BRIEFING NOTE

To: Freshwater Futures: Pongakawa/Waitahanui Water Management Area Community Group

From: Nicki Green, Senior Planner, Water Policy

Date: 22 April 2016

Subject: **Workshop 3: Value Sets and Freshwater Management Units**
10 May 2016, Pongakawa Hall

1 Meeting Overview

1.1 Purpose

To seek community group input to value setting and defining freshwater management units (FMUs).

1.2 Key outcomes sought

1. Improved understanding of work programme and process, and the role of the community group in it.
2. Values (section 2 below):
   a. Community group feedback on and/or endorsement of a draft regional value set.
   b. Draft maps showing spatial extent of values (where they are spatially definable).
3. Attributes (section 3 below):
   a. Community group input on ways to determine how we know a value is or isn't provided for.
4. Freshwater Management Units (section 4 below):
   a. Community group input on how different factors could inform Freshwater Management Unit setting and on mapping these.

2 Freshwater value setting

2.1 Draft freshwater value sets

Values can be defined as intrinsic qualities, uses or potential uses associated with freshwater, that people appreciate about freshwater bodies and wish to see recognised in the on-going management of those freshwater bodies.

The National Policy Statement for Freshwater Management 2014 (NPSFM) requires council to identify values for each FMU. In doing so it:

- must consider how all national values expressed in the NPSFM apply to local and regional circumstances;
- must include all compulsory national values and may include additional (non-compulsory) national values and any other values that regional council considers appropriate; and
- shall take reasonable steps to work with iwi and hapū to identify tangata whenua values and interests, and reflect these in management and decision making for freshwater.

A comprehensive draft value set is needed now in order to progress the next steps in the NPSFM implementation process, shown in Figure 1. Our process for developing a draft value set is shown in Figure 2.

Figure 1: Implementing the National Objectives Framework in the National Policy Statement for Freshwater Management 2014

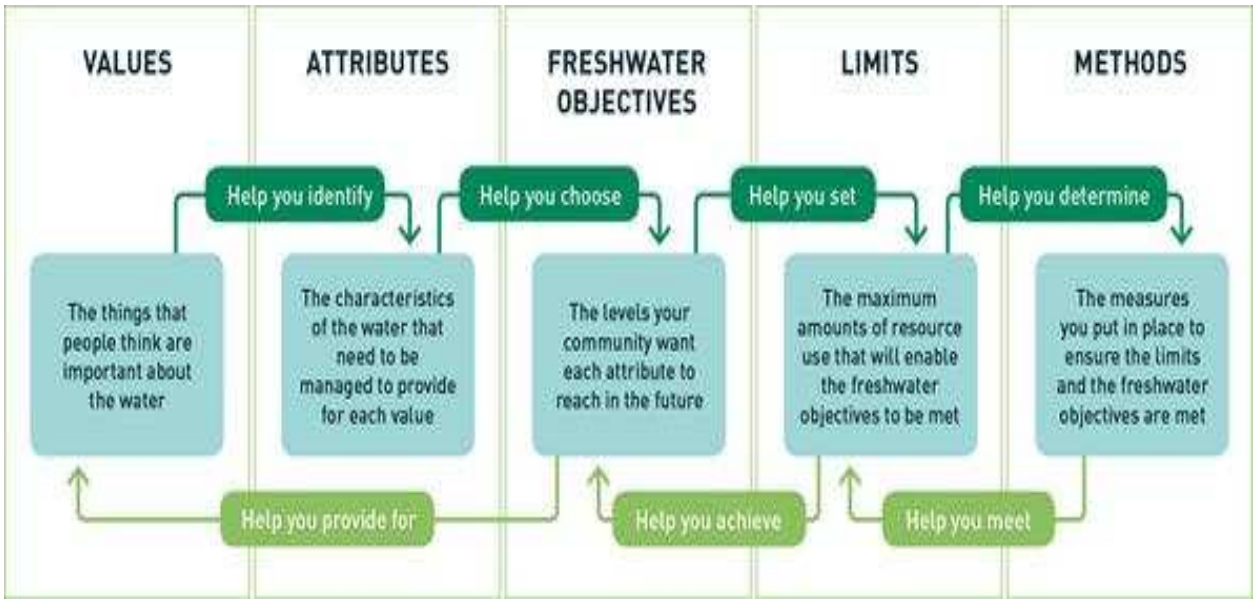
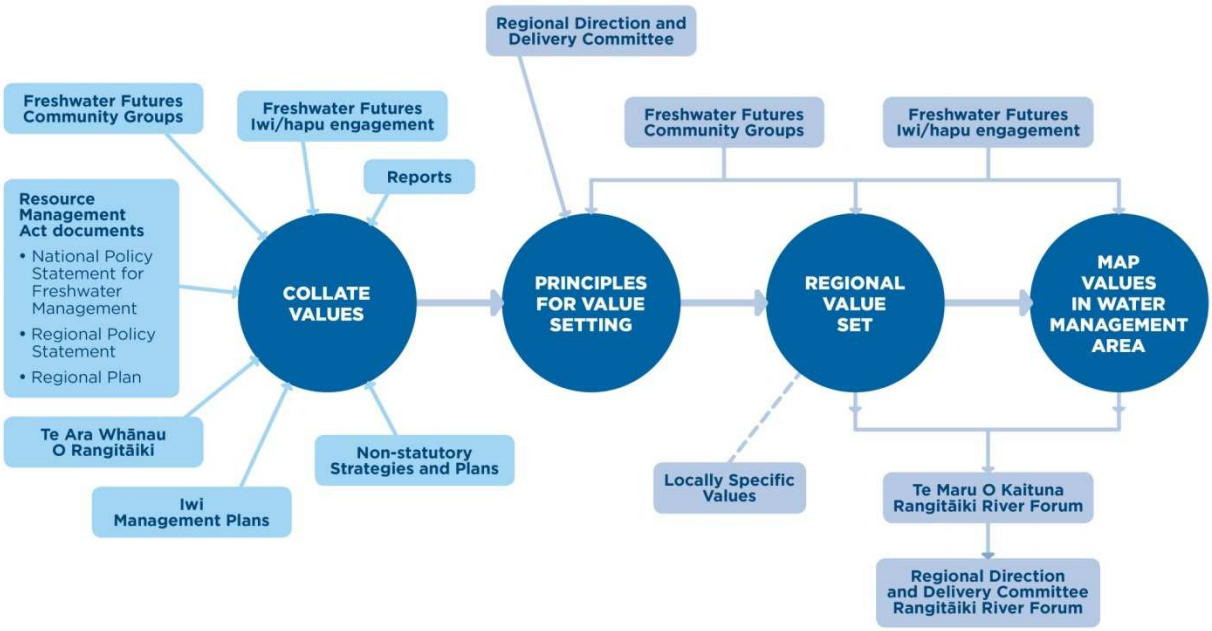


Figure 2: Process for developing a value set



Principles for value setting have been approved by our Regional Direction and Delivery Committee (RDD) for discussion with community groups, iwi/hapū engagement and other stakeholder engagement. These are included in Attachment 1.

First draft value sets have been developed, as outlined in Attachment 2. We are looking for your feedback on the value set before reporting on them to RDD for approval. The value set will remain in draft, with some flexibility to review and amend as later steps in the work programme progress.

Questions:

Please consider:

1. Do you have any questions or feedback about the principles?
2. Have we encompassed all values in the draft groupings? At the workshop, we will have large printouts showing collation of all values expressed by your group. What do you think of the draft groupings, titles, descriptions?

2.2 Mapping value sets

Some current or potential future values and uses exist throughout freshwater bodies. Some only apply to specific area/parts of water bodies. Please spend some time considering which values and uses can be mapped. In workshop 3, we will map some of these as they may inform how we define FMUs and how we set objectives.

3 "Measuring" values: identifying attributes

The NPSFM requires us to identify ways to measure how values are supported, called attributes. Some are provided in the NPSFM Appendix 2.

> ***Attributes:*** *measurable characteristics of fresh water, including physical, chemical and biological properties, which support particular values.*

We are in the early stages of identifying additional attributes. At the workshop, discuss how we would know or measure how each value is provided for. Please think about what would the characteristics of the freshwater body be like if this value was provided for? How can we tell when it is not provided for?

4 Freshwater Management Units

Council must identify FMUs that include all freshwater bodies in the region (including rivers, lakes, wetlands and groundwater). FMUs are defined to be:

> *a **water body, multiple water bodies** or **any part of a water body** determined by Council as the **appropriate scale** for **setting objectives and limits** and for **freshwater accounting and management purposes**".*

Generally, *within* an FMU freshwater management objectives will be similar, whereas *between* FMUs objectives will differ because the FMUs are different in nature, or our values for them differ.

Council has agreed to **principles** for FMU setting and to discussing these with you, iwi/hapū and other stakeholders. The principles are included in Attachment 3. A layer based on catchment geology and slope has been created (see Attachment 4) as this explains natural differences in water body state and response to land use and other activities.

In the workshop, we will provide other layers of information and discuss how they might inform FMU setting. Please spend some time considering the questions in Table 1 below, and how they relate to the Pongakawa/Waitahanui catchments. Is it likely our values, objectives and/or management approaches will be significantly influenced by these factors or not?

Table 1: Questions to consider when setting FMUs

Factors	Questions
Certain land uses	Are water quality and quantity expectations and/or management approaches for some freshwater bodies likely to be quite different from others because of a particular land use? E.g., high expectations for water quality and quantity in native forest compared to catchments dominated by production land, in order to preserve natural state ecological health. What about urban areas?
Water bodies with sensitive receiving environments	Are water quality and quantity expectations and/or management approaches for some freshwater bodies likely to be quite different from others because of a particular receiving environment? E.g., estuaries are more sensitive to contaminants than open coastal waters. To protect or maintain values of estuaries, water quality of fresh water bodies flowing in to them may need to be better. Similarly, consider rivers flowing into natural lakes, groundwater or wetlands.
Water bodies with "permanent" modification	Are there circumstances where the nature of a water body, and its water quality and quantity, is very different because of modification that is likely/will necessarily be permanent? Should this mean the water body objectives and management approaches should differ? E.g., straightened channels, diversions, dams
Cultural or social boundaries	Are there circumstances where we might set quite different objectives based on cultural or social boundaries? E.g., rohe boundaries, local authority boundaries.
Locally specific "special" values	Are there circumstances where the presence of one specific value means the objectives and management approach will be quite different?
Connections with groundwater	Are there circumstances where water quantity or quality is distinctly different in one part of a water body compared to another because of groundwater or geothermal influences?
Other	Are there other factors not listed here that would significantly alter how we set objectives or management approaches for a water body or part of a water body?

Attachment 1: Principles for Value Setting

1. **Values developed are nationally consistent.** Objective CA1(a) of the NPSFM is to provide an approach to establishing freshwater objectives for national and other values that are nationally consistent. For this reason, applicable additional national values will be included along with a regional value set and compulsory national values.
2. **Where possible regional values and definitions will be used to provide for regional consistency.** Where values are frequently expressed in various places across the region and these can be satisfactorily articulated at the regional level they will be defined as a regional freshwater value and definition.
3. **Value setting is flexible enough to accommodate local differences.** Any plan change will need to clearly articulate which values apply within each FMU (and compulsory values apply to all FMUs). There may be cases where very localised special values exist that do not exist across other parts of the region and are not accommodated for within national or regional values. In these cases, local values may need to be defined. There may be some desire from iwi, hapū and community groups to have more local difference or local expression and definition of values and less regional consistency. The merits of this will need to be weighed against the planning and implementation complexity that will follow.
4. **Work to determine values will demonstrate how values drawn from statutory documents are represented.** There are several statutory requirements to consider and/or accommodate provisions of other documents. For example, the regional plan is to "give effect to" the NPSFM and Regional Policy Statement (RPS), "recognise and provide for" provisions of the Kaituna River document, "have particular regard to" Te Ara Whānui o Rangitāiki, and "take into account" iwi planning documents. As values are developed and confirmed, they will be tested against these requirements. A report will be prepared to explain how values expressed within or drawn from these documents, and how engagement feedback has influenced the formation of the value set.
5. **Where information is drawn from statutory documents which do not directly express values for freshwater they will be checked with the authors.** Some documents do not directly express values for freshwater. For example, Te Ara Whānui o Rangitāiki expresses vision, issues, desired outcomes, objectives and actions. In these cases, freshwater values will be explicitly drawn from the documents and checked with the authors (in this case Rangitāiki River Forum).
6. **Generally, common regional values will be aggregated.** The NPSFM anticipates some level of aggregation of values into groupings, including aggregating common values between tangata whenua and other communities. Additional values specific to tangata whenua are also likely to be appropriate.

Attachment 2: First draft freshwater values for the Bay of Plenty Region

Key:

CNV - Compulsory National Value
ANV - Additional National Value
RV - Regional Value

Notes:

- Please read this document after reading the briefing note and principles for value setting.
- Collation of values from various sources revealed that ALL National Values are relevant within the Rangitāiki and Kaituna/Pongakawa WMAs and/or are likely to be relevant in other WMAs. They are therefore included in the regional template.
- Additional regional values reflect aggregated values identified by community groups, Maori values summary, RMA, Regional Policy Statement, Proposed Regional Coastal Environment Plan, Te Ara Whanui O Rangitaiki ,etc. We have called them regional values where we think they are likely to be relevant in all/most WMAs across the region.
- Some regional values were not identified by community groups or hui-a-iwi but are identified in other documents.
- The intention is that for each Freshwater Management Unit, we will confirm which values are present/absent and, where necessary add explanatory/descriptive notes explaining the nature of the value in the FMU (e.g., via a schedule). As FMUs are not yet defined, we will work on spatially mapping the values with the Pongakawa/Waitahanui WMA.

VALUES	National/Regional	Comments
Ecological		
Te Hauora o te Wai / the health and mauri of water		
Ecosystem health – The freshwater management unit supports a healthy ecosystem appropriate to that freshwater body type (river, lake, wetland, or aquifer). In a healthy freshwater ecosystem ecological processes are maintained, there is a range and diversity of indigenous flora and fauna, and there is resilience to change. Matters to take into account for a healthy freshwater ecosystem include the management of adverse effects on flora and fauna of contaminants, changes in freshwater chemistry, excessive nutrients, algal blooms, high sediment levels, high temperatures, low oxygen, invasive species, and changes in flow regime. Other matters to take into account include the essential habitat needs of flora and fauna and the connections between water bodies. The health of flora and	CN	We have considered grouping these into sub-sets as outlined below, but instead consider it more appropriate to identify sub-sets through attribute state bands objectives: Outstanding High Modified Low

fauna may be indicated by measures of macro-invertebrates.		
Species and habitat – The freshwater management unit includes habitat for rare, endangered or otherwise significant species, for part or all their life cycle. For example, native fish spawning sites.	RV	The criteria for assessing indigenous vegetation and habitat of indigenous fauna in the region can be found in Bay of Plenty Regional Policy Statement Appendix F Set 3 Regional Water and Land Plan Schedule 1 includes: A. Habitats and migratory pathways of indigenous fish species; B. Habitats of threatened indigenous flora and fauna C. Whitebait spawning sites D. Important habitats for trout. These will be reviewed and updated as appropriate
Social Values		
Te Hauora o te Tangata / the health and mauri of the people		
Human health for **recreation** – **Occasional immersion / secondary contact recreation** As a minimum, the freshwater management unit will present no more than a moderate risk of infection to people when they are wading or boating or involved in similar activities that involve only occasional immersion in the water. Other contaminants or toxins, such as toxic algae, would not be present in such quantities that they would harm people's health. **Frequent immersion / primary contact recreation** In freshwater management units where a community values more frequent immersion in the water such as swimming, white-water rafting, or water skiing, the risk of infection will be no more than moderate. In some freshwater management units, the risk of infection to people undertaking any activity would be no greater than what would exist there under natural conditions.	CN AN	Added sub-headings for clarity as the water quality state bands differ for these

Te Hauora o te Taiao / the health and mauri of the environment		
Natural form and character – Where people value particular natural qualities of the freshwater management unit. Matters contributing to the natural form and character of a freshwater management unit are its visual and physical characteristics that are valued by the community, including its flow regime, colour, clarity, morphology or location. They may be freshwater management units with exceptional, natural, and iconic aesthetic features. **Amenity values -** contribute to people's appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes. Includes aesthetic values.	AN R	Preservation of natural character of wetlands, lakes and rivers is a matter of national importance under the RMA To be determined in accordance with RPS criteria for assessing natural character in Bay of Plenty Regional Policy Statement Appendix F Set 1. The criteria for assessing natural features and landscape in the region can be found in Bay of Plenty Regional Policy Statement Appendix F Set 2.
Mahinga kai / food gathering, places of food		
Mahinga kai – Kai are safe to harvest and eat. Mahinga kai generally refers to indigenous freshwater species that have traditionally been used as food, tools, or other resources. Mahinga kai provide food for the people of the rohe and these sites give an indication of the overall health of the catchment. For this value, kai would be safe to harvest and eat and knowledge transfer is present (intergenerational harvest). In freshwater management units that are highly valued for providing mahinga kai, the desired species are plentiful enough for long-term harvest and the range of desired species is present across all life stages. **Tuna – longfinned eels and shortfinned eels** **Koura – freshwater crayfish** **Whitebait** **Trout** **Watercress**	AN R R R R R	Species identified by the community are shown here such that specific flow and quality requirements can be considered. Framework will need to allow flexibility to provide for other species identified RWLP Schedule 1 includes: A. Habitats and migratory pathways of indigenous fish species; B. Habitats of threatened indigenous flora and fauna C. Whitebait spawning sites D. Important habitats for trout Note that watercress will do well in high nutrient situation. This will need to be balanced against other values.

Mahinga kai – Kei te ora te mauri (the mauri of the place is intact). For this value, freshwater resources would be available and able to be used for customary use at some places (but not everywhere). In freshwater management units that are highly valued for providing mahinga kai, resources would be available for use, customary practices able to be exercised to the extent desired, and tikanga and preferred methods are able to be practised.	AN	Considering shifting this from the Mahinga Kai grouping, into a customary practice value (under cultural values -see below). However, this specifically relates to customary practices associated with food resources that may depend on water quantity or quality.
Fishing – The freshwater management unit supports fisheries of species allowed to be caught and eaten. For freshwater management units valued for fishing, the numbers of fish would be sufficient and suitable for human consumption. In some areas, fish abundance and diversity would provide a range in species and size of fish, and algal growth, water clarity and safety would be satisfactory for fishers. Attributes will need to be specific to fish species such as salmon, trout, eels, lamprey, or whitebait. **Tuna** **Koura** **Whitebait** **Trout**	ANV RV	Note that attributes will need to relate to water quality and quantity requirements for the species. Note that NPSFM implementation does not address fish passage and structural modification.
Wai Māori / municipal and domestic water supply		
Water supply – The freshwater management unit can meet people's potable water needs. Water quality and quantity would enable domestic water supply to be safe for drinking with, or in some areas without, treatment.	ANV	Considering additional separation into domestic and municipal supply

He ara haere / navigation		
Transport and tauranga waka – The freshwater management unit is navigable for identified means of transport. Transport and tauranga waka generally refers to places to launch waka and water craft, and appropriate places for waka to land (tauranga waka). Water quality and quantity in the freshwater management unit would provide for navigation. The freshwater management unit may also connect places and people including for traditional trails and rites of passage, and allow the use of various craft.	ANV	The criteria for assessing public access can be found in Bay of Plenty Regional Policy Statement Appendix F Set 6.
Economic/Use values		
Mahi māra / cultivation		
Irrigation and food production – The freshwater management unit meets irrigation needs for any purpose. Water quality and quantity would be suitable for irrigation needs, including supporting the cultivation of food crops, the production of food from domesticated animals, non-food crops such as fibre and timber, pasture, sports fields and recreational areas. Attributes will need to be specific to irrigation and food production requirements.	ANV	Note that water use on a dairy farm may cross three values: Animal drinking water Irrigation and food production Wash down of sheds may be accommodated in to the Commercial and industrial use value.
Animal drinking water – The freshwater management unit meets the needs of stock Water quality and quantity would meet the needs of stock, including whether it is palatable and safe.	ANV	
Āu Putea / economic or commercial development		
Commercial and industrial use – The freshwater management unit provides economic opportunities to people, businesses and industries. Water quality and quantity can provide for commercial and industrial activities. Attributes will need to be specific to commercial or	ANV	

industrial requirements. **Commercial and industrial take/use/damming and diversion** The freshwater management unit sustains water take and use for commercial and industrial activities. Includes water take for wash down for dairy sheds. **Assimilative capacity - discharges** The freshwater management unit can sustain the receipt dilution and transportation of contaminants from industrial, commercial and municipal discharges. Applies to water bodies downstream of discharges.	RV RV	Sub-sets added to recognise two distinct uses of water by industrial and commercial activities. Note that, while potentially contentious, discharge of contaminants to water is a matter managed via the RMA and NPSFM. The ability to assimilate contaminants will be assessed in the context of also setting water quality and quantity requirements to meet other values (e.g., ecosystem health, recreation etc.).
Hydro-electric power generation - The freshwater management unit is suitable for hydro-electric power generation. Water quality and quantity and the physical qualities of the freshwater management unit, including hydraulic gradient and flow rate, can provide for hydro-electric power generation	ANV	
Flood water and urban stormwater conveyance		
Flood protection and control – the freshwater management unit is a part of a flood protection and drainage scheme designed to reduce flood hazard or inundation of rural land or nearby settlements. **Urban stormwater drainage and assimilation** – the freshwater management unit sustains the receipt and transportation of stormwater runoff from urban areas (particularly impervious surfaces), directed to the water body in order to protect the urban areas from flood nuisance and risk to public safety and infrastructure. This can affect the hydrology of water bodies downstream and also contribute contaminants typical of urban sources.	RV RV	Not raised as a value by community groups or hui-a-iwi. Local Government Act and RMA functions and responsibilities. As for assimilative capacity, while these may be seen as negative/polluting uses or values, we need to recognise these uses and manage them within the FMU. Urban stormwater drainage and assimilation may only be applied in FMUs where urban area exceeds a certain proportion of the FMU (e.g., 10%)

Cultural values		
Wai Tapu / Sacred Waters	ANV	
Wai tapu – Wai tapu represent the places where rituals and ceremonies are performed. Rituals and ceremonies include, but are not limited to, tohi (baptism), karakia (prayer), waerea (protective incantation), whakatapu (placing of raahui), whakanoa (removal of raahui), and tuku iho (gifting of knowledge and resources for future generations). In providing for this value, the wai tapu would be free from human and animal waste, contaminants and excess sediment, with valued features and unique properties of the wai protected to some extent. Other matters that may be important are that identified catchments have integrity (there is no artificial mixing of the wai tapu) and identified taonga in the wai are protected.		
TBA/ Sites of cultural significance		
Sites of cultural significance - the freshwater management unit includes Korero Tuturu, taonga, heritage sites and the like that are of particular cultural significance generally, or specifically to Maori, which may be affected by water quality or quantity.	RV	The criteria for assessing historic heritage in the region can be found in Bay of Plenty Regional Policy Statement Appendix F Set 5. We have referred to "… generally, or specifically to Maori…", to acknowledge that there may be sites of significance for either Maori or european heritage. This value is intended to apply for either.
Kaitiakitanga / historical relationships		
Cultural heritage and connection – including the likes of heritage connections, whakapapa, whanaungatanga, ngā taniwa, kinship, ancestral taonga significant generally, or specifically to Māori. Some water bodies provide iwi/hapū a strong sense of identity and connection with the land and water. Respective iwi/hapū understood the functional relationships with	RV	We have referred to "… generally, or specifically to Maori…", to acknowledge that there may be cultural and heritage connections to either Maori or european heritage. This value is intended to apply for either.

and between all parts of the rivers, spiritually and physically. Iwi strive to maintain and restore these relationships despite the past artificial modifications along the rivers. **Kaitiakitanga** – Certain iwi and hapū (with mana whenua and ahi kaa) have a special kaitiaki relationship with the specific freshwater management unit. Treaty of Waitangi Settlement Claims in the Bay of Plenty Region demonstrated many iwi and hapū have unique and intergenerational relationship with specific rivers/ lakes/ streams/ waterfalls/ wetlands/ estuaries.		
Rawa Tuturu / Customary resources		
Rawa Tuturu – Kei te ora te mauri (the mauri of the place is intact). For this value, freshwater management unit includes important customary resources (other than food, commercial and industrial uses) at some places (but not everywhere). Such resources may include those needed for customary cleaning, medicine, healing, arts and craft supply and building. Resources would be available for use, customary practices able to be exercised to the extent desired, and tikanga and preferred methods, able to be practised.	RV	Title is from the RPS, Appendix F: Set 4 Mahinga kai resources and associated customary practices are covered by the Mahinga Kai National Values. This value relates to customary resources other than food and other than commercial/industrial uses. See notes above re the national value under Mahinga Kai.
Integrated Management		
Influence on other freshwater bodies		
Base flow – The freshwater management unit plays a natural role in sustaining base flow and of another water body. For example groundwater is discharging to a river, groundwater springs supplying a wetland, or wetlands “moderating” flood flows into a river. **Water quality** - The freshwater management unit discharges to another freshwater body and can affect the water quality of that water body. For example groundwater discharging to a river, wetlands “cleaning” water before it flows into a river, rivers discharging to wetlands or lakes. Where these values and connections are present, the freshwater management unit will need to be managed to achieve the objectives of the water body it influences.	RV	Not raised by hui-a-iwi or community groups but relevant to implementing policy A1 and B1 of the NPSFM. Added as a value such that the FMU objectives and management approach can accommodate effects of water quality and quantity within the FMU on other water bodies. This does not include human made diversions from one water body to another.

Moana / Influence on sensitive coastal waters and receiving environments		
The freshwater management unit discharges to a coastal receiving environment that is sensitive to freshwater quantity and quality (contaminant) inputs. This primarily includes estuaries and harbours. Sensitivity may relate to many values. In particular: Biological diversity and ecosystem health, including habitat for particular species (rare, endangered etc.) Natural features and landscapes Water based recreational activities Natural character Cultural values including Kai moana ***The management of coastal waters and receiving environments is not within scope of NPSFM implementation.*** The focus here is on integrated management and managing the connections between freshwater and coastal water bodies. As a part of integrated management, we focus on freshwater quality and quantity needed at the point of discharge to an estuary/harbour.	RV	Note that objectives will need to reflect Proposed Regional Coastal Environment Plan objectives. E.g.: Maketū estuary is Biological Diversity Area A – RCEP objective 2A is to protect indigenous biological diversity and the specific values are schedules Waihī estuary is largely Biological Diversity Area B (with some specified as Area B) – RCEP objective is to maintain indigenous biological diversity. Both estuaries are Outstanding Natural Features and Landscapes with a range of values expressed in the schedules. Objective 2 is to protect the attributes and values expressed. Maketū and Waihī Estuary are high natural character and the Rangitāiki River wetland is Very High Natural Character under the Regional Policy Statement. The objective is to "protect".
Influences on Geothermal Heat		
The freshwater management unit interacts with a geothermal water body. Take and use of the freshwater may affect the heat of the geothermal resource. **The management of geothermal water bodies is not within scope of NPSFM implementation.** The focus here is on integrated management and managing the connections between freshwater and coastal water bodies.	RV or L?	Not raised by hui-a-iwi or community groups but relevant to implementing policy A1 and B1 of the NPSFM Applicable in Kaituna/Pongakawa WMA and Tauranga WMA – should this be a WMA specific value? Considering whether to include a subset for freshwater bodies whose values are influenced by geothermal activities.

Attachment 3: Principles for identifying Freshwater Management Units

1. **While FMUs are defined to be water bodies, they will be identified in conjunction with catchments** or sub-catchments because the nature of water bodies (including their values, physical and ecological functioning, and their state/condition) is largely determined by the character of their upstream drainages (e.g. climate, topography, land use) and the nature of the resource use that occurs within them (e.g. land use and management, water takes, and point source discharges).

2. **FMUs will reflect significant spatial differences based on consideration of**:
   - **biophysical characteristics** (e.g., topography, geology and river size). Appendix D contains further details about this base layer.
   - **key values and objectives** (e.g., sites/specific areas of particular significance, such as, swimming spots, or sites of special cultural or ecological significance.**;**
   - **land use and other activities** affecting them (e.g., catchments in native forest/natural state may be managed differently to those in other land uses); and/or.
   - **management approaches** to the activities that affect water quality and quantity.

3. **Generally where similar or like FMUs across the region exist a regionally consistent planning and monitoring methodology and framework will apply.** Flexibility will be provided for the provision of cases that may justify a specific FMU at the local level.

4. **Specific provision will be made for different FMU frameworks for groundwater (based on geological units and independent water bodies), wetlands, lakes (based on type) and rivers.**

5. **The spatial scale of FMUs will be manageable** (e.g. achieving a reasonable degree of similarity of relevant characteristics within an FMU while also minimising complexity for plan development and implementation).

Attachment 4: Biophysical base layer for identifying Freshwater Management Units

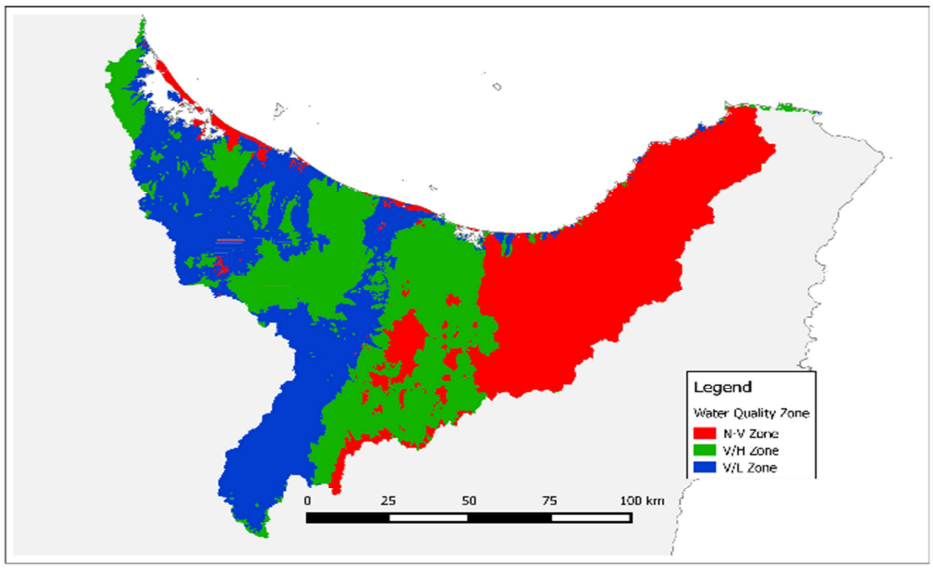
A biophysical classification has been developed as a base layer for developing surface water quality and quantity FMUs. Bio-physical classification is an appropriate foundation for informing FMU setting, as it reflects important differences in relatively unchanging and natural aspects of the environment (including topography, geology and river size) that are relevant to the management of water quality and quantity.

Several approaches to biophysical classification have been assessed by Council and the preferred approach was developed and externally peer reviewed. The result is classification of all Bay of Plenty river segments into three categories as shown in Figure 3[1]:

- Volcanic+Hill
- Volcanic+Low
- Non-Volcanic+Hill

A further delineation of "large" and "small" is applied for water quantity as small streams are affected proportionately more by taking and use than larger streams.

Table 2: Water quality management classes: Volcanic+Hill, Volcanic_Low, Non-Volcanic management classes and associated catchments (right).Other factors being considered



Biophysical classification will help to determine consistent objectives, methods, monitoring and limits for "like water bodies" across the region, particularly for values like ecosystem health. However, it does not necessarily discriminate for some water bodies that have specific values, or water quality issues that may be key determinants of objectives, limits and management methods.

[1] Non-Volcanic+Low makes up less than 1% of the streams within the region and less than 5% of any one WMA and hence these areas were joined with the other non-volcanic areas.