

**Tasman Resource Management Plan
Efficiency and Effectiveness Evaluation**

**Chapter 30:
Taking, Using, Damming and Diverting Water**

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***Note:** This report does not include consideration of the latest requirements in the National Policy Statement for Freshwater Management, National Environmental Standard for Freshwater, or National Regulations for Stock Exclusion gazetted in August 2020.*

Acronyms

FMU	Freshwater Management Unit
GIS	Geographic Information System
LiDAR	Light Detection and Ranging - technology that provides detailed contour data
MagiQ-BI/NCS	Two related Council information systems - used to manage data, including for resource consents and service requests, including complaints.
MPLL	Māori Perpetual Lease land
NES	National Environmental Standards
NES-DW	National Environmental Standards for Sources of Human Drinking Water
NPS	National Policy Statement
NPS-FM	National Policy Statement for Freshwater Management
NPStds	National Planning Standards
NZCPS	New Zealand Coastal Policy Statement
PC##	Plan Change ##, e.g. Plan Change 66
RMA	Resource Management Act
RPS	Tasman Regional Policy Statement
SOE	State of the Environment
TEP	Tasman Environment Plan
TRMP	Tasman Resource Management Plan
WCO	Water Conservation Order

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Executive Summary

This report reviews the efficiency and effectiveness of the provisions in Chapter 30 – Taking, Using, Damming and Diverting Water - in the Tasman Resource Management Plan. It concludes the provisions in this chapter and their implementation through rules and non-regulatory methods largely require full review or update as part of the Tasman Environmental Plan (TEP) review process. The key reasons for this are to fully implement the National Policy Statement for Freshwater Management, and to improve integrated management of waterbodies and their margins, including alignment across the district and regional plans.

Intent of Chapter 30

Chapter 30 addresses three broad issues:

1. Impacts on water body flows or levels from activities that reduce or alter surface water flows, recharge rates or groundwater, wetland or lake water levels, and affect instream uses and values.
2. Allocation of fresh water between competing water users that results in efficient water use and a reasonable security of supply.
3. Freshwater augmentation where there is insufficient fresh water to meet all the demands placed on the resource.

Achievement of Objectives

Water Flows and Levels

By-and-large water flows and levels in the District's water bodies have been managed under the TRMP to enable partial achievement of this objective. Regulated minimum flows, allocation limits and rationing triggers have assisted, and augmentation by the Waimea Community Dam when completed will bolster water flows in the Waimea River. The protection and restoration of flow levels in over allocated FMUs is a requirement of the NPS-FM and is slowly being addressed through reduction of consented volumes (ie claw back), use of cease takes to protect minimum flows, and flow augmentation.

Council's State of the Environment (SOE) monitoring has only recently considered the effects of low water flows and levels on ecological values. A study in 2019 looked at the effects of low flows on rivers in Golden Bay/Mohua during the 2018/19 summer drought. It suggests that adverse effects on habitat was likely to be significant on some waterways, but more work is needed to gather robust and comparative data on impacts of low water flows and levels, and implications for water allocation.

Wetland management under the TRMP is hampered by a lack of identification of wetlands. While there are policies and rules relating to the diversion and taking of water from naturally occurring wetlands, only a small number of wetlands are identified in Schedule 30A or on the Planning Maps. In addition, rules do not encourage or promote wetland protection, enhancement or restoration. As a result, the TRMP objective relating to wetlands is assessed as 'not achieved'.

Allocation of Water

Equitable water allocation is supported in the Chapter through transparent provisions around allocation limits, water flows and levels, rationing triggers, and staged reduction in water use during periods of drought. Regular review of water permits to ensure water use matches availability is a further mechanism to ensure equitable water allocation and security of supply.

The TRMPs 'priority in time' approach to water allocation establishes a first-in-first served system. This might be equitable provided that at least part of the available allocation is reserved to ensure security of supply into the future, e.g. by reserving for priority uses, and/or use of a discretionary activity status for permit renewals to avoid creating an effective perpetual right.

Water allocation is perhaps not equitable when considered across water management zones however, given some areas are over-allocated and no additional water permits can be granted until water becomes available for use. In these circumstances a waiting list ensures those that have been waiting longest for access to water are first in line.

Overall, this objective has been assessed as partially achieved.

Water Augmentation

This TRMP objective, which seeks to ensure there is sufficient water to meet the needs of all water uses, has been assessed as 'not achievable'. The need for minimum flows, allocation limits and rationing triggers in the TRMP indicates that there are times when water demand will outstrip sustainable water supply and the needs of all water uses will therefore not be met. As well, the fact that the Waimea Community Dam is under construction, so as to ensure a reliable volume of water in the Waimea River and adjacent water management zones, further indicates there has not been sufficient water to meet the needs of all uses.

This is in large part due to historical over-allocation and the measures taken in the TRMP have helped to improve the situation. However, demand for water will continue to increase with population growth and more intensive agricultural and horticultural production. The effects of climate change, particularly a greater frequency of prolonged droughts will further exacerbate the pressures of water demand vs supply across the District.

The provisions that encourage the use of dams to store water have been beneficial and the considerable number of dams in the District do augment the available water supply to a large degree, especially in drier areas. Nevertheless, this does not ensure there is always sufficient water.

Implementation of National Instruments

Chapter 30 needs to be updated to give effect to two key national planning instruments. The NPS-FM prioritises the health and well-being of water bodies as the ultimate goal in freshwater management ('Te Mana o Te Wai'). It recognises that the ability of water to provide for human needs (health, economic development) is dependent upon it being healthy. This requires consideration of water quality, water flows/levels and habitat elements.

In support, the NZCPS requires council to "*Provide for the integrated management of natural and physical resources in the coastal environment, and activities that affect the coastal environment*". Issues relating to the interface between salt and freshwater include seawater intrusion into aquifers as a result of over-extraction and/or the effects of sea level rise, and effects on river flows from abstraction and the downstream impacts this can have on estuary health and coastal water uses.

The close connection between land use activities and effects on freshwater quality and quantity requires stronger integration between regional and district provisions in the TRMP. Giving full effect to the NPS-FM and NZCPS will assist with achieving this as both these national directives require councils to manage activities and their effects in an integrated way.

General Recommendations

Overall, the policy framework in Chapter 30 would be significantly strengthened by giving effect to national directives and to improve integrated management of land use activities and their effects on water quality and quantity, including alignment across the district and regional plans.

Key recommendations for the TRMP's overall freshwater framework

- Give full effect to the national guidance, particularly the National Policy Statement for Freshwater Management and the NZ Coastal Policy Statement.
- Review the TRMP chapters dealing with freshwater so that water quality (Chapter 33) and quantity (Chapter 30) issues, and effects on instream, ecological and other values (Chapters 27 and 8), can be managed in a more integrated way. In doing so, simplify and rationalise the freshwater policies.
- Provide stronger integration between Regional and District Plan chapters to enable more effective management of land use activities that impact upon freshwater bodies, the coast and their margins.
- Ensure the effects of climate change are taken into account in the TRMP's water management provisions, including waterbody resilience to drought and flooding.
- Strengthen the provisions relating to the relationship of Māori with waterbodies (including aquifers and wetlands) and reflect mātauranga Māori in TRMP provisions; include relevant provisions from iwi management and environmental plans, statutory acknowledgments in Treaty settlement legislation, and objectives and policies in the NPS-FM and NZCPS.
- Strengthen the TRMP rules so that they require or incentivise restoration and enhancement of waterbodies through the resource consent process.
- Review and relocate Schedules 30A and 30B to include a full set of uses and values for the District's waterbodies, including wetlands.

Key recommendations for Chapter 30

- Simplify policies, particularly where they provide more detail than rules, and rationalising the number of policies in the chapter.
- Review objective and policy set in relation to iwi values, and how those values might be captured within the rules framework.
- Review sets in relation to cross-resource management issues, particularly land use management practices affecting water resources, water use efficiency, wetland and groundwater management.

- Consider including an objective and related policies and rules aimed at protecting the public water supply from contamination; review the suitability of the permitted activity rule for bores and their potential to contaminate groundwater.
- Consider including objectives and related policies and rules aimed at achieving better water conservation and resilience to dry conditions.
- Review fitness-for-purpose and scientific basis of the minimum flows and allocation limits for freshwater management units and for key water bodies. Use a consistent approach to determination of minimum flows and allocations limits based on ecological science advice.
- Consider breaking the 30.2 objective-policy set into more specific objectives with policy sets relating to the key water management issues (e.g. allocation, rationing, augmentation, efficiency, land use effects and water relationship, eco-system/habitat objectives), or location/catchment specific issues (e.g. Waimea, Moutere, Te Matu).
- Clarify the rules for off-stream damming of water and water takes from such storage.
- Update the planning maps to identify wetlands and ensure rules provide appropriate protection.
- Provide clarity around provisions for irrigation of non-soil based crops (e.g. glasshouses) and maintaining rootstock in dry weather.
- Review provisions for the operation of the Dry Weather Taskforce with a view to providing more prescriptive direction around the values to be given priority during water shortages, taking into consideration Te Mana O Te Wai and the proposed hierarchy of obligations in the 2020 NPS-FM amendments.

Specific Objective and Policy Recommendations

The recommendations in Table 1 to Table provide a summarised assessment of the effectiveness and efficiency of the specific Chapter 30 provisions. It considers if there is a need for change in the objective and policy framework and is intended to inform the review of the TRMP.

The recommendations are categorised into:

- **Review:** includes partial or whole-scale review of the intent, scope and language used in the provision
- **Retain (with updates):** retention of the intent of the provision, but update of the scope and/or language used in the provision
- **Retain (unchanged):** retention of the provision largely as is. May include some minor update to language as needed.
- **Remove:** provision is considered unnecessary and should be removed from the policy set. (Note provisions that should be removed from the chapter policy set, but relocated to another policy set elsewhere in the TRMP are assigned to the 'review' category)

Figure 1

Figure 1 provides a visual summary of the recommended changes for Chapter 30.

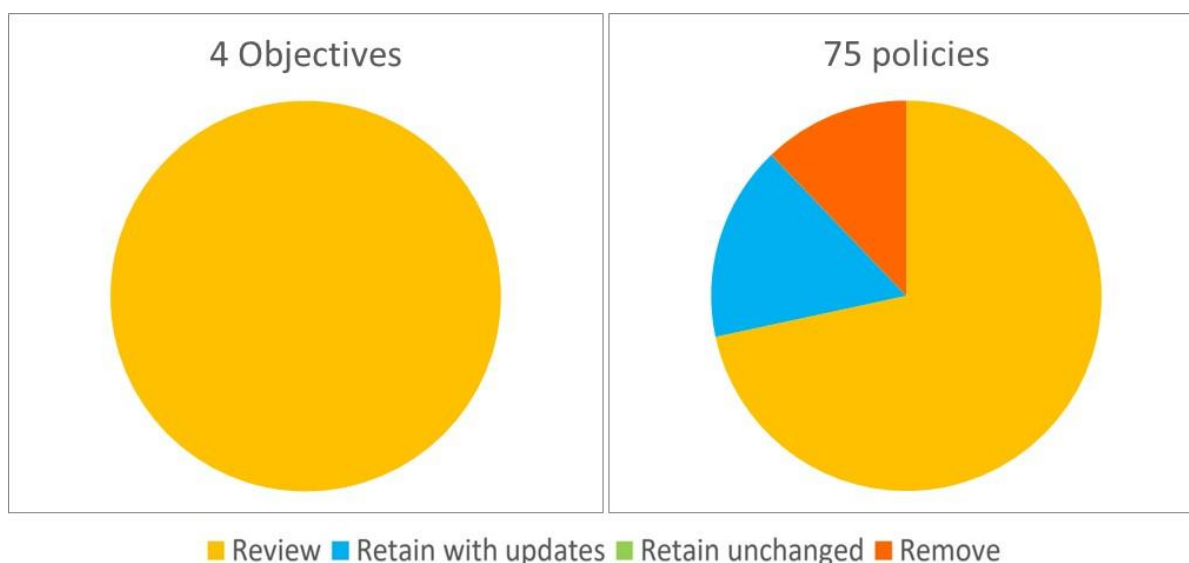


Figure 1: Visual summary of recommended change to objectives and policies in Chapter 30

Reduced Water Body Flows or Levels (30.1)

Table 1: Specific Objective and Policy Recommendations for Waterbody Flows and Levels

Objective Set	Recommendations
General	The recommendations in this table are additional and subservient to the need to review all provisions against the requirements of the NPS-FM.
Objective 30.1.2.1 <i>The maintenance, restoration and enhancement, where necessary, of water flows and levels in water bodies that are sufficient to:</i> <i>(a) preserve their life-supporting capacity (the mauri of the water);</i> <i>(b) protect their natural, intrinsic, cultural and spiritual values, including aquatic ecosystems, natural character, and fishery values, including eel, trout and salmon habitat, and recreational and wildlife values; and</i> <i>(c) maintain their ability to assimilate contaminants.</i>	Review alongside Chapter 8, 27 and 33 objectives. This objective is very similar to Objective 27.1.2.1 and includes matters that are relevant to both Chapter 27 (e.g. natural character and fishery values) and Chapter 33 (assimilation of contaminants). Strengthen internal consistency: while the objective refers to the mauri of water, there are no further references in policies. Similarly 'iwi' or 'Māori' interests are not mentioned in policies or rules, although noted in 'methods'.
Objective 30.1.2.2 <i>The maintenance, restoration and enhancement, where possible, of the quality and extent of wetlands in the District.</i>	Review and strengthen. The wording could be expanded to provide more direction about the aims of managing wetlands in the District; reference to 'where possible' should be removed.

Objective Set	Recommendations
Water Body Management	
<p>Policy 30.1.3.1 <i>To maintain and enhance the uses and values of rivers, aquifers, wetlands and lakes that may be adversely affected by reduced water flows or levels including:</i></p> <p>(a) <i>the uses and values of water bodies identified in Schedule 30A, particularly the internationally, nationally and regionally significant uses and values of water bodies;</i></p> <p>(b) <i>the customary and traditional uses and values of iwi, including wāhi tapu, mahinga kai and other taonga, particularly in relation to sustaining the mauri of the water;</i></p> <p>(c) <i>the capacity of water bodies to dilute contaminants;</i></p> <p><i>by taking into account the management objectives specified for each of the water bodies in Schedule 30A.</i></p>	<p>Retain with updates alongside Chapter 27 and 33.</p> <p>Update Schedule 30A.</p> <p>Complete and apply intent of Schedules 31E and F regarding nutrient and irrigation management.</p> <p>Strengthen internal consistency: point (b) is less strongly covered in rules, direct references to specific customary and traditional uses and values are sparse.</p>
<p>Policy 30.1.3.2 <i>To establish a minimum flow regime or minimum water level regime for rivers, wetlands and lakes where there is a threat to uses and values of the water body or a connected water body, taking into account:</i></p> <p>(a) <i>the range and significance of the existing and potential water body values and uses;</i></p> <p>(b) <i>adverse effects from existing and potential abstractive water users and land use activities affecting water quantity;</i></p> <p>(c) <i>natural flow characteristics;</i></p> <p>(d) <i>practical monitoring and enforcement needs;</i></p> <p>(e) <i>contributions to water flows and levels from dams.</i></p>	<p>Review with updates:</p> <p>Provide minimum flow / levels and allocation limits for all waterbodies used for abstractive water takes in each Freshwater Management Unit.</p>
<p>Policy 30.1.3.3 <i>To recognise the seasonal limitations of the surface water flows of Moutere gravel catchments by seeking to maintain residual water flow downstream of any abstraction point.</i></p>	<p>Review to ensure the policy applies to all appropriate catchments.</p>
<p>Policy 30.1.3.4 <i>To establish the sustainable yield of aquifers taking into account:</i></p> <p>(a) <i>depletion of aquifer yields;</i></p> <p>(b) <i>reduction of connected surface water flows, including coastal springs and wetlands;</i></p> <p>(c) <i>potential for compression of the aquifer;</i></p> <p>(d) <i>potential contamination of the aquifer by seawater intrusion;</i></p> <p>(e) <i>potential for excessive drawdown of groundwater levels;</i></p> <p>(f) <i>presence and significance of living organisms naturally occurring in the aquifer;</i></p> <p>(g) <i>effect of land use activities on recharge of the aquifer;</i></p> <p><i>to avoid:</i></p> <p>(i) <i>long term aquifer depletion;</i></p> <p>(ii) <i>drying up of surface waters;</i></p> <p>(iii) <i>compression of the aquifer;</i></p> <p>(iv) <i>irreversible seawater contamination of the aquifer;</i></p> <p>(v) <i>over-allocation of water from the aquifer.</i></p>	<p>Retain with updates to ensure all relevant points are included, and update as required based on the latest data.</p> <p>Strengthen internal consistency: consider information available to inform decisions in relation to point (f); also, the connection to land use (g (i – v)) may not be well provided for.</p>
<p>Policy 30.1.3.5</p>	<p>Review according to NPS-FM requirements (e.g. reference to Freshwater Management Units).</p>

Objective Set	Recommendations
<p><i>To maintain minimum river flow regimes or groundwater levels by establishing trigger levels for initiating rationing regimes for water management zones (as shown on the planning maps).</i></p>	<p>Reword for clarity.</p>
<p>Policy 30.1.3.6 <i>To ensure that the water allocation limits take into account effects of other activities and events on availability or yield of water, including:</i> <i>(a) potential water yield reduction effects arising from land cover changes such as changes to tall vegetation or urbanisation;</i> <i>(b) climate change, including changes to drought frequency;</i> <i>(c) effects of dams and other water augmentation or storage schemes;</i> <i>(d) effects of gravel extraction.</i></p>	<p>Review according to NPS-FM requirements, e.g. to ensure all relevant considerations are included.</p>
<p>Policy 30.1.3.7 <i>To adopt a water allocation limit for the groundwater of the Motueka Plains aquifers based on the sustainable yield of the aquifer that takes into account:</i> <i>(a) impact of groundwater abstraction on flows in the Motueka River;</i> <i>(b) the cumulative effects of takes in the Central Plains Zone on the potential for seawater intrusion, especially in the Hau Zone;</i> <i>(c) potential for inducing additional recharge to the aquifers from the Motueka River by allowing greater rates of abstraction in the high yield area of the Central Plains Zone;</i> <i>(d) irrigation needs of land in the Middle Motueka and Upper Motueka water management zones;</i> <i>(e) desirable security of supply standards for abstractive water users;</i> <i>(f) the potential for mitigating adverse effects of localised saltwater intrusion in the coastal margin of the Hau Zone, including through provision of alternative water supplies for existing users;</i> <i>and to review the allocation limit if further monitoring and investigation confirms that the Hau Zone seawater intrusion trigger for rationing is not affected by water abstraction in the adjacent zones.</i></p>	<p>Review according to NPS-FM requirements (e.g. reference to Freshwater Management Units).</p>
<p>Policy 30.1.3.8 <i>To ensure that water takes from the Te Matu Zone avoid, remedy, or mitigate adverse drawdown effects on other water users and to:</i> <i>(a) require bore testing, including step drawdown and constant discharge tests to assess localised drawdown and hydraulic characteristics; and</i> <i>(b) ensure effects of takes from any single bore or collection of bores in the same bore field take into account well performance, yields, localised drawdown and long term yield of existing fully penetrating bores.</i></p>	<p>Review according to NPS-FM requirements (e.g. reference to Freshwater Management Units).</p>
Water Takes	
<p>Policy 30.1.3.9 <i>To manage the allocation of water taken from water bodies so that the cumulative effect of water takes does not exceed:</i> <i>(a) the stated flow or water level regime;</i> <i>(b) any allocation limit for water takes for consumptive use for the water body;</i> <i>(c) the sustainable yield of the aquifer;</i> <i>provided that harvesting water during times of high flow may be considered, if adverse effects can be avoided, remedied, or mitigated.</i></p>	<p>Review, as consent staff report this policy is difficult to administer and it is theoretically possible to over-allocate through exercise of controlled activity renewals.</p>

Objective Set	Recommendations
<p>Policy 30.1.3.10 <i>To encourage and promote the taking of water for irrigation from dams and from groundwater in preference to new takes from surface water resources in the Motueka catchment so as to reduce the impact of surface water takes on the values of the Motueka River and its tributaries. (See also 30.1.3.17)</i></p>	<p>Review and reword for clarity Consider whether the policy should be strengthened from ‘encourage and promote’ to ‘require’ or similar. Ensure the priority for water use set out in the policy is clearly reflected in the rules.</p>
<p>Policy 30.1.3.11 <i>To ensure that the connections between groundwater and river flows are fully accounted for when setting and reviewing water allocation limits and minimum flow regimes and when deciding on applications to take or divert water in relation to both rivers and their connected groundwater systems.</i></p>	<p>Review – process policy This policy appears to direct the actual setting of allocation limits (which then appear in rules). Indirect connection of the policy issue as a consideration in the issue of consents through ‘matters’ in relation to the effects on ‘other uses, users and values’.</p>
<p>Policy 30.1.3.12 <i>When assessing resource consent applications to take water, particularly those applications to take water from water bodies where no allocation limit has been established, to take into account actual and potential adverse effects, including cumulative adverse effects of the proposal in combination with any existing authorised takes, on:</i> (a) natural character of the water body and its margins; (b) associated wetlands; (c) cultural and spiritual, amenity and recreational values; (d) aquatic habitat, including plants and animals; (d) other water users; (e) water reserved for other uses; (f) hydrological regime of the water body; (g) capacity to dilute contaminants; (h) uses and values identified in Schedule 30A; (i) sustainable yield of an aquifer and the sustainable short and long term yield of a bore based on the assessment of yields over five and 100 days.</p>	<p>Review in light of NPS-FM requirements and the requirement to provide allocation limits for all FMU. Strengthen internal consistency, some of the specific policy matters such as ‘associated wetlands’ and ‘capacity to dilute’ may be less clearly and adequately addressed in rules due to a lack of specificity.</p>
<p>Policy 30.1.3.13 <i>Except for takes from the Riuwaka River, when assessing a resource consent application to take water for frost protection of crops, to take into account actual and potential adverse effects of the take, either on its own or in combination with other similar water takes on:</i> (a) aquatic habitat, including habitat of fish and eels, including trout; (b) spawning and egg production of fish and eels, including trout; (c) the natural flow variability of the river; (d) existing water users; (e) drawdown effects on groundwater users; and to require measures to ensure that the natural flow of any river does not reduce below the Mean Annual Low Flow (MALF – 7 day).</p>	<p>Review to ensure all relevant points are included.</p>
<p>Policy 30.1.3.14</p>	<p>Review to ensure all relevant points are included, and update as</p>

Objective Set	Recommendations
<p><i>To avoid, remedy or mitigate adverse effects of water takes from the Riuwaka River for frost protection by:</i></p> <p><i>(a) ensuring that the total instantaneous takes from the river do not reduce the minimum flow for May to October below 615 litres per second;</i></p> <p><i>(b) assisting the Riwaka Water User Committee to ensure that the minimum flow is maintained;</i></p> <p><i>(c) requiring time-stamped water metering for water takes used for frost protection;</i></p> <p><i>(d) carrying out resource investigation to understand more about the relationship between water takes for frost protection on river flows;</i></p> <p><i>(e) limiting takes for frost protection to land within the Riwaka Water Management Zone.</i></p>	<p>required based on the latest data for Riuwaka River.</p> <p>Reword for clarity, it is not clear how the policy listed matter relating to the Riuwaka Water Users Committee (a process consideration, not regulation) can be addressed through rules.</p>
<p>Policy 30.1.3.15</p> <p><i>Except as otherwise provided by a water conservation order, to manage the allocation of water for consumptive uses from rivers that have:</i></p> <p><i>(a) no minimum flow or allocation limit specified in this Plan or water conservation order and;</i></p> <p><i>(b) regionally or nationally significant aquatic habitat value as identified in Schedule 30A;</i></p> <p><i>so that the cumulative abstraction from the proposed and all existing authorised takes from the river does not exceed 10 percent of the 5-year, 7-day low flow.</i></p>	<p>Review in light of NPS-FM requirements to provide minimum flows and allocation limits for all FMU.</p>
<p>Policy 30.1.3.16</p> <p><i>Except:</i></p> <p><i>(a) as otherwise provided by a water conservation order, or</i></p> <p><i>(b) for rivers in the Moutere gravel catchments;</i></p> <p><i>to manage the allocation of water for consumptive uses from rivers that:</i></p> <p><i>(i) have no established minimum flow or allocation limit; and</i></p> <p><i>(ii) do not have regionally or nationally significant aquatic habitat value as identified in Schedule 30A;</i></p> <p><i>so that the cumulative abstraction between November and April inclusive, other than in relation to hydro power, from the proposed and all existing authorised takes from the river does not exceed 10 percent of the 5-year, 7-day low flow, provided that up to 33 percent of the 5-year, 7-day low flow may be allocated if the cumulative adverse effects listed in Policy 30.1.3.12 from the proposed take in combination with any other authorised take are avoided, remedied or mitigated.</i></p>	<p>Review and reword for clarity, as the policy is complicated and difficult to understand.</p> <p>Review in light of NPS-FM requirements to provide minimum flows and allocation limits for all FMU.</p> <p>Consider need to link zone level protections to tributaries within zones.</p>
<p>Policy 30.1.3.17</p> <p><i>To require applicants applying for resource consents for new surface water takes in the Moutere Surface Water and Wai-iti zones to provide information about the practicable actual and potential alternatives (including dam or groundwater takes) available to the applicant and to decline the application where:</i></p> <p><i>(a) an alternative supply is considered to be the best practicable option after taking into account:</i></p> <p><i>(i) the financial implications of the alternative options compared with the proposed take;</i></p> <p><i>(ii) the extent to which the alternative options have more or less adverse effects on the environment compared with the proposed take;</i></p>	<p>Review to ensure all relevant points are included, and reword to make clearer.</p> <p>Update according to NPS-FM requirements (e.g. reference to Freshwater Management Units).</p> <p>Strengthen internal consistency - the policy gives greater detail and direction for declining consents than the related rules in relation to 'alternatives' to new surface water takes).</p>

Objective Set	Recommendations
<p>(iii) the extent to which any alternative may enable more equitable water allocation than the proposed take; or</p> <p>(b) the adverse effects of the take assessed under Policy 30.1.3.12 or in relation to the security of supply for other existing water users cannot be avoided, remedied or mitigated. (See also 30.1.3.10)</p>	
<p>Policy 30.1.3.18</p> <p>To avoid excessive localised reductions in bore yields when considering applications to drill bores or applications to take groundwater from an existing bore (provided that in the case of alluvial aquifers, potentially affected neighbouring bores fully penetrate the aquifer), taking into account the:</p> <p>(a) sustainable yield of the aquifer (see 30.1.3.4);</p> <p>(b) depth to the aquifer;</p> <p>(c) permeability of the aquifer;</p> <p>(d) distance from other bores;</p> <p>(e) costs of full penetration;</p> <p>(f) effects on connected surface water bodies;</p> <p>(g) other uses of the water;</p> <p>(h) cumulative effects of water takes from bores, including:</p> <p>(i) potential adverse effects of water takes from any bore whether any take is permitted or otherwise;</p> <p>(ii) effects of takes from new bores on existing takes;</p> <p>(iii) effects of existing water takes on any new take from a bore; and</p> <p>(iv) risks for potential water users identified on any Council waiting list; and declining an application for new bores where:</p> <p>(i) bore setbacks and casing requirements for the Moutere groundwater zones are not met, except in exceptional circumstances.</p>	<p>Review and reword, as the policy is long and complex.</p>
<p>Policy 30.1.3.19</p> <p>In times of low flows, to use rationing regimes, including rostering, as mechanisms to avoid, remedy or mitigate the adverse effects of water takes.</p>	<p>Review: Update according to NPS-FM requirements; include other rationing mechanisms as may be relevant. Clarify use of cease take to protect minimum flows.</p>
<p>Policy 30.1.3.20</p> <p>To adopt management objectives in Schedule 30A for the Waimea River and its tributaries and connected aquifers, and specify minimum flow regimes, allocation limits and targets and rationing of takes in Schedule 31C, that:</p> <p>(a) reflect the water augmentation contributions from the Waimea Community Dam to improving river flows and groundwater levels in the Waimea Plains water management zones; and</p> <p>(b) manage abstraction of water by providing two different security of supply standards depending on whether the relevant water permit is affiliated to the Waimea Community Dam, where permits that are:</p> <p>(i) not affiliated will be managed in real time as if the water flows and levels have not been augmented based on flows at the Wairoa River monitoring site; and</p> <p>(ii) affiliated will be managed in consultation with the Dry Weather Task Force as provided in (c)(ii)(a) – (c)(ii)(i) to avoid saltwater intrusion and maintain and enhance in-stream values as specified in Schedule 30A until the dam is operating.</p>	<p>Review and reword, as the policy is long and complex.</p> <p>Process aspects - as well as providing location-specific directive for consents (Waimea), this policy directs the actual setting of allocation of limits for the Waimea River (which then appears in rules).</p>

Objective Set	Recommendations
<p><i>(c) manage effects of water abstraction for any permits where there is no Waimea Community Dam, by:</i></p> <p><i>(i) adopting minimum flows and implementing the rationing of takes in the Waimea water management zones to avoid saltwater intrusion and maintain and enhance instream values as specified in Schedule 30A and;</i></p> <p><i>(ii) managing the decision to impose cease take provisions in consultation with the Dry Weather Task Force, taking into account:</i></p> <p><i>a) the time of year;</i></p> <p><i>b) rate of recession of river flows and groundwater levels and, if relevant, effect of flow releases from any augmentation scheme;</i></p> <p><i>c) the current weather and weather forecast;</i></p> <p><i>d) patterns of current and likely ongoing water use;</i></p> <p><i>e) the extent and effectiveness of any water saving measures already in place;</i></p> <p><i>f) changes in salinity levels in groundwater;</i></p> <p><i>g) whether salt levels (by measuring electrical conductivity) in the Council’s monitoring bore WWD50 E1611825 N5427949 (NZTM Map Grid) exceed 1 millisiemens per centimetre;</i></p> <p><i>h) the rate of river flow recession, particularly as the Waimea River flows fall below 500 litres per second at the Council nursery recorder;</i></p> <p><i>i) the pattern of groundwater level changes in bores in the coastal margin of the Delta Zone; and</i></p> <p><i>(d) make the most efficient use of available water when there is rationing and reduce abstractive uses according to established priority in Policy 30.2.3.1 when river flows fall below the minimum specified in Schedule 31C.</i></p>	
Gravel Extraction	
<p>Policy 30.1.3.21</p> <p><i>To avoid, remedy or mitigate adverse effects on the uses and values of the water body from the extraction of gravel from riverbeds, taking into account adverse effects on:</i></p> <p><i>(a) groundwater levels and water yields in adjacent aquifers;</i></p> <p><i>(b) the flow regime of the river;</i></p> <p><i>(c) aquatic ecosystems and riparian habitat;</i></p> <p><i>(d) cultural, spiritual, natural and intrinsic values;</i></p> <p><i>to avoid reducing the:</i></p> <p><i>(i) desirable security of supply of existing water users;</i></p> <p><i>(ii) diversity and abundance of aquatic organisms.</i></p>	<p>Review alongside Chapter 27 policies addressing gravel extraction and consider relocating to Chapter 27; Chapter 31 does not mention ‘gravel’ in rules in relation to extraction and effects (relationship) on water abstraction. Chapter 28 sets out rules for gravel extraction.</p>
Efficient Use of Water	
<p>Policy 30.1.3.22</p> <p><i>Within the sustainable allocation limits and subject to flow or level regimes established by the Plan, the Council will enable, promote or require efficient use of water through:</i></p> <p><i>(a) ensuring allocation limits and allocations of water for abstraction are:</i></p> <p><i>(i) calculated with known security of supply; and</i></p> <p><i>(ii) regular review of take permits to ensure bona fide water use;</i></p> <p><i>(b) enabling water to be used for the highest social or economic values by:</i></p>	<p>Review and reword for clarity, as the intent of the policy is unclear. It addresses both ‘efficient water use of allocation limits of the plan’, which appears to direct consent in administering allocation limits, but then the first consideration says ‘ensuring allocation limits and allocations are... calculated right, reviewed</p>

Objective Set	Recommendations
<p><i>(i) reserving water for future specified needs;</i> <i>(ii) encouraging the transfer of permits within the same water management zone to help meet demand for water;</i> <i>(iii) adopting a flexible water permit management regime including provisions for well sharing and use of water user committees to meet minimum flow requirements during periods of drought;</i> <i>(c) ensuring that the technical means of using water are physically efficient through:</i> <i>(i) allocation of water for irrigation end-uses based on specified soil type and climate application rates;</i> <i>(ii) encouraging the adoption of best practice water use technology and processes that reduce the amount of water wasted; and</i> <i>(iii) the use of water meters;</i> <i>(d) investigations monitoring, liaison and provision of information:</i> <i>(i) to water users about how to reduce water use, water use efficiency, re-use of water, use of water conservation devices or practices; and</i> <i>(ii) to water users and the community about the results of investigations and monitoring;</i> <i>(iii) about water user decisions that affect water use and how these may be managed to improve water use and water allocation efficiency;</i> <i>(iv) to water supply service providers, including through Council’s asset management plans and with industry stakeholder groups to promote and plan for effective and integrated water supply, including options for water augmentation.</i></p>	<p>regularly’, which is about the setting of limits. This is another long and complex policy.</p>
Water Damming	
<p>Policy 30.1.3.23 When assessing applications to dam water, to: <i>(a) take into account adverse effects of the damming, including the effects of the volume, velocity, frequency, and duration of flow releases from the dam, either by itself or cumulatively with other dams, on:</i> <i>(i) the uses and values for any water body identified in Schedule 30A;</i> <i>(ii) any flow regime for any river as set out in Schedule 31C;</i> <i>(iii) water levels and flows in connected water bodies, including lakes and wetlands;</i> <i>(iv) recreational values;</i> <i>(v) water quality, including management of periphyton;</i> <i>(vi) river ecology and aquatic ecosystems, including passage of fish and eels;</i> <i>(vii) groundwater recharge;</i> <i>(viii) riparian habitat;</i> <i>(ix) downstream land, property and infrastructure at risk from dam failure;</i> <i>(x) other water users;</i> <i>(b) maintain, in connected water bodies:</i> <i>(i) existing ecosystems to the extent practicable, and</i> <i>(ii) downstream river bed stability, including through sediment transfer and management of vegetation in river beds including by managing the volume, velocity, frequency and duration of flow releases from the dam or cumulatively with other dams.</i></p>	<p>Review alongside Chapter 27 policies addressing dams to avoid overlap. Reword for clarity and simplicity.</p>

Objective Set	Recommendations
Water Diversion	
<p>Policy 30.1.3.25 <i>To avoid, remedy or mitigate adverse effects of diversion of water, including:</i></p> <ul style="list-style-type: none"> <i>(a) diversion of floodwater by stopbanks and other structures;</i> <i>(b) water augmentation schemes;</i> <i>(c) hydro-electric power generation; and</i> <i>(d) instream diversion of water;</i> <p><i>taking into account effects of the diversion on:</i></p> <ul style="list-style-type: none"> <i>(i) uses and values of water bodies identified in Schedule 30A;</i> <i>(ii) fish and eel passage;</i> <i>(iii) actual or potential risks of flooding or erosion;</i> <i>(iv) actual or potential impact on river sediment and gravel transport processes;</i> <i>(v) water quality;</i> <i>(vi) aquatic and riparian ecosystems, including wetlands and habitats for indigenous vegetation or fauna;</i> <i>(vii) any relevant water allocation limits;</i> <i>(viii) other water users.</i> 	<p>Review alongside Chapter 27 policies to ensure all relevant considerations are included and avoid overlap.</p> <p>Consider linkage between diversion of water and diversion of river channels, and ensure rules cover both aspects.</p> <p>Strengthen internal consistency, the effect of diversion in causing a flood risk is not specifically addressed in rules, and sedimentation and gravel transport effects are not specifically noted.</p>
Wetland Management	
<p>Policy 30.1.3.26 <i>To recognise the importance of naturally occurring wetlands and their margins as unique, scarce and vital ecosystems with a range of significant values, including natural character, and to protect and maintain or restore existing naturally occurring wetlands.</i></p>	<p>Review – clarify status of restored or created wetlands that are for ecological purposes and constructed wetlands. Provide clear direction on protection, maintenance and restoration of wetlands.</p>
<p>Policy 30.1.3.27 <i>To develop and maintain a database of wetlands which identifies their values and significance and to assign particular significance where any one of the following criteria applies:</i></p> <ul style="list-style-type: none"> <i>(a) it is predominantly in its natural state;</i> <i>(b) there is biological diversity or representativeness of aquatic or associated terrestrial species or habitats;</i> <i>(c) it has threatened species' habitat values;</i> <i>(d) it is an area of predominantly indigenous vegetation;</i> <i>(e) it contains indigenous dune vegetation, salt herb fields or coastal shrublands;</i> <p><i>and to take into account the following criteria in assessing significance:</i></p> <ul style="list-style-type: none"> <i>(f) the extent to which it improves or maintains water quality by providing a buffer between adjacent land use activities and any water bodies;</i> <i>(g) the extent to which it contributes to the connectivity of hydrological or biological relationship with associated water bodies, including fish passage, river or lake flows and levels, and flood or drought flows, and its importance as a habitat for migratory species;</i> <i>(h) if it is adjacent to the coastal marine area;</i> <i>(i) the extent to which it has specific cultural or spiritual significance.</i> 	<p>Remove as this is a method not a policy; more suited for inclusion in 30.1.20.4 'Investigations and Monitoring'.</p>

Objective Set	Recommendations
<p>Policy 30.1.3.28 <i>To encourage, promote and support:</i> <i>(a) the protection and maintenance or enhancement of naturally occurring wetlands;</i> <i>(b) the construction of further wetlands; and</i> <i>(c) the enhancement of wetland values in wetland areas that are not naturally occurring, including farm drainage systems, irrigation, stock water and amenity ponds and dams;</i> <i>including the creation of wetlands following gravel extraction.</i></p>	<p>Review to provide stronger direction ('encourage, promote and support; is quite weak). Clarify status of restored or created wetlands that are for ecological purposes and constructed wetlands. Strengthen internal consistency, rules do not encourage or promote wetland protection, enhancement or restoration.</p>
<p>Policy 30.1.3.29 <i>To encourage, promote and support appropriate management of naturally occurring wetlands to:</i> <i>(a) control animal and plant pests;</i> <i>(b) exclude stock grazing from wetlands;</i> <i>(c) protect wetlands from inappropriate land use, including land drainage and infilling;</i> <i>(d) maintain water levels to protect wetland values.</i></p>	<p>Review - reword to provide stronger direction ('encourage, promote and support; is quite weak). Clarify status of restored or created wetlands that are for ecological purposes and constructed wetlands. Consider amalgamation with 30.1.3.28. Strengthen internal consistency, rules do not encourage or promote wetland protection, enhancement or restoration. Pest management is included in rule condition in relation to damming of water bodies, but not in relation to wetlands. Stock grazing is not mentioned in relation to wetlands.</p>
<p>Policy 30.1.3.30 <i>To establish and maintain partnerships with landowners that recognise, support and build on existing sustainable management initiatives of naturally occurring wetlands on private property and to prepare wetland management plans, in consultation with each landowner, that:</i> <i>(a) identify wetland values;</i> <i>(b) identify management options for protecting, maintaining and restoring wetland values, having regard to development options of adjacent productive land; and</i> <i>(c) to fund or assist in carrying out works and other activities to protect and restore wetland values.</i></p>	<p>Remove as this is a method not a policy; more suited for inclusion in 30.1.20.2 "Education and Advocacy".</p>
<p>Policy 30.1.3.31 <i>To avoid, remedy or mitigate adverse effects on wetlands and their margins, including cumulative adverse effects as a result of taking, damming, diverting or discharging water, including by infilling, when considering resource consent applications for those activities, taking into account its degree of significance assessed under Policy 30.1.3.27.</i></p>	<p>Retain with updates - reword to provide stronger direction ('avoid, remedy or mitigate' is too generic). Strengthen internal consistency, cumulative effects are not specifically noted in rules in relation to effects on wetlands. Activities that may have a</p>

Objective Set	Recommendations
	cumulative impact on wetlands are not necessarily regulated.
New Plantation Forest	
<p>Policy 30.1.3.32 <i>To regulate new plantation forestry to protect existing water resources from the adverse effects of reduced water yield on the surface water resources of specified Moutere gravel derived catchments in low rainfall areas and on the recharge of the Moutere aquifers.</i></p>	<p>Review and reword for clarity. Retain intent and consider relocating to the appropriate land use chapter dealing with plantation forestry.</p>
<p>Policy 30.1.3.33 <i>To ensure that the adverse effects of new plantation forestry on water yield or groundwater recharge are avoided, remedied or mitigated.</i></p>	<p>Review - consider relocating to the appropriate land use chapter dealing with plantation forestry.</p>
<p>Policy 30.1.3.34 <i>If water becomes available for further abstraction from the Moutere groundwater zones or from catchments within the Surface Water Protection Area, to allow a sustainable and equitable amount of new plantation forestry to take place in the Moutere Groundwater Protection Area or the Surface Water Protection Area before any amendment of allocation limits.</i></p>	<p>Review and update as necessary to take account of new data on water availability in the relevant areas. Consider relocating to the appropriate land use chapter dealing with plantation forestry.</p>
Financial Contributions	
<p>Policy 30.1.3.35 <i>To consider requiring financial contributions as a condition on resource consents to take, dam or divert water, and for new plantation forest proposals in areas at risk of significant water yield or recharge reduction so that the adverse effects of reduced water flows or levels can be remedied or mitigated, taking into account:</i> <i>(a) the effectiveness of a financial contribution to offset adverse effects, particularly cumulative effects and, in the case of new plantation forest proposals, to offset the adverse effects, particularly cumulative effects of reduced water yield;</i> <i>(b) the effectiveness of a financial contribution to offset adverse effects on other water users, or uses and values of a water body;</i> <i>(c) the effectiveness of a financial contribution to improve existing water users' security of supply;</i> <i>(d) the need for a direct relationship between the size and significance of any adverse effect of the take, dam or diversion, and the level of any financial contribution.</i></p>	<p>Review and amend as necessary based on experience of implementing financial contributions and consider potential application of reciprocity (utu) for resource use.</p>
Water Resource Management Relationships	
<p>Policy 30.1.3.36 <i>To encourage and support the functioning of water user committees in water management zones with representatives, as appropriate, from abstractive users, iwi, dischargers of contaminants, those affected by the water extraction or diversion, and those with an interest in instream uses and values, including the Department of Conservation and the Nelson Marlborough Fish and Game Council, to:</i> <i>(a) advise the Council in the development and implementation of water management policies;</i> <i>(b) assist the Council in managing water usage during drought periods, including assistance with rationing or rostering arrangements;</i></p>	<p>Remove as this is a method not a policy; more suited for inclusion in 30.1.20.2 "Education and Advocacy".</p>

Objective Set	Recommendations
<p>(c) assist the Council in implementing programmes of education and advocacy for good practice methods of water use;</p> <p>(d) assist the Council in the development of water classification standards.</p>	
<p>Policy 30.1.3.37 <i>To identify with manawhenua iwi agreed opportunities for active participation of iwi in water management in the District, other than by any transfer or joint management of the power to decide on any policy statement, plan or resource consent.</i></p>	<p>Remove as this is a method not a policy; more suited for inclusion in 30.1.20.2 "Education and Advocacy".</p>
<p>Policy 30.1.3.38 <i>To make decisions on water management having regard to provisions of resource management plans such as the Eel Management Plan, Nelson Marlborough Conservation Management Strategy, and Iwi Environmental Management Plans that promote the sustainable use of water and associated resources.</i></p>	<p>Review to ensure the relevant plans are covered. Consider how the intent of these documents can be embedded within the policy and rule framework as a clearer approach to provide direction on decisions, rather than reference back to a potentially long list of documents.</p> <p>Strengthen internal consistency, these plans are poorly accounted for within rules.</p>
Investigations and Monitoring	
<p>Policy 30.1.3.39 <i>To continue investigations and monitoring of the water resources of the District, with the aim of establishing and maintaining defensible allocation limits and management policies to ensure sustainable management of the resource.</i></p>	<p>Remove as this is a method not a policy; more suited for inclusion in 30.1.20.4 'Investigations and Monitoring'.</p>
<p>Policy 30.1.3.40 <i>To liaise and consult with neighbouring authorities in the management of cross-boundary issues, in particular the management of water in the Roding and Buller rivers.</i></p>	<p>Remove as this is a method not a policy; more suited for inclusion in 30.1.20 'Methods of Implementation.</p>
<p>Policy 30.1.3.41 <i>To continue to investigate and monitor the effects of activities on water resources and methods for avoiding, remedying or mitigating adverse effects of these activities.</i></p>	<p>Remove as this is a method not a policy; more suited for inclusion in 30.1.20.4 'Investigations and Monitoring'.</p>
<p>Policy 30.1.3.42 <i>In managing water abstraction in the Upper Motueka Water Management Zones Council, will mitigate adverse effects of abstractive water takes on instream values, water quality and mitigate adverse effects of rationing on water users by adopting a management regime that:</i></p> <p><i>(a) manages the decision to impose progressive rationing steps to maintain specified minimum flows and to ensure compliance with the Motueka Water Conservation Order taking into account:</i></p> <p><i>(i) the significance of water flows from contributing tributaries;</i></p> <p><i>(ii) the time of year and season;</i></p> <p><i>(ii) rate of recession of river flows and groundwater levels;</i></p> <p><i>(iii) the current weather and weather forecast;</i></p> <p><i>(iv) patterns of actual current and likely on-going water use;</i></p>	<p>Review and reword for clarity.</p> <p>Update according to NPS-FM requirements (e.g. reference to Freshwater Management Units and requirement to define minimum flows for all FMU).</p>

Objective Set	Recommendations
<p>(v) the extent and effectiveness of any water saving measures already in place; and</p> <p>(b) makes the most efficient use of available water when there is rationing and reduces abstractive uses according to established priority in Policy 30.2.3.1 when river flows fall below the minimums specified in Schedule 31C.</p>	

Allocation of Fresh Water between Competing Water Users (30.2)

Table 2: Specific Objective and Policy Recommendations for Allocation of Freshwater

Objective Set	Recommendations
General	The recommendations in this table are additional and subservient to the need to review all provisions against the requirements of the NPS-FM.
<p>Objective 30.2.2</p> <p><i>To achieve equitable water allocation and efficient use of water by water users while ensuring an acceptable security of supply for water users.</i></p>	<p>Review to provide further direction as to what is meant by 'equitable allocation', 'efficient use' and 'acceptable security'.</p> <p>Consider adding additional objectives aimed at water conservation and water resilience.</p>
Equitable Water Allocation	
<p>Policy 30.2.3.1</p> <p><i>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:</i></p> <p><i>(a) water for the maintenance of public health;</i></p> <p><i>(b) prevention of significant long term or irreversible damage to the water resource or related ecosystems or specified significant instream values;</i></p> <p><i>(c) water necessary for the maintenance of animal welfare;</i></p> <p><i>(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;</i></p> <p><i>and the following uses will not be authorised during such a drought:</i></p> <p><i>(e) irrigation and other uses not associated with commercial production such as irrigation of amenity plantings;</i></p> <p><i>(f) non-essential uses such as recreational use, for example, swimming pools and car washing.</i></p> <p><i>Takes not subject to any rationing are:</i></p> <p><i>(i) firefighting uses;</i></p> <p><i>(ii) non-consumptive uses;</i></p> <p><i>(iii) takes from storage.</i></p>	<p>Retain with updates - review priority uses, and amend if / as necessary, as consistent with the NPS-FM and any amendments.</p>

Objective Set	Recommendations
<p><i>Note: An allowance of 125 litres per person per day is used to calculate the amount required for maintenance of human health.</i></p>	
<p>No Policy 30.2.3.2 [deleted in PC 56]</p>	<p>Not Applicable</p>
<p>Policy 30.2.3.3 <i>To protect the minimum water supply needs of domestic and stock water users except where a domestic bore has not fully penetrated an alluvial aquifer by:</i></p> <ul style="list-style-type: none"> <i>(a) assigning priority for available water to the water supply needs for the maintenance of public health during times of drought;</i> <i>(b) seeking to maintain residual water flow downstream of any surface water abstraction point;</i> <i>(c) requiring a minimum quantity of water to be stored on site by new dwellings in rural and rural residential areas to manage the effects of drought and fire risk;</i> <i>(d) advocating the installation of on-site storage of water in urban areas to manage the effects of drought and fire risk;</i> <i>(e) advocating the efficient use of water, including the use of water saving devices, particularly in water short areas;</i> <i>(f) ensuring that the community has information about the reliability of water supplies for permitted activities, particularly in water short areas.</i> 	<p>Review – review with respect to NPS-FM requirements and concerns of potential effects of stockwater takes on small rivers; also to ensure all relevant points are covered for protecting minimum water supply needs.</p>
<p>Policy 30.2.3.4 <i>To recognise and provide for the existing and potential future water needs of communities by:</i></p> <ul style="list-style-type: none"> <i>(a) taking into account the effects of future community growth on available or potentially available water supplies, within the limits of any applicable allocation limit, especially in the Waimea water management zones, and the Hau, Marahau and Moutere Surface Water zones when making decisions on resource consent applications for subdivision or Plan changes to zoning;</i> <i>(b) assigning priority for available water to the water supply needs for the maintenance of public health during times of drought;</i> <i>(c) reserving water within any allocation limit for future expected community growth, taking into account:</i> <ul style="list-style-type: none"> <i>(i) long term population growth projections for the area, including both medium and high growth estimates;</i> <i>(ii) water demand based on existing and likely residential, non-residential (schools, hospitals, commercial and industrial) demand within the reticulation area, including allowance for meeting demand at peak times and network water losses.</i> <i>(d) investigating and adopting, if appropriate, according to Policy 30.3.3.3, other options, including water augmentation, water use reduction, and water re-use and recycling, for ensuring water demand for future growth is able to be met;</i> <i>(e) declining applications for subdivision or zoning change if sufficient reliable and potable water is not available;</i> <i>(f) taking into account the potential effects of severe drought in the stated level of service objectives in the Council's asset management plan for water supply.</i> 	<p>Retain with updates - review to ensure all relevant points are covered for providing for potential needs of communities.</p> <p>Ensure consistency with the NPS-FM, NPS on Urban Development Capacity and the Nelson Tasman Future Development Strategy.</p>

Objective Set	Recommendations
<p>Policy 30.2.3.5 <i>To continue to allocate water on the basis of priority in time for any application for a water permit where there is still water available for allocation.</i></p>	<p>Review to ensure this remains the desired approach.</p>
<p>Policy 30.2.3.6 <i>To reserve water within the sustainable allocation limits of the water body for the following uses:</i> <i>(a) irrigation needs in respect of Māori perpetual lease lands under perpetual leasehold terms (where Māori landowners are unable to directly influence authorised access to water for irrigable land through lease arrangements); and</i> <i>(b) community water supply needs, taking into account expected demand until 2026, and to enable temporary use of the reserved water by other users until it is required for the reserved purpose.</i></p>	<p>Review priority uses, and amend if / as necessary.</p> <p>Reword for clarity, e.g. reference to “the water body” suggests the policy applies to a single unnamed water body.</p>
<p>Policy 30.2.3.7 <i>In water management zones where there is no water available for allocation, to guide the allocation or re-allocation of any water that may become available in that zone by assigning priority for potential water users and by establishing waiting lists. Priority is assigned according to the following criteria in descending order of priority:</i> <i>(a) first, to the irrigation needs of Māori perpetual lease lands reserved under Policy 30.2.3.6(a);</i> <i>(b) next, to potential water users who are registered on a Council-established waiting list.</i> <i>Where (a) and (b) do not apply, then priority will be assigned according to:</i> <i>(c) whether a need for water can be demonstrated;</i> <i>(d) whether there is compliance with relevant Plan rules;</i> <i>(e) new users before existing permit holders;</i> <i>(f) underground takes (which will normally be preferred over takes from surface water); (g) priority uses as listed in Policy 30.2.3.1;</i> <i>(h) any remaining registrations assigned priority by chance.</i></p>	<p>Retain with updates - review priority uses, and amend if / as necessary.</p>
<p>Policy 30.2.3.8 <i>To regularly review rates of water use specified on water permits, including those that are deemed permits under Section 386 of the Act, to ensure that levels, flows, rates or standards established for any water body or management zone will be met.</i></p>	<p>Retain with updates in accordance with NPS-FM monitoring requirements.</p>
<p>Policy 30.2.3.9 <i>To set common expiry dates for water permits to take water in each water management zone, to ensure consistent and efficient management of the resource and set durations that provide a periodic opportunity to:</i> <i>(a) review cumulative water use that takes into account potential effects of changes in:</i> <i>(i) knowledge about the water bodies</i> <i>(ii) over allocation of water</i> <i>(iii) water quantity and water quality</i> <i>(iv) patterns of water use</i> <i>(v) technology</i> <i>(vi) community values</i> <i>(vii) climate</i> <i>on the cumulative effects of all the water takes within the water management zone;</i></p>	<p>Retain with updates in accordance with NPS-FM requirements (e.g. reference to Freshwater Management Units).</p> <p>Reword for clarity and simplicity.</p>

Objective Set	Recommendations
<p>and</p> <p><i>(b) to adopt common expiry dates, and consent status of activities and requirements for permit review that take into account continued business security and consent costs while managing environmental risks.</i></p>	
<p>Policy 30.2.3.10</p> <p><i>Except as provided by policies 30.2.3.11, 30.2.3.12 and 30.2.3.13, when assessing any application to take, use, dam or divert water, to take into account:</i></p> <p><i>(a) any provisions that may exist for the reservation of water;</i></p> <p><i>(b) effects on other water users, including drawdown of groundwater in neighbouring bores;</i></p> <p><i>(c) measures taken for water conservation and to ensure efficient water use;</i></p> <p><i>(d) measures for monitoring water use;</i></p> <p><i>(e) whether the applicant has reasonable access to water at the site where water is to be used;</i></p> <p><i>(f) whether the applicant already has any existing permits that are not fully exercised;</i></p> <p><i>(g) for any application to take water for irrigation:</i></p> <p><i>(i) the location and area of land to be irrigated at any one time, excluding non-irrigated areas such as roads, waterways and buildings, and the soil water-holding characteristics of the soil being irrigated;</i></p> <p><i>(ii) the influences of climate on crop water demand;</i></p> <p><i>(iii) irrigation management plans, that demonstrate mitigation of adverse effects of the water take and use on water quality and quantity.</i></p> <p><i>(iv) for applications that renew existing takes for irrigation, the nature and extent of the financial investment in the construction and operation of an existing irrigation system.</i></p> <p><i>(h) for any application to take water for community water supplies:</i></p> <p><i>(i) the area to be serviced;</i></p> <p><i>(ii) water demand based on existing and likely residential and non-residential (schools, hospitals, commercial and industrial) demand within the reticulation area, including allowance for meeting demand at peak times and network water losses;</i></p> <p><i>(iii) measures to manage demand, including water meters, restricted supplies and pressure control, pricing and water saving technology and processes, for both residential and non-residential (schools, hospitals, commercial and industrial) end uses;</i></p> <p><i>(iv) provisions to manage reduced availability during periods of drought or low flow;</i></p> <p><i>(v) provisions for demand management.</i></p> <p><i>(i) for any application for other uses, including industrial uses, the process where water is necessary, likely volumes to be used in any process and best practice options for efficient water use;</i></p> <p><i>(j) for any application to take water for domestic use, whether Council intends to provide a reticulated community water supply (as identified in the Long Term Plan);</i></p> <p><i>(k) whether there is a reasonable alternative supply from which water takes cause less significant adverse effects, including water storage options for that property;</i></p>	<p>Review and amend with a view to clarifying and simplifying the policy, e.g. by:</p> <ul style="list-style-type: none"> - separating out the points raised into additional policies; and/or - transferring some of the detail into the relevant rules.

Objective Set	Recommendations
<p><i>(l) whether the activity significantly reduces the security of water supply to existing dams.</i></p> <p><i>(m) for any application to take water from an augmented water supply, the nature and extent of the financial investment into the construction, operation and maintenance of the augmentation scheme.</i></p>	
<p>Policy 30.2.3.11</p> <p><i>Where in relation to an application to take water, the permit applicant can demonstrate their augmentation or a contribution to augmentation of a natural water supply through an investment in, or affiliation or contribution to, a water augmentation scheme, Council will not apply policies 30.2.3.10 and 30.2.3.15 in respect of:</i></p> <p><i>(a) bona fide review of permits; or</i></p> <p><i>(b) demonstration of need for and access to water;</i></p> <p><i>depending on the extent to which the natural water supply has been augmented.</i></p>	<p>Retain with updates - reword for clarity.</p>
<p>Policy 30.2.3.12 (A)</p> <p><i>(A) Where there IS a Waimea Community Dam - Transitional Arrangements</i></p> <p>In considering applications to take water in the Waimea Plains water management zones, the Council will provide for transitional water allocation as follows:</p> <p>(a) For affiliated permits, until operation of the Waimea Community Dam has commenced:</p> <p>(i) when making decisions on resource consent applications under Rule 31.1.2.3A, water use will reflect bona fide use between 2003 and 2013 (actual and reasonable use); and</p> <p>(ii) rationing for all permits will be based on avoiding seawater intrusion and maintaining river flows according to Policy 30.1.3.20; and</p> <p>(iii) granting any application for site-to-site transfer of water permits or parts of water permits only in circumstances that do not result in an increase in the amount of water used from November to April;</p> <p>(b) For permits that are not affiliated, until operation of the Waimea Community Dam has commenced, allocation limits and rationing will be based on the provisions, including the 4-step rationing regime that would apply in the absence of the Waimea Community Dam.</p>	<p>Review and update in light of progress towards construction of dam.</p> <p>[Note in relation to Waimea Community Dam: Footnotes for Schedule 30A & B state that “These values and objectives for the Waimea River will be reviewed if a water augmentation scheme is commissioned or within 10 years of these provisions becoming operative, whichever is the sooner.”]</p>
<p>Policy 30.2.3.12 (B)</p> <p><i>(B) Where There IS NO Waimea Community Dam</i></p> <p><i>In considering applications to take water in the Waimea Plains Zones, either:</i></p> <p><i>(a) after 1 November 2023 if by this date the construction of the Waimea Community Dam has not commenced; or</i></p> <p><i>(b) where there is no Water Supply Agreement available to permit applicants by 1 November 2019;</i></p> <p><i>the Council will provide for a water allocation regime that reduces the over-allocation of water and the adverse effects of taking water by:</i></p> <p><i>(c) adopting allocation limits (the sum of existing consented takes due for renewal in 2016 and 2017 and authorised under rule 31.1.2.2) and longer-term allocation targets (based on Council’s security of supply policy) that guide decision making for resource consent applications to take water;</i></p> <p><i>(d) adopting a 4-step rationing regime with the first three steps based on Wairoa River flow triggers and Step 4 requiring a reduction to 30 percent</i></p>	<p>Review and amend or remove in light of progress towards construction of dam.</p>

Objective Set	Recommendations
<p><i>of allocated water based on flow in the Lower Waimea River and salinity levels, except for community water supplies, which remain at Step 3;</i></p> <p><i>(da) considering the imposition of cease take water shortage directions in accordance with policy 30.1.3.20(c)(ii);</i></p> <p><i>(e) reviewing the Plan provisions relating to allocation limits, targets, rationing triggers, and flow regimes by 2025 to assess:</i></p> <p><i>(i) the security of supply in these water management zones to compare it with Council's security of supply standard in Policy 30.2.3.21(a); and</i></p> <p><i>(ii) the relationship between the observed security of supply and flow regime; and</i></p> <p><i>(iii) the extent to which the stated river management objectives are being met;</i></p> <p><i>(f) declining any new resource consent application for consumptive water takes, except where water is taken when river flows are significantly higher than the sum of consented abstractions plus the minimum flow;</i></p> <p><i>(g) when making decisions on resource consent applications under rule 31.1.2.2, reducing permit allocations to reflect bona fide use (actual and reasonable use);</i></p> <p><i>(h) providing for a permit duration of 20 years and reviewing the permit during the consent term in relation to maintenance of river flows and effects of the water use on water quality, including as a result of any Plan review under clause (e).</i></p>	
<p>Policy 30.2.3.12 (C)</p> <p><i>(C) Once Waimea Community Dam Operation Commences</i></p> <p><i>In considering applications to take water in the Waimea Plains Zones once the operation of the Waimea Community Dam commences, the Council will provide for the following water management regime:</i></p> <p><i>(a) For water permits affiliated to the Waimea Community Dam:</i></p> <p><i>(i) allocation limits, security of supply and rationing is linked to the volume of water stored in the dam and the release of water from the dam to maintain specified flows in Schedule 31C Table 1A;</i></p> <p><i>(ii) a consent duration for any permits affiliated to the dam is concurrent with resource consents issued for the Waimea Community Dam;</i></p> <p><i>(iii) permit reviews are required during the consent duration in relation to management of effects of the water use on water quality.</i></p> <p><i>(b) For permits that are not affiliated to the Waimea Community Dam once operation of the Dam has commenced:</i></p> <p><i>(i) a security of supply that is less than the Council's standard for supply security through:</i></p> <p><i>a) adopting allocation limits (the sum of existing consented takes due for renewal in 2016 and 2017 and authorised under rule 31.1.2.2) and longer-term allocation targets (based on Council's security of supply policy) that guide decision making for resource consent applications to take water;</i></p> <p><i>b) water take restrictions, including cease take provisions that provide a security of supply similar to that if there was no dam for the Waimea Plains Zones, and trigger flows specified at the Wairoa at Irvines monitoring site; and</i></p> <p><i>c) a flow trigger that provides for the resumption of water takes after any rationing has been imposed based on the unmodified 7- day moving mean flow of 6,000 litres per second for the Wairoa River measured at the Irvines site;</i></p>	<p>Review and amend in light of progress towards construction of dam.</p>

Objective Set	Recommendations
<p>(ii) permit reviews during the consent duration in relation to management of effects of the water use on water quality;</p> <p>(iii) a consent duration of 20 years.</p>	
<p>Policy 30.2.3.12 (D) <i>(D) Root Stock Survival Water</i> <i>In considering applications to take water in the Waimea Plains Zones under policy 30.2.3.12(A), policy 30.2.3.12(B) or policy 30.2.3.12(C)(b), the Council may provide for the taking of water authorised for the sole purpose of avoiding the death of pipfruit, stonefruit, viticulture and kiwifruit root stock and for the purpose of glasshouse irrigation as follows:</i></p> <p><i>(a) Water allocated for this purpose must not exceed a cumulative instantaneous limit across all Waimea Plains Zones of 521 litres per second; and</i></p> <p><i>(b) The water may only be available after:</i></p> <p><i>(i) 11 days on the lighter soils (Ranzau, Māori) and 30 days on the heavier soils (Waimea, Richmond) for pipfruit, stonefruit, viticulture and kiwifruit</i></p> <p><i>(ii) one day for glasshouses;</i></p> <p><i>following the imposition of either:</i></p> <p><i>(iii) Figure 31.1C Step 3 rationing or beyond for permits not affiliated to the Waimea Community Dam before the Dam commences operation; or</i></p> <p><i>(iv) Figure 31.1C Step 3 rationing or beyond for permits where there is no Waimea Community Dam; or</i></p> <p><i>(v) Figure 31.1C Step 2 rationing for permits not affiliated to the Waimea Community Dam after the Dam commences operation; and</i></p> <p><i>in each case only where no practicable alternative sources of water are available or accessible.</i></p>	<p>Review and amend in light of progress towards construction of dam.</p> <p>Reword, as the policy is long and complex.</p> <p>Strengthen internal consistency, specific detail contained in Policy points do not appear in rules e.g. '521 litres/s' and '11 days on lighter soils' etc.</p>
<p>Policy 30.2.3.12 (E) <i>(E) Permits to Take from the Waimea Community Dam</i> <i>In considering applications for permits that are affiliated or unaffiliated to the Waimea Community Dam, the Council will require that only one permit subject to the relevant affiliated or unaffiliated allocation limit is consented for any one point of take and monitored through one water meter, except where the point of take services more than one landowner through a reticulated irrigation scheme and where:</i></p> <p><i>(a) the total water take is telemetered;</i></p> <p><i>(b) the affiliated and unaffiliated permits are managed jointly so that the water use authorised in each permit is managed as a combined total, with a volume equivalent to the unaffiliated portion of that combined total being subject to the rationing steps applicable to an unaffiliated permit;</i></p> <p><i>(c) water use by landowners serviced by the reticulation scheme must be monitored by water meters at the property boundary and unaffiliated water use reported separately to Council.</i></p>	<p>Retain</p>
<p>Policy 30.2.3.13 <i>If substantial progress towards giving effect to the relevant resource consents for construction of the Waimea Community Dam has not been made by 1 November 2020, as determined under policy 30.2.3.13A, Council will provide priority for the taking of water from any of the Waimea Plains zones and use for community water supplies in a way that recognises and accounts for the constraints on water availability in the Waimea Plains zones, by:</i></p>	<p>Review and amend or remove in light of progress towards construction of dam.</p>

Objective Set	Recommendations
<p>(a) ensuring that water allocated for community water supplies is retained for that use when those existing permits expire and are replaced;</p> <p>(b) requiring permits for community water supplies to be exercised to service only land that:</p> <p>(i) was zoned for urban development as at 27 April 2013, including:</p> <ul style="list-style-type: none"> • any urban deferred zones that existed at that time, and • any such zoned land in Nelson City reticulated for community water supplies from the Council's supply; or <p>(ii) is land the subject of a Special Housing Area declared in any order that was gazetted under the Housing Accords and Special Housing Areas Act 2013 before 14 July 2018; or</p> <p>(iii) was connected to a community water supply before 14 July 2018, including land zoned for rural development connected to rural extensions or to the Redwood Valley community water supply;</p> <p>(iv) is the subject of any resource consent granted before 14 July 2018 in relation to which a binding agreement or requirement exists for any connection to a community water supply;</p> <p>(c) limiting new or expanding industrial activities in these zones to water demanding activities that do not exceed 15 cubic metres of water per day averaged over a week, unless the expanding industrial activity does not involve an increase in bona fide water use or constitutes the non-consumptive use of water;</p> <p>(d) investigating options for augmenting community water supplies;</p> <p>(e) ensuring, when appropriate, that the Council's Water Supply Bylaw and contracts to supply water to industrial and commercial users of water account for water restrictions and water use rationing imposed by conditions on relevant water permits for reticulated community water supplies.</p>	
<p>Policy 30.2.3.13A</p> <p>Council, after consultation with the consent holder for the Waimea Community Dam, will make, by 1 November 2020, a determination on whether substantial progress has been made towards giving effect to the relevant resource consents for construction of the Waimea Community Dam.</p>	<p>Remove as policy will soon be out-of-date and it is process oriented.</p>
<p>Policy 30.2.3.14</p> <p>When considering any application to change the water use specified on a water permit, to take into account any adverse effect of the change on water body uses and values, including maintenance of minimum flows, other water users, and water quality and including:</p> <p>(a) effects of the alteration to the patterns of water use over time, including changes from seasonal use to water takes occurring throughout the year or changes from season to season;</p> <p>(b) effects of any changes to the rates of take;</p> <p>(c) compliance with any relevant reservation policies and provisions.</p>	<p>Retain with updates - review to ensure all relevant points are included.</p>
<p>Policy 30.2.3.15</p> <p>To regularly review permits to ensure the allocation authorised by the permit reflects what is actually needed by:</p> <p>(a) encouraging permit holders to relinquish permits or, if relevant, to transfer the point at which water is taken, and/or lease or permanently transfer permits wholly or in part to another person if the water allocated is no longer being used, except in over-allocated zones; and</p>	<p>Retain with updates to regularly review permits, and review proposed actions (a) and (b) to ensure they are the best only options.</p>

Objective Set	Recommendations
<i>(b) reducing allocations to reflect bona fide use.</i>	
<p>Policy 30.2.3.16 <i>To provide for water permit transfers, including temporary transfers from site to site, including within the Wai-iti Dam Service Zone and the zones augmented by the Waimea Community Dam when it commences operation (Appleby Gravel, Upper Confined Aquifer and Lower Confined Aquifer Water Management Zones), that:</i></p> <p><i>(a) enable more efficient use to be made of water available for abstractive use;</i></p> <p><i>(b) enable water users to obtain more reliable supplies of available water;</i></p> <p><i>(c) where applicable, contribute to the efficient and sustainable operation of the Wai-iti and Waimea Community Dam augmentation schemes.</i></p>	<p>Review the use of water permit transfers to ensure they do achieve water efficiency, as opposed to maximising the use of water.</p>
Water Measuring	
<p>Policy 30.2.3.17 <i>To require water meters or other systems for water take and use recording to be used and water take and use data to be reported to Council by water permit holders in order to:</i></p> <p><i>(a) meet the requirements of the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010;</i></p> <p><i>(b) ensure reliable data is available for making good resource management decisions including through the use of computer models;</i></p> <p><i>(c) enable monitoring for compliance with resource consents;</i></p> <p><i>(d) manage effects of takes on the environment, including cumulative effects and where there is a rationing trigger or minimum flow requirement;</i></p> <p><i>(e) enable efficient use of water;</i></p> <p><i>in respect of any water take:</i></p> <p><i>(i) that is authorised by a consent; or</i></p> <p><i>(ii) that is permitted and where there is a need for water use data to assess cumulative effects of abstraction on a water resource or in relation to an allocation limit, including for permitted takes from the Moutere Groundwater Zones;</i></p>	<p>Review and amend or remove in light of the already introduced Government regulations for watering metering.</p>
<p>Policy 30.2.3.18 <i>To develop electronic data management systems that allow for electronic recording and reporting by water users and to consider requiring electronic recording and reporting when assessing resource consent applications to take water when any of the following apply:</i></p> <p><i>(a) a proposed take from a surface resource is a significant percentage of the flow;</i></p> <p><i>(b) there are significant values that may be affected by a take, particularly during low flows;</i></p> <p><i>(c) there is a history of non-compliance with meter returns;</i></p> <p><i>(d) there is a need to monitor the take in real time, including where takes from rivers are managed by proportional allocation of the flow.</i></p>	<p>Review – review to remove process elements (e.g. ‘To develop electronic data management systems...’) and to refocus the wording on requirements for electronic recording / reporting when considering consent applications.</p>
Mitigation of Adverse Effects	
<p>Policy 30.2.3.19 <i>In consultation with landowners, water permit holders and interest groups, to seek to mitigate the adverse effects of reduced water levels or flows in rivers with significant aquatic fishery habitat, including the</i></p>	<p>Review and reword to with a view to having:</p> <ol style="list-style-type: none"> 1. A policy promoting or requiring habitat enhancement as a condition of a water permit

Objective Set	Recommendations
<p><i>regionally significant trout fishery of the Riuwaka River through methods such as:</i></p> <p><i>(a) enhancement of habitats;</i></p> <p><i>(b) ensuring that Council's river works programmes take into account adverse effects on aquatic habitat.</i></p>	<p>to help improve waterbody resilience;</p> <p>2. A policy requiring Council's rivers works programme to avoid effects on, and to enhance, aquatic habitats (cross-referenced with Chapter 27 to avoid duplication); and</p> <p>3. A method of implementation promoting working with and supporting landowners, interest groups, iwi etc to undertake non-regulatory enhancement activities.</p>
<p>Policy 30.2.3.20</p> <p><i>To work together with water users in the Hau Plains Zone, particularly the users of the Lower Moutere Water Scheme to ensure that domestic water users in the coastal margin of the Hau Plains Zone are periodically supplied with alternative water supplies so as to avoid rationing caused by seawater intrusion into those domestic bores.</i></p>	<p>Review - remove or reword to read more like a policy, as it currently appears to be aimed at non-regulatory responses to drought conditions and effects on domestic supply in lower Moutere location. Consider how this might link to the water supply policy (June 2020) and Water Supply Activity Management Plan.</p>
<p>Policy 30.2.3.21</p> <p><i>To seek to maintain or establish a minimum security of supply for all abstractive water users by establishing allocation limits and trigger levels for rationing whereby:</i></p> <p><i>(a) a reduction in 35 percent of the allocated amount is expected during a 10-year drought for permits to take water from surface or ground water bodies during summer periods; except for community water supplies where the reduction is 25 percent, and</i></p> <p><i>(b) to adopt a higher security of supply where knowledge about cumulative effects of water abstraction on water bodies is not complete or where demand for water resources is lower or where abstractive water users are supplied by a water augmentation scheme that enables higher security standards;</i></p> <p><i>(c) in the Waimea Water Management Zones, where permits are not affiliated to Waimea Community Dam, or where there is no Waimea Community Dam by 1 November 2023, to adopt a lower security of supply as provided by policy 30.2.3.12.</i></p>	<p>Review - review in accordance with NPS-FM requirements and provide flexibility for differing acceptable security of supplies in different water management zones. Retain intent to reduce allocation limits as required to attain acceptable security of supply, and revise use of rationing in light of minimum flow requirements under the NPS-FM.</p> <p>Reword policy for clarity and reduce complexity.</p> <p>Update in light of progress towards construction of dam.</p>
<p>Policy 30.2.3.22</p> <p><i>To encourage taking of water for storage during high flow and to acknowledge that some water users can improve their security of supply above the minimum level through the storage or augmentation of water:</i></p> <p><i>(a) in circumstances where water is only taken when the river flow is greater than the natural median flow for that river and the cumulative total amount of water taken does not exceed 10 percent of the median flow;</i></p> <p><i>or</i></p>	<p>Review - reword for clarity and consider splitting into separate policies to cover a) and b) separately.</p> <p>Relocate detail in a) into a specific rule cascade to provide for water harvest to off-stream storage.</p>

Objective Set	Recommendations
<p><i>(b) in circumstances where it can be shown that the water take, either on its own or in combination with other takes, will not:</i></p> <p><i>(i) be inconsistent with flow regimes specified in Schedule 31C;</i></p> <p><i>(ii) increase the frequency or duration of minimum flows;</i></p> <p><i>(iii) reduce the security of supply of any water users subject to an allocation limit;</i></p> <p><i>(iv) have a significant adverse effect on the values of the water body or any connected water body identified in Schedule 30A;</i></p> <p><i>and when assessing applications, to take into account effects on:</i></p> <p><i>(v) natural flow regime, including the magnitude of the median flow and the frequency of flushing flows.</i></p>	<p>Update Schedule 31C to include minimum flows for all relevant waterbodies.</p> <p>Strengthen internal consistency, the storage of water during high flow times is not specifically provided for within the rule framework.</p>
<p>Policy 30.2.3.23</p> <p><i>To introduce into the Plan or amend by way of variation or change, allocation limits and trigger levels for rationing, in the event of a water augmentation scheme in the Wai-iti Zone or in the Moutere Surface Water Zone.</i></p>	<p>Remove as this is a process policy that directs Council to undertake a Plan Change at a future point.</p>
<p>Efficient Water Use</p>	
<p>Policy 30.2.3.24</p> <p><i>To promote, encourage and require, as appropriate, water conservation practices in the use of water through:</i></p> <p><i>(a) water use practices which minimise losses of water;</i></p> <p><i>(b) water use practices that use water more efficiently;</i></p> <p><i>(c) encouraging water users to use less water;</i></p> <p><i>(d) encouraging the re-use of water;</i></p> <p><i>(e) requiring the storage of water for any new dwelling not connected to a reticulated water supply.</i></p>	<p>Review – retain intent and reword to provide stronger direction (‘promote’ and ‘encourage’ is quite weak).</p> <p>Amend (or add additional policies) to better differentiate between water efficiency and water conservation.</p>
<p>Policy 30.2.3.25</p> <p><i>To regulate the site-to-site transfer of water takes and changes to conditions on water permits according to the potential for adverse effects arising from the transfer or change, taking into account:</i></p> <p><i>(a) the level of knowledge about the water body;</i></p> <p><i>(b) the monitoring of water use;</i></p> <p><i>(c) whether the transfer is within the same water management zone;</i></p> <p><i>(d) the level of allocation within the zone;</i></p> <p><i>(e) whether water has been reserved for any purpose in the zone in which the water is being transferred;</i></p> <p><i>(f) whether the transfer of water facilitates access to water that is augmented from a water augmentation scheme;</i></p> <p><i>(g) whether an actual need for water has been demonstrated and whether there is a risk of speculative trade by a third party.</i></p>	<p>Review and reword to provide greater direction for assessors – eg no transfer if out of zone or if zone over-allocated.</p>
<p>Policy 30.2.3.26</p> <p><i>When considering applications to take water from any Moutere Groundwater Zone, annual water permit allocations will be calculated as follows, after taking into account the sustainable yield of the bore:</i></p> <p><i>(a) for irrigation uses, the annual total is not to exceed a 100-day pumping limit determined from the step-drawdown pumping test (or equivalent);</i></p> <p><i>(b) for other uses, the annual total is not to exceed the amount calculated by a maximum 181 days pumping based on the extension of the 100-day extension of the 100-day limit determined from the step-drawdown pumping test (or equivalent).</i></p>	<p>Review and update as necessary to ensure the policy is based on up-to-date information on water availability in the stated zone.</p> <p>Update according to NPS-FM requirements (e.g. reference to Freshwater Management Units).</p>

Objective Set	Recommendations
<p>Policy 30.2.3.27 <i>To examine the necessity and opportunities for meeting:</i> <i>(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</i> <i>(b) identified water needs for frost protection of crops on Māori perpetual lease land.</i></p>	<p>Review in collaboration with manawhenua iwi.</p>
<p>Policy 30.2.3.28 <i>To regulate the damming, taking and use of water from dams, ponds and reservoirs in such a way as to provide flexibility for water users to make decisions about:</i> <i>(a) security of supply for consumptive water takes; and</i> <i>(b) efficient water use; and</i> <i>(c) bona fide use;</i> <i>while managing the adverse effects, including cumulative effects, of damming and any potential water takes from the dam on:</i> <i>(i) the river uses and values including aquatic ecosystems;</i> <i>(ii) connected water bodies;</i> <i>(iii) downstream water users, including security of supply for existing water users;</i> <i>by managing residual flows from the dam.</i></p>	<p>Review and split into separate policies for takes from off-stream reservoirs and on-stream dams. The effects referenced are most relevant to takes from on-stream dams. Takes from off-stream storage should be enabled while considering efficient and water quality effects from land use enabled by use of water. Reword for clarity, e.g. the policy could provide greater direction in what is meant by providing flexibility.</p>

Freshwater Augmentation (30.3)

Table 3: Specific objective and policy recommendations for freshwater augmentation

Objective set	Recommendations
<p>General</p>	<p>The recommendations in this table are additional and subservient to the need to review all provisions against the requirements of the NPS-FM. Review this section alongside Chapter 27 to avoid overlap.</p>
<p>Objective 30.3.2 <i>There is sufficient water to meet the needs of all water uses.</i></p>	<p>Review as this seems like an unrealistic objective and also risks promoting maximum water use rather than water efficiency or conservation. Consider rephrasing to refer to enabling/promoting use of augmentation where sustainable natural sources of water are unavailable.</p>
<p>Policy 30.3.3.1 <i>To encourage augmentation schemes such as water harvesting in dams and reservoirs, which avoid, remedy or mitigate adverse effects on water availability downstream or on values and uses of the river, especially in zones where there is an over-allocation of water.</i></p>	<p>Review – retain intent but reword to provide greater direction (e.g. ‘encourage’ could be ‘provide for’ and ARM phrasing is too generic). Ensure distinction is made between on-stream and off-stream storage and effects.</p>
<p>Policy 30.3.3.2 <i>To recognise the beneficial effects of water augmentation, including harvesting in dams and reservoirs when considering water permit applications, including beneficial effects on:</i> <i>(a) aquatic habitat and ecosystems;</i> <i>(b) increased water availability;</i> <i>(c) downstream water bodies;</i> <i>(d) other water users.</i> <i>(See also 30.1.3.23 - Water Damming)</i></p>	<p>Review – retain intent and - review list of beneficial effects to ensure it captures all relevant considerations. Ensure distinction is made between on-stream and off-stream storage and effects.</p>
<p>Policy 30.3.3.3 <i>To support investigation and construction of water augmentation schemes, including water reticulation schemes where there is public benefit and to establish the level of support according to the following criteria:</i> <i>(a) The extent to which a water supply is augmented or the level to which the security of supply for water users is enhanced.</i> <i>(b) The nature or extent of benefits for habitat values of aquatic organisms.</i> <i>(c) The nature or extent of benefits for recreational uses.</i> <i>(d) The extent of any public health benefits.</i> <i>(e) The extent to which adverse effects of water or land use activities can be mitigated.</i> <i>(f) The extent to which there are other community benefits such as beneficial effects on landscapes, tourism, etc.</i> <i>(g) The extent of any benefits for increasing knowledge or understanding of the nature or extent of a water resource.</i></p>	<p>Review - reword for clarity and simplicity.</p>

Objective set	Recommendations
<p>(h) The extent to which adverse effects of water allocation policy on water users need to be mitigated.</p> <p>(i) The scale of the proposal, especially in relation to benefits and costs of any alternative option.</p>	
<p>Policy 30.3.3.4</p> <p><i>Where a water augmentation scheme provides opportunities for further water abstraction or restoration, or improvement of instream values, to allocate water for abstraction to sustainable limits or where applicable, allow a sustainable amount of further plantation forestry in the Moutere Groundwater Protection Area or the Surface Water Protection Area, taking into account the level of financial contribution to the scheme.</i></p>	<p>Review – retain intent, but amend for clarity, as current wording is confusing. Consider splitting into separate policies covering allocation from schemes separately from forestry in the Moutere Groundwater Protection area.</p>
<p>Policy 30.3.3.5</p> <p><i>To promote and encourage domestic water users in urban areas to collect rainwater from roofs for re-use. (See also 30.2.3.3)</i></p>	<p>Review – retain intent as this remains a useful means of augmenting urban water supplies, but clarify application to reticulated and unreticulated urban areas and links to policy 30.2.3.24 (e) and 30.2.3.3 (c) and (d).</p>

1. Purpose Statement

The purpose of this evaluation of the TRMP is to determine the effectiveness and efficiency of the provisions contained within it. It helps us understand if the TRMP provisions are doing what they're meant to do.

This evaluation process is a fundamental step in the policy review cycle and a requirement of the Resource Management Act. It informs good quality plan-making and helps maintain confidence and integrity in the process.

The results of this evaluation will inform the review of the Tasman Resource Management Plan.

What do the terms mean?

Effectiveness: *“assess the contribution ... provisions make towards achieving the objectives and how successful they are likely to be in solving the problem they were designed to address”*

Efficiency: *“measures whether the provisions will be likely to achieve the objectives at the lowest total cost to all members of society, or achieves the highest net benefit to all of the society”*

(Ministry for the Environment s.32 Guidance)

Key Evaluation Questions

What we need to keep in mind

- ✓ Are we focused on the right issues?
- ✓ Have we done what we said we'd do?
- ✓ Have we achieved what we said we'd achieve?
- ✓ How do we know our actions led to the outcome observed?
- ✓ Have we achieved that outcome at reasonable cost (could we have achieved it more cheaply)?
(Enfocus, 2008)

2. Scope

2.1 Regional Plan Provisions Reviewed

Part 5 applies to the taking, use, diverting and damming of water. It addresses freshwater and inshore coastal water, but not open coastal water.

It is comprised of three chapters:

- Chapter 30 deals with issues concerning the availability of water in water bodies and inshore coastal water for abstractions, diversions and use, and contains the objectives and policies for managing the quantity of water in water bodies and inshore coastal water throughout the District.
- Chapter 31 states the rules applying to the taking, using, diverting and damming of water in water bodies and inshore coastal water.
- Chapter 32 states the information requirements for water permit applications and coastal permit applications.

Chapter 30 addresses three broad issues:

Reduced Water Body Flows or Levels: A number of activities, including: water abstraction; reductions in bed level by gravel extractions; dams; changes in vegetation from short to tall vegetation; diversion of water, including wetland drainage or infilling; can reduce or alter surface water flows, recharge rates or groundwater, wetland or lake water levels, and cause adverse effects including:

- (i) adverse effects on in-stream values such as aquatic ecosystems; natural character; eel, trout and salmon habitat; recreational, intrinsic and cultural values; values of riparian margins; and the cultural and spiritual values of the tangata whenua;
- (ii) aquifer damage by seawater intrusion, compression, and excessive drawdowns;
- (iii) reduction in the capacity of a water body to dilute contaminants;
- (iv) adverse effects on other abstractive users of water;
- (v) adverse effects on the natural, cultural and intrinsic values of wetlands.

Allocation of Fresh Water Between Competing Water Users: Once the minimum water requirements for instream uses and values of water bodies have been established, the allocation and re-allocation of water available for extraction must be carried out in an equitable way between the competing water users. In water short areas, there is competition between different end users of water, within the same end user groups, and between present and future water users. Water allocation management must result in efficient water use and a reasonable security of supply for users that appropriately balances the number of people with access to water with a level of rationing that is acceptable to all users.

Freshwater Augmentation: In many areas of the District there is insufficient fresh water to meet all the demands placed on the resource and there may be opportunities for augmenting supplies in some areas.

Four objectives and 78 policies have been adopted in addressing the chapter issues, as shown in Table below.

Table 4: Scope of Evaluation

Chapter 30	Objective	Policies
30.1 Reduced Water Body Flows or Levels	30.1.2.1 & 30.1.2.2	30.1.3.1 – 30.1.3.23 30.1.3.25 - 30.1.3.42
30.2 Allocation of Fresh Water Between Competing Water Users	30.2.2	30.2.3.1 30.2.3.3 - 30.2.3.28
30.3 Freshwater Augmentation	30.3.2	30.3.3.1 – 30.3.3.5

Each issue topic has at least one or two objectives and from 5 to 41 related policies. The majority of the policies in the chapter apply to reduced water body flows or levels.

Regulatory methods adopted to implement the policies include:

- TRMP rules that: (a) establish minimum flow regimes, allocation limits, rationing triggers and rationing regimes; (b) control the taking, damming and diverting of water; (c) manage collection and storage of water, including reservation of water for specified uses.

In support, a number of non-regulatory methods are provided for:

- **Education and advocacy**, including identifying uses and values of water bodies, encouraging and supporting water user committees in water management zones, working with manawhenua iwi to identify and implement agreed opportunities for iwi to participate in water management, promoting the protection and restoration of wetlands, and providing information to help water users make sustainable decisions regarding the taking, storage and use of fresh water.
- **Works and services**, including planning for effective and integrated water supply and wastewater services, investigating options for providing for future community water supply needs (including options for water augmentation) and for reducing water use and increasing water use efficiency, and co-ordination of, and financial and technical support for, the Waimea Water Augmentation project.
- **Financial incentives**, including funding the preparation of wetland management plans for naturally occurring wetlands on private property, and consideration of funding for the establishment of new wetlands or enhancement of wetland values where there is public benefit.
- **Monitoring and investigation**, including: (a) continuing development and maintenance of the database identifying water bodies, their particular uses, values and significance; (b) in-stream uses and values of water bodies, the significance of and risks to such values, and methods for their protection or enhancement; (c) continued monitoring of the impact that increased use of allocated water may have on water body flows and levels and on users' security of supply, and (d) the necessity and opportunity for meeting water needs in respect of Treaty of Waitangi settlement lands.

The environmental outcomes sought from implementation of the chapter rules and methods are:

1. Abstractive use of water at a rate that avoids, remedies or mitigates adverse effects on in-stream uses and values of a water body.

2. Land uses that avoid, remedy or mitigate adverse effects on water yield or groundwater levels.
3. Allocation of water at a rate and in a manner that is equitable and reasonable.
4. Efficient use of allocated water.
5. Sufficient water to meet the needs of in-stream uses and values and the needs of abstractive water users.
6. Sustainable management of wetlands.

2.2 Timeframe of Evaluation

The evaluation was conducted from July 2019 to June 2020.

2.3 Summary of Methodology

Broadly, the methodology of this evaluation follows the Plan Outcomes Evaluation process. Plan Outcome Evaluation involves:

1. An examination of the outcomes being sought – what are the objectives trying to achieve?
2. Tracking how the plan has been designed to affect the outcomes – do the intentions in the objectives get carried through to the rules and methods? Are the provisions efficient?
3. Assessing if the provisions have been implemented – what evidence is there that the provisions are being applied to relevant activities?
4. Assessing relevant environmental trends and ‘on the ground’ data to conclude if the Plan has been successful in achieving its intentions. This includes consideration of the external factor influences such as legislative changes, national policy statements, case law, significant economic changes, demographics etc.

Throughout the evaluation, there is an emphasis on attributing the activities enabled or controlled by the TRMP to observed outcomes. However, attributing outcomes to the TRMP must always be viewed in the wider context of changes. These are noted where known, but it is beyond the scope of this evaluation to capture all of the changes and influences that affect outcomes in our communities and environment.

Limitations with the Plan Outcome Evaluation approach also arise where environmental outcome data is poor, or where there are multiple factors driving outcomes. Time, resourcing and quality of data also affects the comprehensiveness of the evaluation.

To address some of these limitations, the evaluation process has included a ‘rapid assessment’ technique. The technique draws on the combined knowledge and expertise of local TDC staff, residents, community leaders, and topic experts to create an understanding of plan implementation, efficiency and outcomes. The rapid assessment outputs are supplemented with:

- environmental data or expert reports where available
- Council data (e.g. water quality information, flow monitoring data, consenting and compliance database information, models, monitoring reports required by consent condition)
- mapping and imagery (e.g. GIS, aerial imagery, LiDAR)

- information or reports prepared during plan change processes (e.g. s.32 Reports, Issues and Options papers, technical reports, submissions, community meetings)

The data sources that have been used for evaluating Chapter 30 are shown in Table below:

Table 5: Information Sources Used in Evaluation

Data source/s	Details and Notes
Rapid Assessment	<ul style="list-style-type: none"> • Meeting with policy staff on 22nd November 2019 • Workshop with council staff on 13th December 2019 • Meeting with consent staff on 30th January 2020
Councillor input	<ul style="list-style-type: none"> • Workshop undertaken on the 8th July 2020
External reports	<ul style="list-style-type: none"> • Legal report for s35 review, Tasman Law, June 2019 • Iwi management plans • Close, M. & Humphries, B. 2019. <i>National Survey of Pesticides and Emerging Organic Contaminants (EOCs) in Groundwater 2018</i>. ESR report for regional councils • Humphries, B. & Close, M. 2014. <i>National Survey of Pesticides in Groundwater 2014</i>. • Ministry for the Environment. 2017. <i>A Guide to the National Policy Statement for Freshwater Management 2014 (as amended 2017)</i> • Ngāti Tama, Ngāti Rārua and Te Ātiawa. 2019. <i>Manawhenua Mātauranga Report For the Tākaka Catchments</i>.
Council reports	<ul style="list-style-type: none"> • TRMP Policy Mapping (Leusink-Sladen, 2019) • James, T. & McCallum, J. 2015. <i>State of the Environment Report: River Water Quality in Tasman District 2015</i>. • Leathwick, J. 2019. <i>Indigenous Biodiversity Rankings for the Tasman Region Report</i> • McCallum, J. & James, T. 2018. <i>The Health of Freshwater Fish Communities in Tasman District 2018</i> • Stevens, G. 2010. <i>State of the Environment Report Groundwater Quality In Tasman District</i> • Tākaka Freshwater and Land Advisory Group. 2019. <i>Recommendations Report for freshwater management in the Tākaka Freshwater Management Unit</i> • Tasman District Council. 2019. <i>Tasman Regional Policy Statement and Resource Management Plan biodiversity provisions in context of the upcoming plan reviews</i> • Stage 2 of TRPS Efficiency and Effectiveness Review: Statutory Obligations (Mason, 2019)
Council records (MagicBR/NCS/databases)	<ul style="list-style-type: none"> • MagiQ BI – Resource consents data

2.4 Summary of Consultation

The following consultation has been undertaken during the preparation of this evaluation.

2.4.1 Tasman District Councillors

A workshop with elected Councillors was held on 8th July 2020 discussing key issues and recommendations identified for this chapter and other related freshwater chapters.

No additional issues were raised by Councillors at this workshop. However Councillor feedback noted that for issues where there were environmental concerns, there is typically a community need driving the activity creating the concern, and that these drivers should also be identified. The report has been reviewed to reflect this feedback.

2.4.2 Tasman Environmental Policy Iwi Working Group

The iwi of Te Tau Ihu, as tāngata whenua, have a unique relationship with Tasman District Council. There are a number of legislative requirements which oblige us to engage more collaboratively with iwi and Māori - including provisions in the Resource Management Act, Local Government Act and Treaty of Waitangi settlement legislation. To support this a separate section 35 report with a focus on iwi/Māori provisions has been prepared. Please refer to that report for a record of consultation undertaken.

3. Effectiveness and Efficiency Evaluation

3.1 Context

The primary legislation affecting Chapter 30 is the Resource Management Act (RMA). The purpose of this Act is to promote the sustainable management of natural and physical resources (s5, RMA). The definition of natural and physical resources specifically includes water (s2). Moreover, one of the key requirements of sustainable management is safeguarding the life-supporting capacity of water (s5(2)(b)).

Several matters of national importance under the RMA (set out in s6), which all councils must 'recognise and provide for', relate directly to the issues addressed in the chapter:

- *s6(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development.*
- *s6(e) the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.*
- *s6(g) the protection of protected customary rights.*

In support, the council must 'have particular regard to' several relevant matters in s7 of the RMA:

- *s7(b) the efficient use and development of natural and physical resources.*
- *s7(d) intrinsic values of ecosystems.*
- *s7(f) maintenance and enhancement of the quality of the environment.*
- *s7(g) any finite characteristics of natural and physical resources.*
- *s7(h) the protection of the habitat of trout and salmon.*

- *s7(i) the effects of climate change:*

Section 30(1) sets out the functions of a regional council for the purpose of giving effect to the RMA and includes:

The control of the taking, use, damming, and diversion of water, and the control of the quantity, level, and flow of water in any water body, including—

- (i) the setting of any maximum or minimum levels or flows of water;*
- (ii) the control of the range, or rate of change, of levels or flows of water.*

3.1.1 Legislation Changes

RMA Amendment 2003: Indigenous Biodiversity

New s30(1)(c)(iia) added a function for regional councils to control the use of land for the purpose of: “the maintenance and enhancement of ecosystems in water bodies and coastal water”.

New s31(1)(ga) added a function for regional councils regarding “the establishment, implementation, and review of objectives, policies, and methods for maintaining indigenous biological diversity”.

Definition for biological diversity added: “the variability among living organisms, and the ecological complexes of which they are a part, including diversity within species, between species, and of ecosystems”.

A recent TDC report on biodiversity provides a stocktake of the TRMP provisions for biodiversity.¹ It concludes that TRMP umbrella provisions for biodiversity are no longer fit for purpose and need to be re-developed in response to the proposed changes in national context:

It is recommended that the TRMP is amended to provide for biodiversity as a core function in its own right with linking objectives and policies across the terrestrial, freshwater and coastal marine domains. More specifically:

- *The TRMP is restructured to comply with the National Planning Standards by including a distinct section or chapter on “ecosystems and indigenous biodiversity”.*
- *Systematic ‘connector’ biodiversity objectives or policies are inserted in other sections or chapters of the Plans that contain provisions relevant to biodiversity.*

3.1.2 National Directives

National Policy Statements (NPS) are instruments issued under the RMA. They state objectives and policies for matters of national significance, which the TRMP is required to ‘give effect to’ (i.e. implement).

National Environment Standards (NES) are regulations issued under the RMA. They prescribe standards for environmental matters, which must be enforced by councils, although in some circumstances councils can impose stricter or more lenient standards where specified by an NES.

¹ Tasman District Council. 2019. *Tasman Regional Policy Statement and Resource Management Plan biodiversity provisions in context of the upcoming plan reviews.*

National Policy Statement on Freshwater Management 2014 (amended 2017) and the Proposed National Environmental Standard for Freshwater Management

The NPS-FM prioritises the health and well-being of water bodies as the ultimate goal in freshwater management ('Te Mana o Te Wai'). It recognises that the ability of water to provide for human needs (health, economic development) is dependent upon it being healthy. This requires consideration of water quality, water flows/levels and habitat elements.

The NPS-FM requires TDC to manage freshwater through identified 'freshwater management units' (these will be based on groupings² of current Water Management Zones in the TRMP) and establish freshwater objectives and set water quantity and quality limits for all freshwater management units in the District. In doing so, the Council must have regard to (amongst other relevant matters): the reasonably foreseeable impacts of climate change; the connection between water bodies; and the connections between freshwater bodies and coastal water. Methods (including rules) to avoid over-allocation (of both quantity and quality) must be established to ensure the objectives are achieved.

The NPS-FM also seeks to improve integrated management of fresh water and the use and development of land in whole catchments, including the interactions between fresh water, land, associated ecosystems and the coastal environment. Every regional council is required to recognise the interactions between fresh water, land, associated ecosystems and the coastal environment ki uta ki tai (from the mountains to the sea). The NPS-FM also directs regional councils to manage fresh water and land use development in whole catchments in an integrated way.

The NPS-FM 2014 (updated 2017) requires provisions in the TRMP that:³

- 'Consider and recognise'⁴ Te Mana o Te Wai, including the connection between the health of water, the broader environment, and people.
- Engage with iwi and hapū and the wider community to consider and recognise Te Mana o te Wai in decision making for freshwater.
- Safeguard fresh water's life-supporting capacity, ecosystem processes and indigenous species, and protect the significant values of wetlands and outstanding freshwater bodies.
- Safeguard the health of people who come into contact with the water and improve water quality so it is suitable for primary contact more often.
- Establish freshwater management units (FMU) covering all waterbodies in the District; establish freshwater objectives and set freshwater quantity and quality limits for all FMUs, and maintain or improve the overall quality of fresh water within a FMU.
- Follow a specific process (the national objectives framework) for identifying the values that tangata whenua and communities have for water.
- Set limits on resource use (e.g. how much water can be taken or how much of a contaminant can be discharged) to meet limits over time and ensure they continue to be met.

² These groupings have also been referred to as Water Management Areas, however this term also has a specific meaning in the TRMP for application of discharge rules in the Motueka-Riuwaka and Waimea areas.

³ For the full text of the NPS-FM see <https://www.mfe.govt.nz/publications/fresh-water/national-policy-statement-freshwater-management-2014-amended-2017>

⁴ This may be elevated to 'give effect to' in the revised NPS-FM in 2020.

- Establish and operate a freshwater accounting system to improve information on freshwater takes and sources of freshwater contaminants.

Proposed 2020 amendments to the NPS-FM are likely to strengthen requirements further, with policies that require freshwater management to give effect to Te Mana O Te Wai.

NZ Coastal Policy Statement 2010 (NZCPS)

The NZCPS sets out general objectives and policies for the sustainable management of New Zealand’s coastal environment, which the TRMP is required to give effect to (i.e. implement). The TRMP was notified prior to the current NZCPS and for that reason only partially gives effect to its objectives and policies.

There are a number of issues relating to the interface between salt and freshwater that are relevant to Chapter 30, including seawater intrusion into aquifers as a result of over-extraction and/or the effects of sea level rise, and effects on river flows from abstraction and the downstream impacts this can have on estuary health and coastal water uses. With these issues in mind, relevant objectives and policies in the NZCPS 2010 that must be given effect to are shown in Table 6 below:⁵

Table 6: NZCPS Provisions Relevant to Chapter 30

NZCPS Objectives	
1.	To safeguard the integrity, form, functioning and resilience of the coastal environment and sustain its ecosystems, including marine and intertidal areas, estuaries, dunes and land, including maintaining and enhancing coastal water quality.
2.	To preserve the natural character of the coastal environment through recognising the characteristics and qualities that contribute to natural character.
3.	To take account of the principles of the Treaty of Waitangi, recognise the role of tangata whenua as kaitiaki and provide for tangata whenua involvement in management of the coastal environment.
NZCPS Policies	
1.	<i>Extent and Characteristics of the Coastal Environment</i> , which recognises the extent and characteristics of the coastal environment vary and the issues that arise can have different effects in different localities.
2.	<i>The Treaty of Waitangi, tangata whenua and Māori heritage</i> , in taking account of the principles of the Treaty of Waitangi (Te Tiriti o Waitangi), and kaitiakitanga, in relation to the coastal environment.
4.	<i>Integration</i> , which requires integrated management of activities and their effects across the line of mean high water springs (i.e. between land and the coastal marine area).
15.	<i>Preservation of Natural Character</i> , which requires avoiding adverse effects of activities on the natural character of the coast.

National Environmental Standard for Plantation Forestry 2018⁶

The Plantation Forestry NES (NES-PF) came into effect on 1 May 2018. Its objectives are to: 1) maintain or improve the environmental outcomes associated with plantation forestry activities

⁵ NZCPS provisions are paraphrased here; for the full text see <https://www.doc.govt.nz/globalassets/documents/conservation/marine-and-coastal/coastal-management/nz-coastal-policy-statement-2010.pdf>

⁶ For further details see MfE & MPI (2017). *National Environmental Standards for Plantation Forestry: Overview of the Regulations*; <https://www.mfe.govt.nz/publications/rma/national-environmental-standards-plantation-forestry->

nationally; and 2) increase certainty and efficiency in the management of plantation forestry activities.

The regulations apply to any forest larger than one hectare that has been planted specifically for commercial purposes and harvest. They cover eight core plantation forestry activities (afforestation; selective felling; earthworks; river crossings; forestry quarrying; harvesting; mechanical land preparation; replanting), allowing these to be carried out as permitted activities, subject to conditions to manage potential effects on the environment.

Most forestry activities are permitted by the NES-PF as long as forestry companies meet specific conditions to prevent significant adverse environmental effects. If the permitted activity conditions cannot be met an application for resource consent to undertake the activity is required.

The NES-PF generally takes precedence over rules in regional and district plans. However, Regulation 6 of the NES-PF allows more stringent plan rules to prevail over the NES-PF in certain circumstances. These circumstances are limited to when plan rules:

- (a) Give effect to an objective developed to give effect to the National Policy Statement for Freshwater Management (NPSFM) and any of policies 11 [indigenous biodiversity], 13 [natural character], 15 [natural features and landscapes], and 22 [sediment] of the New Zealand Coastal Policy Statement 2010 (NZCPS);
- (b) Recognise and provide the protection of outstanding natural landscapes and features and significant natural areas and matters of national importance under section 6(b) and 6(c) of the RMA; and
- (c) Manage specific unique and sensitive environments identified in a regional policy statement, regional plan, or district plan (geothermal areas, karst geology, and areas with separation point granite soils) and certain protect sources of human drinking water supply.

3.1.3 Water Conservation Orders

Water conservation orders (WCOs) may be applied over any waterbody, including aquifers. A water conservation order may provide for protection of the habitat of terrestrial and aquatic organisms, scientific and ecological values, natural characteristics of that water body or recreational, historical and cultural purposes (among other things).

A WCO can prohibit or restrict a regional council issuing new water and discharge permits, although it cannot affect existing permits or land uses directly. Regional policy statements, regional plans and district plans cannot be inconsistent with the provisions of a WCO.

There are two WCOs in Tasman District and the outstanding wild and scenic characteristics of both of these water bodies are recognised in the WCOs:

- Buller River⁷ and listed tributaries.
- Motueka River⁸ and listed tributaries.

[overview-of-regulations](#); and MPI (2018). *Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017: User Guide*; <https://www.mpi.govt.nz/growing-and-harvesting/forestry/national-environmental-standards-for-plantation-forestry/nes-pf-guidance/>

⁷ Water Conservation (Buller River) Order 2001, <http://www.legislation.govt.nz/regulation/public>

⁸ Water Conservation (Motueka River) Order 2004, *ibid*.

A third WCO is in progress for Te Waikoropupu Springs and the Arthur Marble Aquifer⁹

3.1.4 Treaty Settlement Legislation

Four pieces of Treaty settlement legislation relate to the nine iwi within Tasman District:

- Ngāti Kōata, Ngāti Rārua, Ngāti Tama ki Te Tau Ihu, and Te Ātiawa o Te Waka-a-Māui Claims Settlement Act 2014
- Ngāti Apa ki te Rā Tō, Ngāti Kuia, and Rangitāne o Wairau Claims Settlement Act 2014
- Ngati Toa Rangatira Claims Settlement Act 2014
- Ngāi Tahu Claims Settlement Act 1998

Treaty settlement legislation includes statutory acknowledgements by the Crown of statements of association by relevant iwi of their particular cultural, spiritual, historical and traditional associations with statutory areas; statements of coastal values made by relevant iwi and their particular values relating to coastal statutory areas; and Deeds of Recognition which acknowledge sites with which iwi have a special relationship (for example, Ngati Tama's relationship with Waikoropupū Springs).

The statutory acknowledgement associations include reference to iwi beliefs around water and its valued place in the Māori world view, historic relationships with specific areas in Tasman (e.g. ara/ancient trails, urupa, kainga, mahinga kai, mahinga harakeke and cultivation sites) and treasured fish, bird and plant species that were important to their tūpuna (ancestors).

3.1.5 Relevant Plan Changes

The TRMP has had a constant programme of rolling reviews (variations and plan changes) since it was first notified. The changes have been introduced to address unintended outcomes, new issues, new priorities and legislative requirements. The plan changes relevant to this topic are outlined in the table below.

Where a plan change has been recently introduced (i.e. <3 years) its impact will be difficult to determine with any accuracy as:

- there may have been limited uptake of the plan provisions (i.e. not many activities undertaken that trigger the new rule set) and/or
- the impact of existing use rights and previously consented activities continue
- the impacts may not be highly visible until there is a cumulative uptake of the provision (e.g. water permit renewals to include new provisions).

For those reasons, the implementation of plan changes less than 3 years old (from operative date) have not been fully assessed for effectiveness or efficiency.

The Variations and Plan Changes in Table 7 below have been made as part of the Council's on-going programme of water resource investigations and monitoring that continually improves the level of knowledge about water resources and the pattern of use of water.

⁹ Currently in an Environment Court inquiry process

Table 7: Plan Changes Relating to Chapter 30

Plan Change or Variation	Description of change and key matters
<p>Variations 15 – 18: Part 5 ‘Water’ Inclusion in TRMP</p> <p>Notified 3 Nov 2001; Operative 26 Feb 2011</p>	<p>Variation 15 added Part 5 to the TRMP and Variations 16 to 18 made consequential amendments to Part 1, Part 2 and Part 6 respectively, required as a consequence.</p> <p>Variation 15 specified the management objectives for the quantity of water in water bodies, and states policies and methods to achieve them. Performance standards for some water taking, damming and diversion activities are specified and consent requirements made clear.</p> <p>Variation 15 superseded a range of transitional regional rules carried over from the former Nelson-Marlborough Regional Council and the former West Coast Regional Council. It also eventually replaced two regional plans and a number of informal water management plans.</p>
<p>Variation 19: Water Storage Amendments to V17</p> <p>Notified 4 May 2002; Operative 26 Feb 2011</p>	<p>Variation 19 amended the water storage provisions that were introduced by Variation 17. Those provisions did not account for the situation in some serviced Rural and Rural Residential zoned (e.g. parts of serviced Rural Residential Zones at Mapua-Ruby Bay; and Rural 1 Zone at Hope) where a high pressure urban water supply fitted with fire hydrants serves dwellings. In these locations, it is sufficient to allow the high pressure water supply to provide for water needs for firefighting and for potable water, and not require on-site water storage. Three TRMP rules in Chapter 17 were amended accordingly.</p>
<p>Variation 36: Wai-iti Dam</p> <p>Notified 24 April 2004; Operative 26 Feb 2011</p>	<p>The TRMP provisions included in the Plan as part of Variation 15 managed the allocation of water from the Wai-iti Water Management Zone. Subsequently, the Council decided to construct the Wai-iti Community Water Augmentation Scheme, which would impound water in the upper Wai-iti catchment by a dam, and release it into the Wai-iti River in summer. Variation 36 amended the TRMP provisions to enable implementation of the scheme and also achieve water management objectives.</p> <p>Variation 36 establishes the Wai-iti Dam Service Zone within which augmented flows result from the Scheme. It envisages that irrigators in the service area will be able to move points of take closer to the river or take directly from the river to improve access to water if necessary. The Wai-iti Dam Service Zone is shown on the Planning Maps and forms a new water management zone which is subject to the amended Plan provisions.</p>
<p>Variation 52: Waimea Water Management (Interim)</p> <p>Notified 13 Jan 2007; Operative 26 Feb 2011</p>	<p>This Variation amended the TRMP by including a provisional management regime for the Waimea water management zones following several droughts. The river flow, groundwater level and coastal well salinity information collected during the droughts led to concerns about the accuracy of the groundwater model that was used to set the TRMP allocation limits for the Waimea Plains zones (introduced via Variation 15). It became evident that there is much less water available for abstraction in the Waimea Plains system than previously understood. The findings had significant implications for:</p> <ul style="list-style-type: none"> • TRMP allocation limits for some zones; • security of supply for water users; • the maintenance of minimum river and spring flows for in-stream values; and • coastal seawater intrusion risk. <p>As a consequence, Variation 52 set out proposed planning provisions that are interim solutions for water management. They include two new policies and amendments to rules in Chapters 30 & 31 to avoid further over-allocation of water in the Waimea water management zones, to reduce allocation wherever possible, to mitigate adverse effects of droughts on in-stream values and water users by</p>

Plan Change or Variation	Description of change and key matters
	adopting a drought management regime (including involvement by a Dry Weather Task Force), and to support development of a water augmentation scheme.
<p>Variation 65: Waiting Lists for Water Allocation, Site-to-Site Transfer of Water Permits, Moutere Water Management</p> <p>Notified 26 July 2008; Operative 2 Aug 2014</p>	<p><i>Moutere Groundwater Resources</i></p> <p>Based on new data, Variation 65 amended the Moutere water management regime to introduce three separate water management zones for the Eastern Groundwater Zone, an overall increase in the amount of water available for allocation, with different rationing triggers within each of the zones. The new zones and controls were developed taking into account the controls on further plantation forestry in the Groundwater Recharge Protection and Surface Water Protection areas.</p> <p><i>Waiting List Reservation Provisions</i></p> <p>The increased allocation limit above has implications for people on waiting lists for water. Variation 65 amended the waiting list and reservation policies to preserve the integrity of the waiting list and to protect potential future water users in a transparent and equitable manner. It also amended reservations of water for irrigation of Māori Perpetual Lease Land (MPLL) to give first priority to reservation of water for irrigation of MPLL (in accordance with an Environment Court Order).</p> <p><i>New Bore Provisions</i></p> <p>Variation 65 also considered the cumulative effects of increasing rates of residential development in the Moutere Water Management Zones. It addressed the need for robust rules controlling setbacks between bores.</p> <p><i>Site-to-Site Transfers of Water Takes</i></p> <p>Variation 65 provided a clear process for site-to-site transfer of water take permits that are made for a limited time period, by:</p> <ul style="list-style-type: none"> • Protecting existing water permit holders' access to water beyond the term for which the temporary transfer applies. • Ensuring that the temporarily transferred portion of the water permit does not gain unintended rights to renewal. • Introducing policies that support the transfer management regime.
<p>Variation 66 / Plan Change 13: Water Allocation Review (Motueka Central Plains & Middle Motueka Zones, including Dove and Abel Tasman Zones & Community Water Supplies</p> <p>Notified 13 Dec 2008; Operative 2 Aug 2014</p>	<p><i>Motueka Water Resources</i></p> <p>Council investigation into the nature of groundwater resources in the Central Plains Zone has shown that the amount of water that can be sustainably extracted can be significantly increased. The increased allocation introduced by Variation 66 is restricted to a new Central Plains (Te Matu) Subzone.</p> <p><i>Drawdown Effects of New Water Takes</i></p> <p>An amendment was also made to allow domestic bores to be constructed at closer spacings. This allows sufficient protection for domestic bores and also allows for replacement bores to be constructed if an existing bore is inadequate.</p> <p><i>Reservations</i></p> <p>The Variation has amended the quantities reserved for specified purposes (e.g. irrigation of MPLL and for future community water supply) to reflect likely future demand more accurately, and to take into account changes in land ownership and residential development since the TRMP was first notified.</p> <p><i>Allocation Limits</i></p> <p>Allocation limits have been introduced for the Dove and Stanley Brook catchments to reflect the summer dry nature of the catchments, and new water meter requirements introduced. Allocation limits have also been set for smaller coastal catchments near the Abel Tasman National Park to help manage reservation of water for potential future water needs.</p>

Plan Change or Variation	Description of change and key matters
	<p>Frost Protection</p> <p>Variation 66 took account of changes in the pattern of water use as a result of an increasing amount of water being taken for frost protection in Spring and Autumn. The Variation amended the TRMP to take account for this water use and a minimum winter flow was set for the Riuwaka River.</p>
<p>Plan Change 35 & 36: Water Metering</p> <p>Notified 31 Mar 2012; Operative 27 Apr 2013</p>	<p>Plan Change 36 amended Part 5 'Water' to implement new Resource Management (Measurement and Reporting of Water Takes) Regulations 2010. The Council has progressively required water metering throughout the district to manage the allocation and taking of water. Water meter data is used to gather information about water use, and ensure compliance with water permits. Water meter data also provides information to describe the nature and extent of water resources and help develop and enhance models (groundwater/surface water) that inform effective water management decision-making.</p> <p>The Plan Change aligned the regulations and the TRMP provisions in respect of:</p> <ul style="list-style-type: none"> • Metering requirements for takes less than 5 litres per second; • Metering requirements of takes from dam impoundments and storage reservoirs; • Specification of rates of taking in litres per second; • Timelines for compliance; • Water meter specifications, including verification requirements and electronic recording of data; and • Reporting information. <p>Plan Change 35 introduced consequential amendments to Part 1 'Introduction', including amended definitions for 'water meter' and 'storage', and a new definition for 'weir'.</p>
<p>Plan Changes 45 – 48: Waimea Water Management and Augmentation (Lee Dam), Including District Provision for Infrastructure and Water Management</p> <p>Notified 27 April 2013; Operative 19 Sep 2015</p>	<p>These Plan Changes updated general and specific water management provisions in the TRMP for the Waimea Water Management Zones, which were found to have over-allocated water in the zones. Accordingly, Plan Changes 45 - 48 provided for:</p> <ul style="list-style-type: none"> • The water management regime for Waimea Plains water management zones in the event the Lee Valley Dam (aka Waimea Community Dam) goes ahead. • The water management regime for Waimea Plains water management zones in the event that there is no augmentation by a community dam. • The augmentation scheme (i.e. the Waimea Community Dam) identified as the best option to meet abstractive water demand and in-stream values and uses in the Waimea Plains. • The management of water quality as a result of intensive land use resulting through irrigation, especially in the Waimea Plains. <p>The amendments included a new Chapter 15 dealing with infrastructure, focused on the Waimea Community Dam. The Plan Changes consecutively amended TRMP Part 1 'Introduction' (PC45), Part 2 'Land' (PC46), Part 5 'Water' (PC47), and Part 6 'Discharges' (PC48).</p> <p>Plan Change 47 (Changes to Part 5: Water)</p> <ol style="list-style-type: none"> 1. New policies in Part 5 (Water) that reflect Council's preference for the construction of a dam on the Lee River as a solution to existing water demand challenges and to meet likely future water demand. 2. Replacement of the interim water management provisions for the Waimea water management zones with: <ul style="list-style-type: none"> (i) New policy and rules to support the construction and operation of the dam, and the allocation and management of water as a result of improved water flows in the Waimea River and associated aquifers; and

Plan Change or Variation	Description of change and key matters
	<p>(ii) New policy and rules to establish ground and surface water flow limits and levels and water allocation and management regimes in the event the dam is not constructed; and</p> <p>(iii) Transitional water management provisions which will apply until the proposed dam is operational.</p> <p>3. Amendments to existing water take policies that provide for common expiry dates and permit durations and damming.</p>
<p>Plan Changes 54 – 56: Waimea Water Management (Amended Security of Supply Provisions)</p> <p>Notified 19 Sept 2015; Operative 24 Sep 2016</p>	<p>These Plan Changes amended the water allocation policies and rules applying to abstraction of water in the Waimea water management zones affected by flows from the proposed Waimea Community Dam. The funding and water management regime previously proposed (in PCs 45-48) was not accepted by the community and an alternative regime has been developed to more accurately assign the costs and benefits of water augmentation to water users and the Tasman community.</p> <p>A two tier water allocation regime has been developed in these Changes. It allows for water permits with high security of supply linked to release of water from the Waimea Community Dam through a water supply agreement or other form of affiliation to the Dam, as well as permits with a very low security of supply where there is no affiliation with the Waimea Community Dam.</p> <p>Amendments to the TRMP therefore provide for:</p> <ul style="list-style-type: none"> • The water management regime for Waimea Plains water management zones to allow for two security of supply standards, depending on whether the permit holder has a water supply agreement or other agreement showing affiliation to the Waimea Community Dam. • Transitional water management regimes until commencement of the construction of the Dam, and the operation of the dam for both affiliated and non-affiliated permits. • Changing references from the ‘Lee Valley Community Dam’ to ‘Waimea Community Dam’.
<p>Plan Change 63: Waimea Water Transition Management</p> <p>Notified 24 Sep 2016; Operative 7 Apr 2018</p>	<p>This Plan change extended by two years the dates that govern water allocation restrictions through transitional periods over the next several years, both whether there is a Waimea Community Dam (WCD) or not, and for those permits affiliated to the Dam or not affiliated. This change had the benefit of allowing additional time for the funding for the Dam to be agreed, and for water supply agreements to be made with those applicants to hold affiliated water permits upon renewal.</p>
<p>Plan Change 67: Waimea Water Management Technical Amendments</p> <p>Notified 14 July 2018; Operative 15 June 2019</p>	<p>The purposes of Plan Change 67 were to:</p> <ol style="list-style-type: none"> 1. Correct technical errors, update provisions where more current information allows this; and 2. Clarify the effect of unclear provisions, and mitigate decision risks concerning the fate of the Waimea community Dam in relation to granting of renewal permits and exercise of Council’s community water supply permits. <p>The Plan Change amended Part 5 ‘Water’, Chapters 30 & 31, as follows:</p> <ol style="list-style-type: none"> 1. Amend Policy 30.2.3.13(b) to extend the scope of lands able to be serviced for community water supplies under adverse Dam outcomes, and to clarify assessment matters to give effect to the policy in relation to community water supply consents. 2. Update Figure 31.1D and the Soils Area Special Map 236 to reflect new soils information and the applicable rates of application for the soil series.

Plan Change or Variation	Description of change and key matters
	<ol style="list-style-type: none"> 3. Amend the extent of the Redwood and Golden Hills zones under two of the WCD scenarios on the planning maps, and consequentially amend the allocation limits applicable to these zones. 4. Make technical amendments to displays of the rationing steps and trigger flows for the Waimea Plains zones under the three WCD scenarios in the tables of Schedule 31C to clarify their intended effect. 5. Amend the WCD transition date stamps (as amended by Change 63 above) by extending forward by 12 months all date stamps.

3.1.6 Relevant Case Law

Information in this section has come from a TDC commissioned report: Tasman Law (June 2019). *Legal Report for Section 35 TRMP Review*.

Ngāti Tama ki Te Waipounamu Trust v Tasman District Council [2018] NZHC 2166 (Cooke J)

Granted a strike out application by the TDC as the issue (a challenge by Ngāti Tama to resource consent extension (under s125) granted by the TDC to the applicant, Kahurangi Virgin Waters Ltd (KVW)) was no longer “live” because the consent and extensions had now lapsed. The case is important because Justice Cooke made comments regarding the significant changes in the iwi planning context since the water bottling consent was first granted. In particular, Ngāti Tama’s interests had now been formally recognised in the Treaty settlement process and there is formal recognition of the significant importance of resources to Ngāti Tama, including Waikoropupu Springs. Justice Cooke noted that the objective of involving iwi in water management decisions may now be seen as being compromised by the consented activity, and that he was surprised this had not been addressed the TDC.

Ngāti Tama ki Te Waipounamu Trust v Tasman District Council [2017] NZHC 1081 (Thomas J)

Court granted an application by Ngāti Tama for judicial review of the TDC decision granting an Extension Application to KVW for its water bottling consent. Thomas J set the decision aside and required that the Extension Application be reconsidered by TDC. This was on the basis that the TDC was required to take into account the matters listed in s 125(1A)(b)(i), (ii) and (iii). Although (i) was a particular concern (whether substantial progress had been made toward implementing the consent) Thomas J also considered that (ii) applied in terms of whether the applicant had obtained approval from persons who might be adversely affected by the granting of an extension. He noted that the Ngāti Koata, Ngāti Rārua, Ngāti i Tama ki Te Tau Ihu and Te Atiawa o Te Waka a Māui Claims Settlement Act 2014 settles historical claims and includes Takaka River and its tributaries as a statutory area, including Te Waikoropupu Springs. His Honour noted that there are specific provisions in that Settlement Act that are required to be taken into account by TDC.

Wakatu Inc v Tasman District Council [2014] NZEnvC69; [2012] NZEnvC 75 (Newhook J)

This decision addressed two appeals by Wakatu and tangata whenua of TDC decisions granting consent to the TDC’s engineering dept to take groundwater from an aquifer connected to the Motueka River to provide for the Motueka Coastal Community Water Scheme and Plan Change 24 (taking, using, damming and diverting of water) which had the effect of bringing the water abstraction under the water scheme within the limits of a controlled activity. The appellants’ case

was that the proposal to use water outside the catchment would have significant impacts on the mauri of the water and relationship of tangata whenua with their taonga. The effects were characterised as spiritual or metaphysical rather than physical.

The Court considered ss 6(e), 7(a) and 8 RMA “strong directions to be borne in mind at every stage of the planning process” and relevant case law. In looking at the TRMP changes the Court noted that it had not yet been revised to ensure it gave effect to the NPS-FM, so the Court gave separate consideration to that. Acknowledging the historical context against which the application was viewed and the fact that the TDC’s initial attempts to consult with iwi had fallen short, the Court considered there should be provision for tangata whenua to be involved in the administering and monitoring of the water scheme. Overall, the Court concluded that any spiritual effects of the proposal could be rendered insignificant by appropriate conditions of consent and consent was granted. The Court concluded that the appropriate activity status for the water takes should be restricted discretionary.

3.1.7 Relevant Iwi Management Plan Provisions

The RMA (s66(2A)) and NZCPS 2010 (Policy 2) require TDC to “take into account” any relevant iwi planning document recognised by the appropriate iwi authority (or hapū under the NZCPS) and lodged with the council, to the extent that its content has a bearing on resource management issues in the district.

Three Iwi Management Plans (IMPs) have been lodged with TDC by Iwi having interests in the Tasman District:¹⁰

1. Ngati Koata No Rangitoto Ki Te Tonga Trust Iwi Management Plan (2002)
2. Te Rūnanga O Ngāti Kuia, Pakohe Management Plan (2015)
3. Ngāti Tama ki Te Waipounamu Trust Environmental Management Plan (2018)

Two other IMPs prepared by Iwi with an interest in Tasman have been lodged with Nelson City Council:¹¹

4. Nga Taonga Tuku Iho Ki Whakatu Management Plan (2004)
5. Te Ātiawa Ki Te Tau Ihu Iwi Environmental Management Plan (2014)

Relevant provisions in the IMPs will need to be taken into account when the TRMP is updated following the present review. Examples of IMP provisions relating to Chapter 27 matters are shown in Appendix 1.

¹⁰ <https://www.tasman.govt.nz/my-region/iwi/iwi-management-plans/>

¹¹ <http://www.nelson.govt.nz/council/plans-strategies-policies/strategies-plans-policies-reports-and-studies-a-z/iwi-management-plans>

3.1.8 Other Factors

Natural Influences on Freshwater in Tasman¹²

The influence of land cover

Tasman District is fortunate to have relatively few water quality issues compared to other parts of New Zealand. This is assisted due to the District's large rivers having a significant proportion of native forest in their headwaters. Therefore, any inputs of pollutants from developed land in the middle and lower reaches are substantially diluted by the large volume of high quality water from upstream.

Almost two-thirds of the district is protected in conservation estate. Indigenous forest is the main land cover in the region (60%), while pasture (17%) and exotic forest (9%) are also important.

The influence of climate

Over 90% of Tasman's rivers drain areas that can be considered 'cool' (mean annual temp <12 °C) and 'wet' (annual precipitation >500 mm) (Snelder et al. 2004b). Small coastal streams between Richmond and Motueka are the only waterways in the district influenced by a 'warm dry' climate (2.5% of all streams). Moutere Hill country streams are described as being 'cool and dry' (about 3% of all streams), while several small coastal streams in Golden Bay are influenced by a 'warm wet' climate (3% of all streams).

The influence of 'source of flow'

Just over half the streams in the district have their source of flow in hill country, a quarter of the streams are fed by mountainous areas (>1000 m in altitude), and most of the remainder (24%) are lowland-fed, with a few spring-fed streams. Hill-fed streams in the Moutere area tend to have intermittent or ephemeral flow. Flood peaks on the Buller (Kawatiri) River from Lake Rotoiti to Murchison are much more subdued than most rivers in the district, due to its lake-fed source of flow.

The influence of geology

Geology plays an important role in shaping aquatic communities, particularly in the upper Motueka catchment, where there are high concentrations of naturally occurring heavy metals such as iron, nickel and chromium in stream sediment.

Rivers draining marble geology of the Mt Arthur Range have substantial flow during low rainfall periods (due to water storage within the fractured marble) compared to Moutere Gravel hill country where a large proportion of streams dry up in summer. However, many of the deeper parts of Moutere streams where there is shade will continue to hold water through the summer.

¹² From p.13, James, T and McCallum, J 2015. *State of the Environment Report: River Water Quality in Tasman District 2015*. Prepared for Tasman District Council <https://www.tasman.govt.nz/my-region/environment/environmental-management/water/river-water-quality/water-quality/>

Catchments in Separation Point Granite geology (much of Abel Tasman through the Motueka Valley to Mt Murchison) are highly erodible and stream beds have a large component of mobile sand.

Economic and Population Drivers

In 2019, agriculture, forestry and fishing accounted for 13.7% of Tasman District’s GDP and 20.7% of filled jobs (see Figs 2 and 3). Other significant industries in the District’s economy include manufacturing (12.5% and 11.3% respectively), construction (7.9% and 9.4%), and retail trade (7% and 10.8%).

Table 8 shows that over the 11 year period from 2009 to 2019, retail trade contributed \$74m to the District’s economy. This was followed by agriculture, forestry and fishing (\$56m), property services (\$55m), construction (\$54m), and manufacturing (\$52m).

Given its importance in the local economy, it is not surprising that agriculture, horticulture and forestry activities occupy a comparatively large proportion of the District’s land area. These activities are also a major user of freshwater and can have impacts of stream and river health.

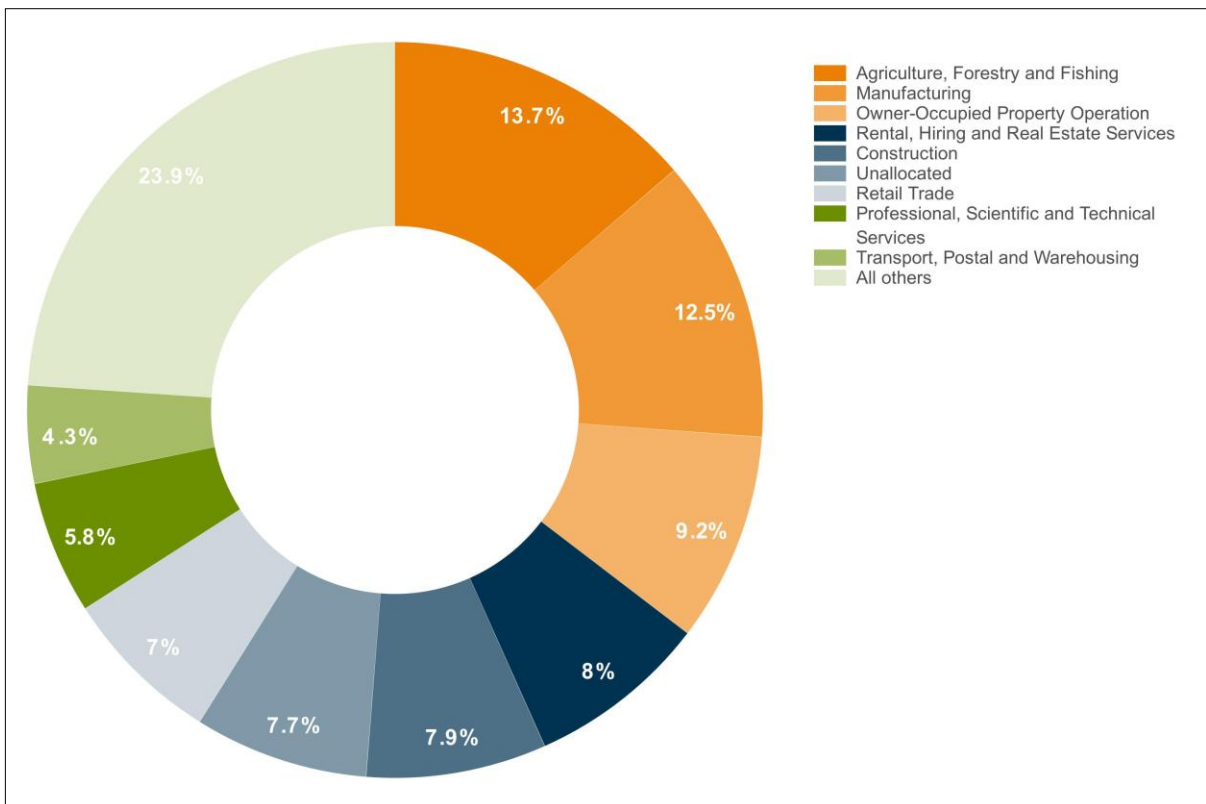


Figure 2: Proportion of GDP in Tasman District (by ANZSIC 1-digit industries), 2019¹³

¹³ <https://ecoprofile.infometrics.co.nz/Tasman%2bDistrict/Gdp>

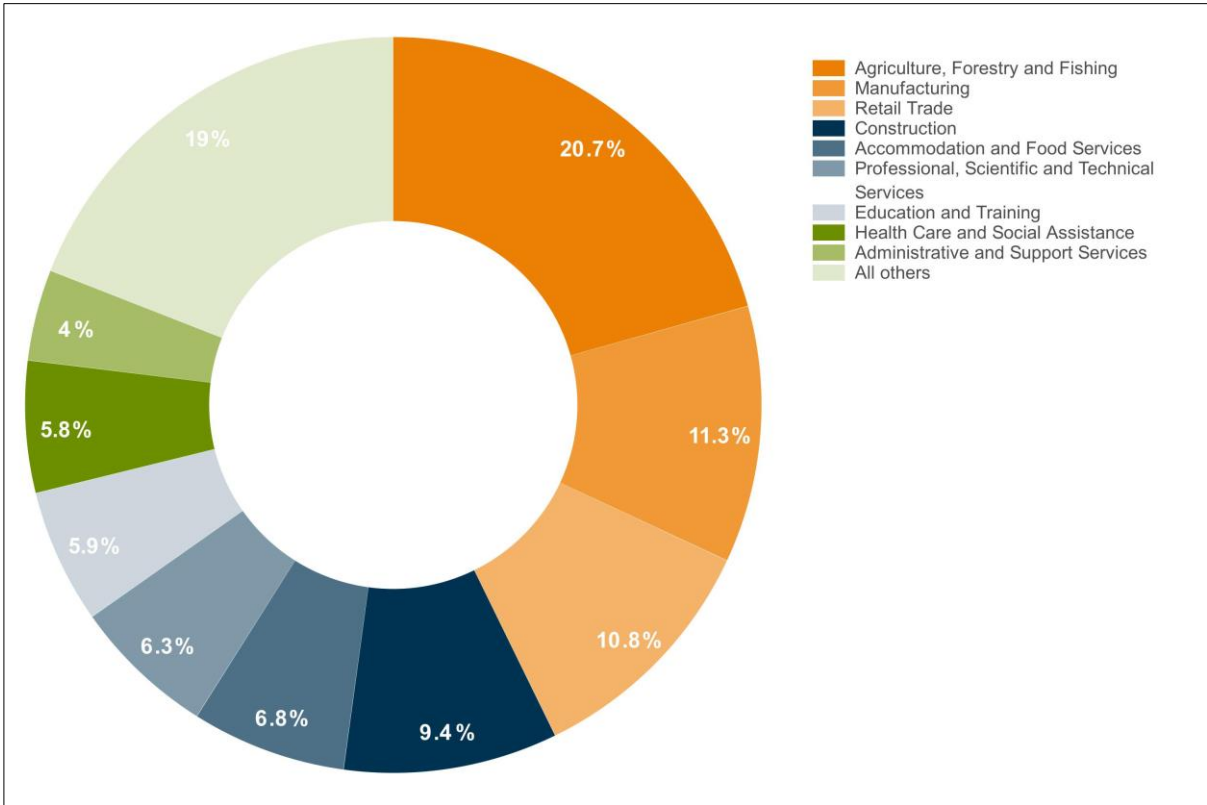


Figure 3: Proportion of filled jobs in Tasman District (by ANZSIC 1-digit industries), 2019¹⁴

Table 8: Biggest contributors to economic growth in the Tasman District, 2009-2019¹⁵

Retail Trade	\$74m
Agriculture, Forestry and Fishing	\$56m
Rental, Hiring and Real Estate Services	\$55m
Construction	\$54m
Manufacturing	\$52m
All other industries	\$362m
Total increase in GDP	\$654m

¹⁴ <https://ecoprofile.infometrics.co.nz/Tasman%2bDistrict/Employment>

¹⁵ <https://ecoprofile.infometrics.co.nz/Tasman%2bDistrict/Gdp>

Tasman District has experienced significant population growth over the past ten years, from an estimated 47,400 in 2010 to 54,800 in 2019 (see Fig 4).¹⁶ This represents an increase of 15% over that period. As a consequence, there has been considerable pressure for residential development, including infill, expansion of existing settlement boundaries, and rural residential living opportunities.

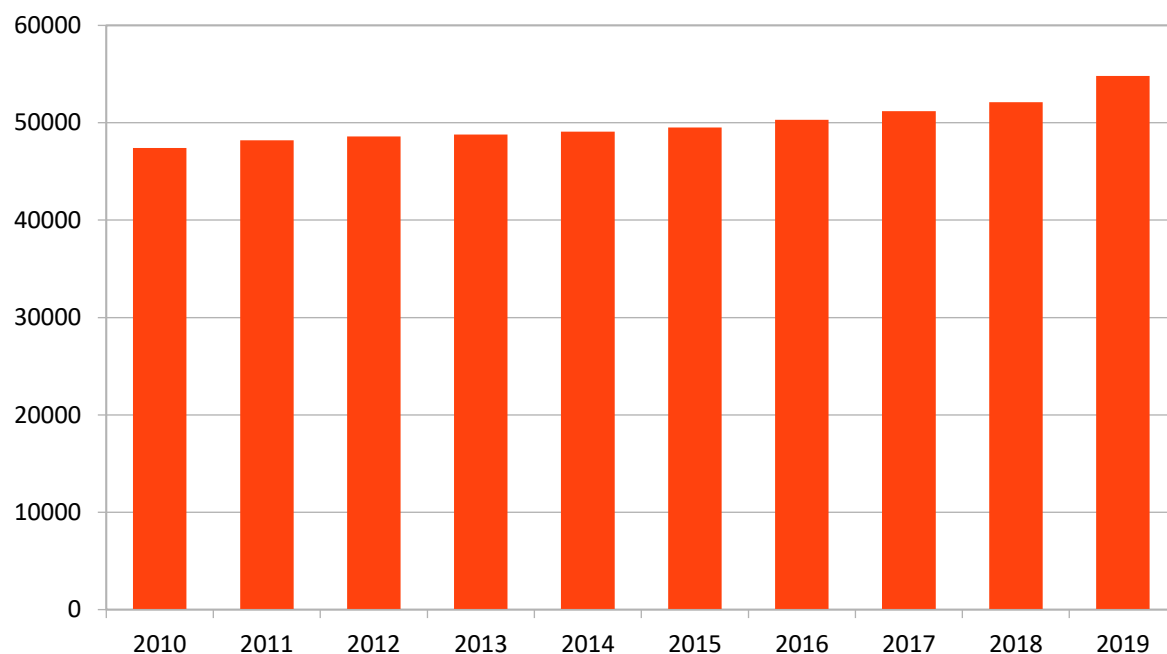


Figure 4: Estimated Population Growth in Tasman District (2010-2019)

3.2 Internal Consistency of Provisions

The internal consistency scores for Chapter 30 objectives are shown in 9 below.¹⁷ The chapter attempts to address a wide range of issues associated with the issue of water management. Water scarcity is the key driver behind many provisions and the central issue underpinning water augmentation provisions such as the Waimea Community Dam.

Table 9: Chapter 30 Summary of Internal Consistency

Objective	Internal Consistency	Comment
30.1.2.1 <i>The maintenance, restoration and enhancement, where</i>	Varied	This set is characterised by a large number of policies (42). They vary in complexity and specificity, but overall may be said to be highly detailed. Internal consistency across such an extensive policy set is (unsurprisingly) varied, however it is

¹⁶ Population data extracted on 17 Sep 2019 21:12 UTC (GMT) from NZ.Stat; 2019 data is from <https://ecoprofile.infometrics.co.nz/Tasman%2bDistrict/Population>.

¹⁷ Information in this section has come from a TDC commissioned report: Leusink Sladen, S. (Dec 2019). *Tasman Resource Management Plan Policy Mapping - Review of the Internal Consistency and Integrity of Plan Objectives, Policies and Rules Parts III – VI*.

<p><i>necessary, of water flows and levels in water bodies that are sufficient to:</i></p> <p><i>(a) preserve their life-supporting capacity (the mauri of the water);</i></p> <p><i>(b) protect their natural, intrinsic, cultural and spiritual values, including aquatic ecosystems, natural character, and fishery values, including eel, trout and salmon habitat, and recreational and wildlife values; and</i></p> <p><i>(c) maintain their ability to assimilate contaminants.</i></p> <p>30.1.2.2</p> <p><i>The maintenance, restoration and enhancement, where possible, of the quality and extent of wetlands in the District.</i></p>		<p>possible to specify issues or themes for which there is ‘strong’ connection to rules and to generalise about the more weakly addressed matters.</p> <p>Strongly implemented policies are those which address surface water flow minimums, allocation limits of the main known sources, and rationing e.g. Policies 30.1.3.2, 30.1.3.3, 30.1.3.5, 30.1.3.8, 30.1.3.9, 30.1.3.13, 30.1.3.20.</p> <p>Some policies are partly or wholly directed at Council itself in limit setting or management (with limited implementation possibility through rules), and examples include 30.1.3.6, 30.1.3.7, 30.1.3.11, 30.1.3.14, 30.1.3.20, 30.1.3.22.</p> <p>The set also contains a number of policies that direct towards information gathering, being monitoring and data-collection, enabling better management and decision-making. Examples include 30.1.3.27, 30.1.3.39, 30.1.3.40. Similarly, many policies have an advocacy directive such as 30.1.3.30, 30.1.3.36, 30.1.3.37, 30.1.3.40, indicating non-regulatory actions and functions of Council in relation to water management as a whole.</p> <p>Just a few policies appear to be weakly provided for, and these relate primarily to wetland management. No rules appear to clearly and unambiguously protect wetlands, and there is poor cross-over with land use sections of the Plan which might otherwise implement policies with land use rules controlling activities that effect wetlands.</p> <p>A couple of other observations include the high degree of overlap between policies and content, and lengthy, highly detailed policies (which read as consents assessment matters might), in providing extensive checklist of matters to consider and a high degree of detail and specificity.</p> <p>It’s interesting to note that while the first objective refers to the mauri of water, there are no further references in policies, although it is noted that the life supporting capacity of water is otherwise addressed. Similarly ‘iwi’ or ‘Māori’ interests are not mentioned in policies or rules, although noted in ‘methods’.</p>
<p>30.2.2</p> <p><i>To achieve equitable water allocation and efficient use of water by water users while ensuring an acceptable security of supply for water users</i></p>	<p>Strong</p>	<p>There are 28 policies within this objective group. They are concerned with fairness of supply to a range of users within limits and in providing a security of supply within those limits. This Chapter also houses much of the augmentation and Waimea Dam-related policies and is heavily detailed in this respect.</p> <p>Overall, the policies are well implemented through specific rules and rule sets, with most policies being strongly implemented by specific rules (where the policy-issue is narrow) or rule-sets and schedules where the matters are more broad or comprehensive. Priorities appear to be clear.</p> <p>As with Objective set 30.1, a number of policies are process related directing Council itself in matters of equitable allocation rather than through consents. Policies 30.2.3.8, 30.2.3.15, 30.2.3.18, 30.2.3.19</p> <p>30.2.3.20 are either information management related or directing Council to advocate and/or educate for certain water management outcomes.</p>

		It is notable that some policies are highly detailed and highly prescriptive, reading much like consent assessment matters or conditions, rather than setting a policy direction (e.g. 30.2.3.10).
30.3.2 <i>There is sufficient water to meet the needs of all water uses</i>	Strong	This policy set focusses on augmentation, promoting it and providing support for it. There are just 5 policies and overall they may be said to be well connected through to specific rules, or process focussed, appearing to be directed at Council 30.3.3.3 and/or advocacy focussed (30.3.3.5).

In strengthening the internal consistency of Chapter 30 provisions, the following actions are recommended:

- Consider breaking the 30.1 2-objective, 42-policy set down into more specific objectives with policy sets relating to the key water management issues (e.g. allocation, rationing, augmentation, efficiency, land use effects and water relationship, eco-system/habitat objectives), or location/catchment specific issues (e.g. Waimea, Moutere, Te Matu).
- Simplify policies, particularly where they provide more detail than rules.
- Review sets in relation to cross-resource management issues, particularly land use management practices affecting water resources, water use efficiency, wetland and groundwater management.
- Review objective and policy set in relation to iwi values, and how those values might be captured within the rules framework.
- Consider simplifying and rationalising the number of policies.

3.3 Evidence of Implementation

3.3.1 Approach to Freshwater Management in Chapter 30

The Council has set sustainable allocation limits for surface waters in the TRMP through minimum flow regimes and allocation limits (maximum allocatable volumes or flow rates). Council has also set limits for groundwater by establishing minimum water levels and associated pumping regimes, maximum allocatable volumes or yield rates, and minimum bore spacings. The allocation of water from interconnected water bodies is managed through water management zones, which may include both surface and groundwater bodies which have common policies and rules. Water management zones have rules that are specific to them and which will apply to all water users in that zone.

The TRMP also identifies triggers such as specific river flows, groundwater levels, or salt levels in groundwater that cause rationing to be imposed. Rationing is in a series of steps that progressively limits water permit holders from taking water if dry periods continue. Another mechanism used to maintain river flows is through rostering, where surface water users adjust the timing or rate of individual takes to reduce the instantaneous rate of take from a particular river.

The TRMP anticipates that the specified sustainable allocation limits will allow for continued use for abstractive needs while protecting and enhancing life-supporting capacity of water bodies and their ecosystems, and other identified uses and values of water.

Reserving Water for Public Use and Irrigation of Māori Perpetual Lease Land

The Council has identified significant future public needs for water for which reservation of water is justified. It aims to specifically reserve water within any sustainable allocation limit for future community needs and for the irrigation of MPLL because there are special circumstances that make it appropriate to do so. The Council also acknowledges that Crown lands will be returned to Māori as part of the settlement of claims under the Treaty of Waitangi Act 1975. The potential future water needs of these lands are not known with any certainty and will need to be addressed in the future when known.

The TRMP identifies a range of activities that may reduce the amount of water or alter several natural flow regimes and cause adverse effects on the uses and values of the water body (10). These activities may reduce surface water flows, lower groundwater levels, or reduce recharge rates.

Table 10: Activities and their Effects on Water Quantity and Flows

Activities	Adverse Effects
<ul style="list-style-type: none"> • Taking water from water bodies. • Changes in land use, particularly establishment of tall vegetation. • Reductions in bed levels by gravel extraction from riverbeds. • Dams for hydro-electric power generation or for water storage or water harvesting. • Diversion of water from a water body, which includes drainage of wetlands. • Infilling wetlands. 	<ul style="list-style-type: none"> • Adverse effects on the life-supporting capacity (the mauri) of the water or the mixing of waters from different water bodies. • Adverse effects on in-stream values such as aquatic ecosystems; natural character; eel, trout and salmon habitat; recreational, intrinsic and cultural values; and values of riparian margins. • Aquifer damage by seawater intrusion, compression, and excessive drawdowns. • Reduction in the capacity of a water body to assimilate contaminants; • Adverse effects on other abstractive users of water. • Adverse effects on the natural, cultural and intrinsic values of wetlands. • Adverse effects on sites of special spiritual, historical or cultural value to tangata whenua, including mahinga kai, wāhi tapu, and areas where pure water is used for ritual purposes. • Adverse effects on important values, including the mana of tangata whenua and the ability of tangata whenua to provide hospitality to visitors.

3.3.2 Resource Consent Data

The Chapter 30 objectives and policies are implemented via rules in Chapter 31 of the TRMP. These include a range of permitted, controlled, restricted discretionary, discretionary, non-complying and prohibited activities applying to:

- a) The taking, diversion and use of water;
- b) Diversion of water by structures;
- c) Damming of fresh water;
- d) Damming and diversion of floodwater;
- e) Diversion and take of water from wetlands, including the drainage of wetlands, and the diversion of water by infilling; and
- f) Site-to-site transfer of water takes and includes inshore coastal water.

In addition, Chapter 16 in Part 2 of the TRMP deals with the construction or alteration of bores throughout the District (section 16.12.2). The relevant rule sets from Chapters 31 and 16 are set out

in Appendix 2. The principal reasons for these rules are explained in the TRMP; for Chapter 31 at pp.31/33–40, and for Chapter 16 at p.16/190¹⁸.

Rules relating to the disturbance of the beds of rivers or lakes are covered under Chapters 27 and 28 in Part 4 of the TRMP. These chapters cover effects of gravel extraction, removal and planting of riparian vegetation, and the effects structures such as dams, hydro power stations, weirs, bridges and culverts. Similarly, Chapters 33 and 36 in Part 6 of the TRMP address the diversion of stormwater. Please refer to the Evaluation Reports for these chapters for further details.

Over the previous ten years (2010–2019) 1967 resource consent applications were received by TDC, as well as 161 applications to vary the conditions of existing consents, giving a total of 2128 applications under the relevant TRMP rule-sets.¹⁹

As Figure 5 shows, more than half of the consent applications (1087 or 55%) related to the taking of groundwater. There were also an additional 87 applications to vary the consent conditions for existing groundwater takes. The majority of applications intended to use the water for irrigation. Other uses included frost protection, pumping groundwater from trenches (‘dewatering’) associated with land development and subdivision, e.g. for the installation of wastewater and stormwater pipes, and a range of domestic, commercial and industrial uses.

Eighteen percent of applications (352) were received for the construction or alteration of a bore. The bores were needed for a range of purposes, including commercial, industrial, domestic, agricultural and horticultural uses (irrigation, stock, frost protection), groundwater monitoring, and geotechnical investigations.

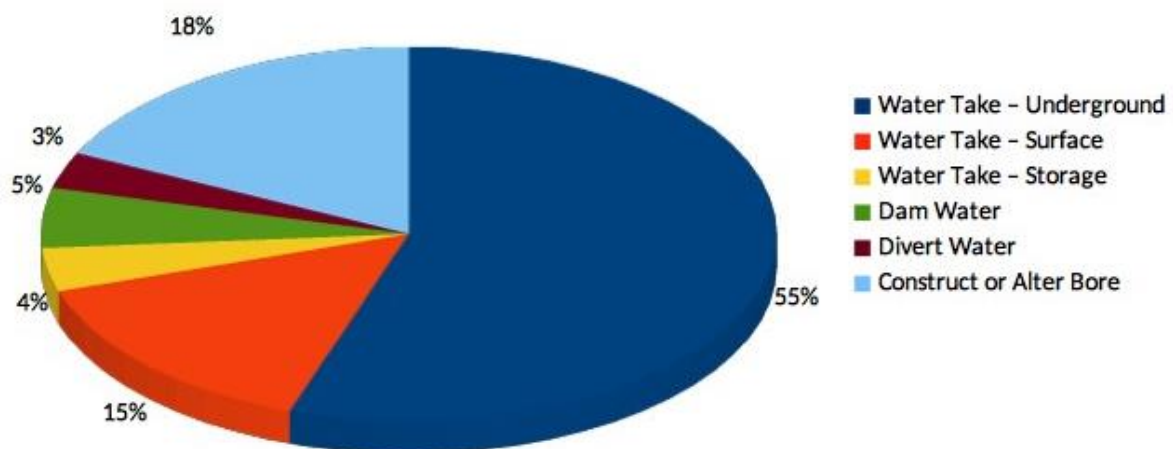


Figure 5: Types of Consent Applications Received (2010 – 2019)

A further 291 applications (15%) involved the taking of surface water, i.e. from stream, rivers and lakes. Again, the majority of these applications sought the water for irrigation purposes, as well as for frost protection, gold mining (e.g. suction dredge operations), public water supply, and dewatering trenches / holes for pipes etc.

¹⁸ Page numbers quoted are relevant to TRMP update version 63.

¹⁹ Resource consent information was extracted from TDC’s MagiQ-BI consents database using keyword searches (it is not possible to search by TRMP rule number). As a consequence, there may be relevant resource consent data that was not captured by the key words used.

Five percent of consent applications (102) were made for the damming of fresh water. The majority of these relate to water storage for agricultural and horticultural uses. Other uses include hydro power generation, control of flood water, and provision of public water. By far the largest project consented over the past 10 years has been the Waimea Community Dam.

As well as requiring consent to dam water, Chapter 31 rules require consent to: a) take surface or groundwater for storage in dams; and b) to take the water stored in dams, ponds and reservoirs. A total of 73 consent applications (4%) were received for this activity. This is comprised of ground or surface water takes to storage (26 consents), and water takes from storage (47 consents), predominantly for irrigation, frost protection, domestic and stock use.

3% of consent applications (62) were for the diversion of surface or floodwater. Activities needing consent included road maintenance and upgrade, construction of bridges, boardwalks and culverts, and flood protection or mitigation.

Lastly, 37 of the applications to take surface or groundwater sought consent to transfer all or part of an existing water take permit to be used on another site. This activity is regulated in the TRMP as a 'site-to-site transfer' and is considered to have the potential to encourage efficient use of water and provide for greater access to water than currently occurs.

Figure 6 shows the number of consent applications received by TDC each year between 2010 and 2019. Applications received vary from a low of 161 in 2010 and 2018, to a peak of 329 in 2015. There was a general increasing trend in the number of consents applied for between 2010 and 2017, but this fell back in 2018 and 2019.

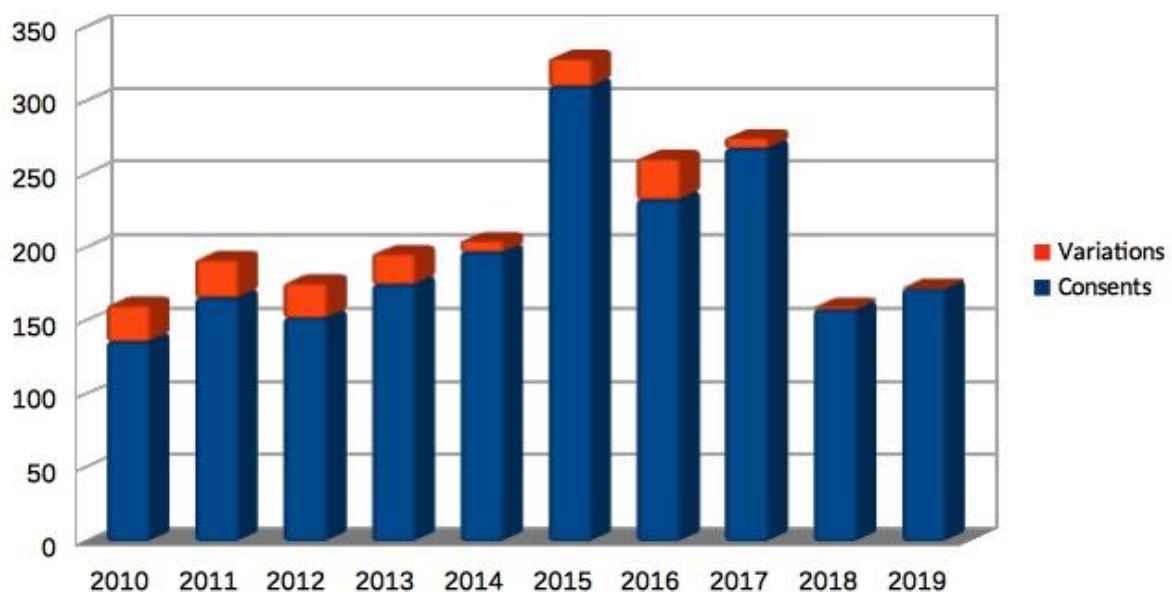


Figure 6: Number of Applications per Year (2010-2019)

Figure 7 shows that the majority of the consents (1585, or 81%) are 'consent effective', which means that the activities granted are currently being carried out by the applicants. The next largest group are 206 consents (10%) that have expired, the majority of which relate to permits to take groundwater. Consents that have been cancelled (46) or surrendered (42) by the applicant account for 4% of the total (2% each), and another 2% are part of a suite of 33 dam renewals that have had the timeframe for a decision extended under s37 of the RMA. Twenty-six consents (1.5%) have

lapsed before they were given effect to, and the final 29 consents (1.5%) are either on hold, have been withdrawn or are awaiting a decision by Council.

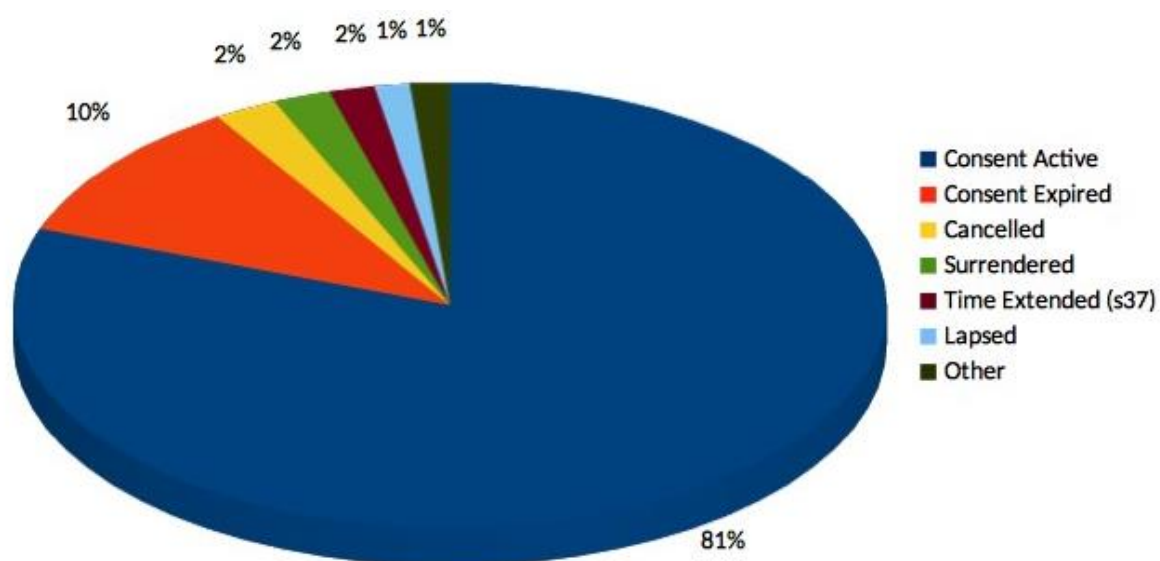


Figure 7: Status of Consents (2010-2019)

A total of 2094 consent applications (98%) were decided upon without notification, whereas 22 consents were fully (i.e. publicly) notified and 12 consents were processed under limited notification (where specifically identified people or groups are affected by the proposal and given an opportunity to make a submission). Decisions on 23 applications are yet to be made.

Tasman District Council was the applicant that applied for the most consents under Chapter 30 provisions, with a total of 120 applications and an additional 15 variations (see Table 11). These were for a variety of activities, including damming and diversion of floodwater, the taking, damming and/or use of ground and surface water for public water supply (including rural water schemes), taking groundwater for dewatering trenches, diversion of surface water during construction (e.g. bridges, culverts and flood protection structures), and taking groundwater for irrigating sports fields.

Table 11: Number of consent applications by TDC

Activity	Consent Applications		Variations	
	Total	TDC	Total	TDC
Water Take - Underground	1087	32	87	7
Water Take - Surface	291	9	27	1
Water Take - Storage	73	0	14	0
Dam Water	102	7	23	3
Divert Water	62	31	3	1
Construct or Alter Bore	352	41	7	3
TOTAL	1967	120	161	15

3.3.3 State of the Environment Monitoring Data

A number of monitoring reports and studies shed light on the health of rivers and streams in the Tasman District. They also help identify the factors that enhance or degrade the condition of waterbodies over time, including direct impacts of human activities. This information is invaluable for evaluating the effectiveness of TRMP policies and methods, and determining the extent to which TRMP objectives have been achieved.

Monitoring data shows that Tasman District has relatively few water quality issues compared to other parts of New Zealand, due to the District's large rivers having a significant proportion of native forest in their headwaters. Therefore, any inputs of pollutants from developed land in the middle and lower reaches are substantially diluted by the large volume of high quality water from upstream.

Nevertheless, there has been a deterioration in the health of water quality and associated habitats and native fish stock, particularly for small streams. This is linked to intensive land uses, including agriculture, horticulture and residential development, and related activities that lead to an increase in sedimentation, nutrient runoff and contamination of waterways. Similarly, there is evidence of elevated nitrates in groundwater, particularly in parts of the Waimea Plains. The close connection between land use activities and effects on freshwater quality therefore requires stronger integration between regional and district provisions in the TRMP.

Overall, state of the environment monitoring data is focused predominantly on water quality and related effects on instream ecology; there is very limited data available on the ecological effects of low river and stream flows.

River Water Quality SOE Report 2015²⁰

As part of its obligations under the RMA, TDC monitors the state of surface water quality and river health at more than 57 sites throughout the Tasman District. The state of river water quality in the 2015 monitoring report is determined by data collected from a set of core sites between 2010 and 2015. River water quality trends, by comparison, are examined using data from the entire record (since 1987 for three sites but the majority of sites since 2000).

The following summarises the main findings of the 2015 monitoring report (pp.2-4):

Threats to Water Quality

The main threats to water quality and stream health in the Tasman District relate to the intensification of agriculture in the district and, to a lesser extent, the expansion of residential development. The main problems with water quality are currently found in small streams whose catchments contain a large proportion (>50%) of intensively developed land.

Sites with pastoral and urban land cover had higher concentrations of disease-causing organisms, greater quantities of deposited fine sediment and lower water clarity than sites with indigenous forest or exotic forest land cover. Focussing on the monitoring sites in pastoral catchments, 40% posed a high risk to people and animals from disease-causing organisms... while 21% had excessive amounts of deposited fine sediment in the bed.

²⁰ James, T and McCallum, J 2015. *State of the Environment Report: River Water Quality in Tasman District 2015*. Prepared for Tasman District Council <https://www.tasman.govt.nz/my-region/environment/environmental-management/water/river-water-quality/water-quality/>

Key recommendations:

To achieve the greatest immediate benefits restoration efforts should focus on the following:

- Reducing faecal bacteria and fine sediment inputs to small streams (stock access and riparian buffers for earthworks and land cultivation).
- Increasing the amount of bank-side vegetation along these streams to provide shading and to keep water temperatures below the critical levels required for protecting ecosystem health.
- Restoring wetlands in key locations where runoff enters streams.

The actions required by these recommendations are not well supported in the current TRMP provisions, particularly rules that enable wetland enhancement/restoration, stream bank planting, and riparian margin setbacks for cultivation/earthwork (Chapter 8).

Water Quality Monitoring and Pesticide Use

Pesticide contamination is of concern in relation to the quality of water available for allocation and use. TDC's 2015 State of River Water Quality Report considered the effect of pesticide discharges on water quality.²¹ It found very low concentrations of pesticides in seven of the 15 groundwater bores sampled as part of a national 4-yearly programme (two in the Waimea, two in the Moutere, one in Riwaka, one in central Motueka, and one in Spring Grove). All the detections were triazine herbicides (mostly terbuthylazine), which were very common field/crop sprays especially for broadleaf and annual weeds. These types of compounds are easily washed through soils and are slow to breakdown in groundwater.

The 2015 monitoring report also noted that only one investigation of pesticides in streams in Tasman was known. A screen for pesticides in sediment from Neimann Creek, an intensively-farmed catchment in the Waimea Plains, found no trace of any pesticides.²² However there has been a lot of work on residual pesticides in our soils mostly related to historic orchard practices or sheep dips. It is likely that some of these recalcitrant spray residues make their way to waterways bound to the soils.

A national programme to detect pesticides in groundwater has been running since 1990 with samples being tested every four years. The latest survey was undertaken in 2018 and included 279 groundwater bores across the country (mostly accessing the more vulnerable unconfined aquifers), including 22 from the Tasman District.²³ The sampling results found that 8 out of the 22 bores tested (36%) found detectable levels of pesticides, with Terbuthylazine being predominant. This was higher than the national result which found 24% of all bores tested to have pesticides present. For the first time in 2018 glyphosate was added to the range of pesticides being tested. None of the bore sites in Tasman tested positive to glyphosate.

The 2018 results represent an improvement when compared with the previous pesticide survey. In the 2014 programme 165 groundwater bores were tested nationally and 28 (17%) were found to

²¹ James, T and McCallum, J 2015. *State of the Environment Report: River Water Quality in Tasman District 2015*. Prepared for Tasman District Council. <https://www.tasman.govt.nz/my-region/environment/environmental-management/water/river-water-quality/water-quality/>

²² James, T. Unpublished data, 2014.

²³ Close, M. & Humphries, B (2019). *National Survey of Pesticides and Emerging Organic Contaminants (EOCs) in Groundwater 2018*. ESR report for regional councils CSC19016. https://research.esr.cri.nz/articles/National_survey_of_pesticides_and_emerging_organic_contaminants_EOCs_in_groundwater_2018/9937304

have traces of pesticides.²⁴ The results for Tasman were considerably higher with seven out of the 15 bores (47%) tested having detectable traces of pesticides, again with Terbutylazine being the most common. The level of pesticides detected in Tasman samples for 2014 and 2018 were well below the maximum acceptable values (MAV).

Groundwater Quality

Council has a State of the Environment (SoE) Monitoring Programme for groundwater quality involving 16 sites that are currently sampled four times per year for a range of chemical and physical parameters.

According to a 2011 Groundwater Report Card (the most recently published SOE data²⁵), groundwater is of a good quality across the Tasman District and suitable for its intended uses. However,

...in places groundwater quality also reflects influences from human activities. In general, the more intense the land use, be it agricultural, horticultural or residential, the greater the likelihood of non-natural human influences on groundwater quality being apparent. Typically this is observed as elevated nutrient concentrations (primarily nitrates). In all bores sampled since 2000 across the District, but excluding those on the Waimea plains east of the Waimea River, the median nitrate concentration is 1.1 g/m³-N which is below the national median of 1.7 g/m³-N.

Monitoring of groundwaters in the Waimea plains east of the Waimea River since the 1970's has shown elevated nitrate concentrations in many places (both in the confined and unconfined aquifers). The median nitrate concentration of the sampled bores in the Waimea plains east of the Waimea River is 11.0 g/m³-N. This contamination includes historic sources of nitrate which has been decreasing over time. However, the continuing elevated nitrate concentrations may mask inputs occurring from current land uses.²⁶

The report card identifies a number of actions to be taken to improve groundwater including adoption of best practice fertiliser use, ensuring that land application of effluents are treated and applied in an appropriate way, ensuring well head protection and back flow preventers are installed on groundwater supplies, and maintaining and enhancing appropriate land cover and land uses over important recharge areas.

Health of Freshwater Fish Communities Monitoring Report 2018²⁷

TDC has established a Freshwater Fish monitoring programme as part of its functions under the RMA to monitor and manage the life-supporting capacity and natural character of waterways. The latest monitoring report brings together the results of fish surveys completed from 2011 to March 2018. The surveys were primarily carried out on lowland streams as these are areas most at risk of degradation by various human activities. Additional reference sites on nearby streams with limited or no risk of degradation were also surveyed for comparison, where possible. The streams sampled

²⁴ Humphries, B. & Close, M. (2014). *National Survey of Pesticides in Groundwater 2014*. ESR report for regional councils CSC15003.

²⁵ TDC. 2011. *Groundwater Quality Report Card*; groundwater data in the report card has come from Stevens, G. 2010. *State of the Environment Report Groundwater Quality In Tasman District*; <https://www.tasman.govt.nz/my-council/key-documents/more/environment-reserves-and-open-space/environmental-monitoring-reports/?path=/EDMS/Public/Other/Environment/EnvironmentalMonitoring/WaterMonitoring/Groundwater>

²⁶ Stevens, G. 2010. Ibid; pii.

²⁷ McCallum, J. & James, T. 2018. *The Health of Freshwater Fish Communities in Tasman District 2018*. Tasman District Council, Richmond, New Zealand

were generally small (less than three metres wide) with varying types and degrees of habitat modification.

The following is a summary of the key findings (pp.1-3):

- There are 20 species of indigenous freshwater fish identified within Tasman and three sport-fish (all salmonids), the most abundant of which is brown trout.
- Of the native fish species in Tasman, more than half (currently 12) are listed as 'At Risk' or 'Nationally Vulnerable' by the Department of Conservation. This high proportion of species with declining populations is largely due to broad-scale land use changes which has led to the degradation of fish habitat in waterways.
- Longfin eels, shortfin eels and inanga were the most frequently observed species. Between 2011 and 2018, longfin eels were observed at 72% of the sites surveyed. Shortfin eels and inanga were observed at 33% and 31% of sites (respectively) and, along with common bully, show high tolerance to poor stream habitat.
- Despite the high prevalence of longfin eels, there is a general absence of larger eels (greater than 600mm). Due to the absence of larger, older individuals, the conservation status of longfin eels remains 'At Risk – Declining' across New Zealand.
- At a national scale, the occurrence of all native fish is declining, with particularly severe reductions in pasture and urban catchments. The longest-running quantitative fish surveys in Tasman are on the Onekaka River, Golden Bay. Here there appears to be a statistically significant decline in longfin eel and total fish numbers.
- Native fish species that are particularly sensitive to habitat degradation are typically absent from streams with high loads of fine sediment or little riparian vegetation.
- Sampling efforts targeting specific rare species such as giant kōkopu and lamprey failed to find any of these fish species at all. However lamprey are very difficult to find using traditional methods and reasonable amounts of pheromone are being found particularly in the Aorere catchment and coastal streams north of the Takaka River.
- This indicates that these species may now be extinct in parts of our region. High water temperatures lead to fish stress and reduced feeding rates as well as reduce the capacity of water to hold oxygen, while promoting the growth of aquatic plants.
- Surveys at Onekaka River at Shambala Road found the highest native fish diversity of any site in Tasman (12 species) and may also be the highest native fish diversity of any site in New Zealand.

Effect of Low Flows on River Ecosystems 2020²⁸

TDC and the Cawthron Institute undertook a study to understand the impacts of low river flows on river ecology and implications for water takes in the Takaka FMU. Sixteen sites in Golden Bay were sampled for water quality and habitat parameters on 6 and 7 March, 2019. This was towards the end of the summer drought, which resulted in record low flows. In general, there is very little data available in Tasman District concerning the resilience of river communities to low flow events.

The results showed that:

²⁸ James, T. 2020. *Effects of the 2019 Drought on Water Quality and Aquatic Ecology of Rivers in Golden Bay*. Report prepared for presentation to Council. [Note: the report outlining the findings of the study is currently in draft form]

...the adverse effects from the reduced amount of wetted habitat is likely to be significant on some waterways, particularly those with larger proportions of wide shallow areas (riffles) such as the lower reaches of Kaituna and Aorere Rivers. Riffles are the part of the river where the greatest productivity (generation of biomass) and diversity of species occurs. The main effects of reduced wetted area are likely to be reductions in the abundance of invertebrate and fish.

Conversely the amount of habitat loss for creeks in Separation Point geology, e.g. Anatimo Stream and Wainui River and Little Onahau River, appear relatively small.

Caveats to the study include the need for a greater number of samples and more ‘fine-scale’ sampling (including macro-invertebrates and fish) to more robustly quantify effects of low flows on a wider scale. Additionally, data obtained for water quality parameters such as dissolved oxygen and water temperature were only based on spot measurements (as opposed to continuous monitoring) and therefore did not capture daily minimum and maximum values.

3.3.4 Issues with Implementation of Chapter 30 Provisions

During rapid assessment workshops, Council staff from policy, consents, compliance, engineering, and environmental monitoring identified a number of issues with implementation of the Chapter 30 provisions. These are discussed below.

Giving Effect to the NPS-FM²⁹

Chapter 30 provisions need to be updated to give effect to the NPS-FM, which sets clear directives for Council to maintain and improve freshwater quality and quantity, and in particular to provide minimum flows and allocation limits for all FMU. The focus of the chapter is largely on water quantity, i.e. establishing a water management system that sets sustainable water allocation and regulates the taking of surface and groundwater to ensure water use stays within the allocation limits.

The NPS-FM makes Te Mana o Te Wai the highest goal, recognising that the ability of water to provide for human needs (health, economic development) naturally follows as long as water health is high. Ecosystem Health of water needs healthy water flows/levels and water quality and healthy riparian and aquatic habitats.

Compliance of TRMP Water Quantity provisions

TRMP water quantity provisions are only partially compliant with the NPS-FM. Few water bodies with smaller numbers of water take permits have established minimum flows and not all water bodies, even some with heavier usage (e.g. Moutere surface), have allocation limits. Some categories (like MPLL reservations) are not recorded and it is currently not possible to readily establish and verify water quantity accounting balances for all Freshwater Management Units.

²⁹ This discussion draws on TDC analysis of the TRMP’s level of compliance with the NPS-FM, as set out in the following draft documents: 1. ‘Gap Analysis: TRMP - NPS FM (Revision 2)’; and 2. *Tasman District FMU Summary (Revision 3)*. Refer to these reports for greater detail about the changes needed for the TRMP to meet NPS-FM requirements.

Compliance of TRMP Water Quality provisions

The TRMP water quality provisions are also not compliant with the NPS-FM. The structure of the water chapters in the TRMP is the reverse of that of the NPS-FM. The NPS-FM focuses largely on surface water quality, whereas the TRMP is focused on ground water (and some surface water) quantity. In the TRMP, safeguarding water quality appears to be viewed as equivalent to managing discharges, as addressed in Chapter 33. There are two exceptions: the first is the specific limits table for the Motueka – Riuwaka Plains WMA in Schedule 36A; the other is the Waimea WMA, where a specific quality schedule was developed in response to the Waimea Community Dam proposal. Chapter 31 also requires irrigation plans as part of water permit applications, and foreshadows the requirement for nutrient management plans to be introduced in a future version of Plan.

Climate Change

When addressing both water quality and quantity under the NPS-FM, Councils are required to have regard to “the reasonably foreseeable impacts of climate change”. In this regard, the NPS-FM notes that “*NZ faces challenges in managing our fresh water to provide for all of the values that are important to New Zealanders. The quality, health, availability and economic value of our fresh waters are under threat. These challenges are likely to increase over time due to the impacts of climate change*” (p.4).

In implementing the NPS-FM, TDC needs to consider the ways in which climate change may affect water management, including matters such as:³⁰

- Changes in frequency and severity of droughts (including potential long term impacts on groundwater resources).
- Changes in frequency and severity of heavy rainfall and flushing or flooding events.
- Changes in temperatures which may influence algal blooms, increased pressure from invasive aquatic species, or changes to water quality.
- Sea level rise, which may affect salination, saltwater intrusion, and groundwater quality in some areas.
- Exacerbation of existing anthropogenic effects (eg, land-use impacts, flooding, or nutrient runoff) – degraded ecosystems are less resilient to additional pressures, including those resulting from climate change.
- The presence or absence of natural features to mitigate the effects of climate change, including:
 - shading (and cooling) effects provided by riparian vegetation;
 - wetlands providing water retention in catchments.
- Deterioration of water quality in some areas as a result of lower flows in freshwater bodies.

Consideration of the impacts of climate change needs to be based on the best information available. TDC’s region-specific information for climate effects on hydrology (eg, rainfall models), should have regard for this information in establishing objectives and limits under the NPS-FM, including effects on both groundwater and surface water resources.

³⁰ See pp.40-41 in Ministry for the Environment. 2017. *A Guide to the National Policy Statement for Freshwater Management 2014 (as amended 2017)*. Wellington: Ministry for the Environment.

Māori Interests in Water

A general observation made about the TRMP is the need for a more consistent approach to addressing matters of significance to Māori.³¹ An overall assessment of internal consistency of the regional provisions concluded that iwi issues were weakly implemented, particularly in relation to freshwater management and coastal values, and sites of significance both in relation to freshwater resources and coastal marine area locations.³²

With specific regard to Chapter 30 provisions, there is no section or set of provisions explicitly and comprehensively addressing Māori interests, values or aspirations with regard to management of freshwater. This needs to be addressed in collaboration with tangata whenua as part of the TRMP review process. While the first objective refers to the mauri of water, there are no further references to this in policies, although ‘the life supporting capacity of water’ is otherwise addressed. Similarly ‘iwi’ or ‘Māori’ interests are not mentioned in policies or rules, (although they are noted in ‘methods).

The Manawhenua Mātauranga Report 2019 prepared by the three manawhenua iwi of Mohua/Golden Bay³³ sets out a wide range of uses, values and aspirations with regard to freshwater management in the Tākaka catchments. The TRMP needs to ensure this type of information is applied to all FMUs in the District, in collaboration with Te Tau Ihu iwi.

Integration with other TRMP Chapters

There are a number of areas where the provisions in Chapter 30 do not link or integrate well with relevant chapters in the District Plan.

Effects of land use activities on water quality and quantity

The close connection between land use activities and effects on surface and ground water quality and quantity requires stronger integration between the Regional and District Plan chapters. This includes impacts such as land use changes on ground and surface water recharge, and contamination from sewage, stock effluent, fertiliser use and land disturbance, which can increase the amount of nutrients and bacteria in groundwater and waterways.

Dealing with Freshwater Management in Separate Chapters

Freshwater management is dealt with in four parts of the Regional Plan (Parts 2 (chapters 8 and 16), 4, 5 and 6) and comprises four policy chapters (8, 27, 30 and 33) and three freshwater specific rules chapters (28, 31 and 36). Consequently, the provisions addressing water health - including quality and quantity - are fragmented across multiple chapters, can be difficult to locate and apply to specific activities, and in general do not reflect an integrated approach to freshwater management.

The TRMP review should consider how the various aspects of freshwater can be integrated more fully. Giving effect to the NPS-FM and National Planning Standards will assist in achieving this.

³¹ Mason (2019) *Stage 1 of Tasman Regional Policy Statement Efficiency and Effectiveness Review: Integrated Management*. Prepared for Tasman District Council.

³² Leusink-Sladen (2019) *Policy Mapping - Review of the Internal Consistency and Integrity of Plan Objectives, Policies and Rules: Parts III – VI*. Prepared for Tasman District Council.

³³ Ngāti Tama, Ngāti Rārua and Te Ātiawa. 2019. Manawhenua Mātauranga Report For the Tākaka Catchments. Report prepared for Tasman District Council; <https://tasman.govt.nz/my-community/community-support/community-boards-and-advisory-groups/fresh-water-land-and-advisory/takaka-fresh-water-and-land-advisory-group/>

Regulation of Dams

Chapters 27, 28, 30 and 31 all include provisions relating to dams. Chapters 27 and 28 address the effects of the construction and use of dams on river and lake beds, as well as the hazard risk posed by the potential failure of an existing dam. Chapters 30 and 31 consider the benefits of dams for water augmentation and seek to manage effects on river flows and levels, and instream values. These provisions could be integrated into a single chapter.

The hazard risk posed by dam failure is not related to beds of rivers or lakes or water quality or quantity, but is rather a land use issue. This aspect could therefore be taken out of Chapter 27 and included in an appropriate District Plan chapter to enable control of this aspect for both off-stream and on-stream dams.

There is also a need to clarify the rules around off-stream damming of water and water takes from such storage. There appears to be a gap in the TRMP rules regarding the construction of dams on land (as opposed to dams on streams or rivers), which means they can be constructed as a permitted activity in the absence of specific rules, and with no further consideration to dam safety or failure risk. Once constructed the taking of water from the dam for any use (e.g. irrigation, stock) requires consent under Chapter 31 rules as a restricted discretionary activity. In the case of a fire, an exception applies under RMA s14(3e) which enables Fire and Emergency NZ to take water for emergency purposes. There is therefore a need for clarity around the enabling of off-stream storage for water use under the TRMP, including the potential for the stored water to be used for fire-fighting.

Protecting Water Supplies from Contamination

Staff noted that a specific objective (and supporting policies and rules) addressing the risk of contamination of the water resource used for public consumption is missing in Chapter 30. The goal would be to ensure the public water supply is protected from the type of contamination that affected Havelock North in 2016.

This gap should be addressed in the TRMP. One suggestion was to introduce a Water Catchment Protection Zone for all public water supplies and strengthen rules to ensure land uses that may cause contamination of ground or surface water in the zone are regulated, particularly near abstraction points. There are also specific requirements in the NES for Drinking Water (NES-DW) that council must meet as a water supplier, and it is anticipated that protections for source water (under regional functions) for all drinking water supplies will be strengthened in the 2020 review of the NES-DW.

Permitted Bore Provisions

Another related concern is the permitted activity rule in Chapter 16 (16.12.2.1) that allows the construction or alteration of a bore without resource consent.³⁴ The rule means that Council does not know where or how well permitted bores have been installed. In Motueka, for instance, there are hundreds of unconsented bores, some of which are poorly located, e.g. in garages. This poses a risk of contamination of groundwater due to backflow down the bore, such as during a flood.

The TRMP review should consider whether to make all bores a consented activity within catchment zones where it would have the greatest impact. Appropriate backflow protection is also required

³⁴ Provided that certain conditions are meant, such as the bore is not drilled, does not extend to a depth greater than 8 metres, and is not within 20 metres of the bank of a watercourse.

and could be addressed as a condition of consent, including retrospectively when replacing an existing bore or water permit. Requiring consent would potentially be a resource challenge for TDC however, i.e. more staff time to process applications.

Reticulated Supply vs Bores

Another issue to be considered is the full reticulation of public water supply, the question being whether TDC should provide potable water to towns and settlements of a certain size. Only around 25,000 out of Tasman's population of 52,000 are on a reticulated water supply and Motueka is the largest town in NZ that is not fully reticulated.

A challenge to reticulation however, is the fact that much of the land in Motueka is less than five metres above sea level, which makes it difficult to install underground reticulation, especially when factoring in climate change and sea level rise. This is similarly an issue for the use of shallow groundwater bores for drinking water supply.

Staff acknowledge that addressing the issue of reticulation requires consideration beyond the RMA and TRMP; it will also need to be considered alongside changes to the Long Term Plan.

Water Efficiency, Conservation and Resilience

Improving Water Efficiency Provisions

The TRMP attempts to encourage appropriate water use by placing limits on water available for extraction and rules ensuring water use for irrigation matches soil type and crop needs. The allocation targets and limits set out in the TRMP aim to address / avoid over allocation, and the introduction of metering has further helped with water efficiency by improving knowledge about how much water is being extracted. Yet while the TRMP provisions support efficient use of water, economics drives much of the water demand in the District, particularly for agricultural and horticultural production, and TRMP provisions have not always anticipated or effectively managed resulting land use changes, e.g. the expansion of hop production in the District.

Introducing Water Conservation Provisions

As well as addressing water efficiency, staff pointed out that the TRMP should promote water conservation, but that currently there is no such objective for this in Chapter 30.

Water efficiency seeks to minimise the amount of water used to accomplish a function, task or result (such as irrigating crops). In contrast, *water conservation* involves the beneficial reduction in water loss, waste or use.³⁵ Water efficiency often involves the use of technology to assist in 'doing more with less' (e.g. applying water to crops using drippers), whereas water conservation tends to require changes in behaviour to use less water.

Resilience and Self-Sufficiency

As well as improving water efficiency provisions and introducing an objective seeking water conservation, staff identified a need for provisions that promote resilience and self-sufficiency in water management during dry periods.

Staff noted that the minimum water tank size required for potable water under the TRMP is only 23,000 litres.³⁶ The small capacity means that rural households can run out of water during dry

³⁵ See <https://www.watercalculator.org/footprint/water-conservation-efficiency/>

³⁶ A further 45,000 litres also needs to be available for fire fighting purposes.

months and consequently need to pay for tankers to fill up their tanks. This is complicated by the fact that when water rationing is required there are limits on the availability of water to be taken by tankers. Staff also noted that there have been instances where landowners in Golden Bay ran out of both bore and tank water during drought conditions and so they started taking water out of a nearby river which got close to drying up.

The TRMP review should therefore consider introducing objectives, policies and rules that promote and support provision of on-site water storage at a capacity that enables rural properties to provide for their water needs during dry periods to a greater extent than is currently required. This could include storage of rain water in larger tanks and the need to maintain a contingency of supply other than for fire-fighting.

Water Quality Issues

Lack of TRMP Provisions Addressing Diffuse Discharges

As indicated above, the TRMP has not effectively dealt with diffuse discharges from land into waterbodies. While there have been improvements in the level of contamination occurring in ground and surface water, e.g. through stock and wastewater management, monitoring has shown that faecal bacteria and fine sediment inputs continue to degrade water quality and the life supporting capacity of freshwater bodies, particularly small streams. Critical areas of bacterial contamination on farms remains a problem, such as laneways for cows that come near to, or cross, streams, and seepage of stock effluent through soil in high-use areas such as around water troughs. Sediment discharges from a range of land uses, including plantation forestry and rural residential development also affects surface water quality.

Greater integration is therefore needed between Chapters 30 and 33, and related land use provisions in the District Plan, to ensure effects on water quality are managed so that it remains suitable for the range of uses it is required for.

Effects of Fertiliser on Water Quality

The regulation of fertiliser as a contaminant is not well distinguished in the TRMP. Nitrate levels in ground water is an issue particularly on the Waimea Plains where monitoring shows spikes in levels after heavy rainfall. While the TRMP recognises the contaminant effects of pesticides and seeks to prevent it from entering freshwater, the provisions relating to fertiliser use are concerned with cross boundary issues, i.e. the avoidance of fertiliser drift over adjoining properties.³⁷ It is also largely carried out as a permitted activity.

This is despite the fact that the activities and risks/environmental effects associated with both pesticide and fertiliser use are largely similar, as noted in Chapter 33, which states that:

Contaminants arise from land use activities such as fertiliser and pesticide use, land disturbance, composting or allowing stock to have uncontrolled access to watercourses. Contaminants may enter the environment directly while the activity is being carried out, or diffusely as a result of natural processes such as leaching, run-off or through wind action (p.33/3).

The TRMP review therefore needs to consider the contaminant effects of fertiliser use and update the relevant provisions accordingly to avoid adverse effects on water quality.

³⁷ Rule-set 36.5.2 'Discharges to Land or Air' addressed fertilisers

Water Quantity Issues

Default Allocation Limits

Schedule 31C 'Triggers for Rationing and Minimum Flows' sets out specific details about when rationing of water use is required based on minimum flows of water bodies. This information is relied on in the consenting process as it provides detailed information about water flows and limits in specific areas, e.g. Moutere gravels. However, not all water bodies have established minimum flows and many areas in Tasman are subject to default allocation limits (10% - 33% of 5-year 7-day low flows). A number of Chapter 30 policies outline default allocations that apply when there is no specific allocation. Consent staff report that these default allocation limits and the policies that apply them (e.g. Policies 31.1.3.13, 15 and 16) are confusing to implement and need to be reviewed. The TRMP should be reviewed to provide clearer guidance on default minimum flows.

Gaps in Allocation Limits

At present there are no water allocation limits in the Tākaka, Aorere/West Coast and Buller catchments (although the Buller River does have a WCO), which makes it difficult for consenting staff to make decisions on water permits.

With respect to Tākaka, staff state they have been working with an 'informal cap' on water availability using best knowledge about the water resource, but this was exceeded by an Environment Court order in 2016. The work undertaken by the Tākaka Freshwater and Land Advisory Group (FLAG) will help with determining limits and this information needs to be incorporated into the Chapter. Similar work needs to be carried out for the other catchments where there are currently no allocation limits.³⁸

Irrigation Rates for Glasshouses

Schedules 31.1D and 31.1DA set irrigation rates by soil and crop type and apply to a range of crops grown outdoors. However, the TRMP does not deal well with water allocation for crops grown in fully closed glasshouses, which have been defaulted out of the specific soil based irrigation rates. The TRMP should therefore be updated to include irrigation rates that are applicable to both soil and greenhouse / hydroponically grown crops.

Maintaining Rootstock in Dry Weather

Consent staff report that the policies and rules relating to root stock survival during dry periods are difficult to implement. In particular, the TRMP does not cover all crops and has inconsistent provisions. The policies need to be strengthened to provide guidance on minimum requirements for keeping root stock alive during dry weather.

Dry Weather Task Force

There were also concerns that the deliberations of the Dry Weather Taskforce weighted the needs of irrigators above maintenance of instream and ecological values during drought conditions. The provisions guiding the Taskforce should be reviewed with a view to including more prescriptive policies and rules around what values need to be given priority during water shortages. Having full information on minimum flows, allocation limits and cease takes would also help address this.

³⁸ For further details see Tākaka Freshwater and Land Advisory Group (2019) *Recommendations Report for freshwater management in the Tākaka Freshwater Management Unit* - <https://www.tasman.govt.nz/my-community/community-support/community-boards-and-advisory-groups/fresh-water-land-and-advisory/takaka-fresh-water-and-land-advisory-group/>

Protecting Wetlands

Wetland mapping, characterisation and database development is a long-overdue requirement of the TRMP and as a result the rules around wetland protection have been ineffective due to a lack of identification in the TRMP.

Updating Current Chapter 30 Provisions

Simplify and Rationalise Policies

A review of the internal consistency of Chapter 30 objectives, policies and related rules highlighted the degree of detail and complexity contained in some policies and the relationship of those policies to rules. The review found that the policy detail may be too specific and comprehensive, and that in some cases that detail would be better placed within rules or rule-based tools such as schedules or figures. It concluded that chapter 30 contains highly detailed policies that could be reviewed with the aim of simplifying policy content, and rehomeing (to rules) valuable, but specific detail.

Related to this, Chapter 30 could benefit from rationalisation of content with a view to reduce the 75 policies. Overlapping or area-specific policies could be reviewed and replaced by fewer policies and other rule-based tools such as maps, schedules and figures providing area-specific implementation detail. Policies also need to be more directive as they currently do not provide clear guidance to consent planners, e.g. on what should be given priority where there are conflicting water uses (implementing the NPS-FM will help with this).

Schedule 30A Incomplete

The significant uses and values of water bodies that may be adversely affected by reduced water quantity are identified in Schedule 30A of the TRMP. The Schedule includes 'instream uses and values', such as aquatic ecosystems, wildlife and aquatic plant habitat, contact and non-contact recreation activities, cultural and spiritual values, and landscape values. It also identifies a range of 'other uses and values', such as irrigation, community water supply, stock and farm water supply, industrial supply, and hydro-electric power generation. Rule conditions in Chapter 30 (including for permitted activities) require the avoidance of effects on the uses and values identified for specific water bodies.

It is noted in the TRMP that the list of values is not yet complete for all water bodies or for all values, and that "Further work is also underway to develop consistent protocols and determine the evidential requirements for inclusion of values into the Schedule". However, the Schedule has not been updated since the TRMP was made operative and staff report that this has made it difficult to implement.

Further consideration is required on the scope of values information needed to inform consent assessments and whether this is suitable in an updated schedule or of a size and format (ie spatial) that it should be managed outside of the TRMP as a cross-referenced document or system.

Water Conservation Orders

At present two established WCOs for the Buller and Motueka Rivers have been appended to the TRMP with an explicit qualifier that they are not part of the Plan. Arguably these should be more formally integrated into TRMP provisions to provide a stronger framework that is consistent with the requirements of the WCOs. The proposed WCO for Te Waikoropupū Springs also needs to be included in the TRMP once gazetted.

3.4 Effectiveness and Efficiency

This section provides an analysis of the efficiency and effectiveness of Chapter 30 of the TRMP. It focuses on the achievement of objectives contained within the chapter. The analysis draws on the information from earlier sections, including environmental data, council records, and the opinion of experienced plan users.

3.4.1 Reduced Water Body Flows or Levels (30.1)

Table 12: Efficiency and effectiveness for water body flows and levels

Objective	Analysis	Rating of Achievement
<p>Objective 30.1.2.1 <i>The maintenance, restoration and enhancement, where necessary, of water flows and levels in water bodies that are sufficient to:</i> <i>(a) preserve their life-supporting capacity (the mauri of the water);</i> <i>(b) protect their natural, intrinsic, cultural and spiritual values, including aquatic ecosystems, natural character, and fishery values, including eel, trout and salmon habitat, and recreational and wildlife values; and</i> <i>(c) maintain their ability to assimilate contaminants.</i></p> <p>Policy set 30.1.3.1 – 30.1.3.23; 30.1.3.25 – 30.1.3.42</p>	<p>Observed deterioration in the health of streams and rivers in Tasman (including associated habitats and native fish stock) has been attributed to a range of land use activities that increase sedimentation, nutrient runoff and contamination of waterways, particularly for small streams less than 3m in width and in some groundwater aquifers.³⁹</p> <p>However, while SOE monitoring has focused on water quality indicators such as e-coli, nutrient levels and suspended sediment, it has not considered the effects of water flows and levels on ecological, recreational and wildlife values.</p> <p>One recent study did consider the effects of low flows on rivers in Golden Bay during the 2018/19 summer drought. It suggests that adverse effects on habitat was likely to be significant on some waterways, but more work is needed to gather robust and comparative data about impacts of low water flows and levels and implications for water allocation.</p> <p>The presence of Water Conservation Orders on both the Motueka and Buller Rivers are an influencing factor, as both WCOs require minimum flows to be maintained.</p> <p>Nevertheless, there are localised incidents of streams and rivers running dry in drought conditions due to over-extraction eg Humphries Creek; and Waimea (in 2001)⁴⁰. By-and-large, however, water flows and levels in the District’s water bodies are managed under the TRMP to achieve partial achievement of this objective. Regulated minimum flows, allocation limits and rationing triggers have assisted in maintaining water levels.</p> <p>Augmentation by the Waimea Community Dam when completed will bolster water flows in the Waimea River.</p> <p>The restoration and enhancement aspects of Objective 30.1.2.1 is slowly being achieved through claw back in over allocated FMUs, use of cease takes to protect minimum flows, and flow augmentation are slowly improving flows. Restoring flows in over allocated areas is also a requirement of the NPS-FM.</p>	<p>Partial achievement</p>

³⁹ James, T and McCallum, J 2015. *State of the Environment Report: River Water Quality in Tasman District 2015*. Prepared for Tasman District Council

⁴⁰ There are numerous rivers in Tasman that go dry naturally due to their connections to groundwater (eg Takaka River and tributaries due to karst geology). In some cases extraction may have a small impact on the extent or frequency of this drying.

Objective	Analysis	Rating of Achievement
<p>Objective 30.1.2.2 <i>The maintenance, restoration and enhancement, where possible, of the quality and extent of wetlands in the District.</i></p> <p>Policy set 30.1.3.1 – 30.1.3.23; 30.1.3.25 – 30.1.3.42</p>	<p>Wetland management under the TRMP is hampered by a lack of identification of wetlands for protection. For several years now the Council has been undertaking a project to identify and map wetlands in the District, however the project is yet to be completed and the findings incorporated into the TRMP.</p> <p>Thus, while there are policies and rules relating to the diversion and taking of water from naturally occurring wetlands, only a small number of wetlands are identified in Schedule 30A or on the Planning Maps.</p> <p>In addition, rules do not encourage or promote wetland protection, enhancement or restoration.</p>	Not achieved

3.4.2 Allocation of Fresh Water between Competing Water Users (30.2)

Table 13: Efficiency and effectiveness for allocation of water

Objective	Analysis	Rating of Achievement
<p>Objective 30.2.2 <i>To achieve equitable water allocation and efficient use of water by water users while ensuring an acceptable security of supply for water users.</i></p> <p>Policies 30.2.3.1; 30.2.3.3 – 30.2.3.28</p>	<p>Equitable water allocation is supported in the Chapter through transparent provisions around allocation limits, water flows and levels, rationing triggers, and staged reduction in water use during periods of drought.</p> <p>Regular review of water permits to ensure water use matches availability is a further mechanism to ensure equitable water allocation and security of supply.</p> <p>The ‘priority in time’ approach to water allocation where there is availability (Policy 30.2.3.5), establishes a first-in-first served system. This might be equitable (or at least simple to administer), provided that at least part of the available allocation is reserved to ensure security of supply into the future, e.g. by reserving for priority uses and/or use of a discretionary activity status for permit renewals to avoid creating an effective perpetual right.</p> <p>Access to water following completion of the Waimea Community Dam will depend on the ability of water users to pay for the water. This will provide greater security of supply for landowners who are affiliated with the dam, as compared to those who are not affiliated. Whether or not this meets the objective of equitable water allocation is yet to be seen.</p> <p>Water allocation is perhaps not equitable when considered across water management zones however, given some areas are over-allocated and no additional water permits can be granted until water becomes available for use. In these circumstances a waiting list ensures those that have been waiting longest for access to water are first in line.</p>	Partial achievement

3.4.3 Freshwater Augmentation (30.3)

Table 14: Efficiency and Effectiveness for Freshwater Augmentation

Objective	Analysis	Rating of Achievement
<p>Objective 30.3.2 <i>There is sufficient water to meet the needs of all water uses.</i></p> <p>Policy set 30.3.3.1 – 30.3.3.5</p>	<p>There is not sufficient water to meet the needs of all water uses all of the time. Consequently this objective has been assessed as ‘not achievable’.</p> <p>The fact the TRMP sets minimum flows, allocation limits and rationing triggers indicates that there are times when water demand outstrips sustainable water supply. As well, the fact that the Waimea Community Dam is under construction so as to ensure a reliable volume of water in the Waimea River and adjacent water management zones further indicates there has not been sufficient water to meet the needs of all uses.</p> <p>This is in large part due to historical over-allocation and the measures taken in the TRMP have helped to improve the situation. However, demand for water will continue to increase with population growth and more intensive agricultural and horticultural production. The effects of climate change, particularly a greater frequency of prolonged droughts will further exacerbate the pressures of water demand vs supply.</p> <p>The provisions in Chapter 30 that encourage the use of dams to store water have been beneficial and the considerable number of dams in the District do augment the available water supply to a considerable degree, especially in drier areas.</p>	<p>Not achievable</p>

Appendix 1: Iwi Management Plan Provisions Relating to Taking, Using, Damming and Diverting Water

Examples of provisions from Te Tau Ihu Iwi Management Plans relevant to the matters addressed in Chapter 30 are shown below. These issues are summarised from the following plans:

1. Ngati Koata No Rangitoto Ki Te Tonga Trust Iwi Management Plan (2002)
2. Te Rūnanga O Ngāti Kuia, Pakohe Management Plan (2015)
3. Ngāti Tama ki Te Waipounamu Trust Environmental Management Plan (2018)
4. Nga Taonga Tuku Iho Ki Whakatū Management Plan (2004) (lodged with Nelson City Council)
5. Te Ātiawa Ki Te Tau Ihu Iwi Environmental Management Plan (2014) (lodged with Nelson City Council)

For the full text please refer to the individual plans.

Key Issues Relating to Fresh Water

- The principle of ki uta ki tai - the flow of water from the source to the sea, recognises the interconnected nature of rivers, lakes, wetlands, wai puna and the coastal environment. Upstream activities have the potential to degrade the mauri of estuarine and seaward areas. For example cumulative effects on coastal water from runoff and discharges into fresh water upstream;
- Activities, which reduce water quality, also reduce the mauri of the water body – the life force, which sustains indigenous life and many associated values. Key concerns include: a) point and non-point discharges to water; b) sedimentation of waterways; c) the removal of indigenous vegetation on riparian margins; d) activities which reduce water quantity to the extent that a water body is unable to flush out contaminants and e) a lack of information regarding the presence and health of indigenous species.
- The over allocation of water, leading to reduced flows and the inability of water bodies to sustain the indigenous communities within them.
- Diminishing mauri (life force) of a water body and the loss of habitats supporting indigenous species.
- Loss of ability for tangata whenua to practise their customs and traditions associated with water, leading to a loss of matauranga (knowledge) associated with those species and habitats.
- Damming waterways can change the nature of a water body, restrict or bar fish migration up and down stream, alter natural sedimentation processes, and provide introduced species with access to water bodies previously not easy to get to.
- Draining of water bodies, such as wetlands has led to the loss of significant habitats for indigenous flora and fauna.
- Mixing waters from one catchment with another contaminates the wairua (spirit) and can also reduce the mauri (life force) of the receiving water body, and may reduce water quality and introduce plant and animal pest species.
- Impacts of river maintenance, engineering of rivers and streams, and in-stream extractive activities (e.g. for sand and gravel) can disrupt the indigenous flora and fauna, change or reduce the habitats (including indigenous fish habitat), damage or destroy waahi tapu (sacred places) and mahinga kai (food gathering places) associated with those water bodies.
- Introduction of exotic plants and animals into waterways resulting in competition with indigenous species for habitat and food, and degradation of river and stream ecosystems.

- Discharge of contaminants into water, including fertilisers, agrichemical and herbicide spray on stream margins, agricultural run-off, direct stock access to waterways (Linkwater), septic tank overflows (Sounds' housing generally) and stormwater discharges into catchment drainage (particularly the Picton and Waikawa basins).
- Repo are culturally significant ecosystems, rich in biodiversity. They are a significant source of mahinga kai, weaving materials and rongoā. The drainage of freshwater wetlands has resulted in the loss of significant ecosystems important as spawning areas for native fish, sediment traps and areas rich in food and nutrients for bird and plant life. Many wetlands in Te Tau Ihu have already been lost through drainage and reclamation.
- Changes to the natural balance of fish habitat and breeding patterns due to reduced shade, increased nutrients, reduced organic matter, channel modification, increased suspended sediments and changes to water flow;
- Restricted or blocked fish passage due to culverts, weirs and dams.

Desired Outcomes

- Recognition of the role of tangata whenua as rangatira and kaitiaki of nga taonga tuku iho.
- Tangata whenua, as kaitiaki, will be effective in ensuring that the mauri or essential life principle of the natural world within the rohe is maintained and enhanced.
- Maintenance and enhancement of freshwater aquatic ecosystems and the management of the effects of activities on water quality in wetlands, lakes, rivers, groundwater and receiving coastal waters that enables: a) contact water recreation; b) food gathering; c) cultural integrity; and d) biological / ecological life supporting capacity.
- Water bodies are healthy and maintained to a level sufficient to:
 - Preserve the mauri (life force) of the water body;
 - Provide for tangata whenua cultural and spiritual values, customs and traditions;
 - Provide sustenance for present and future generations; and
 - Increase opportunities for tangata whenua to practice customs and traditions associated with the uri (descendants) of Tangaroa.
- That the natural functioning and life supporting capacity of ecosystems is not disrupted by discharges into, the taking, use, damming and diversion of fresh surface water or groundwater.
- Water levels and flows are maintained within catchments to protect cultural values.
- Riparian margins of water bodies are restored and enhanced with indigenous vegetation, providing habitat and pathways for indigenous species, and enhancing the ability of taonga species to reproduce (such as inanga).
- Wetlands are recognised and protected for their cultural significance and biodiversity values.
- The relationship between land and water is recognised through integrated catchment planning.
- Activities carried out in the bed or margin of a river or lake do not compromise freshwater fisheries values.
- Hydro developments give effect to the principle ki uta ki tai (flow of water from mountain to sea), and wāhi tapu and wāhi taonga are protected from potential adverse effects resulting from hydro developments.

Appendix 2: Summary of TRMP Rules for Chapter 30 Matters

Table 15: Summary of TRMP Rules for Chapter 30 Matters

Chapter	Description
16.12.2 Bore Construction or Alteration	
16.12.2.1 Permitted Activity	<ul style="list-style-type: none"> The construction or alteration of a bore, Provided it complies with the specified rule conditions, including that the bore extends to a depth of no more than 8 metres and is not drilled.
16.12.2.2 Controlled Activity	<ul style="list-style-type: none"> The construction or alteration of a bore that does not comply with the permitted conditions of rule 16.12.2.1, Provided it complies with the specified rule conditions, including the minimum bore spacing and bore casing requirements for the water management zones set out in Figure 16.12A.
16.12.2.3 Restricted Discretionary Activity	<ul style="list-style-type: none"> The construction or alteration of a bore that does not comply with the controlled conditions of rule 16.12.2.2, Provided that where the bore is in the Moutere Groundwater zones, it complies with the setback distances from existing bores and casing specifications set out in Figure 16.12A
16.12.2.4 Non-Complying Activity	<ul style="list-style-type: none"> The construction or alteration of a bore that does not comply with the restricted discretionary conditions of rule 16.12.2.3.
31.1.2 Water Take, Diversion and Use	
31.1.2.1 Permitted Activities (Take, Diversion or Use from Fresh or Inshore Coastal Water)	<ul style="list-style-type: none"> The taking, diversion or use of water, including freshwater, coastal water or water stored in a dam, for any purpose, including for domestic water supply, Provided it complies with the specified rule conditions, including maximum permitted water takes or diversions (Figures 31.1A and 31.1B).
31.1.2.2 Controlled Activities (Take, Diversion or Use from Fresh or Inshore Coastal Water subject to Existing Permit due for Renewal)	<ul style="list-style-type: none"> Except as provided by rule 31.1.2.3A, the taking, diversion or use of water from surface water, aquifers and inshore coastal water that does not comply with the conditions of rule 31.1.2.1, Provided it complies with the specified rule conditions, including compliance with rationing steps to comply with minimum water flows or levels (Figure 31.1C), and compliance with irrigation rates for soil and crop type (Figures 31.1D and 31.1DA).
31.1.2.3 Controlled Activities (Take, Diversion or Use within Allocation Limits)	<ul style="list-style-type: none"> Except as provided by rule 31.1.2.3A, the taking, diversion or use of water that does not comply with the conditions of rule 31.1.2.1 or 31.1.2.2, Provided it complies with the specified rule conditions, including compliance with allocation limits for freshwater takes (Figures 31.1E and 31.1EA).
31.1.2.3A Controlled Activities (Take, Diversion or Use if there is a Waimea Community Dam)	<ul style="list-style-type: none"> The taking, diversion or use of water that does not comply with the conditions of rule 31.1.2.1, Provided it complies with the specified rule conditions, including the permit holder must be affiliated to the Waimea Community Dam.
31.1.2.4 Controlled Activity (Take from Storage)	<ul style="list-style-type: none"> The taking of water from dam impoundments, ponds or reservoirs that does not comply with the conditions of rule 31.1.2.1, Provided it complies with the specified rule conditions.
31.1.2.5 Restricted Discretionary Activities	<ul style="list-style-type: none"> The taking, diversion or use of water that does not comply with the conditions of rule 31.1.2.1, 31.1.2.2, 31.1.2.3, 31.1.2.3A, or 31.1.2.4,

(Take, Diversion or Use from Fresh or Inshore Coastal Water, or Storage)	Provided it complies with the specified rule conditions, including compliance with allocation limits for coastal water and freshwater takes (Figures 31.1F and 31.1FA).
31.1.2.6 Non-Complying Activities (Take, Diversion or Use from Fresh or Inshore Coastal Water, or Storage)	<ul style="list-style-type: none"> Except as provided in rule 31.1.2.7, the taking, diversion or use of water that does not comply with the conditions of rule 31.1.2.5.
31.1.2.7 Prohibited Activities (Waiting Lists, Waimea Community Dam)	<ul style="list-style-type: none"> In any Water Management Zone where the Council maintains a waiting list, the taking and use of water by any person in priority to any other person with a prior registration on the waiting list made under the provisions of method 30.2.20.1(d). In the Waimea Plains Zones any application that does not comply with condition (a) (in respect of Table 1 of Figure 31.1FA), condition (d) or condition (da) of rule 31.1.2.5
31.1.3 Diversion of Water by Structures	
31.1.3.1 Permitted Activities	<ul style="list-style-type: none"> The diversion of water by a structure lawfully existing in or on the bed of a river and the diversion of water required for the maintenance, repair, extension or removal of any structure lawfully existing in or on the bed of a river, <p>Provided it complies with the specified rule conditions.</p>
31.1.3.2 Discretionary Activities	<ul style="list-style-type: none"> The diversion of water by a structure that does not comply with the conditions of rule 31.1.3.1.
31.1.4 Damming of Fresh Water	
31.1.4.1 Permitted Activities	<ul style="list-style-type: none"> The damming of fresh water, <p>Provided it complies with the specified rule conditions, including the area of the catchment contributing to the dam is less than 20 hectares.</p>
31.1.4.2 Controlled Activities	<ul style="list-style-type: none"> The damming of fresh water that does not comply with the conditions of rule 31.1.4.1, <p>Provided the water damming is authorised by a water permit that is due for renewal.</p>
31.1.4.3 Restricted Discretionary Activities	<ul style="list-style-type: none"> Except as provided by rule 31.1.4.4, the damming of fresh water that does not comply with the conditions of rule 31.1.4.1 or the conditions of rule 31.1.4.2.
31.1.4.4 Non-Complying Activities	<ul style="list-style-type: none"> The damming of water (other than as a result of any intake or deflection structure) on: <ul style="list-style-type: none"> (i) the main stem of the Wairoa (including the Left or Right Branches) above its confluence with the Lee River; (ii) the Lee River from its confluence with the Wairoa River to the boundary of the Water Augmentation Infrastructure Area (Waimea Community Dam) other than for damming that operates in association with the Waimea Community Dam; and (iii) the Roding River, from its confluence with the Lee River to the District boundary, <p>Unless the applicable resource consents for the Waimea Community Dam lapse.</p>
31.1.5 Damming and Diversion of Flood Waters	
31.1.5.1 Permitted Activities	<ul style="list-style-type: none"> The damming and diversion of flood waters by any structure is a permitted activity that may be undertaken without a resource consent, <p>Provided it complies with the specified rule conditions.</p>
31.1.5.2	<ul style="list-style-type: none"> The damming and diversion of flood waters by any structure that does not comply with the conditions of rule 31.1.5.1.

Restricted Discretionary Activities	
31.1.6 Diversion and Take of Water from Naturally Occurring Wetlands	
31.1.6.1 Discretionary Activities	<ul style="list-style-type: none"> The diversion and take of water from a naturally occurring wetland including the diversion of water by the infilling of a wetland. <p>[Note: the rule goes on to describe what constitutes a wetland]</p>
31.1.7 Site-to-Site Transfer of Water	
31.1.7.1A Permitted Activity (Site-to-Site Transfer of Water Take – Waimea Community Dam)	<ul style="list-style-type: none"> The transfer, including a transfer for a limited period (being a period less than the duration of the water permit in question) to another site of all or part of the interest in any water permit to take or use water that is affiliated to the Waimea Community Dam, <p>Provided it complies with the specified rule conditions.</p>
31.1.7.1 Controlled Activities	<ul style="list-style-type: none"> The transfer, including a transfer for a limited period (being a period less than the duration of the water permit in question) to another site of all or part of the interest in any water permit to take or use water, that does not comply with the conditions of 31.1.7.1A, <p>Provided it complies with the specified rule conditions.</p>
31.1.7.2 Restricted Discretionary Activities	<ul style="list-style-type: none"> The transfer, including a transfer for a limited period (being a period less than the duration of the water permit in question) to another site of all or part of the interest in any water permit to take or use water, <p>Provided it complies with the specified rule conditions.</p>
31.1.7.3 Non-Complying Activities	<ul style="list-style-type: none"> The site-to-site transfer of a water take that does not comply with the conditions of rule 31.1.7.2.
Schedules	
Schedule 30A	Uses and Values of Rivers, Lakes, Wetlands, Aquifers and Coastal Waters
Schedule 31A	Duration of Resource Consents
Schedule 31AA	Duration of Resource Consents – Assessment Matters
Schedule 31B	Water Meter Requirements
Schedule 31C	Triggers for Rationing and Minimum Flows
Schedule 31D	Reservation of Water
Schedule 31E	Requirements for Irrigation and Nutrient Management Plans
Schedule 31F	Nutrient Allowances (note currently in use)