Attributes
Ngā Tātai Āhuatanga

Overview | Tirohanga whānui

Waikato Regional Council is carrying out a Freshwater Policy Review in response to central government's Essential Freshwater package, which is about stopping further degradation of New Zealand's fresh water and improving its quality and ecosystem health.

A key element of the package is an update to the *National Policy Statement for Freshwater Management 2020* (NPS-FM), which provides direction on how we manage fresh water under the Resource Management Act (RMA).

For this policy review, we want your input to help understand what you value most about the rivers, streams, lakes and other freshwater bodies in your area. We will then turn your values into environmental outcomes and then attributes – the way we'll measure how we're progressing towards realising these environmental outcomes.

To do this, we'll be following central government's National Objectives Framework (NOF), a consultation process connecting the values and aspirations for fresh water held by tangata whenua and communities with potential solutions to realise these values. This process will be carried out over the next two years and the whakaaro and kōrero you share with us will be used to revise the freshwater aspects in the *Waikato Regional Policy Statement* (RPS) and *Waikato Regional Plan* – our Freshwater Policy Review.

What is an attribute?
Mō te tātai āhuatanga

An attribute is described in the NPS-FM as a measurable characteristic of a freshwater body that can be used to assess how a value[1] is provided for. This characteristic can be numerical (like a concentration), a narrative (describing the characteristic), or both.

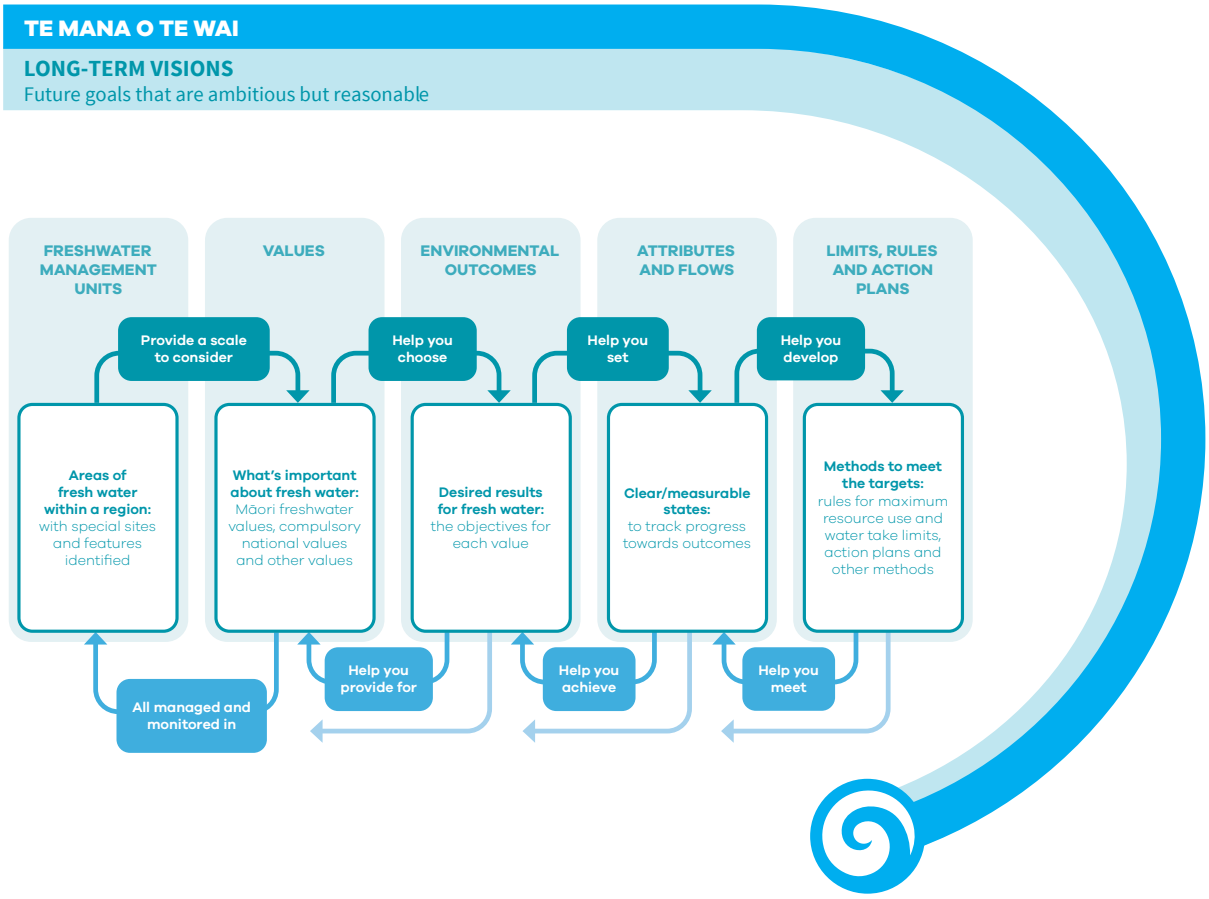
For example

The amount of suspended fine sediment (the 'attribute') in rivers can be a measure of ecosystem health (the 'value'). This attribute is measured by how clear the water is in metres (visual clarity).

This could also be specified numerically as a black disc reading (e.g. more than 1.78m), and a narrative attribute of "Minimal impact of suspended sediment on instream biota. Ecological communities are similar to those observed in natural reference conditions".

[1]*Refer to Information sheet 5 of 11 – Māori freshwater values and Information sheet 6 of 11 – Freshwater values.*

Figure 1



Identifying attributes
Mō ngā tohu tātai āhuatanga

For each value associated with waterbodies within a Freshwater Management Unit[2], we're required to identify attributes or alternative criteria to measure the value. Attributes must be specific and should be assessed in numeric terms where practicable.

The NPS-FM includes a list of attributes that we must use for two of four of its compulsory values: ecosystem health and human contact. These attributes are listed below.

Compulsory value	Attributes for lakes		Attributes for rivers	
Ecosystem health	• Phytoplankton (algae) • Total nitrogen • Total phosphorus • Ammonia toxicity • Submerged plants – natives	• Submerged plants – invasive species • Lake bottom dissolved oxygen • Mid-hypolimnetic dissolved oxygen	• Periphyton (algae) • Ammonia toxicity • Nitrate toxicity • Dissolved oxygen • Suspended fine sediment • Fish	• Macroinvertebrates (insects) • Deposited fine sediment • Dissolved reactive phosphorus • Ecosystem metabolism
Human contact	• Escherichia coli – E. coli (faecal bacteria) • Cyanobacteria – planktonic (toxic algae)		• Escherichia coli – E. coli (faecal bacteria) • Cyanobacteria – planktonic (toxic algae)	

As part of the Freshwater Policy Review, we may identify other attributes for measuring these values to align with the aspirations of tangata whenua and communities.

The NPS-FM does not include any compulsory attributes for its other two compulsory values – mahinga kai and threatened species – so we'll need to identify these attributes with tangata whenua and communities.

If attributes can't be identified, or they are insufficient to assess a value, we are able to identify alternative criteria to assess whether the environmental outcome for a value is being achieved. Mātauranga Māori (Māori knowledge systems) will also have an important contribution to the process of freshwater planning and monitoring in our rohe.

[2]*Refer to Information sheet 4 of 11 – Freshwater Management Units.*

Setting baseline states
Mō te whakatau tūāhua

For each attribute identified for a value, we're required to identify its baseline state. Baseline states generally reflect the state of the environment that existed at the time the NPS-FM (2014) was amended in 2017, unless it was previously identified by a regional council in a better state.

We've set freshwater objectives under the NPS-FM 2014 (amended 2017) for the Waikato and Waipā catchments in Plan Change 1. However, for the rest of our region, the baseline states will need to be the best of either:

a. the state of the attribute on the date it is first identified by council; or
b. the state on 7 September 2017[3].

Our science and monitoring teams regularly monitor the state of the environment in Waikato waterways. This information will support the identification of baseline states for the Freshwater Policy Review. Ideally, water data is collected for five years to get a better picture of the average state of the water. However, not all waterbodies have been monitored for the five-year period to 7 September 2017, but we are committed to using the best information that we have available.

[3]The date at which the 2017 amendments to the NPS-FM 2014 took effect.

Target attribute states
Mō ngā tūāhua hei tutuki

Once we've identified attributes, our next step is to identify the target attribute state that will support achieving environmental outcomes[4] and the long-term visions[5] held by tangata whenua and communities. In most cases, this will need to be at or above the baseline state and national bottom lines.

We need to set a target attribute state for every attribute we use and identify the sites where the target attributes will apply. The difference between the baseline state and the target state will show the magnitude of change required to meet environmental outcomes.

[4]Refer to Information sheet 7 of 11 – Environmental outcomes.

[5] Refer to Information sheet 3 of 11 – Long-term visions.

Attributes that are affected by nutrients
Mō te pānga ki ngā tātai āhuatanga

As a part of achieving the target states for any attribute affected by nutrients, we must set appropriate instream concentration levels and exceedance criteria for dissolved inorganic nitrogen (DIN) and dissolved reactive phosphorus (DRP). These must be set at a level to achieve the environmental outcomes for the attribute, as well as the environmental outcomes for downstream receiving environments that are also sensitive to nutrients.

Timeframes for achieving target attribute states | Mō te ara tutuki

Timeframes for achieving target attribute states are not specified by central government, but the targets we set do need to be time-bound.

If the target has already been achieved, then we need to state that it will be maintained from a specified date. If the timeframe is long term, we will need to include interim target attribute states (no more than 10 years apart) to assess progress towards achieving the target.

Achieving the targets
Mō te tutuki whāinga

The council, alongside tangata whenua and the community, will need to establish how we will work together to achieve the target attribute states and environmental outcomes.

Two key methods for achieving the desired results rely on setting limits on resource use. This is done through rules in regional plans and establishing action plans[6]. As part of the Freshwater Policy Review, we'll be revising the freshwater aspects in our regional plan to ensure it continues to meet the needs of our rohe.

[6]Refer to Information sheet 10 of 11 – Rules and action plans.

Where can I find more information? | Mō te puna kōrero

Check out **waikatoregion.govt.nz/freshwater-policy-review** to find:

- information sheets breaking down the Freshwater Policy Review
- how to share your views
- a summary of key milestones
- update on our progress.

You can also email us at policy@waikatoregion.govt.nz or call 0800 800 401 to speak to a member of our Freshwater Policy Review team.

Waikato REGIONAL COUNCIL
Te Kaunihera ā Rohe o Waikato