Waimatā – Pakarae Catchment Advisory Group – Hui 5

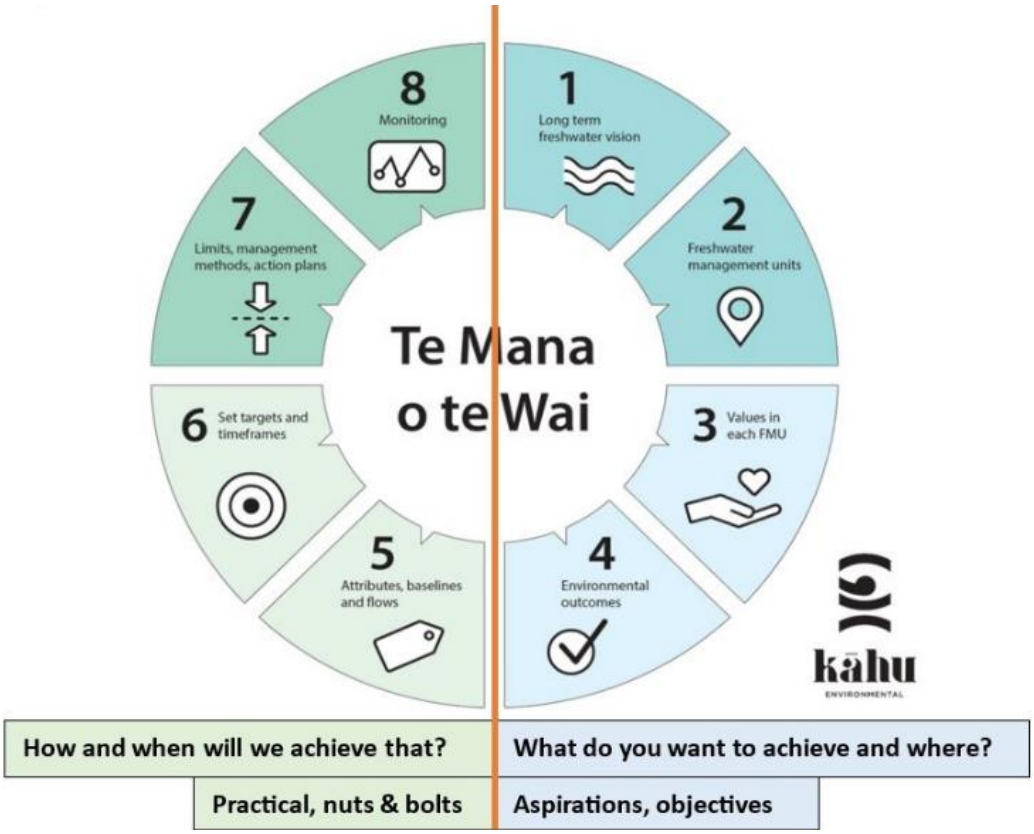
Date: 13 August 2024

Subject: Moving from high-level into the detail

1. Introduction

The National Policy Statement for Freshwater Management (NPS-FM) 2020 provides a framework for achieving the community's vision. It's called the National Objectives Framework – or 'NOF'. It represents a series of steps that our group will work through to develop the Waimatā – Pakarae Catchment Plan.

In previous wānanga we considered Long Term Visions, Freshwater Management Units (FMUs), Values and Environmental Outcomes. These are all important high-level parts of the plan which set the platform for the more 'tangibles' – the nuts and bolts of implementation. We are now entering the fifth segment of the process (as illustrated below).



In this wānanga we will progress our conversations to:

- Refresh our understanding of how Baseline Attribute States (BAS) and Target Attribute States (TAS) relate to Environmental Outcomes.
- Start the process of developing TAS.
- We will focus on attributes related to two key catchment issues and achieving Environmental Outcomes (**Appendix 1**) - sediment and *E. coli*.
- We will workshop the attributes, considering BAS (**Appendix 2**), what can be done to improve the states, and then consider TAS.

The above will lead onto further TAS discussions in the next wānanga, considering other issues.

2. What are TAS and why are they so important?

The council and community must set target attribute states at or above the national bottom line[1] and plan what actions they will take to meet these targets. They are required to improve or at the very least maintain the current state of waterways. Regions can choose to add additional attributes, or higher targets.

The regional council must then work out what needs to be managed to achieve the target attribute states (for example, contaminants, habitat or land use).

Councils must monitor and report on the extent to which the target attribute states are being achieved.

Target Attribute States are described in detail on the NPS-FM (**Appendix 3**).

In essence, TAS:

- Must be set at or above the baseline state of that attribute.
- 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.
- Have timeframes specified.
    - May be of any length of time.
    - If long timeframes, then 10-year interim targets.
    - Generally, not more than 30 years, but can be.
      (links in with the long-term vision, with goals that are ambitious and reasonable)

- Setting TAS requires a practical look at what is possible over set timeframes – it brings in the reality of implementation.

[1] National bottom lines refer to the minimum acceptable physical states for the various attributes Council measures, such as *E. coli*. The Government has set quality bands for the physical attributes of waterways. For the compulsory 'human health for recreation' value, these bands are : A – suitable for swimming; B – generally suitable for swimming; C – suitable for boating and wading; D – unacceptable risk to human health. Band D is unacceptable. That's the national bottom line. Councils can maintain waterways at bands A-C, or seek to improve them but they can't go backwards and they can't choose D unless there are exceptional circumstances.

3. Key issues- Sediment and E. coli

Sediment and *E. coli* are key issues that affect most values, and associated environmental outcomes, that have been identified for this catchment. We have therefore chosen these as a starting point for discussion.

The below compulsory NOF attributes are relevant to these issues:

Attributes requiring limits

- Suspended fine sediment – Ecosystem health
- Escherichia Coli (*E. coli*) – Human contact

Attributes requiring action plans

- Deposited fine sediment
- Escherichia Coli (*E. coli*) – Primary contact sites

Review of Council monitoring data shows that our waterways are performing poorly in terms of these attributes.

Generally, when sediment attributes perform poorly, then other attributes perform poorly (e.g., MCI, Fish-IBI, and Dissolved Reactive Phosphorus). Several values are negatively affected by sediment, not just ecosystem health. Similarly, *E. coli* affects more than just human contact values, but also cultural values such as mahinga kai.

Addressing sediment and *E. coli* has multiple benefits.

4. Workshop exercise

The advisory group will collaboratively explore the below, for both sediment and *E. coli*, in terms of the process of setting TAS:

Questions:

- What is the current baseline?
- How does that compare to the reference state condition?
- What are the drivers of degradation?
- What can be done about the drivers? What tools are available?
- How long will it take to see improvements?
- How does it differ between urban and rural FMUs?

You may want to refresh yourself with the detail provided Column F (*Management and action planning - next step in the process*) and Column G (~ *What does this look like in practice in that FMU?)* in the Excel table presented at the last wānanga. Link previously sent out: (Waimatā-Pakarae_Values Strawman Table.xlsx (sharepoint.com)).

We will be considering e.g., the **green text** below:

	Category	Values Identified	Environmental Outcomes	Compulsory attributes / Attributes or other measures potentially to be developed	Targets Attribute States	Management and action planning - next step in the process	~ What does this look like in practice in that FMU?
Urban FMU	Compulsory	Ecosystem health	The water quality and flows in the rivers, streams and wetlands support a diverse and abundant range of native biota including invertebrates, plants, fish, and birds.	Rivers Suspended Fine Sediment Deposited Fine Sediment (Wadeable rivers)	What can feasibly be achieved? What is the TAS required to achieve the environental outcome(s)? What do we need to do to achieve the TAS? How long will it take to achieve the TAS and by inference, the environmental outcome?	Action plans Land use rules Discharge rules Iwi / hapū management plans **Key drivers:** - Urban transformation - Stormwater contaminants - Hydrological changes (impervious areas, engineered flows) - Landfills **Aspects to be managed within the Rural FMU:** - Sediment from rural areas - E. coli from rural areas	**For example:** - Addressing 'urban stream syndrome' - Stormwater treatment - Hydrological controls, incl. Floodplain protection - Works in watercourses - Riparian shading / planting - Fish passage improvements, stormwater infrastructure - Habitat improvements - Urban corridors - Better compliance and enforcement

The full table is provided in **Appendix 3**.

Many of the above questions are difficult to answer.

At this stage of the process, we are exploring these with currently available information, to develop narrative TAS – a description of where we want to end up.

The council is currently undertaking work with several specialists to better understand the effort (and time) necessary to improve baseline states. An expert panel will also be set up.

This work will enable us to re-visit the TAS identified by the advisory group, considering numeric outcomes to support narrative descriptions.

5. Other items

We had a query regarding mud volcanoes in the Wheatstone Road sub-catchment (part of the Wainui Stream catchment).

At present, there is no available data to assess the effect of the mud volcanoes on downstream ecology. Mud volcanoes are being investigated by Dr Murry Cave, with a paper to be produced hopefully soon. This will be provided to the group once available.

6. Next step: Continuing the TAS discussion

We will move onto the other attributes, always in consideration of the environmental outcomes sought, which aim to achieve the values identified. We will start with attributes closely linked to sediment and *E. coli*, such as Macroinvertebrate Community Indicator (MCI) (for aquatic insects) and the fish biotic index.

Lastly, we will consider whether additional attributes are needed to be able to assess progress against environmental outcomes.

Appendix 1 Environmental Outcomes

Urban FMU

Values Identified	Environmental Outcomes
Ecosystem health	The water quality and flows in the rivers, streams and wetlands support a diverse and abundant range of native biota including invertebrates, plants, fish, and birds.
Human contact	Visitors and locals can enjoy swimming in waterways with clear water, low sediment and low bacterial contamination. Waka ama and other water sports can be practiced year-round along the Waimatā awa with no risk of infection from contact with water or sediment, and no health & safety risks associated with woody debris. The water quality of Hamanatua, Turihaua and Pouawa lagoons is safe for the community, whanau and visitors to swim and play in and enhance the destination appeal for recreation and summer camping. The water quality of the Wainui Stream Mouth is safe for the community, whanau and visitors to swim and play in.
Threatened species	Water quality, quantity, and habitat are suitable for taonga threatened species and they are able to flourish.
Mahinga kai – kai is safe to harvest and eat	*Freshwater, estuarine, and near-shore* Mana whenua can sustainably harvest mahinga kai plants and animals that are important to them, for whānau and marae events, year-round. Mahinga kai is safe to eat or use.
Mahinga kai – Kei te ora te mauri (the mauri of the place is intact).	*Freshwater, estuarine, and near-shore* Whānau, from kaumātua to mokopuna, can undertake their local and unique mahinga kai customs and practices (tikanga and kawa, in the ways of their tīpuna) in awa, repo, lagoons, and wai tai
Natural form and character	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.

Wai tapu	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 recognosed. Mana whenua connections are acknowledged and enabled.
Transport and tauranga waka	The historical cultural significance related to transport and tauranga waka is recognised, and waka activities can take place safely. Note: 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.
Fishing	Waterways are able to support healthy populations of kanae, inanga and tuna. Fish stocks increase in abundance. Fishing is an integral part of whānau life, both in terms of day-to-day activities and sustenance, as well as manaakitanga. Fishing was also fundamental to trade, traditional economies, and cultural exchange.
Drinking water supply	Tributary streams and springs within the catchment continue to provide for safe domestic use.
Animal drinking water	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.
Flood mitigation / Resilience	Floodplains and river channels naturally flood during heavy rainfall events, with intact riparian margins slowing flows and trapping sediment and woody debris.
Urban water availability	Water supply is available for year-round enjoyment and community benefit.
Kaitiekitanga	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.
Taonga species	Native taonga plant, bird and animal species are abundant enough to support cultural practices and collection. Taonga species flourish.

Rural FMU

Values Identified	Example Environmental Outcomes
Ecosystem health	The water quality and flows in the rivers, streams and wetlands support a diverse and abundant range of native biota including invertebrates, plants, fish, and birds.
Human contact	Visitors and locals can enjoy swimming in waterways with clear water, low sediment and low bacterial contamination. Waka ama and other water sports can be practiced year-round along the Waimatā awa with no risk of infection from contact with water or sediment, and no health & safety risks associated with woody debris. The water quality of Hamanatua, Turihaua and Pouawa lagoons is safe for the community, whanau and visitors to swim and play in and enhance the destination appeal for recreation and summer camping.
Threatened species	Water quality, quantity, and habitat are suitable for taonga threatened species and they are able to flourish.
Mahinga kai – kai is safe to harvest and eat	*Freshwater, estuarine, and near-shore* Mana whenua can sustainably harvest mahinga kai plants and animals that are important to them, for whānau and marae events, year-round. Mahinga kai is safe to eat or use.
Mahinga kai – Kei te ora te mauri (the mauri of the place is intact).	*Freshwater, estuarine, and near-shore* Whānau, from kaumātua to mokopuna, can undertake their local and unique mahinga kai customs and practices (tikanga and kawa, in the ways of their tīpuna) in awa, repo, lagoons, and wai tai
Natural form and character	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.
Wai tapu	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.

Transport and tauranga waka	The historical cultural significance related to transport and tauranga waka is recognised, and waka activities can take place safely. Note: 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.
Fishing	Waterways are able to support healthy populations of kanae, inanga and tuna. Fish stocks increase in abundance. Fishing is an integral part of whānau life, both in terms of day-to-day activities and sustenance, as well as manaakitanga. Fishing is also fundamental to trade, traditional economies, and cultural exchange.
Drinking water supply	Tributary streams and springs within the catchment continue to provide for safe domestic use.
Animal drinking water	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.
Flood mitigation / Resilience	Floodplains and river channels naturally flood during heavy rainfall events, with intact riparian margins slowing flows and trapping sediment and woody debris. Land use practices promote natural in-stream processes and hydrology and reduce sediment and woody debris entering waterways
Kaitiekitanga	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.
Taonga species	Native taonga plant, bird and animal species are abundant enough to support cultural practices and collection. Taonga species flourish.

Appendix 2 Baseline States

APPENDIX 3: WATER QUALITY DATA

Attribute (REC Class (Warm Wet Hill)	NPSFM Limit	Kopuawhakapata Stream at Hirini Street	Wainui Stream at Pare Street	Hamanatua Stream at Okitu Bridge	Pakarae River at Pakarae Station Bridge	Waimatā River at Goodwins Road Bridge	Waimatā River at Monowai Bridge
DRP Median mg/L	A ≤0.006 B >0.006 and ≤0.010 C >0.010 and ≤0.018 D >0.018	0.15 Below national bottom line	0.25 Below national bottom line	0.033 Below national bottom line	0.012 C Band	0.022 Below national bottom line	0.012 C Band
	What does this mean?	Phosphate levels are high in the catchment, with slightly lower levels at the site located in the middle of the Waimatā catchment and on the Pakarae River. Phosphate is bound to sediment, and the high phosphate levels reflect the soft sedimentary geology and erosion occurring in the catchments. Action plans are required for all sites in the D band.					
Ammonia (Toxicity) Median mg NH4-N/L	A ≤0.03 B >0.03 and ≤0.24 C >0.24 and ≤1.30 D >1.30	0.06 B Band	0.043 B Band	0.021 A Band	0.012 A Band	0.0185 A Band	0.013 A Band
	What does this mean?	Ammonia is highly toxic to aquatic life, increasing levels of ammonia will negatively affect freshwater habitat.					
Nitrate (Toxicity) Median mg/L	A ≤1.0 B >1.0 and ≤2.4 C >2.4 and ≤6.9 D >6.9	0.58 A Band	0.153 A Band	0.019 A Band	0.012 A Band	0.085 A Bandz	0.014 A Band
	What does this mean?	All sites are in the A band and have low levels of nitrate.					
Dissolved Oxygen mg/L 7 day mean minimum (1 Nov – 30 April)	A >8.0 B 7.0-8.0 C 5.0 – 7.0 D <5.0	Not monitored					
Suspended Fine Sediment (Class 2) Visual Clarity in metres	A ≥0.93 B <0.93 and ≥0.76 C <0.76 >0.61 D <0.61	0.49 Below national bottom line	0.67 C Band	0.63 C Band	0.61 C Band	0.51 Below national bottom line	0.58 Below national bottom line
	What does this mean?	Visual clarity was measured using a clarity tube. All sites will have a moderate to high impact of suspended sediment on instream species. Those waterways below the national bottom line will have ecological communities that are significantly impacted.					

Attribute (REC Class (Warm Wet Hill)	NPSFM Limit	Kopuawhakapata Stream at Hirini Street	Wainui Stream at Pare Street	Hamanatua Stream at Okitu Bridge	Pakarae River at Pakarae Station Bridge	Waimatā River at Goodwins Road Bridge	Waimatā River at Monowai Bridge
Deposited Sediment Class 3) % fine sediment cover*	A ≤9 B >9 and ≤18 C >18 and <27 D >27	51.3 Below national bottom line	Not monitored	Not monitored	11.3 B Band	0.9 A Band	27 C Band
	What does this mean?	Sites in the C and D bands will have a high impact of deposited sediment on instream habitat and species and will require an Action Plan. *Deposited sediment measurements are taken once annually, and these have been averaged over the five-year monitoring period. Because there is no monthly monitoring data the bands are more indicative rather than definitive as per the NPS-FM.					
Human health E.coli/100mL median	A ≤130 B ≤130 C ≤130 D >130 E >260	2200	625	225	170	205	270
	What does this mean?	All sites are below national bottom line for E.coli indicating a high risk for infection of campylobacter. All sites will require an action plan.					
Human health E.coli/100mL 95th Percentile (Swimming)	A ≤130 B >130 and ≤260 C >260 and ≤540 D >540	2400 Below national bottom line	730 Below national bottom line	16410 Below national bottom line	170	230	260
	What does this mean?	Kopuawhakapata, Wainui and Hamanatua Streams are below national bottom line for E.coli indicating a high risk for infection of campylobacter. These sites will require an action plan.					

APPENDIX 4: AQUATIC ECOSYSTEM HEALTH DATA

Attribute (REC Class (Warm Wet Hill)	NPSFM Limit	Wainui Stream at Heath Johnston Park	Pakarae River at Pakarae Station Bridge	Whakauranga Bridge at West Ho Road	Pakarae trib at Stevens Road	Pakarae Trib at Whangara Road	Waimatā River at Goodwins Road Bridge	Waimatā River at Monowai Bridge
Macroinvertebrates QMCI (Mean 2015 -2020)	A ≥6.5 B ≥5.5-<6.5 C ≥4.5-<5.5 D <4.5	3.9 Below national bottom line	2.08 Below national bottom line	5.21 C Band	4.03 Below national bottom line	2.41 Below national bottom line	3.04 Below national bottom line	4.44 Below national bottom line
What does this mean?		All sites reflect poor water quality and do not support a diverse range of sensitive macroinvertebrate species. All sites apart from Whakauranga Bridge at West Ho Road are below national bottom line						
Macroinvertebrates MCI	A ≥130 B ≥110-<130 C ≥90-<110 D <90	71 Below national bottom line	63.5 Below national bottom line	108 C Band	87.5 Below national bottom line	76 Below national bottom line	76 Below national bottom line	90 C Band
What does this mean?		All sites reflect poor water quality and degraded habitat, with few sensitive species. All sites apart from Whakauranga Bridge at West Ho Road and Waimatā River at Monowai Bridge are below the national bottom line.						
Macroinvertebrates ASPM	A ≥0.6 B <0.6-≥0.4 C <0.4-≥0.3 D <0.3	0.03 Below national bottom line	0.07 Below national bottom line	0.54 B Band	0.24 Below national bottom line	0.1 Below national bottom line	0.210 Below national bottom line	0.405 B Band
What does this mean?		Five sites are below national bottom line, with streams having low diversity and numbers of sensitive invertebrates reflecting degraded habitat. Two sites are in the B band which reflects a mild to moderate loss of ecological habitat and integrity.						
Deposited sediment (% cover) class 3	A ≤9 B >9 and ≤18 C >18 and <27 D >27	51.3 Below national bottom line	11.3 B Band	No data	16.1 B Band	34.7 Below national bottom line	0.9 A Band	27 C Band
Fish		Not monitored						
Ecosystem Metabolism		Not monitored						
Periphyton mg chl-a/m2**	A ≤50 B >50 -≤120 C >120 - ≤200 D >200	213 Below national bottom line	38.2 A Band	9.91 A Band	6.06 A Band	38.2 A Band	107.25 B Band	127 C Band
What does this mean?		The sites in the Pakarae catchment are all in the A band for periphyton indicating negligible nutrient enrichment. The Waimatā River sites reflect moderate enrichment and the Wainui stream periphyton levels reflects high nutrient enrichment. **Periphyton measurements are based off annual measurements over 5 years. There is no monthly periphyton monitoring data. It is worth noting that due to this, these bands are more indicative and are not definitive.						

Appendix 3 Target Attribute States (NPS-FM text)

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) Despite subclauses (2) and (3), 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 that 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. use the best information available at the time; and
c. take into account results or information from freshwater accounting systems (*see* clause 3.29).

3.12 How to Achieve Target Attribute States and Environmental Outcomes

(1) In order to achieve the target attribute states for the attributes in Appendix 2A, every regional council:

a. must identify limits on resource use that will achieve the target attribute state, and any nitrogen and phosphorus exceedance criteria and instream concentrations set under clause 3.13, and include the limits as rules in its regional plan(s); and
b. may prepare an action plan; and
c. may impose conditions on resource consents to achieve target attribute states.

(2) In order to achieve the target attribute states for the attributes in Appendix 2B, every regional council:

a. must prepare an action plan for achieving the target attribute state within a specified timeframe; and
b. may identify limits on resource use, and any nitrogen and phosphorus exceedance criteria and instream concentrations set under clause 3.13, and include them as rules in its regional plan(s); and
c. may impose conditions on resource consents to achieve target attribute states.

(3) In order to achieve any other target attribute state 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(s)
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.

3.13 Special Provisions For Attributes Affected by Nutrients

Appendix 4 Considering TAS within the framework

	Category	Values Identified	Environmental Outcomes	Compulsory attributes / Attributes or other measures potentially to be developed	Targets Attribute States	Management and action planning - next step in the process	~ What does this look like in practice in that FMU?
Urban FMU	Compulsory	Ecosystem health	The water quality and flows in the rivers, streams and wetlands support a diverse and abundant range of native biota including invertebrates, plants, fish, and birds.	Rivers Suspended Fine Sediment Deposited Fine Sediment (Wadeable rivers)	What can feasibly be achieved? What is the TAS required to achieve the environental outcome(s)? What do we need to do to achieve the TAS? How long will it take to achieve the TAS and by inference, the environmental outcome?	Action plans Land use rules Discharge rules Iwi / hapū management plans **Key drivers:** - Urban transformation - Stormwater contaminants - Hydrological changes (impervious areas, engineered flows) - Landfills **Aspects to be managed within the Rural FMU:** - Sediment from rural areas - E. coli from rural areas	**For example:** - Addressing 'urban stream syndrome' - Stormwater treatment - Hydrological controls, incl. Floodplain protection - Works in watercourses - Riparian shading / planting - Fish passage improvements, stormwater infrastructure - Habitat improvements - Urban corridors - Better compliance and enforcement
		Human contact	Visitors and locals can enjoy swimming in waterways with clear water, low sediment and low bacterial contamination. Waka ama and other water sports can be practiced year-round along the Waimatā awa with no risk of infection from contact with water or sediment, and no health & safety risks associated with woody debris. The water quality of Hamanatua, Turihaua and Pouawa lagoons is safe for the community, whanau and visitors to swim and play in and enhance the destination appeal for recreation and summer camping. The water quality of the Wainui Stream Mouth is safe for the community, whanau and visitors to swim and play in.	Rivers Escherichia Coli (E. Coli) Escherichia Coli (E. Coli) (Primary Contact Sites) Lagoons and estuaries Enterococci Sediment quality Kai hoe waka	What can feasibly be achieved? What is the TAS required to achieve the environental outcome(s)? What do we need to do to achieve the TAS? How long will it take to achieve the TAS and by inference, the environmental outcome?	Action plans Land use rules Discharge rules Iwi / hapū management plans **Key drivers:** - Wastewater (network issues) - Wastewater issues (septic tank issues) **Aspects to be managed within the Rural FMU:** - Sediment from rural areas - E. coli from rural areas	**For example:** - Preventing inflow & infiltration (DrainWise) - Woody debris removal - Septic tank audits - Supporting infrastructure

	Category	Values Identified	Example Environmental Outcomes	Compulsory attributes / Attributes or other measures potentially to be developed		Management and action planning - next step in the process	~ What does this look like in practice in that FMU?
Rural FMU	Compulsory	Ecosystem health	The water quality and flows in the rivers, streams and wetlands support a diverse and abundant range of native biota including invertebrates, plants, fish, and birds.	Rivers Suspended Fine Sediment Deposited Fine Sediment (Wadeable rivers)	What can feasibly be achieved? What is the TAS required to achieve the environental outcome(s)? What do we need to do to achieve the TAS? How long will it take to achieve the TAS and by inference, the environmental outcome?	Action plans Land use rules Discharge rules Iwi / hapū management plans **Key drivers:** - Livestock farming / agricultural transformation - Contaminants associated with farming - Hydrological changes (land drainage, change in land cover) - Forestry development	**For example:** - Farm Environment Plans - Fencing - Wetland protection - Watercourse restoration - Riparian shading / planting - Fish passage improvements, farm culverts - Retiring non-productve land - Better compliance and enforcement - Improved forestry controls
		Human contact	Visitors and locals can enjoy swimming in waterways with clear water, low sediment and low bacterial contamination. Waka ama and other water sports can be practiced year-round along the Waimatā awa with no risk of infection from contact with water or sediment, and no health & safety risks associated with woody debris. The water quality of Hamanatua, Turihaua and Pouawa lagoons is safe for the community, whanau and visitors to swim and play in and enhance the destination appeal for recreation and summer camping.	Rivers Escherichia Coli (E. Coli) Escherichia Coli (E. Coli) (Primary Contact Sites) Lagoons and estuaries Enterococci Sediment quality	What can feasibly be achieved? What is the TAS required to achieve the environental outcome(s)? What do we need to do to achieve the TAS? How long will it take to achieve the TAS and by inference, the environmental outcome?	Action plans Land use rules Discharge rules Iwi / hapū management plans **Key drivers:** - Farm runoff - Livestock in streams	Included in the above examples.