Te Mana o te Wai Project
Te Tauihu Councils Reports

Marlborough District Council
Nelson City Council
Tasman District Council

VOLUME II

Disclaimer

The council summaries contained in this document provide a snapshot overview of freshwater management in each council region at the time of writing (April 2021). They are not intended to provide a comprehensive record of all freshwater management undertaken by the councils. Freshwater management frameworks are currently under review and a lot is still changing in the regulatory requirements and so parts of these summaries may become out of date. For the most up to date information, please contact the respective council.

In addition, the summaries contain the views of freshwater policy and science staff regarding freshwater management and questions around the implementation of Te Mana O Te Wai to be discussed with ngā iwi. Some of these views have not yet undergone wider community and council review and as such do not represent council policy.

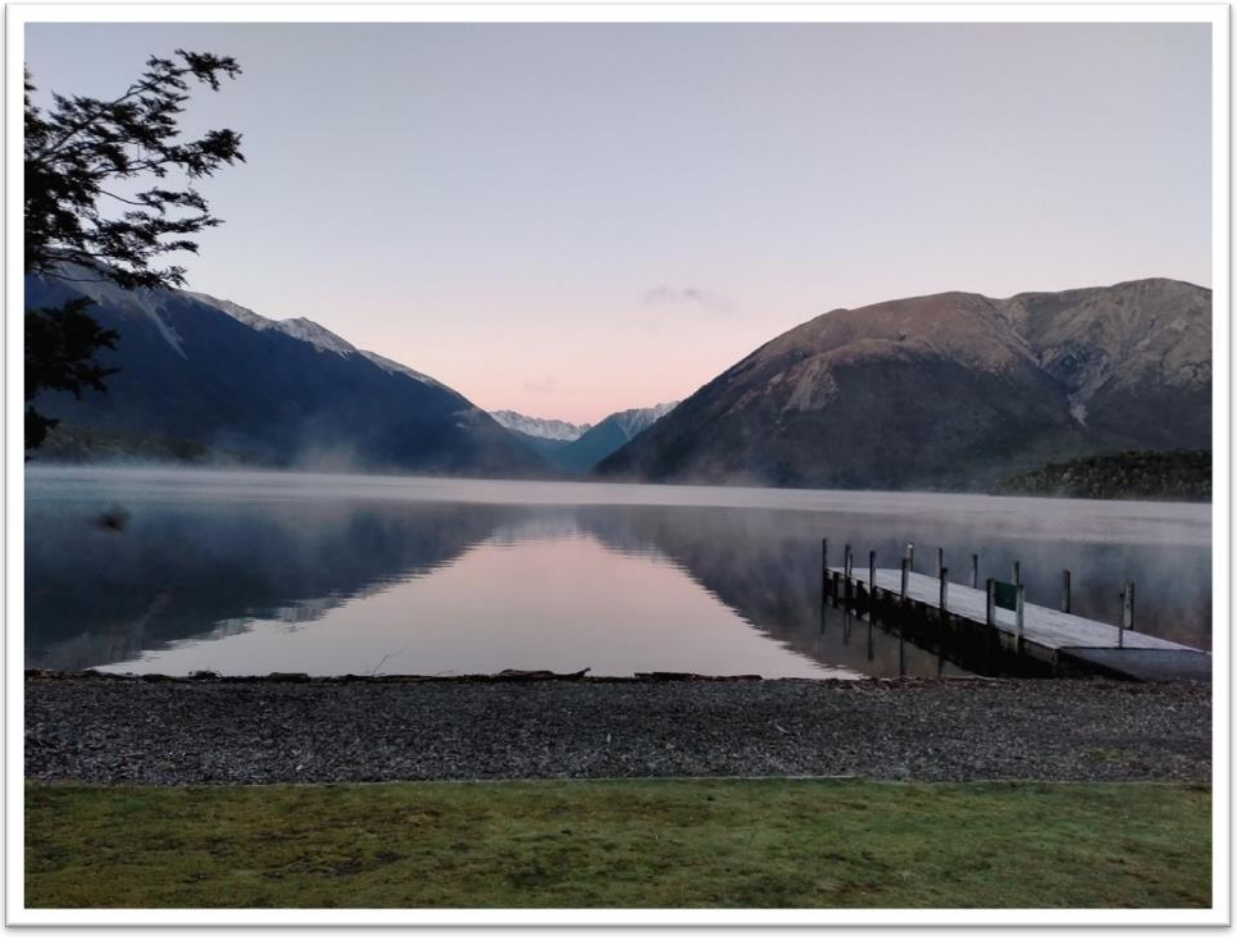


Photo Credit: Ursula Passl: Rotoiti, Nelson Lakes National Park (May 2021)

Contents

Tasman District Council Freshwater Management Overview

1 Purpose

This report provides a 'snapshot' overview of Tasman District Council's (TDC) water management approach to date. The report will contribute to a current state report of Te Tau Ihu iwi freshwater management.

The report addresses TDC's current Plan and policy planning processes and provides an overview of freshwater management processes to date.

Further information is available from Council staff on request.

2 Plans and current processes

2.1 Policy and Regulation

TDC's operative Plans are the Tasman Regional Policy Statement (TRPS) and the Tasman Resource Management Plan (TRMP). As unitary plans, these plans incorporate both land based territorial considerations (eg urban and rural development and land use controls) and air, land, water and coastal regional considerations (eg resource allocation and resource use controls).

These plans do not give full effect to the NPS-FM 2020 or all aspects of earlier NPS versions. Efforts to date in giving effect to previous NPS-FM versions are reflected in the freshwater plan changes since the first NPS-FM in 2011 and the collaborative process work undertaken for the Takaka and Waimea catchments since 2014.

Prior to the 2020 NPS-FM, TDC was operating to a Progressive Implementation Programme (PIP) last reviewed in 2018, which included a program of water resource investigations and associated rolling plan changes to be undertaken by Freshwater Management Unit out to a timeframe of 2030. At the time, this program and timeframe was considered workable and affordable by TDC. This has now been superseded by the 2020 amendments to the RMA requiring notification of freshwater plan changes by December 2024.

TDC are in a state of transition having begun a whole-of-plan review of both the TRPS and TRMP in 2019. The new Tasman Environment Plan (TEP) will replace both the TRPS and TRMP to form a single combined plan.

At the time of writing, TDC aims to notify the TEP in December 2024 in line with the NPS-FM and RMA requirements for notification of freshwater plans. This timeline may be subject to change due to RMA and/or local government reform announcements.

We are also anticipating further national instruments signalled prior to the RMA reform to proceed (eg the NPS for Indigenous Biodiversity and NES drinking water review) which may also influence the management of freshwater in the TEP.

2.2 Non-Regulatory Methods

In addition to the provisions and rules in the TRPS/TRMP, TDC also employs a range of non-regulatory methods to achieve the freshwater objectives sought. Some examples of these are outlined in the table below.

Table 1 Non-regulatory methods for freshwater management in Tasman

Non-regulatory method	Examples
Investigations and Monitoring	• Regular (monthly/quarterly) river and groundwater State of the Environment monitoring • Synoptic catchment water quality surveys (involving numerous sites, less often eg groundwater every 5-10 years) • Short term (months) issue-based investigations (eg 3 month water clarity in Te Waikoropupū) • Research projects – eg sediment flocculation testing • Freshwater data accounting and reporting
Education and Advocacy	• Public education programs and resources – eg "I only drain rain", what to do with different waste products • Nelson Tasman Erosion and Sediment Control Guidelines and associated industry education workshops and events • Guidance on wetland and river restoration projects
Works and Services	• Urban Stormwater Catchment Management Plans (Richmond done with other urban CMPs to come) – in conjunction with global stormwater consenting • Waterbody restoration/enhancement, including as part of stormwater or flood management projects – eg Borck Creek redevelopment and restoration, or as part of the Catchment Enhancement Project eg Motupipi River • River management, including flooding and erosion control and pest species management • Compliance and enforcement services – particularly for discharges to land and water and water permits • Building compliance enforcement for building site erosion and sediment control • Three waters provision (water supply, stormwater and wastewater reticulation and treatment) – subject to three waters reform – and roading where this affects waterbodies (crossings, runoff, access etc). • Parks and reserve management – including water body management and provision of public access to waterbodies • Involvement in the Waimea Community Dam
Financial incentives/assistance	• Waterbody Fencing Fund (for stock exclusion) • Catchment Enhancement Fund • External funding also sought (eg Freshwater Improvement funding for fish passage and wetland restoration)
Partnerships	• Working with iwi entities specific landowners, community groups, catchment groups, industry groups, etc • Water augmentation for enhancement eg Wai-iti Dam, Waimea Dam range of stakeholders/partners • Waimea Inlet Forum • Takaka Freshwater and Land Advisory Group Process • Manawhenua ki Mohua – Mātauranga Māori report for the Tākaka Catchments • Dry Weather Task Force (drought management discussions involving local stakeholders)
Industry self-regulation	• Supporting industry in promoting use of good practice - eg nutrient and irrigation management codes of practice, forestry practice guidelines on Separation Point Granite, industry environmental programs, etc

Further detail can be provided in the "NPS-FM Implementation Program to 2025". There is also further work planned within the non-regulatory program, some of which has been briefly outlined in Section 7.2.

3 Consenting, compliance and enforcement

TDC's consenting and compliance teams administer the current operative Tasman Resource Management Plan, and operative National Environmental Standards (NES) and RMA section 360 Regulations. This includes the NES for Freshwater (2020) and the stock exclusion (2020) and water metering (2020) regulations.

Freshwater, land use and discharge related consent applications and compliance and enforcement matters are assessed against relevant Tasman Resource Management Plan provisions, the Tasman Regional Policy Statement and where required, higher level instruments such as the NPS-FM, the NZ Coastal Policy Statement and the RMA itself.

As noted above, the operative Tasman Resource Management Plan does not reflect the NPS-FM 2020 or aspects of earlier versions of it, and will be replaced by the Tasman Environment Plan, which will seek to give effect to the NPS-FM to the fullest extent possible.

4 Community and Iwi processes

Since 2011 TDC has undertaken 13 plan changes[118] related to freshwater. These generally utilised a standard approach of: iwi and stakeholder engagement in determining issues and options; stakeholder, iwi and community engagement on a draft plan change; and the RMA schedule 1 process following public notification of a proposed plan change (including submissions, further submissions, hearing, decisions and rights of appeal).

In 2014, following a growing expectation for further community involvement, the TDC initiated two freshwater collaborative processes – one in each of the Takaka and Waimea catchments. These processes involved 12-14 members of local communities including people with affiliations to local iwi, environmental groups and stakeholder groups or landowners in each catchment area. Under the Terms of Reference members attended the groups as individuals rather than representatives of a specific sector or group. Most members 'wore multiple hats' and provided their collective viewpoints to the group during discussions.

Iwi engagement for these processes was supplemented through the Tasman Iwi Policy Working Group (IPWG), and in the Takaka catchments, through specific engagement with Manawhenua ki

[118] Plan changes: 35-36 for water metering, V3-C10 for onsite stormwater, 45-48, 54-56, 63 & 67 for Waimea, 52 for Upper Motueka.

Mohua (MKM) and contracts to generate key inputs, including the Mātauranga Māori report for the Tākaka catchments (June 2019) and freshwater cultural tohu development (in progress).

The Takaka FLAG process ran until June 2019 when the group presented their recommendations report to Council alongside the Mātauranga Māori report by MKM. While this collaborative process was every effective in gaining a shared understanding and consensus approach to freshwater management within the group, there were many key lessons learnt through the process. Members and staff were concerned at the length of the process, efficacy of iwi engagement, cost and extent of effort required by both the volunteer members and staff. Subsequently staff recommendations to Council have been to look for alternative means of community engagement in the future and to find alternative methods to involve iwi that better reflects our partnership context.

The Waimea FLAG process was put on hold in early 2016 due to staff resourcing constraints and to avoid the FLAG's duplicating effort on management of land practices. Since 2019, incorporating learnings from the Takaka process, TDC staff have re-initiated discussions with Waimea growers and industry representatives (including HortNZ and Federated Farmers) to specifically address the issue of nitrate in groundwaters of the Waimea Plains.

Additional resourcing has since been put into the Waimea nitrate issue, including engagement of consultant Rochelle Selby-Neal for facilitation and planning work, and very recently a new temporary 12-18 month internal position for a soil scientist to provide dedicated grower liaison and outreach to Waimea growers and to work with HortNZ and other industry groups to help all landowners and growers reach good or best practice for nutrient and water management by 2022 when the Waimea Dam is operational. A recommendation from the project will be for Council to seek input from iwi entities that are involved in growing operations to provide Mātauranga Māori advice on operating in ways that meet the requirements of Te Mana O Te Wai.

Concurrently, with the latest Waimea process, staff are also reviewing the entire freshwater framework through the TEP development process. This includes:

- Implementation of the requirements in the National Objective Framework under the NPS-FM with iwi, key stakeholders and communities through 2021-22 – this includes discussion on Te Mana o Te Wai, FMU definition, long term visions, values of water and environmental outcomes sought (initiated through Te Tau Ihu Collaborative Project)
- Development of issues and options for freshwater and land management with iwi and stakeholders, including a summary report for public feedback in early 2022
- Preparation of a draft plan with iwi and stakeholders for public feedback in 2023
- Preparation of a proposed plan for iwi review and public notification by December 2024 (subject to RMA and local government reforms).

Regarding the Tasman IPWG, it is anticipated that this report and the Te Tau Ihu Collaborative Project will direct the future processes of engagement and collaboration with Iwi in development of the Tasman Environment Plan and both the regulatory and non-regulatory approaches to freshwater management in the Tasman region.

5 Iwi involvement in governance and Plan-making processes

Currently iwi authorities have no direct formal involvement in governance regarding freshwater in Tasman District, although there is an open invitation for iwi to sit on the Dry Weather Task Force, which makes decisions on water management during dry periods, including decisions on rationing, cease take and issuing of water shortage directions (under RMA section 329).

Iwi concerns are included in discussions and decisions on freshwater through staff advice to Council, which is derived from operational level discussions between Council staff in various departments and key resource management and regulatory staff within each iwi authority. This occurs in several ways - through the Tasman IPWG, through the resource consent and compliance processes, and on a project basis through direct staff engagement with iwi authority staff, trusts or other entity meetings (for example TDC staff attendance at the MKM and Whakatu meetings).

Involvement in specific plan making and regulatory processes include the following:

5.1 Involvement in plan making

Iwi involvement in plan making reflects the current statutory obligations for plan making processes. Plan development and review has largely been through the Tasman IPWG, including specific plan topic workshops (eg Regionally Significant Issues workshop) and one-on-one engagement between Environmental Policy staff and iwi authority resource management staff. Previously draft versions of plan changes have been provided for iwi review and feedback. Other statutory obligations include provision of proposed plans for iwi review prior to public notification (ie under RMA Schedule 1 Clause 4A).

5.2 Involvement in resource consenting

A summary of consent applications is sent to all iwi with an interest in areas affected by consent applications (eg in line with statutory acknowledgements) and iwi monitors are identified in resource consent conditions for relevant activities potentially affecting iwi interests.

As part of the consent pre-application process consents staff direct applicants to talk with iwi early in the consent process. Particular emphasis is placed where staff suspect there maybe issues e.g earthworks close to the coast.

Iwi have previously used the ability to seek judicial review of consenting decisions and Council is keen to avoid the need for this in the future.

5.3 Involvement in other plans and strategies

Iwi are also involved in the development of other plans and strategies that may help implement Te Mana O Te Wai across Council functions, for example the Urban Stormwater Catchment Management Plans, Reserve Management Plans, and the Nelson Tasman Erosion and Sediment Control Guidelines. As with the resource plan development, iwi involvement occurs in several ways, but often on a project basis through direct staff engagement with iwi authority resource management staff.

6 Science monitoring programme

6.1 Current monitoring programme

The Environmental Information Team at TDC carry out a range of monitoring services that assist in managing the regions waterbodies, including providing understanding of the nature of the various water resources, current state of water attributes, trends over time and space and investigation of specific issues.

Engineering Services is also proposing additional stormwater runoff and sediment monitoring as part of the network discharge consent and are awaiting a decision from the commissioner before implementing a specific plan.

Where relevant National Environmental Monitoring Standards (NEMS) exist, Council's monitoring programs follow them for approach, method and statistical analysis.

State of the Environment summary reports and data for rainfall, flows and bathing water quality are available on Council's website, as well as the Land, Air, Water Aotearoa website (LAWA).

The current scope of the monitoring program is briefly outlined in the following table

Table 2 Water monitoring program in Tasman

Waterbody Type	Monitoring Type	Frequency	Aims	No. of sample sites in Tasman	Examples
Rainfall and river flows	Hydrological (telemetered and gauged)	Event based and seasonal	To provide climate information, river flood warnings and low flow and drought information including telemetered rationing triggers for water management To help understand annual and long term trends	124 sites: Rainfall 41 River flow/level 29 Groundwater 50 Sea level 2 Meteorological 2	Rain gauge network Flood flow networks in Takaka Low flow gauging in smaller rivers
Water usage	Compliance monitoring	Seasonally, based on weekly returns	Undertaken for compliance checks against consent conditions	1422 water take permits (including 144 damming permits)	Monitoring water usage against allocation limits, drought restrictions, bore and meter integrity.
Discharge consent	Compliance monitoring	Various	Undertaken for compliance checks against consent conditions	184 discharge permits (including 115 stormwater and 6 diversion permits)	Monitoring discharge quality and other performance standards imposed. Assessment of receiving environment for impacts.
River water quality	State of the Environment monitoring	Monthly	To determine state and trends at key sites. To inform models for determining overall state of Tasman's rivers.	29 (counting the 3 NRWQN sites: Aorere 3; Buller 3 (+ 1 NRWQ); Motueka-Riuwaka 6 (+2 NRWQ); Moutere 2; Takaka 6; Waimea 6; Marahau 1 - set up in 2021)	SOE site Motupipi at Reilly Bridge has shown a marked improvement in phosphorus concentration.
River water quality	State of the Environment monitoring	Seasonal/ periodic	To determine the state of key attributes at at-risk or high value waterways	Various (TDC consistently sample about 15-18 sites per season for DO/temp)	24-7 Dissolved oxygen and water temperature sonde monitoring over summer months Water clarity (3mths every 5 years) at Te Waikoropupū
Ground water quality	State of the Environment monitoring	Quarterly	To help understand annual and long term trends	21	SOE site at Te Waikoropupu Springs Motueka Gravel Aquifer
Ground water quality	Synoptic	Ten yearly samples	To help understand the wider context of key issues	Varies, but typically 40-150 sites depending on the catchment	Waimea plains nitrate sampling (~ 70 – 100 bores)
Both surface & groundwater	Investigative	Various - Responsive to issues	To help understand new issues that arise such as breaches of quality guidelines	Varies – issue and budget dependent	Pohara Beach *Enteroccoci* sources

Both surface & groundwater	Research	Typically one-off	To help understand new issues identified or set baselines or programmes for future monitoring	Varies – budget dependent	ESR research into stygofauna communities in Tasman groundwaters Assessment of flocculation efficiency for sediment control
Bathing water / Swimming Spots	State of the Environment monitoring and investigative (if alerts occur)	Seasonal - Weekly / twice weekly between November and March	To identify daily and weekly levels relative to alert and alarm triggers. Proportion of samples complying with NPS-FM or Microbiological Water Quality Guidelines.	7 core sites and a further 8 sampled every second year	Core sites: Pohara Beach, Takaka River, Kaiteriteri Beach, Mapua, Rabbit Island Beach, Roding River, Lee River.
Estuaries	Synoptic / State of the Environment	5-10 yearly	To help understand state and long term trends in habitats (saltmarsh, seagrass, substrate, vegetated margin), macroalgae cover and sedimentation	6 (Waimea, Moutere, Motueka-Riuwaka Deltas, Motupipi, Ruataniwha, Whanganui)	Waimea Motupipi
Lakes	Proposed Synoptic (new)	Monthly sampling for 1 year	Determine state of current lakes with respect to NPS-FM attributes	11 lakes (mostly at-risk coastal lakes in Golden Bay)	Dune and Island Lakes at Whararikiand Kaihoka Lakes.
Freshwater Wetlands	State of the Environment	10 year programme started in 2014	Determine the extent of remaining wetlands and basic assessment of ecological significance.	Desktop mapping of many thousands of wetlands and progressive field surveys with willing landowners.	Mapping wetland boundaries and provide basic ecological assessment.
Freshwater Fish	Synoptic / State of the Environment	Annual survey but 3-5 yearly at core sites	Determine the health of fish communities (abundance and diversity). Investigate the effect of issues such as habitat modification and various in-stream structures on fish migration.	20 per season	Motupipi River downstream dairy factory before and after ecological enhancement work.

6.2 Monitoring programme gaps

There are gaps in the TDC monitoring program in terms of both locations and attributes.

Not all FMU have the desired number of monitoring locations which has historically been limited due to affordability and water pressures eg abstraction. For example in 2016 the river water quality SOE sites were halved in number to enable sampling to be undertaken monthly rather than quarterly to meet new national requirements for sampling without significantly affecting costs.

Staff are undertaking a gap analysis for the NPS-FM 2020 and preparing a freshwater science strategy to work towards addressing them, prioritising those areas necessary to give effect to the NPS-FM 2020 in the Tasman Environment Plan. This will also take into account current monitoring required by the current plans and SOE monitoring. Gaps need to be filled by investigating and developing action plans for catchment water quality/quantity issues.

Some new work is already programmed, for example: a new flow site and groundwater monitoring in Aorere, new seasonal flow sites for Upper Motueka and a new rainfall site for Tapawera plains in response to land use transition to hops, and new groundwater monitoring in Buller.

In estuaries, TDC is moving towards establishing a more integrated ecosystems-based monitoring programme, starting in Waimea and Moutere Inlets. We regularly monitor the invertebrates in and on top of the estuary mud, macro-algae on top of the mud, higher plants (saltmarsh and seagrass) as well as abiotic conditions such as sediment accumulation rates, sediment nutrient concentration and the depth of the anoxic layer in the sediment. This year we have undertaken sampling of estuarine fish and birds and the hope is that it becomes part of regular monitoring.

6.3 Investigations

In addition to regular monitoring, TDC also collect a huge amount of information about freshwater and estuaries on a project by project basis.

These are some key investigation projects in rivers in the last 5 years:

- Targeted kanakana/lamprey sampling at almost 40 sites using sophisticated pheromone samplers. Kanakana is relatively rare and notoriously difficult to sample using traditional fish sampling methods.
- River nesting bird surveys in the Buller catchment (particularly Matakitaki, Buller, Howard). Threatened and declining species such as banded dotterel, black fronted terns and black billed gulls nest on islands within braided rivers and face habitat degradation from pest plant invasion (mainly willow) and rock walls used to narrow river corridors.
- Sediment source tracking in the Waimea and Moutere catchments and in a core sample from the Waimea estuary. To better manage fine sediment discharges from land it is important to know the key activities and land uses that contribute the most.

- Fluvial geomorphology studies in the Moutere catchment, as well as urban Richmond and Kaiteriteri. In order to design catchment enhancement programmes (including channel re-meandering, reconnection to the flood plain and riparian planting) and more ecologically-friendly bank protection structures, it is essential to understand how waterways behave and shape their channels.

7 Freshwater Management Units (FMUs)

Currently the Tasman region is split into water management zones and water management areas. With the development of the TEP there are proposed to be eight FMU covering the whole Tasman region (refer Figure 1). These are:

- Waimea
- Moutere
- Motueka-Riuwaka
- Abel Tasman – Kaiteriteri
- Takaka
- Aorere – West Coast
- Upper Buller / Kawatiri
- Deep Moutere Groundwater

A ninth FMU may be considered for urban areas to align with the Urban Stormwater Catchment Management Plans, which will play a large role in implementing freshwater management in the urban drainage areas.

The boundaries of the proposed FMUs (with the exception of the Deep Moutere Groundwater FMU) are based firstly on the main surface water catchments taking into consideration ground and surface water interactions within and between catchments. Smaller adjacent coastal catchments are grouped with the main catchments that drain to the same coastal receiving environments (eg the catchments west of the Waimea River in the Waimea FMU). In some areas amendments have been made to include management considerations such as shared communities of interest (for example inclusion of Wainui in the Takaka FMU rather than the Able Tasman – Kaiteriteri FMU) and specific management requirements (eg Deep Moutere Groundwater and a potential urban FMU). The boundaries of the FMU are yet to be fully discussed with iwi, stakeholders and the community.

The FMU are generally intended to manage both surface and groundwater in an integrated manner and historically have been split further into water management zones to reflect the detail needed for different water management at different locations due to catchment or sub-catchment hydrology. This seeks to strike a balance between the number of administrative and management considerations to achieve effective water management, while minimising costs.

MfE guidance suggests that the scale of an FMU needs to be appropriate for objective and limit-setting, freshwater accounting, and monitoring. An FMU should not be so large that it prevents the setting of objectives that are specific enough to be effective. Equally, an FMU should not be so small

that it results in undue complexity and cost in either the planning process or in the management of the FMU.

The Deep Moutere Groundwater FMU is a groundwater-only FMU to address management of the large aquifers that underlie several of the surface FMU and shallower aquifers through the Motueka – Moutere - Waimea areas. There are two main aquifers – the Deep Moutere Aquifer and the Waimea Deep Moutere Aquifer (refer Figure 2).

These aquifers are considered confined aquifers with respect to water quality as they have limited influence from land use and surface waters in the overlying catchments. The aquifers are recharged from very slow rainfall recharge in the western margins of the Moutere and from fault zones around the Waimea and Motueka valley areas. The water is very old with a range of 400-20,000 years residence time. There is only very limited use of these aquifers for takes (both due to cost and poor flow availability from many of these deep sources) - typically where there are not alternative water supplies (bores need to be many hundreds of meters deep – with the deepest over 800m). Current water take management triggers are designed to protect the physical nature of the aquifers.

Figure 1 Draft Tasman Freshwater Management Units

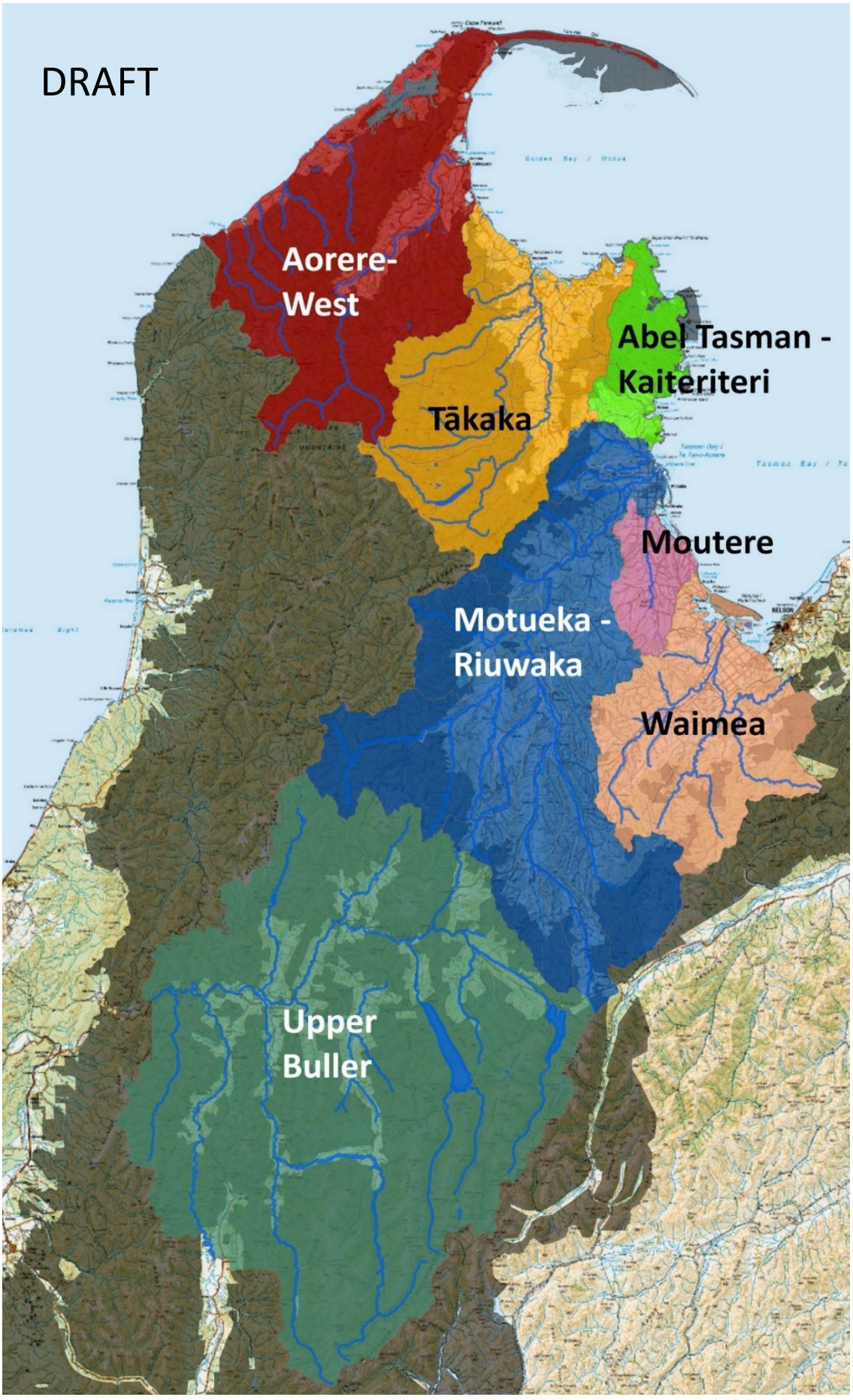
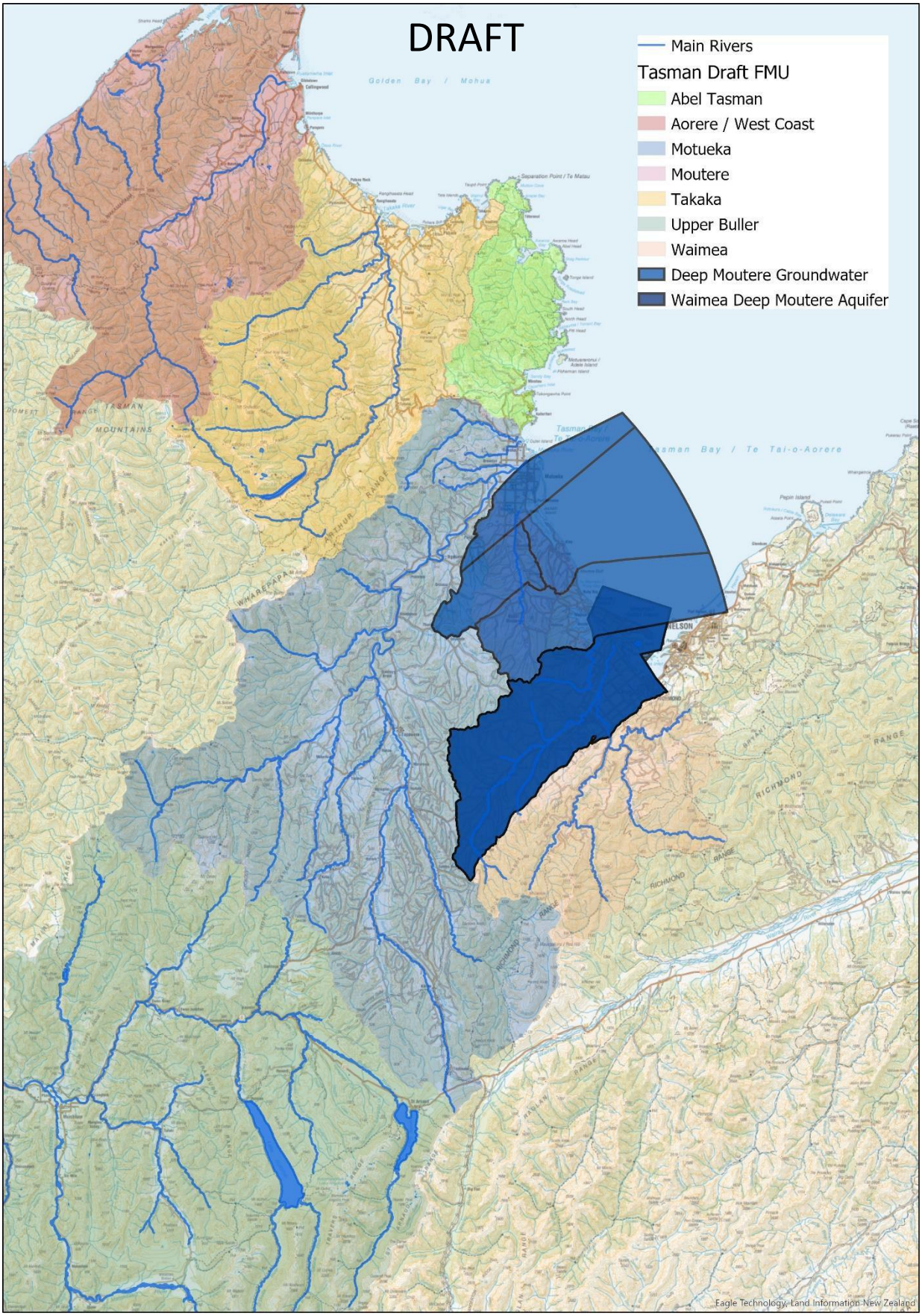


Figure 2 Draft Deep Moutere Groundwater FMU



8 Long term Visions

There are currently no long-term visions formally adopted in any FMU in Tasman or provided in the TRMP.

The Waimea FLAG developed a vision for freshwater (under the NPS-FM 2014), while the Takaka FLAG specifically chose not to develop a vision.

The Waimea FLAG draft vision is:

"To protect and over time enhance the quality of the Waimea Freshwater Catchment Ecosystems so as to meet the current and future cultural, social, environmental and economic needs and values of the communities which use or otherwise relate to them."

For comparison, the Kawatiri FMU Catchment Group which spent 2019-2020 looking at freshwater management in the lower Kawatiri (lower Buller) has recently developed a vision (Kawatiri FMU Group recommendations October 2020):

"In the Kawatiri FMU, freshwater is valued and will be managed utilising the ki uta ki tai (mountains to the sea) philosophy. The health and mauri of water is to be sustained for our community's future wellbeing."

TDC staff are anticipating visions for FMUs to be part of the discussions in Te Tau Ihu Collaborative Project.

9 Value setting

The TRMP currently includes a list of uses and values of water in Schedules 30A and 30B. These schedules are incomplete and are intended to be reviewed and replaced through the TEP process with the outcomes from the iwi and community engagement processes initiated through Te Tau Ihu Collaborative Project.

A process of identifying community values for water under the NPS-FM was undertaken with both the Takaka and Waimea FLAGs. This included consideration of the national values in the applicable NPS-FM version at the time, descriptions of the values that reflected the groups' preferred language and interests, and definitions of management objectives sought for each value.

A comparison of the FLAG values against the NPS-FM 2020 values list and the values in the NCC draft plan and Kawatiri FMU recommendations (WCRC) is included in Appendix 1.

The Takaka FLAG recommendations report (June 2019) describes the values identified for the Takaka catchment which may also be applicable elsewhere in Tasman and includes the management objectives and values specifically for Te Waikoropupū as an Outstanding Freshwater Body (the report is available on TDC's website here - refer pdf pages 50 to 59). The Mātauranga Māori report by MKM (June 2019) provides further context on manawhenua iwi values, interests and aspirations for freshwater and should be read in addition to the Takaka FLAG report (available on TDC's website here).

10 Water health

Council's understanding of the health of waterbodies in Tasman is informed by the information in the water monitoring programme, as well as the professional experience of staff who regularly travel the district and are familiar with our waterbodies.

Due to the targeted nature of the water monitoring program, most waterbodies are not regularly monitored and management relies on a combination of interpretation and extrapolation of monitoring data, responses to issues identified, and proactive 'searching' for issues undertaken using wider, but less frequent, synoptic surveys. This reflects the challenges of managing freshwater over a relatively large region, with complex water catchments and with a comparably small rating base to pay for monitoring and research.

Regarding water health in Tasman, overall it is considered that water quality and flows are in a reasonably good state, however there are known ongoing issues at specific locations across the region and at a range of scales. For example: over-allocation of water on the Waimea Plains - intended to be addressed by the Waimea Dam, and elevated *Enterococci* at Pohara Beach - which has been extensively researched, but as yet unresolved as to the source.

Additionally, across all FMU's there is an identified issue with riparian and aquatic habitat loss and degradation in lowland waterbodies (ie below 150m elevation). This has occurred historically from channel straightening, armouring, excessive sedimentation and loss of riparian vegetation and can be exacerbated or continued by current riparian and waterbody management practices. Staff are seeking ways to quantify the current state of waterbody habitat at a regional level across Tasman, including use of LiDAR to determine stream sinuosity (as a measure of channel modification) and riparian margin cover (as a measure of riparian habitat and shading). Degradation of fish spawning habitat is also common.

Fine sediment discharges, loss of wetlands and fish passage at in-stream structures are also major issues in the working landscape across the district.

At an FMU level the following issues have been identified (list not exhaustive):

Table 3 Key water health issues by FMU

FMU	Issue to be addressed	Potential risk to address
Waimea	• Nitrate levels in groundwater • Water over-allocation (to be addressed by the Waimea dam) • High nutrient, low dissolved oxygen and pathogen levels in smaller lowland streams (Wai-iti, Neimann, Reservoir) • Toxic chemicals from discharges in urban catchments.	• Nitrate exacerbation by dam operation
Moutere	• surface water over-allocated (sinking lid policy in place) • Very high loss of wetlands (>95%) leading to low river flow • Temperature, dissolved oxygen and shading issues • High nutrient, nuisance algae, sediment and pathogen levels in smaller lowland streams (Tasman)	
Mouteka-Riuwaka	• Potential over-allocation in some sub-catchments (Humphries creek, Dove catchment)	• Risks to aquifer under Motueka used by private bores for domestic supply • Baleage wrap pollution • Water quality from land use changes
Upper Buller / Kawatiri	• High flow *E.coli* for contact recreation • *E.coli* at Ned's Creek in Murchison	• Baleage wrap pollution • Natural Character (WCO)
Abel Tasman - Kaiteriteri	• Hill-country erosion and sedimentation	• Incompatible wastewater disposal and bore water supply in Marahau
Takaka	• High *E. coli* and dissolved reactive phosphorus values in smaller lowland streams (Powell, Motupipi, Onekaka, Burton Ale)	• Protection of Te Waikoropupū springs • Reservation of water for potential community supplies • Baleage wrap pollution
Aorere – West Coast	• Lack of allocation regime in Aorere • High *E. coli* values in lowland (Kaituna, Aorere)	• Baleage wrap pollution • Loss of sea grass in Whanganui Inlet (emerging issue)
Deep Moutere Groundwater	• Triggers are set to protect the aquifer integrity and long term aquifer recharge/recovery	• Limited abstraction, but lack of data due to limited bores creates unknowns in aquifer wide sense
Urban areas	• Stormwater contamination • Groundwater recharge protection • Water temperature	• Groundwater levels affecting flow in waterways such as Borck Creek.

10.1 Water quality (attributes and limits)

Staff are undertaking a gap analysis for the NPS-FM 2020 and preparing a freshwater science strategy to work towards addressing them. However the following table summarises the overall state of information with regards to the attributes in the NPS-FM 2020. There are also a range of SOE determinands (other than the NOF attributes) that are monitoring for SOE for long term trends and have long term importance. The level of data available across each FMU will differ, with some FMU or zones within FMU having limited data available (eg Buller, Aorere). This is generally reflective of the past demand for water use and level of intensification of land development, with less populous and developed areas having less monitoring data.

Information is considered 'sufficient' when Council holds verified data in the correct metric/unit and over a suitably long period to allow robust statistical analysis – this meets the requirements in the NPS-FM and National Environmental Monitoring Standard (NEMS).

Table 4 Status of attribute data

Attributes with sufficient information	**Attributes with insufficient information**	**Attributes with no information**
• Ammonia (Toxicity; rivers) • Nitrate (Toxicity; rivers) • Escherichia coli (Rivers) • Escherichia coli (Primary contact sites) • Dissolved Reactive Phosphorus (Rivers) • Macroinvertebrates (Wadeable rivers)	• Suspended Fine Sediment (Rivers) REC classes required, easy fix • Deposited Fine Sediment (Wadeable rivers) Measured using incorrect protocol, may be able to convert • Dissolved oxygen (Rivers) • Fish (Rivers)	• Phytoplankton (Trophic state; lakes) • Total Nitrogen (Trophic state; lakes) • Total Phosphorus (Trophic state; lakes) • (Ammonia (Toxicity; Lakes) • Escherichia coli (Lakes) • Escherichia coli (Primary contact sites; lakes) • Periphyton-Chlorophyll-α (Trophic state; rivers) • Dissolved oxygen (Below point sources; rivers) • Dissolved oxygen (Lake bottoms) • Dissolved Oxygen (Mid-Hypolimnic; Seasonally stratifying lakes • Cyanobacteria (Lakes and lake fed rivers) • Submerged plants (Natives; lakes) • Submerged plants (Invasive species; lakes) • Ecosystem metabolism (Rivers)

Draft water quality limits for some of these attributes (based on the 2017 NPS-FM) where developed through the Takaka FLAG process, however this will need review as part of the TEP development to ensure consistency with the NPS-FM 2020 and the final values and environmental outcomes determined through iwi and community engagement.

10.2 Quantity (allocation and limits)

There have been two methods for setting of water allocation regimes including allocation limits in Tasman:

- Instream Flow Incremental Flow monitoring (IFIM) studies
- Historic Flow method using a percentage of Mean Annual Low Flow (MALF).

In many cases detailed modelling has been undertaken to couple surface water to groundwater and a range of groundwater allocation limits have also been determined. A large portion of water is taken from groundwater in the district. Drivers for integrated limit setting needs to account for links between river and aquifer, protecting aquifer integrity from drawdowns and cross pumping effects, and also saline intrusion in coastal aquifers.

The IFIM method is scientifically based looking at the vulnerability of specific indicator species to flow reduction effects in order to determine flows. This approach has previously been used in the Riuwaka/Motueka and Waimea FMUs and was also used in the Buller Water Conservation Order.

The Historic Flow Method using MALF was used in the Takaka FLAG work on advice from Cawthron that this provided sufficiently robust outputs compared to more detailed approaches, particularly where there is limited data available.

The Historic Flow Method is more conservative than the IFIM approach (the IFIM numbers tend to be closer to the 1 in 5yr low flow) and is driven by the entire range of water values.

This Historic Flow Method has been outlined in a methodology report for the Takaka FMU (Young & Hay - Cawthron, 2017 – report 2977 available online here). This approach identifies the ecological value of a waterbody and assigns a range of percentages of MALF as a sustainable range for minimum flows and for allocation limits eg:

- minimum flow of 90-100% of 7-day MALF at sites with significant instream ecological values
- minimum flow of 70-90% of 7-day MALF at sites with moderate-high instream ecological values
- allocation limit of 10-20% of 7-day MALF at sites with significant instream ecological values
- allocation limit of 20-30% of 7-day MALF at sites with moderate-high instream ecological values

The approach also protects minimum flows with cease take conditions so that abstraction stops when minimum flows are reached to ensure abstraction does not influence drought low flows.

TDC has good information on river flows and groundwater levels within the major rivers and aquifers, with much of this information telemetered (eg real-time online data available at 15min intervals). Other smaller waterbodies have regular manual gauging or gauging during low flows and in some cases these have been correlated to a telemetered site to allow water managers and users to take advantage of real-time, online data.

There is sparse data for the Buller and Aorere/West Coast FMU, largely because of the low population and respective low demand meaning these FMU have been given a lower priority for monitoring expenditure.

Many other smaller water bodies do not have sufficient flow data to define Mean Annual Low Flows (MALF) to allow determination of associated minimum flow and allocation limits.

10.3 Current consents and allocation status

There are 1209 effective consents for water take in the Tasman region – 296 from surface water and 886 from groundwater (the remaining 27 being takes to storage from either surface or groundwater).

Allocation is typically accounted for by zone rather than over an entire FMU as different water bodies and water body reaches have different capacity for abstraction. Zones can be at different statuses (ie fully allocated, over-allocated or under allocated) within the same FMU.

Most zones in the Tasman FMUs are either under allocated or fully allocated. There are instances of confirmed water quantity over-allocation in Tasman. This includes the Waimea Plains (over-allocation to be addressed by Waimea Dam), and instances of creeks going dry over summer due to abstraction (eg Humphries Creek in the Dove catchment) which indicates over-allocation.

- **Motueka/Riuwaka:** most zones are under allocated, some zones in the upper Motueka area are fully allocated, most zones in the middle Motueka are under allocated, but the Dove catchment is over-allocated
- **Abel Tasman – Kaiteriteri**: Marahau zone is under allocated
- **Waimea:** the plains zones (without dam) are over-allocated
- **Moutere:** most are fully allocated
- **Upper Buller / Kawatiri:** under allocated

- **Takaka:** based on the FLAG work most zones are either fully allocated or under allocated. There is a small 'on paper' over-allocation in the Tukurua catchment that is expected to be resolved upon consent renewal as the consent includes a non-consumptive portion
- **Aorere – West Coast:** under allocated, with the exception of the Kaituna River
- **Deep Moutere Groundwater:** under allocated

11 Te Mana o Te Wai

The TRMP does not include specific reference to Te Mana O Te Wai (TMOTW) and the content and approach to water management does not yet fully reflect the philosophy, although aspects of the current provisions do support the hierarchy of obligations. This will be fully addressed through the TEP development process.

11.1 Staff questions on Te Mana o Te Wai application

TDC staff have identified a number of questions for discussion around TMOTW and its application in an RMA planning framework (this may need to be reviewed under an NBA framework). Staff will also be seeking clarification on some of these from Central Government/MfE (ie the first three bullets) as further clarity may be provided through legislation.

1 How is the hierarchy of obligations to be applied in the NBA planning framework?

2 Does the hierarchy of obligations set up a priority order of the national/regional values of water?
   a. And if so, is there a hierarchy between values within each of the obligations?

3 Does human health needs (obligation 2) include:
   a. Local food production for local/national consumption in the context of food security? - And if so, what implications are there for a hierarchy for consent applications for water use related to food production?
   b. Provisions for future generations?
   c. Climate change accounting and adaptation action?

4 Where do iwi consider mahinga kai sit in the hierarchy?

5 TRMP policy 30.2.3. 1 (excerpt in Appendix 2) includes provision for minimum water needs for maintenance of public health during drought – do iwi consider this policy is consistent with the hierarchy of obligations?
   a. If not, what are iwi expectations for management of water for human health needs during extreme droughts?

12 Future areas of work

Following agreement of the FMU extent and boundaries, further work is needed with iwi, stakeholders and the community on the long term visions for each FMU, which water values apply and the environmental outcomes sought.

With respect to iwi discussions the TRMP policy 30.2.3.27 (excerpt below) also identifies the need to define water needs for returned settlement land which need to be considered in the TEP freshwater framework.

> ***TRMP 30.2.3.27*** *To examine the necessity and opportunities for meeting:*
>
> *(a)* ***identified water needs****, including for frost protection in respect of lands of the Crown returned to Māori as part of the settlement of claims under the Treaty of Waitangi Act 1975 and to review water management methods, including plan provisions (including consideration of reserving water for such lands), as appropriate; and*
>
> *(b)* ***identified water needs*** *for frost protection of crops on Māori perpetual lease land.*

13 Other considerations that may be out of scope

There are some aspects of water management that have been identified through iwi and community discussions to date that are important for consideration but are outside the scope of councils' current functions or legislative framework. They may not be easily addressed through this process and may warrant further discussion once the proposed Natural and Built Environments Act is in place.

- The "first in first served" approach to water allocation – this is driven by section 124B of the RMA and may be amended through the RMA reform as indicated in the Randerson report.

- "Best value use of water" – this has not yet been defined nationally (although the TRMP policy 30.1.3.22 refers to enabling water to be used for the "highest social or economic values" through reservation, permit transfer and water sharing), but may provide an alternative approach to first-in-first served allocation.

- Overseas or out of region take and use of water with little or no reciprocity to local communities or the environment (ie the ability to charge for water).

Appendix 1 – Values of water comparison: TDC-NCC-WCRC & NPS-FM 2020

Suggested priority under Te Mana O Te Wai Hierarchy	NPS-FM 2020	Takaka FLAG (NPS-FM 2017)	Waimea FLAG (NPS-FM 2014)	NCC (NPS-FM 2017+)	WCRC (Kawatiri FMU, NPS-FM 2017+)
NA	Long Term Vision (by FMU)	[FLAG choose not to have a vision]	"To protect and over time enhance the quality of the Waimea Freshwater Catchment Ecosystems so as to meet the current and future cultural, social, environmental and economic needs and values of the communities which use or otherwise relate to them."	[to be developed over 2021]	"In the Kawatiri FMU, freshwater is valued and will be managed utilising the ki uta ki tai (mountains to the sea) philosophy. The health and mauri of water is to be sustained for our community's future wellbeing."
Obligation 1 (and 2-3)	[only referenced in TMOTW principles]	[aspects referenced in other values]	[not referenced]	Kaitiakitanga – overarching freshwater value linked to all other values	[not referenced]
Obligation 1	Ecosystem Health*	Ecosystem Health*	Ecosystem Health*	Ecosystem Health*	Ecosystem Health* (biodiversity, wetlands, biosecurity, habitat quality)
Obligation 1	Natural Form and Character [ie natural form and natural character]	Natural Form and Character	[considered but not selected]	Natural form and character	Amenity and natural character (amenity, natural character, tourism, physical access)
Obligation 1	[not referenced]	[not referenced]	[not referenced]	Natural state	[not referenced]
Obligation 1	Threatened species*	[included in ecosystem health]	[included in ecosystem health]	Threatened species habitat*	[not referenced]
Obligation 1	[not referenced]	[included in ecosystem health]	[included in ecosystem health]	Īnanga spawning	[not referenced]
Obligation 1	[some aspects referenced in other parts]	[some aspects referenced in other values]	[some aspects referenced in other values]	Kaitiakitanga, Mauri, Wairua & Mana (Pākohe, Taonga, Kaitiaki species, Tohu species, Taonga species, Iconic species, Kai species, Taniwha, Whakapapa – freshwater with land and coast, Fish passage, Tūpuna awa, Mahinga kai)	[not referenced]
Obligation 1 (2-3)	[some aspects referenced in other parts]	[some aspects referenced in other values]	[some aspects referenced in other values]	Mauri (Natural character and capital Ecosystem health, Recreation, Swimming, washing and cleansing, Wai māori)	[not referenced]
Obligation 1 (2-3)	[some aspects referenced in other parts]	[some aspects referenced in other values]	[some aspects referenced in other values]	Wairua (Karakia and Wairuatanga, Sensory and aesthetic values including sight, touch/feel, taste, sound/voice, smell, flow, History and heritage, Rongoā and healing properties)	[not referenced]
Obligation 2	Drinking water supply	Municipal and Domestic Water Supply	Municipal and Domestic Water Supply	Community water supply	Drinking (community supply, stockwater, when outdoors)
Obligation 2	Mahinga kai* (kai is safe to harvest and eat; and Kei te ora te mauri - the mauri of the place is intact)	[included in fishing and food gathering]	[included in fishing and food gathering]	Mahinga kai*	Mahinga kai* and fishing
Obligation 2?	[not referenced]	[not referenced]	[not referenced]	Wai māori	[not referenced]

Obligation 2-3?	Human contact* [for recreation]	Recreation (Human Health contact)*	Recreation (Human Health contact)*	Human health for recreation*	Contact recreation* (primary and secondary contact)
Obligation 2-3	Fishing	Fishing, Food and Resource Gathering	Fishing and Food Gathering	Fishing Trout habitat and spawning	(Included in Mahinga kai* and fishing)
Obligation 2-3	[reflected in mahinga kai]	[not referenced]	[not referenced]	[not referenced]	Food safety (toxin free)
Obligation 2-3?	Irrigation, cultivation, and production of food and beverages	[included in Livelihood and Economic Use]	[included in Livelihood and Economic Use]	Irrigation, cultivation and food production	(included in industrial and commercial)
Obligation 2-3?	[some aspects referenced in other values]	[some aspects referenced in other values]	[some aspects referenced in other values]	Mana (Access He ara haere/navigation Manaakitanga)	[not referenced]
Obligation 2-3?	[not referenced]	[access referenced in fishing, food and resource gathering value management objectives]	[not referenced]	Public access	(Included in amenity and natural character)
Obligation 3	Wai Tapu	Cultural and Spiritual Values	Cultural and Spiritual Values	[refer separately defined values set]	Cultural and Spiritual Values
Obligation 3	[not referenced]	[not referenced]	[not referenced]	Educational sites	Education
Obligation 3?	[not referenced]	[not referenced]	[not referenced]	Existing infrastructure	[not referenced]
Obligation 3?	[not referenced]	[not referenced]	[not referenced]	Flood capacity and drainage	(Included in industrial and commercial)
Obligation 3	Animal Drinking water	[included in Livelihood and Economic Use]	[included in Livelihood and Economic Use]	Animal drinking water	(Included in Drinking)
Obligation 3	Hydro-electric Power Generation	Hydro-electric Power Generation	[considered, but not selected]	[not referenced]	Included in Flow regimes (hydroelectric clean energy, pounamu, jet boating)
Obligation 3	[covered in separate values]	Livelihood and Economic Use	Livelihood and Economic Use	[covered in separate values]	[covered in separate values]
Obligation 3	Commercial and industrial use	[included in Livelihood and Economic Use]	[included in Livelihood and Economic Use]	Commercial and industrial use	Industrial and Commercial (drainage, fire-fighting, industrial use, irrigation, aquaculture)
Obligation 3	Transport and tauranga waka	[considered, but not selected]	[considered, but not selected]	He ara haere/navigation Transport and tauranga waka	(jet boating included in Flow regimes)
Obligation 3	[not referenced]	[not referenced]	[not referenced]	Amenity	Amenity and natural character (amenity, natural character, tourism, physical access)
Obligation 3	[not referenced]	[not referenced]	[not referenced]	Aesthetics	[not referenced]
Obligation 3	[some aspects referenced in other values]	[some aspects referenced in other values]	[some aspects referenced in other values]	[not referenced]	Flow regimes (hydroelectric clean energy, pounamu, jet boating)

Appendix 2 – Policy 30.2.3.1 excerpt from TRMP

Existing TRMP Policy:

30.2.3.1 *During times of low flow beyond the provisions of any rationing or rostering regime or when implementing a water shortage direction under Section 329 of the Act, Council will give priority to the following uses, whether they are authorised by a permit or through a rule in the Plan (in order of priority from highest to lowest) in requiring reduction or greater restrictions, including cessation for authorised takes:*

(a) water for the maintenance of public health;

(b) prevention of significant long term or irreversible damage to the water resource or related ecosystems or specified significant instream values;

(c) water necessary for the maintenance of animal welfare;

(d) uses for which water is essential for the continued operation of a business, such as irrigation of horticultural crops or water essential to industrial activities;

and the following uses will not be authorised during such a drought:

(e) irrigation and other uses not associated with commercial production such as irrigation of amenity plantings;

(f) non-essential uses such as recreational use, for example, swimming pools and car washing.

Takes not subject to any rationing are:

(i) firefighting uses;

(ii) non-consumptive uses;

(iii) takes from storage.

Note: *An allowance of 125 litres per person per day is used to calculate the amount required for maintenance of human health.*

Nelson Plan Freshwater Management Overview

1 Purpose

This report provides a 'snapshot' overview of Nelson City Council's (NCCs) water management approach to date. The report will contribute to a current state report of Te Tau Ihu iwi freshwater management.

The report addresses NCC's current Plan and policy planning processes and provides an overview of its freshwater management activities.

2 Plans and current processes

Council's operative Plans are the Nelson Resource Management Plan, Nelson Regional Policy Statement and Nelson Air Plan. These do not give effect to the NPSFM 2020. Efforts to date in giving effect to national direction on freshwater management are reflected in the Draft Nelson Plan.

The Draft Nelson Plan will replace the operative plans.

The Draft Nelson Plan includes draft freshwater provisions that were developed under the previous 2014 (amended 2017) NPSFM and earlier draft versions of the new NPSFM 2020. This content is being revised and updated to reflect the gazetted NPSFM 2020. The Draft Nelson Plan does not yet have any legal standing but has recently been made publicly available for feedback.

At the time of writing, Council aims to notify the Nelson Plan in mid-2022. As freshwater provisions to give effect to the NPSFM 2020 may not be ready in time to meet mid-2022 notification deadlines, it is possible they will be notified separately as a Variation to the Proposed Nelson Plan.

The estimated Draft Nelson Plan deadline may be subject to change due to RMA reform announcements.

3 Consenting, compliance and enforcement

Because the Draft Nelson Plan has no legal standing, Council's consenting, compliance, and enforcement teams administer the operative Nelson Resource Management Plan, Nelson Regional Policy Statement and Nelson Air Plan. However, as with all national policy statements, all applications for resource consent must also be assessed against the NPSFM 2020

As noted above, the operative Plans do not reflect the NPSFM 2020 or earlier versions of it and it will be replaced by the Nelson Plan.

4 Community and Iwi processes

The development of freshwater content in the Draft Nelson Plan involved advice and assistance from a community Freshwater Working Group (FWG), and collaboration with the Iwi Working Group (IWG).

The FWG comprises landowners, stakeholder groups, interest groups, industry representatives and government agency representatives. Sub-groups representing the 5 Freshwater Management Units (FMUs) were identified and met separately where required to provide local input into catchment-specific values. Iwi representatives were and are invited to all meetings.

A separate Iwi Working Group (IWG) were also engaged throughout process of development of freshwater provisions in the Draft Nelson Plan. The eight tāngata whenua iwi in the Whakatū rohe were invited to participate: Ngāti Apa ki te Rā Tō Trust; Ngāti Kōata Iwi Trust; Ngāti Kuia Iwi Trust; Te Runanga o Ngāti Rārua Trust; Ngāti Tama ki te Waipounamu Trust; Te Ātiawa o te Waka-a-Māui; Rangitāne o Wairau; and Ngāti Toa Rangatira. The IWG collaboration process operated in parallel with the Freshwater Working Group.

Both the IWG and FWG met regularly between 2015 and 2018 to help Council in the implementation of the 2014/2017 NPSFM. They were engaged to assist in providing determining freshwater management unit (FMU) boundaries, identifying values, discussing attributes and setting attribute limits. They also helped to develop early (NPSFM 2014/2017) meanings of Te Mana o te Wai, and in developing Draft Nelson Plan content, from objectives and policies through to rules.

The FWG recently reconvened following the formal gazetting of the new 2020 NPSFM and will continue to assist and advise Council on the new requirements. Regarding the IWG, it is anticipated that this report and the Te Tau Ihu Collaborative Project will direct future processes of engagement and collaboration with Iwi.

5 Iwi involvement in governance and Plan-making processes

Currently, hui are held to involve iwi representatives on the development of the Nelson Plan in sessions that prioritise issues that are important to them. Session times are organic and vary depending on when material is available, and when council staff and iwi representatives have capacity to engage. Iwi representatives are compensated for the time that they spend working with council staff on plan material. At critical points, iwi trust boards are asked to approve the feedback from their iwi. The Draft Nelson Plan was reviewed by an Iwi representative prior to public engagement.

Regarding representation on Council, a Maori representative sits on the Environment and Planning Committee in an advisory role and participates in Council workshops regarding Plan content. Staff also report to the Iwi-Council Partnership Group and provide Nelson Plan updates. On staff, Kaihautu and supporting Kaituitui are responsible for facilitating partnerships with mana whenua and promoting a collaborative and positive relationship with Māori to effectively deliver Council services and activities.

6 Science monitoring programme

The Science & Environment team at Nelson City Council support freshwater management programmes of Council by providing the technical advice to the plan-making process and information on the condition of the region's waterways. They also deliver freshwater management through a variety of catchment management programmes.

Across the 5 FMUs there are 28 water quality monitoring sites which monitor water quality and chemistry parameters, biological and ecosystem health indicators and freshwater fish. There is also a hydrological monitoring programme that collects data from 8 rain gauges, 1 groundwater and 11 flow sites. A mixture of continuous and discrete data is collected.

Information from these sites contribute to the current 'state of the environment' monitoring requirements. These sites and the information they provide Council meet basic information requirements to give effect to the NPSFM 2020 but can be improved. Key improvements include:

- additional continuous data monitoring sites
- new monitoring attributes within the FMUs
- supporting cultural monitoring initiatives
- additional sites to better understand freshwater processes within different FMUs and sub-catchments within them
- development of freshwater accounting systems for quality and quantity
- trend monitoring to enable assessment of progress towards environmental outcomes and vision statements

The detail of these improvements will be shaped by Iwi and the Community's development of local meaning/s for Te Mana o te Wai and of FMU-specific long-term visions. Staff have identified these gaps and are working towards addressing them, prioritising those areas necessary to give effect to the NPSFM 2020 in the Nelson Plan.

7 FMUs

In the Nelson region, 5 FMUs have been identified covering the whole region (no locations are outstanding). These are the Whangamoa, Wakapuaka, Maitai/Maitahi/Maitahitahi, Stoke and Roding catchments, as shown in Attachment 1.

The boundaries of the FMUs were defined through engagement with the IWG and FWG. They were primarily determined based on catchment boundaries of waterways, and then by discharge points into key estuaries. A ki uta ki tai or 'source-to-sea' approach was applied to all FMUs.

8 Values

A process of identifying and locating values within and across all 5 FMUs was undertaken in collaboration with the FWG and the IWG, through the lens of the 2014/2017 NPSFM. Groups were asked to identify what and where values applied including detail that recognises differences between sub-catchments within each. A summary of the values and their application to the FMUs including sub-catchments is appended (ref. Attachment 2 and Attachment 3).

9 Water quality (attributes and limits)

Council holds information about the health of waterways in each of the FMUs and sub-catchments, based on its water monitoring programme (see 6above). The attributes used in communicating this are based on the requirements of the 2014/2017 NPSFM 'National Objective Framework' (NOF).

Building on this and to ensure the health of water in relation to the community identified values, instream water quality limits were developed and are part of the Draft Nelson Plan. These instream limits were a requirement of the NPSFM 2014/2017 and are attached (Attachment 4). The FWG and IWG assisted Council staff in determining these limits.

The new NPSFM 2020 differs in its approach to water quality limits. It requires that Council update its water health assessment approach to reflect new required attributes of the NOF, develop target attribute states for all attributes, and set limits for activities that are known to have detrimental effects on freshwater health. Draft Nelson Plan content will need to be updated accordingly.

10 Quantity (allocation and limits)

Council has good information about the state of freshwater flow levels and volumes within the 5 FMUs. Based on this information, draft limits were set as part of the 2014/2017 NPSFM process, and these are set out in Attachment 5. These limits will need to be reviewed as part of the 2020 NPSFM process.

There are 36 consented water takes across the 5 FMUs, and up to 500 permitted takes. It is considered that most FMUs are at 100% allocation, with few that are under allocated. Overallocated sub-catchments include Poorman Stream and Saxton Creek in the Stoke FMU, and sub-catchments Brook, Oldham, Todds and Hillwood within the Maitai FMU.

Current Draft Nelson Plan provisions and Council work-programme activities aim to better manage allocation and address over-allocation by improving metering and monitoring systems, requiring better water use efficiency, setting more conservative limits for over-allocated waterways, and synchronising water take consent renewals.

11 Te Mana o te Wai

The Draft Nelson Plan freshwater provisions address the concept of Te Mana O Te Wai in the form required by the 2014/2017 NPSFM, and as anticipated by draft versions of the NPSFM 2020. As part of this process, the IWG provided the following definition for Te Mana o Te Wai for tangata whenua o Te Tau Ihu:

"Mana is in inward flowing force. For wai to have mana, people have to recognise and value the water – it has to be embraced and acknowledged. For example, the Whanganui River settlement provides the river with protection of a person, as a recognised entity it has mana. Once the wai has been degraded the true mana o te wai will be realised (people don't know what they have until it is gone). Wai has common whakapapa to us all, we are all made of it. Wai unites all living things." (from 'Values and Attributes for Freshwater in Whakatu Nelson – Technical Report to Support Development of the Nelson Plan' by the Catalyst Group).

Following this, the draft provisions contain values and concepts that relate directly to Maori cultural health concepts and Te Mana o te Wai (e.g. mana and mauri of te wai) as well as holistic values that support freshwater health and which underpin Te Mana o Te Wai (e.g. maintenance and enhancement of threatened species habitats). All values and the policy concepts supporting them were developed with direct guidance from the IWG, and support from the FWG.

For ease of reference, issues and objectives of the Significant Resource Management Issues of the Region in the Draft Nelson Plan are summarised in Attachment 6 ('Regional Policy Statement' content). Sample policies, methods, principal reasons and anticipated environmental results from other parts of the Draft Nelson Plan are also included. These should be read in full and alongside all Regional and District Plan land and freshwater content.

Full Draft Nelson Plan access is available at https://shape.nelson.govt.nz/nelson-plan (freshwater content in full).

12 Future areas of work

It is acknowledged that the emphasis and direction introduced by the final version of the NPFM 2020 will require Draft Nelson Plan content to be updated. Areas of likely change include (but are not limited to):

- reviewing all draft nelson plan freshwater content to meet the overarching objective, the hierarchy of obligations
- reviewing objectives and policies in terms of the local meaning of Te Mana o te Wai and long term visions
- developing environmental outcomes that reflect prioritised values
- developing and implementing the 6 principles of Te Mana o te Wai through the plan and within plan methods that recognise other council and community initiatives (both regulatory and non-regulatory).
- reviewing draft quality and quantity limits, establishing target attribute states and developing a framework to accommodate activity limits
- developing water accounting and monitoring systems, including trend analysis capabilities

Continued IWG and FWG liaison and opportunities for shared learning is anticipated throughout the process of implementation of the above.

Attachments

Attachment 1 – Freshwater Management Units

Attachment 2 – Freshwater values

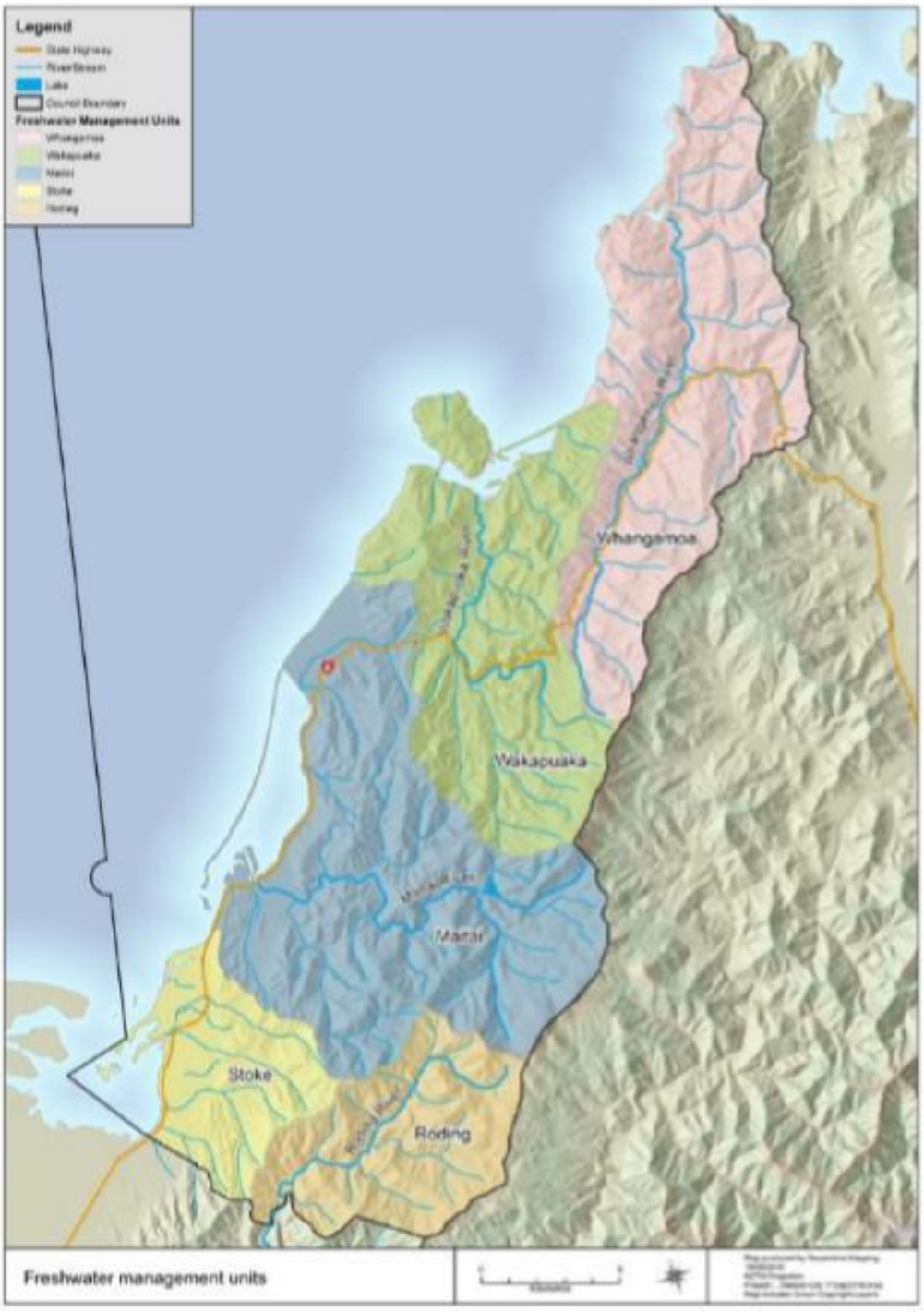
Attachment 3 – Freshwater values by FMU

Attachment 4 – Freshwater quality limits

Attachment 5 – Surface water allocation limits

Attachment 6 – Sample Draft Nelson Plan provisions

Attachment 1 – Freshwater Management Units



Attachment 2 – Freshwater values

APP27 – Freshwater values

12.1 Wāriu/value		12.2 Description
Kaitiakitanga – overarching freshwater value linked to all other values		The practice and responsibility of guardianship of the environment by tāngata whenua, passed down from their tūpuna. The ultimate ngā atua kaitiaki (celestial beings, spiritual guardians, gods), in the contemporary context, people undertake this responsibility in the earthly realm. Kaitiakitanga is both a birth-right and a duty, requiring mana[119]. Governance by tāngata whenua and taking care of the mauri of the natural environment are relevant aspects of kaitiakitanga for freshwater resources. Kaitiakitanga is a matter for particular regard under section 7(a) of the RMA.
12.3 Specific tāngata whenua wāriu/values		12.4 Description
Kaitiakitanga, Mauri, Wairua & Mana	Pākohe	Argillite stone sourced from the mineral belt which runs through Whakatū Nelson. A taonga and significant resource for the people of Ngāti Kuia, Ngāti Kōata and other tāngata whenua. Pākohe was traded throughout Aotearoa and prized for tool making.

[119] Adapted from the Reverend Māori Marsden definition of Kaitiakitanga: "A 'kaitiaki' is a guardian, keeper, preserver, conservator, foster-parent, protector. The suffix 'tanga' transforms the term to mean guardianship, preservation, conservation, fostering, protecting, sheltering. Traditionally, kaitiaki are the spiritual assistants of the gods, and they are the spiritual minders of the elements of the natural world. In modern times, tāngata whenua practice kaitiakitanga in the earthly realm. Tāngata whenua who act as kaitiaki must uphold their mana through protecting the mauri of the natural environment, including freshwater resources."
http://www.marinenz.org.nz/documents/Marsden_1992_Kaitiakitanga.pdf

12.1 Wāriu/value		12.2 Description
		Value acknowledged: Iwi Management Plans lodged by Ngāti Kuia for Pākohe specifically[120] and the management plan of Ngāti Kōata[121].
	Taonga	Taonga are treasured, things or places of significant value or precious and critical resources. Taonga can be animate or inanimate. Protection of the relationship of tāngata whenua with their taonga is a matter of national significance under section 6(e) of the RMA and includes ancestral lands, water, sites, wāhi tapu and other taonga. **Value acknowledged:** Statutory acknowledgements, deeds of settlement and iwi management plans for Whakatū all include references to taonga.
	Kaitiaki species Tohu species Taonga species Iconic species Kai species Taniwha	Species that have particular significance or roles in the aquatic environment. Kaitiaki species may guard a site or environment, they may be taniwha or a known animal (e.g. a tuna/eel or dolphin). Tohu species are indicators or portents (e.g. panako/torrentfish are an indicator of good flows and swift, clean water). Taonga species are treasured life-forms of significance to particular iwi, hapū or whānau (e.g. harakeke/flax or tuna) – these species may also be iconic for a particular area or people. Kai species as those that are particularly sought-after or abundant as food resources and are served as manaaki to manuhiri/guests (e.g. kākahi/freshwater mussels, tuna or kina). Taniwha are powerful water spirits that can take many forms. They can be guardians

[120] http://nelson.govt.nz/assets/Our-council/Downloads/Iwi-Management-Plans/Ngati-Kuia-Pakohe-Management-Plan-final-081114-A1275104.pdf
[121] http://nelson.govt.nz/assets/Our-council/Downloads/Iwi-Management-Plans/Ngati-Koata-Trust-IMP-Iwi-Management-Plan-24May2002-A1133068.pdf

12.1 Wāriu/value		12.2 Description
		and/or monsters and may punish people for physical or spiritual transgressions.
	Whakapapa – freshwater with land and coast	Whakapapa is the connection between celestial and physical realms, the connection between people and the atua, connection between people and the environment and connection between people and their ancestors (genealogy). Tāngata whenua express their connection to place and to the atua via their environment, acknowledged in recitation of pepehā. Whakapapa ki te Wai is the genealogy of the water – connected through the water cycle. Pepehā and whakapapa ki te Wai both refer to the connectivity of the mountains to the sea through rivers.
	Fish passage	Encompassed within the Ecosystem health and Threatened species habitat values.
	Tūpuna awa	The Maitahi/Mahitahi/Maitai River is a tūpuna awa – a significant and ancestral river for tāngata whenua o Te Tau Ihu o Te Waka-a-Māui. Linked to Whakapapa, Pākohe and Taonga values.
	Mahinga kai	Defined as an individual value.
Mauri	Natural character and capital	Natural form and character is defined as an individual value. Natural capital is the natural ability of freshwater to provide resources to sustain people and the environment.
	Ecosystem health	Defined as an individual value.

12.1 Wāriu/value		12.2 Description
	Recreation	Encompassed by Human health for recreation, He ara haere/navigation, Mahinga kai and Wai māori values.
	Swimming, washing and cleansing	Encompassed by the Human health for recreation and Wai māori values.
	Wai māori	Defined as an individual value.
Wairua	Karakia and wairuatanga	Recited incantations, ritual chants, prayers and practices associated with freshwater and traditional Māori spirituality, has links to the definition of 'Wai tapu' in the NPS-FM.
	Sensory and aesthetic values including sight, touch/feel, taste, sound/voice, smell, flow	Some of these aspects will be captured by the Wai māori, Ecosystem health, Natural form and character and Public access values.
	History and heritage	Links to HH – Historic heritage of the Nelson Plan.
	Rongoā and healing properties	Medicines or treatments associated with freshwater – traditional physical or spiritual healing, has links to the definition of 'Wai tapu' in the NPS-FM.
Mana	Access	Defined as an individual value: Public access.
	He ara haere/navigation	Defined as an individual value.
	Manaakitanga	Ethic of hospitality, respect, support and care. The practice of manaakitanga is often associated with hospitality to manuhiri, whereby mahinga kai or kai moana resources are the physical embodiment of the practice,

12.1 Wāriu/value		12.2 Description
		the abundance and quality of which is linked to the mana of the tāngata whenua and the respect shown to the manuhiri – the mana held by the people, given and received.
Ecosystem health		Water bodies or parts of water bodies have healthy ecosystems, where ecological processes are maintained, there is a diversity and range of indigenous flora and fauna, and ecosystems are resilient to change.
Threatened species habitat		Known habitats of threatened species that have critical habitat requirements associated with freshwater.
Īnanga spawning		Known and predicted īnanga spawning habitat at the interface between the freshwater and coastal environments.
Natural form and character		Water bodies and parts of water bodies valued for their natural form and character, including their visual and physical characteristics, which are a function their flow regime, water colour and clarity, morphology or location in the landscape.
Natural state		Water bodies and parts of water bodies in a natural or highly unmodified state.
Human health for recreation		Water bodies or parts of water bodies where water quality is suitable for primary contact (full immersion).
Mahinga kai		Water bodies and parts of water bodies that support the safe harvesting and eating of traditional indigenous species, and the places where kai are found. These places indicate the health of the water. Kei te ora te mauri (the mauri of the place is intact).

12.1 Wāriu/value	12.2 Description
Fishing	Water bodies or parts of water bodies that support the safe catching or collecting of species of fish allowed to be caught and eaten.
Trout habitat and spawning	Water bodies or parts of water bodies that support healthy, functioning habitats for trout and trout spawning.
Wai māori	A value reflecting the aspirations of tāngata whenua and the wider community to be able to drink water directly from its source.
Community water supply	Water bodies or parts of water bodies currently providing water in sufficient quality and quantity to meet municipal or community domestic needs.
He ara haere/navigation	Water bodies or parts of water bodies that are used for navigation purposes including wayfaring and traditional or historic river trails.
Transport and tauranga waka	Water bodies or parts of water bodies that are used for boating, waka ama, rowing, rafting, kayaking or other watercraft.
Aesthetics	Water bodies or parts of water bodies valued for their sensory aspects e.g. appearance/sight, sound, smell, taste and feel.
Amenity	Water bodies or parts of water bodies that are available to, and accessible by, the public for a range of purposes because they are in public ownership or under public management and provide community freshwater amenities.
Public access	Water bodies or parts of water bodies where public access to and along a water body is provided and maintained for a range of purposes.

12.1 Wāriu/value	12.2 Description
Educational sites	Water bodies or parts of water bodies where schools, ngā kura, community groups or the public regularly access the water for educational and community monitoring purposes.
Irrigation, cultivation and food production	Water bodies or parts of water bodies currently providing water in sufficient quality and quantity to meet irrigation (agricultural and recreational) and food production needs.
Animal drinking water	Water bodies or parts of water bodies currently providing water in sufficient quality and quantity to meet stock drinking needs.
Commercial and industrial use	Water bodies or parts of water bodies currently providing water in sufficient quality and quantity to meet commercial and industrial needs.
Existing infrastructure	Location of existing essential public and private infrastructure e.g. hydroelectric and water supply infrastructure, pipelines, dams, roads, bridges etc.
Flood capacity and drainage	Location of existing public flood, erosion and drainage control structures and regular, programmed works to maintain flood capacity and drainage.

Attachment 3 – Freshwater values by FMU

APP28 – Freshwater values by FMU

FMU	Sub-catchment	Kaitiakitanga	Mauri	Wairua	Mana	Ecosystem health	Threatened species habitat	Īnanga spawning	Natural form and character	Natural state	Human health for recreation	Mahinga kai	Fishing	Trout habitat and spawning	Wai māori	Community water supply	He ara haere/navigation	Transport and tauranga waka	Aesthetics	Amenity	Public access	Educational sites	Irrigation, cultivation, food production	Animal drinking water	Commercial and industrial use	Existing infrastructure	Flood capacity and drainage
Roding	Upper Roding	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓					✓	
Stoke	Saxton	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓			✓				✓	✓	✓		✓	✓		✓	✓
	Orphanage	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓			✓				✓	✓	✓					✓	✓
	Orchard	✓	✓	✓	✓	✓	✓		✓		✓	✓			✓				✓	✓	✓					✓	✓
	Upper Poorman	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓			✓				✓	✓	✓	✓	✓	✓		✓	✓
	Lower Poorman	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓			✓				✓	✓	✓	✓	✓			✓	✓
	Jenkins	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓				✓	✓	✓					✓	✓
	Maire	✓	✓	✓	✓	✓		✓	✓						✓				✓	✓	✓				✓	✓	✓
Maitahi/ Mahitahi/ Maitai	York	✓	✓	✓	✓	✓	✓		✓		✓				✓				✓	✓	✓	✓				✓	✓
	Upper Brook	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓				✓	✓	✓	✓				✓	✓
	Lower Brook	✓	✓	✓	✓	✓	✓		✓		✓	✓		✓	✓	✓			✓	✓	✓	✓	✓			✓	✓
	North Branch	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓					✓	

FMU	Sub-catchment	Kaitiakitanga	Mauri	Wairua	Mana	Ecosystem health	Threatened species habitat	Īnanga spawning	Natural form and character	Natural state	Human health for recreation	Mahinga kai	Fishing	Trout habitat and spawning	Wai māori	Community water supply	He ara haere/navigation	Transport and tauranga waka	Aesthetics	Amenity	Public access	Educational sites	Irrigation, cultivation, food production	Animal drinking water	Commercial and industrial use	Existing infrastructure	Flood capacity and drainage
	South Branch	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓					✓	
	Lower Maitahi/ Mahitahi/ Maitai	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
	Sharland	✓	✓	✓	✓	✓	✓		✓		✓	✓		✓	✓				✓	✓	✓					✓	
	Groom	✓	✓	✓	✓	✓			✓		✓	✓			✓				✓	✓	✓					✓	
	Oldham	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓			✓				✓	✓	✓	✓	✓	✓		✓	✓
	Todds	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓			✓	✓			✓	✓	✓		✓	✓		✓	✓
	Hillwood	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓			✓	✓			✓	✓	✓		✓	✓		✓	✓
Wakapuaka	Teal	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓	✓			✓	✓	✓					✓	
	Lud	✓	✓	✓	✓	✓	✓		✓		✓	✓		✓	✓				✓	✓	✓			✓		✓	
	Upper Wakapuaka	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓				✓	✓	✓					✓	

FMU	Sub-catchment	Kaitiakitanga	Mauri	Wairua	Mana	Ecosystem health	Threatened species habitat	Īnanga spawning	Natural form and character	Natural state	Human health for recreation	Mahinga kai	Fishing	Trout habitat and spawning	Wai māori	Community water supply	He ara haere/navigation	Transport and tauranga waka	Aesthetics	Amenity	Public access	Educational sites	Irrigation, cultivation, food production	Animal drinking water	Commercial and industrial use	Existing infrastructure	Flood capacity and drainage
	Lower Wakapuaka	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓		✓	
Whangamoa	Upper Whangamoa	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓				✓	✓	✓					✓	
	Lower Whangamoa	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓	✓					✓	
	Graham	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓			✓				✓	✓	✓					✓	
	Collins	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		✓	✓				✓	✓	✓					✓	
	Dencker	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓			✓				✓	✓	✓					✓	

Attachment 4 – Freshwater quality limits

APP33 – Water quality limits

FMU	Sub-catchment	E. coli / 100ml	MCI	Trophic state - periphyton biomass mg/m²	Periphyton %WCC	Nitrate toxicity mg/L		Ammonia toxicity mg/L		Dissolved oxygen mg/L		Clarity * m	Deposited fine sediment % cover	Cyano-bacteria % cover	DIN mg/L	DRP mg/L	Toxicants / metals	Water temp.	pH	% reduction in water clarity
Attribute statistic		95th %ile	5-year mean	3-year mean	3-year mean	Annual median	95th %ile	Annual median	Annual max.	7-day mean	1-day min.	Min. at Q_{50}	3-year mean		Annual average	Annual average	Species protection level	Annual max.		upstream to downstream Δ in black disc (m)
Roding	Upper Roding (NCC)	≤260	>100	50 - 120 mg/m²	20 – 40%	<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5	3.75	<20%⁺	<20%	100-400	6-10	95%	≤20°C	6.5 < 8.5	≤20
Stoke	Saxton	≤260	>80	120 - 200 mg/m²	40 – 55%	<1	<1.5	<0.03	<0.05	≥5.0 and <7.0	≥4.0 and <5.0	1.6	<25%	<20%	400-800	10-15	95%	≤24°C	6.0 < 9.0	≤30
	Orphanage	≤260	>100	50 - 120 mg/m²	20 – 40%	<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5	3.75	<20%⁺	<20%	100-400	6-10	95%	≤20°C	6.5 < 8.5	≤20
	Orchard	≤260	>100	50 - 120 mg/m²	20 – 40%	<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5	3.75	<20%⁺	<20%	100-400	6-10	95%	≤20°C	6.5 < 8.5	≤20
	Upper Poorman	≤260	>100	50 - 120 mg/m²	20 – 40%	<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5	3.75	<20%⁺	<20%	100-400	6-10	95%	≤20°C	6.5 < 8.5	≤20
	Lower Poorman	≤260	>120	<50 mg/m²	<20%	<1	<1.5	<0.03	<0.05	≥8mg/L	≥7.5mg/L	5	<20%⁺	<20%	<100	<6	99%	≤18°C	6.5 < 8.0	≤20
	Arapiki			No data		<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5						80%?			

FMU	Sub-catchment	E. coli / 100ml	MCI	Trophic state - periphyton biomass mg/m²	Periphyton %WCC	Nitrate toxicity mg/L		Ammonia toxicity mg/L		Dissolved oxygen mg/L		Clarity * m	Deposited fine sediment % cover	Cyano-bacteria % cover	DIN mg/L	DRP mg/L	Toxicants / metals	Water temp.	pH	% reduction in water clarity
Attribute statistic		95th %ile	5-year mean	3-year mean	3-year mean	Annual median	95th %ile	Annual median	Annual max.	7-day mean	1-day min.	Min. at Q_{50}	3-year mean		Annual average	Annual average	Species protection level	Annual max.		upstream to downstream Δ in black disc (m)
	Jenkins	≤260	>100	50 - 120 mg/m² & 20 – 40%	20 – 40%	<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5	3.75	<20%⁺	<20%	100-400	6-10	95%	≤20°C	6.5 < 8.5	≤20
	Maire		>80	120 - 200 mg/m²	40 – 55%	<1	<1.5	<0.03	<0.05	≥5.0 and <7.0	≥4.0 and <5.0	1.6	<25%		400-800	10-15	95%	≤24°C	6.0 < 9.0	≤30
Maitahi/ Mahitahi /Maitai	York	≤260	>80	120 - 200 mg/m²	40 – 55%	<1	<1.5	<0.03	<0.05	≥5.0 and <7.0	≥4.0 and <5.0	1.6	<25%	<20%	400-800	10-15	95%	≤24°C	6.0 < 9.0	≤30
	Upper Brook	≤260	>100	50 - 120 mg/m²	20 – 40%	<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5	3.75	<20%⁺	<20%	100-400	6-10	95%	≤20°C	6.5 < 8.5	≤20
	Lower Brook	≤260	>100	50 - 120 mg/m²	20 – 40%	<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5	3.75	<20%⁺	<20%	100-400	6-10	95%	≤20°C	6.5 < 8.5	≤20
	North Branch	≤260	>100	50 - 120 mg/m²	20 – 40%	<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5	3.75	<20%⁺	<20%	100-400	6-10	95%	≤20°C	6.5 < 8.5	≤20
	South Branch	≤260	>120	<50 mg/m²	<20%	<1	<1.5	<0.03	<0.05	≥8mg /L	≥7.5mg/L	5	<20%⁺	<20%	<100	<6	99%	≤18°C	6.5 < 8.0	≤20
	Lower Maitahi/ Mahitahi/ Maitai	≤260	>120	<50 mg/m²	<20%	<1	<1.5	<0.03	<0.05	≥8mg /L	≥7.5mg/L	5	<20%⁺	<20%	<100	<6	99%	≤18°C	6.5 < 8.0	≤20

FMU	Sub-catchment	E. coli / 100ml	MCI	Trophic state - periphyton biomass mg/m²	Periphyton %WCC	Nitrate toxicity mg/L		Ammonia toxicity mg/L		Dissolved oxygen mg/L		Clarity * m	Deposited fine sediment % cover	Cyano-bacteria % cover	DIN mg/L	DRP mg/L	Toxicants / metals	Water temp.	pH	% reduction in water clarity
Attribute statistic		95th %ile	5-year mean	3-year mean	3-year mean	Annual median	95th %ile	Annual median	Annual max.	7-day mean	1-day min.	Min. at Q_{50}	3-year mean		Annual average	Annual average	Species protection level	Annual max.		upstream to downstream Δ in black disc (m)
	Sharland	≤260	>100	50 - 120 mg/m²	20 – 40%	<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5	3.75	<20%⁺	<20%	100-400	6-10	95%	≤20°C	6.5 < 8.5	≤20
	Packer	≤260	>100	50 - 120 mg/m²	20 – 40%	<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5	3.75	<20%⁺	<20%	100-400	6-10	95%	≤20°C	6.5 < 8.5	≤20
	Groom	≤260		No data		<1	<1.5	<0.03	<0.05					<20%			95%?			
	Oldham	≤260	>100	50 - 120 mg/m²	20 – 40%	<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5	3.75	<20%⁺	<20%	100-400	6-10	95%	≤20°C	6.5 < 8.5	≤20
	Todds	≤260	>80	120 - 200 mg/m²	40 – 55%	<1	<1.5	<0.03	<0.05	≥5.0 and <7.0	≥4.0 and <5.0	1.6	<25%	<20%	400-800	10-15	95%	≤24°C	6.0 < 9.0	≤30
	Hillwood	≤260	>120	<50 mg/m²	<20%	<1	<1.5	<0.03	<0.05	≥8mg/L	≥7.5mg/L	5	<20%⁺	<20%	<100	<6	99%	≤18°C	6.5 < 8.0	≤20
Wakapuaka	Teal	≤260	>100	50 - 120 mg/m²	20 – 40%	<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5	3.75	<20%⁺	<20%	100-400	6-10	95%	≤20°C	6.5 < 8.5	≤20
	Lud	≤260	>100	50 - 120 mg/m²	20 – 40%	<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5	3.75	<20%⁺	<20%	100-400	6-10	95%	≤20°C	6.5 < 8.5	≤20
	Upper Wakapuaka	≤260	>100	50 - 120 mg/m²	20 – 40%	<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5	3.75	<20%⁺	<20%	100-400	6-10	95%	≤20°C	6.5 < 8.5	≤20

FMU	Sub-catchment	E. coli / 100ml	MCI	Trophic state - periphyton biomass mg/m²	Periphyton %WCC	Nitrate toxicity mg/L		Ammonia toxicity mg/L		Dissolved oxygen mg/L		Clarity * m	Deposited fine sediment % cover	Cyano-bacteria % cover	DIN mg/L	DRP mg/L	Toxicants / metals	Water temp.	pH	% reduction in water clarity
Attribute statistic		95th %ile	5-year mean	3-year mean	3-year mean	Annual median	95th %ile	Annual median	Annual max.	7-day mean	1-day min.	Min. at Q_{50}	3-year mean		Annual average	Annual average	Species protection level	Annual max.		upstream to downstream Δ in black disc (m)
	Lower Wakapuaka	≤260	>100	50 - 120 mg/m²	20 – 40%	<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5	3.75	<20%⁺	<20%	100-400	6-10	95%	≤20°C	6.5 < 8.5	≤20
	Māori Pā	≤260		No data		<1	<1.5	<0.03	<0.05					<20%			95%?			
Whangamoa	Upper Whangamoa	≤260	>120	<50 mg/m²	<20%	<1	<1.5	<0.03	<0.05	≥8mg/L	≥7.5mg/L	5	<20%⁺	<20%	<100	<6	99%	≤18°C	6.5 < 8.0	≤20
	Lower Whangamoa	≤260	>120	<50 mg/m²	<20%	<1	<1.5	<0.03	<0.05	≥8mg/L	≥7.5mg/L	5	<20%⁺	<20%	<100	<6	99%	≤18°C	6.5 < 8.0	≤20
	Graham	≤260	>100	50 - 120 mg/m²	20 – 40%	<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5	3.75	<20%⁺	<20%	100-400	6-10	95%	≤20°C	6.5 < 8.5	≤20
	Collins	≤260	>120	<50 mg/m²	<20%	<1	<1.5	<0.03	<0.05	≥8mg/L	≥7.5mg/L	5	<20%⁺	<20%	<100	<6	99%	≤18°C	6.5 < 8.0	≤20
	Dencker	≤260	>100	50 - 120 mg/m²	20 – 40%	<1	<1.5	<0.03	<0.05	≥7.0 and <8.0	≥5.0 and <7.5	3.75	<20%⁺	<20%	100-400	6-10	95%	≤20°C	6.5 < 8.5	≤20

Key:

- * Horizontal visibility of black disc.
- + or *10*% of reference deposited sediment condition.
- *E. coli* means *Escherichia coli* bacteria.
- MCI means macroinvertebrate community index.
- Periphyton%WCC and PeriWCC% mean the percentage of periphyton cover following the weighted composite cover method developed by Matheson et al 2012.
- DIN means Dissolved Inorganic Nitrogen.
- DRP means Dissolved Reactive Phosphorus.
- Toxicants/metals includes the toxicants, metals and metalloids described in Table 3.4.1 of the ANZECC (2000) Guidelines.
- pH means a measure of the acidity or alkalinity of the water, where a figure of 7 is neutral, values lower than 7 are more acid and values higher than 7 are more alkaline.

Attachment 5 – Surface water allocation limits

APP32 – Surface water allocation limits

Note 1

The references in this appendix to MALF are to 7-day mean annual low flow based on actual historical flow data and do not represent naturalised flow statistics. That is, the flow statistics have not been adjusted to exclude the effects of known abstraction. For that reason, the minimum flow and allocation limits in this appendix are set conservatively, recognising that existing abstraction may reduce the actual flow and volume of water available.

Note 2

The abstraction limits and minimum flows apply to all surface water and to groundwater strongly connected to surface water.

FMU	Sub-catchment	Flow recorder/ correlation site	7-day MALF l/s	Minimum flow % MALF	Minimum flow l/s	Core allocation limit % MALF	Core allocation limit l/s	Median flow l/s	Supplementary allocation l/s
Default	All unspecified rivers	-	-	90%	-	10%	-	-	-
Roding	Upper Roding (NCC)	Roding at Caretakers	As per consent	As per consent	As per consent	As per consent	As per consent	N/A	Not proposed
Stoke	Saxton	Saxton at Main Rd	No data	No data	-	No data	-	No data	N/A
	Orphanage	Orphanage at Ngawhatu	4.8	80%	3.84	20%	0.96	25	2.5
	Orchard	Orchard at Nayland Rd	4	80%	3.2	20%	0.8	12	1.2
	Poorman	Poorman at Seaview Rd	11	100%	11	10%	1	29.5	2.95
	Jenkins	Jenkins at Pascoe St	2.9	90%	2.61	10%	0.29	17.1	1.71
Maitahi/ Mahitahi/ Maitai	Brook	Brook at Motor Camp	40	100%	40	10%	4	80.2	8.02
	South Branch	Maitai at Forks	No data	No data	Consented minimum flow TBC	No data	Consented allocation limit TBC	209	20.9
	Lower Maitahi/ Mahitahi/ Maitai	Maitai at Avon Tce	358	90%	322	10%	36	367	36.7
	Oldham	Oldham at Corder Park	4.9	100%	4.9	10%	0.5	17.3	1.73
	Todds	Todds at SH6	3.8	100%	3.8	10%	0.4	14	1.4
	Hillwood	Hillwood at Intake	2.1	90%	1.9	10%	0.2	8.4	0.84

FMU	Sub-catchment	Flow recorder/ correlation site	7-day MALF l/s	Minimum flow % MALF	Minimum flow l/s	Core allocation limit % MALF	Core allocation limit l/s	Median flow l/s	Supplementary allocation l/s
Wakapuaka	Teal	Teal at 1.6km	93	90%	84	10%	9	218.6	21.86
	Lud	Lud at SH6	19	90%	17	10%	2	60.8	6.08
	Upper Wakapuaka	Wakapuaka at Hira	306	90%	275	20%	61	733	73.3
	Lower Wakapuaka	Wakapuaka at Māori Pā Rd	305	90%	275	20%	61	869	86.9
Whangamoa		Whangamoa at Kōkorua Br	377	90%	339	10%	38	1083	108.3

Attachment 6 – Sample Draft Nelson Plan provisions

Significant Resource Management Issues for the Region – Issues, objectives and sample provisions

This table sets out key content that implements aspects of Te Mana o te Wai through Significant Resource Management Issues for the Region or SRMR, otherwise known as 'Regional Policy Statement' level plan content. For the sake of brevity, only issue and objective statements have been provided in full and without explanatory text (Table A). Key examples have also been provided of policies, methods, principal reasons and anticipated environmental results from elsewhere in the Draft Nelson Plan (Table B).

Table A – SRMR – Issues and Objectives in full (explanatory text omitted)

☐ **Draft Plan Reference**	☐ **Provision**
☐ SRMR-LF-I1 ☐ Regional Policy Statement – Issue statement	☐ Land use activities in Whakatū Nelson can result in increased or accelerated soil erosion, which can reduce the productivity of the land and adversely affect water quality by adding sediment and nutrients into waterways and the Coastal marine area. ☐
☐ SRMR-LF-I2 ☐ Regional Policy Statement – Issue statement	☐ The use of freshwater resources has created conflicts between freshwater values in many of Whakatū Nelson's rivers and streams. ☐
☐ SRMR-LF-I3 ☐ Regional Policy Statement – Issue statement	☐ Some of Whakatū Nelson's freshwater rivers and streams have degraded water quality. ☐
☐ SRMR-LF-I4 ☐ Regional Policy Statement – Issue statement	☐ There is insufficient recognition and provision for kaitiakitanga in the management of freshwater resources and a lack of recognition of Te Mana o te Wai

☐ SRMR-LF-I5 ☐ Regional Policy Statement – Issue statement	☐ Whakatū Nelson's indigenous freshwater fish and their freshwater and riparian margin habitats are at risk from subdivision, use and development. ☐
☐ SRMR-LF-I6 ☐ Regional Policy Statement – Issue statement	☐ Unsuitable subdivision, use and development has compromised the natural character of many of Whakatū Nelson's freshwater rivers, streams, wetlands and their margins. ☐
☐ SRMR-LF-I7 ☐ Regional Policy Statement – Issue statement	☐ Whakatū Nelson catchments are steep and there are known flood hazards. While urban rivers and streams play an important role as part of the stormwater drainage network, flood capacity maintenance and some activities in the beds of rivers and streams can cause adverse effects on the natural character and ecosystem health of rivers and streams. ☐
☐ SRMR-LF-I8 ☐ Regional Policy Statement – Issue statement	☐ The allocation of water for abstractive use exceeds sustainable capacity in some Whakatū Nelson freshwater bodies. ☐
☐ SRMR-LF-I9 ☐ Regional Policy Statement – Issue statement	☐ Climate change has the potential to affect natural flows in freshwater bodies and security of supply for use and development. ☐
☐ SRMR-LF-I10 ☐ Regional Policy Statement – Issue statement	☐ Degraded river and stream health restricts the ability of Whakatū Nelson's tāngata whenua to safely harvest mahinga kai. ☐
☐ SRMR-LF-I11 ☐ Regional Policy Statement – Issue statement	☐ Degraded river and stream health restricts the ability of Whakatū Nelson's tāngata whenua to safely harvest mahinga kai. ☐
☐ SRMR-LF-O1 ☐ Regional Policy Statement – Objective	☐ Land is managed sustainably, to safeguard the life supporting capacity and productive potential of soils and reduce the flow of nutrients and sediments into freshwater bodies and the coastal marine area.

☐ SRMR-LF-O2 ☐ Regional Policy Statement – Objective	☐ The ecosystem health, water quantity and water quality within Whakatū Nelson's freshwater management units support the values specified in APP27 – Freshwater values and APP28 – Freshwater values by FMU and are restored where degraded.
☐ SRMR-LF-O3 ☐ Regional Policy Statement – Objective	☐ Freshwater is available in sufficient quantity and adequate quality to meet the reasonably foreseeable needs of the community, taking into account the impact of climate change.
☐ SRMR-LF-O4 ☐ Regional Policy Statement – Objective	☐ Whakatū Nelson tāngata whenua are enabled to exercise kaitiakitanga in freshwater management.
☐ SRMR-LF- O5 ☐ Regional Policy Statement –Objective	☐ The cultural, ecological, recreational and natural character values of freshwater bodies to Whakatu Nelson tangata whenua and the community, that are identified in APP27 – Freshwater values and APP28 – Freshwater values by FMU, acknowledged, protected and where necessary, restored.
☐ SRMR-LF- O6 ☐ Regional Policy Statement –Objective	☐ The ecosystem health of Whakatū Nelson's rivers, streams and their margins and the flow and quality of water in rivers and streams support a diverse indigenous fish community in a healthy and abundant state.
☐ SRMR-LF- O7 ☐ Regional Policy Statement –Objective	☐ The use and development of natural and physical resources within rivers and streams occurs at a rate and in a way that manages flood hazard, preserves natural character and safeguards the life-supporting capacity of freshwater resources.
☐ SRMR-LF- O8 ☐ Regional Policy Statement –Objective	☐ There is no reduction in extent, and no degradation of the natural character, of Whakatū Nelson's natural wetlands and natural character is restored, where degraded.

Table B –Sample policy, method, principal reasons and anticipated environmental results from elsewhere in the Draft Nelson Plan

☐ **Draft Plan Reference**	☐ **Provision**
☐ SRMR-LF-P7 ☐ Regional Policy Statement – Policy	☐ Adopt the following Kaupapa and principles in managing Whakatu Nelson's freshwater resources, so maintain the values specified in APP27 – Freshwater values and APP28 – Freshwater values by FMU: 1. Kaitiakitanga 2. Rere-ki-tanga 3. Korerorero 4. Utu 5. Tika 6. Tikanga 7. Pono 8. Aroha 9. Ki uta ki tai; and 10. Rangatiratanga
☐ SRMR-LF-P9 ☐ Regional Policy Statement – Policy	☐ Promote community-wide understanding of the mana and mauri of freshwater bodies, and support initiatives that restore the mana and mauri of freshwater bodies
☐ SRMR-LF-M22 ☐ Regional Policy Statement – Method	☐ In conjunction with the iwi of Te Tau Ihu, develop and implement cultural health monitoring of rivers and streams and incorporate with routine state of the environment monitoring
☐ SRMR-LF-M38 ☐ Regional Policy Statement – Method	☐ Enable the provision of information signs pou whenua and other visible educational information describing and acknowledging the mana and mauri of Whakatu Nelson rivers and streams
☐ SRMR-LF-M41 ☐ Regional Policy Statement – Method	☐ Continue to engage with the iwi of Te Tau Ihu to achieve a shared understanding of kaitiakitanga as it relates to freshwater management, including commissioning training for Nelson City Council staff and elected members on how to apply the Kaupapa identified in SRMR-LF-P7 in the management of freshwater resources
☐ SRMR-LF-PR2	☐ …The values listed in APP27 – Freshwater values and APP28 – Freshwater values by FMU were identified through a collaborative process of community engagement, including engagement with Whakatu tangata whenua… [extract from full PR]

☐ Regional Policy Statement – Principle reasons	
☐ SRMR-LF-AER7 ☐ Regional Policy Statement – Anticipated environmental result	☐ Mahinga kai is safe to harvest and eat and it is accessible to tangata whenua
☐ SRMR-LF- AER9 ☐ Regional Policy Statement – Anticipated environmental result	☐ The mana and mauri of Whakatu Nelson's freshwater bodies are enhanced
☐ LF-P1 ☐ District/Regional Plan - Policy	☐ When considering an application for resource consent or plan change that affects any freshwater management value of significance to tnagata whenau identified in APP28 – Freshwater values by FMU, recognise and provide for the following matters: 1. The historical association of the tangata whenua of the area, and any historical, cultural or spiritual values associated with the freshwater resource, site, or area including those specified in any Statutory Acknowledgement; 2. Any relevant Mana Whakahono a Rohe or memorandum or understanding between Nelson City Council and relevant iwi authorities or hapu groups; 3. Any joint management and co-governance arrangements established between Nelson City Council and relevant iwi authorities; 4. Continued customary access ☐
☐ LF-P2 ☐ Regional Plan - Policy	☐ When considering an application for resource consent or plan change that is likely to affect the relationship of Whakatu's tangata whenua, and their culture and traditions, with freshwater resources, ensure that: 1. The ability for tangata whenua to exercise kaitiakitanga is maintained or improved; 2. Mauri is maintained or improved where degraded 3. Cultural harvesting resources are maintained or enhanced, and these resources are healthy and accessible to tangata whenua and 4. The relevant provisions of any applicable iwi management plan and the tangata whenua values specified in APP27 – Freshwater resources and APP28 – Freshwater resources by FMU, or in any statutory Acknowledgement, are taken into account.
☐ LF-P12 ☐ Regional Plan - Policy	☐ Provide for the discharge to land of treated wastewater and biosolids from wastewater treatment facilities where: … 5. The discharge does not adversely affected any site of significance to Maori or any archaeological site or heritage site identified on the Nelson Plan maps ☐ [extract from full policy]

☐ LF-P58 ☐ Regional Plan - Policy	☐ Ensure that the construction of structures, deposition of materials and activities within the beds of rivers do not impede fish passage or obstruct navigation of the reaches of rivers identified in APP28 – Freshwater values by FMU as having transport and tauranga waka values
☐ APP27 and APP28 ☐ Regional/District Plan – Appendices (Land and Freshwater) ☐	☐ [extracted list of all values addressed in the appendices] ☐ Kaitiakitanga, mauri, wairua, mana, ecosystem health, threatened species habitat, inanga spawning, natural form and character, natural state, human health for recreation, mahinga kai, community water supply, he ara haere/navigation, transport and Tauranga waka, aesthetics, amenity, public access, educational sites, irrigation, cultivation, food production, animal drinking water, commercial and industrial use, existing infrastructure, flood capacity and drainage

Marlborough District Council – Freshwater Management Overview Project

1. Plan Overview

1.1 Purpose

This report provides a 'snapshot' overview of Marlborough District Council's (MDC) water management approach to date. The report will contribute to a current state report of Te Tau Ihu iwi freshwater management.

The report addresses MDC's current Plans and policy planning processes, and provides an overview of freshwater management processes to date.

1.2 Plans and current processes

The Council's operative Plans are the Wairau/Awatere Resource Management Plan (WARMP) and the Marlborough Sounds Resource Management Plan (MSRMP). These Plans do not give effect to the NPSFM 2020, or previous iterations, as a replacement for these planning documents, the Proposed Marlborough Environment Plan (PMEP) has been in development since the original NPSFM was promulgated in 2011. The PMEP[1], which is now at the appeal stage of the RMA first schedule process, goes some way to giving effect to the NPSFM 2020 but the Council is still in the process of assessing to what extent.

The PMEP will replace the WARMP, the MSRMP and the Marlborough Regional Policy Statement.

The PMEP includes freshwater provisions that were developed to give effect to the previous 2014 (amended 2017) NPSFM, with the exception of a minimum water level for one FMU, and the cumulative water quality limits that were required prior to the NPSFM 2020. The freshwater provisions are being audited to determine to what extent they implement NPSFM 2020.

The provisions of the Appeals Version of the PMEP can be accessed here: https://www.marlborough.govt.nz/your-council/resource-management-policy-and-plans/proposed-marlborough-environment-plan/decisions-on-the-pmep/appeal-process/appeals-version-of-the-pmep.

Rules in the PMEP all have legal effect (as a result of Section 86B of the RMA) and regard can be had to the PMEP objectives and policies. Rules that are not subject to appeal must be treated as operative in accordance with Section 86F of the RMA. In summary, the provisions of the PMEP are already directing the way in which water resources are being managed in Marlborough.

The Council's current planning effort in the short terms is in resolving appeals to the PMEP through mediation and hearing processes, including appeals on water management provisions. The Court has issued directions in this regard which the Council must comply with those directions.

1.3 Consenting, compliance and enforcement

The Council's consenting, compliance, and enforcement teams administer the WARMP, MSRMP and PMEP.

Resource consent applications, and compliance and enforcement matters are assessed against WARMP, MSRMP and PMEP provisions. However, as with all National Policy Statements, discretionary activity resource consent applications must also be assessed against the NPSFM 2020.

As noted above, the operative WARMP and MSRMP do not reflect the NPSFM 2020 or earlier versions of the direction, however the PMEP will in part.

The Council is responsible for enforcing the NES Freshwater, Stock Exclusion Regulations and Water Measurement and Reporting Regulations.

1.4 Community and Iwi processes

The development of freshwater content in the PMEP involved advice and assistance from a community Water Allocation Working Group (WAWG), and the Plan content was considered by an Iwi Working Group (IWG).

The WAWG comprised water users that reflected different areas of the region and different end uses, a representative of Fish and Game, a Rural Councillor, an expert in efficient use and irrigation modelling, groundwater and surface water scientists, resource management and economic consultants, and policy staff. Experts in other fields, such as aquatic ecology and climate, were involved as required. The WAWG were engaged to assist in developing the freshwater planning framework, which at the time reflected the 2011 and 2014 versions of the NPSFM.

An IWG was established by the Council prior to the WAWG and regular hui were held to discuss all Plan provisions, including those relating to freshwater. All Te Tau Ihu iwi and Ngāi Tahu were invited to be part of the IWG, some chose to attend hui and actively participate, some chose to nominate representatives from other iwi to represent them around the table, and others chose to receive information only. The plan review process included some combined hui with the IWG and the WAWG.

The IWG was responsible for identifying issues of significance to tangata whenua iwi for inclusion in the PMEP. This included planning responses to those issues. These provisions are contained in Volume 1, Chapter 4 of the PMEP, which can be accessed here: https://www.marlborough.govt.nz/your-council/resource-management-policy-and-plans/proposed-marlborough-environment-plan/decisions-on-the-pmep/appeal-process/appeals-version-of-the-pmep/volume-1

The IWG also considered and provided input on all other PMEP policy in the context of the issues the IWG had already identified.

Both the IWG and WAWG met regularly prior to notification of the PMEP in 2016.

1.5 Iwi involvement in governance and Plan-making processes

Iwi involvement in plan-making processes is outlined above in relation to the IWG.

A commissioner with experience in tikanga and kaitiakitanga sat on the PMEP Hearings Panel.

There is also provision for an iwi representative on the following Council's committees – Assets and Services, Planning Finance and Community, and Environment.

The Council is in the process of recruiting a Kaihautū. The Kaihautū will be responsible for facilitating partnerships with mana whenua, and promoting collaborative and positive engagement with Māori to effectively deliver Council services and activities.

1.6 Science monitoring programme

The Environmental Science and Monitoring team at the MDC support the freshwater management framework in the PMEP by providing technical advice to the plan-making process and information on the condition of the region's waterways (RMA Section 35 state of the environment monitoring). They also lead the Council's non-regulatory responses to freshwater management.

At this time the MDC has not established FMUs for water quality management, however there are water quality monitoring sites across the region. The regular State of the Environment reporting provides information on the current state of water quality and assists with focusing attention on degraded waterbodies that require particular attention.

The MDC has established several FMUs for managing water quantity and there are hydrological monitoring sites for the majority of those FMUs. The data gathered by the Environmental Science and Monitoring team over many years has enable the Council to have a well developed and tested water allocation framework.

The focus for the Environmental Science and Monitoring team in regards to the NPSFM 2020 will be around water quality and the national objectives framework, and the new national direction on wetlands, river extent, stock access and so on.

The Council has included additional funding in the current LTP for mātauranga Māori.

2. FMUs

At this time the PMEP identifies 7 aquifer-based FMUs and in excess of 30 river-based FMUs for water allocation purposes. These FMUs have an allocation limit and minimum flows and/or levels specified in the PMEP. It is noted that some of these limits are subject to appeal at the time of writing. The boundaries of the FMUs are generally based on catchment boundaries and/or the historic water management framework for these freshwater bodies, and were considered by both the WAWG and the IWG during development.

The Council is yet to identify FMUs for the purposes of water quality management, however there are a set of approximately 70 water resource units that are intended to be aggregated to form the FMUs. The thinking at this time is that there will be perhaps 5 or 6 FMUs. There may also be a review of the water quantity FMUs to consider combining water quality and quantity FMUs into one set, as this is likely to better align with the requirement in the NPSFM 2020 to report a single overall score for ecosystem health (water quality, water quantity, habitat, aquatic life and ecological processes) for each FMU.

3. Value setting

The water resource units that have been identified in the PMEP in both table and map form, each have an identified set of values. These values include fish habitat, invertebrate habitat, bird habitat, aquatic macrophytes, riparian habitat, recreation, public access, natural character, significant wetlands, water supply, aesthetic, and hydroelectric generation.

It is acknowledged that the table of values does not include specific reference to cultural values, and this will be a particular focus moving forward. During the plan review process, the Council and the IWG did discuss including cultural values in the table but the capacity did not exist at the time to make those additions. The Hearing Commissioners in making their decisions on the PMEP in response to submissions also acknowledged this was an important area of work to be done by the Council in partnership with iwi.

Two water resource units had cultural values recognised through in the PMEP decision.[2]

4. Water quality (attributes and limits)

The Council holds information about the health of waterways in the water resource units identified in the PMEP based on its water monitoring programme. The state of the water quality in the regions freshwater resources is communicated through the annual State of the Environment Reporting (reports can be viewed here - https://www.marlborough.govt.nz/environment/rivers-and-wetlands/river-water-quality/state-of-the-environment-reporting-surface-water-monitoring). The monitoring includes attributes based on the requirements of the 2014/2017 NPSFM 'National Objective Framework' (NOF).

The cumulative water quality limits that were required in the NPSFM versions prior to 2020 were not

set in the PMEP, and were the subject of a Progressive Implementation Programme (PIP). Following the promulgation of the NPSFM 2020, neither cumulative limits or PIPs are now required, therefore the Council needs to reconsider its approach to the work programme for developing a water quality framework.

Despite not having established FMUs for water quality and a complete planning framework, the PMEP does contain provisions to protect freshwater quality from degradation and enhance waterbodies already showing signs of degradation. These provisions include objectives based on the National Objectives Framework (as it was in the previous iteration of the NPSFM) and controls include limits on dairy farm conversions and stock access to rivers.

The PMEP also identifies degraded water bodies and constrains a requirement for catchment enhancement plans where water quality is degraded. Those catchment enhancement plans are now starting to be developed and implemented. The Te Hoiere/Pelorus Catchment Restoration Plan is the most significant example. The development of the plans provide an opportunity to partner with tangata whenua iwi, and the community, in restoration efforts.

5.Quantity (allocation and limits)

The Council had a reasonably robust water allocation framework under the existing operative Plans, and this provided a solid basis for the replacement framework in the PMEP. All FMUs for which there has historically been significant demand for the taking of water have allocation limits and minimum flows and/or levels. Where there are rivers with no limits, the PMEP includes policies setting out how limits should be determined on a case-by-case basis. All of the regions aquifer-based FMUs have limits set in the PMEP.

With the exception of one major river, Marlborough's freshwater resources are at full allocation, or are overallocated. The PMEP contains provisions setting out how future overallocation is to be prevented, and how existing overallocation is to be resolved. The provisions for addressing overallocation can be viewed under Issue 5E in Chapter 5 by following this link - https://www.marlborough.govt.nz/your-council/resource-management-policy-and-plans/proposed-marlborough-environment-plan/decisions-on-the-pmep/appeal-process/appeals-version-of-the-pmep/volume-1.

While the NPSFM 2020 will prompt a review of the water quantity framework in the PMEP to ensure it appropriately responds to the new requirements for visions and outcomes, it is anticipated that the existing Plan provisions will generally give effect to the water quantity aspects of the NPSFM 2020.

There are approximately 1700 water permits to take water from Marlborough's surface water and groundwater resources. Given current allocation status, most applications processed by the Council are the reconsenting of existing water permits.

6. Te Mana o te Wai

When it was notified in 2016, the PMEP freshwater provisions responded to the concept of Te Mana O Te Wai relative to the NPSFM 2014. By the time the decisions were being made on the submissions to the Plan, the 2017 amendments to the NPSFM had come through so the Hearings Panel did make changes to the PMEP to the extent that the submissions gave scope, and where the Panel considered amendments/additions to be appropriate. For example, the PMEP includes a policy (Policy 5.3.1) that creates a priority for water allocations, the Panel inserted Te Mana o Te Wai as (a) in the policy's hierarchy. Other provisions, from Objectives down to Methods were amended to recognise Te Mana o Te Wai or reframe aspects of existing text to appropriately refer to Te Mana o Te Wai. The Decision version of PMEP Volume 1, Chapter 5 usefully records tracked changes showing the Panels amendments, and can be viewed here - https://www.marlborough.govt.nz/your-council/resource-management-policy-and-plans/proposed-marlborough-environment-plan/decisions-on-the-pmep/pmep-tracked-changes-version/volume-1.

The MDC appreciates being part of the Te Tau Ihu Freshwater Implementation Programme Group, and looks forward to working towards giving effect to Te Mana o Te Wai through this partnership with Te Tau Ihu iwi and the Nelson and Tasman Councils. The Council also seeks to work in partnership on Te Mana o Te Wai implementation with Ngāi Tahu, and any Te Tau Ihu iwi that seeks to work directly with the MDC outside of the Te Tau Ihu Freshwater Implementation Programme Group.

The Council anticipates that the PMEP will to some extent give effect to Te Mana o Te Wai (NPSFM 2020), and considers that it is most likely that additions and amendments will be made to the existing freshwater planning framework, rather than the framework being replaced by a completely new freshwater plan.

7. Future areas of work

The MDC has engaged an expert consultant, Christina Robb (Happen Consulting), to audit the Council's existing Plan relative to the NPSFM 2020 in order to provide a high level assessment of the areas in which attention should be focused. This audit will inform a work programme and is seen as complimentary to the Council's work as part of the Te Tau Ihu Freshwater Implementation Programme Group.

The Council would like to offer the Te Tau Ihu Freshwater Implementation Programme Group the opportunity to discuss the work of Ms Robb. This would be intended to provide general information and guidance about the relationship between the NPSFM 2020, Council freshwater plans and Te Mana o Te Wai, as gleaned from the Ms Robb's experience working throughout the country with Councils and Central Government.