained, and, in some cases, improved. It may not be possible to allow for additional resource use (above the current level).

If the community seeks growth in particular kinds of resource use, the limits may accommodate new users while still achieving the TAS. Figure 7 illustrates this.

Figure 7: Sinking lid – accommodating for new users of an over-allocated resource



Example: Setting limits on resource use in an FMU

Figure 7 gives an example of a water body for which the resource and land use or output in an FMU (on the land) is over-allocated. This figure shows a scenario whereby a council restricts total resource use, for example, through a combination of imposing input controls (the amount of fertiliser that may be applied), land use controls (restriction on earthworks near water bodies) and output controls (volume and timing of wastewater discharge). The first bar of the figure shows that there is low water quality due to a combination of too much resource use, and/or a lack of restriction on resource outputs and land use.

The council has set limits, with five-year intervals, in its plan to achieve the long-term vision in 20 years. Using a 'sinking lid', over 15 years, the maximum resource use and outputs are lowered and land use is controlled to minimise contaminants. This example shows a five-year lag between sustainably managing the resource (for instance, in lowering nitrogen by capping stock numbers) and achieving the long-term vision. This lag occurs because restoration of ecosystem health is not instant, after reduction of resource use.

The space below the red line shows how much total resource use is allocated to users and how this gets lowered over time. The space above the line depicts the water quality in relation to resource use. Water quality increases as the limits on resources are controlled and managed.

The sinking-lid red line indicates the limits needed to achieve the interim TAS. However, as long as the use allocated to the waterbody (Te Mana o te Wai priority 1) above the line stays within the requirements and timeframes for the interim TAS, the use below the line can be allocated to resource use within the two other priorities. In this example, the use allocated to the waterbody serves priority 1. The use allocated to users A, B, C and the new users falls under priority 3.

In the 10-year timeframe, users A, B and C have reduced their use beyond the limit, to the extent that some resource use can go to a new user, while total resource use stays within the limits to reach the interim TAS.

Reducing existing use

Any new resource use will need to come from reductions in existing use. For example:

- greater efficiency, such as producing fewer contaminants for same amount of activity
- alternative methods that do not produce contaminants, such as moving from discharging wastewater into a river to discharging it to land
- less intensive farming systems or methods that mitigate or contain discharges, such as switching horticulture from in-ground to glasshouse.

These options need to be considered with tangata whenua and the wider community engaged in the process. There may be additional costs, and who these fall to and over what period should be part of the discussion.

When the maintain or improve policy requires a contaminant load to either decrease or remain the same, there may seem to be no room for allocating the resource use to new users. However, this is not clear cut. Resource use can be freed up *within* the limit threshold by reallocating part of the current use to new users. This can only happen within the reductions required to achieve the TAS and Te Mana o te Wai.

Clause 3.15: Preparing action plans

NPS-FM

Clause 3.15: Preparing action plans

- (1) Action plans prepared for the purpose of this National Policy Statement may:
 - (a) be prepared for whole FMUs, parts of FMUs, or multiple FMUs; and
 - (b) set out a phased approach to achieving environmental outcomes; and
 - (c) be 'prepared' by adding to, amending, or replacing an existing action plan.
- (2) An action plan may describe both regulatory measures (such as proposals to amend regional policy statements and plans, and actions taken under the Biosecurity Act 1993 or other legislation) and non-regulatory measures (such as work plans and partnership arrangements with tangata whenua and community groups).
- (3) If an action plan is prepared for the purpose of achieving a specific target attribute state or otherwise supporting the achievement of environmental outcomes it must:
 - (a) identify the environmental outcome that the target attribute state is aimed at achieving; and
 - (b) set out how the regional council will (or intends) to achieve the target attribute state.
- (4) Action plans:
 - (a) must be published as soon as practicable; and
 - (b) may be published either by appending them to a regional plan or by publishing them separately.
- (5) Before preparing an action plan, or amending an action plan other than in a minor way, the regional council must consult with communities and tangata whenua.
- (6) Every action plan, or part of an action plan, prepared for the purpose of this National Policy Statement must be reviewed within 5 years after the action plan or part of the action plan is published.

Policy intent

Regional councils must prepare action plans to achieve the target states of attributes listed in appendix 2B of the NPS-FM. They may also prepare action plans for any other TAS, or otherwise support the achievement of outcomes.

Action plans may be prepared for all, part of or multiple FMUs, after consultation with tangata whenua and the community. These plans may include regulatory and non-regulatory measures. They can be a stand-alone document or added to a regional plan.

An action plan must:

- be published as soon as practicable, and reviewed within five years of publication
- clearly state which TAS and outcome it will achieve, and how the council will do this.

Best practice

Where the attributes that require action plans are likely to interact with those that require limit setting, councils should prepare action plans as part of the regional plan.

Action plans can be published as a single plan or several individual plans, so long as they contain all relevant attributes. Include all relevant rules to act as a 'user guide' for management at the catchment and farm level, and for catchment groups, consents officers, farmers and farm advisors.

Action plans set out a staged approach to achieve environmental outcomes. They may also be prepared if there is a need to amend or replace an existing action plan.

Action plans may be useful to set out a response to new or emerging issues, before a change to the regional plan is possible, for example, if a degrading trend in water quality is likely (see the sections [Clause 3.19: Assessing trends](#) and [Clause 3.20: Responding to degradation](#)).

When preparing action plans for this purpose, tangata whenua, councils and communities should consider the following.

- For local issues, allow for local communities and hapū or whānau to contribute to the plan and take action to give it effect.
- Aim the plan at the relevant geographic or community scale, is a local or regional approach more appropriate?
- Support tangata whenua to continue developing attributes and undertake monitoring at the desired scale, to implement the plan.

Action plans and Integrated Catchment Management Plans

Clear crossovers exist between action plans in the context of the NPS-FM and integrated catchment management plans (ICMPs). An action plan could incorporate existing ICMPs, but it does not have to. Existing ICMPs are not likely to meet the requirements to act as action plans under the NPS-FM, but there is no reason not to adjust them to form an NPS-FM-compliant action plan.

Further information to support implementation

- [Fact sheets and guidance on limits setting and action plans](#)

Clause 3.16: Setting environmental flows and levels

NPS-FM

Clause 3.16: Setting environmental flows and levels

- (1) Every regional council must include rules in its regional plan that set environmental flows and levels for each FMU, and may set different flows and levels for different parts of an FMU.
- (2) Environmental flows and levels:
 - (a) must be set at a level that achieves the environmental outcomes for the values relating to the FMU or relevant part of the FMU and all relevant long-term visions; but
 - (b) may be set and adapted over time to take a phased approach to achieving those environmental outcomes and long-term visions.
- (3) Environmental flows and levels must be expressed in terms of the water level and flow rate, and may include variability of flow (as appropriate to the water body) at which:
 - (a) for flows and levels in rivers: any taking, damming, diversion, or discharge of water meets the environmental outcomes for the river, any connected water body, and receiving environments
 - (b) for levels of lakes: any taking, damming, diversion or discharge of water meets the environmental outcomes for the lake, any connected water body, and receiving environments
 - (c) for levels of groundwater: any taking, damming, or diversion of water meets the environmental outcomes for the groundwater, any connected water body, and receiving environments.
- (4) When setting environmental flows and levels, every regional council must:
 - (a) have regard to the foreseeable impacts of climate change; and
 - (b) take into account results or information from freshwater accounting systems.

Policy intent

What are environmental flows and levels?

Environmental flows and levels are a measure of water quantity, expressed as water level and flow rates and flow variability. They apply to the whole FMU, which may include lakes, rivers, groundwater or a combination of these.

Councils must maintain flows and levels in a water body, to provide for its values and outcomes.

An environmental flow regime aims to retain enough volume, flow and level variability in the water body. It does this by limiting (a) the total amount of water that can be taken and (b) the taking of water when particular flows and levels are reached. The regime includes the take limits (clause 3.17) and minimum and other flows.

Flows and levels are important to achieve environmental outcomes

‘Water quantity – the extent and variability in the level or flow of water’ is one of five biophysical components for the ecosystem health value in appendix 1A – Compulsory values that apply to every FMU.

As outlined in clause 3.9 (‘Identifying values and setting environmental outcomes as objectives’), regional councils, with tangata whenua and the community, must identify the values and think about how the flows and levels will help achieve the outcomes.

Flows and levels are also important for achieving outcomes for other values such as mahinga kai, natural form and character, and recreational uses such as kayaking. Many values will in some way be influenced by flows and levels. Some freshwater attributes (eg, the Macroinvertebrate Community Index) are particularly sensitive to changes in flow and levels.

Below are examples of the importance of environmental flows and levels for many values.

- Safeguarding the mauri and mahinga kai values of water bodies.
- Flushing flows reduce algae and build-up of fine sediment (reduced flows can degrade aquatic life and lower amenity and recreational values).
- Controlling water temperature and dissolved oxygen.
- Preventing overload of contaminants.
- Providing habitats for terrestrial animals: in river braids and islands.
- Allowing for navigation: rafting, kayaking and jet boating in rivers.
- Providing food for drift-feeding fish.
- Enabling fish passage.
- Providing cues for fish migration and spawning.
- Opening river mouths.

Regional councils must set environmental flows and levels as rules in their regional plans

Setting environmental flows and levels is not a new requirement for councils and many may have already set rules in their plans under the NPS-FM 2014. However, the NPS-FM 2020 contains more specific direction about how to set environmental flows and levels.

The main change is the strengthened concept of Te Mana o te Wai in the decision-making process and ensuring that decisions give effect to it. Councils must be confident that existing rules meet this fundamental concept and the hierarchy of obligations, and that the flows and levels are sufficient to maintain or improve the ecosystem health of the water body and connected water bodies.

Regional councils must set environmental flows and levels as rules in their regional plans. This must achieve both the outcomes for the values relating to all or part of the FMU, and all relevant long-term visions. This obligation recognises the importance of water quantity for the compulsory values of ecosystem health and mahinga kai, but also for social and

cultural values (eg, recreational fishing). These values often go hand in hand, because a water body is unlikely to have high recreational and cultural values in the absence of a healthy ecosystem.

Flows and levels no longer a limit

In the NPS-FM 2014, environmental flows and levels were defined as:

a type of limit which describes the amount of water in a 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 freshwater management units must include an allocation limit and a minimum water level (or other level/s).

Take limits were considered as one type of limit, including minimum flows.

An important change to the above definition is that flows and levels are no longer considered a type of limit. In the NPS-FM 2020, they are now a more comparable measurable characteristic for water quantity, similar to how a TAS is a measurable characteristic for water quality.

The distinction between environmental flows and levels, and limits is important.

- Flows and levels contribute to compulsory and other values, and must be managed to achieve environmental outcomes.
- Limits, including take limits, are set on water use as rules in regional plans and as conditions on consents, to ensure the flows and levels are not breached by taking, damming or diverting water.

Flows and levels should now be clearly linked to achieving environmental outcomes, the long-term vision in the regional policy statement, and in line with Te Mana o te Wai.

The requirement to set flows and levels applies to rivers, lakes and groundwater. They must meet the outcomes of any connected water body or receiving environment, which will include wetlands, and, in some cases, water bodies connected to the coastal marine area (such as estuaries). Because the outcomes must be met for all, the most sensitive environment will determine how the flows and levels are set.

Relationship with take limits

The direction for setting the flow regime is directly related to take limits (clause 3.17). Of particular importance, regional plans must:

- i. set flows and levels to achieve outcomes, and long-term visions for each FMU
- ii. identify take limits to meet the flows and levels
- iii. identify when controls on activities (when and where to take water) will be restricted or stopped in order to meet the flows and levels

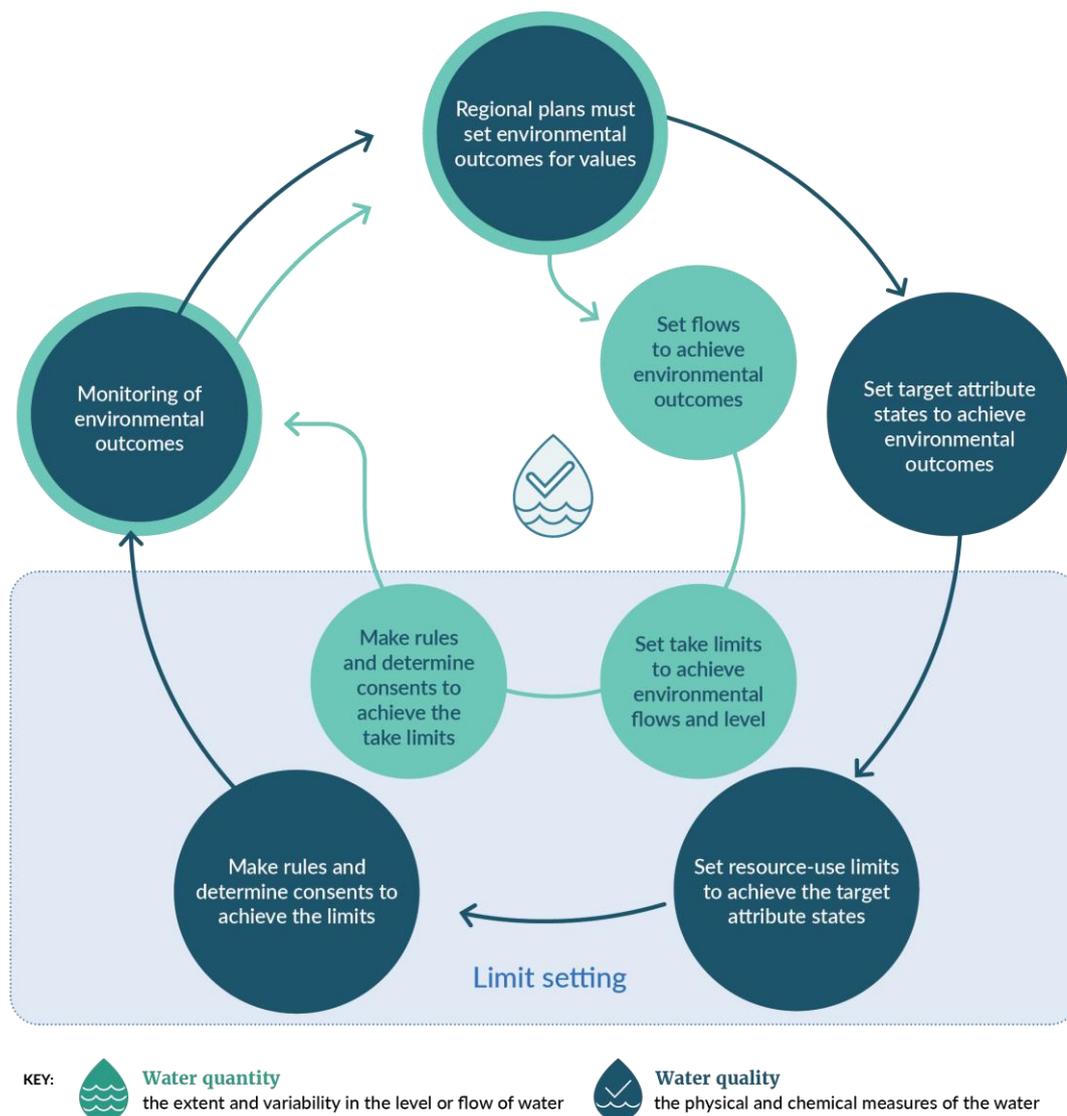
Setting flows and levels, and take limits, is part of the NOF process for applying the NPS-FM. Subparts 1 and 2 apply equally to environmental flows and levels, as they do to

setting TASSs. This includes actively involving tangata whenua and engaging with communities at every stage of the process.

Like TASSs, flows and levels are one way of achieving environmental outcomes and the long-term visions.

The processes for setting and achieving quantity and quality limits now align as shown in figure 8.

Figure 8: Process of setting and achieving limits on water takes and resource use



Holistic approach to setting flows and levels

Setting flows and levels requires a more holistic consideration of the ‘suite of flows’ (beyond minimum flows and allocation) to protect ecosystem health and other values. Under the NPS-FM, a flow can be considered the quantity, variability, flow, duration and timing of flows or water levels to give effect to Te Mana o te Wai, the long-term visions and outcomes set by the community and tangata whenua.

Adjusting the settings

The NPS-FM sets out policy direction clarifying that further decline in the health and well-being of water bodies is not acceptable. In many catchments and aquifers, current freshwater limits may not be sufficient to achieve the environmental outcomes. It may take time for existing water users to adjust to differences in water availability. Flows and levels can be set and adapted over time to take a phased approach to achieving environmental outcomes and long-term visions.

The NPS-FM also requires councils to consider the effects of climate change, and they may provide time to adapt and respond as more information becomes available and mitigation options change.

Types of data

Councils are unlikely to have real data for every water body in their region due to the difficulty and expense of monitoring all. In this instance, councils will need to use modelled data and approximate methods to set environmental flows and levels. Further detail on using best available information is given below.

Integrated management

Councils must take a holistic approach (ki uta ki tai) to managing flows throughout the FMU. Decisions must recognise the interconnectedness of the whole environment. There will be a connection between flows and levels and achieving TASs; these must be developed in tandem.

The requirement to maintain or improve the health of water bodies and freshwater ecosystems applies at all times and across the FMU. This may involve gauging vulnerable tributaries and establishing relationships with low flows at downstream recorders.

The following are examples of interconnectedness:

- the impact on the downstream receiving environments (like lakes, wetlands and estuaries)
- the interconnectedness of groundwater and surface water and impacts on aquifer recharge
- the impact on tributaries and upstream locations (eg, allocating more water from tributaries to increase flow in the main stem of the river would cause the tributaries to degrade)
- fish passage, aquatic life and habitat, excessive or extended low river flows may reduce the habitat for aquatic life and alter ecological processes, including fish that can have their migration routes affected by low flows
- low flows can interfere with maintaining river, lake and hāpua mouth openings
- reduced or less variable flows can also increase water temperatures, periphyton growth and the concentration of nutrients
- reduced flows in inflowing rivers to a lake leads to increased lake residence time and alters the water chemistry in the lake (eg, temperature, dissolved oxygen, nutrients).

Te Mana o te Wai and environmental flows and levels

A significant change in the NPS-FM 2020 is strengthening Te Mana o te Wai as the fundamental concept. This recognises that protecting the health of freshwater protects the health and well-being of the wider environment.

A requirement is also in place for tangata whenua involvement in the local definition and approaches to giving effect to Te Mana o te Wai, including use of mātauranga Māori and other attributes for values such as mahinga kai. These could result in changes to the decisions about setting environmental flows and levels, and take limits, and may require a change to existing rules.

Decisions to prioritise the health and well-being of the water body may be fraught with uncertainties about information. However, councils should take a precautionary approach and not delay decisions.

Best practice

The eight steps below are a suggested best practice example for setting environmental flows and levels.

1. Define the local definition of Te Mana o te Wai, long-term visions and environmental outcomes for compulsory and other values.
2. Identify the flow and level characteristics of the water bodies and their freshwater ecosystems that are necessary to provide for the environmental outcomes (priority 1). These may differ depending on the type of water body. For example, a spring-fed river will have a smaller range of flows than a rain-fed mountain river.

Flow and level characteristics may include:

- the flow and frequency of flushing flows
 - average seasonal water levels (for lakes or wetlands)
 - the flow and frequency of channel-forming flows
 - the flows and timing of flows that open river mouths to migrating fish
 - the flows in the waterway that enable fish to migrate up and within
 - streamwise direction, the main direction of fluid flow.
3. Determine the timing and magnitude of the flows and levels for each characteristic needed to provide for the health and well-being of the water body. This should include the interactions between flow and achieving the TAS for water quality.
 4. Consider other influences, such as climate change and changing vegetation in a catchment, which may affect the water balance by increasing or decreasing evapotranspiration. This may require an adjustment over time to flows and levels, for example, to account for higher temperatures and changes in rainfall patterns (drier or wetter periods).
 5. Set flows and levels that provide for the health of the water body.
 6. Set flows that achieve the TAS for values (including water quality). This may entail reviewing the target attribute states so that, together, they achieve the desired environmental outcomes.
 7. Identify the flow and level characteristics that provide for people's health (as identified by the community and tangata whenua). This may include the range of

flows suitable for taking water for drinking (eg, when the water level is high enough to enter a take structure, but low enough that it is not full of flood sediment).

- a) Consider other influences, such as climate change (eg, changes in precipitation, snow and ice melt), changes to demand for drinking water because of population change, and changes to water conservation practices.
 - b) Set flows and levels that provide for people’s health at a level that does not derogate from the flows and levels set for the health of the water body.
 - c) Identify the flow and level characteristics that provide for the other values identified by tangata whenua and the community. This may include a range of flows suitable for cultural and recreational use.
8. Include the flows and levels as rules in the regional plan, and state whether and when existing water permits will be reviewed to comply with these.

The way the steps are taken, and the result, will vary for different types of water body. For example, groundwater, spring-fed and braided water bodies will have different influencing factors (climate, topography and so on) that will affect the characteristics of the flow. The flow characteristics should link to the environmental outcomes.

Narrative attribute tables for environmental flows and levels

Unlike the other four components of the ecosystem health value, the NPS-FM does not prescribe attributes for environmental flows. It prescribes the overall design framework, including details of how the regime must be expressed in plans, but leaves flexibility for councils to use their own methods for determining what their regime is, and how the flows and levels will be set.

Regional councils may find it useful to develop narrative attribute tables to support their flow and levels regime. Table 2 shows a sample narrative attribute table for water quantity.

Table 2: Example attribute table for water quantity

Value	Ecosystem health
Water body	Rivers
Attribute	Habitat as affected by human induced flow variations
A	Abundant, diverse habitat to support species assemblage and abundance expected without water abstraction or diversion. Sufficient natural flow variability to influence channel morphology and bed movement. The flow regime provides for all ecosystem processes.
B	Reduced habitat but of short duration. Effects of abstractions or diversions can be mitigated (eg, by shading or increasing flow). A variety of flows to influence substrate movement. The flow regime provides for all ecosystem processes.
C	Some reduced habitat of long duration, but still enough to support the species. Variety is reduced.
D	Inadequate abundance or diversity of habitat to provide for the diversity of native flora and fauna. Remaining habitat cannot sustain populations long term. Aquatic species are likely to become stressed if flow stays at this level for an extended time.
E	Inadequate connectivity with other water bodies. Indigenous species are stressed by high temperatures and low dissolved oxygen in the water. Insufficient food and space for the species that have lived there.

Source: *Interim Regulatory Impact Analysis for Consultation: Essential Freshwater Part II: Detailed Analysis* (Ministry for the Environment, 2019)

Reviewing flow regimes that have already been set

Councils may have already set their flows and levels, including existing minimum flows, in their regional plans. However, they must review these to ensure they give effect to Te Mana o te Wai.

Many minimum flow regimes were set to provide for the needs of trout or salmon, and some were set to provide for out-of-stream values, such as economic and social needs, ahead of maintaining instream values. The hierarchy in Te Mana o te Wai means the regime must first meet the health and well-being of water bodies and freshwater ecosystems. Providing for the needs of trout and salmon would be relevant where communities have identified 'fishing' as a value in the FMU.

In some cases, this may require a significant shift to maintain or improve the health of the water body (Policy 5 of the NPS-FM). Adjusting to this new framework may take time, especially in over-allocated catchments that may need significant change.

The council, tangata whenua and community will need to set timeframes for achieving flows and levels that align with the timeframes for the long-term vision. The regional plan should clearly set out the flow and level timeframes. As suggested with target attribute states and limits, a look-up table may be a useful way to transparently show the transition from an over-allocated state to flows and levels that achieve the long-term vision.

Councils may phase in the changes to water management. For example, plan rules can have X cubic metres per second (m³/s) environmental flow in 5 years and Y m³/s in 10 years, to show the progression towards the long-term vision. This will require consultation with the community, and applies to every water body in the catchment, not just the main river stems.

Phased approach

If a water body is currently a long way from achieving the environmental flows and levels that are needed to achieve the values, councils may need to phase in the reduced takes over a period of years. As noted above, section 68(7) of the RMA enables plans to specify a phased approach for existing consents.

When determining the time for adjustment, the following will be important matters for communities to consider:

- the cost of reduced takes (eg, of more efficient irrigation)
- the time for users to adjust their water use
- any cost to the health and well-being of the water body, due to delaying a return to healthy flows and levels.

The time allowed must meet the timeframe in the long-term vision.

Councils should provide clarity about when they will review resource consents and change the flow regimes so that investment decisions can be made about water infrastructure.

Setting flows and levels in plans

Environmental flows and levels must be set as rules in plans. They are the ‘cut-off’ or threshold rules, whereas take limits are the maximum amount that can be taken. For example:

- **environmental flow and level rule:** environmental flow cannot go below a specified amount of m³/s as a result of any taking, damming or diversion
- **water take rule:** the maximum amount of water to be taken, dammed or diverted from the river expressed in m³/s.

When setting environmental flows and levels as rules in the regional plan, regional councils have the option to use section 68(7) of the RMA to specify a phased approach for existing consent holders over time. Once rules are in place, regional councils may also use section 128(1)(b) of the RMA to review existing resource consent conditions in light of the new environmental flows and levels.

Councils are unable to cancel existing consents unless the requirements in RMA section 128(1)(c) regarding inaccuracies in a consent application have been met, a consent review has been ordered as part of a penalty for an offence under the RMA, or the consent holder has requested cancellation. However, reviewing and adjusting consent conditions is an important tool for achieving new flow and level regimes over time. Councils can state in their plan(s) that, in catchments that are over-allocated, consents will be reviewed by a certain date. New consents would not be able to be granted in over-allocated catchments.

The flow and level rules for each FMU may vary from the typical ‘activity-based’ rules in regional plans. A rule more like that found in other regulations may be required. This type of framework is common in many water conservation orders.

If a minimum flow is part of the flow regime, this may require a rule that states ‘no water may be taken when the flow in x stream drops below x level’.

In some river systems with multiple water takes a suite of flows may be set according to clause 3.16, and a suite of take limits set according to clause 3.17. The take limits could be classed as A, B or C-type permits.

For example, where an A permit is for water supply, it can continue to operate until the flow falls to the lowest flow set under clause 3.16. If the flow falls below that threshold due to natural processes, no further water may be taken until the flow returns above the environmental flow framework in appendix x.

For a less complicated catchment with fewer take pressures, it may be enough to restrict the percentage of the instantaneous flow that may be taken at any time.

Suggested approaches for setting environmental flows and levels are as follows.

- Review flow thresholds if monitoring shows they cannot achieve the outcomes (clause 3.18).
- Change the plan to set new flows and rules (clause 3.16).
- State in the plan that the existing permit will be reviewed (clause 3.17, section 68(7) and/or section 128(1)(b) of the RMA).

Effect of climate change on flows

Climate change is expected to exacerbate the pressure on environmental flows by affecting when, where and how much rainfall, snowfall and drought occur. This in turn will affect the quantity of water in rivers and groundwater.

Higher temperatures increase evaporation and the demand for freshwater, including for irrigation. Climate change may also cause more frequent, heavy and intense rainfall, affecting ecosystem health such as sensitive aquatic life, but also providing benefits by flushing contaminants. Increasing water temperatures could be an additional stressor.

These are all factors to consider when setting flows, levels and take limits. After providing for the health and well-being of water bodies, consider how to efficiently allocate water, within limits, due to lower (or higher) capacity to provide for people's health and social, economic and cultural well-being. In areas where climate change is likely to cause more frequent droughts (such as Hawke's Bay and Northland), permit holders may need to prepare for more frequent suspension of their water take by harvesting water at higher flows and storing in off-line dams.

Flows and best available information

When setting environmental flows and levels, every council must use the best information available at the time. If there is not enough data on flows for all small streams (or other water bodies) in a catchment, a council could rely on modelled information. This default approach should reflect the principles of Te Mana o te Wai and be cautious about the streams and instream values.

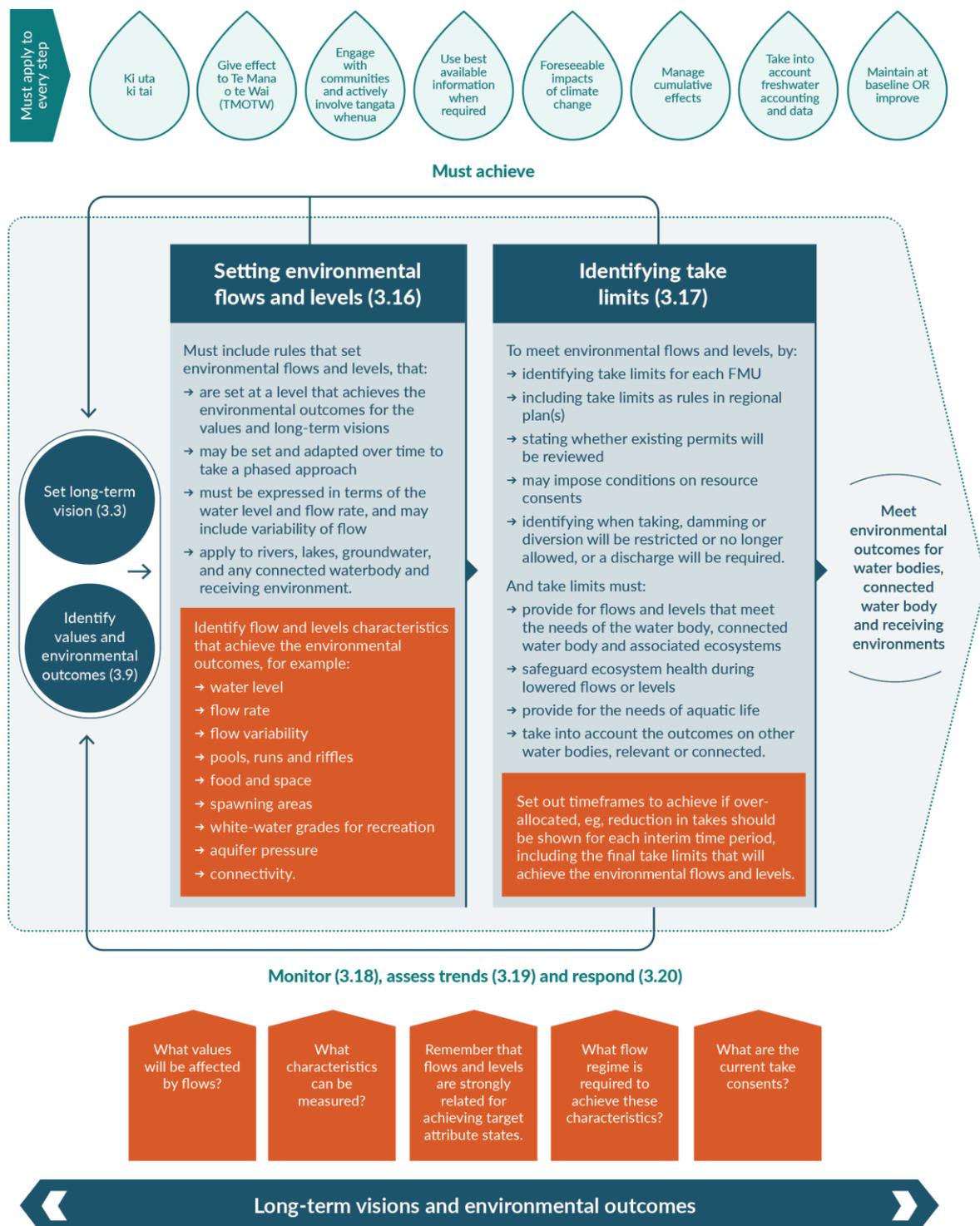
Councils should set a level they are confident will protect the values, until there is more detailed information. More information can then be required as part of any application to take water from the stream, and can demonstrate that reduced flows will not compromise the values.

There are many uncertainties with natural flow variability, and limited data and knowledge. When making management decisions, councils should consider the following but note the best information obligation to keep making decisions.

- The real but unknown state of instream values.
- The level of the desired state of instream values.
- The degree to which the desired state is obtainable, even in the absence of hydrological alteration.
- The degree to which associations between flow-driven instream values and flow regimes can be quantified.
- The degree to which consented and permitted activities are affecting river flows.
- Connectivity between groundwater and surface water, which relates to estimation of streamflow depletion.
- The degree to which water resource use limits are transferred into consents.
- The degree to which consents are over- or under-used.
- Climate change in the recent past and at various points in the future.

Figure 9 sets out the process for setting flows and levels, and identifying take limits as described in the next section.

Figure 9: Process for setting flows and levels, and identifying take limits



KEY:

Dark blue boxes/text NPS-FM policy detail Orange boxes/text interpretation detail

Further information to support implementation

- [Draft guidelines for selecting methods to determine ecological flows and water levels](#)
- [Dataset on river flows, related to the geographic pattern of natural river flows](#)
- [Freshwater conservation under a changing climate – Proceedings of a workshop hosted by the Department of Conservation](#)

Clause 3.17: Identifying water takes

NPS-FM

Clause 3.17: Identifying water takes

- (1) In order to meet environmental flows and levels, every regional council:
 - (a) must identify take limits for each FMU; and
 - (b) must include the take limits as rules in its regional plan(s); and
 - (c) must state in its regional plan(s) whether (and if so, when and which) existing water permits will be reviewed to comply with environmental flows and levels; and
 - (d) may impose conditions on resource consents.
- (2) Take limits must be expressed as a total volume, a total rate, or both a total volume and a total rate, at which water may be:
 - (a) taken or diverted from an FMU or part of an FMU; or
 - (b) dammed in an FMU or part of an FMU.
- (3) Where a regional plan or any resource consent allows the taking, damming, diversion or discharge of water, the plan or resource consent must identify the flows and levels at which:
 - (a) the allowed taking, damming, or diversion will be restricted or no longer allowed; or
 - (b) a discharge will be required.
- (4) Take limits must be identified that:
 - (a) provide for flow or level variability that meets the needs of the relevant water body and connected water bodies, and their associated ecosystems; and
 - (b) safeguard ecosystem health from the effects of the take limit on the frequency and duration of lowered flows or levels; and
 - (c) provide for the life cycle needs of aquatic life; and
 - (d) take into account the environmental outcomes applying to relevant water bodies and any connected water bodies (such as aquifers and downstream surface water bodies), whether in the same or another region.

Clause 1.4: Interpretation

[...]

take limit means the limit on the volume, rate, or both volume and rate, of water that can be taken or diverted from, or dammed in, an FMU or part of an FMU, as set under clause 3.17.

Policy intent

Meeting the environmental flows and levels requires councils to restrict the taking, damming, diverting and discharging of water through 'take limits'.

Take limits must:

- be expressed as a rule in the regional plan, and be set for every FMU
- achieve the flows and levels for an FMU. They should not allow flows or levels of water to fall below these
- be expressed as a volume or rate of take, or both. For example: 'No more than xx m³/s can be taken from this river from 1 November to 31 March'. Groundwater may be expressed as maximum annual volume taken.

Where a regional plan or water permit allows the taking, damming, diversion or discharge of water, it must identify the flows and levels at which these activities will be restricted, no longer allowed, or in the case of discharges, required (clause 3.17(3)).

Take limits must also:

- provide for flow or level variability that meets the needs of the water body from which the water is taken or diverted, or in which it is damned, and the needs of connected water bodies, and their associated ecosystems (eg, a groundwater take limit would not cause a permanent lowering of the groundwater levels, or reduce connected river flows below their environmental flow)
- safeguard ecosystem health from effects on the frequency and duration of lowered flows and levels (eg, a river system may have two or more take limits, so that restrictions can be applied in stages according to the flows and levels)
- provide for the life cycle of aquatic life (eg, a river system may have multiple take limits and restrictions applied to each limit, according to seasons or flows or both)
- take into account environmental outcomes for relevant and connected water bodies (eg, a groundwater take limit may be set so that water levels in a connected wetland maintain the conditions necessary for the wetland flora or fauna)
- be able to quantify for freshwater accounting purposes (clause 3.29) and know total takes for every FMU.

These provisions work closely with Policy 11: Freshwater is allocated and used efficiently, all existing over-allocation is phased out, and future over-allocation is avoided. This has been retained from previous versions of the NPS-FM. The provisions also link to the requirements in clause 3.28 to provide for the transfer of water takes and how to improve efficiency of water use.

Best practice

Over-allocation

An important part of the definition of 'over-allocation' or 'over-allocated' is where resource use exceeds a limit and where an FMU or part of an FMU is not achieving an environmental flow or level set for it under clause 3.16. 'Limit' includes a 'take limit'. Take

limits act in tandem with other restrictions such as cease-to-take flows. For example, it may be environmentally conservative to allow a large rate of take for filling a storage pond during higher flows, in order to limit water abstraction at lower flows. However, this would require applying a cease-to-take flow to stop filling of the storage outside relatively high flows. In this situation, two cease-to-take limits would be applied: one to limit water abstraction at lower flows and the other to high-flow harvesting.

In combination, these definitions mean that councils cannot make rules or grant resource consents that allow the taking, damming or diverting of water to exceed the take limit. Takes or diversions that would exceed the take limits should have an appropriate rule structure that avoids over-allocation (eg, prohibited). The NPS-FM now requires plans to state whether flows or levels will affect existing resource consents (clause 3.17(1)(c)). This allows permit holders to assess the effect of that requirement on their water use, and make submissions to the council during the planning process. The plan may also state that permit holders can comply with the terms of the rule, or rules, in stages or over specified periods.

What about new water users?

In healthy rivers it may still be possible to reallocate water and achieve the long-term visions and Te Mana o te Wai. However, when there is degradation, the first priority is to restore the water body. This may mean permit holders either have their allocation reduced or face more frequent restrictions.

Any water allocation to new users must come from reducing existing takes and ensure flows and levels are restored over time. Opportunities to reduce takes could come from more efficient water use (using less water for the same use) or water storage (either from water harvesting at high flows, or harvesting and storing rainfall). Councils must consider these options with tangata whenua and their communities.

Reducing water use

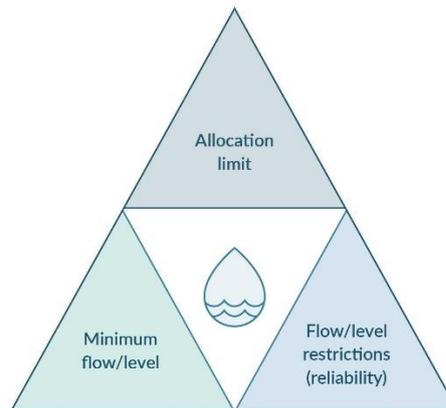
If achieving new flows and levels means reducing the existing takes (lower take limits), water use may need to be reduced. More efficient use (Policy 11 in the NPS-FM) may be one method. If this is not enough, existing takes may need to be reduced, with some reallocation of water.

Figure 10 shows the tension when allocating water between:

- total amount that can be taken (allocation)
- how reliable it is for users (flow and level restrictions)
- how much we leave for the environment (minimum flow and level).

Councils must follow Te Mana o te Wai when allocating water. Priority goes first to the health and well-being of water bodies and then to people's health needs. Within the 'other well-being' matters, the community may choose its priorities, consistent with Te Mana o te Wai.

Figure 10: 'Iron triangle' of water allocation



If a water body is over-allocated, councils may need to phase in the reduction over a period of years. This will allow users time to adjust. There will be implications for users (eg, irrigators). Councils should be upfront with the community about the reductions.

Suggestions for councils and communities

- Align consent expiry dates so they can be reviewed at the same time.
- Build climate resilience into take limits, flows and levels, especially for farming areas with lower takes. Councils can give direction and assistance, improving water-use resilience. This could include on-farm resilience practices that rely less on irrigation, where droughts are predicted to become more common. Achieving Te mana o te Wai and responding to climate change may mean less long-term certainty for users and consent holders, however, in order for the system to be more resilient, there needs to be a degree of flexibility, particularly as new climate science emerges. Forward thinking is critical and may be best achieved by informing permit holders that their permit is not permanent and will be reviewed in relation to increased low flow.
- Think about the implications of consent timeframes and whether to align with national and regional planning frameworks. For example, 10-year consents align with plan timeframes while giving resource users enough certainty to make investment decisions, but not too long (30 years) to be able to adjust water takes or reconsider allocations.
- Keep rules as simple as possible. Avoid complicating the freshwater accounting and compliance, monitoring and enforcement process (eg, many single water takes can make record-keeping difficult and costly for councils).

Water storage

Water storage is an option to use non-critical parts of the flow during low-flow periods when the water body is not stressed, which increases the allocation back to the river.

Stored water **must not** be used to expand or intensify land use that would breach the resource use limits. Councils must clearly set out the limits on total land use and intensity for different land types in a catchment.

Further information to support implementation

- [Guidance on measuring and reporting water takes](#)
- [Guidance and reports on environmental flows](#)

Clause 3.18: Monitoring

NPS-FM

Clause 3.18: Monitoring

- (1) Every regional council must establish methods for monitoring progress towards achieving target attributes states and environmental outcomes.
- (2) The methods must include measures of:
 - (a) mātauranga Māori; and
 - (b) the health of indigenous flora and fauna.
- (3) Monitoring methods must recognise the importance of long-term trends, and the relationship between results and their contribution to evaluating progress towards achieving long-term visions and environmental outcomes for FMUs and parts of FMUs.

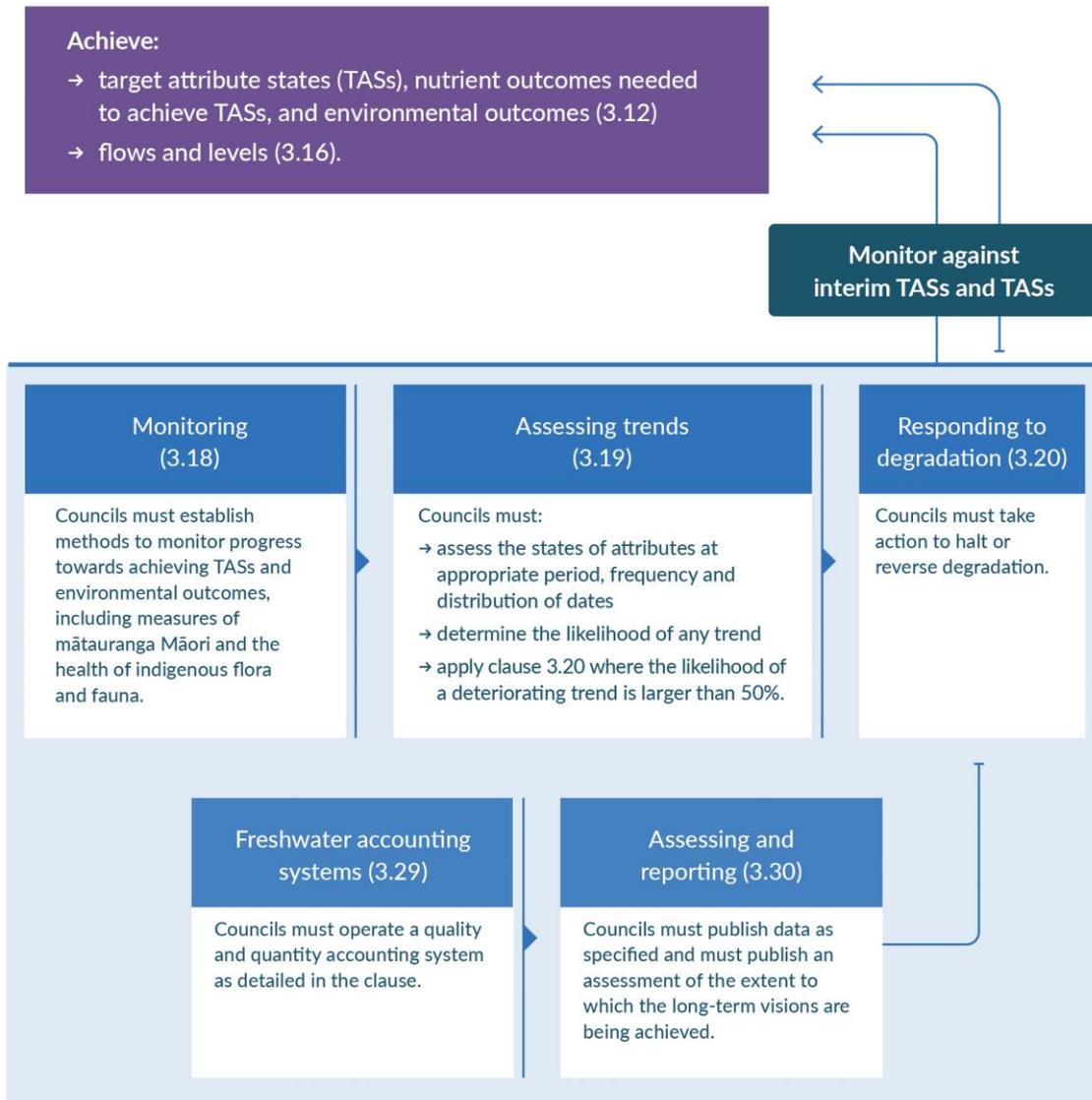
Policy intent

Councils must establish methods for monitoring progress towards achieving TASs and environmental outcomes. The aim is to create a regular feedback loop.

The loop allows councils to act in a timely manner if monitoring shows the outcomes as expected. It shows whether the limits, consent conditions, action plans and other methods are achieving the outcomes and interim goals, and are keeping the FMUs on track to achieve the long-term vision on time. [Figure 11](#) provides a visual representation of this feedback loop.

Each attribute will be monitored at a representative site in the FMU or catchment. The attribute will be assigned a TAS at that monitoring site. The purpose of setting TASs for each monitoring site is so councils can continue to monitor progress at that specific site, and keep track of whether the intervention (eg, limit as a rule in regional plans and action plans) is having an effect and achieving the TAS over time. For efficiency and practicality, it is intended that (where appropriate), councils will monitor more than one attribute at any given monitoring site.

Figure 11: Monitoring and responding to degradation



The NPS-FM does not prescribe specific methods of monitoring, or directions for a monitoring programme. However, the monitoring method must be fit for purpose. It must be a bona fide attempt to assess whether the TASs are being reached and the outcomes are being achieved.

These provisions are linked to other monitoring and reporting requirements in the NPS-FM, including:

- assessing trends (clause 3.19)
- responding to degradation (clause 3.20)
- mapping and monitoring natural inland wetlands (clause 3.23)
- monitoring rivers to assess the ‘no net loss of extent or values’ provisions (clause 3.24(4))
- monitoring primary contact sites (clause 3.27)
- operating a freshwater accounting system, including tracking cumulative effectiveness of activities (eg, increases in discharges and changes in land use) (clause 3.29)
- assessing and reporting on the results of monitoring (clause 3.30).

Best practice

Well-designed monitoring will yield feedback for planning and allow quick changes to address any variation from the pathway to the long-term vision.

Efficient monitoring aims to assess a number of the NPS-FM requirements comprehensively. This will require careful design and site selection.

Aspects to consider include:

- vulnerable receiving environments such as lakes and estuaries
- locations that are at risk (eg, water bodies at risk of irreversible decline)
- locations as mentioned in clause 3.8(4) and 3.8(5)
- the timing and frequency of monitoring, which needs to be fit for purpose to capture any possible deviation from the TAS
- the set of sites, which should capture a holistic picture of the FMUs, and be relevant to the freshwater values
- measurements that allow the assessment of the relevant attribute states
- assessment of resource use in the catchment, and users' actions to meet the limits.

Location of monitoring sites

Bear in mind the locations of the target states when choosing monitoring sites. This is not to say you need to monitor each location. Downstream monitoring can sometimes account for what is happening upstream. It can be more efficient to monitor the sites that either will provide the most information on what is happening in the freshwater ecosystem in the FMU (eg, do not only monitor at the top of a river), or that will review the state of the most vulnerable or at-risk sites, such as receiving estuaries.

Where there is more than one monitoring site for the same attribute in an FMU, how do councils set limits and actions plans appropriately?

The intervention (rules/action plan) should be targeted at the most stringent TAS in the FMU, noting that the benefit of an action plan is to tailor at a finer scale than rules generally provide for. A decreasing trend at a particular monitoring site means your intervention is not effective and firmer action is required in the form of action plans, consent conditions, or adjustments to rules.

Mātauranga Māori

Councils are required to work with tangata whenua to develop monitoring methods in a way that is informed by mātauranga Māori. Mātauranga Māori encompasses traditional knowledge, and the transfer of knowledge, about the nature of the world. As a method, mātauranga Māori can articulate the state of our environment from a Māori perspective.

The practice of mātauranga Māori can be specific to each rohe, iwi or hapū, and while some tangata whenua groups may be happy to work with councils to draw on mātauranga Māori in monitoring, others may not. Therefore, in identifying existing methods, or developing new monitoring methods informed by mātauranga Māori, councils will need to work closely with their local iwi and hapū to develop a plan.

There will be no one-size-fits-all approach. Mātauranga Māori may underpin the attribute and TAS, and the method and approach to monitoring. Methods that are practical and are effective for monitoring attributes will more likely lead to successfully meeting outcomes and visions for a catchment or FMU. This is because the NOF is a cascade, and the monitoring data collected will directly influence how regional councils set environmental flows, issue consents, set limits and put in place action plans.

There are existing kaupapa Māori tools and frameworks, which tangata whenua may consider when working with councils to establish monitoring methods. Alternatively, tangata whenua may develop their own frameworks for their specific context. In many cases, these tools can be used to bridge between the gap between non-Indigenous science and mātauranga Māori and a te ao Māori worldview.

Types of data to collect

Monitoring should not be limited to the state of the water body. State-of-the-water monitoring is important, but any changes in state cannot be checked against trends in land use without also carefully monitoring both resource use and intensity (eg, stocking units). This is particularly important where there are lags that cause delayed response in water quality changes. Land use change data is often not collected regularly, but should be, as it forms an important part of the monitoring package. Without it, it is often hard to assess whether rules on resource use and land use are being implemented effectively.

Councils should also monitor on-farm data showing how limits are met and monitor this information against the changes expected in broader land use trends (eg, if the rules and actions aim to halt expansion or intensity, these should be measured).

Reporting

Reporting of all monitoring data should support the freshwater stewardship roles of tangata whenua, the council and the Ministry, and allow good oversight. Interested parties may need access to information that underpins the regulatory provisions, as set out in clause 3.29(4). This also includes annual monitoring data for attributes and other requirements, as set out in clause 3.30. It should also include other regulatory data related to tracking cumulative effects of activities, eg, land use trends, so they can be transparently reported (clause 3.29) together with the ecosystem score card requirements in clause 3.30(4).

Further information to support implementation

- [A Draft Guide to Monitoring Under the National Policy Statement for Freshwater Management 2014 \(as amended 2017\)](#)
- [Coordinated Monitoring of New Zealand Wetlands](#)
- [Draft Internal Report: Incorporating Mātauranga Māori into the Monitoring of Freshwater in Taranaki](#)
- [Implementing mahinga kai as a Māori freshwater value](#), Chapter 8: Monitoring

Clause 3.19 Assessing trends

NPS-FM

Clause 3.19: Assessing trends

- (1) In order to assess trends in attribute states (that is, whether improving or deteriorating), every regional council must:
 - (a) determine the appropriate period for assessment (which must be the period specified in the relevant attribute table in Appendix 2A or 2B, if given); and
 - (b) determine the minimum sampling frequency and distribution of sampling dates (which must be the frequency and distribution specified in the relevant attribute table in Appendix 2A or 2B, if given); and
 - (c) specify the likelihood of any trend.
- (2) If a deteriorating trend is more likely than not, the regional council must:
 - (a) investigate the cause of the trend; and
 - (b) consider the likelihood of the deteriorating trend, the magnitude of the trend, and the risk of adverse effects on the environment.
- (3) If a deteriorating trend that is the result of something other than a naturally occurring process is detected, any part of an FMU to which the attribute applies is degrading and clause 3.20 applies.
- (4) If a trend assessment cannot identify a trend because of insufficient monitoring, the regional council must make any practicable changes to the monitoring regime that will or are likely to help detect trends in that attribute state.

Policy intent

The direction in clause 3.19(2) is a shift away from the traditional approach to analysing trends. Instead of looking for evidence of a statistically significant deteriorating trend, councils are now instructed to look for the likelihood that a trend exists. If it is more likely than not that a deteriorating trend does exist, they must act. Action under clause 3.19 involves first investigating and applying some analysis (3.19(2)a, 3.19(2)b and 3.19(3)) that allows councils discretion based on risk, and on whether it is possible to determine unnatural cause, before declaring an attribute is 'degrading', which then triggers a requirement to respond to halt or reverse under 3.20.

The reason for this change is that councils should not delay action until evidence for a trend is beyond doubt, as may have happened in the past.

If councils cannot identify a trend, they should consider whether it is because of insufficient monitoring. In general, monthly sampling is considered adequate for detecting meaningful trends in river and lake water quality. Due to the lower temporal variability in groundwater, quarterly sampling is often appropriate.

This is in line with Te Mana o te Wai and the direction to use the best available information, to act in the best interests of the health and well-being of the water body, especially when the impacts are uncertain.

Best practice

This new direction lowers the threshold for councils to act. Where the conventional threshold for assessing statistical significance of a negative trend would be close to 5 per cent (a p-value between .1 and .01), this policy moves toward likelihood comparison, which is comparative (but not the same as) a p-value closer to 0.5. The conventional approach in statistical analysis is to assume no trend, unless the data shows a strong enough indication of one. The philosophy adopted here is to assume a non-stable trend exists. The first step of the analysis is to determine what direction that trend is in.

When there is no or incomplete data, use the best estimate of whether a trend exists and the likelihood of that trend being larger than 50 per cent. It is consistent with Te Mana o te Wai to take action immediately, whether this action be investigative, physical or regulatory, rather than wait for further information, even if hindsight shows a degrading trend did not exist. However, as discussed in the next section, [Clause 3.20: Responding to degradation](#), it is important to assess the size of that trend, and its ecological consequences, alongside its direction, to determine the type and scale of action required.

Further information to support implementation

- [Monitoring change over time: Interpreting water quality trend assessments](#)

Clause 3.20: Responding to degradation

NPS-FM

Clause 3.20: Responding to degradation

- (1) If a regional council detects that an FMU or part of an FMU is degraded or degrading, it must, as soon as practicable, take action to halt or reverse the degradation (for example, by making or changing a regional plan, or preparing an action plan).
- (2) Any action taken in response to a deteriorating trend must be proportionate to the likelihood and magnitude of the trend, the risk of adverse effects on the environment, and the risk of not achieving TAS.
- (3) Every action plan prepared under this clause must include actions to identify the causes of the deterioration, methods to address those causes, and an evaluation of the effectiveness of the methods.

Clause 1.4: Interpretation

[...]

degraded, in relation to an FMU or part of an FMU, means that as a result of something other than a naturally occurring process:

- a) a site or sites in the FMU or part of the FMU to which a TAS applies:
 - i) is below a national bottom line; or
 - ii) is not achieving or is not likely to achieve a TAS; or
- b) the FMU or part of the FMU is not achieving or is not likely to achieve an environmental flow and level set for it; or
- c) the FMU or part of the FMU is less able (when compared to 7 September 2017) to provide for any value identified for it under the NOF

Policy intent

When assessing the likelihood of a deteriorating trend, the response should be proportionate to the likelihood of degradation, the magnitude and the risk to the environment, and the risk of not achieving the TAS.

Best practice

The NPS-FM does not specify what that response should be. Councils can use discretion, for example, by focusing their efforts where degradation is most severe or where the likelihood of a deteriorating trend is highest. The decisions have to be transparent and in line with Te Mana o te Wai.

A first step is to assess the multiple sets of data required under clause 3.29 (water body state trends, the extent of resource use and intensity trends, and, for example, farm data to achieve limits). Uncover why the systems in place have not performed as expected. This allows for:

- an informed conversation with all relevant agencies and the community about the possible improvements
- timely intervention.

Councils can be proactive in managing freshwater. Limits will not always achieve the exact intended outcome the first time around. They are only ever best estimates, using the best available data. New information and technology may necessitate changes. A plan change will be necessary where the limit has been set incorrectly. Plan changes will not affect consents that have already been granted. If necessary, councils can refer to section 128 of the RMA to determine the circumstances under which existing consent conditions can be reviewed.

It is also important that long-term permissions should be used with caution, to ensure councils can continue to give effect to Te Mana o te Wai.

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Glossary

Appendix 2A – of the NPS-FM (Appendix 2A – Attributes requiring limits on resource use)

Appendix 2B – of the NPS-FM (Appendix 2B – Attributes requiring action plans)

attribute – a measurable characteristic (numeric, narrative or both) that can be used to assess the extent to which a particular value is provided for

environmental outcome – in relation to a value that applies to all or part of an FMU, a desired end state that a regional council identifies and then includes as an objective in its regional plans (see clause 3.9 of the NPS-FM)

Essential Freshwater – a national direction, released in 2020, to protect and improve rivers, streams, lakes and wetlands. NPS-FM is part of this national direction

freshwater management unit (FMU) – all or any part of a water body or water bodies, and their related catchments, that a regional council determines under clause 3.8 of the NPS-FM is an appropriate unit for freshwater management and accounting purposes; and **part of an FMU** means any part of an FMU including, but not limited to, a specific site, river reach, water body, or part of a water body

Good Management Practice (GMP) – standards that set measures, such as for the acceptable amount of diffuse nitrogen discharges in different climates, soils and uses

hapū – kinship group, clan, subtribe

integrated management – ki uta ki tai ‘from the land to the sea’, an approach to resource management that addresses the need to manage the interconnectedness of the whole environment. For more detail, refer to policy 3 and clause 3.5 in the NPS-FM.

kai – food, meal

kaitiakitanga – referred to in the NPS-FM as the obligation of tangata whenua to preserve, restore, enhance, and sustainably use freshwater for the benefit of present and future generations

kaupapa – approach, ideology

ki uta ki tai – not defined in the NPS-FM. A Māori concept that refers generally to ‘from the land to the sea; an integrated, sustainable approach to environmental management’

limit – either a limit on resource use or a take limit

lookup table – table that displays the output from regression (or other stats model) analyses

mahinga kai – mahinga kai generally refers to freshwater species that have traditionally been used as food, tools, or other resources. For more detail, refer to the explanation in the NPS-FM appendix 1A.

mana – prestige, authority, control, power, influence, status, spiritual power

manaakitanga – referred to in the NPS-FM as the process by which tangata whenua show respect, generosity, and care for freshwater and for others

mana whakahaere – referred to in the NPS-FM as the power, authority, and obligations of tangata whenua to make decisions that maintain, protect, and sustain the health and well-being of, and their relationship with, freshwater

Mana Whakahono ā Rohe agreements – a tool designed to assist tangata whenua and local authorities to discuss, agree and record how they will work together under the Resource Management Act

mauri – life principle, life force, vital essence, special nature, a material symbol of a life principle, source of emotions

Ministry – Ministry for the Environment

national bottom line – an attribute state identified as such in appendix 2A or appendix 2B of the NPSFM

National Objectives Framework (NOF) – framework for managing freshwater as described in subpart 2 of Part 3 of the NPS-FM

National Policy Statement for Freshwater Management 2020 (NPS-FM) – National direction that provides local authorities with direction on how they should manage freshwater under the Resource Management Act 1991

receiving environment – includes, but is not limited to, any water body (such as a river, lake, wetland or aquifer) and the coastal marine area (including estuaries)

rohe – boundary, district, region

taonga – treasure, anything prized – applied to anything considered to be of value, including socially or culturally valuable objects, resources, phenomenon, ideas and techniques

tangata whenua – people of the land, local indigenous people. Māori are tangata whenua.

target attribute state (TAS) – the state of the attribute that needs to be achieved, to fulfil the associated objectives, outcomes, values and vision

te ao Māori – the Māori world view

Te Mana o te Wai – as set out in clause 1.3 of the NPS-FM

value – the national values relating to ecosystem health, human contact, threatened species and mahinga kai as described in appendix 1A, and for other values that must be considered, as described in appendix 2B of the NPS-FM

wāhi tapu – sacred places

wai – water

water take – a limit on the amount of water that can be taken from an FMU or part of an FMU, as set under clause 3.17 of the NPS-FM

whānau – extended family, family group

whakapapa – genealogy, ancestry