

Proposed Canterbury Land & Water Regional Plan

Incorporating s42A Recommendations

19 Feb 2012

Note:

Grey text to be dealt with at a future hearing

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This is the approved Proposed Canterbury Land & Water Regional Plan, by the Canterbury Regional Council

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KARANGA

Haere mai rā
Ngā maunga, ngā awa, ngā waka
ki runga i te kaupapa whakahirahira nei
Te tiakitanga o te whenua, o te wai
ki uta ki tai

Tuia te pakiaka o te rangi ki te whenua
Tuia ngā aho te Tiriti
Tuia i runga, Tuia i raro
Tuia ngā herenga tangata
Ka rongo te po, ka rongo te ao

Tēnei mātou ngā Poupou o Rokohouia, ngā Hua o tōna whata-kai
E mihi maioha atu nei ki a koutou o te rohe nei e
Nau mai, haere mai, tauti mai ra e.

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TAUPARAPARA

Wāhia te awa
Putā i tua, Putā i waho
Ko te pakiaka o te rākau o maire nuku,
o maire raki, o maire o te māra whenua e
I ruka Tāne, i raro Tāne
Pakupaku Tāne, Rakiihi Tāne
Tāne-te-whakairi-rangi
Tāne-te-waiora
Tāne-te-wānanga
Hōatu e Tāne te kaupapa ki uta
Ki ngā Tiritiri o te Moana
Heke iho rā, heke iho rā
Hekea ngā roto
Hekea ngā awa
Whakawhitia ngā hāpua
Whakaputaina ngā wahapū
Ngā roimata o Hine Takurua e pāhekoheko ana
Ki Te Tai o Mahaanui
Ki Te Tai o Marokura
Huia te rangi
Poupoua te whenua
Toitū rā te Marae o Tāne
Toitū rā te Marae o Tangaroa
Toitū rā anō te iwi
Whano
Whano
Hara mai te toki
Haumi e
Hui e
Tāiki e
Tihe i mauri ora

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Section 1 - Introduction, Issues & Major Responses

Canterbury has substantial fresh water and land resources. Managing land and water is complex and many of the issues are interconnected. This interrelationship of land and water means that effects of any one activity cannot be considered in isolation. The current environment has been modified by both past and current activities, many of which cannot be easily changed or remedied without significant costs to people and communities. There are no 'quick fixes' to managing Canterbury's land and water resources and it is clear that a range of responses are required.

The purpose of the Canterbury Land and Water Regional Plan ("LWRP" or "the Plan") is to identify the resource management outcomes or goals (objectives in this Plan) for managing land and water resources in Canterbury to achieve the purpose of the Resource Management Act 1991 ("RMA"). It identifies the policies and rules needed to achieve the objectives, and provides direction in terms of the processing of resource consent applications.

This Plan is made up of 16 sections and a map volume: the first describes Canterbury's land and water resources, interrelated issues that need to be managed, the key partnerships, relationships and processes already underway, including the Canterbury Water Management Strategy (CWMS). The second section describes how the plan works and contains the definitions used in the Plan. The subsequent three sections cover the region-wide objectives, policies, and rules. Sections 6-15 inclusive contain sub-regional catchment specific policies and rules, and Section 16 contains the schedules. The maps referred to in the rules are in a separate map volume.

1.1.1 Land and Water Resources in Canterbury

Land and water are taonga to Ngāi Tahu. Water provides for and sustains all life and is integral to the cultural and personal identity of Ngāi Tahu as tangata whenua for Canterbury. The life-giving and life-sustaining properties of water are intrinsically linked to spiritual, cultural, economic, environmental and social well-being as well as the survival and identity of Ngāi Tahu whānui. This relationship with wai Māori is recognised in the Ngāi Tahu Claims Settlement Act 1998. In Canterbury eleven lakes, nine rivers and two wetlands are included as areas of statutory acknowledgement.

Fresh water is essential for the survival of all living things. People, communities and their livestock need fresh drinking water, and high quality fresh water is also important for customary uses, contact recreation and some economic activities, such as aquaculture. The quality and quantity of fresh water in our water bodies also sustains aquatic ecosystems and maintains the mauri, natural character and amenity values of lakes and rivers. Reliable fresh water supplies are important for irrigation, hydro-electricity generation and a variety of manufacturing and industrial processes. All are vital to the cultural, social and economic well-being of people and communities in Canterbury and New Zealand. Canterbury currently contributes 58% of New Zealand's hydro-electricity generation capacity and contains over 70% of its irrigated agricultural land.

The land and soils that sustain the biodiversity of flora and fauna on which we all depend are reliant on sustainable land management. The condition of the land on which we build our communities and our infrastructure provides for our well-being, health and safety.

Land also provides places for people to live, and to establish and operate businesses and industry, including soils for primary industry and gravel and minerals for infrastructure and¹ building materials. The importance of managing induced erosion of soil and land for urban development have long-been recognised in New Zealand. The risks and effects of contaminating land from the spill or discharge of hazardous substances, and the potential effects on people, property and infrastructure from inundation, erosion, slippage or liquefaction of land, are also part of managing land resources.

Land and water, and the ecosystems and habitats they support, form a complex, interdependent environment that people and communities must both utilise and sustain. As our uses of land and water continue to increase or intensify, our past approaches to managing our land and water are no longer sufficient. In parts of the region, fresh water and land resources no longer support the values and uses they once did. The interconnectivity of water and land within catchments is recognised in the Ngāi Tahu philosophy of ki uta ki tai – from the mountains to the sea. Activities such as water takes, or damming or discharges upstream will affect the flow and quality of water downstream as well as coastal processes, such as the transport of sediment to the coast and flows needed to open river mouths or flush hāpua.

Since the RMA came into force in 1991 there has been significant change in the quality and availability of water resources, and many new issues have arisen. If we want to manage Canterbury's land and water resources to provide for all our values and uses while also sustaining our natural environment, we need to continue and, in some areas refine, our approaches to managing them. The paragraphs in Section 1.2 describe the most significant issues we face with managing water and land resources in Canterbury.

1.1.2 Legal Rights and Responsibilities

Fresh water is a public resource or “commons”, and the allocation and management of fresh water is primarily the function of regional councils. This is reflected in sections 13 to 15 of the RMA, under which no person may use water (other than for firefighting, reasonable domestic and stockwater supplies), discharge contaminants into water, or undertake activities in the bed of a lake or river, unless allowed by a rule in a regional plan or by resource consent.

A resource consent does not convey ownership of water to the consent holder. Rather it is a permission to take, use, dam or divert water, or discharge contaminants, for the purposes, and subject to any conditions, set out in the resource consent. The maximum duration for which any resource consent can be issued for these activities under the RMA is 35 years, although they are often issued for a significantly shorter duration. A resource consent is also subject to any other limitations imposed by statute, including the powers of the consent authority to review consent conditions or cancel resource consents.

One of the challenges in managing fresh water in Canterbury is balancing the need for certainty for consent holders about the on-going permission and conditions under which they may take and use water or discharge contaminants, and the need to respond to changing conditions in catchments and values of and demand for water. Certainty about the ability to both exercise and renew a water permit is important in facilitating investment in irrigation and associated land uses (as recognised in sections 104(2A) and 124-124C of the RMA). There is no guarantee however, under the RMA that a water

¹ 282.1 Aggregate Group

permit will be replaced when it expires, on the same or similar conditions as previously granted. Difficult situations arise when older water permits expire that were granted under earlier legislation, or in times when the intensity of land use and catchment conditions differed from today.

In contrast to water, Section 9 of the RMA allows any person to undertake any use of their land (other than subdivision) unless it contravenes a rule in a regional or district plan. However, there is still the requirement under the RMA to promote the sustainable management of natural and physical resources; including sustaining the potential of land resources to meet the reasonably foreseeable needs of present and future generations.

Promoting sustainable management also includes a duty under the RMA on every person to avoid, remedy or mitigate any adverse effect on the environment arising from an activity carried out by or on behalf of the person (s17 RMA).

1.2 Land and Water Resources Management Issues – the Need for an Integrated Approach

The issues relating to the management of land and water resources in Canterbury are many, varied and interrelated. Competing demands for water, issues arising from interconnected land and water resources, effects of land-use, and hazards arising from natural and human-induced processes all point to the need for integrated and consistent management.

1.2.1 Competing demands for water

Fresh water is essential for a variety of values and uses, for example, drinking water and stockwater; customary uses and food supplies; contact and non-contact recreation; irrigation, hydro-generation, industrial and other economic activities. We rely on fresh water for our social, cultural and economic well-being and our way of life.

These values and uses create competing demands between maintaining in-stream natural and ecological values and the need to abstract or use water for other activities. Competition also occurs between individuals undertaking the same activities, for example, between irrigators, and between different uses, such as irrigation, hydro-electricity generation and recreation.

The effect of these differing and often competing demands for fresh water occurs at two levels:

1. The effects of individual activities on for example, a fresh water body, or land area with important ecological values or cultural significance, or effects of activities on one another such as the location of intakes or bores in close proximity to other intakes or bores, or discharge sites; and
2. The cumulative effects of abstractions and discharges on the flow, level or quality of water in fresh water bodies.

Some of the most common examples of competing demand needing to be managed are outlined below.

The flows needed to sustain ecosystem and riverine health are the same flows of clean, reliable water most valued for community drinking and stockwater supplies and 'run-of-

river' irrigation. Meeting these demands is more difficult in smaller foothill, plains and lowland rivers and streams. The large alpine rivers usually have sufficient water to meet demands.

High quality fresh water is fundamental for aquatic ecosystem health, drinking water supplies, customary uses and contact recreation. It is also important for maintaining the mauri, natural character and amenity values of water bodies. The largest community water supply is for Christchurch and is drawn predominantly² from the Christchurch confined aquifer system. It is of such high quality that no treatment is needed. Some other communities close to Christchurch also rely on untreated groundwater, such as Kaiapoi, Lincoln, Rolleston and Prebbleton. Many other townships and small communities rely on surface water or combined surface water and groundwater takes that can be of a lower quality and are relatively expensive to treat due to the small number of users.

In rural areas, individual properties often rely on private water supplies which receive no treatment. For sources of drinking water to be of an acceptable quality requires careful management of land uses and other activities that may affect surface and groundwater quality. Deteriorating water quality also affects the use of surface water bodies for customary uses, ~~and~~ contact recreation and economic activities including primary industry.³

Demand for additional water for more irrigation or more reliable irrigation, and hydro-electricity generation, is likely to continue in Canterbury, particularly as New Zealand moves to greater reliance on renewable hydro-electricity generation. Climate change predictions also indicate:

- more variable rainfall within any year and increases in summer temperatures,
- decreases in winter rainfall on the east coast providing less groundwater recharge, and
- increases in rain in the alps and less snow.

If the region becomes drier and warmer then more irrigation will be needed to maintain existing outputs from the land. Additional irrigation can compete with hydro-electricity generation, although if storage is provided then they can be complementary.

Most rivers and streams in Canterbury are at or near full allocation for reliable 'run-of-river' takes. Similarly, many groundwater zones in the region are at or over-allocation limits for abstraction. The cumulative effects of abstraction of groundwater can reduce groundwater levels, in turn affecting the reliability of supply in shallower bores and flows in spring fed streams.

Additional demand for abstraction may be able to be met by harvesting and storing water, particularly from alpine catchments. Canterbury's alpine rivers contain water that is potentially available for harvest and storage, having freshes at times when irrigation demand is highest on the Canterbury Plains. Harvesting and storing water has its challenges. Alpine rivers are ecologically unique having very high natural character, recreation ~~and~~ or⁴ wilderness values. Harvesting and storing water is designed to relieve pressure on rivers in periods of low flow by taking water during freshes. These freshes

² 106.12 CCC

³ 319.6 Deer Ind & Deer Farmers

⁴ 169.4 NZTA

and floods, however, maintain the health of rivers and their ecosystems. They enable ecosystems to recover after periods of low flow and flush algal growth, shift sediment and mobilise the river bed, and remove invading exotic plants such as lupin, broom and willows. The ideal freshes to harvest and store water for irrigation are also often the freshes highly valued for protecting the mauri of rivers including mahinga kai and for in-stream values such as angling, kayaking, and jet-boating.

Another competing use of water is for the disposal and dilution of discharges of contaminants. Rivers, wetlands and groundwater are natural conduits for the movement of water from land, and have long been used for the disposal of stormwater and waste products. These can have severe adverse effects on water quality and in turn on in-stream values.

1.2.2 Issues arising from interconnected water and land resources

Issues arising from the interconnectivity of water, and the use of land and water include:

- effects of activities on parts of the environment that are not in the immediate vicinity of the site, and
- cumulative effects of activities on the environment over space and time, including lag effects and bio-accumulation.

Canterbury's hydrogeology means that surface water is strongly connected to groundwater, both for water quality and quantity. Lowland spring-fed streams and many wetlands are fed from groundwater. The flow and water quality in spring-fed streams directly reflects groundwater levels and groundwater quality, such that high nitrate levels in groundwater means high nitrate levels in these streams. Braided rivers lose surface flow to, and gain surface flow from, groundwater along their reaches. As a result, the abstraction of groundwater can reduce the flows and levels of water in rivers, streams and wetlands, and the abstraction of surface water can also reduce groundwater recharge. Managing the seasonal and long-term cumulative effects of groundwater abstraction on surface flows in lowland streams and inland basins is challenging because the effects from any single abstraction are sometimes not fast or significant enough to show an immediate effect on surface flow and localised variation in effects can occur.⁵

Water quality in unconfined groundwater areas is vulnerable where: discharges of contaminants leach down through the permeable gravels; surface water recharging groundwater is contaminated; and where excavations reduce the distance between the ground surface and groundwater such that spills or discharges of contaminants can rapidly get into groundwater.

Water quality in confined aquifers has a much higher level of natural protection because the confining layers have very low permeability, and because there is an upwards pressure gradient causing an upwards movement of water. Collectively these two attributes help prevent the downward movement of contaminants. Excessive abstraction can reverse this pressure gradient allowing contaminants to move downwards. Excessive groundwater abstraction can also allow the seawater-fresh water interface in an aquifer to move landwards of the coast.

⁵ 19.2 Ellesmere ISI

Groundwater abstracted from confined aquifers is replaced by water moving in from the adjacent unconfined aquifer. Confined aquifers generally have high quality water, but this could be reduced in the long term if the adjacent unconfined groundwater is contaminated.

Fresh water bodies in urban areas are particularly vulnerable to contamination from land uses that discharge contaminants into stormwater systems as these often discharge into local streams or rivers. Most modern industrial activities have appropriate filtering and treatment systems for stormwater while many residential areas do not, in particular older residential areas where homes, commercial activities and roads discharge stormwater via kerb and channel directly into fresh water systems. Common pollutants include: swimming pool or spa pool water; detergents and chemicals from outdoor cleaning; pet faeces; paint; garden sprays; oil from roads and car parks; and fine particles of heavy metals from vehicle brakes and tyres.

Land use, soil type, slope, drainage patterns and groundwater levels also influence how contaminants run-off or leach into fresh water. Intensification of farming, particularly with irrigation,⁶ has the potential to increase nutrient losses to water bodies. The risk of nutrient loss is also increased where: land uses are not well-managed; rainfall is higher; soils are shallow and porous; or where soil is poorly drained and surface run off occurs.

Today, our ability to abstract, convey and apply water over large distances means that high water demand land uses can occur in areas of low rainfall and where ecosystems are adapted to drier, less nutrient rich conditions. Care must be taken in managing land use change to avoid the drying of wetland areas, wetting areas of dry habitat through changing water levels and land drainage patterns, or enriching habitats adapted to low nutrient conditions, for example, high country streams and wetlands.

In dry upper catchments, changing the vegetation cover from short to tall vegetation, for example, to large forestry plantations, can significantly reduce low flows in rivers and streams as a result of trees intercepting rainfall and evaporating it into the atmosphere. This can increase the severity, duration and frequency of low flows, affecting in-stream values, and reducing the reliability of supply to existing abstractors.

The removal of the vegetation cover, particularly trees in erosion prone catchments, can lead to higher levels of sediment flowing downstream, affecting water quality, and in turn, in-stream values.

Adding to the complexity of managing the inter-connectivity of land and water is the lag effect where nutrients or other contaminants discharged to land can take many years to move down through the soil and underlying gravels into groundwater. This makes the management of non-point source discharges more difficult as the extent to which today's water quality problems are caused by previous or current land use practices is unclear.

1.2.3 Issues relating to soil conservation, gravel resources and biodiversity

Land sustains the ecosystems on which humans ultimately depend. We have a responsibility to ensure there is sufficient natural resource capacity in land and soils to provide for the needs of present and future generations.

Conservation of Soils

⁶ 320.2 Fed Farmers (Combined Canty)

Cultivating soil and modifying vegetation cover on both ~~arable~~ plains⁷ land and hill and high country are important activities in providing for the social, cultural and economic well-being of people and communities. But it is also important to manage land uses and practices including vegetation clearance, earthworks and forestry harvesting where they adversely affect soil quality or induce or exacerbate soil erosion. Induced soil erosion at rates greater than new soil formation, and long term reductions in soil quality, reduce the sustainability of farming activities, and the ability of the land to support a good vegetation cover. In addition, accelerated erosion from land use resulting in deposition of sediment in rivers and lakes can have a major impact on aquatic ecosystems and in-stream values.

Maintaining a vegetation cover that is effective at preventing induced erosion is the most cost-effective form of management whether in the hill and high country or on ~~arable~~ plains⁸ land. For example, deep-rooting vegetation binds soils on slopes, and shelter belts reduce the susceptibility of soil to wind erosion on ~~arable~~ plains⁹ land.

The life-supporting capacity of soil resources and their productive potential can also be limited if soil becomes contaminated by toxic or hazardous substances, particularly those that are persistent and immobile. There is a strong legislative focus on managing the use and storage of hazardous substances and disposal of hazardous waste to avoid endangering health and safety for people. The role of the LWRP is to ensure that the use of chemicals, spillage or disposal of hazardous waste does not result in contaminants entering or leaching into fresh water. It is also important to make sure hazardous substances do not contaminate soil, or where soil or land is already contaminated, the contaminants are contained or removed, so they do not contaminate water or other land, or affect people's health.

Quarrying (including Gravel Extraction) and Mining¹⁰ Outside of Riverbeds

Land outside of riverbeds supplies rock, gravel and other minerals for the roading and construction industries. The excavations made by quarrying gravels in unconfined groundwater areas increase the risk of groundwater contamination because activities in the bottom of the pit are closer to groundwater. This risk is greatest where quarrying occurs in areas of shallow groundwater. The risks of quarrying itself on groundwater quality are generally well managed. Rather, it is what the pits are used for after completion of quarrying that is the greatest concern.

Quarrying, mining and extractive¹¹ activities need to be appropriately located, operate without affecting water quality, and sites appropriately managed or rehabilitated once extraction ceases.

Biodiversity, Wetland, and Riparian Margins

Significant modification of vegetation and habitats has occurred and continues to occur¹² in Canterbury as a result of changing land use. Polynesian fires converted large areas of the Canterbury Plains from forest to tussock grassland. The last 160 years of European settlement and development of land for farming, townships, and settlement has caused

⁷ 19.3 Ellesmere ISI

⁸ 19.3 Ellesmere ISI (consequential change)

⁹ 19.3 Ellesmere ISI (consequential change)

¹⁰ 245.2 Fulton Hogan

¹¹ 245.2 Fulton Hogan

¹² 106.13 CCC

extensive changes in vegetation cover across the region, and loss of indigenous flora and fauna.

Wetlands, riparian margins and other areas of indigenous vegetation create habitats for indigenous fauna and have important natural character values. These areas are culturally significant to Ngāi Tahu, as well as being important in defining the uniqueness and identity of New Zealand for all. It is recognised that some exotic vegetation also provides habitat value for significant indigenous fauna.¹³

Vegetation helps to sustain the land and is a useful tool for managing the effects of land use. For example, riparian margins, if wide enough and comprising appropriate vegetation, can perform an important role in stabilising riverbanks, filtering out sediment running off the land, and reducing levels of nitrogen and other contaminants entering water bodies. Wetlands can also filter sediment and contaminants, although introducing significant quantities for treatment into a natural wetland will most likely change the wetland's functioning and values. Appropriately managed artificial wetlands and swales can be very successful at removing sediment and certain contaminants, and are increasingly being incorporated into urban design for stormwater treatment from roads and into the design of effluent treatment facilities because direct discharges to water are inappropriate.

1.2.4 Natural hazards

Natural hazards arise where natural processes or events impact on the human use or occupation of an area. Significant natural hazards in Canterbury can arise from floods in rivers and streams, erosion and seismic activity. Activities in the beds of lakes and rivers, on floodplains, and on slopes are all important but when people locate themselves, their property, infrastructure, and their activities in these areas they can be subject to loss or damage from natural events. Sometimes our activities increase the risk of natural processes being triggered, for example cutting into a hill to build a road can destabilise the slope above. Some areas of land are more prone to the effects of seismic activity, for example rockfall, subsidence or liquefaction. Part of promoting the sustainable management of natural and physical resources requires managing the natural hazard risk to an acceptable level.

With regard to natural hazards, the Regional Council has a role in:

- Managing these natural hazards – through controlling activities that may exacerbate the risk of natural hazards;
- Responding to a natural hazard event – through playing a role in the emergency responses to natural hazards; and
- Aiding recovery from the effects of a natural hazard event – by enabling activities to occur that are required to facilitate recovery.

Seismic Activity

The most significant natural hazard event to occur within the Canterbury region in recent history has been the series of seismic events experienced within greater Christchurch from the year 2010 onwards. The impacts of the earthquakes are well documented with significant social, economic, infrastructural, environmental and cultural impacts.

¹³ 106.14 CCC

The damage caused by these events to natural and physical resources included substantial destruction of buildings, damage to infrastructure and services, widespread land damage, land slips and rockfall. The effects of the seismic activity on land and water has included the re-emergence of springs, sedimentation from liquefaction processes, land subsidence and changes to bed levels and banks of waterbodies. Local and central government have responsibilities to manage and respond to the effects of seismic activity.

Flooding

Land on the floodplains of rivers and the shores of lakes are valued for settlement and farming, because of the proximity to water and flatter, fertile soils. Some of the flooding risk may be managed by stopbanks, groynes, flood control plantings and gravel extraction and vegetation removal to maintain the flood carrying capacity of a river. While these flood management activities are necessary, they also need to be managed because they can cause their own adverse effects.

Activities in Beds of Lakes and Rivers, including Gravel Extraction

People and livestock need to cross river beds, and bridges, pipes, pylons, flood protection works and other infrastructure must pass alongside, through or over river and lake beds. Such activities need to be managed to ensure that bed conditions are maintained to provide for the ecological, cultural, recreational and amenity values associated with them. Braided river beds are particularly important because they provide habitat for several indigenous birds that only breed on open gravel areas.

The accumulation of gravel in Canterbury's foothill and alpine river beds reduces their flood carrying capacity, so removal is important for flood management. Removal of gravel also provides an important source of material for roading, construction, and infrastructure which provides social and economic benefits.¹⁴ Small quantities are often taken for farm related activities, such as farm tracks, but most is used for construction and roading. Demand for gravel is expected to increase with the rebuilding of greater Christchurch following the 2010-2011 earthquakes.

The rate and location at which gravel is removed needs to be well managed because if extraction is greater than the rate of gravel recharge erosion of the bed and banks will occur. Removing gravel close to bridge piles, stopbanks or other structures can undermine them. As with other activities in the beds of lakes and rivers, care needs to be taken to ensure gravel removal does not affect water quality, the habitats of aquatic ecosystems and nesting birds, or any cultural, recreational or amenity values of the river.

Unstable Slopes

Hill and high country areas are also important land resources for a variety of activities, including farming, forestry, and residential development on part of the Port Hills around Christchurch. Slopes can be vulnerable to erosion or slippage, depending on their aspect, type of bed rock and soil. Loess-covered hills are vulnerable to rill and tunnel gully erosion and maintaining a good vegetation cover is essential. Urban development on the loess covered Port Hills needs careful management of stormwater during subdivision earthworks development, and subsequently from individual properties and roads. Soft-rock hill areas are vulnerable to deep-seated erosion where the failure surface is well below the ground surface, but the risks can be reduced by having a deep rooted vegetation cover. Earthworks and vegetation clearance in such areas need to be carefully managed.

¹⁴ 245.4 Fulton Hogan

1.2.5 Need for Integrated and Consistent Management of Water and Land Uses

Because of the interconnectivity described above between surface water and groundwater, between confined and unconfined aquifers, and between land use and water quality, it is essential that land and water resources and land and water use are managed in an integrated and consistent manner within a regional framework. It is no longer effective to look just at the effects of individual activities isolated from the catchments or groundwater zones within which they occur. Rather the cumulative effects of all types of activities need to be considered. Taking an integrated approach will allow competing demands to be more equitably and effectively managed, and better achieve the outcome of sustainable management of land and water.

1.2.6 Managing New and Existing Activities

The RMA requires particular consideration be given to existing activities in the allocation of natural resources. The RMA requires all resource consents to be considered subject to Part 2 of the RMA, and gives the consent authority the power to review consent conditions in particular circumstances¹⁵. In managing water in catchments that are not under stress it is still possible to recognise and provide for existing activities for those catchments. Where abstractions or discharges are over-allocated, alternative management techniques are needed. For applicants seeking a replacement consent, the RMA provides particular recognition through sections 124-124C and s104(2A) which states that the consent authority must have regard to the value of the investment of the existing consent holder.¹⁶

Existing infrastructure associated with large-scale irrigation and hydro-electricity generation schemes have effects that last throughout the period that the structure exists for. When resource consents expire for this infrastructure and associated water abstractions and discharges,¹⁷ the activity must be reassessed as if new even when there is no practical alternative to continuing to use the existing infrastructure. In these cases, rather than debating whether the infrastructure should exist at all, a more useful approach is to focus on improving the efficiency, and reducing the environmental effects, of taking and using the water.

1.3 Key Management Responses for Land and Water

The management of land and water in Canterbury involves a series of regulatory and non-regulatory strategies and actions, of which the LWRP is the key regulatory part. The major responses to managing land and water in Canterbury can be classified into three areas:

- Key partnerships and stakeholders involved in managing land and water;
- Key approaches for managing land and water; and
- The statutory planning framework for managing land and water under the RMA, and the position of the LWRP in that framework.

1.3.1 Key Partnerships

¹⁵ 250.2 TrustPower

¹⁶ 188.2 Synlait Farms

¹⁷ 250.2 TrustPower

The successful management of land and water requires partnership and collaboration. Issues are interconnected and complex, and different groups and individuals have overlapping responsibilities. The Canterbury Regional Council (CRC) shares responsibilities with Ngāi Tahu, with territorial authorities, and with many other organisations and local communities. These partnerships and the CWMS help provide a collaborative and integrated approach to ensuring sustainable management of our land and water resources.

Ngāi Tahu

TŪRANGAWAEWAE

The following sections outline Ngāi Tahu's right to participate meaningfully in the management of the natural resources within the Canterbury Region.

*Mana Whenua*¹⁸

The term mana whenua describes the authority to make decisions concerning the resources and people of a given takiwā. Mana Whenua can also be used as a metaphor for those who hold that authority.

The entire Canterbury region lies within the traditional boundaries of Ngāi Tahu¹⁹ which run south from Te Pari-nui-o-Whiti (White Bluffs) on the East Coast, around the southern coastline and off-shore islands and then back up the West Coast to Kahurangi Point (between Karamea and Farewell Spit). Ngāi Tahu is the largest iwi (tribe) in the South Island, comprising of hundreds of hapū (sub-tribes) and whānau (extended families) who continue to express their mana whenua within their respective areas (takiwā) through the following key actions:

- (a) Protection and perpetuation of their whakapapa (genealogy);
- (b) Continued occupation of their ancestral lands (ahi-kā-roa);
- (c) Continued use of traditional and contemporary natural resources (mahinga kai);
- (d) Taking responsibility to protect and maintain the mauri (vitality) of their environment for the benefit and enjoyment of future generations.

Environment Canterbury recognises Ngāi Tahu's mana whenua through its relationship and consultation with Ngā Rūnanga of the Canterbury region and Te Rūnanga o Ngāi Tahu (see below).

Te Tiriti o Waitangi / The Treaty of Waitangi

The Crown first recognised and provided for Ngāi Tahu's mana whenua in 1840 with the signing of the Treaty of Waitangi / Te Tiriti o Waitangi. With respect to the right to exercise authority over natural resources, Article II of the Treaty / Te Tiriti states:

English Text:

“Her Majesty the Queen of England confirms and guarantees to the Chiefs and Tribes of New Zealand and to the respective families and individuals thereof **the**

¹⁸ The underlining of terms in this section is a formatting style carried over from the pLWRP Volume 1 and does not indicate a change or recommended change as a result of the Section 42A Report.

¹⁹ The term 'Ngāi Tahu' literally means “the descendants of Tahu” and refers to the collective of families (whānau) who descend from the 5 primary hapū (sub-tribes) of Ngāi Tahu as described in Section 2 of the Te Rūnanga o Ngāi Tahu Act (1996), namely: Ngāti Kurī, Ngāti Tūāhuriri, Ngāti Irakehu, Ngāti Te Ruahikihiki & Ngāti Huirapa.

full exclusive and undisturbed possession of their Lands and Estates Forests Fisheries and other properties which they may collectively or individually possess so long as it is their wish and desire to retain the same in their possession...” (emphasis added).

Maori Text:

“Ko te Kuini o Ingarani ka wakarite ka wakaee ki Ngā Rangitira ki Ngā hapu – ki Ngā tangata katoa o Nu Tirani **te tino rangatiratanga o o ratou wenua o ratou kainga me o ratou taonga katoa...**” (same emphasis added).

Translation:

“The Queen of England agrees to protect the chiefs, the sub-tribes and all the people of New Zealand in **the unqualified exercise of their chieftainship over their lands, villages and all their treasures...**” (same emphasis added).

Sale & Purchase of Ngāi Tahu Land

The legitimacy of Ngāi Tahu’s mana whenua in the South Island was reiterated through the contracts for sale and purchase of traditional Ngāi Tahu lands to the Crown from 1844 to 1864, including (within the Canterbury region):

- The Canterbury Purchase 1848
- The Port Cooper Purchase 1849
- The Port Levy Purchase 1849
- The Akaroa Purchase 1856
- The North Canterbury Purchase 1857
- The Kaikōura Purchase 1859

In total, the Crown purchased around 34.5 million acres of Ngāi Tahu land (80% of the South Island and more than half of the land mass of NZ) for just over £14,750. While this amounted to less than a penny per acre, it was encumbered with a number of commitments that included setting aside ‘adequate’ reserves for Ngāi Tahu’s present and future needs.

The amount of land reserved was to have equated to approximately 10% of the land sold – that is, nearly 3.5 million acres – however, only 35,757 acres were ever set aside. Ngāi Tahu were left with only about one-thousandth of their ancestral land and over 3.4 million acres short of the land that the Crown had agreed to reserve.

Mandated Representatives

Following the confinement of Ngāi Tahu property rights to native reserves, local Ngāi Tahu communities began to establish ‘rūnanga’ (i.e. an assemble or council) to facilitate the representation of their rights and interests in the evolving new system of local governance and resource management.



The above figure shows the names and locations of the ten papatipu marae within the Canterbury region as well as their primary hapū and representative Rūnanga. Contact details for each Rūnanga can be found at <http://www.ngaitahu.iwi.nz/>.

Marae were (re)built at the heart of these communities. They were bastions of Ngāi Tahu’s tikanga and kawa (customs, laws, protocols) and came to be known as “papatipu marae”; that is, the marae based communities in which flax roots Ngāi Tahu were born, nurtured and raised.

With the settlement of Ngāi Tahu’s historic Treaty grievance in 1996 and the enactment of the Te Rūnanga o Ngāi Tahu Act, the tribe re-structured itself again under the auspices of one tribal rūnanga (Te Rūnanga o Ngāi Tahu) and 18 regional rūnanga (Ngā Rūnanga o Ngāi Tahu).

The former was established to give the tribe a legal identity and, where prudent, represent the entire tribal collective of Ngāi Tahu Whānui²⁰. It has also become the ‘iwi

²⁰ The term ‘Ngāi Tahu Whānui’ literally means “the length and breadth of Ngāi Tahu”. It acknowledges the expansive relationships across all streams of Ngāi Tahu whakapapa (genealogy), particularly with respect to earlier South Island tribes – Rapuwai, Hawea,

authority' for Ngāi Tahu for the purposes of the RMA. The later were established to represent the rights and interests of local whānau internally within the new tribal structure and externally with the likes of local and regional government agencies within their respective takiwā. Ngā Rūnanga have come to be known as 'Papatipu Rūnanga', but only because of their relationship to the papatipu marae communities they represent.

Legislative Requirements

Under the RMA, Environment Canterbury is required to consult with Ngāi Tahu in respect of the management of natural and physical resources of the Canterbury region, including the preparation of regional plans.

Environment Canterbury therefore maintains a relationship with Ngāi Tahu through both Te Rūnanga and Ngā Rūnanga²¹ with interests in the Canterbury region.

KAITIAKITANGA

Ngāi Tahu's framework for managing natural resources has evolved from a distinct Polynesian world view which acknowledges that people are simply part of the world around them and not masters of it. It then developed through more than 40 generations of collective experience in Te Waipounamu.

The following paragraphs introduce and briefly outline the central tenets of that framework. They are intended to provide a starting point for greater understanding of what drives Ngāi Tahu resource management processes and policies in the hope that more effective collaboration can be achieved with all those responsible for managing Canterbury's natural resources today.

Whakapapa

Whakapapa (genealogy) is the central pillar of the framework, setting out and effectively explaining the relationships between the various elements of the world around us, including human beings.

Mana Whenua

As described earlier, mana whenua is the right to exercise authority over a particular area, its resources and its people. Mana (respect, standing, authority) is passed on via whakapapa and is protected and secured through the on-going exercise of one's rights to resources in a manner consistent with tikanga. Inevitably, with mana comes responsibility.

He tukemata anō tō te taonga.
Even wealth frowns at times.²²

Kaitiaki

Waitaha and Ngāti Mamoe – whose lineage continues to live within many present Ngāi Tahu whānau.

²¹ Unlike English, the māori language has two definitive particles (the) – 'te' and 'ngā'. "Te" is singular (e.g. the house) and "ngā" is plural (i.e. the houses).

²² This proverb advises that the accumulation of wealth will inevitably invite the envy of others as well as the responsibility for generosity to others. (Ngā Pepeha a Ngā Tīpuna: The Sayings of The Ancestors. Mean & Grove. Victoria University Press 2001. ISBN 864733992)

Traditionally, kaitiaki were the non-human guardians of the environment (e.g. birds, animals, fish and reptiles) which, in effect, communicated the relative health and vitality of their respective environments to local tohunga (experts) and rangatira (leaders) who were responsible for interpreting the 'signs' and making decisions accordingly. In essence, there is no real difference to scientific practices of today, which continue to use specific indicator species and observe their behaviours to measure the state of the environment.

Mauri

Mauri is often described as the 'life force' or 'life principle' of any given place or being. It can also be understood as a measure or an expression of the health and vitality of that place or being. The notion embodies Ngāi Tahu's understanding that there are both physical and metaphysical elements to life and that both are essential to our overall well-being. It also associates the human condition with the state of the world around it. Mauri, therefore, is central to kaitiakitanga; that is, the processes and practices of active protection and responsibility by Mana Whenua for the natural and physical resources of the takiwā.

Mauri can change either naturally or through intervention and Ngāi Tahu use both physical and spiritual indicators to assess its relative strength. Physical indicators include, but are not limited to, the presence and abundance of mahinga kai fit for consumption or cultural purpose (e.g. disease free bull-kelp that can be used for the long-term storage of preserved foods). Spiritual indicators are the kaitiaki referred to in the previous section. They are often recalled in kōrero pūrākau (oral traditions) to explain the intrinsic connection between the physical and metaphysical realms of our world.

Wāhi Tapu & Wāhi Taonga

Wāhi tapu are places of particular significance that have been imbued with an element of sacredness or restriction (tapu) following a certain event or circumstance (e.g. death). Wāhi tapu sites are treated according to local customs (tikanga & kawa) that seek to ensure that the tapu nature of those sites is respected. Of all wāhi tapu, urupā (burial sites) are considered to be the most significant.

Wāhi taonga are "places treasured" due to their high intrinsic values and critical role they have in maintaining a balanced and robust ecosystem (e.g. spawning grounds for fish, nesting areas for birds and fresh water springs). They are prized because of their capacity to shape and sustain the quality of life experience and provide for the needs of present and future generations.

Ki Uta Ki Tai

The principle of Ki Uta Ki Tai (from mountains to sea) reflects the holistic nature of traditional resource management, particularly the inter-dependent nature and function of the various elements of the environment within a catchment.

Mauri ora ana te wai, kirimaia ai te kai, ki uta ki tai
Quality water flowing, abundant foods growing, mountains to sea.

Mahinga Kai

The Ngāi Tahu Whānui Claims Settlement Act 1998 describes mahinga kai as "the customary gathering of food and natural materials and the places where those resources are gathered." Mahinga kai are central to Ngāi Tahu's culture, identity and relationship with landscapes and waterways of Te Waipounamu.

Wakawaka

Access to mahinga kai was managed through the division of a natural resource (lakes, rivers, islands, etc) into wakawaka, defined areas within which a particular whānau had exclusive rights to “work the food” (mahi ngā kai) and responsibilities to uphold the associated cultural values.

Nohoanga

Traditional nohoanga (seasonal ‘camp’ sites) were found throughout Te Waipounamu, giving Ngāi Tahu access to mahinga kai from season to season. Their value was recognised in the Canterbury Purchase agreement (Kemp’s Deed) 1848 which reserved and protected both nohoanga and mahinga kai for the present and future needs of Ngāi Tahu whānau in Canterbury.

*“Ko o matou **kainga nohoanga** ko o matou **mahinga kai** me waiho marie mo matou mo a matou tamariki mo muri iho i a matou, a ma to Kawana e whakarite mai hoki teteahi wahi mo matou a mua ake nei, a te wahi e ata ruritia ai te whenua a Ngā Kai Ruri.”*

The Te Rūnanga o Ngāi Tahu Act 1996 identifies 72 traditional nohoanga sites throughout the Ngāi Tahu takiwā, providing tribal members with exclusive, albeit temporary rights to occupy.

Fenton Reserves & Entitlements

A significant determination was made 1868 by Judge Fenton when an order was made for water flow to be maintained to five native reserves within the Canterbury region: Taerutu, Waimaiaia, Torotoroa, Te Aka Aka, Pukatahi and Te Houriri. Known as the Fenton Reserves, these areas were essentially fishing easements awarded in accordance with Kemp’s Deed to help ensure on-going access by the beneficial owners to the associated waterways and their mahinga kai.

As part of the Ngāi Tahu Ancillary Claims settlement, Fenton Entitlements were created to provide the Fenton reserve owners the opportunity to occupy land close to waterways in order to facilitate access to them for the lawful fishing and gathering of other natural resources. While the right to occupy is temporary (up to 210 days per year), the associated right to fish in a part of the adjacent waterway is exclusive.

Mātaitai & Taiapure

Since settlement, Ngāi Tahu have also established a number of customary fisheries protection areas (i.e. mātaitai and taiapure) under the Fisheries Act 1996 and the Fisheries (South Island Customary Fishing) Regulations 1999. The intent of these legislative mechanisms is to give effect to the obligations stated in the Treaty of Waitangi Fisheries Claims Settlement Act 1992 and enable Tangata Tiaki (i.e. local Ngāi Tahu fisheries managers) to exercise greater rangatiratanga (sovereignty) over customary fishing grounds.

Rāhui

A rāhui is a temporary prohibition placed on an area or resource as either (a) a conservation measure, or (b) a means of social and political control. With respect to the former, a rāhui will effectively separate people from any ‘polluted’ area of land or water, preventing the ability to harvest potentially contaminated products from these areas. Rāhui are initiated by someone of rank and were placed and lifted with appropriate karakia (ceremony) by a tohunga (experts).

Iwi Management Plans

Ngāi Tahu has set out its resource management values, issues, objectives and policies in a number of “iwi management plans” throughout the Canterbury region. These documents have been prepared in order to facilitate the exercise of Ngāi Tahu’s rangatiratanga (chieftainship) over their lands, villages and all their treasures as per Article II of the Treaty / Te Tiriti, including the exercise of their kaitiaki responsibilities as Mana Whenua.

Local authorities must take Iwi Management Plans into account when preparing regional or district plans under the RMA.

Statutory Acknowledgement Areas

The Ngāi Tahu Claims Settlement Act 1998 restored Ngāi Tahu ownership to several areas of great tribal significance and which were not deemed to be included as part of the Crown’s land purchase, including but not limited to the beds of Te Waihora/Lake Ellesmere and Muriwai/Cooper’s Lagoon in Canterbury, as well as many reserve areas.

The Act also identified many other areas of significance to Ngāi Tahu as Areas of Statutory Acknowledgement. Those Areas of Statutory Acknowledgement that lie within Canterbury are listed in Schedule 19 of this Plan. The Areas of Statutory Acknowledgement do not form a comprehensive list of all areas of significance and value to Ngāi Tahu whānui; and they do not of themselves confer any form of ownership of the areas upon Ngāi Tahu whānui. However, the importance of those areas is recognised by the Crown and must be recognised by consent authorities when deciding on notification and affected party status under the RMA.

CONCLUSION

The above has introduced the central tenets and some of the principal processes and mechanisms by which Ngāi Tahu came to manage the natural resources of Te Waipounamu. While the nature of this approach is distinctly Māori, the intent - sustainable management - is clearly shared with wider New Zealand culture and has been reflected in Part II of the RMA. In order to bring both cultural perspectives together in the overall management of Canterbury’s lands and water resources, this Plan has sought to integrate and weave Ngāi Tahu’s values throughout. The result will be a region so much richer for its inclusiveness.

He waka kōtuia, kahore e tukutukua ngā mimira.
A waka bound correctly will not come apart in rough seas.

Territorial Local Authorities

District and regional council functions for managing natural resources under the RMA often overlap, particularly in relation to effects of land uses on water bodies, natural hazards and hazardous substances.

As well as the direct overlap of functions, the decisions District Councils make in their district plans about where and how land uses can occur, impact directly on the demand for water and the nature of the discharges of stormwater, sewage and other contaminants into catchments. The sensitivity of fresh water bodies to nutrient enrichment and the state of fresh water resources will, in turn, influence the appropriateness and management of existing and future land use activities in catchments.

Working together, the Regional Council and territorial authorities can most effectively manage the interface of land uses and fresh water resources. The establishment of the ten Water Management Zone Committees under the CWMS, as joint committees of the Regional Council and the relevant territorial authority, is a significant step to facilitate closer liaison. Key stakeholders include representatives from community and environmental groups, relevant industry groups including farmers and those in hydro-generation. The Regional Policy Statement 2012 (RPS 2013) emphasises integrated management of land uses and water quality and quantity between the Regional Council and territorial local authorities.

Christchurch Earthquake Recovery Authority (CERA)

The Christchurch Earthquake Recovery Authority (CERA) was established as a new government department in April 2011, to lead and coordinate the ongoing recovery effort following the Canterbury earthquakes, consistent with the purposes, functions and powers established in the Canterbury Earthquake Recovery Act 2011.

The purpose of the Canterbury Earthquake Recovery Act 2011 includes providing appropriate measures to enable recovery, to enable a focussed, timely and expedited recovery, and to restore the social, economic, cultural and environmental well-being of greater Christchurch communities. CERA's role ceases in April 2016, but recovery activities will continue beyond this time. This Plan will play a key part in the earthquake-related management of land and water resources.

Department of Conservation

~~The Department of Conservation's functions are set out in section 6 of the Conservation Act 1987 and these functions, although different to that of the Regional Council, are often aimed toward consistent outcomes. In particular, functions with respect to the management of fresh water ecosystems, biodiversity and fish passage overlap. In addition, the Department administers significant Crown land holdings in the region, including the catchments of the alpine rivers and many of the lakes.~~

The Department of Conservation is the leading central government agency responsible for the conservation of New Zealand's natural and historic heritage. Its legislative mandate is the Conservation Act 1987 and other key statutes such as the National Parks Act 1980 and Reserves Act 1977.

The Department's key functions as set out in the Conservation Act are:

- to manage land and other natural and historic resources;
- to preserve as far as practicable all indigenous freshwater fisheries, protect recreational fisheries and freshwater habitats;
- to advocate conservation of natural and historic resources;
- to promote the benefits of conservation (including Antarctica and internationally);
to provide conservation information; and
- to foster recreation and allow tourism, to the extent that use is not inconsistent with the conservation of any natural or historic resource.

In Canterbury, the Department's role involves management of large areas of the High Country, including two National Parks, a National Reserve, numerous Conservation Parks, as well as smaller conservation areas and reserves on the Canterbury Plains and Banks Peninsula/Horomaka.

The Department also manages protected species such as birds, bats and lizards under the Wildlife Act 1953.

The Department's general freshwater function is outlined in section 6(ab) of the Conservation Act 1987: "To preserve so far as is practicable all indigenous freshwater fisheries, and protect freshwater fisheries and freshwater fish habitats".

The Conservation General Policy (2005) outlines, in sections 4.1 and 7, the Department's national policy with regard to freshwater.

The Department is also responsible for two key Regulations concerning freshwater.

First, the Freshwater Fisheries Regulations 1983 which regulate fish passage and enable the Department to require fish passes or screens where new structures impede the natural movement of fish upstream or downstream of any natural waterbody. The Regulations also enable various pest fish to be declared noxious so that they can be managed.

Secondly, the Department administers the Whitebait Fishing Regulations 1994 which set the rules for whitebait/inanga fishing in Canterbury.

In addition, Statutory Management Plans are prepared under the Conservation Act 1987 and National Parks Act 1980. These management plans include the Canterbury Conservation Management Strategy, the Arthurs Pass and Aoraki/Mt Cook National Park Plan, and various Conservation Management Plans. The Department and Ngāi Tahu have also jointly prepared the Te Waihora Management Plan (2004) to give effect to the Ngāi Tahu Claims Settlement Act 1998.²³

1.3.2 Key Approaches

The CWMS was developed to foster a more collaborative approach to water management in the region. Prior to its development pressure on Canterbury's water resource increased significantly and with this emerged a highly adversarial approach to allocation and management of water that has resulted in sub-optimal outcomes.

The CWMS is based on collaboration and integrated management to maximise opportunities for the community, environment and economy within an environmentally sustainable framework. The CWMS encompasses the interests and perspectives of many stakeholders and interest groups considering social, cultural and environmental perspectives in managing water resources.

The CWMS includes a set of planning priorities for guiding the allocation of water to particular types of uses. These are:

First order priorities - environment, customary use, community supplies and stock water;
and

Second order priorities - irrigation, renewable electricity generation, recreation and amenity.

²³ 120.1 DOC

The CWMS focuses on delivering a set of quantified outcome targets by specific dates. The outcome targets are in the following areas:

- Ecosystem health and biodiversity
- Natural character, processes and ecological health of braided rivers
- Kaitiakitanga
- Drinking water
- Recreational and amenity opportunities
- Water use efficiency
- Irrigated land area
- Energy security and efficiency
- Indicators of regional and national economies
- Environmental limits

The 10 zone committees are joint committees of the Regional Council and the relevant territorial authority, and membership includes local iwi and community representatives. The Regional Committee is a committee of Environment Canterbury. It focuses on regional issues, and has representatives from each zone committee. The regional and each zone committee are charged with preparing an implementation programme (ZIP and RIP) of actions to address fresh water management issues for the region or their zone. Each committee seeks to develop solutions for its own zone, facilitates community involvement and debate, keeps relevant councils informed, and works collaboratively with neighbouring zone committees and the Regional Committee.

The CWMS is prepared under the Local Government Act 2002 (LGA) and cannot override the RMA or the statutory policy statements and plans prepared under the RMA. However, many of the fundamental concepts in the CWMS are integral to promoting sustainable management of water under the RMA in Canterbury and where this is the case they have been incorporated into the objectives and policies of the RPS 2013 and the LWRP. The vision and principles of the CWMS are a matter which the Council must have particular regard to in making decisions on a regional plan (s63 of the Environment Canterbury (Temporary Commissioners and Improved Water Management) Act 2010 (ECan Act)). The statutory water management documents are discussed in Section 2.

Through the CWMS process, two important concepts have developed in the approach to managing water in Canterbury:

- parallel processes and
- gifts and gains.

The concept of parallel process is based on the management of land and water to achieve a range of social, cultural, environmental, and economic outcomes, essentially all at the same time. For example, at the same time as water storage and water efficiency options are being pursued, so too are actions to deal with environmental issues. The parallel process approach is an objective in the RPS 2013. It reflects the sustainable management concept of s5(2) of the RMA, of using and developing resources while simultaneously sustaining them for future generations and addressing any adverse effects that result.

The gifts and gains approach - putting something back (the gift) for what is taken (the gain), is used by some zone committees to develop solutions of interconnected land and water management to meet the principles of the CWMS. In short, it is unlikely that any one project or activity could fully deliver on all outcomes sought through the CWMS or Part 2 of the RMA, so multiple approaches are needed.

1.3.3 Statutory Planning for Managing Land and Water, and the Role of the Land and Water Regional Plan

The primary legislation for managing natural resources in New Zealand, including land and water, is the RMA, except for land that is managed under the Conservation Act 1987 and the statutes in the First Schedule to that Act. The RMA promotes the sustainable management of natural and physical resources. This involves managing the resources of the Canterbury Region in ways that provide for the needs of current and future generations. The LWRP must also give effect to the objectives and policies specified in any operative national policy statement. Currently there are three national policy statements (NPS). The LWRP has been prepared to give effect to these documents as required by the RMA. In doing this, it has been recognised that no NPS takes precedence over any other and that any resolution of conflict between competing objectives and policies within Canterbury may be informed by the provisions of the RPS 2013 and the LWRP. The National Policy Statement for Freshwater Management (“Freshwater NPS”) requires regional councils to address the over-allocation of water in catchments for abstraction or discharges. Regional plans must give effect to the NPS.

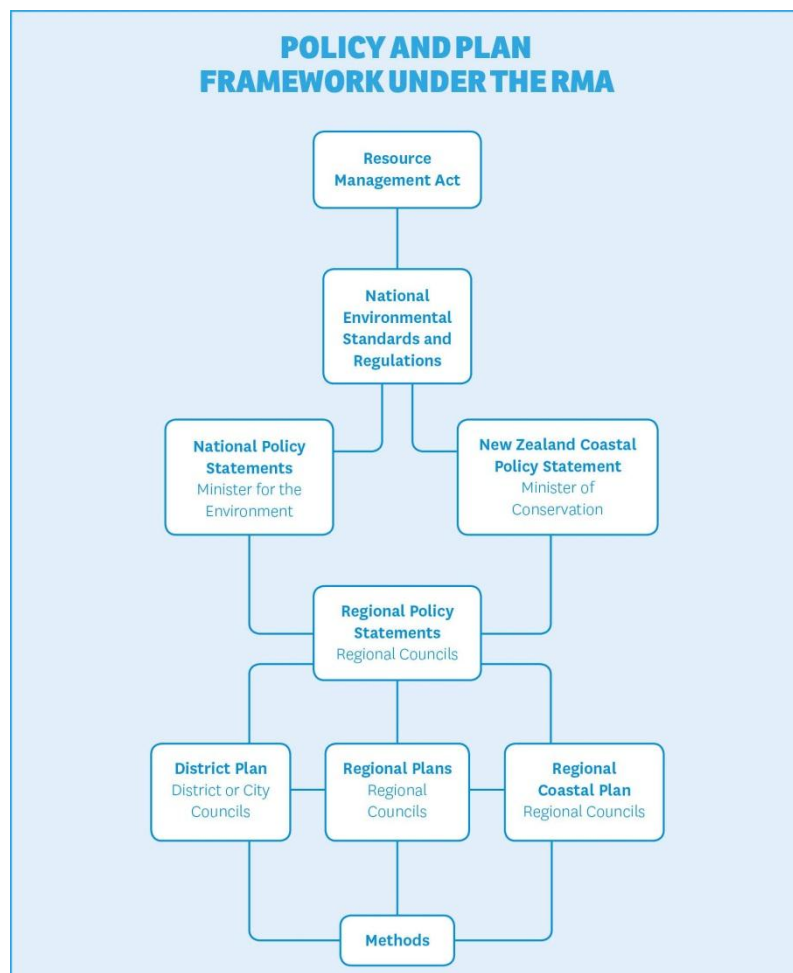


Figure 1 - Hierarchy of Planning Instruments

Regional and District Councils all have functions set out under the RMA with powers and duties to exercise those functions. The RMA provides for a series of planning instruments for managing natural and physical resources, including land and water. Figure 1 shows the

hierarchy of planning instruments relating to land and water under the RMA, and the relationship between them.

Section 30 of the RMA gives regional councils some specific functions around the control of the use of any land (including the beds of lakes and rivers) for the purposes of soil conservation, water quality, water quantity and the maintenance of ecosystems in water bodies, the avoidance or mitigation of natural hazards, and the prevention or mitigation of effects from the use, storage, transport or disposal of hazardous substances. Regional councils also have functions around controlling the planting of plants in the beds of lakes and rivers, the maintenance of indigenous biological diversity and the integration of strategic infrastructure and land use.

District councils, under section 31 of the RMA, have more general functions to control the effects of the use, development or protection of land. Close co-operation is needed between the Regional Council and District Councils in relation to the respective regional and district plans to ensure complementary approaches that avoid duplication.

In addition, a regional plan cannot be interpreted or applied in a way that is inconsistent with the “Recovery Strategy for Greater Christchurch Mahere Haumanutanga o Waitaha” (“Recovery Strategy”), which came into effect on 1 June 2012.

Sections 3-8 of the Recovery Strategy have statutory effect under the Christchurch Earthquake Recovery Act 2011. The Recovery Strategy forms part of and is read together with RMA plans. The Recovery Strategy prevails where there is any inconsistency.

Regional councils also have functions relating to land and water under other legislation. In particular, the Biosecurity Act that manages the control of plant and animal pests. This is done through the Regional Pest Management Strategy.

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Section 2 - How the Plan Works & Definitions

The LWRP contains objectives, policies and rules as required under section 67(1) of the RMA. The objectives, policies and rules in this Plan manage land, water and biodiversity within the region in conjunction with other non-statutory methods. They are designed to assist with implementing the vision and principles in the CWMS.

2.1 Objectives

The objectives in this Plan identify the resource management outcomes or goals for land and water resources in Canterbury region, to achieve the purpose of the RMA. The objectives form a comprehensive suite of outcomes to be attained.

While the objectives form a comprehensive suite of outcomes for the region, the individual provisions can conflict with one another. For this reason, no single objective should be read in isolation. Assessing whether an activity is appropriate requires an overall broad judgement to be made as to how it fits within the overall scheme of this Plan and provides for the achievement of the environmental outcomes sought for the Canterbury Region.²⁴

2.2 Policies

The policies implement the Plan's objectives, as required under section 67(1)(b) of the RMA. The Plan contains two forms of policies.

The Plan first lists strategic policies, which apply to all activities. These key policies provide an overall direction for the integrated management of land and water. The strategic policies are followed by more specific policies which apply to activities. These policies are 'outcome-based' policies, identifying the outcomes sought from the management of land and water resources. These guide decision-making on resource consent applications as well as providing the rationale for the rules, and the status which is given to activities in the rules.

As with the objectives, the policies are intended to apply as a comprehensive suite, and must be read and considered together.

2.3 Rules

The rules in the Plan implement the policies, as required under section 67(1)(c) of the RMA.

The rules have the force and effect of regulations in statute, which means they are legally binding.

The rules determine whether a person needs to apply for a resource consent or whether the proposed activity can be undertaken without one (known as permitted activities). The rules may also make some activities prohibited, which means there can be no resource consent application for that activity. An activity needs to comply with all relevant rules in the Plan, unless the rule itself states otherwise.

²⁴ 196.3 Genesis

There is a strong relationship between the status an activity is given in a rule in this Plan and the effects sought to be managed by the policies and the environmental outcomes sought to be attained by the policies and objectives.

- Permitted and controlled activities are acceptable in all cases, however a controlled activity requires a resource consent to enable specific assessment of identified matters and addition of resource consent conditions.
- Restricted discretionary and discretionary activities may or may not be appropriate in any given circumstance, depending on the effects of the activity.
- Non-complying activities are generally inappropriate, ~~though with a non-complying activity there may be an exceptional case when a resource consent is granted.~~²⁵
- Prohibited activities are not appropriate in any circumstance, and no resource consent application may be made for a prohibited activity.

To make it easier to apply for resource consents and to reduce the number of separate resource consents required to undertake any particular activity, this Plan has, where practicable, adopted the concept of 'rule bundling'. Rule bundling is used to combine several permissions which may be required under section 9 and sections 13 to 15 of the RMA into one rule. One application for resource consent can therefore be made under the bundled rule. The CRC will assess and determine the activities separately, in accordance with the provisions of the RMA relevant to that activity, and any resource consents granted will specify the relevant provisions of the RMA under which the different resource consents have been issued. Resource consents for activities that would otherwise contravene sections 13 – 15 need to expressly allow the relevant activity by reference to the relevant provision.

2.4 Regional and Sub-regional Sections

This Plan operates at two levels. There is a region-wide section, which contains the objectives, policies and rules that apply across the region. There are also ten sub-regional sections. Each part of the region is covered by one and only one sub-regional section.

The sub-regional sections contain policies and rules which are specific to the catchments covered by that section. The policies and rules in the sub-regional sections apply instead of, or in addition to, policies or rules in the region-wide section. They implement the region-wide objectives in the Plan in the most appropriate way for the specific catchment or catchments covered by that section. `

2.5 Fresh water Objectives

Both the objectives in Section 3 and Policy 4.1 in this Plan form the 'fresh water objectives' for Canterbury Region, as described by the Freshwater NPS.

The objectives in the Plan provide the narrative outcomes sought to be achieved for, or from, fresh water across the whole of the Canterbury region.

The specific fresh water in-stream outcomes (numeric and descriptive) to achieve the Plan's objectives are set out in Table 1 to Policy 4.1, or where they have been collaboratively determined at a catchment scale, included in a sub-regional section.

²⁵ 196.6 Genesis

2.6 Limits

Limits as required by the Freshwater NPS, are included in the rules to this Plan.

Limits in the Plan are set to achieve the Plan's objectives and the in-stream fresh water outcomes described in Table 1 to Policy 4.1, or in the relevant sub-regional section.

The Plan's limits either:

1. Set out the maximum amount of a resource that can be allocated to those using the resource within a catchment; or
2. Control activities by:
 - (a) Permitting activities that the Council has determined can cumulatively occur while still ensuring that the objectives and the in-stream fresh water outcomes sought by the Plan will be achieved;
 - (b) Prohibiting activities that the Council has determined will not enable the objectives and the in-stream fresh water outcomes sought by the Plan to be achieved;
 - (c) Requiring resource consents for activities where the Council has determined that a case-by-case assessment is required to assess whether the objectives and the in-stream fresh water outcomes sought by the Plan will be achieved.

Water quantity limits determined at a catchment level, in consultation with stakeholders, are included in the relevant sub-regional sections. Where catchment surface water limits have not been established a regional methodology sets out the limits to be applied. Groundwater quantity limits are set for all groundwater allocation zones in the Canterbury region.

The region-wide nitrogen limits in Section 5 of the Plan are designed to move from a regime of little or no statutory management of diffuse non-point source discharges of nutrients to a statutory regime that requires 'good management practice' across the region. Where good management practice will not result in the Plan's objectives and the in-stream fresh water outcomes being met, then a comprehensive catchment management regime for managing both diffuse and point-source discharges will be included by way of plan change into sub-regional sections.

2.7 Over-allocation

Over-allocation is determined for the purpose of this Plan where a resource:

1. has been allocated to users beyond a limit set by a rule in this Plan; or
2. is being used to a point where an in-stream fresh water outcome described in a sub-regional section or Table 1 to Policy 4.1 is not being met.

In the case of nutrients an assessment of whether the regional in-stream outcomes in Table 1 to Policy 4.1 are being met is shown in the Planning Maps.

Surface and groundwater quantity allocation status is determined using Schedule 13 'Requirements for implementation of water allocation regimes' to this Plan.

Except for ~~essential~~ community drinking²⁶ water supplies and discharges, this Plan will not provide for new activities where a catchment is determined to be over-allocated.

²⁶ 326.12 Horticulture NZ

Where a lake, river or aquifer is over-allocated, sub-regional sections to this Plan will describe the targets, timeframes and mechanisms to be implemented, in addition to the region-wide policies and rules, to address over-allocation.

2.8 Development and review of sub-regional sections

Priority for the development and review of sub-regional sections is to be given to catchments where the regional in-stream fresh water outcomes described in Table 1 to Policy 4.1 are not being met.

Additional policies and rules included in the sub-regional sections are the most efficient and effective way of achieving the region-wide objectives for a particular catchment.

The policies and rules included in the sub-regional sections are to assist with delivering the sustainable water management priority outcomes identified collaboratively by zone committees under the CWMS.

The process for establishing or reviewing catchment specific fresh water in-stream outcomes and the limits, in a sub-regional section, will be carried out either in accordance with the Council White Paper titled “Preferred Approach for Managing the Cumulative Effects of Land Use on Water Quality in the Canterbury Region 2012”, and any subsequent updates, or will be undertaken using an equivalent process that ensures the biophysical, cultural, social and economic consequences of establishing catchment specific in-stream outcomes and setting limits are collaboratively assessed with stakeholders and the community. The intention of the region-wide limits is not to introduce any preconception of what limits should be determined at the catchment level. It is vital that communities in those catchments openly consider analyses of social, bio-physical, economic and cultural costs and benefits under a range of limits specific to that catchment before deciding on a desired end point. In this way, communities can determine the best solutions for their catchments.²⁷

Where a catchment is not meeting the Plan’s objectives, the collaboratively established catchment’s fresh water in-stream outcomes and the corresponding limits will be set out in the policies and rules in the relevant sub-regional section. That sub-regional section will also describe the targets, timeframes and mechanisms to be implemented, in addition to the region-wide policies and rules, to address over-allocation.

2.9 Relationship with other regional plans controlling land and water

In the future this Plan will manage all land and water activities (that can be controlled by a regional council) in the Canterbury region. At the time of notifying this Plan there are a number of separate regional plans that control specific aspects of land and water separately. These plans continue to operate separately from this Plan until they are reviewed, or a catchment specific collaborative process is undertaken to review limits. At that point they are to be incorporated into this Plan. In the interim, Under s67(4) of the RMA a regional plan must not be inconsistent with any other separate regional plan on the same subject matter. Therefore,²⁸ any objective, policy or rule on the same subject matter in any relevant separate plan prevails over those contained in this Plan; as detailed below:

²⁷ 315.1 DairyNZ

²⁸ 221.105 Meridian

Regional Plan	Details
Proposed Hurunui and Waiau River Regional Plan	The Proposed Hurunui and Waiau River Regional Plan has objectives, policies and rules to manage fresh water resources in the Hurunui, Waiau and Jed River Catchments. It includes objectives, policies and rules on surface and groundwater allocation and the effects of land use on water quality in the area covered by the Proposed Hurunui and Waiau River Regional Plan. Any objective, policy or rule on the same subject matter in the Proposed Hurunui and Waiau River Regional Plan prevails over the objectives, policies and rules contained in this Plan.
Opihi River Regional Plan	The Opihi River Regional Plan has objectives, policies and rules relating to the taking or diverting of surface water and discharge to surface water or onto land where the discharge may enter surface water in the area covered by the Opihi River Regional Plan. Any objective, policy or rule on the same subject matter in the Opihi River Regional Plan prevails over the objectives, policies and rules contained in this Plan.
Pareora Catchment Environmental Flow and Water Allocation Regional Plan	The Pareora Catchment Environmental Flow and Water Allocation Regional Plan has objectives, policies and rules relating to the taking or diverting of surface and ground water and discharge to surface water or onto land where the discharge may enter surface water in the area covered by the Pareora Catchment Environmental Flow and Water Allocation Regional Plan. Any objective, policy or rule on the same subject matter in the Pareora Catchment Environmental Flow and Water Allocation Regional Plan prevails over the objectives, policies and rules contained in this Plan.
Waimakariri River Regional Plan	The Waimakariri River Regional Plan has objectives, policies and rules relating to the taking or diverting of surface water and discharge to surface water (excluding the Styx River catchment) or onto land where the discharge may enter surface water (excluding the Styx River catchment) in the Waimakariri River Regional Plan. The Waimakariri River Regional Plan also has rules relating to sewage tank effluent, animal effluent, land drainage water, aquifer or bore test water, water tracers, cooling water, stormwater and swimming pool water. Any objective, policy or rule on the same subject matter in the Waimakariri River Regional Plan prevails over the objectives, policies and rules contained in this Plan. The regional rules in the LWRP apply to all of the Styx River catchment. The regional rules for water quality in the Waimakariri River Regional Plan do not apply in the Styx River catchment.
Waipara Catchment Environmental Flow and Water Allocation Regional Plan	The Waipara Catchment Environmental Flow and Water Allocation Regional Plan has objectives, policies and rules relating to the taking or diverting of surface and ground water and discharge to surface water or onto land where the discharge may enter surface water in the area covered by the Waipara Catchment Environmental Flow and Water Allocation Regional Plan. Any objective, policy or rule on the same subject matter in the Waipara Catchment Environmental Flow and Water Allocation Regional Plan prevails over the objectives, policies and rules contained in this Plan.
Waitaki Catchment Water Allocation Regional Plan	The Waitaki Catchment Water Allocation Regional Plan has objectives, policies and rules relating to the <u>allocation of water</u> . By virtue of section 14 of the <u>Resource Management (Waitaki Catchment) Amendment Act 2004 it is the Regional Plan for the allocation of water in that part of the Waitaki Catchment that is within the Canterbury Region</u> taking or diverting of surface water and discharge to surface water or onto land where the discharge may enter surface water in the Waitaki Catchment Water Allocation Regional Plan. ²⁹ Any objective, policy or rule on the same subject matter in the Waitaki Catchment Water Allocation Regional Plan prevails over the objectives, policies and rules contained in this Plan <u>and any inconsistency between the Plans must be interpreted in favour of the Waitaki Catchment Water Allocation Regional Plan.</u> ³⁰

²⁹ 221.105 Meridian

³⁰ 221.105 Meridian

Regional Coastal Environment Plan	<u>The Regional Coastal Environment Plan has objectives, policies and rules to manage the coastal environment, which includes the coastal marine area. It includes objectives, policies and rules on protection and enhancement of the coast; water quality; controls on activities and structures; and coastal hazards. Any objective, policy or rule on the same subject matter in the Regional Coastal Environment Plan prevails over the objectives, policies and rules contained in this Plan and no objectives, policies or rules in this Plan apply in the coastal marine area.</u> ³¹
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2.10 Definitions, Translations and Abbreviations

Definitions

The words used in this plan have their ordinary meaning as set out in the Oxford English Dictionary (Second Edition or Oxford English Dictionary Online), except where the words are defined in either the RMA or this Plan. The definitions in *italics* below are from the RMA and are reproduced here for information purposes.

Word	Definition
Abstraction	means the taking of water from a water body or the diverting of water outside of the bed of a river, lake or artificial watercourse.
Aerobic decomposition and aerobically composted	means organic waste that has decomposed in the presence of air or oxygen.
Agrichemical	means any substance, or mixture of substances, whether inorganic or organic, man-made or naturally occurring, modified or in its original state that is used to eradicate, or control flora and fauna. It excludes oral nutrition compounds, vertebrate pest controls and fertilisers.
Alpine river	means the Clarence, Waiau, Hurunui, Waimakariri, Rakaia, Rangitata and Waitaki Rivers which all have catchments that extend back to the Main Divide.
Annual exceedance probability (AEP)	means the chance of a natural hazard event of a given size or larger occurring in any one year.

³¹ 167.1 CRC – note: an alternative relief via the planning maps will be presented in Hearing Group 3

Annual or seasonal volume or annual or seasonal allocation volume	<p>means:</p> <ol style="list-style-type: none"> 1. in relation to a water permit, the total amount of water authorised by a water permit over a specified period in each year, or, in the case of an annual volume, a one year period (01 July to 30 June in the following year); and 2. in relation to an allocation block, the total amount of water that is available for allocation from that block over a specified period.
<i>Applicant</i>	<p>a) <i>in sections 37A, 40, 41B, 41C and 42A means –</i></p> <ol style="list-style-type: none"> i. <i>for the purposes of a review of consent conditions, the consent holder; or</i> ii. <i>for any matter described in section 39(1) except for section 39(1)(c), the person who initiates matter;</i> <p>b) <i>in section 96, means the person who –</i></p> <ol style="list-style-type: none"> i. <i>initiates a matter described in section 39(1)(b) or (d); or</i> ii. <i>holds a resource consent referred to in section 39(1)(c); or</i> iii. <i>initiates a requirement for a designation;</i> <p>c) <i>in Part 6AA, has the meaning given in Section 141</i></p>
<i>Aquatic life</i>	<p>a) <i>means any species of plant or animal life that, at any stage in its life history, must inhabit water, whether living or dead; and</i></p> <p>b) <i>includes seabirds (whether or not in the aquatic environment</i></p>
Archaeological site	means a site listed on the New Zealand Archaeological Association's Archaeological Site Recording Scheme website.
Artificial lake	means a lake created by human action. It includes any lake created as a result of damming a river, constructing an impoundment on land, or excavating land, but excludes detention and retention basins for stormwater, for dewatering purposes, factory waste and washdown water and oxidation ponds and other artificial water bodies used to treat human or animal waste.
Artificial watercourse	<i>means a watercourse that is created by human action. It includes an irrigation canal, water supply race, canal for the supply of water for electricity power generation, and farm drainage canal-channel³². It does not include artificial swales, kerb and channelling or other watercourses designed to convey stormwater.</i>
Audit	means an assessment of the performance of a farming activity against the objectives and targets of a Farm Environment Plan, and includes identifying any non-compliance with the Farm Environment Plan, details of any action to remedy instances of non-compliance, and an overall grading based on the assessment of the property.

³² 19.8 Ellesmere irrigation Society Inc.

Available sewerage network	means a community or territorial authority reticulated sewerage system where: <ol style="list-style-type: none"> 1. a pipeline passes within 50 m of the property boundary; 2. the network operator will accept the wastewater from the property; and 3. the distance from the network to the building from which wastewater is generated is less than 100 m.
<i>Bed</i>	<i>means</i> <ol style="list-style-type: none"> a) <i>in relation to any river –</i> <ol style="list-style-type: none"> i.; ii. ..., the space of land which the waters of the river cover at its fullest flow without overtopping its banks; and b) <i>in relation to any lake, except a lake controlled by artificial means,</i> <ol style="list-style-type: none"> i. for the purposes of esplanade reserves, esplanade strips, and subdivision, the space of land which the waters of the lake cover at its annual highest level without exceeding its margin; ii. in all other cases, the space of land which the waters of the lake cover at its highest level without exceeding its margin; and c) <i>in relation to any lake controlled by artificial means, the space of land which the waters of the lake cover at its maximum permitted operating level; and</i> d)
<i>Benefits and costs</i>	<i>Includes benefits and costs of any kind, whether monetary or non-monetary</i>
<i>Best practicable option</i>	<i>in relation to a discharge of a contaminant or an emission of noise, means the best method for preventing or minimising the adverse effects on the environment having regard, among other things, to –</i> <ol style="list-style-type: none"> a) <i>the nature of the discharge or emission and the sensitivity of the receiving environment to adverse effects; and</i> b) <i>the financial implications, and the effects on the environment, of that option when compared with other options; and</i> c) <i>the current state of technical knowledge and the likelihood that the option can be successfully applied</i>
<i>Biological diversity</i>	<i>means the variability among living organisms, and the ecological complexes of which they are a part, including diversity within species, between species, and of ecosystems</i>
Bio-solids	<u>means sewage or sewage sludge derived from a sewage treatment plant, that does not include animal effluent or products derived from industrial wastewater treatment plants, and that has been treated and/or stabilised to the extent that it is able to be safely and beneficially applied to land.</u> ³³

³³ 246.5 NZ Pork Industry Board

Bore	means a structure or hole in the ground constructed for the purpose of: <ol style="list-style-type: none"> 1. investigating or monitoring conditions below the ground surface; or 2. abstracting liquid substances from the ground; or 3. discharging liquid substances into the ground, but excludes test pits and soak holes.
Braided river	means any river with multiple successively divergent and rejoining channels separated by gravel islands.
Changed (in terms of Rules 5.42 to 5.45))	means a change in land use, calculated on a per property basis that arises from either: <ol style="list-style-type: none"> 1. a resource consent to use, or increase the volume of, water for irrigation on a property; or 2. an increase of more than 10% in the loss of nitrogen from land used for a farming activity above the average nitrogen loss from the same land for the period between 1 July 2011 and 30 June 2013. The amount of nitrogen loss shall be calculated using the Overseer™ nutrient model for the 12 months preceding 1 July in any year and expressed as kilograms per hectare per year.
Cleanfill	<u>means material that, when buried, will have no adverse effects on people or the environment. Cleanfill material includes virgin natural materials such as clay, soil and rock, and other inert materials such as concrete or brick that are free of:</u> <ul style="list-style-type: none"> • <u>Combustible, putrescible, degradable or leachable components</u> • <u>Hazardous substances</u> • <u>Products or materials derived from hazardous waste treatment, hazardous waste stabilisation, or hazardous waste disposal practices</u> • <u>Materials that may present a risk to human or animal health, such as medical and veterinary waste, asbestos, or radioactive substances</u> • <u>Liquid waste.</u>³⁴
Climate change	<i>means a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods</i>
Coastal marine area	<i>means the foreshore, seabed and coastal water, and the air space above the water –</i> <ol style="list-style-type: none"> a) <i>of which the seaward boundary is the outer limits of the territorial sea;</i> b) <i>of which the landward boundary is the line of mean high water springs, except that where that line crosses a river, the landward boundary at that point shall be whichever is the lesser of –</i> <ol style="list-style-type: none"> i. <i>1 kilometre upstream from the mouth of the river, or</i> ii. <i>The point upstream that is calculated by multiplying the width of the river mouth by 5</i>

³⁴ 167.3 CRC

Community or network utility operator ³⁵ stormwater system	means a stormwater system owned and operated by a group, territorial authority or company <u>that serves two or more sites that are in separate ownership</u> , ³⁶ comprising swales, drains, channels, wetlands, infiltration basins or pipework and other treatment devices, which may include detention ponds, for the treatment of stormwater prior to a discharge to land, groundwater, surface water or connecting to a reticulated stormwater system.
Community wastewater treatment system	means a wastewater treatment system owned and operated by a group, <u>institution</u> , ³⁷ territorial authority or company that primarily treats domestic effluent and serves more than one site, but does not include the pipework and sewers running from individual sites to the collection and treatment system.
Community drinking water supply	means a drinking-water supply that is recorded in the drinking-water register maintained by the Chief Executive of the Ministry of Health (the Director-General) under section 69J of the Health Act 1956 that provides no fewer than 501 people with drinking water for not less than 60 days each calendar year.
Community Water Supply	<u>means water taken primarily for group drinking water supply and includes group drinking water supply, and community drinking water supply but that may also be used for other purposes such as supply to institutional, industrial, processing, stockwater, or amenity irrigation use and fire-fighting.</u> ³⁸
Conditions	<i>in relation to plans and resource consents, includes terms, standards, restrictions, and prohibitions</i>
Confined aquifer	means an aquifer overlain by a low permeability or impermeable layer where the water in the aquifer is under pressure.
Consent authority	<i>means a regional council, a territorial authority, or a local authority that is both a regional council and a territorial authority, whose permission is required to carry out an activity for which a resource consent is required under this Act</i>
Construction	includes all forms of building activity and infrastructure construction and maintenance . ³⁹
Contact recreation	means human recreation activity where people have direct contact with, or are partly or fully immersed in, the water of a river or lake. It includes activities such as boating, bathing, paddling, swimming, and fishing.

³⁵ 169.14 NZTA³⁶ 310.19 Lincoln University³⁷ 154.3 New Zealand Defence Force³⁸ 86.2 Hurunui DC³⁹ 169.15 NZTA

<i>Contaminant</i>	<p><i>includes any substance (including gases, odorous compounds, liquids, solids, and micro-organisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy, or heat –</i></p> <ul style="list-style-type: none"> <i>a) when discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or</i> <i>b) when discharged onto or into land or into air, changes or is likely to change the physical, chemical, or biological condition of the land or air onto or into which it is discharged</i>
<i>Contaminated land</i>	<p><i>means land that has a hazardous substance in or on it that –</i></p> <ul style="list-style-type: none"> <i>a) has significant adverse effects on the environment; or</i> <i>b) is reasonably likely to have significant adverse effects on the environment</i>
<i>Controlled activity</i>	<p><i>If an activity is described in this Act, regulations (including any national environmental standard), a plan, or a proposed plan as a controlled activity, a resource consent is required for the activity and—</i></p> <ul style="list-style-type: none"> <i>a) the consent authority must grant a resource consent except if—</i> <ul style="list-style-type: none"> <i>i. section 106 applies; or</i> <i>ii. section 55(2) of the Marine and Coastal Area (Takutai Moana) Act 2011 applies; and</i> <i>b) the consent authority's power to impose conditions on the resource consent is restricted to the matters over which control is reserved (whether in its plan or proposed plan, a national environmental standard, or otherwise); and</i> <i>c) the activity must comply with the requirements, conditions, and permissions, if any, specified in the Act, regulations, plan, or proposed plan</i>
Dam	<p>means a structure used or to be used for the damming of any water, or waterbody <u>where the dam is the full width of the waterbody</u>⁴⁰ and includes stormwater treatment ponds, sediment retention ponds and temporary impoundments used during site dewatering. It excludes bridges, intake bunding or structures for water takes <u>provided the structures for water takes are not the full width of a waterbody</u>,⁴¹ culverts except any culverts which have a mechanism that can be used to completely block the flow of water through the culvert and any activities involved in the enhancement, creation or restoration of wetlands.</p>
Damming	<p><u>means the impounding of water by a dam.</u>⁴²</p>

⁴⁰ 197.87 RDRML

⁴¹ 197.87 RDRML

⁴² 197.87 RDRML

<u>Defence against water</u>	<u>means any structure or equipment, including any bund, weir, spillway, floodgate, bank, stopbank, retaining wall, rock or erosion protection structure, groyne, vegetation (including anchored tree protection) or reservoir, that is designed to have the effect of stopping, diverting, controlling, restricting or otherwise regulating the flow, energy or spread of water, including floodwaters, in or out of a water body, artificial watercourse, or artificial lake. For the purposes of this definition, dams are excluded.</u> ⁴³
Dewatering	means the abstraction of groundwater so as to lower the water table for the period of time required to enable excavation, construction, or geotechnical work to proceed in the dewatered area, or to sustain a lower localised water table.
<i>Discharge</i>	<i>includes emit, deposit, and allow to escape</i>
<i>Discharge permit</i>	<i>a consent to do something (other than in a coastal marine area) that otherwise would contravene section 15</i>
Discrepancy for the measurement period	means the volume identified when a stock reconciliation process has been carried out and there is either an identified discrepancy of 0.5% (all locations except the Christchurch Groundwater Protection Zone as shown on the Planning Maps) or 100 litres (within the Christchurch Groundwater Protection Zone as shown on the Planning Maps) or any confirmed product loss.
<i>Discretionary activity</i>	<i>If an activity is described in this Act, regulations (including any national environmental standard), a plan, or a proposed plan as a discretionary activity, a resource consent is required for the activity and—</i> <i>a) the consent authority may decline the consent or grant the consent with or without conditions; and</i> <i>b) if granted, the activity must comply with the requirements, conditions, and permissions, if any, specified in the Act, regulations, plan, or proposed plan</i>
<i>District</i>	<i>in relation to a territorial authority,—</i> <i>a) means the district of the territorial authority as defined in accordance with the Local Government Act 2002 but, except as provided in paragraph (b), does not include any area in the coastal marine area;</i> <i>b) includes, for the purposes of section 89, any area in the coastal marine area</i>
<i>District plan</i>	<i>a) means an operative plan approved by a territorial authority under Schedule 1; and</i> <i>b) includes all operative changes to the plan (whether arising from a review or otherwise)</i>

⁴³ 245.12 Fulton Hogan

Disturbed land	means the disturbance of soil by any means, including blading, blasting, contouring, ripping, root raking, moving, removing, excavating, and cutting. Soil disturbance excludes: disturbance as a result of vegetation disturbance activity, non-motorised soil disturbance activities, thrusting, boring or trenching or mole ploughing associated with cable or pipe laying, soil disturbance undertaken by a mine or quarry operation, cultivation and grazing, and foundation works for structures. ⁴⁴
Diversion	means the deflection of water from its natural course, but remaining within the bed <u>or the banks of the water body, or artificial lake or artificial watercourse</u> . If the water leaves the bed <u>or is taken beyond the banks</u> even for a short distance <u>and then returned</u> ⁴⁵ this Plan considers that the water has been “taken” and subsequently “discharged”.
Down-plains	means those areas eastward of State Highway 1 in the Ashburton River, Ashburton-Lyndhurst, Chertsey, Levels Plain, Mayfield-Hinds, Orari-Opihi, Rakaia-Selwyn, Rangitata-Orton, Selwyn-Waimakariri and Valetta groundwater zones.
Drain	includes any artificial watercourse that has been constructed for the purpose of land drainage of surface or subsurface water and can be a farm drainage channel, an open race or subsurface pipe, tile or mole drain.
Drainage system or land drainage system ⁴⁶	means a surface or subsurface pipe or channel or canal system for the collection, transfer and discharge elsewhere of surface or subsurface water.
Drawdown	means either: 1. lowering of water levels stored behind a dam or other water control structure; or 2. localised decline of a water table; or 3. localised decline in water pressure due to pumping.
Dwelling house	<i>means any building, whether permanent or temporary, that is occupied, in whole or in part, as a residence; and includes any structure or outdoor living area that is accessory to, and used wholly or principally for the purposes of, the residence; but does not include the land upon which the residence is sited</i>

⁴⁴ 314.3 Holcim (New Zealand) Limited

⁴⁵ 245.10 Fulton Hogan

⁴⁶ 169.19 NZTA

Earthworks	means the excavation of, and/or filling with topsoil, subsoil, sediments, rock and/or other underlying materials on which the soil is formed. Earthworks include, but are not limited to, the construction of roads, tracks, firebreaks and landings, and ground shaping (recontouring), root raking and blading. Earthworks excludes: (a) Cultivation of the soil for the establishment of crops or pasture; (b) <u>Digging of postholes for the construction of fences;</u> (c) <u>Works for research and monitoring such as coring, water bores and the use of piezometers;</u> (d) <u>Ripping in of water pipes; and</u> (e) <u>Establishment, maintenance and/or enhancement of wetlands, domestic gardens or amenity planting.</u> ⁴⁷
Ecological health	refers to the condition of an ecosystem and its ability to function normally and support the life forms and processes naturally associated with it. ⁴⁸
Ecosystem	means a system of interacting terrestrial <u>and</u> ⁴⁹ or aquatic living organisms within their natural and physical environment.
Ecosystem services	means the physical functioning of a fresh water body that enables ecosystems, including people and communities to exist, and includes such things as flow variability, floodways, ponding and peak flow buffering <u>and includes the goods and services provided by healthy ecosystems, including medicinal plants, clean water and air, and protection from extreme natural events.</u> ⁵⁰
Efficiency	means that for any given level of output inputs are minimised; and includes both technical and allocative efficiency
Environment	<i>includes – a) ecosystems and their constituent parts, including people and communities; and b) all natural and physical resources; and c) amenity values; and d) the social, economic, aesthetic, and cultural conditions which affect the matters stated in paragraph to (c) or which are affected by those matters</i>
Environmental Management Strategy for irrigation	means an environmental management plan for an irrigation scheme using the methodology described in: “An Environmental Management System for Irrigation Schemes in New Zealand” by C. Mulcock, S. Cumberworth, and I. Brown (June 2009).

⁴⁷ 94.3 Waimakariri DC

⁴⁸ 347.27 Fish & Game

⁴⁹ 106.17 CCC

⁵⁰ 106.93 CCC

Existing resource consent	<p>means:</p> <ol style="list-style-type: none"> 1. an existing resource consent which has been given effect to; 2. an existing resource consent which has not been given effect to and has not lapsed; and 3. an expired resource consent continuing to be exercised under s124 of the RMA.
Exploration	<p><i>means any activity undertaken for the purpose of identifying mineral deposits or occurrences and evaluating the feasibility of mining particular deposits or occurrences of 1 or more minerals; and includes any drilling, dredging, or excavations (whether surface or subsurface) that are reasonably necessary to determine the nature and size of a mineral deposit or occurrence; and to explore has a corresponding meaning</i></p>
Farm Environment Plan Auditor	<p>means a person who has either:</p> <ol style="list-style-type: none"> 1. a Certificate of Completion in Sustainable Nutrient Management in New Zealand Agriculture and a Certificate of Completion in Advanced Sustainable Nutrient Management in New Zealand Agriculture from Massey University; 2. a Certificate of Completion in Sustainable Nutrient Management in New Zealand Agriculture from Massey University and can provide evidence of at least 5 years professional experience in the management of pastoral, horticulture or arable farm systems; or 3. a tertiary qualification in agricultural sciences and can provide evidence of at least 5 years professional experience in nutrient management for pastoral, horticulture or arable farm systems.
Fertiliser	<p>means:</p> <ol style="list-style-type: none"> 1. a solid or fluid substance or biological compound, or mix of substances or biological compounds that is described as, or held out to be for, or suitable for, sustaining or increasing the growth, productivity, or quality of plants or, indirectly, animals through the application to plants or soil of any of the following: <ol style="list-style-type: none"> (a) nitrogen, phosphorus, potassium, sulphur, magnesium, calcium, chlorine, or sodium as major nutrients; (b) manganese, iron, zinc, copper, boron, cobalt, molybdenum, iodine, or selenium as minor nutrients; (c) fertiliser additives to facilitate the uptake and use of nutrients; or (d) soil conditioners to alter the physical characteristics of soil; and 2. includes non-nutrient attributes of the materials used in fertiliser; but 3. does not include; <ol style="list-style-type: none"> (a) substances that are plant growth regulators that modify the physiological functions of plants; or (b) any raw or composted biological waste product that is not able to be registered under the Agricultural Compounds and Veterinary Medicines Act 1997.
Field capacity	<p>means the moisture content of soil when the addition of further water would result in saturation and/or drainage of water from the soil.</p>

Flood carrying capacity	means the ability of a river to carry flood flows within its bed without overtopping its banks.
Flood control structure	means any structure designed and built for the purpose of directing the passage of water away from land. ⁵¹
Flood control vegetation	means trees or shrubs planted for the purpose of defending against erosion of a riverbank, berm, or structure. ⁵²
Flood protection works	means any flood control structure or flood control vegetation. ⁵³
Flow sensitive catchment	means those catchments sensitive to flow reduction as a result of a change in the vegetation cover from short to tall vegetation, based on their limited ability to sustain flows during rainless periods means the catchment of a river which is dependent on rainfall as its main source of flow, has limited ability to store water, and where evapotranspiration can be expected to exceed precipitation between December and April resulting in very low flows in summer and autumn compared with mean flows. ⁵⁴
Fresh water	<i>means all water except coastal water and geothermal water</i>
Fully allocated	means, in the case of allocation of surface water, at the relevant limit specified in the environmental flow and allocation regime in Sections 6-15 and means, in the case of groundwater, at the relevant limit for the groundwater allocation zone in Sections 6-15.
Gallery	means a horizontal underground conduit of perforated or porous material for collecting shallow groundwater by infiltration. These can be some distance from a river, but usually accessing water derived from surface water. "Water infiltration gallery" and "infiltration gallery" have the same meaning.
Greywater	means domestic wastes from a bath, shower, basin, laundry and kitchen but excluding toilet and urinal wastes. It may contain pathogens.
Group drinking water supply	means a drinking-water supply that provides more than 25 <u>one household</u> ⁵⁵ but fewer than 501 people with drinking water for not less than 60 days each calendar year.
Groundwater	means all water beneath the surface of the earth contained within the saturated zone, but excludes the water chemically combined in minerals.
Hāpua	means a shallow lake at the termination of a river, separated from the sea by a bank of sand or shingle and includes coastal lakes which may be in the coastal marine area.
<i>Harmful substance</i>	means any substance prescribed by regulations as a harmful substance for the purposes of this definition. ⁵⁶

⁵¹ 245.12 Fulton Hogan⁵² 245.12 Fulton Hogan⁵³ 245.12 Fulton Hogan⁵⁴ 94.4 Waimakariri DC⁵⁵ 86.2 Hurunui DC⁵⁶ 169.23 NZTA

Hazardous activity or industry	means an activity or industry that appears on the Hazardous Activity and Industry List (HAIL) 2004. The HAIL is published as Schedule A in the Contaminated Land Management Guidelines - Ministry for the Environment (2004) updated September 2007 and is set out in Schedule 3 to this Plan.
Hazardous facility	means a site where hazardous substances are used, stored, handled or disposed of. ⁵⁷
Hazardous substance	<u>means hazardous substances as defined in Schedule 4 Part A</u> ⁵⁸
Hazardous waste	means waste that contains: <ol style="list-style-type: none"> 1. a hazardous substance; or 2. an infectious substance, or material known or reasonably expected to contain pathogens, including bacteria, viruses, rickettsia, parasites, fungi or recombinant micro-organisms (hybrid or mutant) that are known, or reasonably expected, to cause infectious disease in humans and animals that are exposed to them; or 3. radioactive material that meets the definition in Section 2 of the Radiation Protection Act 1965.
Hill and High Country	means all land above 600 m altitude or greater than 20 ⁵⁹ degrees in slope.
Indoor intensive farming	includes any agricultural production which is carried out primarily within buildings, including but not limited to such activities as poultry farming (excluding low density free range poultry or the keeping of fewer than 12 birds), rabbit or fitch farming, pig farming or mushroom production. For the purpose of this Plan 'intensive farming' excludes horticulture. ⁶⁰
Industrial or trade premises	means – <ol style="list-style-type: none"> a) any premises used for any industrial or trade purposes; or b) any premises used for the storage, transfer, treatment, or disposal of waste materials or for other waste management purposes, or used for composting organic materials; or c) any other premises from which a contaminant is discharged in connection with any industrial or trade process – but does not include any production land
Industrial or trade process	includes every part of a process from the receipt of raw material to the dispatch or use in another process or disposal of any product or waste material, and any intervening storage of the raw material, partly processed matter, or product

⁵⁷ 169.24 NZTA⁵⁸ 127.4 Chorus and Telecom Consequential⁵⁹ 167.8 CRC⁶⁰ 222.30 Department of Corrections

<i>Infrastructure</i>	<p><i>in section 30 means –</i></p> <ul style="list-style-type: none"> <i>a) pipelines that distribute or transmit natural or manufactured gas, petroleum, biofuel, or geothermal energy:</i> <i>b) a network for the purpose of telecommunication as defined in section 5 of the Telecommunications Act 2001:</i> <i>c) a network for the purpose of radiocommunication as defined in section 2(1) of the Radiocommunications Act 1989:</i> <i>d) facilities for the generation of electricity, lines used or intended to be used to convey electricity, and support structures for lines used or intended to be used to convey electricity, excluding facilities, lines, and support structures if a person—</i> <ul style="list-style-type: none"> <i>i. uses them in connection with the generation of electricity for the person's use; and</i> <i>ii. does not use them to generate any electricity for supply to any other person:</i> <i>e) a water supply distribution system, including a system for irrigation:</i> <i>f) a drainage or sewerage system:</i> <i>g) structures for transport on land by cycleways, rail, roads, walkways, or any other means:</i> <i>h) facilities for the loading or unloading of cargo or passengers transported on land by any means:</i> <i>i) an airport as defined in section 2 of the Airport Authorities Act 1966:</i> <i>j) a navigation installation as defined in section 2 of the Civil Aviation Act 1990:</i> <i>k) facilities for the loading or unloading of cargo or passengers carried by sea, including a port related commercial undertaking as defined in section 2(1) of the Port Companies Act 1988:</i> <i>l) anything described as a network utility operation in regulations made for the purposes of the definition of network utility operator in section 166</i>
<i>Interference effects</i>	means those effects of a groundwater abstraction calculated in accordance with Schedule 12 of this Plan.
<i>Irrigation</i>	means the application of water to land for the purpose of assisting the production of vegetation or stock on that land, other than by naturally occurring rainfall, springs or rainfall run-off.
<i>Irrigation application efficiency</i>	means the volume of water stored in the plant root zone following irrigation, as a percentage of the total volume applied.
<i>Iwi authority</i>	<i>means the authority which represents an iwi and which is recognised by that iwi as having authority to do so</i>

Iwi Plan or ⁶¹ Iwi Management Plan	means a management plan recognised by an iwi authority.
Kaitiakitanga	means the exercise of guardianship by the tangata whenua of an area in accordance with tikanga Māori in relation to natural and physical resources; and includes the ethic of stewardship. ⁶²
Kerbside collection	means a regular service to collect waste from the road boundary of the property which is provided by the territorial authority and includes kerbside collection services that are undertaken by private contractors on behalf of the territorial authority. It excludes services provided by private contractors paid for directly by the property owner or occupier.
Ki uta ki tai	means (literally) 'from the mountains to the sea' and is a Ngāi Tahu concept to describe the overall approach to natural resources management by Ngāi Tahu and is a truly integrated approach. ⁶³
Lake	means a body of fresh water which is entirely or nearly surrounded by land
Land	a) includes land covered by water and the airspace above land; and b) in a national environmental standard dealing with a regional council function under section 30 or a regional rule, does not include the bed of a lake or river; and c) in a national environmental standard dealing with a territorial authority function under section 31 or a district rule, includes the surface of water in a lake or river
Land drainage water	means water and contaminants discharged from a surface or subsurface pipe or channel or canal system for the collection, transfer and discharge elsewhere of surface or subsurface water. It excludes stormwater which is separately defined.
Land use consent	a consent to do something that otherwise would contravene section 9 or section 13. ⁶⁴
Land-based methods	means not from an aircraft or boat.
Landfill	means a site lawfully ⁶⁵ used for the deposition of solid and/or hazardous waste onto or into land.
Limit	includes any environmental flow and allocation regime in <u>Sub-regional</u> ⁶⁶ Sections 6-15 of this Plan and groundwater allocations in <u>Sub-regional</u> ⁶⁷ Sections 6-15 of this Plan <u>and any water quality and nutrient limits in this Plan.</u> ⁶⁸

⁶¹ 169.25 NZTA⁶² 358.92 Ngā Rūnanga⁶³ 358.91 Ngā Rūnanga⁶⁴ 169.26 NZTA⁶⁵ 167.9 CRC⁶⁶ 167.10 CRC⁶⁷ 167.10 CRC⁶⁸ 167.10 CRC

<i>Local authority</i>	<i>means a regional council or territorial authority</i>
<i>Mātaitai</i>	<i>means food resources from the sea and mahinga mātaitai means the areas from which these resources are gathered</i>
Mainstem	means, in relation to rivers, that stem of the river which flows to the sea, and applies from the source of that stem to the sea, but excludes any tributary.
Maintenance	<i>means repairing and keeping a structure, land or vegetation in good and safe condition and includes upgrading and minor alterations as long as any upgrading or minor alteration does not increase the footprint, height, or external envelope of the structure⁶⁹</i>
Mana whenua	<i>means customary authority exercised by an iwi or hapū in an identified area</i>
Māori	means the native, indigenous, people of this country, the Takata Whenua.
Margin	means land immediately adjacent to the bed of a river, wetland, lake or estuary which is likely to be affected by a high water table, flooding, fluvial erosion, or sediment deposition, and often contains distinctive vegetation. The size of the margin will vary according to local site factors but may extend to the limits demarcated by natural river terraces and constructed stop banks.
Mauri	means essential life force or principle; a metaphysical quality inherent in all things, both animate and inanimate.⁷⁰
Mean Annual Daily Low Flow (MALF)	means the average, for a number of years, of the annual lowest daily flows. This is determined by selecting the lowest daily flow (average over 24 hours) for each year of record, summing those values and then dividing the total by the number of years of record.
Minimum flow	means the flow, when measured at the relevant water flow monitoring site, at which abstractions from a water body must cease.
Mining	<i>means to take, win, or extract, by whatever means, a mineral existing in its natural state in land, or a chemical substance from that mineral, for the purpose of obtaining the mineral or chemical substance; but does not include prospecting or exploration; and to mine has a corresponding meaning</i>

⁶⁹ 306.5 KiwiRail

⁷⁰ 358.90 Ngā Rūnanga

<i>Mouth</i>	<p><i>for the purpose of defining the landward boundary of the coastal marine area, means the mouth of the river either—</i></p> <ul style="list-style-type: none"> <i>a) as agreed and set between the Minister of Conservation, the regional council, and the appropriate territorial authority in the period between consultation on, and notification of, the proposed regional coastal plan; or</i> <i>b) as declared by the Environment Court under section 310 upon application made by the Minister of Conservation, the regional council, or the territorial authority prior to the plan becoming operative,—</i> <p><i>and once so agreed and set or declared shall not be changed in accordance with Schedule 1 or otherwise varied, altered, questioned, or reviewed in any way until the next review of the regional coastal plan, unless the Minister of Conservation, the regional council, and the appropriate territorial authority agree</i></p>
Municipal solid waste	<p>means solid waste collected by a territorial authority and disposed of at a landfill means any non-hazardous, solid waste from a combination of domestic, commercial and industrial sources. It includes putrescible waste, garden waste, uncontaminated biosolids and clinical and related waste (including contaminated waste sterilised to a standard acceptable to the Department of Health). All municipal solid waste shall have no free liquids.⁷¹</p>
<i>National environmental standard</i>	<i>means a standard prescribed by regulations made under section 43</i>
<i>National policy statement</i>	<i>means a statement issued under section 52</i>
<i>Natural and physical resources</i>	<i>includes land, water, air, soil, minerals, and energy, all forms of plants and animals (whether native to New Zealand or introduced), and all structures</i>
<i>Natural hazard</i>	<i>means any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment</i>
Natural lake	means a lake which is formed by natural geomorphic processes, whether modified by human activity or not, and excludes any artificially made lake or pond.
Natural state	means undeveloped state, shaped by natural processes rather than by human activities.
Natural state waterbodies	means rivers, lakes and natural wetlands within land administered for conservation purposes by the Department of Conservation.

⁷¹ 9.4 Envirowaste Services Ltd

Natural wetland	means a wetland which is formed by natural geomorphic processes, whether modified by human activity or not, and excludes any artificially made wetland.
Ngāi Tahu	(Kai Tahu, when written in dialect form) the tribal group holding manawhenua in Te Waipounamu, the area from Kahuraki Point on the West Coast and Te Parinui-o-Whiti (Vernon Bluffs) on the east, and all places south “until the land turns white”. “Ngāi Tahu” can refer to both the collective of Ngāi Tahu, or an individual rūnanga. ⁷²
Non-complying activity	<i>If an activity is described in this Act, regulations (including a national environmental standard), a plan, or a proposed plan as a non-complying activity, a resource consent is required for the activity and the consent authority may—</i> <i>a) decline the consent; or</i> <i>b) grant the consent, with or without conditions, but only if the consent authority is satisfied that the requirements of section 104D are met and the activity must comply with the requirements, conditions, and permissions, if any, specified in the Act, regulations, plan, or proposed plan.</i>
Non-point source ⁷³ discharge	means run-off or leachate from land onto or into land, a water body or the sea.
Nutrient discharge	means the modelled discharge of nutrients using Overseer TM .
Offal	means waste comprised of dead animal matter.
Offal pit	means a hole excavated in land for the purpose of disposing of offal, but does not include an on-site refuse disposal pit.
On-site refuse disposal pit	means a hole excavated in land for the purpose of disposing of household and farm waste.
On-site wastewater treatment system	means a system that receives domestic wastewater from a single site and treats and applies the wastewater to a land application system or a holding tank ⁷⁴ <u>on the site</u> ⁷⁵ . Such domestic wastewater includes that from facilities serving staff/employees/residents in institutional, commercial and industrial establishments. ⁷⁶
Organic matter	means all living and dead material derived from living organisms, or any compounds containing carbon as an essential component. Organic matter includes organic material from production land, industrial or trade premises, or industrial or trade process, such as dead vegetation, organic farm waste, organic freezing works waste and organic fish processing factory waste.

⁷² 358.93 Ngā Rūnanga⁷³ 169.28 NZTA⁷⁴ 148.5 Mainpower⁷⁵ 199.2 SCIRT⁷⁶ 128.10 Meadow Mushrooms Limited

Outdoor intensive farming	means: 1. any stock grazed on irrigated land in or adjoining the bed of a river or lake, in a wetland or adjacent to a wetland boundary; 2. cows, whether dry or milking and calves at hoof, in a dairy herd; 3. farmed pigs; or 4. livestock contained for break-feeding of winter feed crops in or adjacent to the bed of a river or lake, in a wetland or adjacent to a wetland boundary.
Outstanding fresh water bodies	<u>means those</u> ⁷⁷ includes hāpua, natural wetlands, natural state waterbodies and high naturalness waterbodies, <u>which are</u> listed in Sections 6-15 of this Plan and waterbodies subject to Water Conservation Orders.
Outstanding natural features and landscapes	means natural features and landscapes listed in Appendix 4 to the Canterbury RPS 2012 and any additional outstanding natural features and landscapes listed in the relevant District Plan. ⁷⁸
Over-allocated	means, in the case of allocation of surface water, above the relevant limit specified in the environmental flow and allocation regime in Sections 6-15 of this Plan and, in the case of groundwater, above the relevant limit for the groundwater allocation zone in Sections 6-15 of this Plan.
Permitted activity	<i>If an activity is described in this Act, regulations (including any national environmental standard), a plan, or a proposed plan as a permitted activity, a resource consent is not required for the activity if it complies with the requirements, conditions, and permissions, if any, specified in the Act, regulations, plan, or proposed plan</i>
Person	<i>includes the Crown, a corporation sole, and also a body of persons, whether corporate or unincorporated</i>
Petroleum	means 1. any naturally occurring hydrocarbon (other than coal) whether in a gaseous, liquid or solid state; 2. any naturally occurring mixture of hydrocarbons (other than coal) whether in a gaseous, liquid or solid state; or 3. any naturally occurring mixture of one or more hydrocarbons (other than coal) and one or more of the following: hydrogen sulphide, nitrogen, helium or carbon dioxide.
Petroleum product	means a chemical that is produced as a result of refining or physical treatment of petroleum, or as a result of a chemical process in which petroleum is a reagent. ⁷⁹
Pit toilet	means a toilet constructed over a hole dug in the ground surface, which human excrement is disposed directly into, without the addition of water or other waste products. It is commonly known as a “long-drop”.

⁷⁷ 169.29 NZTA

⁷⁸ 161.29 Mackenzie DC

⁷⁹ 169.30 NZTA

<i>Plan</i>	<i>means a regional plan or a district plan</i>
Plantation forest	includes all areas of trees grown for harvest or as a carbon sink forest with a density of 150 or more stems per hectare <u>means a forest of selected species of trees that are specifically planted and managed for a carbon sink or planted and managed specifically for harvesting and production of timber or other wood based products, and includes under-story that has established beneath the canopy and areas that are demonstrated to be failed plantings from the previous rotations.</u> ⁸⁰
Point source discharge	means a discharge from a specific and identifiable outlet onto or into land, a water body or the sea.
<i>Policy statement</i>	means a regional policy statement. ⁸¹
<u>Portable container</u>	<u>means one or more containers of petrol, kerosene or diesel used for refuelling and the container(s) is fixed to a vehicle, towed by a vehicle or transported by helicopter, but does not comprise part of the inbuilt fuel system required to power a vehicle or machine.</u> ⁸²
Potentially contaminated	means that part of a site where an activity or industry described in the list in Schedule 3 of this Plan has been or is being undertaken on it or it is more likely than not that an activity or industry described in the list in Schedule 3 of this Plan is being or has been undertaken on it, when assessed in accordance with the methodology in the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health, but excludes any site where a detailed site investigation has been completed and reported and which demonstrates that any contaminants in or on the site are at, or below, background concentrations.
Principal Water Supplier	<u>a publicly or privately owned supplier that is the sole abstractor of water which is subsequently conveyed and distributed to component irrigation, community and/or stockwater schemes, hydro-electricity generators and/or other users of the water.</u> ⁸³
<i>Production land</i>	<i>a) means any land and auxiliary buildings used for the production (but not processing) of primary products (including agricultural, pastoral, horticultural, and forestry products): b) does not include land or auxiliary buildings used or associated with prospecting, exploration, or mining for minerals</i>
Profile available water	is the difference between field capacity and wilting point and represents the total water available to a depth of 1 m expressed as millimetres of water.

⁸⁰ 273.20 Rayonier

⁸¹ 169.32

⁸² Consequential amendment

⁸³ 197.31 RDRML

<i>Prohibited activity</i>	<i>If an activity is described in this Act, regulations (including a national environmental standard), or a plan as a prohibited activity,— a) no application for a resource consent may be made for the activity; and b) the consent authority must not grant a consent for it</i>
Property	<u>means any contiguous area of land held in one, or more than one ownership, that is utilised as a single operating unit, and may include one or more certificates of title.</u> ⁸⁴
Proposed policy statement	means a proposed regional policy statement that has been notified under clause 5 of Schedule 1 but has not become operative in terms of clause 20 of Schedule 1. ⁸⁵
Pumping test (also called aquifer test)	means a test made by pumping a well for a period of time and observing the change in water level or pressure in the aquifer. A pumping test may be used to determine the capacity of the well, the hydraulic characteristic of the aquifer and any interference effects.
Quarrying	means extracting minerals, excluding petroleum from land, and includes processes for the size reduction or screening or storage or washing of minerals. ⁸⁶
Reasonable mixing zone	means <u>the mixing that occurs in a mixing</u> ⁸⁷ zone as defined in Schedule 5 of this Plan.
Reasonable use	when applied to the taking, diverting or using of water for irrigation means the technically efficient use of water in the particular circumstances of the activity, calculated in accordance with Schedule 10 of this Plan.
Reasonable use test	when applied to the taking, diverting or using of water for irrigation, means a test of the technical efficiency of water use in the particular circumstances of the activity, including consideration of the water requirements for the intended land use activity; whether there are already existing resource consents for the use of water for the same area of land (either partially or totally); on-site physical factors such as soil water-holding capacity, and climatic factors such as rainfall and evaporation. It is calculated in accordance with Schedule 10 of this Plan.
Recovery activities	means, in the context of responding to a natural disaster event for which a regional or national state of emergency was declared, extending, repairing or improving the integrity of any land, water body, infrastructure, but excludes any discharges associated with the operation of infrastructure.
Refuse collection	means a community or territorial authority kerbside collection system. ⁸⁸
Region	<i>in relation to a regional council, means the region of the regional council as determined in accordance with the Local Government Act 2002</i>

⁸⁴ 318.75 Deer Ind & Deer Farmers

⁸⁵ 169.33 NZTA

⁸⁶ 286.3 Isaac Conservation Trust

⁸⁷ 169.35 NZTA, 273.21 Rayonier NZ

⁸⁸ 94.6 Waimakariri DC

<i>Regional coastal plan</i>	<p><i>a) means an operative plan approved by the Minister of Conservation under Schedule 1; and</i></p> <p><i>b) includes all operative changes to the plan (whether arising from a review or otherwise)</i></p>
<i>Regional council</i>	<p><i>a) has the same meaning as in section 5 of the Local Government Act 2002; and</i></p> <p><i>b) includes a unitary authority within the meaning of that Act</i></p>
<i>Regional plan</i>	<p><i>a) means an operative plan approved by a regional council under Schedule 1 (including all operative changes to the plan (whether arising from a review or otherwise)); and</i></p> <p><i>b) includes a regional coastal plan</i></p>
<i>Regional policy statement</i>	<p><i>a) means an operative regional policy statement approved by a regional council under Schedule 1; and</i></p> <p><i>b) includes all operative changes to the policy statement (whether arising from a review or otherwise)</i></p>
<i>Regional rule</i>	<i>means a rule made as part of a regional plan or proposed regional plan in accordance with section 68</i>
<i>Reliability of supply</i>	means, in relation to irrigation, the ability of the water supply to meet demand from one or more abstractors, when operating within the flow and allocation regime or the allocation limits.
<i>Renewable energy</i>	<i>means energy produced from solar, wind, hydro, geothermal, biomass, tidal, wave, and ocean current sources</i>
<i>Re-refined oil</i>	means used oil that has been processed to remove impurities such as particulate, metals, solvents, volatiles, sulphur and chlorine.
<i>Residential or commercial purposes</i>	means land that a relevant district plan or proposed district plan classifies as primarily for residential or commercial activities.
<i>Residential, commercial or industrial purposes</i>	means land that a relevant district plan or proposed district plan classifies as primarily for residential, commercial or industrial activities.
<i>Restricted discretionary activity</i>	<p><i>If an activity is described in this Act, regulations (including any national environmental standard), a plan, or a proposed plan as a restricted discretionary activity, a resource consent is required for the activity and—</i></p> <p><i>a) the consent authority's power to decline a consent, or to grant a consent and to impose conditions on the consent, is restricted to the matters over which discretion is restricted (whether in its plan or proposed plan, a national environmental standard, or otherwise); and</i></p> <p><i>b) if granted, the activity must comply with the requirements, conditions, and permissions, if any, specified in the Act, regulations, plan, or proposed plan</i></p>

Reticulated stormwater system	means a network of drains, channels or pipework operated by a community or network utility operator ⁸⁹ and that serves more than one property.
Riparian margin	means the land within the following distances of the bed of any lake, river or wetland boundary: 1. In Hill and High Country land and land <u>shown as High Soil Erosion Risk zoned LH2</u> ⁹⁰ on the Planning Maps – within <u>10 m</u> 20 m ⁹¹ 2. In <u>all other land not shown as High Soil Erosion Risk on the Planning Maps or defined as Hill and High Country land zoned LH1 on the Planning Maps</u> ⁹² – within <u>5 m</u> 10 m ⁹³ .
River	<i>means a continually or intermittently flowing body of fresh water; and includes a stream and modified watercourse; but does not include any artificial watercourse (including an irrigation canal, water supply race, canal for the supply of water for electricity power generation, and farm drainage canal)</i>
Rule	<i>means a district rule or a regional rule</i>
Seasonal High Water Table	<u>means, at the time the activity is established, the highest elevation that the water table reaches during June-August inclusive of any year.</u> ⁹⁴
Settlement	means <u>land that a relevant district plan or proposed district plan classifies as primarily for residential, commercial, industrial, institutional or recreational activities.</u> a permanent or temporary place where people live ⁹⁵
Seven Day Mean Annual Low Flow (7DMALF)	is determined by adding the lowest seven day low flow for every year of record and dividing by the number of years of record (In any year the seven-day low flow is the lowest average flow sustained over seven consecutive days).
Significant indigenous biodiversity	means areas or habitats that meet one or more of the criteria in Appendix <u>43</u> ⁹⁶ to the Canterbury RPS 2013 ⁹⁷ .

⁸⁹ 169.14 NZTA

⁹⁰ 167.99 - CRC

⁹¹ 125.45 - Kaikoura DC

⁹² 167.62 - CRC

⁹³ 125.45 - Kaikoura DC

⁹⁴ 167.12 CRC

⁹⁵ 169.38 NZTA

⁹⁶ 161.30 Mackenzie DC

⁹⁷ Minor correction

Site	<p>1. the smaller of⁹⁸ an area of land or volume of space with defined boundaries, whether legally or otherwise described, comprised in a single allotment or any other legally defined parcel of land:</p> <p>(a) held in a single certificate of title; or</p> <p>(b) for which a separate certificate of title could be issued without further consent; and</p> <p>2. in the case of land subdivided under the cross lease or company lease systems, site shall mean an area of land exclusively restricted to the control of users of that land; and</p> <p>3. in the case of land subdivided under the Unit Titles Act 2010, site shall mean an area of land or volume of space containing a principal unit or a proposed unit in a unit plan, together with its accessory units.</p> <p>“Site” shall also include the access to the site.</p>
Soil	means the loose material on the earth’s surface in which terrestrial plants grow and includes sand, silts, clays and any intermixed organic material.
Soil conservation	<i>means avoiding, remedying, or mitigating soil erosion and maintaining the physical, chemical, and biological qualities of soil</i>
Soil moisture deficit	is the amount of water required to restore the soil to its field capacity.
Solid animal waste	means solid waste of animal origin, including manure, but does not include dead animals or animal parts.
Solid waste	<i>means primarily solid contaminants for which disposal by discharge into the environment is intended, or which disposal by discharge into the environment would be necessary if other processes such as re-use, recycling⁹⁹ or recovery cannot be applied.</i>
Stock holding area	means an area of land in which the construction of the holding area or stocking density precludes maintenance of pasture or vegetative groundcover, and is used for confining livestock for more than 30 days in any 12 month period or for more than 10 consecutive days at any time. For the avoidance of doubt, this definition includes; milking platforms, feedpads, wintering pads, and farm raceways used for stock holding purposes during milking.
Stock reconciliation	means a stock monitoring process involving a review of cumulated variances between the quantities of sales, use, receipts and stock on-hand, based on an established inventory control system and may include a Product Loss Investigation Procedure (PLIP).
Stormwater	means runoff that has been channelled, diverted, intensified or accelerated by human modification of the land surface or runoff from the external surface of any structure as a result of precipitation and includes entrained contaminants and sediment including that generated during construction or earthworks.

⁹⁸ 188.98 Synlait Farms Limited

⁹⁹ 167.11 CRC

Stream depleting groundwater	means groundwater abstraction that has a direct, high, medium or low stream depletion effect, calculated in accordance with Schedule 9 of this Plan.
Stream depletion effect	means the impact of groundwater abstraction on surface water flow, calculated in accordance with Schedule 9 of this Plan.
Structure	<i>means any building, equipment, device, or other facility made by people and which is fixed to land; and includes any raft</i>
Surface water or surface water body	means water above the ground surface and within a lake, river, artificial watercourse or wetland, but does not include water in the sea, snow or rain or water vapour in the air. When a distance to a surface water body is being considered, it means the distance to the bed of a lake, river, artificial watercourse or to the boundary of a wetland (see wetland boundary definition).
Surrendered	means the partial or full surrendering of a resource consent in terms of section 138 of the RMA.
Swale	means a shallow depression on the land surface, that is covered in grass or other vegetation, that is natural or man-made and that serves to collect and drain overland stormwater runoff.
Tangata whenua	<i>in relation to a particular area, means the iwi, or hapū, that holds mana whenua over that area</i>
Te Rūnanga o Ngāi Tahu	means the body corporate of Ngāi Tahu Whānui as established under Section 6 of the Te Rūnanga o Ngāi Tahu Act 1996.
Telemetered	means the transfer of data to the CRC or its agent via electronic means in real-time or near real-time or regularly.
Territorial authority	<i>means a city council or a district council named in Part 2 of Schedule 2 of the Local Government Act 2002.</i> ¹⁰⁰
Trench	means a long narrow excavation for the purpose of installing or replacing <u>utility pipelines</u> , ¹⁰¹ drainage, irrigation, service connections, electricity and telecommunication cables or on-site utilities such as lighting systems.
Unconfined aquifer	means an aquifer that lacks an overlying layer of fine sediment, and is not under pressure.
Unit	<i>in relation to any land, means a part of the land consisting of a space of any shape situated below, on, or above the surface of the land, or partly in one such situation and partly in another or others, all the dimensions of which are limited, and that is designed for separate ownership; and includes a future development unit (also defined in section 5(1) of the Unit Titles Act 2010)</i>
Up-plains	means those areas westward of State Highway 1 in the Ashburton River, Ashburton-Lyndhurst, Chertsey, Levels Plain, Mayfield-Hinds, Orari-Opihi, Rakaia-Selwyn, Rangitata-Orton, Selwyn-Waimakariri and Valetta groundwater zones.

¹⁰⁰ 169.41 NZTA¹⁰¹ 146.9 Ashburton DC

Used oil or waste oil	means a petroleum or synthetically derived oil where the physical or chemical properties of the oil have changed (due to use or contamination) such that the oil is not suitable for its original purpose. Used oil or waste oil does not include re-refined oil.
Vegetation	includes all plants and seeds, fruit or parts thereof, live or dead, standing, fallen, windblown, cut, broken, pulverised, sawn, or harvested, natural or disturbed.
Vegetation clearance	means removal of vegetation by physical, mechanical, chemical or other means except burning by fire ¹⁰² but excludes: (a) <u>cultivation for the establishment of crops or pasture;</u> (b) <u>clearance for the establishment or maintenance of utilities or structures;</u> (c) <u>removal of a species listed in the Biosecurity NZ Register of Unwanted Organisms or the Canterbury Pest Management Strategy;</u> (d) <u>clearance for the purposes of maintaining existing fence lines, vehicle tracks, firebreaks, drains, ponds, dams or crossings; or</u> (e) <u>domestic gardening and the maintenance of amenity planting.</u> ¹⁰³
Vertebrate toxic agent	means a trade name product used to kill, control or limit the viability of vertebrate pests (such as rabbits, possums). Vertebrate toxic agents include products that have a negative effect on reproduction but do not include attractant or repellent substances that are not toxic.
Waste or other matter	means materials and substances of any kind, form, or description ¹⁰⁴
Wastewater	means liquid waste (and liquids containing waste solids) from domestic, industrial or commercial premises, including, but not limited to, toilet wastes, grey water (household wastewater from kitchens, bathrooms and laundries), sullage and trade wastes and excludes stormwater.
Water	<i>a) means water in all its physical forms whether flowing or not and whether over or under the ground: b) includes fresh water, coastal water, and geothermal water: c) does not include water in any form while in any pipe, tank, or cistern</i>
Water body	<i>means fresh water or geothermal water in a river, lake, stream, pond, wetland, or aquifer, or any part thereof, that is not located within the coastal marine area</i>

¹⁰² 347.30 Fish & Game

¹⁰³ 94.10 Waimakariri DC

¹⁰⁴ 99.33 The Fuel Companies

<i>Water conservation order</i>	<i>means an order made under section 214 for any of the purposes set out in section 199 and that imposes restrictions or prohibitions on the exercise of regional councils' powers under paragraphs (e) and (f) of section 30(1) (as they relate to water) including, in particular, restrictions or prohibitions relating to—</i> <i>a) the quantity, quality, rate of flow, or level of the water body; and</i> <i>b) the maximum and minimum levels or flow or range of levels or flows, or the rate of change of levels or flows to be sought or permitted for the water body; and</i> <i>c) the maximum allocation for abstraction or maximum contaminant loading consistent with the purposes of the order; and</i> <i>d) the ranges of temperature and pressure in a water body.</i>
<i>Water permit</i>	<i>a consent to do something (other than in a coastal marine area) that otherwise would contravene section 14</i>
Water race or water supply race	means a type of artificial watercourse used for the managed conveyance of water often, but not exclusively, for stockwater or irrigation purposes and excludes any drain.
Water supply strategy	means a written document that includes strategies to reduce water demand during times when minimum flow or water level restrictions are in effect. It may be a part of territorial authority bylaw or asset management plan.
Water users group	means a group of users with existing authorisations to take water, voluntarily grouped together to collectively manage the water resource allocated to them, primarily during times of restriction.
Weir	means a dam erected across a river to raise the level of the water.
<i>Wetland</i>	<i>includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions</i>
Wetland boundary	means the point in the transition from wetland to dryland where wetland plant species occur at more than four times their ungrazed height apart. Wetland edge <u>and natural wetland boundary have</u> ¹⁰⁵ has a similar meaning.
Wetted bed	means the area of the bed of a lake or river that is at or below the water level at a particular point in time.

¹⁰⁵ 257.53 Silver Fern Farms (consequential change)

Abbreviations

7DMALF	Seven-day mean annual low flow
AEP	Annual Exceedance Probability
BPO	Best practicable option
CERA	Christchurch Earthquake Recovery Authority
CMA	Coastal marine area
CRC	Canterbury Regional Council
CWMS	Canterbury Water Management Strategy
ECan Act	Environment Canterbury (Temporary Commissioners and Improved Water Management) Act 2010
Freshwater NPS	National Policy Statement for Freshwater Management 2011
g/m ³	Grams per cubic metre
HSNO	Hazardous Substances and New Organisms Act 1996
L/s	Litres per second
LGA	Local Government Act 2002
LWRP	Land and Water Regional Plan
m	Metres
m ²	Square metres
m ³	Cubic metres
m ³ /day	Cubic metres per day
MALF	Mean annual low flow
mg/m ³	Milligrams per cubic metre
mm	Millimetres
NPS	National Policy Statement
RCEP	Regional Coastal Environment Plan
RMA	Resource Management Act 1991
RPS 2012	Canterbury Regional Policy Statement 2012
ug/m ³	Micrograms per cubic metre

Section 3 - Objectives

The Objectives of this Plan must be read in their entirety and considered together. No single Objective has more importance than any other, but in any particular case some Objectives may be more relevant than others.¹⁰⁶

- 3.1 Water is recognised as essential to all life and is respected for its intrinsic values.¹⁰⁷
- 3.2 Land and water are managed as integrated natural resources, recognising the connectivity between surface water and groundwater, and between fresh water, land and the coast.¹⁰⁸
- 3.3 Water is recognised as an enabler of the economic and social wellbeing of the region.¹⁰⁹
- 3.4 Water is available for sustainable abstraction or use to support social and economic activities and social and economic benefits are maximised by the efficient storage, distribution and use of the water made available within the allocation limits or management regimes which are set in this Plan.¹¹⁰
- 3.5 Land uses continue to develop and change in response to socio-economic and community demand while remaining consistent with the CWMS targets.¹¹¹
- 3.6 Groundwater resources remain a sustainable source of high quality water which is available for abstraction while supporting base flows or levels in surface water bodies, springs and wetlands and avoiding salt-water intrusion.¹¹²
- 3.7 A regional network of water storage and distribution facilities provides for sustainable, efficient and multiple use of water, including irrigation and hydro-electricity generation.¹¹³
- 3.8 Fresh water is managed prudently as a shared resource with many values, and any abstraction is necessary and reasonable for its intended use and any water that is abstracted is used efficiently.¹¹⁴
- 3.9 Infrastructure is resilient and positively contributes to economic, cultural and social wellbeing through its efficient and effective operation, on-going maintenance, repair, development and upgrading.¹¹⁵
- 3.10 The quality and quantity of water in fresh water bodies and their catchments is managed to safeguard the life-supporting capacity of ecosystems and ecosystem processes, including ensuring sufficient flow and quality of water to support the habitat and feeding, breeding, migratory and other behavioural requirements of indigenous species, nesting birds and, where appropriate, trout and salmon.¹¹⁶

¹⁰⁶ 270.8 Fonterra

¹⁰⁷ Original Objective 3.1

¹⁰⁸ 358.94 Ngā Rūnanga

¹⁰⁹ 320.12 FedFarm (Combined Canty)

¹¹⁰ Original objective 3.11, 169.52 NZTA, 358.100 Ngā Runanga

¹¹¹ Original objective 3.21

¹¹² 358.99, 358.95 Ngā Runanga

¹¹³ 196.13 Genesis, Original objective 3.9

¹¹⁴ 358.103 Ngā Runanga

¹¹⁵ Original objective 3.16, 209.9 NT Property

¹¹⁶ 358.95 Ngā Runanga

- 3.11 Freshwater bodies and their catchments are maintained in a healthy state, including through hydrological and geomorphic processes such as flushing and opening hāpua and river mouths, flushing algal and weed growth, and transporting sediment.¹¹⁷
- 3.12 Outstanding fresh water bodies and hāpua and their margins are maintained in their existing state or restored where degraded.¹¹⁸
- 3.13 The significant indigenous biodiversity values of rivers, natural wetlands and hāpua are protected and wetlands that contribute to cultural and community values, biodiversity, water quality, mahinga kai, water cleansing and flood retention properties are maintained.¹¹⁹
- 3.14 Natural character values of freshwater bodies, including braided rivers and their margins, wetlands, hāpua and coastal lagoons, are protected.¹²⁰
- 3.15 Community outcomes for water quality and quantity are met through setting, and managing within, limits.¹²¹
- 3.16 All activities operate at good environmental practice or better to optimise efficient resource use and protect the region's fresh water resources from quality and quantity degradation.¹²²
- 3.17 The relationship of Ngāi Tahu and their culture and traditions with the water and land of Canterbury is recognised and enabled.¹²³
- 3.18 Those parts of lakes and rivers that are valued by the community for recreation are suitable for contact recreation.¹²⁴
- 3.19 Soils are healthy and human-induced erosion or contamination is minimised.¹²⁵
- 3.20 The diversion of water, erection, placement or failure of structures, the removal of gravel or other alteration of the bed of a lake or river or the removal of vegetation or natural defences against water does not exacerbate the risk of flooding or erosion of land or damage to structures.¹²⁶
- 3.21 The effectiveness of both man-made natural hazard protection infrastructure, and wetlands and hāpua as natural water retention areas is maintained to reduce the risk of and effects from natural hazards, including those arising from seismic activity and climate change.¹²⁷

¹¹⁷ 358.95 Ngā Runanga

¹¹⁸ 358.95 Ngā Runanga

¹¹⁹ Original objective 3.6, 265.15 Ravensdown

¹²⁰ 358.95 Ngā Runanga

¹²¹ Original objective 3.22, 364.19 RFBPS (Canty West Coast)

¹²² Original objective 3.23, 347.60 Fish & Game

¹²³ Original objective 3.3, 358.95 Ngā Runanga

¹²⁴ Original objective 3.13

¹²⁵ Original objective 3.17, 358.104 Ngā Runanga

¹²⁶ Original objective 3.18

¹²⁷ Original objective 3.19, 358.106 Ngā Runanga

3.22 Gravel in riverbeds is extracted to maintain floodway capacity and to provide resources for building and construction, while maintaining the natural character of braided rivers and not adversely affecting water quality, ecosystems or their habitats, access to or the quality of mahinga kai or causing or exacerbating erosion.¹²⁸

~~3.1 Water is recognised as essential to all life and is respected for its intrinsic values.~~

~~3.2 Water and land are recognised as an integrated resource embracing the philosophy and practice of ki uta ki tai thus recognising the connections between land, groundwater, surface water and coastal waters.~~

~~3.3 The relationship of Ngāi Tahu and their culture and traditions with the water and land of Canterbury is protected.~~

~~3.4 In keeping with the philosophy and practice of ki uta ki tai the interconnectivity of land, water and the coast is reflected in its management.~~

~~3.5 Outstanding fresh water bodies and hāpua and their margins are maintained in their existing state or restored where degraded.~~

~~3.6 The significant indigenous biodiversity values of natural wetlands and hāpua are protected and wetlands in Canterbury that contribute to cultural and community values, biodiversity, water quality, mahinga kai or ecosystem services are enhanced.~~

~~3.7 The mauri of lakes, rivers, hāpua and natural wetlands is maintained or restored and they are suitable for use by Ngāi Tahu and the community.~~

~~3.8 The health of ecosystems is maintained or enhanced in lakes, rivers, hāpua and wetlands.~~

~~3.9 The existing natural character values of alpine rivers are protected.~~

~~3.10 The significant indigenous biodiversity values, mahinga kai values, and natural processes of rivers are protected.~~

~~3.11 Water is available for sustainable abstraction or use to support a variety of economic and social activities and maximum social and economic benefits are obtained from the efficient storage, distribution and use of the water which is available for abstraction.~~

~~3.12 Groundwater continues to provide a sustainable source of high quality water for flows and ecosystem health in surface waterbodies and for abstraction.~~

~~3.13 Those parts of lakes and rivers that are valued by the community for recreation are suitable for contact recreation.~~

~~3.14 High quality fresh water is available to meet actual and reasonably foreseeable needs for community drinking water supplies.~~

¹²⁸ 358.107 Ngā Runanga

- ~~3.15 A regional network of water storage and distribution facilities provides for sustainable, wise, efficient and multiple use of water.~~
- ~~3.16 Infrastructure of national or regional significance is resilient and positively contributes to economic, cultural and social wellbeing through its efficient and effective operation, ongoing maintenance, repair, development and upgrading.~~
- ~~3.17 The mauri and the productive quality and quantity of soil are not degraded.~~
- ~~3.18 The risk of flooding or erosion of land or damage to structures is not exacerbated by the diversion of water, erection, placement or failure of structures, the removal of gravel or other alteration of the bed of a lake or river, removal of vegetation, or the re-contouring of adjacent land.~~
- ~~3.19 The risk and effects of natural hazards, including those arising from seismic activity and climate change, are reduced through protecting the effectiveness of natural hazard protection infrastructure, wetlands and hāpua.~~
- ~~3.20 Extraction of gravel from riverbeds maintains flood carrying capacity, protects infrastructure and provides a resource to enable development.~~
- ~~3.21 Land uses continue to develop and change in response to socio-economic and community demand while remaining consistent with the CWMS targets.~~
- ~~3.22 Community outcomes for water quality and quantity are met through managing limits.~~
- ~~3.23 All activities operate at “good practice” or better to protect the region’s fresh water resources from quality and quantity degradation.~~

Section 4 - Policies

The Policies of this Plan implement the Objectives in Section 3 and must be read in their entirety and considered together

Strategic Policies

- 4.1 Lakes, rivers, wetlands and aquifers will meet the fresh water outcomes set in Sections 6-15 within the specified timeframes.¹²⁹ If outcomes have not been established for a catchment, then each type of lake, river or aquifer will meet the outcomes set out in Table 1 by 2023.¹³⁰
- 4.2 The management of lakes, rivers, wetlands and aquifers will take account of the cumulative effects of land uses, discharges and abstractions in order to meet the fresh water outcomes in accordance with Policy 4.1.
- 4.3 The cultural values of each catchment shall be identified and provided for in the sub-regional sections of the plan. ~~The discharge of contaminants to water or the damming, diversion or abstraction of any water or disturbance to the bed of a fresh water body shall not diminish any values of cultural significance to Ngāi Tahu.~~
- ~~Note: See Statutory Acknowledgements and other relevant information in Schedules 18 to 23 of this Plan, the Ngāi Tahu Freshwater Policy and Iwi Management Plans.~~¹³¹
- 4.4 Water is managed through the setting of limits to maintain the life-supporting capacity of ecosystems, support customary uses, and provide for community supplies¹³² and stock ~~drinking-water supplies~~¹³³, as a first priority and to meet the needs of people and communities for water for irrigation, hydro-electricity generation and other economic activities and to maintain river flows and lake levels needed for recreational activities, as a second priority.
- 4.5 In high naturalness waterbodies listed in Sections 6-15, the damming, diverting or taking of water is limited to that for individual or community stock or drinking water and water for the operation and maintenance of existing¹³⁴ infrastructure.
- 4.6 Where a water quality or quantity limit is set in Sections 6-15, resource consents, will generally not be granted if the granting would cause the limit to be breached or further over-allocation to occur. New consents replacing expiring consents may be granted, but will likely be subject to additional restrictions,¹³⁵
- 4.7 Where over-allocation of water for abstraction from surface water catchments and groundwater zones or nutrient discharges has been determined, a regime will be

¹²⁹ 250.29 TrustPower

¹³⁰ 250.29 TrustPower

¹³¹ 358.212 Ngā Rūnanga

¹³² 161.4 Mackenzie DC

¹³³ 146.17 Ashburton DC

¹³⁴ 358.114 Ngā Rūnanga

¹³⁵ 187.17 Synlait Milk

established in Sections 6-15 that provides methods and a timeframe to eliminate the over-allocation.

- 4.8 The harvest and storage of water for irrigation or hydro-electricity generation schemes contribute to or do not frustrate the attainment of the regional concept for water harvest, storage and distribution set out in Schedule 16, ~~or~~ the priority outcomes expressed in the relevant ZIP or a water quantity limit set in sections 6-15.¹³⁶

¹³⁶ 200.43 EDS

Table 1a Outcomes for Canterbury Rivers

Management unit	Sub-unit	Ecological health indicators			Macrophyte indicators		Periphyton indicators	Siltation indicator		Microbiological indicator		
		[min score]		[min saturation] (%)	[max] (°C)	Macrophyte indicators		Chlorophyll a [max biomass] (mg/m ²)	Filamentous algae cover of bed] (%)		Fine sediment <2 mm diameter [max cover of bed] (%)	
		QMCI*	Dissolved oxygen			Emergent macrophytes [max cover of bed] (%)						Total macrophytes [max cover of bed] (%)
Natural state		Rivers are maintained in a natural state										
Alpine - upland		5 - 6		20	No value set	No value set	50	10	10	Good		
Alpine - lower							120	20			15	Good to Fair
Hill-fed - upland							50	10				
Hill-fed - lower	urban						200	30				
Lake-fed		6	90		20	No value set	200	30	10	Good		
Banks Peninsula		4 - 5	6				120	20	20	No value set		
Spring-fed - upland		6					50	10	Good			
Spring-fed - lower basins		5					200	30	Fair			
Spring-fed - plains	urban	4.5 - 5	70	30	50	200	30	20	No value set			
		3.5		30	60	200	30	30	No value set			
All river management units		Toxin producing cyanobacteria shall not render the river unsuitable for recreation or animal drinking water.										
		Fish shall not be rendered unsuitable for human consumption by contaminants in a river.										
		The natural colour of the water in a river shall not be altered.										
		Natural frequency of hāpua, coastal lake, lagoon and river openings is not altered.										
		Passage for migratory fish species is maintained unless restrictions are required to protect populations of native fish.										
		Natural continuity of river flow is maintained from source to sea, without reaches being induced to run dry.										
		Variability of flow, including floods and freshes, avoids “flat-lining”, enables fish passage and mobilises bed material.										

*Key:

QMCI = quantitative macroinvertebrate community index

SFRG = Suitability for Recreation Grade from Microbiological Water Quality Guidelines for Marine and Freshwater Recreational Areas 2003

Table 1b Outcomes for Canterbury lakes

Management unit	Ecological health indicators			Lake SPI* [min grade]	Eutrophication indicator	Visual quality indicator	Microbiologic al indicator
	Dissolved Oxygen [min] (%)		Temp [max] (°C)				
	Hypo-limnion	Epilimnion					
Natural state	Lakes are maintained in a natural state						
Large high country lakes				Excellent	2	The natural colour of the lake is not altered by more than five Munsell Units	Good
	Small to medium sized high country lakes	70	90	High	Māori Lakes and Lakes Emily, Emma and Georgina 4		Good
All other small to medium sized high country lakes 3							
Coastal lakes				70	90		Moderate
	High	All other coastal lakes 6					
		3				Good	
Artificial lakes - on-river					3		Suitable for the purpose of the lake
Artificial lakes – others	20	Suitable for the purpose of the lake			4		
All lake management units	Toxin producing cyanobacteria shall not render the lake unsuitable for recreation or animal drinking water						
	Fish shall not be rendered unsuitable for human consumption by contaminants in a lake						

*Key:

Lake SPI = Lake Submerged Plant Indicators from Clayton J, Edwards T, (2002) LakesPI: a method for monitoring ecological condition in New Zealand lakes (Technical report version 1 Report by NIWA)

TLI = Trophic Level Index from: Protocol for Monitoring Trophic Levels of New Zealand Lakes and Reservoirs (Report by Lakes Consulting, March 2000)

SFRG = Suitability for Recreation Grade from: Microbiological Water Quality Guidelines for Marine and Freshwater Recreational Areas, Ministry for the Environment, June 2003

Table 1c Outcomes for Canterbury aquifers

Management unit	Subunit	Appearance & Palatability	Health indicators				Groundwater pressure		Groundwater levels
			Guideline value for any aesthetic determinand [DWSNZ*]	Nitrate-nitrogen Concentration (mg/L)		Escherichia coli [median concentration of organisms per 100ml of water]	All other inorganic or organic determinands of health significance [DWSNZ*] (% Max Acceptable Value)	Salt-water intrusion	
				Max	Average				
Coastal Confined Gravel Aquifer System			Water quality in each aquifer is maintained at least in the state recorded or reasonably deduced in the three years prior to 1 November 2010				The upwards hydraulic pressure gradient is maintained in all aquifers	There is no landward movement of the salt – fresh water interface and saltwater contamination of fresh water aquifers is avoided	Long-term average groundwater water levels, and the flow and levels in surface bodies is maintained
Unconfined gravel aquifers	Shallow groundwater predominantly recharged by soil drainage	Within the Guideline value	< 11.3	≤ 5.6	< 1	≤ 50% MAV			
	Deep groundwater predominantly recharged by rivers	Water quality is maintained at least in the state recorded or reasonably deduced in the three years prior to 1 November 2010							

*Key
DWSNZ = Drinking Water Standards for New Zealand 2005

Activity and Resource Policies

Discharge of contaminants to land or to water

- 4.9 There are no direct discharges to surface waterbodies or groundwater of:
- (a) untreated sewage, wastewater or bio-solids;
 - (b) solid or hazardous waste or solid animal waste;
 - (c) animal effluent from an effluent storage facility or a stock holding area;
 - (d) organic waste or leachate from storage of organic material; ~~and~~
 - (e) untreated industrial or trade waste; and
 - (f) hazardous substances¹³⁷
- 4.10 For other discharges of contaminants to surface waterbodies or groundwater, the effects of any discharge are minimised by the use of measures that:
- (a) first, avoids the production of the contaminant;
 - (b) secondly, reuses, recovers or recycles the contaminant;
 - (c) thirdly, ~~reduce~~ minimise¹³⁸ the volume or amount of the discharge; or
 - (d) finally, wherever practical utilise land-based treatment, a wetland constructed to treat contaminants or a designed treatment system prior to discharge; and
 - (e) in the case of surface water¹³⁹ result in a discharge that¹⁴⁰ meets the receiving water standards in Schedule 5¹⁴¹.
- 4.11 Any discharge of a contaminant into or onto land where it may enter groundwater ~~shall~~:
- (a) will¹⁴² not exceed the natural capacity of the soil to treat or remove the contaminant; and
 - (b) will¹⁴³ not exceed available water storage capacity of the soil; and
 - (c) will not result in the accumulation of pathogens, or a persistent or toxic contaminant that would render the land unsuitable for agriculture, commercial, domestic or recreational use or water unsuitable as a source of potable water or for agriculture; and¹⁴⁴
 - (d) where meeting (a), (b) and (c)¹⁴⁵ ~~this is not practicable the discharge will:~~¹⁴⁶
 - (i) meet any nutrient allowance in Sections 6-15 of this Plan;
 - (ii) utilise the best practicable option to ensure the size of any contaminant plume is as small as is reasonably practicable, and

¹³⁷ 167.13 CRC

¹³⁸ 270.14 Fonterra

¹³⁹ 239.34 Fertiliser Association

¹⁴⁰ 146.21 Ashburton DC

¹⁴¹ 245.33 Fulton Hogan

¹⁴² Consequential amendments

¹⁴³ Consequential amendments

¹⁴⁴ 176.14 CRC

¹⁴⁵ 358.147 Ngā Rūnanga

¹⁴⁶ 358.147 Ngā Rūnanga

- (iii) ensure¹⁴⁷ there is sufficient distance between the point of discharge, any other discharge and drinking water supplies to allow for the natural decay or attenuation of pathogenic micro-organisms in the contaminant plume;
- (iv) ~~not result in the accumulation of pathogens, or a persistent or toxic contaminant that would render the land unsuitable for agriculture, commercial, domestic or recreational use or water unsuitable as a source of potable water or for agriculture,~~¹⁴⁸
- (v) not raise groundwater levels so that land drainage is impeded; and
- (vi) not have any adverse effects on the drinking water quality of the groundwater, including any risk to public health.

Stormwater and community wastewater systems

- 4.12 In urban areas, the adverse effects on water quality, aquatic ecosystems, existing uses and values of water and public health from the cumulative effects of sewage, wastewater, industrial or trade waste or stormwater discharges are avoided by:
- (a) all sewage, industrial or trade waste being discharged into a reticulated system, where available;
 - (b) the implementation of contingency measures to minimise the risk of a discharge from a wastewater reticulation system to surface water in the event of a system failure or overloading of the system beyond its design capacity; and
 - (c) any reticulated stormwater or wastewater ~~reticulation~~¹⁴⁹ system installed after 11 August 2012 is designed and managed to avoid sewage discharge into surface water.
- 4.13 Any public reticulated stormwater system for any urban area shall be managed in accordance with a stormwater management plan that addresses the following matters:
- (a) the management of all discharges of stormwater into the stormwater system;
 - (b) for any ~~public~~ community¹⁵⁰ reticulated stormwater system established after 11 August 2012, including any extension to any existing ~~public~~ community¹⁵¹ reticulated stormwater system, the discharge of stormwater being subject to a land-based or designed¹⁵² treatment system, or wetland treatment prior to any discharge to a lake or river
 - (c) how any discharge of stormwater, treated or untreated, into water or onto land where it may enter water meets or will meet¹⁵³ the water quality outcomes for that waterbody set out in Sections 6-15, ~~or~~ Table 1 and Schedule 5¹⁵⁴ (whichever applies); and
 - (d) The management of the discharge of stormwater from sites involving the use, storage or disposal of hazardous substances.

¹⁴⁷ 358.147 Ngā Rūnanga

¹⁴⁸ 176.14 CRC,

¹⁴⁹ 199.5 SCIRT

¹⁵⁰ 169.34 NZTA

¹⁵¹ 169.34 NZTA

¹⁵² 106.41 CCC

¹⁵³ 125.20 Kaikoura DC

¹⁵⁴ 106.42 CCC

- 4.14 Stormwater run-off volumes and peak flows are managed so that they do not cause or exacerbate the risk of inundation, erosion or damage to property or infrastructure downstream.

Earthworks, land excavation and deposition of material into land over aquifers

- 4.15 The discharge of sediment and other contaminants to surface water from earthworks, including roading, works in the bed of a river or lake, land development or construction, is avoided, and if this is not achievable, the best practicable option is used to minimise the discharge to water.
- 4.16 The discharge of contaminants to groundwater from earthworks, excavation, waste collection or disposal sites and contaminated sites is avoided or minimised by ensuring that:
- (a) activities are sited, designed and managed to avoid the contamination of groundwater;
 - (b) existing or closed landfills and contaminated sites are managed and monitored where appropriate¹⁵⁵ to minimise any contamination of groundwater; and
 - (c) there is sufficient thickness of undisturbed sediment in the confining layer over the Coastal Confined Aquifer System to prevent the entry of contaminants into the aquifer or an upward hydraulic gradient is present which would prevent aquifer contamination.¹⁵⁶

Soil stability

- 4.17 On erosion-prone land, any medium and large-scale earthworks, harvesting of forestry or other clearance of vegetation is undertaken in a manner which minimises the exposure of soil to erosion, controls sediment run-off and re-establishes vegetation cover as quickly as possible.
- 4.18 In the Hill and High Country, the use of vegetation burning as a land management tool avoids:
- (a) induced soil erosion;
 - (b) the destruction of natural wetlands or other sites or areas of significant indigenous biodiversity value or cultural significance to Ngāi Tahu; or
 - (c) the removal of resilient and intact vegetation cover, resulting in land becoming susceptible to the establishment of plant pest species.
- 4.19 Sedimentation of waterbodies as a result of land clearance, earthworks and cultivation is avoided or minimised ~~prevented~~¹⁵⁷ by the adoption of control methods and technologies.

¹⁵⁵ 313.17 Kennaway Park Joint Venture Partnership

¹⁵⁶ 59.14 Dr Hugh Thorpe

¹⁵⁷ 238.1 SRS New Zealand Limited

such as¹⁵⁸ maintaining continuous vegetation cover adjacent to waterbodies, or capturing surface run-off to remove sediment and other contaminants or via methods such as direct drilling crops and cultivation that follows the contours of a paddock.¹⁵⁹

Protect sources of human drinking water

4.20 Any water source used for drinking water supply is protected from any discharge of contaminants that may have any actual or potential adverse¹⁶⁰ effect on the quality of the drinking water supply including its taste, clarity and smell and group and community drinking¹⁶¹ water supplies are protected so that they align with the CWMS drinking water targets and meet the drinking-water standards for New Zealand.

Hazardous Substances & hazardous activities

4.21 The discharge of a hazardous substance to water, or onto or into land where it may enter water, to control a plant or animal pest or other unwanted organism only occurs:

- (a) if the substance is registered under the Hazardous Substances and New Organisms Act 1996 for use against the target organism;
- (b) if adverse effects on non-target organisms, Ngāi Tahu cultural values, or the use and consumption of water by humans or livestock are avoided as far as practicable; and
- (c) where good management practices are used to minimise the risk of accidental discharge to water.

4.22 Activities involving the use, storage or discharge of hazardous substances will be undertaken using best practicable measures option¹⁶² to:

- (a) as a first priority, avoid the discharge (including accidental spillage) of hazardous substances onto land or into water, including reticulated stormwater systems; and
 - (b) as a second priority, to ensure, where there is a residual risk of a discharge of hazardous substances including any accidental spillage, it is contained on-site and does not enter surface water bodies, groundwater or stormwater systems
- unless the substance is approved under HSNO to be applied to land or into water.¹⁶³

4.23 Any discharges of hazardous substances from potentially¹⁶⁴ contaminated land, including existing and closed landfills, shall be managed to ensure there are no adverse effects on people's health or safety, on, ~~on human or stock water supplies¹⁶⁵~~, or on surface water or groundwater.¹⁶⁶

¹⁵⁸ 197.21 RDRML

¹⁵⁹ 197.21 RDRML

¹⁶⁰ 268.12 Waimate DC

¹⁶¹ 268.12 Waimate DC

¹⁶² 169.62 NZTA

¹⁶³ 326.24 Horticulture NZ

¹⁶⁴ 127.7 Chorus and Telecom

¹⁶⁵ 187.23 Synlait Farms

¹⁶⁶ 167.15 CRC

- 4.24 Landfills and other waste collection or disposal sites are designed and sited to avoid the contamination of groundwater or surface water either through the direct discharge of hazardous substances to water or the leaching of contaminants into or onto land where they may enter water.
- 4.X The disposal of sludge from the treatment of human effluent shall:
- (a) not contaminate any drinking water supply;
 - (b) avoid the potential for people to come into contact with the sludge;
 - (c) have a zone of influence that will not restrict activities on adjoining properties;
 - (d) avoid ponding on the ground or flowing into surface water;
 - (e) be a sufficient distance from other discharges, wells or groundwater, to allow for the natural decay or attenuation of pathogenic micro-organisms in the contaminant plumes to the extent needed to ensure groundwater remains a potable water source; and
 - (f) be a sufficient distance from adjoining properties so that there is no dust nuisance.¹⁶⁷
- 4.X Where an on-site effluent treatment and disposal system is to be installed to treat and dispose of human effluent:
- (a) The system proposed will effectively treat and dispose of human effluent, given the conditions of the site;
 - (b) People will not come into contact with treated or untreated effluent on the land surface;
 - (c) The zone of influence of the discharge will not restrict activities on adjoining properties;
 - (d) There is no ponding on the ground or flowing into surface water from the discharge;
 - (e) There is sufficient distance between the discharge from the on-site system and other discharges, wells or groundwater, to allow for the natural decay or attenuation of pathogenic micro-organisms in the contaminant plumes to the extent needed to ensure groundwater remains a potable water source; and
 - (f) There is sufficient distance between the discharge from the on-site system and other discharges, wells or groundwater to avoid elevation of groundwater levels to an extent that land drainage is impeded.¹⁶⁸
- 4.25 New cemeteries are not located in areas where they may be subject to inundation from surface water bodies or in areas with groundwater less than 3 m below the ground surface.

Livestock Exclusion from Water Bodies

- 4.26 To avoid damage to the banks of waterbodies, sedimentation and disturbance of the water body, direct discharge of contaminants, and degradation of aquatic ecosystems:
- (a) intensively farmed stock is excluded from water bodies and wetlands; and
 - (b) stock is excluded from sensitive sites; and
 - (c) access to banks and beds by other stock is limited to stock species that prefer to avoid water and at stocking rates that avoid evident damage.

¹⁶⁷ 358.149 Ngā Rūnanga

¹⁶⁸ 358.149 Ngā Rūnanga

Discharges of Animal Effluent

- 4.27 Any system to store, treat and dispose of animal effluent onto land has sufficient storage capacity to avoid the need to dispose of effluent when soil moisture or weather conditions may result in effluent run-off into surface water or leaching into groundwater; and to avoid fugitive discharges in the case of equipment or system failure.

Nutrient discharges – General

- 4.28 The loss of nitrogen to water is minimised through first, raising awareness of the nitrogen losses from farming by requiring record-keeping on existing farms, secondly, supporting the use of industry articulated good practice and finally, introducing, through plan changes to Sections 6-15 of this Plan, nutrient discharge allowances to achieve collaboratively agreed catchment-based water quality outcomes.
- 4.29 Priority will be given to collaborative catchment management processes to introduce plan changes to set nutrient discharge allowances where regional water quality outcomes are not being met, as shown on the Planning Maps, and in the interim risks to the environment from the loss of nitrogen to water will be managed through compliance with industry articulated good practice or, in the absence of any such articulation, granting, subject to conditions, or refusing applications for resource consents.

Nutrient Discharges – Region-wide policies

- 4.30 Until 1 July 2017 the loss of nitrogen to water from existing farming activities will be minimised by raising awareness of the actions and activities that give rise to these discharges and the effects of these discharges on the environment and as a result of nitrogen discharges being recorded by each farming enterprise.
- 4.31 Minimise the loss of nitrogen to water from any change in farming activities in an area coloured red on the Planning Maps, by demonstrating the nitrogen loss from the proposed activity, when assessed in combination with the effects of other land uses or discharges, will not prevent the water quality outcomes of Policy 4.1 being achieved or the nitrogen discharges from the property are a significant and enduring reduction from existing levels.
- 4.32 To minimise the risk of the outcomes in Policy 4.1 not being achieved, where there is no industry articulated good industry practice nitrogen discharge limit for a particular industry sector included in this Plan prior to 1 July 2017 then all farming activities in that industry sector will be required to obtain a resource consent to continue the farming activity and any proposal will be required to demonstrate the nitrogen loss from the proposed activity, when assessed in combination with the effects of other land uses or discharges, will not

prevent the water quality outcomes of Policy 4.1 being achieved or the nitrogen discharges from the property are a significant and enduring reduction from existing levels..

- 4.33 Prior to 1 July 2017, to minimise the risk of the outcomes in Policy 4.1 not being achieved the loss of nitrogen to water from any change in farming activities in an area coloured green, orange or light blue on the Planning Maps, will be managed through resource consent conditions requiring, as a minimum, the preparation and implementation of a farm environment plan and the regular audit of that plan.

- 4.34 Prior to 1 July 2017, to minimise the loss of nitrogen to water from any change in farming activities in an area coloured red or within a Lake Zone as shown on the Planning Maps, an applicant for resource consent must demonstrate that the nitrogen loss from the proposed activity, when assessed in combination with the effects of other land uses or discharges, will not prevent the water quality outcomes of Policy 4.1 being achieved and show that the nitrogen discharges from the property are a significant and enduring reduction from existing levels.
- 4.35 To minimise the loss of nitrogen to water prior to 1 July 2017, where the land owner holds an existing water permit to take and use water, or is a shareholder in an irrigation scheme, and there are conditions on the water permit that address nutrient management, any change in farming activities will be enabled subject to requirements to prepare and implement a farm environment plan, the regular audit of that plan and to record, on a per enterprise basis, nitrogen discharges.
- 4.36 Irrespective of the nutrient allocation status of a catchment as shown on the Planning Maps, to allow the following discharges:
- (a) wastewater discharge from a marae;
 - (b) community wastewater treatment schemes; or
 - (c) wastewater discharge from a hospital, a school or other education institution.

Nutrient discharges – sub regional chapters

- 4.37 All activities shall achieve the nutrient load limit and nutrient allowance for the catchment in Sections 6-15 of this Plan.
- 4.38 If the measured or predicted nutrient load from land uses and discharges exceeds the nutrient load limit for the catchment in Sections 6-15 of this Plan, the loss to water of nutrients from land uses in the catchment will be reduced to achieve the nutrient load limit for the catchment.

Damming and Diversion of Water Bodies

- 4.39 Wetlands in the beds and margins of lakes and rivers are managed as an integral part of lakes and rivers.

Note: Abstraction, earthworks or structures, are not subject to any additional rules that manage wetlands.

- 4.40 In hāpua, coastal lakes, lagoons and natural wetlands the damming, diversion or taking of water is limited to the temporary diversion of water as part of maintaining infrastructure, pest management, or habitat restoration or enhancement work, or the artificial opening of hāpua to assist in fish migration, achieving other conservation outcomes, customary uses, or to avoid land inundation.

- 4.41 The damming or diversion of any alpine or hill-fed river does not have more than a negligible adverse effect on ~~adversely affect~~.¹⁶⁹:
- (a) values of significance to Ngāi Tahu associated with the mainstem;
 - (b) the passage of floods and freshes needed to maintain river processes, ecosystem health and the removal of vegetation encroaching onto the bed of the mainstem;
 - (c) sediment transport within the river and to the coast;
 - (d) fish passage; ~~and~~
 - (e) downstream water quality;
 - (f) the ecological values of the river;¹⁷⁰
 - (g) threatened native riverbed populations and significant indigenous biodiversity; ~~and~~¹⁷¹
 - (h) recreation activities.¹⁷²
- 4.42 Any alteration to the level of any natural lake that is unmodified as at 11 August 2012 is within its natural range (averaged over not less than five years).
- 4.43 The adverse effects of in-stream damming:
- (a) on high naturalness waterbodies identified in Sections 6-15 shall be avoided; and any other river complies with the environmental flow and allocation regime for that catchment and any adverse effects from the damming on: ~~flow variability in the river, sediment flows and nourishment of the coast, aquatic ecosystems, fish passage, indigenous flora and fauna, the habitat of nesting birds in braided rivers, any sites or values of significance to Ngāi Tahu, and any recreational or amenity values are, as a first priority, avoided or, where unable to be avoided, are remedied or mitigated~~;
 - (b)
 - (i) flow variability in the river;
 - (ii) sediment flows and nourishment of the coast;
 - (iii) aquatic ecosystems;
 - (iv) fish passage;
 - (v) indigenous flora and fauna;
 - (vi) the habitats of nesting birds in braided rivers;
 - (vii) the habitat of trout and salmon¹⁷³
 - (viii) any sites or values of significance to Ngāi Tahu; and
 - (ix) any recreational or amenity values are, as a first priority, avoided or, where unable to be avoided, are remedied or mitigated.¹⁷⁴
- 4.44 Small-scale diversions of water within the beds of lakes, rivers or adjoining wetlands are provided for as part of:
- (a) establishing, maintaining or repairing infrastructure;
 - (b) removing gravel or other earthworks; or
 - (c) undertaking minor flood or erosion control or repair works and the diversion is occurring within the boundaries of an individual's property and there are no

¹⁶⁹ 245.40 Fulton Hogan

¹⁷⁰ 200.76 EDS

¹⁷¹ 120.78 DOC

¹⁷² 232.6 Whitewater

¹⁷³ 347.100 Fish & Game

¹⁷⁴ 59.24 Dr Hugh Thorpe

potential adverse effects on any other person, their property, or any ecological, cultural, recreational or amenity values of the fresh water body.

- 4.45 Any dam or infrastructure for the storage of water is sited, designed, constructed and operated to minimise any risk of overspill, leakage, slips or other dam failure, provides for the diversion of floodwaters, and any associated risk of inundation or other adverse effects on people, communities or their property.

Abstraction of Water

- 4.46 Enable the taking of water for group or community drinking water supplies by not requiring compliance with any minimum or residual flow or partial restriction conditions and the environmental flow and allocation regime or groundwater allocation block, provided the water supply is managed to restrict the use of water from those supplies during periods of low flow or water levels, with priority given to drinking water and stockwater needs.¹⁷⁵
- 4.47 Where the rate of take or volume of water consented for abstraction from a catchment exceeds the environmental flow and water allocation regime for surface water or stream depleting groundwater, or the groundwater allocation limit for that catchment, any further allocation of water is limited to:
- (a) any abstraction necessary to meet group and¹⁷⁶ community drinking and stockwater requirements; and
 - (b) the replacement of existing resource consents at the same or a lesser rate of take and the same or a lesser annual or seasonal volume, provided that:
 - (i) there are significant and enduring improvements in the efficiency of water use and reductions in any adverse effects; or
 - (ii) it can be demonstrated that the existing use of water is efficient and that the efficiency is enduring.¹⁷⁷
- 4.48 Existing hydro-electricity¹⁷⁸ generation and irrigation schemes and their water takes¹⁷⁹ are recognised as a part of the existing environment. In re-consenting the schemes, it is expected that there will be improvements in the efficiency of water use and conveyance assessed over the life of the consent and reductions in any adverse effects on flows and levels in water bodies in order to maximise the term of the consent.
- 4.49 The abstraction of groundwater outside of any groundwater allocation zone in Sections 6-15, may occur only if the applicant can demonstrate that:
- (a) the groundwater is not stream depleting groundwater, or does not have a long-term low-level hydraulic connection to any surface water body which is fully or over-allocated for abstraction;
 - (b) the groundwater is not hydraulically connected to any groundwater allocation zone in Sections 6-15 of this Plan which is fully or over-allocated for abstraction;

¹⁷⁵ 86.2 Hurunui DC

¹⁷⁶ 222.19 Corrections

¹⁷⁷ 187.36 Synlait Milk Limited, 188.36 Synlait Farms Limited

¹⁷⁸ 221.53 Meridian

¹⁷⁹ 221.53 Meridian

- (c) the groundwater abstraction will not alter the hydraulic pressure or gradient of any other aquifer; ~~and~~¹⁸⁰
 - (d) the cumulative average rate of abstraction does not exceed the estimated rate of recharge of the aquifer, taking into account losses to natural sources; and¹⁸¹
 - (e) The abstraction will not result in salt water intrusion into the aquifer¹⁸².
- 4.50 Any change to a resource consent to abstract surface water for irrigation as a “run-of-river” take to a “take to storage”, is subject to the following conditions to mitigate any adverse effects:
- (a) a seasonal or annual allocation limit;
 - (b) a maximum instantaneous rate of take;
 - (c) a higher minimum flow, if this is required to sustain ecosystem or recreation values; and
 - (d) any required cessation required to maintain flow variability and freshes in the river.
- 4.51 In addition to the requirements in the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010, ~~for~~¹⁸³ any new water permit, replacement of an expiring water permit, transfer or review of an existing permit:
- (a) to take water at a rate of more than 30 L/s;
 - (b) to take water with a minimum flow or trigger level that signifies a restriction on take;
or
 - (c) to take water within a water users group;¹⁸⁴
- shall include a condition requiring water use records to be telemetered to the Canterbury Regional Council or its nominated agent.
- 4.52 The discharge of water resulting from moving water from one catchment or water body to another in particular¹⁸⁵ ~~does not~~:
- (a) facilitate the unwanted¹⁸⁶ transfer of fish species, plant pests or unwanted organisms into catchments where they are not already present;
 - (b) does not have a more than a negligible adverse effect on ~~adversely affect~~ Ngāi Tahu values;
 - (c) does not have a more than a negligible adverse effect on ~~adversely affect~~ the natural character of the receiving water;
 - (d) does not adversely affect existing drinking water treatment systems to the extent that they are no longer able to effectively treat the water to achieve the standards set out in the Drinking-water Standards for New Zealand; and
 - (e) does not have a more than a negligible adverse effect on ~~adversely affect~~ fish migration.¹⁸⁷

¹⁸⁰ Consequential amendment

¹⁸¹ 89.34 Bowden

¹⁸² 120.166 DOC

¹⁸³ Minor correction

¹⁸⁴ CRC 167.19

¹⁸⁵ 347.24 Fish & Game

¹⁸⁶ 221.26 Meridian

¹⁸⁷ 197.40 RDRML, 250.51 TrustPower, 256.16 Hunter Downs Irrigation

- 4.53 Where water is introduced from outside the catchment, the additional surface water flows are not available for abstraction unless a new or revised environmental flow and allocation regime is introduced through a plan change.
- 4.54 Any abstraction of groundwater does not result in cross-contamination between aquifers or water-bearing layers that results in, or may result in, adverse effects on water quality.
- 4.55 Non-consumptive groundwater takes, including the taking of heat from or adding heat to groundwater, will not be subject to any groundwater allocation zone limits, and will generally be supported, provided the water either remains in the aquifer, or is returned to the same aquifer within 24hrs and is protected from contamination.
- 4.56 The use of bores or galleries, including decommissioned bores, does not result in the contamination of surface water or groundwater through backflow of water, or surface water and contaminants entering bores or galleries.
- 4.57 There is no backflow of contaminants from any equipment or infrastructure which is used to both irrigate land and apply effluent, agri-chemicals or nutrients.
- 4.58 The direct cumulative interference effect from new groundwater takes on existing groundwater takes is minimised by limiting the drawdown of any existing bore within a 2 km radius to no more than 20% of the available drawdown calculated in accordance with the method outlined in Schedule 12.¹⁸⁸
- 4.59 Surface water intakes or galleries are sited so that ~~they do not interfere with or divert surface flow away from~~ the effects from interference or diversion of surface water on other, existing lawfully established surface water intakes or galleries or flow recorder sites are negligible.¹⁸⁹
- 4.60 Any abstraction of surface water or stream depleting groundwater with direct, high, or moderate depletion¹⁹⁰, is subject to conditions specifying:
- (i) the maximum instantaneous rate of take;
 - (ii) a maximum volume based on reasonable use over the period the water is required except for hydro-electricity generation activities¹⁹¹;
 - (iii) a minimum flow at which abstraction ceases in accordance with the relevant flow and allocation limits;
 - (iv) the area or property within which the water is to be used;
 - (v) the location of the take;
 - (vi) the prevention of fish entering any intake in accordance with Schedule 2¹⁹²; and
 - (vii) when partial restrictions (when rivers are flowing above the minimum or residual flow limit but below the full allocation block) come into force.

¹⁸⁸ 187.40 Synlait Milk Limited.

¹⁸⁹ 298.11 Dairy Holdings Limited

¹⁹⁰ 19.44 Ellesmere ISI

¹⁹¹ 250.53 TrustPower

¹⁹² 250.53 TrustPower

- 4.61 To prevent the flow falling below a minimum flow for the catchment, due to abstraction, partial restriction regimes for surface water shall:
- (a) have a single flow monitoring point for the whole catchment that all abstractors are referenced to, with additional flow monitoring points that some or all abstractors are subject to, should the hydrology of the surface water body justify it;
 - (b) provide for groups of water permit holders in the same sub-catchment to share water when takes are operating under partial restrictions; and
 - (c) unless specified in a relevant sub-regional section, be based on a stepped or pro rata restriction regime that applies equally to all takes within an allocation block and does not induce the flow to fall below the minimum flow due to abstraction.
- 4.62 Any abstraction of groundwater is subject to conditions specifying:
- (a) the maximum instantaneous rate of take;
 - (b) a maximum seasonal volume based on reasonable use over the period the water is required;
 - (c) the area or property within which the water is to be used;
 - (d) the location of the abstraction;
 - (e) any minimum groundwater levels at which abstraction ceases if specified in Sections 6-15; and
 - (f) any other conditions to regulate the rate or volume of water that may be abstracted relative to the estimated volume of groundwater stored in a groundwater zone, if specified in Sections 6-15.
- 4.63 Where existing abstractors do not have a maximum seasonal or annual allocation, to impose these conditions when any of the following occur:
- (a) resource consent conditions are resource consent conditions are changed in accordance with Section 127 of the RMA,¹⁹³
 - (b) water permits are transferred;
 - (c) existing resource consents to abstract water expire and are renewed; or
 - (d) the consent authority determines a review of consent conditions is required to impose seasonal or annual volumes in a catchment.

Flow Sensitive Catchments

- 4.64 Reduced effects arising from the interception of rainfall run-off on surface water flows in the flow sensitive catchments listed in Sections 6-15 is achieved by controlling the area, density and species of trees planted, except where tree-planting is required to control deep-seated soil erosion.

¹⁹³ 250.54 TrustPower, 317.34 Anzco *et al*

Site Dewatering

- 4.65 Localised land subsidence or other significant effects on the flows or levels of surface water or groundwater from the dewatering of construction sites or other sites, is avoided by limiting the rate or duration of pumping or other appropriate mitigation measures.

Efficient Use of Water

- 4.66 The rate, volume and seasonal duration for which water may be taken will be reasonable for the intended use.
- 4.67 Water abstraction for irrigation is managed so that:
- (a) winter flows are available for abstraction to storage, while ensuring ecosystem recovery; and
 - (b) abstraction is for the summer (1 September – 30 April¹⁹⁴) irrigation season, unless specified otherwise.
- 4.68 Where water is allocated to a consent holder for abstraction, and the water permit does not specify the period of abstraction, and the water is not required for 12 months of the year, the unused water shall not be further allocated to the consent holder or any other applicant or transferee through the granting of or backup a further¹⁹⁵ water permit.
- 4.69 Water used for irrigation is applied using good-practice that achieves an irrigation application efficiency of not less than 80%.
- 4.70 Systems to convey or apply fresh¹⁹⁶ water are designed to maximise efficient use of water, including the improvement over time of existing systems, ~~except where there will be an adverse effect on ecosystems or existing abstractors from a loss of recharge.~~ taking into account
- (a) practicable options to implement any change required to existing systems; and
 - (b) adverse effects on ecosystems or existing abstractors from a loss of any recharge currently arising from conveyance inefficiencies.¹⁹⁷

Transfer of Water Permits

- 4.71 Reduction in water use in over-allocated catchments, improvement in the efficiency of water use, and encouragement of more effective storage and distribution of water in order to meet economic and social outcomes will be achieved through managed transfers of water take and use permits.
- 4.72 Enable the transfer of water permits to take or use water, provided:

¹⁹⁴ 19.48 Ellesmere ISI

¹⁹⁵ 59.27 Dr Hugh Thorpe, 131.35 HWPL

¹⁹⁶ 257.52 Silver Fern Farms Limited

¹⁹⁷ 221.76 Meridian, 250.257 TrustPower

- (a) the transfer of water is occurring within the same surface water catchment or sub-catchment, or the same groundwater zone, as defined in this plan;
- (b) the same or a lesser amount of water is being taken or used; and
- (c) the adverse effects of the take and use of water are ~~the same or less~~ not greater than minor.¹⁹⁸

4.73 In an over-allocated surface water catchment or groundwater zone, enable the transfer of water permits to take or use water where water is moving to an irrigation scheme or a principal water supplier¹⁹⁹, and in all other instances, enable the transfer of water provided there is a surrender of a proportion of the allocated water to the water body and it is not re-allocated.

Sharing water in times of restriction

- 4.74 Enable water permit holders who choose to enter written agreements with other water permit holders in the same catchment or sub-catchment to temporarily share all or part of the water take authorised by their water permit ~~during times of restrictions~~²⁰⁰, provided:
- (a) all water permits are subject to conditions that specify a maximum rate of take, ~~and~~ a daily volume, and a²⁰¹ seasonal or annual volume;
 - (b) metering and telemetry of data in accordance with Policy 4.51 is undertaken for all takes;
 - (c) all water permits are subject to common restriction conditions, or any discrepancies in restriction conditions are addressed in the written agreement.

Consent Duration, Lapse Periods and Giving Effect to Water Permits

- 4.75 Resource consents to abstract water shall be given effect to within two years unless a longer lapse period is justified to give effect to the consent due to the scale or complexity of the activity. For the purpose of this policy, “given effect to” requires the installation of infrastructure, water meter or flow measuring device²⁰² and use of the water as proposed.
- 4.76 Resource consents for the use of land for farming activities and the associated discharge of nutrients in catchments that are within a Nutrient Allocation Zone in which water quality outcomes are at risk (areas coloured red on the Series A Planning Maps)²⁰³ and resource consents for water take and use in catchments or groundwater allocation zones that are over-allocated will generally be subject to a 5 year duration if the land use and associated nutrient discharges or water take and use may impede the ability of the community to find an integrated solution to manage water quality and the over-allocation of water.

¹⁹⁸ 345.19 Mr Hamish Rennie

¹⁹⁹ 197.46 RDRML

²⁰⁰ 187.51 Synlait Milk Limited, 188.51 Synlait Farm Limited, 315.28 Dairy NZ

²⁰¹ 347.113 Fish & Game

²⁰² 347.116 Fish & Game

²⁰³ 106.51 CCC

Hydrocarbon Exploration or Production, Including “Fracking”

- 4.77 Groundwater or surface water contamination resulting from the use of chemicals, materials or additives or the escape of hydrocarbons during the exploration for, or extraction of, hydrocarbons in solid, liquid or gaseous forms is avoided.
- 4.78 Any bore penetrating bedrock is cased to prevent any potential contaminants leaking into the overlying aquifers and, when decommissioned, the release of contaminants from the bedrock into the overlying aquifers; and any entry of contaminants from the land surface into the well or bore is prevented.

Wetlands and riparian margins

- 4.79 Any take, use, damming or diversion of water, any discharge of contaminants onto land or into water, or any earthworks, structures, planting, vegetation removal or other land uses within a natural wetland boundary, do not adversely affect the significant indigenous biodiversity values of natural wetlands, hāpua, coastal lakes and lagoons, except for:
- (a) a temporary ~~and/or~~²⁰⁴ minor adverse effect where that activity is part of installing, ~~or~~ maintaining, operating or upgrading of²⁰⁵ infrastructure, pest management, or habitat restoration or enhancement work; or
 - (b) the artificial opening of hāpua, coastal lakes or lagoons to assist in fish migration or achieving other conservation outcomes, customary uses, or to avoid land inundation.
- 4.80 Modification of natural wetlands, hāpua, coastal lakes and lagoons may occur if the activity is necessary to provide for the installation upgrading and maintenance (including repair)²⁰⁶ of infrastructure and any significant effects are offset by other improvement or expansion of the same wetland, hāpua, coastal lake or lagoon.
- 4.81 Restoration or enhancement of wetlands is encouraged provided it does not give rise to any adverse effects on other lawfully established activities, including any adverse effects on the reliability of supply of water for existing abstractors, or any inundation or erosion of other people’s property.
- 4.82 Wetlands and riparian planting are developed as integral parts of land drainage systems²⁰⁷, discharges to land and water and stormwater systems/networks²⁰⁸ in both rural and urban areas, to reduce the effects of those activities on water quality and to enhance indigenous biodiversity and amenity values.

²⁰⁴ 358.176 Ngā Rūnanga

²⁰⁵ 197.49 RDRML

²⁰⁶ 306.9 KiwiRail

²⁰⁷ 169.70 NZTA

²⁰⁸ 169.70 NZTA

- 4.83 Water quality, indigenous biodiversity and ecosystem health in lakes, rivers, natural wetlands, hāpua, coastal lakes and lagoons are enhanced through establishing or restoring riparian planting.

Activities in Beds of Lakes and Rivers

- 4.84 Earthworks and structures in the beds or margins of lakes, rivers, natural wetlands, hāpua, coastal lakes and, lagoons:
- (a) maintain the character and channel characteristics of rivers including the²⁰⁹ variable channel characteristics of braided rivers;
 - (b) protect sites and areas of significant indigenous biodiversity values or of cultural significance to Ngāi Tahu; and
 - (c) do not preclude any existing lawful access to the bed of the lake, river, natural wetland hāpua, coastal lake, or lagoon for recreational, customary use, water intakes or supplies²¹⁰ or flood control purposes, except where necessary to protect public health and safety.²¹¹
- 4.85 Plant species listed in the Biosecurity NZ Unwanted Organisms Register or the Regional Pest Management Strategy are not introduced or planted in the beds or margins of lakes, rivers, hāpua, coastal lakes and lagoons, or in wetlands.
- 4.86 Earthworks, structures, or the planting or removal of vegetation (other than by spraying) in the beds of lakes, rivers, hāpua, coastal lakes and lagoons, or within a wetland boundary do not occur in flowing or standing water unless any effects on water quality, ecosystems, or the amenity, recreational or cultural values will be minor or the effects of diverting water are more significant than the effects of the activity occurring in flowing or standing water.
- 4.87 Earthworks, structures (including flood control structures), vegetation planting or removal, or other activities in the beds of lakes or rivers, do not materially²¹² restrict flood flows in any river, or create or exacerbate erosion of the bed or banks of any river or the bed or margins of any lake.
- 4.88 Any modification of the levels of lakes which are artificially managed does not create or exacerbate significant shoreline erosion. This policy does not apply to the artificial opening of hāpua, coastal lakes or lagoons to the sea.
- 4.89 Land uses, and other activities in the beds or margins of lakes and rivers, do not adversely affect the stability or functioning of lawfully established erosion control or flood protection works or infrastructure.

²⁰⁹ 232.8 Whitewater New Zealand & Whitewater Canoe Club

²¹⁰ 146.43 Ashburton DC

²¹¹ 245.44 Fulton Hogan

²¹² 245.46 Fulton Hogan

- 4.X Communities are protected from the natural hazards of flooding and erosion through gravel extraction and establishment and maintenance of flood protection assets.²¹³

Gravel Extraction

- 4.90 Recognise the value of gravel extraction for ~~regionally significant~~ construction and maintenance of infrastructure, for economic activity, for flood management purposes²¹⁴ and for the re-build of Christchurch. ~~and.~~

- 4.90A Enable the maximum extraction of gravel from land without affecting groundwater quality and require remediation to avoid the risk of contamination.²¹⁵

- 4.91 For all gravel removal from the beds of rivers:

- (a) the rate of gravel extraction does not exceed the rate of gravel recharge, except where stored gravel is available for extraction and in that case short-term extraction of stored gravel may occur at a rate that exceeds gravel recharge rates only to the point that bedloads are satisfactory for flood management purposes. gravel levels reach gravel recharge rates²¹⁶; and
- (b) the activity is undertaken in ways which do not induce erosion, adversely affect water quality, significant indigenous biodiversity, disturb wildlife habitat or sites of cultural significance to Ngāi Tahu, or affect access and recreational values.

Natural Hazards

- 4.92 The consequential effects of seismic activity are recognised and timely and appropriate responses to such activity are facilitated.
- 4.93 Temporary adverse effects from activities required for recovery from a natural hazard event are managed to minimise the duration and scale of any adverse effects and maximise the overall benefits of the activity to the recovery.
- 4.94 In urban areas, where groundwater hydrology has changed as a result of seismic activity, including new springs and altered groundwater levels, allow site-specific remediation to occur.

²¹³ 167.21 CRC

²¹⁴ 282.30 Aggregate Group

²¹⁵ 200.123 EDS

²¹⁶ 59.34 Dr. Hugh Thorpe

Section 5 - Region-wide Rules

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General Rules

- 5.1 Unless specifically stated to the contrary, any activity must comply with all the relevant²¹⁷ rules of Section 5 of this Plan, except in relation to Rule 5.5, which prevails in all situations.²¹⁸
- 5.2 Unless specifically stated to the contrary, any rule on the same subject matter in the relevant sub-regional zones in Sections 6-15 of this Plan prevails over the relevant rule of Section 5, except in relation to Rule 5.5, which prevails in all situations.²¹⁹
- 5.3 Notes and cross-references are included for information purposes only and do not form part of the rules and nor should they be considered a complete list.
- 5.4 ~~For the avoidance of doubt,~~²²⁰ For any activity that is classified as a controlled activity or a restricted discretionary activity, the CRC includes, within the matters to which control is reserved or discretion is restricted, the lapse period, the duration of the resource consent, the review of the conditions of a resource consent, the need for a bond or financial contributions, and the collection, recording, monitoring and provision of information concerning the exercise of a resource consent.
- 5.5 Any recovery activity that would otherwise contravene sections 9(2), 13(1), 14(2), s14(3) or s15(1) of the RMA and is not listed as a permitted activity in this Plan is a restricted discretionary activity.

The CRC will restrict discretion to the following matters:

1. The timing,²²¹ duration and scale of the activity;
 2. The adequacy of the management plan prepared in respect of the activity, and in particular, the identification of the effects and the proposed mitigation; and
 3. The extent to which the proposed activity is consistent with the objectives and policies of this Plan.
- 5.6 Any activity that is not a recovery activity that would otherwise contravene sections 13(1), 14(2), s14(3) or s15(1) of the RMA and is not listed as a permitted, controlled,²²² restricted discretionary, discretionary, non-complying or prohibited activity in this Plan is a discretionary activity.

²¹⁷ 263.26 Transpower

²¹⁸ 167.22 CRC

²¹⁹ 167.22 CRC

²²⁰ 19.57 Ellesmere ISI

²²¹ 347.133 Fish & Game

²²² 358.6 Ngā Rūnanga

Note: In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy any pre 1900 archaeological sites is subject to the archaeological authority process under the Historic Places Act 1993. An archaeological authority is required from the NZHPT to modify, damage or destroy any archaeological site, whether recorded or not in the NZAA Site Recording Scheme website.²²³

²²³ 226.2 NZHPT

On-site Wastewater

5.7 The discharge of wastewater from an existing on-site domestic²²⁴ wastewater treatment system onto or into land in circumstances where a contaminant may enter water is a permitted activity, provided the following conditions are met:

1. The discharge was lawfully established prior to 1 November 2013;
2. The treatment and disposal system has not been altered or modified from that established at the time the system was constructed, other than through routine maintenance;
3. The volume of the discharge has not been increased as a result of the addition of buildings, an alteration of an existing building, or a change in use of a building that is connected to the system;
4. The treatment and disposal system is operated and maintained in accordance with the system's design specification for maintenance or, if there is no design specification for maintenance, Section 6.3 of New Zealand Standard AS/NZS 1547:2012 – On-site domestic wastewater management;
5. ~~The discharge is within the area marked “Septic tank Suitability – Area A” on the Planning Maps; and²²⁵~~
6. The discharge is not onto or into land:
 - (a) where there is an available sewerage network;
 - (b) that is contaminated or²²⁶ potentially contaminated except where a discharge permit or land use consent for storage of hazardous substances exists²²⁷;
 - (c) that is listed as an archaeological site;
 - (d) where the discharge would enter any surface water body;
 - (e) within 20 m of any surface water body or the Coastal Marine Area;
 - (f) within 50 m of a bore used for water abstraction; ~~or~~
 - (g) within a group or community drinking water supply protection area as set out in Schedule 1 of this Plan; ~~or~~
 - (h) where there is, at any time, less than 1 m of vertical separation between the discharge point and groundwater;²²⁸
7. The discharge shall not result in wastewater being visible on the ground surface; and
8. The discharge shall not contain hazardous substances or hazardous waste.²²⁹

5.8 The discharge of wastewater from an existing on-site domestic wastewater treatment system onto or into land in circumstances where a contaminant may enter water that does not meet one or more of the conditions of Rule 5.7 is a restricted discretionary activity.

The CRC will restrict discretion to the following matters:

1. The effect of not meeting the condition or conditions of Rule 5.7.

²²⁴ 167.24 CRC

²²⁵ 268.23 Waimate DC

²²⁶ 358.9 Ngā Rūnanga

²²⁷ 148.10 Mainpower

²²⁸ 243.1 ecoENG Limited

²²⁹ 167.24 CRC

2. The extent to which the proposed activity is consistent with the objectives and policies of this Plan relating to Ngāi Tahu values, human and animal health and drinking water quality.

Notification

Pursuant to sections 95A and 95B of the RMA an application for resource consent under this rule will be processed and considered without public or limited notification.

Note that limited notification to affected order holders in terms of section 95F of the RMA will be necessary, where relevant, under section 95B(3) of the RMA.

5.9 The discharge of wastewater from a new, modified²³⁰ or upgraded on-site domestic wastewater treatment system onto or into land in circumstances where a contaminant may enter water is a permitted activity, provided the following conditions are met:

1. The discharge volume does not exceed 2.14 m³ per day ~~week~~;²³¹
2. The discharge is within the area marked "On-site Effluent Suitability Area" ~~Septic tank Suitability – Area A~~²³² on the Planning Maps;
3. The discharge is not onto or into land:
 - (a) where there is an available sewerage network;
 - (b) that is contaminated or²³³ potentially contaminated except where a discharge permit or land use consent for storage of hazardous substances exists;²³⁴
 - (c) listed as an archaeological site; or
 - (d) where the discharge would enter any surface water body;
 - (e) within 20 m of any surface water body or the Coastal Marine Area;
 - (f) within 50 m of a bore used for water abstraction; ~~or~~
 - (g) within a group or community drinking water supply protection area as set out in Schedule 1; or
 - (h) where there is, at any time, less than 1 m of vertical separation between the discharge point and groundwater;²³⁵
4. The treatment and disposal system is designed and installed in accordance with Sections 5 and 6 of New Zealand Standard AS/NZS 1547:2012 – On-site domestic wastewater management; ~~and~~
5. The treatment and disposal system is operated and maintained in accordance with the system's design specification for maintenance or, if there is no design specification for maintenance, Section 6.3 of New Zealand Standard AS/NZS 1547:2012 – On-site domestic wastewater management;
6. The discharge shall not result in wastewater being visible on the ground surface; and²³⁶
7. The discharge shall not contain hazardous substances or hazardous waste.²³⁷

²³⁰ 243.1 ecoENG Limited

²³¹ 167.25 CRC

²³² 167.25 CRC

²³³ 358.9 Ngā Rūnanga

²³⁴ 148.10 Mainpower

²³⁵ 243.1 ecoENG Limited

²³⁶ 167.25 CRC

²³⁷ 167.25 CRC

- 5.10 The discharge of wastewater from a new or upgraded on-site domestic wastewater treatment system onto or into land in circumstances where a contaminant may enter water that does not meet one or more of the conditions of Rule 5.9 is a restricted discretionary activity.**

The CRC will restrict discretion to the following matters:

1. The effect of not meeting the condition or conditions of Rule 5.9.
2. The extent to which the proposed activity is consistent with the objectives and policies of this Plan relating to Ngāi Tahu values, human and animal health and drinking water quality.

Notification

Pursuant to sections 95A and 95B of the RMA an application for resource consent under this rule will be processed and considered without public or limited notification.

Note that limited notification to affected order holders in terms of section 95F of the RMA will be necessary , where relevant, under section 95B(3) of the RMA.

Swimming Pool or Spa Water

5.11 The discharge of swimming pool or spa pool water into water or onto or into land in circumstances where a contaminant may enter water is a permitted activity, provided the following conditions are met:

1. The discharge of filter backwash water is only onto land, and the discharge does not enter any surface waterbody or wetland, including via a stormwater system; and
2. For swimming pool or spa pool water discharges that do not contain filter backwash water, the discharge may be either onto land or into water, provided:
 - (a) that for all discharges:
 - (iii) there are no copper chemicals, flocculants, including aluminium salts in the discharge and the concentration of sodium chloride (common salt) does not exceed 3500 grams/m³;
 - (iv) the swimming pool or spa pool has not been treated within the previous 14 days with a pool sanitizing agent containing chlorine, bromine, or Baquacil™; and
 - (v) the discharge does not result in water or contaminants flowing onto another site; and
 - (b) that for discharges to surface water:
 - (i) the discharge is not within a group or community drinking water supply protection area as set out in Schedule 1; and
 - (ii) for discharges to a river, the rate of flow in the river, at the point of discharge, is at least five times the rate of discharge.

5.12 The discharge of swimming pool or spa pool water into water or onto or into land in circumstances where a contaminant may enter water that does not meet one or more of the conditions of Rule 5.11 is a restricted discretionary activity.

The CRC will restrict discretion to the following matter:

1. The effect of not meeting the condition or conditions of Rule 5.11.

Greywater

5.13 The discharge of greywater onto or into land in circumstances where a contaminant may enter water is a permitted activity, provided the following conditions are met:

1. The discharge is only from a dwelling house and does not contain any waste from a toilet or any hazardous substances;
2. The discharge is from a system that is authorised for use under the Building Act 2004.²³⁸
3. The application rate does not exceed 50 mm per day. The discharge shall:
 - (a) be via a land application system located beneath the ground surface; and
 - (b) as far as practicable, be evenly distributed and not exceed an application rate of 50 millimetres per day;²³⁹

²³⁸ 358.16Ngā Rūnanga, 243.5ecoENG Ltd

²³⁹ 358.16Ngā Rūnanga, 243.5ecoENG Ltd

4. The discharge does not result in greywater flowing, seeping, or ponding on the surface of the ground for more than two hours;
5. The system does not store greywater for more than 12 hours and incorporates a ~~proprietary~~ ²⁴⁰ proprietary filter prior to discharge;
6. The discharge does not result in water or contaminants flowing onto another site; and
7. The point of discharge is not within:
 - (a) 20 m of a surface water body or the Coastal Marine Area;
 - (b) 20 m of a bore used for water abstraction;
 - (c) where an activity or industry, other than A8, listed in Schedule 3 has occurred or is occurring; or
 - (d) a site listed as an archaeological site.
8. Where the discharge is located over an unconfined or semi-confined aquifer and the highest groundwater level is less than two metres from the ground surface, there shall be at least 600 millimetres of soil or sand between the point of discharge and the highest groundwater level.²⁴¹

5.14 The discharge of greywater onto or into land in circumstances where a contaminant may enter water that does not meet one or more of the conditions of Rule 5.13 is a restricted discretionary activity.

The CRC will restrict discretion to the following matters:

1. The effect of not meeting the condition or conditions of Rule 5.13.
2. The extent to which the proposed activity is consistent with the objectives and policies of this Plan relating to Ngāi Tahu values, human and animal health and ~~drinking~~ water quality.²⁴²

Pit and Composting Toilets

5.15 The discharge of untreated human excrement via a pit toilet onto or into land in circumstances where a contaminant may enter water is a permitted activity, provided the following conditions are met:

1. When a pit toilet is filled to within 0.5 m of the original land surface, or is no longer used, the content of the pit toilet is covered with at least 0.5 m of soil;
2. Surface runoff does not enter a pit toilet;
3. There is at least 600 mm of soil or sand between the point of discharge and the ~~highest known groundwater~~ seasonal high water table²⁴³ level; and
4. The pit toilet is not:
 - (a) within 20 m of a surface water body, a bore used for water abstraction or the Coastal Marine Area;
 - (b) within a group or community drinking water supply protection area as set out in Schedule 1;
 - (c) within any area or zone identified in a proposed or operative district plan for residential, commercial or industrial purposes;

²⁴⁰ Typographical error that needs correcting

²⁴¹ 358.16 Ngā Rūnanga

²⁴² 358.16 Ngā Rūnanga of Canterbury

²⁴³ 167.26 CRC

- (d) sited on unconsolidated gravels, coarse or medium sands, fissured rock or scree unless there is at least 600 mm of soil or sand placed in the base of the pit; or
- (e) on a site listed as an archaeological site.

5.16 The discharge of untreated human excrement via a pit toilet onto or into land in circumstances where a contaminant may enter water that does not meet one or more of the conditions in Rule 5.15 is a restricted discretionary activity.

The CRC will restrict discretion to the following matters:

- 1. The effect of not meeting the condition or conditions of Rule 5.15.
- 2. The extent to which the proposed activity is consistent with the objectives and policies of this Plan relating to Ngāi Tahu values, human and animal health and drinking water quality.²⁴⁴

5.17 The discharge of aerobically composted material from a composting toilet onto or into land in circumstances where a contaminant may enter water is a permitted activity, provided the following conditions are met:

- 1. The material discharged has been subject to aerobic decomposition for at least 12 months from the last addition of raw excrement and is worked into the soil immediately following the discharge; and
- 2. The discharge is not onto or into land:
 - (a) within 20 m of a surface water body, the Coastal Marine Area or a bore used for water abstraction;
 - (b) within a group or community drinking water supply protection area as set out in Schedule 1;
 - (c) used for growing food crops for human consumption;
 - (d) when there is water ponding on the soil surface; or
 - (e) listed as an archaeological site.

Note: The composting toilet system may also require approval for use under the Building Act 2004.

5.18 The discharge of aerobically composted material from a composting toilet onto or into land in circumstances where a contaminant may enter water that does not meet one or more of the conditions in Rule 5.17 is a restricted discretionary activity.

The CRC will restrict discretion to the following matters:

- 1. The effect of not meeting the condition or conditions of Rule 5.17.
- 2. The extent to which the proposed activity is consistent with the objectives and policies of this Plan relating to Ngāi Tahu values, human and animal health and drinking²⁴⁵ water quality.

²⁴⁴ 358.18 Ngā Rūnanga

Dust Suppressants

5.19 The discharge of oil as a dust suppressant onto or into land in circumstances where a contaminant may enter water is a permitted activity provided the following conditions are met:

1. The discharge is only of vegetable oil, or of new light fuel or lubricating oil and is:
 - (a) applied in a manner that does not result in pooling or runoff, with a maximum application rate not exceeding 2 litres/m² per day and 4 litres/m² per annum; and
 - (b) not within 20 m of a surface water body, the Coastal Marine Area, a bore or soak-hole.

5.20 The discharge of oil as a dust suppressant onto or into land in circumstances where a contaminant may enter water that does not meet one or more of the conditions in Rule 5.19 is a restricted discretionary activity.

The CRC will restrict discretion to the following matter:

1. The effect of not meeting the condition or conditions of Rule 5.19.

Pest Control

5.21 The discharge of a vertebrate toxic agent via land-based methods, onto or into land, including the bed of a lake or river, in circumstances where a contaminant may enter water is a permitted activity provided the following conditions are met:

1. The substance and the application technique or method is approved for use under the Hazardous Substances and New Organisms Act 1996; and
2. The discharge is not:
 - (i) within 5 m of the wetted bed of a river, lake or artificial watercourse, a wetland boundary or the Coastal Marine Area; or
 - (ii) within 20 m of a bore used for drinking water; or
 - (iii) within a group or community drinking water supply protection area as set out in Schedule 1.

5.22 The discharge of a vertebrate toxic agent via land-based methods, onto or into land, including the bed of a lake or river, in circumstances where a contaminant may enter water, that does not meet one or more of the conditions in Rule 5.21 is a discretionary activity.

²⁴⁵ 358.20 Ngā Rūnanga

5.23 The discharge of a vertebrate toxic agent from an aircraft, onto or into land, including the bed of a lake or river, in circumstances where a contaminant may enter water, is a controlled activity provided the following conditions are met:

1. The substance and the application technique or method is approved for use under the Hazardous Substances and New Organisms Act 1996; and
2. The discharge is not:
 - (a) within 20 m of the wetted bed of a river, lake or artificial watercourse that is more than 3 m wide, a wetland boundary or the Coastal Marine Area or within 20 m of a bore used for drinking water; or
 - (b) within a group or community drinking water supply protection area as set out in Schedule 1.

The CRC reserves control over the following matters:

1. Measures to avoid, mitigate or remedy adverse effects on aquatic ecosystems and human or animal drinking water;
2. The provision of advice and information about the exercise of the consent to people and authorities in and adjacent to the application area; and
3. The adequacy of application methods, systems and management processes to prevent fugitive discharges and the recording of application areas.

Notification

Pursuant to sections 95A and 95B of the RMA an application for resource consent under this rule will be processed and considered without public or limited notification.

Note that limited notification to affected order holders in terms of section 95F of the RMA will be necessary, where relevant, under section 95B(3) of the RMA.

5.24 The discharge of a vertebrate toxic agent from an aircraft, onto or into land, including the bed of a lake or river, in circumstances where a contaminant may enter water, that does not meet one or more of the conditions in Rule 5.23 is a discretionary activity.

5.25 The discharge of an agrichemical, or agrichemical equipment or container washwater, into or onto land, including the bed of a lake, river or artificial watercourse, in circumstances where a contaminant or water may enter water is a permitted activity provided the following conditions are met:

1. The agrichemical and application technique or method is approved for use under the Hazardous Substances and New Organisms Act 1996;
2. The discharge of the agrichemicals is undertaken in accordance with Section 5 and Appendices L and S of New Zealand Standard NZS 8409:2004 Management of Agrichemicals;
3. No mixing or diluting of an agrichemical or rinsing or cleaning of containers or equipment takes place within:
 - (i) 5 m of a surface water body, or a bore; or
 - (ii) in the bed of a river or lake, or within the Christchurch Groundwater Protection Zone as shown on the Planning Maps, unless:
 - (i) the mixing or dilution takes place within a sealed, bunded system that will contain a volume of at least 110% of the largest spray tank to be filled; or
 - (ii) the mixing or dilution is for a hand-held application technique or method.
4. If the water used for mixing or dilution is being abstracted from a surface water body or groundwater, a backflow prevention system is in place to prevent the agrichemical from flowing back into the source water.
5. Where the discharge is from an aircraft:
 - (i) the discharge is be carried out by a person who holds a GROWSAFE® Pilots' Agrichemical Rating Certificate or an AIRCARE™ Accreditation;

- (ii) the flight paths are recorded by an on-board differential global positioning system and this record is kept for at least 12 months following the discharge and made available to the CRC upon request; and
 - (iii) the discharge in the bed of a river in Hill and High Country areas does not occur between the first day of September and the last day of November in any year; and
6. The discharge is not within a group or community drinking water supply protection area as set out in Schedule 1 or within 10 m of any bore used for drinking water supply.

Note: See also the rules on vegetation clearance – 5.143 – 5.154.

5.26 The discharge of an agrichemical, or agrichemical equipment or container washwater, into or onto land in circumstances where a contaminant or water may enter water that does not meet one or more of the conditions of Rule 5.25 is a restricted discretionary activity.

The CRC will restrict discretion to the following matter:

1. The effect of not meeting the condition or conditions of Rule 5.25.

Note: See also the rules on vegetation clearance – 5.143 – 5.154.

5.27 The discharge of diquat or glyphosate to a surface water body via land based methods is a permitted activity provided the following conditions are met:

- 1. The discharge is carried out by a person who holds a current GROWSAFE® Registered Chemical Applicator's Certificate issued by the New Zealand Agrichemical Education Trust; and
- 2. The discharge is only incidental to the spraying of the bed or bank of a river, the bed of a lake, or an artificial watercourse, or a wetland, undertaken in accordance with Rule 5.25;
- 3. The discharge is not:
 - (i) within a group or community drinking water supply protection area as set out in Schedule 1; or
 - (ii) into a river or artificial watercourse within 250 m upstream or 100 m downstream, or in a lake within 250 m, of any other surface water intake.

Note: See also the rules on vegetation clearance – 5.143– 5.154.

5.28 The discharge of an agrichemical to a surface water body, that does not meet one or more of the conditions in Rule 5.27 is a restricted discretionary activity.

The CRC will restrict its discretion to the following matters:

1. Measures to avoid, mitigate or remedy unintended adverse effects on aquatic ecosystems (in addition to the intended removal of the flora or fauna by the application of the relevant agrichemical), and human or animal drinking water;
2. The provision of advice and information about the exercise of the consent to people and authorities in and adjacent to the application area; and
3. The adequacy of application methods, systems and management processes to prevent fugitive discharges and the recording of application areas.
4. The extent to which the proposed activity will prevent or compromise the attainment of the environmental outcomes sought by, or is inconsistent with, the objectives and policies of this Plan relating to human and animal drinking water quality.

Notification

Pursuant to sections 95A and 95B of the RMA an application for resource consent under this rule will be processed and considered without public or limited notification.

Note that limited notification to affected order holders in terms of section 95F of the RMA will be necessary, where relevant, under section 95B(3) of the RMA.

Offal and Farm Rubbish Pits

5.29 The use of land for an offal pit and the associated discharges onto or into land in circumstances where a contaminant may enter water are permitted activities provided the following conditions are met:

1. The discharge is to a pit that:
 - (i) has a volume of less than 50 m³;
 - (ii) is sited and designed to prevent surface runoff entering the pit; and
 - (iii) is designed to prevent animals from gaining access to the pit; and
2. The discharge is only of dead animals or animal parts produced on the site where the pit is located;
3. No more than one pit is constructed or used per site per annum;
4. When any pit is filled to within 0.5 m of the original land surface, or is no longer used, the contents are covered with soil to a depth of at least 0.5 m or the pit is covered with an impermeable lid; and
5. The discharge does not occur:
 - (i) within 50 m of a surface water body, a bore used for water abstraction, the boundary of the site, or the Coastal Marine Area;
 - (ii) within a group or community drinking water supply protection area as set out in Schedule 1;
 - (iii) outside of the area marked "Septic tank Suitability – Area A" on the Planning Maps, unless there is at least 3 m of soil or sand between the point of discharge and the highest known groundwater level;
 - (iv) within the Christchurch Groundwater Protection Zone as shown on the Planning Maps; or

- (v) on a site listed as an archaeological site.

Note: Nothing in this rule prevents a pit being used for both an offal pit and an on-site refuse disposal pit, if the conditions of both rules are complied with.

5.30 The use of land for an offal pit and the associated discharges onto or into land in circumstances where a contaminant may enter water that does not meet one or more of the conditions in Rule 5.29 is a restricted discretionary activity.

The CRC will restrict discretion to the following matters:

1. The effect of not meeting the condition or conditions of Rule 5.29.
2. The extent to which the proposed activity will prevent or compromise the attainment of the environmental outcomes sought by, or is inconsistent with, the objectives and policies of this Plan relating to human and animal drinking water quality.

5.31 The use of land for an on-site refuse disposal pit and the associated discharges onto or into land in circumstances where a contaminant may enter water are permitted activities provided the following conditions are met:

1. The discharge is to a pit:
 - (i) located on a site of greater than 20 ha in area;
 - (ii) with a volume of less than 50 m³;
 - (iii) sited and designed to prevent surface runoff entering the pit; and
 - (iv) designed to prevent animals from gaining access to the pit; and
2. No hazardous substances or agricultural containers are discharged;
3. The discharge is only of refuse produced on the site where the pit is located;
4. No kerbside community or local authority refuse collection is available;
5. When any pit is filled to within 0.5 m of the original land surface, or is no longer used, the contents are covered with soil to a depth of at least 0.5 m or the pit covered with an impermeable lid; and
6. The discharge does not occur:
 - (i) within 50 m of a surface water body, a bore used for water abstraction, the boundary of the site or the Coastal Marine Area;
 - (ii) within a group or community drinking water supply protection area as set out in Schedule 1;
 - (iii) outside of the area marked "Septic tank Suitability – Area A" on the Planning Maps, unless there is at least 3 m of soil or sand between the point of discharge and the highest known groundwater level;
 - (iv) within the Christchurch Groundwater Protection Zone as shown on the Planning Maps; or
 - (v) on a site listed as an archaeological site.

Note: Nothing in this rule prevents a pit being used for both an offal pit and an on-site refuse disposal pit, if the conditions of both rules are complied with.

- 5.32 The use of land for an on-site refuse disposal pit and the associated discharges onto or into land in circumstances where a contaminant may enter water that does not meet one or more of the conditions in Rule 5.31 is a restricted discretionary activity.**

The CRC will restrict discretion to the following matters:

1. The effect of not meeting the condition or conditions of Rule 5.31.
2. The extent to which the proposed activity will prevent or compromise the attainment of the environmental outcomes sought by, or is inconsistent with, the objectives and policies of this Plan relating to human and animal drinking water quality.

Animal and Vegetative Waste

- 5.33 The discharge of solid animal waste, or vegetative material containing animal excrement or vegetative material, including from an intensive farming process or industrial or trade process, into or onto land, or into or onto land in circumstances where a contaminant may enter water is a permitted activity provided the following conditions are met:**

1. The material does not contain any hazardous substance or hazardous waste;
2. The material does not include any waste from a human effluent treatment process; and
3. The material is not discharged:
 - (i) onto the same area of land more frequently than once every two months;
 - (ii) onto land when the soil moisture exceeds field capacity;
 - (iii) within 20 m of a bore used for water abstraction, a surface water body or the Coastal Marine Area; or
 - (iv) within a group or community drinking water supply protection area as set out in Schedule 1.

- 5.34 The discharge of solid animal waste, or vegetative material containing animal excrement or vegetative material, including from an intensive farming process or industrial or trade process, into or onto land, or into or onto land in circumstances where a contaminant may enter water that does not meet one or more of the conditions in Rule 5.33 is a discretionary activity.**

Stock Holding Areas and Animal Effluent

- 5.35 The use of land for a stock holding area, the use of land for the collection, storage and treatment of animal effluent and the subsequent discharge of animal effluent or water containing animal effluent and other contaminants onto or into land where a contaminant may enter water is a restricted discretionary activity, provided the following conditions are met:**

1. The stock holding area, collection, storage and treatment of animal effluent is not within:

- (i) 20 m of a surface water body, a bore used for water abstraction or the Coastal Marine Area;
- (ii) a group or community drinking water supply protection area as set out in Schedule 1; and
- 2. The discharge of animal effluent or water containing animal effluent and other contaminants:
 - (i) is not directly to, or within, 20 m of a surface water body (other than a wetland constructed primarily to treat animal effluent), a bore used for water abstraction or the Coastal Marine Area;
 - (ii) does not occur beyond the boundary of the site;
 - (iii) a group or community drinking water supply protection area as set out in Schedule 1
 - (iv) has backflow prevention installed if the animal effluent or water containing animal effluent is applied with irrigation water; and
 - (v) is not to potentially contaminated land.

The CRC will restrict discretion to the following matters:

- 1. Measures to avoid, mitigate or remedy adverse effects on aquatic ecosystems and human or animal drinking water;
- 2. Measures to store effluent and application rates;
- 3. Methods to store effluent and application rates in times of adverse weather conditions, including frozen ground, or in cases of equipment failure;
- 4. The proximity of any discharge site to any identified site of significant indigenous biodiversity;
- 5. The adequacy of design, construction, systems and management processes to minimise fugitive discharges from the system, including, but not limited to, any design leakage from the stockholding and effluent storage areas, flow paths and mitigation in case of equipment failure or breakage;
- 6. The extent to which the proposed activity is consistent with the objectives and policies of this Plan relating to Ngāi Tahu values, human and animal health and drinking water quality, including Policy 4.11.

5.36 The use of land for a stock holding area, the use of land for the collection, storage and treatment of animal effluent and the subsequent discharge of animal effluent or water containing animal effluent and other contaminants into or onto land where a contaminant may enter water that does not meet one or more of the conditions of Rule 5.35 is a non-complying activity.

Silage Pits and Compost

5.37 The use of land for a silage pit or the stockpiling of other fermenting or decaying organic matter and any associated discharge into or onto land where a contaminant may enter water is a permitted activity provided the following conditions are met:

- 1. The volume of any silage pit or stockpile is less than 20 m³; or

2. The volume of any silage pit or stockpile is greater than 20 m³ and is not sited:
 - (i) within 20 m of a surface water body, the boundary of the site, a bore or the Coastal Marine Area;
 - (ii) within a group or community drinking water supply protection area as set out in Schedule 1; or
 - (iii) within the Christchurch Groundwater Protection Zone as shown on the Planning Maps;
3. Any liquid that drains from the silage pit or stockpile does not enter a surface water body, other than a wetland constructed primarily to treat animal effluent; and
4. Any fermenting or decaying organic matter does not originate from an industrial or trade process.

5.38 The use of land for a silage pit or the stockpiling of other fermenting or decaying organic matter and any associated discharge into or onto land where a contaminant may enter water, that does not meet one or more of the conditions in Rule 5.37 is a restricted discretionary activity.

The CRC will restrict discretion to the following matters:

1. The effect of not meeting the condition or conditions of Rule 5.37.
2. The extent to which the proposed activity will prevent or compromise the attainment of the environmental outcomes sought by, or is inconsistent with, the objectives and policies of this Plan relating to water quality.

Farming

Note: All other rules in this Plan that control discharges, including of nutrients, from farming activities to water or onto or into land in circumstances where nutrients may enter water also have to be complied with. Examples of such rules are Rules 5.29 and 5.30 relating to offal pits.

5.39 Prior to 1 July 2017, the use of land for any farming activity existing at 11 August 2012 and outside of the Lake Zone shown on the Planning Maps, is a permitted activity if the following condition is met:

1. A record of the annual amount of nitrogen loss from the land, for the period from 1 July in one year to 30 June in the following year, calculated using the OVERSEERTM nutrient model, is kept and is provided to the CRC upon request.

5.40 Prior to 1 July 2017, the use of land for a farming activity existing at 11 August 2012 and within the Lake Zone shown on the Planning Maps, is a permitted activity if the following conditions are met:

1. A record of the annual amount of nitrogen loss from the land, for the period from 1 July in one year to 30 June in the following year, calculated using the OVERSEERTM nutrient model;

2. A Farm Environment Plan is prepared and implemented in accordance with Schedule 7;
3. The Farm Environment Plan is externally audited each year for the first three years by a Farm Environment Plan Auditor. Following three consecutive years of full compliance, the audit shall occur once every three years; and
4. A record of the audit compliance grading and the average annual loss of nitrogen for the property is provided to the CRC by 31 August of that year.

5.41 The use of land for a farming activity that does not comply with one or more of the conditions of Rules 5.39 or 5.40 is a restricted discretionary activity.

The CRC will restrict discretion to the following matters:

1. The proposed management practices to avoid or minimise the discharge of nitrogen, phosphorus, sediment and microbiological contaminants to water from the use of land;
2. The potential effects of the land use on surface and groundwater quality, sources of drinking water;
3. The contribution of nutrients from the proposed activity to the nutrient allocation status of the management zone.
4. The extent to which the proposed activity will prevent or compromise the attainment of the environmental outcomes sought by, or is inconsistent with, the objectives and policies of this Plan relating to nutrient management and water quality.

Notification

Pursuant to sections 95A and 95B of the RMA an application for resource consent under this rule will be processed and considered without public or limited notification.

Note that limited notification to affected order holders in terms of section 95F of the RMA will be necessary where relevant, under section 95B(3) of the RMA.

5.42 Prior to 1 July 2017 the use of land for a change to an existing farming activity is a permitted activity if the following conditions are met:

1. The land holder has been granted a water permit, or holds shares in an irrigation company that has been granted a water permit, that authorises irrigation on the land and the land is subject to conditions that specify the maximum amount of nitrogen that may be leached;
2. The property is outside a Lake Zone as shown on the Planning Maps;
3. A record of the annual amount of nitrogen loss from the land, for the period from 1 July in one year to 30 June in the following year, calculated using the OVERSEERTM nutrient model;
4. A Farm Environment Plan is prepared and implemented in accordance with Schedule 7;

5. The Farm Environment Plan is externally audited each year for the first three years by an Farm Environment Plan Auditor. Following three consecutive years of full compliance, the audit shall occur once every three years; and
6. A record of the audit compliance grading and the average annual loss of nitrogen for the property is provided to the CRC by 31 August of that year.

5.43 Prior to 1 July 2017, the use of land for a change to an existing farming activity that does not comply with Condition 1 in Rule 5.42 and is within an area coloured pale blue or green on the Planning Maps is a restricted discretionary activity.

The CRC will restrict the exercise of discretion to the following matters:

1. The proposed management practices to avoid or minimise the discharge of nitrogen, phosphorus, sediment and microbiological contaminants to water from the use of land;
2. The potential effects of the land use on surface and groundwater quality, and sources of drinking water;
3. The contribution of nutrients from the proposed activity to the nutrient allocation status of the management zone.
4. The extent to which the proposed activity will prevent or compromise the attainment of the environmental outcomes sought by, or is inconsistent with, the objectives and policies of this Plan relating to nutrient management and water quality.

5.44 Prior to 1 July 2017, the use of land for a change to an existing farm activity that does not comply with Condition 1 in Rule 5.42 and is within an area coloured orange on the Planning Maps is a discretionary activity.

5.45 Prior to 1 July 2017, the use of land for a change to an existing farm activity that does not comply with Condition 1 in Rule 5.42 and is within an area coloured red or within a Lake Zone shown on the Planning Maps is a non-complying activity.

5.46 From 1 July 2017, the use of land for any farming activity, is a permitted activity if the following conditions are met:

1. The land is outside a Lake Zone shown on the Planning Maps; and
2. The average annual loss of nitrogen does not exceed the rate for the relevant farming activity in Schedule 8; and
3. The annual average loss of nitrogen, averaged over three consecutive years is less than 20 kilograms per hectare a record of the annual amount of nitrogen loss from the land, for the period from 1 July in one year to 30 June in the following year, calculated using the OVERSEERTM nutrient model, is kept and is provided to the CRC upon request; or

4. If the annual average loss of nitrogen, averaged over three consecutive periods from 1 July in one year to 30 June in the following year, is 20 kilograms per hectare or more:
 - (a) a Farm Environment Plan is prepared and implemented in accordance with Schedule 7;
 - (b) the Farm Environment Plan is externally audited each year for the first three years by an Farm Environment Plan Auditor. Following three consecutive years of full compliance, the audit shall occur once every three years; and
 - (c) a record of the audit compliance grading and the average annual loss of nitrogen for the property is be provided to the CRC by 31 August of that year.

5.47 From 1 July 2017, the use of land for any a farming activity that does not meet Condition 2 in Rule 5.46 or where there is no rate for the relevant farming activity specified in Schedule 8 and where the property is within an area coloured pale blue or green on the Planning Maps is a restricted discretionary activity.

The CRC will restrict the exercise of discretion to the following matters:

1. The proposed management practices to avoid or minimise the discharge of nitrogen, phosphorus, sediment and microbiological contaminants to water from the use of land;
2. The potential effects of the land use on surface and groundwater quality, and sources of drinking water;
3. The contribution of nutrients from the proposed activity to the nutrient allocation status of the management zone.
4. The extent to which the proposed activity will prevent or compromise the attainment of the environmental outcomes sought by, or is inconsistent with, the objectives and policies of this Plan relating to nutrient management and water quality.

5.48 From 1 July 2017, the use of land for any farming activity is a discretionary activity where either:

- a. The activity does not meet Condition 2 in Rule 5.46 or there is no rate for the relevant farming activity specified in Schedule 8 and where the property is within an area coloured orange on the Planning Maps; or
- b. The activity complies with Condition 2 but not Condition 1 in Rule 5.46; or
- c. The activity does not meet Condition 3 or 4, whichever is relevant, in Rule 5.46.

5.49 From 1 July 2017, the use of land for any a farming activity that does not meet Condition 2 in Rule 5.46 or where there is no rate for the relevant farming activity specified in Schedule 8 and where the property is within an area coloured red or within a Lake Zone shown on the Planning Maps is a non-complying activity.

5.50 The discharge of nutrients onto or into land in circumstances that may result in a contaminant entering water that would otherwise contravene s15(1) of the RMA is a permitted activity, provided the following condition is met:

1. The land use activity associated with the discharge is authorised under Rules 5.39 to 5.49.

5.51 The discharge of nutrients onto or into land in circumstances that may result in a contaminant entering water that would otherwise contravene s15(1) of the RMA and does not meet the condition in Rule 5.50 is a discretionary activity.

Fertiliser Use

5.52 The discharge of fertiliser onto or into land in circumstances where a contaminant may enter water is a permitted activity provided the following conditions are met:

1. There is no fertiliser discharged when there is water ponding on the surface of the land; and
2. Fertiliser is not discharged directly into or within 10 m of the bed of a permanently flowing river, lake, artificial watercourse or within 10 m of a wetland boundary or any identified significant indigenous biodiversity site unless the equipment used has a current Spreadmark Certificate, in which case the setback distance is reduced to 5m.

Note: The discharge of fertiliser may also be restricted by Rules 5.39 to 5.51.

5.53 The discharge of fertiliser from an aircraft onto or into land in circumstances where a contaminant may enter water and into any river is a permitted activity provided the following conditions are met:

1. There is no fertiliser discharged when there is water ponding on the surface of the land;
2. The equipment used has a current Spreadmark Certificate;
3. The discharge is be carried out by a person who holds a GROWSAFE® Pilots' Agrichemical Rating Certificate or an AIRCARE™ Accreditation;
4. Fertiliser is not discharged directly into or within 10 m of the bed of a permanently flowing river or artificial watercourse that is more than 2m wide, any lake, or any wetland boundary ;and
5. The flight paths are recorded by an on-board differential global positioning system and this record is kept for at least 12 months following the discharge and made available to the CRC upon request.

Note: The discharge of fertiliser may also be restricted by Rules 5.39 to 5.51.

5.54 The discharge of fertiliser onto land, or onto or into land in circumstances where a contaminant may enter water that does not meet one or more of the conditions in Rule 5.52 or rule 5.53 is a discretionary activity.

Land Drainage Water

5.55 The discharge of water that may contain contaminants from sub-surface or surface drains into an artificial watercourse, constructed wetland or into or onto land is a permitted activity provided the following conditions are met:

1. The discharge into an artificial water course or constructed wetland,²⁴⁶ beyond the Mixing Zone as defined in Schedule 5, does not:
 - (a) produce conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or
 - (b) produce any conspicuous change in the colour or visual clarity; and
2. The discharge does not:
 - (a) occur within a group or community drinking water supply protection area as set out in Schedule 1;
 - (b) contain any hazardous substance or hazardous waste; or
 - (c) originate from or enter potentially contaminated land.

5.56 The discharge of water that may contain contaminants from sub-surface or surface drains into an artificial watercourse, constructed wetland or into or onto land that does not meet one or more of the conditions of Rule 5.55 is a discretionary activity.

5.57 The discharge of water that may contain contaminants from sub-surface or surface drains into a river, lake or natural wetland is a permitted activity provided the following conditions are met:

1. The discharge of land drainage water is only from a drainage system, the full spatial extent of which existed at 3 July 2004;
2. The concentration of:
 - (a) total suspended solids in the discharge does not exceed 50 grams/m³; and
 - (b) un-ionised hydrogen sulphide in the discharge does not exceed 0.005 grams/m³;
3. The discharge, beyond the Mixing Zone as defined in Schedule 5, does not:
 - (a) produce conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - (b) produce any conspicuous change in the colour or visual clarity; or
 - (c) produce any emission of objectionable odour; and
4. The discharge does not:
 - (a) occur within a group or community drinking water supply protection area as set out in Schedule 1; or
 - (b) contain any hazardous substance or hazardous waste.

5.58 The discharge of water that may contain contaminants from sub-surface or surface drains into a river, lake or natural wetland that does not meet the conditions of Rule 5.57 is a discretionary activity.

²⁴⁶ 245.52 Fulton Hogan Canterbury Ltd, 282.34 The Canterbury Aggregate Producers Group

Cemeteries

- 5.59** The use of land for an existing cemetery, and any ancillary discharge of contaminants into or onto land in circumstances where a contaminant may enter water is a permitted activity.
- 5.60** The use of land for a new cemetery or an extension to an existing cemetery, and any ancillary discharge of contaminants into or onto land in circumstances where a contaminant or water may enter water, is a permitted activity, provided the following conditions are met:
1. Any new cemetery or an extension to an existing cemetery is not located:
 - (a) within 20 m of a surface water body or the Coastal Marine Area;
 - (b) within 50 m of a bore used for water abstraction;
 - (c) within a group or community drinking water supply protection area as set out in Schedule 1;
 - (d) where groundwater is less than 3 m below the ground surface; or
 - (e) within the Christchurch Groundwater Protection Zone as shown on the Planning Maps;
- 5.61** The use of land for a cemetery, and any ancillary discharge of contaminants into or onto land in circumstances where a contaminant or water may enter water, that does not meet one or more of the conditions in Rule 5.60 is a discretionary activity.

Sewerage Systems

- 5.62** The use of land for a community wastewater treatment system and the discharge of sewage sludge, bio-solids and treated sewage effluent from a community wastewater treatment system and the discharge of sewage sludge and bio-solids from a domestic on-site waste water treatment system into or onto land, or into or onto land in circumstances where a contaminant may enter water are discretionary activities.
- 5.63** The use of land for a community wastewater treatment system and the discharge of sewage sludge, bio-solids and treated sewage effluent from a community wastewater treatment system and the discharge of sewage sludge and bio-solids from an on-site waste water treatment system into or onto land, or into or onto land in circumstances where a contaminant may enter water within a group or community drinking water supply protection area as set out in Schedule 1 is a prohibited activity.
- 5.64** The discharge of treated sewage effluent into surface water or a natural wetland is a non-complying activity.

- 5.65** The discharge of untreated sewage onto or into land in circumstances where a contaminant may enter water or into surface water, wetland or groundwater, as a result of a spill, overflow, or equipment failure, is a non-complying activity.
- 5.66** The discharge of untreated sewage onto or into land where a contaminant may enter water or into a river, lake, artificial watercourse, wetland or groundwater, except as a result of a spill, overflow, or equipment failure, is a prohibited activity.

Municipal Solid Waste

- 5.67** The discharge of municipal solid waste or hazardous waste into or onto land, or into or onto land in circumstances where a contaminant may enter water and is not categorised as a prohibited activity is a discretionary activity.
- 5.68** The discharge of municipal solid waste into or onto land, or into or onto land in circumstances where a contaminant may enter water, where the discharge is:
- (i)** in the Christchurch Groundwater Protection Zone as shown on the Planning Maps; or
 - (ii)** in a group or community drinking water supply protection area as set out in Schedule 1;
- is a prohibited activity.

Industrial and Trade Wastes

- 5.69** The discharge of any liquid waste²⁴⁷ or sludge waste²⁴⁸ from an industrial or trade process, excluding sewage, into or onto land, or into or onto land in circumstances where a contaminant may enter water is a permitted activity provided the following conditions are met:
- 1. The volume of the discharge does not exceed 10 m³ per day;
 - 2. The discharge is at a rate not exceeding 5 mm per day;
 - 3. The discharge does not:
 - ~~(a)~~ contain any hazardous substance or hazardous waste; or
 - ~~(b)~~ originate on potentially contaminated land;²⁴⁹ and
 - 4. The discharge is not:
 - (a) directly to a surface water body, or within 50 m of a surface water body, a bore used for water abstraction, a dwelling house, school, community facility²⁵⁰ or the Coastal Marine Area;
 - (b) within a group or community drinking water supply protection area as set out in Schedule 1;

²⁴⁷ 169.88 NZTA

²⁴⁸ 169.88 NZTA

²⁴⁹ 99.45 The Fuel Companies 169.88 NZTA

²⁵⁰ 358.43 Ngā Rūnanga

- (c) within the Christchurch Groundwater Protection Zone as shown on the Planning Maps;
- (d) onto or into land over an unconfined or semi-confined aquifer, where the land has less than 0.3 m depth of soil;
- (e) within any area or zone identified in a proposed or operative district plan for residential or commercial purposes;
- (f) within a Nutrient Allocation Zone identified as “At Risk” (Orange) or “Water Outcomes Not Met” (Red) ~~an area coloured orange or red~~²⁵¹ on the Planning Maps, unless the discharge contains no nitrogen.
- (g) onto or into potentially contaminated land.²⁵²

5.70 The discharge of any liquid waste²⁵³ or sludge waste²⁵⁴ from an industrial or trade process, excluding sewage, into or onto land, or into or onto land in circumstances where a contaminant may enter water that does not meet one or more of the conditions in Rule 5.69 is a discretionary activity.

Stormwater

5.71 The discharge of stormwater from a community ~~or network utility operator~~²⁵⁵ stormwater system onto or into land or into or onto land in circumstances where a contaminant may enter water, or into groundwater or a surface water body is a restricted discretionary activity provided the following condition is met:

1. An application for a discharge permit for a discharge that existed at 11 August 2012 must be completed and lodged by 30 June 2016.²⁵⁶

The CRC will restrict discretion to the following matters:

1. The stormwater management plan prepared to address the management of stormwater in the catchment and matters set out in guidance documents prepared by the CRC, and its implementation;
2. The rate and volume of discharge and the changes to the flow regime of a river or artificial watercourse, flood frequency, including flooding of land or dwellings, erosion of river bank and channels;
3. Concentration of contaminants and adverse effects, including cumulative effects on the receiving water quality of surface and groundwater, aquatic ecosystems, Ngāi Tahu cultural values and other existing uses and users of the water, including takes and discharges;
4. Measures to:
 - (a) reduce the volume and concentration of contaminants in the discharge;

²⁵¹ 106.67 CCC

²⁵² 358.43 Ngā Rūnanga

²⁵³ 169.90 NZTA

²⁵⁴ 169.90 NZTA

²⁵⁵ 149.15 New Zealand Institute for Crop and Food Research

²⁵⁶ 86.19 Hurunui District Council

- (b) ensure the volume and rate of discharge do not exceed:
 - (i) the capability of the soil and subsoil layers at the site to reduce contaminant concentrations in the discharge;
 - (ii) the infiltration capacity of the soil and subsoil layers at the site;
 - (c) avoid the accumulation of toxic or persistent contaminants in the soil or subsoil layers; and
 - (d) minimise suspended sediment in stormwater from activities involving earthworks; and
5. The protection of any drinking water sources.

5.72A The discharge of stormwater into a river, lake, wetland or artificial watercourse or onto or into land in circumstances where a contaminant may enter a river, lake or artificial watercourse ~~water~~ is a permitted activity provided the following conditions are met:

- 1. The discharge is into a community ~~or network utility operator~~²⁵⁷ stormwater system; or
- 2. The discharge is not into a community stormwater system, and²⁵⁸
 - (a) The discharge is not from, into or onto potentially contaminated land;
 - (b) The discharge is not into:
 - (i) a water race, as defined in Section 5 of the Local Government Act 2002;
 - (ii) a wetland, unless the wetland is part of a lawfully established stormwater or wastewater treatment system; or
 - (iii) a water body that is Natural State, unless the discharge was lawfully established before 1 November 2013;
 - (c) The discharge does not result in an increase in the flow in the receiving water body at the point of discharge of more than 1% of a flood event with an AEP of 20% (one in five year event);
 - ~~(d) For a discharge of stormwater onto or into land:~~
 - ~~(i) the discharge does not cause stormwater from up to and including a 24 hour duration 2% AEP rainfall event to enter any other property;~~
 - ~~(ii) the discharge does not result in the ponding of stormwater on the ground for more than 48 hours;~~
 - ~~(iii) the discharge is located at least 1 m above the highest groundwater level that can be reasonably inferred for the site at the time the discharge system is constructed;~~
 - ~~(iv) there is no overland flow resulting from the discharge to a surface water body unless via a treatment system or constructed wetland; and~~
 - ~~(v) for a discharge from a roof, the discharge system is sealed to prevent the entry of any other contaminants; and~~²⁵⁹
 - (d) For a discharge of stormwater to surface water:

²⁵⁷ 169.14 NZTA

²⁵⁸ 167.36 CRC

²⁵⁹ 106.70 CCC

- (i) The discharge meets the water quality standards in Schedule 5 after reasonable mixing with the receiving waters, in accordance with Schedule 5;
- (ii) the concentration of total suspended solids in the discharge shall not exceed:
 - (i) 50 g/m³, where the discharge is to any spring-fed river, Banks Peninsula river, or to a lake; or
 - (ii) 100 g/m³ where the discharge is to any other river or to an artificial watercourse; and
- (iii) the discharge to water is not within a group or community drinking water supply protection area as set out in Schedule 1.

5.72B The discharge of stormwater onto or into land where contaminants may enter groundwater is a permitted activity provided the following conditions are met:

1. The discharge is into a community ~~or network utility operator~~²⁶⁰ stormwater system or
2. The discharge is not into a community stormwater system, and²⁶¹
 - ~~2(a)~~ The discharge is not from, into or onto potentially contaminated land;
 - ~~3. (b)~~ The discharge is not into:
 - ~~(a)(i)~~ a water race, as defined in Section 5 of the Local Government Act 2002;²⁶²
 - ~~(b)(ii)~~ a wetland, unless the wetland is part of a lawfully established stormwater or wastewater treatment system; or
 - ~~(c)(iii)~~ a water body that is Natural State, unless the discharge was lawfully established before 1 November 2013;
 - ~~4.(c)~~ The discharge does not result in an increase in the flow in the receiving water body at the point of discharge of more than 1% of a flood event with an AEP of 20% (one in five year event);
 - ~~5.(b)~~ For a The discharge of stormwater onto or into land:
 - ~~(a)(i)~~ the discharge does not cause stormwater from up to and including a 24 hour duration 2% AEP rainfall event to enter any other property;
 - ~~(b)(ii)~~ the discharge does not result in the ponding of stormwater on the ground for more than 48 hours, unless part of the stormwater treatment system,²⁶³
 - ~~(c)(iii)~~ the discharge is located at least 1 m above the highest groundwater level that can be reasonably inferred for the site at the time the discharge system is constructed;
 - ~~(d)(iv)~~ there is no overland flow resulting from the discharge to a surface water body unless via a treatment system or constructed wetland; and
 - ~~(e)(v)~~ for a discharge from a roof, the discharge system is sealed to prevent the entry of any other contaminants. and²⁶⁴
 - ~~6.(c)~~ For a discharge of stormwater to surface water:
 - ~~(a)(i)~~ The discharge meets the water quality standards in Schedule 5 after reasonable mixing with the receiving waters, in accordance with Schedule 5;

²⁶⁰ 169.14 NZTA

²⁶¹ 167.36 CRC

²⁶² 169.91 NZTA

²⁶³ 106.70 CCC

²⁶⁴ 89.48 Bowden Environmental

- ~~(b)(ii) the concentration of total suspended solids in the discharge shall not exceed:~~
- ~~• 50 g/m³, where the discharge is to any spring fed river, Banks Peninsula river, or to a lake; or~~
 - ~~• 100 g/m³ where the discharge is to any other river or to an artificial watercourse; and~~
- ~~(c)(iii) the discharge to water is not within a group or community drinking water supply protection area as set out in Schedule 1.²⁶⁵~~

5.73 The discharge of stormwater into a river, lake, wetland or artificial watercourse or onto or into land in circumstances where a contaminant may enter water that does not meet the conditions of Rule 5.72A and Rule 5.72B²⁶⁶ is a ~~noncomplying discretionary~~²⁶⁷ activity.

Water Tracers

5.74 The discharge of a water tracer to groundwater, a river, lake or artificial watercourse is a controlled activity provided the following conditions are met:

1. The tracers are limited to the following:
 - (a) *Bacillus stearothermophilus* and *Bacillus subtilis* v. *niger*; *Lycopodium* sp. spores;
 - (b) Baker's yeast (*Saccharomyces cerevisia*);
 - (c) Bacteriophages;
 - (d) Rhodamine WT and Fluorescein fluorescent dyes;
 - (e) sodium chloride or potassium chloride; or
 - (f) potassium bromide; and
2. The discharge is not within a group or community drinking water supply protection area as set out in Schedule 1.

The CRC will restrict discretion to the following matters:

1. Duration and timing of the discharge; and
2. The volume and concentration of the tracer and likely effects on water quality, aquatic ecosystems and sources of drinking water.

Notification

Pursuant to sections 95A and 95B of the RMA an application for resource consent under this rule will be processed and considered without public or limited notification.

Note that limited notification to affected order holders in terms of section 95F of the RMA will be necessary, where relevant, under section 95B(3) of the RMA.

5.75 The discharge of a water tracer to groundwater, a river, lake or artificial watercourse that does not meet one or more of the conditions in Rule 5.74 is a discretionary activity.

²⁶⁵ 358.45 Ngā Rūnanga

²⁶⁶ Consequential Amendment – Refer Recommendation R5.72

²⁶⁷ 283.5 Lyttelton Port Company

Other Minor Contaminant Discharges

5.76 Any discharge of water or contaminants onto or into land in circumstances where a contaminant may enter groundwater²⁶⁸ that is not classified by any of the above rules, is a permitted activity, provided the following conditions are met:

1. The volume of the discharge does not exceed 10 m³ per day and the application rate does not exceed 10 mm per day;
2. The discharge is not directly into groundwater;
3. The discharge does not result in any overflow or runoff into any surface water body or onto neighbouring site;
4. The discharge does not, in groundwater, render fresh water unsuitable or unpalatable for consumption by farm animals or humans;
5. The discharge does not contain any hazardous substance, hazardous waste or added radioactive isotope;
6. The discharge does not occur when the soil moisture exceeds field capacity;
7. The discharge is not from potentially contaminated land; and
8. The discharge is not within
 - (a) 50 m of a bore used for water abstraction; or
 - (b) within a group or community drinking water supply protection area as set out in Schedule 1.

5.77 Any discharge of water or contaminants into surface²⁶⁹ water or onto or into land in circumstances where it may enter surface water²⁷⁰ that is not classified by any of the above rules, is a permitted activity, provided the following conditions are met:

1. The discharge is not from potentially contaminated land;
2. The discharge is not into a Natural State water body;
3. The discharge meets the water quality standards in Schedule 5 after reasonable mixing with the receiving waters, in accordance with Schedule 5; and
4. the concentration of total suspended solids in the discharge shall not exceed:
 - (a) 50 g/m³, where the discharge is to any Spring-fed river, Banks Peninsula river, or to a lake; or
 - (b) 100 g/m³ where the discharge is to any other river or to an artificial watercourse.
5. The discharge shall not result in more than a 20% change in the rate of flow of the receiving surface water body.²⁷¹

Advice Note

Any discharge that is not permitted by this rule or is not classified by any other rule in this Plan will require resource consent as a discretionary activity under Rule 5.6.²⁷²

²⁶⁸ 167.37 CRC

²⁶⁹ 167.38 CRC

²⁷⁰ 167.38 CRC

²⁷¹ 167.38 CRC

²⁷² 167.38 CRC

5.X Temporary discharges to land or water within artificial watercourses as part of the maintenance of watercourse structures, are a permitted activity, provided the following conditions are met:

1. The discharge is only of water, sediment, and vegetative matter from within the confines of the artificial watercourse.
2. The discharge does not cause an adverse effect on water outside of the artificial watercourse.²⁷³

Bores

Note: In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy any pre 1900 archaeological sites is subject to the archaeological authority process under the Historic Places Act 1993. An archaeological authority is required from the NZHPT to modify, damage or destroy any archaeological site, whether recorded or not in the NZAA Site Recording Scheme website.²⁷⁴

5.78 From the 1st of November 2013, the use of land, including the bed of a lake or river, for the installation, maintenance and use of a bore, other than a bore for geotechnical investigation, or a water infiltration gallery is a permitted activity provided the following conditions are met:

1. The bore or gallery is installed by a bore driller or bore drilling company that holds a current accreditation under the CRC Bore Installers Accreditation Programme;
2. The bore is not for hydrocarbon exploration or production;
3. The screening of any bore or gallery may only be into a single aquifer or water-permeable zone and all aquifers or water-permeable zones of differing pressure, water quality, or temperature are sealed to prevent the interconnection or movement of groundwater between aquifers or water-permeable zones;
4. Any bore constructed to abstract groundwater is screened to below any minimum water level for the groundwater zone as set out in Sections 6-15 of this Plan;
5. Contaminants or water are prevented from entering the top of the bore or gallery or underlying groundwater by:
 - (a) covering or capping the bore or the above ground portion of the gallery pipe, when not in use;
 - (b) sealing the exterior of the bore (the annulus) with bentonite or concrete grout from ground level to above the screen or 1 m below ground level, whichever is the lesser; and
 - (c) sealing the bore-head or above ground portion of the gallery pipe at ground or pumphouse floor level with a concrete pad of at least 0.3 m radius and 0.1 m thickness which is contoured to slope away from the bore or pipe; and
6. Information on bore or gallery location, bore installation (including bore logs and intended uses), and other relevant information is submitted to the CRC within 20 working days of drilling the bore.

²⁷³ 221.88 Meridian

²⁷⁴ 226.2 NZHPT

7. The bore or gallery is not installed on land that is contaminated or potentially contaminated.²⁷⁵

Note: the “use” of a bore or gallery does not authorise the taking or use of water.

5.79 From the 1st of November 2013, the use of land, including the bed of a lake or river, for the installation, maintenance and use of a bore for geotechnical investigation or monitoring is a permitted activity provided the following conditions are met:

1. For any non-permanent bore, it is decommissioned by filling with clean material and compacted or sealed at the surface to prevent contaminants entering the bore;
2. For any permanent bore, including monitoring bores, contaminants or water are prevented from entering the top of the bore or underlying groundwater by:
 - (a) covering or capping the bore when not in use;
 - (b) sealing the exterior of the bore (the annulus) with bentonite or concrete grout from ground level to above the screen or 1 m below ground level, whichever is the lesser; and
 - (c) sealing the bore-head at ground or pumphouse floor level with a concrete pad of at least 0.3 m radius and 0.1 m thickness which is contoured to slope away from the bore or pipe; and
3. Information on bore ~~or gallery~~²⁷⁶ location, bore installation (including bore logs and intended uses), and other relevant information is submitted to the CRC within 20 working days of drilling the bore.

5.80 From the 1st of November 2013, the use of land, including the bed of a lake or river, for the installation, maintenance and use of a bore or a water infiltration gallery that does not meet one or more of the conditions in Rule 5.78 or 5.79 is a discretionary activity.

Note: the “use” of a bore or gallery does not authorise the taking or use of water.

5.81 The use of land, including the bed of a lake or river, for the installation, maintenance and use of a bore for hydrocarbon exploration or production is a discretionary activity.

5.X From the 1st of November 2013, the use of land, including the bed of a lake or river, for the decommissioning of a bore, other than a bore for geotechnical investigation or a hydrocarbon bore is a permitted activity provided the following conditions are met:

1. The bore is backfilled with inert material and sealed at the surface to prevent any contaminants or surface water from entering the bore;
2. Any bore intercepting groundwater is sealed to prevent the vertical movement of groundwater between aquifers or water bearing layers within an aquifer and to permanently confine the groundwater to the aquifer or water bearing layer within an aquifer, in which it originally occurred.

²⁷⁵ 167.39 CRC

²⁷⁶ 169.95 NZTA

5.Y From the 1st of November 2013, the use of land, including the bed of a lake or river, for the decommissioning of a bore, other than a bore for geotechnical investigation or a hydrocarbon bore, that does not meet one or more of the conditions in Rule 5.X is a discretionary activity.²⁷⁷

5.82 The taking of water from groundwater for the purposes of carrying out bore development or pumping tests and the associated use and discharge of that water is a permitted activity, provided the following conditions are met:

1. The take continues only for the time required to carry out bore development or a pumping test and in any event, the taking does not exceed 120 hours within any 14 day period and total no more than 10 days in any consecutive 12 month period per bore;
2. Any bore development or pumping test is carried out in accordance with Schedule 11;
3. An assessment of interference effects, undertaken in accordance with Schedule 12, does not show that any community, group or private drinking water supply bore will be prevented from taking water; and
4. At the point and time of any discharge to surface water, the rate of flow in the river or artificial watercourse is at least five times the rate of the discharge.

5.83 The taking of water from groundwater for the purposes of carrying out bore development or pumping tests and the associated use and discharge of that water that does not meet one or more of the conditions in Rule 5.82 is a restricted discretionary activity.

The CRC will restrict discretion to the following matter:

1. The effect of not meeting the condition or conditions of Rule 5.82.

Small and Community Water Takes

Interpretation

Note 1: The rules relating to small and community water takes and construction, including road maintenance (Rules 5.84 to 5.93) are the only rules in Section 5 relating to water takes that apply to small and community water takes and construction, including road maintenance. If a small or community water take does not comply with the relevant conditions, then it is considered under the rules for other water takes (Rules 5.96 to 5.106). Specific rules in Sections 6-15 can still over-ride these Section 5 rules.

Note 2: Nothing in this Plan affects an individual's right to take water in accordance with section 14(3)(b) of the RMA.

²⁷⁷ CRC 167.40

Note 3: Wetlands, including the margins of rivers, lakes and artificial watercourses, that are contiguous with a river, lake or artificial watercourse and within the bed of the river, lake or artificial watercourse are not considered wetlands for the purposes of Rules 5.76 to 5.100.

5.84 The take and use of water from a river, lake or an artificial watercourse is a permitted activity provided the following conditions are met:

1. The total take or diversion²⁷⁸ and use per site:
 - (i) is less than the following rates and volumes:

Water body	7DMALF	Rate	Volume per day
River	< 100 L/s	0.5 L/s	2 m ³
River	100 – 500 L/s	2 L/s	10 m ³
River	500 L/s – 10 m ³ /s	5 L/s	20 m ³
River	10 – 20 m ³ /s	5 L/s	50 m ³
River	>20 m ³ /s	5 L/s	100 m ³
Artificial watercourse	N/A	5 L/s	10 m ³
Lakes	N/A	5 L/s	50 m ³

- (ii) for rivers where the 7DMALF is unable to be calculated is at a rate of less than 5 L/s and a maximum volume of 10 m³ per day; and
2. Fish are prevented from entering the water intake as set out in Schedule 2;
3. Where the take or diversion is from a water body with a minimum flow that is set in Sections 6-15, the take or diversion of water for other than an individual's reasonable domestic and stockwater use ceases when the flow is at or below the minimum flow for that water body, as ~~published on~~ measured by the Canterbury Regional Council ~~website~~²⁷⁹;
4. The take is not from any river or part of a river that is subject to a Water Conservation Order;
5. Where the take is from a water race, irrigation or hydro-electricity canal or storage facility, the abstractor holds a current written agreement with the holder of the resource consents for the taking or diversion of water into the water race,²⁸⁰ canal or storage facility; and
6. The take is not from the Avon River/Ōtākaro or Heathcote River or a natural wetland or a hāpua.

5.85 The take and use of water from any river or part of a river that is subject to a Water Conservation Order is a restricted discretionary activity provided the following conditions are met:

²⁷⁸ 89.4 Bowden Environmental

²⁷⁹ 169.98 NZTA

²⁸⁰ 146.64 Ashburton DC

1. The take ~~or diversion~~²⁸¹ is at a rate of less than 5 L/s and a maximum volume of 100 m³ per day;
2. Fish are prevented from entering the water intake as set out in Schedule 2; and
3. The take ~~or diversion~~²⁸² of water for other than an individual's reasonable domestic and stockwater use ceases when the flow is at or below the minimum flow for that water body as set out in the relevant Water Conservation Order.

The Canterbury Regional Council will restrict discretion to the following matter:

1. ~~The provisions of~~²⁸³ ~~Whether the take, in combination with all other takes, complies with the relevant Water Conservation Order.~~

5.86 The taking and using of less than 5 L/s and 10 m³ per day of groundwater is a permitted activity provided the following condition is complied with:

1. The bore, other than a sampling or monitoring bore, is located more than 20 m from the site boundary where that site is in different ownership²⁸⁴, or any surface water body.

5.87 The taking and using of less than 5 L/s and 100 m³ per day of groundwater is a permitted activity provided the following conditions are complied with:

1. The site is more than 20 ha in area; and
2. The bore is located more than 20 m from the site boundary where that site is in different ownership²⁸⁵ or any surface water body.

5.88 The taking and using of water for a ~~group or~~²⁸⁶ community water supply from groundwater or surface water is a restricted discretionary activity provided the following condition is complied with:

There is an operative Water Supply Strategy.

The CRC will restrict discretion to the following matters:

1. The reasonable demand for water, taking into account the size of the community or group, the number of properties and stock that are to be supplied, the uses that are to be supplied and the potential growth in demand for water;
2. The effectiveness and efficiency of the distribution network;
3. The adequacy of the Water Supply Strategy;
4. The effect on other water takes, including reliability of supply;
5. Any beneficial effects from the use of the water; and
6. Compliance with any relevant Water Conservation Order.

²⁸¹ 89.25 Bowden Environmental

²⁸² 89.25 Bowden Environmental

²⁸³ 250.72 TrustPower

²⁸⁴ 89.38 Bowden Environmental

²⁸⁵ 89.39 Bowden Environmental

²⁸⁶ 86.2 Hurunui DC

7. The extent to which the proposed activity is inconsistent with, the Strategic Policies of this Plan.

Note 1: If a small or community water take does not comply with the relevant conditions, then it is considered under the rules for other water takes (Rules 5.96 to 5.106). Specific rules in Sections 6-15 can still over-ride these Section 5 rules.

Note 2: Nothing in this Plan affects an individual's right to take water in accordance with section 14(3)(b) of the RMA.

Water for Construction and Maintenance

5.89 The taking and using of water from a river, lake or an artificial watercourse for infrastructure construction, maintenance and repair is a permitted activity, provided the following conditions are met:

1. The take and use does not exceed 15 L/s and 100 m³ per day;
2. The take and use is for no longer than 2 months;
3. The take does not at any time exceed 10% of the flow at the point of take;
4. Where the take is from a water body with a minimum flow set in Sections 6-15, the take or diversion ceases when the flow is at or below the minimum flow, as published on the CRC website;
5. The take is not from a natural wetland;
6. Fish are prevented from entering the water intake as set out in Schedule 2;
7. Where the take is from ~~an~~ a water race²⁸⁷, irrigation or hydro-electricity canal or storage facility, the abstractor holds a current written agreement with the holder of the resource consents for the taking or diversion of water into the canal or storage facility; and
8. The take is not from any river or part of a river that is subject to a Water Conservation Order.

5.90 The taking and using of water from any river or part of a river that is subject to a Water Conservation Order, for infrastructure construction, maintenance and repair is a restricted discretionary activity.

The CRC will restrict discretion to the following matters:

1. ~~Whether the take, in combination with all other takes complies with~~ The provisions of²⁸⁸ the relevant Water Conservation Order; and
2. The location of the take, the effect on the immediate vicinity and the need for any restriction to prevent the flow from reducing to zero in this vicinity.

²⁸⁷ 146.68 Ashburton DC

²⁸⁸ 250.75 TrustPower

5.91 The taking and using of water from a river, lake or an artificial watercourse for infrastructure construction, maintenance and repair, other than from any river or part of a river that is subject to a Water Conservation Order, that does not meet one or more of the conditions in Rule 5.89 is a discretionary activity.

5.92 The taking of water from groundwater for the purpose of de-watering for carrying out excavation, construction and geotechnical testing and the associated use and discharge of that water is a permitted activity, provided the following conditions are met:

1. The take continues only for the time required to carry out the work but not exceeding 6 months;
2. The discharge is not from, into or onto contaminated or potentially contaminated land. ~~The abstraction is not from site where an activity or industry listed in Schedule 3 has occurred or is occurring~~²⁸⁹
3. The take does not lower the groundwater level more than 8 m below the ground level of the site;
4. The take does not have a moderate, high or direct stream depletion effect on a surface water body, determined in accordance with Schedule 9, unless the abstracted groundwater is being discharged to the surface water body to which it is hydraulically connected;
5. An assessment of interference effects, undertaken in accordance with Schedule 12, does not show that any community, group or private drinking water supply bore will be prevented from taking water;
6. At the point and time of any discharge to surface water, the rate of flow in the river or artificial watercourse is at least five times the rate of the discharge;
7. The concentration of suspended solids in any discharge to a surface water body does not exceed 50g/m³²⁹⁰ ~~100 g/m³~~; and
8. The discharge is not within a group or community drinking water supply protection area as set out in Schedule 1.

5.93 The taking of water from groundwater for the purpose of de-watering for carrying out excavation, construction and geotechnical testing and the associated use and discharge of that water that does not meet one or more of the conditions in Rule 5.92 is a restricted discretionary activity.

The CRC will restrict discretion to the following matter:

1. The effect of not meeting the condition or conditions of Rule 5.92.

Water from Canals or Water Storage

5.94 The taking ~~or use~~²⁹¹ of water from irrigation or hydroelectric canals or water storage facilities is a permitted activity, provided the following conditions are met:

²⁸⁹ 167.43 CRC

²⁹⁰ 169.105 NZTA

1. For the taking of water from a water storage facility, the storage facility is not within the bed of a river; and
2. The site owner or occupier has a written agreement with the owner or manager of the irrigation or hydroelectric canal or water storage facility to take water from the artificial watercourse or water storage facility.

5.95 The ~~taking or use~~ of water from irrigation or hydroelectric canals or water storage facilities that does not meet one or more of the conditions in Rule 5.94, or the use of the water,²⁹² is a discretionary activity.

Take and Use Surface Water

Note: See Sub-regional Sections 6-15 of this Plan or existing catchment-based Regional Plans for location-specific requirements.

5.96 The taking and use of surface water from a river or lake is a restricted discretionary activity, provided the following conditions are met:

1. Unless the proposed take or diversion is the replacement of a lawfully established affected by the provisions of Section 124-124 C²⁹³ of the RMA, the take, in addition to all existing resource consented takes, complies with any rate of take and seasonal or annual volume limits set in Sections 6-15 for that surface water body;
2. Unless the proposed take is the replacement of a lawfully established take affected by the provisions of Section 124-124 C²⁹⁴ of the RMA, if no limits are set in Sections 6-15 for that surface water body, the take, both singularly and in addition to all existing resource consented takes meets a flow regime with a minimum flow of 50% of the 7-day mean annual low flow (7DMALF) as calculated by the CRC and an allocation limit of 20% of the 7DMALF; and
3. The take is not from a natural wetland, hāpua or a high naturalness river that is listed in Sections 6-15.

The CRC will restrict discretion to the following matters:

1. Any effects on water quality, including whether the activity, in combination with all other activities, will alter the water quality allocation status of the relevant catchment;
2. Whether the amount of water to be taken and used is reasonable for the proposed use. In assessing reasonable use for irrigation purposes, the CRC will consider the matters set out in Schedule 10;
3. For water used for irrigation, the management of water allocation and resulting nutrient discharges on individual farms;
4. The potential effects on groundwater recharge where the groundwater allocation zone is fully or over-allocated as set out in Sections 6-15;

²⁹¹ 347.246 Fish & Game

²⁹² 347.246 Fish & Game

²⁹³ 200.146 EDS

²⁹⁴ 200.146 EDS

5. The availability and practicality of using alternative supplies of water;
6. The effects the take or diversion²⁹⁵ has on any other authorised takes or diversions;
7. The potential to frustrate or prevent the attainment of the regional network for water harvest, storage and distribution, shown on the Regional Concept diagram in Schedule 16;
8. The reduction in the rate of take in times of low flow and restrictions to prevent the flow from reducing to zero as set out in policies to this Plan;
9. Whether and how fish are prevented from entering the water intake; and
10. ~~The provisions of~~ Whether the take, in combination with all other takes, complies with a relevant Water Conservation Order²⁹⁶.

5.97 The taking and use of surface water from a river or lake that does not meet condition 2 or 3 in Rule 5.96 is a non-complying activity.

5.98 The taking and use of surface water from a river or lake that does not meet condition 1 in Rule 5.96 is a prohibited activity.

5.99 The non-consumptive²⁹⁷ taking and use of water from a lake, river or artificial watercourse and discharge of the same water to the same lake, river or artificial watercourse is a restricted discretionary activity, provided the following conditions are met:

1. Limits have been set for that surface water body in Sections 6-15 or the lake or river is subject to a Water Conservation Order;
2. The taking of water and subsequent discharge will have no effect on the limits set for that water body in Sections 6-15 or the flow and allocation regime set out in the Water Conservation Order;
3. The maximum distance from the point of take to the point of discharge is not more than 250 m; and
4. The take is not from a natural wetland, hāpua or a high naturalness lake or river that is listed in Sections 6-15.

The CRC will restrict discretion to the following matters:

1. Measures that will ensure the limits are not affected;
2. Whether the amount of water to be taken is reasonable for the intended use;
3. The effects the take has on any other authorised takes or diversions;
4. The potential to frustrate or prevent the attainment of the regional network for water harvest, storage and distribution, shown on the Regional Concept diagram in Schedule 16;
5. The reduction in the rate of take in times of low flow and the need for any additional restrictions to prevent the flow from reducing to zero;

²⁹⁵ 167.42 CRC, 198.37 Irricon, 245.58 Fulton Hogan

²⁹⁶ 250.78 TrustPower

²⁹⁷ 167.45 CRC

6. Whether and how fish are prevented from entering the water intake and/or discharge structure²⁹⁸; and
7. Effects on aquatic ecosystems, in-stream habitat, wetlands, dryland habitats²⁹⁹, sites of significance to Ngāi Tahu and Ngāi Tahu values³⁰⁰, sites of significance to Ngāi Tahu, amenity & recreational values in the area of the river subject to the diversion take³⁰¹; and
8. Effects of both take ~~or diversion and~~ and any subsequent³⁰² discharge on water quality.

5.100 The non-consumptive³⁰³ taking and use of water from a lake, river or artificial watercourse and discharge of the same water to the same lake, river or artificial watercourse that does not meet one or more of the conditions in Rule 5.99 is a non-complying activity.

Take and Use Groundwater

Note: See Sub-regional Sections 6-15 of this Plan or existing catchment-based Regional Plans for location-specific requirements.

5.101 The taking and use of groundwater is a restricted discretionary activity, provided the following conditions are met:

1. The take is from within a Groundwater Allocation Zone on the Planning Maps;
2. Unless the proposed take is the replacement of a lawfully established take affected by the provisions of section 124- 124C³⁰⁴ of the RMA, for stream depleting groundwater takes, the take, in addition to all existing resource consented surface water takes, complies with the limits set in Sections 6-15 for that surface water body in accordance with Schedule 9;
3. Unless the proposed take is the replacement of a lawfully established take affected by the provisions of section 124- 124C³⁰⁵ of the RMA, the seasonal or annual volume of the groundwater take, in addition to all existing resource consented takes, as determined by the method in Schedule 13³⁰⁶ does not exceed the limits for the relevant Groundwater Allocation Zone in Sections 6-15; and
4. The bore interference effects are acceptable, as set out in Schedule 12.

The CRC will restrict discretion to the following matters:

1. Whether the amount of water to be taken and used is reasonable for the proposed use. In assessing reasonable use for irrigation purposes, the CRC will consider the matters set out in Schedule 10;

²⁹⁸ 347.156 Fish & Game

²⁹⁹ 120.194 DOC

³⁰⁰ 358.58 Ngā Rūnanga

³⁰¹ 245.55 Fulton Hogan

³⁰² 245.55 Fulton Hogan

³⁰³ 167.46 CRC

³⁰⁴ 390.9 Canterbury Aoraki Conservation Board

³⁰⁵ 390.9 Canterbury Aoraki Conservation Board

³⁰⁶ 187.98 Synlait Milk Limited, 188.98 Synlait Farms Limited

2. The availability and practicality of using alternative supplies of water;
3. The maximum rate of take, including the capacity of the bore or bore field to achieve that rate, and the rate required to service³⁰⁷ any irrigation system;
4. The effects on surface water resources if the groundwater take is within a surface water catchment where the surface water allocation limit, as set out in Sections 6-15 is fully or over-allocated;
5. The effects the take has on any other authorised takes, including interference effects as set out in Schedule 12;
6. For stream depleting groundwater takes, any reduction in the rate of take in times of low flow and restrictions to prevent the flow from reducing to zero as set out in policies to this Plan; and
7. Whether salt-water intrusion into the aquifer or landward movement of the salt water/fresh water interface is prevented.
8. The proximity of water use to any significant indigenous biodiversity; and³⁰⁸
9. The protection of groundwater sources, including the prevention of backflow of water or contaminants.³⁰⁹

~~**5.102 The taking and use of groundwater where the point of abstraction is outside of a Groundwater Allocation Zone on the Planning Maps is a non-complying activity.**~~³¹⁰

5.103 The taking and use of groundwater that does not meet one or more of conditions 1 and 4 in Rule 5.101 is a non-complying activity.

5.104 The taking and use of groundwater that does not meet one or more of conditions 2 and 3 in Rule 5.101 is a prohibited activity.

5.105 The non-consumptive taking and using of groundwater, including for heating or cooling purposes, and the associated discharge to groundwater, is a permitted activity provided the following conditions are complied with:

1. The discharge of the groundwater is to the same aquifer or groundwater source as the abstraction, and the discharge is within 50 m of the abstraction point;
2. The use of the water is for ~~non-commercial~~ domestic³¹¹ purposes; and
3. No contaminants, other than water of the same or different temperature, enter the groundwater.

5.106 The non-consumptive taking and use of ground water and associated discharge to groundwater of the same ground water to the same aquifer that does not meet one or more of the Conditions in Rule 5.105³¹² is a discretionary activity.

³⁰⁷ 182.10 HydroServices, 390.8 Canterbury Aoraki Conservation Board

³⁰⁸ 167.48 CRC

³⁰⁹ 167.48 CRC

³¹⁰ 89.02 Bowden Environmental

³¹¹ 6.2 Central Heating New Zealand Ltd

Transfer of Water Permits

5.107 The temporary or permanent transfer, in whole or in part, (other than to the new owner of the site to which the take and use of the water relates and where the location of the take and use of water does not change) of a water permit to take or use surface water or groundwater, is a restricted discretionary activity, provided the following conditions are met:

1. The reliability of supply for any other lawfully established water take is not reduced;
2. The seasonal or annual volume of take after the transfer is less than or equal to the volume of take prior to the transfer, or if no seasonal or annual volume has been applied, a seasonal or annual volume is applied in accordance with Schedule 10;
3. In the case of surface water, the point of take remains within the same surface water allocation zone and the take complies with the limits set in Sections 6-15;
4. In the case of groundwater:
 - (a) the point of take is within the same groundwater allocation zone;
 - (b) the bore interference effects as set out in Schedule 12 are acceptable; and
 - (c) in addition for stream depleting groundwater takes:
 - (i) the transfer is within the same surface water allocation zone;
 - (ii) the take complies with the limits set in Sections 6-15; and,
 - (iii) the stream depletion effect is no greater in the transferred location than in the original location; and
5. In a catchment where the surface water and/or groundwater allocation limits set out in Rule 5.96 or Sections 6-15 are exceeded any transferred water is surrendered in the following proportions:
 - (a) 0% in the case of transferring surface water to an irrigation scheme or principle water supplier³¹³ which includes a storage component;
 - (b) 25% in the case of transferring surface water from down-plains to up-plains;
 - (c) 25% in the case of transferring groundwater from up-plains to down-plains; and
 - (d) 50% in all other cases.

The CRC will restrict discretion to the following matters:

1. The nature of the transfer, whether short term, long term, partial or full, and the apportioning of the maximum rate and seasonal or annual volume in the case of a partial transfer;
2. The appropriateness of existing conditions, including conditions on minimum flow, seasonal or annual volume and other restrictions to mitigate effects;
3. The reasonable need for the quantities of water sought, the intended use of the water and the ability of the applicant to abstract and use those quantities;
4. The efficiency of the exercise of the resource consent;
5. The reduction in the rate of take in times of low flow; and

³¹² 167.47 CRC

³¹³ 197.82 RDRML

6. The method of preventing fish from entering any water intake.

Notification

Pursuant to sections 95A and 95B of the RMA an application for resource consent under this rule will be processed and considered without public or limited notification.

Note that limited notification to affected order holders in terms of section 95F of the RMA will be necessary, where relevant, under section 95B(3) of the RMA.

- 5.108 The temporary or permanent transfer, in whole or in part, of a water permit to take or use surface water or groundwater that does not meet one or more of the conditions of Rule 5.107 is a non-complying activity.**

Flow Sensitive Catchments

Note: See Sub-regional Sections 6-15 of this Plan for location-specific requirements.

- 5.109 The replanting after harvest of areas of plantation forest within any flow-sensitive catchment listed in Sections 6-15 is a permitted activity, provided the following conditions are met:**

1. The total area of replanted forest does not exceed the area of forest and replanting of the forest occurs in the same location, or the area as used for a rotation forestry operation, that existed at 1 November 2010; and
2. Any replanting occurs within five years of the removal of the previous forest cover.

- 5.110 The planting of new areas of plantation forest within any flow-sensitive catchment listed in Sections 6-15 is a controlled permitted³¹⁴ activity, provided the forest planting meets the following conditions:**

1. Existing areas of exotic tall vegetation, other than plantation forest, that is greater than 2 m tall and occupies more than 80% of the canopy cover and existed at 1 November 2010 may be planted in plantation forest; and
2. The total area of land planted in plantation forest, ~~other than land planted pursuant to condition 1,~~ does not exceed 2015% of the flow sensitive catchment or sub-catchment listed in Section 6-15 ~~total site area of a certificate of title that existed at 1 November 2010.~~

The Canterbury Regional Council will retain control over the following matter:

1. The provision of information on the location, density and timing of planting.³¹⁵

³¹⁴ 273.4 Rayonier

³¹⁵ 273.4 Rayonier

5.111 The replanting after harvest of areas of plantation forest that does not meet the conditions of Rule 5.109 or the planting of new plantation forest that does not meet one or more of the conditions of Rule 5.110, within any flow-sensitive catchment listed in Sections 6-15 is a restricted discretionary activity.

The CRC will restrict discretion to the following matters:

1. The impacts of forestry planting on the surface water flows in the catchment, including water allocation status, minimum flow or flow regime, in-stream values and authorised takes and use of the water;
2. The impacts of forestry planting on groundwater recharge;
3. The benefits of the forestry for slope stability, erosion control, noxious plant control, water quality, carbon sequestration³¹⁶ and biodiversity protection;
4. The spacing and density, and species of the planting; and
5. The extent to which the proposed activity will prevent or compromise the attainment of the environmental outcomes sought by, or is inconsistent with, the objectives and policies of this Plan.

5.X From the 1st of November 2013, the use of land, including the bed of a lake or river, for the decommissioning of a bore, other than a bore for geotechnical investigation or a hydrocarbon bore is a permitted activity provided the following conditions are met:

1. The bore is backfilled with inert material and sealed at the surface to prevent any contaminants or surface water from entering the bore;
2. Any bore intercepting groundwater is sealed to prevent the vertical movement of groundwater between aquifers or water bearing layers within an aquifer and to permanently confine the groundwater to the aquifer or water bearing layer within an aquifer, in which it originally occurred.³¹⁷

5.X From the 1st of November 2013, the use of land, including the bed of a lake or river, for the decommissioning of a bore, other than a bore for geotechnical investigation or a hydrocarbon bore, that does not meet one or more of the conditions in Rule 5.X is a discretionary activity.³¹⁸

Structures

Note: For all activities in or near waterways, refer also to requirements and restrictions under the Canterbury Flood Protection and Drainage Bylaw 2012.

~~**5.112 Unless specified otherwise in Sections 6-15, wetlands, including the margins of rivers, lakes and artificial watercourses, that are contiguous with a river, lake or artificial watercourse and within the bed of the river, lake or artificial watercourse are not considered wetlands for the purposes of Rules 5.139 to 5.142.³¹⁹**~~

³¹⁶ 191.2 Dr William Rolleston

³¹⁷ CRC 167.40

³¹⁸ 167.40 CRC

³¹⁹ 106.73 CCC

5.113 The placement, use, altering, reconstruction maintenance or removal of pipes, ducts, cables or wires over the bed of a lake or river, whether attached to a structure or not is a permitted activity, provided the following conditions are met:

1. The pipes, ducts, cables or wires ~~run perpendicular to the channel and~~³²⁰ do not prevent access to or over the bed or to lawfully established structures or defences against water, including flood protection works, or to flood control vegetation,³²¹
2. The activity is not undertaken in, on, or over the bed of any river or lake listed as a high naturalness lake or river in Sections 6-15, unless the pipes, ducts, cables or wires are attached to an existing structure;
3. ~~If the pipes, ducts, cables or wires are attached to an existing structure, they are attached above the soffit; and~~³²²
4. The pipes, ducts, cables or wires do not obstruct or alter navigation of the lake or river or reduce the flood carrying capacity of the waterway.³²³

5.114 The drilling, tunnelling, or disturbance in or under the bed of a lake or river and the installation, maintenance, or removal of pipes, ducts, cables or wires and associated support structures³²⁴ **is a permitted activity, provided the following conditions are met:**

1. The activity is not undertaken in, on, or under the bed of a lake listed as a high naturalness lake in Sections 6-15 or in an inanga or salmon spawning site listed in Schedule 17³²⁵;
2. The activity does not involve the deposition of any substance, other than bed material, on the bed of a lake or river;
3. The activity is undertaken at a distance greater than 10 m from any dam, weir, bridge, or network utility pole, pylon or flood protection vegetation, 150 m from any water level recorder, 50 m from any flood protection works or closer where there is evidence that permission has been obtained from the owner of the infrastructure or the works are being carried out by or on behalf of the owner³²⁶ ;
4. Within 30 days of the completion of the activity the bed of the lake or river is returned to its original contour;
5. Marker posts are erected for the lifetime of the pipes, ducts, cables or wires; and
6. The works do not occur in flowing water.

Note: The installation of a bore in the bed of a lake or river is controlled in Rule 5.78.

5.115 The installation, extension, use, maintenance or removal of bridges and culverts, ~~including the erection or extension of the structure~~³²⁷ **and the consequential deposition of substances on, in or under the bed of a lake or river, the excavation or other**

³²⁰ 160.28 Timaru District Council

³²¹ 245.68 Fulton Hogan

³²² 221.82 Meridian

³²³ 221.82 Meridian

³²⁴ 127.14 Chorus & Telecom

³²⁵ 347.163 Fish & Game

³²⁶ 199.12 SCIRT

³²⁷ 358.64 Nga Runanga

disturbance of the bed of a lake or river, and, in the case of culverts, the associated take, discharge or diversion of water is a permitted activity, provided the following conditions are met:

1. Any ~~substance~~ material³²⁸ deposited in, on, under or over the bed of a lake or river in order to construct or maintain the structure is of inert materials of colour and material type that blends with the surrounding natural environment and does not contain or is not coated with any hazardous substance;
2. The activity is undertaken at a distance greater than 10 m from any dam, weir, bridge, or network utility pole, pylon or flood protection vegetation, 150 m from any water level recorder, 50 m from any flood protection works or closer where there is evidence that permission has been obtained from the owner of the infrastructure or the works are being carried out by or on behalf of the owner³²⁹;
3. The works do not occur in flowing water;
4. Other than the maintenance of a structure outside the spawning season and the use of a structure³³⁰ the activity is not undertaken in an inanga or salmon spawning site listed in Schedule 17;
5. Upon completion of the activity:
 - (a) any area of the bed of a lake or river which has been disturbed is returned to as near as practicable to its original state;
 - (b) any excavated areas are left with battered slopes not steeper than 3:1 slope angle (3 horizontal to 1 vertical) and any flow channels disturbed during the activity are reinstated;
6. For any permanent culvert:
 - (a) the maximum length is 25 m;
 - (b) the maximum width of the river bed at the point of the crossing is 5 m;
 - (c) the culvert is installed so that the base of the culvert is below bed level to an extent that a minimum of 25% of the internal width of the culvert is below the level of the bed of the river or lake or is covered with water at the estimated 7DMALF;
 - (d) the culvert provides a 50% AEP flood flow capacity without increasing upstream water levels; and
 - (e) the location is not within any urban area or settlement;
7. For any temporary culvert:
 - (a) the maximum width of the river bed at the point of the crossing is 5 m;
 - (b) the culvert is installed at a level no higher than bed level, and no lower than 100 mm below the level of the bed of the river or lake;
 - (c) the culvert is not placed in a water body managed for flood control or drainage purposes unless written approval is obtained from the authority responsible for the waterbody³³¹ ~~it is undertaken by or on behalf of the CRC;~~ and
 - (d) the culvert is not in place for more than four weeks; and

³²⁸ 169.110 NZTA

³²⁹ 125.30 Kaikoura DC

³³⁰ 167.49 CRC

³³¹ 125.30 Kaikoura DC

8. For any bridge:
 - (a) there are no piers within the bed;
 - (b) the bridge and the approaches are designed so that a 5% AEP flood event does not cause any increase in upstream water levels;
 - (c) the soffit (underside) of any bridge is higher than the top of the river bank, and at least 500 mm above the 5% AEP flood level; and
 - (d) the bridge abutments are constructed parallel to the flow.
9. The works or structures do not impede any existing fish passage.³³²

5.116 The installation, maintenance, use and removal of defences against water flood protection works³³³, and including the associated deposition of substances on, in or under the bed of a lake or river and excavation associated diversions and discharges³³⁴ of sediment or other disturbance of the bed of a lake or river is a permitted activity, provided the following conditions are met:

1. The activity does not prevent access in any way to lawfully established structures, including defences against water³³⁵ ~~flood protection works, or to flood control vegetation;~~
2. Other than for the use of flood protection work³³⁶ the activity is not in, on, or under the bed of any river or lake listed as a high naturalness lake or river in Sections 6-15 or site in Schedule 17;³³⁷ and
3. The activity is undertaken by or on behalf of a local authority or a network utility operator in accordance with ~~flood protection~~ plan that has been certified by the CRC as being in accordance with the CRC's River Engineering Section Quality and Environmental Management System Manual (March 2010) ~~by the CRC.~~³³⁸ and
4. The works or structures do not impede any existing fish passage.³³⁹

5.117 ~~For structures, excluding dams, lawfully established prior to the notification of this Plan, the use and maintenance of the structure is a permitted activity provided the following condition is met:~~

The use, maintenance, upgrading and minor alteration of structures, excluding dams, on, in or under the bed of a lake or river are permitted activities provided the following condition are met:³⁴⁰

1. The structures are lawfully established prior to notification of this Plan³⁴¹
2. Any substance material³⁴² deposited in, on, under or over the bed in order to maintain the structure is of inert materials of colour and material type that blends

³³² 35.7 South Island Eel Industry Association

³³³ 245.71 Fulton Hogan

³³⁴ 167.50 CRC

³³⁵ 245.71 Fulton Hogan

³³⁶ 245.71 Fulton Hogan

³³⁷ 120.210 DOC

³³⁸ 245.71 Fulton Hogan

³³⁹ 35.8 South Island Eel Industry Assn

³⁴⁰ 221.86 Meridian

³⁴¹ Consequential amendment

³⁴² 197.85 RDRML

with the surrounding natural environment, is not contaminated with any hazardous substance. ~~and is not deposited into surface water.~~³⁴³

3. Any upgrading or minor alteration shall not increase the footprint, height, or external envelope of the structure.³⁴⁴

5.118 Notwithstanding any other rule in this Plan, temporary structures and diversions associated with undertaking activities in Rules 5.113 to 5.117 and 5.125 to 5.128~~7~~ or in relation to artificial watercourses³⁴⁵ are permitted activities, provided the following conditions are met:

1. ~~The diversion does not divert more than third of the width of the naturally flowing or standing water body~~³⁴⁶;;
2. The activity is not undertaken in an inanga or salmon spawning site listed in Schedule 17; and
3. The temporary structure and³⁴⁷ diversion is in place for not more than ~~2~~ 4³⁴⁸ weeks in any 12 month period.

5.119 Temporary discharges to water or to land in circumstances where a contaminant may enter water associated with undertaking activities in Rules 5.113 to 5.117 and 5.125 to 5.128~~7~~ or in relation to artificial watercourses³⁴⁹ are permitted activities, provided the following conditions are met:

1. The discharge is only of sediment, organic material³⁵⁰ and water originating from within the bed of the lake or river;
2. The discharge is not undertaken in an inanga or salmon spawning site listed in Schedule 17; and
3. The discharge is not for more than ~~eight~~ ten hours in any 24-hour period, and not more than 40 hours in total in any calendar month.

5.120 The diversion of surface run-off water caused by flooding is a permitted activity, provided the following conditions are met:

1. The activity is undertaken by or on behalf of³⁵¹ a local authority in accordance with a flood protection plan that has been certified as being in accordance with the CRC's River Engineering Section Quality and Environmental Management System Manual (March 2010) by the CRC.

³⁴³ 313.26 Kennaway Park

³⁴⁴ 221.86 Meridian

³⁴⁵ 167.51 CRC

³⁴⁶ 167.51 CRC

³⁴⁷ 358.67 Nga Runanga

³⁴⁸ 306.17 NZ Railways Corporation

³⁴⁹ 167.52 CRC

³⁵⁰ 313.28 Kennaway Park

³⁵¹ 245.74 Fulton Hogan

5.121 Any structure, excluding dams, but including any associated³⁵² diversions and discharges in the bed of a lake or river that does not comply with Rules 5.113 to 5.120 is a discretionary activity.

5.X Where not classified by any other rule in this plan, the diversion or discharge of water as a result of the excavation and disturbance of a river or lake bed, or the establishment of a structure or defence against water, is a discretionary activity.³⁵³

Refuelling in Lake and Riverbeds

5.122 The refuelling of vehicles or equipment in the bed of a lake or river is a permitted activity, provided the following conditions are met:

1. The refuelling of machinery does not take place over the wet bed of a river or lake, or in any area where spills may enter surface water;
2. All refuelling and bulk deliveries are directly supervised by the equipment operator;
3. All mobile plant is refuelled in a designated area, on an impermeable base away from drains or watercourses and if not, drip trays are used; and
4. All non-mobile plant has drip trays or other spill-containment installed.

5.123 The refuelling of vehicles or equipment in the bed of a lake or river that does not meet one or more of the conditions of Rule 5.122 is a discretionary activity.

Gravel from Lake and Riverbeds

Note: For all activities in or near waterways, refer also to requirements and restrictions under the Canterbury Flood Protection and Drainage Bylaw 2012.

Note: In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy any pre 1900 archaeological sites is subject to the archaeological authority process under the Historic Places Act 1993. An archaeological authority is required from the NZHPT to modify, damage or destroy any archaeological site, whether recorded or not in the NZAA Site Recording Scheme website.³⁵⁴

5.124 Sections 124A to 124C do not apply to resource consents to extract gravel from rivers in Canterbury.

³⁵² 256.44 Hunter Downs Irrigation

³⁵³ 256.45 Hunter Downs Irrigation

³⁵⁴ 226.2 NZHPT

5.125 The extraction of gravel from the bed of a lake or river³⁵⁵ including the deposition of substances on the bed and excavation or other disturbance of the bed of a lake or river is a permitted activity, provided the following conditions are met:

1. The activity is not undertaken in, on, or under the bed of any river or lake listed as a high naturalness lake or river in Sections 6-15;
2. No part of the activity occurs within flowing water;
3. The activity does not include the deposition of any substance, other than bed material, on the bed;
4. The volume excavated by any person or on behalf of any person, organisation or corporation:
 - (a) in the bed of any river or lake does not exceed 5 m³ in any 12 consecutive months; or
 - (b) between 1 February and 31 August, in the beds listed in Schedule 14, does not exceed 5 m³ per month and not more than 10 m³ in any 12 consecutive months period; or
 - (c) between 1 February and 31 August, in the beds listed in Schedule 15, does not exceed 10 m³ per month and not more than 20 m³ in any 12 consecutive months period;
5. Any excavated material (other than surplus or reject material) is removed from the bed within 10 days of the material being excavated;
6. The activity is undertaken more than 50 m from any lawfully established dam, weir, culvert crossing, bridge, surface water intake plant or network utility pole or pylon, more than 150 m from any lawfully established water level recorder and more than 5 m of any existing ~~flood control works~~ defences against water³⁵⁶ unless they are the network utility operator responsible for the structure;
7. The activity and any associated equipment, materials or debris does not obstruct or alter access to or the navigation of the lake or river;
8. The activity does not include screening or any other processing of the gravel within the bed of the lake or river; and
9. The activity is not undertaken in an inanga or salmon spawning site listed in Schedule 17.
10. Excavation shall not occur within 100 metres of birds which are nesting or rearing their young in the bed of the river.³⁵⁷

5.126 The extraction of gravel, including the ancillary deposition of substances on the bed and excavation or other disturbance of the bed that complies with all the conditions in Rule 5.125, except with respect to the volume limits, is a permitted activity, provided the following condition is met:

1. The extraction of gravel is undertaken by the CRC or persons acting under written authority of the CRC.

³⁵⁵ 167.53 CRC

³⁵⁶ 282.39 Aggregate Group

³⁵⁷ 159.17 Orari River Protection Group

5.127 Any extraction of gravel from the bed of a lake or river where one or more of the conditions for Rule 5.125 or 5.126 are not met is a discretionary activity.

Dams and Damming

5.128 The damming of water in the bed of a river and the constructing, using, altering, maintaining and operating dam structures within the bed of a river, and the use of land to store water, including any associated ~~damming~~ ³⁵⁸ ~~impounding~~ of water outside the bed of a river or natural lake is a permitted activity, provided the following conditions are met:

1. For the ~~damming~~ ³⁵⁹ ~~impounding~~ of water outside the bed of a river or natural lake:
 - (a) the volume of water stored or impounded is less than 20,000 m³;
 - (b) the maximum depth of water is less than 3 m; and
 - (c) if the volume of water impounded is greater than 1,000 m³, the design and construction of the dam is certified by a Recognised Engineer ~~chartered professional engineer (civil)~~ ³⁶⁰; and
 - (d) the land is not contaminated or potentially contaminated. ³⁶¹
2. For the damming of water in the bed of a river and the constructing, altering, using, maintaining and operating of dam structures within the bed of a river:
 - (a) The volume of water impounded is less than 5,000 m³;
 - (b) The maximum depth of water is less than 3 m;
 - (c) The dam does not impound the full flow of the river;
 - (d) Any existing passage of fish is not impeded;
 - (e) The damming of water does not cause water flow to fail to meet any limits in Sections 6-15 or fall below the minimum flow for the surface water body if the water body is subject to a minimum flow as set out in Sections 6-15;
 - (f) The dam is not located in a river listed as a high naturalness river in Sections 6-15 or in the mainstem of any river; and
 - (g) The damming does not prevent water being taken by any domestic or stock water supply, or reduce the reliability of supply of any existing legally authorised water take.

5.129 The damming of water in the bed of a river and the constructing, using, altering, maintaining and operating structures within the bed of a river, and the use of land to store water, including any associated ~~impounding~~ ³⁶² ~~damming~~ of water outside the bed of a river or natural lake that does not meet the conditions of Rule 5.128 is a discretionary activity, provided the following conditions are met:

1. The damming of water complies with the environmental flow and allocation limits ~~does not cause water flow to fail to meet any limits~~ ³⁶³ set in Sections 6-15;

³⁵⁸ 187.82 Synlait Farms Ltd

³⁵⁹ 187.82 Synlait Farms Ltd

³⁶⁰ 303.1 Valetta Irrigation Limited

³⁶¹ 167.55 CRC

³⁶² 187.82 Synlait Farms Ltd

³⁶³ 250.83 TrustPower

2. ~~The Any new~~³⁶⁴ dam is not located in a river listed as an high naturalness lake or river in Sections 6-15 or in the mainstem of any river; and
3. The damming does not prevent water being taken by any domestic or stock water supply, or reduce the reliability of supply of any existing legally authorised water take.

5.130 The damming of water in the bed of a river, including the associated constructing, using, maintaining and operating structures within the bed of a river that does not comply with one or more of the conditions in Rule 5.129 is a non-complying activity.

5.131 The constructing of a new dam and the damming of water in the bed of a river or lake that results in the natural operating regime or level of a natural lake being altered is a non-complying activity.

5.132 ~~The use and maintenance of a structure in the bed of a river associated with lawfully established dam hydroelectricity power scheme~~³⁶⁵ that existed on 1 November 2013 is a controlled activity.

The CRC reserves control over the following matters:

1. The maintenance of, or improvement of, fish passage;
2. The risk of dam failure;
3. Whether and how fish are prevented from entering any intake structures;
4. Passage of flood waters.

Stock exclusion from waterbodies

5.133 The use and disturbance of the bed of a lake or river or a wetland by outdoor intensively farmed livestock for temporary or permanent stocking or temporary access is a prohibited activity.

5.134 The use and disturbance of the bed of a lake or river or a wetland by cattle or farmed deer for temporary or permanent stocking is a prohibited activity in the following areas:

1. In an inanga or salmon spawning site listed in Schedule 17;
2. Within 1000 m upstream of a group or community water supply intake as listed in Schedule 1;
3. Within 1000 m upstream in the bed of a lake or flowing river of a fresh water bathing site listed in Schedule 6; or
4. In a bed of a Spring-fed plains river.

³⁶⁴ 250.83 TrustPower

³⁶⁵ 270.64 Fonterra, 221.34 Meridian

5.135 The use and disturbance of the bed of a lake, river or wetland for temporary or permanent stocking or temporary access and any associated discharges is a permitted activity, provided the following conditions are met:

1. The use or disturbance is not a prohibited activity under Rules 5.133 or 5.134
2. The disturbance by livestock shall not, outside the Mixing Zone cause:
 - (i) a conspicuous change in colour or clarity of the water;
 - (ii) the concentration of *Exherichia coli* to exceed 550 *E.coli* per 100 millilitres;
3. The disturbance shall not result in the following effects being clearly visible in or on the bed, including the banks of a river or lake:
 - (i) pugging or trampling of the land; or
 - (ii) areas of bare ground; and
4. The disturbance of a wetland shall not result in:
 - (i) a conspicuous change in colour or clarity of the water;
 - (ii) any clearly visible pugging or trampling of land.

5.136 The use and disturbance of a bed of a lake, river or wetland for a permanent stock crossing point and any associated discharges is a permitted activity, provided the following conditions are met:

1. The use or disturbance is not a prohibited activity under Rules 5.133 or 5.134;
2. The crossing point is not more than 20 m wide;
3. The crossing point is perpendicular to the direction of water flow, except where this is impracticable owing to the natural contours of the riverbed or adjoining land;
4. The crossing point aligns with a constructed track or raceway on either side of the crossing point;
5. The crossing point does not obstruct the passage of fish;
6. The approaches to the crossing shall be located, constructed and maintained to ensure that the parts of the crossing approaching the area of the bed covered by water under low flow conditions are underlain by compacted gravel or some other material with an equivalent or better stability against erosion.

5.137 The use and disturbance of the bed of a lake or river or a wetland for temporary or permanent stocking and any incidental discharges that does not comply with one or more of conditions 2 to 4 in Rule 5.135, and for a permanent stock crossing point that does not comply with one or more of conditions 2 to 6 in Rule 5.136, is a discretionary activity.

Wetlands

5.138 Unless specified otherwise in Sections 6-15, wetlands, including the margins of rivers, lakes and artificial watercourses, that are contiguous with a river, lake or artificial watercourse and within the bed of the river, lake or artificial watercourse are not considered wetlands for the purposes of Rules 5.139 to 5.142.

5.139 The enhancing, restoring or creating of a wetland, including the associated taking, use, damming³⁶⁶ or diversion of water from groundwater or surface water, and discharge of excess or overflow water from the wetland into surface water is a permitted activity if the following conditions are met:

1. The taking, use, damming³⁶⁷ or diversion of water is from within the site, and is at a maximum rate of 5 L/s and 100 m³ per day;
2. ~~Fish passage is not restricted;~~³⁶⁸
3. The taking of water is non-consumptive, is discharged back into the same waterbody ~~river~~³⁶⁹ and complies with any limits in Sections 6-15 of this Plan or any other Regional Plan for the relevant water body; and
4. The taking of water does not prevent water being taken by any domestic or stock water supply.

5.140 The enhancing, restoring or creating a wetland that does not comply with one or more of the conditions in Rule 5.139 is a discretionary activity.

5.141 Reducing the area of a natural wetland associated with the provision of infrastructure for transport, electricity or water distribution or reticulation, including vegetation clearance and earthworks³⁷⁰ and the taking, use, damming or diversion (including draining) of water and the associated discharge of any water onto land or into a river, lake, artificial watercourse or wetland is a restricted discretionary activity.

The CRC will restrict discretion to the following matters:

1. The practicality of avoiding the natural wetland, including alternative routes or methods;
2. The ecological significance of the wetland, and the potential for adverse effects on the significant values of the wetland; and
3. Any off-setting of effects through the enhancement or creation of additional wetland area;~~and~~
4. The magnitude of reduction in area of natural wetland; and³⁷¹

³⁶⁶ 169.119 NZTA

³⁶⁷ 169.119 NZTA

³⁶⁸ 120.235 DOC

³⁶⁹ 167.56 CRC

³⁷⁰ 221.97 Meridian

³⁷¹ 200.157 EDS

5. The extent to which the proposed activity will prevent or compromise the attainment of the environmental outcomes sought by, or is inconsistent with, the objectives and policies of this Plan.

5.142 Reducing the area of a natural wetland by the taking, use, damming or diversion (including draining) of water or other means, including vegetation clearance, cultivation³⁷², burning or earthworks, except as provided for in Rule 5.141 is a non-complying activity.

Vegetation in Lake and Riverbeds

Note: For all activities in or near waterways, refer also to requirements and restrictions under the Canterbury Flood Protection and Drainage Bylaw 2012.

5.143 The introduction or planting of any plant, or the removal and disturbance of existing vegetation in, on or under the bed of a lake or river is a permitted activity, provided the following conditions are met:

1. The activity does not prevent access to lawfully established structures, including flood protection works, or to flood control vegetation;
2. No vegetation used for flood control or bank stabilisation is disturbed, removed, damaged or destroyed except by or on behalf, or with the approval,³⁷³ of the person or agency responsible for maintaining that vegetation for flood control purposes;
3. No woody vegetation is disposed of in, on, over or under the bed of a lake or river;
4. Introduction or planting of vegetation in, on, or under the bed of any lake or river is not of a species listed in the Biosecurity NZ Register of Unwanted Organisms or the Canterbury Pest Management Strategy;
5. Introduction or planting of vegetation in, on, or under the bed of any river or lake listed as a high naturalness lake or river in Sections 6-15 is only of indigenous plant species that naturally occur in the catchment;
6. The disturbance, removal, damage or destroying of any plant or vegetation in, on, or under the bed of any river or lake listed as a high naturalness lake or river in Sections 6-15 is only of ~~species~~³⁷⁴ non-indigenous species;
7. Except for clearance around utilities or existing structures, removal of a species listed in the Biosecurity NZ Register of Unwanted Organisms or the Canterbury Pest Management Strategy, clearance for the purposes of maintaining existing fence lines, vehicle tracks, firebreaks, drains, ponds, dams or crossings,³⁷⁵ the activity does not occur in an inanga or salmon spawning site listed in Schedule 17; and

³⁷² 167.57 CRC

³⁷³ 221.98 Meridian

³⁷⁴ 120.238 DOC

³⁷⁵ 94.10 Waimakariri DC (consequential change)

8. In a flood control rating district scheme area ~~identified in Schedule 14~~³⁷⁶, the introduction or planting of any plant, is by or on behalf of the person or agency responsible for maintaining that vegetation for flood control purposes.

5.144 The introduction or planting of any plant, or the removal and disturbance of existing vegetation in, on or under the bed of a lake or river that does not comply with one or more of conditions 1, 3 or 5 to 7 of Rule 5.143 is a restricted discretionary activity.

The CRC will restrict discretion to the following matters:

1. The effect of not meeting the condition or conditions of Rule 5.143; and
2. The extent to which the proposed activity will prevent or compromise the attainment of the environmental outcomes sought by, or is inconsistent with, the objectives and policies of this Plan.

5.145 The introduction or planting of any plant, or the removal and disturbance of existing vegetation in, on or under the bed of a lake or river that does not comply with condition 2 of Rule 5.143 is a non-complying activity.

5.146 The introduction or planting of any plant, or the removal and disturbance of existing vegetation in, on or under the bed of a lake or river that does not comply with condition 4 of Rule 5.143 is a prohibited activity.

Earthworks and Vegetation Clearance in Riparian Areas

Note: In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy any pre 1900 archaeological sites is subject to the archaeological authority process under the Historic Places Act 1993. An archaeological authority is required from the NZHPT to modify, damage or destroy any archaeological site, whether recorded or not in the NZAA Site Recording Scheme website.³⁷⁷

5.147 The use of land for vegetation clearance outside the bed of a river or lake or adjacent to a natural wetland boundary but within:

- a. **10 m** ~~20 m~~³⁷⁸ **of the bed of a lake or river or a natural wetland boundary in Hill and High Country land or land shown as High Soil Erosion Risk ~~zoned LH2~~**³⁷⁹ **on the Planning Maps; or**
- b. **5 m** ~~10 m~~³⁸⁰ **of the bed of a lake or river or a natural wetland boundary in land zoned LH1 on the Planning Maps;**

is a permitted activity provided the following conditions are met:

³⁷⁶ 167.58 CRC

³⁷⁷ 226.2 NZHPT

³⁷⁸ 125.45 Kaikoura DC

³⁷⁹ 167.99 CRC

³⁸⁰ 125.45 Kaikoura DC

1. The area of bare ground resulting from vegetation clearance does not exceed 10% of the area within the relevant setback distance in any site at any time, ~~except as a result of pest plant spraying~~³⁸¹;
2. The vegetation clearance is not on land above 900 m above sea level;
3. The felling of trees, or any part of a tree, except where to ensure human safety it is not practicable to do so, is away from any lake, river or wetland and no logs or tree trunks are dragged through or across the bed of a lake or a permanently flowing river, or a wetland;
4. The vegetation clearance does not occur adjacent to³⁸² ~~within 1m of~~ a significant spawning reach for salmon or an inanga spawning area listed in Schedule 17;
5. The vegetation is not flood or erosion control vegetation; and
6. Vegetation clearance associated with recovery activities ~~or the establishment, maintenance or repair of network utilities and fencing~~³⁸³ is not required to meet Conditions 1 and 2.

Note: Refer to the CRC's Erosion and Sediment Control Guidelines for additional guidance on undertaking vegetation clearance activities.

5.148 The use of land for earthworks or cultivation outside the bed of a river or lake or adjacent to a natural wetland boundary but within:

- a. ~~10m 20m~~³⁸⁴ of the bed of a lake or river or a natural wetland boundary in Hill and High Country land and land shown as High Soil Erosion Risk zoned LH2³⁸⁵ on the Planning Maps; or
- b. ~~5m 10m~~³⁸⁶ of the bed of a lake or river or a natural wetland boundary in all other land not shown as High Soil Erosion Risk on the Planning Maps or defined as Hill and High Country land zoned LH1 on the Planning Maps³⁸⁷;

is a permitted activity provided the following conditions are met:

1. The extent of earthworks or cultivation within the relevant setback distances in any property does not at any time exceed:
 - (i) an area of 500 m², or 10% of the area, whichever is the lesser; or
 - (ii) a volume of 10 m³ ~~on Hill and High Country land and land zoned LH2~~³⁸⁸ shown as High Soil Erosion Risk on the Planning Maps;
2. Any discharge of sediment associated with the activity into the water in a river, lake, wetland or the Coastal Marine Area does not exceed 8 hours in any 24 hour period, and does not exceed 24 hours in total in any 6 month period;
3. Any cultivation is across the contour of the land;

³⁸¹ 273.7 Rayonier

³⁸² 120.242 DOC

³⁸³ Because of the recommended change to the definition of vegetation clearance, the inclusion of these terms is no longer appropriate.

³⁸⁴ 125.45 Kaikoura DC

³⁸⁵ 167.99 CRC

³⁸⁶ 125.45 Kaikoura DC

³⁸⁷ 167.61 CRC

³⁸⁸ 167.99 CRC

4. ~~Any trenches excavated for infrastructure are back-filled and compacted within 10 days of being excavated;~~³⁸⁹;
5. The activity does not occur ~~adjacent to~~ ^{within}³⁹⁰ a significant spawning reach for salmon or an inanga spawning area listed in Schedule 17;
6. Any earthworks or cultivation is not within 5 m of any flood control structure; and
7. Earthworks associated with recovery activities or the establishment, maintenance or repair of network utilities and fencing is not required to meet Conditions 1, ~~or 2~~ ^{or 6}.³⁹¹.

5.149 Vegetation clearance, earthworks or cultivation outside the bed of a river or lake or adjacent to a wetland boundary but within:

1. ~~10 m~~ ^{20 m}³⁹² of the bed of a lake or river or a natural wetland boundary in Hill and High Country land and land shown as High Soil Erosion Risk zoned LH2³⁹³ on the Planning Maps; or
2. ~~5 m~~ ^{10 m}³⁹⁴ of the bed of a lake or river or a natural wetland boundary in all other land not shown as High Soil Erosion Risk on the Planning Maps or defined as Hill and High Country land zoned LH1 on the Planning Maps³⁹⁵;

that does not comply with the conditions in Rules 5.147 or 5.148 is a restricted discretionary activity.

The CRC will restrict its discretion to the following matters:

1. For forest harvesting, the harvesting method, location of haulage and log handling areas, access tracks, and sediment control;
2. The potential for adverse effects on soil quality or slope stability;
3. The potential for adverse effects on the quality of water in rivers, lakes, wetlands or the sea;
4. The potential for adverse effects on areas of natural character, outstanding natural features or landscapes, areas of significant indigenous vegetation and significant habitats of indigenous fauna, mahinga kai areas or sites of importance to Tangata Whenua;
5. The potential for adverse effects on the banks or bed of a water body or on its flood carrying capacity; and
6. The potential for adverse effects on transport networks, neighbouring properties or structures.

Vegetation Clearance and Earthworks in Erosion-prone Areas

³⁸⁹ 106.78 CCC

³⁹⁰ 120.242 DOC

³⁹¹ 199.14 SCIRT

³⁹² 125.45 Kaikoura DC

³⁹³ 167.99 CRC

³⁹⁴ 125.45 Kaikoura DC

³⁹⁵ 167.62 CRC

- 5.150 Within the area shown as High Soil Erosion Risk on ~~Area LH2 of~~³⁹⁶ the Planning Maps and outside any riparian margin, the use of land for:**
- a. Cultivation or spraying of slopes less than ~~15°~~ 25 degrees³⁹⁷;;**
 - b. Cultivation or spraying on slopes greater than ~~15°~~ 25 degrees³⁹⁸; provided the total area sprayed or cultivated is less than 200 m²;**
 - c. Vegetation clearance of species listed in the Biosecurity NZ Register of Unwanted Organisms or the Canterbury Pest Management Strategy.³⁹⁹**
 - d. Hand clearance and spot spraying of vegetation;**
 - e. Silvicultural practices of release cutting, pruning or thinning to waste and harvesting in accordance with the Environmental Code of Practice for Plantation Forestry (ECOP) 2007~~by suspension systems~~.⁴⁰⁰;**
 - f. Earthworks within a production forest undertaken in accordance with NZ Forest Road Engineering Manual (2012).⁴⁰¹**
 - g. Maintenance of existing firebreaks, roads and tracks and, during a fire emergency, construction of new firebreaks and tracks;**
 - h. Construction of walking tracks no more than 1.5 m wide;**
 - i. Maintenance of existing transport networks;**
 - j. Earthworks and vegetation clearance associated with the establishment, repair or maintenance of pipelines, electricity lines, telecommunication lines and radio communication structures and fences; and**
 - k. Other earthworks where:**
 - i. the volume is less than 10 m³ per site or per hectare (whichever is the greater); and**
 - ii. the maximum depth of cut or fill is ~~less than~~⁴⁰² 0.5 m;**
- is a permitted activity provided the following conditions are met:**
- 1. Any cleared areas are stabilised and where it is not put to its final use shall be revegetated within 6 months from the date of the commencement of the vegetation clearance or earthworks;**
 - 2. Any cultivation is across the contour of the land;**
 - 3. When firebreaks, roads, or tracks are constructed or maintained the maximum depth of cut or fill is 0.5 m; and ~~or exotic forest harvesting is carried out, culverts and stormwater controls are installed and maintained to lead water via a channel into an existing watercourse~~⁴⁰³**
 - 4. the concentration of total suspended solids in the discharge shall not exceed:**
 - (a) 50 g/m³, where the discharge is to any Spring-fed river, Banks Peninsula river, or to a lake; or**
 - (b) 100 g/m³ where the discharge is to any other river or to an artificial watercourse.**

³⁹⁶ 167.99 CRC

³⁹⁷ 16.33 Mr Ross Little

³⁹⁸ 16.33 Mr Ross Little

³⁹⁹ 214.54 LINZ

⁴⁰⁰ 238.7 SRS New Zealand Limited

⁴⁰¹ 238.7 SRS New Zealand Limited

⁴⁰² Removal of redundant words

⁴⁰³ 120.245 DOC

Note: Refer to the CRC's Erosion and Sediment Control Guidelines for additional guidance on undertaking vegetation clearance activities.

- 5.151 Within the area shown as High Soil Erosion Risk Area ~~LH2~~⁴⁰⁴ on the Planning Maps and outside any riparian margin, the use of land for vegetation clearance, cultivation and earthworks that does not comply with the conditions in Rules 5.150 is a restricted discretionary activity.**

The CRC will restrict its discretion to the following matters:

1. The potential for adverse effects on soil quality or slope stability;
2. The potential for adverse effects on the quality of water in rivers, lakes, wetlands or the sea;
3. The potential for adverse effects on areas of natural character, outstanding natural features or landscapes, areas of significant indigenous vegetation and significant habitats of indigenous fauna, mahinga kai areas or sites of importance to Tangata Whenua;
4. The potential for adverse effects on a natural wetland or the banks or bed of a water body or on its flood carrying capacity;
5. The potential for adverse effects on transport networks, neighbouring properties or structures;
6. In addition, for forest harvesting, the harvesting method, location of haulage and log handling areas, access tracks, and sediment control; and
7. The extent to which the proposed activity will prevent or compromise the attainment of the environmental outcomes sought by, or is inconsistent with, the objectives and policies of this Plan.

- 5.152 Within the Hill and High Country, the use of land for the burning of vegetation is a permitted activity provided the following conditions are met:**

1. Burning does not occur within 10 m ~~20 m~~⁴⁰⁵ of the bed of a river where the wetted bed is more than 2 m wide⁴⁰⁶ or lake or a natural wetland boundary;
2. Within an area to be burnt:
 - (a) the extent of bare ground is less than 20%;
 - (b) the slope is less than 35 degrees⁴⁰⁷; and
 - (c) the land is less than 900 m above mean sea level;
3. The person undertaking the burning has, at least twenty working days prior to commencing the burning, notified the CRC and provided location maps or aerial photographs of the sites to be burnt at a minimum scale of 1:50,000;
4. The same area of land has not had the vegetation burnt within the preceding ten years;
5. The burning is carried out between 1 June and 31 October; and

⁴⁰⁴ 167.62 CRC

⁴⁰⁵ 125.45 Kaikoura DC

⁴⁰⁶ 16.31 Mr Ross Little

⁴⁰⁷ 167.64 CRC

6. The burnt area is either:
 - (a) Spelled from grazing for a minimum of 6 months following burning;
 - (b) Sown with pasture seed within 6 months of burning; or
 - (c) Planted with trees within one year of burning.

5.153 Within the Hill and High Country, the use of land for the burning of vegetation that is not a permitted activity under Rule 5.152 is a controlled activity provided the following condition are met:

1. The burning is not carried out between 15 December and 1 March.
2. Burning does not occur within 10 m of the bed of a river where the wetted bed is more than 2 m wide⁴⁰⁸, lake or natural wetland boundary; and
3. Within an area to be burnt:
 - (a) the extent of bare ground is less than 20%;
 - (b) the slope is less than 35 degrees⁴⁰⁹; and
 - (c) the land is less than 900 m above mean sea level.

The CRC reserves control over the following matters:

1. The boundaries of the area to be burned so as to avoid or reduce any likely adverse effects on water quantity and water quality and to conserve soil on land vulnerable to erosion; and
2. Post burn management measures, including requirements for spelling from grazing, and the quantity and type of seed and fertiliser to be applied, that will encourage restoration of suitable vegetation cover.

Notification

Pursuant to sections 95A and 95B of the RMA an application for resource consent under this rule will be processed and considered without public or limited notification.

Note that limited notification to affected order holders in terms of section 95F of the RMA will be necessary, where relevant, under section 95B(3) of the RMA.

5.154 Within the Hill and High Country, the use of land for the burning of vegetation greater than 1 ha in area that is not provided for as a permitted activity under Rule 5.152 or as a controlled activity under Rule 5.153 is a discretionary activity.

Advice Notes:

The following matters are drawn to the attention of all persons burning vegetation in the Hill and High Country:

1. *The burning in open air of any vegetation remains subject to the requirements of the Forest and Rural Fires Act 1977, territorial bylaws⁴¹⁰, and to any regional rules made under the RMA to control the discharge of contaminants to air.*

⁴⁰⁸ 16.31 Mr Ross Little

⁴⁰⁹ 167.64 CRC

⁴¹⁰ 146.77 Ashburton DC

2. *A consent granted under the RMA does not discharge a person from liability for damage caused by the fire or liability for costs associated with the suppression of wildfires that may result from the controlled burning of vegetation.*⁴¹¹.
3. *Land occupiers wishing to burn vegetation may require further authorisations or agreements, including:*
 - (a) *from the Department of Conservation;*
 - (b) *from the Rural Fire Authority;*
 - (c) *from Commissioner of Crown Lands for burning on Crown pastoral leasehold land;*
 - (d) *from Territorial Local Authorities as determined by rules in their District Plans; and*
 - (e) *from iwi or other organisations responsible for any functions impacting on Sections 6, 7 and 8 of RMA*

Excavation and Deposition over Aquifers

Note: In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy any pre 1900 archaeological sites is subject to the archaeological authority process under the Historic Places Act 1993. An archaeological authority is required from the NZHPT to modify, damage or destroy any archaeological site, whether recorded or not in the NZAA Site Recording Scheme website.⁴¹²

5.155 The use of land to excavate material is a permitted activity, provided the following conditions are met:

1. Over the Coastal Confined Gravel Aquifer System, as shown on the Planning Maps:
 - (a) there is more than 1 m of undisturbed material between the deepest part of the excavation and Aquifer 1; and
 - (b) if more than 100 m³ of material is excavated, the excavation does not occur within 50m of any surface waterbody;
2. Over an unconfined or semi-confined aquifer:
 - (a) the volume of material excavated is less than 100 m³; or
 - (b) the volume of material excavated is more than 100 m³ and:
 - (i) there is more than 1 m of undisturbed material between the deepest part of the excavation and the seasonal high water table level; and
 - (ii) the excavation does not occur within 50m of any surface waterbody.⁴¹³

5.156 The use of land to excavate material that does not comply with the conditions of Rule 5.155 is a restricted discretionary activity.

The Canterbury Regional Council will restrict its discretion to the following matters:

1. The potential for adverse effects on the quality of water in aquifers, rivers, lakes, wetlands or the sea and mitigation measures;
2. The remediation or long-term treatment of the excavation;

⁴¹¹ 146.77 Ashburton DC

⁴¹² 226.2 NZHPT

⁴¹³ 167.27 CRC 154.24 NZDF

3. The protection of the confining layer and maintaining levels and groundwater pressures in any confined aquifer, including any alternative methods or locations for the excavation;
4. The need for and benefits from the excavation; and
5. The management of any exposed groundwater.⁴¹⁴

~~5.157 The use of land to excavate material in or above the Coastal Confined Gravel Aquifer System is a permitted activity, provided the following conditions are met:~~

- ~~1. There is not less than 1 m of undisturbed material between the base of the excavation and Aquifer 1; and~~
- ~~2. The excavation does not occur within 50 m of the bed of a permanently or intermittently flowing river, a lake or a wetland boundary.~~

~~5.158 The use of land to excavate material in or above the Coastal Confined Gravel Aquifer System that does not comply with condition 2 of Rule 5.157 is a discretionary activity.~~

~~5.159 The use of land to excavate material in or above the Coastal Confined Gravel Aquifer System that does not comply with condition 1 of Rule 5.157 is a non-complying activity.~~

5.160 The use of land for the deposition of more than 50 m³ of material in any consecutive 12 month period onto land which is excavated to a depth in excess of 5 m below the natural land surface and is located over an unconfined or semi-confined aquifer, where the seasonal high water table⁴¹⁵ ~~highest level of groundwater which can reasonably be expected to occur at the site~~ is less than 5 m ~~30 m~~ below the deepest point in the excavation ~~natural land surface~~⁴¹⁶ is a controlled activity, provided the following conditions are met:

1. The material is only cleanfill;
2. The volume of vegetative matter in any cubic metre of material deposited does not exceed 3%;
3. The material is not be deposited into groundwater;
4. Any cured asphalt deposited is be placed in the land at least 1 m above the highest groundwater level expected at the site; and
5. The material is not deposited on land that is listed as an archaeological site; and⁴¹⁷
6. A management plan shall be prepared in accordance with Section 8.1 and Appendix B of "A Guide to the Management of Cleanfills", Ministry for the Environment, January 2002.

⁴¹⁴ 245.80 Fulton Hogan

⁴¹⁵ 167.28 CRC

⁴¹⁶ 245.182 Fulton Hogan

⁴¹⁷ 358.83 Ngā Rūnanga

- 5.161 The use of land for the deposition of more than 50 m³ of material in any consecutive 12 month period onto land which is excavated to a depth in excess of 5 m below the natural land surface and is located over an unconfined or semi-confined aquifer, where the where the seasonal high water table⁴¹⁸ ~~highest level of groundwater which can reasonably be expected to occur at the site~~ is less than 5 30 m below the deepest point in the excavation⁴¹⁹ that does not comply with the conditions of Rule 5.160 is a restricted⁴²⁰ discretionary activity.**

The Canterbury Regional Council will restrict its discretion to the following matters:

1. The potential for adverse effects on the quality of water in aquifers, rivers, lakes, wetlands or the sea and mitigation measures;
2. The proportion of any material other than cleanfill and its potential to cause contamination; and
3. The content and adequacy of the management plan prepared in accordance with Section 8.1 and Appendix B of "A Guide to the Management of Cleanfills", Ministry for the Environment, January 2002.⁴²¹

Note: In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy any pre 1900 archaeological sites is subject to the archaeological authority process under the Historic Places Act 1993. An archaeological authority is required from the NZHPT to modify, damage or destroy any archaeological site, whether recorded or not in the NZAA Site Recording Scheme website.⁴²²

Hazardous Substances

- 5.162 The use of land for the storage in a portable container and use of a hazardous substance listed in Part A of Schedule 4 is a permitted activity provided the following conditions are met:**

1. The aggregate quantity of specified hazardous substances stored on a site in one or more portable containers does not exceed ~~2,000~~ 5,000⁴²³ litres;
2. The container(s) are located in an area, or a structure, that will contain a leak or spill of the substance and will allow the spilled substance to be collected;
3. Equipment that is suitable to absorb any leak or spill of the substance (a "spill kit") is located with the container(s) at all times, along with instructions on how to use the spill kit;
4. The container(s) are not located within
 - (a) 20 m of a surface water body or a bore;
 - (b) a group or community drinking water supply protection area as set out in Schedule 1; and
5. The container(s) do not remain on a site for more than 90 days in any consecutive 12 month period.

⁴¹⁸ 167.28 CRC

⁴¹⁹ 245.182 Fulton Hogan

⁴²⁰ 150.38 Winstone Aggregates

⁴²¹ 150.38 Winstone Aggregates

⁴²² 226.2 NZHPT

⁴²³ 39.12 Blue Gum Trading Ltd

5.163 The use of land for the storage in a portable container and use of a hazardous substance listed in Part A of Schedule 4 that does not meet one or more of the conditions in Rule 5.162 is a restricted discretionary activity.

The CRC will restrict discretion to the following matters:

1. Measures to avoid:
 - (a) the entry of the substances or associated contaminants into; groundwater, surface water, supplies of drinking water and aquatic ecosystems; and
 - (b) any adverse effect on the current or future use of the water resource, as a result of leakage or spillage of the substance, or a release of the substance as a result of a natural event;
2. Measures to prevent or contain spills or leaks, including site layout and drainage, waste management, emergency management and leak detection;
3. Maintenance and monitoring of the storage or use system including containment measures; and
4. The extent to which the proposed activity will prevent or compromise the attainment of the environmental outcomes sought by, or is inconsistent with, the objectives and policies of this Plan relating to water quality and contaminated land.

5.164 The use of land for the storage, other than in a portable container, and use of a hazardous substance listed in Part A of Schedule 4 is a permitted activity provided the following conditions are met:

1. All hazardous substances on a site are stored and used in accordance with requirements under the Hazardous Substances and New Organisms Act 1996. Evidence of compliance with these requirements shall be made available to the CRC upon request;
2. A current inventory of all hazardous substances on the site is maintained, and a copy of the inventory shall be made available to the CRC or emergency services on request;
3. For hazardous substances stored or held on or over land, all areas or installations used to store or hold hazardous substances are inspected at least once per month or annually if the site is remote and unstaffed⁴²⁴, and repaired or maintained if any defects are found that may compromise the of the hazardous substance;
4. For hazardous substances stored or held in a container located in or under land, ~~stock reconciliation is undertaken:~~
 - ~~(a) — for service stations storing or holding fuel:~~

If the stock reconciliation of product volumes stored in each container located in or under land at a service station shows a discrepancy of greater than 0.5% over three consecutive days or greater than a 1,000 litre loss in a single day, a Product Loss Investigation Procedure shall be implemented immediately. This procedure shall involve the following key steps:

⁴²⁴ 8.1 Chorus and Telecom

- ~~(i) Site Level check, including review of data and calculations and reconciliation actions;~~
 - ~~(ii) Where the cause of concern has not been identified by (i), an Engineering Check of the reconciliation equipment and observation wells;~~
 - ~~(iii) Where the cause of concern has not been identified by (ii), a Container Test;~~
 - ~~(iv) A copy of the procedure shall be kept on site at all times;⁴²⁵~~
 - ~~(a) if there has been any physical loss of product identified by the above procedure, CRC shall be notified within 2 working days unless the loss occurred from a container in any area listed in condition (5), in which case notification shall occur within 24 hours of confirmation of the loss;~~
 - ~~(b) for all other sites storing any hazardous substances: Stock reconciliation is undertaken within 24 hours of a substance being delivered and thereafter on a fortnightly basis. If the stock reconciliation shows a discrepancy for the measurement period of more than 100 litres or 0.5%, whichever is the smaller, the CRC shall be notified within 2 working days unless the loss occurred from a container in any area listed in condition (5), in which case notification shall occur within 24 hours; and⁴²⁶~~
 - ~~(b) records of recent⁴²⁷ stock reconciliations over the past three months⁴²⁸ shall be made available to the CRC upon request. If requested, a copy of the stock reconciliation and the most recent certification of the container shall be provided to the CRC within five working days;~~
5. For substances stored within a group or community drinking water supply protection as set out in Schedule 1:
- (a) all hazardous substances on a site are stored under cover in a facility which is designed, constructed and managed to contain a leak or spill and allow the leaked or spilled substance to either be collected or lawfully disposed of;
 - (b) spill kits to contain or absorb a spilled substance are located with storage facility and use areas at all times and train staff to manage spilled substances; and
6. Except where the storage was lawfully established before 4 July 2004 and the maximum quantity stored has not increased since that date, or the storage relates to transformers and other equipment associated with electricity infrastructure,⁴²⁹ the substances shall not be stored within:
- (a) 20 m of a surface water body or a bore used for water abstraction;
 - (b) 250 m of a known active fault that has a recurrence period of less than 10,000 years, and the land is:
 - (i) over an unconfined or semi-confined aquifer; or
 - (ii) within 50 m of a permanently or intermittently flowing river or a lake.

⁴²⁵ 99.85 Fuel Companies

⁴²⁶ 99.85 Fuel Companies

⁴²⁷ 99.85 Fuel Companies

⁴²⁸ 99.85 Fuel Companies

⁴²⁹ 221.103 Meridian Energy

5.165 The use of land for the storage, other than in a portable container, and use of a hazardous substance listed in Part A of Schedule 4 that does not meet one or more of the conditions in Rule 5.164 is a discretionary activity.

5.166 The use of land for the decommissioning of a container located on,⁴³⁰ in or under land that is or has been used to store a hazardous substance is a permitted activity provided the following condition is met:

1. The information listed in Part B of Schedule 4 is provided to the CRC at least one week before the decommissioning is undertaken, except for item 12, which is to be provided within one month of completion of the report or plan for each phase of the investigation or remediation.

5.167 The use of land for the decommissioning of a container located on,⁴³¹ in or under land that is or has been used to store a hazardous substance that does not meet one or more of the conditions in Rule 5.166 is a discretionary activity.

5.168 The use of land for a site investigation to assess concentrations of hazardous substances that may be present in the soil is a permitted activity provided the following conditions are met:

1. The site investigation is to be undertaken in accordance with Contaminated Land Management Guidelines No. 5: Site Investigation and Analysis of Soils (Ministry for the Environment, ~~February 2004~~ 2011) and reported on in accordance with Section 4 of the Contaminated Land Management Guidelines No. 1: Reporting on Contaminated Sites in New Zealand, (Ministry for the Environment, ~~November 2003~~ 2011)⁴³²; and
2. The person or organisation initiating the site investigation provides a copy of report of the site investigation to the CRC within two months of the completion of the investigation.

5.169 The use of land for a site investigation to assess concentrations of hazardous substances that may be present in the soil that does not meet one or more of the conditions in Rule 5.169 is a restricted discretionary activity.

The CRC will restrict discretion to the following matters:

1. Measures to avoid the dispersal of the substances or associated contaminants onto or into land, and⁴³³ into groundwater, surface water, supplies of drinking water and aquatic ecosystems;
2. Any adverse effect on the current or future use of the land;

⁴³⁰ 167.70 CRC

⁴³¹ 167.70 CRC

⁴³² 167.72 CRC

⁴³³ 167.72 CRC

3. The methodology of the investigation and the associated reporting; and
4. The extent to which the proposed activity will prevent or compromise the attainment of the environmental outcomes sought by, or is inconsistent with, the objectives and policies of this Plan.

Section 16 - Schedules

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Schedule 1 - Group or Community Drinking Water Protection Areas

A Community Drinking Water Supply is a drinking-water supply that is recorded in the drinking-water register maintained by the Chief Executive of the Ministry of Health (the Director-General) under section 69J of the Health Act 1956 that provides no fewer than 501 people with drinking water for not less than 60 days each calendar year.

A Group Drinking Water Supply is a drinking-water supply that provides more than 25– one household but fewer than 501 people with drinking water for not less than 60 days each calendar year.⁴³⁴

The location and details of groundwater wells (including water infiltration galleries) and surface water intakes used as sources of group or community drinking water supplies can be found on the Group or Community Supply Wells and Group or Community Water Supply Protection Zone map layers on the CRC's online GIS mapping website.

Existing group or community drinking water supply wells will have provisional Group or Community Drinking Water Supply Protection Zones (using the method of this schedule) until the relevant resource consent requires replacement.

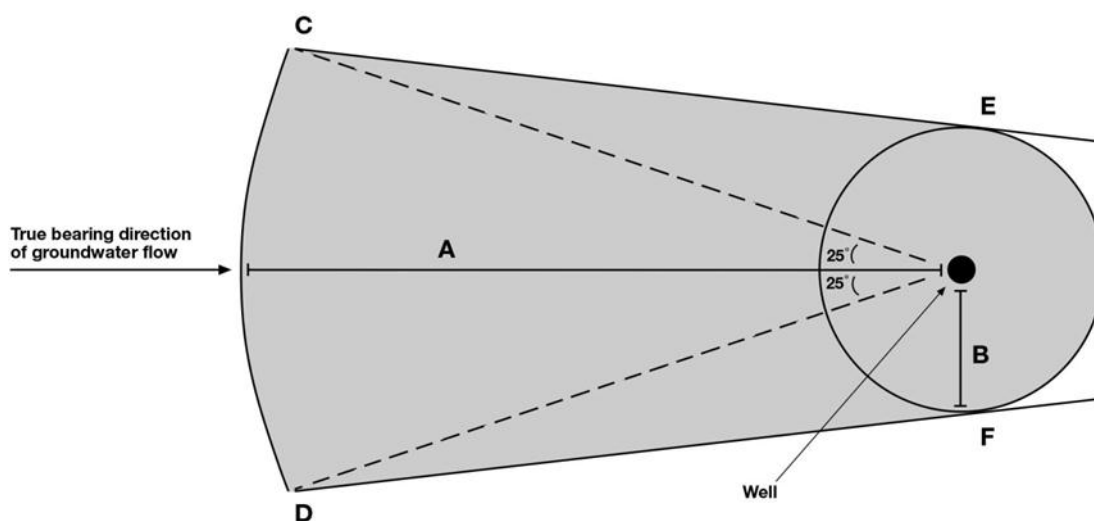
In any resource consent application for a new group or community drinking water supply take and replacement of any existing group or community drinking water supply take, the need for, and extent of, a specific protection zone will be considered. The dimensions of a protection zone around a group or community drinking water supply are to be determined using site specific information, including the depth of the well, pumping rates, the type of aquifer, the types of actual or potential contaminants, and the potential risk to water quality.

All new group or community drinking water supplies and specific protection zones will be added to the Group or Community Supply Wells and Group or Community Water Supply Protection Zone map layers on Environment Canterbury's GIS mapping website.

Existing groundwater group or community drinking water supplies are protected for distances specified in Figure 1A and Table 1A.

⁴³⁴ 86.2 Hurunui DC

Figure 1A Method for calculating the area of a provisional Group or Community Drinking Water Supply Protection Zone.



The area of the protection zone is determined by selecting from the table below depending on the screen depth (or well depth if no screen depth is recorded) and aquifer type.

Table 1A – Protection Areas

Screen Depth (or well depth if no screen depth is recorded)	Aquifer Type	Protection distances (m)	
		Upgradient from the bore (A)	Radius from the bore (B)
<10m ⁴³⁵	All ⁴³⁶	2000 ⁴³⁷	200
10 – 30 m ⁴³⁸	Unconfined or semi confined	1000	200
	Confined	100	100
	Coastal Confined Gravel ⁴³⁹ Aquifer 1	400	400
30 – 70 m	Unconfined or semi confined	500	200
	Confined	100	100
	Coastal Confined Gravel ⁴⁴⁰ Aquifer 1	400	400
> 70 m	Unconfined or semi confined	100	100
	Confined	100	100
	Coastal Confined Gravel ⁴⁴¹ Aquifer 1	400	400

⁴³⁵ 167.80 CRC

⁴³⁶ 167.80 CRC

⁴³⁷ 167.80 CRC

⁴³⁸ 167.80 CRC

⁴³⁹ 167.80 CRC

⁴⁴⁰ 167.80 CRC

⁴⁴¹ 167.80 CRC

Existing surface water group or community drinking water supplies, including galleries, are protected from discharges for the following distances, across the full width of the bed, and within a lateral distance of 50 m from the bed:

Upstream on a river 1000 m

Downstream on a river 100 m

On a lake 500 m radius from the point of take⁴⁴²

⁴⁴² 125.44 Kaikoura DC

Schedule 2 - Fish Screen Standards and Guidelines

1. Where the diversion and take does not exceed a maximum rate of 10 L/s and a maximum volume of 100 m³ per day, a fish screen shall be installed to prevent fish from entering the intake. The fish screen shall be designed to the following standard and kept functional at all times that water is being taken:
 - (a) Water shall only be taken when a fish screen with a mesh size or slot width not exceeding 2 mm for intakes within 2 km of the coast, a coastal lake or estuary, or 3 mm for anywhere else, is operated and maintained across the full width of the intake to ensure that fish and fish fry are prevented from bypassing the screen into the intake; and
 - (b) The screen area shall be designed to ensure the calculated average through screen velocity does not exceed 0.12 m/s (screens should generally be designed to exceed this area to account for some routine level of clogging of the screen with detritus). The required area (m²) of fish screen should exceed = Flow (L/s)/120.

Example: The minimum required fish screen area for a cylindrical screen can therefore be calculated from:

$$\text{Area} = 2\pi r(r + h) \times z$$

Where: $\pi = 3.14159$

r = radius of cylinder (m)

h = length or height of cylinder (m)

z = proportional open mesh area of screen material (i.e. 0.5 for mesh that is 50% open area)

Note: The above formula holds where the screen is fully immersed in water as is usually the case with pump takes. Where this is not the case, the area will need to be adjusted accordingly. Where 50% of the screen may be exposed, then the area calculation will need to be adjusted to half (or multiplied by 0.5), or the actual screen area would need to be doubled (multiplied by 2) in order to achieve the same area immersed. This example makes no allowance for the area taken up by the end of the intake pipe. Where high levels of detritus and other clogging materials are present, screen areas should be increased to account for reduced effective screen area.

2. Where the diversion and take does not exceed a maximum rate of 10 L/s and a maximum volume of 100 m³ per day but does not meet the standards in A(1)⁴⁴³ above; or where the diversion and take exceeds a maximum rate of 10 L/s and a maximum volume of 100 m³ per day and the diversion is less than 10 m³/s or the take is less than 500 L/s pumped, a fish screen shall be installed to prevent fish from entering the intake. The fish screen shall be designed with the following features:

⁴⁴³ 146.84 Ashburton DC

- (a) The site is located as close to the river source as possible to minimise exposure of fish to the fish screen structure, and minimises the length of stream affected while providing the best possible conditions for (b) - (f) below;
 - (b) Water velocity through the screen ("approach velocity") is slow enough (generally <0.12 m/s) to allow fish to escape entrainment (being sucked through or washed over the screen) or impingement (being squashed or rubbed against the screen);
 - (c) Water velocity across (or past) the screen ("sweep velocity") is greater than the approach velocity (b) and is sufficient to sweep the fish past the intake;
 - (d) An effective bypass system is provided that is easily accessible to entrained fish, and fish are taken away from the intake and back into the source channel, or into water which provides the fish with unimpeded passage back into the source channel;
 - (e) Screening material (mesh, profile bars or other) on the screen needs to have a smooth surface and openings that prevent any damage to fish coming into contact with the screening material; and
 - (f) The intake structure and fish screen are operated to a consistent, appropriate standard with appropriate operation and maintenance procedures, and this operation and maintenance should be regularly checked or monitored. A record should be kept of all the maintenance and monitoring carried out.
3. Where the diversion is more than 10 m³/s or the take is more than 500 L/s pumped, in addition to the features listed in B (2)⁴⁴⁴ (a) to (f) above, it will be necessary for the intake to be purpose designed and to consider on a case by case basis whether any additional features will be necessary to ensure fish are prevented from entering the intake.

Notes:

- 1. Submerged galleries (abstracting water vertically) and galleries in river banks (abstracting water horizontally), or behavioural barriers and devices such as those that use light and sound diversions may not meet all of the engineering features set out in B-(2)⁴⁴⁵ above, but shall be considered to comply with them where it is demonstrated that they are able to exclude fish to the same degree of effectiveness.
- 2. In conjunction with a number of stakeholder groups, the CRC has developed good practice guidelines for fish screening in Canterbury. A copy of this guideline can be obtained from the CRC to help in ensuring fish screens are designed, installed and operated to include the features identified in B-(2)⁴⁴⁶ above.

⁴⁴⁴ 146.84 Ashburton DC

⁴⁴⁵ 146.84 Ashburton DC

⁴⁴⁶ 146.84 Ashburton DC

Schedule 3 - Hazardous Industries *and Activities*⁴⁴⁷

A. Chemical manufacture, application and bulk storage

1. Agrichemicals including commercial premises used by spray contractors for filling, storing or washing out tanks for agrichemical application
2. Chemical manufacture, formulation or bulk storage
3. Commercial analytical laboratory sites
4. Corrosives including formulation or bulk storage
5. Dry-cleaning plants including dry-cleaning premises or the bulk storage of dry-cleaning solvents
6. Fertiliser manufacture or bulk storage
7. Gasworks including the manufacture of gas from coal or oil feedstocks
8. Livestock dip or spray race operations
9. Paint manufacture or formulation (excluding retail paint stores)
10. Persistent pesticide bulk storage or use including sport turfs, market gardens, orchards, glass houses or spray sheds
11. Pest control including the premises of commercial pest control operators or any authorities that carry out pest control where bulk storage or preparation of pesticide occurs, including preparation of poisoned baits or filling or washing of tanks for pesticide application
12. Pesticide manufacture (including animal poisons, insecticides, fungicides or herbicides) including the commercial manufacturing, blending, mixing or formulating of pesticides
13. Petroleum or petrochemical industries including a petroleum depot, terminal, blending plant or refinery, or facilities for recovery, reprocessing or recycling petroleum-based materials, or bulk storage of petroleum or petrochemicals above or below ground
14. Pharmaceutical manufacture including the commercial manufacture, blending, mixing or formulation of pharmaceuticals, including animal remedies or the manufacturing of illicit drugs with the potential for environmental discharges
15. Printing including commercial printing using metal type, inks, dyes, or solvents (excluding photocopy shops)
16. Skin or wool processing including a tannery or fellmongery, or any other commercial facility for hide curing, drying, scouring or finishing or storing wool or leather products
17. Storage tanks or drums for fuel, chemicals or liquid waste
18. Wood treatment or preservation including the commercial use of anti-sapstain chemicals during milling, or bulk storage of treated timber outside

B. Electrical and electronic works, power generation and transmission

1. Batteries including the commercial assembling, disassembling, manufacturing or recycling of batteries (but excluding retail battery stores)

⁴⁴⁷ 169.136 NZTA

2. Electrical transformers including the manufacturing, repairing or disposing of electrical transformers or other heavy electrical equipment
3. Electronics including the commercial manufacturing, reconditioning or recycling of computers, televisions and other electronic devices
4. Power stations, substations or switchyards

C. Explosives and ordinances production, storage and use

1. Explosive or ordinance production, maintenance, dismantling, disposal, bulk storage or re-packaging
2. Gun clubs or rifle ranges, including clay targets clubs that use lead munitions outdoors
3. Training areas set aside exclusively or primarily for the detonation of explosive ammunition

D. Metal extraction, refining and reprocessing, storage and use

1. Abrasive blasting including abrasive blast cleaning (excluding cleaning carried out in fully enclosed booths) or the disposal of abrasive blasting material
2. Foundry operations including the commercial production of metal products by injecting or pouring molten metal into moulds
3. Metal treatment or coating including polishing, anodising, galvanising, pickling, electroplating, or heat treatment or finishing using cyanide compounds
4. Metalliferous ore processing including the chemical or physical extraction of metals, including smelting, refining, fusing or refining metals
5. Engineering workshops with metal fabrication

E. Mineral extraction, refining and reprocessing, storage and use

1. Asbestos products manufacture or disposal including sites with buildings containing asbestos products known to be in a deteriorated condition
2. Asphalt or bitumen manufacture or bulk storage (excluding single-use sites used by a mobile asphalt plant)
3. Cement or lime manufacture using a kiln including the storage of wastes from the manufacturing process
4. Commercial concrete manufacture or commercial cement storage
5. Coal or coke yards
6. Hydrocarbon exploration or production including well sites or flare pits
7. Mining industries (excluding gravel extraction) including exposure of faces or release of groundwater containing hazardous contaminants, or the storage of hazardous wastes including waste dumps or dam tailings

F. Vehicle refuelling, service and repair

1. Airports including fuel storage, workshops, washdown areas, or fire practice areas
2. Brake lining manufacturers, repairers or recyclers
3. Engine reconditioning workshops
4. Motor vehicle workshops
5. Port activities including dry docks or marine vessel maintenance facilities

6. Railway yards including goods-handling yards, workshops, refuelling facilities or maintenance areas
7. Service stations including retail or commercial refuelling facilities
8. Transport depots or yards including areas used for refuelling or the bulk storage of hazardous substances

G. Cemeteries and waste recycling, treatment and disposal

1. Cemeteries
2. Drum or tank reconditioning or recycling
3. Landfill sites
4. Scrap yards including automotive dismantling, wrecking or scrap metal yards
5. Waste disposal to land (excluding where biosolids have been used as soil conditioners)
6. Waste recycling or waste or wastewater treatment

H. Any land that has been subject to the migration of hazardous substances from adjacent land in sufficient quantity that it could be a risk to human health or the environment

I. Any other land that has been subject to the intentional or accidental release of a hazardous substance in sufficient quantity that it could be a risk to human health or the environment.⁴⁴⁸

⁴⁴⁸ 106.91 CCC

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Schedule 4 - Hazardous Substances

Part A – Hazardous Substances

Hazardous substance means, unless expressly provided otherwise by regulations, any substance defined in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001 —

- (a) With one or more of the following intrinsic properties:
 - (i) Explosiveness:
 - (ii) Flammability:
 - (iii) A capacity to oxidise:
 - (iv) Corrosiveness:
 - (v) Toxicity (including chronic toxicity):
 - (vi) Ecotoxicity, with or without bioaccumulation; or
- (b) Which on contact with air or water (other than air or water where the temperature or pressure has been artificially increased or decreased) generates a substance with any one or more of the properties specified in paragraph (a) of this definition.

Part B – Decommissioning

Information to be provided:

1. the information required by clauses 8(b)(i) – 8(b)(iii) of the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011;
2. the capacity of the container;
3. the type of specified hazardous substance that is or has been stored in the container;
4. the legal description of the site and the location of the container on the site;
5. the name and address of the person undertaking the decommissioning of the container;
6. the proposed method of decommissioning;
7. the date and approximate time the container is to be decommissioned;
8. the reason for the decommissioning of the container;
9. the destination or proposed use of the decommissioned container;
10. the process for cleaning or decontaminating the container, and the disposal of any residue from this process;
11. the proposed method of backfilling and/or repairing disturbed land as a result of the decommissioning and a description of any backfill materials to be used.
12. a copy of any site assessment report and remedial action plan.

Schedule 5 - Mixing Zones and Receiving Water Standards

Mixing Zones

The area (and underlying volume) of a receiving water where the water quality standards specified for rivers, artificial watercourses and lakes do not have to be met is referred to as the Mixing Zone.

The Mixing Zone, as a result of a point source discharge of a contaminant, is:

1. For river and artificial watercourse locations with flowing water present at all times;
 - (i) no longer than 200 m along the longest axis of the zone, and
 - (ii) occupies no greater than two-thirds of the wetted channel width¹ at the estimated 7DMALF² for that location;
2. For river and artificial watercourse locations, with intermittent flows, no longer than 20 m at times of flow and 0 m at no flow;
3. For lake locations:
 - (a) if the discharge location is within 50m of the lake water edge³ at any time, a circle with a diameter of 50 m; or
 - (b) if the discharge location is greater than 50m from the lake water edge³ at all times, a circle with a diameter of 100 m; and
4. When within a Group or Community Drinking Water Protection Zone, as set out in Schedule 1, 0 m.

Notes:

¹ The wetted channel width is estimated by a suitably experienced and qualified person for the proposed discharge location. For a braided river the wetted channel width is the width of water in the braid receiving the discharge.

² The 7DMALF for a specific location is estimated using a generally accepted calculation method undertaken by a suitably experienced and qualified person.

³ The lake water edge is estimated by a suitably experienced and qualified person for the proposed discharge location at the lowest lake level with a ten year reoccurrence interval.

Receiving Water Standards

(Refer to tables on the following pages).

Table 5A⁴⁴⁹ –Water quality standards for waters not classified as NATURAL

Water quality class	DOC*	Temperature	pH	Visual clarity	Colour	DIN*	DRP*	E. coli*	Toxicants
	Change shall be less than (mg/l)	Average change shall not exceed (°C)	Shall be between (no units)	% change shall not exceed	% change shall not exceed (Munsell units)	Shall be less than (mg/l)	Shall be less than (mg/l)	95% of samples shall be less than (E. coli per 100ml)	Shall not exceed the concentration specified in Table 47.5B ⁴⁵⁰ for the relevant level of protection (see note below)
Rivers and artificial watercourses									
Alpine-upland				20	5	0.08	0.005	260	99%
Alpine-lower						0.18	0.007	550	95%
Hill-fed – upland						0.21	0.006	260	99%
Hill-fed – lower				20	5	0.47	0.006		95%
Hill-fed – lower – urban						0.47	0.006	550	90%
Lake-fed	2.0	2.0	6.5 – 8.5	20	5	0.21	0.003	260	99%
Banks Peninsula				35	10	0.09	0.025	550	99%
Spring-fed - upland				20	5	0.10	0.007	260	99%
Spring-fed - lower basin				35	10	0.47	0.010	550	95%
Spring-fed - plains				35	10	1.50	0.016	550	95%
Spring-fed - plains - urban				20	5	1.50	0.016	550	90%
Lakes									
						TN*	TP*		
Large high country lakes	2.0	2.0	6.5 - 8.5	20	5	0.073	0.004	260	99%
Small to medium high country lakes						0.016	0.009	260	99%
Coastal lakes and lagoons						0.340	0.020	550	95%
Artificial – on-river						0.016	0.009	260	99%
Artificial – other						0.340	0.020	260	95%

Key to Abbreviations

DOC = Dissolved organic carbon
DIN = Dissolved inorganic nitrogen
TN = Total nitrogen

⁴⁴⁹ 167.81 CRC
⁴⁵⁰ 167.83 CRC

DRP = Dissolved reactive phosphorus
TP = Total phosphorus
E. coli = *Escherichia coli*

Table 5B⁴⁵¹ Toxicant water quality standards for all water classes except Class NATURAL

	LEVEL OF PROTECTION (% species)		
	99%	95%	90%
	Narrative Standards		
	Adverse effects on aquatic organisms are less than negligible.	Adverse effects on aquatic organisms are less than minor.	Adverse effects on aquatic organisms are minor.
CHEMICAL	Numerical standards		
	(µg/l)	(µg/l)	(µg/l)
METALS AND METALLOIDS			
Aluminium	27	55	80
Arsenic (As III)	1	24	94
Arsenic (AsV)	0.8	13	42
Boron	90	370	680
Cadmium	0.06	0.2	0.4
Chromium (CrVI)	0.01	1.0	6
Copper	1.0	1.4	1.8
Lead	1.0	3.4	5.6
Manganese	1200	1900	2500
Mercury (inorganic)	0.06	0.06	1.9
Nickel	8	11	13
Selenium (Total)	5	11	18
Silver	0.02	0.05	0.1
Zinc	2.4	8.0	15
NON-METALLIC INORGANICS			
Ammonia (Total N)	320	For values see Table WQ17-1-5C ⁴⁵²	
Chlorine (Total Cl)	0.4	3	6
Cyanide (Unionised, as CN)	4	7	11
Hydrogen sulphide (Un-ionised as S)	0.5	1.0	1.5
AROMATIC HYDROCARBONS			
Benzene	600	950	1300
o-xylene	200	350	470
p-xylene	140	200	250
CHLOROETHANES			
1,1,2-TRICHLOROETHANE	5400	6500	
HEXACHLOROETHANE	290	290	
ANILINES			
ANILINE	8	8	
2,4-DICHLOROANILINE	0.6	7	
3,4-DICHLOROANILINE	1.3	3	
POLYCYCLIC AROMATIC HYDROCARBONS			
Naphthalene	2.5	16	37
NITROBENZENES			
Nitrobenzene	230	550	

⁴⁵¹ 167.82 CRC⁴⁵² 106.92 CCC

NITROTOLUENES			
CHEMICAL	LEVEL OF PROTECTION (% species)		
	99%	95 ⁴⁵³ %	90 ⁴⁵⁴ %
2,4-dinitrotoluene	16	16	
2,4,6-trinitrotoluene	100	140	
CHLOROBENZENES			
1,2-dichlorobenzene	120	160	
1,3-dichlorobenzene	160	260	
1,4-dichlorobenzene	40	60	
1,2,3-trichlorobenzene	3	10	
1,2,4-trichlorobenzene	85	85	
PHENOLS			
Phenol	85	320	
2-chlorophenol	340	340	
4-chlorophenol	160	220	
2,4-dichlorophenol	120	120	
2,4,6-trichlorophenol	3	3	
2,3,4,6- tetrachlorophenol	10	10	
2,4-dinitrophenol	13	45	
PHTHALATES			
Dimethylphthalate	3000	3700	
Diethylphthalate	900	1000	
Dibutylphthalate	9.9	9.9	
MISCELLANEOUS INDUSTRIAL CHEMICALS			
Poly(acrylonitrile-co-butadiene-costyrene)	200	530	
ORGANOPHOSPHORUS PESTICIDES			
Azinphos methyl	0.01	0.02	0.05
Chloropyrifos	0.00004	0.00004	0.11
Diazinon	0.000003	0.01	0.2
Dimethoate	0.1	0.15	0.2
Fenitrothion	0.1	0.2	0.3
Malathion	0.002	0.05	0.2
Carbofuran	0.06	0.06	4
Methomyl	0.5	3.5	9.5
HERBICIDES AND FUNGICIDES			
Diquat	0.01	1.4	10
2,4-D	140	280	450
Molinate	0.1	3.4	14
Thiobencarb	1	2.8	4.6
Thiram	0.01	0.2	0.8
Atrazine	0.7	13	45
Simazine	0.2	3.2	11
Tebuthiuron	0.02	2.2	20
Glyphosate	370	1200	2000
Trifluralin	2.6	2.6	6
SURFACTANTS			
Linear alkylbenzene sulfonates (LAS)	65	280	520
Alcohol ethoxylated sulfate (AES)	340	650	850

⁴⁵³ 167.84 CRC⁴⁵⁴ 167.84 CRC

Alcoholethoxylated surfactants (AE)	50	140	220
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Table 5C Maximum total ammonia concentrations for 95% species protection at different pH⁴⁵⁵

pH	Total Ammonia (N µg/l)
6.0	2570
6.1	2555
6.2	2540
6.3	2520
6.4	2490
6.5	2460
6.6	2430
6.7	2380
6.8	2330
6.9	2260
7.0	2180
7.1	2090
7.2	1990
7.3	1880
7.4	1750
7.5	1610
7.6	1470
7.7	1320
7.8	1180
7.9	1030
8.0	900
8.1	780
8.2	660
8.3	560
8.4	480
8.5	400
8.6	340
8.7	290
8.8	240
8.9	210
9.0	180

⁴⁵⁵ 106.92 CCC

Schedule 6 - Areas on rivers or lakes commonly used for freshwater bathing

Area	River or lake site	Map reference of site	The distance upstream from the site where stock are excluded from the river or lake. (metres)
North Canterbury	Ashley Gorge Picnic Ground	L34:473-752	1000
	Hurunui River SH1	N33:179-121	1000
	Hurunui River SH7	N33:909-150	1000
	Waipara River - Boys Brigade Camp	N34:901-929	1000
	Selwyn - Upper Huts	M36:648-215	1000
	Selwyn - Coes Ford	M36:627-234	1000
	Selwyn - Chamberlains	M36:596-242	1000
	Selwyn - Glentunnel	L35:242-463	1000
Mid Canterbury	Ashburton River/Hakatere - SH1	K37:087-990	1000
	Lake Clearwater	J36:525-315	1000
	Lake Camp	J36:526-310	2000
	Orari Gorge	J37:653-951	1000
South Canterbury	Pareora River - Brasells Bridge	J39:618-371	1000
	Pareora - Pareora Huts	J39:552-422	1000
	Pareora - Evans Crossing	J39:540-437	1000
	Otaio Gorge	J39:454-296	1000
	Waihao - Bradshaws	J40:643-015	1000
	Waihao - Black Hole	J40:479-995	1000
Waitaki catchment	Hakataramea River at the hotel	I40:112-061	1000
	Lake Benmore – Falstone	H39:870-419	1000
	Lake Benmore – Haldon	H39:888-475	1000
	Lake Benmore – Ohau C	H38:772-543	1000
	Lake Benmore – Sailors Cutting	H39:788-250	1000
	Lake Benmore - Glenburn	H39:759-276	1000
	Lake Aviemore – Loch Laird	H39:862-228	1000
	Lake Aviemore - Waitangi	I40:959-192	1000
	Lake Aviemore – Te Akatarawa	I40:933-187	1000
	Lake Ruataniwha – Camping Ground	H38:743-552	1000

Schedule 7 - Farm Environment Plan

A Farm Environment Plan shall be prepared by a person with the appropriate professional qualifications. The plan shall take into account all sources of nutrients used for the farming activity and identify all relevant nutrient management practices and mitigation measures.

The plan requirements will apply to:

1. a plan prepared for an individual property; or
2. a plan prepared for an individual property which is part of a collective of properties, including an irrigation scheme, an Industry Certification Scheme, or catchment club.

Plan requirements

The farm environment plan must clearly identify how when the assigned industry 'good practices' and/or property nutrient allowances will be achieved. The plan shall contain as a minimum:

1. Property details
 - a. Physical address
 - b. Description of the ownership and name of a contact person
 - c. Legal description of the land and farm identifier
2. A map(s) or aerial photograph at a scale that clearly shows:
 - a. The boundaries of the property
 - b. The boundaries of the main land management units on the property.
 - c. The location of permanent or intermittent rivers, streams, lakes, drains, ponds or wetlands.
 - d. The location of riparian vegetation and fences adjacent to water bodies.
 - e. The location of storage facilities, offal or refuse disposal pits, feeding or stock holding areas, effluent blocks, raceways, tracks and crossings.
 - f. The location of any areas within or adjoining the property that are identified in a District Plan as "significant indigenous biodiversity".
3. An assessment of the risks to water quality associated with the major farming activities on the property and how the identified risks will be managed.
4. A description of how each of the following management objectives will, where relevant, be met.
 - a) **Nutrient management:** To maximise nutrient use efficiency while minimising nutrient losses to water in order to meet specified nutrient allowances.
 - b) **Irrigation management:** To operate irrigation systems that are capable of applying water efficiently and management that ensures actual use of water is monitored and is efficient.
 - c) **Soils management:** To maintain or improve the physical and biological condition of soils in order to minimise the movement of sediment, phosphorus and other contaminants to waterways.
 - d) **Wetlands and riparian management:** To manage wetland and waterway margins to avoid damage to the bed and margins of a water body, avoid direct input of nutrients, and to maximise riparian margin nutrient filtering.

- e) **Collected animal effluent management:** To manage the risks associated with the operation of effluent systems to ensure effluent systems are compliant 365 days of the year.
- f) **Livestock management:** To manage wetlands and water bodies so that stock are excluded as far as practicable from water, to avoid damage to the bed and margins of a water body, and to avoid the direct input of nutrients, sediment, and microbial pathogens.

The plan shall include for each management objective;

- a. user defined measurable targets that clearly set a pathway and timeframe for achievement of the objective
 - b. a description of the good management practices together with actions required to achieve the objective and targets.
 - c. the records for measuring performance and achievement of the target.
5. Nutrient budgets are prepared using the OVERSEERTM nutrient budget model, for each of the identified land management units and the overall farm.

Schedule 8 - Industry Derived Nitrogen Discharges

This Schedule is currently blank, but will be established, to articulate industry developed good-practice discharge allowances, and build upon Report No. R10/127 *Estimating nitrate-nitrogen leaching rates under rural land uses in Canterbury*.

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Schedule 9 - Assessment of Stream Depletion Effect

The degree of stream depletion effect shall be determined as follows:

A **direct degree of stream depletion effect** is where the modelled effect of seven days of steady continuous groundwater abstraction on the surface water body is equal to or greater than 90% of that abstraction rate.

A **high degree of stream depletion effect** is where the modelled effect of seven days of steady continuous groundwater abstraction on the surface water body is less than 90% of that abstraction rate but the effect of 150 days of steady continuous groundwater abstraction is greater than or equal to 60% of that abstraction rate.

A **moderate degree of stream depletion effect** is where the effect of 150 days of steady continuous groundwater abstraction on the surface water body is less than 60% but greater than or equal to 40% of that abstraction rate, or the effect of 150 days of continuous steady groundwater abstraction on the surface water body is less than 40% of that abstraction rate but pumping the proposed annual volume over 150 days at a continuous steady rate exceeds 5 L/s unless a greater or lesser rate is specified for the catchment in Sections 6-15.

A **low degree of stream depletion effect** is where the effect of 150 days of steady continuous groundwater abstraction on the surface water body is less than 40% of that abstraction rate and the effect of pumping the proposed annual volume over 150 days at a continuous steady rate is less than 5 L/s unless a greater or lesser rate is specified for the catchment in Sections 6-15.

Borefields

Where there is more than one bore on a property abstracting water that is hydraulically connected to a stream, the stream depletion effect for each bore shall be determined independently, and **where the bores have the same stream depletion effect**, the stream depletion effect of the bores shall be determined in combination as a borefield. The combined stream depletion effect shall be determined evaluating the maximum possible stream depletion effect that may develop as a result of operating under the proposed consent conditions.

Inclusion in surface and groundwater allocations**Table 9.1: Stream depletion effect to be included in the surface and groundwater allocations**

Stream depletion effect	Amount to be included in the surface water allocation limit	Amount allocated from the groundwater zone	<i>Pumping schedule</i>
Direct	Average daily rate of take ¹ (the rate at which water can be continuously taken to abstract the maximum daily volume that is to be taken), and 100% of the annual volume	None	Not applicable
High	The stream depletion effect ¹ estimated using the <i>pumping schedule</i> ; and 75% of the annual volume	25% of the annual volume	150 days continuous steady pumping required to deliver the annual volume
Moderate	The stream depletion effect ² estimated using the <i>pumping schedule</i> ; and 50% of the annual volume	50% of the annual volume	150 days continuous steady pumping required to deliver the annual volume
Low	None	100% of the annual volume	Not applicable

Notes:

1. This effect will be included in the surface water allocation irrespective of the rate of take.
2. This effect will be included in the surface water allocation if the stream depletion effect exceeds the stream depletion effect cut-off in Section 6, or where none has been set in Section 6, 5 L/s.

Schedule 10 - Reasonable Use Test

This Schedule only applies to the activity of using water for irrigation purposes, and does not apply to wastes that are discharged to land under an authorised discharge permit. Such discharges will be subject to the relevant policy provisions and rules set out in Section 5.

This schedule provides three methods for determining the seasonal irrigation demand.

1. Records of past use, moderated to ensure the annual volume is sufficient to meet demand conditions that occur in nine out of ten years for a system with an irrigation application efficiency of 80%; or
2. Use of a model that has been field validated and shown to reliably predict annual irrigation volume within an accuracy of 15%. The annual volume calculated using the model shall be compliant with the following criteria:
 - (a) an irrigation application efficiency of 80%;
 - (b) a system capacity to meet peak demand ~~between 4.0 – 6.5 mm/d~~⁴⁵⁶;
 - (c) a nominal irrigation season from 1 September to 30 April; and
 - (d) demand conditions that occur in nine out of ten years.
3. Using the methodology set out below and the figures set out in Table 10.1.

To determine the applicable seasonal irrigation demand standard and derive an annual volume:

1. find the total seasonal demand from Table 10.1 for the particular soil PAW class. Where the soil PAW class is between 100 - 200 mm, insert the appropriate PAW for the soil to be irrigated into the formula to determine the total seasonal demand;
2. determine effective irrigation season rainfall for the location using Figures 10.1 and 10.2: Map of effective irrigation season rainfall;
3. deduct this rainfall amount from the total seasonal demand amount to give the irrigation requirement in millimetres – this provides the seasonal irrigation demand standard;
4. adjust this seasonal irrigation demand standard by multiplying by 10 to find the volume of water (cubic metres) per hectare per season; and
5. multiply this amount by the area that is to be irrigated to give the annual volume.

Example

Consent details:

Maximum instantaneous pump rate:	110 L/s
Volume per DRP:	9,108 m ³
Design Return Period (DRP):	1 day
Area to be irrigated:	200 ha
Profile Available Water (PAW) at location:	69 mm
Total Seasonal Demand:	910 mm (taken from Table 10.1)

⁴⁵⁶ 182.15 HydroServices, 187.90 Synlait Milk Limited, 188.90 Synlait Farms Limited, 326.68 Horticulture NZ, 189.43 Dunsandel Groundwater Users Group, 320.223 FedFarms (Combined Canty), 192.68 Irrigation NZ, 311.169 Simons Pass Station Limited

Effective rainfall (exceeded 860% of time)	230 mm (determined from Figure 10.1)
Annual irrigation allocation	$(910 \text{ mm} - 230 \text{ mm}) \times 10 \times 200 \text{ ha} = 1\,360\,000 \text{ m}^3$

Table 10.1: Total seasonal demand to meet plant water requirements

Soil PAW Class	Total Seasonal Demand
<100 mm	910 mm
100-200 mm	910 – 1.6 (PAW – 100) mm
>200 mm	750 mm

Soil PAW Class represents the upper and lower limits of the soils that are generally irrigated in Canterbury in terms of the profile available water (PAW) of the soils. Between the upper and lower limits set out in Table 10.1, a sliding scale is used to determine the relevant total seasonal demand.

Total seasonal demand is the total amount of water required to satisfy plant water needs during the main growing period. This demand can be satisfied by rainfall and irrigation. In determining the irrigation component, provision has been made for:

1. an irrigation application efficiency of 80%;
2. a system capacity to meet peak demand ~~between 4.0 – 6.5 mm/d~~⁴⁵⁷;
3. a nominal irrigation season from 1 September to 30 April;
4. demand conditions that occur in nine out of ten years; and
5. a land use of intensive pasture production.

Effective irrigation season rainfall is the amount of rain that will contribute to crop growth over the nominal irrigation season. In determining this amount, provision has been made for:

1. rainfall that occurs on average in six out of ten years (which, together with a complementary seasonal irrigation allowance, is estimated to meet total water demand with a reliability of nine out of ten years based on analysis of long-term climate data); and
2. excluding daily rainfall amounts of less than 5 mm, or cumulative rainfall amounts in consecutive days in excess of 50 mm.

Seasonal irrigation demand standard for a given soil PAW the depth of water (measured in millimetres) per hectare per year required to be supplied by irrigation to satisfy plant water demand after allowing for effective irrigation season rainfall.

⁴⁵⁷ 182.15 HydroServices, 187.90 Synlait Milk Limited, 188.90 Synlait Farms Limited, 326.68 Horticulture NZ, 189.43 Dunsandel Groundwater Users Group, 320.223 FedFarms (Combined Canty), 192.68 Irrigation NZ, 311.169 Simons Pass Station Limited

Figure 10.1: Map of effective irrigation season rainfall (millimetres) (northern and central Canterbury)

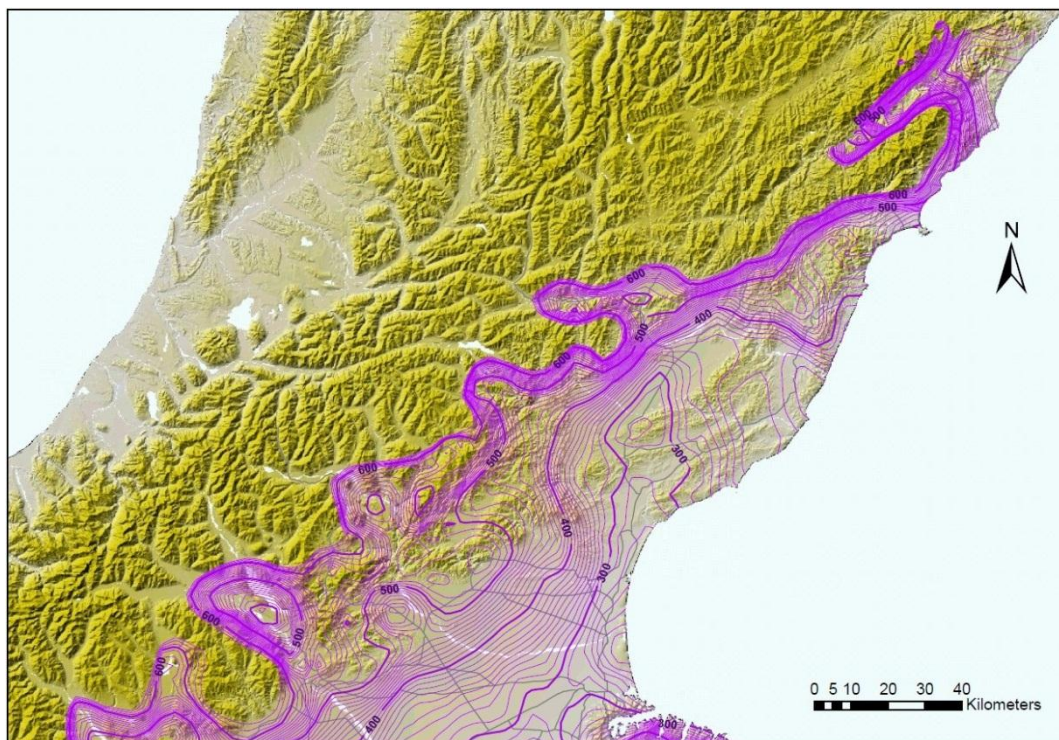
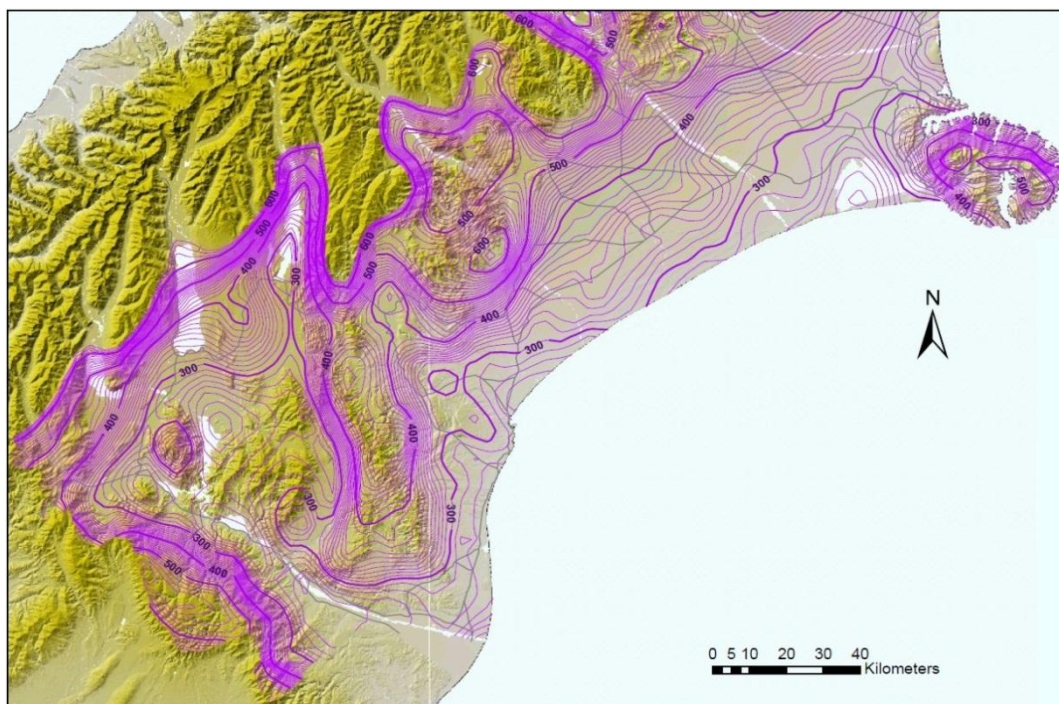


Figure 10.2: Map of effective irrigation season rainfall (millimetres) (mid and southern Canterbury)



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Schedule 11 - Aquifer testing

Aquifer testing minimum requirements – Constant rate

1. Water levels shall be recorded in each production and monitoring bore being used in the constant rate discharge test for a period of at least 12 hours prior to the test period to determine the water level trends and fluctuations in these bores.
2. Barometric pressure shall be recorded throughout testing.
3. Recovery shall be recorded for at least 12 hours (preferably for a period equal to the pumping duration) after the cessation of pumping.
4. Automatic level loggers shall be used with a logging frequency of: no longer than 5 minutes for the pumped well and; no longer than 15 minutes for any observation wells.
5. Flow from the production bore shall be measured and recorded and any changes recorded. Flow shall be measured to within a precision of 10%. Note that achieving constant flow rate throughout the test will simplify the analysis of the test and is particularly important where useable water level observations may be limited to the production bore.
6. The duration of the constant rate discharge test shall be no less than 2880 minutes or two days, unless sufficient information is provided to justify a more appropriate duration.⁴⁵⁸
7. Discharge water from the pumping test shall be diverted to a drain, water race or surface water body not hydraulically connected to the pumped aquifer. If water is being pumped from a well screened 50 m or deeper, water may be discharged to ground through an irrigator. Approval shall be sought from the owner or maintainer of any drains or water race prior to use.

It is strongly recommended that prior to testing that a step drawdown test is conducted on the production bore to determine the optimal pumping rate for the constant rate discharge test, and to estimate local transmissivity. These estimates will assist with the analysis of the constant rate test.

Aquifer testing minimum requirements – Step test

1. Initial static water level in well recorded.
2. A 4-step drawdown test with each step having a minimum duration of 30 minutes/1 hour recommended).
3. Water level and time measured simultaneously throughout the duration of the test at least every 5 minutes, including recovery.
4. Flow from the production bore shall be measured and recorded and any changes recorded. Flow shall be measured to within a precision of 10%.
5. Discharge water from the pumping test should be diverted to a drain, water race or surface water body not hydraulically connected to the pumped aquifer. However, if water is being pumped from 50 m or deeper, water may be discharged to ground.

⁴⁵⁸ 279.36 Aqualinc Research Limited, 320.223 FedFarm (Combined Canty)

Information to submit to the CRC:

1. Well details including: Location (GPS and location map), depth, diameter, and screen information if available.
2. Initial static water level in each well.
3. Date of test
4. Discharge records
5. Drawdown data records (corrected and uncorrected)
6. Barometric data records.
7. Any analysis, or in the case of a constant discharge test a full aquifer test report

The aquifer test report shall include, in addition to the above:

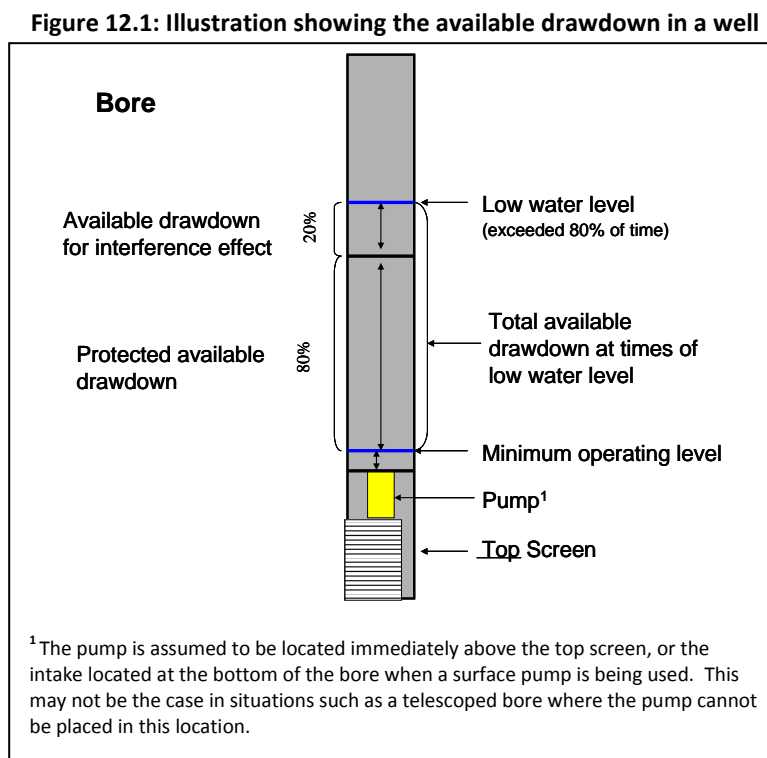
1. Conceptual hydrogeological model, based on well logs, geology, hydrogeological setting and test results.
2. Test setup including details about the discharge of the pumped water.
3. Summary of corrections applied and correction methods used
4. Analysis summary, including assumptions and models
5. Test results
6. Aquifer parameters (transmissivity, storativity, etc.).
7. References for all cited information.

Schedule 12 - Well Interference Effects

The direct cumulative interference effect on a bore shall be the combined interference of abstracting from all bores (including the new bore):

1. That are authorised by a resource consent to take groundwater for abstractive purposes (but excluding those that are authorised to take groundwater through an operative permitted activity rule) and bores used for which no water permit to take groundwater is required, but which are intended to be used for water level observations; and
2. That are located within 2 km of the bore, and have a calculated interference effect on that bore of more than 0.1m, when abstracting at either the authorised rate of abstraction over 150 days to deliver their seasonal allocation, or pumping at the authorised average daily rate over seven continuous days, whichever is the greater.

An “acceptable” direct cumulative interference effect is when the direct cumulative interference effect is no greater than 20% of the total available drawdown at times of low water level that is exceeded 80% of the time during the period of proposed water use, having taken into account individual bore and pump installation details (see Figure 12.1).⁴⁵⁹



Where an existing bore adequately penetrates an aquifer, the existing bore should not have its protected available drawdown reduced due to the direct cumulative interference effects from other bores, unless the effect is mitigated.

⁴⁵⁹ 187.91 Synlait Mil Limited, 188.91 Synlait Farms Limited

For a bore to adequately penetrate the aquifer, an adequate penetration depth shall be determined as follows:

1. where the aquifer is included in Sections 6-15, the depth specified in Sections 6-15; or
2. for aquifers where the depth is not specified in Sections 6-15:
 - (a) either a depth below the calculated minimum water level, or below the level to which 50% of bores within 2km penetrating the aquifer are already established at 1 January 2002, whichever is the deeper; or
 - (b) a depth determined by the application of the best available technical information and/or advice to be an adequate penetration depth.

Where an existing bore inadequately penetrates an aquifer, the interference effect of a new bore will be assessed as if the existing bore is also adequately penetrating.

Schedule 13 - Requirements for implementation of water allocation regimes

Surface water allocation regimes

1. The amount of water allocated within an allocation block is the sum of:
 - (a) the ~~average daily~~ maximum⁴⁶⁰ rate of abstraction of each surface water take ~~or diversion~~⁴⁶¹ and
 - (b) the stream depletion effect of each groundwater take that is calculated in accordance with Schedule 9;

Note: (1)(a) does not apply to non-consumptive diversions required for the effective operation of a fish screen and is used to facilitate the return of fish back to the river.⁴⁶²
2. The amount of water allocated is to be assessed on a monthly basis for the period in each year (period of abstraction) that each take requires the water, on the following basis:
 - (a) the period of abstraction authorised as a condition of each permit, if such a condition exists;
 - (b) where the water permit is to take water for irrigation use and no storage is authorised by the water permit, the calculated period of abstraction is the months of September to May inclusive; or
 - (c) 12 months of the year in all other cases;
3. Where a surface water body is dammed and/or water is stored, the limit for each allocation block may also be set to include an annual volume. Where the annual volume is used, the ~~effective~~⁴⁶³ allocation shall be determined in the same way as set out for groundwater allocation zones in Schedule 13 below.

Groundwater allocation regimes

1. The amount of water allocated within a groundwater allocation block is the sum of each seasonal or annual volume of each groundwater take, less any contribution from surface water calculated in accordance with Schedule 9;
2. The seasonal or annual volume allocated is to be determined as either:
 - (a) that specified as part of a water permit; or
 - (b) when not specified as part of a water permit, the annual volume shall be determined as follows:
 - (i) where the water permit is to take water for irrigation use, either the annual volume calculated using Schedule 10, or the annual volume calculated using the average daily rate of take derived from the water permit x 212 (days), whichever is the lesser;

⁴⁶⁰ 167.85 CRC, 347.231 Fish & Game, 120.314 DOC, 89.6 Bowden Environmental

⁴⁶¹ 198.45 Irricon, 237.5 Mr S Nevin

⁴⁶² 198.45 Irricon, 237.5 Mr S Nevin

⁴⁶³ 57.2 Environmental Consultancy Services Limited

- (ii) where the water permit is to take water for group drinking water supply use or community drinking water supply use, as the maximum daily volume multiplied by 150; and
 - (iii) where the water permit is to take water for industrial or commercial use and:
 - 1. the activity occurs continually throughout the whole year, as the maximum weekly volume multiplied by 52; or
 - 2. the activity is carried out on a seasonal basis, as the maximum weekly volume multiplied by the number of weeks of the season for which the activity is typically carried out; and
 - (iv) for other uses not specified above, or where there is a combination of uses listed in (i), (ii) or (iii) above, on a case by case basis; and
- (c) in any case, the maximum instantaneous rate of take consented from a bore should not exceed the rate that is physically capable of being yielded from the bore.

Schedule 14 - Excavation of bed material (10m3)

1. Kekerengu River from 500 m upstream, (at or about P30:9286:1433) to 1 kilometre downstream of the Benmore Stream confluence (at or about P30:9275:1286).
2. Hapuku River from Grange Road crossing (at or about O31:6705:7821) downstream to the coastal marine area (at or about P31:7102:7543).
3. Puhi Puhi Stream from Jordons Stream confluence (at or about P31:7230:8487) to Hapuka River confluence (at or about O31:6915:7728).
4. Waimangarara River– from 250 m upstream of Postmans Road crossing (at or about O31:6489:7274), to 250 m downstream of Postmans Road crossing (at or about O31:6494:7222).
5. Luke Creek from 250 m upstream of Postmans Road crossing (at or about O31:6321:7245), to 250 m downstream of Postmans Road crossing (at or about O31:6340:7198).
6. Kowhai River (Kaikoura) from the confluence with Floodgate Creek downstream (at or about O31:5938:7002) to the coastal marine area (at or about O31:6213:6526).
7. Kahutara River from 1 kilometre upstream of the Inland Kaikoura Road bridge (at or about O31:4950:7042), downstream to the coastal marine area (at or about O31:5845:6346).
8. Oaro River from 1 kilometre upstream of the State Highway One bridge (at or about O32:5031:5415), downstream to the coastal marine area (at or about O32:5168:5473).
9. Charwell River from 1 kilometre upstream of the Inland Kaikoura Road bridge (at or about O31:3938:6596), to 1 kilometre downstream of the Inland Kaikoura Road bridge (at or about O31:4007:6423).
10. Linton Stream from 1 kilometre upstream of the Inland Kaikoura Road bridge (at or about O31:4950:7041), to 1 kilometre downstream of the Inland Kaikoura Road bridge (at or about O31:5083:6914).
11. Cribb Creek from 1 kilometre upstream of the Inland Kaikoura Road bridge (at or about O31:5152:6980), to 1 kilometre downstream of the Inland Kaikoura Road bridge (at or about O31:5244:6815).
12. Stanton River from the Leader - Waiau Road bridge (at or about N32:2370:4285) downstream to the confluence with the Waiau River (at or about N32:2110:3842).
13. Mason River from the Inland Kaikoura road bridge (at or about N32:2371:5575) downstream to the confluence with the Waiau River (at or about N32:1283:3937).
14. Lottery River from the Sherwood Road crossing (where the road reverts to a walking track) (at or about N32:1574:5224) to the confluence with the Mason River (at or about N32:1780:4286).
15. Chatterton River from the Rogerson River Confluence (at or about N32:9455:5487) downstream to confluence with the Percival River (at or about N32:9407:5050).
16. Percival River from the Switchback Stream confluence (at or about N32:9773:5290) downstream to the confluence with the Waiau River (at or about N32:9204:4772).
17. Hanmer River from immediately downstream of The Hossack homestead (at or about N32:0629:5178), downstream to the confluence with the Waiau River (at or about N32:9216:4750).
18. Pahau River from the Top Ford Road/Top Pahau Road crossing (at or about N33:9218:2703), downstream to the confluence with the Hurunui River (at or about N33:0204:1919).

19. Leamington Stream from Leamington Road crossing (at or about N33:2297:2380) downstream to the confluence with the Waiau River (at or about O32:3277:3128).
20. Lyndon Stream from the Lyndon Road bridge (at or about N32:0802:4269) downstream to the confluence with the Home Stream (at or about N32:0953:4132).
21. Home Stream from the confluence with Lyndon Stream (at or about N32:0953:4132), to the confluence of the Waiau River (at or about N32:1043:4094)
22. Waikari River from McRaes Road crossing (at or about M33:8899:0679), downstream to the confluence with the Hurunui River (at or about N33:1422:1379).
23. Kowai River (North Branch) (Leithfield) from Douglas Road bridge (at or about M34:8424:8662), downstream to the coastal marine area (at or about N34:9079:7875).
24. Kowai River (South Branch) from Marshmans Road crossing (at or about M34:8269:7942), downstream to the confluence with North Branch of the Kowai River (at or about M34:8935:7961).
25. Karetu River from 1 kilometre upstream of the Loburn – White Rock Road bridge (at or about M34:6504:8097), downstream to the confluence with the Grey River (at or about M34:6631:7831).
26. Grey River from the West Branch Confluence (at or about M34:6849:8195) downstream to the confluence with the Okuku River (at or about M34:6598:7781).
27. Makerikeri River from the Carrs Road Bridge (at or about M34:7130:7643), downstream to the confluence with the Ashley River/Rakahuri (at or about M35:7415:6966).
28. Okuku River from 2 kilometres upstream of Okuku Pass Road (at or about M34:5551:9601) to 500 m downstream of Okuku Pass Rd (at or about M34:5726:9455).
29. Okuku River from the confluence with Kowhai Stream (at or about M34:6245:8208), downstream to the confluence with the Ashley River/Rakahuri (at or about M34:6669:7152).
30. Hororata River from State Highway 72 bridge (at or about L35:1329:4268) downstream to the confluence with the Selwyn River/Waikirikiri (at or about L36:3615:3312).
31. Hawkins River from Bangor Roadbridge (at or about L35:3400:4665), downstream to the confluence with the Selwyn River/Waikirikiri (at or about L36:3974:3264).
32. Waianiwaniwa River from the State Highway 72 bridge (at or about L35:2938:4724), downstream to the confluence with the Selwyn River/Waikirikiri (at or about L36:3569:3406).
33. Taylors Stream from State Highway 72 bridge (at or about K36:8762:3106), downstream to the confluence with the Bowyers Stream (at or about K36:9148:1886).
34. Bowyers Stream from State Highway 72 bridge (at or about K36:8474:2363), downstream to the confluence with south branch of the Ashburton River/Hakatere (at or about K36:9214:1766).
35. Hinds River (Hekeao) (North Branch) from the Lower Downs Rd bridge (at or about K36:7999:1688), downstream to the confluence with the south branch of the Hinds River (Hekeao) (at or about K37:8369:0960).
36. Hinds River (Hekeao) (South Branch) from the Lower Downs Rd bridge (at or about K36:7835:1140), downstream to the confluence with the north branch of the Hinds River (Hekeao) (at or about K37:8369:0960).

37. Hinds River (Hekeao) (Main Stream) from the confluence of the north and south branches (at or about K37:8369:0960), downstream to the coastal marine area (at or about K38:0254:7641).
38. Waihi River from the Burdons Road bridge (at or about J37:6706:8561), downstream to the confluence with the Temuka River (at or about K38:7141:6345).
39. Te Moana River from Sheep Dip Road bridges (at or about J37:5852:8340), downstream to the confluence with the Temuka River (at or about K38:7141:6345).
40. Temuka River, from the confluence of the Waihi –Te Moana Rivers (at or about K38:7141:6345), downstream to the confluence with the Opihi River (at or about K38:7529:5908).
41. Kowhai Stream (Peel Forest) from 250 m upstream of Blandsford Ford (at or about J37:6796:9923), downstream to the confluence with Coopers Creek (at or about K37:7046:9278).
42. Scotsburn Stream from 250 m upstream of Horsfall Roadbridge (at or about J37:6813:9654), downstream to the confluence with Coopers Creek (at or about K37:7062:9205).
43. Coopers Creek from confluence of Scotsburn and Kowhai streams, (at or about K37:7063:9205) downstream to the confluence with Orari River (at or about K38:7914:6537).
44. Sweetwater Creek from Burdon Roadbridge, (at or about J37:6732:8667) downstream to the confluence with Orari River (at or about K37:7103:8353).
45. Barkers Creek from McKeown Road bridge (at or about J37:6497:8231), downstream to the confluence with the Waihi River (at or about J37:6905:8058).
46. Kakahu River from State Highway 79 bridge (at or about J38:6427:7500), downstream to the confluence with the Hae Hae te Moana River (at or about J38:6870:6706).
47. Waimate Creek from Mill Road bridge (at or about J40:5332:0705), downstream to Hannaton Road bridge (at or about J40:6239:0620).
48. Hook River from Hunter Road bridge (at or about J40:5314:1520) to Hook Swamp (at or about J40:6353:1193).
49. Elephant Hill Stream from Elephant Hill Road bridge (at or about J40:3930:9725), to 100 m downstream to the Tawai – Ikawai Road crossing (at or about J40:4087:9106).
50. Maerewhenua River from Pukeraro Road crossing (at or about I41:1974:8199) to the confluence with the Waitaki River (at or about I40:2812:9241).
51. Otekaieke River from 1 kilometre upstream of State Highway 83 (at or about I40:9442), downstream to the confluence with the Waitaki River (at or about I40:1847:9620).
52. Otiake River from 1 kilometre upstream of State Highway 83 (at or about I40:1425:9797), downstream to the confluence with the Waitaki River (at or about I40:1532:9884).
53. Kurow River from 500 m upstream of State Highway 83 (at or about I40:1067:0275), downstream to the confluence with the Waitaki River (at or about I40:1151:0366).
54. Otematata River from 500 m above State Highway 83 (at or about H40:8782:1823), downstream to the confluence with Lake Aviemore (at or about H40:8816:1921).

Schedule 15 - Excavation of bed material (20m³)

1. Clarence River from the George Stream confluence (at or about P30:7948:9962), downstream to the coastal marine area (at or about P30:8665:9266).
2. Conway River from Ferniehurst bridge (at or about O32:3762:4225), downstream to the coastal marine area (at or about O32:4835:4348).
3. Waiau River from the Hope River confluence (at or about M32:7378:4601), downstream to the coastal marine area (at or about O33:4040:2555).
4. Leader River from the Mendip Road bridge (at or about O32:3262:4044), downstream to the confluence with the Waiau River (at or about O32:3553:3066).
5. Hurunui River from the Mandamus River confluence (at or about M33:7362:2381), downstream to the coastal marine area (at or about O33:3301:1061).
6. Waitohi River from Barkers Road crossing (at or about M33:7989:1540), downstream to the confluence with the Hurunui River (at or about N33:9091:1482).
7. Waipara River from Stringers Road bridge (at or about M34:8297:9383), downstream to the coastal marine area (at or about N34:9347:8378).
8. Ashley River/Rakahuri from 200 m below the gorge bridge (at or about L34:4748:7489), downstream to the Okuku River confluence (at or about M34:6667:7153).
9. Ashley River/Rakahuri from the upper gorge (3 km upstream of the Lees Valley Rd bridge) (at or about L34:4458:8859) downstream to the confluence with the Whistler River (at or about L34:4148:8044).
10. Whistler River from the gorge (5 km upstream of the Lees Valley Rd bridge) (at or about L34:3963:8693) downstream to the confluence with the Ashley River/Rakahuri (at or about L34:4148:8044).
11. Ashley River/Rakahuri from a line extended from Toppings Road (at or about M34:8319:7007), downstream to the coastal marine area (at or about M35:8662:6978).
12. Selwyn River/Waikirikiriri from Coalgate bridge (at or about L35:2591:4618), downstream to 1 kilometre below Coes Ford (at or about M36:6337:2283).
13. Rakaia River from the Gorge bridges (at or about K35:0147:4244) downstream to the coastal marine area (at or about L37:4676:0089).
14. Ashburton River/Hakatere (north branch) from State Highway 72 Bridge (at or about K36:9151:3247), downstream to the confluence with the south branch of the Ashburton River/Hakatere (at or about K37:0750:0171).
15. Ashburton River/Hakatere (south branch) from State highway 72 bridge (at or about K36:8075:2028), downstream to the confluence with the north branch of the Ashburton River/Hakatere (at or about K37:0750:0171).
16. Rangitata River from the Rangitata Diversion race intake (at or about J36:6805:1437), downstream to the coastal marine area (at or about K38:9021:6805).
17. Orari River from the Orari Gorge (at or about J37:6580:9332), downstream to the coastal marine area (at or about K38:8273:6158).
18. Opuha River from the Skipton Bridge (at or about J38:4817:7884), downstream to the confluence with the Opihi River (at or about J38:4954:6836).
19. Tengawai River from 100 m upstream of the Exe Stream confluence (at or about I38:2702:6465), downstream to the confluence with the Opihi River (at or about J38:6143:6037).

20. Opihi River from Horseshoe Bend (Mount Dobson road) (at or about I37:2609:8363), downstream to the coastal marine area (at or about K38:7825:5737).
21. Pareora River from immediately downstream of the Pareora Huts (at or about J39:5568:4197), downstream to the coastal marine area (at or about J39:6772:3236).
22. Otaio River from 500 m upstream of the Bluecliffs bridge (at or about J39:5289:3279), downstream to the coastal marine area (at or about J39:6556:2674).
23. Makikihi River from two kilometres upstream of State Highway 1 (at or about J40:6067:1851), downstream to the coastal marine area (at or about J40:6396:1859).
24. Waihao River from McCullochs Bridge (at or about J40:4999:9891), downstream to the coastal marine area (at or about J40:6512:0228).
25. Waitaki River from the Kurow Hakataramea Bridge (at or about I40:1016:0584) downstream to the coastal marine area (at or about J41:6290:8410).
26. Hakataramea River from 250 m above Moorland Settlement Road bridge (at or about I39:2553:3065), downstream to the confluence with the Waitaki River (at or about I40:1079:0557).

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Schedule 16 - Regional Concept Plan

The following extracts from the CWMS Regional Implementation Programme May 2012 provides the background to and context for the Water Availability diagram that follows and together these comprise the regional concept for water harvest, storage and distribution referred to in Policy 4.8 of this Plan.

Background

The CWMS (2010) recognised the potential benefits and constraints that new water supply and distribution infrastructure could have as part of an integrated regional approach to water management. The strategy acknowledged that there were important considerations to be dealt with in relation to new storage, such as the environmental and recreational impacts of infrastructure projects, and the consequential effects of further land use intensification, but that without the development of new water storage, the potential to increase irrigated land would not be realised. The strategy also recognised the potential for more efficient use of water to “free up” water for new uses or users, or for environmental enhancement or restoration, and the role of existing storage and distribution infrastructure in an integrated approach.

The Regional Committee acknowledges the obligations of Environment Canterbury (and others) under the RMA to recognise and provide for renewable electricity generation and the requirements of the National Policy Statement on Renewable Electricity Generation (NPSREG).

The Regional Committee believes that in order for a regional approach to supply and distribution infrastructure to succeed, it needs to benefit the economy, the environment, and our communities (local and regional) in an integrated way. The storage, supply, and distribution of water for “multiple uses” to help deliver the cross-cutting targets of the CWMS (2010) will thus be an important element of a regional approach.

The Regional Committee acknowledges that individual infrastructure components must deliver CWMS (2010) priorities at a local zone level if they are to be acceptable to local communities and help realise benefits to the wider region. The inter-connection of infrastructure between and distribution of water across several zones is likely to be required, as the number of suitable sites for new storage infrastructure will be limited. ...

The Regional Committee recognises that if new infrastructure is to proceed, individual supply and distribution components must be economically viable and “bankable” to investors and developers. Individual infrastructure components will also need to be developed in a co-ordinated way to ensure that projects which can proceed sooner rather than later, do not foreclose opportunities to deliver an integrated regional approach. The committee also sees the potential for water quality improvements and other benefits through the development of ‘environmental infrastructure’ such as constructed wetlands and on-farm treatment swales that can be incorporated into water storage and supply networks.

...

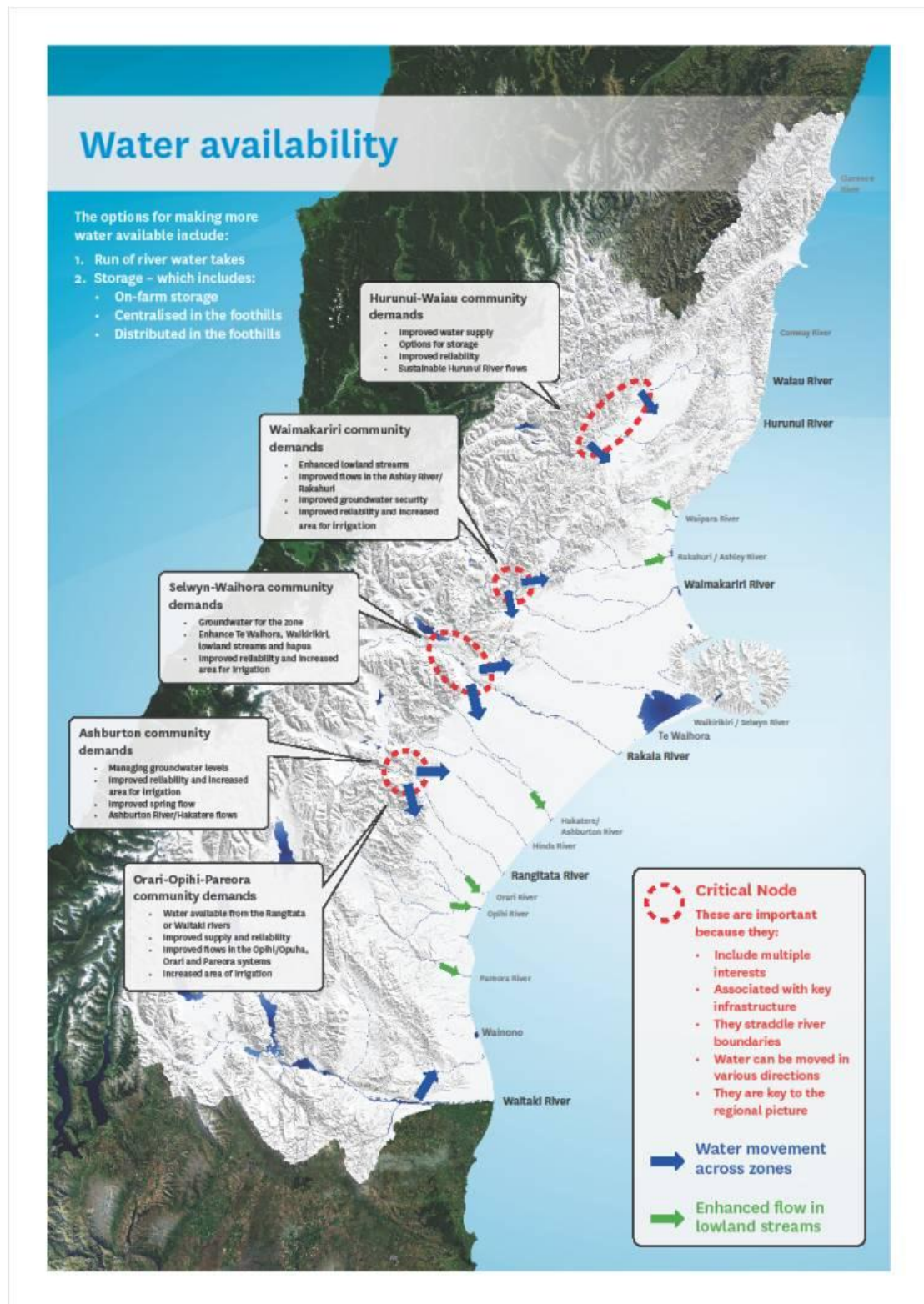
In developing a “big picture” for a regionally integrated approach to supply and distribution infrastructure, the Regional Committee will:

- *Plan on the basis that infrastructure options in the Hurunui-Waiapu Zone are a non-connected* part of the integrated regional approach*

- *Identify the need for additional storage in potentially inter-connected zones i.e. Waimakariri, Selwyn-Waihora, Ashburton, Orari-Opihi-Pareora (OOP)*
- *Address the need for more water in the OOP Zone by investigating connections northwards to mid/central Canterbury*
- *Initially consider any infrastructure options in the Waitaki catchment, as non-connected* part of the integrated regional approach*
- *Identify the potential role of existing supply and distribution infrastructure assets to inter-connect zones*
- *Identify the potential for more efficient use of water to “free up” water for new uses and/or reduce the need for additional storage*
- *Evaluate the potential ability of an integrated approach in inter-connected zones to*
 - *enhance environmental flows and water quality in rivers,*
 - *and increase irrigated land area,*
 - *and increase reliability of water supply, and increase generation of renewable electricity*
 - *and support implementation of priority outcomes on Kaitiakitanga (including mahinga kai), Ecosystem Health and Biodiversity, and Land Use and Water Quality*
 - *and support ZIPs*

** Use of “non-connected” above relates only to cross-zone-boundary transfers of water. In-zone supplies do potentially affect other zones, e.g. when they avoid the need for water supply from another zone.*

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Schedule 17 - Salmon and Inanga Spawning Sites

Salmon Spawning Sites

River Catchment	River, stream or reach name	Upstream Location Description	Downstream Location Description	Downstream Grid Reference	Upstream Grid Reference
Waiau	Henry River	Approx 2 km above Anne River	St James walkway bridge	BT23 629 114	BT23 588 115
	Waiau River - headwaters	Approximately 15.3 km upstream Waiau River from confluence with Ada River	Confluence of Ada River with Waiau River	BT24 677 145	BT24 720 281
	Matagouri Point Stream	Approximately 2.7 km upstream Matagouri Stream from confluence with Waiau River at 790 m contour	Confluence of Matagouri Stream with Waiau River	BT24 690 194	(790m)
Hurunui	Hurunui River - north branch	Camp Stream confluence	Lake Sumner	BU22 314 724	BU21 157 715
	Landslip Stream	620 m contour	Confluence of Landslip Stream with North Branch Hurunui River (just below Matagouri Flat)	BU22 219 731	(620m)
	Hurunui South Branch	Stream at 780 m contour	North Esk confluence	BV22 374 597	BU22 194 658
	Homestead Creek	700 m contour	Confluence of Homestead Creek with the Hurunui South Branch	BV22 348 611	BU22 315 631
Rakaia	Glenariffe Stream	Top of Genariffe Stream (approx. 4.8 km from confluence with Double Hill Stream)	Confluence of Glenariffe Stream with Rakaia	BW20 681 034	BW19 628 044
	Double Hill Stream	Approx 3.6 km upstream Double Hill Stream from Double Hill Run Road bridge	Confluence of Double Hill Stream with Rakaia River	BW20 682 033	(450m)
	Manuka Point	540 m contour	Confluence of Manuka Point	BW19 579	(540m)

River Catchment	River, stream or reach name	Upstream Location Description	Downstream Location Description	Downstream Grid Reference	Upstream Grid Reference
	Stream		Stream and Rakaia River	064	
	Hydra waters, Titan Stream, Chimera Stream	480 m contour	Confluence of Titan Stream with Rakaia River	BW19 671 068	(480m)
	Ryton River	Approx 11 km upstream Ryton River from entrance to Lake Coleridge	Entrance of Ryton River into Lake Coleridge	BW20 805 062	BW20 831 085
	Goat Hill	500 m contour	Confluence with Wilberforce River	BW20 685 126	(500m)
	Hennah Stream	Exit of Hennah Stream from Lake Evelyn	Confluence of Hennah Stream with Ryton River	BW20 818 076	BW20 813 097
	Mellish Stream	4WD track 1.5 km upstream	Inlet of Mellish Stream to Harrisons Bight, Lake Heron	BX19 556 854	BX19 564 844
Rangitata	Deep Stream Complex - Mesopotamia	Approx 500 m downstream Scour Stream from Rangitata Gorge Road crossing to the 470 m contour	Confluence of Scour Stream with Rangitata River	BX18 364 625	(470m)
	Deep Creek Complex – Mt Potts	Approximately 2.3 km south west of Rabbit Hill to the 500 m contour	Confluence of Deep Creek complex with Rangitata River (approximately 3 km west of Potts Road Bridge over Potts River)	BX18 314 723	(530m)
	Brabazon Fan	Unnamed tributaries of the Rangitata River to the 500 m contour	Confluence with the Rangitata River	BX18 312 696	(500m)
	Black Mountain Stream	Unnamed tributaries of the Rangitata River to the 580 m contour	Confluence with the Rangitata River	BX18 248 763	(580m)
	Ealing Springs	Unnamed tributaries of the Rangitata River	Confluence with the Rangitata River	BY20 724 215	BY20 704 232

River Catchment	River, stream or reach name	Upstream Location Description	Downstream Location Description	Downstream Grid Reference	Upstream Grid Reference
		to the 140 m contour			
	McKinnons Creek	Unnamed tributary of the Rangitata River known as McKinnons Creek to the 40 m contour	Confluence with the Rangitata River	BZ20 793 086	(40m)
Orari	Orari River - Lower Section	Orari River at Badham Bridge	Orari River mouth	BZ20 728 001	BZ19 677 063
	Ohapi Creek	Ohapi South, Middle and North Branches at Guild Rd/20 m contour	Confluence with the mouth of the Orari River	BZ20 724 000	BZ19 662 028 BZ19 663 029 BZ19 677 044
Opihi	Opihi River	Fairlie at SH79 bridge	Temuka River confluence	BZ19 652 975	BZ18 266 152
	Temuka River	Ford at Oxford Crossing Road	Confluence of Temuka River with Opihi River (approx 3.5 km downstream of SH1 bridge over Opihi River)	BZ19 652 975	BZ19 614 018
	Waihi River	Beeby Road ford	Oxford Crossing Road	BZ19 614 018	BZ19 613 093
	Opuha River Gorge	Approximately 1.5 km below dam	Skipton Bridge (SH79 bridge over Opuha River)	BZ18 382 173	BY18 312 242
	Tengawai River	Albury	Confluence of Tengawai River with Opihi River (approx 800 m upstream of Waitohi Pleasant Point Road bridge over Opihi River)	BZ19 510 990	BZ18 306 006
Waitaki	Lower Waitaki River	Waitaki Dam.	SH1 bridge	CB19 500 232	CA17 962 486
	Hakataramea River	Cattle Creek	Confluence of Hakataramea River with Waitaki River	CB17 008 439	CA17 156 690
	Larch Stream	540 m contour	Hopkins confluence	BZ15 481 084	(540m)
	Stockyard	555 m contour	Hopkins	BZ15 498 135	(555m)

River Catchment	River, stream or reach name	Upstream Location Description	Downstream Location Description	Downstream Grid Reference	Upstream Grid Reference
	Creek		confluence		
	Ohau tributary 1	Just below 560 m contour	Lake Benmore	BZ16 763 861	BZ16 755 870
	Ohau tributary 2	Ponds beside Ohau C	Ohau confluence	BZ15 705 912	BZ15 682 926

Inanga Spawning Sites:

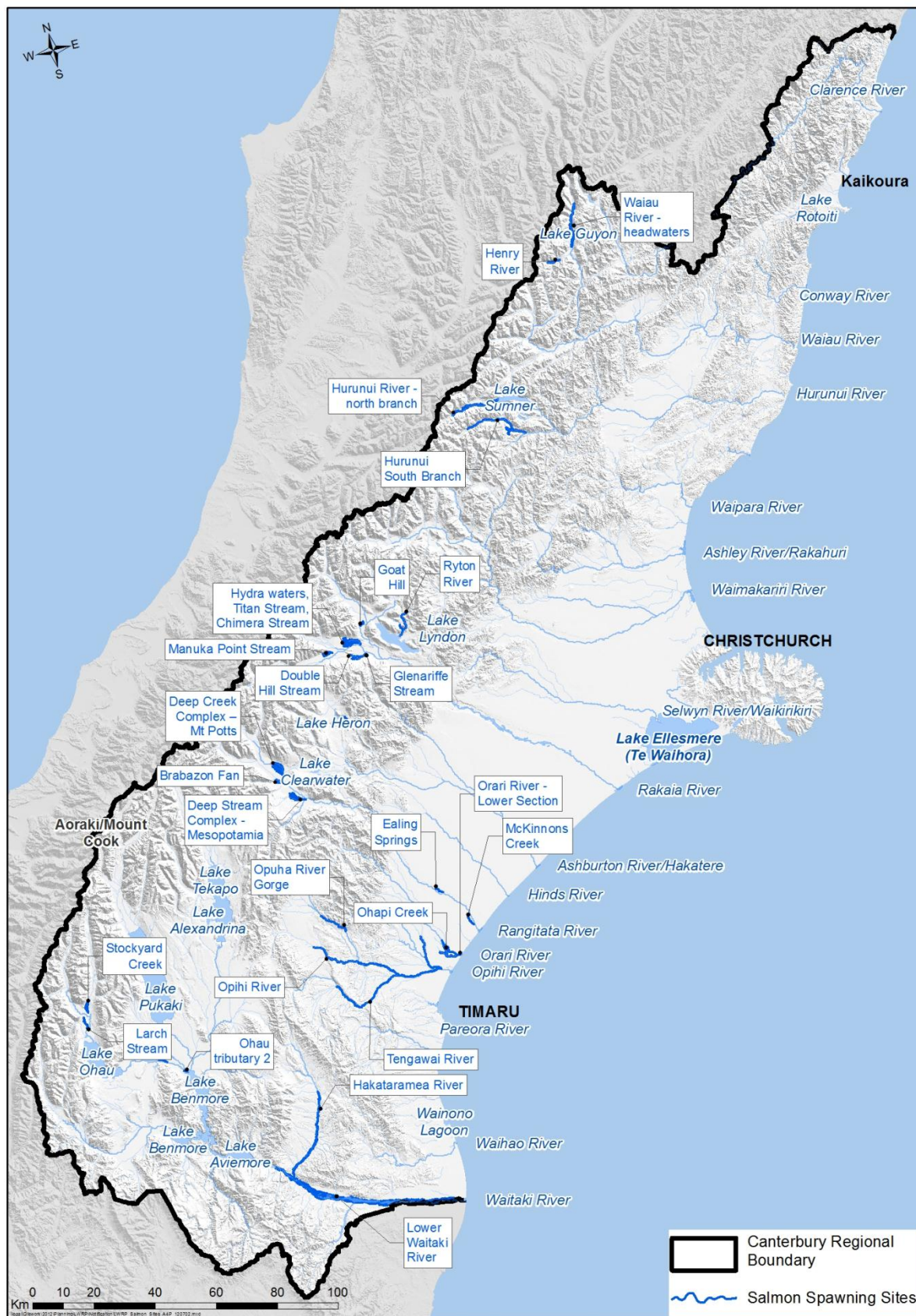
Okains Bay: The reach from School House Road bridge upstream to the CRC water level recorder on Opara Stream.

Le Bons Bay: The reach 350m to 500m upstream of the bridge that is closest to the sea over the Le Bons Stream.

Gough's Bay: The reach on the stream in Gough's Bay between map co-ordinates upstream (longitude 173.08992, latitude -43.806926) to downstream (longitude 173.091505, latitude -43.80724).

Rakaia Mouth, Boat Creek: The reach between map co-ordinates upstream (longitude 172.237675, latitude -43.888139) to downstream (longitude 172.23794, latitude -43.889671).

Note: When inanga spawn they do so in mass over a very small area. The largest known physical area of inanga spawning in Canterbury is less than 60 m² (National Inanga Spawning Database: trends and implications for spawning sites and management; Taylor; M.J. 2002). Most sites are less than 10 m².



Salmon and Inanga Spawning sites Schedule 18 - Rūnanga Takiwā in the Canterbury Region

Descriptions from the Te Rūnanga o Ngāi Tahu Act 1996, schedule 1:

Word	Meaning
Te Rūnanga o Kaikōura	The takiwā of Te Rūnanga o Kaikōura centres on Takahanga and extends from Te Parinui o Whiti to the Hurunui River and inland to the Main Divide.
Te Ngāi Tuahuriri Rūnanga.	The takiwā of Te Ngāi Tuahuriri Rūnanga centres on Tuahiwi and extends from the Hurunui to Hakatere, sharing an interest with Arowhenua Rūnanga northwards to Rakaia, and thence inland to the Main Divide.
Rapaki Rūnanga *	The takiwā of Rapaki Rūnanga centres on Rapaki and includes the catchment of Whakaraupo and Te Kaituna.
Te Rūnanga o Koukourarata	The takiwā of Te Rūnanga o Koukourarata centres on Koukourarata and extends from Pohatu Pa to the shores of Te Waihora including Te Kaituna.
Wairewa Rūnanga	The takiwā of Wairewa Rūnanga centres on Wairewa and the catchment of the lake Te Wairewa and the hills and coast to the adjoining takiwā of Koukourarata, Onuku Rūnanga, and Taumutu Rūnanga.
Te Rūnanga o Onuku	The takiwā of Te Rūnanga o Onuku centres on Onuku and the hills and coasts of Akaroa to the adjoining takiwā of Te Rūnanga o Koukourarata and Wairewa Rūnanga.
Taumutu Rūnanga	The takiwā of Taumutu Rūnanga centres on Taumutu and the waters of Te Waihora and adjoining lands and shares a common interest with Te Ngāi Tuahuriri Rūnanga and Te Rūnanga o Arowhenua in the area south to Hakatere.
Te Rūnanga o Arowhenua	The takiwā of Te Rūnanga o Arowhenua centres on Arowhenua and extends from Rakaia to Waitaki, sharing interests with Ngāi Tuahuriri ki Kaiapoi between Hakatere and Rakaia, and thence inland to Aoraki and the Main Divide.
Te Rūnanga o Waihao	The takiwā of Te Rūnanga o Waihao centres on Wainono, sharing interests with Te Rūnanga o Arowhenua to Waitaki, and extends inland to Omarama and the Main Divide.
Te Rūnanga o Moeraki	The takiwā of Te Rūnanga o Moeraki centres on Moeraki and extends from Waitaki to Waihemo and inland to the Main Divide.

* Te Hapū o Ngāti Wheke

Instruments from the Ngāi Tahu Claims Settlement Act 1998 (NTCSA 1998) relevant to this Plan

Statutory acknowledgements

Statutory Acknowledgements recognise Ngāi Tahu mana in relation to a range of sites and areas in the South Island. They provide for the recognition of this mana to be reflected in the management of those areas through Resource Management Act 1991 processes.

The Statutory Acknowledgements and definitions of the areas in the Canterbury region and how they affect the resource management process are set out in Schedule 19 of this Plan.

Tōpuni

Tōpuni are landscape features of special importance or value to Ngāi Tahu. They place an 'overlay' of Ngāi Tahu values on specific pieces of land managed by the Department of Conservation and ensure that Ngāi Tahu values are recognised, acknowledged and provided for.

A list of Tōpuni sites in the Canterbury region and a description of the values associated with them are in Schedule 20 of this Plan.

Nohoanga

Nohoanga are temporary campsites to facilitate customary fishing and gathering of other resources. The Ngāi Tahu Settlement provides for 72 such sites.

Sites over which Nohoanga Entitlements are to be granted in the Canterbury region are set out in Schedule 21 of this plan.

Taonga species management

Recognition by respectively the Minister of Conservation and the Director General of Conservation of Ngāi Tahu association with certain bird, plant and marine mammal species. The aim is to improve Ngāi Tahu involvement in the management of these species through increased consultative requirements with Ngāi Tahu. The CRC's obligation in the preparation of the LWRP in relation to the taonga species listed in Schedule 97 of the Ngāi Tahu Claims Settlement Act 1998 is to have regard to strategies and plans in relation to the listed species prepared by the Department of Conservation under other Acts of Parliament.

A list of taonga species is provided in Schedule 22 of this Plan.

Customary fisheries management

Acknowledgement of the special relationship of Ngāi Tahu with a number of taonga fish species. Customary Fisheries Management includes control mechanisms for greater Ngāi Tahu involvement through the Fisheries Act 1996 such as:

- Ngāi Tahu must be consulted as an advisory committee to the Minister of Fisheries and the Minister of Conservation;

- the advice of Ngāi Tahu must be had regard to by the Minister of Fisheries and the Minister of Conservation in the management of taonga fish species;
- regulations for fresh water fisheries;
- sets out some species that are not to be fished commercially;
- reintroduces provisions in the Fisheries Act for rāhui.

A list of customary fish species is provided in Schedule 23 of this Plan.

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Schedule 19 - Ngāi Tahu statutory acknowledgement areas

[No submissions lodged – no changes recommended]

Schedule 20 - Tōpuni areas and descriptions

[No submissions lodged – no changes recommended]

Schedule 21 - Sites over which nohoanga entitlements are to be granted in the Canterbury region

Schedule 95 – pursuant to section 256 of the Ngāi Tahu Claims Settlement Act 1998

Site number	Waterway	Legal description/allocation plan
4	Hurunui River	1 hectare, approximately, being Part Rural Section 40222. Part Gazette 1972, page 2346. Subject to survey, as shown on Allocation Plan MN 142 (S.O. 19859).
5	Lake Alexandrina/ Takamoana	1 hectare, approximately, being Part Section 14 (S.O. 18830). Part Gazette 1996, page 4759. Subject to survey, as shown hatched on Allocation Plan MN 472 (S.O. 19885).
6	Lake Benmore/ Haldon	1 hectare, approximately, being: (a) 7000 square metres, approximately, being Part Reserve 1358 (S.O. 10143). Part Gazette 1967, page 444; (b) 3000 square metres, approximately, being Part Reserve 1358 (S.O. 13546). Part Gazette 1992, page 1986: Subject to survey, as shown on Allocation Plan MN 473 (S.O. 19886).
7	Lake McGregor Whakarukumoana	5000 square metres, approximately, being Part Section 13 (S.O. 18830). Part Gazette 1996, page 4759. Subject to survey, as shown on Allocation Plan MN 471 (S.O. 19884).
8	Lake Pūkaki	1 hectare, approximately, being Part Reserve 5195 (S.O. 9656). Part Gazette Notice 171402/1. Subject to survey, as shown on Allocation Plan MN 68 (S.O. 19843).
9	Lake Sumner (No 1)	1 hectare, approximately, being an area of Crown Land. Subject to survey, as shown on Allocation Plan MN 435 (S.O.19877).
10	Ōhau River	1 hectare, approximately, being Part Ōhau Riverbed (S.O. 16047). Part Gazette Notice A78078/1. Subject to survey, as shown on Allocation Plan MN 151 (S.O. 19861).
11	Ōhau River (No 2)	1 hectare, approximately, being Part Rural Section 36867 (S.O. 5620 and 5621). Part Certificate of Title 26F/698. Subject to survey, as shown on Allocation Plan MN 469 (S.O. 19883).
12	Pareora River (No 1)	1 hectare, approximately, being Part Reserve 3571 (S.O. 1064). Part Gazette Notice 553820/1. Subject to survey, as shown on Allocation Plan MN 465 (S.O. 19879)
13	Pareora River (No 2)	1 hectare, approximately, being Part Reserve 3577 (S.O. 1064) and Part Motukaika Riverbed. Part Gazette 1902, page 2559. Subject to survey, as shown on Allocation Plan MN 466 (S.O. 19880).
14	Rakaia River (No 1)	1 hectare, approximately, being Part Reserve 3047 (BM 71). Part Gazette 1898, page 245. Subject to survey, as shown on Allocation Plan MN 80 (S.O. 19846).

Site number	Waterway	Legal description/allocation plan
15	Rakaia River (No 2)	1 hectare, approximately, being Part Tengawai Riverbed. Subject to survey, as shown hatched on Allocation Plan MN 489 (S.O. 19887).
16	Tengawai River	1 hectare, approximately, being Part Tengawai Riverbed. Subject to survey, as shown on Allocation Plan MN 437 (S.O. 19878).
17	Waiau River	1 hectare, approximately, being Part Reserve 3215 (S.O. 1407). Part Gazette 1898, page 1720. Subject to survey, as shown on Allocation Plan MN 79 (S.O. 19845).
18	Waihao River (No 1)	1 hectare, approximately, being Part Waihao Riverbed. Subject to survey, as shown hatched on Allocation Plan MN 467 (S.O. 19881).
19	Waihao River (No 2)	1 hectare, approximately, being Part Rural Sections 41962 (S.O. 16307) and Part Waihao Riverbed. Part Gazette Notice 553820/1. Subject to survey, as shown on Allocation Plan MN 84 (S.O. 19847).
20	Waipara River Waipara Rivermouth	1 hectare, approximately, being Part Waipara Riverbed opposite Lot 1 DP 17853. Subject to survey, as shown on Allocation Plan MN 143 (S.O. 19860).
21	Waipara River	1 hectare, approximately, being Part Waipara Riverbed adjoining legal road (Barnetts Road, Waipara). Subject to survey, as shown hatched on Allocation Plan MN 468 (S.O. 19882).

Schedule 22 - Taonga species list

[No submissions lodged – no changes recommended]

Schedule 23 - Customary fisheries species lists

[No submissions lodged – no changes recommended]

Changes to the planning maps is recommended:

1. That the notation and layers for the aquifer types on the “B” map series be made consistent.⁴⁶⁴
2. That the notation and layers for the “damming full flow is prohibited” areas on the “B” map series be deleted.⁴⁶⁵
3. That the Septic Tank Effluent Suitability - Area A map layer be replaced with the On-site Effluent Suitability Area map layer.⁴⁶⁶

⁴⁶⁴ 221.104 Meridian

⁴⁶⁵ 221.104 Meridian

⁴⁶⁶ 167.89 CRC