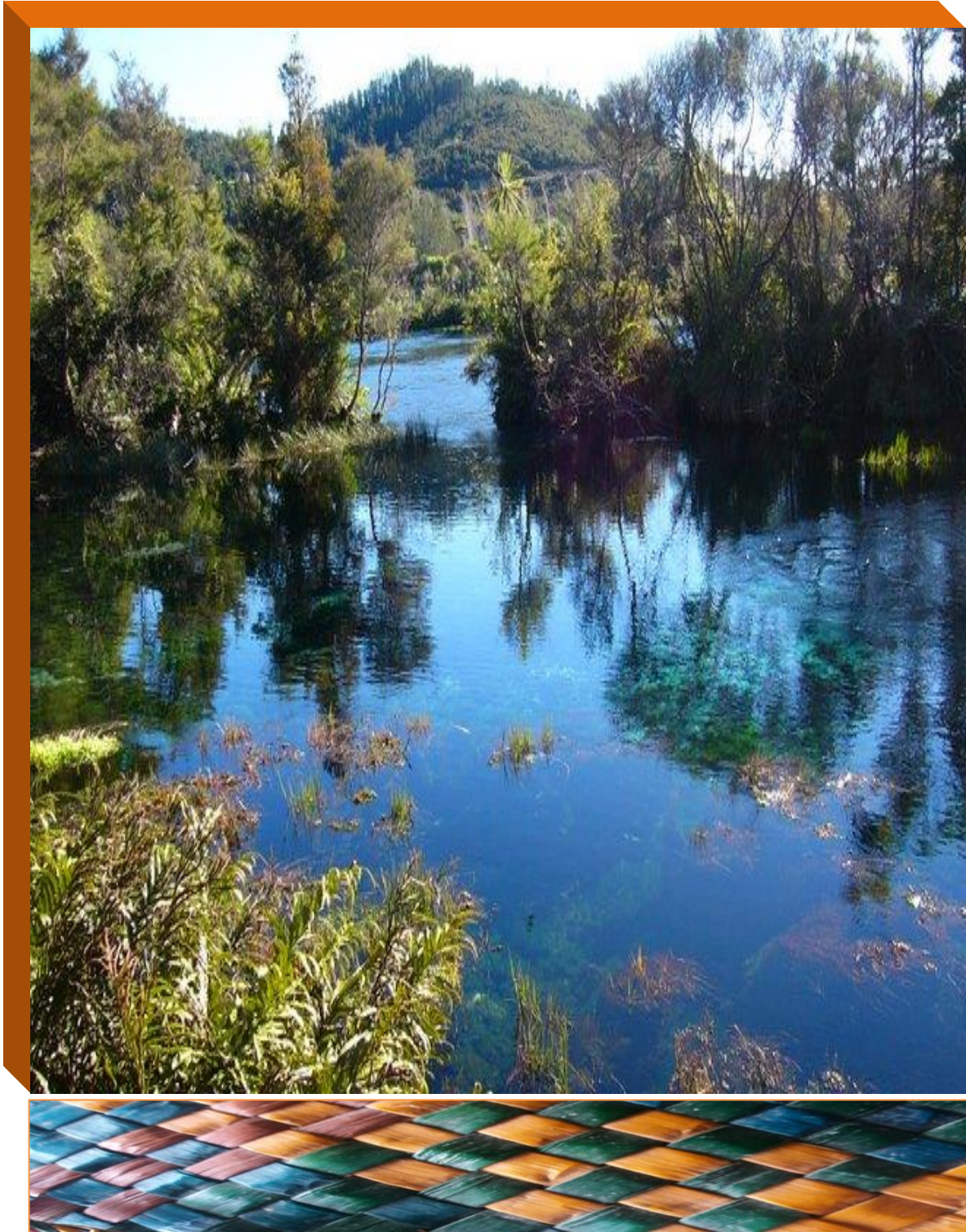


# Manawhenua Mātauranga Report For the Tākaka Catchments



June 2019

## Mohua

Mohua, Wainui, Whariwharangi,  
Taupo, Waikoropupū, Pariwhakaoho,  
Parapara, Onetahua, Kei hea e  
E Mohua Taitapu Te Moana  
Tākaka Te Awa e  
Waikoropupū te puna  
Te Marae e Ko Onetahua  
Ko Te Ātiawa me Ngāti Rārua, ko Ngāti Tama e pai nei  
Ko Ngā Taniwha he Kaitiaki, Kaiwhakaruaki, Ngararahuarau, Huriawa me Poutini e  
Kia Ora Ra Tēnā Koutou Katoa

*(Waiata by Violet Goodall)*



**Cover:** *Te Waikoropupū photo & kete woven from Mohua harakeke (Photos by U Passl)*

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## TIMATANGA

Ngāti Tama, Ngāti Rārua and Te Ātiawa are the three manawhenua iwi who whakapapa to Mohua and practice kaitiakitanga (guardianship) in the rohe (area)<sup>1</sup>. Whakapapa is the thread connecting present day manawhenua with their tūpuna (ancestors) and with future generations. The hau kaingā (people living in Mohua today) are the direct descendants of Ngāti Tama, Ngāti Rārua and Te Ātiawa rangatira (chiefs),<sup>2</sup> who through raupatu (conquest) became manawhenua of the rohe. Ngā hapu and whānau continue to maintain ahi-kā-roa (keep the home fires burning), and in doing so, carry out their responsibilities and obligations to uphold the cultural, spiritual and environmental integrity of Mohua for past, present and future generations.<sup>3</sup>

### Purpose

This report has been contracted by the Tasman District Council to articulate the cultural significance of the Tākaka catchments (within the Tākaka Freshwater Management Unit) and associated expectations for the management of ngā taonga (treasured resources), within the context of an integrated catchment management approach. The purpose of the partnership agreement signed by Manawhenua ki Mohua and Tasman District Council is to:

- Identify and document Manawhenua ki Mohua values, moemoeā (aspirations) and recommendations for managing ngā taonga tuku iho (treasured resources) within the Tākaka catchments, including adjacent coastal environments (“the catchments”), to inform Council processes, reporting and decision-making.
- Incorporate Manawhenua ki Mohua mātauranga associated with ngā taonga tuku iho within the Council Resource Management Plan for the catchments, to achieve sustainable management under the Resource Management Act 1991 (RMA) and the National Policy Statement for Freshwater Management 2014 (NPSFM).
- Build upon the current relationship between Manawhenua ki Mohua and the Council to work towards achieving a greater level of trust, respect, mana and support in the management of ngā taonga tuku iho within the catchments.

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<sup>1</sup> The three iwi signed their Deeds of Settlement in 2013, confirming manawhenua values, customary rights and interests and kaitiaki role and responsibilities. The redress instruments for cultural, financial and commercial matters will ensure Crown and Local Authorities engage and consult appropriately with each iwi trust for any matters that may impact on the relationship each iwi has with their taonga, sites of significance and wāhi tapu. The cultural redress mechanisms include: Vesting of Sites and Overlay Classifications, Statutory Acknowledgements (including coastal acknowledgements), Deeds of Recognition, Statement of Historical Association and Geographic names.

<sup>2</sup> These chiefs included: Te Meihana, Niho Tehamu, Te Aupōuri Mātenga, Henare Tatana Te Keha, Tāmami Pirimoana, Terahui Hekaka, and Takarei Tewhareaitu

<sup>3</sup> For the purpose of this report, the people who whakapapa and maintain ahi-kā-roa in Mohua are called manawhenua



- Enable Manawhenua ki Mohua to exercise manawhenua and manamoana over the catchments.

This report is an expression of kaitiakitanga – of cultural values, interests and priorities to retain and enhance manawhenua values. Understanding the relationship of manawhenua with taonga (treasures), such as wai (water), is essential if cultural values and customary practices handed down through the generations are to guide contemporary resource management practices. Mātauranga<sup>4</sup> (knowledge) encompasses all aspects of local knowledge; both spiritual and physical. Mātauranga is passed from generation to generation, to ensure knowledge of history, tradition and custom continues into the future.

Central principles underpinning catchment management are Ki uta ki tai – the flow of wai from the ngā maunga (mountains) to ngā moana (sea), and Te Mana o te Wai – the first right to wai is to wai itself; a principle which is intertwined with Te Mana o te Whenua (the mana of the land). In order to safeguard the hauora (health) of the Tākaka catchments, all relationships with ngā taonga (treasured resources) in the rohe (area) must be managed in an integrated way.

Manawhenua moemoeā (aspire) for the mātauranga (knowledge) in this report to be used to achieve positive and meaningful cultural and environmental outcomes. To this end, it is important that this report is read in its entirety and that manawhenua participate in decision-making relating to the management of catchment hauora (health) in Mohua.

## **i. Report context**

The Tākaka Freshwater Management Unit<sup>5</sup> covers catchment areas from the Wainui catchment in the east to the Tukurua catchment in the west – and all the catchment areas that drain to the Tākaka Awa (river) and the Arthur Marble Aquifer. A small part of the upper Riuwaka catchment is included as it overlies and therefore potentially recharges the Arthur Marble Aquifer.<sup>6</sup> The topography of the area is rugged with steep ranges to the east, south and southwest, and narrow valleys that broaden out towards Tākaka. The maunga (mountains) to the south are between 1500-1650m high and to the east, the Pikikirunga range is just over 1000m. The taumata (hill tops) to the west are between 560- 1250 m high.

A large amount of this area (635km<sup>2</sup>) falls within the boundaries of Kahurangi National Park and Tākaka Hill Forest Park, both of which are administered by the Department of Conservation (DoC). In addition, there is another 150km<sup>2</sup> of indigenous forest outside the two Parks with exotic grasslands covering most of the remainder; only a small area is in pine forest and orchards. Geologically, the area comprises of rocks of varied and complex geology including: schist; granite and diorite; Arthur Marble, quartzite and argillite, and tertiary sediments including: Tarakohe Mudstone, Tākaka limestone, Motupipi Coal

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<sup>4</sup> Traditional and contemporary knowledge – see Glossary

<sup>5</sup> The term Freshwater Management Unit is from the National Policy Statement for Freshwater Management 2014

<sup>6</sup> See Map on Page 8

Measures and recent sands, gravels and coastal deposits. The area has a mild climate with average to high sunshine hours.<sup>7</sup>

## ii. Report structure

### **PART 1: WHANAUNGATANGA - Whakapapa**

Ancestral relationships, knowledge and history associated with the Tākaka catchments – shared through manawhenua oral traditions such as pūrākau (stories), waiata (songs), karakia (prayer) and mihi (greetings).

### **PART 2: TE MANA O TE WAI - Kaitiakitanga**

Importance of the Tākaka catchments and associated taonga (sacred resources) to present day hapū (sub-tribal) and whānau (family) groups – the significance of mātauranga (knowledge) and traditions guiding the practice of kaitiakitanga.

### **PART 3: MOE MOEĀ - Aspirations for the future**

Strengthening the hauora (health) of the Tākaka catchments; identifying priorities to protect, restore and re-establish relationships with taonga (treasures) and wāhi tapu (sacred sites) for future generations.

### **PART 4: MANAWHENUA COMMENTS ON FLAG WORK**

An assessment of the work undertaken by Tākaka Freshwater and Land Advisory Group (FLAG) to identify how manawhenua values, aspirations and recommendations may be integrated with FLAG findings and preferred management methods and processes.

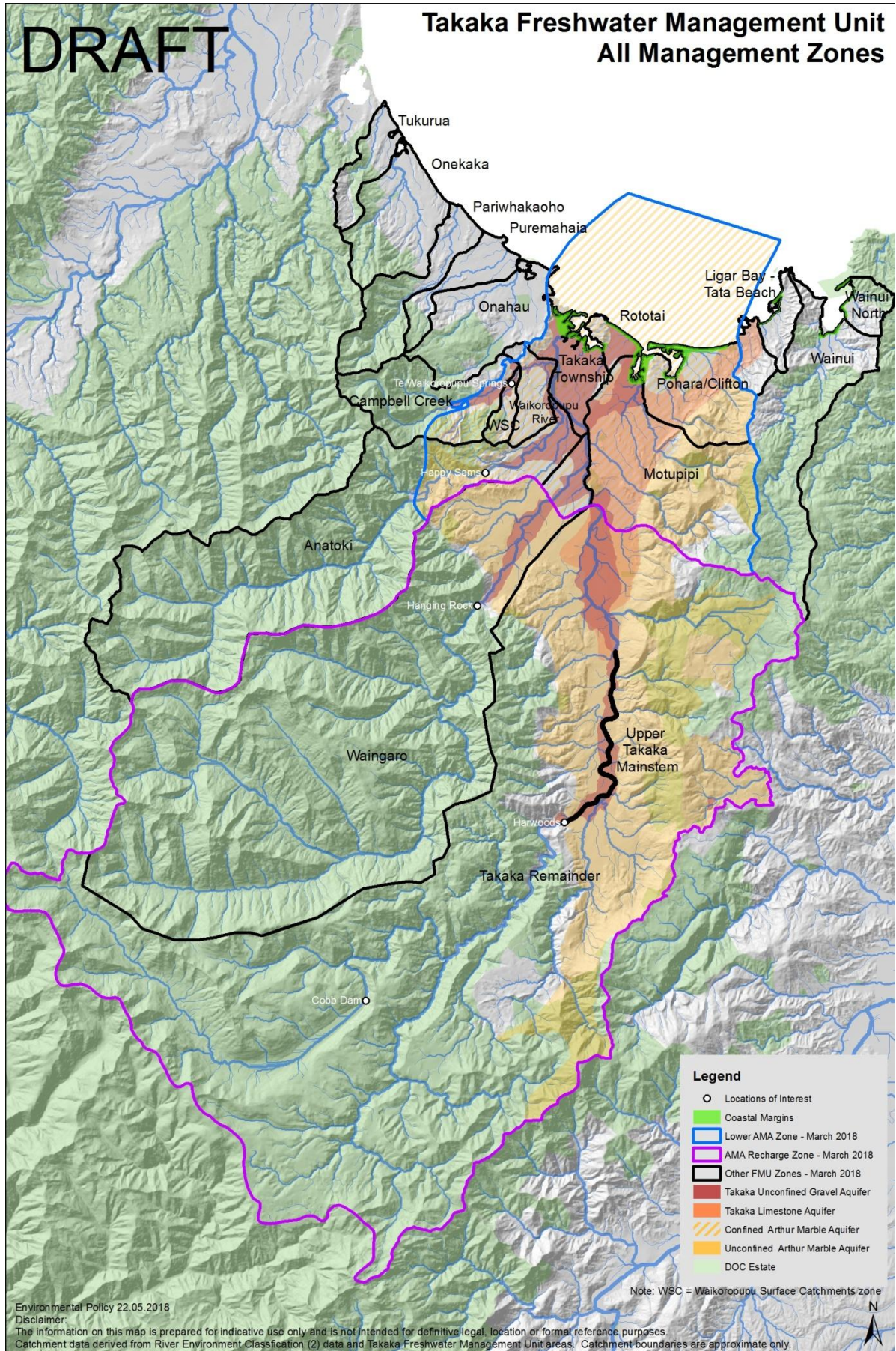
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<sup>7</sup> *Water Resources of the Takaka Water Management Area*: J T Thomas & M Harvey for the Tasman District Council (July 2013:pg1-5)



# DRAFT

## Takaka Freshwater Management Unit All Management Zones





Waikoropupū, Waikoropupū

Pupū ake te whenua

Pupū ake ko ngā waiora

Waikoropupū

Ngā puna wai o Tākaka

Ngā puna roimata wairua

Waikoropupū, Waikoropupū

*Bubbling waters from the throat of the spring*

*Bubbling waters from the throat of the spring*

*Forever bubbling from the land*

*Forever bubbling for the health of the people and the spring waters*

*The spring waters of Tākaka*

*The tears of the spirit ancestors,*

*Water bubbling from the throat of the spring*

*Waters bubbling from the throat of the spring*



## EHARA TAKU TOA I TE TOA TAKITAHĪ, ENGARI HE TOA TAKITINI

*I come not only with my own strength, but that of my tūpuna katoa*



### PART 1: WHANAUANGATANGA

Manawhenua articulate their whanaungatanga (relationships) to Te Ao Wairua (spirit world) and ngā taonga (treasured treasures) through whakapapa (ancestral descent). It is through whakapapa that manawhenua express moemoeā (aspirations) for taking care of natural resources.

Whakapapa links the Supreme Being IO, the creator of all things with the natural world. IO created the realm of being (from the void) and in doing so formed the spiritual framework for the cosmic process to unfold. Energy, awareness, wisdom and the ‘breath of life’ came together to lift the veil of darkness; shape, form, time and space was created. Rangi-nui (the Sky Father) and Papatūānuku (Earth Mother) emerged clinging to each other. From these parents descended ngā atua kaitiaki, the spiritual guardians, who breathed life into all taonga (treasured resources).<sup>8</sup> Rangi-nui and Papatūānuku form the physical and spiritual realm within which ngā atua exist (see illustration on page eleven).<sup>9</sup>

For manawhenua, the ultimate reality is wairua or spirit. Therefore, everything in life is sustained, replenished and regenerated by its hau or mauri, ‘the breath of life’. People are part of the cosmic process and the natural order of things; there is no sharp distinction between the natural world, culture and society. All manawhenua customs, values and attitudes are derived from the indigenous body of knowledge, which seeks to explain the origin of the universe.

It is through whakapapa that manawhenua define their collective identity, mana and belonging to each other and to the universe. All elements of nature and the cosmos are ngā tūpuna (ancestors) of those living today. Whanaungatanga (kinship) is derived from whakapapa and sets out hapū and whānau responsibilities. Because of whanaunga (relatedness), all elements in the natural world are treated with the utmost respect, an honour given to esteemed ancestors. Wai is imbued with a mana of its own; to be treated like a very old kaumātua (a respected elder); a representative of the spirits and times past.<sup>10</sup>

Pūrākau (stories) are an integral part of the body of knowledge held by manawhenua; deliberate constructs used by tūpuna to make sense of the world – to understand the relationship between the Creator, the universe and people. Cultural patterns developed around this perceived reality.

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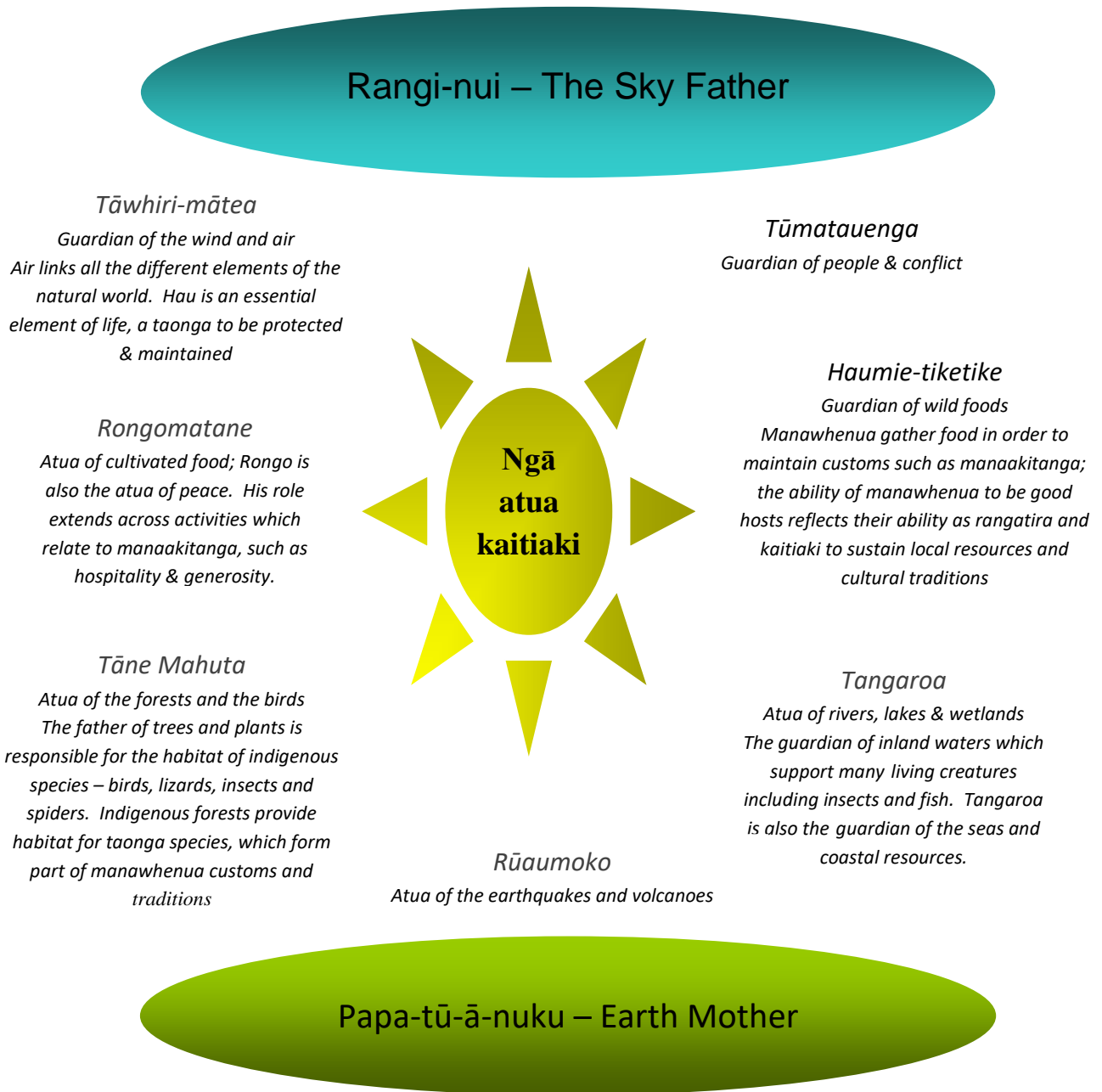
<sup>8</sup> *Mātauranga Māori and taonga: The Nature and Extent of Treaty Rights held by Iwi and Hapū* (January 1997) A report prepared by David Williams under commission of Solicitor to the Wai 262 Claimants

<sup>9</sup> *Managing waterways in the Tasman District, a cultural impact assessment* (April 2011: 12)

<sup>10</sup> Te Tikanga Māori: Ihi Communications and Consultancy, Auckland, NZ (Undated: 5 & 6)

## I. Ngā atua kaitiaki

At the centre of manawhenua relationships with ngā taonga are ngā atua kaitiaki – spiritual guardians responsible for all aspects of life.



For manawhenua, connections to ngā atua kaitiaki are fundamental to all cultural values intertwined with the Tākaka catchments. Te Tinana o Te Whaea Tapu (physical landscape) refers to the body of Papatūānuku and is therefore personified in ngā whenua. All the waters in the Tākaka catchments are connected to the Earth Mother and wai is a sacred life force, which came forth from the separation of Ranginui and Papatūānuku. Therefore wai is all pervading and cannot be separated from ngā whenua within the catchments.<sup>11</sup>

<sup>11</sup> Department of Conservation: *Kaburangi National Park Management Plan* (2011: 13)



For manawhenua, Papatūānuku is also personified in the karst cave systems of Mohua. Through cave systems, tangata (people) can return back to the care of the Earth Mother for any purpose or occasion. Caves are environments where the terrestrial, the physical, the spiritual and the metaphysical worlds come together. Caves are places of healing, learning and instruction – places to congregate and take refuge; this is illustrated in caves and rock shelters where drawings are found. Caves and karst areas are also used as ūrupa (burial places). Even if there are no tangible signs of kōiwi (human remains) or taonga (relics, treasures), these sites may still be of cultural significance; they are ‘windows through time’ connecting present day manawhenua with the beliefs, knowledge and responsibilities of their tūpuna (ancestors).<sup>12</sup>

Manawhenua relationships with the spirit world can also be illustrated in the domain of Hine Tu Ahoanga (the Sandstone Lady). The handiwork of the Sandstone Lady can be seen in the rock formations and caves across Mohua; places that acted as shelter for the living and those who had passed on. It is within the domain of Hine Tu Ahoanga that Huriawa resides.

## **II. Ko te pakiwhaitara o Huriawa<sup>13</sup>**

Huriawa is known to manawhenua as the tūpuna (ancestor) and kaitiaki taniwha (guardian spirit) who travels in the sacred wai that flows through Mohua. Whakapapa (genealogy) connects Huriawa with Mohua, but also the northern areas of the North Island and Te Wai Pounamu (the South Island). Originally, Huriawa resided on Parapara Maunga, but she was called forth to be the caretaker taniwha of the sacred carved prow piece of the waka “Uruao” that was ceremoniously invested in the mouth of the Waitapu River; the river that was once called Ngā Waitapu o Uruao (the sacred waters of the Uruao).

Huriawa travels through Mohua clearing all the waterways from the effects of storms. She tosses fallen trees and tangled vegetation out of the rivers to free the flow of wai. When the rains come, Huriawa dives deep into the land and sea. It is she who churns up the waters when fresh water is found rising through the sea, far from shore.

Huriawa resides in the wai flowing through the Tākaka Catchment, in the aquifers, awa and springs. She rests in the many sandstone caves and underground streams of Te Waikoropupū. These sacred waters are a spiritual taonga (sacred treasure) manawhenua seek to protect for future generations. Huriawa forms part of the whole narrative within the domain of Tangaroa – she is the subject of oral traditions in Mohua, but also of pūrākau told across Aotearoa.

Another ancient pūrākau linked to the Tākaka catchments is the part lizard/part human taniwha, Ngarara Huarau, who inhabited a cave in Wainui Bay, to protect the precious coastal resources of Wainui Estuary.<sup>14</sup> Ngarara Huarau was set on fire while sleeping at

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<sup>12</sup> Ibid (2011:13)

<sup>13</sup> U Passl: *A cultural impact assessment of the Takaka Wastewater Treatment Plant* (2005:17 & 18)

<sup>14</sup> H & J Mitchell (April 2008) *Cultural significance of sites and waahi tapu in the Tasman District* (Pg 45) Prepared for Tiakina te Taiao and the Tasman District Council

Whakatu and as he tried to get back to Wainui he formed Harwood's hole; the marble on the Tākaka Hill was created from his burning scales.<sup>15</sup>

### III. Ahi-kā-roa<sup>16</sup>

Ahi-kā-roa relates to the continuous occupation of an area by manawhenua. It is the kaitiaki who reside and maintain the home fires through their relationship with the rohe (area).

Manawhenua have maintained ahi-kā-roa in Mohua for hundreds of years. The whenua (land) and wai (waters) associated with the Tākaka Catchments are of great historical and traditional significance. The length of occupation, customary use of ngā taonga (sacred treasures) and the continuous occupation and use of the coastline – the ancient ara (pathways) linking Totaranui with Onetahua – are all indicators of the importance of the catchments to manawhenua.

It is believed that tribes first visited Mohua 700 years ago, as part of their expansion from Whakatu to Mohua and on to Te Tai Poutini. The lower Tākaka catchments and area encompassing Te Waikoropupū was a strategic site, a kāinga on whānau journeys for mahinga mātaimai (food gathering). Te Waikoropupū was the gateway to the pounamu ara (greenstone trails); whoever controlled Te Waikoropupū also controlled the inland and coastal ara to Te Tai Poutini.

According to oral traditions, the Waitaha and Rapuwai peoples, followed by Ngāi Tara and Ngāti Wairangi, occupied the area before 1600. Historic evidence provides a record of settlement in more recent times. In 1642, Abel Tasman's records provided the first written accounts that Mohua was populated by manawhenua. Crew members observed the glow of fires and smoke rising from numerous locations. The resident manawhenua were Ngāti Tūmatakōkiri, who sent waka (canoes) manned by warriors out into the Bay towards the East Indian Company ships. Ngāti Tūmatakōkiri came from the North Island and held much of the northwest of the South Island until the arrival of Ngāti Apa around 1800. Ngāti Apa's period of customary authority was short-lived and they were soon displaced in the raids of 1828 – 30 by Te Ātiawa, Ngāti Rārua, and Ngāti Tama.

This was the last tribal conquest of Mohua, an alliance of tribes from Taranaki and Tainui, who came to Te Tau Ihu armed with muskets and cannons. Under their chiefs Te Koihua, Niho, Takerei, and Te Pūoho, control was gained over much of the northwest Nelson, including Mohua. Through raupatu, the role of manawhenua and kaitiakitanga transferred to Te Ātiawa, Ngāti Rārua, and Ngāti Tama – a responsibility held since this time.

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<sup>15</sup> Margie Little pers comm. (June 2018)

<sup>16</sup>Information sourced from: *A cultural assessment of the Takaka Wastewater Treatment Plant* (A Manawhenua ki Mohua Report 2005); & *A cultural impact assessment Motupipi Cycle Trail and Bridge* (A Manawhenua ki Mohua Report 2013)

#### IV. Tūpuna associations with the Tākaka catchments<sup>17</sup>

Traditionally, the Tākaka catchments were used extensively for cultivation and habitation, due to the rich mahinga kai, mahinga mātaītai and other special resource areas found there. Ngāti Tama, Te Ātiawa and Ngāti Rārua tūpuna appreciated the temperate climate and calm waters of Mohua, the rich resources of the forests, the waterways, wetlands, mudflats, estuaries and the sea itself. The whole catchment teemed with life, allowing tūpuna (ancestors) to gather a wide variety of natural resources. Whānau fished from the rivers and collected rongoā (medicinal plants) and weaving materials from its banks, such as Harakeke (flax), Neinei and Kiekie.<sup>18</sup> Paru (mud) was collected to make dyes for weaving clothing and mats, as well as preservatives for ropes made of muka.<sup>19</sup> The iron rich haematite clays at Onekaka provided kōkōwai,<sup>20</sup> which was used to decorate waka (canoes) and whare (houses).

The diversity of habitats associated with the coast provided shelter for a wide variety of indigenous species. Manawhenua fished whitebait, herring, flounder and kahawai from estuaries and river mouths, while pipi, cockles and mussels were harvested from the extensive shellfish beds. Tūpuna were able to harvest bird species, which were found in abundance nesting near or feeding from the rich mud flats.

In early colonial times, there were pā and kāinga (camp and work areas) throughout the catchments. Key localities included Tukuruā, Pariwhakaoho, Tākaka and Motupipi. Tukuruā was occupied by Te Ranginohokau, his wife Meira and their whānau of Ngāti Tama and the Kaitangata hapū (sub-tribe) of Te Ātiawa. Further east, lay Pariwhakaoho whose chief was Henere Tatana Te Keha. Te Keha lived at Pariwhakaoho with his wife Huhana Te Awaiti and whānau. The cultivations around Pariwhakaoho were reported by James Mackay Jr in 1861 as the best cultivations of soil in the district of Golden Bay.<sup>21</sup> Archaeological evidence of manawhenua settlement at Pariwhakaoho includes a cluster of midden and ovens, pits and terraces, a pā and ūrupa site.

Other surveyors and officials recorded the extensive cultivations along the Tākaka river with Tuckett reporting that the cultivations “*excel any which I have seen elsewhere.*”<sup>22</sup> The lower reaches of the Tākaka valley was used extensively for cultivation. After the Tainui Taranaki conquest, Ngāti Rārua, Ngāti Tama and Te Ātiawa tūpuna all settled there. There was a pā or kāinga at Waitapu, which was inhabited by fifty tūpuna (ancestors) in the gold rush times.

The Ngāti Tama pā occupied by Te Meihana whānau was known as Patoto, situated near the river mouth opposite Rangiatā.<sup>23</sup> The Tākaka pā became the centre of hospitality in late

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<sup>17</sup> Plant, bird and invertebrate taonga species are listed in Appendix A

<sup>18</sup> See Taonga Species List in Appendix 1

<sup>19</sup> Muka; fibres of flax or harakeke

<sup>20</sup> Kōkōwai; red ochre and other coloured dyes

<sup>21</sup> H & J Mitchell (April 2008) *Cultural significance of sites and waahi tapu in the Tasman District* (Pg 36-39) Prepared for Tiakina te Taiao and the Tasman District Council

<sup>22</sup> Ibid pg 39

<sup>23</sup> Rangiatā, now known as Rangihacata



1857, when gold miners arrived to exploit the Anatoki. Another small kāinga was situated upriver on a tributary channel, Waikoho.<sup>24</sup> The significance of this area for Ngāti Tama is still visible at the river mouth. Other discoveries at Rangiaata include pits, terraces and pā site.

Te Aupōuri Mātenga, a Ngāti Rārua chief and his whānau also cultivated land along the Mohua coastline, including an extensive area around the Tākaka river mouth. In 1843, he had a large potato plantation on the river opposite the survey station house.<sup>25</sup>

Te Ātiawa lands extended around Paton’s Rock; an area interconnected with the estuary and the Tākaka river mouth. For generations, Te Ātiawa whānau have talked about the significance of the area for kaimoana (seafood), reflecting on the abundance and variety of food to be gathered there. Evidence of Te Ātiawa occupation and use of resources in the area remain – a waka (canoe/rock shelter) is recorded there and an old urupā and a pā site are still visible.

The Motupipi awa, lagoon, estuary and sand spit were also highly valued area by tūpuna. The rich natural resources of the area, the calm waters with easy access to the open sea, the adjacent forests with a plentiful supply of timber, birds and plants, and the temperate climate made for excellent cultivation and harvesting resources.<sup>26</sup> A large kāinga on the edge of the Motupipi estuary, the Motupipi pā, was described in 1857 as having “... *high palisading walls all round...several canoes were drawn up on the beach, one of them a large war canoe with elaborately carved figure-head and stem post standing four or five feet high*”<sup>27</sup>. The estuary remains an important habitat for many bird species, some of which are categorised as threatened and nationally significant. Bird species include: the banded rail, royal spoonbill, pied stilt, pied oyster catcher, herons, weka, the Australasian bittern and gull. The substrate shores continue to support a wide range of macro-invertebrates, which provide these birds, fish and other invertebrates with sustenance.<sup>28</sup>

The diversity and number of wāhi tapu in the rohe are a testament to the importance of the Tākaka catchments to tūpuna and their long and extensive use of natural resources in the area. Surprisingly, there is a lack of recorded archaeological sites in the catchments. It is likely that farming and other land use practices have destroyed surface traces of earlier times, however, significant material may well lie below the surface, which is yet to be discovered. Although wāhi tapu include visible sites, such as kāinga and pā, not all are visible, such as oral history, Te Reo and ara (walking trails).

The long history of occupation and travel in Mohua and beyond has enabled manawhenua to accumulate extensive knowledge of natural resources within their rohe (tribal areas).

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24 Waikoho; now known as Waingaro

25 H & J Mitchell (April 2008) *Cultural significance of sites and waahi tapu in the Tasman District* (Pg 40) Prepared for Tiakina te Taiao and the Tasman District Council

26 Ibid (April 2008:46)

27 Ibid (April 2008:46)

28 Environment Court Decision No. W181/96 (1996:3)



## **PART 2: TE MANA O TE WAI**

### **1. Te Mana o te Wai – *the first right to wai is to wai itself***

For manawhenua, the importance of protecting the intrinsic nature of wai (water) cannot be overstated. This approach acknowledges the significance of whakapapa relationships and the mana imbued in this sacred taonga (treasure). Upholding the integrity of wai acknowledges and protects the wairua (spirit), mauri (life force) and mana of water bodies. Te Mana o te Wai and Te Mana o te Whenua are interconnected and therefore need to be considered together, when looking at ways to improve catchment hauora (health).

### **2. Ki uta ki tai – *the flow of wai from the maunga to the moana.***

Wai (water) rises up from ngā moana (sea) to become the tears of Ranginui, filling ngā whenua (land) reservoirs which include: ngā maunga (sacred ancestors), tomo (caves), aquifers, ngā awa (rivers), tributaries (ribs of ngā tūpuna), ngā puna (freshwater springs), ngā roto (lakes), ngā kūkūwai (wetland filters of Papatūānuku) and mahinga mātaītai (food baskets of the sea) before flowing into the coastal marine area – feeding replenishing and nurturing all life in the domain of Tangaroa (sacred guardian of fresh and coastal wai).

Ki uta ki tai recognises the Tākaka catchments as an integrated whole. This view of nature acknowledges the relationship between all living things. In order to safeguard the integrity of wai, manawhenua consider it is essential that all activities within catchments are managed in an integrated way.

### **3. Te Ao Tūroa**

Te Ao Tūroa refers to the relationship manawhenua have with the natural world. Whakapapa determines who and how ahi kā whānau and hapū interact with ngā taonga (treasured natural resources) according to mātauranga (knowledge) and wānanga (lore). Everything has a whakapapa – from ngā manu (birds), ika (fish), ngāhere (trees) and ngārara (insects) to ngā whenua (land), ngā maunga (mountains) and ngā wai (water bodies). This connectedness between spirit, people and nature forms the basis for Te Ao Tūroa.

### **4. Tiakina te mauri**

Wai is imbued with wairua and mauri – a spirit and life force of its own. Manawhenua seek to protect this life force for future generations. Any change in the flow and energy of wai, changes the hauora (health) and personality of a water body.<sup>29</sup> Mauri and wairua are intertwined with the hauora of the whole catchment – recognising the interrelationships of life within catchments.

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<sup>29</sup> *A Cultural Impact Assessment of the Maitai Walkway Development Project*, A Tiakina te Taiao Report, prepared by Ursula Passl (2012:12)

## HOMAI TO WAIORA KI AU, KIA TU PAKARI

*Pass me the health giving waters, that I may stand tall strong and healthy*

### 5. Ngā uara wai<sup>30</sup> *Manawhenua values associated with wai*

Wai is a living taonga, classified under Article II of the Treaty of Waitangi. A sacred treasure, wai symbolises the wairua (spiritual) link between past and present. The lifeblood of Papatūānuku<sup>31</sup> and the tears of Ranginui,<sup>32</sup> wai flows through the land via waterways, creating rivers, streams, underground reservoirs, wetlands and swamps on its path. Waterways connect the mountains to the sea, therefore the physical and spiritual survival of all things in a catchment depend upon on mauri (life force) and wairua (spirit) of wai.<sup>33</sup>

Wai expresses all dimensions of life, Taha wairua (the spiritual), Taha hinengaro (the intellectual), Taha tinana (the physical); and Taha whānau (the social). A traditional classification system links the spiritual dimensions with those of the physical:

**Wai Ora:** Water of life, the purest form of freshwater. It gives and sustains life, can rejuvenate damaged mauri (life force) and counteracts evil. Wai-ora is of such spiritual significance that is used in ceremonies such as baptism (e.g. Te Waikoropupū).

**Wai Māori:** Water that sustains manawhenua daily life, such as drinking and cooking.

**Wai Tai:** Sea water that is potentially dangerous.

**Wai Mate:** Wai that has lost its mauri; it is damaged or polluted beyond its capacity to rejuvenate either itself or other living things. Wai-mate can contaminate the mauri of other living things or other waters (e.g. Lake Killarney).

**Wai Kino:** Wai that is spoiled or polluted and that contains rocks or submerged snags; this wai has the potential to be detrimental to life.

**Wai Tapu:** Waters of death, water burial site. These waters are tapu due to loss or other events, and are subject to restrictions.

### 6. Ancestral relationship

The Tākaka catchments supported the wellbeing of tūpuna (ancestors) living in Mohua. The coastline and estuaries provided an important ecological habitat for harvesting wāhi taonga (sacred resources). Cultural values and customs associated with the coast were an integral part of traditional life. Tūpuna used coastal promontories as geological markers to explain where they come from – providing a link between the past and the present.

Manawhenua identity is intertwined with the catchments. This identity is reflected in pūrākau (stories), waiata (songs), and karakia (prayers). It is still customary for manawhenua to recite the relationship that connects them to the natural world, when

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<sup>30</sup> *Te Waikoropupū Springs Management Plan* (2009:53) Department of Conservation

<sup>31</sup> Earth mother, the land

<sup>32</sup> Sky father

<sup>33</sup> Excerpt from *A Cultural Impact Assessment – Managing waterways Tasman District* (April 2011:6)



speaking in a formal setting. This tradition identifies where manawhenua come from and the natural resources they rely on for their spiritual and physical wellbeing.

## **7. Tiakina te wāhi tapu**

Within the Tākaka catchments, there are numerous tapu places and sites. Places become designated as wāhi tapu because of an association with tapu (sacred events), kōiwi (human remains) or tapu objects. Wāhi tapu signify ahi-kā-roa (continuous occupation) and are indicators of manawhenua identity, confirmed and protected by the use of tapu. Wāhi tapu are a physical and spiritual link to the tūpuna (ancestors). Wāhi tapu can include: urupā (burial grounds), sites used for ceremonial purposes, mahinga mātaītai (food gathering areas), waka landing sites, kāinga (village), camping sites and rongoā sites (medicinal plant gathering areas).

As kaitiaki (guardians), the manawhenua have inherited the responsibility to protect all wāhi tapu within the rohe for past, present and future generations. Activities or management approaches which lead to the contamination or loss of wāhi tapu reflects a spiritual and physical loss to the ahi kā whānau.

The existence of wāhi tapu within the Tākaka catchments intensifies the importance of the rohe (area). Wāhi tapu do not normally exist in isolation, as they reflect the interconnected cultural relationship manawhenua have maintained in an area and with particular resources over time. Each site relates to another and together they form a cluster of sites, which are intrinsically significant. Clusters of wāhi tapu are important in determining length and patterns of settlement and resource use.

## **8. Wāhi taonga**

Wāhi taonga is a term used to describe culturally valuable resources, objects, phenomenon, ideas and practices. In relation to the Tākaka catchments, taonga species have been degraded or lost as a result of successive land use and development practices – through excessive nutrient inputs, habitat loss and pest invasion. This strengthens manawhenua resolve to protect the catchments from all activities, which could degrade their cultural values further.

The Tākaka catchments provide a range of habitats and kōhanga (nesting places) supporting a variety taonga species.<sup>34</sup> A feeding ground for ika (fish), macro-invertebrate species, the catchments support taonga plants, ngā rara (insects) and the nesting, feeding and migration patterns of manu (birds). Examples of ika species found in the catchments include: Inanga, Long and Short fin Eel, Koaro, Banded Kokopu, Upland Bully, Redfin Bully and Common Bully.

Wāhi taonga species are particularly sensitive to changes in water quality; if the health of wāhi taonga diminishes, so too does the health of the people.

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<sup>34</sup> See Taonga species list in Appendix A

## 9. Customary use<sup>35</sup>

Mātauranga associated with the customary use of natural resources in the Tākaka catchments was integral to tūpuna well-being. Successive generations used mātauranga to guide customary practices, such as harvesting according to tohu (signs) or the seasons, collecting plant material for dyeing or weaving or for rongoā (medicinal purposes). A local example was dyeing muka (flax fibre). Harakeke (flax) was buried in the black mud in the Motupipi estuary and the dyed material was used for decoration of kete (baskets) and cloaks.<sup>36</sup>






Traditionally, tūpuna followed trails throughout the rohe to gather food and other resources. Wāhi taonga sustained the spiritual and physical well being of both resident and visiting tribes. Although many taonga species are less abundant today, they remain an integral part of cultural life.

## 10. Kaitiakitanga

Through the relationship with ngā atua kaitiaki (spiritual guardians), manawhenua believe they have a duty to their tūpuna (those living and those to come) to take care of and protect ngā taonga. This responsibility is called kaitiakitanga.

Over many generations manawhenua have developed relationships with ngā taonga based on mātauranga (knowledge), tikanga (customary practices) and kawa (rules). Customs include traditional practices of karakia (prayers); ritenga (rituals) for gathering food, whaikōrero (formal speeches) reciting connections to people and the natural world; waiata (songs) about sacred places; rahui (prohibitions) on taking resources and utu (reciprocity) for using resources.

Kaitiakitanga places Te Mana o te Wai and Te Mana o te Whenua at the centre of decision-making, along with reciprocity, which guides the relationship of manawhenua with ngā taonga. Ngā hauora (the health) of the Tākaka catchments must be protected, in order to provide for the hauora of ngā tangata (the people). Customary practices associated with use of ngā taonga include:

-  Acknowledging ngā atua kaitiaki – reflects whanaungatanga; respect for ngā taonga;
-  Enhancing the hauora (health) of ngā taonga as kaitiaki for future generations;
-  Maintaining the hauora (health) of mahinga kai and mahinga mātaitai (food baskets of the sea);
-  Reciprocity – maintaining a strong relationship with ngā taonga; giving back what is taken from the catchments in kind; and
-  Using tohu (indicators) to measure catchment hauora (health).

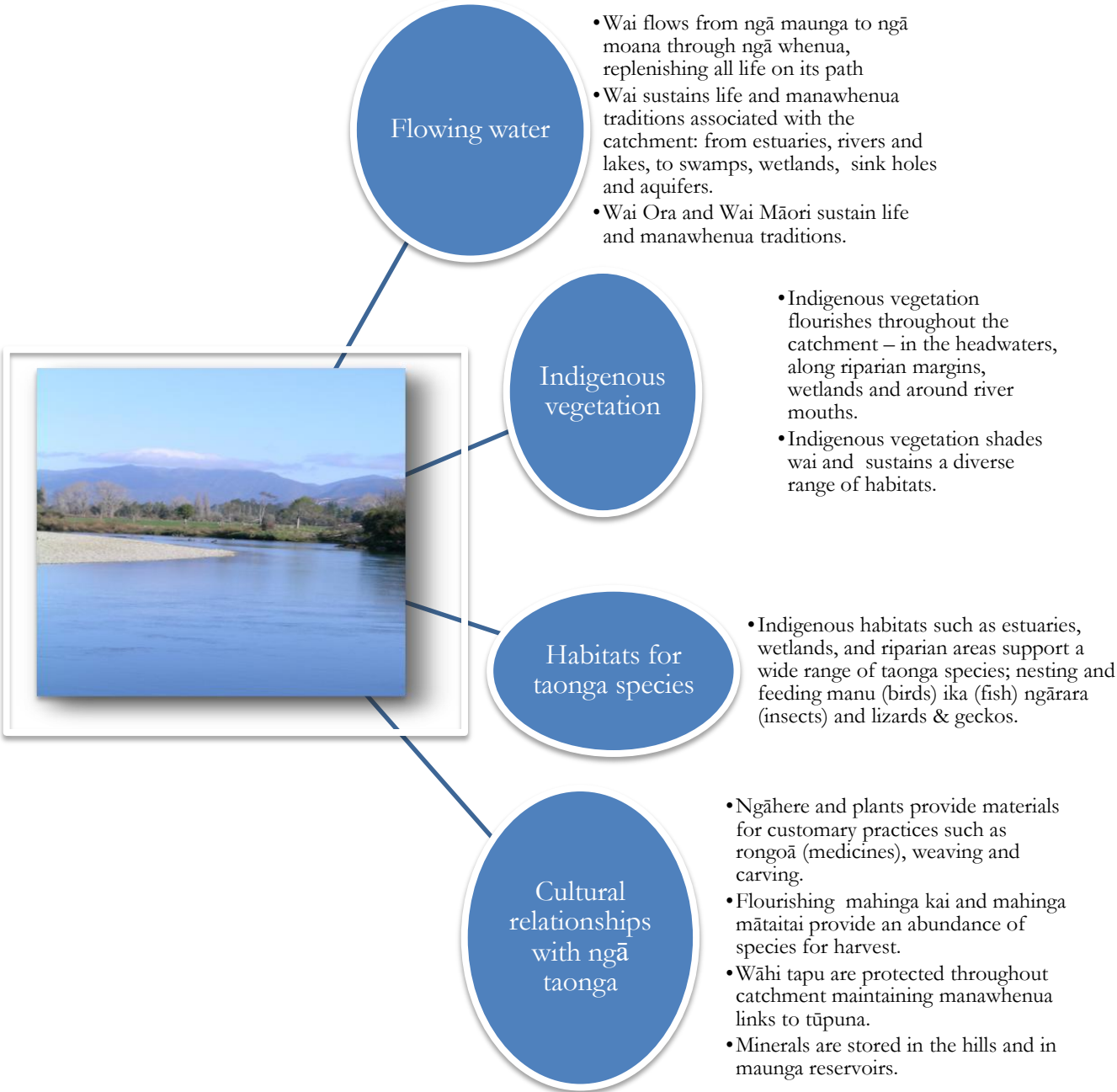
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<sup>35</sup> Tiakina te Taiao, *A cultural impact assessment – managing waterways in the Tasman District*, April (2011:8)

<sup>36</sup> Trina Mitchell pers comm. (January 2012)

Ngā whenua (land) and ngā wai (waters) within the Tākaka catchments are life forms in their own right; they have a fundamental nature and identity – a mauri (life force), wairua (spirit) and mana (authority) of their own. The health of the ngā whenua and ngā wai in the catchments reflects the hauora (health) of people living in the rohe (area). As kaitiaki, manawhenua recognise the interrelationships of all life within the rohe (area).

**Attributes of a catchment with a healthy wairua and mauri<sup>37</sup>**

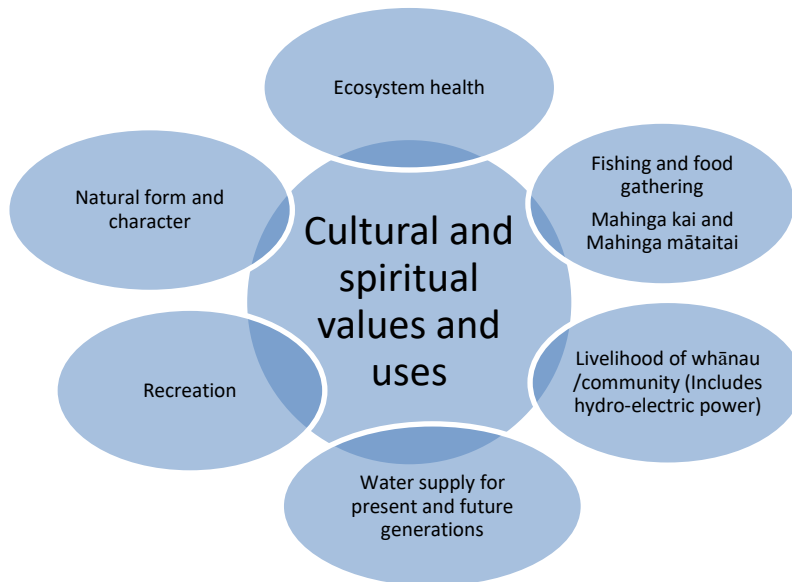


<sup>37</sup> Adapted from: *Tangata Whenua Ki Whakatu Environmental Indicators for Wai* (July 2005:29)

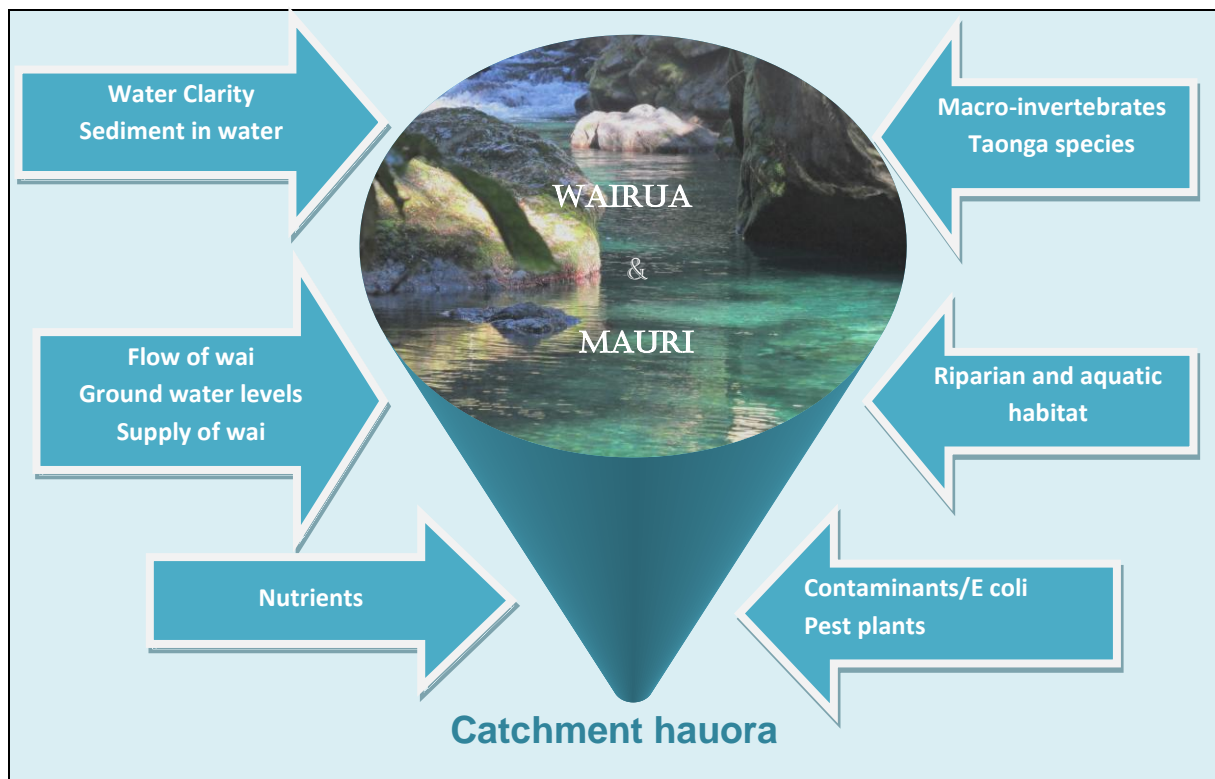


## 11. Tākaka Freshwater and Land Advisory Group

In late 2016, Tākaka Freshwater and Land Advisory Group (FLAG), which included manawhenua representatives, developed a draft framework for the protection of values and uses associated with the Tākaka catchments. These values and uses are interconnected with the cultural values and uses identified in this report, as depicted below:



FLAG also identified a number of attributes to support and provide for the key values and uses. Manawhenua support these attributes, but wish to highlight that the hauora (health) the mauri (life force) and wairua (spirit) of water bodies is at the heart of catchment management. This is depicted in the diagram below.

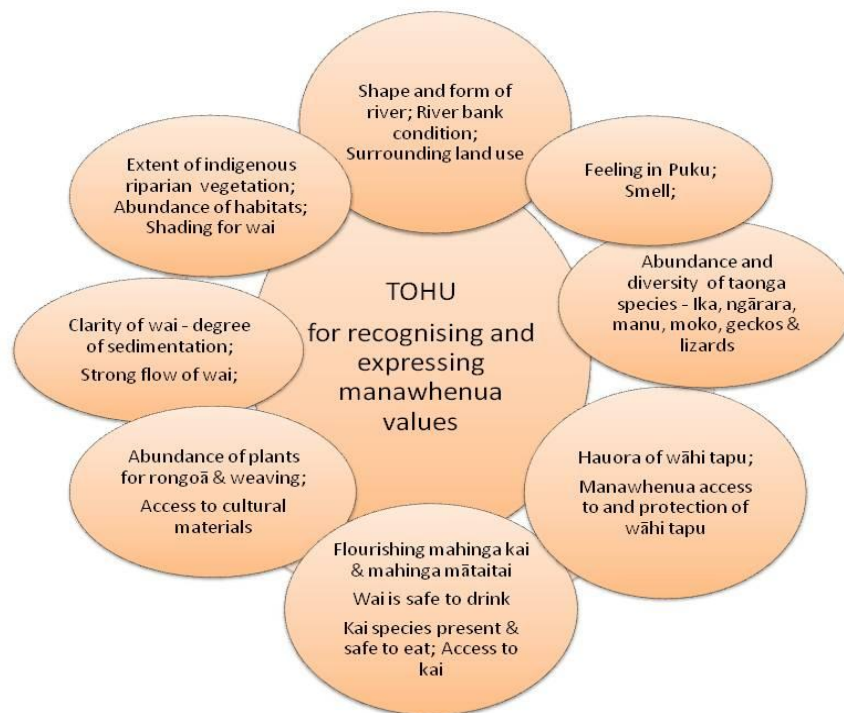


## 12. Cultural tohu

Cultural tohu (indicators) are measures of catchment hauora encompassing values associated with ngā atua kaitiaki (spiritual guardians), ngā taonga (natural treasures) and ngā tangata (the people). The presence or abundance of tohu (indicators) helps to assess the degree to which a catchment is able to support life – this relates directly to the health of the mauri and wairua of the catchment. For manawhenua, measuring catchment hauora includes consideration of:

- Nature, size and purity of water bodies;
- Individual and cumulative effects of land use on the mauri and wairua of ngā whenua and interconnected water bodies – this encompasses indigenous riparian vegetation and connectivity of indigenous species throughout catchments; and
- Number, diversity and hauora of sites/areas of cultural significance, such as mahinga kai, (customary food gathering or cultivation site), wāhi tapu (a place subject to tapu, to restrict access or use of the area) and mahinga mātaimai (customary seafood gathering site/shellfish bed).

In 2005, Te Ātiawa, Ngāti Tama and Ngāti Rārua took part in a study to develop tohu to measure the hauora (health) of the Mahitahi Catchment in Whakatu.<sup>38</sup> The tohu identified through this project are clustered in the diagram below.<sup>39</sup> It is essential that manawhenua develop and use relevant tohu to monitor changes in catchment hauora (health); tohu which encompass fresh water, land and coastal ecosystems. This would complement the scientific monitoring currently being undertaken for the Tākaka catchments.



<sup>38</sup> Tangata whenua ki Whakatu indicators for wai (August 2005:33)

<sup>39</sup> This work was based on *A Cultural Health Index for Streams and Waterways*: Indicators for recognising and expressing Māori values Report prepared for the Ministry for the Environment by Gail Tipa and Laurel Teirney (June 2003)

## HE TAURA WHIRI KOTAHI MAI ANO TE KOPUNGA TAI NO I TE PU AU

*From the source to the mouth of the river all things are joined together as one*



### **PART 3: MOEMOEĀ:**

#### **I. Overarching aspirations**

As kaitiaki of Mohua, manawhenua seek greater recognition of the cultural significance of the Tākaka catchments through:

- Participation in the management of catchment hauora (health);
- Cultural values and interests informing decision-making; and
- Recognition of manawhenua Māoritanga (culture, beliefs and practices).

These moemoeā require commitment by manawhenua and Council to work towards achieving a greater level of trust and respect to support a mutually beneficial and positive working relationship.

The establishment of a kaihautu position – a leadership role reporting directly to the Chief Executive Officer would improve the current relationship between Council and manawhenua. The kaihautu would work to ensure the Council is culturally competent in relation to the Treaty of Waitangi and corresponding legislation through:

- The provision of cultural advice to Council on legal matters;
- Increasing cultural competency within the Council over time; and
- Ensuring that all Council engagement with manawhenua is culturally appropriate

A separate yet complementary cultural role is for the Council to be guided in matters of tikanga; ensuring Council is culturally aware and safe when working with manawhenua.

In order to protect and maintain catchment stability, manawhenua consider essential that management decisions are focused on:

- Maintaining and enhancing the wairua and mauri of the catchments;
- Giving effect to Ki uta ki tai and Te Mana o te Wai;
- Management approaches which recognises relationships between:
  - Land and water bodies in the catchments;
  - Freshwater and seawater ecosystems; and
  - Climate change and ecosystem hauora (health)

## **II. Keeping the Tākaka catchments in balance**

### **1. Ki uta ki tai**

Integrated catchment management recognises Ki uta ki tai – the flow of wai through the catchment from ngā maunga (mountains) to ngā moana (sea).

1.1 Wai flowing through the catchments supports a diverse and healthy number of indigenous species.

Manawhenua support initiatives to increase the understanding of the nature of indigenous ecosystems in the catchments and the hauora (health) of those ecosystems.

1.2 The importance of Ki uta ki tai to replenish the coastal marine environment is recognised in catchment management.

Manawhenua recommend that management objectives for the coastal and marine ecosystems are developed – acknowledging the importance of coastal marine ecosystems; the receiving environment for all wai flowing through the domain of Tangaroa.

Manawhenua support Council modeling of catchment loads in order to assess cumulative effects of activities on coastal ecosystems – tracking trends over time.

Manawhenua consider coastal assessments are essential to gain a better understanding of the hauora (health) of existing habitats and taonga species in order to determine priorities for protection.

Manawhenua support Council monitoring of river plume ecosystems in order to assess: pathogens, fine sediments and nutrients (all of which have an impact on coastal ecosystems).

1.3 The flow of wai (water) through a diverse number of water bodies (on its path from ngā maunga to ngā moana) is understood better and informs catchment management.

Manawhenua consider it essential to understand the dynamics of the movement of water through the catchments. Manawhenua acknowledge and support current Council monitoring, but encourage the application of a broader range of contemporary science methods to understand the complex nature of the aquifer system.



## 2. Te Mana o te Wai<sup>40</sup>

Manawhenua seek a close working partnership with the Tasman District Council in developing the Regional Policy Statement and Resource Management Plan – including the development of a strategic framework from which decisions about water allocation and use are made.

2.1 Establishing minimum low flows to maintain the mauri and wairua of all water bodies is essential. Manawhenua support a precautionary approach to water allocation; placing restrictions on water takes to protect the hauora (health) of waterways.

Manawhenua support establishing flow and allocation limits according to good management practice, to ensure the ongoing health of the wai itself and the ecosystems wai sustains.

2.2 Manawhenua stress the importance of wai permits being allocated as a temporary gift, not a right – this acknowledges the responsibility of our generation to look after wai and use it wisely, enabling changes in the way wai is used in the future.

Manawhenua support the development of clear guidelines and rules to assess the sustainability of existing permits in relation to individual and cumulative effects on the water bodies and associated habitats:

- Manawhenua seek to work with Council to develop guidelines to consider the degree of risk each water user may have on catchment hauora (health), to inform the Council process of issuing and reviewing water takes;

- Manawhenua highlight the importance of maintaining a constant focus on protecting and improving catchment hauora through the assessment and management of individual user risk to water alongside the collective risk to water (focusing on both water and land use).

- Manawhenua support the review of the framework to regulate both wai takes and wai uses to ensure ongoing good practice.

2.3 Manawhenua stress the importance of not allocating all wai which is currently considered ‘sustainably available’ for use to:<sup>41</sup>

- Enable future generations to access ‘sustainably available’ wai; and

- Provide for unanticipated uses to enable the transition of water use to uses with less environmental impacts, such as rules for who can apply for water based on end use.

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<sup>40</sup> The first right to water is to the water itself

<sup>41</sup> This approach is about giving effect to the practice of reciprocity – respecting relationships with sacred resources and ensuring that as kaitiaki, resources are available for mokopuna (grandchildren). This is about appreciating the fact that there is enough wai to sustain our current well-being; however, if we continue to increase our demand for water, this could impact on the health and well-being of future generations (NB: All people).

- 2.4 Manawhenua support incentives to promote off-line storage<sup>42</sup> of wai, where natural water bodies are unable to supply the demand for wai on a sustainable level.
- 2.5 Manawhenua consider it essential that water bodies which are culturally and/or environmentally sensitive receive greater protection – such as smaller, more sensitive water bodies or those already degraded in lowland areas.

**In relation to specific catchment allocation regimes:**

- **AMA Recharge Zone:** Manawhenua support the current allocation of wai. Manawhenua stress the importance of taking a ‘precautionary approach’<sup>43</sup> to the allocation of wai (no further allocation), in particular for the area that recharges Te Waikoropupū. Te Waikoropupū is of immense significance to manawhenua, as a wāhi tapu a wai tapu and a taonga. Protecting the waters of Te Waikoropupū is integral to the spiritual and cultural well-being of manawhenua; it is a fundamental part of manawhenua identity and the maintenance of tribal traditions.
- **Pariwhakaoho** – that no water takes are permitted from Pariwhakaoho. This sacred ancestral awa is of particular importance for hau kaingā, as it is the life blood of ahi kā whānau encompassing Taha wairua (the spiritual), Taha hinengaro (the intellectual), Taha tinana (the physical); and Taha whānau (the social).
- **Anatoki** – Manawhenua support the ‘90:10’ regime, as this is a more conservative precautionary approach.
- **Upper Tākaka mainstream** – Manawhenua support the proposed 70:15 regime with no change to the existing takes (A takes), all of which have existing cease takes. Any new takes (B takes) would have to meet the ‘70:15’ regime.
- **Small or degraded awa** – In addition, manawhenua seek for currently permitted takes including domestic and stock-water takes to be freshly regulated, to protect smaller sensitive water-bodies and already degraded lowland waterways (such as the Motupipi).

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<sup>42</sup> Offline Storage is storage that is not located within the bed of a permanent or intermittent water body. For example: detention dams or tanks located on dry land or in ephemeral gullies. These might be filled by natural drainage of overland flow or by pumping or diversion from a neighbouring water body (with resource consent for the water take).

<sup>43</sup> A precautionary approach considers tohu (indicators) of water body hauora, such as the nature of the water body and the potential adverse impacts of water allocation – for example water bodies which are sensitive to changes in water volumes and reduced flows (such as smaller water ways and wetlands); water bodies which have cultural or biological significance (such as ngā puna and river mouths); and already degraded water bodies, which are more sensitive to low flows.

### 3. Catchment hauora

Catchment hauora is increased for future generations – the diversity and number of aquatic and terrestrial habitats and associated taonga in catchments are increased over time.

Water quality and hauora in the Tākaka catchments is improved for future generations. Risks to key attributes of water quality trigger actions to protect wai in the catchments, through land use controls in the first instance, and water allocation controls if necessary.

#### A. Land use

3.1 Manawhenua consider it essential that further research is conducted to assess the degree of existing vegetation cover and restoration required in the catchments to reduce the risk to water from sediment entering wai.

- Manawhenua support comprehensive catchment mapping focusing on:
  - In-stream and riparian habitat values alongside an assessment of habitat condition and connectedness; and
  - Taonga species associated with different in-stream and riparian habitats.

- Manawhenua support enhancing vegetation corridors through initiatives focused on restoring and protecting:
  - Riparian and biodiversity values; and
  - Mahinga kai values.

3.2 That the risks to wai as a result of different types of land use practices are identified alongside key trigger actions to protect wai through land use controls.

- Manawhenua support the proposed “Risk to Water Framework” and stress the importance of catchment management planning and decision-making being guided by a central moemoeā (an agreed catchment-wide vision); to strive to increase catchment hauora for future generations.

- Manawhenua seek participation in the identification of options for policy and planning rules and incentives to minimise the risk to water from land uses in the Tākaka catchments.

3.3 Good management practice (GMP) is required for all water users and land users as a matter of course, to protect the mauri and wairua of wai.

- Requires a review of land use practices, looking at best practice management to minimise nutrients, sediment, effluent and pathogens entering wai and impacts on aquatic and riparian habitat.


- Consider the degree to which different land uses and associated practices impact on soil and land hauora (i.e. contaminant risk).

- Manawhenua support the development of rules for stock exclusion, fencing setbacks, forestry buffers from water courses and restoration planting.


- Manawhenua consider education an essential part of encouraging the use of ‘good management practice’.

3.4 Manawhenua support the mapping of currently fenced off waterways. For high priority areas such as natural wetlands, mahinga kai and wāhi tapu – that these are fenced as a matter of urgency.

3.5 Manawhenua support the protection of karst sinkholes, recognising the variability of these landforms in relation to flow of wai.

 Rules are put in place to exclude stock and adopt setbacks for any discharges for sink holes that drain water directly to groundwater or are permanent lakes.

3.6 Manawhenua support discharges to whenua (land) over those to wai (water) to protect the integrity of water bodies.

 Manawhenua recommend stronger rules and incentives are put in place to avoid discharges to wai as these are culturally abhorrent.

## **B. Riparian management**

Riparian management is recognised as an essential part of catchment hauora; especially in relation to smaller lowland streams (NB: riparian management includes stock exclusion, fencing setbacks and restoration and replanting); Existing areas of riparian vegetation are protected and enhanced as a matter of priority.

The benefits of riparian planting and aquatic restoration to wai ecosystem health are recognised – including shading of wai, improving water quality, provision of habitat to aquatic and terrestrial plants and animals and improved biodiversity and mahinga kai values.

Manawhenua recommend indigenous plant species are used to restore and enhance riparian margins in preference to introduced species:

3.7 Manawhenua partners with the Mohua community to increase riparian planting and associated pest control in the catchments.

3.8 Manawhenua recommend that the Council support and assist in the co-ordination of catchment-wide restoration initiatives.

3.9 Manawhenua support Council adoption of stronger policies, rules to avoid the removal of existing vegetation for riparian areas.

3.10 Manawhenua support Council adoption of policies, rules and non-regulatory methods to support planting and pest control initiatives on private land.

3.11 Culturally significant areas are identified and mapped by manawhenua for restoration and enhancement within the catchments (for example areas with significant indigenous vegetation such as wetlands, awa (rivers) with high native fish diversity (such as the Onekaka), river mouths and estuarine areas (such as the Motupipi), the interface between fresh and salt water ecosystems).

- 3.12 Vegetation corridors within the catchments support a greater diversity of habitats and species (Linking in with other initiatives, such as Project Divine and Project Mohua).
- 3.13 Council assists in the development of a catchment-wide pest control plan to complement community-driven enhancement initiatives.

### **C. Monitoring catchment hauora**

Manawhenua consider it essential that all activities in the Tākaka catchments are assessed by the Council in relation to their impact on water quality, habitat health and species biodiversity, which are all intertwined with cultural values.

- 3.14 Catchment hauora (health) monitoring information (water quality, habitat health and species biodiversity) informs decision-making and corresponding changes are made to Council's policies, rules and non-regulatory methods.
- 3.15 Existing and new monitoring places mauri and wairua at the centre of catchment hauora (health); (*See Figure on page 21*).
- 3.16 Manawhenua identify and apply cultural health tohu (indicators) for both fresh and salt water ecosystems, in order to increase the information available to guide catchment management.<sup>44</sup>
- 3.17 That the manawhenua classification system for wai is used as a framework to evaluate different water bodies in the catchments according to their spiritual, intellectual, physical and social qualities (*See page 17*).
- 3.18 Cultural tohu (indicators) covering inter-related resources, complements scientific monitoring by measuring the cultural hauora (health) of the catchments.

This requires manawhenua identify tohu and agree on how this information will be collected, reported and used to inform catchment management.

- 3.19 Rules and incentives encourage land owners to use 'good practice management' in relation to land and water use in the catchments.

This requires the Council and Industry keep abreast of new and improved 'good practice' as these arise and this information is shared with all land and water users.

- 3.20 The effects of global warming, climate change and sea level rise are assessed by the Council as a matter of priority to monitor changes in catchment hauora (health); with particular reference to smaller water courses and the marine coastal environment.

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




<sup>44</sup> See *A Cultural Health Index for Streams and Waterways*: Indicators for recognising and expressing Māori values Report prepared for the Ministry for the Environment by Gail Tipa and Laurel Teirney (June 2003)



## D. Reciprocity

Manawhenua work in partnership with the Council to ensure that all land and water users incorporate a reciprocity measure to enhance and or restore the domain of Tangaroa (the sacred guardian of fresh and coastal waters). This approach encourages water and land users to recognise that everything they do has an impact on catchment hauora. Reciprocity measures highlight the privilege of utilising resources in the catchments, supporting an ethic of respect for ngā wai (water) and ngā whenua (land) resources.

3.21 Examples of reciprocity measures include, but are not limited to:


-  Maintaining indigenous vegetation along waterway margins to support natural filtering functions, provide shading for wai, improve water quality and enhance habitat for taonga species;
-  Stream enhancement projects, such as planting new areas with indigenous vegetation on waterway margins;
-  Pest control operations to support planting initiatives – focusing on both plant, animal and insect pests;
-  Undertaking an ecological/biodiversity assessment of life in the water body to guide further enhancement of this ecosystem; and
-  Working with manawhenua to monitor wai according to cultural indicators, in order for manawhenua to ascertain the cultural health of the receiving environment.

## 4. Cultural traditions

Manawhenua are able to drink wai and eat species collected from wai throughout the catchments, without fear of getting sick. NB: According to the traditional classification system, wai classified as Wai Mate or Wai Kino was unsuitable for drinking or harvesting species. Manawhenua stress the utmost importance of maintaining a constant focus on enhancing the mauri and wairua of water bodies, especially those that have been degraded.

Taonga species exist in healthy numbers to allow manawhenua to maintain cultural traditions and practices in the catchments over time, such as manaakitanga.

4.1 Culturally significant areas within the catchments that require protection and enhancement are identified and mapped by manawhenua.

-  This initiative would require the establishment of a manawhenua working group to access a range of funding options available to support this research.

4.2 Council and manawhenua work in partnership to consider priorities for land acquisition and associated management strategies, targeting mahinga kai/mahinga mātaimai sites/areas and wāhi tapu areas.

- 4.3 Riparian planting in the catchments focuses on culturally significant areas as a matter of priority. This includes areas where there are clusters of wāhi tapu and/or significant taonga habitats, such as wetlands and estuaries.
- 4.4 Manawhenua traditions and practices are strengthened and/or re-established for future generations.
- Manawhenua hold wānanga to establish what the cultural priorities are.
- 4.5 Te Reo names for waterways, wāhi tapu and mahinga kai are formally re-instated throughout the catchments
- This mahi requires background research to collate this information.

## HE ORANGA MOU, HE ORANGA MO MATOU, HE ORANGA MO TATOU KATOA

*A place of well being for you, for us, for all of us*



### **PART 4: MANAWHENUA COMMENTS ON FLAG WORK**

Manawhenua feedback on the Tākaka Freshwater and Land Advisory Group (FLAG) work is based on hui and working group discussion, which resulted in the development of Parts 1-3 of this report. Parts 1-3 provide the broader cultural context for feedback presented in Part 4. Therefore all four parts need to be read in conjunction with each other.

Part 4 provides an assessment of the work undertaken by FLAG and how manawhenua values, aspirations and recommendations may be integrated with this work. It also includes areas, which FLAG was unable to comment on, as they relate specifically to manawhenua moemoeā (aspirations). Excerpts from Parts 1-3 have been included in Part 4 (in italics) to support the discussion.

#### **1. Freshwater Management Unit**

Manawhenua support the extent of the Tākaka Freshwater Management Unit (FMU), with the western boundary at Tukurua and the eastern boundary being Wainui Bay; including all of the Tākaka river catchments.

Manawhenua stress the importance of key principles underpinning integrated catchment management. These principles align with manawhenua aspirations for managing natural resources according to: *Ki uta ki tai* – the flow of wai from the ngā maunga (mountains) to ngā moana (sea) and *Te Mana o te Wai* – the first right to wai is to wai itself; a principle intertwined with *Te Mana o te Whenua* (the authority of the land).

Manawhenua consider that currently, there is not enough emphasis placed on the relationships between the land, water and the coastal environment. Manawhenua consider it imperative that management decisions reflect the way in which different resources in the catchment relate to the functioning of the whole catchment. The challenge for FLAG and Council, especially given the increasing effects of climate change and cumulative effects of activities in the catchments – is to find methods to give effect to the key principles underpinning integrated catchment management. An explanation of these concepts is provided below.

***Ki uta ki tai*** – the flow of wai from the maunga to the moana.

*Wai (water) rises up from ngā moana (sea) to become the tears of Ranginui, filling ngā whenua (land) reservoirs which include: ngā maunga (sacred ancestors), tomo (caves), aquifers, ngā awa (rivers), tributaries (ribs of ngā tūpuna), ngā puna (freshwater springs), ngā roto (lakes), ngā kūkūwai (wetland filters of Papatūānuku), mahinga mātaimai (food*

*baskets of the sea) flowing back into the coastal marine area – feeding replenishing and nurturing all life in the domain of Tangaroa (sacred guardian of fresh and coastal wai).*

*Ki uta ki tai recognises the Tākaka catchments is an integrated whole. This view of nature acknowledges the relationship between all living things. In order to safeguard the integrity of wai, manawhenua consider it is essential that all activities within the catchments are managed in an integrated way.*

***Te Mana o te Wai – the first right to wai is to wai itself***

*For manawhenua, the importance of protecting the intrinsic nature of wai (water) cannot be overstated. This approach acknowledges the significance of whakapapa relationships and the mana imbued in this sacred taonga (treasure). Upholding the integrity of wai acknowledges and protects the wairua (spirit), mauri (life force) and mana of water bodies. Te Mana o te Wai and Te Mana o te Whenua are interconnected and therefore need to be considered together, when looking at ways to improve catchment hauora (health).*

*For manawhenua, connections to ngā atua kaitiaki (the sacred guardians) are fundamental to all cultural values intertwined with the catchments. Te Tinana o Te Whaea Tapu (physical landscape) refers to the body of Papatūānuku and is therefore personified in ngā whenua. All the waters in the Tākaka catchments (whether fresh or salty) are connected to the Earth Mother – wai is a sacred life force which came forth from the separation of Ranginui and Papatūānuku. Wai is all pervading and cannot be separated from the ngā whenua (land) within the Tākaka catchments*

*The wai flowing through the Freshwater Management Unit includes all surface waters – rivers, lakes, wetlands and springs – and groundwater aquifers. Wai (water) is imbued with wairua and mauri – a spirit and life force of its own. Manawhenua seek to protect this life force for future generations. Any change in the flow and energy of wai, changes the hauora (health) and personality of a water body. Mauri and wairua are intertwined with catchment hauora – recognising the interrelationships between all taonga in catchments.*

*Wai (water) originates from the domain of Tangaroa (atua of water), rising up from ngā moana (sea) to become the tears of Ranginui, filling ngā whenua (land) reservoirs which include: ngā maunga (sacred ancestors), tomo (caves), aquifers, ngā awa (rivers) and tributaries (ribs of nga tūpuna), ngā puna (freshwater springs), ngā roto (lakes), ngā kūkūwai (wetlands- filters of Papatūānuku) and mahinga mātaimai such as estuaries (food baskets of the sea), before flowing to the domain of Tangaroa (into the coastal marine area).*

The FLAG work does not specifically emphasise the relationship between fresh water and the coastal marine environments – the receiving environment of all wai flowing through the domain of Tangaora. However, manawhenua consider the two cannot be separated and recommend greater consideration is given to the way one relates to the other.

*Manawhenua draw attention to the importance of Ki uta ki tai, to replenish the coastal marine environment.*

- *Manawhenua recommend that management objectives for the coastal and marine ecosystems are developed – acknowledging the importance of coastal marine ecosystems – the receiving environment for all wai flowing through the domain of Tangaroa.*
- *Manawhenua support Council modeling of catchment loads in order to assess cumulative effects of activities on coastal ecosystems – tracking trends over time.*
- *Manawhenua consider coastal assessments essential to gain a better understanding of the hauora (health) of existing habitats and taonga species in order to determine priorities for protection.*
- *Manawhenua support Council monitoring of river plume ecosystems in order to assess: pathogens, fine sediments and nutrients (all of which have an impact on coastal ecosystems).*

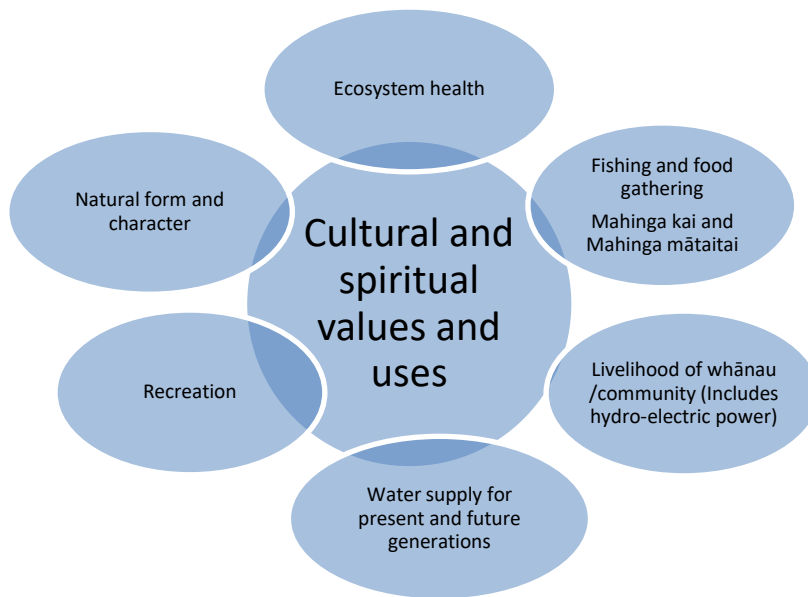
### **Assumptions about catchment management**

Manawhenua support the fundamental assumptions FLAG has made about catchment management with additional cultural components as follows:

- If the mauri (life force) is protected all other values and uses of wai will be protected.
- The current situation regarding wai quality and quantity in the Tākaka catchments is good and needs to be maintained.
- Different catchment areas have different influences on the awa (rivers) and aquifers and ngā puna such as Te Waikoropupū – management needs to reflect these connections.
- Where risks to ngā wai (water) and ngā whenua (land) are identified, it is important that management controls reflect the degree of each risk.
- Particular land use generates contaminants that can affect the quality of wai, therefore it is important to focus on managing these at source.
- Where there is uncertainty, it is important to take a precautionary approach to decision-making and monitor what is happening in order to inform future management changes.
- Wai hauora can be improved by encouraging restoration of aquatic and riparian habitat.

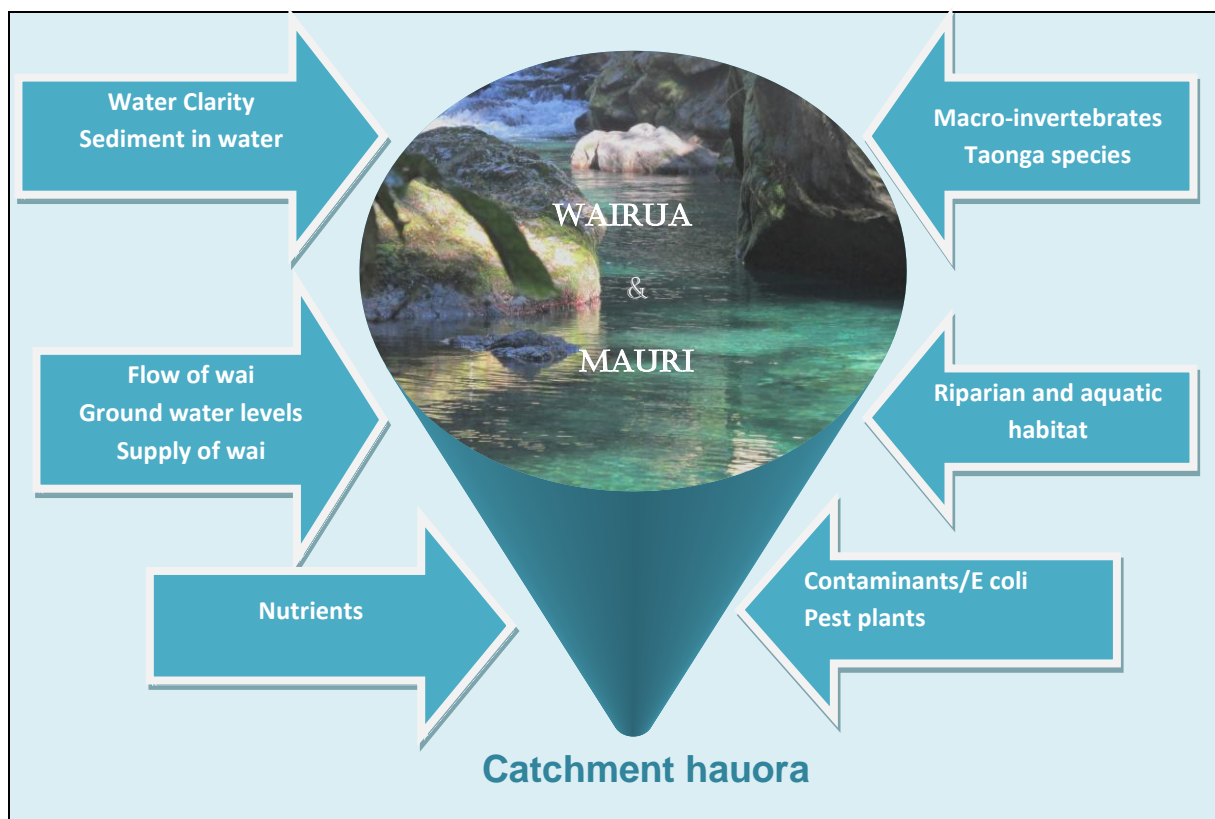
## **2. Values and uses of water**

Manawhenua support the values and uses for wai developed through the FLAG process. However, from a manawhenua perspective, ‘cultural and spiritual values’ encompass all the other values and uses. An illustration of values and uses for wai places cultural and spiritual values at the centre. Manawhenua also support the essence of the objectives FLAG defined for each value. (NB: See an adapted version of the summary of FLAG Values and Objectives in Appendix 2).



### 3. Attributes / indicators for values

FLAG also identified a number of attributes to support and enable values and uses. Manawhenua support these attributes, but recommend that the hauora (health) of the mauri (life force) and wairua (spirit) of water bodies is at the heart of catchment hauora (health). This is depicted in the diagram below.



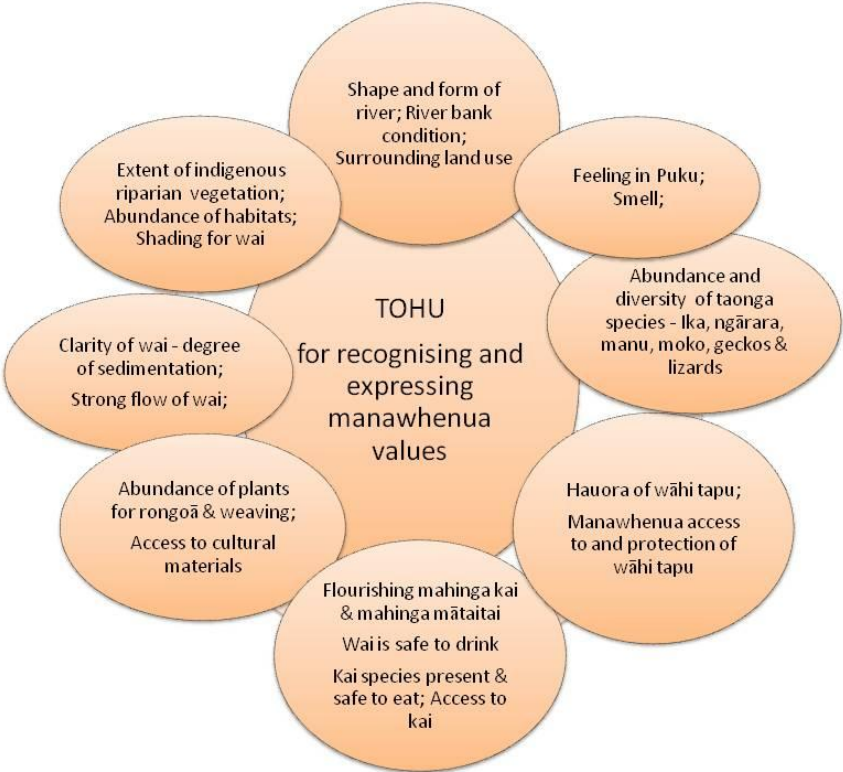
Cultural tohu (indicators) are measures of catchment hauora encompassing values associated with ngā atua kaitiaki (spiritual guardians), ngā taonga (natural treasures) and ngā tangata (the people). The presence or abundance of tohu (indicators) helps to assess



the degree to which a catchment is able to support life – this relates directly to the health of the mauri and wairua of the catchment. For manawhenua, measuring catchment hauora includes consideration of:

- Nature, size and purity of water bodies
- Individual and cumulative effects of land use on the mauri and wairua of ngā whenua and interconnected water bodies – this encompasses indigenous riparian vegetation and connectivity of species throughout catchments.
- Number, diversity and hauora of sites/areas of cultural significance, such as mahinga kai, (customary food gathering or cultivation site), wāhi tapu (a place subject to tapu to restrict access or use of the area) and mahinga mātaimai (customary seafood gathering site/shellfish bed)

It is important that cultural health monitoring is undertaken as soon as practicable by manawhenua to assess catchment hauora (health). This would complement the scientific monitoring currently being undertaken for the Tākaka catchments. A number of tohu have been identified as a basis for such assessments as follows:<sup>45</sup>



Another area of work for manawhenua to complete is the development of tohu for measuring the hauora of the coastal marine environment. This work is important if there is to be cultural health monitoring of wai throughout the domain of Tangaroa (sacred guardian of wai), according to the principle of Ki uta ki tai.

<sup>45</sup> This work was based on *A Cultural Health Index for Streams and Waterways*: Indicators for recognising and expressing Māori values Report prepared for the Ministry for the Environment by Gail Tipa and Laurel Teirney (June 2003)

#### **4. Desired states for attributes/indicators**

Manawhenua support the identification of desired states for respective attributes/indicators. It is important to reiterate that for manawhenua, improving the mauri and wairua of water bodies is the overarching aspiration, with all other indicators being measures of change in water body hauora (health). Manawhenua recommend using cultural tohu in conjunction with scientific indicators to achieve a more comprehensive picture of water body hauora across the catchments.

#### **5. Te Waikoropupū: an outstanding freshwater body**

Manawhenua support the identification of Te Waikoropupū as an outstanding water body under NPSFM. Outstanding cultural values include spiritual values such as wai tapu, wāhi tapu and measures of mauri hauora (health), such as water clarity and a strong artesian flow. It is important for manawhenua to use the cultural health index referred to in earlier sections of the report, to measure changes at Te Waikoropupū over time.<sup>46</sup>

#### **6. Methods for protecting water flows and allocating water**

Manawhenua support the key changes and approaches recommended by FLAG to protect water flows and allocation (in principle), subject to the inclusion of manawhenua perspectives as follows:

- The catchment management framework is a package of pieces that work together to achieve the desired outcomes for Te Mana o te Wai (*and Te Mana o te Whenua*).
- Cease takes are introduced so wai is only taken when there is sufficient flow to sustain life and abstraction does not affect low flows in water bodies.
- The amount of wai provided for use is set by first protecting the mauri (life force) of wai (this includes an assessment of in-stream ecological values).
- Land uses that have risks to water quality must be assessed to identify ways to reduce or minimise these risks to ngā whenua and ngā wai.
- Higher risk land use activities must be adequately set back from water bodies.
- If scientific and cultural health monitoring shows the freshwater management objectives are not being met, the Council will need to increase regulation of land use activities.
- If current land use changes to higher risk activities, then this will also trigger increased regulation by Council.

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<sup>46</sup> Refers to Gail Tipa et al work.

## Recommendations relating to the allocation of wai

*Manawhenua support a precautionary approach to water allocation; placing restrictions on water takes to protect the hauora (health) of waterways.*

- *Manawhenua support establishing flow and allocation limits according to good practice, to ensure the ongoing health of the wai and the ecosystems wai sustains*

*Manawhenua stress the importance of wai permits being allocated as a temporary gift, not a right. This acknowledges the responsibility of the current generation to look after wai and use it wisely, enabling changes in the way wai is used in the future.*

*Manawhenua support the development of clear guidelines and rules to assess the sustainability of existing water permits in relation to individual and cumulative effects on the water bodies and associated habitats:*

- *Manawhenua seek to work with the Council to develop guidelines to consider the degree of risk each water user may have on catchment hauora (health), to inform the Council process of issuing and reviewing water takes;*
- *Manawhenua emphasise the importance of maintaining a constant focus on protecting and improving catchment hauora through the assessment and management of individual user risk to water alongside the collective risk to water (focusing on both water and land use);*
- *Manawhenua support the review of the framework to regulate both wai takes and wai uses to ensure ongoing good practice;*

*Manawhenua stress the importance of not allocating all wai which is currently considered 'sustainably available' for use to:<sup>47</sup>*

- *Enable future generations to access 'sustainably available' wai; and*
- *Provide for unanticipated uses, to enable transition of water use to uses that have less environmental impact, such as rules for who can apply for water based on end use.*

*Manawhenua support incentives to promote off-line storage<sup>48</sup> of wai, where natural water bodies are unable to supply the demand for wai on a sustainable level.*

*Manawhenua consider it essential, that water bodies that are culturally and/or environmentally sensitive receive greater protection – smaller, more sensitive water bodies or those already degraded in lowland areas.*

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<sup>47</sup> This approach is all about giving effect to the practice of reciprocity – respecting relationships with sacred resources and ensuring that as kaitiaki, resources are available for all mokopuna (grandchildren). This is about appreciating the fact that there is enough wai to sustain for our current wellbeing, but if we continue to increase our demand for wai, this could impact on the health and well-being of future generations (NB: All people).

<sup>48</sup> Offline Storage is storage that is not located within the bed of a permanent or intermittent water body. For example: detention dams or tanks located on dry land or in ephemeral gullies. These might be filled by natural drainage of overland flow or by pumping or diversion from a neighbouring water body (with resource consent for the water take).

### In relation to specific catchment allocation regimes:

- **AMA Recharge Zone:** *Manawhenua support Option 2: Current allocated amount. Manawhenua stress the importance of taking a ‘precautionary approach’<sup>49</sup> to the allocation of wai (no further allocation), in particular for the area that recharges Te Waikoropupū. Te Waikoropupū is of immense significance to manawhenua, as a wāhi tapu a wai tapu and a taonga. Protecting the waters of Te Waikoropupū is integral to the spiritual and cultural well-being of manawhenua; it is a fundamental part of manawhenua identity and the maintenance of tribal traditions.*
- **Pariwhakaoho** – *that no water takes are permitted from Pariwhakaoho. This sacred ancestral awa is of particular importance for hau kaingā as it is the life blood of whānau encompassing – Taha wairua (the spiritual), Taha hinengaro (the intellectual), Taha tinana (the physical); and Taha whānau (the social).*
- **Anatoki** – *Manawhenua support Option 2: ‘90:10’ regime, as this is a more conservative precautionary approach.*
- **Upper Tākaka mainstream** – *Manawhenua support the proposed 70:15 regime with no change to the existing takes (A takes), all of which have existing cease takes. Any new takes (B takes) would have to meet the ‘70:15’ regime.*
- **Small or degraded awa** – *In addition, manawhenua seek for currently permitted takes including domestic and stock-water takes to be freshly regulated, to protect smaller sensitive water-bodies and already degraded lowland waterways (such as the Motupipi).*

## 7. Reservation of allocation for future use

Manawhenua support the reservation of wai for community supply in Tākaka Township zone allowing for potential future needs. This includes wai which may be allocated for ‘cultural reservation’ in future.

## 8. Managing land use to protect water quality

Manawhenua support the addition of a new policy on using land use control for water quality management and reference to use of an adaptive management approach.

Manawhenua support new land use rules for the entire Tākaka Freshwater Management Unit and adaptive regimes for areas influencing Te Waikoropupū.

Manawhenua support the ‘Risk to Water’ framework – including permitted activity conditions and information requirements:

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<sup>49</sup> A precautionary approach considers tohu (indicators) of water body hauora, such as the nature of the water body and the degree to which water allocation could impact on wai – for example water bodies which are sensitive to changes in water volumes and reduced flows (such as smaller water ways and wetlands); water bodies which have cultural or biological significance (such as ngā puna and river mouths); and already degraded water bodies, which are more sensitive to low flows.

- Focusing on land uses with either “High” or “Moderate” risk to water (e.g. from a cultural perspective high risks to wai includes all uses which discharge to wai and involve human and animal effluent).
- Requirement for all high or moderate risk land uses to develop ‘Risk to Water’ plans:
  - Plans to identify farm specific sources of contaminants and pathways for how these might enter water; and
  - Plans to identify management methods to address risk and timeframes for implementation these.
- Conditions to be met in addition to ‘Risk to Water’ planning including:
  - Setbacks from water bodies for specific activities (i.e. ones that create bare soil);
  - Limitations on removing or degrading riparian vegetation;
  - Stock exclusion; and
  - Specified good practice for certain activities (e.g. cultivation and break feeding).

### **Specific recommendations relating to land use<sup>50</sup>**

*Manawhenua consider it essential that further research is conducted to assess the degree of existing vegetation cover and restoration required in the catchments to reduce the risk of sediment entering wai.*

- *Manawhenua recommend comprehensive catchment mapping focusing on:  
In-stream and riparian habitat values in the catchment – alongside an assessment of habitat condition and connectedness; and  
Taonga species associated with different in-stream and riparian habitats.*
- *Manawhenua support enhancing vegetation corridors in the catchments through initiatives focused on restoring and protecting:  
riparian and biodiversity values; and  
mahinga kai values.*
- *That the risks to wai as a result of different types of land use and land use practices are identified alongside key trigger actions to protect wai through land use controls.  
Manawhenua support the proposed “Risk to Water Framework” and stress the importance of catchment management planning and decision-making being guided by a central moemoeā (an agreed catchment-wide vision); to strive to increase catchment hauora for future generations.  
Manawhenua seek participation in the identification of options for policy and planning rules and incentives to minimise the risk to water from land uses in the Tākaka catchments.*
- *Good management practice (GMP) is required for all water users and land users as a matter of course, to protect the mauri and wairua of wai.*

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<sup>50</sup> See pg 23 & 24

*Requires a review of land use practices, looking at best practice management to minimise nutrients, sediment, effluent and pathogens entering wai and impacts on aquatic and riparian habitat.*

*Consider the degree to which different land uses and associated practices impact on soil and land hauora (i.e. contaminant risk and soil loss).*

*Manawhenua support the development of rules for stock exclusion, fencing setbacks, forestry buffers from water courses and restoration planting.*

*Manawhenua consider education an essential part of encouraging the use of 'good management practice'.*

■ *Manawhenua support the mapping of currently fenced off waterways. For those not yet fenced, to focus on fencing high priority areas, such as natural wetlands, mahinga kai and wāhi tapu, as a matter of urgency.*

■ *Manawhenua support discharges to whenua (land) over those to wai (water) in order to protect the integrity of water bodies.*

*Manawhenua recommend stronger rules and incentives are put in place to avoid contaminant discharges to wai, as these are culturally abhorrent.*

## **9. Additional protection of Te Waikoropupū**

Manawhenua support the suggested Te Waikoropupū Springs Exclusion Zone:

- No new AMA bores within 1km of main spring.
- No new AMA water takes within 1km of main spring.

Manawhenua support an adaptive approach for the recharge area, based on water quality at Te Waikoropupū.

Manawhenua support an adaptive approach, based on land use change in the recharge area. (i.e. If land use changes to a higher risk, land use or land use intensifies – resource consent is required (controlled activity)).

Manawhenua support the suggested Te Waikoropupū Surface Catchment Zone requirements. Additional requirements for surface catchments that drain to water bodies in Te Waikoropupū Reserve:

- A specific setback of 100 metres from water bodies in the Reserve for specific activities, such as point sources including: effluent disposal, onsite wastewater systems, offal/refuse pits and silage storage); and
- A requirement and support for restoration of riparian vegetation for water bodies in this area.



## 10. Encouraging riparian vegetation restoration and protection

Manawhenua support the addition of new policy around the importance of riparian vegetation for ecosystem health, water quality, biodiversity and mahinga kai.

Manawhenua support a “backstop rule” requiring implementation of approved riparian restorations plans by 2050, with the understanding that prior to this date non-regulatory promotion and support of restoration is proposed.

Recommendations on riparian vegetation restoration and protection (from Part 3) include:

- *Manawhenua partners with the Mohua community to increase riparian planting and associated pest control in the catchments.*
- *Manawhenua recommend that the Council support and assist in the co-ordination of catchment-wide restoration initiatives.*
- *Manawhenua support Council adoption of stronger polices and rules to avoid the removal of existing vegetation for riparian areas.*
- *Manawhenua support Council adoption of policies, rules and non-regulatory methods to support planting and pest control initiatives on private land.*
- *Culturally significant areas are identified and mapped by manawhenua for restoration and enhancement within the catchments (for example areas with significant indigenous vegetation such as wetlands, awa (rivers) with high native fish diversity (such as the Onekaka), river mouths and estuarine areas (such as the Motupipi), the interface between fresh and salt water ecosystems.*
- *Vegetation corridors within the catchments support a greater diversity of habitats and species (Linking in with other initiatives, such as Project Divine and Project Mohua).*
- *Manawhenua recommend that the Council assist in the development of a catchment-wide pest control plan to complement community-driven restoration and enhancement initiatives.*

## 11. Added protection for karst sinkholes

Manawhenua note that there is already a rule (chapter 36, rule 36.1.5.1) making discharges (soil, debris, offal, effluent, etc) to sinkholes a discretionary activity that requires resource consent. However, manawhenua support specific reference to karst sinkholes to be added to the discharges rule cascade, to create more consistent protection.

Manawhenua support further definition of sinkholes depending on how direct their connection to groundwater is, based on how long they hold water and whether filtering of water is likely to occur as follows:

- Those that hold water permanently (closed sinkholes) are managed as lakes.
- Those that have a distinct hole at their base, into which streams of water can flow freely (open sinkholes), are managed in a similar way to rivers (stock exclusion required, and planting encouraged).

- Those that have no distinct hole and where water is likely to drain through layers of soil and gravels before entering groundwater (and are likely to be filtered) are managed in the same way as surrounding land.

## 12. Key definitions

Manawhenua support new terms to be defined in the Tasman Resource Management Plan.

### 12.1 Te Waikoropupū

For the purpose of the Tasman Resource Management Plan (TRMP), Te Waikoropupū is defined as: “*Te Waikoropupū Springs includes all water bodies within the Te Waikoropupū Springs Scenic Reserve*” as already listed in the TRMP as a note under rule 28.3.2.1.

### 12.2 Names used for water management zones

Refer to draft map provided for names and spatial extent on page 8.

Note the AMA Recharge, Lower AMA and Coastal margin zones are overlapping with the other zones to produce a 3-D management framework which reflects the groundwater bodies and differing management needs.

## 13. Non-regulatory methods

### 13.1 Riparian and aquatic habitat restoration

Manawhenua support riparian and aquatic habitat restoration and recommend the Council review how it can best support and grow existing riparian and habitat restoration efforts, especially through partnering and education with:

- Support for ongoing provision of subsidy funding for fencing and restoration efforts; and
- The development of a catchment-wide restoration plan.

### 13.2 Investigations and monitoring

#### Water quality monitoring

Manawhenua support on-going water quality monitoring (see Section 14) including:

- New attributes/indicators (e.g. Baseline sampling of dissolved oxygen and clarity at the springs, dissolved organic carbon at Lindsay’s Bridge);
- New sites (e.g. Lindsay’s Bridge has been added to the Rivers State of the Environment Monitoring programme);
- On-site wastewater auditing – especially for areas overlying aquifer recharge and karst sinkholes; and
- Further monitoring and investigation into understanding Te Waikoropupū and the Arthur Marble aquifer (including stygofauna).

#### Understanding land use risks

Manawhenua support the proposed onsite wastewater auditing, especially in areas overlying aquifer recharge and karst sinkholes.

### **13.3 Education and Advocacy**

Manawhenua support further education and advocacy for uptake of good management practice and restoration of water bodies in the Tākaka catchments.

### **13.4 Tākaka Catchment Management Planning**

Manawhenua support the programmed catchment management project for Tākaka town that will look at implementation of the National Policy Statement for fresh water in the urban area.






## **14. Catchment management areas requiring greater emphasis**

Manawhenua acknowledge that the Council already under takes regular monitoring as part of their State of the Environment Programme including rainfall, river and spring flows, groundwater levels and surface and groundwater quality, estuary health and fish species. However, further monitoring is required to fully understand catchment hauora (health), including monitoring of riparian and aquatic hauora, species biodiversity, cultural health indicators and the risks posed by current and changing land uses.

### **14.1 Monitoring catchment hauora**

This section emphasises the importance of good baseline information in order to improve decisions about catchment management.

*Manawhenua consider it essential that the Council assesses all activities in the Tākaka catchments in relation to their impact on water quality, habitat health and species biodiversity, which are all intertwined with cultural values. This is an opportunity for the Council to work with manawhenua to gain a better understanding of cultural values in the catchments. Key recommendations include:*

-  *Catchment hauora (health) monitoring information (water quality, habitat health and species biodiversity) informs decision-making and corresponding changes are made to the Council's policies, rules and non-regulatory methods.*
-  *Existing and new monitoring places mauri and wairua at the centre of catchment hauora (health) (See diagram on page:36).*
-  *Manawhenua identify and apply cultural health indicators for both fresh and salt water ecosystems in order to increase the information base to guide/inform catchment management.<sup>51</sup>*
-  *That the manawhenua classification system for wai is used as a framework to evaluate different water bodies in the catchments according to their spiritual, intellectual, physical and social qualities.*
-  *Cultural tohu (indicators) across all resources in the catchments complement scientific monitoring by measuring the cultural hauora (health) of the catchments. This requires manawhenua identify tohu and agree on how this information will be collected, reported and used to inform catchment management.*

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<sup>51</sup> See *A Cultural Health Index for Streams and Waterways: Indicators for recognising and expressing Māori values Report* prepared for the Ministry for the Environment by Gail Tipa and Laurel Teirney (June 2003)

■ *Rules and incentives encourage land owners to use ‘good practice’ in relation to land and water use in the catchments.*

*This requires the Council and Industry keep abreast of new and improved ‘good practice’ as these arise and this information is shared with all land and water users.*

■ *The effects of global warming, climate change and sea level rise are assessed by the Council as a matter of priority, to assess any change in relation to risks to catchment hauora (health); with particular reference to smaller water courses and the marine coastal environment.*

## **14.2 Reciprocity**

*Manawhenua work in partnership with the Council to ensure that all land and water users incorporate a reciprocity measure (some of which are identified below) to enhance and or restore the domain of Tangaroa (the sacred guardian of fresh and coastal water). This approach encourages water and land users to recognise that everything they do has an impact on catchment hauora. Reciprocity measures highlight the privilege of utilising resources in the catchments, supporting an ethic of respect for ngā wai (water) and ngā whenua (land) resources. Examples of reciprocity measures include, but are not limited to:*

- *Maintaining indigenous vegetation along waterway margins to support natural filtering functions, provide shading wai, improve water quality and enhance habitats for taonga species;*
- *Stream enhancement projects, such as planting new areas with indigenous vegetation on the waterway margins;*
- *Pest control operations to support planting initiatives – focusing on plant, animal and insect pests;*
- *Undertaking an ecological/biodiversity assessment of the life in a water body to guide future enhancement efforts; and*
- *Working with manawhenua to monitor wai according to cultural indicators in order to assess the cultural health of the receiving environment.*

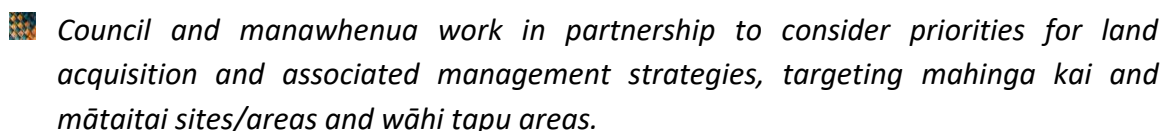
## **14.3 Cultural traditions**

*Manawhenua are able to drink wai and eat species collected from wai throughout the catchments, without fear of getting sick. NB: According to the traditional classification system, water classified as Wai Mate or Wai Kino was unsuitable drinking or harvesting species. Manawhenua stress the importance of maintaining a constant focus on enhancing the mauri and wairua of wai, especially where water bodies have been degraded.*

*Taonga species exist in healthy numbers to allow manawhenua to maintain cultural traditions and practices in the catchments over time, such as manaakitanga.*

■ *Culturally significant areas within the catchments that require protection and enhancement are identified and mapped by manawhenua.*

*Such an initiative would require the establishment of a manawhenua working group to access funding to support this research.*

 Council and manawhenua work in partnership to consider priorities for land acquisition and associated management strategies, targeting mahinga kai and mātaimai sites/areas and wāhi tapu areas.

## 15. Additional messages to Council

Manawhenua support the additional messages to Council from FLAG discussions, which relate to wider catchment management issues (in principle), subject to a few wording changes as follows:

**Promote rainwater harvest** (e.g. individual rainwater tanks), where this will not impact housing affordability.

**Promote offline water storage for production use** (e.g. storage that is not within a water body) and associated water harvest during times of higher flows, while protecting flow variability and flushing flows of source water bodies.

**Promote non-consumptive uses of water** (e.g. hydro-electric power generation) where these do not impact on wai hauora, by ensuring associated regulation is clear and streamlined.

**Review Council's engineering methods for river management** – including rock lining approaches, to determine appropriate methods that provide for flood management, while also providing for ecological health requirements and avoiding damage or loss to in-stream and riparian habitat values, and culturally or locally important sites.

**Review the resourcing and efficacy of compliance efforts** – there is a public perception that existing compliance efforts are insufficient to protect water health, in particular dealing with noncompliant users. More effort and more transparency are important to improve community confidence in this vital part of the resource management process.

**Undertake more monitoring** – requires funding, including cultural health monitoring.

**Undertake more reporting back to the community** and in ways they understand and access.

**Initiate discussions with the Department of Conservation and manawhenua** on the management of whitebait.

**Review the effects and regulation of tree removal undertaken for irrigation installation**

**Improve the water transfer system** to enable improved water use efficiency. Other Councils (e.g. Marlborough) are developing online systems for water transfer that streamline the water transfer process, so better use is made of allocated water.

## GLOSSARY

This glossary contains cultural values and terms referred to in this report, which manawhenua consider may require further explanation. Māori words not included in this Glossary are translated as they arise throughout the report.

**Whanaungatanga** Nuclear and extended family relationships are extremely influential in Māori culture. For manawhenua, whanaungatanga relationships are everything – the relationships between people, the relationships between people and the physical world, and the relationships between people and the spiritual world.

**Whakapapa** Genealogy connections are the basis of all relationships. Every living thing is related through whakapapa. It is customary practice when speaking in formal settings for manawhenua to identify where they come from in relation to other iwi, as well as recite the relationship that connects them to the natural world – such as the whenua (land), maunga (mountains) and awa (rivers). This practice reinforces the belief that all things have the same origin and that the wellbeing of the whole environment determines the wellbeing of manawhenua.

**Mauri,**  
**Wairua** Mauri is often described as ‘life force’ or ‘life principle’ of a place or being. It is an expression of the hauora (health) of that place or being. Mauri is derived from Io (the creator of all things) and gives being and form to everything in the universe. Wairua (spirit) is closely associated with mauri, because the spiritual and physical body is joined together as one by the mauri. Therefore everything has a mauri, including tangata (people), whenua (land), moana (sea), awa (rivers), ngāhere (forests), ika (fish), manu (birds) and ngārara (insects). All life has spiritual and physical elements – tangible and intangible – all of which are essential for wellbeing. Tohu (indicators) include the presence and abundance of species, fit for all cultural purposes.

The presence of mauri in all things entrusts manawhenua to appreciate and respect wāhi taonga (sacred resources) and try to protect, restore and enhance the mauri of all living things.

**Tapu** A person, place or thing that is prohibited, restricted, set apart, forbidden or under atua protection is tapu – tapu removes the person, place or thing from the sphere of the everyday into the sphere of the sacred. Traditionally, tapu was used as a way to control how people behaved towards each other and the environment, placing restrictions upon society to ensure that people flourished. Rangatira and tohunga (acting as channels for the atua) could apply tapu; these restrictions can be removed with water, food or karakia (prayer) Ngā taonga in the natural world all originate from one of the atua and therefore to appease the atua, karakia were carried out before and after harvesting. When tapu is removed, things become noa – a process called whakanoa.

**Hui,**  
**Karakia** It is customary practice for manawhenua to open and close hui (meetings) with a karakia (prayer). Io recited a karakia before he created the universe, and Tāne Mahuta (spiritual guardian of the forest) recited a karakia to gain the necessary powers to separate his parents. Karakia can be directed to the universe, tūpuna



(ancestors), an iwi (tribe), hapu (sub-tribe), whānau (family) or an individual. Karakia may also be offered to specific atua, with the intention that the atua may provide guidance and comfort to tangata whenua in whatever activity is being undertaken.

**Kaitiakitanga** Kaitiakitanga is the responsibility passed down from the tūpuna (ancestors), for present day whānau and hapū to maintain and enhance a safe and healthy environment. Although sourced in spiritual values, kaitiakitanga is expressed as a practical means to control and regulate the actions of tangata (people). Kaitiakitanga is guided by mātauranga Māori (Māori knowledge) and practiced according to kawa, tikanga and kaitiaki roles, providing protection of ngā taonga and restoration and enhancement of ecosystems, but also the utilisation of resources.

**Mana** Mana can be described as the mandate or authority to manage, control and maintain relationships with ngā taonga (sacred resources) in the rohe. Mana is gained through whakapapa (genealogy), but can also be earned or acquired through raupatu (conquest). For example, the mana of a tribe increases with the wise management and use of natural resources within their rohe.

**Rahui** Rāhui is a temporary prohibition on an area or behaviour. Commonly rahui is used to protect a resource and allowing for restoration. A rāhui is lifted and an area returned to general use, when it is considered that a resource has been restored to an acceptable level.

**Utu** Utu refers to the maintenance of balance and harmony in relationships between individuals and groups. It is closely linked to mana and relates to reciprocity of all deeds. Gift exchange is a major component of utu, creating reciprocal obligations on the parties involved and establishing permanent and personal relationships.

**Mātauranga** Traditional and present day mātauranga (knowledge). Mātauranga originates from nga tūpuna and includes cultural perspectives of the world, manawhenua creativity and cultural practices relating to both the spiritual and natural world. Mātauranga is an evolving body of knowledge, ever growing and expanding over time.

One way in which mātauranga is communicated from one person to another and from one generation to another is through waiata (song). There are many types of waiata; some contain information on whakapapa, others contain beliefs concerning the atua, and some provide guidance on tikanga. Mātauranga is also passed between people through the use of karakia (prayer) and whakatauki (proverbs).

**Tikanga, kawa, Tangata tiaki** Guiding the relationship with the natural world are the concepts of tikanga (customary practices) and kawa (rules) which govern the behaviour of Tangata tiaki (human guardians). Tikanga is based on manawhenua values and is handed down from generation to generation. The term kawa (“the right way of

doing things”) is often used in association with tikanga. Kawa covers the rules of etiquette surrounding everyday life of whānau (family), hapu (sub-tribe) and iwi (tribe). Examples of manawhenua tikanga include: whakapapa (relationship connections), whaikōrero (formal speeches), karakia (prayer) and waiata (song/singing).

**Manaakitanga**

Manaakitanga is the term used to describe unqualified acts of giving. It includes the customary practice of koha, (the giving and receiving of gifts) and is often expressed through the provision of kai (food) to manuhiri (visitors). Manawhenua demonstrate respect for the mana (status) of their guests by providing them with local delicacies. This act of giving reflects the reputation of the manawhenua as the hosts, as the abundance of the kai provided, reflects their ability as rangatira (chiefs) and kaitiaki (guardians) to sustain local resources and cultural traditions.

**Mauri**

Life force, vital essence, special nature – a material symbol of a life principle, source of emotions; the essential quality and vitality of a being or entity. Also used for physical objects, individuals, ecosystems or social groups in which this essence is located. Mātauranga (knowledge) and associated practices are based on managing ngā taonga to sustain their hauora (health) – to sustain their mauri (life force) and protect their wairua (spiritual essence) for future generations.

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## APPENDIX ONE

## Taonga Species List

### PLANTS

| NAME IN MĀORI                | NAME IN ENGLISH           | SCIENTIFIC NAME   | SIGNIFICANCE   |
|------------------------------|---------------------------|---|--|
| <b>Akatorotoro</b>           | White rātā vine           | Metrosideros perforata<br>Metrosideros colensoi<br>Metrosideros diffusa | Koauau, kete, hinaki, traps  |
| <b>Akatawhitawhi</b>         | Scarlet rātā vine         | Metrosideros fulgens  | Kete, hinaki, traps, Rongoā  |
| <b>Akeake</b>                | Akeake                    | Dodonaea viscosa  | Taiaha, patu, rakau (hard and heavy), ko   |
| <b>Hangehange</b>            | NZ privet                 | Geniostoma rupestre var. ligustrifolium                                 | Rongoā   |
| <b>Harakeke</b>              | Flax<br>(and cultivars)   | Phormium tenax  | Raranga, kai (nectar, oil from seeds), rongoā, hinaki, kete, muka, binding, ropes, korari for waka |
| <b>Hīnau</b>                 | Hīnau                     | Elaeocarpus dentatus  | muka dye, kai (flesh of fruit), koauau, urupa  |
| <b>Horoeka</b>               | Lancewood                 | Pseudopanax crassifolius  | Tokotoko, rongoā   |
| <b>Horopito</b>              | Pepper tree               | Pseudowintera colorata<br>Pseudowintera axillaris                       | Kai, flavouring, smoking fish, rongoā  |
| <b>Houhere</b>               | lacebark                  | Hoheria sexstylosa var. ovata   | Rongoā, raranga  |
| <b>Kahikatea</b>             | White pine<br>Kahikatea   | Dacrycarpus dacrydioides  | Rongoā, gum burnt for soot – pango, kai  |
| <b>Kaikomāko</b>             | Kaikomāko                 | Pennantia corymbosa   | Fire making, koauau  |
| <b>Kanono,<br/>Raurēkau</b>  | Coprosma                  | Coprosma grandifolia  | Kai, fibre dye, very important rongoā  |
| <b>Kānuka</b>                | Kānuka<br>Sand kānuka     | Kunzea ericoides<br>Kunzea arenaria                                     | Flavouring kai, oil, rakau for patu, hafts, handles, hangi   |
| <b>Karaka</b>                | Karaka                    | Corynocarpus laevigatus   | Kai, rongoā  |
| <b>Karamea ,<br/>Taramea</b> | Spaniard<br>Speargrass    | Aciphylla glaucescens<br>Aciphylla ferox                                | Kai, rautangi (fragrance)  |
| <b>Karamu</b>                | Coprosma                  | Coprosma robusta<br>Coprosma lucida                                     | Kai, rongoā  |
| <b>Kareao</b>                | Supplejack                | Ripogonum scandens  | Kai, kete, traps, tongs, rongoā  |
| <b>Karengo</b>               | Red seaweed               | Porphyra columbina  | Kai, agar  |
| <b>Karetu</b>                | Holy grass, cyanide grass | Hierochloa redolens   | Rautangi (fragrance), raranga  |
| <b>Kawaka</b>                | Lowland cedar             | Libocedrus plumosa  | Rakau (durable)  |
| <b>Kawakawa</b>              | Pepper tree               | Macropiper excelsum ssp. excelsum                                       | Rongoā, tangi  |
| <b>Kiekie</b>                | Kiekie                    | Freycinetia banksii   | Raranga, tukutuku, kai, binding toki   |
| <b>Kohekohe</b>              | NZ mahogany               | Dysoxylum spectabile  | Rongoā, rakau very decorative  |

| NAME IN MĀORI                       | NAME IN ENGLISH                     | SCIENTIFIC NAME  | SIGNIFICANCE  |
|-------------------------------------|-------------------------------------|--|---|
| <b>Kōhia</b>                        | NZ passion flower                   | Passiflora tetrandra   | Kai , carrying fire   |
| <b>Kōkihi</b>                       | NZ spinach                          | Tetragonia implexicoma<br>Tetragonia tetragonioides  | Kai, hangi  |
| <b>Kopoti</b>                       | NZ aniseed                          | Anisotome aromatic   | Kai, rautangi (fragrance)   |
| <b>Koromiko</b>                     | Koromiko                            | Hebe salicifolia<br>Hebe leiophylla  | Rongoā , koauau   |
| <b>Kōtukutuku</b>                   | Tree fuchsia                        | Fuchsia excorticata  | Kai, rongoā   |
| <b>Kōwhai</b>                       | Kōwhai                              | Sophora microphylla<br>Sophora longicarinata   | Rongoā, rakau koauau, bowls, tool handles, dye                            |
| <b>Kuta</b>                         | Tall spike rush                     | Elaeocharis sphacelata   | Raranga whariki   |
| <b>Mahoe</b>                        | Whiteywood                          | Melicytus ramiflorus   | Fire making, hangi, rongoā  |
| <b>Makomako</b>                     | Wineberry                           | Aristotelia serrata  | Rongoā, kai, koauau   |
| <b>Maku</b>                         | Hen and chicken fern<br>Shield fern | Asplenium bulbiferum   | Kai   |
| <b>Pikopiko</b>                     |                                     | Polystichum richardii  | Kai   |
| <b>Māmaku</b>                       | Black tree fern                     | Cyathea medullaris   | Kai, rongoā, whare building, fire lighting                                |
| <b>Ponga</b>                        | Silver fern                         | Cyathea dealbata   |   |
| <b>Whekī</b>                        | Rough tree fern                     | Dicksonia squarrosa  |   |
| <b>Whekīponga</b>                   |                                     | Dicksonia fibrosa  |   |
| <b>Manoao</b>                       | Silver pine<br>Yellow pine          | Manoao colensoi<br>Lepidothamnus intermedius   | Koauau, rakau (durable), rautangi (fragrance)                             |
| <b>Mānuka</b>                       | Tea tree                            | Leptospermum scoparium   | Rongoā,kai, oil, rakau for tools, hafts, ko, smoking and flavouring kai   |
| <b>Mātai</b>                        | Black pine<br>Mātai                 | Prumnopitys taxifolia  | Puoro, waka, whakairo (carving)<br>Po, rakau, rongoā (antiseptic)         |
| <b>Matangoa</b>                     | Cress                               | Rorippa divaricata   | Kai, hangi, threatened species  |
| <b>Mingimingi</b><br><b>Tūmingi</b> | Mingimingi                          | Leucopogon fasciculatus<br>Leptecpphylla juniperina  | Rongoā  |
| <b>Miro</b>                         | Brown pine<br>Miro                  | Prumnopitys ferruginea   | Rakau, pahu (a very resonant wood), koauau, Rongoā, oil, insecticide, dye |
| <b>Nau</b>                          | Peppergrass<br>Scurvy grass         | Lepidium banksii<br>Lepidium oleraceum   | Kai, endangered species, associated with titi                             |
| <b>Naupiro</b>                      | Burnett aniseed                     | Gingidia haematitica   | Rautangi (fragrance), endangered species, endemic to Mohua                |
| <b>Neinei</b>                       | Grass trees                         | Dracophyllum elegantissimum<br>Dracophyllum traversii<br>Dracophyllum townsonii<br>Dracophyllum latifolium | Raranga (rain capes), ornamental leaves, tokotoko                         |
| <b>Ngaio</b>                        | Ngaio                               | Myoporum laetum  | Rongoā, insecticide   |
| <b>Nīkau</b>                        | Nīkau palm                          | Rhopalostylis sapida   | Rongoā, whare   |
| <b>Patē</b><br><b>Patete</b>        | Seven finger                        | Schefflera digitata  | Rongoā  |
| <b>Pinātoro</b>                     | NZ daphne                           | Pimelea prostrata<br>Pimelea carnosa   | Rongoā  |
| <b>Pīngao</b>                       | Sand sedge                          | Ficinia spiralis   | Raranga , kai hangi, legend   |
| <b>Piripiri</b>                     | Bidibid                             | Acaena anserinifolia   | Rongoā  |

| NAME IN MĀORI          | NAME IN ENGLISH                                  | SCIENTIFIC NAME  | SIGNIFICANCE   |
|------------------------|--|--|--|
| <b>Pirirangi</b>       | Red flowered beech mistletoe                     | <i>Peraxella tetrapetala</i>                                 | Kai manu, endangered species   |
| <b>Pirita Korukoru</b> | Scarlet flowered beech mistletoe                 | <i>Peraxilla colensoi</i>                                    | Kai manu, endangered species   |
| <b>Poroporo</b>        | Poroporo   | <i>Solanum laciniatum</i><br><i>Solanum aviculare</i>        | Rongoā, koauau   |
| <b>Pukatea</b>         | Pukatea  | <i>Laurelia novae-zelandiae</i>                              | Rongoā, rakau for hoe  |
| <b>Rahurahu</b>        | Bracken fern<br>Fern root                        | <i>Pteridium esculentum</i>                                  | Kai, Rongoā  |
| <b>Rangiora</b>        | Rangiora   | <i>Brachyglottis repanda</i>                                 | Rongoā   |
| <b>Rātā</b>            | Southern rātā<br>Northern rātā                   | <i>Metrosideros umbellata</i><br><i>Metrosideros robusta</i> | Rakau patu, taiaha, tokotoko, koauau, rongoā   |
| <b>Raukawa</b>         | Raukawa  | <i>Raukawa edgerleyi</i>                                     | Rautangi   |
| <b>Raupō</b>           | Bulrush  | <i>Typha orientalis</i>                                      | Tukutuku, kai, whare, rongoā   |
| <b>Rengarenga</b>      | Renga lily                                       | <i>Arthropodium cirrhatum</i>                                | Kai, rongoā  |
| <b>Rimu</b>            | Red pine<br>Rimu                                 | <i>Dacrydium cupressinum</i>                                 | Kai, hangi, rakau, burnt gum for soot, pango   |
| <b>Rōhutu</b>          | Heart-leaved myrtle                              | <i>Lophomyrtus obcordata</i>                                 | Rakau, handles and hafts, oil  |
| <b>Tānekaha</b>        | Celery pine                                      | <i>Phyllocladus trichomanoides</i>                           | Rakau, taiaha, koauau, tokotoko, dye and tanning, Rongoā   |
| <b>Tangata upoko</b>   | Coastal cutty grass                              | <i>Cyperus ustulatus</i>                                     | Raranga, nets, whare   |
| <b>Tarata</b>          | Lemonwood<br>Kahurangi pittosporum               | <i>Pittosporum eugenioides</i><br><i>Pittosporum dallii</i>  | Chewing gum.<br>Rakau for koauau, rare tree only found in Mohua  |
| <b>Tātārāmoa</b>       | Bush lawyer                                      | <i>Rubus australis</i><br><i>Rubus schmidelioides</i>        | Rongoā   |
| <b>Ti kīuka</b>        | Cabbage tree                                     | <i>Cordyline australis</i>                                   | Kai, raranga   |
| <b>Titoki</b>          | Titoki   | <i>Alectryon excelsus</i> ssp. <i>excelsus</i>               | Oil from seeds, Rongoā, insecticide, rakau, koauau   |
| <b>Toetoe</b>          | Toetoe   | <i>Austroderia richardii</i>                                 | Raranga, tukutuku, Rongoā, legend  |
| <b>Toi</b>             | Mountain cabbage tree                            | <i>Cordyline indivisa</i>                                    | Raranga, muka  |
| <b>Tōtara</b>          | Tōtara   | <i>Podocarpus totara</i><br><i>Podocarpus hallii</i>         | Kai, Rongoā, bark for containers, torches, rakau for waka, bark for caulking, durable, carving, pou, building. |
| <b>Tutu</b>            | Toot   | <i>Coriaria arborea</i>                                      | Rongoā, kai, koauau.   |
| <b>Wharariki</b>       | Coastal flax<br>Mountain flax<br>(and cultivars) | <i>Phormium cookianum</i>                                    | Raranga, muka, kete, Rongoā, kai, (nectar), korari used  |
| <b>Whau</b>            | Cork wood  | <i>Entelea arborescens</i>                                   | Rakau for net floats, koauau, Rongoā   |
| <b>Whauwhau - paku</b> | Fivefinger                                       | <i>Pseudopanax arboreus</i>                                  | Rakau for koauau   |
| <b>Wīwī</b>            | Rushes   | <i>Juncus pallidus</i>                                       | Raranga, kete  |



## BIRDS

| MĀORI NAME             | ENGLISH NAME              | SCIENTIFIC NAME                                   |
|------------------------|---------------------------|---|
| Huahou                 | Knot                      | <i>Calidris canutus</i>                           |
| Kahu                   | Harrier hawk              | <i>Circus approximans</i>                         |
| Kākā                   | Kākā                      | <i>Nestor meridionalis</i>                        |
| Kākariki               | Red crowned parakeet      | <i>Cyanoramphus novaezelandiae novaezelandiae</i> |
| Kārearea               | NZ falcon                 | <i>Falco novaeseelandiae</i>                      |
| Kareke                 | Marsh crane               | <i>Porzana pusilla affinis</i>                    |
| Karoro                 | Black backed gull         | <i>Larus dominicanus</i>                          |
| Kāruhiruhi             | Pied shag                 | <i>Phalacrocorax varius</i>                       |
| Kawaupaka              | Little pied shag          | <i>Phalacrocorax melanoleucos</i>                 |
| Kawau tua whenua       | Black shag                | <i>Phalacrocorax carbo</i>                        |
| Kea                    | Mountain parrot           | <i>Nestor notabilis</i>                           |
| Kererū                 | Pigeon                    | <i>Himiphaga novaeseelandiae</i>                  |
| Koekoeā                | Long tailed cuckoo        | <i>Eudynamys taitensis</i>                        |
| Korimako               | Bellbird                  | <i>Anthornis melanura</i>                         |
| Kororā                 | Cook Strait blue penguin  | <i>Eudyptula minor variabilis</i>                 |
| Kōtare                 | kingfisher                | <i>Halcyon sancta vagans</i>                      |
| Kōtuku                 | White heron               | <i>Egretta alba</i>                               |
| Kōtuku ngutupapa       | Royal spoonbill           | <i>Platalea leucorodia regia</i>                  |
| Kuaka                  | Eastern Bar-tailed godwit | <i>Limosa lapponica baueri</i>                    |
| Kuru whengu            | New Zealand shoveler      | <i>Anas rhynchotis variegata</i>                  |
| Mātātā                 | South Island Fernbird     | <i>Bowdleria punctata punctata</i>                |
| Matuku hūrepo          | Australasian bittern      | <i>Botaurus stellaris poiciloptilus</i>           |
| Matuku moana           | Reef heron                | <i>Egretta sacra</i>                              |
| Miromiro               | Tomtit                    | <i>Petroica macrocephala macrocephala</i>         |
| Moho pererū            | Banded rail               | <i>Rallus phillippensis</i>                       |
| Mōhua                  | Yellowhead                | <i>Mohoua ochrocephala</i>                        |
| Pakahā                 | Fluttering shearwater     | <i>Puffinus gavia</i>                             |
| Pāpango                | Scaup                     | <i>Aythya novaeseelandiae</i>                     |
| Pārekareka             | Spotted shag              | <i>Stictocarbo punctatus</i>                      |
| Pārera                 | Grey duck                 | <i>Anas superciliosa superciliosa</i>             |
| Pihipihi , tauhou      | Silvereye                 | <i>Zosterops lateralis lateralis</i>              |
| Pihoihoi               | New Zealand pipit         | <i>Anthus novaeseelandiae</i>                     |
| Pīpipi                 | Brown creeper             | <i>Finschia novaeseelandiae</i>                   |
| Pīpīwharauoa           | Shining cuckoo            | <i>Chrysococcyx lucidus lucidus</i>               |
| Pītoitoi               | South Island robin        | <i>Petroica australis australis</i>               |
| Piwakawaka             | Fantail                   | <i>Rhipidura fuliginosa</i>                       |
| Poaka                  | Pied stilt                | <i>Himantopus himantopus leucocephalus</i>        |
| Pohowera,<br>Turiwhatu | Banded dotterel           | <i>Charadrius bicinctus</i>                       |
| Pūkeko                 | Swamp hen                 | <i>Porphyrio porphyrio melanotus</i>              |

| MĀORI NAME   | ENGLISH NAME                              | SCIENTIFIC NAME  |
|--------------|---|--|
| Pūtangitangi | Paradise duck                             | Tadorna variegata  |
| Riroriro     | Grey warbler                              | Gerygone igata   |
| Roa          | Great spotted kiwi<br>Little spotted kiwi | Apteryx haastii<br>Apteryx owenii  |
| Ruru         | Morepork                                  | Ninox novaeseelandiae<br>novaeseelandiae                                 |
| Tākāpu       | Australasian gannet                       | Sula bassana serrator  |
| Taranui      | Caspian tern                              | Hydroprogne caspia   |
| Tara         | White fronted tern                        | Sterna striata   |
| Tarāpunga    | Red billed gull                           | Larus novaehollandiae scopulinus   |
| Titi         | Sooty shearwater<br>Common diving petrel  | Puffinus griseus<br>Pelecanoides urinatrix                               |
| Titipounamu  | South Island Rifleman<br><br>Rock wren    | Acanthisitta chloris chloris<br>Xenicus gilviventris                     |
| Tōrea        | South Island pied oystercatcher           | Haematopus ostralegus finschi  |
| Torea pango  | Variable oystercatcher                    | Haematopus unicolor  |
| Toroa        | Albatrosses,<br>Mollymawks                | Diomedea epomophora<br>Diomedea exulans<br>Diomedea melanophrys impavida |
| Tui          | Parson bird                               | Prothemadera novaeseelandiae   |
| Weka         | Western weka                              | Gallirallus australis australis  |
| Whio         | Blue duck                                 | Hymenolaimus malacorhynchos  |

## INVERTEBRATES

| MĀORI NAME          | ENGLISH NAME                      | SCIENTIFIC NAME                             |
|---------------------|-----------------------------------|---|
| Ataata              | Cats eye                          | Turbo smaragdus                             |
| Awanui              | Large trumpet shell               | Charonia lampas capax                       |
| Hopetea             | White rock shell                  | Thais orbita                                |
| Huhu,<br>Tunga rere | Huhu beetle                       | Prionoplus reticularis                      |
| Hururoa             | Horse mussel                      | Atrina pectinata zelandica                  |
| Kahu kura           | Red admiral butterfly             | Bassaris gonerilla                          |
| Kahu kōwhai         | Yellow admiral butterfly          | Bassaris itea                               |
| Kaikaikaroro        | Triangle shell, surf clam         | Spisula aequilatera                         |
| Kākahi              | Fresh water mussel                | Hydriddella menziesi<br>Hydriddella onekaka |
| Karaka              | Cooks turban shell                | Cookia sulcata                              |
| Katipō              | Katipo spider                     | Latrodectus katipo                          |
| Kina                | Sea egg                           | Evechinus chloroticus                       |
| Kōura moana         | Spiny crayfish                    | Jasus edwardsi                              |
| Kōura wai           | Fresh water crayfish              | Paranephrops planifrons                     |
| Kuku                | Green shell mussel<br>Blue mussel | Perna canaliculus<br>Mytilus edulis         |
| Kurikuri            | Ground beetles                    | Mecodema costellum obesum                   |

| MĀORI NAME           | ENGLISH NAME                            | SCIENTIFIC NAME   |
|----------------------|---|---|
| Mata                 | Seashore earwig                         | Anisolabis littorea   |
| Ngāokeoke            | Peripatus                               | Peripatoides novaezealandiae  |
| Pāpaka               | Paddle crab                             | Ovalipes catharus   |
| Pāua                 | Paua                                    | Haliotis iris   |
| Pepe para riki       | Copper butterfly                        | Lycaena salustius   |
| Pepe tunga           | Huhu                                    | Prionoplus reticularis  |
| Pipi                 | Pipi                                    | Paphies australis   |
| Pu a raukatauri      | Bag moth                                | Liothula omnivorus  |
| Pupu nehenehe        |   | Rhytida oconnori  |
| Pupu ngahere         | Bush snails                             | Powelliphanta superba<br>Powelliphanta gilliesi<br>Powelliphanta hochstetteri |
| Pupu tarakihi        | Paper nautilus                          | Argonauta nodosa  |
| Putoko               | Leaf vein slug                          | Pseudaneitea gigantea   |
| Putoko ropiropi      |   | Athoracophorus bitentaculatus   |
| Tātarakihi, kihikihi | Cicada                                  | Amphipsalta zealandica  |
| Tipa                 | Fan scallop                             | Pecten novaezealandiae  |
| Titiko               | Mud snail                               | Amphibola crenata   |
| Titiwai, Pūrātoke    | Glow worms                              | Arachnocampa luminosa   |
| Tokoriro             | Cave weta                               | Gymnoplectron species   |
| Tuangi               | Cockle, clam                            | Austrovenus stutchburyi   |
| Tuatua               |   | Paphies subtriangulata<br>Paphies donacina                                    |
| Tūwhaipapa           | Giraffe weevil                          | Lasiorrhynchus barbicornis  |
| Wētā                 | Alpine scree weta<br>Nelson alpine weta | Deinacrida connectens<br>Deinacrida tibiospina                                |
| Wheke                | Common octopus                          | Octopus maorum  |

## APPENDIX TWO

### Revised Tākaka Water Catchments Management Values and Objectives

#### **Note on interpretation**

*Unless otherwise stated, both Māori and English terms are used in these value descriptions and management objectives to encompass all cultures and spiritualities.*

*For example, the term Wai Tapu (sacred waters) is used to identify waters held in highest regard by both Māori and non-Māori, and both secular and non-secular view points.*

*The aim of this approach is to achieve an all-inclusive definition of the values and objectives, while utilising the succinct nature of Māori terms relating to water and water management which often describe complex concepts that have no simple direct English translation, but whose fundamental principles are shared by others.*

*The National Policy Statement for Freshwater Management 2014 (NPSFM) provides the framework for this process. This document is available from the Ministry for the Environment's website at: <http://www.mfe.govt.nz/fresh-water/freshwater-management-nps>*

#### **Cultural and Spiritual Values – Description**

##### **What this value means:**

Healthy wai (waters) is vital for the well-being, energy and peace of mind of all tangata (people). We respect and treasure our sacred wai and interconnected sacred places. Our well-being is reflected by the hauora (health) of our wai. The purity of wai supports our connection with nature and manawhenua relationships with ngā atua kaitiaki (sacred guardians). Healthy wai imbues peace of mind, revitalising energy and supports the practice of tikanga (customary practices), including rituals and ceremonies. Individuals and whānau (families) are able to enjoy and connect with our water bodies now and in the future.

##### *Further explanation of meanings:*

*Customary practices include the use of rituals and ceremonies which include, but are not limited to: tohi (baptism), karakia (prayer), waerea (protective incantation), whakatapu (placing of rāhui or restrictions), whakanoa (removal of rāhui), and tuku iho (gifting of knowledge and resources for future generations).*

*In providing for this value, the wai tapu (sacred waters) must be free from human and animal waste, contaminants and excess sediment, with valued features and unique properties of the wai protected. Catchment integrity is paramount, which means there is no artificial mixing of the wai tapu. Taonga species and sacred places associated with wai are protected.*

#### **Cultural and Spiritual Values Management Objectives**

- All wai (waters) in the catchments have a healthy mauri (life force).
- Water bodies are enhanced over time – to increase the mauri and the hauora (health) of interconnected indigenous habitats and species.
- Wai is protected for cultural and spiritual uses.

**Applies to:** All surface and groundwater

Wai Tapu (sacred water) is protected. Valued features, taonga (treasures) and unique properties of water at Wai Tapu (sacred water) are protected.

**Applies to:** Te Waikoropupū Springs, Fish Creek Springs, Tākaka Oxbow Spring.

## **Municipal & Domestic Water Supply – Description**

**What this value means:**

*“Water supply – The freshwater meets the community’s potable water needs. Water quality and quantity enables domestic water supply to be safe for drinking”*

### **Municipal and Domestic Water Supply Management Objectives**

Water bodies used for human drinking water meet the domestic needs of users.

**Applies to:** All water used for human drinking water

Surface and ground water (not requiring treatment) is suitable for drinking and is protected from all contamination, which may make the water unsuitable for human consumption.

**Applies to:** All surface and ground water used for drinking water, not requiring treatment.

Surface and ground water (that requires treatment in order to be suitable for use as drinking water) is protected from contamination, which may require additional treatment to make it suitable for human consumption.

**Applies to:** All surface and ground water used for drinking water which requires treatment.

## **Ecosystem Health Description**

*(compulsory under the National Policy Statement for Freshwater Management 2014)*

**What this value means:**

The Tākaka catchments have a special environment with rare and unique qualities. From the dynamic estuaries, to the karst and marble areas, and bush-clad national park catchments, wai (water) supports all life and is essential for ecosystems to function and flourish. It is vital that our natural taonga (treasured resources), including awa (rivers), streams, puna (springs), kūkūwai (wetlands), coastal and riparian vegetation are protected and maintained to ensure the ongoing hauora (health) of these ecosystems.

*Further explanation of meanings:*

*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 of contaminants on flora and fauna, 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 should be indicated by measures of macro invertebrate species as expected for the water body type.*

### **Ecosystem Health - Management Objectives**

- All surface and ground waters have a healthy mauri (life force).

- There is a diversity of indigenous taonga (flora and fauna) with the expected range of life stages for the water body type.
- Water quality provides for healthy, functioning and resilient aquatic populations (population dynamics, feeding, growth and breeding are occurring within expected ranges for the water body type).

**Applies to:** All surface and groundwater – including rivers, streams, springs, groundwater, wetlands and freshwaters, where they flow into coastal areas.

- There is good habitat diversity, including riparian and wetland vegetation, bed/bank substrate, meander, width/depth, floodplain connectivity and bank shape suitable to aquatic and riparian fauna needs.

**Applies to:** All rivers, streams, springs, lakes and wetlands.

## Fishing and Food Gathering – Description

### What this value means:

Fishing and gathering of freshwater and coastal food and resources are important for our families, our wellbeing and our connectedness to the moana (sea) and whenua (land). Kai (food) must be safe to harvest and eat. Mahinga kai (resource gathering places) and mahinga mātaītai (customary seafood gathering sites) must have a healthy mauri (life force) and be able to support taonga species and resources for harvest. The ability to fish and gather food and/or other materials at traditional locations is important and needs to be maintained for future generations.

### *Further explanation of meanings:*

*Mahinga kai and mahinga mātaītai refers to places that have traditionally been used for gathering indigenous species, food or other resources. Mahinga kai and mātaītai mātaītai provide food for manawhenua and the wider community; they are indicators of the overall hauora (health) of the catchments.*

*For this value, kai (food) is safe to eat and manawhenua are able to transfer mātauranga (indigenous knowledge) associating with harvesting resources to future generations. In areas or waters which are highly valued by manawhenua for kai and other resources, it is essential that desired taonga species exist in numbers to sustain long-term harvest, and the range of desired species are present across all life stages.*

*For this value, freshwater resources are present and able to be used for customary purposes by manawhenua. In wai (waters) that are highly valued for kai and other taonga, resources are accessible and available for harvest according to tikanga (customary practices).*

*For waters valued for fishing, the numbers of fish are sufficient and suitable for human consumption. Fish abundance and diversity would provide a range in species and size of fish, 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.*

## Fishing and Food Gathering

### Management Objectives

- Kai (food) is safe to harvest and eat.

- In locations where mahinga kai and mahinga mātaaitai (fresh and coastal resource gathering sites) are found, taonga species exist in numbers to support long-term harvest, with a range of desired species present across all life stages.
- Locations that are valued mahinga kai and mahinga mātaaitai are accessible and able to be used to the extent desired in accordance with tikanga (customary practices).
- All mahinga kai and mahinga mātaaitai sites or areas have a healthy mauri (life force).

**Applies to:** All surface waters and freshwater where it flows into coastal areas.

*Note: the implementation methods for such objectives will require elements outside of the scope of the FLAG project.*

Examples of Kai Species

- **Western coastal catchments** (Tukurua to Little Onahau)-
  - whitebait species, Tuna (eels), freshwater shellfish, Trout (Onekaka) freshwater Koura, Watercress
  - Flounder, Pipi, Tuatua, Kutai ( mussels), Paua

**Fishing and Food Gathering:**

Examples of Valued Mahinga

- **Motupipi catchment**
  - whitebait species, Tuna (eels), freshwater shellfish, Koura
- **Takaka River**
  - whitebait species, Tuna (eels), Trout
- **Anatoki and Waingaro Rivers**
  - Tuna (eels), Trout
- **Te Waikoropupū River**
  - Tuna, Trout, Koura, water cress
- **Motupipi and Waitapu Estuaries** (where affected by river outflows)
  - Estuarine shellfish

**Livelihood and Economic Use – Description**

**What this value means:**

Water of sufficient quality and quantity is important for human consumption, farming, horticulture, aquaculture and tourism livelihoods and for community wellbeing. It provides for irrigation, food production, stock water and economic opportunities for people, businesses and industries. Water storage can improve security of supply.

*Further explanation of meanings:*



*Water quality and quantity is 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.*

*Water quality and quantity meets the needs of stock.*

*Water quality and quantity can provide for commercial and industrial activities, if available and sustainable. Attributes will need to be specific to commercial or industrial requirements.*

## **Natural Form and Character – Description**

### **What this value means:**

The inherent values of our water bodies connect us with natural world and for manawhenua, ngā atua kaitiaki are an integral part of this relationship. People seek out natural areas to nurture ourselves on all levels – spiritually, physically and emotionally. Specific natural values encompasses the sound of flowing water, flourishing wai with a healthy mauri (life force); abundant and diverse species (including indigenous) taonga species and the wild and dynamic character and personality of our awa (rivers) and interconnected estuaries. The headwaters in the national park, and the karst landscapes and springs, in particular Te Waikoropupū, provide a special and unique quality to the Tākaka catchments.

*Further explanation of meanings:*

*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 areas with exceptional, natural, and iconic aesthetic features.*

### **Natural Form & Character Management Objectives**

- The natural and physical characteristics of the water bodies, especially within the karst landscapes, national parks and spring systems within the Tākaka catchments are protected

**Applies to:** all water bodies, especially Te Waikoropupū Springs

- Water flows and quality from spring systems are protected

**Applies to:** all springs, especially Te Waikoropupū Springs

## **Recreation-Description**

*(compulsory for secondary contact under the National Policy Statement for Freshwater Management 2014)*

### **What this value means:**

Swimming, fishing, kayaking and tramping are important recreational activities undertaken in the Tākaka catchments. Recreation is important for well-being. Recreation provides enjoyment and refreshes the mind and body. Recreation is an important social activity, particularly for families and those with favoured traditional spots for swimming or fishing.

*Further explanation of meanings:*

*As a minimum national bottom line the NPSFM requires all freshwater to be safe for people who 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 and kayaking, the water would need to meet a higher standard in order to be safe for these sorts of activities.*

**Recreation - Management Objectives**

- Surface waters are safe for swimming during the months Nov – April (excluding times of flood flow)
- Surface waters are safe for secondary contact recreation.

**Applies to:** All surface waters

**Hydro-electric Power Generation – Description**

**What this value means:**

Renewable energy generation through hydro-electric use of water is important for economic, as well as environmental reasons.

Where freshwater is suitable, hydroelectric power generation is recognised and provided for. Existing generation is protected.

*Further explanation of meanings:*

*Hydro-electric power generation (au putea) – The freshwater is suitable for hydro electric power generation.*

*Water quality and quantity and the physical qualities of the freshwater, including hydraulic gradient and flow rate, can provide for hydro-electric power generation. Existing generation shall be protected.*

**Hydro-electric Power Generation - Management Objectives:**

- Existing Hydro-electric power generation schemes are able to continue to generate electricity as needed and existing generation is protected.

**Applies to:** Rivers with existing systems: Cobb River, Campbell Creek, Waitui Stream, Onekaka River, Rameka River, Gibson Creek, Ellis Creek, Wainui River

- The future potential for new micro and small scale hydro-electric power generation is provided for.

**Applies to:** All Surface water