



Waimatā – Pakarae Catchment Advisory Group – Hui 8

Date: 10 December 2024

Subject: Attributes and Actions

1. Introduction

We have been working through values and environmental outcomes for the catchment. This has been done as an advisory group, while Mana Whenua have also been engaged independently outside of group meetings.

The outcome is a refined set of environmental outcomes, for which we must now consider attributes, target attribute states (TAS), and actions that can realistically achieve the TAS - what management measures and actions might be needed to either maintain the values, or to improve the situation where environmental outcomes are not being met.

In our previous hui we considered a potential approach to setting TAS (**Appendix 1**).

At the 10 December hui we will consider potential management measures and actions, and consider these in terms of attributes and other means of monitoring progress towards achieving TAS.

2. Attributes

The NPS-FM includes several compulsory attributes, as well as additional attributes that must be considered. The NPS-FM also allows for identification of other attributes. **Table 1** provides *draft* details on attributes that are relevant to each value and associated environmental outcomes. **This is a working document.**

For Hui 8, we will focus on attributes that are not compulsory (as we need to decide on whether to include suggested attributes). We have included multiple attributes / measures and action plan options; this will be reviewed, with their inclusion finalised through the process. Outcomes don't have to be measured only in attribute format; other measures are also available.

Note:

- Engagement with Mana Whenua is ongoing, with more work to be carried out regarding values and environmental outcomes.
- Similarly, continued engagement with the advisory group and the community in general will likely also result in further refinement of values and environmental outcomes.

Table 1 Linking actions to environmental outcomes and values

Key: Values in blue cells are compulsory values identified in the NPS-FM 2020; Values in orange cells are other values that must be considered in the NPS-FM 2020; Values in green cells are new freshwater values identified by this Group for this catchment; Values in pink cells are Māori freshwater values identified for this catchment.

Values Identified	Example Environmental Outcomes	Relevant compulsory attributes and potential additional attributes or other measures to be developed	Management and actions
<p>Ecosystem health</p> <p>Where detail applies only to the urban FMU, this content is provided in Green</p> <p>Where detail applies only to the rural FMU, this content is provided in Blue.</p>	<p>The water quality, flows, and habitat in the rivers, streams, estuaries, and wetlands support a diverse and abundant range of native biota including invertebrates, plants, fish, and birds. This in freshwater and estuarine areas.</p> <p>(Natural Form and Character is also inherent in the above)</p>	<p><u>Compulsory attributes</u></p> <p>Rivers / Streams:</p> <p>Periphyton (Trophic State)</p> <p>Ammonia (Toxicity)</p> <p>Nitrate (Toxicity)</p> <p>Dissolved Oxygen (below point sources)</p> <p>Suspended Fine Sediment</p> <p>Fish (Wadeable rivers)</p> <p>Macroinvertebrates (1 of 2) (Wadeable rivers)</p> <p>Macroinvertebrates (2 of 2) (Wadeable rivers)</p> <p>Dissolved Oxygen</p> <p>Dissolved Reactive Phosphorus</p> <p>Ecosystem Metabolism (Both Gross Primary Production and Ecosystem Respiration)</p> <p><u>Potential additional attributes / measures</u></p> <p>Rivers / Streams:</p> <p>Fish passage</p> <p>Hazardous woody debris</p> <p>Stream temperatures</p> <p>Stormwater heavy metals, namely for Zinc (Chronic toxicity) and Copper (Chronic toxicity)</p> <p>Wetlands:</p> <p>Proportion of wetland remaining</p> <p>Change in Prevalence Index</p> <p>Estuaries:</p> <p>LAWA estuarine indicators:</p> <ul style="list-style-type: none"> - Muddiness - Metal and organic contaminants (in sediment) - Macrofauna (macrofauna community assessed against the Benthic Health Model) <p>Stormwater heavy metals, namely for Zinc (Chronic toxicity) and Copper (Chronic toxicity) .</p>	<p>Potential action plans:</p> <ul style="list-style-type: none"> - Restoration plans produced for urban streams (incl. Kopuawhaka-pata, Wainui, Wheatstone, and Owen Streams) - Restoration plan produced for the Hamanatua - Farm Environment Plans addressing fertiliser use, erosion control, stock-water reticulation, etc. - Fencing (stock exclusion) - Retiring non-productive land - Improved forestry controls (skid sites, debris nets, etc.) - Pest animal control - Proactive management of erosion planting - Restoration plans for wetlands - Constructed wetlands for water treatment - Fish passage remediation programme - Strategic planning (e.g. Island biogeography) <p>Supported by:</p> <ul style="list-style-type: none"> - Setting limits on resource use - Allocation of water quantity - Forestry requirements / rules - Land use rules that protect waterbodies - consider wider stream buffer setback requirements - Iwi / hapū management plans - Stormwater ICMP requirements - Stormwater discharge rules - Better compliance and enforcement - Strategic assessments of restoration options, considering sediment / geological challenges.

<p style="text-align: center;">Human contact</p> <p style="color: green; font-weight: bold;">Where detail applies only to the urban FMU, this content is provided in Green</p> <p style="color: blue; font-weight: bold;">Where detail applies only to the rural FMU, this content is provided in Blue.</p>	<p>The water quality along the Waimatā and Tūranganui awa is safe for the community, whānau and visitors to swim, play, and compete in.</p> <p>Waka ama and other water sports can be practiced year-round along the Waimatā and Tūranganui awa with no risk of infection from contact with water or sediment, and no health & safety risks associated with woody debris.</p> <p>The water quality of the Wainui Stream Mouth and Hamanatua Stream Mouth is safe for the community, whānau and visitors to swim and play in.</p>	<p><u>Compulsory attributes</u></p> <p>Rivers / Streams: Escherichia Coli (E. Coli) Escherichia Coli (E. Coli) (Primary Contact Sites)</p> <p><u>Potential additional attributes / measures</u></p> <p>Rivers / Streams: Hazardous woody debris Wastewater issues (Tapu & Noa)</p> <p>Lagoons and estuaries: Enterococci LAWA estuarine indicators: - Muddiness - Metal and organic contaminants (in sediment) Hazardous woody debris; link to duration that woody debris affects human contact / recreational use Kai hoe waka / other active use Wastewater issues (Tapu & Noa)</p>	<p>Potential action plans:</p> <ul style="list-style-type: none"> - Targeted investigations upstream of the Hamanatua lagoon and Wainui Stream mouth (identify sources of bacteria) <li style="color: green;">- Wastewater network actions are already provided for in other processes / consents. <li style="color: green;">- Septic tank audits <li style="color: blue;">- Woody debris removal post-cyclones <li style="color: blue;">- Forestry requirements / rules <li style="color: blue;">- Fencing (stock exclusion) <li style="color: blue;">- Pest animal control <li style="color: blue;">- Proactive management of erosion planting <p>Supported by:</p> <ul style="list-style-type: none"> <li style="color: green;">- DrainWise programme <li style="color: green;">- Wastewater discharge rules (on-site wastewater) <li style="color: green;">- Land use rules that address on-site wastewater <li style="color: green;">- Wastewater Asset Management Plan <li style="color: green;">- Stormwater ICMP requirements - Better compliance and enforcement
<p style="text-align: center;">Threatened species</p> <p style="color: red; font-weight: bold;">The same for Urban and Rural FMUs</p>	<p>Water quality, quantity, and habitat are suitable for threatened species, and they are able to flourish.</p>	<p>Linked to 'Ecosystem health' and 'Natural form and Character'.</p> <p>Biodiversity outcomes, in association with 'Ecosystem health' and 'Natural form and character'.</p> <p><u>Potential additional attributes / measures</u></p> <p>Rivers incl. streams: Threatened fish species (inanga spawning sites; inanga abundance) Inanga spawning sites Fish passage</p> <p>Riparian areas: Birds (Kereru and / or Bellbird) Pekapeka</p>	<p>Potential action plans:</p> <ul style="list-style-type: none"> - Predator control in important habitat - Pekapeka (bat boxes) in safe habitats - Galaxiid (incl. inanga) spawning habitat improvements <p>Supported by:</p> <ul style="list-style-type: none"> - Biodiversity strategies <p>Aspects to be managed within the Rural FMU:</p> <ul style="list-style-type: none"> - Sediment from rural areas - Debris from rural areas - Nutrients <p><u>Note:</u> Action plans and management of Ecosystem Health and other values support achievement of this value / the environmental outcomes.</p>

<p>Mahinga kai – kai is safe to harvest and eat</p> <p>The same for Urban and Rural FMUs</p>	<p><i>Freshwater, estuarine, and near-shore</i></p> <p>Mana whenua can sustainably harvest mahinga kai plants and animals that are important to them, for whānau and marae events, year-round.</p> <p>Mahinga kai is safe to eat or use.</p>	<p>Linked to 'Ecosystem health', 'Natural form and Character', and 'Threatened species'</p> <p><u>Compulsory values:</u></p> <p>Rivers, lagoons, estuaries, near-shore (as identified by Mana Whenua):</p> <p>Mahinga kai is safe to eat or use.</p> <p>Kei te ora te mauri (the mauri of the place is intact).</p> <p><u>Potential additional attributes / measures to address the above values:</u></p> <p>Mahinga kai species or materials health - medical health risks</p> <p>Wastewater issues (Tapu & Noa)</p> <p>Abundant whitebait migration</p> <p>Tuna abundance</p> <p>Inanga abundance</p> <p>Pātiki and Kanae abundance</p> <p>Shellfish can be consumed (species to be chosen)</p> <p>Access to and protection of mahinga kai sites, for customary practices</p> <p>Kaitiekitanga</p> <p><u>Note:</u> The Wastewater Tapu and Noa attribute is critical for this attribute.</p> <p>To be further developed with mana whenua</p>	<p>Potential action plans:</p> <ul style="list-style-type: none"> - Scheduling and protection status for important sites (incl. recognition of Taniwha) - Enabling access to important sites - Consideration of whakapapa awa in restoration plans <p>Supported by:</p> <ul style="list-style-type: none"> - In particular, wastewater improvements (and considering Tapu and Noa) - Enabling Mana Whenua to exercise Kaitiekitanga in water bodies - Recognition of tikanga and kawa by GDC and its operators - Exploring and recognising ancestral names for waterbodies, and 'telling the story' of waterbodies <p><u>Note:</u> Action plans and management of Ecosystem Health and other values support achievement of this value / the environmental outcomes.</p>
<p>Mahinga kai – Kei te ora te mauri (the mauri of the place is intact).</p> <p>The same for Urban and Rural FMUs</p>	<p><i>Freshwater, estuarine, and near-shore</i></p> <p>Whānau, from kaumātua to mokopuna, can undertake their local and unique mahinga kai customs and practices (tikanga and kawa, and reo, in the ways of their tīpuna) in awa, repo, lagoons, and wai tai.</p> <p>The people are healthy.</p>	<p>Linked to 'Ecosystem health', 'Natural form and Character', and 'Threatened species'</p> <p><u>Compulsory values:</u></p> <p>Rivers, lagoons, estuaries, near-shore (as identified by Mana Whenua):</p> <p>Mahinga kai is safe to eat or use.</p> <p>Kei te ora te mauri (the mauri of the place is intact).</p> <p><u>Potential additional attributes / measures to address the above values:</u></p> <p>Mahinga kai species or materials health - medical health risks</p> <p>Wastewater issues (Tapu & Noa)</p> <p>Abundant whitebait migration</p> <p>Tuna abundance</p> <p>Inanga abundance</p> <p>Pātiki and Kanae abundance</p> <p>Shellfish can be consumed (species to be chosen)</p> <p>Access to and protection of mahinga kai sites, for customary practices</p> <p>Kaitiekitanga</p> <p><u>Note:</u> The Wastewater Tapu and Noa attribute is critical for this attribute.</p> <p>To be further developed with mana whenua</p>	<p>Potential action plans:</p> <ul style="list-style-type: none"> - Scheduling and protection status for important sites (incl. recognition of Taniwha) - Enabling access to important sites - Consideration of whakapapa awa in restoration plans <p>Supported by:</p> <ul style="list-style-type: none"> - In particular, wastewater improvements (and considering Tapu and Noa) - Enabling Mana Whenua to exercise Kaitiekitanga in water bodies - Recognition of tikanga and kawa by GDC and its operators - Exploring and recognising ancestral names for waterbodies, and 'telling the story' of waterbodies <p><u>Note:</u> Action plans and management of Ecosystem Health and other values support achievement of this value / the environmental outcomes.</p>

<p>Natural form and character</p> <p>Where detail applies only to the urban FMU, this content is provided in Green</p> <p>Where detail applies only to the rural FMU, this content is provided in Blue.</p>	<p>The existing natural character of the rivers and streams is maintained. Further straightening or relocation of the rivers and streams is minimised and damming of the main rivers is avoided. Existing crossings and access structures are protected from erosion, soft engineering methods for erosion protection are preferred where possible. The riparian environment is improved through planting to reduce the impact of bank erosion on this value. Floodplains are protected from further modification.</p>	<p>Linked to most other values and attributes.</p> <p>Potential additional attributes / measures</p> <p>Rivers:</p> <p>Riparian margin extents (link through to native plants / vegetated extents within 20m of banks of the waterway)</p> <p>Rapid Habitat Assessment / Stream Ecological Valuation</p> <p>Floodplain protection</p> <p>Natural intactness - No further loss of stream length, floodplains, or natural channel alignment.</p> <p>Stream / river mouths:</p> <p>Banks and channels are stable, no further transformation within floodplains</p> <p>(In an urban setting, the above will require management to prevent the stream mouth from migrating. It also requires consideration of stream / river conveyance capacities.)</p> <p>Riparian margin extents (link through to native plants / vegetated extents within 20m of banks of the waterway); link to GDC/Crown controlled land in estuarine areas.</p>	<p>Potential action plans:</p> <ul style="list-style-type: none"> - Restoration of riparian areas owned by GDC or the Crown - Identify wetland restoration opportunities - Work with farmers to restore riparian margins <p>Supported by:</p> <ul style="list-style-type: none"> - Stormwater flow controls in ICMP - Bigger riparian margins (Land use rules that protect waterbodies - consider wider stream buffer requirements) - Better application of esplanade reserves <p><u>Note:</u> Action plans and management of Ecosystem Health and other values support achievement of this value / the environmental outcomes.</p>
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<p style="text-align: center;">Wai tapu</p> <p style="text-align: center;">Where detail applies only to the urban FMU, this content is provided in Green</p> <p style="text-align: center;">Where detail applies only to the rural FMU, this content is provided in Blue.</p>	<p>Wāhi tapu sites and other culturally important freshwater sites, areas, and routes, including associated mātauranga, are recognised by their original Te Reo Māori names, safeguarded against unauthorised use and impact through land-legal, planning, and other mechanisms, and whānau are able to actively manage these places. Their historical cultural value is recognised. Mana whenua connections are acknowledged and enabled.</p>	<p><u>Potential additional attributes / measures</u></p> <p>Access to and protection of wai tapu sites, for customary practices</p> <p>To be developed with mana whenua</p>	<p>Potential action plans:</p> <ul style="list-style-type: none"> - Scheduling and protection status for important sites - Enabling access to important sites - Consideration of whakapapa awa in restoration plans <p>Supported by:</p> <ul style="list-style-type: none"> - In particular, wastewater improvements (and considering Tapu and Noa) - Enabling Mana Whenua to exercise Kaitiakitanga in water bodies - Recognition of tikanga and kawa by GDC and its operators - Exploring and recognising ancestral names for waterbodies, and 'telling the story' of waterbodies <p><u>Note:</u> Action plans and management of Ecosystem Health and other values support achievement of this value / the environmental outcomes.</p>
<p style="text-align: center;">Transport and tauranga waka</p> <p style="text-align: center;">The same for Urban and Rural FMUs</p>	<p>The historical cultural significance related to transport and tauranga waka is recognised, and waka activities can take place safely.</p> <p><u>Note:</u> Waterways are regionally significant from a transport and tauranga waka perspective, on account of related whakapapa, heritage values, and cultural significance related to transport and tauranga waka.</p>	<p><u>Potential additional attributes / measures</u></p> <p>Access to and protection of tauranga waka and other important waka sites and routes, for customary practices</p> <p>To be developed with mana whenua</p>	<p>Potential action plans:</p> <ul style="list-style-type: none"> - Scheduling and protection status for important sites and routes - Enabling access to important sites - Consideration of whakapapa awa in restoration plans <p><u>Note:</u> Action plans and management of Ecosystem Health and other values support achievement of this value / the environmental outcomes.</p>

<p style="text-align: center;">Fishing</p> <p style="text-align: center;">The same for Urban and Rural FMUs</p>	<p>Waterways are able to support healthy populations of Kanae, inanga and tuna. Fish stocks increase in abundance.</p> <p>Fishing is an integral part of whānau and community life, both in terms of day-to-day activities and sustenance, as well as manaakitanga, sharing, and connection to the awa. Fishing was also fundamental to trade, traditional economies, and cultural exchange.</p>	<p>This value should be achieved if the above values are addressed.</p> <p>No additional attributes proposed.</p>	<p>This value should be achieved if the above action plans and management measures are addressed.</p> <p>No additional action plans proposed.</p>
<p style="text-align: center;">Drinking water supply</p> <p style="text-align: center;">This applies only to the Urban FMU.</p> <p style="text-align: center;">It is intended to be relevant to a community water supply.</p>	<p>Tributary streams and springs within the catchment continue to provide for safe domestic use.</p> <p>The municipal supply is adequate to assure year-round water supply.</p> <p>Activities are managed to protect the drinking water supplies of ahi kaa and marae.</p>	<p>Tributary and spring water takes not relevant to the urban settlements.</p> <p>No additional attributes proposed for the municipal drinking water supply - this is addressed through Local Water Done Well and the Water Services Act, plus upcoming consent processes.</p> <p>However, potential additional attribute:</p> <p>Proportion of community who have access to safe and sufficient drinking water supply that meets health standard.</p>	<p>Supported by national and regional water regulation and upcoming municipal water supply consents. The latter includes demand management.</p> <p>No additional action plans proposed.</p>
<p style="text-align: center;">Animal drinking water</p> <p style="text-align: center;">This applies only to the Rural FMU</p>	<p>The streams, rivers and groundwater provide sufficient quantities of healthy drinking water needs for livestock. This is done in such a way that other identified values of the river are not compromised.</p>	<p>This value is relevant to water use by individual property owners that generally manage their own water supplies.</p> <p>No additional attributes proposed.</p>	<p>This value should be achieved on a per property / landowner basis; does not fit in well with catchment provisions. This is provided water quantity is adequately addressed.</p> <p>No additional action plans proposed.</p>

<p>Flood mitigation</p> <p>The same for Urban and Rural FMUs</p>	<p>Floodplains and river channels naturally flood during heavy rainfall events, with intact riparian margins slowing flows and trapping sediment and woody debris.</p>	<p>This is addressed through the Stormwater ICMP and wider catchment flood planning. No additional attributes are proposed.</p> <p>However, important cultural and community sites to be identified and considered in terms protection from flood effects.</p>	<p>Supported by stormwater and catchment flooding projects / processes, and relevant consents.</p> <p>No additional action plans proposed. Actions are detailed in the Stormwater ICMP. This will include projects and management measures to manage flooding.</p>
<p>Natural flows in Urban environments</p> <p>This applies only to the Urban FMU</p>	<p>Waterways are protected from higher volume, more frequent, and longer duration stormwater flows during heavy rainfall events.</p>	<p>This is addressed through the Stormwater ICMP and wider catchment flood planning. No additional attributes are proposed.</p>	<p>Supported by stormwater and catchment flooding projects / processes, and relevant consents.</p> <p>No additional action plans proposed. Actions are detailed in the Stormwater ICMP. This will include projects and management measures to manage erosion, slumping, etc.</p>
<p>Urban water availability</p> <p>This applies only to the Urban FMU</p>	<p>Water supply is available for year-round enjoyment and community benefit.</p>	<p>This is addressed through upcoming water supply consents. No additional attributes are proposed.</p>	<p>Supported by national and regional water regulation and upcoming municipal water supply consents. The latter includes demand management.</p> <p>No additional action plans proposed.</p>
<p>Kaitiekitanga</p> <p>The same for Urban and Rural FMUs</p>	<p>Mana whenua can access and connect with waterways, lagoons, and estuaries to undertake their mahi as kaitieki, undertaking restoration and monitoring actions, in-line with their mātauranga, tikanga, and kawa.</p>	<p>This value should be achieved if the above values are addressed. No additional attributes proposed.</p> <p>To be developed with mana whenua as required.</p>	<p>This value should be achieved if the above action plans and management measures are addressed.</p> <p>No additional action plans proposed. However, supported by:</p> <ul style="list-style-type: none"> - Council assistance in funding applications - Council assistance with information and tools for management - Council recognition of Mana Whenua interests in waterbodies <p>Cultural monitoring related to the NPS-FM to be undertaken by whānau, with outcomes shared by whānau for GDC reporting (with safeguards in place)</p>

<p>Environmental stewardship</p> <p>The same for Urban and Rural FMUs</p>	<p>The community can access and connect with waterways, lagoons, and estuaries to undertake restoration work and monitoring actions, in-line with community aspirations.</p>	<p>This value should be achieved if the above values are addressed.</p> <p>No additional attributes proposed.</p>	<p>This value should be achieved if the above action plans and management measures are addressed.</p> <p>No additional action plans proposed.</p> <p>However, supported by:</p> <ul style="list-style-type: none"> - Council assistance in funding applications - Council assistance with information and tools for management - Council recognition of community group interests in waterbodies
<p>Taonga species</p> <p>The same for Urban and Rural FMUs</p>	<p>Native taonga plant, bird and animal species are abundant enough to support cultural practices and collection. Taonga species flourish.</p>	<p>To be developed with mana whenua (unless species already included / catered for within other values, attributes, and actions).</p>	<p>To be developed with mana whenua (unless species already included / catered for within other values, attributes, and actions).</p>
<p>Taiao sustainability via the use of maramataka</p> <p>The same for Urban and Rural FMUs</p>	<p>The values on the left are more like Environmental Outcomes (Eos); feels like this could fall into the values such as Kaitiekitanga or Mātauranga Māori. Will be difficult to set conventional attributes, even qualitative attributes.</p> <p>Incorporation of appropriate cultural monitoring may enable this to be realised. E.g., Cultural assessment frameworks</p>	<p>To be developed by mana whenua, as required.</p>	<p>Supported by cultural monitoring frameworks.</p> <p>Action: Develop cultural monitoring frameworks.</p>
<p>Pā/Kainga/Nohoanga</p> <p>The same for Urban and Rural FMUs</p>	<p>The values on the left are more like EOs ; I think this could fall within Wai tapu and Mahinga kai access / protections suggested above; may be able to integrate this by specifically including these in the text. Incorporation of</p>	<p>To be developed by mana whenua, as required.</p>	<p>Supported by cultural monitoring frameworks.</p> <p>Action: Develop cultural monitoring frameworks.</p>

	appropriate cultural monitoring may enable this to be realised. E.g., Cultural assessment frameworks		
<p>Utu - Natural consequences</p> <p>The same for Urban and Rural FMUs</p>	Will be difficult to set conventional attributes, even qualitative attributes. Not sure this is possible to frame within the NPS-FM framework. Incorporation of appropriate cultural monitoring may enable this to be realised. E.g., Cultural assessment frameworks	To be developed by mana whenua, as required.	Supported by cultural monitoring frameworks. Action: Develop cultural monitoring frameworks.
<p>Natural states of wai</p> <p>The same for Urban and Rural FMUs</p>	The values on the left are more like EOs ; feels like this could fall into the value of Kaitiakitanga or Mātauranga Māori . Not sure this is possible to frame within the NPS-FM framework. Incorporation of appropriate cultural monitoring may enable this to be realised. E.g., Cultural assessment frameworks	To be developed by mana whenua, as required.	Supported by cultural monitoring frameworks. Action: Develop cultural monitoring frameworks.

<p style="text-align: center;">Mana Motuhake</p> <p style="text-align: center;">The same for Urban and Rural FMUs</p>	<p>Close to Mana Whakahaere; difficult to set conventional attributes, even qualitative attributes. Incorporation of appropriate cultural monitoring may enable this to be realised. E.g., Cultural assessment frameworks</p>	<p>To be developed by mana whenua, if required.</p>	<p>Supported by cultural monitoring frameworks.</p> <p>Action: Develop cultural monitoring frameworks.</p> <p>The below terms of engagement for working with GDC can support this value:</p> <p>Mana whakahaere</p> <ul style="list-style-type: none"> - Mana Whenua are included in decision-making that affects their rohe, their rights as ahi kaa and owners of land are practically applied. - Mana Whenua Te Mana o te Wai statements are included in freshwater planning. - Mātauranga Māori is considered equitably. - Mana Whenua can fulfill their role as kaitieki.
<p style="text-align: center;">Oranga/Hauora</p> <p style="text-align: center;">The same for Urban and Rural FMUs</p>	<p>Will be difficult to set conventional attributes, even qualitative attributes. Not sure this is possible to frame within the NPS-FM framework. Could this be an EO of achievement of the values, EOs, attributes, and other means as a whole? Incorporation of appropriate cultural monitoring may enable this to be realised. E.g., Cultural assessment frameworks</p>	<p>To be developed by mana whenua, if required.</p>	<p>Supported by cultural monitoring frameworks.</p> <p>Action: Develop cultural monitoring frameworks.</p>

A clear message from the advisory group, which applies to all values, is the need for all parties, including Mana Whenua, the community, farmers, Council, and other organisations, to collaborate and work towards shared goals. The formation of catchment groups was generally supported as a means of collaboration. This also creates opportunities for education and awareness, and funding applications.

There was a desire for more support for Mana Whenua and community groups, to undertake their mahi.

The group also supported nature-based approaches to freshwater management.

3. Next steps

Once we have finalised the values, environmental outcomes, attributes and potential actions and management measures, we will go through a prioritisation process. This will highlight what is likely most important in the catchment, applying a practical lens.

As part of the above process, we will identify specific projects (to form part of action plans).

We will then also consider TAS for the various attributes, forming a realistic yet ambitious position on what can be achieved. This will subsequently be considered in light of outcomes from the Expert Panel.

The above process will enable a focus on achieving the best possible outcome within reasonable times in consideration implementation challenges and the likelihood of achieving freshwater improvements.

Appendix 1 Potential approach to setting Target Attribute States

A key component of the Catchment Plan is the identification of target attribute states (TAS) and the timeframes to achieve them. For many parts of the catchment, current water quality does not support the values or environmental outcomes sought. However, improving water quality is not a fast or easy process. The target attribute states need to take the catchment towards those environmental outcomes and the NPSFM directs that these need to be both realistic but also ambitious.

The following approach is proposed in drafting the proposed target attribute states:

- **Where the water quality attribute is within the A or B band**, the target should generally be to maintain the current state. This recognises that that water quality attribute is not likely to be a major contributor to not achieving environmental outcomes.
- **Where the water quality attribute is currently degrading, and/or below the national bottom line and/or at a level where it is impacting on the values of the waterbody**, targets should be set.
- It needs to be recognised that water quality problems are difficult and slow to address. **Targets need to be ambitious but realistic.**
- **For degrading attributes**, it is proposed that the first five-year target would focus on stabilising water quality and halting the declining trend. The second five-year target would be to reverse the degrading trend, and the longer-term target (15-30 years) is to reach the national bottom line (NBL) or the next band.
- Depending on how bad things are, **for attributes below the national bottom line or where values are not being met**, interim targets could be to improve within a band, with longer term (15-30 year) targets to meet national bottom lines or the next band.
- **Where it is unlikely that a national bottom line can be met within 30 years**, the 30-year target may be an interim target.

The implications of this approach are summarised in the table below. These targets need to be considered in terms of – *are these outcomes realistically achievable?*

Site	Attribute	Target Attribute State Proposed
Larger watercourses Pakarae River, Turihaua, Pouawa, Waiomoko, and Hamanatua monitoring sites	Dissolved Reactive Phosphorus	Maintain current baselines, reduce DRP through achievement of sediment reductions.
	Suspended Fine Sediment	Maintain current baselines, aim to meet National Bottom Line within 20 years.
	Deposited Fine Sediment	Maintain current baselines, aim to meet National Bottom Line within 20 years.
	E.coli	Reach levels that are safe for primary contact recreation and Mahinga Kai during summer within 10 years; and levels that are safe for primary contact recreation and Mahinga Kai during all year round within 20 years.
	Enterococci (for linked coastal environments)	

	Macroinvertebrates	Maintain current baselines, aim to meet National Bottom Line within 20 years.
	Dissolved Oxygen	Maintain current baselines , aim to meet National Bottom Line within 10 years; and meet top of C Band within 30 years.
<u>Larger watercourses</u>	Dissolved Reactive Phosphorus	Maintain current baselines, reduce DRP through achievement of sediment reductions.
Waimatā River monitoring sites	Suspended Fine Sediment	Maintain current baselines, aim to meet National Bottom Line within 30 years.
	Deposited Fine Sediment	Maintain current baselines, aim to meet National Bottom Line within 30 years.
	E.coli	Reach levels that are safe for primary contact recreation and Mahinga Kai during summer within 10 years; and levels that are safe for primary contact recreation and Mahinga Kai during all year round within 20 years. Consider if this is possible within urban reaches of the Waimatā River.
	Enterococci (for linked coastal environments)	
	Macroinvertebrates	Maintain current baselines, aim to meet National Bottom Line within 30 years.
	Dissolved Oxygen	Maintain current baselines, aim to meet National Bottom Line within 10 years; and meet top of C Band within 30 years.
	Stormwater contaminants	Maintain current baselines, aim to meet 80% species protection levels within 20 years, for copper and zinc; aim to meet 90% species protection levels within 20 years
Rural tributaries monitoring sites	Dissolved Reactive Phosphorus	Maintain current baselines, reduce DRP through achievement of sediment reductions.
	Suspended Fine Sediment	Maintain current baselines, aim to meet National Bottom Line within 20 years.
	Deposited Fine Sediment	Maintain current baselines, aim to meet National Bottom Line within 20 years.
	E.coli	Reach levels that support achievement of target attribute states for the larger watercourses
	Enterococci (for linked coastal environments)	
	Macroinvertebrates	Maintain current baselines, aim to meet National Bottom Line within 20 years.
	Dissolved Oxygen	Maintain current baselines, aim to meet National Bottom Line within 10 years; and meet top of C Band within 30 years.
<u>Small watercourses</u>	Dissolved Reactive Phosphorus	Maintain current baselines, reduce DRP through achievement of sediment reductions.
Urban watercourses monitoring sites	Suspended Fine Sediment	Maintain current baselines, aim to meet National Bottom Line within 10 years.
	Deposited Fine Sediment	Maintain current baselines, aim to meet National Bottom Line within 10 years.
	E.coli	Reach levels that are safe for primary contact recreation and <u>some</u> Mahinga Kai during summer within 10 years; and levels that are safe for
	Enterococci (for linked coastal environments)	

		primary contact recreation and Mahinga Kai during all year round within 30 years. Consider if this is possible within urban watercourses.
	Macroinvertebrates	Maintain current baselines, aim to meet National Bottom Line within 20 years.
	Dissolved Oxygen	Maintain current baselines, aim to meet National Bottom Line within 10 years; and meet top of C Band within 20 years.
	Stormwater contaminants	Maintain current baselines, aim to meet 80% species protection levels within 20 years, for copper and zinc; aim to meet 90% species protection levels within 20 years
Lagoons and stream / river mouths monitoring sites	E.coli	Reach levels that are safe for primary contact recreation and <u>some</u> Mahinga Kai during summer within 10 years; and levels that are safe for primary contact recreation and Mahinga Kai during all year round within 30 years.
	Enterococci (for linked coastal environments)	
	Stormwater contaminants	Maintain current baselines, aim to meet 80% species protection levels within 20 years, for copper and zinc; aim to meet 90% species protection levels within 20 years
	Suspended Fine Sediment	Maintain current baselines, aim to meet National Bottom Line within 10 years.
	Deposited Fine Sediment	Maintain current baselines, aim to meet National Bottom Line within 10 years.

Questions

Do you agree with the proposed approach to setting targets? What should change? Are there some things which should be prioritised?