Outline of process

- Feedback from the group sessions were grouped into values categories
- Where possible the NPSFM-NOF values and descriptions have been used as a basis
  - Some NOF descriptions have been modified or added to (in red text):
    - Ecosystem Health
    - Recreation
- New descriptions of cultural/spiritual and dog exercise have been drafted
- Existing management objectives are re-ordered using the NOF descriptions

Outline of process

- Characteristics for each value category have been compiled
- Attributes for the characteristics are listed based on:
  - feedback from groups
  - existing environmental monitoring
  - staff suggestions

FLAG Output

- Consider the;
  - characteristics that describe each value category
  - possible attributes (or indicators) for each of the characteristics
- Decide on the key attributes (indicators)
- Begin work on understanding the “state” bands of attributes

Cultural and Spiritual Values

What this value means: [borrowed from the Takaka FLAG process]:

Healthy water is vital for our well-being, energy and peace of mind. We respect and treasure our waters and wahi tapu (sacred places). Our well-being is reflected by the health of our waters. The purity and health of our water supports our connection with nature and Papatuanuku. It imbues peace of mind and revitalising energy and allows for cultural and spiritual rituals and uses. Individuals and families are able to enjoy and connect with our water bodies now and in the future.

Applies to: All water bodies

Does this adequately capture your view?

Note: don't invest too much time trying to get a 'perfect' description of the values – this is an iterative process where we can clarify and edit statements as we go through the process.

Cultural and Spiritual Values - NOF

The National Objective Framework includes the following description:

*"**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."

Is this relevant ?

Cultural and Spiritual Values
DRAFT Management Objective

The Waimea Plains water bodies have healthy Mauri and surface and ground water is suitable for cultural and spiritual uses and rituals (tikanga). Those water bodies which do not have a healthy mauri are restored.

Applies to: All surface and groundwater

[Objective taken from Takaka FLAG process as no management objectives specifically listed in Schedule 30B, but the value is indentified under Waimea River and Coastal Water in the Waimea Inlet and intended to be extended to all water bodies as previously discussed]

Does this objective need to be more specific about what characteristics of water are important for cultural/spiritual values?

Cultural and Spiritual Values – **Attributes**

The characteristics of water that are important for cultural and spiritual values:	Measured Attributes:
The water is appealing (look, smell, taste). The water is clear and naturally coloured. The water smells and tastes pleasant.	Visual Water Clarity (black or secci disc) Odour (subjective odour types) Visual Colour (qualitative colour charts)
The water does not contain human or animal wastes. The water is suitable for immersion (ie primary contact).	Disease causing organisms: E.Coli, Faecal coliforms, Enterocci Number of direct sewage discharges to water
The water does not contain contaminants.	Visual contaminant assessment – Films, scums, floatables. ~~Chemical analysis for pollution events.~~ Chemical/ physical/ microbiological parameters used based on risk associated with various land uses or pollution events. Turbidity ~~sampling~~
There are no unpleasant slimes or overgrowth of aquatic plants and algae.	Periphyton (% Bed Cover - visual assessment). Cyanobacteria (% cover of bed – visual assessment).
There is diverse life in the water. There is healthy life in the water.	~~Macroinvertebrate sampling (MCI).~~ Macro-invertebrate indices (eg MCI). ~~Fish Sampling.~~ Freshwater fish abundance and diversity.
The water has healthy Mauri.	Assessment of Mauri (via Cultural Health Index)
The water is accessible and available for use.	Number/spread of publically accessible sites.

Do you agree with the characteristics ? Are there others you think are important for cultural and spiritual values? Note: defining terms like 'good' and 'healthy' will be a mix of value and science that we will need to work through later in the process

Municipal and Domestic Water Supply- NOF

(includes Human consumption and Community water supply from TMRP Sch. 30A&B:)

The National Objective Framework includes the following description:

***"Water supply* (Wai Māori)** – *The* [freshwater] *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."

Is the NOF description suitable? Does it cover your views on this value?

Note: the New Zealand Drinking Water Standards provide guidance on minimum requirements for community and small rural drinking water supplies and domestic users. This will be discussed further at the meeting.

Municipal and Domestic Water Supply
Management Objective (Schedule 30B)

Water quality that has a low risk for drinking water. [with or without treatment?]

Applies to:

Groundwater: Upper Confined, Lower Confined and Appleby Gravel Aquifers.

Surface waters: Waimea, Wairoa, Roading, Lee Rivers

Do the drinking water standards help understand how "low risk" is defined? What types or levels of treatment might be necessary?

Municipal & Domestic Water Supply – **Attributes**

The characteristics of water that are important for municipal and domestic water supply:	Measured Attributes:
The water is appealing (look, smell, taste). The water is clear and naturally coloured. The water smells and tastes pleasant.	[NZDWS] water is acceptable to the majority of users Turbidity ~~sampling~~ Odour (subjective odour types) Visual Colour (qualitative colour charts)
The water does not contain disease causing organisms.	E.Coli or Faecal coliforms in source water. Treatment or management regimes that meet the New Zealand Drinking Water Standards.
The water does not contain contaminants.	~~Contaminants?~~ Risk assessment of source waters and monitoring of expected contaminants. Or treatment or management regimes that meet the New Zealand Drinking Water Standards.
The source water meets the New Zealand Drinking Water Standards (NZDWS) or can be affordably and readily treated or managed to meet the standards.	Affordability of treatment or management regime if required to meet the NZDWS

Do you agree with the characteristics/attributes ? Are there others you think are important for community and private water supplies?

Ecosystem Health – NOF (compulsory)

(Includes Aquatic Ecosystems from TMRP Sch. 30A&B)

The National Objective Framework includes the following description:

"Ecosystem health **(Te Hauora o te Wai)** – *The* [freshwater] *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, [the relationship of riparian and wetland vegetation, substrate, meander, width/depth diversity and bank shape to aquatic and riparian fauna needs and to water quality]*, *and the connections between water bodies. The health of flora and fauna may be indicated by measures of macroinvertebrates."*

Is the NOF description suitable? Does it cover your views on this value?

*Note: Staff have suggested the addition in red to better acknowledge the importance of river form and stream side planting to overall ecosystem health – do you agree with this?

Ecosystem Health (compulsory under NOF)

Management Objectives (schedule 30B)

Water quality that meets the needs of aquatic organisms including native fish and trout (except in the Waimea River when step three rationing imposed under a 'no-dam' scenario).

Applies to: Surface waters: Waimea, Wairoa, Roding, Lee rivers

Water quality that maintains or improves ~~provides for existing~~ aquatic ecosystems in coastal springs.

- Applies to: Groundwaters: UCA, LCA, AGUA;
- Surface Waters: Neimann, Pearl and O'Connors Creeks

Water quality that meets the needs of aquatic organisms.

- Applies to: Coastal water in the Waimea Inlet

Do you agree the objectives are consistent with the NOF requirements for ecosystem health ?

Ecosystem Health (compulsory)– Attributes

The characteristics of water that are important for Ecosystem Health:	Measured Attributes:
There is diverse life (indigenous flora and fauna) appropriate to the freshwater body type.	Macro-invertebrate indices (eg MCI). Freshwater fish abundance and diversity. Riparian Vegetation Assessment
Ecological processes are maintained and there is resilience to change.	Macro-invertebrate indices (MCI) and Fish abundance and diversity Ecosystem metabolism (gross primary production and ecosystem respiration). Stream habitat score. % of natural wetlands (including riverine wetlands) remaining in catchment. % natural floodplains present .
The water is clear and naturally coloured.	Visual Water Clarity (black or secci disc) Turbidity Visual Colour (qualitative colour charts)
The water does not contain contaminants.	Chemical/physical/microbiological parameters used based on risk associated with various land uses or pollution events.
Nutrients in the water are not excessive and there is no overgrowth of algae or aquatic plants.	Periphyton (% Bed Cover - visual assessment). Cyanobacteria (% cover of bed – visual assessment). Dissolved Oxygen levels Nitrogen concentrations (ammonia, nitrate etc) Phosphorus concentrations
There is minimal siltation of the bed.	% cover of fine sediment on the stream bed Suspendible Benthic Sediment Volume in cobbly beds. Imbeddedness
There is healthy and diverse riparian and wetland vegetation, substrate, meander, width/depth and bank shape appropriate to the water body type.	Riparian Vegetation Assessment?

Do you agree with the characteristics /attributes? Are there others you think are important for Ecosystem Health?

Fishing and Food Gathering - NOF

The National Objective Framework includes the following descriptions:

"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 [waters] *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."*

"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 [waters] *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."*

"Fishing – *The* [waters] *supports fisheries of species allowed to be caught and eaten.*

For [waters] *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."*

Is the NOF description suitable? Does it cover your views on this value?

Fishing and Food Gathering
Management Objectives (schedule 30B)

- Water quality that meets the needs of aquatic organisms including native fish and trout (except in the Waimea River when step three rationing imposed under a 'no-dam' scenario).

Applies to: Surface waters: Waimea, Wairoa, Roding, Lee, Wai-iti Rivers

- Water quality that meets the needs of consumption of shellfish

- Water quality that meets the needs of aquatic organisms.

Applies to: Coastal Waters of the Waimea Inlet

Do you agree the objectives are consistent with the NOF?

Fishing and Food Gathering – **Attributes**

The characteristics of water that are important for Fishing and Food Gathering:	Measured Attributes:
Fish and food are safe to gather and eat.	Fish/shellfish flesh sampling for Faecal coliforms
Traditional and valued spots for fishing and food gathering are accessible and protected.	Number of sites with safe public access.
Mahinga kai species are abundant and healthy.	Fish and other kai species sampling.
There is clarity of water.	Visual Water Clarity (black or secci disc) Turbidity
The water does not contain contaminants.	Visual contaminant assessment – Films, scums, floatables. Chemical/physical/microbiological parameters used based on risk associated with various land uses or pollution events. Turbidity
The water does not contain human or animal wastes.	E.Coli or Faecal coliforms in source water.
There is no overgrowth of algae or aquatic plants.	Periphyton (% Bed Cover - visual assessment). Cyanobacteria (% cover of bed – visual assessment). Dissolved Oxygen levels

Do you agree with the characteristics /attributes? Are there others you think are important for Fishing and Food Gathering?

Livelihood and Economic Use – NOF

(Irrigation, industrial uses, stock and farm water)

The National Objective Framework includes the following descriptions:

"Irrigation and food production *– The* [freshwater] *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."

"Animal drinking water *– The* [freshwater] *meets the needs of stock.*

Water quality and quantity would meet the needs of stock, including whether it is palatable and safe."

"Commercial and industrial use – The [freshwater] *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 industrial requirements."

Is the NOF description suitable? Does it cover your views on this value?

Any comments?

Livelihood and Economic Use

Management Objectives (Schedule 30B)

- Water quality that meets the needs of abstractive users, including irrigation and food production and stock water supplies (except in the Waimea River when step three rationing imposed under a 'no-dam' scenario).

Groundwater: Upper Confined, Lower Confined and Appleby Gravel Aquifers (for irrigation and food production, stock and farm water, industrial uses)

Surface waters:

Waimea (for irrigation and food production, stock and farm water- except when step three rationing imposed)

Wairoa, Roading, Lee Rivers (for stock and farm water)

Wai-iti River (for irrigation and food production, stock and farm water)

Livelihood and Economic Use - **Attributes**

The characteristics of water that are important for Livelihood and Economic Uses:	Measured Attributes:
Water quality is suitable for use with minimal or no treatment. *[tourism, eco-tourism, dairying, dry stock (beef, deer, sheep, goat), orchards, viticulture, fodder crops, forestry, bottled water, fishing, aquaculture, ?others]*	E.Coli / faecal coliforms Visual Water Clarity Turbidity Nitrates Phosphorus Palatability to stock? ??others -this is a mixed bag and varies depending on use ??Cost of treatment requirements.

Do you agree with the characteristics/attributes? Are there others you think are important for Livelihood and Economic Use?

Recreation – NOF

(compulsory for secondary contact under NOF)

The National Objective Framework includes the following description:

"Human health for recreation (Te Hauora o te Tangata)– *As a minimum, the* [freshwater] *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.*

In [freshwater] *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] *, the risk of infection to people undertaking any activity would be no greater than what would exist there under natural conditions."*

Is the NOF description suitable? Does it cover your views on this value?

Note: staff have suggested removal of the term 'water skiing' unless this occurs somewhere in the Waimea catchments.

Recreation

Management Objectives (schedule 30B)

Water quality that meets the needs of recreational users;

- All surface waters (except coastal springs) are safe for swimming during the months Nov – April (except during floods and in the Waimea River when step three rationing imposed under a 'no-dam' scenario)

- All surface waters are safe for secondary contact recreation.

- All surface waters used for a specific recreation activity are suitable for that use at the relevant time (refer next slide for list of uses and locations)

Do you agree with these objectives and the waters they should apply to?

Recreation – **Types and Locations**

Specific Recreation Types	Applicable Water bodies	Time Recreation Occurs
Swimming	Waimea , Wairoa, Roding, Lee, Wai-iti Rivers Coastal Waters of the Waimea Inlet	~Nov-April?
Recreational fishing (either for food or release)	Waimea, Wairoa, Roding, Lee, Wai-iti Rivers	?
Dog walking	Waimea, ?	all year
Boating – jet boating	Waimea	?
Bird watching?	All rivers	?
Kayaking	?	Site/flow dependent

Do you agree with the recreation types and associated water bodies indentified? Are there others?

Recreation – **Attributes**

The characteristics of water that are important for recreation (as relevant to different locations/times):	Measured Attributes:
The water is appealing (look, smell, taste). The water is clear and naturally coloured. The water smells and tastes pleasant.	Visual Water Clarity (black or secci disc) Odour (subjective odour types) Visual Colour (qualitative colour charts)
The water does not contain human or animal wastes. The water is suitable for swimming (primary contact).	Disease causing organisms: E.Coli, Faecal coliforms, Enterocci
The water does not contain contaminants.	Visual contaminant assessment – Films, scums, floatables. Chemical/physical/microbiological parameters used based on risk associated with various land uses or pollution events. Turbidity
There are no unpleasant slimes or overgrowth of aquatic plants and algae.	Periphyton (% Bed Cover - visual assessment). Cyanobacteria (% cover of bed – visual assessment).
The water is accessible and available for use.	Number/spread of publically accessible sites.

Do you agree with the characteristics/attributes? Are there others you think are important for Recreation?

New Value? Natural Form and Character

(landscape values, recreational values)

The National Objective Framework includes the following description:

"Natural form and character (Te Hauora o te Taiao) *– Where people value particular natural qualities of the* [freshwater]*.*

Matters contributing to the natural form and character of [freshwater] *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."*

There are no applicable management objectives for natural form and character in schedule 30B. Should there be water quality objectives relating to natural form and character?

New Value? – Dog Exercise

Description: River areas used for dog exercise do not present a health risk to dogs.

Draft Management Objective:

Freshwater quality presents no more than a moderate? risk of death by bacterial poisoning to dogs which have access to the river.

Applies to:

Waimea River? – at all times – except when step three rationing imposed?

Other rivers?

The characteristics of water that are important for dog exercise:	Measured Attributes:
Cyanobacterial toxins are not present in amounts sufficient to cause death in dogs accessing the river.	Periphyton (% Bed Cover - visual assessment). Cyanobacteria (% cover of bed – visual assessment).

Should this value be included here or as a Recreational value? Do you agree with the management objective?

Are there other characteristics you think are important for Dog Exercise?

New Value? – Navigation

Description: ?? Is this value covered by recreation (boating/kakaking?) and human health-secondary contact

Draft Management Objective:

??

Applies to:

?Waimea River (boating)

The characteristics of water that are important for navigation:	Measured Attributes:
??	??

Should this value be included? - Or is it adequately covered elsewhere?

Note: the NOF includes “Transport and Tauranga Waka” as a value which has not been identified as applying to the Waimea FLAG Catchment area.