

# CHAPTER 30: TAKING, USING, DAMMING AND DIVERTING WATER

## 30.0 INTRODUCTION

### 30.0.1 Water Resources of Tasman District

The Council has good hydrological records for the larger rivers in the District and a good understanding about frequency of floods and low flows in these rivers. It continues to collect information about water flows and levels, and about the adverse effects of reduced water flows on instream uses and values to better understand the relationship between water abstraction, river hydrology, aquatic habitats, and other water uses.

The Council also has a good knowledge about the interconnections between ground and surface water resources, recharge mechanisms, and rates and extent of groundwater resources in the Waimea and Motueka plains and in the Moutere Valley. It continues investigations to define more accurately the groundwater resources, particularly those of the Takaka Valley, the Upper Motueka Valley and the deep Moutere aquifers. The Council recognizes the importance of good hydrological data and information about interconnections between water bodies and water use relationships in making robust and equitable water management decisions. It is committed to the on-going collection and analysis of this information.

#### 30.0.1.1 Takaka/Aorere/West Coast

The rivers in Tasman District vary greatly in character. In the west the rivers drain the high rainfall areas of Golden Bay. The rivers there frequently have large floods but also have long settled periods.

The Aorere River is a major river, flowing through a dairy-farming valley. To the west of the Aorere, there are several catchments flowing to the west coast, including the Patarau and Anatori rivers. High rainfall and plentiful water are features of this part of Tasman District.

The Takaka River includes the Cobb, Anatoki and Waingaro tributaries. There are several coastal rivers like the Pariwhakaoho and Onekaka north of Takaka flowing directly to the sea. The Takaka valley contains the major marble and limestone karst aquifers associated with Te Waikoropupu Springs. The Cobb Power Station is located in this catchment.

#### 30.0.1.2 Motueka

The rivers in the Motueka River catchment are more diverse. The western tributaries (notably the Wangapeka and Baton rivers) have larger flows more representative of the higher rainfall Golden Bay area. They contrast greatly with the small rivers such as the Dove, Stanley Brook and Motupiko rivers draining the Moutere Hills as these can dry up completely in summer. The catchment also includes the nationally recognised Mt Arthur karst cave system. A high-yielding aquifer comprised of three interlinked layers underlies the central part of the Motueka Plains. Computer modelling has been used to provide information about sustainable yields and predict effects of various water management regimes for these aquifers.

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The Motueka and Riuwaka rivers contain important trout fisheries. There is a Water Conservation Order over the Motueka River, which is a nationally significant trout fishery and has high natural and intrinsic values.

#### 30.0.1.3 Abel Tasman/Marahau

This area is predominantly within the National Park. Main rivers are the Marahau, Otuwhero and Wainui which all drain Separation Point Granite and have stable base flows. Main water use is by settlements adjacent to the Park and by Department of Conservation campgrounds and huts within the Park.

#### **30.0.1.4 Moutere**

The Moutere catchments and adjacent coastal catchments from Appleby to Lower Moutere have low summer flows and many headwater streams are dry in summer. The three deep Moutere aquifers lie under the Moutere valley and may extend into the Waimea Basin, Motueka Plains and south to Lake Rotoiti.

#### **30.0.1.5 Waimea**

Between the Moutere Hills and the Richmond ranges is the Waimea River system which partially drains Moutere hill country with small rivers to the west of the catchment, often drying completely in summer. Rivers draining the Richmond ranges to the east have more reliable flows from the ultramafic rocks of the Red Hill/Maungakura and the eastern Nelson hills.

The Waimea water system also comprises three main aquifers and computer modelling has been used to provide information about sustainable water management from the ground and surface water systems.

#### **30.0.1.6 Upper Buller**

The Buller catchment just upstream of Lyell is within Tasman District and includes the Matiri, Gowan/Te Kauparenu, Matakītaki and Lower Maruia rivers, and lakes Rotoiti and Rotoroa. Abstractive water use is low. The Buller River has important instream values. They are recognised in the Water Conservation (Buller River) Order 2001 (*refer Annex 1*).

#### **30.0.1.7 Wetlands**

Wetlands are found, in varying forms, from mountain ranges to coastal estuaries. While there are wetlands in the conservation estate, these are generally at higher altitudes, and most of the remaining lowland wetlands, particularly those at altitudes below 100 metres above sea level, are in private ownership. International convention and national legislation recognise the importance and scarcity of this unique and valuable ecosystem and the need to preserve and protect it.

A preliminary study of wetlands in the District shows an almost total loss of naturally occurring wetlands from the Motueka and Moutere ecological districts, and significant losses (over 70 percent) of wetlands from Waimea and Golden Bay. Few large wetlands remain and of the remaining wetlands, more than half are less than 0.5 hectares in size or are not naturally occurring.

Part V deals with activities relating to the taking, diversion and damming of water from wetlands. Other parts of the Plan dealing with wetlands include Part II in relation to controls over vegetation removal and land disturbance. Part IV considers activities carried out in river and lake beds and Part VI considers discharges of water and contaminants. All of these parts of the Plan provide a complementary approach to the management of wetlands.

### **30.0.2 Uses and Values of Water**

Water is a public natural resource. The Plan aims for an integrated approach to the management of water by managing water as part of an ecosystem, with uses and values that are required to be sustained.

#### **30.0.2.1 Surface Water Uses and Values**

Water is a public natural resource. The District's freshwater resources have a wide range of uses and values, both instream values and value through use of abstracted water. Instream uses and values include use of water for recreation activities, harvesting of fish and aquatic plants, values for public health, and aesthetic, ecological, cultural, spiritual, intrinsic and natural values.

Abstracted or dammed water also has a range of public and private uses and values, including water supply for urban uses, fire-fighting, hydro-electric power generation, industrial, irrigation and other commercial uses.

These are beneficial uses of water and the benefits are realised by individuals, communities, Tasman District and the nation in varying degrees. Benefits of water use provide for the economic and social well-being of the District through provision of wealth and jobs such as through horticultural or industrial uses of water. In addition to these benefits, hydro-electric power generation also has benefits relating to the production of renewable energy. In some cases, water use activities, such as damming, can result in benefit by augmenting the water resource and thus increase the range of values the water body may have. Health benefits arise from community water supply, and individuals also gain benefit from private use of water for swimming pools and amenity garden irrigation. The Council recognises the benefits of water use to community health and its social, economic, and cultural wellbeing through the allocation of water, establishment of allocation limits, and on the priority order for restrictions on water takes during times of low flow.

Contaminants may enter water bodies either directly or through diffuse runoff. The quantity of water present affects the water bodies' ability to assimilate the contaminants. Council manages the effects of discharges in Part VI of the Plan, but also recognises that there is a connection between water quantity and water quality in this part of the Plan.

### **30.0.2.2 Groundwater Uses and Values**

The groundwater resources of the District also have a range of uses and values dependent on adequate water levels being maintained in each aquifer. There is considerable abstractive use made of most groundwater resources for a range of purposes, including community supply, domestic use, stock use, and irrigation. Groundwater resources in karst terrain also have significant ecological, intrinsic and recreational values and have an important role in creating karst features, landforms and ecosystems. They may also contain phreatic communities of underground fauna whose water quality and quantity needs are not well understood.

Some groundwater resources also sustain important uses and values of surface water resources, such as special aquatic ecosystems and fisheries. The Te Waikoropupu Springs, alluvial coastal springs such as Neimann and Pearl creeks, and the Riuwaka River are particularly significant examples. The Te Waikoropupu Springs also has particularly significant value as a taonga to Māori, as well as the community at large.

### **30.0.2.3 Wetland Uses and Values**

Some water bodies such as wetlands and lakes have particular significance because of their limited number and extent, and high value as natural ecosystems. The Act requires the Council to recognise and provide for the preservation of the natural character of wetlands and their margins and their protection from inappropriate use and development.

Wetlands have a range of natural functions; physical, chemical and biological ecosystem processes; and biodiversity and habitat values that are unique, scarce and important. Wetland values include maintaining or improving water quality, providing aquatic and semi-aquatic habitat for fisheries and fish spawning (especially native fish, including eels), and a wide range of plants and fauna, flood control, natural character, natural heritage and landscape values, intrinsic and ecological values, and, aesthetic, cultural and spiritual values, including tangata whenua values. Wetlands can function as carbon and nutrient sinks. They also have recreation values for hunting and fishing. Wetlands have traditionally been places for gathering mahinga kai and a range of other cultural materials important to the customs and economy of tangata whenua.

Wetlands improve water quality by filtering sediment and pollutants such as fertiliser and bacterial contamination from run-off and help by denitrifying groundwater flowing through them. This is also the case for the small wetlands draining into Lake Rotoiti that help maintain lake water quality. Some wetlands host a range of rare native fish, including the giant kokopu and the mudfish and rare plant associations. Wetlands adjacent to estuaries provide important habitat for a wide range of plants and animals.

#### **30.0.2.4 Coastal Water Uses and Values**

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Coastal water, which is a public natural resource, also has a range of uses and values in addition to its natural, habitat, cultural, spiritual and intrinsic values, such as abstractive uses for fish and shellfish processing. Coastal waters in estuaries support particularly important fishery and wildlife ecosystems and in being the medium for mussel farming.

Council has distinguished between open coastal water, being that adjoining the open sea coast between Kahurangi Point and the Farewell Spit lighthouse; and inshore coastal water, being the waters of Golden Bay/Mohua and Tasman Bay/Te Tai-o-Aorere, and the estuaries of the western coastline of the District. Council has not identified issues relating to the open coastal water of the District, and this Chapter contains no provisions about this resource.

Further information on the characteristics and qualities of coastal water should be sought through state of the environment monitoring, baseline information required with coastal permit applications, and effects monitoring conditions incorporated in coastal permits.

#### **30.0.2.5 Tangata Whenua Values**

Water is of great significance to tangata whenua — it is an essential element to all life. As kaitiaki, or guardians, tangata whenua believe that the maintenance of the mauri, or life-supporting capacity of water, is fundamental to ensuring the physical and spiritual survival of all living things. A water body with an intact mauri is able to sustain healthy ecosystems.

The mauri of water is sacred and is a link to the source of tribal creation traditions. In Māori mythology, water represents the lifeblood of Papatuanuku and the tears of Ranginui. Water symbolises the spiritual link between the past and the present and is regarded with great respect. Customary lore and practices, or tikanga Māori, regulate the way in which water resources are used and conserved in order to protect and sustain the mauri of the water body for future generations.

The interrelationship of the spiritual dimension with the physical can be illustrated by the many names that tangata whenua have for water and the way that they classify it. For instance:

- Waiora is of spiritual significance and is used in baptism.
- Wai Māori is water used for everyday purposes.
- Wai Mate is water that has lost its life-supporting capacity, or mauri. It has been damaged or polluted beyond its capacity to rejuvenate either itself or other living things.
- Wai Kino is water that has been spoiled or polluted.

Rivers are a source of water and have a mauri and mana of their own. They are entities with a distinct essence and identity with which tangata whenua affirm their relationship to the environment. Tangata whenua have a relationship with the entire river system, not any one component. Rivers are the lifeblood of the land and therefore the well-being of a river reflects the well-being of the land and people who live around it.

Water bodies provide tangata whenua with mahinga kai and other cultural materials and taonga. Therefore, the maintenance of the quality and quantity of water is vital to sustain habitats important for mahinga kai. The mahinga kai custom involves the management and utilisation of the resources of waters for the sustenance of life, the mauri and human wellbeing. Traditionally, the abundance of food found in water bodies reflected the wealth and mana of the tangata whenua and their success as rangatira and kaitiaki in preserving their local resources and cultural traditions.

Tangata whenua have a long association with water bodies in Tasman, therefore there are many wāhi tapu, or sacred places found in or next to water bodies in the District. These wāhi tapu are of great significance to tangata whenua and are integral values to be protected by this Plan.

The Act requires that the Council recognise and provide for the relationship of Māori and their culture and traditions with their ancestral lands, water wāhi tapu and other taonga. It also requires Council to have particular regard to kaitiakitanga and to ensure that the Plan takes into account the principles of the Treaty in the management of the District's water resources. These principles include the active protection of Māori rights and interests, consultation, and each partner acting in good faith towards each other.

Restoration, protection and enhancement of the life-supporting capacity of waters, and avoidance or mitigation of all forms of water contamination are directives under the Act fully in accord with kaupapa and tikanga Māori. Concerns about protection of fresh water from overuse are not uniquely Māori issues. These are matters of public concern to which tangata whenua have added their significant cultural perspective, and Council will take heed of these concerns through its Plan.

Kaitiakitanga can be expressed through the control and regulation of the effects of human action on the environment and thus supports participation by iwi in the preparation, implementation and monitoring of this Plan.

### **30.0.3 Sustainable Water Management**

The significant uses and values of water bodies that may be adversely affected by reduced water quantity are identified in Schedule 30A of this Plan. Council also maintains a detailed complementary database that lists the range of uses and values for specified water bodies and parts of water bodies. This database is being continually updated as more information is collected through ongoing investigations and consultation. Council intends to undertake water classification, which is addressed in Part VI, and which establishes water quality standards to meet specified uses and values, in a manner consistent with this database and to ensure that the water management objectives in both parts of the Plan are consistent and integrated.

Sustainable water management means that the significant uses and values of a water body that may be adversely affected by reduced water level or flow are identified, and any water allocation regime takes them into account.

As part of the requirement for sustainable water management, the Act specifies certain nationally important natural and cultural values to be particularly recognised and provided for or have regard to. These include:

- (a) preserving the natural character of wetlands, lakes and rivers and their margins, and the protection of them from inappropriate development (Section 6);
- (b) protecting outstanding natural features and significant habitats of indigenous fauna (for example, indigenous fish, eels and wildlife) (Section 6);
- (c) intrinsic values of ecosystems (Section 7);
- (d) maintenance and enhancement of amenity values and the quality of the environment (Section 7);
- (e) protecting the habitat of trout and salmon (Section 7);
- (f) any finite characteristics of any water body.

Sustainable allocation limits for water 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. In relation to surface waters, these are usually described as instream values and uses, such as the maintenance of healthy freshwater life and associated recreational, cultural, spiritual and aesthetic needs. Reduced flows can give rise to habitat loss, increased temperature, and other adverse water quality effects. Investigations and continued monitoring are needed to define or further confirm flow needs of aquatic life, recreational and other instream interests, and to determine effects of activities on them.

Ways the Council sets sustainable allocation limits for surface waters include minimum flow regimes and allocation limits (maximum allocatable volumes or flow rates). Council manages the allocation of water from interconnected water bodies by establishing water management zones. The zones may include both surface and groundwater bodies which have common policies and rules.

For groundwater, potential adverse effects which may limit the sustainable use of the aquifers include reduced water yields because of excessive watertable drawdowns, seawater intrusion, aquifer compression, excessive induced seepage from connected surface waters, and changes in groundwater recharge or quality because of land use practices. Investigations and continued monitoring into groundwater and associated hydrological systems are essential so that sustainable allocation limits can be established and refined. Council sets limits for groundwater by establishing minimum water levels and associated pumping regimes, maximum allocatable volumes or yield rates, and minimum bore spacings.

Limits may be set in conservative or precautionary terms or may be set in response to problems. The Council will determine how much investigation and monitoring is necessary to support the limits to be set, and the precise threshold limits to sustain a water resource. Previous experiences in water allocation in the District have indicated the difficulties facing communities and the Council when over-allocation has caused local water resources to go dry, or it has caused surface water flows and groundwater levels to be reduced to unsustainable levels or it has reduced security of supply for existing water users. This has resulted in problems in reducing authorised and actual usage to restore the resource to a more sustainable level of allocation in the Moutere Surface Water and Wai-iti zones and other zones in the Waimea Water Management Area should the Waimea Community Dam not be constructed. Any new limits or reviews of the established allocation limits and water allocation policies that may be required following further investigations will be subject to consultation with water user committees, water users and the community before the Plan is changed.

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Water flow regimes and water allocation limits will be revised where water augmentation increases the amount of water available to supply additional water for abstractive users while ensuring that instream values are provided for.

### 30.0.3.1 Integrated Catchment Management

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There is a risk to the quality of water as land use intensifies, including through the use of water to irrigate land. Land use intensification has the potential to increase the amount of nutrients, especially nitrate-nitrogen and phosphate, in run-off to surface water and through leaching to groundwater.

Groundwater in the Waimea Plains aquifers has high nitrate in places both from the current and historic pattern of land use. While trends in the nitrate concentrations are mostly decreasing, the increased intensification of land use enabled by the proposed Waimea Community Dam is a risk to groundwater quality and surface water quality in the Neimann, Pearl and lower O'Connor creeks.

Provisions in Part VI address this risk and include management of the contamination risks through controlling the effects of taking and using water for irrigation.

### 30.0.4 Activities with Adverse Effects on Water Bodies

There are several activities that may reduce the amount of water or alter natural flow regimes and cause adverse effects on the uses and values of the water body. The activities are:

- (a) Taking water from water bodies.
- (b) Changes in land use, particularly establishment of tall vegetation.
- (c) Reductions in bed levels by gravel extraction from riverbeds.
- (d) Dams for hydro-electric power generation or for water storage or water harvesting.
- (e) Diversion of water from a water body, which includes drainage of wetlands.
- (f) Infilling wetlands.

These activities may reduce surface water flows, lower groundwater levels, or reduce recharge rates.

The adverse effects of these activities include:

- (i) adverse effects on the life-supporting capacity (the mauri) of the water of any of the above water activities or the mixing of waters from different water bodies;
- (ii) 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;

- (iii) aquifer damage by seawater intrusion, compression, and excessive drawdowns;
- (iv) reduction in the capacity of a water body to assimilate contaminants;
- (v) adverse effects on other abstractive users of water;
- (vi) adverse effects on the natural, cultural and intrinsic values of wetlands;
- (vii) 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;
- (viii) adverse effects on important values, including the mana of tangata whenua and the ability of tangata whenua to provide hospitality to visitors.

#### 30.0.4.1 Water Abstraction

The taking of water from water bodies and the margins of others has the potential to cause reduced levels or flows in any water body. Water takes can be significant, individually or cumulatively.

Fresh water is a seasonally changing natural resource. Often, demand for its use is greatest when it is least available. Parts of the District, including the Waimea and Moutere river catchment, some of the Motueka-Riwaka Plains areas, and parts of the eastern Takaka Hills, already face significant water shortage and allocation problems during the summer months.

Two thirds of water takes authorised by resource consent take from groundwater, while the remaining third take from surface water bodies, including dams. Storage dams are a major source of water in the water short Moutere catchment. Overall, irrigation accounts for about 90 percent of water takes.

There is a long history of irrigation in the Waimea and Motueka areas and these water resources also meet community and industrial needs of Richmond and Motueka. In the Waimea area and in the Moutere catchments, Council is committed to investigating options for augmenting water supplies, including options for funding to meet demands of water users as well as needs of instream water uses and values. Council is committed to improving flows in the Waimea River to protect instream habitat and maintain and improve water users', including community users', security of supply as this river is being adversely affected by the current water abstraction. It has identified an augmentation dam on the Upper Lee River as its preferred solution to meeting the current and potential future values and uses of the Waimea River and Waimea Plains groundwater.

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A revision of water resource data for the Waimea Plains shows that, as the river flows drop, the connection between river flows and groundwater is much more critical than previously modelled. There is significantly more water flowing from the river to groundwater during low flow conditions. It is now evident that without augmentation, there is much less water available to:

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- meet allocation limits to a desirable security of supply,
- maintain minimum flows to protect instream values of the Waimea River,
- prevent seawater intrusion,
- maintain coastal spring flows,

in the Waimea Plains water management zones (excluding the Wai-iti and Wai-iti Dam Service zones) than previously understood.

Council operates a Dry Weather Task Force (DWTF) with representatives from a range of organisations with an interest in water management, including iwi, Nelson Marlborough Fish and Game Council, Department of Conservation and representatives from water user committees to assist in the management of water during droughts. The DWTF is consulted during droughts and the members provide input into decisions about rationing and other drought management measures that could be adopted as well as liaison with the members of their groups.

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Council is addressing the over-allocation of water in the Waimea Plains zones by supporting the community-based Waimea Water Augmentation Committee in providing for water augmentation through a dam on the Lee River. Resource consents to construct, operate and maintain the Waimea Community Dam on the Lee River have been granted.

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Other water bodies are facing increasing demand from water users because of changing land uses, including rivers in the Motueka and Takaka catchments where there is increasing irrigation of dairy land and horticultural crops. Council must allocate water from the Motueka and Buller rivers in a way that is consistent with their Water Conservation Orders and is continuing its investigation into the water resources of the Takaka Valley. The Act requires available water to be allocated on a “priority-in-time” or “first-come, first-served” basis, in the absence of allocation policies or rules. The Act exempts minor individual domestic or stock-watering needs from having to obtain a water permit, provided there are no adverse effects on the environment, but otherwise creates no priority for these uses. Fire-fighting water may be taken under all circumstances.

Provided sustainable allocation limits are either set or acknowledged in terms of the above requirements, then the Act leaves open the question of whether any uses or values may be reserved or preferentially allocated through policy-making under plans. The Council has identified significant future public needs for water for which reservation of water is justified. It will specifically reserve water within any sustainable allocation limit for future community needs and for the irrigation of Māori perpetual lease land 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.

Different water management zones have varied values and uses and different patterns of land and water use. This may result in different management objectives and methods being used for different water bodies. In addition, the effects of water demand and management history have manifested themselves in slightly different ways in different parts of the District. However, the Council has ensured in this Plan, that its approach to water management is consistent across the District. The plan accounts for any differences in water management between different water bodies and the level of regulation will reflect the appropriate level of protection for water bodies and amount of competition between users.

Once a sustainable allocation regime has been established, the Council calculates the amount of water available to be abstracted from the water body, taking into account the desirable security of supply. It identifies triggers such as specific river flows, groundwater levels, or salt levels in groundwater that cause rationing to be imposed. Rationing is the mechanism the Council uses to reduce the total amount of water taken by users in a water management zone so that the flow or level can be maintained. Rationing is imposed on individual permits, although one permit may supply water to several properties. 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.

Other changes in the pattern of water use are occurring as a result of increasing amounts of water being taken to protect susceptible crops from damaging effects of frost. Fruit blossom of crops, especially kiwifruit, are prone to damage by late frosts. Water is sprayed on the vines to provide protection for the developing fruit.

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Effects of taking water for frost protection are different from effects arising from water takes for irrigation during summer. While flows are usually higher during autumn and spring, the aquatic habitat requirements are also different. For example, the higher flow needs of spawning fish and sufficient flow through gravels to protect incubating eggs are particularly important.



The cumulative effects of water taken for frost protection have the potential to cause adverse effects especially on the spawning habitat of trout. Flow management provisions to protect spawning trout will help protect the spawning requirements for other fish.

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#### **30.0.4.2 Vegetation Changes**

Land use activities such as vegetation change can have a significant effect on water quantity. A catchment with a forest or tall vegetation cover will generally have a lower annual run-off than a similar catchment under pasture. The changes in water yield following vegetation changes are dominated by changes in the interception characteristics of the vegetation. That is, rainwater is intercepted by the foliage and evaporated back into the air and more rainwater is lost in this way from tall vegetation cover than from pasture cover.

This process has important consequences for water resources: a change from short to tall vegetation covers may cause a decline in surface water yields and, if the catchment also recharges groundwater, then groundwater yields may also decline. Both instream values and the opportunities for continuing or new abstractions of water for irrigation or other purposes may be adversely affected by such declines.

This adverse effect on yields of surface water is best known for areas located on the Moutere gravel formation between the Motueka River and the Wai-iti and Waimea rivers in association with the establishment of plantation forests.

Discovery and development of the deep Moutere aquifers has led to concern that an increase in plantation forests in the recharge area for those water resources is likely to adversely affect recharge of the aquifers and affect security of supply for existing users.

Scrub such as fern and gorse may also have adverse water yield effects in comparison with pasture. Council has considered the impact of scrub reversion but judges that the risks to water yield is negligible in comparison with the contribution from new plantation forest. Practical and legal difficulties would also make it difficult for Council to address the effects of these vegetation types.

#### **30.0.4.3 Damming Water**

Dams are valuable for augmenting water supplies in water short areas, and they frequently provide new or enhanced aquatic habitats. However, dams can alter the hydrological regime of a river by stopping or reducing flows during dry periods and preventing natural variations in flow and velocity. They can also adversely affect aquatic habitats, both downstream and upstream of a dam, and adversely affect the passage of fish and eels, alter natural sedimentation processes, influence the range of fish and eel habitats, and change water quality.

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Dams are an integral part of water management, particularly in water short Moutere gravel catchments.

The effects of dam structures are addressed in Part IV and include assessment of structural stability.

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#### **30.0.4.4 Diversion of Water**

Stopbank systems are a diversion of water that may cause adverse effects on the hydrological regime of a river. Other diversions include temporary or permanent diversions of water flow from the river flow for uses such as hydro-electric power generation.

However, mixing waters from one catchment to another may adversely affect the unique and special mauri of those catchments. There is also the risk of introduction of species to ecosystems where they are not already found and changes to water quality.

Farm drainage activities also divert groundwater or water from surface water bodies, including wet areas in paddocks, and drains can also divert water away from wetlands.

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#### **30.0.4.5 Diversion and Taking of Water from Wetlands**

Drainage of wetlands involves the diversion and taking of water away from the wetland. This adversely affects the hydrological functioning of the wetland and associated water bodies. Wetland drainage and infilling wetlands with soil or other fill adversely affects the range of natural, cultural and intrinsic values that wetlands have. Other activities such as stock grazing and processes, such as sedimentation and pest plant growth, can also reduce wetland values.

Most of the remaining wetlands in the lowland areas below 100 metres above sea level are in private ownership and are vulnerable to economic pressure to develop land. The greatest threats to these wetlands are not so much water abstraction, but rather grazing by stock, drainage and diversion of water from the wetland, infilling, invasion by animal and plant pests, and increased input of sediment and nutrients. For some wetlands, natural or intrinsic values can be lost where excavations to form open water are carried out.

The public's understanding about the high natural and ecological values of wetlands is growing but there is a need to ensure that people are aware of the importance and significance of wetlands.

There is a particular need for the Council to establish partnerships with landowners that recognise, support and build on landowners' stewardship roles in managing wetlands and their margins on private property.

The approach that Council adopts will need to reflect a careful balance between establishing effective wetland management on private property and acknowledging the community uses and values of wetlands. The management of wetlands and their margins is constrained by the lack of information about the location and nature of wetlands in the District, particularly the wetlands with significant local, regional or national values. Without this information, it is difficult to make informed policy decisions about whether and in what circumstances wetland drainage can be permitted under the Resource Management Act.

#### **30.0.4.6 Gravel Extraction**

Gravel extraction may change the shape of a riverbed and affect water flow and quality, groundwater recharge, velocity, and the amount of aquatic habitat. Effects of these changes may be either adverse or beneficial depending on the situation. Beneficial effects can include increasing water depth and improving aquatic habitat. Adverse effects on river ecosystems and their uses and values can include the loss of traditional mahinga kai resources. The removal of gravel may cause the bed of a river to drop causing a range of adverse effects on the river ecosystem. Gravel extraction can also lead to channelisation and realignment of water flows with adverse effects on fish and eel habitat.

A number of the riverbeds in Tasman District are degrading in places, and the processes involved in river channel changes are gradual. The adverse effects of gravel extraction from the Wai-iti River on water availability from adjacent aquifers are well documented. Computer modelling also shows that gravel extraction – and hence lowered riverbed levels - from the Motueka River near Woodmans Bend could reduce recharge into the Motueka Plains aquifers adjacent. Recent modelling shows that groundwater levels in the Motueka Plains aquifer would be reduced by 0.1 metres if the bed levels in the lower Motueka River are lowered by 0.3 metres. These effects are recognised and provided for in this part of the Plan and effects of the gravel extraction activities are accounted for in Part IV.

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Gravel is occasionally removed or moved within rivers in the Moutere gravel derived catchments to enhance access to surface water. Adverse effects on other water users' access to water and on channel capacity need to be managed.

This part of the Plan deals with the effects of gravel extraction on the quantity of water in rivers and in adjacent aquifers. Part IV considers the effects on river channels, instream habitats and other values, and continues regulation of this activity.

### 30.0.4.7 Competing Water Demands

The Council must first establish the minimum flows or aquifer levels needed to protect the instream uses and values of water bodies. Once these have been established, an allocation limit can be calculated that defines the amount available for out-of-stream use.

There is competition for the water that is available for abstractive use. Competition exists between different end users such as community, industrial and irrigation users. There is also competition within the user groups, e.g. between irrigators.

The Council must allocate (and re-allocate) water between these competing demands in a way that results in equitable access to water for all water users.

The Council must balance the need for water by individual water users with the need to ensure that all water users have an acceptable security of supply and are not subject to an unreasonable level of rationing during low-flow periods. In achieving equitable water allocation between these competing water users, the Council seeks the efficient use of water. It also seeks to ensure equitable allocation of water between present and potential water users.

The Council notes that for users in the water short Wai-iti Zone and the Moutere Surface Water Zone, historical allocation of water has been such that users do not have a desirable security of supply. These zones are considered to be over-allocated.

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Abstractive water users in most of the Waimea Water Management Zones have low security of supply as a result of past allocation and relatively recent findings about groundwater and surface water interactions. Without the proposed Waimea Community Dam, water security will continue to be low in these zones with respect to the Council's security of supply standard.

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The proposed Waimea Community Dam will enable existing water users to significantly improve their security of supply provided they are affiliated to the Dam. New water use is also provided for by the dam.

### 30.0.4.8 Augmenting Water Supplies

In the areas of the District where there is insufficient water to meet all the demands placed on the resource, there may be opportunities for augmenting supplies in some areas. This is particularly relevant for the Waimea and Moutere water management zones where there is insufficient water to meet all present and future potential demands for water. Council is particularly committed to meeting water demands for both abstractive and instream water users in the Waimea water management zones and is co-ordinating and supporting the development of a community water supply dam on the Lee River, the Waimea Community Dam.

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Augmentation options include discovery of new groundwater resources, for example the deep aquifers of the Moutere may be found to extend over a larger area. Augmentation through harvesting water in dams and reservoirs at times of high flow is a common augmentation option. Transfer of water within catchments or between water management zones may also be used to augment supplies in water short areas.

Water augmentation may enable water to be used by a greater number of users. It may also enhance or maintain instream uses and values, or it may offset or mitigate adverse effects of water use or reduced water flows.

Water augmentation can improve the security of supply for water users by ensuring that there is water available for abstraction when natural flows or water levels are insufficient to meet demand, or it can be used to meet day-to-day water demands.

Where water is stored in reservoirs or impoundments constructed away from the river bed, adverse effects on the water body, including adverse effects on fish passage, are more easily avoided.

Measures to reuse or recycle water will also contribute to enhancing water availability and its efficient use.

## 30.1 REDUCED WATER BODY FLOWS OR LEVELS

### 30.1.1 Issue

A number of activities, including:

- (a) water abstraction;
- (b) reductions in bed level by gravel extractions;
- (c) dams;
- (d) changes in vegetation from short to tall vegetation;
- (e) 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.

### 30.1.2 Objectives

**30.1.2.1** The maintenance, restoration and enhancement, where necessary, of water flows and levels in water bodies that are sufficient to:

- (a) preserve their life-supporting capacity (the mauri of the water);
- (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
- (c) maintain their ability to assimilate contaminants.

**30.1.2.2** The maintenance, restoration and enhancement, where possible, of the quality and extent of wetlands in the District.

### 30.1.3 Policies

*Refer to Policy sets 27.3.3, 27.5.3, 30.1.3, 30.2.3, 30.3.3.*

*Refer to Rule sections 16.12, 18.3, 18.4, 28.2, 28.5, 31.1, 31.2, 36.4.*

#### Water Body Management

**30.1.3.1A** To avoid the loss of river extent and values, unless the Council is satisfied that:

- (a) there is a functional need for the activity in that location; and
- (b) the effects of the activity are managed by applying the effects management hierarchy.

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**30.1.3.1** 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:

- (a) the uses and values of water bodies identified in Schedule 30A, particularly the internationally, nationally and regionally significant uses and values of water bodies;

- (b) 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;
- (c) the capacity of water bodies to dilute contaminants;

by taking into account the management objectives specified for each of the water bodies in Schedule 30A.

**30.1.3.2** 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:

- (a) the range and significance of the existing and potential water body values and uses;
- (b) adverse effects from existing and potential abstractive water users and land use activities affecting water quantity;
- (c) natural flow characteristics;
- (d) practical monitoring and enforcement needs;
- (e) contributions to water flows and levels from dams.

**30.1.3.3** 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.

**30.1.3.4** To establish the sustainable yield of aquifers taking into account:

- (a) depletion of aquifer yields;
- (b) reduction of connected surface water flows, including coastal springs and wetlands;
- (c) potential for compression of the aquifer;
- (d) potential contamination of the aquifer by seawater intrusion;
- (e) potential for excessive drawdown of groundwater levels;
- (f) presence and significance of living organisms naturally occurring in the aquifer;
- (g) effect of land use activities on recharge of the aquifer;

to avoid:

- (i) long term aquifer depletion;
- (ii) drying up of surface waters;
- (iii) compression of the aquifer;
- (iv) irreversible seawater contamination of the aquifer;
- (v) over-allocation of water from the aquifer.

**30.1.3.5** 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).

**30.1.3.6** To ensure that the water allocation limits take into account effects of other activities and events on availability or yield of water, including:

- (a) potential water yield reduction effects arising from land cover changes such as changes to tall vegetation or urbanisation;
- (b) climate change, including changes to drought frequency;
- (c) effects of dams and other water augmentation or storage schemes;
- (d) effects of gravel extraction.

- 30.1.3.7** 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: C24 12/08  
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- (a) impact of groundwater abstraction on flows in the Motueka River;
  - (b) the cumulative effects of takes in the Central Plains Zone on the potential for seawater intrusion, especially in the Hau Zone;
  - (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;
  - (d) irrigation needs of land in the Middle Motueka and Upper Motueka water management zones;
  - (e) desirable security of supply standards for abstractive water users;
  - (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;
- 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.
- 30.1.3.8** To ensure that water takes from the Te Matu Zone avoid, remedy, or mitigate adverse drawdown effects on other water users and to:
- (a) require bore testing, including step drawdown and constant discharge tests to assess localised drawdown and hydraulic characteristics; and
  - (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.
- 30.1.3.8A** The passage of fish is maintained, or is improved, by instream structures, except where it is desirable to prevent the passage of some fish species in order to protect desired fish species, their life stages, or their habitats. NPS-FM  
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### Water Takes

- 30.1.3.9** To manage the allocation of water taken from water bodies so that the cumulative effect of water takes does not exceed: C24 12/08  
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- (a) the stated flow or water level regime;
  - (b) any allocation limit for water takes for consumptive use for the water body;
  - (c) the sustainable yield of the aquifer;
- provided that harvesting water during times of high flow may be considered, if adverse effects can be avoided, remedied, or mitigated.
- 30.1.3.10** 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)*
- 30.1.3.11** 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.

**30.1.3.12** 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:

- (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.

**30.1.3.13** 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:

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- (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).

**30.1.3.14** To avoid, remedy or mitigate adverse effects of water takes from the Riuwaka River for frost protection by:

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- (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;
- (b) assisting the Riwaka Water User Committee to ensure that the minimum flow is maintained;
- (c) requiring time-stamped water metering for water takes used for frost protection;
- (d) carrying out resource investigation to understand more about the relationship between water takes for frost protection on river flows;
- (e) limiting takes for frost protection to land within the Riwaka Water Management Zone.

**30.1.3.15** Except as otherwise provided by a water conservation order, to manage the allocation of water for consumptive uses from rivers that have:

- (a) no minimum flow or allocation limit specified in this Plan or water conservation order and;
- (b) regionally or nationally significant aquatic habitat value as identified in Schedule 30A;

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.



**30.1.3.16** Except:

- (a) as otherwise provided by a water conservation order, or
- (b) for rivers in the Moutere gravel catchments;

to manage the allocation of water for consumptive uses from rivers that: (i) have no established minimum flow or allocation limit; and

- (ii) do not have regionally or nationally significant aquatic habitat value as identified in Schedule 30A;

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.

**30.1.3.17**

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:

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- (a) an alternative supply is considered to be the best practicable option after taking into account:
  - (i) the financial implications of the alternative options compared with the proposed take;
  - (ii) the extent to which the alternative options have more or less adverse effects on the environment compared with the proposed take;
  - (iii) the extent to which any alternative may enable more equitable water allocation than the proposed take; or
- (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*)

**30.1.3.18**

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:

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- (a) sustainable yield of the aquifer (*see 30.1.3.4*);
- (b) depth to the aquifer;
- (c) permeability of the aquifer;
- (d) distance from other bores;
- (e) costs of full penetration;
- (f) effects on connected surface water bodies;
- (g) other uses of the water;
- (h) cumulative effects of water takes from bores, including:
  - (i) potential adverse effects of water takes from any bore whether any take is permitted or otherwise;
  - (ii) effects of takes from new bores on existing takes;
  - (iii) effects of existing water takes on any new take from a bore; and
  - (iv) risks for potential water users identified on any Council waiting list;

and declining an application for new bores where:

- (i) bore setbacks and casing requirements for the Moutere groundwater zones are not met, except in exceptional circumstances.

**30.1.3.19** In times of low flows, to use rationing regimes, including rostering, as mechanisms to avoid, remedy or mitigate the adverse effects of water takes.

**30.1.3.20** 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:

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- (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
- (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:
  - (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
  - (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.
- (c) manage effects of water abstraction for any permits where there is no Waimea Community Dam, by:
  - (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;
  - (ii) managing the decision to impose cease take provisions in consultation with the Dry Weather Task Force, taking into account:
    - a) the time of year;
    - b) rate of recession of river flows and groundwater levels and, if relevant, effect of flow releases from any augmentation scheme;
    - c) the current weather and weather forecast;
    - d) patterns of current and likely ongoing water use;
    - e) the extent and effectiveness of any water saving measures already in place;
    - f) changes in salinity levels in groundwater;
    - 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;
    - 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) the pattern of groundwater level changes in bores in the coastal margin of the Delta Zone; and
- (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.

### Gravel Extraction

**30.1.3.21** 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:

- (a) groundwater levels and water yields in adjacent aquifers;

- (b) the flow regime of the river;
- (c) aquatic ecosystems and riparian habitat;
- (d) cultural, spiritual, natural and intrinsic values;

to avoid reducing the:

- (i) desirable security of supply of existing water users;
- (ii) diversity and abundance of aquatic organisms.

### Efficient Use of Water

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**30.1.3.22** 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:

- (a) ensuring allocation limits and allocations of water for abstraction are:
  - (i) calculated with known security of supply; and
  - (ii) regular review of take permits to ensure bona fide water use;
- (b) enabling water to be used for the highest social or economic values by:
  - (i) reserving water for future specified needs;
  - (ii) encouraging the transfer of permits within the same water management zone to help meet demand for water;
  - (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;
- (c) ensuring that the technical means of using water are physically efficient through:
  - (i) allocation of water for irrigation end-uses based on specified soil type and climate application rates;
  - (ii) encouraging the adoption of best practice water use technology and processes that reduce the amount of water wasted; and
  - (iii) the use of water meters;
- (d) investigations monitoring, liaison and provision of information:
  - (i) to water users about how to reduce water use, water use efficiency, re-use of water, use of water, use of water conservation devices or practices; and
  - (ii) to water users and the community about the results of investigations and monitoring;
  - (iii) about water user decisions that affect water use and how these may be managed to improve water use and water allocation efficiency;
  - (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.

### Water Damming

**30.1.3.23** When assessing applications to dam water, to:

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- (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) the uses and values for any water body identified in Schedule 30A;
  - (ii) any flow regime for any river as set out in Schedule 31C;
  - (iii) water levels and flows in connected water bodies, including lakes and wetlands;

- (iv) recreational values;
  - (v) water quality, including management of periphyton;
  - (vi) river ecology and aquatic ecosystems, including passage of fish and eels;
  - (vii) groundwater recharge;
  - (viii) riparian habitat;
  - (ix) downstream land, property and infrastructure at risk from dam failure;
  - (x) other water users;
- (b) maintain, in connected water bodies:
- (i) existing ecosystems to the extent practicable, and
  - (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.

*(See also 30.3.3.2)*

*[Policy 30.1.3.24 is deleted]*

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### Water Diversion

**30.1.3.25** To avoid, remedy or mitigate adverse effects of diversion of water, including

- (a) diversion of floodwater by stopbanks and other structures;
- (b) water augmentation schemes;
- (c) hydro-electric power generation; and
- (d) instream diversion of water;

taking into account effects of the diversion on:

- (i) uses and values of water bodies identified in Schedule 30A;
- (ii) fish and eel passage;
- (iii) actual or potential risks of flooding or erosion;
- (iv) actual or potential impact on river sediment and gravel transport processes;
- (v) water quality;
- (vi) aquatic and riparian ecosystems, including wetlands and habitats for indigenous vegetation or fauna;
- (vii) any relevant water allocation limits;
- (viii) other water users.

### Wetland Management

**30.1.3.26A** The loss of extent of natural inland wetlands is avoided, their values are protected, and their restoration is promoted, except where:

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- (a) the loss of extent or values arises from any of the following:
  - (i) the customary harvest of food or resources undertaken in accordance with tikanga Māori
  - (ii) restoration activities
  - (iii) scientific research
  - (iv) the sustainable harvest of sphagnum moss
  - (v) the construction or maintenance of wetland utility structures (as defined in the Resource Management (National Environmental Standards for Freshwater) Regulations 2020)

- (vi) the maintenance or operation of specified infrastructure, or other infrastructure (as defined in the Resource Management (National Environmental Standards for Freshwater) Regulations 2020
- (vii) natural hazard works (as defined in the Resource Management (National Environmental Standards for Freshwater) Regulations 2020); or
- (b) the regional council is satisfied that:
  - (i) the activity is necessary for the construction or upgrade of specified infrastructure; and
  - (ii) the specified infrastructure will provide significant national or regional benefits; and
  - (iii) there is a functional need for the specified infrastructure in that location; and
  - (iv) the effects of the activity are managed through applying the effects management hierarchy.”

**30.1.3.26** 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.

**30.1.3.27** 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:

- (a) it is predominantly in its natural state;
- (b) there is biological diversity or representativeness of aquatic or associated terrestrial species or habitats;
- (c) it has threatened species' habitat values;
- (d) it is an area of predominantly indigenous vegetation;
- (e) it contains indigenous dune vegetation, salt herb fields or coastal shrublands;

and to take into account the following criteria in assessing significance:

- (f) the extent to which it improves or maintains water quality by providing a buffer between adjacent land use activities and any water bodies;
- (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;
- (h) if it is adjacent to the coastal marine area;
- (i) the extent to which it has specific cultural or spiritual significance.

**30.1.3.28** To encourage, promote and support:

- (a) the protection and maintenance or enhancement of naturally occurring wetlands;
- (b) the construction of further wetlands; and
- (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;

including the creation of wetlands following gravel extraction.

**30.1.3.29** To encourage, promote and support appropriate management of naturally occurring wetlands to:

- (a) control animal and plant pests;
- (b) exclude stock grazing from wetlands;

- (c) protect wetlands from inappropriate land use, including land drainage and infilling;
- (d) maintain water levels to protect wetland values.

**30.1.3.30** 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:

- (a) identify wetland values;
- (b) identify management options for protecting, maintaining and restoring wetland values, having regard to development options of adjacent productive land; and
- (c) to fund or assist in carrying out works and other activities to protect and restore wetland values.

**30.1.3.31** 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.

### **New Plantation Forest**

**30.1.3.32** 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.

**30.1.3.33** To ensure that the adverse effects of new plantation forestry on water yield or groundwater recharge are avoided, remedied or mitigated.

**30.1.3.34** 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.

### **Financial Contributions**

**30.1.3.35** 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:

- (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;
- (b) the effectiveness of a financial contribution to offset adverse effects on other water users, or uses and values of a water body;
- (c) the effectiveness of a financial contribution to improve existing water users' security of supply;
- (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.

### **Water Resource Management Relationships**

**30.1.3.36** 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:

- (a) advise the Council in the development and implementation of water management policies;
- (b) assist the Council in managing water usage during drought periods, including assistance with rationing or rostering arrangements;
- (c) assist the Council in implementing programmes of education and advocacy for good practice methods of water use;
- (d) assist the Council in the development of water classification standards.

**30.1.3.37** 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.

**30.1.3.38** 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.

### Investigations and Monitoring

**30.1.3.39** 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.

**30.1.3.40** 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.

**30.1.3.41** 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.

**30.1.3.42** 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:

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- (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) the significance of water flows from contributing tributaries;
  - (ii) the time of year and season;
  - (ii) rate of recession of river flows and groundwater levels;
  - (iii) the current weather and weather forecast;
  - (iv) patterns of actual current and likely on-going water use;
  - (v) the extent and effectiveness of any water saving measures already in place;

and

- (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.

**30.1.3.43** When considering any application, the consent authority must have regard to the following matters:

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- (a) the extent to which the change would adversely affect safeguarding the life-supporting capacity of fresh water and of any associated ecosystem; and
- (b) the extent to which it is feasible and dependable that any adverse effect on the life-supporting capacity of fresh water and of any associated ecosystem resulting from the change would be avoided.

**Note:**

1. This policy applies to:
  - a) any new activity and
  - b) change in the character, intensity or scale of any established activity –  
that involves any taking, using, damming or diverting of fresh water or draining of any wetland which is likely to result in any more than minor adverse change in the natural variability of flows or level of any fresh water, compared to that which immediately preceded the commencement of the new activity or the change in the established activity (or in the case of a change in an intermittent or seasonal activity, compared to that on the last occasion on which the activity was carried out).
2. This policy does not apply to any application for consent first lodged before the National Policy Statement for Freshwater Management 2011 took effect on 1 July 2011.

### **30.1.20 Methods of Implementation**

#### **30.1.20.1 Regulatory**

- (a) Rules relating to:
  - (i) minimum flow regimes or levels for surface water bodies and aquifers;
  - (ii) allocation limits and triggers for initiating rationing regimes;
  - (iii) construction, location, depth and spacing of bores;
  - (iv) taking water;
  - (v) damming water;
  - (vi) diverting water, including drainage and infilling of wetlands;
  - (vii) extraction of gravel from river beds in Part IV;
  - (viii) establishment of plantation forestry in specified areas.
- (b) Water quality classification under Method 33.1.20.1(iii) that takes into account effects of changed water quantity on identified uses and values.
- (c) Reviews of permits.
- (d) Enforcement and abatement action, as necessary.

#### **30.1.20.2 Education and Advocacy**

- (a) Liaison with landowners, resource user groups, interest groups, iwi and other statutory bodies to identify uses and values of water bodies, the minimum flow or water level regimes to protect these uses, and values and methods to maintain these flows or levels.
- (b) Encouraging formation of and providing administration support for the on-going functioning of water user committees in water management zones.
- (c) Working with manawhenua iwi to identify and implement agreed opportunities for iwi to participate in water management, including through water resource monitoring and investigations, policy development, resource consent consideration, and education on sustainable water use practices.
- (d) Consultation with water user committees for the management of water takes for frost protection. C23/C24  
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- (e) Provision of information and advice concerning sustainable practices, including best practicable options for water use, activities in riverbeds and establishment of plantation forestry to maintain water quantity and avoid adverse effects.



- (f) Promotion or support of appropriate industry codes of practice and individual management practices that avoid, remedy or mitigate adverse effects of water use or reduced water quantity.
- (g) Provision of information and advice about wetland uses and values, and measures to protect, maintain or restore them.
- (h) Provision of information and advice about establishment of wetlands, and their margins, and restoration or protection of existing wetlands, including enhancement of values in wetlands that are not naturally occurring.
- (i) Providing information to landowners about sources of funding, such as from the Council, through the QEII Trust, Nga Whenua Rahui and others, for the protection and restoration of wetlands.
- (j) Advocacy for water takes that reduce impacts on surface water resources in the Motueka catchment.
- (k) Support or support preparation of resource management plans that promote the sustainable use and management of resources, such as the Eel Management Plan and Iwi environmental management plans.
- (l) Provision of information about the state of the District's water bodies to iwi and other interest groups, landowners and water users through state of the environment monitoring reports, other monitoring reports, and information transfer through meetings, hui and presentations.
- (m) Provision of information to people, including householders in rural areas, about the nature and extent of water resources.
- (n) Review of stakeholder partnerships on completion of wetlands database in 2008.

### **30.1.20.3 Financial Incentives**

- (a) The Council will fund the preparation of wetland management plans for naturally occurring wetlands on private property, in consultation with landowners, that identify wetland values and management options for sustainable wetland management and will contribute funding to works, including fencing, pest control, planting and habitat enhancement where there is public benefit and long term improvement to wetland values, including biodiversity gains, or improvements to water quality and quantity.
- (b) The Council will consider funding the establishment of new wetlands or enhancement of wetland values in circumstances where there is public benefit and long term improvement to wetland values, including biodiversity gains, or improvements to water quality and quantity.
- (c) Council will consider rates relief for wetland areas and the waiving of consent fees for any application for the construction or maintenance of wetlands and waiving requirements for backfilling following gravel extraction where appropriate.

### **30.1.20.4 Investigations and Monitoring**

- (a) Continuing development and maintenance of the database in consultation with iwi and interest groups, that identifies specific water bodies or parts of water bodies, their particular uses, values and significance.
- (b) Further development of criteria used to assign significance to the range of uses and values of water bodies. This includes determining the process to be followed for developing criteria and the regulatory status of the criteria, in consultation with iwi, Department of Conservation, Fish and Game Council and other stakeholders and water users.
- (c) Development of an integrated schedule of water body uses and values, management objectives and methods, including monitoring, that relate to all water body management provisions in this Plan, in consultation with iwi, Department of Conservation, Fish and Game Council and other stakeholders and water users by 2008.

- (d) Investigations and monitoring of the water resources of the District to:
- (i) identify relationships between water body uses and values, and water levels and flows;
  - (ii) understand the nature and extent of aquifers, including recharge mechanisms and relationship with surface water bodies;
  - (iii) understand the relationship between land cover change, surface water yields and groundwater recharge;
  - (iv) understand the relationship between gravel extraction from riverbeds and groundwater levels in adjacent aquifers;
  - (v) understand the values and significance of naturally occurring wetlands in the District, assess the contribution of water levels and flows to these values, and record changes in quality and extent of wetlands;
  - (vi) accurately assess impacts of water abstraction, damming or diversion that reduce water quantity or water body uses and values;
  - (vii) continue to improve understanding about the dynamics of groundwater systems by developing and updating computer and other models;
  - (viii) investigate and understand the potential hydro-electric power generation value of water bodies, potential effects and measures to mitigate adverse effects of such power generation, and the relative value or significance of power generation values in relation to other uses and values of the water body.
- (e) In consultation with interest groups, including iwi, investigate and monitor instream uses and values of water bodies and assess the significance of and risks to such values and methods for their necessary and appropriate protection or enhancement.
- (f) To monitor the effects of water takes on rivers that have no minimum flow regime, and review and assess the appropriateness of the allocation limit threshold or the need for some other allocation regime for that water body once the threshold for allocation has been reached.
- (g) Continue the development and maintenance of a database of wetlands in consultation with landowners, the Department of Conservation and the Nelson Marlborough Fish and Game Council, iwi and interest groups that identifies specific wetlands, their uses and values and their significance and potential for restoration. Council will establish a register of national, regional and locally significant wetlands and will report on changes to the quality and extent of wetlands in the District.
- (h) The wetlands database will be completed by 2008 and, once complete, Council will review landowner partnerships and the regulatory provisions for wetland drainage and infilling.
- (i) Investigations into what economic decisions affect water use and how these may be managed to improve water use and water allocation efficiency.
- (j) Investigations into the nature and patterns of water use for frost protection of vulnerable crops and whether there is a need to develop allocation limits for uses other than irrigation uses in summer periods, including further investigation into the connection between frost water takes and the flow of the Riuwaka River, and investigation into the need for reservation of water within these limits for crop needs on irrigable Māori perpetual lease land. C23/C24  
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- (k) To carry out concurrent flow gauging and water abstraction monitoring during summer low flow in the Motueka River between Kohatu and Tapawera to better determine the correlation between ground water and river flows and the effect of abstraction on river flows. C52 1/15  
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### 30.1.30 Principal Reasons and Explanation

#### Water Body Management

The Council is required to manage water resources sustainably. In particular, Council must sustain the potential of the water resources to meet the needs of future generations and to safeguard the life-supporting capacity or mauri of the water. In addition, each water body has a number of overlapping or competing uses and values that must be recognised and taken into account.

The Council also recognises that tangata whenua have an interest in the management of the District's water resources. It will consult with iwi in the development and implementation of its policies. The Council has adopted policies and methods to implement policies that are in accordance with the objectives that Māori have for the management of water in exercising their role of kaitiakitanga as kaitiaki.

The significant uses and values for the major rivers, lakes, aquifers and some major wetlands in the District are listed in Schedule 30A, along with the management objectives that Council has adopted. The public and private benefits of water use to individuals and the community are recognised by ensuring that sustainable amounts of water are available for these uses. Management objectives show the extent to which various uses and values are accounted for and this, along with the policies in section 30.2, establish relative priority for water. The Council is also developing a database, which identifies uses and values in more detail for specific water bodies or parts of water bodies. Council does not yet have full information about the range of uses and values of all the water bodies in the District. Neither has it determined the significance of all the potential uses and values of all water bodies. It has undertaken to develop the criteria used to determine significance in consultation with stakeholder groups. This database will continue to be developed in consultation with stakeholders and will guide decision-making in respect of resource consent applications for activities subject to this part of the Plan. The database and the Schedule will be developed to reflect the range of uses, values and management objectives and methods that relate to all aspects of water body management. The revised schedule will be added to the Plan as a further variation (or change). It will contribute to decision-making in respect of activities in the riparian management zone (addressed in Part II and Part IV), as well as water classification (Part VI) and land disturbance activities (Part II, Chapter 18) that have the potential to affect water body uses and values.

The Council's water allocation policies recognise the need to provide for a water body's uses and values while allowing for abstractive use of the water. It will achieve this for some rivers by establishing a minimum flow regime that takes into account seasonal aspects of low flows including, for example, provision for fish and eel spawning, and the duration and frequency of low flows. For other rivers, Council has identified a threshold for allocation that recognises the significant values and uses. This approach is consistent with the protection of the traditional values and perspectives according to tikanga Māori, including kaitiakitanga.

The management approach is that for most rivers, a decision on minimum flow is one of selecting how much habitat loss is sustainable rather than seeking no habitat loss. Other factors relevant to instream water flow needs for recreational, cultural and spiritual values, are also taken into account. The minimum flow regime is not necessarily intended to provide for all in-stream uses in all rivers, particularly recreational uses that will recover after low-flow periods.

The minimum flow regime specified for any river is the flow regime that is required to maintain or provide for the specified uses and values identified for that river. A minimum flow regime also reflects the imperative of the Act to provide for the life-supporting capacity of the river.

Under most circumstances, the river flows should not fall below a minimum flow because of abstractions. This minimum flow may need to be maintained by Council intervention, including through imposing rationing, by or through specified rationing steps, or rostering takes.

However, in some drought situations, the flow may naturally, or in combination with abstractive uses, fall below a stated minimum, even with these management provisions. During these times of extreme low flow beyond provisions of rationing, or when issuing directions under Section 329 of the Act, Council has identified priorities for use of water. It will require that specified uses of water cease before more essential uses in a priority order, which is specified in Policy 30.2.3.1.

The Council has regard to the Ministry for the Environment's flow guidelines when establishing minimum flow regimes. The flow regime will establish the sustainable baseline flow that the Council will attempt to maintain through its water management provisions.

Some rivers, such as the Waimea, Riuwaka, Little Sydney and Brooklyn, have minimum flow regimes established for them. As water use from other water bodies increases, or where other activities may impact on water quantity, there may also be a need to develop minimum flow regimes or other water allocation management provisions for them, for example, specific provisions for the Takaka River. Policy 30.1.3.2 guides decision-making where there may be a need to consider establishing a minimum flow regime.

Takes from storage will often have less impact on the uses and values of water bodies than takes directly from a water body. Takes from river gravels adjacent to rivers will have a direct effect on flows in the river and will be considered as a take from surface water.

Council will also advocate for landowners, water permit holders and people carrying out flood or erosion control works in rivers to consider measures to enhance aquatic habitat to mitigate the adverse effects of reduced water flows.

Council will continue to monitor and collect information about the nature of water bodies, including information about their interconnectivity and recharge. It will also ensure its water management provisions continue to be appropriate and defensible, including through plan changes where applicable.

### Waimea River

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Op 9/16

Review and further investigation of the water resources in the Waimea water management area has shown that in the Reservoir, Waimea West, Golden Hills, Delta, Hope and Eastern Hills and Upper and Lower Confined Aquifer zones there is insufficient water to meet abstractive demand at the stated security of supply level. Historical allocation limits had not taken account of flow requirements for the identified instream values, and current permit allocations mean that the maintenance of a desirable minimum flow in a significant drought requires substantial management action. Even with reduced allocation limits, maintenance of a minimum flow in the Waimea River requires earlier rationing that takes advantage of aquifer storage for longer during reducing flows. In addition, by the time a '1 in 10-year' frequency drought is reached, the Waimea River flow is falling so rapidly that the stated security of supply standard also falls very rapidly.

Council acknowledges that this allocation regime significantly exceeds the available water for both water body values and uses and significantly reduces water users' acceptable security of supply.

Council is now signalling through these provisions and those in Chapter 15 and the Long Term Plan, that it considers the Waimea Community Dam is the most efficient and effective means of managing water demand and river flows in the Waimea Plains.

Objectives in Schedule 30A reflect the higher standards for the range of values and uses for the Waimea water resources if the Waimea Community Dam is constructed.

The proposed Waimea Community Dam will provide a minimum flow of 1100 litres per second in the Waimea River that will meet existing and foreseeable future water users' needs, including abstractive and instream uses and values. This corresponds to the calculated natural 1-day Mean Annual Low Flow (MALF) and maintains flows for recreation and habitat for aquatic life at or above the level that would have been expected without any abstractions in most years.

The minimum flow of 510 litres per second in the Lee River between the dam and the Roding confluence is equivalent to the natural 7-day MALF, also set to provide for recreation and maintain aquatic habitat. With 13 million cubic metres of water storage, the Waimea Community Dam provides water security for droughts occurring, on average, every 60 years.

Council adopted an interim water management regime in 2007 that focussed on mitigating adverse effects of droughts on water body uses and values and on water users until the outcome of the augmentation scheme project is known. Those transitional provisions will continue to apply to water permits which are affiliated to the dam until the dam commences operation.

### Waimea River – Augmented Flow Management

C47 4/13  
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Water management provisions are updated to enable management of the augmented flows in the rivers affected by dam releases and also the management of what would have been the unmodified (or natural) flows in those rivers.

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New water management provisions for the Waimea water management zones, including establishment of minimum flows, and rationing triggers that reflect two different security of supply standards have been adopted. The two different security of supply standards reflect whether or not the water permit is affiliated to the Waimea Community Dam through a water supply agreement or other applicable agreement.

The Council has adopted new river and groundwater management objectives as shown in Schedule 30A to manage the unmodified river flows. These flows in combination with the relevant allocation limits, targets and rationing triggers are what would be required in the absence of an augmentation scheme.

In the absence of an augmentation dam, management objectives included avoiding seawater intrusion, maintenance of spring flows and provision for minimal recreation and amenity values in the lower Waimea River.

However, trigger levels for rationing to be used where there is no dam, cannot also be used when there is a dam to differentiate the two security of supply standards. This is because the augmented river flow at the Wairoa Gorge then enhances water levels and flows in the rivers and the groundwater of the Waimea Plains, when the dam is releasing water. These flows contribute to Waimea River flow and groundwater storage, and augment all associated water resources that are subject to abstractive use. It is impossible to distinguish the augmented water supply from the otherwise unmodified component of flow and level once the water flows into the Plains and starts flowing from the river to the aquifer below the Wairoa Gorge.

For this reason, the rationing regime proposed for where there is no dam and applicable to water permits that are not affiliated to the dam, relies on the unmodified flow at the Wairoa River monitoring site at Irvines. The three rationing triggers are calculated on the basis of the new sustainable allocation limits that provide for abstraction at the Council's security of supply standard. The unmodified flow at the Wairoa site will be calculated by the Council on the basis of measured flows at the Wairoa at Irvines monitoring site, accounting for any effects on flow caused by the dam.

In addition, a cease take flow calculation based on maintaining a similar level of restrictions for unaffiliated permits, compared to the 'no dam' rationing, is also introduced for the permits not affiliated to the dam. The 4-step rationing triggers, including the 800 litres per second trigger for the Waimea River cannot be used in this regime as the Waimea Community Dam is required to maintain flows at 1100 litres per second.

Resumption of water takes following any rationing for water permits that are not affiliated will also be restricted. Taking water will only be resumed once there has been sufficient recovery of the groundwater levels. This recovery is provided by ensuring the 7-day moving mean flow of 6,000 litres per second for the Wairoa River measured at the Wairoa at Irvines site has been reached. This flow ensures the necessary water resource recovery before pumping can start again.

Rationing based on flows in the Wairoa River at Irvines site, will be required for permits that are not affiliated with the Waimea Community Dam. For water permits affiliated to the dam, rationing will be based on dam storage volume and the maintenance of minimum flows in the Waimea River.

### No Waimea Community Dam

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In the absence of a dam, management objectives to avoid sea water intrusion and provide for minimal recreation and amenity values require a minimum flow of 800 litres per second in the Waimea River and linking Step 4 rationing to that minimum flow. Policy direction to guide decisions about cease take includes occurrence of sea water intrusion in the council's monitoring bore and a flow of 500 litres per second in the Waimea River. This reflects the community values

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for the river and complements the Council's community Waimea River Park Management Plan 2010. A flow of 800 litres per second also ensures effects of climate change and sea level rise can be managed.

### **Transitional Water Management Provisions**

C56 9/15  
Op 9/16

If there is no dam or while waiting for commencement of dam operation, Council will also continue to consult with the Dry Weather Task Force during droughts about implementation of rationing for affiliated permits or for cease take directions in a 'no dam' situation and other drought management methods, including measures to ensure efficient use of available water. In all other circumstances, water takes are controlled through conditions for rationing that are linked to specified flows at the Wairoa Site. Once the dam is operational, in a severe drought, drought management will require the Council, the managers of the dam and water users to work together on efficient management of the stored water. The Dry Weather Task Force will be established by Council during droughts with representatives invited from iwi, Nelson Marlborough Fish and Game Council, Department of Conservation, Federated Farmers of New Zealand and the relevant water user committees and will include the Waimea Community Dam Operator in relation to the Waimea Plains water management zones.

The Council's long term approach to water management for the Waimea zones is to augment water supplies to reduce the level of conflict between instream and abstractive uses and values and increase users' security of supply and provide for new water use. It will promote the increased security of supply enabled by water permits affiliated to the Waimea Community Dam as well as the range of economic, social and community benefits enabled by the dam.

If the construction of the Waimea Community Dam does not proceed as anticipated, Council nevertheless will protect the site for a future augmentation dam through land use provisions in Part II that provide for the needs of future generations.

### **Motueka River**

The Motueka River and its tributaries are subject to the Water Conservation (Motueka River) Order 2004. The Order primarily recognises the importance of the Motueka River as a nationally significant trout fishery and seeks to maintain minimum river flows. The river also has significant landscape, amenity, recreation and cultural values. The rules in the Plan provide the means by which the flow regime will be maintained, and include rationing triggers and allocation limits. *(See Annex 2 for a copy of the Order [provided for information purposes only]).*

The Council is also continuing its investigations into the relationship between ground and surface water resources in the Motueka catchment. It wishes to encourage and promote the taking of water for irrigation from groundwater rather than directly from the river as this will reduce the impact of water takes on the values of the river. Investigations to date indicate that there is sufficient water to irrigate all the irrigable land in the catchment, provided a smaller proportion of water is taken directly from the river than from groundwater.

### **Riuwaka River**

The regionally significant trout fishery of the Riuwaka River will be maintained by the establishment of an allocation limit and a rostering regime that maintains stated flows in the river. The resulting flows in the Riuwaka River are not the ideal conditions for fisheries, especially trout fisheries, however a process of consultation and liaison between interest groups will identify and implement measures to mitigate adverse effects of the takes.

The relatively small number of permit holders and the effective operation of the water users' committee for this zone effectively achieve the management objectives for the Riuwaka River.

## **Buller River**

The outstanding instream and natural values of the Buller River and its tributaries have been identified in the Water Conservation (Buller River) Order 2001. The Order contains restrictions on the taking of water, alterations of river flow or lake levels, river form and damming. It also specifies water quality standards that must be maintained. *(See Annex 1 for a copy of the Order [provided for information purposes only]).*

## **Other Rivers**

For rivers without an established minimum flow regime, policies 30.1.3.12 to 30.1.3.16 provide guidance for allocating water. Council may not yet have sufficient information to establish a minimum flow for them. Some of these resources may not currently be subject to significant demand, although others, like the Sherry River, may make significant contributions to other rivers.

For larger rivers, the inter-relationships between the various uses and values and river flows means that where there is no minimum flow or allocation limit, each application needs to be assessed on a case-by-case basis. The Council will take into account the cumulative effect of other abstractions from the river.

For the smaller rivers, Council has established thresholds for allocation based on the 5-year, 7-day low flow. This ensures that while water can still be allocated for abstraction from these rivers, a limit is established to protect the identified significant uses and values, beyond which a greater level of investigation into the effects of water takes on that river will be initiated.

The thresholds adopted by the Council reflect recognition of the needs of instream values while allowing for sustainable abstraction. The regime adopted for rivers for which there is incomplete knowledge is still precautionary and is reflected by the use of the 5-year, 7-day low flow as this is a smaller flow than the annual flow and allows for better residual flows in most years.

The policies provide water allocation guidance in the interim, and they will be reviewed as there is increasing abstractive demand to assess and evaluate the values and uses of the water body and to produce an allocation regime that ensures protection of those values.

The Council's management approach for these water bodies provides for a consistent, logical and sustainable water allocation for all water bodies.

## **Groundwater**

The Council will achieve sustainable groundwater allocation for most aquifers by establishing a safe allocation limit that takes into account recharge rates, effects on connected water bodies (including wetlands) and the need to avoid causing adverse effects that are irreversible, such as compression and seawater or nitrate contamination. Other adverse effects such as localised drawdown may be remedied or mitigated by establishing separation distances for bores and controlling rates and quantity of water pumped. Seawater contamination may be irreversible depending on the sea or freshwater interface. In some aquifers, such as in the Hau Plains Zone, seawater intrusion is reversed once water is no longer taken from the aquifer. The effects of groundwater abstraction on river flows, including the Waimea and Motueka rivers and coastal springs such as Neimann and Pearl creeks, may also be significant, and Council has taken this into account when establishing a safe yield.

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The Council will take into account the degree of interconnection between groundwater bodies and adjacent surface water bodies in setting allocation limits. It recognises that the storage capacity or nature of some aquifers means that takes from groundwater have no or less immediate effect on surface water flows and levels. It will encourage takes from groundwater in preference to surface water takes, particularly in relation to the surface water resources of the Motueka catchment.

In assessing the drawdown effects on other bores in alluvial aquifers such as those in the Motueka or Waimea plains, a fully penetrating bore is drilled to the bottom of the aquifer and constructed in such a way that water is abstracted from the deepest part of the bore in order to maximise water quality and water quantity. If bores are not fully penetrating, they may be adversely affected by pumping drawdown effects from other bores.

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Allocation limits for the Motueka plains aquifers are based on the sustainable recharge of the aquifer and take into account interaction with the Motueka River flows and irrigation needs in the upper catchment. The limits for the Central Plains Zone also recognise a high yield area of the aquifer near to the River, where higher rates of groundwater abstraction can be sustainably provided for.

The allocation limits currently reflect the potential adverse effects of seawater intrusion in the Hau Zone. However, it is possible that seawater intrusion is a localised effect mainly in the coastal margin of the Hau Zone and is not a relevant trigger for groundwater takes in the Central Plains Zone. Until Council has gathered more data and monitored the effects of this allocation regime, it will adopt a conservative allocation limit for the Central Plains Zone that accounts for possible seawater intrusion effect in the Hau Plains Zone. Better understanding about interactions between the Hau Plains and Central Plains zones and the potential for mitigation of seawater intrusion in the Hau Plains Zone (as is currently carried out by the Lower Moutere Water Scheme) may mean Council can further review allocation limits for the Central Plains Zone in the future. Any review of the allocation limits for any water management zone will be done through a plan change or variation process and subject to public consultation.

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### **Water Allocation**

The use of water management zones means Council can establish allocation limits that reflect the interconnections between ground and surface waters. It also means that Council can establish allocation limits having regard to the security of supply for water users in those zones. Water management zones will have rules that are specific to them and which will apply to all water users in that zone.

Under the Act, resource consents are not required for taking water for an individual's reasonable domestic needs or the reasonable needs of an individual's drinking water, provided that no adverse effect is caused by the take. No resource consents are required to take water for fire fighting. The Plan defines what is meant by domestic water, and restricts the take during drought to avoid adverse effects from such takes. The taking of water for any other use requires a consent unless permitted by a rule in the Plan.

Through rules in this Plan, the taking of small amounts of water for any purpose will continue to be a permitted activity. This is because such takes generally have an insignificant effect on the water resource and because the costs to the Council and to the water user of regulating these uses through permits for such small takes would outweigh the benefits to the environment and to other users.

Council must take into account the likely cumulative effects of permitted takes of water on natural and instream values of the water body, and on other abstractive water users. In over-allocated zones or for sensitive water bodies, the cumulative effects of incremental increases in permitted water takes may become significant. The trends towards rural residential living, in particular, may result in incremental increases in the amount of water taken that are becoming cumulatively significant, this is particularly so for some coastal margins, such as in the Hau Plains, Delta and Marahau margins.

The Council will carry out investigations to quantify the amounts involved in existing and potential future permitted water takes, including takes for domestic supply in rural and rural residential areas and to better understand their significance, particularly in fully-allocated or over-allocated zones. Council will also require water augmentation through provision of water storage by new dwellings in Rural and Rural Residential zones (*see 30.2.3.3*). Water storage will also provide water supplies for fire fighting, particularly during droughts. Furthermore, Council will ensure that landowners in water short areas are informed of the nature of the water supplies in those areas. This will help enable people to make appropriate decisions about their water supplies and measures to reduce water use.

Water is increasingly being taken for frost protection of susceptible crops to avoid damage to blossom. While effects of water takes for frost protection are not currently known to be significant because water is generally taken at times of higher flows in spring, the potential for cumulative effects of water takes for frost protection is significant in the Riuwaka River and may develop for other water bodies. A minimum flow will protect the Riuwaka River and potential adverse effects will be avoided for other rivers by taking into account the cumulative impacts of frost protection takes on the river's flow variability and on its Mean Annual Low Flow. Drawdown effects of groundwater takes, as well as effects on connected surface water bodies, will also be accounted for when assessing groundwater takes for frost fighting.

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### Gravel Extraction

Extraction of gravel has been shown to have an adverse effect on the groundwater levels of adjacent aquifers. This consequently affects water users who would otherwise have access to this water and adversely affects their security of supply. Gravel extraction from the Wai-iti River has already been shown to adversely effect the groundwater levels in adjacent aquifers. Computer modelling has shown that adverse effects of gravel extraction from the Lower Motueka River on adjacent groundwater levels are potentially very significant.

Gravel extraction from rivers also has the potential to alter the river hydrology and may, in some instances, have beneficial effects. This may occur where the river flow has been deepened. In other situations, gravel extraction may adversely affect aquatic life and habitats, and cause sedimentation of water. River hydrology may also be adversely affected if flows are shallower and faster.

The effects of gravel extraction on riverbed level and subsequently on aquifer recharge may also be relevant in the Upper Motueka, Motupiko and Takaka Plains and rivers like the Moutere where groundwater from aquifers adjacent to the rivers is being extracted, but there is less information about the extent and significance of these effects as yet.

### Damming Water

Dams capture run-off from storm events as well as summer low flows. They can have a range of adverse effects that the Council may need to consider, including effects on fish and eel passage and on the usual flow regime of the downstream water bodies. (Fish passage must also be considered under the Freshwater Fisheries Regulations administered by the Department of Conservation). Reduced flows in summer, or variable flows throughout the year, may affect aquatic communities. Some dams may also affect riparian habitats if the flow regime is changed significantly.

Managing flows from dams may need to account for flood and low flow management as well as providing for variable or flushing flows to mimic natural conditions where these are necessary to manage bed and bank stability, including sediment and vegetation management in river beds, periphyton and ecological functioning.

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The quality of impounded water in dams can also be changed as a result of time or depth at which the water is stored, and the effects of this, including the effects of discharging this water, may need careful assessment. The rules regulating discharge of water in Chapter 36 address this. The impoundment can also deprive downstream permit holders (stream takes or other dam owners) of their previous security of supply, particularly where dams are constructed on ephemeral streams, rather than permanent ones. Cumulatively, the impacts of dams on summer flows in the lower catchment can be significant.

Small dams where the contributing catchment is less than 20 hectares have little impact on the quantity of water in downstream water bodies. This is because the catchment area does not contribute a significant amount of water and water resources in the contributing catchment are generally insignificant. Dams of this size are most common in the water short catchments of the Moutere gravels.

### **Afforestation**

The establishment of plantation forest on parts of the Moutere gravel formation may have adverse effects on surface water yield and groundwater recharge.

The Council wishes to ensure that the groundwater resources of the Moutere Eastern and Western Groundwater zones are safeguarded. The establishment of further plantation forestry in the recharge area for this groundwater resource is therefore regulated. In addition, new takes and renewals of existing groundwater takes from these zones will be required to comply with sustainable abstraction and rates of use limits.

Some of the Moutere gravel derived catchments such as the Moutere, Dove and Wai-iti catchments are at risk of reduced surface water flows as a result of plantation forestry growth. Council wishes to provide for a certain security of supply for existing water users as well as safeguard the life-supporting capacity and in-stream values of water resources in defined areas. It will achieve this by controlling the establishment of new plantations so that the adverse effects of plantations are avoided, remedied or mitigated. In fully and over-allocated catchments such as the Moutere and Wai-iti catchments, new surface takes in low-flow periods will be avoided. In other catchments susceptible to water yield reduction, Council will also regulate water use to avoid adverse effects of future water yield reduction.

The significance of the effect of further afforestation in these Moutere gravel catchments will depend largely on the size of the catchment, the proportion of the area already afforested and any new afforestation. Expected water flows and the existing level of abstraction are also important in establishing whether the reduction in flow attributable to the afforestation is likely to cause significant adverse effect, that is, in some catchments, including the smaller tributaries of the Waimea, low flows are already non-existent and further afforestation is unlikely to create additional adverse effect on either water users or in-stream values. Rules controlling further afforestation are thus limited to those areas where any further reduction in water flow during low-flow periods is likely to cause adverse effects. These are the areas where further abstraction during low flows is also avoided because allocation limits have been reached. For those catchments where water has not yet been fully allocated, further water allocation or afforestation will only be considered if they do not cause flows to be reduced below a stated minimum level.

There are still gaps in the information and understanding of the water yield effects of plantation forestry, including the recharge mechanisms and effects on low surface water flows. Investigations into processes and effects of plantation forest and water yields, and measures to avoid, remedy or mitigate adverse effects, are necessary to help refine Council policy for effective management.

### **Diversion of Water and Wetland Management**

Policy 30.1.3.25 provides direction to manage adverse effects of diversions of water related to activities such as flood water diversions by stop banks and hydro-electric power generation.

Policies 30.1.3.26 to 30.1.3.31 recognise the importance of wetlands, especially naturally occurring wetlands in the District.

Council wishes to encourage the community to understand and appreciate wetlands, and to take an active role in protecting and maintaining or restoring their values.

Education is an important aspect of improving community understanding and awareness of the importance of wetlands, and the activities that affect them, such as vegetation clearance, stock grazing, pest and weed control, and nutrient enrichment.

The Council also acknowledges that landowners have an important stewardship role in the management and protection of wetlands on private property. Council wishes to complement and support this role through establishing strong and cooperative partnerships with landowners and by providing appropriate advice and assistance, including financial assistance to achieve the sustainable management of wetlands. This includes wetlands in rural areas under threat of drainage for pastoral use and wetlands under threat of drainage or infilling for residential development.

The Council will encourage landowners to seek advice and information from Council about wetland values on their properties and the most appropriate ways to manage them. It will adopt a proactive approach that reflects the need to recognise and protect wetlands, which will help avoid regulatory measures being required.

This partnership approach will assist understanding about Council's regulatory role and raise awareness about wetland management issues. The Council will recognise the public benefit gained through appropriate wetland management by providing financial assistance for wetland protection and supporting the creation of new wetland habitat including, as part of gravel extraction, activities where appropriate.

When considering an application to modify a wetland through drainage, infill or vegetation damage, the Council will assess the importance of the wetland on a case-by-case basis using relevant criteria. Policy 30.1.3.31 allows for the possibility of mitigation or remedying adverse effects by enhancing wetland values in alternative wetlands.

Stock grazing can also destroy or impair wetland values. There is no regulation controlling stock grazing, however the Council will seek to avoid, remedy or mitigate adverse effects of this activity by ensuring that landowners are aware of the importance of wetlands and methods to protect them.

The Council has completed a wetland inventory that lists the location, description and significance of wetlands, including potential for restoration. Council has also undertaken to carry out a review of wetland management provisions in the Plan on completion of the inventory. This is because the Council wishes to demonstrate its commitment to sustainable wetland management. The intention of review provides a transparent signal of this commitment and ensures that landowner expectations will not be unnecessarily constrained by a regulatory provision that has such a blanket effect on land management.

Such a database will also provide information about existing wetlands and threats to them and assist Council and landowners to make sustainable resource management decisions.

### **Financial Contributions**

Section 108 allows the Council to impose a requirement for a financial contribution. This is where adverse effects, including adverse cumulative effects, may be offset or prevented through money or land contributed by the consent holder. The financial contribution can be used to remedy or mitigate the adverse effect and/or it could be used to contribute to a positive effect which provides some compensation or relief from the adverse effect caused or likely to be caused by the activity. It will not be applied as a penalty or payment for effects which cannot otherwise be adequately managed.

The Council may need to consider financial contributions because the adverse effects caused by individuals in some circumstances cannot easily be avoided, remedied or mitigated through conditions imposed on the consent.

The Council wishes to ensure an equitable approach to financial contributions so that all measures to avoid, remedy or mitigate the adverse effects of resource users are appropriately considered. This includes where adverse effects of water takes could be offset or mitigated through such things as water augmentation.

Council will also consider imposing a financial contribution for new afforestation proposals according to the extent and location of the proposed afforestation. It will apply only in respect of consents necessary to establish new forestry in areas where there is likely to be an adverse effect on water yield. These contributions will be for the purpose of providing water augmentation.

It is not possible to provide a basis for calculating the maximum exposure to financial contributions more explicitly for water take, damming or diversion, or afforestation activities at present. The significance of effects is related to the nature, scale and location of each activity which can be very variable in each circumstance and there is no pre-determined or pre-costed solution as with, for example, the utility services required to manage the effects of subdivisions.

#### **30.1.40 Performance Monitoring Indicators**

- 30.1.40.1** Number of times water flows or levels decrease below stated minimum flows or levels and the frequency that rationing triggers are reached.
- 30.1.40.2** Level of knowledge about quantity of water in water bodies and interconnections with other water bodies.
- 30.1.40.3** Numbers of consents issued for water taking, damming or diverting, new afforestation, and gravel extraction.
- 30.1.40.4** Level of compliance with conditions of resource consents.
- 30.1.40.5** Number of complaints about adverse effects of low water levels or flows.
- 30.1.40.6** Changes in water yield assessed as resulting from changes in tall vegetation cover, particularly plantation forestry, in at-risk catchments.
- 30.1.40.7** Changes to quality and extent of wetlands.
- 30.1.40.8** Level of satisfaction by recreational users of water bodies.
- 30.1.40.9** State of health of aquatic life, including significant trout fisheries.



## 30.2 ALLOCATION OF FRESH WATER BETWEEN COMPETING WATER USERS

### 30.2.1 Issue

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.

### 30.2.2 Objective

To achieve equitable water allocation and efficient use of water by water users while ensuring an acceptable security of supply for water users.

### 30.2.3 Policies

*Refer to Policy sets 30.1.3, 30.3.3.*

*Refer to Rule sections 16.12.2, 17.5.2, 17.5.5, 17.6.2, 17.6.5, 17.7.2, 17.7.5, 31.1, 31.2.*

#### Equitable Water Allocation

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

- (a) water for the maintenance of public health;
- (b) prevention of significant long term or irreversible damage to the water resource or related ecosystems or specified significant instream values;
- (c) water necessary for the maintenance of animal welfare; C56 9/15  
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- (d) uses for which water is essential for the continued operation of a business, such as irrigation of horticultural crops or water essential to industrial activities;

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

- (e) irrigation and other uses not associated with commercial production such as irrigation of amenity plantings;
- (f) non-essential uses such as recreational use, for example, swimming pools and car washing.

Takes not subject to any rationing are:

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- (i) firefighting uses;
- (ii) non-consumptive uses;
- (iii) takes from storage.

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

*[Policy 30.2.3.2 deleted]*

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**30.2.3.3** 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:

- (a) assigning priority for available water to the water supply needs for the maintenance of public health during times of drought;
- (b) seeking to maintain residual water flow downstream of any surface water abstraction point;
- (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;
- (d) advocating the installation of on-site storage of water in urban areas to manage the effects of drought and fire risk;
- (e) advocating the efficient use of water, including the use of water saving devices, particularly in water short areas;
- (f) ensuring that the community has information about the reliability of water supplies for permitted activities, particularly in water short areas.

**30.2.3.4** To recognise and provide for the existing and potential future water needs of communities by:

- (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;
- (b) assigning priority for available water to the water supply needs for the maintenance of public health during times of drought;
- (c) reserving water within any allocation limit for future expected community growth, taking into account:
  - (i) long term population growth projections for the area, including both medium and high growth estimates;
  - (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.
- (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;
- (e) declining applications for subdivision or zoning change if sufficient reliable and potable water is not available;
- (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.

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**30.2.3.5** 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.

**30.2.3.6** To reserve water within the sustainable allocation limits of the water body for the following uses:

- (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



- (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. C23 7/08  
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**30.2.3.7** 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:

- (a) first, to the irrigation needs of Māori perpetual lease lands reserved under Policy 30.2.3.6(a);
- (b) next, to potential water users who are registered on a Council-established waiting list.

Where (a) and (b) do not apply, then priority will be assigned according to:

- (c) whether a need for water can be demonstrated;
- (d) whether there is compliance with relevant Plan rules;
- (e) new users before existing permit holders;
- (f) underground takes (which will normally be preferred over takes from surface water);
- (g) priority uses as listed in Policy 30.2.3.1;
- (h) any remaining registrations assigned priority by chance.

**30.2.3.8** 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.

**30.2.3.9** 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: C47 4/13  
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- (a) review cumulative water use that takes into account potential effects of changes in:
- (i) knowledge about the water bodies
  - (ii) over allocation of water
  - (iii) water quantity and water quality
  - (iv) patterns of water use
  - (v) technology
  - (vi) community values
  - (vii) climate

on the cumulative effects of all the water takes within the water management zone;

and

- (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.

**30.2.3.10** 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: C23 7/08 Op 8/14  
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- (a) any provisions that may exist for the reservation of water; C23 7/08  
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- (b) effects on other water users, including drawdown of groundwater in neighbouring bores;

- (c) measures taken for water conservation and to ensure efficient water use;
- (d) measures for monitoring water use;
- (e) whether the applicant has reasonable access to water at the site where water is to be used;
- (f) whether the applicant already has any existing permits that are not fully exercised;
- (g) for any application to take water for irrigation:
  - (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;
  - (ii) the influences of climate on crop water demand;
  - (iii) irrigation management plans, that demonstrate mitigation of adverse effects of the water take and use on water quality and quantity.
  - (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.
- (h) for any application to take water for community water supplies:
  - (i) the area to be serviced; C23 7/08  
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  - (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; C47 4/13  
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  - (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;
  - (iv) provisions to manage reduced availability during periods of drought or low flow;
  - (v) provisions for demand management.
- (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; C23 7/08  
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- (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);
- (k) whether there is a reasonable alternative supply from which water takes cause less significant adverse effects, including water storage options for that property;
- (l) whether the activity significantly reduces the security of water supply to existing dams.
- (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. C56 9/15  
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*(See also 30.1.3.12)*

- 30.2.3.11** 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:
- (a) bona fide review of permits; or
  - (b) demonstration of need for and access to water;
- depending on the extent to which the natural water supply has been augmented.
- 30.2.3.12 (A) Where there IS a Waimea Community Dam - Transitional Arrangements**
- In considering applications to take water in the Waimea Plains water management zones, the Council will provide for transitional water allocation as follows:
- (a) For affiliated permits, until operation of the Waimea Community Dam has commenced:
    - (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
    - (ii) rationing for all permits will be based on avoiding seawater intrusion and maintaining river flows according to Policy 30.1.3.20; and
    - (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;
  - (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.
- (B) Where There IS NO Waimea Community Dam**
- In considering applications to take water in the Waimea Plains Zones, either:
- (a) after 1 November 2023 if by this date the construction of the Waimea Community Dam has not commenced; or
  - (b) where there is no Water Supply Agreement available to permit applicants by 1 November 2019;
- the Council will provide for a water allocation regime that reduces the over-allocation of water and the adverse effects of taking water by:
- (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;
  - (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 of allocated water based on flow in the Lower Waimea River and salinity levels, except for community water supplies, which remain at Step 3;
  - (da) considering the imposition of cease take water shortage directions in accordance with policy 30.1.3.20(c)(ii);

- (e) reviewing the Plan provisions relating to allocation limits, targets, rationing triggers, and flow regimes by 2025 to assess:
  - (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
  - (ii) the relationship between the observed security of supply and flow regime; and
  - (iii) the extent to which the stated river management objectives are being met;
- (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;
- (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);
- (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).

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### **(C) Once Waimea Community Dam Operation Commences**

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:

- (a) For water permits affiliated to the Waimea Community Dam:
  - (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;
  - (ii) a consent duration for any permits affiliated to the dam is concurrent with resource consents issued for the Waimea Community Dam;
  - (iii) permit reviews are required during the consent duration in relation to management of effects of the water use on water quality.
- (b) For permits that are not affiliated to the Waimea Community Dam once operation of the Dam has commenced:
  - (i) a security of supply that is less than the Council’s standard for supply security through:
    - 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;
    - 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
    - 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;
  - (ii) permit reviews during the consent duration in relation to management of effects of the water use on water quality;
  - (iii) a consent duration of 20 years.

**(D) Root Stock Survival Water**

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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:

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- (a) Water allocated for this purpose must not exceed a cumulative instantaneous limit across all Waimea Plains Zones of 521 litres per second; and
- (b) The water may only be available after:
  - (i) 11 days on the lighter soils (Ranzau, Maori) and 30 days on the heavier soils (Waimea, Richmond) for pipfruit, stonefruit, viticulture and kiwifruit
  - (ii) one day for glasshouses;
 following the imposition of either:
  - (iii) Figure 31.1C Step 3 rationing or beyond for permits not affiliated to the Waimea Community Dam before the Dam commences operation; or
  - (iv) Figure 31.1C Step 3 rationing or beyond for permits where there is no Waimea Community Dam; or
  - (v) Figure 31.1C Step 2 rationing for permits not affiliated to the Waimea Community Dam after the Dam commences operation; and
 in each case only where no practicable alternative sources of water are available or accessible.

**(E) Permits to Take from the Waimea Community Dam**

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:

- (a) the total water take is telemetered;
- (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;
- (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.

**30.2.3.13**

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:

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- (a) ensuring that water allocated for community water supplies is retained for that use when those existing permits expire and are replaced;

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(b)	requiring permits for community water supplies to be exercised to service only land that:	C47 4/13 Op 9/15
(i)	was zoned for urban development as at 27 April 2013, including: <ul style="list-style-type: none"> <li>• any urban deferred zones that existed at that time, and</li> <li>• any such zoned land in Nelson City reticulated for community water supplies from the Council’s supply; or</li> </ul>	C56 9/15 Op 9/16 C67 7/18 Op 6/19
(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	
(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;	
(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;	
(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;	C47 4/13 Op 9/15 C56 9/15 Op 9/16
(d)	investigating options for augmenting community water supplies;	
(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.	
<b>30.2.3.13A</b>	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.	C56 9/15 Op 9/16 C63 9/16 Op 7/18 C67 7/18 Op 6/19
<b>30.2.3.14</b>	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:	C23 7/08 Op 8/14
(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;	
(b)	effects of any changes to the rates of take;	
(c)	compliance with any relevant reservation policies and provisions.	
<b>30.2.3.15</b>	To regularly review permits to ensure the allocation authorised by the permit reflects what is actually needed by:	C47 4/13 Op 9/15 C56 9/15 Op 9/16
(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	
(b)	reducing allocations to reflect bona fide use.	

- 30.2.3.16** 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:
- (a) enable more efficient use to be made of water available for abstractive use;
  - (b) enable water users to obtain more reliable supplies of available water;
  - (c) where applicable, contribute to the efficient and sustainable operation of the Wai-iti and Waimea Community Dam augmentation schemes.

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### Water Measuring

- 30.2.3.17** 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:
- (a) meet the requirements of the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010;
  - (b) ensure reliable data is available for making good resource management decisions including through the use of computer models;
  - (c) enable monitoring for compliance with resource consents;
  - (d) manage effects of takes on the environment, including cumulative effects and where there is a rationing trigger or minimum flow requirement;
  - (e) enable efficient use of water;
- in respect of any water take:
- (i) that is authorised by a consent; or
  - (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;
- 30.2.3.18** 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:
- (a) a proposed take from a surface resource is a significant percentage of the flow;
  - (b) there are significant values that may be affected by a take, particularly during low flows;
  - (c) there is a history of non-compliance with meter returns;
  - (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.

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Op 4/13

### Mitigation of Adverse Effects

- 30.2.3.19** 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 regionally significant trout fishery of the Riuwaka River through methods such as:

- (a) enhancement of habitats;
- (b) ensuring that Council’s river works programmes take into account adverse effects on aquatic habitat.
- 30.2.3.20** 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.
- 30.2.3.21** 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:
- (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
- (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;
- (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.
- 30.2.3.22** 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:
- (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;
- or
- (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) be inconsistent with flow regimes specified in Schedule 31C;
- (ii) increase the frequency or duration of minimum flows;
- (iii) reduce the security of supply of any water users subject to an allocation limit;
- (iv) have a significant adverse effect on the values of the water body or any connected water body identified in Schedule 30A;
- and when assessing applications, to take into account effects on:
- (v) natural flow regime, including the magnitude of the median flow and the frequency of flushing flows.
- 30.2.3.23** 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.

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C63 9/16 Op 4/18  
C67 7/18 Op 6/19C52 1/15  
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## Efficient Water Use

- 30.2.3.24** To promote, encourage and require, as appropriate, water conservation practices in the use of water through:
- (a) water use practices which minimise losses of water;
  - (b) water use practices that use water more efficiently;
  - (c) encouraging water users to use less water;
  - (d) encouraging the re-use of water;
  - (e) requiring the storage of water for any new dwelling not connected to a reticulated water supply.
- 30.2.3.25** 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:
- (a) the level of knowledge about the water body;
  - (b) the monitoring of water use;
  - (c) whether the transfer is within the same water management zone;
  - (d) the level of allocation within the zone;
  - (e) whether water has been reserved for any purpose in the zone in which the water is being transferred;
  - (f) whether the transfer of water facilitates access to water that is augmented from a water augmentation scheme;
  - (g) whether an actual need for water has been demonstrated and whether there is a risk of speculative trade by a third party.
- 30.2.3.26** 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:
- (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);
  - (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).
- 30.2.3.27** To examine the necessity and opportunities for meeting:
- (a) identified water needs, including for frost protection in respect of lands of the Crown returned to Māori as part of the settlement of claims under the Treaty of Waitangi Act 1975 and to review water management methods, including plan provisions (including consideration of reserving water for such lands), as appropriate; and
  - (b) identified water needs for frost protection of crops on Māori perpetual lease land.
- 30.2.3.28** 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:
- (a) security of supply for consumptive water takes; and
  - (b) efficient water use; and
  - (c) bona fide use;
- while managing the adverse effects, including cumulative effects, of damming and any potential water takes from the dam on:

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- (i) the river uses and values including aquatic ecosystems;
- (ii) connected water bodies;
- (iii) downstream water users, including security of supply for existing water users; by managing residual flows from the dam.

C36 3/12  
Op 4/13

## 30.2.20 Methods of Implementation

### 30.2.20.1 Regulatory

- (a) Rules relating to:
  - (i) the establishment of allocation limits, rationing triggers and rationing regimes;
  - (ii) water taking, including permit reviews;
  - (iii) reservation of water for specified uses;
  - (iv) site-to-site transfer of water permits;
  - (v) use of water meters;
  - (vi) collection and storage of water.
- (b) Enforcement and abatement action, where necessary.
- (c) Water shortage directions under Section 329 of the Act, where necessary.
- (d) Establishment and maintenance of waiting lists for water management zones where limits specified in the Plan have been reached.

C23 7/08  
Op 8/14

Information concerning fully allocated zones and the waiting lists that have been established is publicly available at any of the Council offices. The waiting lists will be maintained in the order in which they are currently established (provided all the necessary information has been provided to the Council), followed by new registrations.

A person wishing to become registered on a waiting list must:

- (i) apply by way of a form prescribed from time to time by the Council; and
- (ii) specify a maximum amount of water to be taken or used; and
- (iii) demonstrate a need to take or use water up to that amount; and
- (iv) include details of the person's landholding that is to benefit from use of the water.

This will require a person to include applicable details of the matters set out in Policy 30.2.3.10.

A registration fee must also be paid prior to registration being acknowledged.

New registrations will be entered on the relevant waiting list in the order in which the Council acknowledges in writing that it has received all necessary information, including sufficient information to satisfy the Council that there is a need to take or use the amount of water sought by the person wishing to become registered.

The Council may, at its discretion, include on the register a lesser amount of water, or refuse to register a person on the waiting list where it is not satisfied that a person has demonstrated a need to take or use water, or to take or use water up to the amount sought, as the case may be.

Registration on a waiting list grants priority in accordance with Policy 30.2.3.7 for a person on the waiting list to apply for a water permit under Section 88 of the Act for the amount of water as registered on the waiting list, in the order set out in the waiting list when the water becomes available for allocation.

Where a person registered on a waiting list has been informed by the Council that they have priority to make an application for a water permit, the application must be made within three months of being so advised in writing by the Council.

If no application is made within three months (or such further time as the Council may, in its absolute discretion, allow) the Council may receive and process an application from the next person or persons on the waiting list in their order of registration.

Where a person registered on a waiting list transfers a benefiting landholding, that person's position on the waiting list may be transferred to his or her successor in title, provided the Council is so advised of this in writing within three months of the transfer of ownership.

- (e) To require water meters in accordance with the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 and Policy 30.2.3.17, and to progressively upgrade existing water meters in a manner consistent with the transitional provisions of the regulations and for consented takes less than 5 litres per second.

C36 3/12  
Op 4/13

### 30.2.20.2 Education and Advocacy

- (a) Provision of information to potential water users concerning waiting lists.
- (b) Provision of information about transfer, including site-to-site transfer or lease of water permits where water permits are not being fully exercised.
- (c) Provision of information to individuals and the public about actual water use obtained from water meter data.
- (d) Provision of information about how to reduce water use, water use efficiency, re-use of water, use of water conservation devices or practices, and transfer of information gained through investigations and monitoring.
- (e) Promotion of works to improve fish and eel habitat in rivers with significant aquatic fishery habitat, including the Riuwaka River, in consultation with landowners, permit holders, interest groups, and iwi.
- (f) Preparation and provision of information about best practices for irrigation.

### 30.2.20.3 Works and Services

- (a) Liaison with water supply and wastewater service providers, especially through Council's asset management plans, to:
  - (i) promote and plan for effective and integrated water supply and wastewater services, including assessment of the strategic water supply needs of existing and potential future communities in water short areas;
  - (ii) investigate options for providing for future community water supply needs, including options for water augmentation;
  - (iii) investigate options for reducing water use and increasing water use efficiency.
- (b) Liaison with the asset manager of rivers to take into account options to improve fishery values in rivers with significant aquatic habitat value, including the Riuwaka River, when carrying out river works.

### 30.2.20.4 Investigation and Monitoring

- (a) Investigation of alternative water supply options for domestic and stock water users affected by low security of supply.
- (b) Investigation and support of industries to investigate options for more efficient water use.
- (c) Continued monitoring of the impact that possible increased use of allocated water may have on water body flows and levels and on users' security of supply.

- (d) Investigation and understanding of the nature and significance of small-scale permitted water takes, including cumulative incremental increases, especially water taken by rural residential water users.
- (e) Investigation and development of options for monitoring and reporting on soil moisture levels in relation to irrigation needs of a range of crops across the District, in consultation with industry stakeholders.
- (f) Investigation into barriers for use of allocated water and measures to improve rates of use of allocatable water. C23/C24  
Op 8/14
- (g) Investigation into the necessity and opportunity for meeting water needs in respect of Treaty of Waitangi settlement lands, including the water needs for frost protection of crops on settlement lands, on enactment of legislation confirming settlement of all Te Tau Ihu (Wai 785) iwi claims in respect of land in the Tasman District (or at a sooner time as considered appropriate), and to review water management methods, including plan provisions, and consideration of reserving water for such lands, as appropriate.

### 30.2.30 Principal Reasons and Explanation

Policies 30.2.3.1 to 30.2.3.6 recognise that not all end uses of water have equal priority for water at all times and these policies specify the circumstances where there is priority for water. They establish priority during periods of water shortage, and continue with the Council's protection of the minimum water supply needs for stock water and domestic supplies to provide for essential human health and animal welfare. C56 9/15  
Op 9/16

In assessing the drawdown effects on other bores in alluvial aquifers such as those in the Motueka or Waimea Plains, a fully penetrating bore is drilled to the bottom of the aquifer and the bore is constructed in such a way that water is abstracted from the deepest part of the bore in order to maximise water quality and water quantity. C24 12/08  
Op 8/14

Domestic bores in the unreticulated areas of the Motueka Plains may be affected by drawdown effects from neighbouring irrigation bores if the domestic bore is too shallow and increasing allocation limits in the Central Plains Zone may impact on these bores. Council intends to provide a reliable and secure community water supply to Motueka as an alternative for domestic users. However, Council acknowledges that while some domestic bores may experience lower water levels in some summers, the benefits of an increased allocation limit to the District are very significant and should not be forgone because some bores are inadequate.

The policies articulate better the levels of expectation both by Council and of Council in terms of water services. Council will protect minimum needs of domestic water users to the extent specified, and will ensure that development of communities is in such a way that takes into account the limitations of water supplies in some areas.

The Council will require that new dwellings in all rural and rural residential areas be constructed with 23,000 litre water tanks to enhance water supplies in those areas. Water collection, especially rainwater collection from dwellings has water management implications in that it can give householders additional security of supply during droughts and reduces reliance on a scarce resource. It enables householders to better manage the effects of a drought.

The requirements for water collection and storage also reflect a concern about the need to manage fire risk. Council wishes to ensure that there is sufficient regard for the need for fire-fighting water supplies in all unserviced areas, and requirements for water collection will help achieve this.

The need to allow for reservation of water for irrigation of Māori perpetual lease lands and for future community use has been recognised by Council.

Certain Māori perpetual lease lands currently under perpetual leasehold terms may not have authorised access to sufficient water, either at present or in the future. The Māori landowners are unable to directly influence the lease arrangement to require water permits for irrigation of irrigable land to be obtained or exercised.

C24 12/08  
Op 8/14

This is a potential disadvantage to these otherwise productive lands following future resumption of the leases in favour of the Māori owners.

The Council intends to investigate opportunities to address provision for possible water needs in respect of Crown land that is to be returned to Māori in the settlement of claims under the Treaty of Waitangi Act 1975. If new allocation limits are established for takes in relation to frost protection, the Council will also account for the need to reserve some of this water for crop and other productive needs for Māori perpetual lease land. The Treaty of Waitangi and Council's duties under the Act to account for its principles provide a basis for this reservation.

C23/C24  
Op 8/14

In providing for water for future community use, Council recognises the need to take into account the demand for water according to the expected rate of growth of communities. There is a need to ensure this growth is consistent with the size and condition of the water supply infrastructure and the availability of water. Asset management, including both maintenance of existing assets and provision for creating new assets, also needs to be considered, along with water availability, options for augmentation, and water management policies. The Plan gives priority to community uses by reserving defined amounts of water for future community use. The reservation of water will be within stated allocation limits for any water management zone, and the Council will ensure that its asset management plan for water supply will take into account the effect of water allocation limits when considering future water supply needs for community water supplies. Community water supply permits will continue to be required to comply with rationing requirements and bona fide reviews, although these requirements will reflect the unique characteristics of community water supplies. They recognise that water asset providers do not have the same level of control over the amount of water used and that indirect controls such as hosing bans, water meters and pricing mechanisms are employed to influence levels of water use. Policy 30.2.3.4 recognises that reserving water will not be sufficient by itself to provide for the future needs of community water supplies, particularly in already fully-allocated zones.

Policy 30.2.3.7 provides guidance for water allocation in situations where water may become available in areas previously fully allocated. The use of waiting lists to determine priority for future access to water will continue so that Council has a transparent and equitable system in these situations.

Policies 30.2.3.8 to 30.2.3.17 seek equitable and efficient water allocation and water use.

Council will require water permit applicants to demonstrate a need for water, especially in water short areas where there are waiting lists. This will assist in achieving the objective of equitable allocation and efficient use of water.

C23 7/08  
Op 8/14

It is both efficient and sustainable for the Council to consider community water supply needs through a planned approach to water allocation rather than an ad hoc response to individual demand. This approach ensures more equitable and strategic water allocation management that can address the needs of a wide range of existing and future water users.

C23 7/08  
Op 8/14

In water management zones benefitting from an augmented supply, including those benefitting from the Waimea Community Dam, water users will need to contribute funding to such schemes in order to access the augmented water. This reflects the community approach to resolving water shortages as, without user contributions, the security of supply for existing users is not sustainable in over-allocated zones and no provisions can be made for future users. Under Policy 30.2.3.11, Council will not subject these permits to the same review provisions as other water users to reflect the investment made by water users in augmenting their water supply.

C56 9/15  
Op 9/16

For affiliated permit holders, the Council also wishes to protect existing investment into water use until the Waimea Community Dam is operational. It is adopting provisions that protect the status quo water use for these permits by requiring only a limited bona fide review assessment that does not include reductions as a result of soil or crop type specifications, and continues with the same rationing triggers as currently exist.

It wishes to maintain a status quo approach but also ensure that there is no increased usage before the dam is operational.

Council also wishes to enable efficient use of the allocatable quantity of water specified through allocation limits and especially augmented water supplies in the Wai-iti Dam Service Zone and the Waimea Zones benefitting from increased flows or levels arising from the proposed Waimea Community Dam as described in Policy 30.2.3.16. Where such augmentation schemes are operating, site to site transfers will be encouraged as a means of increasing the efficient use of available water and these will be subject to fewer restrictions. It has introduced permitted and controlled activities for site-to-site transfers of points of take. This regime enables users to move points of take closer to the augmented river flow and thus a more reliable supply. It can encourage users to transfer unused parts of permits to new users and contribute to more efficient use of water. It helps achieve more efficient and sustainable use of the augmented supply by allowing optimal use of all the available water.

C56 9/15  
Op 9/16

In most water short areas, potential water users currently do not have access to water. Through Policy 30.2.3.15, Council wishes to ensure that water available for allocation in these areas is used fully and not "saved" or unused by permit holders. The previous policy approach, which saw reductions in allocations if water permits were not fully exercised, has been criticised for not being totally successful in achieving the outcome of equitable water allocation and efficient water use. To overcome this, Council has indicated that it will encourage the permanent transfer or lease of permits to allow permit holders some flexibility.

C47 4/13  
Op 9/15

Council also proposes to retain its discretion to review permits regularly to ensure permits reflect actual usage. The Council will continue to carry out reviews of bona fide use of water authorised by permits, generally at the time a permit is due for expiry and a new application is received. Water permit holders will be advised of the options available to them at the time information about the expiry of the permit is given. The 'bona fide' review will take into account relevant reasons for water use at rates lower than that allocated. Rates of water use may be reduced as a result of the review, particularly in zones that are fully or over allocated. Any reductions in allocated amounts will be used to meet demand by new water users, or to reduce allocated amounts in over-allocated zones. Continued non-use of allocated water may result in reductions in allocation.

Except in over-allocated zones, Council will provide information and advice to permit holders about permanent transfer or lease of permits. There is a potential for higher rates of use of allocated water than has previously occurred by the Council taking this approach. This is because there is an incentive for water users to maximise their use of water allocated to them either by themselves or by leasing or trading part of their permit, rather than 'losing unused portions'. Council recognises the potential for adverse effects on water users' security of supply through increased rationing and on the water levels or flows as more water is taken. It will continue to closely monitor water usage and the effects of water abstractions in affected water management zones as well as on the security of supply of water users.

In setting allocation limits and establishing rationing regimes, Council takes into account the minimum security of supply of water users.

C24 12/08  
Op 8/14

### Security of Supply

C44 4/13 Op 1/15

The Council will generally seek to provide a security of supply for surface and ground water users that results in the equivalent of a 35 percent reduction in allocated use during a 10-year drought, implemented through a series of stepwise reductions as provided for in Policy 30.2.3.20. It will also encourage the harvesting of water during times of high flow and recognise that water users can increase their own security of supply through water augmentation schemes such as water harvesting and storage in dams (Policy 30.2.3.21). The Council also recognises that contributions to an augmentation scheme may improve instream values. An augmentation scheme may lead to allocation limits being increased or changes being made to minimum flow provisions.

The Council will also account for investment into dam infrastructure and associated water use by ensuring that any new activities to take, use, dam or divert water do not significantly adversely affect the functioning and use of any existing dam by reducing the supply of water to the dam.

C23/C24  
Op 8/14

Some water management zones have allocation regimes where the security of supply is higher than the stated minimum. This may be because there is still uncertainty about the exact nature of the water resource and recharge mechanisms and a more precautionary approach has been used. The consequences of unsustainable extraction are significant and irreversible damage to aquifers can be caused by over abstraction. Higher security of supply is provided in the Moutere groundwater zones and in the Central Plains and King Edwards zones. Water users in these zones enjoy a relatively high security of supply as triggers for rationing are set at levels that are unlikely to be triggered in a '1 in 10-year' drought.

C24 12/08  
Op 8/14

More data and improved understanding about the connections between the Hau Plains Zone seawater intrusion risks and water takes in the Central Plains zone may allow Council to review allocation limits while still providing for a security of supply that is consistent with stated objectives.

In some zones, water allocated is greater than the amount considered to be the sustainable water allocation limit for the zone. This is particularly relevant in most of the Waimea zones should there be no augmentation dam, the Wai-iti Zone and for most of the Moutere Surface Water Zone. Permit holders are likely to have a lower security of supply than considered desirable. The existing Wai-iti Dam and the proposed Waimea Community Dam, however, enable water users in the augmented zones to improve their security of supply. The size of the Lee dam and the flows required to maintain downstream aquatic habitat and other values will influence the security of supply. For the Wai-iti dam, the design security of supply means water permit holders will not be rationed in a 10-year drought, while the proposed Waimea Community Dam ensures secure supplies for those abstractions that are affiliated to the Dam for a 24-year drought for abstractive use under the new allocation limits.

C56 9/15  
Op 9/16

For permits not affiliated to the Waimea Community Dam, the security of supply will be much lower. Rationing and security of supply is based on the cumulative sustainable allocation limit for the affected zones and the (calculated) effect of these takes on a minimum flow of 650 litres per second in the Waimea River and will include cease take provisions based on flows at the Wairoa River Irvine's monitoring site.

These provisions will avoid creating any opportunity for permits not affiliated to the dam gaining advantage from augmented flow as a result of the Waimea Community Dam.

Provision is made in policy 30.2.3.12(D) for the Council to consider allocating water for the survival of horticultural and viticultural root stock and glasshouse crops.

Some takes that service more than one landowner through a reticulated water scheme, such as the take by Waimea East Irrigation Company Limited, may need to provide water both to landowners within a scheme who wish to be affiliated and to those who do not wish to be affiliated. One option for managing this is for an applicant to apply for a single affiliated permit for an area that is less than the total area able to be irrigated, but which can then be applied to a bigger area. This may not be feasible in all cases, so the Plan also provides for another alternative which is to obtain two permits (one for affiliated water and one for unaffiliated water) and to manage these jointly (see policy 30.2.3.12(E)).

The Council will work with the Lower Moutere Water Scheme and other water users in the Hau Plains Zone to ensure that domestic water users, who might otherwise have been affected by seawater intrusion, are periodically provided with an alternative water supply to avoid adverse effects of seawater intrusion. This means that domestic users will continue to have water while irrigators can avoid triggering rationing for longer.

C24 12/08  
Op 8/14

An allocation limit has been established for the Riuwaka River that results in a compromise between the needs of the existing abstractive users for a reasonable security of supply and the requirements for a minimum flow that sustains the regionally significant trout fishery in the river. Through Policy 30.2.3.19 the Council will seek to mitigate the adverse effects of the reduced flows in consultation with the Nelson Marlborough Fish and Game Council as well as adjacent landowners and permit holders by improving fish and eel habitat. *(See also section 8.1 in respect of public access to rivers.)*

Allocation of water will be on the basis that water allocated is used efficiently. Council will achieve this by taking into account soil characteristics and area irrigated for irrigation purposes and other users will be required to show how water use efficiency will be achieved and monitored. Crop type will not generally be used to determine allocation rates for irrigation as this will reduce the flexibility for landowners to change type of crops grown. However, because water users can elect to transfer access to water temporarily or permanently, permit renewal applications will be assessed on the basis of the least of the previously allocated or used amount, and will not subsequently be increased to reflect the defined soil application rate.

### No Waimea Community Dam

C47 4/13  
Op 9/15

If there is no Waimea Community Dam, resource consent applications that are renewals of existing water permits will be subject to water allocation on the basis of bona fide use, including allocation based on crop and soil type. Sustainable allocation targets will guide decision making in relation to any new applications.

C56 9/15  
Op 9/16

In the Waimea Plains water management zones, Council has adopted allocation limits which will be the sum of existing consented takes authorised by rule 31.1.2.2 in 2016 and 2017. New sustainable allocation targets in the absence of a dam have been adopted to manage new water take applications.

These allocation limits and targets will have substantial impacts on all of the abstractive users of water.

No new permits will be issued in these zones. Resource consent applications that are renewals of existing water permits will be subject to water allocation on the basis of bona fide use, crop and soil type and conditions for rationing aimed at protecting the flow in the Waimea River.

However, provision is made in policy 30.2.3.12(D) for the Council to consider allocating water for the survival of horticultural and viticultural root stock and glasshouse crops.

Council has adopted new policy and rule provisions that recognise existing water permits and re-allocation of water for community water supply from the Delta, Golden Hills, Reservoir, and Lower Confined Aquifer Zones and provide for the existing urban development and rural extension commitments for Richmond, Brightwater and Mapua-Ruby Bay identified in this Plan and the Long Term Plan. However, this recognition also accounts for the water over-allocation issues in the Plains and constrains new urban development unless other augmentation solutions are provided for.

C56 9/15  
Op 9/16  
C67 7/18  
Op 6/19

A permit duration of 20 years will also be adopted that reduces consent costs for water users.

### Water Measuring

C36 3/12  
Op 4/13

Water measuring enables Council to monitor compliance with resource consents and also to provide information to assess Plan compliance. Water use data also improves knowledge about the District's water resources and water use patterns and can be used to help in achieving efficient water use and development of robust water allocation provisions. National regulations (Resource Management (Measurement and Reporting of Water Takes) Regulations 2010) also now require water metering for consented takes greater than 5 litres per second. The installation and verification of water meters will be required to be carried out by appropriately accredited people. Decisions about verification of existing meters where installation does not meet the new guidelines developed under the regulations will be made by Council.



Water meters will continue to be required for all consented takes less than 5 litres per second and permitted takes in sensitive water management zones such as the Moutere Groundwater zones where there is a need to monitor total abstraction. Non-consumptive takes may also be required to measure water usage if the take has implications for management of minimum flows, security of supply for other users or rationing, and to enable compliance with consent conditions to be monitored. An exception is provided for surface takes less than 5 litres per second during winter months where the water is being taken and stored for use during summer low-flow periods. This use of water takes advantage of higher flows and augments water supplies during times when water is seasonally limited.

C36 3/12  
Op 4/13

The Council is continuing to develop secure electronic data management and reporting systems as more water users see the benefits of electronic recording and reporting. While manual recording of meter data is currently most common and will continue to be provided for (especially for takes less than 5 litres per second), the Council expects to move towards more automated and electronic systems over time. The regulations provide a good starting point for raising awareness and standards of recording and reporting. Over time, new larger takes and those in sensitive areas could be required to install electronic recording and reporting systems.

The Council will also continue to require reporting of water meter data on a weekly basis. This is because consent compliance and water management, including during drought conditions, is based on weekly totals and this approach has proved effective. Exceptions to this regime include, where rostering is required, at low flow and for situations where compliance with flow-sharing provisions is required, such as for the Buller Water Conservation Order.

### **Water Harvesting and Storage**

C52 1/15  
Op 7/17

The Council also wishes to continue to encourage augmentation of water supplies, especially in seasonally water short areas, and to recognise investment by landowners into structures that augment water supplies, including reservoirs or ponds that are filled by pumping from surface water or groundwater sources. The benefits of augmentation are recognised in section 30.3 and the management of the effects of dams in section 30.1.

As demand for water increases and allocation limits are met, the harvesting of water during times of high flow, generally into storage for later use, is increasingly being considered in a range of innovative ways across the District.

The management of flow harvesting for out-of-stream storage is providing new challenges because the effects are on a range of components of the flow regime, not just the low flow, which has previously been the focus of water allocation policy.

Precise quantitative predictions of the consequences of flow changes are not available for all rivers, and it is not possible to prescribe requirements for all mid-range flow regimes that will meet management objectives. However, there is now sufficient research to support the establishment of flow thresholds to guide some flow harvesting decisions and to highlight the key ecologically relevant flow regime components that may be affected by harvesting.

New policy provides guidance for assessing applications. If water is harvested when flows are above median flow and limited to no more than 10 percent of the median flow, adverse effects of flow harvesting are small. Where there is higher abstraction pressure, a more in-depth analysis may be required, including habitat modelling and flushing flow analysis.

### **Efficient Water Use**

The Council will also ensure that water users have appropriate information to assist them in identifying and adopting practices available for achieving more efficient use of water. It promotes conservative use of water by domestic users, irrigators and industrial users as well as water re-use.

The Council will continue to investigate and encourage industrial and irrigation users to investigate ways of achieving more efficient water use.

**30.2.40 Performance Monitoring Indicators**

- (a) Maintenance of defined river flows, or groundwater or lake levels.
- (b) Number of resource consents issued to take water.
- (c) Level of compliance with resource consent conditions.
- (d) Number of complaints about water take activities.
- (e) Frequency or severity of rationing.

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## 30.3 FRESHWATER AUGMENTATION

### 30.3.1 Issue

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.

### 30.3.2 Objective

There is sufficient water to meet the needs of all water uses.

### 30.3.3 Policies

*Refer to Policy sets 30.1.3, 30.2.3.*

*Refer to Rule sections 31.1.*

- 30.3.3.1** 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.
- 30.3.3.2** To recognise the beneficial effects of water augmentation, including harvesting in dams and reservoirs when considering water permit applications, including beneficial effects on:
- (a) aquatic habitat and ecosystems;
  - (b) increased water availability;
  - (c) downstream water bodies;
  - (d) other water users.
- (See also 30.1.3.23 - Water Damming)*
- 30.3.3.3** 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:
- (a) The extent to which a water supply is augmented or the level to which the security of supply for water users is enhanced.
  - (b) The nature or extent of benefits for habitat values of aquatic organisms.
  - (c) The nature or extent of benefits for recreational uses.
  - (d) The extent of any public health benefits.
  - (e) The extent to which adverse effects of water or land use activities can be mitigated.
  - (f) The extent to which there are other community benefits such as beneficial effects on landscapes, tourism, etc.
  - (g) The extent of any benefits for increasing knowledge or understanding of the nature or extent of a water resource.
  - (h) The extent to which adverse effects of water allocation policy on water users need to be mitigated.
  - (i) The scale of the proposal, especially in relation to benefits and costs of any alternative option.
- 30.3.3.4** 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.

- 30.3.3.5** To promote and encourage domestic water users in urban areas to collect rainwater from roofs for re-use. (*See also 30.2.3.3*)

### **30.3.20 Methods of Implementation**

#### **30.3.20.1 Education and Advocacy**

- (a) Advice and information about the extent of water resources and options for water augmentation, especially the construction of dams.
- (b) Advice about and promotion of the collection of rainwater from roofs for re-use.

#### **30.3.20.2 Works and Services**

- (a) Support of water augmentation schemes according to the established criteria.
- (b) Co-ordination of, and financial and technical support for, the Waimea Water Augmentation project.

### **30.3.30 Principal Reasons and Explanation**

In water management zones where water is fully allocated, additional permits to take surface water during low flow periods would not be granted. However, collection and storage of water during high flows in dams or reservoirs can be cost effective. It enables permits to take water to be granted and water to be taken during droughts when takes from rivers or groundwater may be restricted. Council will encourage such augmentation proposals, provided adverse effects can be managed.

Storage of water or other augmentation developments can have a range of other benefits, including for aquatic habitats, recreation, public health, mitigating adverse effects of other land or water uses, better resource knowledge (such as better information about deep aquifers), and other community benefits (such as landscape or tourism).

Water augmentation proposals can include investigation into new water resources such as aquifers, reticulation for users in water short areas, initiatives for enhanced groundwater recharge, or dams and reservoirs.

Council will take account of beneficial effects of water augmentation when considering any application to store water, especially where out-of-stream impoundments avoid adverse effects on water bodies.

There is also a need to guide the level of Council involvement for any particular augmentation proposal according to the public and private benefits and these are identified in Policy 30.3.3.3. The criteria are in no particular order and the significance of any of the criteria will depend on the circumstances of each situation.

Council will ensure that people intending to build new dwellings in urban parts of the district, including serviced urban areas, are aware of the advantages of water storage and collection in respect of reduced reliance on reticulated water supplies during droughts, and augmentation of potentially available water. An additional advantage of water collection and storage in urban areas is in reducing the impact of stormwater on urban stormwater networks.

### **30.3.40 Performance Monitoring Indicators**

**30.3.40.1** Number of new water augmentation schemes.

**30.3.40.2** Number of rainwater storage systems constructed.

- 30.3.40.3 Level of unsatisfied demand for water.
- 30.3.40.4 Changes to the security of supply.
- 30.3.40.5 Maintenance of minimum flow regimes.

## **30.50 ENVIRONMENTAL RESULTS ANTICIPATED**

- 30.50.1 Abstractive use of water at a rate that avoids, remedies or mitigates adverse effects on instream uses and values of a water body.
- 30.50.2 Land uses that avoid, remedy or mitigate adverse effects on water yield or groundwater levels.
- 30.50.3 Allocation of water at a rate and in a manner that is equitable and reasonable.
- 30.50.4 Efficient use of allocated water.
- 30.50.5 Sufficient water to meet the needs of instream uses and values and the needs of abstractive water users.
- 30.50.6 Sustainable management of wetlands.

## SCHEDULES

### Schedule 30A: Uses and Values of Rivers, Lakes, Wetlands, Aquifers and Coastal Waters

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This Schedule lists values for water bodies within the Tasman District. The Schedule includes, as appropriate, the waters of estuaries and coastal margins listed in Schedule 25D. The list of values is not yet complete for all water bodies or for all values. Further work is also underway to develop consistent protocols and determine the evidential requirements for inclusion of values into the Schedule.

Some types of values have been assigned an indicative relative significance of the value. The significance of values or uses (either existing or potential) is only in relation to other water bodies that may have that value or use and is not as compared to other values. A consistent methodology for assessing relative significance between or across all values is still being developed. Only those values in relation to wetlands, values identified in water Conservation Orders and significant habitats of indigenous species are assigned through a formal method or statutory process.

Rivers with potential value for hydro-power generation or irrigation are identified. However, this does not indicate weighting or priority for these values over other values that exist or have potential for that river.

The Schedule includes values that must be taken into account in relation to specific conditions on permitted activities and when making resource consent applications for activities managed by rules in Part IV or when applying provision of Policy 33.1.3.15 in Part VI. It is not an exhaustive list and additional information about potentially affected uses and values may be required in support of resource consent applications.

Unless specified, the values included for any river or group of rivers may apply to the length of the rivers listed or only to specific reaches, and further investigation may be required to provide sufficient details.

This Schedule is yet to be developed in accordance with the:

- (a) National Policy Statement for Freshwater Management 2011
  - (b) National Policy Statement on Renewable Electricity Generation 2011
- to:
- (i) include management objectives for all water bodies as well as limits and thresholds for water quality and quantity; and
  - (ii) to recognise the national significance of the need to develop renewable electricity resource including hydro-electric power generation.

The Council will introduce future changes to the Plan to fully implement these national policy statements.

WATER BODY USES AND VALUES		
Water Body	Values/Uses Adversely Affected by Reduced Flows or Levels	Water Management Objectives for Water Quantity
(1) <b>All groundwater</b> (All groundwater may have any of these uses and values and information may be required to identify existence of values and to assess the impact of proposed activities on these values and uses.)	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Contribution to river and spring flows.</li> <li>Phreatic ecological communities.</li> </ul>	<ul style="list-style-type: none"> <li>Prevention of seawater intrusion.</li> <li>Maintenance of aquifer pressures (abstraction rates to match recharge rates).</li> <li>Maintenance of contribution to river or spring flows.</li> </ul>
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Human consumption.</li> <li>Irrigation including for food production.</li> <li>Community water supply.</li> <li>Stock and farm water supply.</li> <li>Industrial supply.</li> </ul>	<ul style="list-style-type: none"> <li>Protection of water supply needs of stock and domestic users (provided there is full penetration of any alluvial aquifer).</li> <li>Maintenance of water users' security of supply at an acceptable level.</li> </ul>

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WATER BODY USES AND VALUES			
Water Body	Values/Uses Adversely Affected by Reduced Flows or Levels	Water Management Objectives for Water Quantity	
<b>WITH WAIMEA COMMUNITY DAM</b>			
<sup>1</sup> These values and objectives apply to water bodies (2) to (4) from now until construction of the Waimea Community Dam commences and continue to apply once the dam commences operation.			
(2) Upper Confined Aquifer (3) Appleby Gravel Aquifer (4) Lower Confined Aquifer	<b>Instream Uses and Values</b>		
		<b>AFTER dam is operating</b>	<b>UNTIL dam is operating</b>
	<ul style="list-style-type: none"> <li>Contribution of flow to the Waimea River.</li> <li>Contribution of flows to Neimann, Pearl and O'Connor Creeks</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of Waimea River flows all year in up to a 50-year drought to maintain aquifer water levels.</li> <li>Improved spring flows in Neimann, Pearl and O'Connor creeks.</li> <li>Avoidance of seawater intrusion into any pumped bore.</li> <li>Improved aquifer pressures such that annual recharge rates meet or exceed annual abstraction rates.</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of flow in the Waimea River through water rationing.</li> <li>Maintenance of spring flows in Neimann, Pearl and O'Connor creeks.</li> <li>Avoidance of seawater intrusion into any pumped bore.</li> <li>Maintenance of aquifer water levels.</li> </ul>
	<b>Other Uses and Values</b>		
	<b>AFTER dam is operating</b>	<b>UNTIL dam is operating</b>	
	<ul style="list-style-type: none"> <li>Human consumption.</li> <li>Irrigation including for food production.</li> <li>Community water supply.</li> <li>Stock and farm water supply.</li> <li>Industrial supply.</li> </ul>	<ul style="list-style-type: none"> <li>Protection of water supply needs of stock and domestic users.</li> <li>Maintenance of water users' security of supply at 100% in up to a 50-year drought,</li> </ul>	<ul style="list-style-type: none"> <li>Protection of water supply needs of stock and domestic users.</li> <li>Maintenance of water users' existing security of supply</li> </ul>
<b>Water Body</b>	<b>Values/Uses Adversely Affected by Reduced Flows or Levels</b>	<b>Water Management Objectives for Water Quantity</b>	
<b>WITHOUT WAIMEA COMMUNITY DAM</b>			
These values and objectives apply to water bodies (2) to (4) if substantial progress towards giving effect to the applicable resource consents for construction of the Waimea Community Dam has not been made by November 2020.			
(2) Upper Confined Aquifer (3) Aquifers of the Reservoir, Waimea West and Delta zones (4) Lower Confined Aquifer	<b>Instream Uses and Values</b>		
	<ul style="list-style-type: none"> <li>Contribution of flow to the Waimea River.</li> <li>Contribution of flows to Neimann, Pearl and O'Connor creeks.</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of Waimea River minimum flow.</li> <li>Maintenance of spring flows in Neimann, Pearl and O'Connor creeks.</li> <li>Prevention of seawater intrusion.</li> <li>Maintenance of aquifer pressures such that annual recharge rates meet or exceed annual abstraction rates.</li> </ul>	
	<b>Other Uses and Values</b>		
	<ul style="list-style-type: none"> <li>Human consumption.</li> <li>Irrigation including for food production.</li> <li>Community water supply.</li> <li>Stock and farm water supply.</li> <li>Industrial supply.</li> </ul>	<ul style="list-style-type: none"> <li>Protection of water supply needs of stock and domestic users.</li> <li>Reduction of water allocations to improve water users' security of supply at an acceptable level.</li> </ul>	

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<sup>1</sup> 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.



Water Body	Values/Uses Adversely Affected by Reduced Flows or Levels	Water Management Objectives for Water Quantity
(5) Motueka Plains, Central Plains and King Edward Zones Aquifers	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Contribution to coastal springs' flows.</li> <li>• Contribution of flow to Hau Plains Zone aquifer.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of flows in coastal springs.</li> <li>• Maintenance of flow to Hau Plains Zone aquifer.</li> <li>• Prevention of seawater intrusion.</li> <li>• Maintenance of aquifer pressures (abstraction rates to match recharge rates).</li> </ul>
(6) Hau Plains Zone Aquifer	<b>Instream Uses and Values</b>	
		<ul style="list-style-type: none"> <li>• Maintenance of aquifer pressure (abstraction sources to match recharge rates).</li> </ul>
(7) Karst Terrain Aquifers and Rivers	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Subsurface aquatic habitat.</li> <li>• Contribution to Te Waikoropupu Springs, Motueka River and Riuwaka River flows.</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of subsurface aquatic habitats.</li> <li>• Maintenance of Te Waikoropupu Springs' and Riuwaka River flows.</li> </ul>
(8) All surface water bodies (All surface water may have any of these uses and values and information may be required to identify existence of values and to assess the impact of proposed activities on these values and uses)	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Aquatic ecosystems, wildlife and aquatic plant habitat.</li> <li>• Contact and non-contact recreation activities.</li> <li>• Cultural and spiritual values.</li> <li>• Landscape values.</li> <li>• Contribution to lowland spring flows.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of minimum low flows for instream aquatic values including fisheries values.</li> <li>• Protection of contact and non-contact recreation activities.</li> <li>• Protection of landscape cultural and spiritual values.</li> </ul>
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Human consumption.</li> <li>• Irrigation including for food production.</li> <li>• Community water supply.</li> <li>• Stock and farm water supply.</li> <li>• Industrial supply.</li> <li>• Hydro-electric power generation.</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of water supply needs of stock and domestic users.</li> <li>• Maintenance of water users' security of supply at acceptable level.</li> </ul>

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<b>WATER BODY USES AND VALUES</b>			
<b>Water Body</b>	<b>Values/Uses Adversely Affected by Reduced Flows or Levels</b>	<b>Water Management Objectives for Water Quantity</b>	
<b>WITH WAIMEA COMMUNITY DAM</b>			
<sup>2</sup> These values and objectives apply to water bodies (9) and (10) from now until construction of the Waimea Community Dam commences and continue to apply once the dam commences operation.			
<b>(9) Waimea River</b>	<b>Instream Uses and Values</b>		
		<b>AFTER dam is operating</b>	<b>UNTIL dam is operating</b>
	<ul style="list-style-type: none"> <li>• Aquatic ecosystems, wildlife and aquatic plant habitat.</li> <li>• Contact and non-contact recreation including swimming, canoeing, angling, jet boating and picnicking.</li> <li>• Cultural and spiritual values.</li> <li>• Landscape values.</li> <li>• Instream native and trout fisheries including native fish diversity and abundance, threatened native fish including torrent fish, brown trout habitat, trout passage and trout spawning.</li> <li>• Contribution to Neimann, Pearl and O'Connor creeks and spring flows.</li> <li>• Native bird habitat including for threatened banded dotterel, NZ Pied Stilt and black-fronted tern.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of flows all year in up to a 50-year drought to:                             <ul style="list-style-type: none"> <li>• sustain aquatic ecosystems;</li> <li>• provide for recreational activities, including trout fishing;</li> <li>• provide for cultural and spiritual values;</li> <li>• enhance landscape values;</li> <li>• avoid seawater intrusion up river adjacent to any pumped bore;</li> <li>• sustain habitat needs of native fish and trout;</li> <li>• sustain flow in Neimann, Pearl and O'Connor creeks; and</li> <li>• support habitat needs of native birds.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of flows in the Waimea River through water rationing to:                             <ul style="list-style-type: none"> <li>• sustain habitat needs of native fish and trout;</li> <li>• sustain flow in Neimann, Pearl and O'Connor creeks; and</li> <li>• avoid seawater intrusion.</li> </ul> </li> </ul>
	<b>Other Uses and Values</b>		
<ul style="list-style-type: none"> <li>• Human consumption.</li> <li>• Irrigation including for food production.</li> <li>• Stock and farm water supply..</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of water users' security of supply at 100% in up to a 50-year drought.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance water users' existing security of supply.</li> </ul>	
<b>(10) Neimann, Pearl and O'Connor Creeks</b>	<b>Instream Uses and Values</b>		
		<b>AFTER dam is operating</b>	<b>UNTIL dam is operating</b>
	<ul style="list-style-type: none"> <li>• Native fish habitat in Neimann, Pearl and O'Connor creeks downstream of 1609565 5428615 NZTM, including the regionally significant native fishery of Neimann and Pearl creeks.</li> <li>• Regionally significant wildlife habitat in Neimann, Pearl and O'Connor creeks.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of flows including improved spring flows during drought to protect native fishery and wildlife habitats.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of spring flows during drought to sustain native fishery and wild life habitats and avoid seawater intrusion.</li> </ul>

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<sup>2</sup> 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.

WATER BODY USES AND VALUES		
Water Body	Values/Uses Adversely Affected by Reduced Flows or Levels	Water Management Objectives for Water Quantity
<b>WITHOUT WAIMEA COMMUNITY DAM</b>		C56 9/15 Op 9/16 C63 9/16 Op 4/18 C67 7/18 Op 6/19
<sup>3</sup> These values and objectives apply to water bodies (9) and (10) if substantial progress towards giving effect to the applicable resource consents for construction of the Waimea Community Dam has not been made by November 2020.		
(9) Waimea River	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Aquatic ecosystems, wildlife and aquatic plant habitat.</li> <li>• Contact and non-contact recreation including swimming, canoeing, angling, jet boating and picnicking.</li> <li>• Cultural and spiritual values.</li> <li>• Landscape values.</li> <li>• Instream native and trout fisheries including native fish diversity and abundance, brown trout habitat, trout passage and trout spawning.</li> <li>• Contribution to Neimann, Pearl and O'Connor creeks and spring flows.</li> <li>• Native bird habitat including for threatened banded dotterel, NZ Pied Stilt and black-fronted tern.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of Waimea River minimum flow to: <ul style="list-style-type: none"> <li>• support aquatic ecosystems</li> <li>• provide for at least 70% protection of habitat for trout</li> <li>• provide for cultural and spiritual values and landscape values</li> <li>• sustain habitat needs of native fish and trout;</li> <li>• sustain flow in Neimann, Pearl and O'Connor creeks;</li> <li>• avoid seawater intrusion up river adjacent to any pumped bore</li> <li>• support habitat needs or native birds.</li> <li>• provide for recreational activities at flows above minimum flow, in addition to the above objectives.</li> </ul> </li> </ul>
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Human consumption.</li> <li>• Irrigation including for food production.</li> <li>• Stock and farm water supply.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of water allocations to improve water users' security of supply at an acceptable level.</li> </ul>
(10) Neimann, Pearl and O'Connor Creeks	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Native fish habitat in Neimann, Pearl and O'Connor creeks downstream of 1609565 5428615 NZTM, including the regionally significant native fishery of Neimann and Pearl creeks.</li> <li>• Regionally significant wildlife habitat in Neimann, Pearl and O'Connor creeks.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of spring flows during drought to protect instream and wildlife habitats and avoid seawater intrusion.</li> </ul>
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Stock and farm water supply.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction of water allocations to improve water users' security of supply to at an acceptable level.</li> </ul>
(11) Wai-iti River	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Trout spawning.</li> <li>• Contribution to Waimea River flows.</li> <li>• Contribution to groundwater levels.</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of trout spawning values.</li> <li>• Contribution to minimum flow at Livingston Road and enhancing groundwater levels in the Wai-iti Dam Service Zone.</li> </ul>
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Human consumption.</li> <li>• Irrigation including for food production.</li> <li>• Community water supply.</li> <li>• Stock and farm water supply.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance or improvement of users' security of supply to an acceptable level.</li> </ul>

<sup>3</sup> 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.

<b>WATER BODY USES AND VALUES</b>			
<b>Water Body</b>	<b>Values/Uses Adversely Affected by Reduced Flows or Levels</b>	<b>Water Management Objectives for Water Quantity</b>	
<b>WITH WAIMEA COMMUNITY DAM</b>			
<i><sup>4</sup>These values and objectives apply to water body (12) from now until construction of the Waimea Community Dam commences and continue to apply once the dam commences operation.</i>			
<b>(12) Wairoa, Roding and Lee Rivers</b>	<b>Instream Uses and Values</b>		
		<b>AFTER dam is operating</b>	<b>UNTIL dam is operating</b>
	<ul style="list-style-type: none"> <li>• Aquatic ecosystems, wildlife and aquatic plant habitat.</li> <li>• Native fish and trout habitat.</li> <li>• Contribution to Waimea River flows.</li> <li>• Contact and non-contact recreation, including swimming, canoeing, angling, jet boating and picnicking.</li> <li>• Cultural and spiritual values</li> <li>• Landscape values</li> <li>• Instream native and trout fisheries including native fish diversity and abundance, brown trout habitat, trout passage and trout spawning.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of residual flow in the Lee River adequate to protect aquatic ecosystems and habitats, contribute sufficient water to maintain Waimea River minimum flows, allow a range of recreation activities,</li> <li>• Provide for landscape, cultural and spiritual values, and provide for instream values including fisheries and natural values.</li> <li>• In the Wairoa and Roding rivers, protection of aquatic ecosystem values (including fisheries and natural values), recreational values, contributions to Waimea River flows, and protection of landscape, cultural and spiritual values</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of aquatic ecosystem values including native fisheries and natural values.</li> <li>• Protection of recreational activities in the Wairoa, Lee and Roding Rivers.</li> <li>• Maintenance of contribution to Waimea River flows.</li> <li>• Protection of landscape, cultural and spiritual values.</li> </ul>
	<b>Other Uses and Values</b>		
		<b>AFTER dam is operating</b>	<b>UNTIL dam is operating</b>
	<ul style="list-style-type: none"> <li>• Human consumption.</li> <li>• Irrigation including for food production.</li> <li>• Community water supply.</li> <li>• Stock and farm water supply.</li> <li>• Potential value for hydro-electric power generation in the Lee River.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of users' security of supply to a high level.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of users' security of supply at an acceptable level.</li> </ul>

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<sup>4</sup> 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.

WATER BODY USES AND VALUES		
Water Body	Values/Uses Adversely Affected by Reduced Flows or Levels	Water Management Objectives for Water Quantity
<b>WITHOUT WAIMEA COMMUNITY DAM</b> <sup>5</sup> These values and objectives apply to water body (12) if substantial progress towards giving effect to the applicable resource consents for construction of the Waimea Community Dam has not been made by 1 May 2020.		C56 9/15 Op 9/16 C63 9/16 Op 4/18 C67 7/18 Op 6/19
(12) Wairoa, Roding and Lee Rivers	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Aquatic ecosystems, wildlife and aquatic plant habitat.</li> <li>• Native fish and trout habitat.</li> <li>• Contribution to Waimea River flows.</li> <li>• Contact and non-contact recreation, including swimming, canoeing, angling, jet boating and picnicking.</li> <li>• Cultural and spiritual values.</li> <li>• Landscape values</li> <li>• Instream native and trout fisheries including native fish diversity and abundance, brown trout habitat, trout passage and trout spawning.</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of instream values including fisheries and natural values.</li> <li>• Protection of recreational activities in the Wairoa, Lee and Roding Rivers.</li> <li>• Maintenance of contribution to Waimea River flows.</li> <li>• Protection of landscape, cultural and spiritual values.</li> </ul>
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Human consumption.</li> <li>• Community water supply.</li> <li>• Stock and farm water supply.</li> <li>• Potential value for hydro-electric power generation in the Lee River.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of domestic, stock and farm water supplies.</li> </ul>
(13) Moutere Surface Water Resources	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Eel habitat.</li> <li>• Giant kokopu habitat.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of minimum flows to protect instream habitat, particularly for eels.</li> </ul>
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Human consumption.</li> <li>• Irrigation including for food production.</li> <li>• Community water supply.</li> <li>• Stock and farm water supply.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance and improvement of users' security of supply to acceptable levels.</li> <li>• Maintenance of minimum flows for stock and domestic water supplies.</li> </ul>
(14) Motueka River and its tributaries including the Wangapeka, Motupiko, Baton and Pearse rivers	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Refer to Water Conservation (Motueka River) Order 2004)</li> <li>• Trout fishery of national significance in the Wangapeka and Motueka Rivers below its confluence with the Wangapeka River.</li> <li>• Native fisheries including eel habitat and aquatic ecosystem, including, regionally significant trout spawning habitat in the east bank tributaries of the Motueka River, and regionally significant native fish habitat in Motupiko River.</li> <li>• Whitebait spawning habitat in coastal streams.</li> <li>• Braided river habitat for threatened banded dotterel in the Motueka River.</li> <li>• Contact and non-contact recreation, including kayaking.</li> <li>• Cultural, spiritual and landscape values.</li> <li>• Internationally significant karst values in the Baton River.</li> <li>• Threatened black-fronted tern nesting sites in Motueka River from Tapawera (about E2495080 N5978700) to its confluence with the Wangapeka River.</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of instream values particularly trout and native fisheries values.</li> <li>• Protection of cultural, spiritual and landscape values.</li> <li>• Maintenance of water flows consistent with the Water Conservation (Motueka River) Order 2004.</li> </ul>

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<sup>5</sup> 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.

<b>WATER BODY USES AND VALUES</b>		
<b>Water Body</b>	<b>Values/Uses Adversely Affected by Reduced Flows or Levels</b>	<b>Water Management Objectives for Water Quantity</b>
	<ul style="list-style-type: none"> <li>Threatened black-billed gull nesting sites between the Wangapeka confluence and Kohatu.</li> <li>Wildlife habitat, including for threatened blue ducks in the Upper Motueka, Baton, Upper Wangapeka and Rolling rivers and tributaries of the Rolling River upstream of E2474980 N5973525.</li> </ul>	
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Human consumption.</li> <li>Irrigation including for food production.</li> <li>Community water supply.</li> <li>Stock and farm water supply.</li> <li>Industrial supply.</li> <li>Small scale hydroelectric power generation</li> <li>Alluvial gold resources in parts of the Baton, Ellis, Wangapeka, Sherry and Tadmor Rivers.</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance and improvement of users' security of supply to acceptable levels.</li> <li>Maintenance of minimum flows for stock and domestic water supplies.</li> </ul>
<b>(15) Riuwaka River including north and south branches and resurgences</b>	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Trout fishery of regional significance.</li> <li>Native fisheries habitat and aquatic ecosystem.</li> <li>Contact and non-contact recreation, including kayaking.</li> <li>Whitebait habitat in the tidal reaches.</li> <li>Cultural, spiritual and landscape values.</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of minimum flow regime to protect instream values and aquatic habitats.</li> <li>Protection of cultural, spiritual and landscape values.</li> </ul>
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Human consumption</li> <li>Irrigation including for food production.</li> <li>Community water supply.</li> <li>Stock and farm water supply.</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of users' security of supply at acceptable level.</li> </ul>
<b>(16) Buller River and tributaries including the Gowan/Te Kauparenuui, Mangles, Matakītaki, Matiri, Maruia, Fyfe, Travers, Owen, Glenroy, Tiraumea and Tutaki</b>	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Refer to Water Conservation (Buller River) Order 2001.</li> <li>Trout fisheries and trout spawning areas of regional importance in the Buller River and its tributaries.</li> <li>Water Conservation Order values including for trout fisheries and trout spawning, native fisheries, blue duck and wildlife habitat, canoeing and rafting, and wild and scenic values, in the Buller and its tributary rivers, including the Gowan/Te Kauparenuui, Mangles, Tutaki, Tiraumea, Travers, Owen, Maruia, Fyfe and Matakītaki Rivers.</li> <li>Native fisheries, eel and wildlife habitat, including regionally significant blue duck or water fowl habitat in the Upper Buller, Matiri, Travers, and Owen rivers and nationally significant blue duck habitat in the Fyfe River and native fisheries and wildlife habitat in the Matakītaki River.</li> <li>Nationally significant karst values of the Owen River.</li> <li>Contact and non-contact recreation, including kayaking, rafting and whitewater recreation values on parts of the Buller River and its tributaries.</li> <li>Cultural, spiritual and landscape values including landscape/natural character values at: <ul style="list-style-type: none"> <li>Blue Rock Gorge</li> <li>Maruia Falls</li> </ul> </li> <li>Braided river habitat for threatened banded Dotterel, NZ Pied Oystercatcher and Pied Stilt</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of flows and levels consistent with the National Water Conservation Order (Buller River).</li> <li>Protection of aquatic habitat especially blue duck and, trout spawning habitat.</li> <li>Protection of cultural, spiritual and landscape values.</li> </ul>
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Human consumption</li> <li>Irrigation including for food production.</li> <li>Community water supply.</li> <li>Stock and farm water supply.</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of users' security of supply at acceptable level.</li> </ul>

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<b>WATER BODY USES AND VALUES</b>		
<b>Water Body</b>	<b>Values/Uses Adversely Affected by Reduced Flows or Levels</b>	<b>Water Management Objectives for Water Quantity</b>
	<ul style="list-style-type: none"> <li>Threatened black-fronted tern and black-billed gull nesting areas in:               <ul style="list-style-type: none"> <li>Matakitaki River from confluence with Nardoo Creek to the top of Mammoth Flat (E2460830 N5911224)</li> <li>Matakitaki from Horse Terrace Bridge (E2456950 N5910523) to its confluence with the Six Mile</li> <li>Howard River/Hinemoatū downstream from its confluence with Gibbs Creek</li> <li>Buller River from 3 km above its confluence with Howard River/ Hinemoatū to SH63.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of flows and levels consistent with the National Water Conservation Order (Buller River).</li> <li>Protection of aquatic habitat especially blue duck and, trout spawning habitat.</li> <li>Protection of cultural, spiritual and landscape values.</li> </ul>
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Human consumption.</li> <li>Irrigation including for food production.</li> <li>Community water supply.</li> <li>Stock and farm water supply.</li> <li>Small scale hydroelectric power generation.</li> <li>Hydro-electric power generation in the Matiri River.</li> <li>Potential value for hydro-electric power generation in the Matakitaki River.</li> <li>Alluvial gold in parts of the Lower Buller, Matakitaki, Maruia, Howard/Hinemoatū, Maude, Maggie and Louis rivers.</li> </ul>	
<b>(16A) Lakes Rotoiti, Rotoroa and Matiri</b>	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Refer to Water Conservation (Buller River) Order 2001.</li> <li>Native fisheries, eel and wildlife habitat, including regionally significant blue duck or water fowl habitat in Lakes Matiri, Rotoiti and Rotoroa.</li> <li>Regionally significant fisheries and wildlife habitats.</li> <li>Nationally significant aquatic vegetation values in Lakes Rotoiti and Rotoroa.</li> <li>Contact and non contact recreation, including kayaking.</li> <li>Cultural, spiritual, landscape values and natural character.</li> <li>Nationally significant native fishery in Lake Matiri.</li> </ul>	Maintenance of levels consistent with the Water Conservation (Buller River) Order 2001. <ul style="list-style-type: none"> <li>Protection of aquatic habitat.</li> <li>Protection of cultural, spiritual and landscape values.</li> </ul>
<b>(17) Black Valley Stream</b>	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Aquatic habitat especially native fisheries and eels habitat and regionally significant trout spawning habitat.</li> <li>Landscape values.</li> <li>Maintains flows and water quality in Lake Rotoiti.</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of flows and water quality in Lake Rotoiti.</li> <li>Protection of aquatic habitat.</li> </ul>
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Stock and farm water supply.</li> </ul>	
<b>(18) Naturally occurring wetlands including Puponga, Mangarakau, and Rakopi Swamps, and Lakes Otuhie, Kaihoka and Stanley</b>	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Aquatic habitats including native and eel fisheries and plant habitats, including the regionally significant aquatic vegetation, aquatic fishery.</li> <li>Nationally significant native fishery in Mangarakau swamp.</li> <li>Regionally significant water fowl habitat in Kaihoka Lakes.</li> <li>Water quality improvement.</li> <li>Mitigation of flood flows.</li> <li>Cultural, spiritual and landscape values including landscape values at Kaihoka Lakes.</li> <li>Recreational values.</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of existing water levels and flows to protect aquatic habitats and water quality.</li> <li>Provision for flood mitigation.</li> <li>Protection of for cultural, spiritual and landscape values.</li> </ul>
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Stock and farm water supply.</li> </ul>	

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<b>WATER BODY USES AND VALUES</b>		
<b>Water Body</b>	<b>Values/Uses Adversely Affected by Reduced Flows or Levels</b>	<b>Water Management Objectives for Water Quantity</b>
(19) Te Waikoropupu Springs	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Internationally significant wetland values including plant, macroinvertebrate, and fauna habitat and cultural, heritage, spiritual and landscape values.</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of existing water levels and flows to protect aquatic habitats and cultural, spiritual and landscape values.</li> </ul>
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Stock and farm water supply.</li> </ul>	
(20) Motupipi River	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Aquatic habitat including regionally significant native fishery habitat.</li> <li>Recreational values.</li> <li>Cultural, spiritual and landscape values.</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of water flows to protect aquatic habitat, especially native fisheries.</li> <li>Maintenance of flows to protect cultural, spiritual and landscape values.</li> </ul>
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Stock and farm water supply.</li> </ul>	
(21) Takaka, Anatoki, Waingaro, Aorere, Anatori, Wainui, Taupata, Burton Ale, Big, Anaweka, Turimawivi, Cobb, Onekaka, Puramahoa and Pariwhakaoho Rivers	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Native fishery habitat that is nationally significant in the Anatori, Anaweka, Turimawivi, Burton Ale, Wainui and Taupata rivers, and Camp and Lagoon creeks, and regionally significant in Big and Cobb rivers.</li> <li>Regionally significant trout fishery in the Takaka, Cobb and Aorere Rivers and the Cobb Reservoir.</li> <li>Locally significant trout fisheries in the Anatoki, Waingaro, Anatori and Patarau rivers.</li> <li>Regionally significant whitebait habitat in the Aorere River.</li> <li>Eel habitat.</li> <li>Blue duck habitat that is nationally significant in Anatori River and regionally significant in Big, Burgoo, Anatoki and Upper Cobb rivers.</li> <li>Trout spawning values that are regionally significant in the Kaituna River.</li> <li>Contact and non-contact recreation, including kayaking.</li> <li>Habitat for threatened blue duck in the Upper Takaka, Fyfe and Big rivers and the rivers of the west coast south from Cape Farewell.</li> <li>Braided river habitat from threatened banded dotterel and pied stilt.</li> <li>Cultural, spiritual and landscape values including significant landscape values at around Salisbury Bridge and Devils Boots and Wainui Falls.</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance of water flows to protect aquatic and wildlife habitat, especially native fisheries.</li> <li>Maintenance of flows to protect cultural, spiritual and landscape values.</li> </ul>
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Stock and farm water supply.</li> <li>Human consumption.</li> <li>Irrigation including for food production.</li> <li>Community water supply.</li> <li>Regionally significant hydro-electric power generation in Cobb River.</li> <li>Hydro-electric power generation in Campbell Creek (Te Waikoropupu River) and Onekaka River.</li> <li>Alluvial gold resources in parts of the Waitui, Aorere, Kaituna and Slate rivers.</li> </ul>	
(22) Wetlands	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Aquatic ecosystems, native fish and eel habitat, water fowl habitat and aquatic plant habitat.</li> <li>Cultural, spiritual, intrinsic and landscape values; water quality improvement function; flood mitigation function; and recreation values.</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance, restoration and enhancement, where appropriate, of the quality and extent of wetlands.</li> </ul>
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>Stock and farm water supply.</li> </ul>	

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<b>WATER BODY USES AND VALUES</b>		
<b>Water Body</b>	<b>Values/Uses Adversely Affected by Reduced Flows or Levels</b>	<b>Water Management Objectives for Water Quantity</b>
(23) <b>Abel Tasman National Park Rivers</b>	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Native fish habitat, including for short jawed and giant kokopu, koara, dwarf galaxias and long fin eel.</li> <li>• Whitebait spawning habitat.</li> <li>• Water fowl habitat.</li> <li>• Cultural, spiritual and landscape values.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance, restoration and enhancement, where appropriate, of the quality and extent of wetlands.</li> </ul>
(24) <b>Coastal Water</b>	<b>Instream Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Aquatic ecosystems, marine fauna and aquatic plant habitat.</li> <li>• Recreation value.</li> <li>• Cultural, spiritual and landscape values.</li> </ul>	<ul style="list-style-type: none"> <li>• Protection of aquatic habitat, and cultural, spiritual and landscape values.</li> <li>• Protection of recreational values.</li> </ul>
	<b>Other Uses and Values</b>	
	<ul style="list-style-type: none"> <li>• Use by ships and offshore installations, ballast for ships, fish processing and aquaculture.</li> </ul>	
<b>Notes:</b> (1) The tributaries of each of the rivers listed are also included within the management objectives for that river as appropriate. (2) The Council also maintains a database identifying the particular uses and values and their significance, of water bodies and parts of water bodies in the District. The database which is not yet complete and still under development will complement this schedule by giving the site-specific information at a much more detailed level than the overview provided here. (3) The uses and values listed in the schedule are not ranked in order of value or importance.		

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<b>Schedule 30B: Waimea Water Quality</b>			
<b>WATER BODY USES AND VALUES</b>			
<b>Water Body</b>	<b>Values/Uses Adversely Affected by Reduced Water Quality</b>	<b>Water Management Objectives for Water Quality</b>	
<b>WITH WAIMEA COMMUNITY DAM</b>			
<sup>6</sup> These values and objectives apply from now until construction of the Waimea Community Dam commences and continue to apply once the dam commences operation.			
		<b>After dam is operating</b>	<b>Until dam is operating</b>
(2) Upper Confined Aquifer (3) Appleby Gravel Aquifer (4) Lower Confined Aquifer	<ul style="list-style-type: none"> <li>Human consumption</li> <li>Aquatic ecosystems</li> <li>Irrigation and food production</li> <li>Industrial uses</li> <li>Community water supply</li> <li>Stock and farm water supply.</li> </ul>	Water quality that: <ul style="list-style-type: none"> <li>has low risk for drinking water</li> <li>provides for existing aquatic ecosystems in coastal springs</li> <li>meets the needs of abstractive water users</li> </ul>	
(9) Waimea River	<ul style="list-style-type: none"> <li>Aquatic ecosystems</li> <li>Human consumption</li> <li>Recreational values</li> <li>Cultural and spiritual</li> <li>Stock and farm water supply</li> <li>Irrigation and food production</li> </ul>	Water quality that meets the needs of: <ul style="list-style-type: none"> <li>aquatic organisms including native fish and trout,</li> <li>recreational water users,</li> <li>abstractive water users including irrigation of food crops and stock water supplies</li> </ul>	Except when step three rationing or water shortage directions are imposed water quality that meets the needs of: <ul style="list-style-type: none"> <li>aquatic organisms including native fish and trout,</li> <li>recreational water users,</li> <li>abstractive water users including irrigation of food crops and stock water supplies</li> </ul>
(10) Neimann, Pearl and O'Connor Creeks	<ul style="list-style-type: none"> <li>Aquatic ecosystems</li> </ul>	Water quality that <ul style="list-style-type: none"> <li>provides for existing aquatic ecosystems in coastal springs</li> </ul>	
(12) Wairoa, Roding and Lee Rivers	<ul style="list-style-type: none"> <li>Aquatic ecosystems</li> <li>Human consumption</li> <li>Recreation</li> <li>Stock and farm water supply</li> <li>Irrigation</li> </ul>	Water quality that meets the needs of: <ul style="list-style-type: none"> <li>aquatic organisms including native fish and trout,</li> <li>recreational water users,</li> <li>abstractive water users including irrigation of food crops and stock water supplies</li> </ul>	
(13) Coastal Water in the Waimea Inlet	<ul style="list-style-type: none"> <li>Aquatic ecosystems</li> <li>Recreation</li> <li>Landscape values</li> <li>Cultural and spiritual values</li> <li>Food gathering</li> </ul>	Water quality that meets the needs of: <ul style="list-style-type: none"> <li>aquatic organisms,</li> <li>recreational water users</li> <li>consumption of shellfish</li> <li>amenity and landscape values</li> </ul>	
<b>WITHOUT WAIMEA COMMUNITY DAM</b>			
These values and objectives apply 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.			
(2) Upper Confined Aquifer (3) Appleby Gravel Aquifer (4) Lower Confined Aquifer	<ul style="list-style-type: none"> <li>Aquatic ecosystems</li> <li>Human consumption</li> <li>Irrigation and food production</li> <li>Industrial uses</li> <li>Community water supply</li> <li>Stock and farm water supply</li> </ul>	Water quality that: <ul style="list-style-type: none"> <li>has low risk for drinking water</li> <li>provides for existing aquatic ecosystems in coastal springs</li> <li>meets the needs of abstractive water users</li> </ul>	
(9) Waimea River	<ul style="list-style-type: none"> <li>Aquatic ecosystems</li> <li>Human consumption</li> <li>Recreational values</li> <li>Cultural and spiritual values</li> <li>Stock and farm water supply.</li> <li>Irrigation and food production</li> </ul>	Except when step three rationing or water shortage directions are imposed, water quality that meets the needs of: <ul style="list-style-type: none"> <li>aquatic organisms including native fish and trout,</li> <li>recreational water users,</li> <li>abstractive water users including irrigation of food crops and stock water supplies</li> </ul>	

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<sup>6</sup> 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.

<b>WATER BODY USES AND VALUES</b>		
<b>Water Body</b>	<b>Values/Uses Adversely Affected by Reduced Water Quality</b>	<b>Water Management Objectives for Water Quality</b>
<b>(10) Neimann, Pearl and O'Connor Creeks</b>	<ul style="list-style-type: none"> <li>• Aquatic ecosystems</li> </ul>	Water quality that: <ul style="list-style-type: none"> <li>• provides for existing aquatic ecosystems in coastal springs</li> </ul>
<b>(12) Wairoa, Roding and Lee Rivers</b>	<ul style="list-style-type: none"> <li>• Aquatic ecosystems</li> <li>• Human consumption</li> <li>• Recreation</li> <li>• Stock and farm water supply</li> <li>• Irrigation and food production</li> </ul>	Water quality that meets the needs of: <ul style="list-style-type: none"> <li>• aquatic organisms including native fish and trout,</li> <li>• recreational water users,</li> <li>• abstractive water users including irrigation of food crops and stock water supplies</li> </ul>
<b>(13) Coastal water in the Waimea Inlet</b>	<ul style="list-style-type: none"> <li>• Aquatic ecosystems</li> <li>• Recreation</li> <li>• Landscape values</li> <li>• Cultural and spiritual values</li> <li>• Food gathering</li> </ul>	Water quality that meets the needs of: <ul style="list-style-type: none"> <li>• aquatic organisms,</li> <li>• recreational water users,</li> <li>• consumption of shellfish</li> <li>• amenity and landscape values</li> </ul>

