Canterbury Land and Water Regional Plan
Volume 1

Facilitating sustainable development in the Canterbury region
Cover photo

The Rakaia River, one of the region’s braided rivers

Credit: Nelson Boustead NIWA
This is a true and correct copy of Plan Change 5 to the Canterbury Land and Water Regional Plan Volume 1, approved at a meeting of the Canterbury Regional Council on 13 December 2018.

Plan Change 5 will be publicly notified on 23 January 2019 and will become operative under Clause 20 of Schedule 1 to the Resource Management Act 1991 on 1 February 2019.

The Common Seal of the Canterbury Regional Council was fixed in the presence of:

Bill Bayfield
Chief Executive
Canterbury Regional Council

Steve Lowndes
Chair
Canterbury Regional Council

13 December 2018
(This page is intentionally left blank)
I hereby certify that this is a true and correct copy of Plan Change 3 to the Canterbury Land and Water Regional Plan Volume 1, approved at a meeting of the Canterbury Regional Council on 24 August 2017.

The Common Seal of the Canterbury Regional Council was fixed in the presence of:

Jill Atkinson
Acting Chief Executive
Canterbury Regional Council

Steve Lowndes
Acting Chairperson
Canterbury Regional Council

24 August 2017
This is a true and correct copy of Plan Change 4 to the Canterbury Land and Water Regional Plan Volume 1, approved at a meeting of the Canterbury Regional Council on 23 February 2017 in accordance with Clause 17(2) of Schedule 1 to the Resource Management Act 1991.

Plan Change 4 will be publicly notified on 4 March 2017 and will become operative under Clause 20 of Schedule 1 to the Resource Management Act 1991 on 11 March 2017.

The Common Seal of the Canterbury Regional Council was fixed in the presence of:

Miles McConway
Acting Chief Executive
Canterbury Regional Council

23 February 2017
(This page is intentionally left blank)
This is a true and correct copy of the Canterbury Land and Water Regional Plan Volume 1, approved in part at a meeting of the Canterbury Regional Council on 8 December 2016 in accordance with Clause 17(2) of the First Schedule of the Resource Management Act 1991.

The following parts of the Canterbury Land and Water Regional Plan Volume 1 will be publicly notified on 21 January 2017 and will become operative under Clause 20 of Schedule 1 to the Resource Management Act 1991 on 1 February 2017.

- Rules 5.154, 5.155, 5.156, 5.157 and 5.158

The Common Seal of the Canterbury Regional Council was fixed in the presence of:

Bill Bayfield
Chief Executive
Canterbury Regional Council

David Bedford
Chairperson
Canterbury Regional Council

8 December 2016
This is a true and correct copy of Plan Change 6 to the Canterbury Land and Water Regional Plan Volume 1, approved at a meeting of the Canterbury Regional Council on 8 December 2016 in accordance with Clause 17(2) of the First Schedule of the Resource Management Act 1991.

Plan Change 6 will be publicly notified on 21 January 2017 and will become operative under Clause 20 of Schedule 1 to the Resource Management Act 1991 on 1 February 2017.

The Common Seal of the Canterbury Regional Council was fixed in the presence of:

Bill Bayfield
Chief Executive
Canterbury Regional Council

David Bedford
Chairperson
Canterbury Regional Council

8 December 2016
(This page is intentionally left blank)
This is a true and correct copy of Plan Change 1 (notified as Variation 1) to the Canterbury Land and Water Regional Plan Volume 1, approved at a meeting of the Canterbury Regional Council on 17 December 2015 in accordance with Clause 17(2) of the First Schedule of the Resource Management Act 1991.

This document is part of a statutory regional plan prepared by the Canterbury Regional Council in accordance with the requirements of the Resource Management Act 1991.

Plan Change 1 will be publicly notified on 23 January 2016 and will become operative under Clause 20 of Schedule 1 of the Resource Management Act 1991 on 1 February 2016. The following parts of the Canterbury Land and Water Regional Plan as amended by Plan Change 1 will become operative on 1 February 2016:

- **Section 5 (Region-wide)**
  - Rules 5.69 and 5.164
- **Section 9 (Christchurch West–Melton)**
  - Section 9.2A (Definitions)
  - Policies 9.4.10
  - Rules 9.5.18 – 9.5.20
- **Section 11 (Selwyn Te Waihora)**
  - Introduction
  - Section 11.2A (Definitions)
  - Section 11.3 (Iwi Management Plans)
  - Section 11.4 (Policies)
    - 11.4.1 – 11.4.34 and 11.4.38
  - Section 11.5 (Rules)
    - 11.5.1 – 11.5.47
  - Section 11.6 (Freshwater Outcomes)
  - Section 11.7 (Environmental Flow and Allocation Regime and Water Quality Targets/Limits)
  - Section 11.8 (Te Waihora Cultural Landscape/Values Management Area)
  - Section 11.9 (Flow Sensitive Catchments)
  - Section 11.10 (High Naturalness Waterbodies)
  - Section 11.11 (Schedules – including additions to Schedules 7 and 13, and new Schedule 24).

The Common Seal of the Canterbury Regional Council was fixed in the presence of:

Bill Bayfield
Chief Executive
Canterbury Regional Council

Dame Margaret Bazley ONZ, DNZM, Hon DLit
Chairperson
Canterbury Regional Council

17 December 2015
This is a true and correct copy of the Canterbury Land and Water Regional Plan Volume 1, approved in part at a meeting of the Canterbury Regional Council on 15 October 2015.

The following parts of the Canterbury Land and Water Regional Plan Volume 1 will be publicly notified on 31 October 2015 and will become operative on 1 December 2015:

- Policies 13.4.1, 13.4.2, 13.4.3, 13.4.7 and 13.4.8;
- Rules 13.5.1, 13.5.5 and 13.5.6;
- Table 12 (Hakatere/Ashburton River Catchment Environmental Flow and Allocation Limits);

The remaining parts of the Canterbury Land and Water Regional Plan - Volume 1 that do not become operative on 1 December 2015 are identified with grey shading.

The Common Seal of the Canterbury Regional Council was fixed in the presence of:

Bill Bayfield
Chief Executive
Canterbury Regional Council

Hon David Caygill CNZM
Acting Chairperson
Canterbury Regional Council

15 October 2015
(This page is intentionally left blank)
I hereby certify that this is a true and correct copy of the Canterbury Land and Water Regional Plan - Volume 1, approved at a meeting of the Canterbury Regional Council on 13 August 2015.

This Plan will be publicly notified on 24 August 2015 and the following parts of the Canterbury Land and Water Regional Plan – Volume 1, will become operative on 1 September 2015:

- All of Section 1 – Introduction, Issues and Major Responses;
- All of Section 2 – How the Plan Works & Definitions;
- All of Section 3 – Objectives;
- All of Section 4 – Policies;
- Section 5 – Region-wide Rules – All rules relating to all topics other than:
  o Take and Use of Surface Water (Rules 5.123 - 5.127); and
  o Dams and Damming (Rules 5.154 - 5.158);
- All of Sections 6, 7, 8, 9, 10, 11, 12, 14 and 15;
- All of Section 13, except for:
  o Policies 13.4.1, 13.4.2, 13.4.3, 13.4.7 and 13.4.8;
  o Rules 13.5.1, 13.5.5 and 13.5.6;
  o Table 12 (Hakatere/Ashburton River Catchment Environmental Flow and Allocation Limits);
- All of Section 16.

Those parts of the Canterbury Land and Water Regional Plan – Volume 1 that do not become operative on 1 September 2015 are identified with grey shading.

The Common Seal of the Canterbury Regional Council was fixed in the presence of:

Bill Bayfield  
Chief Executive  
Canterbury Regional Council

Dame Margaret Bazley ONZ, DNZM, Hon DLit  
Chairperson  
Canterbury Regional Council

13 August 2015
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.
(This page is intentionally left blank)
TAUPARAPARA

Wāhia te awa

Puta i tua, Puta 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, Rakihī Tāne

Tāne-te-whakairī-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 Takuruia 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
# Table of Contents

Table of Contents ......................................................................................................................................... i

Section 1 Introduction, Issues & Major Responses ................................................................................... 7

1.1 Introduction .................................................................................................................................. 7
1.2 Land and Water Resources Management Issues – the Need for an Integrated Approach ............ 9
1.3 Key Management Responses for Land and Water ......................................................................... 16

Section 2 How the Plan Works & Definitions ......................................................................................... 29

2.1 Objectives ...................................................................................................................................... 29
2.2 Policies ......................................................................................................................................... 29
2.3 Rules .............................................................................................................................................. 30
2.4 Fresh Water Objectives .................................................................................................................. 30
2.5 Limits .............................................................................................................................................. 31
2.6 Over-allocation ................................................................................................................................. 31
2.7 Development and review of sub-region sections ............................................................................. 32
2.8 Relationship with other regional plans controlling land and water .................................. 32
2.9 Definitions, Translations and Abbreviations ................................................................................... 34

Section 3 Objectives ................................................................................................................................. 49

Section 4 Policies ..................................................................................................................................... 51

Strategic Policies ......................................................................................................................................... 52
Sub-region Section Development ............................................................................................................... 57
Activity and Resource Policies ................................................................................................................... 57

Section 5 Region-wide Rules ................................................................................................................... 81

Section 6 Kaikoura ..................................................................................................................................... 157

6.1 Other Regional Plans that apply to the Kaikoura Sub-region ......................................................... 157
6.2 Water Conservation Orders that apply to the Kaikoura Sub-region ............................................. 157
6.3 Fresh water Outcomes ...................................................................................................................... 157
6.4 Policies ............................................................................................................................................ 158
6.5 Rules ............................................................................................................................................... 158
6.6 Allocation Limits ............................................................................................................................... 159
6.7 High Naturalness Water Bodies ......................................................................................................... 162

Section 7 Hurunui -Waiau ......................................................................................................................... 165

7.1 Other Regional Plans that apply to the Hurunui-Waiau Sub-region ................................................. 165
7.2 Water Conservation Orders that apply to the Hurunui-Waiau Sub-region ...................................... 166
Schedule 2 Fish Screen Standards and Guidelines ................................................................. 415
Schedule 3 Hazardous Industries and Activities ......................................................................... 417
Schedule 4 Hazardous Substances ............................................................................................... 421
Schedule 5 Mixing Zones and Receiving Water Standards ......................................................... 423
Schedule 6 Areas on rivers or lakes commonly used for freshwater bathing ............................ 429
Schedule 7 Farm Environment Plan ............................................................................................. 431
Schedule 7A Management Plan for Farming Activities ............................................................... 437
Schedule 8 Region-wide Water Quality Limits ............................................................................ 439
Schedule 9 Assessment of Stream Depletion Effect .................................................................. 441
Schedule 10 Reasonable Use Test ............................................................................................... 443
Schedule 11 Aquifer testing .......................................................................................................... 447
Schedule 12 Well Interference Effects ........................................................................................ 449
Schedule 13 Requirements for implementation of water allocation regimes .............................. 451
Schedule 14 Excavation of bed material (10 m³) ......................................................................... 453
Schedule 15 Excavation of bed material (20 m³) ........................................................................ 457
Schedule 16 Regional Concept Plan ............................................................................................ 459
Schedule 17 Salmon Spawning Sites ........................................................................................... 463
Schedule 18 Rūnanga Takiwā in the Canterbury Region .............................................................. 469
Schedule 19 Ngāi Tahu statutory acknowledgement areas ......................................................... 473
Schedule 20 Tōpuni areas and descriptions ................................................................................. 521
Schedule 21 Sites over which nohoanga entitlements are to be granted ...................................... 527
Schedule 22 Taonga species list .................................................................................................. 529
Schedule 23 Customary fisheries species lists ........................................................................... 533
Schedule 24 Farm Practices ....................................................................................................... 535
Schedule 24a Farm Practices ..................................................................................................... 537
Schedule 24b Good Farm Practices .......................................................................................... 539
Schedule 24c Valley Floor Area River Bank Erosion Plan ......................................................... 541
Schedule 25 Water Supply Strategy ............................................................................................ 543
Schedule 26 Aquaculture Environment Plan .............................................................................. 545
Schedule 27 On-Land Nitrogen Load Conversion ...................................................................... 547
Schedule 28 Good Management Practice Modelling Rules ....................................................... 555
Schedule 29 Methodology for Updated Flexibility Caps ............................................................ 567
Schedule 30 Methodology for Updating Maximum Caps ............................................................ 571
Schedule 31 Methodology for Recalculating Catchment Load Limits ...................................... 575
Section 1 Introduction, Issues & Major Responses

1.1 Introduction

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 to 15 inclusive contain sub-region 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 and 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 a "commons" resource, 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 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 (section 17 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, food and livestock processing, hydro-electricity generation and recreation.

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

- the effects of individual activities on for example, a fresh waterbody, 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
- 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 predominantly 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, contact recreation and economic activities including primary industry.

Demand for additional water for more irrigation or more reliable irrigation, and hydro-electricity generation, is likely to continue in Canterbury, particularly if 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 or 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 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.

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.
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 has the potential to increase nutrient losses to water bodies. Forestry attenuates flash flooding, reduces soil erosion and improves aquatic habitat through the majority of its 30 year rotation. 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

Cultivating soil and modifying vegetation cover on both plains 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 plains land. For example, deep-rooting vegetation binds soils on slopes, and shelter belts reduce the susceptibility of soil to wind erosion on plains land. The application of water and nutrients can assist in maintaining effective vegetative cover on the Canterbury plains.

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 Mining 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 extractive activities need to be appropriately located and managed to avoid, remedy or mitigate adverse effects on 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 occur 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 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.

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 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.

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 water bodies. 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. Many of Canterbury’s rivers have naturally aggrading beds, therefore targeted extraction can have benefits for flood management. 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. 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 significantly adversely 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.

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 circumstances. In managing water in catchments that are not under stress it is still possible to recognise and provide for existing activities in those catchments. Where abstractions or discharges are over-allocated, alternative management techniques are needed, and any over-allocation has to be phased out within a defined timeframe. For applicants seeking a replacement consent, the RMA provides particular recognition through sections 124-124C and section 104(2A) which states that the consent authority must have regard to the value of the investment of the existing consent holder. Existing infrastructure associated with large-scale irrigation and hydro-electricity generation schemes is recognised as part of the existing environment and has effects that last throughout the period that the structure exists for. When resource consents expire for this infrastructure and associated water abstractions and discharges, 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

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

TŪRANGAWAWEWAE

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

Mana Whenua

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 Tahu which run south from Te Pari-nui-o-Whiti (White Bluffs) on the East Coast, around the southern coastline and offshore 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 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 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 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 wakaae 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 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 New Zealand) 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 the present and future needs of Ngāi Tahu.

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 begun 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 figure below 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 the Ngāi Tahu 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 Whānui. It has also become the ‘iwi 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 Rūnanga with interests in the Canterbury region.

KAITIAKITANGA
The Ngāi Tahu 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
Wai Pounamu.

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.

Kaitiaki
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 the Ngāi Tahu 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 culture, identity and relationship with landscapes and waterways of Te Wai Pounamu.

**Wakawaka**

Access to mahinga kai was managed through the division of natural resources (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 Wai Pounamu, 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 tetehi 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 in 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 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 Wai Pounamu. 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 land and water resources, this Plan has sought to integrate and weave Ngāi Tahu 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 Canterbury Regional Policy Statement 2013 (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 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.
Canterbury Land and Water Regional Plan

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.

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.

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 (RIP and ZIP) 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 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 Freshwater NPS. The NPS for Renewable Electricity Generation requires that regional councils recognise and provide for the national significance of renewable generation activities, including having particular regard to the maintenance of the generation output of existing renewable generation activities.

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 1993, that manages the control of plant and animal pests. This is done through the Regional Pest Management Strategy.
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 consistent with the vision and principles in the CWMS.

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-region sections. Each part of the region is covered by one and only one sub-region section.

The sub-region sections contain policies and rules which are specific to the catchments covered by that section. The policies and rules in the sub-region sections implement the region-wide objectives in the Plan in the most appropriate way for the specific catchment or catchments covered by that section. Where the Plan contains policies and rules on the same subject matter, the more specific sub-region provision will take precedence, except in relation to Policies 4.2 to 4.9. Policy 4.1 will also take precedence unless catchment specific outcomes are specified in the sub-region Section.

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 implemented by the policies, rules and other methods.

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.

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. For the purposes of clarity, where a rule in this Plan refers to a limit, target, threshold, standard, method, practice, site or list contained in any table or schedule within this Plan, that table or schedule forms part of the rule.

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.

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
- Prohibited activities are not appropriate in any circumstance, and no resource consent application may be made for a prohibited activity.

Rule bundling is used in this Plan to combine permissions which may be required under section 9 and sections 13 to 15 of the RMA. One application for resource consent can therefore be made and the CRC will assess and determine the component 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 Fresh Water Objectives

The objectives in Section 3 and Policies 4.1 – 4.6 in this Plan form the ‘freshwater 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 freshwater outcomes (numeric and descriptive) to achieve the Plan’s objectives are set out in Table 1 to Policy 4.1. Where they have been collaboratively determined at a catchment scale the specific freshwater outcomes (numeric and descriptive) are included in a sub-region section.

### 2.5 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-region 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-region 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. Water quality limits are set in Schedule 8.

### 2.6 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-region section; or
3. where the Objectives in Section 3 or Policies 4.1 – 4.6 are not being met.

In the case of nutrients an assessment of whether the regional in-stream outcomes in the Objectives in Section 3 and Policies 4.1 – 4.6 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 community drinking water supplies and discharges, this Plan will not provide for new activities where a catchment is determined to be over-allocated.

Where a lake, river or aquifer is over-allocated, sub-region 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.

### 2.7 Development and review of sub-region sections

Policy 4.9 details how and when a sub-region section will be developed, what parts of this LWRP are able to be changed and what matters must be considered. In addition, Appendix 2 to the RPS 2013 contains direction for the development of sub-region sections.

Priority for the development and review of sub-region sections is to be given to catchments where the regional in-stream fresh water outcomes described in the Objectives in Section 3 and Policies 4.1 – 4.6 are not being met.

The process for establishing or reviewing catchment specific fresh water in-stream outcomes and the limits, in a sub-region 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 social, biophysical, 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.

In addition to the collaboratively established fresh water in-stream outcomes and corresponding limits set out in the policies and rules in the relevant sub-region section, where a catchment is not meeting the Plan’s objectives, the sub-region 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.

### 2.8 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. 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, 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.

<table>
<thead>
<tr>
<th>Regional Plan</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hurunui and Waiau River Regional Plan</td>
<td>The 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.</td>
</tr>
<tr>
<td>Opihi River Regional Plan</td>
<td>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.</td>
</tr>
<tr>
<td>Pareora Catchment Environmental Flow and Water Allocation Regional Plan</td>
<td>The Pareora Catchment Environmental Flow and Water Allocation Regional Plan has objectives, policies and rules relating to the taking or diverting of surface and groundwater 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.</td>
</tr>
<tr>
<td>Waimakariri River Regional Plan</td>
<td>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 in the area covered by 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. Except for policies and rules in the sub-region sections of the proposed Land and Water Regional Plan that specifically address the repair of earthquake damaged land on individual sites used for residential activities, 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.</td>
</tr>
<tr>
<td>Waipara Catchment Environmental Flow and Water Allocation Regional Plan</td>
<td>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.</td>
</tr>
<tr>
<td>Waitaki Catchment Water Allocation Regional Plan</td>
<td>The Waitaki Catchment Water Allocation Regional Plan has objectives, policies and rules relating to the allocation of water. By virtue of section 14 of the 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. 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 and any inconsistency between the Plans must be interpreted in favour of the Waitaki Catchment Water Allocation Regional Plan.</td>
</tr>
<tr>
<td>Regional Coastal Environment Plan</td>
<td>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.</td>
</tr>
</tbody>
</table>
## 2.9 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, the RPS 2013, or this Plan. The definitions in italics below are from the RMA and are reproduced here for information purposes.

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstraction</td>
<td>means the taking of water from a waterbody or the diverting of water outside of the bed of a river, lake or artificial watercourse.</td>
</tr>
</tbody>
</table>
| Accredited Farm Consultant                | means a person who holds a Certificate of Completion in Advanced Sustainable Nutrient Management in New Zealand Agriculture from Massey University and who:  
(a) has been certified by the New Zealand Institute for Primary Industry Management as meeting the criteria for a ‘Certified Dairy Farm System Consultant’; or  
(b) is a Certified Nutrient Management Adviser under the Nutrient Manager Adviser Certification Programme Ltd; or  
(c) holds any other qualification that has been approved by the Chief Executive of Environment Canterbury as being an equivalent standard with respect to the knowledge and competencies required. |
| 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, (including approved adjuvants), 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.                                                           |
| Animal effluent                           | Animal effluent means faeces and urine from animals other than humans, including associated process water, wash-down water, contaminants and sludge but excluding solid animal waste. For the purposes of this definition, it does not include incidental animal effluent present in livestock processing waste streams. |
| Annual exceedance probability (AEP)       | means the chance of a natural hazard event of a given size or larger occurring in any one year.                                                                                                          |
| Annual or seasonal volume or annual or seasonal allocation volume | means:  
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 limit, the total amount of water that is available for allocation over a specified period. |
<p>| Aquifer 1                                 | means the uppermost aquifer of the Coastal Confined Gravel Aquifer System as shown on the Planning Maps.                                                                                                 |
| 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 |</p>
<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artificial watercourse</td>
<td>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 channel. It does not include artificial swales, kerb and channelling or other watercourses designed to convey stormwater.</td>
</tr>
<tr>
<td>Audit</td>
<td>means an assessment of the performance of a farming activity against the objectives and targets of a Farm Environment Plan, and includes identifying any remedial actions to be carried out to achieve the objectives and targets of the Farm Environment Plan, and an overall grading based on the assessment of the farming activity.</td>
</tr>
<tr>
<td>Available reticulated stormwater system</td>
<td>means a reticulated stormwater system where:</td>
</tr>
<tr>
<td></td>
<td>1. a conveyance structure that forms part of the reticulated stormwater system passes within 50m of the property boundary; and</td>
</tr>
<tr>
<td></td>
<td>2. stormwater is able to be conveyed into the reticulated system under gravity; and</td>
</tr>
<tr>
<td></td>
<td>3. the network operator will accept the stormwater from the property; and</td>
</tr>
<tr>
<td></td>
<td>4. the distance between the conveyance structure and the source of the stormwater is less than 100m.</td>
</tr>
<tr>
<td>Available sewerage network</td>
<td>means a community or territorial authority reticulated sewerage system where:</td>
</tr>
<tr>
<td></td>
<td>1. a pipeline passes within 50 m of the property boundary; and</td>
</tr>
<tr>
<td></td>
<td>2. the network operator will accept the wastewater from the property; and</td>
</tr>
<tr>
<td></td>
<td>3. the distance from the network to the building from which wastewater is generated is less than 100 m.</td>
</tr>
<tr>
<td>Baseline GMP Loss Rate</td>
<td>Means the average nitrogen loss rate below the root zone, as estimated by the Farm Portal, for the farming activity carried out during the nitrogen baseline period, if operated at Good Management Practice.</td>
</tr>
<tr>
<td>Bed</td>
<td>means the space of land extending between the outward extremities of any stopbank or any flood protection vegetation, as shown on the maps which form part of the CRC Flood Protection and Drainage Bylaw 2013, and where there is no stopbank or flood protection vegetation or relevant map in the CRC Flood Protection and Drainage Bylaw 2013, means:</td>
</tr>
<tr>
<td></td>
<td>(a) in relation to any river –</td>
</tr>
<tr>
<td></td>
<td>1. ...;</td>
</tr>
<tr>
<td></td>
<td>2. ... the space of land which the waters of the river cover at its fullest flow without overtopping its banks; and</td>
</tr>
<tr>
<td></td>
<td>(b) in relation to any lake, except a lake controlled by artificial means,</td>
</tr>
<tr>
<td></td>
<td>1. ...;</td>
</tr>
<tr>
<td></td>
<td>2. in all other cases, the space of land which the waters of the lake cover at its highest level without exceeding its margin; and</td>
</tr>
<tr>
<td></td>
<td>(c) 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</td>
</tr>
<tr>
<td>Best practicable option</td>
<td>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 –</td>
</tr>
<tr>
<td></td>
<td>(a) the nature of the discharge or emission and the sensitivity of the receiving environment to adverse effects; and</td>
</tr>
<tr>
<td></td>
<td>(b) the financial implications, and the effects on the environment, of that option when compared with other options; and</td>
</tr>
<tr>
<td></td>
<td>(c) the current state of technical knowledge and the likelihood that the option can be successfully applied</td>
</tr>
<tr>
<td>Bio-solids</td>
<td>means sewage or sewage sludge derived from a sewage treatment plant, that does not include animal effluent or products derived from industrial treatment plants, and that has</td>
</tr>
<tr>
<td>Word</td>
<td>Definition</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Bore</td>
<td>means a structure or hole in the ground constructed for the purpose of: 1. hydrological or geotechnical investigations 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 any test pit, trench, soak hole, piezometers, lysimeters or well-pointing device or other structure used to temporarily lower the groundwater table for the purpose of dewatering.</td>
</tr>
<tr>
<td>Certified Farm Environment Plan Auditor</td>
<td>means a person who either: (a) is approved by the Chief Executive of Environment Canterbury as meeting the following criteria and is registered on the Environment Canterbury website as a Certified Farm Environment Plan Auditor or (b) is an auditor who is operating under an International Standards Organisation accredited audit programme that has been approved by the Chief Executive of Environment Canterbury as including audit criteria equivalent to that set out in Part C of Schedule 7; and 1. has at least 5 years’ professional experience in the management of pastoral, horticulture or arable farm systems; and (i) holds a Certificate of Completion in Advanced Sustainable Nutrient Management in New Zealand Agriculture from Massey University; or (ii) holds a tertiary qualification in agricultural science or demonstrates an equivalent level of knowledge and experience; and 2. is a current member of a professional institute relevant to auditing that requires members to subscribe to a code of ethics and has a procedure in place for dealing with complaints made against members; and 3. demonstrates, to the Chief Executive of Environment Canterbury, proficiency in the auditing of Farm Environment Plans against the matters set out in Part C of Schedule 7.</td>
</tr>
<tr>
<td>Cleanfill</td>
<td>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: 1. combustible, putrescible, degradable or leachable components; 2. hazardous substances; 3. products or materials derived from hazardous waste treatment, hazardous waste stabilisation, or hazardous waste disposal practices; 4. materials that may present a risk to human or animal health, such as medical and veterinary waste, asbestos, or radioactive substances; or 5. liquid waste.</td>
</tr>
</tbody>
</table>
| Coastal marine area                    | means the foreshore, seabed and coastal water, and the air space above the water - (a) of which the seaward boundary is the outer limits of the territorial sea; (b) 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. 1 kilometre upstream from the mouth of the river, or ii. The point upstream that is calculated by multiplying the width of the river
<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community wastewater treatment system</td>
<td>means a wastewater treatment system owned and operated by a group, institution, 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.</td>
</tr>
<tr>
<td>Community drinking-water supply</td>
<td>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 25 people with drinking-water for not less than 60 days each calendar year, or is a site listed in Schedule 1(a).</td>
</tr>
<tr>
<td>Community Water Supply</td>
<td>means water taken primarily for community drinking-water supply, and includes that also used for institutional, industrial, processing, or stockwater purposes or amenity irrigation use and fire-fighting activities.</td>
</tr>
<tr>
<td>Confined aquifer</td>
<td>means an aquifer overlain by a low permeability or impermeable layer where the water in the aquifer is under pressure.</td>
</tr>
<tr>
<td>Construction</td>
<td>includes all forms of building activity and infrastructure construction.</td>
</tr>
<tr>
<td>Construction-phase stormwater</td>
<td>Means water, sediment and entrained contaminants resulting from precipitation on exposed or unstabilised land and which arises from construction or demolition activities, or the development of a building site.</td>
</tr>
<tr>
<td>Contact recreation</td>
<td>means human recreation activity where people have direct contact with, or are partly or fully immersed in, the water or river or lake. It includes activities such as boating, bathing, paddling, swimming, and fishing.</td>
</tr>
</tbody>
</table>
| Contaminant                               | includes any substance (including gases, odorous compounds, liquids, solids, and microorganisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy, or heat—  
  (a) when discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or  
  (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 |
| Contaminated land                         | means land that has a hazardous substance in or on it that—  
  (a) has significant adverse effects on the environment; or  
  (b) is reasonably likely to have significant adverse effects on the environment |
<p>| Dam                                       | means a structure used or to be used for the damming of any water, or waterbody where the structure is the full width of the waterbody 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 provided the structures for water takes are not the full width of a waterbody, 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. |
| Damming                                   | means the impounding of water by a dam.                                                                                                                                                                   |
| Defence against water                     | 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 waterbody, artificial watercourse, or artificial lake. For the purposes of this definition, dams are excluded. |
| Dewatering                                | means the abstraction of groundwater so as to lower the water table for the period of time required to enable excavation, construction, maintenance or geotechnical work to proceed in the dewatered area. |</p>
<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discrepancy for the measurement period</td>
<td>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.</td>
</tr>
<tr>
<td>Diversion</td>
<td>means the deflection of water from its natural course, but remaining within the bed or the banks of the water body, or artificial lake or artificial watercourse. For the purpose of this Plan and unless the diversion is the result of a lawful permanent re-alignment of the bed of a surface water body, taking water from the bed of any watercourse, even if only for a short distance before it is returned, is considered a take and discharge.</td>
</tr>
<tr>
<td>Down-plains</td>
<td>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.</td>
</tr>
<tr>
<td>Drain</td>
<td>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, or culvert.</td>
</tr>
<tr>
<td>Drainage system</td>
<td>means a surface or subsurface pipe or channel or canal system that has been constructed for the primary purpose of: 1. collecting or draining water and contaminants from agricultural or rural land and ancillary structures; or 2. controlling or permanently lowering the water table; and which conveys and discharges that water and contaminants to land or surface water. It excludes any system that has been constructed for the primary purpose of collecting, conveying or discharging stormwater.</td>
</tr>
<tr>
<td>Drainage water</td>
<td>means water and contaminants arising from the drainage of water from the soil profile, or excess surface water from agricultural or rural land. It excludes stormwater and sediment-laden water which are separately defined.</td>
</tr>
<tr>
<td>Drawdown</td>
<td>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.</td>
</tr>
<tr>
<td>Dwelling house</td>
<td>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.</td>
</tr>
<tr>
<td>Earthworks</td>
<td>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 and maintenance 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, or harvesting of, crops or pasture; or (b) digging of postholes for the construction of fences; (c) works for research and monitoring such as coring, water bores and the use of piezometers; (d) ripping in of water pipes or cables; (e) establishment, maintenance and/or enhancement of wetlands, domestic gardens or amenity planting; (f) harvesting of horticulural crops.</td>
</tr>
<tr>
<td>Ecosystem</td>
<td>means a system of interacting terrestrial and/or aquatic living organisms within their</td>
</tr>
</tbody>
</table>

Canterbury Land and Water Regional Plan
<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>natural and physical environment.</td>
<td></td>
</tr>
<tr>
<td>Ecosystem services</td>
<td>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 and includes the goods and services provided by healthy ecosystems, including medicinal plants, clean water and air, and protection from extreme natural events.</td>
</tr>
<tr>
<td>Efficiency</td>
<td>means that for any given level of output inputs are minimised; and includes technical, dynamic and allocative efficiency.</td>
</tr>
<tr>
<td>Equivalent Baseline GMP Loss Rate</td>
<td>means the average nitrogen loss rate below the root zone, expressed in kg per hectare per annum, for a 48 month consecutive period within the period 01 January 2009 to 31 December 2013, and that has been calculated by applying: (a) modelling proxies equivalent to those in Schedule 28 of this Plan to that part of the farming activity where that is practicable and appropriate; and (b) alternative methods and modelling proxies that are representative of Good Management Practice to the balance of the farming activity. For the purposes of clarity, in the case where a building consent and effluent discharge consent have been granted for a new or upgraded dairy milking shed in the period 01 January 2009 to 31 December 2013, the calculation will be on the basis that the dairy farming activity is operational.</td>
</tr>
<tr>
<td>Equivalent Good Management Practice Loss Rate</td>
<td>means the average nitrogen loss rate below the root zone, expressed in kg per hectare per annum, for the most recent four year period, and that has been calculated by applying: (a) modelling proxies equivalent to those in Schedule 28 of this Plan to that part of the farming activity where that is practicable and appropriate; and (b) alternative methods and modelling proxies that are representative of Good Management Practice to the balance of the farming activity.</td>
</tr>
<tr>
<td>Existing resource consent</td>
<td>means: 1. resource consent which has been given effect to; 2. 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.</td>
</tr>
<tr>
<td>Farm Portal</td>
<td>means the nutrient management database accessed at farmportal.ecan.govt.nz that is used to derive a Baseline GMP Loss Rate and Good Management Practice Loss Rate in accordance with Schedule 28.</td>
</tr>
<tr>
<td>Farming enterprise</td>
<td>means an aggregation of parcels of land held in single or multiple ownership (whether or not held in common ownership) that constitutes a single operating unit for the purpose of nutrient management.</td>
</tr>
<tr>
<td>Fertiliser</td>
<td>means: 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: (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 does not include: (a) substances that are plant growth regulators that modify the physiological</td>
</tr>
<tr>
<td>Word</td>
<td>Definition</td>
</tr>
<tr>
<td>------</td>
<td>------------</td>
</tr>
<tr>
<td>defines 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.</td>
<td></td>
</tr>
<tr>
<td>Field capacity</td>
<td>means the moisture content of soil when the addition of further water would result in saturation and/or drainage of water from the soil.</td>
</tr>
<tr>
<td>Flood carrying capacity</td>
<td>means the ability of a river to carry flood flows within its bed without overtopping its banks.</td>
</tr>
<tr>
<td>Floodwaters</td>
<td>means surface water that has inundated a property as a result of the breaching or overtopping of the banks of a surface water body.</td>
</tr>
<tr>
<td>Flow sensitive catchment</td>
<td>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.</td>
</tr>
<tr>
<td>Gallery</td>
<td>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.</td>
</tr>
<tr>
<td>Good Management Practice Loss Rate</td>
<td>means the average nitrogen loss rate below the root zone, as estimated by the Farm Portal, for the farming activity carried out over the most recent four year period, if operated at Good Management Practice.</td>
</tr>
<tr>
<td>Greywater</td>
<td>means domestic wastes from a bath, shower, basin, laundry and kitchen but excluding toilet and urinal wastes. It may contain pathogens.</td>
</tr>
<tr>
<td>Groundwater</td>
<td>means all water beneath the surface of the earth contained within the saturated zone, but excludes the water chemically combined in minerals.</td>
</tr>
<tr>
<td>Hāpua</td>
<td>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.</td>
</tr>
<tr>
<td>Hazardous activity or industry</td>
<td>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.</td>
</tr>
<tr>
<td>Hazardous substance</td>
<td>means hazardous substances as defined in Schedule 4 Part A of this Plan.</td>
</tr>
<tr>
<td>Hazardous waste</td>
<td>means waste that contains: 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.</td>
</tr>
<tr>
<td>High Naturalness Waterbody</td>
<td>means those hāpua, wetlands and natural state water bodies which are considered to have outstanding or significant characteristics and which are listed as high naturalness water bodies in Sections 6 to 15 of this Plan.</td>
</tr>
<tr>
<td>Hill and High Country</td>
<td>means all land above 600 m altitude or greater than 20 degrees in slope.</td>
</tr>
<tr>
<td>Inanga Spawning Habitat</td>
<td>means that part of the bed and banks of a lake, permanently or intermittently flowing (but not ephemeral) river, artificial watercourse, coastal lagoon or wetland that is within an area identified as ‘Inanga Spawning Habitat’ on the Planning Maps.</td>
</tr>
<tr>
<td>Intensively farmed</td>
<td>means:</td>
</tr>
<tr>
<td>Word</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| stock                         | 1. cattle or deer grazed on irrigated land or contained for break-feeding of winter feed crops;  
                                  2. dairy cattle, including cows, whether dry or milking, and whether on irrigated land or not; or  
                                  3. farmed pigs.                                                                                                                                 |
| Interference effects          | means those effects of a groundwater abstraction calculated in accordance with Schedule 12 of this Plan.                                    |
| Irrigation                   | 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. |
| Irrigation application       | efficiency means the volume of water stored in the plant root zone following irrigation, as a percentage of the total volume applied.       |
| Irrigation Scheme            | means a trust, company, incorporated society or other legal entity that holds a resource consent to take and supply water to more than one property. |
| Iwi Management Plan          | means a management plan recognised by an iwi authority.                                                                                   |
| Kerbside collection          | means a regular service provided by a territorial authority to collect waste from the road boundary of the property 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. |
| Landfill                     | means a site used for the deposition of solid and/or hazardous waste onto or into land.                                                   |
| Limit                        | includes any environmental flow and allocation limit in Sub-region Sections 6 to 15 of this Plan and groundwater allocation limits in Sub-region Sections 6 to 15 of this Plan and any water quality and nutrient limits in this Plan, including in the Rules in Section 5 and Schedule 8. |
| 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                  | 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 materially increase the footprint, height, or external envelope of the structure. |
| Management Plan              | means, in relation to a farming activity, a plan prepared in accordance with Schedule 7A of this Plan.                                      |
| 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. |
| 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.                  |
| Municipal solid waste        | means any non-hazardous, solid waste from a combination of domestic, commercial and industrial sources. It includes putrescible waste, garden waste, uncontaminated bio-solids and clinical and related waste (including contaminated waste sterilised to a standard acceptable to the Department of Health). |
| Nationally and regionally    | significant includes, but is not limited to, infrastructure for activities recognised by a National Policy Statement as being nationally significant. |

Canterbury Land and Water Regional Plan
<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>infrastructure</td>
<td>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.</td>
</tr>
<tr>
<td>Natural hazard</td>
<td>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.</td>
</tr>
<tr>
<td>Natural lake</td>
<td>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.</td>
</tr>
<tr>
<td>Natural state</td>
<td>means undeveloped state, shaped by natural processes rather than by human activities.</td>
</tr>
<tr>
<td>Natural state water bodies</td>
<td>means rivers, lakes and wetlands within land administered for conservation purposes by the Department of Conservation.</td>
</tr>
<tr>
<td>Non-point source discharge</td>
<td>means run-off or leachate from land onto or into land, a water body or the sea.</td>
</tr>
<tr>
<td>Nitrogen baseline</td>
<td>means: (a) the discharge of nitrogen below the root zone, as modelled with OVERSEER®, (where the required data is inputted into the model in accordance with OVERSEER® Best Practice Data Input Standards), or an equivalent model approved by the Chief Executive of Environment Canterbury, averaged over a 48 month consecutive period within the period 1 January 2009 to 31 December 2013, and expressed in kg per hectare per annum, except in relation to Rules 5.46, 5.56, 5.58A and 5.62, where it is expressed as a total kg per annum from the identified area of land; and (b) in the case where a building consent and effluent discharge consent have been granted for a new or upgraded dairy milking shed in the period 01 January 2009 to 31 December 2013, the calculation under (a) will be on the basis that the dairy farming activity is operational; and (c) if OVERSEER® is updated, the most recent version is to be used to recalculate the nitrogen baseline using the same input data for the same period as used in (a) above.</td>
</tr>
<tr>
<td>Nitrogen loss calculation</td>
<td>means the discharge of nitrogen below the root zone, as modelled with OVERSEER® (where the required data is inputted into the model in accordance with OVERSEER® Best Practice Data Input Standards), or an equivalent model approved by the Chief Executive of Environment Canterbury, averaged over the most recent four year period and expressed in kg per hectare per annum. If OVERSEER® is updated, the most recent version is to be used.</td>
</tr>
<tr>
<td>Nutrient discharge</td>
<td>means nutrient loss from the property by surface runoff or by leaching below the root zone.</td>
</tr>
<tr>
<td>Offal</td>
<td>means waste comprised of dead animal matter.</td>
</tr>
<tr>
<td>Offal pit</td>
<td>means a hole excavated in land for the purpose of disposing of offal, but does not include an on-site refuse disposal pit.</td>
</tr>
<tr>
<td>On-site refuse disposal pit</td>
<td>means a hole excavated in land for the purpose of disposing of household and farm waste.</td>
</tr>
<tr>
<td>On-site wastewater treatment system</td>
<td>means a system that receives wastewater from a single property and treats and applies the wastewater to a land application system on the property. Such wastewater includes that from facilities serving staff/employees/residents in institutional, utility, commercial and industrial establishments.</td>
</tr>
<tr>
<td>Organic matter</td>
<td>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 processes, such as dead vegetation, organic farm waste, organic freezing works waste and organic fish processing factory waste.</td>
</tr>
<tr>
<td>Phosphorus Risk Zone</td>
<td>means the area shown as the ‘High Runoff Risk Phosphorus Zone’ on the Planning Maps.</td>
</tr>
<tr>
<td>Word</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Pit toilet</td>
<td>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”.</td>
</tr>
<tr>
<td>Plantation forest</td>
<td>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.</td>
</tr>
<tr>
<td>Point source discharge</td>
<td>means a discharge from a specific and identifiable outlet onto or into land, a water body or the sea.</td>
</tr>
<tr>
<td>Portable container</td>
<td>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.</td>
</tr>
<tr>
<td>Potentially contaminated</td>
<td>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 where 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, 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.</td>
</tr>
<tr>
<td>Principal water supplier</td>
<td>a publicly or privately owned supplier of water which is conveyed and distributed to constituent irrigation schemes, community and/or stockwater schemes, hydro-electricity generators and/or other users of the water.</td>
</tr>
<tr>
<td>Profile available water</td>
<td>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.</td>
</tr>
<tr>
<td>Property</td>
<td>means any contiguous area of land, including land separated by a road or river, 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.</td>
</tr>
<tr>
<td>Pumping test (also called aquifer test)</td>
<td>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 or any interference effects.</td>
</tr>
<tr>
<td>Reasonable mixing</td>
<td>means the mixing that occurs in a mixing zone as defined in Schedule 5 of this Plan.</td>
</tr>
<tr>
<td>Reasonable use</td>
<td>when applied to the taking 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.</td>
</tr>
<tr>
<td>Reasonable use test</td>
<td>when applied to the taking 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.</td>
</tr>
<tr>
<td>Recovery activities</td>
<td>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, or infrastructure, and any associated discharge of sediment-laden water arising as a result of that extension, repair or improvement, but excludes any discharges associated with the operation of infrastructure.</td>
</tr>
<tr>
<td>Reliability of supply</td>
<td>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.</td>
</tr>
<tr>
<td>Re-refined oil</td>
<td>means used oil that has been processed to remove impurities such as particulate, metals,</td>
</tr>
<tr>
<td>Word</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Residential or commercial purposes</td>
<td>means land that a relevant district plan or proposed district plan classifies as primarily for residential or commercial activities.</td>
</tr>
<tr>
<td>Residential, commercial or industrial purposes</td>
<td>means land that a relevant district plan or proposed district plan classifies as primarily for residential, commercial or industrial activities.</td>
</tr>
<tr>
<td>Reticulated stormwater system</td>
<td>means a network of pipes, swales, drains, kerbs and channels owned or operated by a network utility operator that collects stormwater within areas used or proposed to be used for urban-residential, commercial or industrial purposes and conveys that stormwater to any device, wetland, retention or detention pond or infiltration basin for the treatment of stormwater, prior to a discharge to land, groundwater or surface water. It excludes any drainage system that has been constructed for the primary purpose of collection, conveyance or discharge of drainage water.</td>
</tr>
<tr>
<td>Riparian margin</td>
<td>means the land within the following distances of the bed of any lake, river or wetland boundary: 1. In Hill and High Country land or land shown as High Soil Erosion Risk on the Planning Maps – within 10 m; and 2. In all other land not shown as High Soil Erosion Risk on the Planning Maps or defined as Hill and High Country – within 5 m.</td>
</tr>
<tr>
<td>River</td>
<td>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).</td>
</tr>
<tr>
<td>Seasonal High Water Table</td>
<td>means, at the time the activity is established, the highest elevation that the water table has reached between the months of June and August inclusive.</td>
</tr>
<tr>
<td>Sediment-laden water</td>
<td>means water and entrained sediment arising from earthworks, geotechnical investigations, vegetation clearance, or the introduction or removal of vegetation, but excludes construction-phase stormwater which is separately defined.</td>
</tr>
<tr>
<td>Settlement</td>
<td>means land that a relevant district plan or proposed district plan classifies as primarily for residential, commercial, industrial, institutional or recreational activities.</td>
</tr>
<tr>
<td>Seven Day Mean Annual Low Flow (7DMALF)</td>
<td>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).</td>
</tr>
<tr>
<td>Sewage sludge</td>
<td>means a semi-liquid residue that settles to the bottom of pipes, tanks and systems used in on-site wastewater treatment systems and community wastewater systems.</td>
</tr>
<tr>
<td>Significant indigenous biodiversity</td>
<td>means areas or habitats that meet one or more of the criteria in Appendix 3 to the Canterbury RPS 2013.</td>
</tr>
<tr>
<td>Site</td>
<td>means: 1. 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: (a) held in a single certificate of title; or (b) for which a separate certificate of title could be issued without further consent; and 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 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.</td>
</tr>
<tr>
<td>Word</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>&quot;Site&quot;</td>
<td>shall also include the access to the site.</td>
</tr>
<tr>
<td>Soil</td>
<td>means the loose material on the earth’s surface in which terrestrial plants grow and includes sand, silts, clays and any intermixed organic material.</td>
</tr>
<tr>
<td>Solid animal waste</td>
<td>means solid waste of animal origin, including manure, but does not include dead animals or animal parts.</td>
</tr>
<tr>
<td>Solid waste</td>
<td>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, recycling or recovering cannot be applied.</td>
</tr>
<tr>
<td>Stock holding area</td>
<td>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 24-hour 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; but excludes sheep and cattle yards constructed on pasture or bare soil.</td>
</tr>
<tr>
<td>Stock reconciliation</td>
<td>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).</td>
</tr>
<tr>
<td>Stormwater</td>
<td>means runoff water and entrained contaminants arising from precipitation on the external surface of any structure or any land modified by human action, and that has been channelled, diverted, intensified or accelerated by human intervention. It excludes construction-phase stormwater, sediment-laden water and drainage water which are separately defined.</td>
</tr>
<tr>
<td>Stream depleting groundwater</td>
<td>means groundwater abstraction that has a direct, high, medium or low stream depletion effect, calculated in accordance with Schedule 9 of this Plan.</td>
</tr>
<tr>
<td>Stream depletion effect</td>
<td>means the impact of groundwater abstraction on surface water flow, calculated in accordance with Schedule 9 of this Plan.</td>
</tr>
<tr>
<td>Surface water or surface water body</td>
<td>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).</td>
</tr>
<tr>
<td>Surrendered</td>
<td>means the partial or full surrendering of a resource consent in terms of section 138 of the RMA.</td>
</tr>
<tr>
<td>Swale</td>
<td>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.</td>
</tr>
<tr>
<td>Te Rūnanga o Ngāi Tahu</td>
<td>means the body corporate of Ngāi Tahu Whānui as established under Section 6 of the Te Rūnanga o Ngāi Tahu Act 1996.</td>
</tr>
<tr>
<td>Telemetered</td>
<td>means the transfer of data to the CRC or its agent via electronic means in real-time or near real-time or regularly.</td>
</tr>
<tr>
<td>Trench</td>
<td>means a long narrow excavation for the purpose of installing or replacing utility pipelines, drainage, irrigation, service connections, electricity and telecommunication cables or on-site utilities such as lighting systems.</td>
</tr>
<tr>
<td>Unconfined aquifer</td>
<td>means an aquifer that lacks an overlying layer of fine sediment, and is not under pressure.</td>
</tr>
<tr>
<td>Up-plains</td>
<td>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.</td>
</tr>
<tr>
<td>Vegetation</td>
<td>includes all plants and seeds, fruit or parts thereof, live or dead, standing, fallen, windblown, cut, broken, pulverised, sawn, or harvested, natural or disturbed.</td>
</tr>
<tr>
<td>Vegetation clearance</td>
<td>means removal of vegetation by physical, mechanical, chemical or other means but</td>
</tr>
</tbody>
</table>
Canterbury Land and Water Regional Plan

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>excludes:</td>
<td>(a) cultivation for the establishment of, or harvesting of, crops or pasture;</td>
</tr>
<tr>
<td></td>
<td>(b) clearance for the establishment or maintenance of utilities or structures;</td>
</tr>
<tr>
<td></td>
<td>(c) removal of a species listed in the Biosecurity NZ Register of Unwanted Organisms or the Canterbury Pest Management Strategy;</td>
</tr>
<tr>
<td></td>
<td>(d) clearance for the purposes of maintaining existing fence lines, vehicle tracks, firebreaks, drains, ponds, dams or crossings;</td>
</tr>
<tr>
<td></td>
<td>(e) domestic gardening and the maintenance of amenity planting;</td>
</tr>
<tr>
<td></td>
<td>(f) clearance by, or on behalf of, the Canterbury Regional Council for the purposes of maintaining the flood-carrying capacity of a river;</td>
</tr>
<tr>
<td></td>
<td>(g) exotic vegetation clearance by the Department of Conservation or Land Information New Zealand for the purposes of pest management and maintenance of public access.</td>
</tr>
<tr>
<td>Vertebrate toxic agent</td>
<td>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.</td>
</tr>
<tr>
<td>Wastewater</td>
<td>means sewage, toilet wastes and grey water (household wastewater from kitchens, bathrooms and laundries), but excludes stormwater, trade wastes, livestock processing wastes, and other industrial or trade process wastes.</td>
</tr>
<tr>
<td>Water</td>
<td>means water in all its physical forms whether flowing or not and whether over or under the ground:</td>
</tr>
<tr>
<td></td>
<td>(a) includes fresh water, coastal water, and geothermal water;</td>
</tr>
<tr>
<td></td>
<td>(b) does not include water in any form while in any pipe, tank, or cistern</td>
</tr>
<tr>
<td>Water body</td>
<td>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</td>
</tr>
<tr>
<td>Water race or water supply race</td>
<td>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.</td>
</tr>
<tr>
<td>Water supply strategy</td>
<td>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.</td>
</tr>
<tr>
<td>Water users group</td>
<td>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.</td>
</tr>
<tr>
<td>Weir</td>
<td>means a dam erected across a river to raise the level of the water.</td>
</tr>
<tr>
<td>Wetland</td>
<td>includes:</td>
</tr>
<tr>
<td></td>
<td>1. wetlands which are part of river, stream and lake beds;</td>
</tr>
<tr>
<td></td>
<td>2. natural ponds, swamps, marshes, fens, bogs, seeps, brackish areas, mountain wetlands, and other naturally wet areas that support an indigenous ecosystem of plants and animals specifically adapted to living in wet conditions, and provide a habitat for wildlife;</td>
</tr>
<tr>
<td></td>
<td>3. coastal wetlands above mean high water springs;</td>
</tr>
<tr>
<td></td>
<td>but excludes:</td>
</tr>
<tr>
<td></td>
<td>(a) wet pasture or where water temporarily ponds after rainfall</td>
</tr>
<tr>
<td></td>
<td>(b) artificial wetlands used for wastewater or stormwater treatment except where they are listed in Sections 6 to 15 of this Plan;</td>
</tr>
<tr>
<td></td>
<td>(c) artificial farm dams, drainage canals and detention dams; and</td>
</tr>
<tr>
<td></td>
<td>(d) reservoirs for firefighting, domestic or community water supply.</td>
</tr>
<tr>
<td>Wetland boundary</td>
<td>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 has a similar</td>
</tr>
</tbody>
</table>
Word | Definition
--- | ---
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.
Winter Grazing | means the grazing of cattle within the period of 1 May to 30 September, where the cattle are contained for break-feeding of in-situ brassica and root vegetable forage crops or for consuming supplementary feed that has been brought onto the property.

**Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>7DMALF</td>
<td>Seven-day mean annual low flow</td>
</tr>
<tr>
<td>CRC</td>
<td>Canterbury Regional Council</td>
</tr>
<tr>
<td>CWMS</td>
<td>Canterbury Water Management Strategy</td>
</tr>
<tr>
<td>ECAN Act</td>
<td>Environment Canterbury (Temporary Commissioners and Improved Water Management) Act 2010</td>
</tr>
<tr>
<td>Freshwater NPS</td>
<td>National Policy Statement for Freshwater Management 2011</td>
</tr>
<tr>
<td>g/m³</td>
<td>Grams per cubic metre</td>
</tr>
<tr>
<td>kg</td>
<td>Kilograms</td>
</tr>
<tr>
<td>L/s</td>
<td>Litres per second</td>
</tr>
<tr>
<td>LWRP</td>
<td>Land and Water Regional Plan</td>
</tr>
<tr>
<td>m</td>
<td>Metres</td>
</tr>
<tr>
<td>m²</td>
<td>Square metres</td>
</tr>
<tr>
<td>m³</td>
<td>Cubic metres</td>
</tr>
<tr>
<td>m³/day</td>
<td>Cubic metres per day</td>
</tr>
<tr>
<td>mg/m³</td>
<td>Milligrams per cubic metre</td>
</tr>
<tr>
<td>mm</td>
<td>Millimetres</td>
</tr>
<tr>
<td>RMA</td>
<td>Resource Management Act 1991</td>
</tr>
<tr>
<td>RPS 2013</td>
<td>Canterbury Regional Policy Statement 2013</td>
</tr>
</tbody>
</table>
(This page is intentionally left blank)
Section 3 Objectives

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

3.1 Land and water are managed as integrated natural resources to recognise and enable Ngāi Tahu culture, traditions, customary uses and relationships with land and water.

3.2 Water management applies the ethic of ki uta ki tai – from the mountains to the sea – and 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.

3.3 Nationally and regionally significant infrastructure is enabled and is resilient and positively contributes to economic, cultural and social wellbeing through its efficient and effective operation, on-going maintenance, repair, development and upgrading.

3.4 A regional network of water storage and distribution facilities provides for sustainable, efficient and multiple use of water.

3.5 Land uses continue to develop and change in response to socio-economic and community demand.

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

3.7 Fresh water is managed prudently as a shared resource with many in-stream and out-of-stream values.

3.8 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.

3.8A High quality fresh water is available to meet actual and reasonably foreseeable needs for community drinking water supplies.

3.9 Abstracted water is shown to be necessary and reasonable for its intended use and any water that is abstracted is used efficiently.

3.10 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.

3.11 Water is recognised as an enabler of the economic and social wellbeing of the region.
3.12 When setting and managing within limits, regard is had to community outcomes for water quality and quantity.

3.13 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.

3.14 High naturalness waterbodies and hāpua and their margins are maintained in a healthy state or are improved where degraded.

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

3.16 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.

3.17 The significant indigenous biodiversity values of rivers, wetlands and hāpua are protected.

3.18 Wetlands that contribute to cultural and community values, biodiversity, water quality, mahinga kai, water cleansing and flood mitigation are maintained.

3.19 Natural character values of freshwater bodies, including braided rivers and their margins, wetlands, hāpua and coastal lagoons, are protected.

3.20 Gravel in riverbeds is extracted to maintain floodway capacity and to provide resources for building and construction and maintenance, 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.

3.21 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.

3.22 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.

3.23 Soils are healthy and productive, and human-induced erosion and contamination are minimised.

3.24 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.
**Index to Policies**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Policy Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Policies</td>
<td>4.1 – 4.8</td>
</tr>
<tr>
<td>Sub-region Section Development</td>
<td>4.9 – 4.11</td>
</tr>
<tr>
<td>Discharge of Contaminants to Land or Water</td>
<td>4.12 – 4.14B</td>
</tr>
<tr>
<td>Stormwater and Community Wastewater Systems</td>
<td>4.15 – 4.17</td>
</tr>
<tr>
<td>Earthworks, Land Excavation and Deposition of Material into Land over Aquifers</td>
<td>4.18 – 4.19</td>
</tr>
<tr>
<td>Soil Stability</td>
<td>4.20 – 4.22</td>
</tr>
<tr>
<td>Protect Sources of Drinking Water</td>
<td>4.23 – 4.23B</td>
</tr>
<tr>
<td>Hazardous Substances and Hazardous Activities</td>
<td>4.24 – 4.30</td>
</tr>
<tr>
<td>Livestock Exclusion from Water Bodies</td>
<td>4.31 – 4.32</td>
</tr>
<tr>
<td>Discharges of collected animal effluent</td>
<td>4.33</td>
</tr>
<tr>
<td>Nutrient Management</td>
<td>4.34 – 4.41D</td>
</tr>
<tr>
<td>Damming and Diversion of Water Bodies</td>
<td>4.42 – 4.48</td>
</tr>
<tr>
<td>Abstraction of Water</td>
<td>4.49 – 4.64</td>
</tr>
<tr>
<td>Efficient Use of Water</td>
<td>4.65 – 4.69</td>
</tr>
<tr>
<td>Transfer of Water Permits</td>
<td>4.70 – 4.71</td>
</tr>
<tr>
<td>Sharing Water in Times of Restriction</td>
<td>4.72</td>
</tr>
<tr>
<td>Consent Duration, Lapse Periods and Giving Effect to Water Permits</td>
<td>4.73 – 4.74</td>
</tr>
<tr>
<td>Flow Sensitive Catchments</td>
<td>4.75</td>
</tr>
<tr>
<td>Site Dewatering</td>
<td>4.76 – 4.76A</td>
</tr>
<tr>
<td>Groundwater Protection</td>
<td>4.77 – 4.78</td>
</tr>
<tr>
<td>Hydrocarbon Exploration or Production, including “Fracking”</td>
<td>4.79 – 4.80</td>
</tr>
<tr>
<td>Wetlands and Riparian Margins</td>
<td>4.81 – 4.85</td>
</tr>
<tr>
<td>Activities in Beds of Lakes and Rivers</td>
<td>4.85A – 4.92</td>
</tr>
<tr>
<td>Fine Sediment Removal and Habitat Restoration</td>
<td>4.92A</td>
</tr>
<tr>
<td>Gravel Extraction</td>
<td>4.93 – 4.95</td>
</tr>
<tr>
<td>Natural Hazards</td>
<td>4.96 – 4.98</td>
</tr>
</tbody>
</table>
Section 4 - Policies

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

Where the Plan contains Policies in Section 4 and in the relevant sub-region Section on the same subject matter, the more specific sub-region Policy will take precedence, except in relation to Policies 4.2 to 4.9. Policy 4.1 will also take precedence unless catchment specific outcomes are specified in the sub-region Section.

Strategic Policies

4.1 Lakes, rivers, wetlands and aquifers will meet the fresh water outcomes set in Sections 6 to 15 within the specified timeframes. If outcomes have not been established for a catchment, then each type of lake, river or aquifer should meet the outcomes set out in Table 1 by 2030.

4.2 The management of lakes, rivers, wetlands and aquifers will take account of the fresh water outcomes, water quantity limits and the individual and cumulative effects of land uses, discharges and abstractions will meet the water quality limits set in Sections 6 to 15 or Schedule 8 and the individual and cumulative effects of abstractions will meet the water quantity limits in Sections 6 to 15.

4.3 Surface water bodies are managed so that:
   (a) toxin producing cyanobacteria do not render rivers or lakes unsuitable for recreation or human and animal drinking-water;
   (b) fish are not rendered unsuitable for human consumption by contaminants;
   (c) the natural colour of the water in a river is not altered;
   (d) the natural frequency of hāpua, coastal lakes, lagoons and river openings is not altered;
   (e) the passage for migratory fish species is maintained unless restrictions are required to protect populations of native fish;
   (f) reaches of rivers are not induced to run dry, thereby maintaining the natural continuity of river flow from source to sea,
   (g) variability of flow, including floods and freshes, is maintained to avoid prolonged “flat-lining” of rivers; to facilitate fish passage; and to mobilise bed material; and
   (h) the exercise of customary uses and values is supported.

4.4 Groundwater is managed so that:
   (a) groundwater abstractions do not cause a continuing long-term decline in mean annual groundwater levels or artesian pressures;
   (b) the individual and cumulative rate, duration and volume of water pumped from bores is controlled so as to prevent seawater contamination;
   (c) the rate and duration of individual abstractions is controlled to ensure that individually or cumulatively, localised pressure reversal does not result in the downward movement of contaminants;
(d) in any location where an overall upwards pressure gradient exists, restrict the taking of groundwater so that at all times the overall upward pressure difference is maintained between any one aquifer and the next overlying aquifer;
(e) overall water quality in aquifers does not decline; and
(f) the exercise of customary uses and values is supported.

4.5 Water is managed through the setting of limits to safeguard the life-supporting capacity of ecosystems, support customary uses, and provide for community drinking-water supplies and stock water, 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.

4.6 In high naturalness water bodies listed in Sections 6 to 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 existing infrastructure.

4.7 Resource consents for new or existing activities will not be granted if the granting would cause a water quality or quantity limit set in Sections 6 to 15 to be breached or further over allocation (water quality and/or water quantity) to occur or in the absence of any water quality standards in Sections 6 to 15, the limits set in Schedule 8 to be breached. Replacement consents, or new consents for existing activities may be granted to:
(a) allow the continuation of existing activities at the same or lesser rate or scale, provided the consent contains conditions that contribute to the phasing out of the over allocation (water quality and/or water quantity) within a specified timeframe; or
(b) exceed the allocation limit (water quality and/or water quantity) to a minor extent and in the short-term if that exceedance is part of a proposal to phase out the over-allocation within a specified timeframe included in Sections 6 to 15 of this Plan.

4.8 The harvest and storage of water for new irrigation or new 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 a water quantity limit set in Sections 6 to 15.

4.8A [From NPS-FM 2014]

1. When considering any application for a discharge the consent authority must have regard to the following matters:
   (a) the extent to which the discharge would avoid contamination that will have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water and
   (b) the extent to which it is feasible and dependable that any more than minor adverse effect on fresh water, and on any ecosystem associated with fresh water, resulting from the discharge would be avoided.

2. When considering any application for a discharge the consent authority must have regard to the following matters:
(a) the extent to which the discharge would avoid contamination that will have an adverse effect on the health of people and communities as affected by their contact with freshwater; and

(b) the extent to which it is feasible and dependable that any more than minor adverse effect on the health of people and communities as affected by their contact with fresh water resulting from the discharge would be avoided.

3. This policy applies to the following discharges (including a diffuse discharge by any person or animal):
   (a) a new discharge or
   (b) a change or increase in any discharge –
   of any contaminant into fresh water, or onto or into land in circumstances that may result in that contaminant (or, as a result of any natural process from the discharge of that contaminant, any other contaminant) entering fresh water.

4. Paragraph 1 of this policy does not apply to any application for consent first lodged before the National Policy Statement for Freshwater Management 2011 took effect on 1 July 2011.

5. Paragraph 2 of this policy does not apply to any application for consent first lodged before the National Policy Statement for Freshwater Management 2014 takes effect.

4.8B [From NPS-FM 2014]

1. When considering any application the consent authority must have regard to the following matters:
   (a) the extent to which the change would adversely affect safeguarding the life-supporting capacity of fresh water and of any associated ecosystem and
   (b) the extent to which it is feasible and dependable that any adverse effect on the lifesupporting capacity of fresh water and of any associated ecosystem resulting from the change would be avoided.

2. This policy applies to:
   (a) any new activity and
   (b) any change in the character, intensity or scale of any established activity – that involves any taking, using, damming or diverting of fresh water or draining of any wetland which is likely to result in any more than minor adverse change in the natural variability of flows or level of any fresh water, compared to that which immediately preceded the commencement of the new activity or the change in the established activity (or in the case of a change in an intermittent or seasonal activity, compared to that on the last occasion on which the activity was carried out).

3. This policy does not apply to any application for consent first lodged before the National Policy Statement for Freshwater Management 2011 took effect on 1 July 2011.
### Table 1a Freshwater Outcomes for Canterbury Rivers

<table>
<thead>
<tr>
<th>Management unit</th>
<th>Sub-unit</th>
<th>Ecological health indicators</th>
<th>Macrophyte indicators</th>
<th>Periphyton indicators&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Siltation indicator&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Microbiological indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management unit</td>
<td>Sub-unit</td>
<td>QMCI&lt;sup&gt;*&lt;/sup&gt;</td>
<td>Dissolved oxygen [min saturation] (%)</td>
<td>Temperature (°C)</td>
<td>Total macrophytes max cover of bed (%)</td>
<td>Chlorophyll a max biomass (mg/m&lt;sup&gt;2&lt;/sup&gt;)</td>
</tr>
<tr>
<td>Natural state waterbodies&lt;sup&gt;2&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alpine - upland</td>
<td>6</td>
<td>90</td>
<td>20</td>
<td>No value set</td>
<td>No value set</td>
<td>50</td>
</tr>
<tr>
<td>Alpine - lower</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hill-fed - upland</td>
<td>6</td>
<td>90</td>
<td>20</td>
<td>No value set</td>
<td>No value set</td>
<td>120</td>
</tr>
<tr>
<td>Hill-fed - lower</td>
<td>6</td>
<td>90</td>
<td>20</td>
<td>No value set</td>
<td>No value set</td>
<td>50</td>
</tr>
<tr>
<td>Urban</td>
<td>3.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake-fed</td>
<td>6</td>
<td>90</td>
<td>20</td>
<td>No value set</td>
<td>No value set</td>
<td>200</td>
</tr>
<tr>
<td>Banks Peninsula</td>
<td>6</td>
<td>90</td>
<td>20</td>
<td>No value set</td>
<td>No value set</td>
<td>200</td>
</tr>
<tr>
<td>Spring-fed - upland</td>
<td>5</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spring-fed - lower basins</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spring-fed - plains</td>
<td>5</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>3.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. These indicators only apply to wadeable areas of wetted riverbed. For the purposes of this table, wadeable areas are defined as reaches of the river up to 600mm in depth.
2. Rivers within land that is administered for conservation purposes by the Department of Conservation.

*Key:
QMCI = quantitative macroinvertebrate community index
SFRG = Suitability for Recreation Grade from Microbiological Water Quality Guidelines for Marine and Freshwater Recreational Areas, Ministry for the Environment, June 2003
### Table 1b Freshwater Outcomes for Canterbury Lakes

<table>
<thead>
<tr>
<th>Management unit</th>
<th>Ecological health indicators</th>
<th>Eutrophication indicator</th>
<th>Visual quality indicator</th>
<th>Microbiological indicator</th>
<th>Suitability for contact recreation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dissolved Oxygen [min] (%)</td>
<td>Temp [max] (ºC)</td>
<td>Lake SPI* [min grade]</td>
<td>Trophic Level Index (TLI)* [max score]</td>
<td>Colour</td>
</tr>
<tr>
<td></td>
<td>Hypolimnion</td>
<td>Epilimnion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural state waterbodies(^1)</td>
<td>Lakes are maintained in a natural state</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large high country lakes</td>
<td>70</td>
<td>90</td>
<td>19</td>
<td>Excellent</td>
<td>Good</td>
</tr>
<tr>
<td>Small to medium sized high country lakes</td>
<td></td>
<td></td>
<td></td>
<td>High</td>
<td>Māori Lakes and Lakes Emily and Georgina</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>All other small to medium sized high country lakes</td>
</tr>
<tr>
<td>Coastal lakes</td>
<td>70</td>
<td>90</td>
<td>19</td>
<td>Moderate</td>
<td>Coopers Lagoon/Muriwai</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>All other coastal lakes</td>
</tr>
<tr>
<td>Artificial lakes – on-river</td>
<td>20</td>
<td></td>
<td></td>
<td>High</td>
<td></td>
</tr>
<tr>
<td>Artificial lakes – others</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td>Suitable for the purpose of the lake</td>
</tr>
</tbody>
</table>

(a) Explanatory Note: In respect of Lake Coleridge the natural colour of the lake is the colour of the lake as measured monthly in the period 1 August 2014 to 31 July 2015.

1. Lakes within land that is administered for conservation purposes by the Department of Conservation.

*Key:


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
Sub-region Section Development

4.9 Reviews of sub-region sections will:
   (a) be in accordance with Appendix 2 of the RPS 2013; and
   (b) identify and provide for the social, economic, cultural and environmental values of each catchment; and
   (c) have particular regard to collaboratively developed local water quality and quantity outcomes and methods, and timeframes to achieve them, including through setting limits and targets; and
   (d) establish methods and a timeframe to phase out any over-allocation where over-allocation of water for abstraction from surface water catchments or groundwater zones or nutrient discharges has been determined; and
   (e) not make any changes to the Objectives or Policies 4.1-4.9 of this Plan, but may provide for policies, outcomes and limits that are specific to the catchments in the sub-region.

4.10 [4.10 has been deleted: High Court Order CIV-2014-409-71]

4.11 The setting and attainment of catchment specific water quality and quantity outcomes and limits is enabled through:
   (a) limiting the duration of any resource consent granted under the region-wide rules in this Plan to a period not exceeding five years past the expected notification date (as set out in the Council’s Progressive Implementation Programme) of any plan change that will introduce water quality or water quantity provisions into Sections 6 – 15 of this Plan; but
   (b) allowing, where appropriate, a longer resource consent duration for discharge permits granted to irrigation schemes or principal water suppliers under the region-wide nutrient management rules in this Plan, provided those permits include conditions that restrict the nitrogen loss from the land and enable a review of the consent under section 128(1) of the RMA.

Activity and Resource Policies

Discharges of Contaminants to land or water

4.12 There are no direct discharges to surface water bodies or groundwater of:
   (a) untreated sewage, wastewater (except as a result of extreme weather related overflows or system failures) 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.

4.13 For other discharges of contaminants into or onto land where it may enter water or to surface water bodies or groundwater (excluding those passive discharges to which Policy 4.26 applies), the effects of any discharge are minimised by the use of measures that:
   (a) first, avoid the production of the contaminant;
(b) secondly, reuse, recovers or recycles the contaminant;
(c) thirdly, minimise 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 water, results in a discharge that after reasonable mixing meets the receiving water standards in Schedule 5 or does not result in any further degradation in water quality in any receiving surface waterbody that does not meet the water quality standards in Schedule 5 or any applicable water conservation order.

4.14 Any discharge of a contaminant into or onto land where it may enter groundwater (excluding those passive discharges to which Policy 4.26 applies):
(a) will not exceed the natural capacity of the soil to treat or remove the contaminant; and
(b) will not exceed available water storage capacity of the soil; and
(c) where meeting (a) and (b) is not practicable, the discharge will:
   (i) meet any nutrient limits in Schedule 8 or Sections 6 to 15 of this Plan; and
   (ii) utilise the best practicable option to ensure the size of any contaminant plume is as small as is reasonably practicable; and
   (iii) ensure 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; and
   (iv) not result in the accumulation of pathogens, or a persistent or toxic contaminant that would render the land unsuitable for agriculture, commercial, domestic, cultural or recreational use or water unsuitable as a source of potable water or for agriculture; and
   (v) not raise groundwater levels so that land drainage is impeded.

4.14A The disposal of domestic effluent and wastewater shall be managed so as to avoid any adverse effect that is more than minimal on surface and ground waters. Where residential density exceeds 1.5 dwellings per hectare and the total population is greater than 1000 persons, community reticulated systems should be promoted. Alternatively, other measures should be promoted to reduce adverse effects on water bodies from effluent disposal systems, including secondary treatment systems and septic tank warrants of fitness.

4.14B Have regard to Ngāi Tahu values, and in particular those expressed within an iwi management plan, when considering applications for discharges which may adversely affect statutory acknowledgement areas, nohoanga sites, surface waterbodies, silent file areas, culturally significant sites, Heritage New Zealand sites, any listed archaeological sites, and cultural landscapes, identified in this Plan, any relevant district plan, or in any iwi management plan.

**Stormwater and community wastewater systems**

4.15 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;
(ab) all stormwater being discharged to land or into reticulated system, where a reticulated system is available;
(b) all stormwater being discharged in accordance with a stormwater management plan, where one has been consented;
(c) 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
(d) any reticulated stormwater or wastewater system installed after 11 August 2012 is designed and managed to avoid sewage discharge into surface water.

4.16 Any reticulated stormwater system for any urban area is 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; and
(b) for any reticulated stormwater system established after 11 August 2012, including any extension to any existing reticulated stormwater system, the discharge of stormwater being subject to a land-based or designed treatment system, or wetland treatment prior to any discharge to a lake or river; and
(c) how any discharge of stormwater, treated or untreated, into water or onto land where it may enter water meets or will meet, the water quality outcomes and standards and limits for that waterbody set out in Table 1, Schedules 5 and 8 and Sections 6 to 15, (whichever applies); and
(d) The management of the discharge of stormwater from sites involving the use, storage or disposal of hazardous substances, and
(e) Where the discharge is from an existing local authority network, demonstration of a commitment to progressively improve the quality of the discharge to meet condition (c) as soon as practicable but no later than 2025.

4.16A Operators of reticulated stormwater systems implement methods to manage the quantity and quality of all stormwater directed to and conveyed by the reticulated stormwater system, and from 1 January 2025 network operators account for and are responsible for the quality and quantity of all stormwater discharged from that reticulated stormwater system.

4.17 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 or risks to human safety.

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

4.18 The loss or discharge of sediment or sediment-laden water 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 loss or discharge to water.
4.19 The discharge of contaminants to groundwater from earthworks, excavation, waste collection or disposal sites and contaminated land 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 land are managed and monitored where appropriate 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.

Soil stability

4.20 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.

4.21 In the Hill and High Country, the use of vegetation burning as a land management tool avoids:
(a) induced soil erosion; and
(b) the destruction of wetlands or other sites or areas of significant indigenous biodiversity value or cultural significance to Ngāi Tahu; and
(c) the removal of resilient and intact vegetation cover, resulting in land becoming susceptible to the establishment of plant pest species; and
(d) adverse effects on regionally significant infrastructure.

4.22 Sedimentation of water bodies as a result of land clearance, earthworks and cultivation is avoided or minimised by the adoption of control methods and technologies, such as maintaining continuous vegetation cover adjacent to water bodies, or capturing surface run-off to remove sediment and other contaminants or by methods such as direct drilling crops and cultivation that follows the contours of a paddock.

Protect sources of drinking-water

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

4.23A The quality of water abstracted from community drinking-water supply sources is protected through:
(a) the application of a provisional protection zone around the source of any existing community drinking-water supply, unless a specific protection zone is included as a condition in the permit to take or use water; and
Canterbury Land and Water Regional Plan

(b) requiring applications for new or replacement permits to take or use water for community drinking-water supply to include an assessment of the specific protection zone required, taking into account the factors set out in Schedule 1; and
(c) providing, by way of resource consent, for the replacement of provisional protection zones with specific protection zones which reflect the level of protection required for that supply.

4.23B In considering resource consent applications to take or use water for a community drinking-water supply, the consent authority shall have regard to:
(a) the factors set out in Schedule 1; and
(b) the extent to which the application reflects those factors set out in Schedule 1 when establishing the extent of the proposed protection zone; and
(c) the level of additional restriction the proposed protection zone will impose on land users within the proposed protection zone.

Hazardous Substances & hazardous activities

4.24 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 practices are used to minimise the risk of accidental discharge to water.

4.25 Unless the substance is approved under the Hazardous Substances and New Organisms Act 1996 to be applied onto land or into water, activities involving the use, storage or discharge of hazardous substances will be undertaken using the best practicable option 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, 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.

4.26 Any discharges of hazardous substances from contaminated land, including existing and closed landfills, are managed to ensure that adverse effects beyond the site boundary on people’s health or safety, on human or stock water supplies, or on surface water are avoided.

4.27 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.

4.28 The disposal of sewage sludge from the treatment of human effluent:
(a) does not contaminate any drinking-water supply;
(b) avoids adverse effects on people’s health or safety, on human or stock water supplies and on surface water beyond the site boundary;
(c) does not restrict activities on adjoining properties;
(d) avoids creating a dust nuisance on adjoining properties.

4.29 Where an on-site effluent treatment and disposal system is to be installed to treat and dispose of human effluent the system proposed will:
(a) effectively treat and dispose of human effluent, given the conditions of the site;
(b) avoid adverse effects on people’s health or safety, on human or stock water supplies and on surface water beyond the site boundary;
(c) not restrict activities on adjoining properties;
(d) allow 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.

4.30 New cemeteries are located away from 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

4.31 Damage to the bed or banks of water bodies, sedimentation and disturbance of the waterbody, direct discharge of contaminants, and degradation of aquatic ecosystems and inanga and salmon spawning habitat is avoided by:
(a) excluding intensively farmed stock from lakes, rivers and wetlands; and
(b) excluding stock from within freshwater bathing sites listed in Schedule 6, salmon spawning sites listed in Schedule 17, Community Drinking-water Protection Zones as set out in Schedule 1, other sensitive waterbody areas; and the waterbody bed and banks closely adjacent to and upstream of these areas; and
(ba) excluding stock from inanga spawning habitat; and
(c) limiting access to wetlands, and the banks or beds of lakes and rivers to stock species that prefer to avoid water and at stocking rates that avoid evident damage.

4.32 Adverse effects arising from stock access occurring under Policy 4.31(c) on water clarity and colour, bank stability, or riparian vegetation cover are minimised through the design and construction of stock crossing points and the management of stock grazing and stock movements across water bodies.

Discharges of Collected Animal Effluent

4.33 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 Management
4.34 The loss nutrients from any farming activity to water is minimised by:
   (a) raising awareness of the nutrient losses by requiring monitoring and record-keeping of
       modelled nutrient loss;
   (b) farming activities that have nutrient losses operating at good practice or better; and
   (c) requiring the provision of information on modelled or estimated nutrient loss from
       farming activities to enable better decision-making.

4.35 Where a load limit or nutrient discharge allowance has been set in Sections 6 to 15 of this
Plan, farming activities will achieve the nutrient load limit and nutrient discharge allowance
for the catchment.

4.36 Water quality outcomes are met by:
   (a) all farming activities minimising nutrient losses through the implementation of good
       practice;
   (b) all permitted farming activities on properties greater than 10 hectares preparing and
       implementing a Management Plan in accordance with Schedule 7A;
   (c) farming activities with the potential for more significant nutrient loss managing their
       nitrogen losses in accordance with the Good Management Practice Loss Rates and
       being subject to a resource consent process;
   (d) irrigation schemes and principal water suppliers managing nutrient losses from farming
       activities on properties they supply with water through use of the Farm Portal or other
       mechanisms; and
   (e) encouraging industry, principal water supplier and irrigation scheme-based initiatives
       to improve land and water use practices for farming activities, reduce nutrient loss and
       nutrient discharges, and facilitate land use consenting, including irrigation and principal
       water supplier scheme-wide initiatives, reporting and auditing of their constituent
       farms.

Policies 4.37 to 4.38H apply to individual farming activities, nutrient user groups and farming
enterprises and do not apply to irrigation schemes and principal water suppliers.

4.37 Water quality is improved within the Lake Zone and Red Nutrient Allocation Zone by:
   (a) avoiding the granting of any resource consent that will allow nitrogen losses from a
       farming activity to exceed the Baseline GMP Loss Rate, except where Policy 4.38C
       applies; and
   (b) including on any resource consent granted for the use of land for a farming activity,
       conditions that:
       (i) limit the nitrogen loss calculation for the farming activity to a rate not exceeding
           the Baseline GMP Loss Rate; and
       (ii) require farming activities to operate at or below the Good Management Practice
           Loss Rate, in any circumstance where that Good Management Practice Loss Rate
           has not been influenced by severe extraordinary events (including but not limited
           to droughts or floods) and is less than the Baseline GMP Loss Rate; and
   (c) requiring a Farm Environment Plan as part of any application for resource consent to
       use land for a farming activity, and requiring that Farm Environment Plan to be
       prepared in accordance with Schedule 7 of this Plan.
4.38 Water quality is maintained within the Orange Nutrient Allocation Zone by:
(a) restricting nitrogen losses from farming activities to the lesser of the Baseline GMP Loss Rate or the Good Management Practice Loss Rate, except where Policy 4.38C applies; and
(b) including on any resource consent granted for the use of land for a farming activity, conditions that:
   (i) limit the nitrogen loss calculation for the farming activity to a rate not exceeding the Baseline GMP Loss Rate; and
   (ii) requiring farming activities to operate at or below the Good Management Practice Loss Rate, in any circumstance where that Good Management Practice Loss Rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than the Baseline GMP Loss Rate; and
(c) requiring a Farm Environment Plan as part of any application for resource consent to use land for a farming activity, and requiring that Farm Environment Plan to be prepared in accordance with Schedule 7 of this Plan.

4.38A Water quality is maintained within the Green and Light Blue Nutrient Allocation Zones by:
(a) restricting increases in nitrogen loss from farming activities to no more than a total of 5kg/ha/yr above the Baseline GMP Loss Rate; and
(b) including on any resource consent granted for the use of land for a farming activity, conditions that:
   (i) limit the nitrogen loss calculation for the farming activity to a rate not exceeding a total of 5kg/ha/yr above the Baseline GMP Loss Rate; and
   (ii) require farming activities to operate at or below the Good Management Practice Loss Rate, in any circumstance where that Good Management Practice Loss Rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than a total of 5kg/ha/yr above the Baseline GMP Loss Rate; and
(c) requiring a Farm Environment Plan as part of any application for resource consent to use land for a farming activity, and requiring that Farm Environment Plan to be prepared in accordance with Schedule 7 of this Plan.

4.38B When considering any application for resource consent for the use of land for a farming activity, the consent authority should not disregard any adverse effect of the proposed activity on water quality on the basis that this Plan permits an activity with that effect.

4.38C Within the Red, Orange, Green or Light Blue Nutrient Allocation Zones, only consider the granting of an application for resource consent to exceed the thresholds in Policy 4.37(a), Policy 4.38(a) or Policy 4.38A(a) where:
(a) the nitrogen baseline has been lawfully exceeded prior to 13 February 2016 and the application contains evidence that directly and specifically establishes that the exceedance was lawful; and
(b) the nitrogen loss calculation remains below the lesser of the Good Management Practice Loss Rate or the nitrogen loss calculation that occurred in the four years prior to 13 February 2016.
4.38D Provide for the use of an Equivalent Baseline GMP Loss Rate or Equivalent Good Management Practice Loss Rate in those limited circumstances where it is demonstrated that the Farm Portal is unable to generate a Baseline GMP Loss Rate or Good Management Practice Loss Rate or the number generated is demonstrated to be erroneous.

4.38E Where resource consent is granted for the use of land for a farming activity and that resource consent restricts the nitrogen loss rate from the farming activity to an Equivalent Baseline GMP Loss Rate or Equivalent Good Management Practice Loss Rate, impose conditions that enable a review of that resource consent when the Farm Portal is able to generate a Baseline GMP Loss Rate or Good Management Practice Loss Rate for that farming activity.

4.38F Effects on water quality arising from intensification or changes to a farming activity, are monitored by the Canterbury Regional Council:
(a) requiring property owners to submit information regarding the type and intensity of their farming activity to the Farm Portal; and
(b) reviewing (as part of an ongoing monitoring programme) the accuracy of information submitted to the Farm Portal; and
(c) reviewing the implementation of Management Plans for permitted farming activities.

4.38G Where a policy or a condition in a rule requires compliance with a Baseline GMP Loss Rate, compliance with that loss rate shall not be required prior to 30 June 2020.

4.38H Where a policy or rule requires a farming activity to be managed in accordance with the Good Management Practice Loss Rate, compliance with that loss rate shall not be required prior to:
(a) 1 July 2017 for any land where part of the property is located within the Lake Zone;
(b) 1 January 2018 for any land where part of the property is located within the Orange Nutrient Allocation Zone;
(c) 1 July 2018 for any land where part of the property is located within the Red Nutrient Allocation Zone;
(d) 1 January 2019 for any land where part of the property is located within the Green or Light Blue Nutrient Allocation Zone.

4.38I Manage the loss of phosphorus to water from land used for farming activities by:
(a) identifying on the Planning Maps High Runoff Risk Phosphorus Zones where the risk of phosphorus loss to surface water from overland flow is elevated; and
(b) requiring any farming activity to identify within the Farm Environment Plan or the Management Plan any critical area for phosphorus loss; and
(c) requiring actions to be implemented to minimise phosphorus and sediment loss.

4.39 Irrespective of the nutrient allocation status of a catchment as shown on the Series A Planning Maps, to allow the following discharges, provided the design and management of the discharge treatment system minimises the discharge of nutrients that may enter water:
(a) wastewater discharge from a marae;
(b) community wastewater treatment schemes;
(c) wastewater discharge from a hospital, a school or other education institution; or
(d) on-site domestic wastewater discharges.

4.40 Farm Environment Plans are used as a primary means of identifying and delivering good environmental practice across a range of farm activities, including nutrient loss management, efficient and effective use of water for irrigation, riparian management, stock movements across waterways, offal and farm rubbish pits, the storage and application of effluent and fertiliser use.

4.41 Applications for resource consents for farming activities will be accompanied by a Farm Environment Plan that has been prepared in accordance with Schedule 7 and the conditions of any resource consent granted will specify:
(a) procedures and criteria for the timely review and updating of the Farm Environment Plan; and
(b) a requirement to meaningfully implement the Farm Environment Plan; and
(c) monitoring and information provision; and
(d) requirements for the independent auditing of the Farm Environment Plan and the remedying of compliance issues raised in the audit; and
(e) the timing of any subsequent audits.

4.41A The contribution that the preparation of accurate nutrient budgets and Farm Environment Plans make to the attainment of the water quality outcomes is recognised by:
(a) requiring the preparation of nutrient budgets in accordance with the OVERSEER® Best Practice Data Input Standards; and
(b) applying to any nutrient budget that forms part of an application for resource consent a level of scrutiny that is proportionate to the qualifications, experience and performance of the person who prepared the budget; and
(c) irrigation schemes and principal water suppliers requiring the preparation and auditing of Farm Environment Plans for properties they supply with water; and
(d) providing, except where the discharge of nutrients from a farming activity is authorised by a discharge permit held by an irrigation scheme or principal water supplier, a controlled activity pathway for resource consent provided the application has been prepared or reviewed by an Accredited Farm Consultant.

4.41B Attainment of the water quality outcomes for the region is enhanced through the implementation of good management practice and by:
(a) the use of an audit grade as the measure of a farming activity’s overall performance relative to the objectives, targets and actions in the Farm Environment Plan, and the Good Management Practices and Good Management Practice Loss Rates; and
(b) the use of audit grades as the basis for determining compliance and the frequency of any future audits; and
(c) requiring the completion of corrective actions to address non-compliances identified in the Farm Environment Plan audit; and
(d) the use of a Certified Farm Environment Plan Auditor to assess a farming activity’s performance; and
(e) requiring the nitrogen loss calculation to be prepared using annual input data in circumstances where:
   (i) the results of the most recent audit indicate there is a low level of confidence that the objectives in the Farm Environment Plan are being met; or
   (ii) the area of irrigated land has increased, as compared with the area of land that was irrigated at the time of the most recent audit; or
   (iii) the area of land used for winter grazing has increased, as compared with the area of land that was used for winter grazing at the time of the most recent audit.

4.41C Maintain water quality in Orange, Green and Light Blue Nutrient Allocation Zones, and improve water quality in Red Nutrient Allocation Zones and Lake Zones by requiring:
(a) any resource consent application for the discharge of nutrients submitted by an irrigation scheme or principal water supplier to describe the methods that will be used to implement the Good Management Practices on any land that will be supplied with water from the scheme or principal water supplier; and
(b) any resource consent application for the discharge of nutrients submitted by an irrigation scheme or principal water supplier to describe whether the irrigation scheme or principal water supplier intends to manage nutrient losses within their command area on an aggregated basis or on a ‘property by property basis’; and
(c) discharge permits granted to irrigation schemes or principal water suppliers to be subject to conditions that restrict the total nitrogen loss to a limit not exceeding:
   (i) the Baseline GMP Loss Rate (or Equivalent Baseline GMP Loss rate where any one of the criteria in clauses (a) to (c) of Rule 5.42A is met), for any land within the Red, Lake or Orange Nutrient Allocation Zones; and
   (ii) a total of 5 kg/ha/yr above the Baseline GMP Loss Rate (or Equivalent Baseline GMP Loss Rate where any one of the criteria in clauses (a) to (c) of Rule 5.42A is met) for any land within the Green or Light Blue Allocation Zones except that where the nitrogen loss from the land is authorised by a condition on an existing water permit or discharge permit granted to an irrigation scheme or principal water supplier and intensification on that land or change of land use occurred prior to 13 February 2016, the new discharge permit is to include a condition that limits the nitrogen loss to a rate that is not greater than the aggregated Good Management Practice Loss Rate (or Equivalent Good Management Practice Loss Rate where any one of the criteria in clauses (a) to (c) of Rule 5.42A is met) for the land.

4.41D Applications by irrigation schemes or principal water suppliers for a resource consent for the use of land for a farming activity or the discharge of nutrients are to be accompanied by an Environmental Management Strategy that describes:
(a) how the nutrient load for which resource consent is sought has been calculated, and the rationale for that nutrient load applied; and
(b) how nutrients from all land subject to any permit granted to the scheme or principal water supplier will be accounted for; and
(c) how properties joining or leaving the irrigation scheme or principal water supplier area are to be managed, including the method to be used to calculate the nutrient load that will be allocated to any property leaving the scheme; and
(d) the proposed monitoring and reporting regime to the CRC, including, but not limited to, a description of the:

(i) audit systems that will be used to assess individual on-farm compliance with the content of any Farm Environment Plan; and

(ii) methods used to address non-compliances identified in individual on-farm audits; and

(iii) proposed data to be collected and the frequency of any proposed reporting to the CRC.
4.42 Wetlands in the beds and margins of lakes and rivers are managed as an integral part of lakes and rivers.

4.43 In hāpua, coastal lakes, lagoons and 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.

4.44 The damming or diversion of any alpine or hill-fed river or high naturalness waterbody identified in Sections 6 to 15 does not have more than a minimal adverse effect on:
(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;
(e) downstream water quality;
(f) the ecological values of the river and its margins;
(g) threatened native riverbed populations and significant indigenous biodiversity; and
(h) recreation activities.

4.45 Any alteration to the level of any natural lake that was unmodified as at 11 August 2012 is within its natural range (averaged over not less than five years).

4.46 The adverse effects of in-stream damming on water bodies other than those identified in Policy 4.44 will be avoided as a first priority, and where adverse effects are unable to be avoided, they will be remedied or mitigated.

4.47 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;
(c) undertaking minor flood or erosion control or repair works and the diversion is occurring within the boundaries of a site or an individual’s property and there are no potential adverse effects that are more than minimal on any other person, their property, or any ecological, cultural, recreational or amenity values of the fresh waterbody;
(d) emergency rural fire fighting purposes; or
(e) maintaining intakes for animal drinking water.

4.48 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

4.49 Enable the taking of water for a community water supply by not requiring compliance with any minimum or residual flow or partial restriction conditions and the environmental flow and allocation regime or groundwater allocation limit provided a water supply strategy developed in accordance with Schedule 25 is in place and the water supply is so managed as to restrict the use of water from those supplies during periods of low flow or water levels.

4.50 Where the rate of take or volume of water consented for abstraction from a catchment exceeds the environmental flow and water allocation limit 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 community water supply and stockwater requirements; and
(b) the replacement of existing resource consents provided that:
   (i) a reduction in over-allocation is enabled through the replacement resource consent being for no more than 90% of the previously consented rate of take and annual or seasonal volume unless there is a method and defined timeframe to phase out over-allocation set out in the relevant sub-region Section of this Plan; and
   (ii) there are significant and enduring improvements in the efficiency of water use and reductions in any adverse effects; or
   (iii) it is demonstrated that the existing use of water is efficient and that the efficiency is enduring.

4.51 In recognition of their national benefits, existing hydro-electricity generation, and irrigation schemes and principal water supplier schemes and their associated water takes, use, damming, diverting and discharge of water are to be considered as part of the existing environment. On considering an application for a replacement consent for an existing scheme consideration will be given to the need for, and appropriateness of, improvements in the efficiency of water use and conveyance assessed over the life of the consent and reductions in any adverse effects on the environment. The benefits derived from the use of water for the generation of electricity from existing and new renewable energy sources are recognised and provided for in accordance with the National Policy Statement for Renewable Electricity Generation 2011 and the Regional Policy Statement.

4.52 The abstraction of groundwater outside of any groundwater allocation zone in Sections 6 to 15, may occur only if the applicant demonstrates that:
(a) the groundwater abstraction has a low stream depleting effect, or does not contribute to the over-allocation of any surface waterbody;
(b) the groundwater is not hydraulically connected to any groundwater allocation zone in Sections 6 to 15 of this Plan which is fully or over allocated for abstraction;
(c) the total amount of groundwater abstracted cannot result in any continuing long-term decline in mean annual groundwater levels or artesian pressures; and
(d) the abstraction will not result in any seawater contamination of the aquifer.
4.53 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:

(aa) imposition of reasonable use determined in accordance with Schedule 10;
(a) a seasonal or annual allocation limit;
(b) a maximum instantaneous rate of take;
(c) if an environmental flow and allocation limit has not been set in Sections 6 to 15 a minimum flow that is required to sustain ecosystem or recreation values; and
(d) if an environmental flow and allocation limit has not been set in Sections 6 to 15 any required cessation necessary to maintain flow variability and freshes in the river.

4.54 In addition to the requirements in the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010, 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;
shall include a condition requiring water use records to be telemetered to the Canterbury Regional Council or its nominated agent.

4.55 Any discharge of water resulting from moving water from one catchment or waterbody to another in particular:

(a) does not facilitate the unwanted transfer of fish species, plant pests or unwanted organisms into catchments where they are not already present;
(b) takes into account Ngāi Tahu values;
(c) does not have a more than a minor adverse effect on the natural character of the receiving water;
(d) does not compromise the ability of existing drinking-water treatment systems 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 minor adverse effect on fish migration.

4.56 Where water is introduced from outside a catchment, the additional surface water flows are not available for abstraction unless either:

(a) a new or revised environmental flow and allocation regime is introduced through a plan change; or
(b) the existing environmental flow and allocation regime has been developed in anticipation of the additional surface water flows.

4.57 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.

4.58 Non-consumptive groundwater takes, including the taking of heat from or adding heat to groundwater and any taking which in conjunction with other activities on a site results in a neutral or positive water balance, 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 groundwater allocation zone within 24 hours and is protected from contamination, other than heat.

4.59 The direct cumulative interference effect from new groundwater takes on existing groundwater takes shall not exceed the acceptable threshold criteria described in Schedule 12, unless it can be demonstrated that there will be no more than minimal adverse effects on the yield of existing adequately penetrating bores.

4.60 Surface water intakes or galleries are located so that any adverse effects resulting from their interference with or diversion of surface water from other existing lawfully established surface water intakes or galleries or flow recorder sites are no more than minimal.

4.61 Any abstraction of surface water or stream depleting groundwater with direct, high, or moderate depletion, is subject to conditions specifying:
(a) the maximum instantaneous rate of take;
(b) except for hydro-electricity generation activities, a maximum volume based on reasonable use determined in accordance with Schedule 10 over the period the water is required;
(c) a minimum flow at which abstraction ceases in accordance with the relevant flow and allocation limits;
(d) the area or property within which the water is to be used;
(e) the location of the take;
(f) the prevention of fish entering any intake, in accordance with Schedule 2;
(g) when partial restrictions (when rivers are flowing above the minimum or residual flow limit but below the sum of the minimum or residual flow and the allocation limit) come into force; and
(h) where the water is used for irrigation, the need for, compliance with, and auditing of a Farm Environment Plan.

4.62 To prevent the flow falling below a minimum flow for the catchment, due to abstraction, partial restriction regimes for surface water will be implemented. Regimes will be designed to:
(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 waterbody 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) except if otherwise specified in an applicable sub-region section, implement a stepped or pro rata restriction regime that applies equally to all taking within an allocation limit and does not induce the flow to fall below the minimum flow due to abstraction.

4.63 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 determined in accordance with Schedule 10 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 to 15;
(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 to 15; and
(g) where the water is used for irrigation, the need for, compliance with, and auditing of a Farm Environment Plan.

4.64 Where existing abstractors do not have a maximum seasonal or annual allocation, to impose these conditions, determined in accordance with Schedule 10, when any of the following occur:
(a) resource consent conditions are changed in accordance with Section 127 of the RMA;
(b) water permits are transferred;
(c) existing resource consents to abstract water expire and are replaced; or
(d) the consent authority determines that a review of consent conditions is required to impose seasonal or annual volumes in a catchment.

**Efficient Use of Water**

4.65 The rate, volume and seasonal duration for which water may be taken will be reasonable for the intended use.

4.66 Water abstraction for irrigation is managed so that:
(a) winter flows are available for abstraction to storage, while ensuring ecosystem recovery through the maintenance of flow variability; and
(b) unless specified otherwise, abstraction is for a defined annual volume determined in accordance with Schedule 10.

4.67 Enable the spatial and temporal sharing of allocated water between uses and users, subject to the existing consent holders retaining priority access to the water during the remaining currency of those consents, and provided that the rate of taking or volume of water consented for abstraction from a catchment does not exceed the environmental flow and water allocation limit for surface water or stream depleting groundwater, or the groundwater allocation limit for that catchment.

4.67A Where the rate of taking or volume of water consented for abstraction from a catchment exceeds any water allocation limit for surface water or stream depleting groundwater, or any groundwater allocation limit for that catchment, and where:
(a) water is allocated to a consent holder for abstraction, and
(b) the water permit does not specify the period of abstraction, and
(c) the water is not required for 12 months of the year:
the unused water is not further allocated to the consent holder of any other applicant or transferee through the granting of a further water permit.
4.68 Water used for irrigation is applied using good practice that achieves an irrigation application efficiency of not less than 80%.

4.69 Systems to convey or apply fresh water are designed to maximise efficient use of water, including the improvement over time of existing systems, taking into account:
(a) practicable options to implement any change to existing systems; and
(b) the benefits and costs of achieving a higher level of efficiency.

Transfer of Water Permits

4.70 In order to meet economic and social outcomes, 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 should be achieved through managed transfers of water take and use permits.

4.71 Enable the transfer of water permits to take or use water, provided:
(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;
(ba) the transferee’s water take is reasonable for their proposed use as determined under the provisions of this Plan including Schedule 10 for irrigation uses;
(c) the adverse effects of the take and use of water are not more than minor; and
(d) that in an over-allocated surface water catchment or groundwater zone, a proportion of the allocated water is surrendered and is not re-allocated, unless there is a method and defined timeframe to phase out over-allocation set out in an applicable sub-region Section of this Plan.

4.71A Proposals to transfer water from one catchment to another are the subject of timely consultation with Ngāi Tahu on the whakapapa of the catchments, and on the effects on natural character, water quality and ecology of the catchments.

Sharing water in times of restriction

4.72 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 provided:
(a) all water permits are subject to conditions that specify a maximum rate of take, a daily volume, and a seasonal or annual volume;
(b) metering and telemetry of data in accordance with Policy 4.54 is undertaken for all takes; and
(c) all water permits are subject to common restriction conditions, or any discrepancies in restriction conditions are addressed in the written agreement.

Consent Term, Lapse Periods and Giving Effect to Water Permits

4.73 Resource consents to take water shall be given effect to within three years unless a longer lapping period is justified due to the scale or complexity of the activity. For the purpose of
this policy, “given effect” requires the installation of infrastructure, water meter or flow measuring device and taking of the water as proposed.

4.74 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 not met (areas coloured Red on the Series A Planning Maps) and resource consents for water take and use in catchments or groundwater allocation zones that are over-allocated will generally be for a specified term not exceeding 15 years (with any nutrient losses from farming, nutrient discharges, and rates and volumes of water taken being subject to regular review under section 128(1)(a) of the RMA) 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. The general presumption of a 15 year maximum term will not necessarily be applicable in relation to the taking and use of water for regionally significant infrastructure.

Flow Sensitive Catchments

4.75 Reduced effects arising from the interception of rainfall run-off on surface water flows in the flow sensitive catchments listed in Sections 6 to 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.

Site Dewatering

4.76 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.

4.76A Adverse effects on surface water quality are minimised through limiting the concentration of sediment and other contaminants present in the dewatering water prior to its discharge to surface water.

Groundwater Protection

4.77 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.

4.78 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.

Hydrocarbon Exploration or Production, Including Fracking

4.79 Avoid 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.

4.80 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**

4.81 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 wetland boundary, do not adversely affect the significant values of wetlands, hāpua, coastal lakes and lagoons, except for:

(a) a temporary and or minor adverse effect where that activity is part of installing, maintaining, operating or upgrading 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.

4.82 Modification of wetlands, hāpua, coastal lakes and lagoons may occur if the modification is necessary, and necessarily has to be in that location to provide for the installation, upgrading or maintenance of infrastructure and any significant effects are offset by other improvements to or expansion of the same or another wetland, hāpua, coastal lake or lagoon.

4.83 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.

4.84 Wetlands and riparian planting are developed as integral parts of land drainage systems, discharges to land and water and stormwater systems in both rural and urban areas, to reduce the effects of those activities on water quality and to enhance indigenous biodiversity and amenity values.

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

**Activities in Beds of Lakes and Rivers**

4.85A Indigenous biodiversity, habitats of indigenous fauna and flora, and the natural character of Canterbury’s braided river systems is preserved through:

(a) preventing further encroachment of activities onto the beds, banks and margins of lakes, braided rivers and associated wetlands and coastal lagoons; and

(b) limiting vegetation clearance and cultivation within the bed, banks and margins of lakes, braided rivers and associated wetlands and coastal lagoons, unless the vegetation clearance or cultivation is for the purpose of pest management, habitat restoration, flood control purposes, the operation, maintenance, upgrade or repair of structures or infrastructure, or maintenance of public access.
Activities that occur in the beds or margins of lakes, rivers, wetlands, hāpua, coastal lakes and lagoons are managed or undertaken so that:

(a) the character and channel characteristics of rivers including the variable channel characteristics of braided rivers are preserved;

(b) sites and areas of significant indigenous biodiversity values or of cultural significance to Ngāi Tahu are protected; and

(c) existing lawful access to the bed of the lake, river, wetland, hāpua, coastal lake, or lagoon for recreational, customary use, water intakes or supplies or flood control purposes, is not precluded, except where necessary to protect public health and safety.

Within the beds and margins of lakes, rivers, hāpua, wetlands, coastal lakes and lagoons, damage to inanga spawning habitat is minimised by scheduling works to occur outside the inanga spawning period of 1 March to 1 June inclusive where it is practicable to do so, and by extending this period where the works involve vegetation clearance, cultivation or earthworks, so as to allow sufficient time for regeneration of the habitat.

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.

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.

Earthworks, structures (including defences against water), vegetation planting or removal, or other activities in the beds of lakes or rivers, do not materially 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.

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.

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.

Communities are protected from the natural hazards of flooding and erosion through gravel extraction and establishment and maintenance of flood protection assets.
Fine Sediment Removal and Habitat Restoration

4.92A Enable catchment restoration activities that protect springheads, establish or enhance riparian margins, create restore or enhance wetlands, and remove nuisance macrophytes and fine sediment from waterways.

Gravel Extraction

4.93 Recognise the value of gravel extraction for construction and maintenance of infrastructure, for economic activity, for flood management purposes and for the re-build of Christchurch.

4.94 Enable the extraction of gravel from land, provided adverse effects on groundwater quality are minimised and remediation is undertaken to minimise any ongoing risk of groundwater contamination.

4.95 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; and
   (b) the activity is undertaken in ways which do not induce erosion (except for flood management purposes) and minimise adverse effects on water quality, significant indigenous biodiversity, wildlife habitat, sites of cultural significance to Ngāi Tahu, affect public access, and recreational values.

4.95A Effective management of rivers for flood control purposes is enabled, and erosion of riverbeds, banks and structures from the effects of gravel extraction is minimised, by aligning the duration and volume limits in any resource consent granted for the extraction of gravel with those set out in the Canterbury Regional River Gravel Management Strategy.

Natural Hazards

4.96 The consequential effects of seismic activity are recognised and timely and appropriate responses to such activity are facilitated.

4.97 Remediation works which are necessary to enable people and communities to recover from natural hazard events
   (a) occur in a timely way,
   (b) the works are managed to minimise their duration and scale,
   (c) the works do not cause or exacerbate potential natural hazards elsewhere, and
   (d) adverse effects on the environment resulting from the works are avoided, remedied or mitigated.

4.98 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.
### Section 5 Region-wide Rules

#### Index to Rules

<table>
<thead>
<tr>
<th>Topic</th>
<th>Rule Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Rules</td>
<td>5.1 – 5.6</td>
</tr>
<tr>
<td>On-site Wastewater</td>
<td>5.7 – 5.9</td>
</tr>
<tr>
<td>Swimming Pool or Spa Water</td>
<td>5.10 – 5.11</td>
</tr>
<tr>
<td>Greywater</td>
<td>5.12 – 5.13</td>
</tr>
<tr>
<td>Pit and Composting Toilets</td>
<td>5.14 – 5.17</td>
</tr>
<tr>
<td>Dust Suppressants</td>
<td>5.18 – 5.19</td>
</tr>
<tr>
<td>Pest Control and Agrichemicals</td>
<td>5.20 – 5.23</td>
</tr>
<tr>
<td>Offal and Farm Rubbish Pits</td>
<td>5.24 – 5.28</td>
</tr>
<tr>
<td>Animal and Vegetative Waste</td>
<td>5.29 – 5.30</td>
</tr>
<tr>
<td>Stock Holding Areas and Animal Effluent</td>
<td>5.31 – 5.37</td>
</tr>
<tr>
<td>Silage Pits and Compost</td>
<td>5.38 – 5.40</td>
</tr>
<tr>
<td>Nutrient Management</td>
<td>5.41 – 5.64</td>
</tr>
<tr>
<td>Fertiliser Use</td>
<td>5.65 – 5.67</td>
</tr>
<tr>
<td>Stock Exclusion</td>
<td>5.68 – 5.71</td>
</tr>
<tr>
<td>Flow Sensitive Catchments</td>
<td>5.72 – 5.74</td>
</tr>
<tr>
<td>Drainage Water</td>
<td>5.75 – 5.80</td>
</tr>
<tr>
<td>Cemeteries</td>
<td>5.81 – 5.83</td>
</tr>
<tr>
<td>Sewerage Systems</td>
<td>5.84 – 5.88</td>
</tr>
<tr>
<td>Municipal Solid Waste</td>
<td>5.89 – 5.90</td>
</tr>
<tr>
<td>Industrial and Trade Wastes</td>
<td>5.91 – 5.92</td>
</tr>
<tr>
<td>Stormwater</td>
<td>5.93A – 5.97</td>
</tr>
<tr>
<td>Other Minor Contaminant Discharges</td>
<td>5.98 – 5.100</td>
</tr>
<tr>
<td>Water tracers</td>
<td>5.101 – 5.102</td>
</tr>
<tr>
<td>Bores</td>
<td>5.103 – 5.110</td>
</tr>
<tr>
<td>Small and Community Water Takes</td>
<td>5.111 – 5.115</td>
</tr>
<tr>
<td>Water for Construction and Maintenance</td>
<td>5.116 – 5.118</td>
</tr>
<tr>
<td>Site Dewatering - Groundwater</td>
<td>5.119 – 5.120</td>
</tr>
<tr>
<td>Water from Canals or Water Storage</td>
<td>5.121 – 5.122</td>
</tr>
<tr>
<td>Take and Use Surface Water</td>
<td>5.123 – 5.127</td>
</tr>
<tr>
<td>Take and Use Groundwater</td>
<td>5.128 – 5.132</td>
</tr>
<tr>
<td>Transfer of Water Permits</td>
<td>5.133 – 5.134</td>
</tr>
<tr>
<td>Structures</td>
<td>5.135 – 5.141B</td>
</tr>
<tr>
<td>Floodwaters</td>
<td>5.142 – 5.142A</td>
</tr>
<tr>
<td>Refuelling in Lake and Riverbeds</td>
<td>5.145 – 5.146</td>
</tr>
<tr>
<td>Fine Sediment Removal from Rivers</td>
<td>5.146A – 5.146B</td>
</tr>
<tr>
<td>Gravel from Lake and Riverbeds</td>
<td>5.147 – 5.153</td>
</tr>
<tr>
<td>Dams and Damming</td>
<td>5.154 – 5.158</td>
</tr>
<tr>
<td>Wetlands</td>
<td>5.159 – 5.162</td>
</tr>
<tr>
<td>Vegetation in Lake and River Beds</td>
<td>5.163 – 5.166</td>
</tr>
<tr>
<td>Earthworks and Vegetation Clearance in Riparian Areas</td>
<td>5.167 – 5.169</td>
</tr>
<tr>
<td>Vegetation Clearance and Earthworks in Erosion-prone Areas</td>
<td>5.170 – 5.171</td>
</tr>
<tr>
<td>Burning of Vegetation</td>
<td>5.172 – 5.174</td>
</tr>
<tr>
<td>Excavation and Deposition over Aquifers</td>
<td>5.175 – 5.178</td>
</tr>
<tr>
<td>Hazardous Substances</td>
<td>5.179 – 5.184</td>
</tr>
<tr>
<td>Contaminated Land</td>
<td>5.185 – 5.188</td>
</tr>
</tbody>
</table>
General Rules

Note: In addition to the provisions of this Plan any activity may require authority under the relevant district plan or other legislation

5.1 Any activity must comply with all applicable rules in Section 5 of this Plan, except:
(a) where Rule 5.5 applies; or
(b) where explicitly stated to the contrary in any other applicable rule in this Plan.

5.2 Any rule on the same subject matter in the relevant sub-region zones in Section 6 to 15 of this Plan prevails over the relevant rule of Section 5, except:
(a) where Rule 5.5 applies; or
(b) where explicitly stated to the contrary in any other applicable rule in this Plan.

5.3 Notes and cross-references are included for information purposes only and do not form part of the rules nor should they be considered a complete list.

5.4 In consideration of applications for controlled activities or restricted discretionary activities the matters on which—
(a) control is reserved; or
(b) exercise of discretion is restricted;
— include the lapsing period, the term of the resource consent, the review of the conditions of a resource consent, the need for a bond 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 exercise of discretion is restricted to the following matters:
1. The timing, term and scale of the activity; and
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.

5.6 Any activity that—
(a) would contravene sections 13(1), 14(2), s14(3) or s15(1) of the RMA; and
(b) is not a recovery activity; and
(c) is not classified by this Plan as any other of the classes of activity listed in section 87A of the RMA
— is a discretionary activity.
On-site Wastewater

Notes:

1. In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy pre 1900 archaeological sites is subject to the archaeological authority process under the Heritage New Zealand Poutere Taonga Act 2014. An archaeological authority is required from Heritage New Zealand to modify, damage or destroy any archaeological site, whether recorded or not in the New Zealand Heritage List/Rārangi Kōrero website.

2. Detailed information about separation distances for on-site effluent disposal systems is available from the Institute of Environmental Science and Research. Information includes the Guidelines for separation distances based on virus transport between on-site domestic wastewater systems and wells (ESR 2010).

5.7 The discharge of wastewater from an existing on-site 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; and
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; and
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; and
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; and
5. The discharge is not onto or into land:
   (a) where there is an available sewerage network; or
   (b) that is listed as an archaeological site; or
   (c) where the discharge would enter any surface waterbody; or
   (d) within 20 m of any surface waterbody or the Coastal Marine Area; or
   (e) within 50 m of a bore used for water abstraction; or
   (f) within a Community Drinking-water Protection Zone as set out in Schedule 1 of this Plan; or
   (g) where there is, at any time, less than 1 m of vertical separation between the discharge point and groundwater; and
6. The discharge does not result in wastewater being visible on the ground surface; and
7. The discharge does not contain any hazardous substance.

5.8 The discharge of wastewater from a new, modified or upgraded on-site 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 m$^3$ per day; and
2. The discharge is onto or into a site that is equal to or greater than 4 hectares in area; and
2a. The discharge is not located within an area where residential density exceeds 1.5 dwellings per hectare and the total population is greater than 1000 persons; and
3. The discharge is not onto or into land:
   (a) where there is an available sewerage network; or
   (b) that is contaminated or potentially contaminated; or
   (c) that is listed as an archaeological site; or
   (d) in circumstances where the discharge would enter any surface waterbody; or
   (e) within 20 m of any surface waterbody or the Coastal Marine Area; or
   (f) within 50 m of a bore used for water abstraction; or
   (g) within a Community Drinking-water Protection Zone 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; and
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; and
6. The discharge does not result in wastewater being visible on the ground surface; and
7. The discharge does not contain any hazardous substance.

5.8A The discharge of wastewater from an existing, new, modified or upgraded back country hut 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 m³ per day; and
2. The treatment and disposal system has a written system design specification for maintenance (and if such a system design specification for maintenance does not exist, a written system design specification for maintenance shall be prepared in accordance with Section 6.3 of New Zealand Standard AS/NZS 1547:2012 On-site Domestic Wastewater Management by the 31st of December 2017) and is operated and maintained within that specification; and
3. The discharge is not onto or into land:
   (c) where there is an available sewerage network; or
   (d) that is contaminated or potentially contaminated; or
   (e) that is listed as an archaeological site; or
   (f) in circumstances where the discharge would enter any surface waterbody; or
   (g) within 20 m of any surface waterbody or the Coastal Marine Area; or
   (h) within 50 m of a bore used for water abstraction; or
   (i) within a Community Drinking-water Protection Zone as set out in Schedule 1; or
   (j) where there is, at any time, less than 1 m of vertical separation between the discharge point and mean seasonal high water table; and
4. The discharge does not result in wastewater being visible on the ground surface, unless the discharge occurs as a result of a land application system that has been specifically designed to treat and discharge wastewater through application of wastewater to the land surface; and

5. The discharge does not contain any hazardous substance.

5.8B The discharge of wastewater from an existing, new, modified or upgraded back country hut 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 5.8A is a discretionary activity.

5.9 The discharge of wastewater from:
(a) an existing on-site 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; or
(b) a new, modified or upgraded on-site 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 5.8;

is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:
1. The actual and potential environmental effects of not meeting the condition or conditions of Rule 5.7 for an existing system; and
2. The actual and potential direct and cumulative environmental effects of not meeting the condition or conditions of Rule 5.8 for a new, modified or upgraded system; and
3. The actual and potential environmental effects of the discharge on the quality and safety of human and animal drinking-water; and
4. The effect of on-site wastewater treatment system density in the local area including known on-site wastewater treatment system failures, the material health status of the community, groundwater quality, the nature of effects of current sewage disposal methods, treatment options available and affordability.

Swimming Pool or Spa Water

5.10 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:
      (i) there are no copper chemicals or flocculants, including aluminium salts, in the discharge and the concentration of sodium chloride (common salt) does not exceed 3500 g/m³; and
Canterbury Land and Water Regional Plan

(ii) 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

(iii) 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 Community Drinking-water Protection Zone 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.

5.11 The discharge of swimming pool or spa pool water into water or onto or into land in circumstances where a contaminant may enter water that does not meet one or more of the conditions of Rule 5.10 is a restricted discretionary activity.

The exercise of discretion is restricted to the following matter:
1. The actual and potential environmental effects of not meeting the condition or conditions of Rule 5.10.

Greywater

5.12 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 substance; and
2. The discharge is from a system that is authorised for use under the Building Act 2004; and
3. The discharge is:
   (a) via a land application system located beneath the ground surface; and
   (b) as far as practicable, is evenly distributed and does not exceed an application rate of 50 mm per day; and
4. The discharge does not result in greywater flowing, seeping, or ponding on the surface of the ground for more than two hours; and
5. The system does not store greywater for more than 12 hours and incorporates a proprietary filter prior to discharge; and
6. The discharge does not result in water or contaminants flowing onto another site; and
7. The point of discharge is not:
   (a) within 20 m of a surface water body or the Coastal Marine Area; or
   (b) within 20 m of a bore used for water abstraction; or
   (c) to land that is contaminated or potentially contaminated; or
   (d) onto or into land listed as an archaeological site; and
8. Where the discharge is located over an unconfined or semi-confined aquifer and the highest groundwater level is less than 2 m from the ground surface, there shall be at least 600 mm of soil or sand between the point of discharge and the seasonal high water table.
5.13 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 5.12 is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:
1. The actual and potential environmental effects of not meeting the condition or conditions of Rule 5.12; and
2. The actual and potential environmental effects of the discharge on the quality and safety of human and animal drinking-water.

Pit and Composting Toilets

5.14 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; and
2. Surface runoff does not enter a pit toilet; and
3. There is at least 600 mm of soil or sand between the point of discharge and the seasonal high water table level; and
4. The pit toilet is not:
   (a) within 20 m of a surface waterbody, a bore used for water abstraction or the Coastal Marine Area; or
   (b) within a Community Drinking-water Protection Zone as set out in Schedule 1; or
   (c) within any area or zone identified in a proposed or operative district plan for residential, commercial or industrial purposes; or
   (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) onto or into land listed as an archaeological site.

5.15 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 5.14 is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:
1. The actual and potential environmental effects of not meeting the condition or conditions of Rule 5.14; and
2. The actual and potential environmental effects of the discharge on the quality and safety of human and animal drinking-water.

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

5.16 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) that is within 20 m of a surface waterbody, the Coastal Marine Area, an adjacent property or a bore used for water abstraction; or
   (b) that is within a Community Drinking-water Protection Zone as set out in Schedule 1; or
   (c) that is used for growing food crops for human consumption; or
   (d) when there is water ponding or flowing on the land; or
   (e) that is listed as an archaeological site.

5.17 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 5.16 is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:
1. The actual and potential environmental effects of not meeting the condition or conditions of Rule 5.16; and
2. The actual and potential environmental effects of the discharge on the quality and safety of human and animal drinking-water.

Dust Suppressants

5.18 The discharge of a dust suppressant onto or into land in circumstances where a contaminant may enter water is a permitted activity, provided either of the following conditions is 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; or

2. The dust suppressant is approved under the Hazardous Substances and New Organisms Act 1996 and the use and discharge of the dust suppressant is in accordance with all conditions of the approval.

5.19 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 5.18 is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:
1. The actual and potential environmental effects of not meeting the condition or conditions of Rule 5.18.
Pest Control and Agrichemicals

Note: See also the rules on vegetation clearance – 5.163 – 5.174

5.20 The discharge of a vertebrate toxic agent onto or into land, including the bed of a lake or river, in circumstances where a contaminant may enter water, or into water, is a permitted activity, provided the following conditions are met:
1. The substance is approved under the Hazardous Substances and New Organisms Act 1996 and the use and discharge of the substance is in accordance with all conditions of the approval; and
2. The discharge is not within a Community Drinking-water Protection Zone as set out in Schedule 1.

5.21 The discharge of a vertebrate toxic agent onto or into land, including the bed of a lake or river, in circumstances where a contaminant may enter water, or into water, that does not meet one or more of the conditions in Rule 5.20 is a discretionary activity.

5.22 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, or into a surface waterbody, is a permitted activity, provided the following conditions are met:
1. The substance is approved under the Hazardous Substances and New Organisms Act 1996 and the use and discharge of the substance is in accordance with all conditions of the approval; and
2. No mixing or diluting of an agrichemical or rinsing or cleaning of containers or equipment takes place within:
   (a) 5 m of a surface waterbody, or a bore; or
   (b) in the bed of a river or lake, or within the Christchurch Groundwater Protection Zone as shown on the Planning Maps, or a Community Drinking-water Protection Zone as set out in Schedule 1, 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; and
3. If the water used for mixing or dilution is being abstracted from a surface waterbody or groundwater, a backflow prevention system is in place to prevent the agrichemical from flowing back into the source water; and
4. For discharges direct to surface water, the discharge is not:
   (a) within a Community Drinking-water Protection Zone as set out in Schedule 1; or
   (b) 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.

5.23 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, or into a surface waterbody, that does not meet one or more of the conditions of Rule 5.22 is a discretionary activity.
Offal and Farm Rubbish Pits

Notes:

1. In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy pre 1900 archaeological sites is subject to the archaeological authority process under the Heritage New Zealand Pouutere Taonga Act 2014. An archaeological authority is required from Heritage New Zealand to modify, damage or destroy any archaeological site, whether recorded or not in the New Zealand Heritage List/Rārangi Kōrero website

2. Nothing in Rule 5.24 or 5.27 prevents a pit being used for both an offal pit and an on-site refuse disposal pit, if the conditions of Rule 5.24 and Rule 5.27 are met.

3. The discharge of carcasses and offal to land must not create a nuisance under the Health Act 1956. This means that the activity must not be offensive, likely to be injurious to health, spread disease, likely to harbour rats and other vermin, or give rise to the breeding of flies or other insects which are capable of transmitting disease.

4. If the discharge of carcasses and offal creates risks to human health it is appropriate to notify the Medical Officer of Health or Health Protection Officer for the area. Situations where this might be necessary include:
   a. potential for microbial contamination of water supplies;
   b. any infestations of vermin or other disease vectors; or
   c. fallen stock left to decompose in the field where they die.

5.24 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:
   (a) has a volume of less than 50 m³; and
   (b) is sited and designed to prevent surface runoff entering the pit; and
   (c) 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 property where the pit is located; and

3. No more than one pit is constructed or used per 100 hectares of property area per annum; and

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. No discharge occurs:
   (a) within 100m of a surface water body, a bore used for water abstraction, the boundary of the site, or the Coastal Marine Area; or
   (b) within a Community Drinking-water Protection Zone as set out in Schedule 1; or
   (c) unless there is at least 3 m of soil or sand between the point of discharge and the seasonal high water table level or
   (d) within the Christchurch Groundwater Protection Zone as shown on the Planning Maps; or
(e) onto or into land listed as an archaeological site; or
(f) within any area or zone identified in a proposed or operative district plan for residential, commercial or industrial purposes.

5.25 Despite Rule 5.24, the use of land to bury a single dead animal and the associated discharge onto or into land in circumstances where a contaminant may enter water are permitted activities, provided the following conditions are met:

1. The dead animal cannot be disposed of in accordance with the conditions of Rule 5.24; and
2. The dead animal results from agricultural production on the same property; and
3. The dead animal is buried in a pit which does not contain any water, and is immediately and completely covered by sufficient soil or plant material so as to prevent discharge of odour to air, or other nuisance; and
4. The burial location is not within any area or zone identified in a proposed or operative district plan for residential, commercial or industrial purposes; and
5. The burial site is at least 50 m from any:
   (a) surface water body; or
   (b) bore used for water abstraction; or
   (c) property boundary.

5.26 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 5.24 is a restricted discretionary activity where the following condition is met:

1. The disposal and discharge are the subject of a Farm Environment Plan that has been prepared in accordance with Schedule 7 Part A.

*The exercise of discretion is restricted to the following matters:*

1. The actual or potential environmental effects of not meeting the condition or conditions of Rule 5.24 or Rule 5.25; and
2. The actual or potential environmental effects of the discharge on the quality and safety of human and animal drinking-water; and
3. The quality of, compliance with, and auditing of the Farm Environment Plan.

5.27 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:
   (a) located on a site of greater than 20 hectares in area; and
   (b) with a volume of less than 50 m³; and
   (c) sited and designed to prevent surface runoff entering the pit; and
   (d) designed to prevent animals from gaining access to the pit; and
2. No hazardous substances, agrichemicals or agrichemical containers are discharged; and
3. The discharge is only of refuse produced on the property where the pit is located; and
4. No kerbside community or local authority refuse collection is available; and
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:
   (a) within 100 m of a surface water body, a bore used for water abstraction, the boundary of the property or the Coastal Marine Area; or
   (b) within a Community Drinking-water Protection Zone as set out in Schedule 1; or
   (c) unless there is at least 3 m of soil or sand between the point of discharge and the seasonal high water table level; or
   (d) within the Christchurch Groundwater Protection Zone as shown on the Planning Maps; or
   (e) onto or into land listed as an archaeological site; or
   (f) within any area or zone identified in a proposed or operative district plan for residential, commercial or industrial purposes.

5.28 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 5.27 is a restricted discretionary activity where the following condition is met:

1. The disposal and discharge are the subject of a Farm Environment Plan that has been prepared in accordance with Schedule 7 Part A.

   **The exercise of discretion is restricted to the following matters:**
   1. The actual or potential environmental effects of not meeting the condition or conditions of Rule 5.27; and
   2. The actual or potential environmental effects of the discharge on the quality and safety of human and animal drinking-water; and
   3. The quality of, compliance with, and auditing of the Farm Environment Plan.

**Animal and Vegetative Waste**

5.29 The discharge of solid animal waste (excluding any discharge directly from an animal to land), 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; and
2. The material does not include any waste from a human effluent treatment process; and
3. The material is not discharged:
   (a) onto the same area of land more frequently than once every two months; or
   (b) onto land where solid animal waste, or vegetative material containing animal excrement or vegetative material from a previous application is still visible on the land surface; or
   (c) onto land when the soil moisture exceeds field capacity; or
   (d) within 20 m of a bore used for water abstraction, a surface waterbody not listed in Schedule 17 or the Coastal Marine Area; or
Canterbury Land and Water Regional Plan

5.30 The discharge of solid animal waste, (excluding any discharge directly from an animal to land), 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 5.29 is a discretionary activity.

Stock Holding Areas and Animal Effluent

Note: In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy pre 1900 archaeological sites is subject to the archaeological authority process under the Heritage New Zealand Poutere Taonga Act 2014. An archaeological authority is required from Heritage New Zealand to modify, damage or destroy any archaeological site, whether recorded or not in the New Zealand Heritage List/Rārangi Kōrero website

5.31 The use of land for a stock holding area is a permitted activity, provided the following conditions are met:
1. The stock holding area is not:
   (a) within 20 m of a surface water body, a bore used for water abstraction or the Coastal Marine Area; or
   (b) within 100 m of a pre-existing dwelling or place of assembly on another property; and
1A. The stock holding area is not located within a Community Drinking-water Protection Zone as set out in Schedule 1; and
2. All liquid animal effluent, washdown water or stormwater containing animal effluent is collected and disposed of to an animal effluent collection and storage system authorised under Rules 5.33 to 5.37 or an existing discharge permit; and
3. The base of any stock holding area located on land over an unconfined or semi-confined aquifer shall be sealed such that seepage into land does not exceed one millimetre per day.

5.32 The use of land for a stock holding area that does not meet one or more of the conditions of Rule 5.31 is a discretionary activity.

5.33 The use of land for the collection, storage and treatment of animal effluent is a permitted activity, provided the following conditions are met:
1. The land used for the collection, storage and treatment of animal effluent is not:
   (a) 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; or
   (b) within 50 m of the boundary of the property; or
   (c) within a Community Drinking-water Protection Zone as set out in Schedule 1; and
2. The collection, storage and treatment system is sealed, such that seepage into land does not exceed one millimetre per day.
5.34 The use of land for the collection, storage and treatment of animal effluent that does not meet one or more of the conditions of Rule 5.33 is a discretionary activity.

5.35 The discharge of animal effluent or water containing animal effluent and other contaminants originating from a stock truck holding tank onto or into land where a contaminant may enter water is a permitted activity, provided the following conditions are met:
1. The maximum volume discharged does not exceed 100 m$^3$ per property in any 12 month period; and
2. The discharge of animal effluent or water containing animal effluent and other contaminants:
   (a) is not within 20 m of a surface water body (other than a wetland constructed primarily to treat animal effluent); or
   (b) within 20 m of a bore used for water abstraction, the Coastal Marine Area, or the boundary of the property.

5.36 The discharge of animal effluent or water containing animal effluent and other contaminants originating from:
(a) a stock holding area; or
(b) a stock truck holding tank that does not meet one or more of the conditions of Rule 5.35; or
(c) an animal effluent storage facility onto or into land where a contaminant may enter water
is a restricted discretionary activity, provided the following conditions are met:
1. The discharge of animal effluent or water containing animal effluent and other contaminants:
   (a) is not 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; and
   (b) does not occur beyond the boundary of the property on which the animal effluent is generated unless the written approval of the property owner where the discharge occurs has been obtained; and
   (c) is not within a Community Drinking-water Protection Zone as set out in Schedule 1; and
   (d) has backflow prevention installed if the animal effluent or water containing animal effluent is applied with irrigation water; and
   (e) is not to contaminated or potentially contaminated land; and
2. The discharge is the subject of a Farm Environment Plan that has been prepared in accordance with Schedule 7 Part A.

The exercise of discretion is restricted to the following matters:
1. Measures to avoid, mitigate or remedy adverse effects on aquatic ecosystems and human or animal drinking-water; and
2. Effluent and water application rates and nutrient load; and
3. The effectiveness of methods to store effluent and application rates in times of adverse weather conditions, including frozen or saturated soil, or in cases of equipment failure; and
4. The proximity of any discharge site to, and actual or potential effects on, any identified site of significant indigenous biodiversity on biodiversity; and
5. The adequacy of design, construction, systems and management processes to minimise fugitive discharges from the system, including, but not limited to, mitigation in case of equipment failure or breakage; and
6. The quality of, compliance with, and auditing of the Farm Environment Plan.

5.37 Any discharge of animal effluent or water containing animal effluent or other contaminants that does not meet one or more of the conditions in Rule 5.35 or Rule 5.36 or that is directly into water (other than into a wetland constructed primarily to treat animal effluent) is a non-complying activity.

Silage Pits and Compost

Note: Rules 5.38 to 5.40 do not apply to the storage of baled and wrapped silage, whether stored in individual bales or a continuous tube

5.38 The use of land for a silage pit or the stockpiling of decaying organic matter (including compost) 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; and
2. Any liquid that drains from the stockpile does not enter a surface waterbody, other than a wetland constructed primarily to treat animal effluent; and
3. Any decaying organic matter does not originate from an industrial or trade process.

5.39 The use of land for a silage pit or the stockpiling of other decaying organic matter (including compost) not permitted by Rule 5.38 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 silage pit or stockpile is not sited:
   (a) within 50 m of a surface waterbody, the boundary of the property, a bore, or the Coastal Marine Area; or
   (b) within a Community Drinking-water Protection Zone as set out in Schedule 1; or
   (c) within the Christchurch Groundwater Protection Zone as shown on the Planning Maps; and
2. Any liquid that drains from the silage pit or stockpile does not enter a surface waterbody, other than a wetland constructed primarily to treat effluent; and
3. Any decaying organic matter does not originate from an industrial or trade process.

5.40 The use of land for a silage pit or the stockpiling of other decaying organic matter (including compost) 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 5.39 is a restricted discretionary activity where the following condition is met:
1. The silage pit, stockpile, and discharge is the subject of a Farm Environment Plan that has been prepared in accordance with Schedule 7 Part A.

The exercise of discretion is restricted to the following matters:
1. The actual or potential environmental effects of not meeting the condition or conditions of Rule 5.39; and
2. The quality of, compliance with and auditing of the Farm Environment Plan.

Nutrient Management

Note: The Nutrient Management Rules set out a different set of rules for each of the five Nutrient Allocation Zones that are shown on the series A Planning Maps (Lake, Red, Orange, Green and Light Blue). Overlaying the rules for each Nutrient Allocation Zone are alternative rules that may apply if nutrient management is being undertaken by an irrigation scheme or principal water supplier.

All Nutrient Allocation Zones

5.41 Despite Rules 5.43 to 5.59, the use of land for a farming activity where either:
(a) the nitrogen loss from the farming activity is being managed under a resource consent that is held by an irrigation scheme or principal water supplier and the permit contains conditions which limit:
   (i) the maximum rate (kg/ha/yr) or amount (kg/yr) at which nitrogen may be leached from the subject land; or
   (ii) the concentration of nitrogen in the drainage water leached from the subject land (as measured in ppm or g/m³); or
(b) the land is subject to a water permit that authorises the use of water for irrigation and:
   (i) the permit was granted prior to 18 January 2014; and
   (ii) the permit is subject to conditions that specify the maximum rate of nitrogen that may be leached from the land; and
   (iii) the water permit is subject to conditions which require the preparation and implementation of a plan to mitigate the effects of the loss of nutrients to water is a permitted activity

5.42 Where any property or farming enterprise includes land in more than one Nutrient Allocation Zone, as shown on the Planning Maps:
(a) the rules for each Nutrient Allocation Zone apply respectively only to the part of the property within that Zone; and
(b) where the conditions of Rules 5.43 to 5.59 specify a date by which a resource consent application is to be lodged, and the property is located in more than one Nutrient Allocation Zone, compliance with the earliest date is required.

5.42A Despite Rules 5.43 to 5.59, the use of land for a farming activity on a property greater than 10 hectares where:
(a) the Farm Portal is unable to generate a Baseline GMP Loss Rate or Good Management Practice Loss Rate or the number generated is demonstrated to be erroneous; or
Canterbury Land and Water Regional Plan

(b) more than 25% of the property is used to produce, farm, or rear a crop or animal type that is not able to be selected as an option in OVERSEER® and where the OVERSEER® Best Practice Data Input Standard does not recommend an alternative;

(c) the Farm Portal is unable to generate a Baseline GMP Loss Rate or Good Management Practice Loss Rate that is representative for the property as a consequence of that property being subject to nutrient management rules in:
   (i) both the region-wide section of this Plan and rules in a sub-region section of this Plan; or
   (ii) more than one sub-region section of this Plan; or
   (iii) a single sub-region section of this Plan where that section contains nutrient management rules introduced by separate plan change processes; or
   (iv) this Plan and nutrient management rules in another regional plan;

is a discretionary activity provided the following conditions are met:

1. The nitrogen loss calculation for any part of the property within a Lake Zone, Red Nutrient Allocation Zone or Orange Nutrient Allocation Zone does not exceed the nitrogen baseline; and
2. The nitrogen loss calculation for any part of the property within a Green or Light Blue Nutrient Allocation Zone does not exceed a total of 5kg/ha/yr above the nitrogen baseline; and
3. An Accredited Farm Consultant has prepared a Farm Environment Plan and nutrient budgets for the property in accordance with Part A of Schedule 7 and they are submitted with the application for resource consent; and
4. The application for resource consent includes a calculation of the Equivalent Baseline GMP Loss Rate and Equivalent Good Management Practice Loss Rate for the farming activity, and the methodology used to derive those numbers.

5.42B The use of land for a farming activity on a property greater than 10 hectares where:

(a) the Farm Portal is unable to generate a Baseline GMP Loss Rate or Good Management Practice Loss Rate or the number generated is demonstrated to be erroneous; or

(b) more than 25% of the property is used to produce, farm, or rear a crop or animal type that is not able to be selected as an option in OVERSEER® and where the OVERSEER® Best Practice Data Input Standard does not recommend an alternative; or

(c) the Farm Portal is unable to generate a Baseline GMP Loss Rate or Good Management Practice Loss Rate that is representative for the property as a consequence of that property being subject to nutrient management rules in:
   (i) both the region-wide section of this Plan and rules in a sub-region section of this Plan; or
   (ii) more than one sub-region section of this Plan; or
   (iii) a single sub-region section of this Plan where that section contains nutrient management rules introduced by separate plan change processes; or
   (iv) this Plan and nutrient management rules in another regional plan;

that does not meet condition 3 of Rule 5.42A is a non-complying activity.

5.42C The use of land for a farming activity on a property greater than 10 hectares where:
Canterbury Land and Water Regional Plan

(a) the Farm Portal is unable to generate a Baseline GMP Loss Rate or Good Management Practice Loss Rate or the number generated is demonstrated to be erroneous; or

(b) more than 25% of the property is used to produce, farm, or rear a crop or animal type that is not able to be selected as an option in OVERSEER® and where the OVERSEER® Best Practice Data Input Standard does not recommend an alternative; or

(c) the Farm Portal is unable to generate a Baseline GMP Loss Rate or Good Management Practice Loss Rate that is representative for the property as a consequence of that property being subject to nutrient management rules in:
   (i) both the region-wide section of this Plan and rules in a sub-region section of this Plan; or
   (ii) more than one sub-region section of this Plan; or
   (iii) a single sub-region section of this Plan where that section contains nutrient management rules introduced by separate plan change processes; or
   (iv) this Plan and nutrient management rules in another regional plan; that does not meet one or more of conditions 1, 2 or 4 of Rule 5.42A is a prohibited activity.

Red Nutrient Allocation Zones

5.43 Within the Red Nutrient Allocation Zone, the use of land for a farming activity on a property 10 hectares or less in area is a permitted activity.

5.44 Within the Red Nutrient Allocation Zone, the use of land for a farming activity on a property greater than 10 hectares in area is a permitted activity provided the following conditions are met:

1. The property is registered in the Farm Portal by 1 July 2019 and information about the farming activity and the property is reviewed and updated by the property owner or their agent every 36 months thereafter, or whenever a material change in the land use associated with the farming activity occurs, or whenever any boundary of the property is changed; and

2. The area of the property authorised to be irrigated with water is less than 50 hectares; and

3. For any property where, as at 13 February 2016, the area of the property authorised to be irrigated with water is less than 50 hectares, any increase in the area of the property that is irrigated is limited to 10 hectares above that which was irrigated at 13 February 2016; and

4. The area of the property used for winter grazing is less than:
   (a) 10 hectares, for any property less than 100 hectares in area; or
   (b) 10% of the area of the property, for any property between 100 hectares and 1000 hectares in area; or
   (c) 100 hectares, for any property greater than 1000 hectares in area; and

5. A Management Plan has been prepared in accordance with Schedule 7A and is implemented within 12 months of the rule being made operative and supplied to the Canterbury Regional Council on request.
5.44A Within the Red Nutrient Allocation Zone, the use of land for a farming activity on a property greater than 10 hectares in area that does not comply with one or more of the conditions of Rule 5.44 is a controlled activity provided the following conditions are met:

1. A Farm Environment Plan has been prepared for the property in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and
2. Until 30 June 2020, the nitrogen loss calculation for the part of the property within the Red Nutrient Allocation Zone does not exceed the nitrogen baseline, and from 1 July 2020 the Baseline GMP Loss Rate; and
3. The Farm Environment Plan and nutrient budget submitted with the application for resource consent has been prepared or reviewed by an Accredited Farm Consultant.

The CRC reserves control over the following matters:

1. The commencement date for the first audit of the Farm Environment Plan; and
2. The content, quality and accuracy of the nutrient budgets provided with the application for resource consent; and
3. The timing of any actions or Good Management Practices proposed to achieve the objectives and targets described in Schedule 7; and
4. Methods that limit the nitrogen loss calculation for the farming activity to a rate not exceeding the Baseline GMP Loss Rate; and
5. Methods that require the farming activity to operate at or below the Good Management Practice Loss Rate, in any circumstance where that Good Management Practice Loss Rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than the Baseline GMP Loss Rate; and
6. Methods to avoid or mitigate adverse effects of the activity on surface water quality, groundwater quality and sources of drinking water; and
7. Methods to address any non-compliance identified as a result of a Farm Environment Plan audit, including the timing of any subsequent audits; and
8. Reporting of estimated nutrient losses and audit results of the Farm Environment Plan to the Canterbury Regional Council, including via the Farm Portal; and
9. Methods to prevent an exceedance of any relevant nutrient load limit set out in Sections 6 to 15 of the Plan if the region-wide rules continue to apply in the sub-region.

5.45 Within the Red Nutrient Allocation Zone, the use of land for a farming activity on a property greater than 10 hectares in area that does not comply with condition 2 or 3 of Rule 5.44A is a restricted discretionary activity provided the following conditions are met:

1. A Farm Environment Plan has been prepared for the property in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and
2. Until 30 June 2020, the nitrogen loss calculation for the part of the property within the Red Nutrient Allocation Zone does not exceed the nitrogen baseline, and from 1 July 2020 does not exceed the Baseline GMP Loss Rate; unless the nitrogen baseline was lawfully exceeded prior to 13 February 2016, and the application for resource consent demonstrates that the exceedance was lawful.

The exercise of discretion is restricted to the following matters:

1. The content of, compliance with, and auditing of the Farm Environment Plan; and
2. The content, quality and accuracy of the nutrient budgets provided with the application for resource consent; and
3. The actual or potential adverse effects of the activity on surface water quality, groundwater quality and sources of drinking water and how these will be avoided or mitigated; and
4. The timing of any actions or Good Management Practices proposed to achieve the objectives and targets described in Schedule 7; and
5. Methods that limit the nitrogen loss calculation for the farming activity to a rate not exceeding the Baseline GMP Loss Rate; and
6. Methods that require the farming activity to operate at or below the Good Management Practice Loss Rate, in any circumstance where that Good Management Practice Loss Rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than the Baseline GMP Loss Rate; and
7. Methods to address any non-compliances identified as a result of a Farm Environment Plan audit; including the timing of subsequent audits; and
8. Reporting of nutrient losses and audit results of the Farm Environment Plan to the Canterbury Regional Council, including via the Farm Portal; and
9. The consistency of the proposal with Policy 4.38C; and
10. Methods to prevent an exceedance of any relevant nutrient load limit set out in Sections 6 to 15 of the Plan if the region-wide rules continue to apply in the sub-region.

5.46 Within the Red Nutrient Allocation Zone, the use of land for a farming activity as part of a farming enterprise is a discretionary activity, provided the following conditions are met:
   1. A Farm Environment Plan has been prepared for the farming enterprise in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and
   2. Until 30 June 2020 the nitrogen loss calculation for the farming enterprise does not exceed the nitrogen baseline and, from 1 July 2020 the Baseline GMP Loss Rate; and
   3. The properties comprising the farming enterprise are in the same surface water catchment and Nutrient Allocation Zone, as shown on the Planning Maps.

5.47 Within the Red Nutrient Allocation Zone, the use of land for a farming activity on a property greater than 10 hectares in area that does not comply with condition 1 of Rule 5.44A, or condition 1 of Rule 5.45, or the use of land for a farming activity as part of a farming enterprise that does not comply with conditions 1 or 3 of Rule 5.46, is a non-complying activity.

5.48 Within the Red Nutrient Allocation Zone, the use of land for a farming activity on a property greater than 10 hectares in area that does not comply with condition 2 of Rule 5.45, or the use of land for a farming activity as part of a farming enterprise that does not comply with condition 2 of Rule 5.46 is a prohibited activity.

Lake Zones

5.49 Within the Lake Zone, the use of land for a farming activity on a property 10 hectares or less in area is a permitted activity.
5.50 Within the Lake Zone, the use of land for a farming activity on a property greater than 10 hectares in area is a restricted discretionary activity provided the following conditions are met:

1. A Farm Environment Plan has been prepared for the property in accordance with Part A of Schedule 7 and is submitted with the application for resource consent;
2. Until 30 June 2020, the nitrogen loss calculation for the part of the property within the Lake Zone does not exceed the nitrogen baseline, and from 1 July 2020 the Baseline GMP Loss Rate.

The exercise of discretion is restricted to the following matters:

1. The content of, compliance with, and auditing of the Farm Environment Plan; and
2. The content, quality and accuracy of the nutrient budgets provided with the application for resource consent; and
3. The actual or potential adverse effects of the activity on surface water quality, groundwater quality and sources of drinking water and how these will be avoided or mitigated; and
4. The timing of any actions or Good Management Practices proposed to achieve the objectives and targets described in Schedule 7; and
5. Methods that limit the nitrogen loss calculation for the farming activity to a rate not exceeding the Baseline GMP Loss Rate; and
6. Methods that require the farming activity to operate at or below the Good Management Practice Loss Rate, in any circumstance where that Good Management Practice Loss Rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than the Baseline GMP Loss Rate; and
7. Methods to address any non-compliance identified as a result of a Farm Environment Plan audit, including the timing of any subsequent audits; and
8. Reporting of nutrient losses and audit results of the Farm Environment Plan to the Canterbury Regional Council, including via the Farm Portal; and
9. Methods to prevent an exceedance of any relevant nutrient load limit set out in Sections 6 to 15 of the Plan if the region-wide rules continue to apply in the sub-region.

5.51 Within the Lake Zone, the use of land for a farming activity on a property greater than 10 hectares that does not comply with condition 1 of Rule 5.50 is non-complying activity.

5.52 Within the Lake Zone, the use of land for a farming activity on a property greater than 10 hectares that does not comply with condition 2 of Rule 5.50 is a prohibited activity.

Orange Nutrient Allocation Zones

5.53 Within the Orange Nutrient Allocation Zone, the use of land for a farming activity on a property 10 hectares or less in area is a permitted activity.

5.54 Within the Orange Nutrient Allocation Zone, the use of land for a farming activity on a property greater than 10 hectares in area is a permitted activity provided the following conditions are met:
1. The property is registered in the Farm Portal by 1 July 2019 and information about the farming activity and the property is reviewed and updated by the property owner or their agent every 36 months thereafter, or whenever a material change in the land use associated with the farming activity occurs, or whenever any boundary of the property is changed; and

2. The area of the property irrigated with water is less than 50 hectares; and

3. The area of the property used for winter grazing is less than:
   (a) 10 hectares, for any property less than 100 hectares in area; or
   (b) 10% of the area of the property, for any property between 100 hectares and 1000 hectares in area; or
   (c) 100 hectares, for any property greater than 1000 hectares in area; and

4. A Management Plan has been prepared in accordance with Schedule 7A and is implemented within 12 months of the rule being made operative and supplied to the Canterbury Regional Council on request.

5.54A Within the Orange Nutrient Allocation Zone, the use of land for a farming activity on a property greater than 10 hectares in area that does not comply with one or more of the conditions of Rule 5.54 is a controlled activity provided the following conditions are met:

1. A Farm Environment Plan has been prepared for the property in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and

2. Until 30 June 2020, the nitrogen loss calculation for the part of the property within the Orange Nutrient Allocation Zone does not exceed the nitrogen baseline, and from 1 July 2020 the Baseline GMP Loss Rate; and

3. The Farm Environment Plan and nutrient budget submitted with the application for resource consent has been prepared or reviewed by an Accredited Farm Consultant.

The CRC reserves control over the following matters:

1. The commencement date for the first audit of the Farm Environment Plan; and

2. The content, quality and accuracy of the nutrient budgets provided with the application for resource consent; and

3. The timing of any actions or Good Management Practices proposed to achieve the objectives and targets described in Schedule 7; and

4. Methods that limit the nitrogen loss calculation for the farming activity to a rate not exceeding the Baseline GMP Loss Rate; and

5. Methods that require the farming activity to operate at or below the Good Management Practice Loss Rate, in any circumstance where that Good Management Practice Loss Rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than the Baseline GMP Loss Rate; and

6. Methods to avoid or mitigate adverse effects of the activity on surface water quality, groundwater quality and sources of drinking water; and

7. Methods to address any non-compliance identified as a result of a Farm Environment Plan audit, including the timing of any subsequent audits; and

8. Reporting of nutrient losses and audit results of the Farm Environment Plan to the Canterbury Regional Council, including via the Farm Portal; and
9. Methods to prevent an exceedance of any relevant nutrient load limit set out in Sections 6 to 15 of the Plan if the region-wide rules continue to apply in the sub-region.

5.55 Within the Orange Nutrient Allocation Zone, the use of land for a farming activity on a property greater than 10 hectares in area, that does not comply with condition 2 or 3 of Rule 5.54A, is a restricted discretionary activity provided the following conditions are met:

1. A Farm Environment Plan has been prepared for the property in accordance with Part A of Schedule 7 and is submitted with the application for resource consent;
2. Until 30 June 2020, the nitrogen loss calculation for the part of the property within the Orange Nutrient Allocation Zone does not exceed the nitrogen baseline, and from 1 July 2020 the Baseline GMP Loss Rate, unless the nitrogen baseline was lawfully exceeded prior to 13 February 2016, and the application for resource consent demonstrates that the exceedance was lawful.

The exercise of discretion is restricted to the following matters:
1. The content of, compliance with, and auditing of the Farm Environment Plan; and
2. The content, quality and accuracy of the nutrient budgets provided with the application for resource consent; and
3. The actual or potential adverse effects of the proposal on surface water quality, groundwater quality and sources of drinking water and how these will be avoided or mitigated; and
4. The timing of any actions or Good Management Practices proposed to achieve the objectives and targets described in Schedule 7; and
5. Methods that limit the nitrogen loss calculation for the farming activity to a rate not exceeding the Baseline GMP Loss Rate; and
6. Methods that require the farming activity to operate at or below the Good Management Practice Loss Rate, in any circumstance where that Good Management Practice Loss Rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than the Baseline GMP Loss Rate; and
7. Methods to address any non-compliances that are identified as a result of a Farm Environment Plan audit, including the timing of any subsequent audits; and
8. Reporting of nutrient losses and audit results of the Farm Environment Plan to the Canterbury Regional Council, including via the Farm Portal; and
9. The consistency of the proposal with Policy 4.38C; and
10. Methods to prevent an exceedance of any relevant nutrient load limit set out in Sections 6 to 15 of the Plan if the region-wide rules continue to apply in the sub-region.

5.56 Within the Orange Nutrient Allocation Zone, the use of land for a farming activity as part of a farming enterprise is a discretionary activity, provided the following conditions are met:

1. A Farm Environment Plan has been prepared for the farming enterprise in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and
2. Until 30 June 2020, the nitrogen loss calculation for the farming enterprise does not exceed the nitrogen baseline, and from 1 July 2020 the Baseline GMP Loss Rate; and
3. The properties comprising the farming enterprise are in the same surface water catchment and Nutrient Allocation Zone, as shown on the Planning Maps.

5.56A Within the Orange Nutrient Allocation Zone, the use of land for a farming activity on a property greater than 10 hectares in area that does not comply with condition 1 of Rule 5.54A, or one or more of the conditions of Rule 5.55, or the use of land for a farming activity as part of a farming enterprise that does not comply with one or more of the conditions of Rule 5.56 is a non-complying activity.

Green and Light Blue Nutrient Allocation Zones

5.57 Within the Green or Light Blue Nutrient Allocation Zone the use of land for a farming activity on a property 10 hectares or less is a permitted activity.

5.57A Within the Green or Light Blue Nutrient Allocation Zone, the use of land for a farming activity on a property greater than 10 hectares in area is a permitted activity provided the following conditions are met:

1. The property is registered in the Farm Portal by 1 January 2020 and information about the farming activity and the property is reviewed and updated by the property owner or their agent every 36 months thereafter or whenever a material change in the land use associated with the farming activity occurs or whenever any boundary of the property is changed; and

2. The area of the property irrigated with water is less than 50 hectares; and

3. The area of the property used for winter grazing is less than:
   (a) 10 hectares, for any property less than 100 hectares in area; or
   (b) 10% of the area of the property, for any property between 100 hectares and 1000 hectares in area; or
   (c) 100 hectares, for any property greater than 1000 hectares in area; and

4. A Management Plan has been prepared in accordance with Schedule 7A and is implemented within 12 months of the rule being made operative and supplied to the Canterbury Regional Council on request.

5.57B Within the Green or Light Blue Nutrient Allocation Zone the use of land for a farming activity on a property greater than 10 hectares in area that does not comply with one or more of the conditions of Rule 5.57A is a controlled activity provided the following conditions are met:

1. A Farm Environment Plan has been prepared for the property in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and

2. Until 30 June 2020, the nitrogen loss calculation for the part of the property within the Green or Light Blue Nutrient Allocation Zone does not exceed the nitrogen baseline, and from 1 July 2020 the Baseline GMP Loss Rate; and

3. The Farm Environment Plan and nutrient budget submitted with the application for resource consent has been prepared or reviewed by an Accredited Farm Consultant.

The CRC reserves control over the following matters:

1. The commencement date for the first audit of the Farm Environment Plan; and
2. The content, quality and accuracy of the nutrient budgets provided with the application for resource consent; and
3. The timing of any actions or Good Management Practices proposed to achieve the objectives and targets described in Schedule 7; and
4. Methods that limit the nitrogen loss calculation for the farming activity to a rate not exceeding the Baseline GMP Loss Rate; and
5. Methods that require the farming activity to operate at or below the Good Management Practice Loss Rate, in any circumstance where that Good Management Practice Loss Rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than the Baseline GMP Loss Rate; and
6. Methods to avoid or mitigate adverse effects of the activity on surface water quality, groundwater quality and sources of drinking water; and
7. Methods to address any non-compliance identified as a result of a Farm Environment Plan audit, including the timing of any subsequent audits; and
8. Reporting of nutrient losses and audit results of the Farm Environment Plan to the Canterbury Regional Council, including via the Farm Portal; and
9. Methods to prevent an exceedance of any relevant nutrient load limit set out in Sections 6 to 15 of the Plan if the region-wide rules continue to apply in the sub-region.

5.58 Within the Green or Light Blue Nutrient Allocation Zone the use of land for a farming activity on a property greater than 10 hectares in area that does not comply with condition 2 or 3 of Rule 5.57B is a restricted discretionary activity provided the following conditions are met:

1. A Farm Environment Plan has been prepared for the property in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and
2. Until 30 June 2020, the nitrogen loss calculation for the part of the property within the Green or Light Blue Nutrient Allocation Zone does not exceed a total of 5kg/ha/yr above the nitrogen baseline, and from 1 July 2020 a total of 5kg/ha/yr above the Baseline GMP Loss Rate; unless the nitrogen baseline was lawfully exceeded prior to 13 February 2016, and the application for resource consent demonstrates that the exceedance was lawful.

The exercise of discretion is restricted to the following matters:

1. The content of, compliance with, and auditing of the Farm Environment Plan; and
2. The content quality and accuracy of the nutrient budgets provided with the application for resource consent; and
3. The actual or potential adverse effects of the proposal on surface water quality, groundwater quality and sources of drinking water and how these will be avoided or mitigated; and
4. The timing of any actions or Good Management Practices proposed to achieve the objectives and targets described in Schedule 7; and
5. Methods that limit the nitrogen loss calculation for the farming activity to a rate not exceeding a total of 5kg/ha/yr above the Baseline GMP Loss Rate; and
6. Methods that require the farming activity to operate at or below the Good Management Practice Loss Rate, in any circumstance where that Good Management
Practice Loss Rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than a loss rate equivalent to a total of 5kg/ha/yr above the Baseline GMP Loss Rate; and

7. Methods to address any non-compliances that are identified as a result of a Farm Environment Plan audit, including the timing of any subsequent audits; and

8. Reporting of nutrient losses and audit results of the Farm Environment Plan to the Canterbury Regional Council, including via the Farm Portal; and

9. The consistency of the proposal with Policy 4.38C; and

10. Methods to prevent an exceedance of any relevant nutrient load limit set out in Sections 6 to 15 of the Plan if the region-wide rules continue to apply in the sub-region.

5.58A Within the Green or Light Blue Nutrient Allocation Zone the use of land for a farming activity as part of a farming enterprise is a discretionary activity, provided the following conditions are met:

1. A Farm Environment Plan has been prepared in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and

2. Until 30 June 2020, the nitrogen loss calculation for the farming enterprise does not exceed the nitrogen baseline, and from 1 July 2020 the Baseline GMP Loss Rate; and

3. The properties comprising the farming enterprise are in the same surface water catchment and Nutrient Allocation Zone, as shown on the Planning Maps.

5.59 Within the Green or Light Blue Nutrient Allocation Zone the use of land for a farming activity on a property greater than 10 hectares in area, that does not comply with condition 1 of Rule 5.57B, or one or more of the conditions of Rule 5.58, or the use of land for a farming activity as part of a farming enterprise that does not comply with one or more of the conditions of Rule 5.58A, is a non-complying activity.

Irrigation Schemes

Notes:

1. If a property is irrigated with water from an irrigation scheme or principal water supplier that does not hold a discharge permit under Rule 5.62 or is not a permitted activity under Rule 5.61, then it is assessed under Rules 5.43 to 5.59.

2. If the applicant is not an irrigation scheme or a principal water supplier, or the holder of the discharge permit will not be an irrigation scheme or a principal water supplier, then the discharge is assessed under Rules 5.63 to 5.64.

5.60 Notwithstanding Rules 5.43 to 5.59, the use of land for a farming activity is a permitted activity, provided the following conditions are met:

1. The property is irrigated with water from an irrigation scheme or a principal water supplier, and the irrigation scheme or a principal water supplier holds a discharge permit that specifies the maximum annual amount of nitrate-nitrogen that may be discharged or leached under Rule 5.62 or the discharge or leaching is a permitted activity under Rule 5.61.
5.61 Until 1 January 2017, 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 conditions are met:
1. There is an existing consent, held by an irrigation scheme or a principal water supplier, that has conditions that specify the maximum amount or rate at which nutrients may be discharged or leached from the subject land; and
2. The consent was granted prior to 11 August 2012.

5.62 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 discretionary activity, provided the following condition is met:
1. The applicant is an irrigation scheme or a principal water supplier, or the holder of the discharge permit will be an irrigation scheme or a principal water supplier.

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, provided that:
1. The nutrient loss is equal to or less than that currently authorised through conditions on a water permit to take and use water; or
2. The nutrient loss is equal to or less than the aggregation of the nutrient baseline across properties within the command area, calculated on a surface water catchment basis.

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.

Incidental Nutrient Discharges

5.63 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 conditions are met:
1. The land use activity associated with the discharge is authorised under Rules 5.41 to 5.59; or
2. The land use activity associated with the discharge is authorised under Rules 10.1, 10.2, 11.1 or 11.1A of the Hurunui-Waiau River Regional Plan.

5.64 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 condition 1 of Rules 5.62 or conditions 1 or 2 of 5.63 is a non-complying activity.

Fertiliser Use

Note: The discharge of fertiliser may also be restricted by Rules 5.43 to 5.64

5.65 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 the soil moisture exceeds field capacity; and
2. Where any permanently flowing river, lake, artificial watercourse or wetland has riparian planting from which stock is excluded, fertiliser may be discharged up to the paddock-side edge of the riparian planting, but not onto the riparian planting, except for fertiliser required to establish the planting; or

3. Where any permanently flowing river, lake, artificial watercourse or wetland does not have riparian planting from which stock is excluded, fertiliser is not discharged directly into or within 10 m of the bed or within 10 m of a wetland boundary or any identified significant indigenous biodiversity site.

5.66 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 the soil moisture exceeds field capacity and
2. 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 2 m wide, any lake, or any wetland boundary or any significant indigenous biodiversity site identified in the relevant district plan.

5.67 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 5.65 or Rule 5.66 is a restricted discretionary activity, provided the following condition is met:
1. The discharge is a subject of a Farm Environment Plan that has been prepared in accordance with Schedule 7 Part A.

The exercise of discretion is restricted to the following matters:
1. The actual or potential environmental effects of not meeting the condition or conditions of Rules 5.65 or 5.66; and
2. The potential benefits of the activity to the applicant, the community and the environment; and
3. The quality of, compliance with and auditing of the Farm Environment Plan.

Stock Exclusion

5.68A For the purposes of Rules 5.68 to 5.71 of this Plan, the bed (including the banks) of a braided river is limited to the wetted channels, any gravel islands, the gravel margins, and the outer edge of any flood protection vegetation or where no flood protection vegetation exists, the lesser of:
1. The distance from the outer gravel margin to land that was cultivated or was in crop or pasture prior to 5 September 2015; or
2. 10m landward of the outer gravel margin as measured at any time, except that if a stopbank exists then the stopbank does not form part of the bed.

5.68B Rules 5.68 to 5.71 of this Plan do not apply to the bed (including the banks) of any artificial lake unless:
1. The artificial lake has been created as a result of the damming of a river; or
2. The artificial lake discharges directly into a river, lake or wetland.

5.68 The use and disturbance of the bed (including the banks) of a lake, river or a wetland by stock and any associated discharge to water is a permitted activity, provided the following conditions are met:

1. The use or disturbance of the bed (including the banks) of a lake, river or wetland and any associated discharge to water is not categorised as a non-complying activity under Rule 5.70 or a prohibited activity under Rule 5.71; and

2. The use or disturbance of the bed (including the banks) of a lake or river and any associated discharge to water is at a stock crossing point that is:

   (a) not more than 20 m wide; and

   (b) perpendicular to the direction of water flow, except where this is impracticable owing to the natural contours of the riverbed or adjoining land; and

   (c) aligns with a constructed track or raceway on either side of the crossing point; or

3. The use or disturbance of the bed (including the banks) of a lake or river and any associated discharge to water that is not at a permanent stock crossing point does not result in:

   (a) pugging or de-vegetation that exposes bare earth in the bed (including the banks) of a lake or river; or

   (b) a conspicuous change in colour or clarity of the water, outside the Mixing Zone; or

   (c) cattle standing in any:

      (k) lake located outside of the Hill and High Country Area, other than any farm pond specifically constructed to provide stock water and that has no outlet to a lake, river, artificial watercourse or wetland;

      (ii) lake located within a Lake Zone, as shown on the Planning Maps; and

      (iii) lake classified as a High Naturalness Waterbody; and

4. The disturbance of a wetland does not result in a conspicuous change in colour or clarity of water, or pugging or de-vegetation that exposes bare earth.

5.69 The use and disturbance of the bed (including the banks) of a lake, river or a wetland by stock and any associated discharge to water that does not meet one or more of the conditions of Rule 5.68, excluding condition 1, and is not listed as a non-complying activity under Rule 5.70 or a prohibited activity under Rule 5.71 is a discretionary activity.

5.70 Unless categorised as a prohibited activity under Rule 5.71, the use and disturbance of the bed (including the banks) of a lake, a river that is greater than 1 m wide or 100 millimetres deep (under median flow conditions), or a wetland, by intensively farmed stock and any associated discharge to water is a non-complying activity.

5.71 The use and disturbance of the bed (including the banks) of a lake or river by any farmed cattle, farmed deer or farmed pigs and any associated discharge to water is a prohibited activity in the following areas:

1. In a salmon spawning site listed in Schedule 17, or in any inanga spawning habitat; or

2. Within a Community Drinking-water Protection Zone as set out in Schedule 1; or
3. Within 1,000 m upstream, in the bed of a lake river, of a fresh water bathing site listed in Schedule 6; or
4. In the bed (including the banks) of a spring-fed plains river, as shown on the Planning Maps.

**Flow Sensitive Catchments**

**Note:** See sub-region Sections 6 to 15 of this Plan for location-specific requirements

5.72 The replanting after harvest of areas of plantation forest within any flow-sensitive catchment listed in Sections 6 to 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.

5.73 The planting of new areas of plantation forest within any flow-sensitive catchment listed in Sections 6 to 15 is a controlled 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. In catchments less than or equal to 50 km² in area the total area of land planted in plantation forest does not exceed 20% of the flow sensitive catchment or sub-catchment listed in Sections 6 to 15; and
3. In any catchment greater than 50 km² in area the new area of planting, together with all other new areas of planting in the same flow sensitive catchment since 1 November 2012, will not cumulatively cause more than a five percent reduction in the seven day mean annual low flow, and/or more than a 10% reduction in the mean flow.

*The CRC reserves control over the following matter:*
1. The provision of information on the location, density and timing of planting.

5.74 The replanting after harvest of areas of plantation forest that does not meet the conditions of Rule 5.72 or the planting of new plantation forest that does not meet one or more of the conditions of Rule 5.73, within any flow-sensitive catchment listed in Sections 6 to 15 is a restricted discretionary activity.

*The exercise of discretion is restricted to the following matters:*
1. The actual or potential adverse environmental effects 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; and
2. The actual or potential adverse environmental effects of forestry planting on groundwater recharge; and
3. The benefits of the forestry for slope stability, erosion control, noxious plant control, water quality, carbon sequestration and biodiversity protection; and
4. The spacing and density, and species of the planting.

**Drainage Water**

5.75 The discharge of drainage water from a drainage system 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 watercourse or constructed wetland, 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; and
   (b) produce any conspicuous change in the colour or visual clarity; and
2. The discharge does not:
   (a) occur within a Community Drinking-water Protection Zone as set out in Schedule 1; and
   (b) contain any hazardous substance; and
   (c) originate from or enter contaminated or potentially contaminated land.

5.76 The discharge of drainage water from a drainage system into an artificial watercourse, constructed wetland or into or onto land that does not meet one or more of the conditions of Rule 5.75 is a discretionary activity.

5.77 The discharge of drainage water from a drainage system into a river, lake or 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; and
2. The concentration of:
   (a) total suspended solids in the discharge does not exceed 50 g/m$^3$; and
   (b) un-ionised hydrogen sulphide in the discharge does not exceed 0.005 g/m$^3$; and
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; or
   (b) produce any conspicuous change in the colour or visual clarity; or
   (c) render fresh water unsuitable for consumption by farm animals to the extent that the concentration of \textit{E.coli} exceeds 550 per 100 ml; and
4. The discharge does not:
   (a) occur within a Community Drinking-water Protection Zone as set out in Schedule 1; or
   (b) contain any hazardous substance.

5.78 The discharge of drainage water from a drainage system into a river, lake or wetland that does not meet the conditions of Rule 5.77 is a discretionary activity.

5.79 The discharge of contaminants and water from the maintenance of artificial watercourses and associated structures into an artificial watercourse, constructed wetland or into land is a permitted activity, provided the following conditions are met:
1. The discharge is only water, sediment, and vegetative matter originating from within the banks of the artificial watercourse; and
2. If the discharge subsequently enters a river, lake or wetland, the discharge, beyond the Mixing Zone as defined in Schedule 5, does not produce:
   (a) conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or
   (b) any conspicuous change in the colour or visual clarity.

5.80 The discharge of contaminants and water from the maintenance of artificial watercourses and associated structures into an artificial watercourse, constructed wetland or into or onto land that does not meet one or more of the conditions of Rule 5.79 is a discretionary activity.

Cemeteries

5.81 The use of land for a cemetery that existed as at 5 September 2015, and any ancillary discharge of contaminants into or onto land in circumstances where a contaminant may enter water is a permitted activity.

5.82 The use of land for a new cemetery or an extension to an existing cemetery after 5 September 2015, 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 condition is met:
   1. Any new cemetery or an extension to an existing cemetery after 5 September 2015 is not located:
      (a) within 20 m of a surface waterbody or the Coastal Marine Area; and
      (b) within 50 m of a bore used for water abstraction; and
      (c) within a Community Drinking-water Protection Zone as set out in Schedule 1; and
      (d) where groundwater is less than 3 m below the ground surface; and
      (e) within the Christchurch Groundwater Protection Zone as shown on the Planning Maps; and
      (f) on a contaminated or potentially contaminated land.

5.83 The use of land for a new cemetery, or any extension to an existing cemetery after 5 September 2015, and any ancillary discharge of contaminants into or onto land in circumstances where a contaminant or water may enter water, that does not meet condition in Rule 5.82 is a discretionary activity.

Sewerage Systems

5.84 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 wastewater treatment system into or onto land, or into or onto land in circumstances where a contaminant may enter water are discretionary activities.
5.85 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 wastewater treatment system into or onto land, or into or onto land in circumstances where a contaminant may enter water within a Community Drinking-water Protection Zone as set out in Schedule 1 is a prohibited activity.

5.86 The discharge of treated sewage effluent into surface water or a wetland is a non-complying activity.

5.87 The discharge of untreated sewage onto or into land in circumstances where a contaminant may enter water or into surface water, a wetland or groundwater, as a result of a spill, overflow, or equipment failure, is a non-complying activity.

5.88 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

5.89 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.

5.90 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:
(a) in the Christchurch Groundwater Protection Zone as shown on the Planning Maps; or
(b) in a Community Drinking-water Protection Zone as set out in Schedule 1;
is a prohibited activity.

Industrial and Trade Wastes

5.91 The discharge of any liquid waste or sludge waste from an industrial or trade process, including livestock processing, excluding wastewater, 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; and
2. The discharge is at a rate not exceeding 5 mm per day; and
3. The discharge does not contain any hazardous substance; 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 facility or the Coastal Marine Area; and
   (b) within a Community Drinking-water Protection Zone as set out in Schedule 1; and
   (c) within the Christchurch Groundwater Protection Zone as shown on the Planning Maps; and
(d) onto or into land over an unconfined or semi-confined aquifer, where the land has less than 0.3 m depth of soil; and
(e) within any area or zone identified in a proposed or operative district plan for residential or commercial purposes; and
(f) within a Nutrient Allocation Zone identified as “At Risk” (Orange) or “Water Outcomes Not Met” (Red) on the Planning Maps, unless the discharge contains no nitrogen or phosphorus, or otherwise causes a limit in Schedule 8 to be exceeded; and
(g) onto or into contaminated or potentially contaminated land.

5.92 The discharge of any liquid waste or sludge waste from an industrial or trade process, including livestock processing, excluding wastewater, 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 5.91 is a discretionary activity.

Stormwater

Note: Refer also to Section 9 of this Plan for a specific rule concerning stormwater discharges within the Avon/Otakaro or Heathcote catchments that are not within an area covered by an approved stormwater management plan.

Reticulated Stormwater Systems

5.93A The discharge of stormwater or construction-phase stormwater into a reticulated stormwater system is a permitted activity, provided the following condition is met:
1. Written permission has been obtained from the owner of the reticulated stormwater system that allows entry of the stormwater into the reticulated stormwater system.

5.93 The discharge of stormwater or construction-phase stormwater from a reticulated 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 waterbody is a restricted discretionary activity, provided the following conditions are met:
1. For a discharge that existed at 11 August 2012, an application for a discharge permit is lodged prior to 30 June 2018, or at a later date as agreed between the reticulated stormwater system operator and the CRC; and
2. A stormwater management plan has been prepared to address the management of stormwater in the catchment and is lodged with the application; and
3. The discharge will not cause a limit in Schedule 8 to be exceeded.

The exercise of discretion is restricted to the following matters:
1. The quality of, compliance with and monitoring of 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
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; and
3. The concentration of contaminants and resulting actual and potential adverse environmental 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; and

4. Measures to:
   (a) reduce the volume and concentration of contaminants in the discharge; and
   (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; and
      (ii) the infiltration capacity of the soil and subsoil layers at the site; and
   (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 potential benefits of the activity to the applicant, the community and the environment; and

6. The need for measures to protect any human or animal drinking-water sources.

5.94 The discharge of stormwater or construction-phase stormwater from a reticulated 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 waterbody that does not meet the conditions of Rule 5.93 is a non complying activity.

Construction-phase stormwater not discharged from a Reticulated Stormwater System

5.94A The discharge of construction-phase stormwater, other than into or from a reticulated stormwater system, to a surface waterbody, or onto or into land in circumstances where a contaminant may enter groundwater or surface water, is a permitted activity, provided the following conditions are met:

1. The area of disturbed land from which the discharge is generated is less than:
   (a) 1000m² for any construction-phase stormwater generated as a result of work carried out in an area shown as High Soil Erosion Risk on the Planning Maps; or
   (b) two hectares in any other location; and

2. The concentration of total suspended solids in the discharge shall not exceed:
   (a) 50g/m³ where the discharge is to any spring-fed river, Banks Peninsula river, or to a lake except when the background total suspended solids in the waterbody is greater than 50g/m³ in which case the Schedule 5 visual clarity standards shall apply; or
   (b) 100g/m³ where the discharge is to any other river or to an artificial watercourse except when the background total suspended solids in the waterbody is greater than 100g/m³ in which case Schedule 5 visual clarity standards shall apply; and

3. The discharge does not result in an increase in the flow in the receiving waterbody at the point of discharge of more than 1% of a flood event with an Annual Exceedance Probability of 20% (one in five year event); and

4. The discharge is not from, into or onto contaminated or potentially contaminated land; and
5. The discharge does not contain any hazardous substance; and
6. The discharge does not occur within a Community Drinking-water Protection Zone as set out in Schedule 1.

5.94B The discharge of construction-phase stormwater, other than into or from a reticulated stormwater system, into a surface waterbody, or onto or into land in circumstances where a contaminant may enter groundwater or surface water, that does not meet one or more of the conditions of Rule 5.94A is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:
1. The actual and potential effects of the discharge on the quality of surface water, aquatic ecosystems, Ngāi Tahu cultural values; and
2. The actual and potential effects of the discharge on the quality and safety of human and animal drinking water; and
3. The actual and potential adverse environmental effects of the quantity of water to be discharged on the banks or bed of a waterbody or on its flood carrying capacity, and on the capacity of the network to convey that discharge; and
4. The potential benefits of the activity to the applicant, the community and the environment.

Stormwater not discharged from a Reticulated Stormwater System

5.95 The discharge of stormwater, other than into or from a reticulated stormwater system, into a river, lake, wetland or artificial watercourse or onto or into land in circumstances where a contaminant may enter a river, lake, wetland, or artificial watercourse is a permitted activity, provided the following conditions are met:
1. The discharge is not from, into or onto contaminated or potentially contaminated land; and
2. The discharge is not into:
   (a) a water race, as defined in Section 5 of the Local Government Act 2002; and
   (b) a wetland, unless the wetland is part of a lawfully established stormwater or wastewater treatment system; and
   (c) a waterbody that is Natural State, unless the discharge was lawfully established before 1 November 2013; and
3. The discharge does not result in an increase in the flow in the receiving waterbody at the point of discharge of more than 1% of a flood event with an Annual Exceedance Probability of 20% (one in five year event); and
4. The discharge meets the water quality standards in Schedule 5 after reasonable mixing with the receiving waters, in accordance with Schedule 5; and
5. 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 except when the background total suspended solids in the waterbody is greater than 50 g/m³ in which case the Schedule 5 visual clarity standards shall apply; or
(b) 100 g/m³ where the discharge is to any other river or to an artificial watercourse except when the background total suspended solids in the waterbody is greater than 100 g/m³ in which case the Schedule 5 visual clarity standards shall apply; and

6. The discharge to water is not within a Community Drinking-water Protection Zone as set out in Schedule 1; and

7. The discharge does not occur where there is an available reticulated stormwater system.

5.96 The discharge of stormwater, other than into or from a reticulated stormwater system, onto or into land where contaminants may enter groundwater is a permitted activity, provided the following conditions are met:

1. The discharge is not from, into or onto contaminated or potentially contaminated land; and

2. The discharge:
   (a) does not cause stormwater from up to and including a 24 hour duration 10% Annual Exceedance Probability rainfall event to enter any other property; and
   (b) does not result in the ponding of stormwater on the ground for more than 48 hours, unless the pond is part of the stormwater treatment system; and
   (c) is located at least 1 m above the seasonal high water table that can be reasonably inferred for the site at the time the discharge system is constructed; and
   (d) is only from land used for residential, educational or rural activities; and
   (e) does not occur where there is an available reticulated stormwater system, except where incidental to a discharge to that system; and
   (f) is not from a system that collects and discharges stormwater from more than five sites.

5.97 The discharge of stormwater, other than from a reticulated stormwater system, into a river, lake, wetland or artificial watercourse or onto or into land in circumstances where a contaminant may enter groundwater that does not meet one or more of the conditions of Rule 5.95 or Rule 5.96; and the discharge of stormwater or construction-phase stormwater into a reticulated stormwater system that does not meet the condition of Rule 5.93A; is a discretionary activity except that within the boundaries of Christchurch City it is a non-complying activity.

Other Minor Contaminant Discharges

5.98 Any discharge of water or contaminants onto or into land in circumstances where a contaminant may enter groundwater 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; and

2. The discharge is not directly into groundwater; and

3. The discharge does not result in any overflow or runoff into any surface water body or onto neighbouring site; and
4. The discharge does not, in groundwater, render fresh water unsuitable or unpalatable for consumption by animals or humans; and

5. The discharge does not contain any hazardous substance, hazardous waste or added radioactive isotope; and

6. The discharge does not occur when the soil moisture exceeds field capacity; and

7. The discharge is not from or into contaminated or potentially contaminated land; and

8. The discharge is not within
   (a) 50 m of a bore used for water abstraction; or
   (b) within a Community Drinking-water Protection Zone as set out in Schedule 1; and

9. Where the discharge is from the use of live ammunition associated with military training under the Defence Act 1990, conditions 1 to 8 do not apply.

5.99 Any discharge of water or contaminants into surface water or onto or into land in circumstances where it may enter surface water 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 or into contaminated or potentially contaminated land; and

2. The discharge is not into a Natural State water body; and

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/m$^3$ where the discharge is to any Spring-fed river, Banks Peninsula river, or to a lake; or
   (b) 100 g/m$^3$ where the discharge is to any other river or to an artificial watercourse; and

5. The discharge does not result in more than a 20% change in the rate of flow of the receiving surface water body; and

6. The discharge does not contain any hazardous substance, hazardous waste or added radioactive isotope.

5.100 Any discharge that is not permitted by either Rule 5.98 or 5.99 and is not classified by any other rule in this Plan is a discretionary activity.

Water tracers

5.101 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; or
   (b) Baker’s yeast (Saccharomyces cerevisia); or
   (c) Bacteriophages; or
   (d) Rhodamine WT and Fluorescein fluorescent dyes; or
   (e) sodium chloride or potassium chloride; or
   (f) potassium bromide; and

2. The discharge is not within a Community Drinking-water Protection Zone as set out in Schedule 1.
The CRC reserves control over the following matters:
1. Duration and timing of the discharge; and
2. The volume and concentration of the tracer; and
3. The actual and potential environmental effects on water quality, aquatic ecosystems and sources of human or animal 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.

5.102 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 5.101 is a discretionary activity.

Bores

Notes:
1. In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy pre 1900 archaeological sites is subject to the archaeological authority process under the Heritage New Zealand Poutere Taonga Act 2014. An archaeological authority is required from Heritage New Zealand to modify, damage or destroy any archaeological site, whether recorded or not in the New Zealand Heritage List/Rārangi Kōrero website.
2. The “use” of a bore or gallery does not authorise the taking or use of water.
3. The construction and maintenance of a bore should be carried out in accordance with the Environmental Standard for Drilling Soil and Rock (NZS 4411.)

5.103 The use of land, including the bed of a lake or river, for the installation, maintenance and use of a water infiltration gallery (other than a water infiltration gallery used for emergency firefighting purposes), or a bore, other than a bore for hydrological or geotechnical investigation or monitoring, 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 Programme; and
2. The screening of any bore or gallery may only be into a single aquifer or water-permeable zone. During bore installation reasonable and practicable methods shall be used to minimise the risk of interconnection or movement of groundwater between aquifers or water-permeable zones; and
3. Any bore constructed to abstract groundwater is screened to below any minimum water level for the groundwater zone as set out in Section 6 to 15 of this Plan; and
4. 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; and
(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

5. 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; and

6. The bore or gallery is not installed on contaminated or potentially contaminated land.

5.104 The use of land, including the bed of a lake or river, for the installation, maintenance and use of a bore for hydrological or geotechnical investigation or monitoring is a permitted activity, provided the following conditions are met:

1. 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; and
   (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

2. Information on bore location, bore installation (including bore logs and intended uses) is submitted to the CRC:
   (a) within 20 working days of drilling the bore; or
   (b) for hydrological or geotechnical investigations, within 40 working days of carrying out the geotechnical investigation.

5.104A The use of land, including the excavating of the bed of a lake or river, for the use of a water infiltration gallery for emergency rural fire fighting and the decommissioning of that water infiltration gallery is a permitted activity, provided the following conditions are met:

1. The gallery is less than 5 metres square in area; and
2. The gallery is decommissioned once the fire is formally declared out; and
3. The gallery is rehabilitated by filling with clean material; and
4. CRC is advised within 20 days of excavating the gallery.

5.105 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 5.103, or 5.104 or 5.104A is a discretionary activity.

5.106 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.
5.107 The use of land, including the bed of a lake or river, for the decommissioning of a 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; and
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; and
3. The bore has not been used for hydrocarbon exploration or production.

5.108 The use of land, including the bed of a lake or river, for the decommissioning of a bore that does not meet one or more of the conditions in Rule 5.107 is a discretionary activity.

5.109 The taking of water from groundwater for the purposes of carrying out bore development or pumping tests, or incidental to hydrological or geotechnical investigations, 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; and
2. Any bore development or pumping test is carried out in accordance with Schedule 11; and
3. Bore development or pumping tests shall cease upon notification that the pumping may be preventing access to any:
   (a) community drinking water supply; or
   (b) private drinking water supply, except any supply located on the property the test is being carried out on; 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; and
5. The concentration of total suspended solids in the discharge does not exceed:
   (a) 50g/m³ to any spring-fed river, Banks Peninsula river, or to a lake; or
   (b) 100g/m³ where the discharge is to any other river or to an artificial watercourse.

5.110 The taking of water from groundwater for the purposes of carrying out bore development or pumping tests, or incidental to geotechnical investigations, and the associated use and discharge of that water that does not meet one or more of the conditions in Rule 5.109 is a restricted discretionary activity.

The exercise of discretion is restricted to the following matter:
1. The actual and potential adverse environmental effects of not meeting the condition or conditions of Rule 5.109.

Small and Community Water Takes

Interpretation
1. The rules relating to small and community water takes and construction, including road maintenance (Rules 5.111 to 5.120) 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 rules, then it is considered under the rules for other water takes (Rules 5.121 to 5.132). Specific rules in Sections 6 to 15 can still over-ride these Section 5 rules.

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

3. Takes for drinking water supplies will also need to comply with other requirements including The National Environmental Standard for Sources of Human Drinking Water Regulations 2007 and the Health (Drinking Water) Amendment Act 2007.

5.111 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 and use per property:
   (a) is less than the following rates and volumes:

<table>
<thead>
<tr>
<th>Water body</th>
<th>7DMALF</th>
<th>Rate</th>
<th>Volume per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>River</td>
<td>&lt; 100 L/s</td>
<td>0.5 L/s</td>
<td>2 m³</td>
</tr>
<tr>
<td>River</td>
<td>100 – 500 L/s</td>
<td>2 L/s</td>
<td>10 m³</td>
</tr>
<tr>
<td>River</td>
<td>500 L/s – 10 m³/s</td>
<td>5 L/s</td>
<td>20 m³</td>
</tr>
<tr>
<td>River</td>
<td>10 – 20 m³/s</td>
<td>5 L/s</td>
<td>50 m³</td>
</tr>
<tr>
<td>River</td>
<td>&gt;20 m³/s</td>
<td>5 L/s</td>
<td>100 m³</td>
</tr>
<tr>
<td>Artificial</td>
<td>N/A</td>
<td>5 L/s</td>
<td>10 m³</td>
</tr>
<tr>
<td>watercourse</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lakes</td>
<td>N/A</td>
<td>5 L/s</td>
<td>50 m³</td>
</tr>
</tbody>
</table>

   or

   (b) 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; and

3. Where the take is from a waterbody with a minimum flow that is set in Sections 6 to 15, the take 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 waterbody, as estimated by the Canterbury Regional Council; and

4. The take is not from any river or part of a river that is subject to a Water Conservation Order; and

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 of water into the water race, canal or storage facility; and

6. The take is not from the Avon River/Ōtākaro or Heathcote River or a wetland or a hāpua.
5.112 The take and use of water from any river or part of a river, or lake, that is subject to a Water Conservation Order is a restricted discretionary activity, provided the following conditions are met:

1. The take is at a rate of less than 5 L/s and a maximum volume of 100 m³ per day; and
2. Fish are prevented from entering the water intake as set out in Schedule 2; and
3. The take 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 waterbody as set out in the relevant Water Conservation Order; and
4. The take and use of water complies with, in combination with all other takes, the environmental flow and allocation limits as set out in the relevant Water Conservation Order.

The exercise of discretion is restricted to the following matter:

1. The provisions of the relevant Water Conservation Order.

5.113 The taking and using of less than 5 L/s and 10 m³ per property 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 property boundary, or any surface waterbody.

5.114 The taking and using of less than 5 L/s and more than 10 m³ but less than 100 m³ per property per day of groundwater on a property more than 20ha in area is a permitted activity, provided the following conditions are complied with:

1. The bore is located more than 20 m from the property boundary or any surface waterbody.

5.114A The taking and using of:

(a) less than 5L/s and 10m³ per property per day of groundwater that does not meet the condition of Rule 5.113; or
(b) less than 5L/s and more than 10m³ but less than 100m³ per property per day of groundwater on a property more than 20ha in area that does not meet the condition of Rule 5.114; is a restricted discretionary activity.

The exercise of discretion is restricted to the following matter:

1. The actual and potential adverse environmental effects of not meeting the condition of Rule 5.113 or Rule 5.114.

5.115 The taking and using of water for a community water supply from groundwater or surface water is a restricted discretionary activity, provided the following conditions are complied with:

1. A Water Supply Strategy prepared in accordance with Schedule 25 is submitted with the resource consent application; and
2. Where the application seeks water for purposes other than drinking water, the application shall identify which components are not related to drinking water, and which of those are existing or new activities.
The exercise of discretion is restricted to the following matters:
1. The reasonable demand for water, taking into account the size of the community, 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; and
2. The effectiveness and efficiency of the distribution network; and
3. The quality and adequacy of, compliance with and auditing of the Water Supply Strategy; and
4. The actual and potential adverse effects on other water takes, including reliability of supply; and
4A. The effect on the environmental flow and allocation limits within the relevant sub-region Sections 6 to 15; and
5. The potential benefits of the activity to the applicant, the community and the environment; and
6. Compliance with any relevant Water Conservation Order; and
7. The need for and extent of the proposed Community Drinking-water Protection Zone; and
8. The matters set out in Schedule 1 and the way in which those matters are responded to in the proposal for which consent is sought and the assessment of effects forming part of the application; and
9. The actual and potential effects on any user of land located within the proposed Community Drinking-water Protection Zone.

Water for Construction Maintenance

5.116 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; and
2. The take and use is for no longer than 2 months; and
3. The take does not at any time exceed 10% of the flow at the point of take; and
4. Where the take is from a water body with a minimum flow set in Section 6 to 15, the take or diversion ceases when the flow is at or below the minimum flow, as estimated by the Canterbury Regional Council; and
5. The take is not from a wetland; and
6. Fish are prevented from entering the water intake as set out in Schedule 2; and
7. 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 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.

5.117 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 exercise of discretion is restricted to the following matters:

1. The provisions of the relevant Water Conservation Order; and
2. The location of the take, the actual and potential adverse environmental effects on the immediate vicinity and the need for any restriction to prevent the flow from reducing to zero in this vicinity.

5.118 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 5.116 is a discretionary activity.

Site Dewatering - Groundwater

Interpretation

The taking of water for dewatering for carrying out excavation, construction, maintenance or repair including for infrastructure or geotechnical testing is not required to comply with the take Rules 5.123 to 5.132. Specific rules in Section 6 to 15 can however over-ride these Section 5 rules.

5.119 The taking of water from groundwater for the purpose of dewatering for carrying out excavation, construction, maintenance 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 the take shall not last for a period exceeding 6 months; and
2. The take or discharge is not from, into, or onto contaminated or potentially contaminated land; and
3. The take does not lower the groundwater level more than 8 m below the ground level of the site or cause subsidence of any other site; and
4. The take does not have a moderate, high or direct stream depletion effect on a surface waterbody, determined in accordance with Schedule 9, unless the abstracted groundwater is being discharged to the surface waterbody to which it is hydraulically connected; and
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; and
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; and
7. The concentration of total suspended solids in any discharge to a surface waterbody does not exceed:
   (a) 50 g/m³ where the discharge is to any Spring-fed river, Banks Peninsula river, or to a lake or wetland; or
   (b) 100 g/m³ where the discharge is to any other river or to an artificial watercourse; and
8. The discharge after reasonable mixing with the receiving waterbody meets the visual clarity standards in Schedule 5; and
9. The point of discharge is not within a Community Drinking-water Protection Zone as set out in Schedule 1.

5.120 The taking of water from groundwater for the purpose of de-watering for carrying out excavation, construction, maintenance and geotechnical testing and the associated use and discharge of that water that does not meet one or more of the conditions in Rule 5.119 is a restricted discretionary activity.

*The exercise of discretion is restricted to the following matters:*
1. The actual and potential environmental effects of not meeting the condition or conditions of Rule 5.119.

**Water from Canals or Water Storage**

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

5.122 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 5.121 is a discretionary activity.

**Take and Use Surface Water**

*Notes:*
1. See sub-region Sections 6 to 15 of this Plan or existing catchment-based Regional Plans for location-specific requirements.
2. Activities that qualify as permitted under Rules 5.111, 5.115, 5.116 and 5.121 are not Prohibited Activities under Rule 5.125

5.123 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 is the replacement of a lawfully established activity affected by the provisions of section 124-124C of the RMA, the take, in addition to all existing consented takes, does not result in any exceedance of any environmental flow or allocation limit or rate of take or seasonal or annual volume limits set in Sections 6 to 15 for that surface waterbody; and
2. Unless the proposed take is the replacement of a lawfully established take affected by the provisions of section 124-124C of the RMA, if no limits are set in Sections 6 to 15 for that surface waterbody, the take, both singularly and in addition to all existing consented takes meets a flow regime with a minimum flow of 50% of the 7-day mean annual low flow (7DMALF) as estimated by the CRC and an allocation limit of 20% of the 7DMALF; and
3. Unless it is associated with the artificial opening of a hāpua, lagoon or coastal lake to the sea, the take is not from a wetland, hāpua or a high naturalness river or high naturalness lake that is listed in Sections 6 to 15.

*The exercise of discretion is restricted to the following matters:*

1A. The rate, volume and timing of the take; and

1. The actual or potential adverse environmental 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; and

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; and

3. For water used for irrigation, the management of water allocation and resulting nutrient discharges on individual farms; and

4. The potential effects on groundwater recharge where the groundwater allocation zone is fully or over allocated as set out in Sections 6 to 15; and

5. The availability and practicality of using alternative supplies of water; and

6. The effects the take has on any other authorised takes or diversions; and

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; and

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; and

9. Whether and how fish are prevented from entering the water intake; and

10. The provisions of any relevant Water Conservation Order; and

11. The proximity and actual or potential adverse environmental effects of water use on any significant indigenous biodiversity and adjacent dry land habitats; and

12. Where the proposed take is the replacement of a lawfully established take affected by the provisions of Section 124-124C of the RMA and is from an over-allocated surface water catchment, the reduction in the rate of take and volume limits to enable reduction of the over-allocation; and

13. Where the water is to be used for irrigation, the preparation and implementation of a Farm Environment Plan in accordance with Schedule 7 that demonstrates that the water is being used efficiently.

5.124 The taking and use of surface water from a river or lake that does not meet one or more of the conditions of Rule 5.123, excluding condition 1, is a non-complying activity.

5.125 The taking and use of surface water from a river or lake that does not meet condition 1 in Rule 5.123 is a prohibited activity.

5.125A Despite other discharge rules in this Plan, the discharge of contaminants or water onto or into land in circumstances where contaminants may enter surface water, or into surface water, associated with an activity that is part of the Waitaki Power Scheme, for which a resource consent is held and is the replacement of authorisation for a lawfully
established existing discharge affected by the provisions of sections 124 - 124C of the RMA, and the discharge is
(a) generation and spill water from dams and power houses; or
(b) from water storage; or
(c) into or from canals; or
(d) to protect the structural integrity of dams, power houses, canals and appurtenant structures;

is a controlled activity, provided the following condition is met:
1. The discharge does not cause the relevant water quality limits set out in Section 15B of this Plan, or in the absence of any water quality limits in Sections 15B the limits set out in Schedule 8 of this Plan, to be exceeded.

**The CRC reserves control over the following matters:**
1. Measures that will ensure any relevant water quality outcomes (freshwater objectives, limits or targets) set out in Section 15B of this Plan, or in the absence of any water quality outcomes in Sections 15B the outcomes in Tables 1a and 1b of this Plan, are met; and
2. Any mitigation measures to address adverse effects of the discharge on the environment, including effects on Ngāi Tahu culture, traditions, customary uses and relationships with land and water; and
3. Collection, recording, monitoring and provision of information concerning the exercise of consent.

**Notification**
Pursuant to section 95A of the RMA an application for resource consent under this rule will be processed and considered with public notification.

**5.125B** The discharge of contaminants or water onto or into land in circumstances where contaminants may enter surface water, or into surface water, associated with an activity that is part of the Waitaki Power Scheme, for which a resource consent is held and is the replacement of authorisation for a lawfully established existing discharge affected by the provisions of sections 124 - 124C of the RMA, and the discharge is:
(a) generation and spill water from dams and power houses; or
(b) from water storage; or
(c) into or from canals; or
(d) to protect the structural integrity of dams, power houses, canals and appurtenant structures;

that does not meet the condition of Rule 5.125A is a discretionary activity.

**5.125C** Despite any other rule or rules in this Plan:
(a) the take and use of water; and
(b) the discharge of water to water; and
(c) the discharge of contaminants into surface water; and
(d) the damming and diversion of water; and
(e) the use and maintenance of a structure in the bed of a surface water body; and
(f) the excavation and disturbance of the bed of lakes and rivers, and any associated clearance of vegetation in the bed of lakes and rivers associated with the use and maintenance of structures;

for hydroelectricity generation associated with either the Coleridge, Highbank, Montalto or Opuha scheme, or by a principal water supplier into or from the Rangitata Diversion Race that had been lawfully established prior to 1 November 2016 and is the replacement of an existing resource consent or resource consents affected by the provisions of sections 124 - 124C of the RMA is a controlled activity, provided the following conditions are met:

1. The application(s) for resource consent replaces an existing resource consent(s); and
2. There is no increase in the rate or volume of take or diversion; and
3. There is no increase in the volume of discharge or change to the type or characteristics of contaminants discharged; and
4. There is no change in the footprint of the infrastructure in the bed of a surface water body.

The CRC reserves control over the following matters:

1. The volume and rate of water taken or diverted, and the timing of the take or diversion; and
2. Intake velocities and measures to avoid or mitigate fish entrainment; and
3. The range, or rate of change of levels or flows of water; and
4. Water levels; and
5. Compliance with environmental flow and allocation limits in Sections 6 to 15 of this Plan; and
6. Any adverse effects on:
   (a) Ngāi Tahu cultural values
   (b) Lawfully established users of the surface water body
   (c) Downstream sediment transport processes
   (d) Aquatic ecosystems, areas of significant indigenous vegetation, and significant habitats of indigenous fauna
   (e) Outstanding natural features and landscapes and natural character
   (f) Amenity values (including recreation) and existing public access to and along the margins of rivers and lakes; and
7. Fish passage; and
8. Measures to manage land stability and erosion; and
9. Measures to control flooding; and
10. Measures to improve technical efficiency in water use; and
11. Where contaminants are discharged to water or land where they may enter surface water, contaminant concentrations and loading rates; and
12. Measures required to comply with s107(1) of the RMA; and
13. Maintenance and contingency requirements; and

Notification
Pursuant to section 95A of the RMA an application for resource consent under this rule will be processed and considered with public notification.

5.125D Despite any other rule or rules in this Plan:
(a) the take and use of water; and
(b) the discharge of water to water; and
(c) the discharge of contaminants into surface water; and
(d) the damming and diversion of water; and
(e) the use and maintenance of a structure in the bed of a lake, river or stream; and
(f) the excavation and disturbance of the bed of lakes and rivers, and any associated clearance of vegetation in the bed of lakes and rivers associated with the use and maintenance of structures;
for hydro electricity generation associated with either the Coleridge, Highbank, Montalto or Opuha scheme, or by a principal water supplier into or from the Rangitata Diversion Race and that had been lawfully established prior to 1 November 2016 and that does not meet one or more of the conditions of Rule 5.125C is a discretionary activity.

5.126 The non-consumptive 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 waterbody in Sections 6 to 15 or the lake or river is subject to a Water Conservation Order; and
2. The taking of water and subsequent discharge does not result in any exceedance of any limit set for that waterbody in Sections 6 to 15 or flow and allocation regime set out in the Water Conservation Order; and
3. Other than for the replacement of existing consents for activities provided for under Policy 4.51, the maximum distance from the point of take to the point of discharge is not more than 250 m; and
4. Other than for the replacement of existing consents for activities provided for under Policy 4.51, the take is not from a wetland, hāpua or a high naturalness lake or river that is listed in Sections 6 to 15.

The exercise of discretion is restricted to the following matters:
1A. The rate, volume and timing of the take; and
1. Measures that will ensure any limits are not affected; and
2. Whether the amount of water to be taken is reasonable for the intended use; and
3. The effects the take has on any other authorised takes; and
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; and
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; and
6. Whether and how fish are prevented from entering the water intake and/or discharge structure; and
7. The actual or potential adverse environmental effects on aquatic ecosystems, in-stream habitat, wetlands, dryland habitats, sites of significance to Ngāi Tahu, amenity and recreational values in the area of the river subject to the take; and
8. The actual or potential adverse environmental effects of both the take and any subsequent discharge on water quality.

5.127 The non-consumptive 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 5.126 is a non-complying activity.

Take and Use Groundwater

Notes:
1. See sub-region Sections 6 to 15 of this Plan or existing catchment-based Regional Plans for location-specific requirements
2. Activities that qualify as permitted under Rules 5.113, 5.114, 5.115 and 5.119 are not Prohibited Activities under Rule 5.130

5.128 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; and
2. Unless the proposed take is the replacement of a lawfully established take affected by the provisions of section 124-124C of the RMA, for stream depleting groundwater takes, the take, in addition to all existing consented surface water takes, does not result in any exceedance of any environmental flow and allocation limits set in Sections 6 to 15 for that surface waterbody in accordance with Schedule 9; and
3. Unless the proposed take is the replacement of a lawfully established take affected by the provisions of section 124-124C of the RMA, the seasonal or annual volume of the groundwater take, in addition to all existing consented takes, as determined by the method in Schedule 13 does not exceed the groundwater allocation limits for the relevant Groundwater Allocation Zone in Sections 6 to 15; and
4. Unless the proposed take is the replacement of a lawfully established take affected by the provisions of sections 124-124C of the RMA, the bore interference effects on any groundwater abstraction other than an abstraction by or on behalf of the applicant are acceptable, as determined in accordance with Schedule 12.

The exercise of discretion is restricted to the following matters:
1A. The rate, volume and timing of the take; and
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; and
2. The availability and practicality of using alternative supplies of water; and
3. The maximum rate of take, including the capacity of the bore or bore field to achieve that rate, and the rate required to service any irrigation system; and
4. The actual or potential adverse environmental 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 to 15 is fully or over allocated; and

5. Unless the proposed take is the replacement of a lawfully established take affected by the provisions of sections 124-124C of the RMA, the actual or potential adverse environmental effects the take has on any other authorised takes, including interference effects as set out in Schedule 12; and

6. For stream depleting groundwater takes, the matters of discretion under Rule 5.123; and

7. Whether salt-water intrusion into the aquifer or landward movement of the salt water/fresh water interface is prevented; and

8. The proximity and actual or potential adverse environmental effects of water use to any significant indigenous biodiversity and adjacent dryland habitats; and

9. The protection of groundwater sources, including the prevention of backflow of water or contaminants; and

10. Where the proposed take is the replacement of a lawfully established take affected by the provisions of Section 124-124C of the RMA and is from an over-allocated groundwater allocation zone, the reduction in the rate of take and volume limits to enable reduction of the over-allocation; and

11. Where the water is being used for irrigation, the preparation and implementation of a Farm Environment Plan in accordance with Schedule 7 that demonstrates that the water is being used efficiently.

5.129 The taking and use of groundwater that does not meet one or more of conditions 1 or 4 in Rule 5.128 is a non-complying activity.

5.130 The taking and use of groundwater that does not meet one or more of conditions 2 or 3 in Rule 5.128 is a prohibited activity.

5.131 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 met:
   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; and
   2. The use of the water is for domestic purposes; and
   3. No contaminants, other than water of the same or different temperature, enter the groundwater.

5.132 The non-consumptive taking and use of ground water and associated discharge to groundwater that does not meet one or more of the conditions in Rule 5.131 is a discretionary activity.

Transfer of Water Permits

5.133 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; and
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; and
3. In the case of surface water, the point of take remains within the same catchment and the take complies with the limits set in Sections 6 to 15; and
4. In the case of groundwater:
   (a) the point of take is within the same groundwater allocation zone; and
   (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 catchment; and
      (ii) the take complies with the limits set in Sections 6 to 15 or the limits in any relevant catchment specific plan listed in Section 2.8 of this Plan; and
      (iii) the stream depletion effect is no greater in the transferred location than in the original location.

The exercise of discretion is restricted 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; and
2. The appropriateness of existing conditions, including conditions on minimum flow, seasonal or annual volume and other restrictions to mitigate effects; and
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; and
4. The efficiency of the exercise of the resource consent; and
5. The reduction in the rate of take in times of low flow; and
6. The method of preventing fish from entering any water intake; and
7. In a catchment where the surface water and/or groundwater allocation limits set out in Rule 5.123 and Rule 5.128 or Sections 6 to 15 are exceeded, any reduction in the rate or volume of take that may be required to assist with the phasing out of that exceedance.

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.

5.134 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 5.133 is a non-complying activity.
Structures

Notes:
1. For all activities in or near waterways, refer also to requirements and restrictions under the Canterbury Regional Council Flood Protection and Drainage Bylaw 2013

2. In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy pre 1900 archaeological sites is subject to the archaeological authority process under the Heritage New Zealand Poutere Taonga Act 2014. An archaeological authority is required from Heritage New Zealand to modify, damage or destroy any archaeological site, whether recorded or not in the New Zealand Heritage List/Rārangi Kōrero website.

3. The installation of a bore in the bed of a lake or river is controlled in Rule 5.103

5.135 The placement, alteration, reconstruction, or removal of pipes, ducts, cables or wires over the bed of a lake or river, whether attached to a structure or not, and associated support structures is a permitted activity, provided the following conditions are met:
   1. The pipes, ducts, cables or wires and associated support structures do not prevent access to or over the bed or to lawfully established structures or defences against water; and
   2. The activity is not undertaken in, on, or over the bed of any river or lake listed as a high naturalness waterbody in Sections 6 to 15, unless the pipes, ducts, cables or wires are attached to an existing structure; and
   3. The pipes, ducts, cables or wires and associated support structures do not obstruct or alter navigation of the lake or river or reduce the flood carrying capacity of the waterway.

5.136 The drilling, tunnelling, or disturbance in or under the bed of a lake or river and the installation, or removal of pipes, ducts, cables or wires 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 to 15 or in a salmon spawning site listed in Schedule 17, or in any inanga spawning habitat during the inanga spawning season of 1 March to 1 June inclusive; and
   2. The activity does not involve the deposition of any substance, other than bed material, on the bed of a lake or river; and
   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, or 150 m from any water level recorder, or 50 m from any defence against water, 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 owner; and
   4. Within 30 days of the completion of the activity the bed of the lake or river is returned to its original contour; and
   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.
5.137 The installation, alteration, extension, or removal of bridges and culverts, and the consequential deposition of substances on, in or under the bed of a lake or river, the excavation or other 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 material 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; and

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, or 150 m from any water level recorder, or 50 m from any defence against water, 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 owner; and

3. The works do not occur in flowing water; and

4. The activity is not undertaken in a salmon spawning site listed in Schedule 17, or in any inanga spawning habitat during the inanga spawning season of 1 March to 1 June inclusive; and

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; and
   (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; and

6. For any permanent culvert at the time of its installation:
   (a) the maximum length is 25 m; and
   (b) the maximum width of the river bed at the point of the crossing is 5 m; and
   (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; and
   (d) the culvert provides a 5% Annual Exceedance Probability flood flow capacity without increasing upstream water levels; and
   (e) the location is not within any urban area or settlement; and

7. For any temporary culvert:
   (a) the maximum width of the river bed at the point of the crossing is 5 m; and
   (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; and
   (c) the culvert is not placed in a waterbody managed for flood control or drainage purposes unless written approval is obtained from the authority responsible for the waterbody; and
   (d) the culvert is not in place for more than four weeks; unless it is within a plantation forest in which case the culvert shall be in place for no more than 3 months; and

8. For any bridge:
   (a) there are no piers within the bed; and
(b) the bridge and the approaches are designed so that a 5% Annual Exceedance Probability flood event does not cause any increase in upstream water levels; and
(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; and
9. The works or structures do not prevent any existing fish passage.

5.138 The installation, maintenance, use and removal of defences against water, including the associated deposition of substances on, in or under the bed of a lake or river and excavation associated diversions and discharges 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 water; and
2. Other than for the use of defences against water the activity is not in, on, or under the bed of any river or lake listed as a high naturalness waterbody in Sections 6 to 15 or within a salmon spawning site listed in Schedule 17, or in any inanga spawning habitat during the inanga spawning season of 1 March to 1 June inclusive; and
3. The activity is undertaken by or on behalf of a local authority or a network utility operator in accordance with a plan that has been certified by the CRC as being in accordance with the Canterbury Regional Council Code of Practice for Defences Against Water and Drainage Schemes (June 2015); and
4. The works or structures do not prevent any existing fish passage.

5.139 The use and maintenance of structures, excluding dams, on, in or under the bed of a lake or river are permitted activities, provided the following conditions are met:
1. The structures have been lawfully established; and
2. Any material 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 with the surrounding natural environment, is not contaminated with any hazardous substance; and
3. Any upgrading or minor alteration does not increase the footprint, height, or external envelope of the structure; and
4. Except for bridges, culverts, pipes, ducts, cables and wires and their associated support structures the maintenance of that part of the structure within the bed of a lake or river is not undertaken within a salmon spawning site listed in Schedule 17, or in any inanga spawning habitat during the inanga spawning season of 1 March to 1 June inclusive.

5.140 Despite any other rule in this Plan, temporary structures and diversions associated with undertaking activities in Rules 5.135 to 5.139, military training activities, or artificial watercourses are permitted activities, provided the following conditions are met:
1. The activity is not undertaken in a salmon spawning site listed in Schedule 17, or in any inanga spawning habitat during the inanga spawning season of 1 March to 1 June inclusive; and
2. The temporary structure and diversion is in place for not more than 4 weeks in any 12 month period.
5.140A The installation, alteration, extension or removal of any equipment or device on or in the bed of a lake or river, that is for the purpose of monitoring, measuring, or taking samples from any surface waterbody, and the associated excavation, disturbance and consequential deposition of substances on, in or under the bed of a lake or river is a permitted activity, provided the following conditions are met:
1. The equipment or device and any associated support structures do not prevent any existing fish passage; and
2. Any material deposited in, on, under or over the bed in order to maintain the structure does not contain any hazardous substance and is of inert materials of colour and material type that blends with the surrounding natural environment; and
3. Any alteration, removal or extension of any monitoring, measuring or sampling equipment does not occur unless a written permission has been obtained from the owner of that equipment; and
4. Upon completion of the associated excavation, disturbance and consequential deposition of substances on, in or under the bed, any area of the bed of a lake or river that has been disturbed is returned, as near as practicable, to its original state; and
5. The installation, alteration, extension or removal of any equipment or device is not undertaken in any inanga spawning habitat during the inanga spawning season of 1 March to 1 June inclusive.

5.141 Temporary discharges to water or to land in circumstances where a contaminant may enter water associated with undertaking activities in Rules 5.135 to 5.140 or in relation to artificial watercourses are permitted activities, provided the following conditions are met:
1. The discharge is only of sediment, organic material and water originating from within the bed of the lake or river; and
2. The discharge is not undertaken in a salmon spawning site listed in Schedule 17, or in any inanga spawning habitat during the inanga spawning season of 1 March to 1 June inclusive; and
3. The discharge is not for more than ten hours in any 24-hour period, and not more than 40 hours in total in any calendar month.

5.141A The placement, installation, erection, reconstruction, alteration or removal of any structure, excluding dams, on, in or under the bed of a lake or river, and including any associated excavation, disturbance, diversion and discharge in the bed of a lake or river that does not comply with Rules 5.135 to 5.141 is a discretionary activity.

5.141B Where not classified by any other Rule in this plan, the diversion or discharge of water and contaminants 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.

Floodwaters

5.142 The diversion of floodwaters within a property and the discharge of floodwaters from a property to a river, lake or artificial watercourse to alleviate surface flooding is a permitted activity, provided the following conditions are met:
1. The discharge:
   (a) does not cause or exacerbate erosion of the property or the bed or banks of the
       receiving surface waterbody; and
   (b) does not result in the destabilisation of any lawfully established structure.

5.142A The diversion or discharge of floodwaters from a property to a river, lake or artificial
watercourse to alleviate surface flooding that does not meet the condition of Rule 5.142,
is a discretionary activity.

[Rules 5.143 and 5.144 have been deleted: Plan Change 4]

Refuelling in Lake and Riverbeds

Note: In addition to the provisions of this Plan and any relevant district plan, any activity which
may modify, damage or destroy pre 1900 archaeological sites is subject to the
archaeological authority process under the Heritage New Zealand Poutere Taonga Act
2014. An archaeological authority is required from Heritage New Zealand to modify,
damage or destroy any archaeological site, whether recorded or not in the New Zealand
Heritage List/Rārangi Kōrero website

5.145 The use of land for 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; and
2. All refuelling and bulk deliveries are directly supervised by the equipment operator;
   and
3. Refuelling occurs on an impermeable surface, or drip trays are used, or other effective
   spill-containment equipment is installed.

5.146 The use of land for 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 5.145 is a discretionary activity.

Fine Sediment Removal from Rivers

5.146A Despite any other rule in this Plan, the disturbance of the bed and banks of a river to
remove fine sediment less than 2 mm in diameter for the sole purpose of habitat
restoration, and the consequential damming, take, use and discharge of water in
circumstances where contaminants may enter water is a restricted discretionary activity
provided the following conditions are met:
1. The application for resource consent includes a management plan that describes:
   (a) the location, timing and method of sediment removal, and the methods for
       management and disposal of that material; and
   (b) the location of any sensitive ecological habitats and species located within, and
       250 m downstream of, the works area; and
   (c) an assessment of the environmental effects of the activity, including those effects
       that may occur downstream, and a description of how those adverse effects will
       be avoided or mitigated; and
2. The activity does not take place on any listed archaeological site; and
3. Any damming of the waterbody will not occur for more than 12 hours at any one location; and
4. The activity is undertaken more than 50 m from any lawfully established surface water intake, or closer where written permission has been obtained from the owner of the surface water intake structure.

**The exercise of discretion is restricted to the following matters:**

1. The content of the management plan including the comprehensiveness of the adverse effects identified and the adequacy of the proposed methods to mitigate any potential adverse effects; and
2. The location, method and timing of sediment removal with respect to the life stage and habitat of sensitive ecological communities including fish and invertebrates; and
3. The potential adverse effects of the activity on downstream water quality, flows, drinking water supplies, surface water takes, bank stability, and significant habitats of indigenous fauna and flora; and
4. The effect of the activity on the reliability of any authorised surface water take; and
5. The volume and rate at which water is abstracted and discharged to the river; and
6. The adverse effects of the activity on sites used for freshwater bathing as set out in Schedule 6; and
7. Any adverse effects on mahinga kai, wāhi tapu or wāhi taonga identified in any iwi management plan; and
8. The benefits of the activity to the applicant, community and the environment; and
9. Methods to restrict the activity when the river is at or below the minimum flow for that waterbody as set out in Sections 6 to 15 of this Plan, or any relevant catchment specific plan listed in Section 2.8 of this Plan; and
10. Methods to restrict the maximum instantaneous rate of water abstraction to a rate not exceeding 50 percent of the flow in the river at the site being remediated.

5.146B The disturbance of the bed and banks of a river to remove fine sediment less than 2 mm in diameter for the sole purpose of habitat restoration, and the consequential damming, take, use and discharge of water in circumstances where contaminants may enter water that does not meet one or more of conditions of Rule 5.146A is a discretionary activity.

**Gravel from Lake and Riverbeds**

**Notes:**

1. For all activities in or near waterways, refer also to requirements and restrictions under the Canterbury Regional Council Flood Protection and Drainage Bylaw 2013.

2. In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy pre 1900 archaeological sites is subject to the archaeological authority process under the Heritage New Zealand Poutere Taonga Act 2014. An archaeological authority is required from Heritage New Zealand to modify, damage or destroy any archaeological site, whether recorded or not in the New Zealand Heritage List/Rārangi Kōrero website.
5.147 Sections 124A to 124C of the Resource Management Act 1991 do not apply to resource consents to extract gravel from the bed of a lake or river in Canterbury.

5.148 The extraction of gravel from the bed of a lake or river 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 waterbody in Sections 6 to 15; and
2. No part of the activity occurs within flowing water; and
3. The activity does not include the deposition of any substance, other than bed material, on the bed; and
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 m$^3$ in any 12 consecutive months; or
   (b) between 1 February and 31 August, in the beds listed in Schedule 14, does not exceed 5 m$^3$ per month and not more than 10 m$^3$ 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 m$^3$ per month and not more than 20 m$^3$ in any 12 consecutive months period; and
5. Any excavated material (other than surplus or reject material) is removed from the bed within 10 days of the material being excavated; and
6. Unless undertaken by owner of the structure, or written permission from the owner of the structure has been obtained, 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 7.5 m from any existing defences against water; and
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; and
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 a salmon spawning site listed in Schedule 17, or in any inanga spawning habitat during the period of 1 January to 1 June inclusive; and
10. Excavation shall not occur within 100 metres of birds which are nesting or rearing their young in the bed of the river.

5.149 The extraction of gravel from the bed of a lake or river, including the ancillary deposition of substances on the bed and excavation or other disturbance of the bed that does not meet condition 4, 5, or 8 of Rule 5.148, is a permitted activity, provided the following condition is met:

1. The extraction of gravel is undertaken by or on behalf of the CRC in conformance with the current version of the Canterbury Regional Gravel Management Strategy prepared to give effect to Policy 10.3.4 of the Canterbury Regional Policy Statement.
5.150 The extraction of gravel from the bed of a lake or river including the ancillary deposition of substances on the bed and excavation or other disturbance of the bed that does not meet condition 1, 2, 3, 6, 7, 9 or 10 of Rule 5.148 or condition 1 of Rule 5.149 is a discretionary activity.

5.151 Notwithstanding any other rule in this Plan, temporary structures and diversions associated with undertaking activities in Rules 5.147 to 5.150 or in relation to artificial watercourses are permitted activities, provided the following conditions are met:
1. The activity is not undertaken in a salmon spawning site listed in Schedule 17 or in any inanga spawning habitat during the inanga spawning season of 1 March to 1 June inclusive; and
2. The temporary structure and diversion is in place for not more than 4 weeks in any 12 month period.

5.152 Temporary discharges to water or to land in circumstances where a contaminant may enter water associated with undertaking activities in Rules 5.147 to 5.150 or in relation to artificial watercourses are permitted activities, provided the following conditions are met:
1. The discharge is only of sediment, organic material and water originating from within the bed of the lake or river; and
2. The discharge is not undertaken in a salmon spawning site listed in Schedule 17, or in any inanga spawning habitat during the inanga spawning season of 1 March to 1 June inclusive; and
3. The discharge is not for more than ten hours in any 24-hour period, and not more than 40 hours in total in any calendar month.

5.153 Where not classified by any other Rule in this Plan, the diversion or discharge of water and contaminants as a result of the extraction of gravel from the bed of a lake or river including the deposition of substances on the bed and excavation or other disturbance of the bed of a lake or river, is a discretionary activity.

Dams and Damming

Note: In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy pre 1900 archaeological sites is subject to the archaeological authority process under the Heritage New Zealand Poutere Taonga Act 2014. An archaeological authority is required from Heritage New Zealand to modify, damage or destroy any archaeological site, whether recorded or not in the New Zealand Heritage List/Rārangi Kōrero website.

5.154 The damming of water in the bed of a river and the constructing, using, altering, maintaining and operating of dam structures within the bed of a river, including any damming or 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 or impounding of water outside the bed of a river or natural lake:
   (a) the volume of water impounded is less than 20,000 m³; or
(b) the maximum depth of water impounded above ground level (measured as the maximum vertical distance between the crest of the dam and the ground level immediately adjacent to dam) is less than 4 m; and

(c) if the volume of water impounded is greater than 1,000 m$^3$, the design and construction of the dam is certified by a Recognised Engineer; and

(d) the land is not contaminated or potentially contaminated.

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 m$^3$; and

(b) the maximum depth of water is less than 3 m; and

(c) the dam does not impound the full flow of the river; and

(d) any existing passage of fish is not impeded; and

(e) the damming of water does not cause water flow to fail to meet any limits in Sections 6 to 15 or fall below the minimum flow for the surface waterbody if the waterbody is subject to a minimum flow as set out in Sections 6 to 15; and

(f) the dam is not located in a river listed as a high naturalness river in Sections 6 to 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.

5.155 The damming of water in the bed of a river and the constructing, using, altering, maintaining and operating of dam structures within the bed of a river, including any damming of water outside the bed of a river or natural lake that does not meet one or more of the conditions of Rule 5.154 is a discretionary activity, provided the following conditions are met:

1. The damming of water does not result in downstream river flows less than any minimum flow limit set in Sections 6-15 or, where applicable, the default rules on minimum flow limits in Rule 5.123(2); and

2. Any new dam is not located in a river listed as a high naturalness waterbody in Sections 6 to 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.

5.156 The damming of water in the bed of a river, and the constructing, using, altering, maintaining and operating of structures within the bed of a river that does not comply with one or more of the conditions in Rule 5.155 is a non-complying activity.

5.157 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 of a natural lake (as described in Policy 4.45 of this Plan) being altered is a non-complying activity.

5.158 The use and maintenance of a lawfully established dam that existed on 1 November 2013 is a permitted activity.

Wetlands
5.159 The enhancing, restoring or creating of a wetland, including the associated taking, use, damming 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, damming or diversion of water is at a maximum rate of 5 L/s and 100 m³ per day; and
2. The taking of water is non-consumptive, is discharged back into the same waterbody and complies with any limits in Sections 6 to 15 of this Plan or any other Regional Plan for the relevant waterbody; and
3. The taking of water does not prevent water being taken by any domestic or stock water supply.

5.160 The enhancing, restoring or creating of a wetland that does not comply with one or more of the conditions in Rule 5.159 is a discretionary activity.

5.161 Reducing the area of a wetland for the operation, maintenance or repair of existing infrastructure or construction of new infrastructure for transport, electricity or water distribution or reticulation, including vegetation clearance and earthworks 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 exercise of discretion is restricted to the following matters:*

1. The practicality of avoiding the wetland, including alternative routes or methods; and
2. The ecological significance of the wetland, and the actual and potential adverse effects on the significant values of the wetland; and
3. Any off-setting of any actual and potential adverse effects; and
4. The magnitude and proportion of reduction in area of the wetland.

5.162 Reducing the area of a wetland by the taking, use, damming or diversion (including draining) of water or other means, including vegetation clearance, cultivation, burning or earthworks, except as provided for in Rule 5.161 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 Regional Council Flood Protection and Drainage Bylaw 2013

5.163 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 and any associated discharge of sediment or sediment-laden water in circumstances where sediment may enter surface water 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; and
2. No vegetation used for flood control or bank stabilisation is disturbed, removed, damaged or destroyed without the prior written permission of the person or agency responsible for maintaining that vegetation for flood control purposes; and
3. No woody vegetation is disposed of in, on, over or under the bed of a lake or river other than for in situ decomposition of sprayed weeds that were growing in, on, over or under the bed; and

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; and

5. Introduction or planting of vegetation in, on, or under the bed of any river or lake listed as a high naturalness waterbody in Section 6 to 15 is only of indigenous plant species that naturally occur in the catchment; and

6. Vegetation clearance in, on, or under the bed of any river or lake listed as a high naturalness waterbody in Section 6 to 15 is only of:
   (a) non-indigenous species; or
   (b) indigenous species that form the understorey of plantation forest that is being harvested and a minimum 5 m set back from the river or lake is provided upon replanting (if replanting occurs); and

7. Vegetation clearance does not occur in a salmon spawning site listed in Schedule 17, or in any inanga spawning habitat during the period of 1 January to 1 June inclusive; and

8. In a flood control rating district scheme area, the introduction or planting of any plant, has the prior written permission of the person or agency responsible for maintaining that vegetation for flood control purposes; and

9. From 5 September 2015, and within the bed of the Clarence, Waiau, Hurunui, Waimakariri, Rakaia, Rangitata, and Waitaki rivers, vegetation clearance or cultivation does not result in a reduction in the area or diversity of existing riverbed vegetation, unless the activity is for the purpose of the operation, maintenance, upgrade or repair of infrastructure; and

10. Except in relation to recovery activities, or the establishment, maintenance, repair or upgrading of network utilities and fencing, the concentration of total suspended solids in the discharge does not exceed:
   (a) 50g/m³ where the discharge is to any Spring-fed river, Banks Peninsula River, or to a lake, except when the background total suspended solids in the waterbody is greater than 50g/m³ in which case the Schedule 5 visual clarity standards shall apply; or
   (b) 100g/m³ where the discharge is to any other river or to an artificial watercourse except when the background total suspended solids in the waterbody is greater than 100g/m³ in which case the Schedule 5 visual clarity standards shall apply.

5.164 The introduction or planting of any plant, or the removal or disturbance of existing vegetation in, on or under the bed of a lake or river and any associated discharge of sediment or sediment-laden water that does not comply with one or more of the conditions of Rule 5.163, excluding conditions 2, 4, and 9, is a restricted discretionary activity.

The exercise of discretion is restricted to the following matter:

1. The actual and potential adverse environmental effects of not meeting the condition or conditions of Rule 5.163.
5.165 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 and any associated discharge of sediment or sediment-laden water that does not comply with conditions 2 or 9 of Rule 5.163 is a non-complying activity.

5.166 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 and any associated discharge of sediment or sediment-laden water that does not comply with condition 4 of Rule 5.163 is a prohibited activity.

Earthworks and Vegetation Clearance in Riparian Areas

Notes:

1. In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy pre 1900 archaeological sites is subject to the archaeological authority process under the Heritage New Zealand Poutere Taonga Act 2014. An archaeological authority is required from Heritage New Zealand to modify, damage or destroy any archaeological site, whether recorded or not in the New Zealand Heritage List/Rārangi Kōrero website.

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

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

(a) 10 m of the bed of a lake or river or a wetland boundary in Hill and High Country land or land shown as High Soil Erosion Risk on the Planning Maps; or

(b) 5 m of the bed of a lake or river or a wetland boundary in all other land not shown as High Soil Erosion Risk on the Planning Maps or defined as Hill and High Country on the Planning Maps;

and any associated discharge of sediment or sediment-laden water in circumstances where sediment may enter surface water is a permitted activity, provided the following conditions are met:

1. Except in relation to recovery activities, the area of bare ground resulting from vegetation clearance:
   (a) does not exceed 10% of the area within the relevant riparian margin at any time; or
   (b) is undertaken in accordance with a Farm Environment Plan that has been prepared in accordance with Schedule 7 Part A; or
   (c) for plantation forestry activities is undertaken in accordance with the Environmental Code of Practice for Plantation Forestry (ECOP) 2007; and

2. Except in relation to recovery activities, the vegetation clearance is not on land above 900 m above sea level; and

3. Except in relation to recovery activities, or the establishment, maintenance or repair of network utilities and fencing, the concentration of total suspended solids in the discharge does not exceed:
Canterbury Land and Water Regional Plan

(a) 50g/m³ where the discharge is to any Spring-fed river, Banks Peninsula River, or to a lake, except when the background total suspended solids in the waterbody is greater than 50g/m³ in which case the Schedule 5 visual clarity standards shall apply; or

(b) 100g/m³ where the discharge is to any other river or to an artificial watercourse except when the background total suspended solids in the waterbody is greater than 100g/m³ in which case the Schedule 5 visual clarity standards shall apply; and

4. The felling of trees, or any part of a tree, is away from any lake, river or wetland, except where it is not practicable to do so to ensure human safety, and no logs or tree trunks are dragged through or across the bed of a lake or a permanently flowing river, or a wetland; and

5. The vegetation clearance does not occur adjacent to a salmon spawning site listed in Schedule 17, or in any inanga spawning habitat during the period of 1 January to 1 June inclusive; and

6. The vegetation is not flood or erosion control vegetation; and

7. From 5 September 2015, and in the riparian margins of the Clarence, Waiau, Hurunui, Waimakariri, Rakaia, Rangitata, and the Waitaki rivers, vegetation clearance or cultivation does not result in a reduction in the area or diversity of existing riparian vegetation, unless the works have been authorised by a land use consent granted by the relevant territorial authority and conditions 1 to 6 above are also met, or the activity is for the purpose of the installation, operation, maintenance, upgrade or repair of infrastructure.

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

(a) 10 m of the bed of a lake or river or a wetland boundary in Hill and High Country land or land shown as High Soil Erosion Risk on the Planning Maps; or

(b) 5 m of the bed of a lake or river or a wetland boundary in all other land not shown as High Soil Erosion Risk on the Planning Maps or defined as Hill and High Country;

and any associated discharge of sediment or sediment-laden water in circumstances where sediment may enter surface water is a permitted activity, provided the following conditions are met:

1. Except in relation to recovery activities, or the establishment, maintenance or repair of network utilities and fencing, the extent of earthworks within the riparian margin:
   (a) 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 10m³ on land shown as High Soil Erosion Risk on the Planning Maps; or
   (b) is undertaken in accordance with a Farm Environment Plan that has been prepared in accordance with Schedule 7 Part A; or
   (c) for plantation forestry activities is undertaken in accordance with the Environmental Code of Practice for Plantation Forestry (ECOP) 2007 and the NZ Forest Road Engineering Manual (2012); and
2. Except in relation to recovery activities or the establishment, maintenance or repair of network utilities and fencing, the concentration of total suspended solids in the discharge does not exceed:
   (a) 50g/m³ where the discharge is to any Spring-fed river, Banks Peninsula River, or to a lake, except when the background total suspended solids in the waterbody is greater than 50g/m³ in which case the Schedule 5 visual clarity standards shall apply; or
   (b) 100g/m³ where the discharge is to any other river or to an artificial watercourse except when the background total suspended solids in the waterbody is greater than 100g/m³ in which case the Schedule 5 visual clarity standards shall apply; and

3. The activity does not occur adjacent to a salmon spawning area listed in Schedule 17, or in any inanga spawning habitat during the period of 1 January to 1 June inclusive; and

4. Except in relation to recovery activities or the establishment, maintenance or repair of network utilities and fencing, any earthworks or cultivation is not within 5 m of any flood control structure; and

5. From 5 September 2015, and in the riparian margins of Clarence, Waiau, Hurunui, Waimakariri, Rakaia, Rangitata, and Waitaki rivers, earthworks or cultivation do not result in a reduction in the area or diversity of existing riparian vegetation, unless the works have been authorised by a land use consent granted by the relevant territorial authority and conditions 1 to 4 above are met, or the activity is for the purpose of the installation, operation, maintenance, upgrade or repair of infrastructure.

5.169 Vegetation clearance and earthworks outside the bed of a river or lake or adjacent to a wetland boundary but within:
   (a) 10 m of the bed of a lake or river or a wetland boundary in Hill and High Country land and land shown as High Soil Erosion Risk on the Planning Maps; or
   (b) 5 m of the bed of a lake or river or a wetland boundary in all other land not shown as High Soil Erosion Risk on the Planning Maps or defined as Hill and High Country; and any associated discharge of sediment or sediment-laden water in circumstances where sediment may enter surface water that does not comply with one or more of the conditions in Rules 5.167 or 5.168 is a restricted discretionary activity.

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

Vegetation Clearance and Earthworks in Erosion-prone Areas

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

5.170 Within the area shown as High Soil Erosion Risk on the Planning Maps and outside any riparian margin, the use of land (excluding any works for which a building consent has been obtained from the relevant local authority) for
(a) Cultivation or spraying of slopes less than 25 degrees; or
(b) Cultivation or spraying on slopes greater than 25 degrees; provided that, the total area sprayed or cultivated is less than 200 m²; or
(c) Vegetation clearance of species (including by spraying) listed in the Biosecurity NZ Register of Unwanted Organisms or the Canterbury Pest Management Strategy; or
(d) Hand clearance and spot spraying of vegetation; or
(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; or
(f) Earthworks within a production forest undertaken in accordance with NZ Forest Road Engineering Manual (2012); or
(g) Maintenance of existing firebreaks, roads and tracks and, during a fire emergency, construction of new firebreaks and tracks; or
(ga) Construction of fences; or
(h) Construction of walking tracks no more than 1.5 m wide; or
(i) Maintenance of existing transport networks; or
(j) Earthworks and vegetation clearance associated with the establishment, repair or maintenance of pipelines, electricity lines, telecommunication lines and radio communication structures and fences; or
(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 0.5 m;
and any associated discharge of sediment or sediment-laden water in circumstances where sediment may enter surface water 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; and
2. Any cultivation is across the contour of the land; and
3. When firebreaks, roads, or tracks are constructed or maintained the maximum depth of cut or fill is 0.5 m; 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 except when the background total suspended solids in the waterbody is greater than 50 g/m³ in which case the Schedule 5 visual clarity standards shall apply; or

(b) 100 g/m³ where the discharge is to any other river or to an artificial watercourse except when the background total suspended solids in the waterbody is greater than 100 g/m³ in which case the Schedule 5 visual clarity standards shall apply.

5.171 Within the area shown as High Soil Erosion Risk on the Planning Maps and outside any riparian margin, the use of land for vegetation clearance, cultivation and earthworks that does not comply with one or more of the conditions in Rule 5.170, or vegetation clearance, cultivation or earthwork activities not listed in Rule 5.170(a) to (k), and any associated discharge of sediment or sediment-laden water in circumstances where sediment may enter surface water is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:
1. The actual and potential adverse environmental effects on soil quality or slope stability; and
2. The actual and potential adverse environmental effects on the quality of water in rivers, lakes, artificial watercourses or wetlands; and
3. The actual and potential adverse environmental effects on areas of natural character, outstanding natural features or landscapes, areas of significant indigenous vegetation, indigenous biodiversity and significant habitats of indigenous fauna, mahinga kai areas or sites of importance to Tangata Whenua; and
4. The actual and potential adverse environmental effects on a wetland or the banks or bed of a waterbody or on its flood carrying capacity; and
5. The actual and potential adverse environmental effects on transport networks, neighbouring properties or structures; and
6. In addition, for forest harvesting, the harvesting method, location of haulage and log handling areas, access tracks, and sediment control.

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 bylaws, and to any regional rules made under the RMA to control the discharge of contaminants to air.

2. A consent granted under the RMA does not exempt 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.

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

5.172 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 5 m of the bed of a river where the wetted bed is more than 2 m wide or lake or a wetland boundary where the wetland is more than 0.5 hectares in area; and  
2. Within an area to be burnt:
   (a) the extent of bare ground is less than 20%; and  
   (b) the slope is less than 35 degrees; and  
   (c) the land is less than 900 m above mean sea level; and  
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; and  
4. The same area of land has not had the vegetation burnt within the preceding ten years; and  
5. The burning is carried out between 1 June and 31 October; and  
6. The burnt area is either:
   (a) spelled from grazing for a minimum of 6 months following burning; or  
   (b) sown with pasture seed within 6 months of burning; or  
   (c) planted with trees within one year of burning.

5.173 Within the Hill and High Country, the use of land for the burning of vegetation that is not a permitted activity under Rule 5.172 is a controlled activity, provided the following conditions are met:

1. The burning is not carried out between 15 December and 1 March; and  
2. Burning does not occur within 5 m of the bed of a river where the wetted bed is more than 2 m wide, lake or wetland boundary where the wetland is more than 0.5 hectares in area; and  
3. Within an area to be burnt:
   (a) the extent of bare ground is less than 20%; and  
   (b) the slope is less than 35 degrees; 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.

5.174 Within the Hill and High Country, the use of land for the burning of vegetation that is not provided for as a permitted activity under Rule 5.172 or as a controlled activity under Rule 5.173 is a discretionary activity.

Earthworks over Aquifers

Note: In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy pre 1900 archaeological sites is subject to the archaeological authority process under the Heritage New Zealand Poutere Taonga Act 2014. An archaeological authority is required from Heritage New Zealand to modify, damage or destroy any archaeological site, whether recorded or not in the New Zealand Heritage List/Rārangi Kōrero website.

5.175 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 m$^3$ of material is excavated, the excavation does not occur within 50 m of any surface waterbody; or

2. Over an unconfined or semi-confined aquifer:
   (a) the volume of material excavated is less than 100 m$^3$; or
   (b) the volume of material excavated is more than 100 m$^3$ 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 50 m of any surface waterbody.

5.176 The use of land to excavate material that does not comply with one or more of the conditions of Rule 5.175 is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:

1. The actual and potential adverse environmental effects on the quality of water in aquifers, rivers, lakes, wetlands; and
2. Any need for remediation or long-term treatment of the excavation; and
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; and
4. The management of any exposed groundwater.
5.177 The use of land for the deposition of more than 50 m$^3$ 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 table is less than 5 m below the deepest point in the excavation is a controlled activity, provided the following conditions are met:

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

The CRC reserves control over the following matters:

1. The potential for adverse effects on the quality of water in aquifers, rivers, lakes, wetlands and mitigation measures; and

5.178 The use of land for the deposition of more than 50 m$^3$ 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 table is less than 5 m below the deepest point in the excavation that does not comply with the conditions of Rule 5.177 is a restricted discretionary activity.

The CRC will restrict its discretion to the following matters:

1. The potential for adverse effects on the quality of water in aquifers, rivers, lakes, wetlands and mitigation measures; and
2. The proportion of any material other than cleanfill and its potential to cause contamination; and

Hazardous Substances

5.179 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 substance is approved under the Hazardous Substances and New Organisms Act 1996 and the storage and use of the substance is in accordance with all conditions of the approval; and
2. The container(s) are not located within:
   (a) 20 m of a surface water body or a bore; or
   (b) a Community Drinking-water Protection Zone as set out in Schedule 1.

5.180 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 5.179 is a restricted discretionary activity.

The exercise of discretion is restricted 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 actual or potential adverse environmental effects 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; and
2. Measures to prevent or contain spills or leaks, including site layout and drainage, waste management, emergency management and leak detection; and
3. Maintenance and monitoring of the storage or use system including containment measures.

5.181 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. The substance is approved under the Hazardous Substances and New Organisms Act 1996 and the storage and use of the substance is in accordance with all conditions of the approval; and
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; and
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 outside of any area or zone identified in a proposed or operative district plan for residential, commercial or industrial purposes and is unstaffed, and repaired or maintained if any defects are found that may compromise the containment of the hazardous substance; and
4. For hazardous substances stored or held in a container located in or under land:
   (a) if there has been any physical loss of product, then the Canterbury Regional Council shall be notified within 24 hours of confirmation of the loss; and
   (b) records of stock reconciliations over the past 12 months 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; and
5. For substances stored within a Community Drinking-water Protection Zone 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; and
   (b) spill kits to contain or absorb a spilled substance are located with the storage facility and use areas at all times 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, the substances shall not be stored within:
   (a) 20 m of a surface waterbody or a bore used for water abstraction; or
   (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.

5.182 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 5.181 is a discretionary activity.

5.183 The use of land for the decommissioning of a container located on, 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.

5.184 The use of land for the decommissioning of a container located on, in or under land that is or has been used to store a hazardous substance that does not meet the condition in Rule 5.183 is a discretionary activity.

Contaminated Land

5.185 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 be undertaken in accordance with Contaminated Land Management Guidelines No. 5: Site Investigation and Analysis of Soils (Ministry for the Environment, 2011) and reported on in accordance with the Contaminated Land Management Guidelines No. 1: Reporting on Contaminated Sites in New Zealand, (Ministry for the Environment, 2011); and
   2. The person or organisation initiating the site investigation provides a copy of the report of the site investigation to the CRC within two months of the completion of the investigation.
5.186 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 5.185 is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:
1. Measures to avoid the dispersal of the substances or associated contaminants onto or into land, and into groundwater, surface water, supplies of drinking-water and aquatic ecosystems; and
2. The actual and potential adverse environmental effects on the current or future use of the land; and
3. The methodology of the investigation and the associated reporting.

5.187 The passive discharge of contaminants from contaminated land onto or into land in circumstances where those contaminants may enter water is a permitted activity, provided the following conditions are met:
1. There has been a site investigation report provided to the CRC in accordance with Rule 5.185; and
2. Either the site investigation report or water quality sampling demonstrates that the discharge does not result in the concentration of contaminants in groundwater:
   (a) at the property boundary;
   (b) at any existing groundwater bore (excluding any monitoring bore located on the property);
   (c) within a Community Drinking-water Protection Zone; exceeding the limits applicable to groundwater set out in Schedule 8; and
3. Either the site investigation report or water quality sampling demonstrates that the discharge does not result in the concentration of contaminants in groundwater at any point where groundwater exits to surface water, exceeding the receiving water quality standards in Schedule 5 for 90% of species; and
4. At any point where the groundwater exits to surface water the discharge does not produce any:
   (a) conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or
   (b) conspicuous change in the colour or visual clarity.

5.188 The passive discharge of contaminants from contaminated land onto or into land in circumstances where those contaminants may enter water that does not meet one or more of the conditions in Rule 5.187 is a discretionary activity.
Section 6 Kaikoura

The area covered by this section aligns closely with the Kaikoura Zone boundary under the CWMS, and is in two parts – one of which covers the headwaters of the Clarence River (including Lake Tennyson) to the confluence of the Acheron River. The other area aligns closely with the Kaikoura District Council boundary and extends from just north of the Conway River mouth up to the Kekerengu River.

Kaikoura Sub-region

6.1 Other Regional Plans that apply to the Kaikoura Sub-region

Nil.

6.2 Water Conservation Orders that apply to the Kaikoura Sub-region

Nil.

6.3 Fresh water Outcomes

See Objectives in Section 3, Policies 4.1, 4.2, 4.3 and 4.4.
6.4  Policies

The following policies apply in the Kaikoura sub-region, in addition to those set out in Section 4 of this Plan.

6.4.1  When the available flow is less than the size of the sum of the minimum flow and the allocation limit as set out in Table 2 below, takes shall be reduced on a pro rata basis, unless an alternative reduction regime which achieves the same outcome is agreed by the water user group and Regional Council so that individuals can have access to water for longer periods during restrictions.

6.4.2  The stream depletion cut-off limit (i.e. the stream depletion effect to which a groundwater take must be reduced to be exempt from any minimum flow restrictions or be counted within an allocation limit) for groundwater takes with a high or moderate degree of hydraulic connection (refer to Schedule 9) to the Luke, Middle, Lyell and Ewelme catchments listed in Table 2 below, shall be 1 L/s.

6.4.3  For all rivers and streams listed in Table 2, except for the Upper Kahutara catchment A block (1 May – 30 Sep), no new water permits, or increases in the maximum rate of take or annual volume for existing permits, for the taking or diversion of:
   (a) surface water;
   (b) groundwater that is determined as having a direct degree of hydraulic connection, as per Schedule 9; or
   (c) groundwater that is determined as having a high or moderate degree of hydraulic connection (as per Schedule 9), where the stream depletion effect is:
      (i) greater than 1 L/s in the case of Luke, Middle, Lyell and Ewelme catchments listed in Table 2 below; or
      (ii) greater than 5 L/s in the case of Hapuku, Kowhai and Kahutara catchments listed in Table 2 below;
shall be granted, unless use of the water is non-consumptive and the water that is taken or diverted is discharged back into the river near to the point of take.

6.5  Rules

The following rules apply in the Kaikoura sub-region, in addition to those set out in Section 5 of this Plan.

6.5.1  The damming of the mainstem of the Clarence River is a prohibited activity.
6.6 **Allocation Limits**

6.6.1 **Environmental Flow and Allocation Limits**

The following flow and allocation limits are to be applied when reading policies in Section 4,5 and 9

**Table 2: Kaikoura Streams Environmental Flow and Allocation Limits**

<table>
<thead>
<tr>
<th>River or stream (see Planning Maps)</th>
<th>Location of recorder site, or site where flow is measured</th>
<th>Min flow for A permits (L/s)</th>
<th>Allocation limit for A permits (L/s)</th>
<th>Minimum flow for B permits (L/s)</th>
<th>Allocation limit for B permits (L/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hapuku River</td>
<td>State Highway 1</td>
<td>670</td>
<td>206</td>
<td>950</td>
<td>100 (1 Oct – 30 Apr)</td>
</tr>
<tr>
<td>Luke Stream</td>
<td>At the property with the legal description Section 329 Kaikoura Suburban DIST</td>
<td>15</td>
<td>68</td>
<td>110</td>
<td>25 (1 Oct – 30 Apr)</td>
</tr>
<tr>
<td>Middle Creek</td>
<td>State Highway 1</td>
<td>165 (1 Sep – 31 May)</td>
<td>95 (1 Oct – 30 Apr)</td>
<td>475</td>
<td>50 (1 Oct - 30 Apr)</td>
</tr>
<tr>
<td>Lyell Creek/ Waikawau mainstem</td>
<td>Recorder site downstream of the confluence with Warrens Creek</td>
<td>300 (1 Oct – 30 Apr), 420 (1 May – 30 Sep)</td>
<td>58 (1 Oct – 30 Apr) 0 (1 May – 30 Sep)</td>
<td>1095</td>
<td>100 (Maximum of 50 from Warrens Creek/Lyell mainstem, 25 from Left Branch and 25 from Right Branch) for the period 1 Oct – 30 Apr)</td>
</tr>
<tr>
<td>River or stream (see Planning Maps)</td>
<td>Location of recorder site, or site where flow is measured</td>
<td>Min flow for A permits (L/s)</td>
<td>Allocation limit for A permits (L/s)</td>
<td>Minimum flow for B permits (L/s)</td>
<td>Allocation limit for B permits (L/s)</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>----------------------------------------------------------</td>
<td>-----------------------------</td>
<td>-----------------------------------</td>
<td>---------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Lyell Creek Right Branch</td>
<td>At the Mt Fyffe Road Bridge</td>
<td>25 on the Right Branch. In addition, abstractions from the Right Branch shall be subject to restrictions relating to the Lyell Creek mainstem at the recorder.</td>
<td>41 (1 Oct – 30 Apr) 5 (1 May – 30 Sep)</td>
<td>See Lyell Creek mainstem</td>
<td>See Lyell Creek mainstem</td>
</tr>
<tr>
<td>Lyell Creek Left Branch</td>
<td>At the property with the legal description Lot 2 DP 377996</td>
<td>45 on the Left Branch. In addition, abstractions from the Left Branch shall be subject to restrictions relating to the Lyell Creek mainstem at the recorder.</td>
<td>20 (1 Oct – 30 Apr) 6 (1 May – 30 Sep)</td>
<td>See Lyell Creek mainstem</td>
<td>See Lyell Creek mainstem</td>
</tr>
<tr>
<td>Warrens Creek</td>
<td>Rorrisons Road Bridge</td>
<td>180 (1 May – 30 Sep), 110 (1 Oct – 30 Apr) In addition, abstractions from Warrens Creek shall be subject to restrictions relating to the Lyell Creek mainstem at the recorder.</td>
<td>117 (1 Oct – 30 Apr) 14 (1 May 30-Sep)</td>
<td>See Lyell Creek mainstem</td>
<td>See Lyell Creek mainstem</td>
</tr>
<tr>
<td>Kowhai River mainstem</td>
<td>At the gorge</td>
<td>690</td>
<td>119</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Kowhai River tributaries</td>
<td>Tributary minimum flows remain as per individual consent conditions.</td>
<td>124</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>River or stream (see Planning Maps)</td>
<td>Location of recorder site, or site where flow is measured</td>
<td>Min flow for A permits (L/s)</td>
<td>Allocation limit for A permits (L/s)</td>
<td>Minimum flow for B permits (L/s)</td>
<td>Allocation limit for B permits (L/s)</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>----------------------------------------------------------</td>
<td>----------------------------</td>
<td>-----------------------------------</td>
<td>---------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Ewelme Stream (Stoney Creek)</td>
<td>Quarry Road</td>
<td>55</td>
<td>96</td>
<td>205</td>
<td>25 (1 Oct – 30 Apr)</td>
</tr>
<tr>
<td>Upper Kahutara River</td>
<td>Blunts Road</td>
<td>80 (1 Oct – 30 Apr), 370 (1 May – 30 Sep)</td>
<td>15 (1 Oct – 30 Apr)</td>
<td>370</td>
<td>50 (1 Oct – 30 Apr)</td>
</tr>
<tr>
<td>Un-named tributary of the Kahutara</td>
<td>At the property with the legal description Lot 4 DP426919</td>
<td>40</td>
<td>52 (1 Oct – 30 Apr) 30 (1 May – 30 Sep)</td>
<td>95</td>
<td>25 (1 Oct – 30 Apr)</td>
</tr>
</tbody>
</table>

For all other areas see Rule 5.123.
6.6.2 Groundwater Allocation limits

The following groundwater allocation limits are to be applied when reading relevant policies and rules in Sections 4, 5 and 6.

Table 3: Kaikoura Groundwater Limits

<table>
<thead>
<tr>
<th>Zone (see Planning Maps)</th>
<th>Allocation Limit (mil m3/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaikoura - Kowhai</td>
<td>10.1</td>
</tr>
<tr>
<td>Kaikoura – Mt Fyffe</td>
<td>19.2</td>
</tr>
</tbody>
</table>

For all other areas see Rule 5.128

6.6.3 Catchment Nutrient Load Limits and Allowances

Nil. See Rules 5.41 to 5.64.

6.7 High Naturalness Water Bodies

The following are to be applied when reading relevant policies and rules in Sections 4 and 5.

<table>
<thead>
<tr>
<th>Main River/Lake (see Planning Maps)</th>
<th>Location and/or Topo 50 Map Reference</th>
<th>Outstanding and Significant Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarence River and tributaries</td>
<td>From the mouth of the Clarence River (at or about BT28:770-308) to the headwaters (where this lies within the Canterbury region)</td>
<td>High degree of naturalness, upper catchment to Acheron confluence. Outstanding natural features and landscapes, upper catchment through to Dart Stream. Habitat of threatened/endangered indigenous birds and fish. High habitat value for brown trout, Lake Tennyson and above. High habitat value for brown trout and chinook salmon from Lake Tennyson to Acheron confluence. High visual amenity value and high sight seeing and trout angling value, upper catchment to Acheron confluence. Outstanding wild and scenic values from the confluence with the Acheron River to the sea including the Gates of Clarence, Middle Clarence and Sawtooth Gorges</td>
</tr>
<tr>
<td>Main River/Lake (see Planning Maps)</td>
<td>Location and/or Topo 50 Map Reference</td>
<td>Outstanding and Significant Characteristics</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>--------------------------------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Spawning areas for brown trout and Chinook salmon upstream of the Acheron River confluence, including both the mainstem of the Clarence River for salmon and the upper tributaries including the Styx, Leaderdale, and various unnamed tributaries for brown trout.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Rotoiti BT27:489-059</td>
<td>Habitat of threatened/endangered indigenous birds (SSWI).</td>
<td></td>
</tr>
<tr>
<td>Lake Rotorua BT27:479-050</td>
<td>Habitat of threatened/endangered indigenous birds.</td>
<td></td>
</tr>
</tbody>
</table>
Kaikoura Streams Environmental Flow and Allocation Limits

- Allocation Regime Boundary
- Allocation Regime Zones
- Canterbury Regional Boundary
- State Highways
- Roads

Kaikoura Streams Environmental Flow and Allocation Limits
Land and Water Regional Plan
Section 7 Hurunui - Waiau

The area covered by this section is generally contiguous with the Hurunui District Council boundary and the Hurunui-Waiau Zone boundary under the CWMS.

There are four main rivers in the zone, all of which are braided, and they are the Waipara, Hurunui, Waiau and Conway. All of these rivers have highly valued hapua (coastal lagoons), that are important for cultural values, ecosystem health, river birds and fish. The zone has about 64 wetland sites, although there has been an approximately 98% loss in wetland area over time. The river catchments in the Zone contain a diverse range of habitats including braided reaches, gorges, lagoons, lakes, gravel beds, and mudflats. These rivers provide outstanding habitat for many rare birds, fish, plants and other species, as well as a wide range of recreational values. They are also a key source of the groundwater and surface water required for drinking-water and irrigation in the zone.

Hurunui-Waiau Sub Region

The Hurunui-Waiau Zone Committee has developed a vision for the Zone that accommodates the values that underpin the CWMS. In order for the Zone Committee’s vision to be realised, the following three outcomes were recognised as needing to be achieved:

- A thriving natural environment, safeguarded by protecting important ecosystems and biodiversity and by implementing appropriate environmental flow regimes.
Canterbury Land and Water Regional Plan

- Healthy water ways that provide abundant mahinga kai and recreational opportunities, with the health of hapua on the major rivers reflecting effective and responsible economic and natural resource management of the land and rivers that flow into them so that the mauri of the rivers is maintained and enhanced.

- A prospering zone, economically and socially, built largely on the basis of environmentally sustainable irrigated food and fibre production and tourism, with irrigation water supplied through an innovative combination of run-of-river takes and off-mainstem-river storage, and managed by sustainable good practice audited self-management programmes.

7.1 Other Regional Plans that apply to the Hurunui-Waiau Sub-region

7.1.1 Hurunui and Waiau River Regional Plan

The Hurunui and Waiau River Regional Plan (HWRRP) controls the taking, using, damming and diverting of surface water, stream-depleting groundwater, and groundwater within the Hurunui, Waiau and Jed River catchments; the discharge of water for non-consumptive uses; and the cumulative effects of land use on water quality. The HWRRP specifically implements a number of recommendations in the Hurunui Waiau ZIP, 2011.

The LWRP’s objectives, policies and rules do not apply to the matters controlled by the Hurunui and Waiau River Regional Plan.

It should also be noted that incidental discharges arising from the use of land for a farming activity within this sub-region are managed under Rule 7.5.1 of this Plan.

7.1.2 Waipara Catchment Environmental Flow and Water Allocation Regional Plan

The Waipara Catchment Environmental Flow and Water Allocation Regional Plan controls the taking, using, damming and diverting of surface water, stream-depleting groundwater, and groundwater within the Waipara River catchment.

This Plan’s objectives, policies and rules do not apply to the matters controlled by the Waipara Catchment Environmental Flow and Water Allocation Regional Plan.

7.2 Water Conservation Orders that apply to the Hurunui-Waiau Sub-region

Nil.
7.3 **Fresh water Outcomes**

See the HWRRP for the fresh water outcomes sought for the area and matters covered by that Plan. For all other locations within the Hurunui Waiau sub-region see Objectives in Section 3, Policies 4.1, 4.2, 4.3 and 4.4.

7.4 **Policies**

The following policies apply in the Hurunui-Waiau sub-region, in addition to those set out in Section 5 of this Plan.

7.4.1 All takes from the Motunau River share the available flow within the allocation limit in Table 4 below. When available flow is less than the size of sum of the minimum flow and the allocation limit takes shall be reduced on a pro rata basis in order to maintain the minimum flows.

7.5 **Rules**

The following rules apply in the Hurunui-Waiau sub-region, in addition to those set out in Section 5 of this Plan.

7.5.1 **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 10.1, 10.2, 11.1 or 11.1A of the Hurunui-Waiau River Regional Plan.
## 7.6 Allocation Limits

### 7.6.1 Environmental Flow and Allocation Limits

The following flow and allocation limits are to be applied when reading policies and rules in Sections 4, 5 and 7.

**Table 4: Motunau River Environmental Flow and Allocation Limits**

<table>
<thead>
<tr>
<th>River or stream (see Planning Maps)</th>
<th>Location of the site where flow is measured</th>
<th>Topo 50 Map Reference of site</th>
<th>Minimum flow for A permits (L/s)</th>
<th>Allocation limit for A permits (L/s)</th>
<th>Minimum flow for B permits (L/s)</th>
<th>Allocation limit for B permits (L/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motunau River</td>
<td>At Atkinson property immediately downstream of the pump intake</td>
<td>BV25:053-345</td>
<td>25 (Oct- Apr) 45 (May- Sep)</td>
<td>20 (Oct- Apr) 50 (May-Sep)</td>
<td>45 (Oct – Apr)</td>
<td>50 (Oct – Apr)</td>
</tr>
</tbody>
</table>

**Table 5: Conway River Environmental Flow and Allocation Limits**

<table>
<thead>
<tr>
<th>River or stream (see Planning Maps)</th>
<th>Location of the site where flow is measured</th>
<th>Topo 50 Map Reference of site</th>
<th>Minimum flow for A permits (L/s)</th>
<th>Location of the Site where residual flow is measured</th>
<th>Reduction in take (flow in L/s)</th>
<th>Allocation limit for A permits (L/s)</th>
<th>Minimum flow for B permits (L/s)</th>
<th>Allocation limit for B permits (L/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charwell River</td>
<td>Charwell Gorge</td>
<td>BT26:292-059</td>
<td>1 September - 30 April: 89 1 May – 31 August: 287</td>
<td>1 September - 30 April: Whenever the flow is between 108 L/s and 89 L/s, takes shall be reduced on a pro rata basis.</td>
<td>160</td>
<td>287</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Conway River Between confluence</td>
<td>State Highway 1 Bridge</td>
<td>BU26:342-836</td>
<td>1 September - 30 April: 700</td>
<td>1 September - 30 April:</td>
<td>85</td>
<td>2,100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>River or stream (see Planning Maps)</td>
<td>Location of the site where flow is measured</td>
<td>Topo 50 Map Reference of site</td>
<td>Minimum flow for A permits (L/s)</td>
<td>Location of the site where residual flow is measured</td>
<td>Reduction in take (flow in L/s)</td>
<td>Allocation limit for A permits (L/s)</td>
<td>Minimum flow for B permits (L/s)</td>
<td>Allocation limit for B permits (L/s)</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>---------------------------------------------</td>
<td>-------------------------------</td>
<td>---------------------------------</td>
<td>---------------------------------------------</td>
<td>---------------------------------</td>
<td>---------------------------------</td>
<td>---------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>with Charwell River and State Highway 1 Bridge</td>
<td></td>
<td></td>
<td>1 May – 31 August: 2100</td>
<td></td>
<td>All takes reduce by 25% if flow is 841 – 910 All takes reduce by 50% if flow is 771 – 840 All takes reduce by 75% if flow is 701 – 770</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conway River below State Highway 1 Bridge</td>
<td>State Highway 1 Bridge</td>
<td>BU26:342-836</td>
<td>1 September - 30 April: 700 unless a residual flow of 350 litres/sec or greater is measured. 1 May – 31 August: 2100</td>
<td>The most downstream single channel available below map reference BU27:38280-81943 and above any diversion outflow.</td>
<td>1 September - 30 April: When the available flow is less than 210 L/s, takes shall be reduced on a prorata basis in order to maintain either the minimum flow or residual flow.</td>
<td>210 for takes. No limit on the amount of water diverted, provided that it is the minimum practically necessary to facilitate takes within the allocation block</td>
<td>2,100</td>
<td>100 combined from Conway River below SH1 and Limestone Creek</td>
</tr>
<tr>
<td>River or stream (see Planning Maps)</td>
<td>Location of the site where flow is measured</td>
<td>Topo 50 Map Reference of site</td>
<td>Minimum flow for A permits (L/s)</td>
<td>Location of the site where residual flow is measured</td>
<td>Reduction in take (flow in L/s)</td>
<td>Allocation limit for A permits (L/s)</td>
<td>Minimum flow for B permits (L/s)</td>
<td>Allocation limit for B permits (L/s)</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>--------------------------------------------</td>
<td>-----------------------------</td>
<td>-------------------------------</td>
<td>-----------------------------------------------</td>
<td>-------------------------------</td>
<td>---------------------------------</td>
<td>-----------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Limestone Creek</td>
<td>State Highway 1 Bridge</td>
<td>BU26:343:836 323-836-1</td>
<td>1 September - 30 April: 700 unless a residual flow of 350 litres/sec or greater is measured. 1 May – 31 August: 2100</td>
<td>The most downstream single channel available below map reference BU27:38280-81943 and above any diversion outflow.</td>
<td>1 September - 30 April: 2100</td>
<td>25</td>
<td>2,100</td>
<td></td>
</tr>
</tbody>
</table>

Advisory Note: 5 litres per second is included in the 210 L/s allocation for future domestic water requirements for the Conway River below State Highway 1 Bridge.

See the HWRRP for the Waiau, Hurunui and Jed River catchment flow and allocation limits and the Waipara Catchment Environmental Flow and Water Allocation Regional Plan for the Waipara River flow and allocation limits. For all other areas see Rule 5.123.
7.6.2 Groundwater Allocation Limits

The following groundwater allocation limits are to be applied when reading relevant policies and rules in Sections 4 and Table 6: Hurunui-Waiau Groundwater Limits

Table 6: Hurunui-Waiau Groundwater Limits

<table>
<thead>
<tr>
<th>Zone (see Planning Maps)</th>
<th>Allocation Limit (million m³/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waipara North</td>
<td>2.9</td>
</tr>
<tr>
<td>Kowai</td>
<td>17.4</td>
</tr>
</tbody>
</table>

See the HWRRP for groundwater allocation limits managed under the HWRRP and the Waipara Catchment Environmental Flow and Water Allocation Regional Plan for the Waipara groundwater allocation limits. For all other areas see Rule 5.128.

7.6.3 Catchment Nutrient Load Limits and Allowances

See the HWRRP for the management of nutrients in the Hurunui, Waiau and Jed River catchments. For all other catchments see Rules 5.41 to 5.64.

7.7 Flow Sensitive Catchments

The following are to be applied when reading relevant policies and rules in Sections 4 and 5.

<table>
<thead>
<tr>
<th>Major Catchment (see Planning Maps)</th>
<th>Sub-catchment</th>
<th>Sensitive part of catchment</th>
<th>Monitoring site – lower boundary of catchment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blythe</td>
<td>Blythe River</td>
<td>Whole catchment</td>
<td>Nape Nape Road</td>
</tr>
<tr>
<td>Conway</td>
<td>Limestone Creek</td>
<td>Whole catchment</td>
<td>Conway confluence</td>
</tr>
<tr>
<td>Hurunui</td>
<td>Waitohi River</td>
<td>Whole catchment</td>
<td>1.6km upstream from Hurunui confluence</td>
</tr>
<tr>
<td>Waiau</td>
<td>Mason River</td>
<td>Whole catchment</td>
<td>Waiau/Lyndon Road Bridge</td>
</tr>
<tr>
<td></td>
<td>Home Stream</td>
<td>Whole catchment</td>
<td>Emu Plains Road</td>
</tr>
<tr>
<td>Waipara</td>
<td>Waipara River</td>
<td>Catchment upstream from Teviotdale</td>
<td>Teviotdale recorder site</td>
</tr>
<tr>
<td></td>
<td>Weka Stream</td>
<td>Whole catchment</td>
<td>Archers Creek Dam</td>
</tr>
</tbody>
</table>
(This page is intentionally left blank)
Section 8 Waimakariri

The area covered by this section is generally contiguous with the Waimakariri District Council boundary and the Waimakariri Zone boundary under the CWMS.

Waimakariri Sub-region

The area is characterised by the large alpine Waimakariri River alongside the hill-fed Ashley/Rakahuri River and its tributaries (including the Okuku River), and a network of spring-fed streams and lagoons in the coastal zone. Much of the land to the east of Rangiora is reclaimed swamp, which is still subject to poor drainage and occasional flooding. The north-western portion of the area is hill and high country. These hills, including Mt Oxford, Mt Richardson, and Mt Thomas, dominate the district’s western landscape.

The following sustainable water management priority outcomes have been identified by the Waimakariri Zone Committee:

- Lowland stream water quality and water quantity supports mahinga kai gathering and a diversity of aquatic life.

- The Ashley/Rakahuri River is safe for contact recreation, has improved river habitat, improved fish passage, improved customary use, and flows that support natural coastal processes.
• The zone has safe and reliable drinking water, preferably from secure sources, and the Tuahiwi community has a high quality water supply.

• The biodiversity of coastal lagoons and foothills wetlands are protected with improved biodiversity on the plains.

• Highly reliable irrigation water, to a target of 95%, is available in the Zone. Optimal water and nutrient management is common practice.

• There is improved contribution to the regional economy from the Zone.

8.1 Other Regional Plans that apply to the Waimakariri Sub-region

8.1.1 Waimakariri River Regional Plan 2004

The Waimakariri River Regional Plan 2004 controls use of water in the Waimakariri River, its tributaries and hydraulically connected groundwater; point and non-point source discharges of contaminants to water bodies in the Waimakariri River catchment; and land use activities in the beds of rivers and lakes in the Waimakariri River catchment.

Except for Policies 8.4.4, 8.4.4A and Rules 8.5.2 and 8.5.3 which address the repair of earthquake damaged land on individual sites used for residential activities the LWRP’s objectives, policies and rules do not apply to the matters controlled by the Waimakariri River Regional Plan 2004. The specific relationship between the LWRP and the Waimakariri River Regional Plan 2004 and how the plans are administered is detailed in Section 2.8.

8.2 Water Conservation Orders that apply to the Waimakariri Sub-region

Nil.

8.3 Fresh water Outcomes

See Objectives in Section 3, Policies 4.1, 4.2, 4.3 and 4.4.

8.4 Policies

The following policies apply in the Waimakariri sub-region, in addition to those set out in Section 4 of this Plan.

8.4.1 In implementing partial restrictions, takes from the Ashley River/Rakahuri catchment, other than for stock drinking water and community drinking water supplies, shall be reduced on a pro rata basis in order to maintain the minimum flows in Table 7 below.
8.4.2 Takes from any tributaries that join the Ashley River/Rakahuri upstream of State Highway 1 will have a minimum flow set at the Ashley Gorge plus any minimum flow set in the vicinity of the take.

8.4.3 There shall be no transfer of the point of take of a water permit beyond the property to which the take applies, and there shall be no transfer to another property of any part of any water permit for the take or use of water that is taken from the Ashley River/Rakahuri or from any of its tributaries that join the mainstem above State Highway 1. (This limitation does not apply to Taranaki Creek, Waikuku Stream, Little Ashley Creek and Saltwater Creek).

8.4.4 Until 31 December 2018, and where the site was used for residential activities as at 4 September 2010, enable within the area shown in Map 8.1, the repair of earthquake damaged land within specified thresholds as permitted activities. Beyond these thresholds, provide for land repair activities by way of a resource consent, where the adverse effects on the environment are mitigated.

8.4.4A Enable, within specified thresholds and within the area shown in Map 8.1 the repair of earthquake damaged land associated with non-residential activities as permitted activities. Beyond these thresholds, provide for land repair activities by way of a resource consent, where the adverse effects on the environment are mitigated.

8.4.5 Ensure a focused and expedited decision making process for landowners by requiring resource consent applications to be processed and considered without public or limited notification. In addition, ensure the social, economic, cultural and environmental well-being of communities is met by requiring adverse effects from the repair of earthquake damaged land to be mitigated through conditions of consent.

8.5 Rules

The following rules apply in the Waimakariri sub-region, in addition to those set out in Section 5 of this Plan.

8.5.1 The damming of the mainstem of the Ashley River/Rakahuri upstream from Ashley Gorge Bridge to downstream of the confluence with the Townshend River at approximate map reference BW22:300-174 is a prohibited activity.

Notes:
1. For all activities in or near waterways, refer also to the requirements and restrictions under the Canterbury Flood Protection and Drainage Bylaw 2013.
2. In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy pre 1900 archaeological sites is subject to the archaeological authority process under the Heritage New Zealand Poutere Taonga Act 2014. An archaeological authority is required from Heritage New Zealand to modify,
8.5.2 Prior to 31 December 2018, the repair of earthquake damaged land located within the area shown on area shown on Map 8.1, and located outside the High Soil Erosion Risk Areas, and which is carried out on an individual site used for residential activities, but excluding any residential property zoned “red” by the Canterbury Earthquake Recovery Authority), which involves any one or more of

(a) the use of land for:
   (i) the excavation of material over the unconfined, semi-confined or coastal confined aquifer system;
   (ii) the deposition of material into land or into groundwater, and any associated discharge into groundwater;
   (iii) vegetation clearance or earthworks within the riparian margin (defined for the purposes of this rule as any land within 10 metres of the bed of a river, lake or wetland boundary);
   (iv) the installation, maintenance, and use of a bore for geotechnical investigation or monitoring purposes;
   (v) the installation and construction of building foundations;
(b) the discharge of sediment-laden water generated from earthworks into a surface waterbody, or onto or into land where it may enter a surface water body;
(c) the taking of groundwater for the purposes of dewatering or land drainage, and the associated discharge of that water into a surface water body, or onto or into land where it may enter a surface water body

is a permitted activity, provided the following conditions, as applicable, are met:

General Conditions
1. The extent and duration of any works is limited to only that necessary to repair the land or building foundations.
2. The works (excluding any discharges associated with the works listed above) do not occur in, the bed of any lake, river or natural wetland.

Earthworks, Excavation and Deposition of Material
3. Erosion and sediment control measures are implemented and maintained in accordance with Environment Canterbury’s Erosion and Sediment Control Guidelines for Small Sites to minimise erosion and the discharge of sediment laden water to surface water.
4. Any material deposited into land consists only of uncontaminated fill (soil, rocks, gravels, sand, silt, clay), concrete, cement, grout, concrete, steel or timber foundation piles, or inert building materials.
5. From the date this rule becomes operative, the use of land for the placement of treated timber foundation piles into confined groundwater within the Coastal Confined Aquifer System, and any discharge from those foundation piles, does not occur within a group or community drinking water supply protection area, as set out in Schedule 1 of this plan.
6. Any excavation over the coastal confined aquifer system maintains at least one metre of undisturbed material between the deepest part of the excavation and Aquifer 1.
7. No materials (other than those listed in condition (4)), vehicles or machinery (excluding clean uncontaminated equipment used for dewatering, and infrastructure installed for the purposes of land repair) are deposited into, or used within groundwater.
8. Compaction, or earthworks involving below ground soil disturbance (excluding filling), do not occur on any part of a site which is identified as a landfill.
9. There is no discharge of any cement, concrete, grout, or water containing cement, grout, or concrete, into any surface waterbody, or beyond the property boundary.
10. Where grout is deposited into land, or into groundwater, the following conditions also apply
   (a) The volume of grout shall not exceed 80 cubic metres per site.
   (b) The point of deposition into land is not within:
       (i) 20 metres of any surface water body, or 20 metres of the Coastal Marine Area, where the material is deposited into groundwater; or
       (ii) 5 metres of any surface waterbody, or 10 metres of the Coastal Marine Area, where a separation of one metre is maintained between groundwater and any deposited material.
   (c) Where grout is deposited into land via in-situ mixing:
       (i) The grout shall be mixed evenly throughout the augured soil column; and
       (ii) The percentage of grout within the area of the augured soil column shall not exceed 20%;
   (d) Where grout is deposited into land using methods other than in-situ mixing, the percentage of cement in the dry grout mixture shall not exceed 30%
11. To prevent erosion, bare ground is stabilised within 10 days of any vegetation clearance or earthworks.
12. For earthworks carried out within the riparian area, in addition to conditions (3) through (11), the following conditions apply:
   (a) Vegetation used and maintained by the Canterbury Regional Council for flood or erosion control purposes is not removed.
   (b) Replanting is not of a species listed in the Biosecurity NZ Register of Unwanted Organisms or Canterbury Pest Management Strategy.
   (c) The activities do not reduce the available floodway.
   (d) The activities do not result in the destabilisation of the bank of any river, lake or natural wetland, or destabilise any existing lawfully established structures, or interfere with access to waterways for maintenance or inspection purposes.

Geotechnical Investigations
13. The bore is used only for the purposes of geotechnical investigations and is decommissioned by filling with clean material and compacted or sealed at the surface to prevent contaminants entering the bore.
14. Information on location (including bore logs and intended uses), and other relevant information is submitted to the CRC within 20 working days of drilling the bore.

Dewatering, Sediment-laden Water, and Land Drainage
15. Dewatering and land drainage discharges are not from, or discharged onto or into any potentially contaminated land.

16. The taking of groundwater for dewatering purposes does not lower the groundwater level more than 8 metres below the ground level of the site.

17. The taking and discharge of land drainage water and site dewatering water onto or into land or into surface water does not result in subsidence of the land surface, or river bed or river bank erosion.

18. The discharge of dewatering water onto or into land, or into surface water, does not result in any flooding of any neighbouring property, or result in ponding on the land surface for more than 48 hours.

19. The concentration of suspended solids in any dewatering water or sediment-laden water discharged to any surface water body does not exceed 100 grams per cubic metre.

For the purposes of Rule 8.5.2 the following definitions apply:

'Earthquake Damaged Land' means land damaged as a result of the Canterbury Earthquake Sequence that commenced on 4 September 2010.

'Residential Activities' means land zoned residential in a district plan; or land used predominantly for residential occupation as at 4 September 2010”.

'Grout' means a material which consists of water and at least 20% cement, and which may also contain aggregate, inert additives or bentonite.

'Landfill' means any part of a site where solid or hazardous waste has been deposited (either lawfully or not), and which is identified as a landfill on Environment Canterbury’s Listed Land Use Register, or in the records of the relevant territorial authority.

8.5.3 The repair of earthquake damaged land which is carried out on individual sites used for residential activities which does not meet one or more of the applicable conditions of Rule 8.5.2 is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:
1. The effect of not meeting the condition or conditions of Rule 8.5.2; and
2. Mitigation measures proposed to be implemented or mitigation measures available to minimise any actual or potential environmental effect.

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.

8.5.4 The discharge of contaminants to land associated with the construction of building foundations, or the repair of earthquake damaged land, within the area shown on Map 8.1, and located outside the High Soil Erosion Risk Area, and which is carried out on any
site used for non-residential activities is a permitted activity, provided the following conditions are met:

1. The extent and duration of any works is limited to only that necessary for the construction of foundations or to repair the land.
2. The discharge is only leachate from the deposition of uncontaminated fill (soil, rocks, gravels, sand, silt, clay); concrete; cement; grout; concrete, steel or timber foundation piles; or inert building materials.
3. From the date this rule becomes operative, the use of land for the placement of treated timber foundation piles into confined groundwater within the Coastal Confined Aquifer System, and any discharge from those foundation piles, does not occur within a group or community drinking water supply protection area, as set out in Schedule 1 of this plan.
4. There is no discharge of any cement, concrete, grout, or water containing cement, grout, or concrete, into any surface waterbody, or beyond the property boundary.
5. Where grout is deposited into land, or into groundwater:
   (a) The point of deposition into land is not within 10 metres of any surface water body, or 20 metres of the Coastal Marine Area, where the material is deposited into groundwater; or 5 metres of any surface water body, or 10 metres of the Coastal Marine Area, where a separation of one metre is maintained between groundwater and any deposited material.
   (b) Where grout is deposited into land via in-situ mixing the grout shall be mixed evenly throughout the augured soil column and the percentage of grout within the augured soil column shall not exceed 20%.
   (c) Where grout is deposited into land using methods other than in-situ mixing, the percentage of cement in the dry grout mixture shall not exceed 30%.

For the purposes of Rule 8.5.4 the following definitions apply:

'Earthquake Damaged Land' means land damaged as a result of the Canterbury Earthquake Sequence that commenced on 4 September 2010.

'Non-Residential Activities' means any building used for purposes other than residential occupation, or any multi-unit or multi-storey (greater than 3 stories) residential development.

'Grout' means a material which consists of water and at least 20% cement, and which may also contain aggregate, inert additives or bentonite.

8.5.5 The discharge of contaminants to land associated with the construction of building foundations, or the repair of earthquake damaged land, within the area shown on Map 8.1, and located outside the High Soil Erosion Risk Area, and which is carried out on any site used for non-residential activities that does not meet one or more of the conditions in Rule 8.5.4 is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:
1. The effect of not meeting the condition or conditions of Rule 8.5.4; and
2. Mitigation measures proposed to be implemented or mitigation measures available to minimise any actual or potential environmental effect

**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.
8.6 Allocation Limits

8.6.1 Environmental Flow and Allocation Limits

The following flow and allocation limits are to be applied when reading policies and rules in Sections 4, 5 and 8.

Table 7: Ashley River/Rakahuri Environmental Flow and Allocation Limits

<table>
<thead>
<tr>
<th>River or stream (see Planning Maps)</th>
<th>Location of recorder site*, or site where flow is measured</th>
<th>Topo 50 Map Reference</th>
<th>Minimum flow for A permits (L/s)</th>
<th>Allocation limit for A permits (L/s)</th>
<th>Minimum flow for B permits (L/s)</th>
<th>Allocation limit for B permits (L/s)</th>
<th>Minimum flow for C permits (L/s)</th>
<th>Allocation limit for C permits (L/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taranaki Creek</td>
<td>Kaiapohia monument</td>
<td>BW24:748-054</td>
<td>120</td>
<td>61</td>
<td>No B Block</td>
<td>No B Block</td>
<td>No C Block</td>
<td>No C Block</td>
</tr>
<tr>
<td>Waikuku Stream</td>
<td>Beach Road</td>
<td>BW24:747-069</td>
<td>100 Monday to Friday 150 Saturday and Sunday</td>
<td>460</td>
<td>No B Block</td>
<td>No B Block</td>
<td>No C Block</td>
<td>No C Block</td>
</tr>
<tr>
<td>Little Ashley Creek</td>
<td>State Highway One</td>
<td>BW24:746-073</td>
<td>50 except for four days per calendar month when the minimum flow shall be 30 L/s</td>
<td>172</td>
<td>No B Block</td>
<td>No B Block</td>
<td>No C Block</td>
<td>No C Block</td>
</tr>
<tr>
<td>Saltwater Creek</td>
<td>Toppings Rd</td>
<td>BW24:731-108</td>
<td>100</td>
<td>408</td>
<td>No B Block</td>
<td>No B Block</td>
<td>No C Block</td>
<td>No C Block</td>
</tr>
</tbody>
</table>

See the Waimakariri River Regional Plan for the Waimakariri catchment flow and allocation limits.
8.6.2 Groundwater Allocation Limits

The following groundwater allocation limits are to be applied when reading relevant policies and rules in Sections 4 and 5.

**Table 8: Waimakariri Groundwater Limits**

<table>
<thead>
<tr>
<th>Groundwater Allocation Zone (see Planning Maps)</th>
<th>Allocation Limit (million m$^3$/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashley</td>
<td>29.4</td>
</tr>
<tr>
<td>Cust</td>
<td>56.3</td>
</tr>
<tr>
<td>Eyre</td>
<td>99.07</td>
</tr>
<tr>
<td>Kowai</td>
<td>17.4</td>
</tr>
<tr>
<td>Loburn Fan</td>
<td>40.8</td>
</tr>
</tbody>
</table>

For all other areas see Rule 5.128.

8.6.3 Catchment Nutrient Load Limits and Allowances

Nil. See Rules 5.41 to 5.64.

8.7 Flow Sensitive Catchments

The following are to be applied when reading relevant policies and rules in Sections 4 and 5.

<table>
<thead>
<tr>
<th>Major Catchment (see Planning Maps)</th>
<th>Sub-catchment</th>
<th>Sensitive part of catchment</th>
<th>Monitoring site – lower boundary of catchment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashley/Rakahuri</td>
<td>Okuku River</td>
<td>Catchment upstream from Fox Creek confluence</td>
<td>Fox Creek recorder</td>
</tr>
</tbody>
</table>

8.8 High Naturalness Water Bodies

The following are to be applied when reading relevant policies and rules in Sections 4 and 5.

<table>
<thead>
<tr>
<th>Main River/Lake (see Planning Maps)</th>
<th>Location and Topo 50 Map Reference</th>
<th>Outstanding and significant characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashley/Rakahuri River</td>
<td>From the Ashley Gorge Bridge (at or about BW22:374-134) to 200 m below the confluence with the Townshend River (at or about BW22:300-174)</td>
<td>High degree of naturalness High visual amenity value – very scenic and deeply incised gorge which is visible in places from Lees Valley Road</td>
</tr>
</tbody>
</table>
Canterbury Land and Water Regional Plan

(This page is intentionally left blank)
Section 9 Christchurch-West Melton

The area covered by this section corresponds with that of the Christchurch-West Melton Zone under the CWMS. Bordered to the north by the lower reaches of the Waimakariri River, and to the south by the Port Hills, the main waterways within the area are the Avon/Ōtākaro, Heathcote and Styx Rivers.

Christchurch-West Melton Sub-region

The Avon/Ōtākaro, Heathcote and Styx Rivers are spring-fed lowland rivers which comprise a single thread channel with low gradients. The Avon/Ōtākaro and Heathcote Rivers flow into the Avon-Heathcote Estuary/Ihutai, whereas the Styx River flows into Brooklands Lagoon, near the mouth of the Waimakariri River.

9.1 Other Regional Plans that apply to the Christchurch-West Melton Sub-region

9.1.1 Waimakariri River Regional Plan 2004

The Waimakariri River Regional Plan 2004 controls use of water in the Waimakariri River, its tributaries and hydraulically connected groundwater; point and non-point source discharges of contaminants to water bodies (except for the Styx River catchment) in the
Waimakariri River catchment; and land use activities in the beds of rivers and lakes in the Waimakariri River catchment.

Except for the water quality rules in the LWRP which apply in the Styx River Catchment, Policies 9.4.5 and 9.4.6 and Rules 9.5.7 and 9.5.8 of the LWRP (which address the repair of earthquake damaged land on individual sites used for residential activities); the LWRP’s objectives, policies and rules do not apply to the matters controlled by the Waimakariri River Regional Plan 2004.

9.2 Water Conservation Orders that apply to the Christchurch-West Melton Sub-region

Nil.

9.2A Definitions

For this sub-region section of the Plan the following definitions apply in addition to the definitions contained in Section 2.9.

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halswell River/Huritini Catchment</td>
<td>means the catchment identified as the Halswell Catchment on the Planning Maps.</td>
</tr>
</tbody>
</table>

9.3 Fresh water Outcomes

Objectives in Section 3, Policies 4.1, 4.2, 4.3 and 4.4.

Ōtākaro Avon River Corridor Regeneration

9.3.1 The benefits of a regenerated Ōtākaro Avon River Corridor to Christchurch and its communities are recognized and enabled.

9.4 Policies

The following policies apply in the Christchurch-West Melton sub-region, in addition to those set out in Section 4 of this Plan.

Protect Sources of Drinking Water

9.4.1 Protect the high quality, untreated groundwater sources available to Christchurch City as a potable water supply in the area shown on the Planning Maps as the Christchurch Groundwater Protection Zone by:

(a) Ensuring any abstraction of groundwater maintains upward hydraulic pressure gradients of groundwater where this pressure exists;
(b) Controlling the use of land where activities involve the aggregation of large quantities of hazardous substances to ensure risks of spill, leaching or other contamination of groundwater are appropriately mitigated;

(c) Preventing new landfills or any expansion of existing landfill disposal areas, except for the disposal of inert fill or clean fill only; and

(d) Ensuring any land uses maintain an overlying confining layer above the aquifer of at least 3 m thickness, or where the confining layer is less than 3 m thick, maintain the existing thickness of the confining layer. Where the confining layer is removed or reduced, including as part of site construction or gravel or mineral extraction, measures are put in place to mitigate the risk of contaminants from land uses entering groundwater once site construction or excavation ceases and any remaining excavations are rehabilitated using inert fill.

Abstraction of Water

9.4.2 In the Woolston/Heathcote Groundwater Management Zone shown on the Planning Maps, groundwater abstraction shall be managed so that groundwater that is taken is of a quality that is suitable for potable use.

9.4.3 Takes from the Woolston/Heathcote Groundwater Management Zone shown on the Planning Maps shall have no more than minor adverse effects on groundwater levels in the first confined aquifer.

Transfer of Water Permits

9.4.4 Resource consents which authorise the take and use of water for gravel extraction (and associated purposes) may be transferred in full or in part to another site and used for the same purpose without a proportion of water being surrendered.

Earthquake Recovery and Regeneration

9.4.5 Until 31 December 2018, and where the site was used for residential activities as at 4 September 2010, enable within the area shown in Map 9.1, the repair of earthquake damaged land within specified thresholds as permitted activities. Beyond these thresholds, provide for land repair activities by way of a resource consent, where the adverse effects on the environment are mitigated.

9.4.6 Enable, within specified thresholds and within the area shown in Map 9.1, the repair of earthquake damaged land associated with non-residential activities as permitted activities. Beyond these thresholds, provide for land repair activities by way of a resource consent, where the adverse effects on the environment are mitigated.

9.4.7 Enable the discharge to land of earthquake related residual demolition waste, liquefaction silt and infrastructure waste and associated ancillary activities within the Burwood Landfill Specific Purpose Site, as shown on Map 9.2, provided the adverse effects on the environment are mitigated.

9.4.8 Ensure a focused and expedited decision making process for landowners by requiring resource consent applications to be processed and considered without public or limited notification. In addition, ensure the social, economic, cultural and environmental well-
being of communities is met by requiring adverse effects from the repair of earthquake damaged land to be mitigated through conditions of consent.

9.4.8a Enable the regeneration of the Ōtākaro Avon River Corridor as shown on Map 9.3, provided the adverse effects on the environment are mitigated.

9.4.8b Ensure a focused and expedited decision-making process for the Ōtākaro Avon River Corridor by requiring resource consent applications submitted by or on behalf of the Christchurch City Council, Canterbury Regional Council or the Crown, to be processed and considered without public notification where these are for the construction of:
   i. Stopbanks and stormwater infrastructure;
   ii. Landings; and
   iii. Walking and cycling paths;
   as identified in the Ōtākaro Avon River Corridor Regeneration Plan.

For the avoidance of doubt, construction includes but is not limited to earthworks, vegetation removal, ecological restoration, the creation of paths and roads, works in waterbodies, the diversion of water, and the establishment of structures in a Landing Overlay.

**Stormwater and Drainage Water**

9.4.9 To accommodate geological alterations to the land and its relationship with surface water bodies within Christchurch City, resulting from the recent seismic events, and to prevent any increase in inundation of land in the lower catchments, the discharge to surface water of any stormwater in the Avon/Otakaro or Heathcote catchments that is not within an area covered by a consented stormwater management plan will require specific evaluation, including of downstream flooding potential, through a resource consent process.

9.4.10 To prevent any increase in inundation of land in the Halswell River/Huritini Catchment, the discharge to surface water of any stormwater or drainage water in the Halswell River/Huritini Catchment that is not within an area covered by a consented stormwater management plan will require specific evaluation to ensure hydraulic neutrality through a resource consent process.

**9.5 Rules**

The following rules apply in the Christchurch-West Melton sub-region, in addition to those set out in Section 5 of this Plan.

**Taking and Using Surface Water and Groundwater**

9.5.1 The taking and use of surface water from, or stream depleting groundwater associated with, the Avon/Ōtākaro or Heathcote rivers is a restricted discretionary activity, provided the following conditions are met:

---

1 The Landing Overlay is identified on Appendix 13.14.6.1 of the Christchurch District Plan.
1. The take or diversion complies with the minimum flows as set out in Table 9 below; and
2. The take or diversion is a renewal of an existing resource consent and the rate or take and volume is to remain unchanged; or
3. The water that is taken or diverted will be discharged back into the river near the point of take; or
4. The water to be taken is high or moderate stream depleting groundwater, is to be used for group drinking water supply or community drinking water supply and is subject to a Water Supply Strategy.

The exercise of discretion is restricted to the following matters:
1. Whether the amount of water to be taken and used is reasonable for the intended end use;
2. The availability and practicality of using alternative supplies of water;
3. The effects the take or diversion has on any other authorised takes or diversions;
4. Whether and how fish are prevented from entering the water intake;

9.5.2 The taking, diverting or use of surface water from the Avon/Ōtākaro or Heathcote River that does not meet the conditions of Rule 9.5.1 is a prohibited activity.

9.5.3 The taking and use of groundwater from the Woolston/Heathcote Groundwater Management Zone is a restricted discretionary activity, provided the following conditions are met:
1. For stream depleting groundwater takes, the take, in addition to all existing consented surface water takes, complies with Table 10;
2. The annual volume of the groundwater take, in addition to all existing consented takes, complies with Table 10; and
3. The well interference effects as set out in Schedule 12 are “acceptable”.

The exercise of discretion is restricted to the following matters:
1. Whether the amount of water to be taken and used is reasonable for the intended end use;
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;
4. The effects the take has on any other authorised takes, including interference effects as set out in Schedule 12;
5. Restrictions in take in accordance with the levels and restrictions in Table 10;
6. For stream depleting groundwater takes, any 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.

9.5.4 Unless categorised as a prohibited activity in Rule 9.5.5 the taking and use of groundwater from the Woolston/Heathcote Groundwater Management Zone is a non-complying activity.
9.5.5 The taking and use of groundwater from the Woolston/Heathcote Groundwater Management Zone that does not meet conditions 1 or 2 in Rule 9.5.3 is a prohibited activity.

Transfers of Water Permits

9.5.6 The temporary or permanent site to site transfer, in whole or in part, of a water permit to take or use water for gravel extraction (and associated purposes) is a discretionary activity provided the water will be used for the same purpose.

Earthquake Recovery

Notes:
1. For all activities in or near waterways, refer also to the requirements and restrictions under the Canterbury Flood Protection and Drainage Bylaw 2013.
2. In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy pre 1900 archaeological sites is subject to the archaeological authority process under the Heritage New Zealand Poutere Taonga Act 2014. An archaeological authority is required from Heritage New Zealand to modify, damage or destroy any archaeological site, whether recorded or not in the New Zealand Heritage List/Rārangi Kōrero website.

9.5.7 Prior to 31 December 2018, the repair of earthquake damaged land located within the area shown on Map 9.1, and located outside the High Soil Erosion Risk Areas, and which is carried out on an individual site used for residential activities, but excluding any residential property zoned “red” by the Canterbury Earthquake Recovery Authority), which involves any one or more of

(a) the use of land for:
   (i) the excavation of material over the unconfined, semi-confined or coastal confined aquifer system;
   (ii) the deposition of material into land or into groundwater, and any associated discharge into groundwater;
   (iii) vegetation clearance or earthworks within the riparian margin (defined for the purposes of this rule as any land within 10 metres of the bed of a river, lake or wetland boundary);
   (iv) the installation, maintenance, and use of a bore for geotechnical investigation or monitoring purposes;
   (v) the installation and construction of building foundations;
(b) the discharge of sediment-laden water generated from earthworks into a surface waterbody, or onto or into land where it may enter a surface water body;
(c) the taking of groundwater for the purposes of dewatering or land drainage, and the associated discharge of that water into a surface water body, or onto or into land where it may enter a surface water body is a permitted activity, provided the following conditions, as applicable, are met:

   General Conditions
1. The extent and duration of any works is limited to only that necessary to repair the land or building foundations.

2. The works (excluding any discharges associated with the works listed above) do not occur in, the bed of any lake, river or natural wetland.

Earthworks, Excavation and Deposition of Material

3. Erosion and sediment control measures are implemented and maintained in accordance with Environment Canterbury’s Erosion and Sediment Control Guidelines for Small Sites to minimise erosion and the discharge of sediment laden water to surface water.

4. Any material deposited into land consists only of uncontaminated fill (soil, rocks, gravels, sand, silt, clay), concrete, cement, grout, concrete, steel or timber foundation piles, or inert building materials.

5. From the date this rule becomes operative, the use of land for the placement of treated timber foundation piles into confined groundwater within the Coastal Confined Aquifer System, and any discharge from those foundation piles, does not occur within a group or community drinking water supply protection area, as set out in Schedule 1 of this plan.

6. Any excavation over the coastal confined aquifer system maintains at least one metre of undisturbed material between the deepest part of the excavation and Aquifer 1.

7. No materials (other than those listed in condition (4)), vehicles or machinery (excluding clean uncontaminated equipment used for dewatering, and infrastructure installed for the purposes of land repair) are deposited into, or used within groundwater.

8. Compaction, or earthworks involving below ground soil disturbance (excluding filling), do not occur on any part of a site which is identified as a landfill.

9. There is no discharge of any cement, concrete, grout, or water containing cement, grout, or concrete, into any surface waterbody, or beyond the property boundary.

10. Where grout is deposited into land, or into groundwater, the following conditions also apply:
   (a) The volume of grout shall not exceed 80 cubic metres per site.
   (b) The point of deposition into land is not within:
      (i) 20 metres of any surface water body, or 20 metres of the Coastal Marine Area, where the material is deposited into groundwater; or
      (ii) 5 metres of any surface waterbody, or 10 metres of the Coastal Marine Area, where a separation of one metre is maintained between groundwater and any deposited material.
   (c) Where grout is deposited into land via in-situ mixing:
      (i) The grout shall be mixed evenly throughout the augured soil column; and
      (ii) The percentage of grout within the area of the augured soil column shall not exceed 20%,
   (d) Where grout is deposited into land using methods other than in-situ mixing, the percentage of cement in the dry grout mixture shall not exceed 30%

11. To prevent erosion, bare ground is stabilised within 10 days of any vegetation clearance or earthworks.
12. For earthworks carried out within the riparian area, in addition to conditions (3) through (11), the following conditions apply:
   (a) Vegetation used and maintained by the Canterbury Regional Council for flood or erosion control purposes is not removed.
   (b) Replanting is not of a species listed in the Biosecurity NZ Register of Unwanted Organisms or Canterbury Pest Management Strategy.
   (c) The activities do not reduce the available floodway.
   (d) The activities do not result in the destabilisation of the bank of any river, lake or natural wetland, or destabilise any existing lawfully established structures, or interfere with access to waterways for maintenance or inspection purposes.

Geotechnical Investigations
13. The bore is used only for the purposes of geotechnical investigations and is decommissioned by filling with clean material and compacted or sealed at the surface to prevent contaminants entering the bore.
14. Information on location (including bore logs and intended uses), and other relevant information is submitted to the CRC within 20 working days of drilling the bore.

Dewatering, Sediment-laden Water, and Land Drainage
15. Dewatering and land drainage discharges are not from, or discharged onto or into any potentially contaminated land.
16. The taking of groundwater for dewatering purposes does not lower the groundwater level more than 8 metres below the ground level of the site.
17. The taking and discharge of land drainage water and site dewatering water onto or into land or into surface water does not result in subsidence of the land surface, or river bed or river bank erosion.
18. The discharge of dewatering water onto or into land, or into surface water, does not result in any flooding of any neighbouring property, or result in ponding on the land surface for more than 48 hours.
19. The concentration of suspended solids in any dewatering water or sediment-laden water discharged to any surface water body does not exceed 100 grams per cubic metre.

For the purposes of Rule 9.5.7 the following definitions apply:

'Earthquake Damaged Land' means land damaged as a result of the Canterbury Earthquake Sequence that commenced on 4 September 2010.

'Residential Activities' means land zoned residential in a district plan; or land used predominantly for residential occupation as at 4 September 2010.

'Grout' means a material which consists of water and at least 20% cement, and which may also contain aggregate, inert additives or bentonite.
'Landfill' means any part of a site where solid or hazardous waste has been deposited (either lawfully or not), and which is identified as a landfill on Environment Canterbury’s Listed Land Use Register, or in the records of the relevant territorial authority.

9.5.8 The repair of earthquake damaged land which is carried out on individual sites used for residential activities which does not meet one or more of the applicable conditions of Rule 9.5.7 is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters
1. The effect of not meeting the condition or conditions of Rule 9.5.7; and
2. Mitigation measures proposed to be implemented or mitigation measures available to minimise any actual or potential environmental effect.

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.

9.5.9 The discharge of contaminants to land associated with the construction of building foundations, or the repair of earthquake damaged land, within the area shown on Map 9.1, and located outside the High Soil Erosion Risk Area, and which is carried out on any site used for non-residential activities is a permitted activity, provided the following conditions are met.

1. The extent and duration of any works is limited to only that necessary for the construction of foundations or to repair the land.
2. The discharge is only leachate from the deposition of uncontaminated fill (soil, rocks, gravels, sand, silt, clay); concrete; cement; grout; concrete, steel or timber foundation piles; or inert building materials.
3. From the date this rule becomes operative, the use of land for the placement of treated timber foundation piles into confined groundwater within the Coastal Confined Aquifer System, and any discharge from those foundation piles, does not occur within a group or community drinking water supply protection area, as set out in Schedule 1 of this plan.
4. There is no discharge of any cement, concrete, grout, or water containing cement, grout, or concrete, into any surface waterbody, or beyond the property boundary.
5. Where grout is deposited into land, or into groundwater:
   (a) The point of deposition into land is not within 10 metres of any surface water body, or 20 metres of the Coastal Marine Area, where the material is deposited into groundwater; or 5 metres of any surface water body, or 10 metres of the Coastal Marine Area, where a separation of one metre is maintained between groundwater and any deposited material.
   (b) Where grout is deposited into land via in-situ mixing the grout shall be mixed evenly throughout the augured soil column and the percentage of grout within the augured soil column shall not exceed 20%.
(c) Where grout is deposited into land using methods other than in-situ mixing, the percentage of cement in the dry grout mixture shall not exceed 30%.

For the purposes of Rule 9.5.9 the following definitions apply:

“Earthquake Damaged Land” means land damaged as a result of the Canterbury Earthquake Sequence that commenced on 4 September 2010.

“Non-Residential Activities” means any building used for purposes other than residential occupation, or any multi-unit or multi-storey (greater than 3 stories) residential development.

“Grout” means a material which consists of water and at least 20% cement, and which may also contain aggregate, inert additives or bentonite.

9.5.10 The discharge of contaminants to land associated with the construction of building foundations, or the repair of earthquake damaged land, within the area shown on Map 9.1, and located outside the High Soil Erosion Risk Area, and which is carried out on any site used for non-residential activities that does not meet one or more of the conditions in Rule 9.5.9 is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:

1. The effect of not meeting the condition or conditions of Rule 9.5.9; and
2. Mitigation measures proposed to be implemented or mitigation measures available to minimise any actual or potential environmental effect.

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.

9.5.11 Prior to 31 December 2018, the use of land for earthworks, where the earthworks exceed the thresholds in Rule 5.170(k), associated with the site clearance, stabilisation, or repair, of any earthquake damaged land (excluding any works for which a building consent has been obtained from the relevant local authority), and any associated discharge of sediment-laden water that is carried out

(a) on an individual site used for residential activities (excluding any residential property zoned “red” by the Canterbury Earthquake Recovery Authority) and
(b) within the High Soil Erosion Risk Area shown on the Planning Maps, but outside any riparian margin;

is a permitted activity provided the following conditions are met:

1. The extent and duration of any earthworks is limited to only that necessary for site clearance, stabilisation or repair of the land; and
2. Earthworks do not occur in the bed of any lake, river or natural wetland; and
3. The works are designed and monitored by a Chartered Professional Engineer with competency in geotechnical engineering, or a Professional Engineering Geologist (IPENZ registered), to avoid exacerbation of erosion or mass movement of soils prone to dispersion on the property or any adjacent property. Upon completion of the works, the Engineer or Professional Engineering Geologist is to certify that they designed and monitored the works; and

4. A copy of the geotechnical certification for the works is retained by the property owner and provided to the relevant territorial authority within 3 months of the works being completed; and provided to the CRC on request. The information to be provided shall include plans, any variations to the plans, design calculations and the certification; and

5. Any material deposited into land consists only of uncontaminated fill (soil, rocks, gravels, sand, silt, clay), concrete, inert building materials, or foundation piles comprised of cement, concrete, steel or timber; and

6. Erosion and sediment control measures are implemented and maintained throughout the duration of the works to minimise erosion and the discharge of sediment laden water to surface water; or onto or into land where it may enter surface water; and

7. Compaction or earthworks involving below ground soil disturbance (excluding filling) do not occur on any part of a site which is identified as a landfill; and

8. To prevent erosion, bare ground is stabilised within 10 days of any vegetation clearance or earthworks; and

9. The concentration of total suspended solids in the discharge shall not exceed:
   (a) 50g/m³ where the discharge is to any spring-fed river, Banks Peninsula river, or to a lake, except that when the background total suspended solids in that waterbody is greater than 50g/m³ the Schedule 5 visual clarity standards shall apply; or
   (b) 100g/m³ where the discharge is to any other river, or to an artificial watercourse except that when the background total suspended solids in the waterbody is greater than 100g/m³, the Schedule 5 visual clarity standards shall apply.

For the purposes of rules 9.5.11 and 9.5.12 the following definitions apply:

'Earthquake Damaged Land' means land damaged as a result of the Canterbury Earthquake Sequence that commenced on 4 September 2010.

'Landfill' means any part of a site where solid or hazardous waste has been deposited (either lawfully or not) and which is identified as a landfill on Environment Canterbury’s Listed Land Use Register, or in the records of the relevant territorial authority.

'Residential activities' means land zoned residential in a district plan; or land used predominantly for residential occupation as at 4 September 2010.

'Works' means earthworks and erosion and sediment control measures necessary for site clearance, stabilisation or repair, of earthquake damaged land.

'Mass movement' means the geomorphic process by which material (rock, soil) moves downslope, typically as a mass under gravity.
9.5.12 Prior to 31 December 2018, the use of land for earthworks, where the earthworks exceed
the thresholds in Rule 5.170(k), associated with the site clearance, stabilisation, or repair,
of any earthquake damaged property (excluding any works for which a building consent
has been obtained from the relevant local authority), and any associated discharge of
sediment-laden water that is carried out
(a) on an individual site used for residential activities (excluding any residential property
zoned “red” by the Canterbury Earthquake Recovery Authority); and
(b) within the High Soil Erosion Risk Area shown on the Planning Maps, but outside any
riparian margin
that does not comply with any one or more of the conditions of Rule 9.5.11 is a restricted
discretionary activity.

The exercise of discretion is restricted to the following matters:
1. The effect of not meeting the condition or conditions of Rule 9.5.11; and
2. Mitigation measures proposed to be implemented or mitigation measures available to
minimise any actual or potential environmental effect.

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.

9.5.13 Within the Specific Purpose (Burwood Landfill and Resource Recovery Park) Zone as
shown on Map 9.2, the use of land for the deposition of earthquake related residual
demolition waste, liquefaction silt, or infrastructure waste, excavation, and site
remediation; the consequential discharge of contaminants onto or into land in
circumstances where contaminants may enter water; and the discharge of construction
phase stormwater, sediment-laden water or stormwater to water associated with these
activities, is a controlled activity provided the following conditions are met:

1. The activities are only within the Burwood Landfill Specific Purpose Site, as shown on
Map 9.2.
2. The application for resource consent:
   (a) addresses the matters set out in Appendix 3 of the Landfill Guidelines (2000)
       published by the Centre for Advanced Engineering, University of Canterbury; and
   (b) identifies all of the effects of the proposed activity (with particular reference to
       the matters over which the CRC reserves control) and describes how those effects
       are to be remedied or mitigated; and
   (c) includes a cultural impact assessment; and
   (d) includes written comments on the proposal, from Te Runanga o Ngai Tahu or any
       papatipu rūnanga identified by Te Runanga o Ngai Tahu; the Christchurch District
       Health Board; the Burwood – Pegasus Community Board; the Parklands
       Residents’ Association Incorporated; the Queenspark Residents’ Association; and
       the owners and occupiers of land adjacent to the Burwood Landfill Specific
       Site.
The CRC reserves control over the following matters:
1. Effects on cultural values; and
2. Effects on recreational users; and
3. Effects arising from the use of the land for earthworks; and
4. Effects on human health; and
5. Effects on groundwater quality, drinking water quality and surface water quality; and
6. Effects on the coastal environment; and
7. Effects on biodiversity; and
8. Remediation of the site; and
9. Community liaison complaints process and reporting; and
10. Receipt and management of waste.

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.

9.5.14 Within the Specific Purpose (Burwood Landfill and Resource Recovery Park) Zone as shown on Map 9.2, the use of land for the deposition of earthquake related residual demolition waste, liquefaction silt, or infrastructure waste, excavation, and site remediation; the consequential discharge of contaminants onto or into land in circumstances where contaminants may enter water; and the discharge of construction phase stormwater, sediment-laden water or stormwater to water associated with these activities, that does not meet one or more of the conditions of Rule 9.5.13 is a prohibited activity.

9.5.14APursuant to section 95A of the RMA, an application for a controlled, restricted discretionary or discretionary activity resource consent submitted by or on behalf of the Christchurch City Council, Canterbury Regional Council or the Crown within the Ōtākaro Avon River Corridor for the construction of stopbanks and stormwater infrastructure, Landings and walking and cycling paths will be processed and considered without public notification.

Taking and using of groundwater for district heating and cooling schemes
9.5.15 The non-consumptive taking and using of groundwater for district heating or cooling schemes, and the associated discharge to groundwater, is a permitted activity, provided the following conditions are met:
1. The take and discharge is located within the area bounded by Moorhouse Avenue, Fitzgerald Avenue, Bealey Avenue, Harper Avenue and Deans Avenue; and
2. The take shall only be from a bore or bores screened at a depth of no less than 30 metres and no more than 100 metres; and
3. The discharge shall only be to the Riccarton gravel aquifer being the first gravel aquifer encountered below 20 metres;
4. The discharge is only groundwater abstracted under this rule; and
5. Prior to the first abstraction of groundwater, the direct cumulative interference effect is classified as being acceptable as determined in accordance with Schedule 12, except that for the purposes of this condition "direct cumulative interference effect" includes those effects on any existing authorised or permitted takes; and
6. The discharge from the heating and cooling scheme does not result in any loss of operational efficiency in any temperature sensitive bore that existed prior to the time the discharge first commences; and
7. Monthly records of the temperature and rate of water abstraction and water discharge, measured in accordance with the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010, are retained and supplied to the Canterbury Regional Council upon request; and
8. A record of the modelling undertaken in accordance with condition 5 is retained and provided to Canterbury Regional Council upon request; and
9. The Canterbury Regional Council is advised in writing of the installation of any district heating or cooling scheme prior to the commencement of any take or discharge associated with that scheme.

For the purposes of Rule 9.5.15 "district heating or cooling scheme" means a system that abstracts and discharges groundwater for the purposes of heating or cooling residential developments comprising three or more residential units, or any commercial or industrial development.

9.5.16 The non-consumptive taking and use of groundwater for district heating or cooling schemes, and the associated discharge to groundwater that does not meet one or more of the Conditions in Rule 9.5.15 is a discretionary activity.

Stormwater

9.5.17 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, wetland or artificial watercourse in the Avon/Otakaro or Heathcote catchments that is not (a) authorised by a consented stormwater management plan; or (b) into a reticulated stormwater system is a discretionary activity.

9.5.18 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, wetland or artificial watercourse in the Halswell River/Huritini Catchment that is not authorised by a consented stormwater management plan and the discharge did not occur before 5 December 2013, is a discretionary activity.
Drainage Water

Note: Regional Rules 5.76, 5.78, 5.79 and 5.80 apply in the Christchurch West-Melton sub-region. Rules 9.5.19 and 9.5.20 apply as additions to Regional Rules 5.75 and 5.77.

9.5.19 Within the Christchurch West-Melton sub-region Regional Rule 5.77 includes the following additional condition:

1. Any discharge that commences after 1 May 2015 is not within the Halswell River/Huritini Catchment.

9.5.20 Within the Christchurch West-Melton sub-region Regional Rule 5.75 includes the following additional condition:

1. Any discharge that commences after 1 May 2015 is not within the Halswell River/Huritini Catchment.
9.6 Allocation Limits

9.6.1 Environmental Flow and Allocation Limits

The following flow and allocation limits are to be applied when reading policies and rules in Sections 4 and 5.

Table 9: Avon River/Otakaro and Heathcote River Environmental Flow and Allocation Limits

<table>
<thead>
<tr>
<th>River or stream (see Planning Maps)</th>
<th>Location of recorder site</th>
<th>Topo 50 Map Reference of site</th>
<th>Minimum flow for A permits (L/s)</th>
<th>Reductions in take (L/s)</th>
<th>Allocation limit for A permits (L/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avon River/ Ōtākaro</td>
<td>Gloucester St</td>
<td>BX24:704-803</td>
<td>1,100</td>
<td>No restrictions set</td>
<td>No additional water to be allocated</td>
</tr>
<tr>
<td>Heathcote River</td>
<td>Buxton Terrace</td>
<td>BX24:715-709</td>
<td>400</td>
<td>No restrictions set</td>
<td>No additional water to be allocated</td>
</tr>
</tbody>
</table>

See the Waimakariri River Regional Plan for the Waimakariri catchment flow and allocation limits. For all other areas see Rule 5.123

9.6.2 Groundwater Allocation Limits

The following groundwater allocation limits are to be applied when reading policies and rules in Sections 4, 5 and 9.

In general, no additional water is to be allocated from the Christchurch West-Melton Groundwater Allocation Zone shown on the Planning Maps except for group or community water supply as set out in Rule 5.115 or for non-consumptive taking and use as set out in Rules 5.131 and 5.132.
Table 10: Woolston/Heathcote Groundwater

<table>
<thead>
<tr>
<th>Groundwater Allocation Zone (see Planning Maps)</th>
<th>Number and location of monitoring bore where level is measured</th>
<th>Map reference of monitoring site</th>
<th>Aquifer name and depth (above mean sea level datum)</th>
<th>Allocation limit A permits (cubic metres/yr)</th>
<th>Minimum level for A permits (above mean sea level datum)</th>
<th>Restriction regime</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woolston/ Heathcote groundwater management</td>
<td>M36/1159 Scruttons Rd</td>
<td>BX24:755-766</td>
<td>First confined aquifer</td>
<td>No limit set but no new takes allowed from Woolston / Heathcote Groundwater Management Zone after 1 January 2002</td>
<td>1 m above mean sea level datum when taken as a moving average over any preceding consecutive 12-month period; or 0.25 m above mean sea level datum when taken as a 14-day consecutive day moving mean; or 0.5 m below mean sea level datum when taken as an instantaneous level</td>
<td>If groundwater levels drop to below any one of the minimum levels, then the taking of water shall reduce by one third If groundwater levels drop below any two of the minimum levels simultaneously, then the taking of water shall reduce by two-thirds If groundwater levels drop below all three minimum levels simultaneously, then the taking of water must cease</td>
<td>The restrictions should not apply if all permit holders, who are subject to the same restrictions, are adhering to a water-sharing regime</td>
</tr>
<tr>
<td>Second and other deeper confined aquifers</td>
<td>No limit set but no new takes to be allowed from Woolston/ Heathcote</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groundwater Allocation Zone (see Planning Maps)</td>
<td>Number and location of monitoring bore where level is measured</td>
<td>Map reference of monitoring site</td>
<td>Aquifer name and depth (above mean sea level datum)</td>
<td>Allocation limit A permits (cubic metres/yr)</td>
<td>Minimum level for A permits (above mean sea level datum)</td>
<td>Restriction regime</td>
<td>Comments</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>---------------------------------------------------------------</td>
<td>---------------------------------</td>
<td>--------------------------------------------------</td>
<td>---------------------------------------------</td>
<td>----------------------------------------------------------</td>
<td>------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Groundwater Management Zone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 9.6.3 Catchment Nutrient Load Limits and Allowances

See Rules 5.41 to 5.64.
Avon / Otakaro and Heathcote River Environmental Flow and Allocation Limits
Map 9.2 Specific Purpose (Burwood Landfill and Resource Recovery Park) Zone and Burwood Landfill Specific Purpose Site
High Soil Erosion Risk Areas
Section 10 Banks Peninsula

The area covered by this sub-region section is shown in Figure 1 below. It generally corresponds with the area covered by the Banks Peninsula Water Management Zone Committee.

Many of the rivers and streams on Banks Peninsula have steep, short catchments, generally with riffle-run pool sequences. These waterways are rain-fed, are subject to rapid flow recession, and some may be seasonally dry. Banks Peninsula waterways also typically have long periods of low flow, low base flows and infrequent large floods of short duration, with higher flows occurring in winter when precipitation is higher. Some small streams exit to small estuaries situated in pocket beaches, before entering the sea.

**Figure 1 Banks Peninsula Sub-Region**

---

**Waiau catchment**

Figure 2 defines the extent of the Waiau catchment. The catchment covers the land from mean high water springs at Birdlings Flat to the south, Mount Fitzgerald and Mount Sinclair to the north, High Bare Peak to the west and Saddle Hill / Wainui Pass to the east. The main water resources in this catchment include Te Roto ō Waiau/Lake Forsyth and the waterways that flow into the lake, such as the Ōkana, Ōkuti and Takiritawai Rivers. The catchment includes the townships of Little River, Birdlings Flat and Cooptown.
The hapū with kaitiakitanga responsibilities for the Wairewa catchment are Kāti Irakehu and Kāti Makō, represented in a modern-day context by Wairewa Rūnanga. The marae of Kāti Irakehu and Kāti Makō is located in the catchment, as shown in Figure 2.

The outstanding cultural significance of Te Roto ō Wairewa/Lake Forsyth is recognised in the Ngāi Tahu Claims Settlement Act 1998, including by the Statutory Acknowledgement for the lake, and by the creation of a reserve at the head of the lake. Te Roto ō Wairewa/Lake Forsyth is renowned for its mahinga kai values, with tuna (eel), pātiki (flounder) and inanga (whitebait) the main kai taken. Commercial fishing is prohibited in the Wairewa/Lake Forsyth Mātaitai Reserve which includes Te Roto ō Wairewa/Lake Forsyth and the Takiritawai River. The lake is also one of only two customary lakes in New Zealand, which means that only Ngāi Tahu may take tuna from the lake.

Te Roto ō Wairewa/Lake Forsyth lakebed totalling 651.73 hectares is a stewardship area managed under section 25 of the Conservation Act by the Department of Conservation.

Te Roto ō Wairewa / Lake Forsyth is also recognised as a nationally and regionally significant lake and wetland area. Te Roto ō Wairewa / Lake Forsyth provides lake-margin and swamp habitats for waterfowl (including the crested grebe), and other threatened or at risk bird species, a variety of salt and freshwater marsh plants and invertebrate species. The lake and its tributaries provide habitats for a variety of fish species including tuna (long fin and short fin eel), inanga, patiki, banded kōkopu, and common and upland bullies. The Ōkuti River is a known spawning site for the kanakana (lamprey). Apart from the upland bully, all these species require access to the sea to complete their lifecycle. Perch and brown trout can also be found in Te Roto ō Wairewa /Lake Forsyth and its tributaries.
Te Roto ō Wairewa/Lake Forsyth and its tributaries, the Ōkana and Ōkuti rivers, are classed as a locally important salmonid fishery, and the Lake is also classed as nationally and regionally significant game bird habitat.

Over the last 160 years, the Wairewa catchment has changed dramatically. Historically the lake was a shallow estuary but the growth of the Kaitorete Spit has enclosed it, and there is insufficient flow to maintain an opening to the sea. Deforestation of the catchment has accelerated the natural processes of erosion and the subsequent loss of sediment into waterways and the lake, and there is insufficient water movement to move sediment and phosphorus out into the sea. The once abundant eel fishery is in decline, though the exact reasons for this decline are unclear.

Soils in the catchment are naturally high in phosphorus and this is thought to be a driving factor in the regular summer blooms of the toxic cyanobacteria, *Nodularia spumigena*, within Te Roto ō Wairewa / Lake Forsyth. These blue-green algal blooms produce toxic by-products which are harmful to humans and animals, and impact on cultural, recreational and amenity values associated with the lake. Erosion of stream banks in the valley floor is the single biggest source of phosphorus. Preventing eroded soil from entering waterways, and eventually the lake, is a critical challenge for the catchment.

Other issues in the Wairewa catchment are the phosphorus rich sediment that is already in the lake ('legacy phosphorus'); controlling other sources of phosphorus; the setting of minimum flows and allocation limits for the Ōkana, Ōkuti and Takiritawai rivers; and providing for the migratory habits of the tuna so as to enhance mahinga kai and to complete the life cycle of other diadromous fish.

Nitrogen concentrations in the catchment’s rivers are currently low and these low concentrations should be maintained to avoid exacerbating algal blooms within Te Roto ō Wairewa/Lake Forsyth.

The nitrate-nitrogen limits for the rivers in the Wairewa catchment are set at a level to manage more than just toxicity. They also seek to manage periphyton in rivers and the contribution of the river to total nitrogen within the Lake.

During 2013-2015 the Banks Peninsula Zone Committee engaged with the local community and stakeholders to develop a package of actions (the ‘Solutions Package’) to protect community values and opportunities to safely gather mahinga kai, improve water quality in Te Roto ō Wairewa/ Lake Forsyth (aspiring to a TLI trophic state of 4 in the long term (20 years)) and manage water quantity in the rivers in the catchment while also sustaining a healthy economy and community. The Wairewa Zone Implementation Programme Addendum November 2014 records the full package of actions to be implemented, and includes those that are best given effect to through regulation and those that are best achieved through other means.

The key actions include:

- Addressing the key source of phosphorus in the catchment by encouraging works to stabilise the banks of rivers in the Valley Floor Area;
- Preventing stock accessing the river banks in the Valley Floor Area so as to reduce bank erosion and collapse, and prevent animal effluent entering waterways;
• Intercepting phosphorus-rich sediment before it enters the lake through the construction of a sediment retention basin or wetland at the head of Te Roto ō Wairewa/ Lake Forsyth;
• Providing for lake investigations to address the phosphorus that is already present in the lake;
• Requiring community wastewater treatment systems to remove phosphorus from discharges where practicable, and minimise the volume of wastewater;
• Introducing a minimum flow and allocation limit for the Ōkana, Ōkuti and Takiritawai rivers and their tributaries that protects the ecosystems and cultural health of these water bodies;
• Setting a nitrate-nitrogen concentration for rivers that protects the existing high water quality; and
• Providing for a lake opening and closing regime that maintains lake levels for flood control and land drainage, while recognising the cultural values of Ngāi Tahu.

This section of the Plan includes policies and rules that, in addition to those in Sections 4 and 5, will support the implementation of the Solutions Package for the Wairewa catchment and will sustainably manage water resources to achieve the purpose of the Resource Management Act 1991. It does so within the scope of a regional plan and regional council functions under the Resource Management Act 1991.

10.1 Other Regional Plans that apply to the Banks Peninsula Sub-region

Regional Coastal Environment Plan for the Canterbury Region 2005

10.1A Definitions

For the Wairewa catchment the following definitions apply in addition to those contained in Section 2.9.

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wairewa catchment</td>
<td>means the area shown as the Ōkana - Lake Forsyth Nutrient Allocation Zone on the Planning Maps.</td>
</tr>
<tr>
<td>Valley Floor Area</td>
<td>means the area identified as the Wairewa Valley Floor Area on the Planning Maps.</td>
</tr>
</tbody>
</table>

10.2 Water Conservation Orders that apply to the Banks Peninsula Sub-region

Nil.

10.3 Iwi Management Plans that apply to the Banks Peninsula Sub-region

Te Rūnanga o Ngāi Tahu Freshwater Policy Statement.
10.4 Policies

Note: The following policies apply within the Wairewa catchment in addition to the region-wide policies set out in Section 4 of this Plan.

Improving Water Quality

10.4.1 Enhance the cultural values of Ngāi Tahu, recreation and amenity values and the ecological health and water quality in the Wairewa catchment by:

(a) excluding stock from the bed and riparian margins of the Ōkana, Ōkuti, and Takiritawai rivers, their tributaries, and the lake within the Valley Floor Area, in order to reduce the risk of bank erosion and collapse and avoid animal effluent entering water; and
(b) reducing the risk of bank erosion and collapse and the loss of soil into water through providing for bank stabilisation activities that are consistent with a Valley Floor Area River Bank Erosion Plan prepared in accordance with Schedule 24c; and
(c) encouraging the planting of appropriate native species in riparian margins where this is compatible with achieving bank stabilisation; and
(d) providing for the removal of phosphorus and sediment by diverting river flows through a wetland and/or sediment basin before entering Te Roto ō Wairewa/Lake Forsyth; and
(e) requiring discharges from community wastewater treatment systems to minimise phosphorus, and to minimise the volume of wastewater; and
(f) preventing inundation of on-site wastewater treatment systems from floodwaters in flood-prone areas; and
(g) maintaining low levels of nitrate-nitrogen and ammonia concentrations in rivers to meet the limits in Table 10(d).

10.4.2 Improve water quality in Te Roto ō Wairewa/Lake Forsyth by achieving the targets in Table 10(e) and Table 10(f) by 2030.

Flood Management

10.4.3 Improve the flood-carrying capacity of the Ōkana, Ōkuti, and Takiritawai rivers and their tributaries and avoid activities in the beds or margins of these rivers or their tributaries which may significantly reduce their flood carrying capacity.

Cultural Significance of Te Roto ō Wairewa/Lake Forsyth

10.4.4 Recognise the cultural significance of Te Roto ō Wairewa/Lake Forsyth to Ngāi Tahu and its status as a customary lake and area of statutory acknowledgement under the Ngāi Tahu Claims Settlement Act 1998; and promote the restoration of the lake and its margins for customary uses.

Te Roto ō Wairewa / Lake Forsyth

10.4.5 Recognise and provide for the cultural values of Ngāi Tahu and customary uses of Te Roto ō Wairewa / Lake Forsyth, and enhance the ecological health of the lake, while maintaining flood control and land drainage functions by:
(a) reducing the sediment and phosphorus load entering the lake; and
(b) allowing activities that are for the purpose of investigating legacy phosphorus issues in the lake and that facilitate restoration of the lake; and
(c) providing for the artificial opening and closing of the lake.

**Lyttelton Port Recovery**

10.4.6 The recovery of Lyttelton Port is provided for by expediting activities associated with the repair, rebuild and reconfiguration of the Port, while managing the effects on the environment and ensuring the integrated management of Whakaraupō/Lyttelton Harbour.

**10.5 Rules**

*Note:* For all activities in or near waterways, refer also to requirements and restrictions under the Canterbury Regional Council Flood Protection and Drainage Bylaw 2013.

**Bank Erosion and Flood Management**

*Note:* Despite Rules 10.5.1 and 10.5.2, any activity classified as a permitted activity by a Rule in Section 5 of this plan is permitted in the Valley Floor Area unless it is being carried out for the primary purpose of reducing bank erosion and collapse, in which case Rules 10.5.1 and 10.5.2 apply.

10.5.1 Within the Valley Floor Area, the use of land in the riparian margin or the disturbance of the bed and banks of the Ōkana, Ōkuti and Takiritawai rivers and their tributaries, Te Roto ō Wairewa/Lake Forsyth, that is for the purpose of reducing bank erosion and collapse and that includes

(a) planting or removal of vegetation; or
(b) installation, maintenance, use and removal of a structure; or
(c) installation, maintenance, use and removal of cables or wires and associated support structures; or
(d) earthworks, including excavation; or
(e) diversion of water; or
(f) the incidental discharge of sediment-laden water into surface water, or into or onto land in circumstances where it may enter surface water; or
(g) deposition of substances on, in or under the bed of a lake or river

is a restricted discretionary activity, provided the following condition is met:

1. A Valley Floor Area River Bank Erosion Plan has been prepared in accordance with Schedule 24c and is submitted with the application for resource consent.

_The exercise of discretion is restricted to the following matters:_

1. The content and adequacy of the Valley Floor Area River Bank Erosion Plan; and
2. The content and characteristics of any deposited material; and
3. The species of any plant to be introduced planted or removed; and
4. Effects on water quality, sources of human or animal drinking-water, aquatic ecosystems, inanga spawning habitat the spawning habitat of other fish, and the timing of the activity; and
5. Effects on mahinga kai or sites of importance to Ngāi Tahu; and
6. Effects on the flood carrying capacity of the river; and
7. Effects on fish passage; and
8. Effects on lawfully established structures and access to those structures; and
9. Effects on flood protection vegetation; and
10. Effects on the stability of river banks upstream and downstream of the activity; and
11. The potential benefits of the activity to the applicant, the community and the environment.

10.5.2 Within the Valley Floor Area, the use of land in the riparian margin or the disturbance of the bed and banks of the Ōkana, Ōkuti and Takiritawai rivers and their tributaries, or Te Roto ō Wairewa/Lake Forsyth, that is for the purpose of reducing bank erosion and collapse and that includes
(a) planting or removal of vegetation; or
(b) installation, maintenance, use and removal of a structure; or
(c) installation, maintenance, use and removal of cables or wires and associated support structures; or
(d) earthworks, including excavation; or
(e) diversion of water; or
(f) the incidental discharge of sediment-laden water into surface water, or into or onto land in circumstances where it may enter surface water; or
(g) deposition of substances on, in or under the bed of a lake or river and that does not meet the condition of Rule 10.5.2 is a non-complying activity.

Stock Exclusion

Note: Within the Wairewa catchment, and excluding the Valley Floor Area, Rules 5.68, 5.68B, 5.69, 5.70 and 5.71 apply.

10.5.3 Until 1 January 2020, within the Valley Floor Area, the use and disturbance of the bed (including the banks) of the Ōkana, Ōkuti, and Takiritawai rivers and their tributaries, or of Te Roto ō Wairewa/Lake Forsyth by stock, and any associated discharge to surface water is subject to Rules 5.68, 5.68B, 5.69, 5.70 and 5.71.

10.5.4 Except as provided for in Rules 10.5.5 to 10.5.7, from 1 January 2020, within the Valley Floor Area, the use and disturbance of the bed (including the banks) and the riparian margin of the Ōkana, Ōkuti, and Takiritawai rivers and their tributaries and of Te Roto ō Wairewa/Lake Forsyth by all stock, and any associated discharge to surface water is a prohibited activity.

10.5.5 From 1 January 2020, within the Valley Floor Area, the use and disturbance of the riparian margin of the Ōkana, Ōkuti, and Takiritawai Rivers and their tributaries and of Te Roto ō Wairewa/Lake Forsyth by sheep is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:
1. Effects on the stability of river banks and erosion protection works; and
2. Effects on flood protection and riparian vegetation; and
3. Effects on water quality, sources of human or animal drinking-water aquatic ecosystems, inanga spawning habitat, the spawning habitat of other fish, and the timing of the activity; and
4. Effects on lawfully established structures or defences against water; and
5. The intensity, timing and duration of grazing; and
6. The positive benefits of the activity for controlling weeds; and
7. Effects on Ngāi Tahu cultural values and mahinga kai; and
8. The positive benefits of any proposed river bank stabilisation and erosion protection works.

10.5.6 Within the Valley Floor Area where, prior to 20 April 2016, a permanent barrier, including fencing, has been established within the riparian margin no closer than 2 metres from the bed of a lake or river, and that barrier is maintained so that stock (excluding sheep) cannot pass through it, the use and disturbance of the riparian margin of the Ōkana, Ōkuti and Takiritawai Rivers and their tributaries and Te Roto ō Wairewa/Lake Forsyth by stock on the landward side of that barrier is a permitted activity.

10.5.7 Within the Valley Floor Area where, prior to 20 April 2016, permanent post and wire fencing has been established within the riparian margin and that fence is maintained, the use and disturbance of the riparian margin of the Ōkana, Ōkuti, and Takiritawai Rivers and their tributaries and of Te Roto ō Wairewa/Lake Forsyth by sheep is a permitted activity provided that there is no evident damage to riparian planting and the riparian margin on the river side of the fence.

Te Roto ō Wairewa/Lake Forsyth - Management and Investigations

Notes:
1 The Department of Conservation manages the bed of Lake Forsyth/Te Roto ō Wairewa under the Conservation Act (1987) and should be consulted prior to undertaking any investigations in the lake bed to determine if authorisation is required under that Act.
2 It is expected that any person carrying out an activity in accordance with Rule 10.5.7 would consult with Wairewa Rūnanga before undertaking investigations.

10.5.8 Within the Valley Floor Area, the use of land and the disturbance of the bed and riparian margin of a river or lake to construct, maintain or use a sediment basin and/or wetland, and the associated deposition of substances, on, in, or under the bed, and any associated taking, using or diverting of surface water, or the discharge of sediment-laden water to surface water, is a discretionary activity.

10.5.9 The disturbance of the bed of Te Roto ō Wairewa/Lake Forsyth for the purpose of investigating legacy phosphorus, and the associated deposition of substances, on, in, or under the bed, or the discharge of sediment-laden water to surface water, is a permitted activity, provided the following conditions are met:
1. The activity does not include the deposition of any substance, other than bed material, on the bed; and
2. The activity is undertaken more than 50m from any lawfully established surface water intake; or more than 150m from any lawfully established water level recorder; or closer where there is evidence that permission has been obtained from the owner of the intake or recorder; and
3. The activity and any associated equipment or materials do not obstruct or alter access to, or navigation on, the lake; and
4. The activity is not undertaken in any inanga spawning habitat during the inanga spawning season of 1 March to 1 June inclusive; and
5. The activity does not restrict the passage of migratory fish species; and
6. The activity does not take place on a site listed as an archaeological site on the New Zealand Archaeological Association Site Recording Scheme website; and
7. The activity does not occur within 100m of birds which are nesting or rearing their young.

10.5.10 The disturbance of the bed Te Roto ō Wairewa/Lake Forsyth for the purpose of investigating legacy phosphorus, and the associated deposition of substances, on, in, or under the bed, or the discharge of sediment-laden water to surface water, that does not meet one or more of the conditions of Rule 10.5.9 is a discretionary activity.

10.5.11 The use of land and the disturbance of the bed and riparian margins of Te Roto ō Wairewa/Lake Forsyth for the purpose of opening or closing the lake, and the associated extraction and deposition of gravel, including the ancillary deposition of substances on the bed, the diverting of surface water, or the discharge of sediment-laden water to surface water, is a discretionary activity.

10.5.12 An activity within the areas shown on Map 10.1 as Area A or Area B, which involves any one or more of
(a) the use of land for:
   (i) the excavation of material;
   (ii) the deposition of material onto or into land or into groundwater, and any associated discharge into groundwater;
   (iii) vegetation clearance or earthworks within the riparian margin (defined for the purposes of this rule as any land within 10 metres of the bed of a river, lake or wetland boundary);
   (iv) the installation and use of building foundations;
(b) the discharge of sediment-laden water generated from earthworks into a surface waterbody, or onto or into land where it may enter a surface waterbody; and
(c) the taking of water for the purposes of dewatering or land drainage, and the associated discharge of that water into a surface waterbody, or onto or into land where it may enter a surface waterbody
is a permitted activity, provided the following conditions, as applicable, are met:
Earthworks, deposition and excavation of material

1. Erosion and sediment control measures are implemented and maintained throughout the duration of the works to minimise erosion and the discharge of sediment-laden water to surface water; or onto or into land where it may enter surface water.

2. Any material deposited into groundwater, or onto or into land within 1 metre of groundwater shall only be previous in situ material from the same location, uncontaminated fill (soil, rocks, gravels, sand, silt, clay), concrete, cement, grout, steel or timber foundation piles, or inert building materials.

3. Earthworks involving below ground soil disturbance do not occur on any area which is identified as a landfill.

4. There is no discharge of any cement, concrete, grout, or water containing cement, grout or concrete, into any surface waterbody, or beyond the property boundary.

Geotechnical investigations

5. The bore is used only for the purposes of geotechnical investigations and is decommissioned by filling with clean material and compacted or sealed at the surface to prevent contaminants entering the bore.

6. Information on location, bore logs and intended uses is submitted to the Canterbury Regional Council within 20 working days of drilling the bore.

Dewatering, sediment-laden water and land drainage

7. For Area A, the discharge is only sediment and water.

8. The taking and discharge of land drainage water and the site dewatering water onto or into land or into surface water does not result in river bed or river bank erosion.

9. The discharge shall not result in any of the following:
   (a) the production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
   (b) any conspicuous change in colour or visual clarity;
   (c) any emission of objectionable odour; or
   (d) significant adverse effects on aquatic life.

10.5.13 Within the area shown on Map 10.1, an activity in Area A or Area B which does not comply with one or more of the conditions of Rule 10.5.12, or in Area C, which involves any one or more of
   (a) the use of land for:
      (i) the excavation of material;
      (ii) the deposition of material onto or into land or into groundwater, and any associated discharge into groundwater;
      (iii) vegetation clearance or earthworks within the riparian margin (defined for the purposes of this rule as any land within 10 metres of the bed of a river, lake or wetland boundary);
      (iv) the installation and use of building foundations;
   (b) the discharge of sediment-laden water generated from earthworks into a surface waterbody, or onto or into land where it may enter a surface waterbody; and
(c) the taking of water for the purposes of dewatering or land drainage, and the associated discharge of that water into a surface waterbody, or onto or into land where it may enter a surface waterbody is a restricted discretionary activity.

The exercise of discretion is limited to the following matters:
1. For Area A or Area B, the effect of not meeting the condition or conditions of Rule 10.5.12 and any mitigation measures to minimise that effect.
2. For Area C, the nature of any contaminants present, their effects on the receiving environment and any mitigation measures to minimise those effects.

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.
### 10.6 Fresh Water Outcomes

The following tables set out the freshwater outcomes to be achieved in the Wairewa catchment by 2030. The freshwater outcomes for other areas in the Banks Peninsula Sub-region are set out in the Objectives in Section 3, and in Policies 4.1, 4.2, 4.3 and 4.4 in Section 4 of this Plan.

**Table 10(a) Freshwater Outcomes for Lake Forsyth / Wairewa Catchment Rivers to be achieved by 2030**

<table>
<thead>
<tr>
<th>River Management Unit</th>
<th>River type</th>
<th>River</th>
<th>Ecological Health Attributes</th>
<th>Periphyton Attributes</th>
<th>Siltation Attribute</th>
<th>Human Health for Recreation Attributes</th>
<th>Cultural Attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshwater Management</td>
<td>River type</td>
<td>River</td>
<td>QMCI 1,3</td>
<td>Dissolved oxygen</td>
<td>Temp</td>
<td>Chlorophyll a</td>
<td>Filamento</td>
</tr>
<tr>
<td>unit</td>
<td></td>
<td></td>
<td>(min % saturation)</td>
<td>[max] [°C]</td>
<td>[mg chl-a/m²]</td>
<td>[max cover of bed]</td>
<td>[max diameter]</td>
</tr>
<tr>
<td>Wairewa catchment</td>
<td>Banks Peninsula</td>
<td>Ōkuti River</td>
<td>Ōkana River</td>
<td>Takiritawai River</td>
<td>5</td>
<td>90%</td>
<td>20</td>
</tr>
</tbody>
</table>

1. QMCI = Quantitative macro invertebrate community index.
3. These attributes only apply to wadeable areas of wetted riverbed. For the purposes of this table, wadeable areas are defined as reaches of the river up to 600mm in depth.
**Table 10(b) Freshwater Outcomes to be achieved for Te Roto ō Wairewa / Lake Forsyth by 2030**

<table>
<thead>
<tr>
<th>Lake Type</th>
<th>Ecological health Attributes</th>
<th>Trophic Attribute</th>
<th>Visual Quality Attribute</th>
<th>Human Health for Recreation Attributes</th>
<th>Cultural Attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dissolved Oxygen (min)</td>
<td>Temp (max) [°C]</td>
<td>Lake SPI 1</td>
<td>Colour</td>
<td>Macrophytes</td>
</tr>
<tr>
<td>Coastal lake</td>
<td>Hypolimnion saturation [%]</td>
<td>Epilimnion saturation [%]</td>
<td>TL12 (max)</td>
<td>the spatial extent of native macrophyte beds is showing an increasing trend</td>
<td>Good</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>90</td>
<td>19</td>
<td>Moderate</td>
<td>5</td>
</tr>
</tbody>
</table>

2. TLI = Trophic Level Index from: Protocol for Monitoring Trophic Levels of New Zealand lakes and reservoirs (Report by Lakes Consulting, March 2000). The scale is from less than 1 (very low nutrients) to more than 7 (very high nutrients). The TLI is calculated at TLI3 (using TP, TN and Chl. a.).
10.7  Environmental Flow and Allocation Regime and Water Quality Targets and Limits

10.7.1 Environmental Flow Regime

Rules 5.123-5.125 (Minimum flows and allocation limits) and Table 10(c) apply in the Wairewa catchment.

Table 10(c) Wairewa Catchment Environmental Flow and Allocation Limits

<table>
<thead>
<tr>
<th>Surface water body</th>
<th>Minimum flow site Topo 50 Map Reference</th>
<th>Minimum flow (L/s)</th>
<th>Allocation limit (L/s)</th>
<th>Restrictions</th>
<th>Reduce take by</th>
<th>Flow rate at site (L/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ōkuti River and its tributaries</td>
<td>Ōkuti River at Kinloch Road Bridge: map reference BY24:83495-51700</td>
<td>59</td>
<td>20</td>
<td>25%</td>
<td>79</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>50%</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>Ōkana River, Takiritawai River and their tributaries</td>
<td>Ōkana River at SH75: map reference BX24:83650-54230</td>
<td>97</td>
<td>32</td>
<td>25%</td>
<td>129</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>50%</td>
<td>113</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td>97</td>
<td></td>
</tr>
</tbody>
</table>

10.7.2 Groundwater Allocation Limits

See Rule 5.128.

10.7.3 Water Quality Limits and Targets

For rivers and the lake in the Wairewa catchment, the water quality limits in Table 10(d) and the water quality limits and targets in Table 10(e) prevail over the region wide limits in Schedule 8.

The National Policy Statement for Freshwater Management 2014 defines a target as a limit to be met within a defined timeframe. Targets for Te Roto ō Wairewa / Lake Forsyth in Tables 10(e) and 10(f) are to be met by 2030.

Groundwater limits for the Forsyth / Wairewa catchment, and limits for all waterbodies in other areas in the Banks Peninsula Sub-region, are set out in Schedule 8.

Table 10(d) Water Quality Limits for Rivers in Wairewa Catchment

<table>
<thead>
<tr>
<th>Freshwater Management Unit</th>
<th>River type</th>
<th>River name and measurement location Topo 50 Map Reference</th>
<th>Nitrate-Nitrogen concentration (mg/L)</th>
<th>Ammoniacal Nitrogen concentration (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Annual median 95th percentile</td>
<td>Annual median 1 Annual maximum</td>
</tr>
<tr>
<td>Wairewa catchment</td>
<td>Banks Peninsula</td>
<td>Ōkuti River at Kinloch Road Bridge: map</td>
<td>0.2 0.5</td>
<td>0.03 0.05</td>
</tr>
</tbody>
</table>
### Table 10(e) Water Quality Limits, and Targets to be achieved by 2030, Te Roto ō Wairewa/ Lake Forsyth

<table>
<thead>
<tr>
<th>Lake type</th>
<th>Lake name and measurement location</th>
<th>Targets</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total Phosphorus concentration [mg/m³] [annual median]</td>
<td>Total Nitrogen concentration [mg/m³] [annual median]</td>
<td>Ammoniacal nitrogen concentration (mg/L)</td>
</tr>
<tr>
<td></td>
<td>Annual median</td>
<td>Annual maximum</td>
<td>Annual median¹</td>
</tr>
<tr>
<td>Coastal lake</td>
<td>Te Roto ō Wairewa/Lake Forsyth at Catons Bay: map reference BY24:78799-50315</td>
<td>50 800</td>
<td>12 60</td>
</tr>
</tbody>
</table>

1. Based on pH 8 and temperature 20°C. Compliance with the numeric attribute states should be undertaken after pH adjustment.

### Table 10(f) Total Phosphorus Load Target Te Roto ō Wairewa/ Lake Forsyth to be achieved by 2030

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual load (kg)¹</td>
<td>2,600</td>
</tr>
</tbody>
</table>

1. Annual load (kg) – means the annual load of phosphorous entering the Lake as calculated by Dr T Davie in Environment Canterbury memorandum dated 15 July 2015

### 10.8 Flow Sensitive Catchments

The following are to be applied when reading relevant policies and rules in Sections 4 and 5.
<table>
<thead>
<tr>
<th>Catchment (see Planning Maps)</th>
<th>Sensitive part of catchment</th>
<th>Monitoring site – lower boundary of catchment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipers Valley Stream (Duvauchelle)</td>
<td>Whole catchment</td>
<td>Governors Bay/Teddington Road and Allandale</td>
</tr>
<tr>
<td>Allandale Stream (Smarts Road Drain)</td>
<td>Whole catchment</td>
<td>Christchurch /Akaroa Road (State Highway 75)</td>
</tr>
<tr>
<td>French Farm Stream</td>
<td>Whole catchment</td>
<td>French Farm Valley Road recorder above Christchurch /Akaroa Road (State Highway 75)</td>
</tr>
<tr>
<td>Takamatua Stream</td>
<td>Whole catchment</td>
<td>Christchurch /Akaroa Road (State Highway 75)</td>
</tr>
<tr>
<td>Ōkuti River</td>
<td>Whole catchment</td>
<td>Kinloch Road Bridge</td>
</tr>
<tr>
<td>Ōkana River</td>
<td>Whole catchment</td>
<td>Christchurch /Akaroa Road (State Highway 75)</td>
</tr>
<tr>
<td>Pigeon Bay Stream</td>
<td>Whole catchment</td>
<td>Pigeon Bay Road</td>
</tr>
<tr>
<td>Police Stream</td>
<td>Whole catchment</td>
<td>Christchurch /Akaroa Road (State Highway 75)</td>
</tr>
</tbody>
</table>

10.9 **High Naturalness Waterbodies**

Nil.
Section 11 Selwyn - Te Waihora

The area covered by this section is shown on the map below. It includes the foothills catchment of the Waikirikiri/Selwyn River and its tributaries, the plains between the Waimakariri and Rakaia Rivers, the Halswell River/Huritini, and a number of other lowland streams and ephemeral waterways of Banks Peninsula that flow into Te Waihora/Lake Ellesmere. This section does not set flow and allocation regimes for the Rakaia and Waimakariri Rivers. These are contained in the National Water Conservation (Rakaia River) Order 1988 and the Waimakariri River Regional Plan. This section also does not apply to the taking and using of surface water from any section of the Rakaia River that is within the Little Rakaia Combined Surface and Groundwater Allocation Zone.

Te Waihora/Lake Ellesmere is a tribal taonga for Ngāi Tahu. It has long been an abundant source of mahinga kai and is also known by the name Te Kete Ika a Rākaihautū, the fish basket of Rākaihautū. The outstanding cultural significance of Te Waihora/Lake Ellesmere is recognised in the Ngāi Tahu Claims Settlement Act 1998 and the National Water Conservation (Te Waihora/Lake Ellesmere) Order 1990. Under the Ngāi Tahu Claims Settlement Act 1998, ownership of the lakebed of Te Waihora/Lake Ellesmere was returned to Te Rūnanga o Ngāi Tahu.

This section of the Plan gives priority to the outstanding values of the lake and recognises the sensitivity of Te Waihora as a receiving environment, through the careful management of activities that have a direct influence on lake health, and the relationship of Ngāi Tahu with the lake. This enables Ngāi Tahu to more effectively exercise kaitiakitanga with regard to Te Waihora.
Te Waihora/Lake Ellesmere is also recognised as a nationally significant wetland for both wildlife and wildlife viewing. It supports a rich biological environment including native and introduced species. It is regarded as an important recreational resource for New Zealanders. It is used for fishing, kayaking, motor boating, wind surfing, water and jet skiing, duck shooting, picnicking, bird watching and sightseeing.

The Selwyn Te Waihora sub-region that is addressed by this section includes a diverse range of farming, industrial and township based activities. The sub-region is of significant economic, social and cultural importance to the wider Canterbury Region and New Zealand.

Irrigation can be helpful in delivering a range of benefits at local, regional and national scales. In the last 20 years, water use, irrigation and the extent of intensive land use have increased substantially. Further irrigation development has been consented, and the implementation of this irrigation is anticipated by this section of the Plan.

The Selwyn Te Waihora sub-region is an important area for agriculture and food production which provides significant employment, both on-farm and in processing and service industries. The social and economic wellbeing of the community is reliant on the agricultural industry and it is important that it is retained so that the community can thrive.

Flows in lowland streams and the Selwyn River/Waikirikiri have decreased by 15-20 percent, there are elevated nitrate concentrations in shallow groundwater and lowland streams, and the health of Te Waihora/Lake Ellesmere has deteriorated.

There is a lag effect in the transport of nitrogen in the groundwater system of 10-30 years so some environmental and cultural health outcomes will continue to decline even with immediate action. Phosphorus from historical land use has accumulated in the lake-bed sediments of Te Waihora/Lake Ellesmere and is released into the lake when wind-induced wave action disturbs the lake sediments. This can give rise to algal blooms that impact on cultural, recreational and amenity values associated with the lake.

The overall vision, as expressed in the Zone Implementation Programme Addendum, for Te Waihora/Lake Ellesmere catchment is ‘To restore the mauri of Te Waihora while maintaining the prosperous land-based economy and thriving communities.’

Achieving the vision for Te Waihora/Lake Ellesmere and its catchment will require a sustained effort over a long period of time. A package of actions to achieve the vision for the Selwyn Te Waihora sub-region has been identified through a two year collaborative planning process with the Selwyn Waihora Zone Committee. The Selwyn Waihora Zone Implementation Programme Addendum 2013 records the full package of actions to be implemented. This sub-region section comprises the regulatory actions.

The key resulting actions included in the package are:

- Consented alpine water introduced to the catchment for additional irrigation development and is also used to replace groundwater takes, enable stream augmentation and/or managed aquifer recharge;
• Water allocation limits, to deliver ecological and cultural flows;
• New takes in over-allocated water management zones are prohibited and the volume of water allocated is reduced;
• Reducing legacy phosphorus in Te Waihora/Lake Ellesmere by 50 percent and improved management of lake-level and opening;
• Restricting the agricultural nitrogen load losses from the catchment;
• A 50 percent reduction in the catchment phosphorus load;
• Requiring all farming activities to operate at good management practice then make further improvements over time in managing nitrogen.

The package of actions is significant but it will not achieve the catchment vision. Modelling indicates that to achieve the full vision for the lake under current land management techniques would require wholesale changes in land use in the catchment which would not enable people and communities to provide for their economic and social well-being. There is however, potential for further improvement in the management of irrigation and diffuse pollution as innovation continues to develop within the agricultural sector. This will provide the opportunity for continual improvement in the health of Te Waihora/Lake Ellesmere and water bodies in the catchment over time.

This sub-region section includes policies and rules in addition to those in Sections 4 and 5 of this Plan to support the implementation of the package of actions for the catchment and to sustainably manage water resources to achieve the purpose of the Resource Management Act 1991. It does so within the scope of a regional plan and regional council functions under the Resource Management Act 1991. The objectives and strategic policies in Sections 3 and 4 of this Plan in conjunction with the Selwyn Te Waihora sub-region freshwater outcomes in Section 11.6 are the sub-region’s ‘freshwater objectives’ in accordance with the National Policy Statement: Freshwater Management 2014.

The Selwyn Te Waihora sub-region is not currently achieving all its ‘freshwater objectives’ and water quality is anticipated to get worse before it gets better as a result of lag effects. The sub-region is therefore over-allocated in accordance with the National Policy Statement: Freshwater Management 2014. In accordance with the Council’s Staged Implementation Programme this sub-region section implements Policy A2 and includes limits or targets (Section 11.7) and rules (Section 11.5) to assist with improving water quality and meet the limits or targets within the rules. This section also sets out the environmental flow regimes and allocation limits for surface and groundwater in the sub-region (Section 11.7.1 and 11.7.2) and the rules (Section 11.5) to phase out over-allocation of water in accordance with Policy B6.

11.1 Other Regional Plans that apply to the Selwyn Te Waihora Sub-region

Waimakariri River Regional Plan 2004
11.2 Water Conservation Orders that apply to the Selwyn Te Waihora Sub-region

National Water Conservation (Te Waihora/Lake Ellesmere) Order 1990

11.2A Selwyn Te Waihora Sub-region Section Definitions

For this sub-region section of the Plan the following definitions apply in addition to the definitions contained in Section 2.9.

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptive management conditions</td>
<td>means a condition or conditions on a resource consent to take groundwater that includes an annually variable volume dependent on the annually assessed state of the groundwater resource in a zone.</td>
</tr>
<tr>
<td>Augmentation</td>
<td>means the addition of water to surface water or groundwater to increase flows in Hill fed-lower and Spring fed-plains rivers.</td>
</tr>
<tr>
<td>Baseline land use</td>
<td>means the land use, or uses, comprising a farming activity or farming enterprise, that was carried on within the period between 1 July 2009 and 30 June 2013, used to determine the ‘nitrogen baseline’ as defined in Section 2.9 of this Plan; and where a discharge permit that imposes nitrogen loss limits was granted in the period 01 July 2009 – 30 June 2013, the land use associated with the discharge permit is the ‘baseline land use’.</td>
</tr>
<tr>
<td>Central Plains Water</td>
<td>means the holder of resource consents CRC061973, CRC061972, CRC062685 and CRC136234 or any variation or replacement consent.</td>
</tr>
<tr>
<td>Cultural Landscape/Values Management Area</td>
<td>means the area of land comprising the Lake Zone and River Zone identified in Section 11.8.</td>
</tr>
<tr>
<td>Halswell River/Huritini Catchment</td>
<td>means the catchment identified as the Halswell Catchment on the Planning Maps.</td>
</tr>
<tr>
<td>Selwyn Te Waihora Sub-region</td>
<td>means the catchment identified as the Selwyn Te Waihora Sub-region on the Planning Maps.</td>
</tr>
</tbody>
</table>

11.3 Iwi Management Plans that apply to the Selwyn Te Waihora Sub-region

Mahaanui Iwi Management Plan 2013
Te Waihora Joint Management Plan (Mahere Tukutahi o Te Waihora) 2005
11.4 Policies

The following policies apply in the Selwyn Te Waihora sub-region in addition to those set out in Section 4 of this Plan.

11.4.1 Manage water abstraction and discharges of contaminants within the entire Selwyn Te Waihora sub-region to avoid, remedy or mitigate adverse cumulative effects on the water quality of Te Waihora/Lake Ellesmere, rivers and shallow groundwater; and the flow of water in springs and tributaries flowing into Te Waihora/Lake Ellesmere and achieve, in combination with non-regulatory actions, the freshwater objectives and outcomes for the sub-region.

11.4.2 In recognition of the importance of the entire catchment to Ngāi Tahu, actively manage the Selwyn Te Waihora sub-region to enable Ngāi Tahu to exercise kaitiakitanga in the management of fresh water.

11.4.3 Establish and maintain a Cultural Landscape/Values Management Area that encompasses Te Waihora, its margins, wetlands, springs and tributaries to:
(a) recognise the nature, concentration, networks and significance to Ngāi Tahu of sites and values within the Area; and
(b) provide for the relationship of Ngāi Tahu with Te Waihora/Lake Ellesmere.

11.4.4 Manage the Cultural Landscape/Values Management Area:
(a) as one integrated freshwater mahinga kai system with outstanding values;
(b) to protect mahinga kai, wāhi tapu and wāhi taonga;
(c) to restore the health of Te Waihora/Lake Ellesmere; and
(d) to recognise the cultural and ecological sensitivity of the Area to discharges of contaminants and the taking and use of freshwater.

11.4.5 Recognise the value of the Te Waihora/Lake Ellesmere catchment for its recreational and amenity values.

11.4.6 Recognise and protect the wāhi tapu values associated with the Waikekewai Creek by prohibiting any new abstraction of surface water or groundwater with a direct or high stream depletion effect on Waikekewai Creek or Taumutu Creek, and phasing out existing abstraction consents as they expire.

Managing Land Use to Improve Water Quality

11.4.7 Reduce the total nitrogen load entering Te Waihora/Lake Ellesmere by restricting the losses of nitrogen from farming activities, industrial and trade processes and community sewerage systems in accordance with the target (the limit to be met over time) and limits in Tables 11(i) and 11(j).

11.4.8 Require any person discharging sewage sludge, bio-solids or treated sewage effluent into or onto land from a community wastewater system to adopt the best practicable option to
11.4.9 Allow the discharge of sewage sludge, bio-solids and treated sewage effluent into or onto land from a community wastewater system that will cumulatively result in the exceedance of the nitrogen load limit for community sewerage systems in Table 11(i) only if the exceedance is less than the nitrogen load contribution from the aggregation of on-site domestic wastewater treatment systems that would be replaced by the community wastewater system.

11.4.10 In circumstances where the treatment or discharge of sewage sludge, bio-solids and treated sewage effluent from a community wastewater system is within the Cultural Landscape/Values Management Area there shall be no direct discharge to surface water or groundwater.

11.4.11 Require any person discharging wastewater, liquid waste or sludge waste from an industrial or trade process into or onto land to adopt the best practicable option to manage the treatment and discharge of contaminants and not exceed the nitrogen load limit for industrial and trade processes in Table 11(i) unless Policy 11.4.12 applies.

11.4.12 Enable the discharge of wastewater, liquid waste or sludge waste from an industrial or trade process into or onto land which cumulatively will result in the exceedance of the nitrogen load limit for industrial and trade processes in Table 11(i) only in circumstances where the loss of nitrogen from the land, being from both the discharge and any farming activity occurring on the land, does not exceed any authorised discharge of nitrogen from the land that was occurring prior to the discharge of wastewater.

11.4.13 Reduce discharges of nitrogen, phosphorus, sediment and microbial contaminants from farming activities in the catchment by requiring farming activities to:

(a) Not exceed the nitrogen baseline where a property's nitrogen loss calculation is more than 15 kg of nitrogen per hectare per annum, unless Policy 11.4.14 applies; and

(b) Implement the good management practices set out in Schedule 24; and

(c) Implement a Farm Environment Plan prepared in accordance with Schedule 7 Part A, by 1 July 2017, if a property is greater than 10 hectares and is within the Lake Area in the Cultural Landscape/Values Management Area; and

(d) Exclude stock from drains, in addition to the regional requirements to exclude stock from lakes, rivers and wetlands.

11.4.14 Consider applications to exceed a property's nitrogen baseline where the applicant is seeking a nitrogen loss that is no greater than the maximum annual loss of nitrogen of any single 1 July to 30 June year over the 1 July 2009 to 30 June 2013 period, provided that the applicant demonstrates:

(a) That the farming system has changed or been intensified through capital investment; and

(b) That good management practices were undertaken during the 1 July 2009 to 30 June 2013 years and continue to be undertaken; and
(c) How the industry-specific percentage further reductions indicated as being likely by Policy 11.4.16(1)(b) will be achieved.

11.4.15 By 1 January 2017, further reduce discharges of nitrogen, phosphorus, sediment and microbial contaminants from farming activities in the catchment by requiring farming activities to:

(a) Implement a Farm Environment Plan, prepared in accordance with Schedule 7 Part A, where the nitrogen loss calculation for the property is greater than 15 kg per hectare per annum or the property is situated partly or wholly within a Phosphorus Sediment Risk Area as shown on the planning maps; and

(b) Where a property’s nitrogen loss calculation is greater than 15 kg of nitrogen per hectare per annum, achieve a rate of nitrogen and phosphorus loss that is consistent with good management practice for the property’s baseline land use taking into account:

(i) The type of farming activity; and
(ii) The drainage characteristics of the soil; and
(iii) The climatic conditions and topography of the property; and
(iv) The type of irrigation system used (if any); and
(v) Whether the practices set out in Schedule 24 have been fully adopted; and
(vi) The nitrogen baseline for the property and the level of any enduring reductions in nitrogen loss already achieved relative to that baseline.

11.4.16 (1) Assist with achieving the water quality limits in Section 11.7.3, being a 14% reduction in nitrogen losses across the catchment beyond those that could be reasonably anticipated by adopting good management practices, by 1 January 2022 by requiring farming activities (including farming activities within irrigation schemes) to:

(a) Implement a Farm Environment Plan prepared in accordance with Schedule 7 Part A, where a property is greater than 10 hectares; and

(b) Where a property’s nitrogen loss calculation is greater than 15 kg of nitrogen per hectare per annum, further reduce losses of nitrogen from farming activities by implementing management practices that are in the order of half-way between good management practice and maximum feasible mitigation, which means the required reduction in the losses of nitrogen from the property or farming enterprise are:

(i) 30% for dairy; or
(ii) 22% for dairy support; or
(iii) 20% for pigs; or
(iv) 5% for irrigated sheep, beef or deer; or
(v) 2% for dryland sheep and beef; or
(vi) 7% for arable; or
(vii) 5% for fruit, viticulture or vegetables; or
(viii) 0% for any other land use.

(2) If the nitrogen loss rate reductions required in Policy 11.4.16(1)(b) are unable to be achieved by 1 January 2022, any extension of time to achieve the reductions will be considered having regard to:
(a) The nitrogen baseline and the level of any enduring nitrogen loss rate reduction already achieved from that baseline; and
(b) The implications on achieving the catchment nitrogen load target in Table 11(i) by 2037; and
(c) The capital and operational costs of making nitrogen loss rate reductions and the benefit (in terms of maintaining a farming activity’s financial viability) of spreading that investment over time; and
(d) The nature, sequencing, measurability and enforceability of any steps proposed to achieve the nitrogen loss rate reductions.

11.4.17(1) Enable establishment of farming enterprises in circumstances where, for the purpose of nutrient management, the total farming activity does not exceed the aggregate of the nitrogen baselines of all the parcels of land used in the enterprise (whether or not the parcels are held in single, multiple, or common ownership).

(2) Enable disestablishment of farming enterprises, by which each parcel of land formerly used in the enterprise does not exceed either:
   (a) the individual nitrogen baseline of the land in that parcel; or
   (b) a nitrogen baseline limit to be determined so that the aggregate of the baselines of all the parcels formerly used in the enterprise is not exceeded.

11.4.18 Despite Policies 11.4.7 to 11.4.9, 11.4.11, 11.4.16 and 11.4.17, restricting farming activities and farming enterprises so that from 1 January 2037 their nitrogen loss calculations are not more than 80 kg of nitrogen per hectare per annum.

11.4.19 Irrigation schemes efficiently manage nutrient discharges, by requiring any discharge consent issued to an Irrigation Scheme described in Table 11(j), to include conditions that:
   (a) Require that the relevant Irrigation Scheme Nitrogen Limits in Table 11(j) are not exceeded; and
   (b) Where the Irrigation Scheme Nitrogen Limits in Table 11(j) are set in order to provide for a Scheme to establish or expand in area, enable the discharge of nitrogen only in proportion to the area of the Scheme that is operational; and
   (c) For land that was not irrigated prior to 1 January 2015, require the Irrigation Scheme to account for all nutrient losses from farming activities that are partly or fully supplied with water by the Scheme; and
   (d) For land that was not irrigated prior to 1 January 2015, require the irrigation scheme to:
      (i) limit the initial nitrogen loss on any dryland property converting to irrigation to the good management practice level that is appropriate for the farming system undertaken following irrigation; and
      (ii) by 1 January 2022, manage each property supplied with water, in accordance with the overall nitrogen loss rate reduction set out in Policy 11.4.16(1).
Lake, Catchment and Flow Restoration

11.4.20 Enable lake restoration activities that re-establish aquatic plants, lake margin wetlands and remove phosphorus from lake bed sediments in Te Waihora/Lake Ellesmere.

11.4.21 Enable catchment restoration activities that protect springheads, protect, establish or enhance plant riparian margins, create restore or enhance wetlands and target removal of macrophytes or fine sediment from waterways.

11.4.22 Enable managed aquifer recharge and targeted stream augmentation to assist with improvements to lowland stream flows and their ecological and cultural health where, by design, construction, and operation of any project:
(a) Adverse effects on cultural values, including those associated with unnatural mixing of water, are remedied or mitigated; and
(b) Adverse effects on the availability, quality and safety of human drinking water are avoided; and
(c) Adverse effects on fish passage are avoided or mitigated; and
(d) Inundation of existing wetlands is avoided or mitigated; and
(e) There is no net loss of significant indigenous vegetation or significant habitats of indigenous biodiversity; and
(f) Adverse effects on people, property and drainage systems from raised groundwater levels and higher flows are avoided, remedied or mitigated.

Sustainable Use of Water and Improved Flows

11.4.23 Manage groundwater and surface water together as a single resource, to ensure, in combination with the introduction of alpine water into the catchment, flows in the Selwyn River/Waikirikiri and lowland streams are improved and the allocation limits and targets in Table 11(e) are met.

11.4.24 Prohibit the allocation of surface or groundwater which may either singularly or cumulatively result in the allocation limits within Tables 11(e), 11(f) or 11(g) being exceeded.

11.4.25 Restrict the transfer of water permits within the Rakaia-Selwyn and Selwyn-Waimakariri water allocation zones to minimise the cumulative effects on flows in hill-fed and spring-fed plains rivers from the use of allocated but unused water, by requiring that:
(a) irrigation scheme shareholders within the Irrigation Scheme Area shown on the planning maps do not transfer their permits to take and use groundwater; and
(b) fifty percent of any transferred water is surrendered except where:
(i) the transferred water is to be used for a community water supply, or
(ii) the transferred water is or will, following transfer, be used for an industrial or trade process and result in a neutral or positive water balance.

11.4.26 Only reallocate water to existing resource consent holders at a rate and volume that reflects:
(a) for irrigation takes, reasonable use as calculated in accordance with Schedule 10; and
(b) for other takes, despite Policy 4.50(b)(i), an amount of water that is reasonable and demonstrates efficient use of water for the particular end use.

11.4.27 Any replacement resource consent granted to a transferor to take and use water for irrigation shall not include any water that has been transferred to another site.

11.4.28 Prior to the transfer of any existing resource consent to take and use water for irrigation to another site, if no annual volume has been applied to the resource consent, then an annual volume shall be applied in accordance with Schedule 10.

11.4.29 Until the allocation limits in Tables 11(e) are no longer exceeded, apply adaptive management conditions upon replacement of any groundwater resource consents that have previously been subject to adaptive management conditions, not less stringent than the pre-existing conditions.

11.4.30 Protect the ecological and cultural health of the Selwyn River/Waikirikiri and lowland streams by including, by way of consent review in 2025 or on all consents granted (including replacement of consents expiring prior to 31 December 2025), for surface water takes and stream-depleting groundwater takes the minimum flow and partial restrictions in Tables 11(c) and 11(d).

11.4.31 Enable the granting of new water take permits for deep groundwater in those circumstances where:
(a) the take is non-consumptive and the subsequent use of the water and an associated discharge to land results in a neutral or positive water balance; or
(b) the applicant holds a water permit to take surface water or groundwater with a direct or high stream-depletion effect for an equal or greater rate and volume than is sought from deep groundwater; and
(c) the surface water take or groundwater take with a direct or high stream-depletion effect is surrendered.

11.4.32 Prohibit in-stream damming of the full flow on the main stem of the Selwyn River/Waikirikiri and the main stem and permanently flowing tributaries of the Waiāniwaniwa River above its confluence with the Selwyn River/Waikirikiri.

11.4.33 Enable the storage of water from the Rakaia River and Waimakariri River to improve the reliability of supply of Irrigation Scheme water and support a reduction in the use of groundwater provided:
(a) A Ngāi Tahu cultural impact assessment has been undertaken; and
(b) Adverse effects on cultural values identified in the assessment are avoided, remedied or mitigated; and
(c) Adverse effects on the availability and quality of community drinking water supplies are avoided; and
(d) Adverse effects on surface water drainage are avoided or mitigated; and
(e) Inundation of existing wetlands is avoided, or mitigated through site specific design; and
(f) Adverse effects on fish passage are avoided or mitigated; and
(g) There is no net loss of significant indigenous vegetation or significant habitat of indigenous biodiversity from the inundation of river reaches; and
(h) Inundation of significant trout and salmon spawning areas is avoided or mitigated; and
(i) Infrastructure is designed to accommodate the effects of climate change.

Halswell River/Huritini Catchment Flooding and Drainage

11.4.34 To prevent any increase in inundation (excluding inundation that is caused by or results from a stormwater treatment system) of land in the Halswell River/Huritini Catchment, to ensure hydraulic neutrality the discharge to surface water of any stormwater or drainage water in the Halswell River/Huritini Catchment that is not within an area covered by a consented stormwater management plan will require specific evaluation through a resource consent process.

Earthquake Recovery

11.4.35 Until 31 December 2018, and where the site was used for residential activities as at 4 September 2010, enable within the area shown in Map 11.1, the repair of earthquake damaged land within specified thresholds as permitted activities. Beyond these thresholds, provide for land repair activities by way of a resource consent, where the adverse effects on the environment are mitigated.

11.4.36 Enable, within specified thresholds and within the area shown in Map 11.1, the repair of earthquake damaged land associated with non-residential activities as permitted activities Beyond these thresholds provide for land repair activities by way of a resource consent, where the adverse effects on the environment are mitigated.

11.4.37 Ensure a focused and expedited decision making process for landowners by requiring resource consent applications to be processed and considered without public or limited notification. In addition, ensure the social, economic, cultural and environmental well-being of communities is met by requiring adverse effects from the repair of earthquake damaged land to be mitigated through conditions of consent.

Current information, monitoring and review

11.4.38 Making decisions on the best available current information, including monitoring and periodic review of the effectiveness of the water quality limits and targets.
### 11.5 Rules

**Index to Rules**

The following index identifies regional rules that are modified by this sub-region section or where new rules are introduced.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Regional rule</th>
<th>Additions to regional rules</th>
<th>Sub-region rules that prevail over regional rules</th>
<th>New sub-region rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-site Wastewater</td>
<td>5.8</td>
<td>11.5.1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>5.9</td>
<td>11.5.2</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Offal and Farm Rubbish Pits</td>
<td>5.26, 5.28</td>
<td>11.53</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Stock Holding Areas and Animal Effluent</td>
<td>5.36</td>
<td>11.5.4</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Silage Pits and Compost</td>
<td>5.40</td>
<td>11.5.5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Nutrient Management</td>
<td>5.41-5.64</td>
<td>-</td>
<td>11.5.6 - 11.5.19</td>
<td>-</td>
</tr>
<tr>
<td>Stock Exclusion</td>
<td>5.68-5.71</td>
<td>11.5.20</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>5.68</td>
<td>11.5.21</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>5.71</td>
<td>11.5.22</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Drainage Water</td>
<td>5.77</td>
<td>11.5.23</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>5.75</td>
<td>11.5.24</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sewerage Systems</td>
<td>5.84</td>
<td>-</td>
<td>11.5.25</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>11.5.26</td>
<td>-</td>
</tr>
<tr>
<td>Industrial and Trade Wastes</td>
<td>5.91</td>
<td>11.5.27</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>5.92</td>
<td>-</td>
<td>11.5.28</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>11.5.29</td>
<td>-</td>
</tr>
<tr>
<td>Stormwater</td>
<td>5.93</td>
<td>11.5.30</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>11.5.31</td>
<td>-</td>
</tr>
<tr>
<td>Small and Community Water Takes</td>
<td>5.111</td>
<td>11.5.32</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Taking and Using Surface Water</td>
<td>5.123-5.127</td>
<td>-</td>
<td>11.5.33-11.5.37</td>
<td>-</td>
</tr>
<tr>
<td>Taking and Using Groundwater</td>
<td>5.128-5.130</td>
<td>-</td>
<td>11.5.33-11.5.37</td>
<td>-</td>
</tr>
<tr>
<td>Transfer of Water Permits</td>
<td>5.133-5.134</td>
<td>-</td>
<td>11.5.38-11.5.41</td>
<td>-</td>
</tr>
<tr>
<td>Augmenting groundwater or surface water</td>
<td>-</td>
<td>-</td>
<td>11.5.42 - 11.5.43</td>
<td>-</td>
</tr>
<tr>
<td>Dams and Damming</td>
<td>-</td>
<td>-</td>
<td>11.5.44</td>
<td>-</td>
</tr>
<tr>
<td>Vegetation in Lake and River Beds</td>
<td>5.163</td>
<td>11.5.45</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sediment Removal</td>
<td>-</td>
<td>-</td>
<td>11.5.46-11.5.47</td>
<td>-</td>
</tr>
<tr>
<td>Earthquake Recovery</td>
<td>-</td>
<td>-</td>
<td>11.5.48-11.5.53</td>
<td>-</td>
</tr>
</tbody>
</table>
On-site Wastewater

Note: Regional Rules 5.7, 5.8 and 5.9 apply in the Selwyn Te Waihora sub-region. Rules 11.5.1 and 11.5.2 apply as additions to Regional Rules 5.8 and 5.9.

11.5.1 Within the Selwyn Te Waihora sub-region Regional Rule 5.8 includes the following additional condition:

1. The discharge of wastewater from a new on-site domestic wastewater treatment system is not within the Cultural Landscape/Values Management Area.

11.5.2 Within the Selwyn Te Waihora sub-region Regional Rule 5.9 includes the following additional matter of discretion:

1. Any adverse effects on mahinga kai, wāhi tapu or wāhi taonga within the Cultural Landscape/Values Management Area.

Offal and Farm Rubbish Pits

Note: Regional Rules 5.24, 5.25, 5.26, 5.27 and 5.28 apply in the Selwyn Te Waihora sub-region. Rule 11.5.3 applies as an addition to Regional Rules 5.26 and 5.28.

11.5.3 Within the Selwyn Te Waihora sub-region Regional Rule 5.26 and 5.28 includes the following additional matter of discretion:

1. Any adverse effects on mahinga kai, wāhi tapu or wāhi taonga within the Cultural Landscape/Values Management Area.

Stock Holding Areas and Animal Effluent

Note: Regional Rules 5.31, 5.32, 5.33, 5.34, 5.35, 5.36 and 5.37 apply in the Selwyn Te Waihora sub-region. Rule 11.5.4 applies as an addition to Regional Rule 5.36.

11.5.4 Within the Selwyn Te Waihora sub-region Regional Rule 5.36 includes the following additional matter of discretion:

1. Any adverse effects on mahinga kai, wāhi tapu or wāhi taonga within the Cultural Landscape/Values Management Area.

Silage Pits and Compost

Note: Regional Rules 5.38, 5.39 and 5.40 apply in the Selwyn Te Waihora sub-region. Rule 11.5.5 applies as an addition to Regional Rule 5.40.

11.5.5 Within the Selwyn Te Waihora sub-region Regional Rule 5.40 includes the following additional matter of discretion:

1. Any adverse effects on mahinga kai, wāhi tapu or wāhi taonga within the Cultural Landscape/Values Management Area.
Nutrient Management, Sediment and Microbial Contaminants

Notes:
1. Rules 11.5.6, 11.5.7, 11.5.8, 11.5.9, 11.5.10, 11.5.11, 11.5.12, 11.5.13 and 11.5.14 prevail over Regional Rules 5.41 to 5.56A (Nutrient Management - Red, Orange and Lake Zones).
2. Rules 11.5.6 to 11.5.17 do not apply to the use of land for the disposal to land of wastewater (excluding sewage) from industrial or trade process, including livestock processing.
3. The terms “farming enterprise”, “nitrogen loss calculation” and “nitrogen baseline” are defined in Section 2.9 of this Plan.

11.5.6 Despite any of Rules 11.5.7 to 11.5.14, the use of land for a farming activity in the Selwyn Te Waihora sub-region is a permitted activity provided the following conditions are met:
   1. The land is used for the disposal of wastewater or liquid waste from an industrial or trade process and a resource consent has been granted for that discharge that limits nitrogen loss from that property; or
   2. The property is less than 10 hectares; and
   3. The nitrogen loss calculation for the property does not exceed 15 kg per hectare per annum.

11.5.7 Until 1 January 2017 the use of land for a farming activity in the Selwyn Te Waihora sub-region is a permitted activity provided the following conditions are met:
   either
   1. (a) The nitrogen loss calculation for the property does not exceed 15 kg per hectare per annum;
      or
   (b) The nitrogen loss calculation for the property does not exceed the nitrogen baseline;
      and in either case—
   2. The practices in Schedule 24 are being implemented and the information required is recorded in accordance with Schedule 24, and supplied to Canterbury Regional Council on request.

11.5.8 From 1 January 2017, the use of land for a farming activity in the Selwyn Te Waihora sub-region is a permitted activity, provided the following conditions are met:
   1. The nitrogen loss calculation for the property does not exceed 15 kg per hectare per annum; and
   2. No part of the property is located within the Phosphorus Sediment Risk Area as shown on the Planning Maps; and
   3. No part of the property is located within the Lake Area in the Cultural Landscape/Values Management Area; and
   4. The practices in Schedule 24 are being implemented and the information required is recorded in accordance with Schedule 24, and supplied to Canterbury Regional Council on request.
11.5.9 From 1 January 2017, the use of land for a farming activity in the Selwyn Te Waihora sub-region that is not a permitted activity under Rule 11.5.8 is a controlled activity, provided the following conditions are met:

1. A Farm Environment Plan has been prepared in accordance with Schedule 7 Part A; and
2. The nitrogen loss calculation for the property has not increased above either 15kg per hectare per annum or the nitrogen baseline, whichever is the greater; and
3. Land that was not irrigated prior to 1 January 2015 is not supplied with water from an Irrigation Scheme described in Table 11(j).

The CRC reserves control over the following matters:

1. The content of, compliance with and auditing of the Farm Environment Plan; and
2. Maximum allowable nitrogen and phosphorus loss rates to be applied to the property, including reductions below good management practices in accordance with Policies 11.4.16 to 11.4.18; and
3. For properties partly or wholly located in the Cultural Landscape/Values Management Area, the protection of mahinga kai, wāhi tapu and wāhi taonga, the management of waterways and drains in the Farm Environment Plan, and the cultural and ecological sensitivity of the Area to discharges of contaminants; and
4. The nitrogen load target for farming activities in Table 11(i); and
5. The potential benefits of the activity to the applicant, the community and the environment.

11.5.10 The use of land for a farming activity in the Selwyn Te Waihora sub-region that does not comply with Condition 1 of Rule 11.5.7 or Condition 2 of Rule 11.5.9 is a discretionary activity, provided the following conditions are met:

1. A Farm Environment Plan has been prepared in accordance with Schedule 7 Part A; and
2. The nitrogen loss calculation for the property is no greater than the maximum annual loss of nitrogen of any single 1 July to 30 June year over the 1 July 2009 to 30 June 2013 period; and
3. Land that was not irrigated prior to 1 January 2015 is not supplied with water from an Irrigation Scheme described in Table 11(j).

11.5.11 The use of land for a farming activity as part of a farming enterprise in the Selwyn Te Waihora sub-region is a discretionary activity, provided the following conditions are met:

1. A Farm Environment Plan for the parcels of land held in single or multiple ownership (whether or not held in common ownership) forming the farming enterprise has been prepared in accordance with Schedule 7 Part A; and
2. The aggregated nitrogen loss calculation for the parcels of land held in single or multiple ownership (whether or not held in common ownership) forming the farming enterprise has not increased above the aggregated nitrogen baseline for those parcels of land; and
3. Land that was not irrigated prior to 1 January 2015 is not supplied with water from an irrigation scheme described in Table 11(j).

11.5.12 The use of land for a farming activity or farming enterprise that does not comply with Condition 2 of Rule 11.5.7, Conditions 1 or 3 of Rule 11.5.9, Conditions 1 or 3 of Rule 11.5.10 or Conditions 1 or 3 of Rule 11.5.11 is a non-complying activity.

11.5.13 The use of land for a farming activity or farming enterprise that does not comply with Condition 2 of Rule 11.5.10 or Condition 2 of Rule 11.5.11 is a prohibited activity.

11.5.14 From 1 January 2037, the use of land for a farming activity or farming enterprise where the nitrogen loss calculation for the property is greater than 80 kg per hectare per annum is a prohibited activity.

**Irrigation Schemes**

Note: Regional Rule 5.61 applies in the Selwyn Te Waihora sub-region, in which Rules 11.5.15 and 11.5.16 prevail over Regional Rules 5.60 and 5.62. Rule 11.5.17 is a new rule.

11.5.15 Despite any of Rules 11.5.6 to 11.5.14, the use of land for a farming activity in the Selwyn Te Waihora sub-region is a permitted activity provided the following conditions are met:

1. The property is irrigated with water from an Irrigation Scheme and the discharge is a permitted activity under Regional Rule 5.61; or
2. The property is irrigated with water from an Irrigation Scheme and the Irrigation Scheme holds a discharge consent under Rule 11.5.16 or 11.5.17 or Rule 5.62.

11.5.16 The discharge of nitrogen, phosphorus, sediment or microbial contaminants onto or into land in circumstances that may result in a contaminant entering water that would otherwise contravene s15(1) of the RMA, in the Selwyn Te Waihora, is a discretionary activity, provided the following conditions are met:

1. The applicant is an Irrigation Scheme; and
2. If the Irrigation Scheme is described in Table 11(j) the nitrogen loss calculation for land that was not irrigated (other than by effluent) prior to 1 January 2015 will not exceed the Irrigation Scheme Nitrogen Limits in Table 11(j).

11.5.17 The discharge of nitrogen, phosphorus, sediment or microbial contaminants onto or into land in circumstances that may result in a contaminant entering water that would otherwise contravene s15(1) of the RMA, in the Selwyn Te Waihora catchment, and meets condition 1 of Rule 11.5.16 but does not meet condition 2 of Rule 11.5.16, is a non-complying activity.

Note: The targets and load limits in Table 11(i) apply to all land irrigated prior to 1 January 2015. These targets and load limits continue to apply even if the land is subsequently irrigated (either wholly or partly) with water from an irrigation scheme.
The load limits in Table 11(j) apply only to land that was not irrigated prior to 1 January 2015.

Rules 11.5.6 to 11.5.14 apply to farming activities that are not authorised under Rule 11.5.15.

Incidental Discharges of Nutrients, Sediment and Microbial Contaminants

Note: Rules 11.5.18 and 11.5.19 prevail over Regional Rules 5.63 and 5.64

11.5.18 Within the Selwyn Te Waihora sub-region, the discharge of nitrogen, phosphorus, sediment or microbial contaminants 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 11.5.6 to Rule 11.5.14.

11.5.19 Within the Selwyn Te Waihora sub-region, the discharge of nitrogen, phosphorus, sediment and microbial contaminants 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 comply with Rule 11.5.18 is a non-complying activity.

Stock Exclusion

Notes:
1. Regional Rules 5.68, 5.69, 5.70 and 5.71 (Stock Exclusion) apply in the Selwyn Te Waihora sub-region. Rules 11.5.20, 11.5.21, and 11.5.22 apply as additions to Regional Rules 5.68, 5.69, 5.70 and 5.71.
2. For all activities in or near waterways, refer also to the requirements and restrictions under the Canterbury Flood Protection and Drainage Bylaw 2013.

11.5.20 Within the Selwyn Te Waihora sub-region any reference in Rules 5.68, 5.69, 5.70 and 5.71 to the bed of a lake, river or wetland also includes a drain, but does not include any subsurface drain or drain that does not have surface water in it.

11.5.21 Within the Selwyn Te Waihora sub-region Regional Rule 5.68 includes the following additional condition:

1. The activity is not within the Cultural Landscape/Values Management Area.

11.5.22 Within the Selwyn Te Waihora sub-region Regional Rule 5.71 includes the following additional condition:

1. The activity is within the Cultural Landscape/Values Management Area.
Drainage Water

Note: Regional Rules 5.76, 5.78, 5.79 and 5.80 apply in the Selwyn Te Waihora sub-region. Rules 11.5.23 and 11.5.24 apply as additions to Regional Rules 5.75 and 5.77.

11.5.23 Within the Selwyn Te Waihora sub-region Regional Rule 5.77 includes the following additional condition:

1. Any discharge that commences after 1 May 2015 is not within the Halswell River/Huritini Catchment.

11.5.24 Within the Selwyn Waihora sub-region Regional Rule 5.75 includes the following additional condition:

1. Any discharge that commences after 1 May 2015 is not within the Halswell River/Huritini Catchment.

Sewerage Systems

Note: Regional Rules 5.84, 5.85, 5.86, 5.87 and 5.88 apply in the Selwyn Te Waihora sub-region. Rule 11.5.25 prevails over Regional Rule 5.84. Rule 11.5.26 is a new rule.

11.5.25 Within the Selwyn Te Waihora sub-region the use of land for a community wastewater treatment system and the discharge of sewerage sludge, bio-solids and treated sewerage effluent from a community wastewater treatment system and the discharge of sewerage 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 is a discretionary activity where the following condition are met:

1. The discharge, in combination with all lawfully established existing community wastewater treatment system discharges, does not exceed the nitrogen load limit in Table 11(i) for community sewerage systems; and
2. The best practicable option is used for the treatment and discharge.

11.5.26 Within the Selwyn Te Waihora sub-region the use of land for a community wastewater treatment system and the discharge of sewerage sludge, bio-solids and treated sewerage effluent from a community wastewater treatment system and the discharge of sewerage 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 in the Selwyn Te Waihora sub-region that does not comply with Rule 11.5.25 is a non-complying activity.

Industrial and Trade Waste

Note: Regional Rules 5.91 and 5.92 apply in the Selwyn Te Waihora sub-region. Rule 11.5.27 applies as an addition to Regional Rule 5.91. Rule 11.5.28 prevails over Regional Rule 5.92. Rule 11.5.29 is a new rule.

11.5.27 Within the Selwyn Te Waihora sub-region Regional Rule 5.91 includes the following additional condition:
1. The discharge is not within the Cultural Landscape/Values Management Area.

11.5.28 Despite Rules 11.5.6 to 11.5.17, within the Selwyn Te Waihora sub-region the discharge of any wastewater, liquid waste or sludge waste from an industrial or trade process, including livestock processing, excluding sewage, into or onto land, or into or onto land in circumstances where a contaminant may enter water is a discretionary activity where the following conditions are met:

1. The discharge, in combination with all lawfully established existing discharges, does not exceed the nitrogen load limit in Table 11(i) for industrial or trade processes; or
2. The nitrogen loss from the discharge, in combination with any other activity, including farming, occurring on the land, is less than any authorised nitrogen loss from the activity that is being replaced; and
3. For all discharges, the best practicable option is used for the treatment and discharge.

11.5.29 Within the Selwyn Te Waihora sub-region the discharge of any wastewater, liquid waste or sludge waste from an industrial or trade process, including livestock processing, excluding sewerage, 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 11.5.28 is a non-complying activity.

**Stormwater**

*Note: Regional Rules 5.93, 5.94, 5.95, 5.96 and 5.97 apply in the Selwyn Te Waihora sub-region. Rule 11.5.30 applies as an addition to Regional Rules 5.93, 5.95 and 5.96. Rule 11.5.31 is a new rule.*

11.5.30 Within the Selwyn Te Waihora sub-region Regional Rule 5.93 includes the following additional matter of discretion:

1. Any adverse effects on mahinga kai, wāhi tapu or wāhi taonga within the Cultural Landscape/Values Management Area.

11.5.31 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, wetland or artificial watercourse in the Halswell River/Huritini catchment that is not authorised by a consented stormwater management plan and the discharge did not occur before 5 December 2013, is a discretionary activity.

**Small and Community Water Takes**

*Note: Regional Rules 5.111, 5.112, 5.113, 5.114 and 5.115 apply in the Selwyn Te Waihora sub-region. Rule 11.5.32 applies as an exception to Rule 5.111.*

11.5.32 Within the Selwyn Te Waihora sub-region Rule 5.111 does not apply within the Rakaia-Selwyn and Selwyn-Waimakariri Combined Surface and Groundwater Allocation Zones east of State Highway 1.
Taking and Using Surface Water and Groundwater

Notes:

1. Regional Rules 5.126, 5.127, 5.131, 5.132 (non-consumptive taking and use of surface water and groundwater) apply in the Selwyn Te Waihora sub-region. Rules 11.5.33, 11.5.34, 11.5.35, 11.5.36 and 11.5.37 prevail over Regional Rules 5.123, 5.124, 5.125, 5.128, 5.129 and 5.130.

2. The taking and using of surface water from the Rakaia River that does not comply with the region-wide rules of this Plan is subject to the rules in Section 12 of this Plan and any requirements of the National Water Conservation (Rakaia River) Order 1988. The taking and using of surface water or hydraulically connected groundwater within the area to which the Waimakariri River Regional Plan applies, is subject only to the rules and provisions of that Plan.

11.5.33 The taking and using of surface water from a river, lake or wetland or groundwater within the Selwyn Te Waihora sub-region and including all areas within the Little Rakaia Combined Surface and Groundwater Allocation Zone is a restricted discretionary activity, provided the following conditions are met:

1. The proposed take in combination with all existing resource consents, does not result in any exceedance of any of the allocation limits in Table 11(e), 11(f) and 11(g); or

2. The proposed take is the replacement of a lawfully established surface water or groundwater take for which an application to continue the activity has been made under s124 of the RMA and there is no increase in the proposed rate of take or annual volume; and

3. A surface water take or a groundwater take with a direct or high degree of stream depletion effect greater than 5 L/s determined in accordance with Schedule 9, complies with the minimum flow and restriction regime in Tables 11(c) and 11(d); and

4. Unless it is associated with the artificial opening of a hāpua, lagoon or coastal lake to the sea, the take is not from a wetland or hāpua; and

5. For the renewal of an existing irrigation take the annual volume and maximum rate of take has been calculated in accordance with Schedule 10; and

6. For other takes, despite Policy 4.50(b)(i), an amount of water that is reasonable and demonstrates efficient use of water for the particular end use; and

7. The take is not a surface water or groundwater take with a direct or high degree of stream depletion effect greater than 5 L/s, determined in accordance with Schedule 9, within the Waikewai Creek and Taumutu Creek catchments; and

8. The bore interference effects are acceptable, as determined in accordance with Schedule 12.

The exercise of discretion is restricted to the following matters:

1. The rate, volume and timing of the water take, including the particular demand characteristics of any rotational farming system; and

2. For new resource consent applications that are not a renewal of an existing consent, whether the amount of water to be taken and used is reasonable and demonstrates
efficient use of water for the proposed use. In assessing reasonable use for irrigation purposes, the CRC will consider the matters set out in Schedule 10; and

3. The availability and practicality of using alternative supplies of water; and

4. The application efficiency where water is to be taken and used for irrigation; and

5. The proximity and actual or potential adverse environmental effects of water use on any significant indigenous biodiversity and adjacent dryland habitat; and

6. For surface water takes:
   (i) the effects the take has on any other authorised takes or diversions; and
   (ii) whether and how fish are prevented from entering the water intake; and
   (iii) the provisions of any relevant Water Conservation Order; and

7. For groundwater takes:
   (i) the maximum rate of take, including the capacity of the bore or bore field to achieve that rate, and the rate required to service any irrigation system; and
   (ii) the actual or potential adverse environmental effects the take has on any other authorised takes, including interference effects as set out in Schedule 12; and
   (iii) whether salt-water intrusion into the aquifer or landward movement of the salt water/fresh water interface is prevented; and
   (iv) the protection of groundwater sources, including prevention of backflow of water and contaminants; and
   (v) the features of any adaptive management conditions on new consents or replacement consents where the consent being replaced is subject to adaptive management conditions; and

8. Any adverse effects on mahinga kai, wāhi tapu or wāhi taonga within the Cultural Landscape/Values Management Area.

11.5.34 The taking and using of groundwater within the Selwyn Te Waihora sub-region and including all areas within the Little Rakaia Combined Surface and Groundwater Allocation Zone that will substitute an existing surface water or groundwater permit with a direct or high stream depletion effect is a restricted discretionary activity provided the following conditions are met:

1. The groundwater take will be abstracted from the same property as the existing resource consent and there is no increase in the proposed rate of take or annual volume; and

2. If the abstraction is from an up-plains location, it is below 50 m deep; or

3. If the abstraction is from a down-plains location, it is below 30 m deep or from the second confined aquifer; and

4. For an irrigation take the annual volume and maximum rate of take sought has been calculated in accordance with Schedule 10; and

5. The bore interference effects are acceptable, as determined in accordance with Schedule 12.

The exercise of discretion is restricted to the following matters:

1. The maximum rate of take, including the capacity of the bore or bore field to achieve that rate, and the rate required to service any irrigation system; and
2. Whether the amount of water to be taken and used is reasonable and demonstrates efficient use of water for the proposed use assessed in accordance with Schedule 10; and
3. The effects the take has on any other authorised abstraction, including interference effects as indicated by a Step Test undertaken in accordance with the requirements of Schedule 11 and well interference calculated in accordance with the method in Schedule 12; and
4. Where the take is less than 2 km from the coast, whether salt-water intrusion into the aquifer or landward movement of the salt water/fresh water interface is prevented; and
5. The protection of groundwater sources, including the prevention of backflow of water or contaminants; and
6. Any adverse effects on mahinga kai, wāhi tapu or wāhi taonga within the Cultural Landscape/Values Management Area.

11.5.35 Despite Rule 11.5.33 the taking and use of surface water or groundwater for the sole purpose of augmenting groundwater or surface water to increase stream flows in the Selwyn Te Waihora sub-region and including all areas within the Little Rakaia Combined Surface and Groundwater Allocation Zone is a discretionary activity.

11.5.36 The taking and use of surface water from a river, lake or wetland or groundwater within the Selwyn Te Waihora sub-region and including all areas within the Little Rakaia Combined Surface and Groundwater Allocation Zone that does not meet Conditions 4, 6, 7 or 8 in Rule 11.5.33 or does not comply with Rule 11.5.34 is a non-complying activity.

11.5.37 The taking and use of surface water from a river, lake or wetland or groundwater within the Selwyn Te Waihora sub-region and including all areas within the Little Rakaia Combined Surface and Groundwater Allocation Zone that does not meet Conditions 1, 2, 3, or 5 of Rule 11.5.33 is a prohibited activity.

Transfer of Water Permits

Note: Rules 11.5.38, Rule 11.5.39, 11.5.40 and 11.5.41 prevail over Regional Rules 5.133 and 5.134.

11.5.38 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 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 within the Selwyn Te Waihora sub-region, is to be considered as if it 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; and
2. In the case of surface water, the point of take remains within the same surface water catchment and the take complies with the minimum flow and restriction regime in Tables 11(c) and 11(d); or
3. In the case of groundwater:
   (a) the point of take is within the same groundwater allocation zone or combined surface and groundwater allocation zone; and
   (b) the bore interference effects as set out in Schedule 12 are acceptable; and
   (c) the transfer is not from a person who holds shares in an Irrigation Scheme in the Irrigation Scheme Area as shown on the Planning Maps; and
   (d) in addition for stream-depleting groundwater takes:
      (i) the transfer is within the same surface water catchment; and
      (ii) the take complies with the minimum flow and restriction regime in Table 11(c) and 11(d); and
      (iii) the stream depletion effect is no greater in the transferred location than in the original location unless a volume of surface water allocation from the affected water body that is at least equivalent to the additional volume of stream depletion is surrendered, for at least the duration of the transferred take; and

4. If the transfer is within the Rakaia-Selwyn or Selwyn-Waimakariri Combined Surface and Groundwater Allocation Zones 50 percent of the volume of transferred water is to be surrendered unless:
   (a) the transferred water is to be used for a community water supply; or
   (b) the transferred water is used, or will following transfer be used, for an industrial or trade process and result in a neutral or positive water balance.

**The exercise of discretion is restricted 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 of take and annual volume in the case of a partial transfer; and
2. The appropriateness of conditions, including conditions on minimum flow, annual volume and other restrictions to mitigate effects; and
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; and
4. The efficiency of the exercise of the resource consent; and
5. The reduction in the rate of take in times of low flow; and
6. The method of preventing fish from entering any water intake.

**11.5.39** Despite Rule 11.5.38, the temporary or permanent site-to-site transfer, in whole or in part, of a water permit to take or use water for gravel extraction (and ancillary activities) is to be considered as if it is a discretionary activity, provided the following condition is met:

1. The water continues to be used only for gravel extraction and ancillary activities.

**11.5.40** Despite Rule 11.5.38, the permanent transfer, in whole or in part, (other than to the new owner of the site at which the water is abstracted 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 in the Selwyn Te Waihora sub-region, is to be considered as if it is a discretionary activity provided the following conditions are met:
1. The transferred water is used, or will following transfer be used for community water supply; or
2. The transferred water is used, or will following transfer be used, for an industrial or trade process and result in a neutral or positive water balance.

11.5.41 The transfer, in whole or in part, of a water permit to take or use surface water or groundwater in the Selwyn Te Waihora sub-region that does not meet the conditions of Rule 11.5.38, Rule 11.5.39 or Rule 11.5.40 must not under section 136 of the RMA be approved, in the same way as if it were a prohibited activity.

Augmenting Groundwater or Surface Water

Notes:
1. For all activities in or near waterways, refer also to the Canterbury Flood Protection and Drainage Bylaw 2013
2. Rules 11.5.42 and 11.5.43 are new rules.

11.5.42 The discharge of water into water or onto or into land for the purpose of augmenting groundwater or surface water to increase stream flows within the Selwyn Te Waihora sub-region is a restricted discretionary activity, provided the following conditions are met:

1. The discharge is part of a trial for investigative purposes and for a duration not exceeding 5 years; and
2. The activity does not take place on a site described as an archaeological site; and
3. The discharge is not within a Group or Community Drinking Water Protection Zone as set out in Schedule 1; and
4. The discharge is not within 100 m of any well used to supply potable water; and
5. The discharge is for restoring flows for ecological or cultural benefit.

The exercise of discretion is restricted to the following matters:

1. The location, method and timing of the discharge to groundwater or surface water; and
2. The adequacy of the scheme design, construction, operation, monitoring, reporting and management processes; and
3. The appropriateness of integration with existing or planned infrastructure and water conveyance systems; and
4. Any adverse effects on people and property from raised groundwater levels and higher flows; and
5. Any adverse effects on water quality in the receiving aquifer or river, significant habitats of indigenous flora and fauna; and
6. Any adverse effects on sites or values of importance to Ngāi Tahu from moving water from one catchment or waterbody to another; and
7. The potential benefits of the activity to the community and the environment; and
8. Any adverse effects of the discharge on fish passage or existing wetlands.
11.5.43 The discharge of water into water or onto or into land for the purpose of augmenting groundwater or surface water to increase stream flows in the Selwyn Te Waihora sub-region that does not meet one or more of the conditions of Rule 11.5.42 is a discretionary activity.

Dams and Damming

Note: Regional Rules 5.154, 5.155, 5.156, 5.157 and 5.158 apply in the Selwyn Te Waihora sub-region. Rule 11.5.44 is a new rule.

11.5.44 Any damming commenced after 1 February 2014 of the full flow of water within the bed of the main stem, of the north branch, or of any tributary of the north branch of the Selwyn River/Waikirikiri between the mouth at or about map reference BX23: 5559-5636 to BW21: 9667-9703 and BX21:9752-8937, or within the bed of the main stem and permanently flowing tributaries of the Waiāniwaniwa River above the confluence with the Selwyn River/Waikirikiri at or about map reference BX22: 2494-7347 to BW21:1130-9083 is a prohibited activity.

Vegetation in Lake and River Beds

Note: Regional Rules 5.163, 5.164, 5.165, and 5.166 apply in the Selwyn Te Waihora sub-region Rule 11.5.45 applies as an addition to Regional Rule 5.163.

11.5.45 Within the Selwyn Te Waihora sub-region Regional Rule 5.163 includes the following additional condition:

1. Where the activity involves the removal of existing vegetation by or on behalf of a local authority within the Cultural Landscape/Values Management Area the activity is undertaken in accordance with a drainage management plan that identifies:
   (a) The frequency, extent and characteristics of the works to be authorised by the Plan; and
   (b) The identification and avoidance or mitigation of all effects on mahinga kai, wāhi tapu and wāhi taonga.

Sediment Removal from Rivers and Streams

Notes:

1. For all activities in or near waterways, refer also to the requirements and restrictions under the Canterbury Flood Protection and Drainage Bylaw 2013.

2. Rules 11.5.46 and 11.5.47 are new rules.

11.5.46 Within the Selwyn Te Waihora sub-region disturbing the bed of a river to remove fine sediment less than 2 mm in diameter for the sole purpose of habitat restoration and ancillary taking and discharging of water is a restricted discretionary activity provided the following conditions are met:

1. A management plan has been prepared and submitted to the Canterbury Regional Council that includes:
   (a) the location and method of sediment removal, management and disposal;
(b) methods of erosion control;
(c) an inventory of sensitive ecological habitats and species; and
(d) an assessment of the environmental risks including effects downstream, and how adverse effects will be avoided or mitigated; and

2. The activity does not occur when the river is at or below the minimum flow in Table 11(c); or
3. Any abstracted water is returned to the river not more than 250 m from the point of take following removal of fine sediment; and
4. The maximum instantaneous rate of water abstraction shall not exceed 50 percent of the flow in the stream at the site being remediated; and
5. The activity does not take place on a site described as an archaeological site on the New Zealand Archaeological Association Site Recording Scheme website; and
6. The activity is not undertaken within a Group or Community Drinking Water Protection Zone as described in Schedule 1; and
7. The activity is undertaken more than 50 m from any lawfully established surface water intake.

The exercise of discretion is restricted to the following matters:
1. The location, method and timing of sediment removal with respect to the life stage and habitat of sensitive ecological communities including fish and invertebrates; and
2. The adverse effects of the activity on downstream water quality, flows and significant habitats of indigenous fauna and flora; and
3. The effect of the activity on reliability for any authorised surface water take; and
4. The volume and rate at which water is abstracted and returned to the river; and
5. The adverse effects of the activity on sites used for freshwater bathing in Schedule 6; and
6. Any adverse effects on mahinga kai, wāhi tapu or wāhi taonga within the Cultural Landscape/Values Management Area; and
7. The benefits of the activity to the community and the environment.

11.5.47 Within the Selwyn Te Waihora sub-region disturbing the bed of a river to remove fine sediment less than 2 mm in diameter for the sole purpose of habitat restoration and ancillary taking and discharging of water that does not meet one or more of the conditions in Rule 11.5.46 is a discretionary activity.

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 New Zealand Historic Places Trust to modify, damage or destroy any archaeological site, whether recorded or not in the New Zealand Archaeological Association Site Recording Scheme website.
Earthquake Recovery

Notes:
1. For all activities in or near waterways, refer also to the requirements and restrictions under the Canterbury Flood Protection and Drainage Bylaw 2013.

2. In addition to this Plan, and any applicable district plan, any activity that may modify, damage, or destroy any pre 1900 archaeological site is also subject to the archaeological authority process under the Historic Places Act 1993. An archaeological authority is required by that Act to modify, damage, or destroy any archaeological site, whether or not it is recorded in the NZAA Site Recording Scheme website.

11.5.48 Prior to 31 December 2018, the repair of earthquake damaged land located within the area shown on area shown on Map 11.1, and located outside the High Soil Erosion Risk Areas, and which is carried out on an individual site used for residential activities, but excluding any residential property zoned “red” by the Canterbury Earthquake Recovery Authority, which involves any one or more of:
(a) the use of land for:
   (i) the excavation of material over the unconfined, semi-confined or coastal confined aquifer system;
   (ii) the deposition of material into land or into groundwater, and any associated discharge into groundwater;
   (iii) vegetation clearance or earthworks within the riparian margin (defined for the purposes of this rule as any land within 10 metres of the bed of a river, lake or wetland boundary);
   (iv) the installation, maintenance, and use of a bore for geotechnical investigation or monitoring purposes;
   (v) the installation and construction of building foundations;
(b) the discharge of sediment-laden water generated from earthworks into a surface waterbody, or onto or into land where it may enter a surface water body;
(c) the taking of groundwater for the purposes of dewatering or land drainage, and the associated discharge of that water into a surface water body, or onto or into land where it may enter a surface water body;

is a permitted activity, provided the following conditions, as applicable, are met:

General Conditions
1. The extent and duration of any works is limited to only that necessary to repair the land or building foundations.
2. The works (excluding any discharges associated with the works listed above) do not occur in, the bed of any lake, river or natural wetland.

Earthworks, Excavation and Deposition of Material
3. Erosion and sediment control measures are implemented and maintained in accordance with Environment Canterbury’s Erosion and Sediment Control Guidelines for Small Sites to minimise erosion and the discharge of sediment laden water to surface water.
4. Any material deposited into land consists only of uncontaminated fill (soil, rocks, gravels, sand, silt, clay), concrete, cement, grout, concrete, steel or timber foundation piles, or inert building materials.

5. From the date this rule becomes operative, the use of land for the placement of treated timber foundation piles into confined groundwater within the Coastal Confined Aquifer System, and any discharge from those foundation piles, does not occur within a group or community drinking water supply protection area, as set out in Schedule 1 of this plan.

6. Any excavation over the coastal confined aquifer system maintains at least one metre of undisturbed material between the deepest part of the excavation and Aquifer 1.

7. No materials (other than those listed in condition (4)), vehicles or machinery (excluding clean uncontaminated equipment used for dewatering, and infrastructure installed for the purposes of land repair) are deposited into, or used within groundwater.

8. Compaction, or earthworks involving below ground soil disturbance (excluding filling), do not occur on any part of a site which is identified as a landfill.

9. There is no discharge of any cement, concrete, grout, or water containing cement, grout, or concrete, into any surface waterbody, or beyond the property boundary.

10. Where grout is deposited into land, or into groundwater, the following conditions also apply:
   (a) The volume of grout shall not exceed 80 cubic metres per site
   (b) The point of deposition into land is not within:
        (i) 20 metres of any surface water body, or 20 metres of the Coastal Marine Area, where the material is deposited into groundwater; or
        (ii) 5 metres of any surface waterbody, or 10 metres of the Coastal Marine Area, where a separation of one metre is maintained between groundwater and any deposited material.
   (c) Where grout is deposited into land via in-situ mixing:
        (i) The grout shall be mixed evenly throughout the augured soil column; and
        (ii) The percentage of grout within the area of the augured soil column shall not exceed 20%
   (d) Where grout is deposited into land using methods other than in-situ mixing, the percentage of cement in the dry grout mixture shall not exceed 30%

11. To prevent erosion, bare ground is stabilised within 10 days of any vegetation clearance or earthworks.

12. For earthworks carried out within the riparian area, in addition to conditions (3) through (11), the following conditions apply:
   (a) Vegetation used and maintained by the Canterbury Regional Council for flood or erosion control purposes is not removed.
   (b) Replanting is not of a species listed in the Biosecurity NZ Register of Unwanted Organisms or Canterbury Pest Management Strategy.
   (c) The activities do not reduce the available floodway.
   (d) The activities do not result in the destabilisation of the bank of any river, lake or natural wetland, or destabilise any existing lawfully established structures, or interfere with access to waterways for maintenance or inspection purposes.
Geotechnical Investigations
13. The bore is used only for the purposes of geotechnical investigations and is decommissioned by filling with clean material and compacted or sealed at the surface to prevent contaminants entering the bore.
14. Information on location (including bore logs and intended uses), and other relevant information is submitted to the CRC within 20 working days of drilling the bore.

Dewatering, Sediment-laden Water, and Land Drainage
15. Dewatering and land drainage discharges are not from, or discharged onto or into any potentially contaminated land.
16. The taking of groundwater for dewatering purposes does not lower the groundwater level more than 8 metres below the ground level of the site.
17. The taking and discharge of land drainage water and site dewatering water onto or into land or into surface water does not result in subsidence of the land surface, or river bed or river bank erosion.
18. The discharge of dewatering water onto or into land, or into surface water, does not result in any flooding of any neighbouring property, or result in ponding on the land surface for more than 48 hours.
19. The concentration of suspended solids in any dewatering water or sediment-laden water discharged to any surface water body does not exceed 100 grams per cubic metre.

For the purposes of Rule 11.5.48 the following definitions apply:

'Earthquake Damaged Land' means land damaged as a result of the Canterbury Earthquake Sequence that commenced on 4 September 2010.

'Residential Activities' means land zoned residential in a district plan; or land used predominantly for residential occupation as at 4 September 2010.

'Grout' means a material which consists of water and at least 20% cement, and which may also contain aggregate, inert additives or bentonite.

'Landfill' means any part of a site where solid or hazardous waste has been deposited (either lawfully or not), and which is identified as a landfill on Environment Canterbury’s Listed Land Use Register, or in the records of the relevant territorial authority.

11.5.49 The repair of earthquake damaged land which is carried out on individual sites used for residential activities which does not meet one or more of the applicable conditions of Rule 11.5.48 is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:
1. The effect of not meeting the condition or conditions of Rule 11.5.48; and
2. Mitigation measures proposed to be implemented or mitigation measures available to minimise any actual or potential environmental effect.

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.

11.5.50 The discharge of contaminants to land associated with the construction of building foundations, or the repair of earthquake damaged land, within the area shown on Map 11.1, and located outside the High Soil Erosion Risk Area, and which is carried out on any site used for non-residential activities is a permitted activity, provided the following conditions are met.

1. The extent and duration of any works is limited to only that necessary for the construction of foundations or to repair the land.

2. The discharge is only leachate from the deposition of uncontaminated fill (soil, rocks, gravels, sand, silt, clay); concrete; cement; grout; concrete, steel or timber foundation piles; or inert building materials.

3. From the date this rule becomes operative, the use of land for the placement of treated timber foundation piles into confined groundwater within the Coastal Confined Aquifer System, and any discharge from those foundation piles, does not occur within a group or community drinking water supply protection area, as set out in Schedule 1 of this plan.

4. There is no discharge of any cement, concrete, grout, or water containing cement, grout, or concrete, into any surface waterbody, or beyond the property boundary.

5. Where grout is deposited into land, or into groundwater:
   
   (a) The point of deposition into land is not within 10 metres of any surface water body, or 20 metres of the Coastal Marine Area, where the material is deposited into groundwater; or 5 metres of any surface water body, or 10 metres of the Coastal Marine Area, where a separation of one metre is maintained between groundwater and any deposited material.

   (b) Where grout is deposited into land via in-situ mixing the grout shall be mixed evenly throughout the augured soil column and the percentage of grout within the augured soil column shall not exceed 20%.

   (c) Where grout is deposited into land using methods other than in-situ mixing, the percentage of cement in the dry grout mixture shall not exceed 30%.

For the purposes of Rule 11.5.50 the following definitions apply:

'Earthquake Damaged Land' means land damaged as a result of the Canterbury Earthquake Sequence that commenced on 4 September 2010.

'Non-Residential Activities’ means any building used for purposes other than residential occupation, or any multi-unit or multi-storey (greater than 3 stories) residential development.

'Grout' means a material which consists of water and at least 20% cement, and which may also contain aggregate, inert additives or bentonite.

11.5.51 The discharge of contaminants to land associated with the construction of building foundations, or the repair of earthquake damaged land, within the area shown on Map 11.1, and located outside the High Soil Erosion Risk Area, and which is carried out on any
site used for non-residential activities that does not meet one or more of the conditions in Rule 11.5.50 is a restricted discretionary activity.

**The exercise of discretion is restricted to the following matters:**
1. The effect of not meeting the condition or conditions of Rule 11.5.50.
2. Mitigation measures proposed to be implemented or mitigation measures available to minimise any actual or potential environmental effect.

**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.

**11.5.52** Prior to 31 December 2018, the use of land for earthworks, where the earthworks exceed the thresholds in Rule 5.170(k), associated with the site clearance, stabilisation, or repair, of any earthquake damaged land (excluding any works for which a building consent has been obtained from the relevant local authority), and any associated discharge of sediment-laden water that is carried out:

(a) on an individual site used for residential activities (excluding any residential property zoned “red” by the Canterbury Earthquake Recovery Authority); and
(b) within the High Soil Erosion Risk Area shown on the Planning Maps, but outside any riparian margin;

is a permitted activity, provided the following conditions are met:

1. The extent and duration of any earthworks is limited to only that necessary for site clearance, stabilisation or repair of the land; and
2. Earthworks do not occur in the bed of any lake, river or natural wetland; and
3. The works are designed and monitored by a Chartered Professional Engineer with competency in geotechnical engineering, or a Professional Engineering Geologist (IPENZ registered), to avoid exacerbation of erosion or mass movement of soils prone to dispersion on the property or any adjacent property. Upon completion of the works, the Engineer or Professional Engineering Geologist is to certify that they designed and monitored the works; and
4. A copy of the geotechnical certification for the works is retained by the property owner and provided to the relevant territorial authority within 3 months of the works being completed; and provided to the CRC on request. The information to be provided shall include plans, any variations to the plans, design calculations and the certification; and
5. Any material deposited into land consists only of uncontaminated fill (soil, rocks, gravels, sand, silt, clay), concrete, inert building materials, or foundation piles comprised of cement, concrete, steel or timber; and
6. Erosion and sediment control measures are implemented and maintained throughout the duration of the works to minimise erosion and the discharge of sediment laden water to surface water; or onto or into land where it may enter surface water; and
7. Compaction or earthworks involving below ground soil disturbance (excluding filling) do not occur on any part of a site which is identified as a landfill; and
8. To prevent erosion, bare ground is stabilised within 10 days of any vegetation clearance or earthworks; and

9. The concentration of total suspended solids in the discharge shall not exceed:
   (a) 50g/m³ where the discharge is to any spring-fed river, Banks Peninsula river, or to a lake, except that when the background total suspended solids in that waterbody is greater than 50g/m³ the Schedule 5 visual clarity standards shall apply; or
   (b) 100g/m³ where the discharge is to any other river, or to an artificial watercourse except that when the background total suspended solids in the waterbody is greater than 100g/m³, the Schedule 5 visual clarity standards shall apply.

For the purposes of rules 11.5.52 and 11.5.53 the following definitions apply:

'Earthquake Damaged Land' means land damaged as a result of the Canterbury Earthquake Sequence that commenced on 4 September 2010.

'Landfill' means any part of a site where solid or hazardous waste has been deposited (either lawfully or not) and which is identified as a landfill on Environment Canterbury’s Listed Land Use Register, or in the records of the relevant territorial authority.

'Residential activities' means land zoned residential in a district plan; or land used predominantly for residential occupation as at 4 September 2010.

'Works' means earthworks and erosion and sediment control measures necessary for site clearance, stabilisation or repair, of earthquake damaged land.

'Mass movement' means the geomorphic process by which material (rock, soil) moves downslope, typically as a mass under gravity.

11.5.53 Prior to 31 December 2018, the use of land for earthworks, where the earthworks exceed the thresholds in Rule 5.170(k), associated with the site clearance, stabilisation, or repair, of any earthquake damaged property (excluding any works for which a building consent has been obtained from the relevant local authority), and any associated discharge of sediment-laden water that is carried out
   (a) on an individual site used for residential activities (excluding any residential property zoned “red” by the Canterbury Earthquake Recovery Authority) and
   (b) within the High Soil Erosion Risk Area shown on the Planning Maps, but outside any riparian margin;
that does not comply with any one or more of the conditions of Rule 11.5.52 is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:
1. The effect of not meeting the condition or conditions of Rule 11.5.52; and
2. Mitigation measures proposed to be implemented or mitigation measures available to minimise any actual or potential environmental effect.
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.
## 11.6 Fresh Water Outcomes

The following tables set out the freshwater outcomes to be achieved in the Selwyn Te Waihora sub-region.

### Table 11(a): Freshwater Outcomes for Selwyn Te Waihora Sub-region Rivers

<table>
<thead>
<tr>
<th>Management Unit (see Planning Maps)</th>
<th>River</th>
<th>Ecological health indicators</th>
<th>Macrophyte indicators</th>
<th>Periphyton Indicators</th>
<th>Siltation indicator (11)</th>
<th>Microbiological indicator</th>
<th>Cultural indicator (10)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>QMCI [min score]</td>
<td>Dissolved oxygen [min saturation] (%)</td>
<td>Temperature</td>
<td>Emergent macrophytes [max cover of bed] (%)</td>
<td>Total macrophytes [max cover of bed] (%)</td>
<td>Chlorophyll α (biomass) (mg/m³)</td>
</tr>
<tr>
<td>Natural state</td>
<td>Headwaters of Selwyn/Waikirikiri</td>
<td>Rivers are maintained in a natural state</td>
<td>Freshwater mahinga kai species are sufficiently abundant for customary gathering, water quality is suitable for their safe harvesting, and they are safe to eat.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alpine - upland</td>
<td>Headwaters of Selwyn/Waikirikiri</td>
<td>&gt;6</td>
<td>90</td>
<td>20</td>
<td>No values set</td>
<td>No values set</td>
<td>50</td>
</tr>
<tr>
<td>Hill-fed - upland</td>
<td>Upper Selwyn/Waikirikiri Hawkins</td>
<td>&gt;6 (1)</td>
<td>90</td>
<td>20</td>
<td>No values set</td>
<td>No values set</td>
<td>50</td>
</tr>
<tr>
<td>Hill-fed - lower</td>
<td>Hawkins Hororata Selwyn River/Waikirikiri Waiāniwaniwa</td>
<td>&gt;5 (2)</td>
<td>90</td>
<td>20</td>
<td>No values set</td>
<td>No values set</td>
<td>200(6)</td>
</tr>
<tr>
<td>Banks Peninsula</td>
<td>Kaituna Price Stream</td>
<td>&gt;5 (3)</td>
<td>90</td>
<td>20</td>
<td>No values set</td>
<td>No values set</td>
<td>120</td>
</tr>
<tr>
<td>Spring-fed - plains</td>
<td>Birdlings Brook Boggy Creek Doyleston Drain Halswell River/Huritini Hanmer Road Drain Harts Creek</td>
<td>&gt;5 (5)</td>
<td>70</td>
<td>20</td>
<td>30</td>
<td>50</td>
<td>No values set</td>
</tr>
<tr>
<td>Management Unit</td>
<td>River</td>
<td>Ecological health indicators</td>
<td>Macrophyte indicators</td>
<td>Periphyton indicators</td>
<td>Siltation indicator</td>
<td>Microbiological indicator</td>
<td>Cultural indicator</td>
</tr>
<tr>
<td>------------------</td>
<td>----------------------------</td>
<td>-------------------------------</td>
<td>-----------------------</td>
<td>-----------------------</td>
<td>---------------------</td>
<td>--------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>(see Planning Maps)</td>
<td>QMCI [min score]</td>
<td>Dissolved oxygen [min saturation] (%)</td>
<td>Temperature</td>
<td>Emergent macrophytes [max cover of bed] (%)</td>
<td>Total macrophytes [max cover of bed] (%)</td>
<td>Chlorophyll α [biomass] (mg/m³)</td>
<td>Filamentous algae &gt;20mm [max cover of bed] (%)</td>
</tr>
<tr>
<td>Hororata</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irwell River</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jollies Brook</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knights Creek</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lee</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Selwyn/Waikirikiri</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silverstream</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snake Creek</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taumutu Creek</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tent Burn Stream</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiekewai Creek; and other lowland spring-fed streams.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All Rivers | - | Observed minimum river flows of 80 to 90% of the naturalised 7DMALF on average

Key:
QMCI = Quantitative macro invertebrate community index
SFRG = Suitability for Recreation Grade from Microbiological Water Quality Guidelines for Marine and Freshwater Recreational Areas 2003
7DMALF = Seven day Mean Annual Low Flow
(1) Selwyn River/Waikirikiri upstream of Whitecliffs
(2) Over a 5 year period: 80 percent of samples for the Selwyn River/Waikirikiri and Hawkins River; and 60 percent of samples for the Waianuiwa River
(3) QMCI ≥ 5 for (1) Kaituna River from Kaituna to Te Waihora/Lake Ellesmere confluence and (2) Prices Stream from 2.5 km upstream of SH75 to Te Waihora/Lake Ellesmere confluence
(4) QMCI ≥ 6 for (1) Kaituna River all reaches upstream of Kaituna (2) Prices Stream all reaches upstream from a point 2.5 km upstream of SH75
(5) 80 percent of samples over a 5 year period
(6) 80 percent of samples over a 5 year period
(7) Over a 5 year period: 95 percent of samples for Boggy Creek and the Selwyn River/Waikirikiri at Coes Ford; 90 percent of samples for Doyleston Drain; and 80 percent of samples for Waiekewai Creek and Irwell River
(8) Halswell River/Hurtini, Harts Creek and Hanmer Road Drain
(9) SFRG outcomes for Selwyn River / Waikirikiri contact recreation sites: Glentunnel (Fair); Chamberlains Ford (Good); Coes Ford (Fair); Upper Huts (Fair).
(10) Outcomes relate to the part of any river that passes through the Cultural Landscape/Values Management Area in Table 11(n)
(11) Siltation indicator: Excludes farm drains, naturally soft-bottomed streams and natural deposition areas at river mouth
Table 11(b): Freshwater Outcomes for Selwyn Te Waihora Sub-region Lakes

<table>
<thead>
<tr>
<th>Management unit (see Planning Map)</th>
<th>Lake</th>
<th>Ecological health indicators</th>
<th>Eutrophication indicator</th>
<th>Visual quality indicator</th>
<th>Microbiological indicator</th>
<th>Cultural indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Dissolved Oxygen [min] (%)</td>
<td>Temp [max] (^ºC)</td>
<td>Lake SPI [min grade]</td>
<td>Trophic Level Index (TLI)(1) [maximum annual average]</td>
<td>Water clarity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hypolimnion</td>
<td>Epilimnion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coastal Lakes</td>
<td>Te Waihora / Lake Ellesmere</td>
<td>70</td>
<td>90</td>
<td>19 (Mid lake)</td>
<td>Moderate</td>
<td>6.6 (Mid lake) 6.0 (Lake margins) (2)</td>
</tr>
<tr>
<td>Muriwai/ Coopers Lagoon</td>
<td></td>
<td>70</td>
<td>90</td>
<td>19</td>
<td>Moderate</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Key:
- TLI = Trophic Level Index from: Protocol for Monitoring Trophic Levels of New Zealand Lakes and Reservoirs (Report by Lakes Consulting, March 2000) provides a pragmatic and widely used numeric scale for measuring the trophic status of New Zealand lakes. The scale is from less than 1 (very low nutrients) to more than 7 (very high nutrients).
- Clarity = Measured using SHMAK tube method.

(1) TLI assumed to be calculated as TLI3 (using TP, TN and chl-α).
(2) The TLI of 6.0 at the lake margins reflects the desired outcome where water clarity is improved compared to the mid-lake areas as a result of wave-break created by macrophyte re-establishment.
(3) SFRG outcomes for Te Waihora/Lake Ellesmere contact recreation sites: Te Waihora/ Lake Ellesmere Domain (Good).
### 11.7 Environmental Flow and Allocation Regime and Water Quality Targets/Limits

The following minimum flow and restriction regimes are to be applied when reading relevant Policies and Rules in Section 4, 5 and 11. The flow and restriction regime does not apply to community drinking water supplies.

#### 11.7.1 Environmental Flow Regime

**Table 11(c): Selwyn Te Waihora Minimum Flows and Partial Restriction Regime for A Permits**

<table>
<thead>
<tr>
<th>River or stream (See Planning Maps)</th>
<th>Location of recorder site or site where flow is measured</th>
<th>Topo 50 Map Reference</th>
<th>Minimum Flows</th>
<th>Restriction Regime</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Minimum flow for A permits (L/s) Before 1 July 2025</td>
<td>Minimum flow for A permits (L/s) From 1 July 2025</td>
</tr>
<tr>
<td>Baileys Creek</td>
<td>Baileys Creek at Lincoln Leeston Road</td>
<td>BX23:51407-64392</td>
<td>40</td>
<td>88</td>
</tr>
<tr>
<td>Birdlings Brook</td>
<td>Birdlings Brook at Leggs Road</td>
<td>BY23:45311-50397</td>
<td>440</td>
<td>564</td>
</tr>
<tr>
<td>Birdlings Brook</td>
<td>Birdlings Brook at Lochheads Road</td>
<td>BY23:44711-51196</td>
<td>480</td>
<td>499</td>
</tr>
<tr>
<td>Boggy Creek</td>
<td>Boggy Creek at Lower Lake Road</td>
<td>BY23:48309-53896</td>
<td>261</td>
<td>331</td>
</tr>
<tr>
<td>Halswell River</td>
<td>Halswell River at Neills Road</td>
<td>BX23:63003-6159 4</td>
<td>640</td>
<td>815</td>
</tr>
<tr>
<td>Halswell River</td>
<td>Halswell River at Hodgens Bridge</td>
<td>BX24:65403-57696</td>
<td>70% 7DMALF</td>
<td>70% 7DMALF + 90</td>
</tr>
<tr>
<td>Halswell River</td>
<td>Halswell River at Leadleys Road</td>
<td>BX24:64402-71691</td>
<td>400</td>
<td>495</td>
</tr>
<tr>
<td>River or stream (See Planning Maps)</td>
<td>Location of recorder site or site where flow is measured</td>
<td>Topo 50 Map Reference</td>
<td>Minimum Flows</td>
<td>Restriction Regime</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-------------------------------------------------------</td>
<td>----------------------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Minimum flow for A permits (L/s) Before 1 July 2025</td>
<td>Minimum flow for A permits (L/s) From 1 July 2025</td>
</tr>
<tr>
<td>Halswell River</td>
<td>Halswell River at Tobecks Bridge</td>
<td>BX23:60804-64593</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>650</td>
</tr>
<tr>
<td>Halswell River</td>
<td>Halswell River at D/S of Knights Creek diversion</td>
<td>BX23:63802-71991</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>90% 7DMALF</td>
</tr>
<tr>
<td>Halswell River – Knights Creek tributary</td>
<td>Knights Creek at Jamiesons Property</td>
<td>BX23:63802-71991</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>220</td>
</tr>
<tr>
<td>Hanmer Road Drain</td>
<td>Hanmer Road Drain at Lower Lake Road</td>
<td>BX23:49409-55495</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>250</td>
</tr>
<tr>
<td>Harts Creek</td>
<td>Harts Creek at Lower Lake Road</td>
<td>BY23:45851-50287</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>1100</td>
</tr>
<tr>
<td>Harts Creek</td>
<td>Harts Creek at Timber Yard Road</td>
<td>BY23:46790-50427</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>1100</td>
</tr>
<tr>
<td>Hawkins River</td>
<td>Hawkins River at Willows-Dalethorpe Road</td>
<td>BW21:05709-96450</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>35</td>
</tr>
<tr>
<td>Hawkins River</td>
<td>Stokes Stream (Hawkins) at Dalethorpe Road</td>
<td>BW21:15396-96681</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>27 (residual flow)</td>
</tr>
<tr>
<td>Hororata River</td>
<td>Hororata River at Haldon Water Race Bridge</td>
<td>BX22:19716-74487</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>30</td>
</tr>
<tr>
<td>Irwell River</td>
<td>Irwell River at Leiston Christchurch Road</td>
<td>BX23:47409-58794</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>90% 7DMALF</td>
</tr>
<tr>
<td>River or stream (See Planning Maps)</td>
<td>Location of recorder site or site where flow is measured</td>
<td>Topo 50 Map Reference</td>
<td>Minimum Flows Before 1 July 2025</td>
<td>Minimum Flows for A permits (L/s) From 1 July 2025</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>----------------------------------------------------------</td>
<td>-----------------------</td>
<td>---------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>Irwell River at Lake Road</td>
<td>BX23:49789-56245</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>890</td>
<td>923</td>
</tr>
<tr>
<td>Unnamed drain at Prendergast property – tributary of Irwell River</td>
<td>BX23:52108-57895</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>26 (residual flow)</td>
<td>N/a</td>
</tr>
<tr>
<td>Jollies Brook at outlet to sea</td>
<td>BY23:41014-41000</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>360</td>
<td>708</td>
</tr>
<tr>
<td>Kaituna River at Kaituna Valley Road</td>
<td>BX24:74399-54998</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>60</td>
<td>104</td>
</tr>
<tr>
<td>Lee River at Temoana</td>
<td>BY23:42513-45198</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>70% 7DMALF</td>
<td>70% 7DMALF + 189</td>
</tr>
<tr>
<td>L-II River at Moir’s Property</td>
<td>BX23:59204-66392</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>160</td>
<td>259</td>
</tr>
<tr>
<td>L-II River at Wolfes Road</td>
<td>BX23:55506-60094</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>1240</td>
<td>1469</td>
</tr>
<tr>
<td>Selwyn River at Coes Ford</td>
<td>BX23:52643-61694</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>1200</td>
<td>1412</td>
</tr>
<tr>
<td>Selwyn River at Whitecliffs</td>
<td>BX21:10512-87228</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>550</td>
<td>638</td>
</tr>
<tr>
<td>Selwyn River at Rennie Property D/S of Intake</td>
<td>BX23:54207-60494</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>600 (residual flow)</td>
<td>N/a</td>
</tr>
</tbody>
</table>
Table 11(d): Selwyn Te Waihora Minimum Flows for B Permits

<table>
<thead>
<tr>
<th>River or stream (See Planning Maps)</th>
<th>Location of recorder site or site where flow is measured</th>
<th>Topo 50 Map Reference</th>
<th>Minimum Flows Before 1 July 2025</th>
<th>Minimum Flows for B permits (L/s) From 1 July 2025</th>
<th>Restriction Regime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaituna River</td>
<td>Kaituna River at Kaituna Valley Road</td>
<td>BX24:74399-54998</td>
<td>As per existing minimum flow conditions on a resource consent</td>
<td>522</td>
<td></td>
</tr>
</tbody>
</table>

11.7.2 Groundwater and Surface Water Allocation Limits

The following groundwater and surface water allocation limits are to be applied when reading relevant policies and rules in Sections 4, 5 and 11. The allocation limits do not apply to group or community drinking water supplies.
### Table 11(e): Combined Surface Water and Groundwater Allocation Limits for Selwyn-Waimakariri, Rakaia-Selwyn and Little Rakaia Combined Surface and Groundwater Allocation Zones

<table>
<thead>
<tr>
<th>Allocation Zone (see Planning Maps)</th>
<th>Allocation Limits and Targets (million m³/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selwyn-Waimakariri</td>
<td>193</td>
</tr>
<tr>
<td>Rakaia-Selwyn</td>
<td>180</td>
</tr>
<tr>
<td>Little Rakaia</td>
<td>67</td>
</tr>
</tbody>
</table>

### Table 11(f): Kaituna Groundwater Allocation Zone Limits

<table>
<thead>
<tr>
<th>Allocation Zone (see Planning Maps)</th>
<th>Allocation Limit (million m³/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaituna</td>
<td>2.1</td>
</tr>
</tbody>
</table>

### Table 11(g): Surface Water Allocation Limits

<table>
<thead>
<tr>
<th>River or Stream (see Planning Maps)</th>
<th>Allocation Limit For A Permits (L/s)</th>
<th>Allocation Limit For B Permits (L/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaituna River</td>
<td>44</td>
<td>131</td>
</tr>
<tr>
<td>Prices Stream</td>
<td>No abstraction</td>
<td>No abstraction</td>
</tr>
<tr>
<td>Graylee</td>
<td>No abstraction</td>
<td>No abstraction</td>
</tr>
<tr>
<td>Turrells Drain</td>
<td>No abstraction</td>
<td>No abstraction</td>
</tr>
</tbody>
</table>

### 11.7.3 Water Quality Limits and Targets (*)

The water quality limits in Tables 11(k), 11(l) and 11(m) prevail over the region wide limits in Schedule 8. The limits and targets in Tables 11(i) and 11(j) are additional limits for the Selwyn Te Waihora sub-region.

### Table 11(i): Sub-region Target Limits for Nitrogen Losses from Farming Activities, Community Sewerage Systems and Industrial or Trade Processes

<table>
<thead>
<tr>
<th>Sub-region</th>
<th>Activity</th>
<th>Nitrogen Load (tonnes/year)</th>
<th>Limit/Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selwyn Te Waihora</td>
<td>Farming</td>
<td>4830 (1)(2)</td>
<td>Target to be met by no later than 2037</td>
</tr>
<tr>
<td></td>
<td>Community sewerage systems</td>
<td>62</td>
<td>Limit</td>
</tr>
<tr>
<td></td>
<td>Industrial or trade processes</td>
<td>152.4</td>
<td>Limit</td>
</tr>
</tbody>
</table>

*By the National Policy Statement for Freshwater Management 2014 a target is a limit to be met within a defined timeframe.
1. This limit/target includes the nitrogen lost from any Irrigation Scheme provided for in Table 11(j).
2. Despite note (1), the Irrigation Scheme Nitrogen Limits in Table 11(j) have been calculated on a different basis to the limits/targets included in Table 11(i).
Table 11(j): Irrigation Scheme Nitrogen Limits

<table>
<thead>
<tr>
<th>Irrigation Scheme</th>
<th>Tonnes of nitrogen per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Plains Water For land that was not irrigated (other than by effluent) prior to 1 January 2015</td>
<td>979</td>
</tr>
</tbody>
</table>

The load limits in Table 11(j) apply only to land that was not irrigated prior to 1 January 2015. Rules 11.5.6 to 11.5.14 apply to farming activities that are not authorised under Rule 11.5.15.

Table 11(k): Limits for Rivers

<table>
<thead>
<tr>
<th>River type</th>
<th>Type</th>
<th>Measurement</th>
<th>Limit Nitrate-nitrogen concentration (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpine – upland</td>
<td>Nitrate (toxicity)</td>
<td>Annual median</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Annual 95th percentile</td>
<td>1.5</td>
</tr>
<tr>
<td>Hill-fed – upland</td>
<td>Nitrate (toxicity)</td>
<td>Annual median</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Annual 95th percentile</td>
<td>1.5</td>
</tr>
<tr>
<td>Hill-fed - lower(1)</td>
<td>Nitrate (toxicity)</td>
<td>Annual median</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Annual 95th percentile</td>
<td>3.5</td>
</tr>
<tr>
<td>Banks Peninsula</td>
<td>Nitrate (toxicity)</td>
<td>Annual median</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Annual 95th percentile</td>
<td>1.5</td>
</tr>
<tr>
<td>Spring-fed plains(2)</td>
<td>Nitrate (toxicity)</td>
<td>Annual median</td>
<td>6.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Annual 95th percentile</td>
<td>9.8</td>
</tr>
</tbody>
</table>

(1) Excluding Hawkins River which has an annual median limit of 3.8 mg/L and annual 95th percentile of 5.6 mg/L
(2) Excluding Boggy Creek and Doyleston Drain, but including the lower Selwyn River/Waikirikiri downstream of the drying reach

Table 11(l): Limits for Lake Ellesmere/ Te Waihora and Coopers Lagoon/ Muriwai

<table>
<thead>
<tr>
<th>Lake</th>
<th>Location</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TLI(2)</td>
</tr>
<tr>
<td>Te Waihora / Lake Ellesmere</td>
<td>Mid lake</td>
<td>6.6</td>
</tr>
<tr>
<td></td>
<td>Margins</td>
<td>6</td>
</tr>
<tr>
<td>Coopers Lagoon</td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

(1) As a maximum annual average
(2) TLI assumed to be calculated as a TLI3 (using TP, TN and Chl-a).
(3) The anticipated TLI of 6 in the margins of Te Waihora to be driven primarily by improved water clarity in the lake margins as a result of re-establishing macrophyte beds. It is expected that concentrations of TP, TN and/or chl-α would also reduce in the margins compared to the mid lake, but it is not possible at this time to set numbers for these concentrations.
Table 11(m): Limits for Groundwater

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Measurement</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrate-N</td>
<td>5-year annual average concentration&lt;sup&gt;(1)&lt;/sup&gt;</td>
<td>8.5 mg/L</td>
</tr>
<tr>
<td><em>E.coli</em></td>
<td>Median concentration&lt;sup&gt;(2)&lt;/sup&gt;</td>
<td>&lt; 1 organism/100 millilitres</td>
</tr>
<tr>
<td>Other contaminants&lt;sup&gt;(3)&lt;/sup&gt;</td>
<td>Any sample</td>
<td>&lt; 50% MAV&lt;sup&gt;(4)&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

(1) In shallow groundwater < 50 metres below groundwater level.
(2) Measured over the length of the record.
(3) Other contaminants of health significance as described in NZ Drinking Water Standards.
(4) Maximum Acceptable Value (as described in (3) above).

11.8 Te Waihora Cultural Landscape/Values Management Area

The following are to be applied when reading relevant policies and rules in Sections 4, 5 and 11.

Table 11(n): Cultural Landscape/Values Management Area

<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Area</td>
<td>The Area that encompasses Te Waihora/Lake Ellesmere, its margins and wetlands identified as the Te Waihora Cultural Landscape/Values Lake Management Area as shown on the Planning Maps.</td>
</tr>
<tr>
<td>River Zone 20 metres each side</td>
<td>20 metres each side of the following rivers (from their source through to the lake, unless otherwise specified, but — other than in the Waikekawai catchment — excluding all ephemeral tributaries and artificial watercourses). 20 metres is measured from the edge of the river bed:</td>
</tr>
<tr>
<td>• Selwyn River/Waikirikiri</td>
<td>below the confluence with the Hawkins River;</td>
</tr>
<tr>
<td>• Waikekawai</td>
<td></td>
</tr>
<tr>
<td>• Birdlings Brook</td>
<td></td>
</tr>
<tr>
<td>• Te Raki</td>
<td></td>
</tr>
<tr>
<td>• Harts Creek/Waitatari</td>
<td></td>
</tr>
<tr>
<td>• Boggy Creek</td>
<td></td>
</tr>
<tr>
<td>• Irwell River/Waiwhio</td>
<td></td>
</tr>
<tr>
<td>• Silverstream</td>
<td></td>
</tr>
<tr>
<td>• LII River/Ararira</td>
<td></td>
</tr>
<tr>
<td>• Halswell River/Huritini</td>
<td></td>
</tr>
<tr>
<td>• Kaituna River</td>
<td></td>
</tr>
<tr>
<td>• Prices Stream; and</td>
<td></td>
</tr>
<tr>
<td>• Waikoko Stream</td>
<td></td>
</tr>
</tbody>
</table>

11.9 Flow Sensitive Catchments

The following are to be applied when reading relevant policies and rules in Sections 4 and 5.
## 11.10 High Naturalness Waterbodies

NIL.

## 11.11 Schedules

Schedules 1 to 23 apply in the Selwyn Te Waihora sub-region. Additions apply to Schedules 7 and 13.
Map 11.1

High Soil Erosion Risk Areas
Section 12 Central Canterbury Alpine Rivers

The area covered by this section comprises the mainstems and headwaters of the Waimakariri, Rakaia and Rangitata Rivers.

These rivers all have substantial braided sections and incised gorges between the plains and their upper catchments. The source of these alpine rivers is rainfall and snow melt, and flows are variable, with regular freshes and floods resulting from rainfall events. There is a strong seasonal variability to the flows in these alpine rivers, with low flows during autumn, winter and mid – late summer, and relatively high flows during spring and early summer as a result of snow melt and rain associated with north-westerly airflow over the Southern Alps.

12.1 Other Regional Plans that apply to the Central Canterbury Alpine Rivers Sub-region

12.1.1 Waimakariri River Regional Plan 2004

The Waimakariri River Regional Plan 2004 controls the use of water in the Waimakariri River, its tributaries and hydraulically connected groundwater; point and non-point source discharges of contaminants to water bodies in the Waimakariri River catchment; and land use activities in the beds of rivers and lakes in the Waimakariri River catchment.
The LWRP’s objectives, policies and rules do not apply to the matters controlled by the Waimakariri River Regional Plan.

### 12.2 Water Conservation Orders that apply to the Central Canterbury Alpine Rivers Sub-region


### 12.3 Fresh water Outcomes

Objectives in Section 3, Policies 4.1, 4.2, 4.3 and 4.4.

### 12.4 Policies

No additional policies apply in the Central Canterbury Alpine Rivers sub-region, in addition to those set out in Section 4 of this Plan.

### 12.5 Rules

No additional rules apply in the Central Canterbury Alpine Rivers sub-region, in addition to those set out in Section 5 of this Plan.

### 12.6 Allocation Limits

#### 12.6.1 Environmental Flow and Allocation Limits


#### 12.6.2 Groundwater Allocation Limits

See Rule 5.128.

#### 12.6.3 Catchment Nutrient Load Limits and Allowances

Nil. See Rules 5.41 to 5.64.
## 12.7 High Naturalness Water Bodies

The following are to be applied when reading relevant policies and rules in Sections 4 and 5.

<table>
<thead>
<tr>
<th>Main River/Lake (see Planning Maps)</th>
<th>Topo 50 Map Reference</th>
<th>Outstanding and Significant Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Lyndon</td>
<td>BW21:946-050</td>
<td>Part of the Rakaia catchment that is considered to have outstanding wildlife habitat, fisheries and recreational features.</td>
</tr>
<tr>
<td>Lake Catherine</td>
<td>BW20:830-136</td>
<td>Part of the Rakaia catchment that is considered to have outstanding wildlife habitat, fisheries and recreational features.</td>
</tr>
<tr>
<td>Lake Lillian</td>
<td>BW20:798-187</td>
<td>Part of the Rakaia catchment that is considered to have outstanding wildlife habitat, fisheries and recreational features.</td>
</tr>
<tr>
<td>Lake Ida and Little Ida</td>
<td>BW20:811-121</td>
<td>Part of the Rakaia catchment that is considered to have outstanding wildlife habitat, fisheries and recreational features.</td>
</tr>
<tr>
<td>Lake Evelyn</td>
<td>BW20:812-101</td>
<td>Part of the Rakaia catchment that is considered to have outstanding wildlife habitat, fisheries and recreational features.</td>
</tr>
<tr>
<td>Lake Henrietta</td>
<td>BW20:782-127</td>
<td>Part of the Rakaia catchment that is considered to have outstanding wildlife habitat, fisheries and recreational features.</td>
</tr>
<tr>
<td>Lake Selfe</td>
<td>BW20:797-115</td>
<td>Part of the Rakaia catchment that is considered to have outstanding wildlife habitat, fisheries and recreational features.</td>
</tr>
<tr>
<td>Lake Georgina</td>
<td>BW20:839-030</td>
<td>Part of the Rakaia catchment that is considered to have outstanding wildlife habitat, fisheries and recreational features.</td>
</tr>
<tr>
<td>Clyde River and all Tributaries</td>
<td>-</td>
<td>Amenity and intrinsic values Indigenous plant communities Wild and scenic and other natural characteristics Significance for Ngai Tahu</td>
</tr>
<tr>
<td>Havelock River and all Tributaries</td>
<td>-</td>
<td>Amenity and intrinsic values Indigenous plant communities Wild and scenic and other natural characteristics Significance for Ngai Tahu</td>
</tr>
</tbody>
</table>
Section 13 Ashburton

The area covered by this section is generally contiguous with the Ashburton District Council boundary and the Ashburton Zone boundary under the CWMS, excluding the Rakaia River and Rangitata River and their headwaters. Included within the boundary of this sub-region are the townships of Ashburton, Rakaia and Methven.

Within this section there are policies and rules for water quantity in the Hakatere/Ashburton River catchment, and policies and rules for water quality and quantity in the Hinds/Hekeao Plains Area. For all other areas within this section only the region-wide policies and rules apply.

The main river in this sub-region is the Ashburton/Hakatere, which has a north and a south branch, and tributaries which include Taylors Stream and Pudding Hill Stream. The Ashburton River/Hakatere provides habitat for rare birds, fish, plants and other species, as well as a wide range of recreational values. A number of other foothill streams with associated bush remnants provide valuable recreational and ecological opportunities. This sub-region also includes part of the Ashburton Lakes Basin (Ō Tū Wharekai), including Lake Clearwater and Lake Emma, but does not include the largest lake in this group, Lake Heron.

The following sustainable water management priority outcomes for the Hakatere/Ashburton River catchment have been identified by the Ashburton Zone Committee:

- Improved and protected natural character and mauri of the Ashburton River/Hakatere.
- Ecosystem health and biodiversity are protected and improved.
• Protected and improved water quality.
• Efficiently used, secure and reliable supply of water.

To achieve these outcomes for the Ashburton River, the flow and allocation regime introduces a minimum flow of 6,000 L/s at State Highway 1, and in the longer term a minimum flow of 10,000 L/s. Other outcomes to be achieved by the flow regime include the protection of the North Branch flows, in-stream habitats, facilitation of alternative water use to reduce pressure on river flows, efficient use of water and management of water permits that are transferred. In achieving these outcomes changes are to occur over time so as to have minimal impact on existing activities. The take from the South Branch of the Ashburton River by Rangitata Diversion Race Management Limited (RDR) is recognised as a relatively large water take which provides reliable water for a number of properties. The regime, therefore, does not restrict its take in the same manner as other takes and it is therefore expected that RDR will play an active role in Water Users’ Groups to manage reliability of supply. As part of delivering on the outcomes in the short term it is expected that some surface water abstractors will switch to groundwater, that water sharing will occur and in the longer term that new storage projects will assist to maintain and improve reliability of supply for water users.

The Hinds/Hekeao Plains Area consists of the Hinds River/Hekeao catchment, and the plains between the Rangitata and Hakatere/Ashburton Rivers. The Upper Hinds/Hekeao Area includes the foothills and basins that drain into the north and south branches of the Hinds River/Hekeao. The Lower Hinds/Hekeao Plains Area contains the middle and lower reaches of the Hinds River/Hekeao as it flows out across the Canterbury Plains and contains more than 30 spring-fed lowland water bodies by the coast. Many of the water bodies in the Lower Hinds/Hekeao Plains Area are the remnants of what was once an expansive wetland.

The Hinds/Hekeao Plains Area today is highly modified. Drainage of the wetland area east of State Highway 1 began in the 1850s allowing the establishment of one of Canterbury’s most productive agricultural areas. An artificial channel, cut in the 1860s-1870s, created a permanent outlet for the river to flow to the sea. A small hāpua (lagoon) is present at the river mouth, although this is blocked to the sea most of the time. Many of the artificial drains, stock water races and modified channels which replaced the wetlands and waterways, provide substitute habitats for a variety of fish and invertebrate species.

The Hinds/Hekeao Plains Area was historically, and is currently, an important area for food production. It currently provides significant employment in the area, both on-farm and in processing and servicing industries. The social and economic wellbeing of the community is reliant on the agricultural industry and it is important that it is retained so that the communities can thrive.

Agricultural development, however, has had a significant impact on the cultural, ecological and recreational values and opportunities of the area. Today drainage remains a primary function of many of the lowland water bodies, however they continue to be a taonga and source of mahinga kai for Ngāi Tahu and support significant ecological and recreational values.
For Ngāi Tahu water is taonga. The wetlands of the Lower Hinds/Hekeao Plains Area supported a rich and varied mahinga kai resource. The cultural significance of the Hinds River/Hekeao is recognised by its Statutory Acknowledgement status.

There are a number of irrigation schemes in the Hinds/Hekeao Plains Area. There are also individual surface and groundwater takes throughout the area. Agriculture now makes up 98 percent of land use in the Hinds/Hekeao Plains Area. The availability of plentiful clean water has been one of the critical ingredients to the economic success of the area.

Water resources are now showing signs of stress. Nitrogen concentrations in the 2013/14 year average around 11 milligrams of nitrogen per litre in shallow wells, and are increasing while water availability is decreasing. These trends have not only had an adverse effect on cultural and ecological values but have also adversely affected the reliability of supply for users.

During 2013 and 2014 the Ashburton Zone Committee engaged with the local community and stakeholders to develop a package of actions (the 'Solutions Package') that was considered the most effective to protect cultural values and opportunities to gather mahinga kai safely, maintain water quality and quantity in the Upper Hinds/Hekeao Plains Area, and improve water quality and quantity in Lower Hinds/Hekeao Plains Area while also sustaining a healthy economy and community.

The Committee's Solutions Package consists of four main parts with both regulatory and non-regulatory recommendations:
- catchment scale actions (e.g. on-farm mitigation measures, managed aquifer recharge, and increased irrigation area);
- local scale actions (e.g. riparian fencing, planting, and well-head protection);
- investigations, monitoring and review of the Solutions Package; and
- community engagement.

The Committee's Solutions Package is fully outlined in the Ashburton Zone Implementation Programme Addendum 2014. This section of the Plan includes policies and rules that achieve the outcomes of the Ashburton Zone Implementation Programme Addendum 2014.

The Solutions Package requires a 45 percent reduction in nitrogen losses from farming activities in the Lower Hinds/Hekeao Plains Area by 2035. To achieve this, all farming activities are to operate at good management practice by 2017. Farming is then required to further reduce nitrogen loss rates by 36 percent by 2035. Some change in land use or land use intensification is underway, and further change may be considered once water quality improves.

In conjunction with managed aquifer recharge, on-farm mitigation is anticipated to reduce the concentration of nitrogen in shallow groundwater in the Lower Hinds/Hekeao Plains Area to 6.9 milligrams of nitrogen per litre, and achieve an 80 percent protection level for aquatic species in lowland spring-fed streams and a 90 percent protection level for the Lower Hinds River/Hekeao.

In the Upper Hinds/Hekeao Plains Area water quality is to be maintained through adoption of good management practices to minimise losses of sediment, phosphorus and microbial contamination,
and increases in nitrogen losses are restricted to achieve a 99 percent protection level for aquatic species in the hill-fed streams.

The Solutions Package also includes actions to improve flows in the lowland streams and the Hinds River/Hekeao. Provision is made for switching from surface water or hydraulically connected groundwater to deep groundwater. New abstractions of surface water or groundwater from the Valetta and Mayfield-Hinds Groundwater Allocation Zones, beyond domestic and stock needs and community supplies, is prohibited while allocation limits are not being met. Transfers of surface water consents and groundwater consents within the Valetta Groundwater Allocation Zone are also prohibited while limits are not being met. The Solutions Package also includes the establishment of a Hinds Drains Working Party to develop and recommend revised allocation limits and minimum flows for the spring-fed plains rivers in the Lower Hinds/Hekeao Plains Area by no later than 2020.

### 13.1 Definitions

#### 13.1A Hinds/Hekeao Definitions

For the Hinds/Hekeao Plains Area the following definitions apply in addition to the definitions contained in Section 2.9.

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptive Management Conditions</td>
<td>means a condition or conditions on a resource consent to take groundwater that specifies an annually variable volume dependent on the annually assessed volume of the groundwater resource in a zone.</td>
</tr>
<tr>
<td>Augmenting</td>
<td>means the addition of water to surface water or groundwater specifically for the purpose of reducing the concentration of nitrate nitrogen in groundwater, or increasing flows in lowland streams.</td>
</tr>
<tr>
<td>Baseline Land Use</td>
<td>means the land use, or uses, on a property between 1 July 2009 and 30 June 2013 used to determine the property's 'nitrogen baseline' as defined in Section 13 of this Plan.</td>
</tr>
<tr>
<td>Deep groundwater</td>
<td>means groundwater that is abstracted from a depth of at least 80 m below ground level.</td>
</tr>
<tr>
<td>Hinds/Hekeao Plains Area</td>
<td>means the area identified as the 'Hinds/Hekeao Plains Area' on the Planning Maps.</td>
</tr>
<tr>
<td>Lower Hinds/Hekeao Plains Area</td>
<td>means the area identified as the 'Lower Hinds/Hekeao Plains Area' on the Planning Maps.</td>
</tr>
<tr>
<td>Lower Hinds River/Hekeao</td>
<td>means the Hinds River/Hekeao in the Lower Hinds/Hekeao Plains Area.</td>
</tr>
<tr>
<td>Nitrogen Baseline</td>
<td>(a) in the ‘Hinds-Rangitata Area’ as shown on the Planning Maps means: (i) the maximum annual discharge of nitrogen below the root zone, as modelled with OVERSEER® (where the required data is inputted into the model in accordance with OVERSEER® Best Practice Data Input Standards), or an equivalent model approved by the Chief Executive of Environment Canterbury, over any 01 July to 30 June period in any year.</td>
</tr>
</tbody>
</table>
single year between 2009 to 2015, and expressed in kg per hectare per annum; and
(ii) if OVERSEER® is updated, the most recent version is to be used to recalculate the nitrogen baseline using the same input data;
(b) in all other areas within the Hinds/Hekeao Plains Area has the meaning set out in Section 2.9 of this Plan.

| Upper Hinds/Hekeao Plains Area | means the area identified as the 'Upper Hinds/Hekeao Plains Area' on the Planning Maps. |

13.2 Other Plans and Instruments that apply to the Ashburton Sub-region

13.2.1 Other Regional Plans that apply to the Ashburton Sub-region

Nil

13.2.2 Water Conservation Orders that apply to the Ashburton Sub-region


13.2.3 Iwi Management Plans that apply to the Ashburton Sub-region

Hinds/Hekeao Plains Area


13.3 Fresh water Outcomes

For the Hinds/Hekeao Plains area see Objectives in Section 3, and freshwater outcomes in Table 13(a).

For the Ashburton sub-region except for Hinds/Hekeao Plains Area see Objectives in Section 3 and Policies 4.1, 4.2, 4.3 and 4.4.

13.4 Policies

The following policies apply in the Ashburton sub-region, in addition to those set out in Section 4 of this Plan.

13.4.1 In order to increase the amount of water in the river that is available to meet the proposed increased minimum flows, the taking of water for community stock water supplies from the Ashburton River/Hakatere will progressively decrease so that as soon as possible, but by no later than 1 July 2023, that taking will not exceed 2,900 L/s in total.

13.4.2 No new surface or stream depleting groundwater permits will be granted in the Ashburton River/Hakatere catchment until the minimum flow at the State Highway 1 recorder site is
raised to 10,000 L/s, except that replacement permits for water permits that expire may be granted, however in those cases consideration must be given to the practicality of using alternative supplies of water.

13.4.3 To address over-allocation in the Ashburton/Hakatere catchment, no additional rate or volume of water above that authorised under existing water permits will be granted when those existing permits are sought to be replaced upon their expiry.

13.4.4 To avoid over-allocation of the Ashburton River Groundwater Allocation Zone, it is limited to a total of 104.7 million m$^3$ per annum of which:
(a) 69.7 million m$^3$ per annum is available for existing lawfully established groundwater takes; and
(b) 35 million m$^3$ per annum is available for applicants who surrender surface water and/or stream depleting groundwater takes in accordance with Policies 13.4.5 and 13.4.7.

13.4.5 To address over-allocation of surface water in the Hakatere/Ashburton catchment and the Lower Hinds/Hekeao Plains Area, enable taking deep groundwater provided the applicant holds a lawfully established surface water take or stream depleting groundwater take for an equal or greater rate and volume than is sought from the deep groundwater, and the surface water take or stream depleting groundwater take is surrendered.

13.4.6 In the Valetta and Mayfield-Hinds Groundwater Allocation Zones avoid allocating groundwater from the T-Allocation Block in Table 13(f), unless the proposed groundwater take will substitute for an existing surface water take, and the proposed take is from deep groundwater, or the take will not have a direct, high or moderate stream depletion effect.

13.4.7 The water resulting from any surrendered surface water and stream depleting groundwater takes in the Ashburton River/Hakatere catchment and in the Hinds/Hekeao Plains Area will not be reallocated and will be left in the river, until such time as the catchment is no longer over allocated.

13.4.8 For the Ashburton River/Hakatere, the following restrictions shall be applied in respect of the abstraction of surface water and stream depleting groundwater in the Ashburton River/Hakatere catchment:
(a) between 1 July 2023 and until 30 June 2033 Rangitata Diversion Race A and B allocations shall be subject to the residual flow restrictions specified in Table 13(b).
(b) between 1 July 2023 and until 30 June 2033 all abstractions except Rangitata Diversion Race intake shall be subject to the State Highway 1 minimum flow in addition to the relevant tributary minimum flow as per Table 13(b).
(c) from 1 July 2033, all abstractions shall only be subject to the State Highway 1 minimum flow as per Table 13(b).
(d) any Water Users’ Group will be subject to pro rata reductions.
(e) all abstractions except Rangitata Diversion Race allocations and Water Users’ Group takes shall be subject to incremental stepped reductions as per Table 13(c).
13.4.9 In accordance with Section 128 of the RMA, Canterbury Regional Council may complete a review of all existing water permits in the Ashburton Catchment prior to 1 July 2023, to ensure the abstractions comply with the allocation limits and minimum flow requirements specified in Table 13(b).

13.4.10 Improve the overall water quality in the Hinds/Hekeao Plains Area by:
(a) establishing two management areas the Upper Hinds/Hekeao Plains Area and Lower Hinds/Hekeao Plains Area;
(b) improving management of nitrogen, microbial contaminants, phosphorus and sediment in both areas;
(c) restricting increases in nitrogen losses in the Upper Hinds/Hekeao Plains Area;
(d) reducing overall nitrogen losses by 45% percent in the Lower Hinds/Hekeao Plains Area; and
(e) adopting the use of managed aquifer recharge and targeted stream augmentation to augment groundwater and/or surface water.

13.4.11 Reduce discharges of microbial contaminants, phosphorus and sediments in the Hinds/Hekeao Plains Area by:
(a) implementing the region-wide stock exclusion rules; and
(b) excluding cattle, pigs and deer from drains; and
(c) establishing phosphorus limits for ‘Hill-fed Upland’ surface water bodies; and
(d) implementing the farm practices in Schedule 24a; or
(e) preparing and implementing Farm Environment Plans, in accordance with Schedule 7.

13.4.12 Recognise the cultural significance of the Hekeao/Hinds River to Ngāi Tahu and enable Ngāi Tahu to exercise kaitiakitanga and mahinga kai in the catchment through:
(a) continual improvement in the flows in lowland streams and springs over time;
(b) continual reductions in the concentrations of nitrogen in groundwater over time;
(c) minimising the potential discharge of contaminants into water through land use practices, riparian management, and waterway and drain maintenance; and
(d) encouraging the protection or restoration of natural wetland areas and other mahinga kai.

13.4.13 Manage surface water quality, particularly in-stream nitrate-nitrogen and dissolved reactive phosphorus concentrations\(^3\), in the Upper Hinds/Hekeao Plains Area by:
(a) requiring, from 1 January 2017, all farming activities to operate at good management practice while allowing farming activities that have a nitrogen loss calculation less than 15 kgN\(^3\) per hectare per year at 1 September 2015 to increase their nitrogen losses up to but not exceeding 15 kgN\(^4\) per hectare per year; and
(b) requiring that if at 1 September 2015 a property's nitrogen loss calculation is greater than 15kgN\(^3\) per hectare per year, there are further reductions in nitrogen loss over time (beyond any reduction that could be reasonably expected from the

---

2 The policy of reducing nitrogen losses by 45% is based on the methodology explained in the Hinds/Hekeao Plains Technical Overview – CRC Report R14/79
3 As set out in Table 13(g) and Table 13(h) respectively.
4 Calculated using Overseer version 6.0
improvement of good management practices) that result in reductions in nitrogen loss, relative to the property’s 1 September 2015 nitrogen loss calculation, of not less than:

(i) 15% by 1 January 2025
(ii) 25% by 1 January 2030
(iii) 36% by 1 January 2035

provided that these nitrogen loss reductions do not require the property’s nitrogen loss calculation to reduce below 20 kgN\(^3\) per hectare per year.

13.4.14 By 2035, improve water quality in the Lower Hinds/Hekeao Plains Area to achieve the target nitrate toxicity limits set out in Table 13(g) for ‘Hill-fed Lower’ and ‘Spring-fed Plains’ surface waterbodies, and an annual average groundwater nitrate-nitrogen concentration of 6.9 mg/L\(^5\) by:

(a) reducing the discharge of nitrogen from farming activities in fulfilment of Policy 13.4.15; and

(b) implementing Managed Aquifer Recharge and Targeted Stream Augmentation.

13.4.15 By 2035, farming activities and farming enterprises in the Lower Hinds/Hekeao Plains Area, whether or not they are supplied with water by an irrigation scheme or a principal water supplier, collectively achieve Policy 13.4.14 by:

(a) requiring, from 1 January 2017, all existing farming activities to discharge no more nitrogen than the loss rate that could be reasonably expected from the implementation of good management practices, calculated on the baseline land use taking into account:

(i) The type of farming activity; and
(ii) The drainage characteristics of the soil; and
(iii) The climatic conditions and topography of the property; and
(iv) The type of irrigation system used (if any); and
(v) Whether the practices set out in Schedule 24a have been fully adopted; and

(b) subject to Policy 13.4.15(a), allowing farming activities that have a nitrogen loss calculation less than 15 kgN\(^6\) per hectare per year at 1 September 2015 to increase their nitrogen losses up to but not exceeding 15 kgN\(^5\) per hectare per year; and

(c) subject to Policy 13.4.15(a), enabling farming activities that have a nitrogen loss calculation between 15 kgN\(^5\) per hectare per year and 20 kgN\(^5\) per hectare per year at 1 September 2015 to apply for resource consent to increase their nitrogen losses up to but not exceeding 20 kgN\(^5\) per hectare per year; and

(d) requiring that if at 1 September 2015 a property’s nitrogen loss calculation is greater than 20 kgN\(^5\) per hectare per year, further reductions (beyond any reduction resulting from Policy 13.4.15(a)) are applied to the nitrogen loss calculation (relative to the property’s 1 September 2015 nitrogen loss calculation) of not less than:

(i) 15% by 1 January 2025
(ii) 25% by 1 January 2030
(iii) 36% by 1 January 2035

provided these reductions do not require the property’s nitrogen loss calculation to reduce below 20 kgN\(^5\) per hectare per year; and

---

\(^5\) As determined by the median concentration across the Canterbury Regional Council’s quarterly groundwater monitoring bores (screened <30 metres below water table)

\(^6\) Calculated using Overseer version 6.0
requiring that the total aggregated nitrogen losses from properties where the nitrogen losses are managed by an irrigation scheme or principal water supplier be limited as follows:

(i) land either:
   (a) irrigated with water first lawfully supplied by an irrigation scheme or principal water supplier before the granting of CRC121664 or CRC162882; or
   (b) not irrigated but where the nitrogen losses are accounted for under a resource consent held by an irrigation scheme or principal water supplier; is subject to Policies 13.4.15(a) and 13.4.15(d) except if Policies 13.4.15(b) or 13.4.15(c) apply;

(ii) land first irrigated with water lawfully supplied by an irrigation scheme or principal water supplier for irrigation authorised and established under and prior to the expiry of resource consent CRC121664 or CRC162882 is limited to a nitrogen loss calculation of 27 $\text{kgN} / \text{ha per year}$;

(iii) land otherwise irrigated with water supplied by an irrigation scheme or principal water supplier for irrigation is subject to Policies 13.1.15(a) and 13.4.15(d) except if Policies 13.4.15(b) or 13.4.15(c) apply;

(f) except as provided for by Policies 13.4.15(b), (c) and (e), not allowing any land use intensification, changes in land use, or new irrigation that would increase the nitrogen loss above the land’s nitrogen baseline until the average groundwater nitrogen concentration in the Lower Hinds/Hekeao Plains sub-region is below 6.9 $\text{mg/L}$.

13.4.16 If the separate nitrogen loss rate reductions in fulfilment of Policy 13.4.13(b)(i) to (iii) and Policy 13.4.15(d)(i) to (iii) are unable to be achieved by their target dates, any proposed extension of time to achieve the reductions will be assessed having regard, among other matters, to:

(a) the nitrogen baseline and the level of any enduring nitrogen loss rate reduction already achieved from that baseline; and

(b) the implications for fully achieving the target nitrate-nitrogen concentrations in Policy 13.4.14 by 2035; and

(c) the capital and operational costs of making nitrogen loss rate reductions and the benefit (in terms of maintaining a farming activity’s financial viability) of spreading that investment over time; and

(d) the nature, sequencing, measurability and enforceability of any steps proposed to achieve the nitrogen loss rate reductions.

13.4.17a (1) Enable the establishment of farming enterprises in circumstances where, for the purpose of nutrient management, the nitrogen loss from the total farming activity does not exceed the aggregate of the nitrogen baselines of all the land used in the enterprise, and any time-framed reductions set out in Policy 13.4.15 are achieved (whether or not the land is held in single, multiple, or common ownership).

(2) Enable the disestablishment of farming enterprises, provided the land formerly used in the

---

7 Calculated using Overseer version 6.0.3.
8 Although, due to the order of their development in the Plan, Policies 13.4.17 and 11.4.17 use slightly different language to express the policies, no different interpretation is intended.
enterprise does not exceed either:
(a) the individual nitrogen baseline of the land, taking account of any applicable time-framed reductions set out in Policy 13.4.15; or
(b) a nitrogen baseline limit, to be determined so that the aggregate of the baselines of all the land formerly used in the enterprise, following any time-framed reductions set out in Policy 13.4.15, is not exceeded.

13.4.18 Improve flows in spring-fed waterbodies and/or decrease nitrate nitrogen concentrations in the Hinds River/Hekeao spring-fed waterbodies and groundwater in the Lower Hinds/Hekeao Plains Area by enabling managed aquifer recharge and targeted stream augmentation, where:
(a) adverse effects on cultural values, including those associated with unnatural mixing of water are avoided as the first preference, and where avoidance is not practicable, they are remedied or mitigated;
(b) adverse effects on the availability and quality of community drinking water supplies are avoided;
(c) adverse effects on fish passage are avoided or mitigated;
(d) inundation of existing wetlands is avoided, remedied or mitigated through scheme design, construction and operation;
(e) there is no net loss, including through inundation, of significant biodiversity habitat of indigenous biodiversity; and
(f) adverse effects on people and property from raised groundwater levels and higher flows are avoided as the first preference, and where avoidance is not practicable, they are remedied or mitigated.

13.4.19 Enable catchment restoration activities that protect springheads; protect, establish or enhance planted riparian margins; create, restore or enhance wetlands; and target removal of fine sediment from water ways.

13.4.20 Improve flows in spring-fed waterbodies and the Lower Hinds River/Hekeao to meet economic, cultural, social and environmental outcomes in the Hinds/Hekeao Plains Area by requiring adherence to flow and allocation limits, limiting the volume and rate of abstraction on replacement water permits to reasonable use calculated in accordance with Schedule 10 and restricting increased use arising from the transfer of consented volumes of water within surface water catchments and the Valetta Groundwater Allocation Zone.

13.4.21 Until such time as the Valetta Groundwater Allocation Zone limits in Table 13(f) are no longer exceeded apply adaptive management conditions upon replacement of any groundwater permits that have previously been subject to adaptive management conditions on the same or similar terms as the pre-existing conditions.

13.4.22 In the Lower Hinds/Hekeao Plains Area, with the exception of the Lower Hinds River/Hekeao, and until 30 June 2025, any water permit granted to replace an existing water permit will be subject to the minimum flow and allocation limits in Table 13(e).
13.4.23 After 1 July 2025 a minimum flow of 50% 7DMALF and an allocation limit of 20% 7DMALF will be applied to all water permits granted to abstract surface water from the waterbodies listed in Table 13(e), or to abstract groundwater with a direct, high or moderate stream depletion effect on those waterbodies, unless there is a collaboratively developed flow and allocation regime that has been included in this Plan through a Schedule 1 RMA process.

13.5 Rules

The following rules apply in the Ashburton sub-region, in addition to those set out in Section 5 of this Plan.

Ashburton Sub-region

13.5.1 The taking of surface water from the Ashburton River catchment by a Water Users' Group formed by two or more existing abstractors within the same A permit allocation limit or B permit allocation limit is a restricted discretionary activity, provided that the following conditions are met:
1. The take does not reduce the reliability of supply for any other abstractor or cause the minimum flow in any catchment or sub-catchment (Table 13(b)) to be breached; and
2. All members of an A permit allocation limit Water Users’ Group have water abstraction points located within the same river or stream as set out in Table 13(b); and
3. All abstractors have installed telemetered water use measuring devices; and
4. Individual water take permits subject to the Water Users' Group shall not be exercised concurrently with the Water Users' Group water permit.

The exercise of discretion is restricted to the following matters:
1. The terms and conditions of the operating agreement between the members of the Water Users’ Group; and
2. The reduction in the rate of take in times of low flow and restrictions as set out in Policy 13.4.8; and
3. Whether the proposed activity will prevent or compromise the attainment of the environmental outcomes sought by, or is inconsistent with, the objectives and policies in the Plan in respect of water allocation, flow regimes, and in-stream values.

13.5.2 The take and use of groundwater within the B permit allocation limit of the Ashburton River Groundwater Allocation Zone is a restricted discretionary activity, provided that the following conditions are met:
1. The annual volume of the groundwater take, in addition to all existing consented takes, does not exceed the B permit allocation limit as set out in Table 13(f); and
2. The bore interference effects are “acceptable”, as set out in Schedule 12; and
3. The abstraction depth is greater than 40 m below ground level; and
4. The applicant holds a lawfully established surface water take or stream depleting groundwater take for an equal or greater rate and volume than is sought and the surface water take or stream depleting groundwater take is surrendered concurrently with the application.
The exercise of discretion is restricted 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; and
2. The maximum rate of take, including the capacity of the bore or bore field and any irrigation system; and
3. The effects the take has on any other authorised takes, including interference effects as set out in Schedule 12.

13.5.3 The taking and use of groundwater within the B permit allocation limit of the Ashburton River Groundwater Allocation Zone as set out in Table 13(f) that does not meet one or more of conditions 2 or 3 of Rule 13.5.2 is a non-complying activity.

13.5.4 The taking and use of groundwater within the B permit allocation limit of the Ashburton River Groundwater Allocation Zone that does not meet condition 1 of Rule 13.5.2 is a prohibited activity.

13.5.5 The taking and use of surface water and stream depleting groundwater in the Ashburton River/Hakatere catchment is a discretionary activity, provided either of the following conditions are met:
1. The proposed take is the replacement of a lawfully established take affected by the provisions of s124 to 124C of the RMA; or
2. The proposed take, in addition to all existing consented takes, meets a flow regime with an A Block minimum flow of 10,000 L/s and an A Block allocation limit of 15,100 L/s, or a B Block minimum flow of 14,000 L/s and a B Block allocation limit of 5,000 L/s.

13.5.6 The taking and use of surface water and stream depleting groundwater in the Ashburton River/Hakatere catchment that does not meet either of the conditions of Rule 13.5.5 is a prohibited activity.

Hinds/Hekeao Plains Area

The following index identifies region-wide rules that are modified by the Hinds/Hekeao Plains Area rules introduced into this section.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Region-wide Rule</th>
<th>Additions to Region-wide Rules</th>
<th>Sub-regional Rules that prevail over Region-wide Rules</th>
<th>New Sub-region Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pest Control and Agrichemicals</td>
<td>5.22</td>
<td>13.5.7</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Nutrient Management²</td>
<td>Red, Lake Zone, Orange, Green or light Blue</td>
<td>5.41-5.59</td>
<td>13.5.8-13.5.20</td>
<td>-</td>
</tr>
<tr>
<td>Irrigation Scheme</td>
<td>5.60-5.62</td>
<td>-</td>
<td>13.5.21-13.5.23</td>
<td>-</td>
</tr>
<tr>
<td>Incidental</td>
<td>5.63-5.64</td>
<td>-</td>
<td>13.5.24-13.5.25</td>
<td>-</td>
</tr>
</tbody>
</table>
### Pest Control and Agrichemicals

*Note:* Rule 13.5.7 applies as an addition to Region-wide Rule 5.22 in the Hinds/Hekeao Plains Area.

**13.5.7 Within the Hinds/Hekeao Plains Area, Region-wide Rule 5.22 shall include the following condition:**

1. For discharges to surface water signs are erected:
   - (a) in accordance with HSNO regulations, if such regulations require signage for the chemical being applied; or
   - (b) if HSNO regulations do not require signage for the chemical being applied or if no HSNO regulations exist for the chemical, at all public access points within 2 km of the discharge location, or for waterways on privately held land, at the main vehicular entrance to the property, at least 48 hours prior to commencement of the discharge, and shall remain in place for at least 48 hours following the discharge. Signs shall include the following information:
     - (i) the name of the agrichemical discharged, the date and time the discharge will commence and a description of the application area; and
     - (ii) a warning to avoid contact with surface water, and to avoid collection of shellfish or mahinga kai; and
     - (iii) a contact name and phone number for the person carrying out the discharge.
Nutrient Management, Sediment and Microbial Contaminants

Note: Rules 13.5.8 to 13.5.20 prevail over Region-wide Rules 5.41 and 5.43 to 5.59 (Nutrient Management - Red, Orange and Green and Light Blue Zones) in the Hinds/Hekeao Plains Area.

Upper Hinds/Hekeao Plains Area

13.5.8 Despite any of Rules 13.5.9 to 13.5.13 the use of land for a farming activity in the Upper Hinds/Hekeao Plains Area on a property of less than 5 ha is a permitted activity.

13.5.9 The use of land for a farming activity in the Upper Hinds/Hekeao Plains Area is a permitted activity, provided the following conditions are met:
1. The nitrogen loss calculation for the property does not exceed 15 kg per hectare per year; and
2. The practices in Schedule 24a are being implemented and the information required is recorded in accordance with Schedule 24a, and supplied to the Canterbury Regional Council on request.

13.5.10 The use of land for a farming activity in the Upper Hinds/Hekeao Plains Area that does not meet conditions 1 or 2 of Rule 13.5.9 is a restricted discretionary activity, provided the following conditions are met:
1. The nitrogen loss calculation for the property does not exceed 15 kg per hectare per year or the nitrogen baseline, whichever is the greater; and
2. A Farm Environment Plan has been prepared in accordance with Part A of Schedule 7.

The exercise of discretion is restricted to the following matters:
1. The nitrogen loss rate reductions applicable to the property to fulfil Policy 13.4.13; and
2. The quality of, compliance with, and auditing of the Farm Environment Plan; and
3. The potential benefits of the activity to the applicant, the community, and the environment; and
4. The potential effects, including cumulative effects, of the activity on surface water and groundwater quality, sources of drinking-water, and aquatic ecosystems.

13.5.11 The use of land for a farming activity as part of a farming enterprise in the Upper Hinds/Hekeao Plains Area is a discretionary activity, provided the following conditions are met:
1. The aggregated nitrogen loss calculation for the parcels of land held in single or multiple ownership (whether or not held in common ownership) forming the farming enterprise does not increase above the greater of 15 kg/ha/yr or the aggregated nitrogen baseline for those parcels of land; and
2. The farming enterprise is solely in the Upper Hinds/Hekeao Plains Area; and
3. A Farm Environment Plan for the parcels of land held in single or multiple ownership (whether or not held in common ownership) forming the farming enterprise has been prepared in accordance with Part A of Schedule 7.
13.5.12 The use of land for a farming activity that does not comply with condition 2 of Rule 13.5.10 or conditions 2 or 3 of Rule 13.5.11 is a non-complying activity.

13.5.13 The use of land for a farming activity that does not comply with condition 1 of Rule 13.5.10 or condition 1 of Rule 13.5.11 is a prohibited activity.

Lower Hinds/Hekeao Plains Area

13.5.14 Despite any of Rules 13.5.15 to 13.5.20 the use of land for a farming activity in the Lower Hinds/Hekeao Plains Area on a property of less than 5 ha is a permitted activity.

13.5.15 The use of land for a farming activity in the Lower Hinds/Hekeao Plains Area where the nitrogen loss calculation does not exceed 15 kg per hectare per year is a permitted activity, provided the following condition is met:
   1. The practices in Schedule 24a are being implemented and the information required is recorded in accordance with Schedule 24a, and supplied to the Canterbury Regional Council on request.

13.5.16 The use of land for a farming activity in the Lower Hinds/Hekeao Plains Area where the nitrogen loss calculation does not exceed 15 kg per hectare per year that does not meet condition 1 of Rule 13.5.15 is a restricted discretionary activity, provided the following condition is met:
   1. A Farm Environment Plan has been prepared in accordance with Part A of Schedule 7.

   The exercise of discretion is restricted to the following matters:
   1. The quality of, compliance with, and auditing of the Farm Environment Plan; and
   2. The potential benefits of the activity to the applicant, the community, and the environment; and
   3. The potential effects, including cumulative effects, of the activity on surface water and groundwater quality, and aquatic ecosystems.

13.5.17 The use of land for a farming activity in the Lower Hinds/Hekeao Plains Area where the nitrogen loss calculation exceeds 15 kg per hectare per year is a restricted discretionary activity, provided the following conditions are met:
   1. The nitrogen loss calculation for the property:
      (a) does not exceed 20 kg/ha/yr, and the nitrogen loss calculation has not increased by more than 5 kg/ha/yr above the nitrogen baseline; or
      (b) exceeds 20 kg/ha/yr but does not exceed the nitrogen baseline; and
   2. A Farm Environment Plan has been prepared in accordance with Part A of Schedule 7.

   The exercise of discretion is restricted to the following matters:
   1. The quality of, compliance with, and auditing of the Farm Environment Plan; and
   2. The nitrogen loss rate reductions applicable to the property to fulfil Policy 13.4.15; and
   3. The potential benefits of the activity to the applicant, the community and the environment; and
   4. The potential effects, including cumulative effects, of the activity on surface water and groundwater quality, sources of drinking-water, and aquatic ecosystems.
13.5.18 The use of land for a farming activity as part of a farming enterprise in the Lower Hinds/Hekeao Plains Area is a discretionary activity, provided the following conditions are met:

1. The farming enterprise is solely in the Lower Hinds/Hekeao Plains Area; and
2. The aggregated nitrogen loss calculation for the parcels of land held in single or multiple ownership (whether or not held in common ownership) forming the farming enterprise, does not increase above the greater of 15kg/ha/yr or the aggregated nitrogen baseline for those parcels of land; and
3. A Farm Environment Plan for the parcels of land held in single or multiple ownership (whether or not held in common ownership) forming the farming enterprise has been prepared in accordance with Part A of Schedule 7.

13.5.19 The use of land for a farming activity that does not comply with condition 1 of Rule 13.5.16 or condition 2 of Rule 13.5.17, or the use of land for a farming activity as part of a farming enterprise that does not comply with condition 3 of Rule 13.5.18, is a non-complying activity.

13.5.20 The use of land for a farming activity that does not comply with condition 1 of Rule 13.5.17 or conditions 1 or 2 of Rule 13.5.18, is a prohibited activity.

**Irrigation Schemes**

*Note: Rules 13.5.21, 13.5.22 and 13.5.23 prevail over Region-wide Rules 5.60, 5.61 and 5.62 in the Hinds/Hekeao Plains Area.*

13.5.21 Despite Rules 13.5.14 to 13.5.20, the use of land for a farming activity in the Lower Hinds/Hekeao Plains Area where the property is fully or partially irrigated with water from an irrigation scheme or principal water supplier and the irrigation scheme or principal water supplier:

(a) holds a discharge permit that was granted under Rule 5.62 prior to 1 August 2014; or
(b) holds a resource consent that meets the conditions of Rule 5.61; or
(c) holds a discharge permit that has been granted under Rule 13.5.22; is a permitted activity.

13.5.22 The discharge of nutrients onto or into land in circumstances that may result in a contaminant entering water in the Lower Hinds/Hekeao Plains Area that would otherwise contravene s15(1) of the RMA is a discretionary activity, provided the following conditions are met:

1. The applicant is an irrigation scheme or a principal water supplier, or the holder of the discharge permit will be an irrigation scheme or a principal water supplier; and
2. The aggregated nitrogen loss calculation for land irrigated with water that was first lawfully supplied by an irrigation scheme or principal water supplier, but prior to CRC121664 or CRC162882 being granted, is limited to the nitrogen loss rate that corresponds with the aggregated baseline land use for that land; and
3. The aggregated nitrogen loss calculation for land first irrigated with water where nitrogen losses were authorised by CRC121664 or CRC162882, and where the
irrigation was established after the applicable resource consent was granted but prior to the expiry of that resource consent, is limited to 27 kgN\(^9\) per hectare per year; and

4. The nitrogen loss calculation for land otherwise irrigated with water fully or partially supplied by an irrigation scheme or principal water supplier for irrigation, is:
   (a) limited in accordance with Policies 13.4.15(a) and 13.4.15(d) except if Policies 13.4.15(b) or 13.4.15(c) apply;
   (b) if Policies 13.4.15(b) or 13.4.15(c) apply, the nitrogen loss calculation is limited to:
      (i) up to but not exceeding 15 kgN per hectare per year, for any property that had a nitrogen loss calculation of less than 15 kgN per hectare per year as at 1 September 2015; and
      (ii) up to but not exceeding 20 kgN per hectare per year, for any property that had a nitrogen loss calculation between 15 kgN per hectare per year and 20 kgN per hectare per year as at 1 September 2015; and

5. Except as provided for by conditions 2, 3 or 4(a) of this rule, for land where irrigation was not authorised and established under either CRC121664 or CRC162882, the nitrogen loss calculation that applies to those properties is not aggregated and redistributed for use on other land, but can be aggregated and redistributed within the property itself. For the avoidance of doubt, the aggregated nitrogen loss calculations in conditions 2, 3 and 4(a) may be combined to form the total aggregated nitrogen loss calculation.

6. The application for resource consent is accompanied by a legally binding obligation running with the land to achieve in full any applicable future nitrogen loss reductions in Policy 13.4.15.

**Notification**

Pursuant to section 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.

13.5.23 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 that does not meet one or more of the conditions in Rule 13.5.22 is a prohibited activity.

**Note:** If the applicant is not an irrigation scheme or a principal water supplier, or the holder of the discharge permit will not be an irrigation scheme or a principal water supplier, then the discharge is assessed under Rules 13.5.24 and 13.5.25.

**Incidental Nutrient Discharges**

**Note:** Rules 13.5.24 and 13.5.25 prevail over Region-wide Rules 5.63 and 5.64.

---

9 Calculated using Overseer version 6.0.3.
13.5.24 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 13.5.8 to 13.5.12 or 13.5.14 to 13.5.19.

13.5.25 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 condition 1 of Rule 13.5.24 is a non-complying activity.

Stock Exclusion

Notes:
1. Rules 5.68, 5.69, 5.70 and 5.71 (Stock Exclusion) apply in the Hinds/Hekeao Plains Area. Rule 13.5.26 applies as an addition to Rules 5.68, 5.69, 5.70 and 5.71.
2. For all activities in or near waterways, refer also to the Canterbury Flood Protection and Drainage Bylaw 2013.

13.5.26 Within the Hinds/Hekeao Plains Area any reference to the bed of a lake, river or wetland in Rules 5.68, 5.69, 5.70 and 5.71 also includes a drain, but does not include any subsurface drain, or drain that does not have water in it.

Sediment Removal from Rivers and Streams

Notes:
1. Rules 13.5.27 and 13.5.28 are new rules
2. For all activities in or near waterways, refer also to the Canterbury Flood Protection and Drainage Bylaw 2013.
3. 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 Heritage New Zealand Pouhere Taonga Act 2014. An archaeological authority is required from Heritage New Zealand Pouhere Taonga to modify, damage or destroy any archaeological site, whether recorded or not in the New Zealand Archaeological Association Site Recording Scheme website.

13.5.27 Within the Hinds/Hekeao Plains Area the taking and use of water from a river and the disturbance of the bed of a river to remove fine sediment less than 2 mm in diameter for the sole purpose of habitat restoration is a restricted discretionary activity, provided the following conditions are met:
1. A management plan has been prepared that includes the location, timeframe and method of sediment removal, management and disposal, erosion control methodology, an inventory of sensitive ecological habitats and species, and an assessment of the environmental risks including effects downstream; and
2. The activity does not occur when the river is at or below the minimum flow in Table 13(d) or 13(e); and
3. Following removal of fine sediment any abstracted water is returned to the river not
more than 250 m from the point of take; and
4. The maximum instantaneous rate of water abstraction shall not exceed 50% of the flow in the stream to the site being remediated; and
5. The activity does not take place on a site listed as an archaeological site on the New Zealand Archaeological Association Site Recording Scheme website; and
6. The activity is not undertaken within a Community Drinking Water Protection Zone as set out in Schedule 1; and
7. The activity is undertaken at a distance greater than 50 m from any lawfully established surface water intake.

The exercise of discretion is restricted to the following matters:
1. The content and adequacy of the management plan; and
2. The location, method and timing of sediment removal with respect to the life stage and habitat of sensitive ecological communities including fish and invertebrates; and
3. The adverse effects of the activity on downstream water quality, flows and significant habitats of indigenous fauna and flora; and
4. The effect of the activity on reliability for any authorised surface water take; and
5. The volume and rate at which water is abstracted and returned to the river, including the effects of erosion, bank stability and waterway capacity; and
6. Any adverse effects on mahinga kai, wāhi tapu or wāhi taonga; and
7. The benefits of the activity to the community and the environment.

13.5.28 Within the Hinds/Hekeao Plains Area the taking and use of water from a river and the disturbance of the bed of a river to remove fine sediment less than 2 mm in diameter for the sole purpose of habitat restoration that does not meet one or more of the conditions in Rule 13.5.27 is a discretionary activity.

Small and Community Water Takes


13.5.29 Within the Lower Hinds/Hekeao Plains Area Region-wide Rule 5.111 does not apply.

Take and Use of Ground and Surface Water

Notes:
2. Nothing in this Plan affects a person’s right to take water in accordance with section 14(3)(b) of the RMA.

13.5.30 The taking and use of groundwater within the Valetta and Mayfield-Hinds Groundwater Allocation Zones that will substitute an existing surface water or groundwater permit
with a direct, high or moderate stream depletion effect is a restricted discretionary activity, provided the following conditions are met:

1. The use of groundwater is on the same property as the existing resource consent and there is no increase in the annual volume, or is for the sole purpose of augmenting a surface waterbody; and
2. The groundwater take will not have a direct or high stream depletion effect; and
3. The bore interference effects are acceptable, as determined in accordance with Schedule 12; and
4. The proposed take, in combination with all other resource consents granted under this Rule, will not exceed the T allocation limits in Table 13(f); and
5. The take is from deep groundwater or the application for resource consent demonstrates that the take is not from stream depleting groundwater.

The exercise of discretion is restricted to the following matters:

1. Whether the volume and abstraction rate of water to be taken and used is reasonable for the proposed use assessed in accordance with Schedule 10; and
2. The timing of the surrender of the existing surface water or groundwater permit or permits; and
3. The effects the take has on any other authorised abstraction, including interference effects as indicated by an Aquifer Test undertaken in accordance with the requirements of Schedule 11 and well interference calculated in accordance with the method in Schedule 12; and
4. Where the take is less than 2 km from the coast, whether salt-intrusion into the aquifer or inland movement of the salt water/fresh water interface is prevented; and
5. The protection of groundwater from contamination, including the prevention of backflow of water or contaminants.

13.5.31 The taking and use of groundwater that does not meet one or more of the conditions of Rule 13.5.30 is a prohibited activity.

Transfer of Water Permits

Note: Rules 13.5.32, 13.5.33 and 13.5.34 prevail over Region-wide Rules 5.133 and 5.134 in the Hinds/Hekeao Plains Area

13.5.32 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 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 within the Hinds/Hekeao Plains Area, is to be considered as if it 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; and
2. In the case of surface water;
   (a) the point of take remains within the same surface water catchment and the take complies with the minimum flow and restriction regime in Tables 13(d) and 13(e); and
(b) 50 percent of the volume of transferred water is to be surrendered; or

3. In the case of groundwater:
   (a) the point of take is within the same groundwater allocation zone or combined surface and groundwater allocation zone; and
   (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 catchment; and
      (ii) the take complies with the minimum flow and restriction regime in Table 13(d) and 13(e); and
      (iii) the stream depletion effect is no greater in the transferred location than in the original location, unless at least an equivalent volume of surface water allocation from the affected water body can be surrendered alongside the transfer, for at least the duration of the transferred take; and
   (d) If the transfer is within the Valetta Groundwater Allocation Zone, 50 percent of the volume of transferred water is to be surrendered.

The exercise of discretion is restricted 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 of take and annual volume in the case of a partial transfer; and
2. The appropriateness of conditions, including conditions on minimum flow, annual volume and other restrictions to mitigate effects; and
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; and
4. The efficiency of the exercise of the resource consent; and
5. The reduction in the rate of take in times of low flow; and
6. The method of preventing fish from entering any water intake.

13.5.33 Despite Rule 13.5.32, the temporary or permanent site-to-site transfer, in whole or in part, of a water permit to take or use water for gravel extraction (and ancillary activities), is to be considered as if it is a discretionary activity, provided the following condition is met:

1. The water continues to be used only for gravel extraction and ancillary activities.

13.5.34 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 water relates and where the location of the take and use of water does not change) of a water permit that does not meet one of the conditions of Rule 13.5.32 or Rule 13.5.33 must not be approved under section 136 of the RMA, in the same way as if it were a prohibited activity.

Augmenting Groundwater or Surface Water

Notes:

1. For all activities in or near waterways, refer also to the Canterbury Flood Protection and Drainage Bylaw 2013.
2. *Rules 13.5.35 to 13.5.37 are new rules that apply in the Hinds/Hekeao Plains Area*

13.5.35 The taking and use of surface water or groundwater in the Lower Hinds/Hekeao Plains Area for the sole purpose of augmenting surface water or groundwater to reduce concentrations of nitrate nitrogen in surface water or groundwater and/or increase flows in lowland streams is a discretionary activity.

13.5.36 The discharge of water into water, or onto land in circumstances where it may enter water (where that water contains contaminants), that is for the purpose of augmenting groundwater or surface water within the Hinds/Hekeao Plains Area, is a restricted discretionary activity, provided the following conditions are met:

1. The discharge is part of a trial for investigative purposes and the duration of the trial will not exceed 5 years; and
2. The activity does not take place on a site listed as an archaeological site; and
3. The discharge is not within a Community Drinking Water Protection Zone as set out in Schedule 1; and
4. The discharge is not within 100 m of any well used to supply potable water; and
5. The discharge is for the purpose of reducing the concentration of nitrate nitrogen in surface water or groundwater, or increasing flows in lowland streams for ecological or cultural benefits.

*The exercise of discretion is restricted to the following matters:*

1. The location, method and timing of the discharge to groundwater or surface water; and
2. The adequacy of the scheme design, construction, operation, monitoring, reporting; and
3. The appropriateness of integration with existing or planned infrastructure and water conveyance systems; and
4. Any adverse effects on people and property from raised groundwater levels and reduced drainage capacity in the drainage system; and
5. Any adverse effects on water quality in the receiving aquifer or river or significant habitats of indigenous flora and fauna; and
6. Any adverse effects on sites or values of importance to Ngāi Tahu from moving water from one catchment or water body to another; and
7. Any adverse effects on sites or areas of wāhi tapu, wāhi taonga or mahinga kai; and
8. The potential benefits of the activity to the community and the environment.

13.5.37 The discharge of water into water, or onto land in circumstances where that may enter water (where that water contains contaminants), that is for the purpose of augmenting groundwater or surface water in the Hinds/Hekeao Plains Area, that does not meet one or more of the conditions of Rule 13.5.36 is a discretionary activity.
13.6 Freshwater Outcomes

The following table sets out, in combination with Policies 4.3 and 4.4 the freshwater outcomes for the Hinds/Hekeao Plains Area. These freshwater outcomes are to be maintained where they are already being met, or achieved by 2035 where they are not currently met. Achievement of these freshwater outcomes will be through a combination of the implementation of this Plan along with implementation of the recommendations of the Ashburton Zone Implementation Programme Addendum: Hinds Plains Area, 2014.

Table 13(a): Freshwater Outcomes for Hinds/Hekeao Plains Area Rivers

<table>
<thead>
<tr>
<th>Management Unit</th>
<th>River</th>
<th>Ecological health indicators</th>
<th>Macrophyte indicators</th>
<th>Periphyton indicators</th>
<th>Siltation indicator</th>
<th>Microbial indicator for contact recreation [SFRG]</th>
<th>Cultural Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>QMCI [min Score]</td>
<td>Dissolved oxygen [min saturation %]</td>
<td>Temperature [max (°C)]</td>
<td>Emergent Macrophytes [max cover of bed] (%)</td>
<td>Total Macrophytes [max cover of bed] (%)</td>
<td>Chlorophyll a [max biomass] (mg/m³)</td>
</tr>
<tr>
<td>Hill-fed – Upland</td>
<td>Upper Hinds River/Hekeao¹</td>
<td>6</td>
<td>90</td>
<td>20</td>
<td>No value set</td>
<td>No value set</td>
<td>50</td>
</tr>
<tr>
<td>Hill-fed - Lower</td>
<td>Lower Hinds River/Hekeao¹</td>
<td>6</td>
<td>90</td>
<td>20</td>
<td>No value set</td>
<td>No value set</td>
<td>200</td>
</tr>
<tr>
<td>Spring-fed Plains</td>
<td>Including but not limited to:</td>
<td>5</td>
<td>70</td>
<td>20</td>
<td>30</td>
<td>50</td>
<td>200</td>
</tr>
<tr>
<td>Drain</td>
<td>Taylor Drain</td>
<td>Northern Drain</td>
<td>Griggs Drain</td>
<td>Dobsons Drain</td>
<td>Twenty One Drain</td>
<td>Crows Drain</td>
<td>Harris Drain</td>
</tr>
<tr>
<td>----------------</td>
<td>--------------</td>
<td>----------------</td>
<td>--------------</td>
<td>--------------</td>
<td>------------------</td>
<td>-------------</td>
<td>--------------</td>
</tr>
</tbody>
</table>

Key:
QMC1 = Quantitative Macroinvertebrate Community Index
SFRG = Suitability for Recreation Grade – from Microbiological water quality guidelines for Marine and Freshwater Recreational Areas 2003

Footnotes:
1 Upstream of the Rangitata Diversion Race siphon on both North and South branches of the Hinds River.

For freshwater outcomes for all other areas within the Ashburton sub-region refer to Policies 4.3, 4.4 and Tables 1a and 1b.
### 13.7 Environmental Flow and Allocation and Water Quality Targets/Limits

#### 13.7.1 Environmental Flow and Allocation Limits

**Table 13(b): Hakatere/Ashburton River Catchment Environmental Flow and Allocation Limits**

<table>
<thead>
<tr>
<th>River or stream (see Planning Maps)</th>
<th>Location of recorder site, or site where flow is measured</th>
<th>Topo 50 Map Reference</th>
<th>From 1 July 2023</th>
<th>From 1 July 2033</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Minimum flow for A permits (L/s)</td>
<td>Allocation limit for A permits (L/s)</td>
</tr>
<tr>
<td>Ashburton River mainstem</td>
<td>State Highway 1 Bridge</td>
<td>BY21:999-351</td>
<td>6,000</td>
<td>253</td>
</tr>
<tr>
<td>South Branch</td>
<td>Residual flow site immediately downstream of the RDR intake point</td>
<td>BX20:721-576</td>
<td>3,200 (February – April)</td>
<td>5,100</td>
</tr>
<tr>
<td>South Branch at North Branch confluence</td>
<td>BY21:976-399</td>
<td>4,650</td>
<td>3,905</td>
<td>10,500</td>
</tr>
<tr>
<td>North Branch</td>
<td>above confluence</td>
<td>BY21:976-401</td>
<td>1,000</td>
<td>2,194</td>
</tr>
<tr>
<td>Pudding Hill</td>
<td>below ADC water race</td>
<td>BY21:976-404</td>
<td>80</td>
<td>528</td>
</tr>
<tr>
<td>Taylor’s Stream</td>
<td>above South Branch Confluence</td>
<td>BX20:808-742</td>
<td>500</td>
<td>4,465</td>
</tr>
<tr>
<td>O’Shea Creek</td>
<td>bywash to North Ashburton</td>
<td>BY20:885-527</td>
<td>450</td>
<td>556</td>
</tr>
<tr>
<td>Mt. Harding Creek</td>
<td>Aitkens Road</td>
<td>BY21:926-502</td>
<td>500</td>
<td>1562</td>
</tr>
<tr>
<td>Lagmhor Creek</td>
<td>Frasers Road</td>
<td>BY21:962-366</td>
<td>100</td>
<td>295</td>
</tr>
</tbody>
</table>

For all other areas see Rule 5.123.
### Table 13(c): Ashburton River/Hakatere Restriction Regime

<table>
<thead>
<tr>
<th>Flow at SH1 (L/s)</th>
<th>Reduction in Take</th>
</tr>
</thead>
<tbody>
<tr>
<td>7,700</td>
<td>0%</td>
</tr>
<tr>
<td>7,275</td>
<td>25%</td>
</tr>
<tr>
<td>6,850</td>
<td>50%</td>
</tr>
<tr>
<td>6,425</td>
<td>75%</td>
</tr>
<tr>
<td>6,000</td>
<td>100%</td>
</tr>
</tbody>
</table>

Note: Table 13(c) applies from 1 July 2023.

### Table 13(d) Hinds River/Hekeao Environmental Flow and Allocation Limits

<table>
<thead>
<tr>
<th>River</th>
<th>Minimum flow sites</th>
<th>Topo 50 Map reference</th>
<th>Minimum flow (L/s) 1 October 2014 – 30 June 2020</th>
<th>Allocation (L/s) 1 October 2014 – 30 June 2025</th>
<th>Restriction regime 1 From 1 July 2020</th>
<th>Restriction regime 1 From 1 July 2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Branch</td>
<td>Not applicable</td>
<td>Topo 50 Map reference</td>
<td>No minimum flow</td>
<td>32</td>
<td>No restriction regime</td>
<td></td>
</tr>
<tr>
<td>North Branch</td>
<td>Not applicable</td>
<td>Topo 50 Map reference</td>
<td>No minimum flow</td>
<td>0</td>
<td>No restriction regime</td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>Poplar Road</td>
<td>BY20:9080-1949</td>
<td>700</td>
<td>770</td>
<td>1522</td>
<td>1973</td>
</tr>
</tbody>
</table>

1 Flows at which pro-rata restrictions start (L/s)

### Table 13(e): Lower Hinds/Hekeao Plains Area Environmental Flow and Allocation Limits

<table>
<thead>
<tr>
<th>Spring-fed Plains Rivers</th>
<th>Minimum flow sites</th>
<th>Topo 50 Map reference</th>
<th>1 October 2014 – 30 June 2025 Minimum flow (L/s)</th>
<th>Allocation (L/s) 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blees Drain</td>
<td>Lower Beach Road</td>
<td>BY21:0132-2104</td>
<td>As per existing minimum flow and partial restriction conditions on existing resource consents</td>
<td>349</td>
</tr>
<tr>
<td>Flemington Drain</td>
<td>Lower Beach Road</td>
<td>BY21:0112-2059</td>
<td>As per existing minimum flow and partial restriction conditions on existing resource consents</td>
<td>547</td>
</tr>
<tr>
<td>Parakanoi Drain</td>
<td>Lower Beach Road</td>
<td>BZ21:9575-1779</td>
<td>As per existing minimum flow and partial restriction conditions on existing resource consents</td>
<td>588</td>
</tr>
<tr>
<td>Windermere Drain</td>
<td>Poplar Road</td>
<td>BY21:9369-1968</td>
<td>As per existing minimum flow and partial restriction conditions on existing resource consents</td>
<td>668</td>
</tr>
<tr>
<td>Boundary Drain</td>
<td>Trigpole Road</td>
<td>BZ20:8982-1672</td>
<td>As per existing minimum flow and partial restriction conditions on existing resource consents</td>
<td>987</td>
</tr>
<tr>
<td>Spring-fed Plains Rivers ¹</td>
<td>Minimum flow sites</td>
<td>Topo 50 Map reference</td>
<td>1 October 2014 – 30 June 2025</td>
<td>Minimum flow (L/s)</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------</td>
<td>-----------------------</td>
<td>-------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Stormy Drain</td>
<td>Lower Beach Road</td>
<td>BZ20:8764-1178</td>
<td>As per existing minimum flow and partial restriction conditions on existing resource consents</td>
<td>436</td>
</tr>
<tr>
<td>Spicers Drain</td>
<td>Lower Beach Road</td>
<td>BY21:0012-2019</td>
<td>As per existing minimum flow and partial restriction conditions on existing resource consents</td>
<td>184</td>
</tr>
<tr>
<td>Dawson Drain</td>
<td>Twenty One Drains Road</td>
<td>BY21:9773-1919</td>
<td>As per existing minimum flow and partial restriction conditions on existing resource consents</td>
<td>35</td>
</tr>
<tr>
<td>Home Paddock Drain</td>
<td>Poplar Road</td>
<td>BZ21:9443-1679</td>
<td>As per existing minimum flow and partial restriction conditions on existing resource consents</td>
<td>333</td>
</tr>
<tr>
<td>Deals Drain</td>
<td>Poplar Road</td>
<td>BZ21:9273-1599</td>
<td>As per existing minimum flow and partial restriction conditions on existing resource consents</td>
<td>347</td>
</tr>
<tr>
<td>O ‘Shaughessys Drain</td>
<td>Poplar Road</td>
<td>BY20:9123-1969</td>
<td>As per existing minimum flow and partial restriction conditions on existing resource consents</td>
<td>426</td>
</tr>
<tr>
<td>Taylors Drain</td>
<td>At corner Hinds River Road and Newpark Road</td>
<td>BY20:9033-2189</td>
<td>As per existing minimum flow and partial restriction conditions on existing resource consents</td>
<td>513</td>
</tr>
<tr>
<td>Northern Drain</td>
<td>Surveyors Road</td>
<td>BY20:8863-2164</td>
<td>As per existing minimum flow and partial restriction conditions on existing resource consents</td>
<td>634</td>
</tr>
<tr>
<td>Griggs Drain</td>
<td>Lower Beach Road</td>
<td>BZ20:9173-1479</td>
<td>As per existing minimum flow and partial restriction conditions on existing resource consents</td>
<td>100</td>
</tr>
<tr>
<td>Dobson Drain</td>
<td>Twenty One Drains Road</td>
<td>BZ20:8953-1449</td>
<td>As per existing minimum flow and partial restriction conditions on existing resource consents</td>
<td>447</td>
</tr>
<tr>
<td>Twenty One Drain</td>
<td>Twenty One Drains Road</td>
<td>BZ20:8933-1299</td>
<td>As per existing minimum flow and partial restriction conditions on existing resource consents</td>
<td>351</td>
</tr>
<tr>
<td>Crows Drain</td>
<td>Lower Beach Road</td>
<td>BZ20:8603-1059</td>
<td>As per existing minimum flow and partial restriction conditions on existing resource consents</td>
<td>314</td>
</tr>
<tr>
<td>Harris Drain</td>
<td>Lower Beach Road</td>
<td>BZ20:8504-0979</td>
<td>As per existing minimum flow and partial restriction</td>
<td>260</td>
</tr>
</tbody>
</table>
### Spring-fed Plains Rivers

<table>
<thead>
<tr>
<th>Minimum flow sites</th>
<th>Topo 50 Map reference</th>
<th>1 October 2014 – 30 June 2025</th>
<th>Allocation (L/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td><strong>Minimum flow (L/s)</strong></td>
<td><strong>Allocation (L/s)</strong></td>
</tr>
<tr>
<td>Yeatmans Drain</td>
<td>-</td>
<td>B20:8588-1048</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>As per existing minimum flow</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>and partial restriction</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>conditions on existing resource consents</td>
<td></td>
</tr>
<tr>
<td>Oakdale Drain</td>
<td>Rangitata Mouth Road</td>
<td>B20:8276-1004</td>
<td>190</td>
</tr>
<tr>
<td></td>
<td></td>
<td>As per existing minimum flow</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>and partial restriction</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>conditions on existing resource consents</td>
<td></td>
</tr>
<tr>
<td>McLeans Swamp Road Drain</td>
<td>Windermere cut off</td>
<td>B Y20:8673-2799</td>
<td>-</td>
</tr>
<tr>
<td>Moffats Drain</td>
<td>Boundary Road</td>
<td>-</td>
<td>353</td>
</tr>
<tr>
<td>Meyfield Road</td>
<td></td>
<td>As per existing minimum flow</td>
<td></td>
</tr>
<tr>
<td>Montymers Drain</td>
<td>At confluence with Hinds River</td>
<td>BZ21:9223-1569</td>
<td>125</td>
</tr>
<tr>
<td>Pyes Drain</td>
<td>Lower Beach Road</td>
<td>B20:8893-1249</td>
<td>381</td>
</tr>
<tr>
<td></td>
<td></td>
<td>As per existing minimum flow</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>and partial restriction</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>conditions on existing resource consents</td>
<td></td>
</tr>
</tbody>
</table>

1 The drains referred to in this column are considered to be modified watercourses for the purposes of the Resource Management Act 1991.

2 Existing rates of allocation

#### 13.7.2 Groundwater Allocation Limits/Targets

The following groundwater allocation limits are to be applied when reading relevant policies and rules in Sections 4, 5 and 13.

**Table 13(f): Ashburton Groundwater Limits/Targets**

<table>
<thead>
<tr>
<th>Groundwater Allocation Zone (see Planning Maps)</th>
<th>A Allocation Limit (million m³/yr)</th>
<th>B Allocation Limit (million m³/yr)</th>
<th>T Allocation Limit (million m³/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chertsey</td>
<td>112.4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ashburton Lyndhurst</td>
<td>126.60</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hakatere/Ashburton River</td>
<td>69.7</td>
<td>35*</td>
<td>0</td>
</tr>
<tr>
<td>Valetta</td>
<td>96.6</td>
<td>0</td>
<td>33</td>
</tr>
<tr>
<td>Mayfield-Hinds</td>
<td>126.1</td>
<td>0</td>
<td>28.3</td>
</tr>
</tbody>
</table>

1 Taking of groundwater within the T-Allocation limit is governed by Rule 13.5.30

2 Refer to Policies 13.4.5, 13.4.7 and 13.4.8.

For all other areas see Rule 5.128.
13.7.3 Water Quality Limits and Targets

In the Hinds/Hekeao Plains Area the water quality limits in Tables 13(g) 13(h) and 13(i) prevail over the region-wide limits in Schedule 8.

Table 13(g): Limits/Targets for the Hinds/Hekeao Plains Area surface waterbodies

<table>
<thead>
<tr>
<th>Surface Waterbody type</th>
<th>Type</th>
<th>Measurement</th>
<th>Limit/Target Nitrate-nitrogen concentration (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hill-fed Upland (^2)</td>
<td>Nitrate toxicity</td>
<td>Annual median</td>
<td>1.0 (Limit)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Annual 95th percentile</td>
<td>1.5 (Limit)</td>
</tr>
<tr>
<td>Hill-fed Lower</td>
<td>Nitrate toxicity</td>
<td>Annual median</td>
<td>3.8 (Target to be met by 2035)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Annual 95th percentile</td>
<td>5.6 (Target to be met by 2035)</td>
</tr>
<tr>
<td>Spring-fed Plains</td>
<td>Nitrate toxicity</td>
<td>Annual median</td>
<td>6.9 (Target to be met by 2035)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Annual 95th percentile</td>
<td>9.8 (Target to be met by 2035)</td>
</tr>
</tbody>
</table>

\(^1\) Waterbodies are to meet both (annual median and 95th percentile) limits/targets

\(^2\) Monitoring of Hill-fed Upland rivers occurs at the Canterbury Regional Council’s monthly surface waterbodies monitoring sites, upstream of the Rangitata Diversion Race siphon on both North and South branches of the Hinds River. For other surface waterbodies monitoring occurs at the Canterbury Regional council’s monthly surface waterbodies monitoring sites.

Table 13(h): Limits for Hinds/Hekeao Plains Area surface waterbodies

<table>
<thead>
<tr>
<th>Surface Waterbody type</th>
<th>Type</th>
<th>Measurement</th>
<th>Limit (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hill-fed Upland (^1)</td>
<td>Dissolved Reactive Phosphorus (DRP)</td>
<td>Annual median</td>
<td>0.02</td>
</tr>
</tbody>
</table>

\(^1\) Measured immediately upstream of the Rangitata Diversion Race siphon on both the North and South branches of the Hinds River.

Table 13(i): Limits/Targets for Groundwater

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Measurement</th>
<th>Limits/Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrate-N</td>
<td>Annual average concentration(^1)</td>
<td>6.9 mg /L (Target to be met by 2035)</td>
</tr>
<tr>
<td>E. coli</td>
<td>Annual median concentration(^1)</td>
<td>&lt; 1 organism/100 millilitres (Limit)</td>
</tr>
<tr>
<td>Other contaminants(^2)</td>
<td>Any sample(^1)</td>
<td>&lt;50% MAV (^3) (Limit)</td>
</tr>
</tbody>
</table>

\(^1\) Groundwater quality is determined as the median concentration across the Canterbury Regional Council’s quarterly groundwater monitoring bores (screened <30 m below the ground level).

\(^2\) Other contaminants of health significance as listed in NZ Drinking-water Standards

\(^3\) Maximum acceptable value (as listed \(^2\) above)

13.8 Flow Sensitive Catchments

Nil.

13.9 High Naturalness Water Bodies

The following are to be applied when reading relevant policies and rules in Sections 4 and 5.
## Table 13(j): High Naturalness Water Bodies

<table>
<thead>
<tr>
<th>Main Lake/River (see Planning Maps)</th>
<th>Topo 50 Map Reference</th>
<th>Outstanding and Significant Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Emily</td>
<td>BX19:577-773</td>
<td>Outstanding natural features and landscapes that includes a regionally significant wetland complex. Habitat of threatened/endangered indigenous birds and fresh water species including eel and fresh water mussel. High visual amenity value.</td>
</tr>
<tr>
<td>Maori Lakes</td>
<td>BX19:526-741</td>
<td>Outstanding natural features and landscapes. Habitat of threatened/endangered indigenous birds, including crested grebe and Australasian bittern. Inflows and outflows high habitat value for maintaining longfinned and shortfinned eel and galaxiidae and the sport fish, brown trout. Outflows high habitat value Chinnook salmon spawning and fresh water mussels. High visual amenity value.</td>
</tr>
<tr>
<td>Lake Trinity</td>
<td>BX19:512-673</td>
<td>Outstanding natural features and landscapes. High visual amenity value.</td>
</tr>
<tr>
<td>Lake Clearwater</td>
<td>BX18:422-704</td>
<td>Outstanding natural features and landscapes including a regionally significant red tussock wetland. Habitat of threatened/endangered indigenous birds and Recommended Area for Protection. High habitat value for indigenous fish such as galaxiidae, eel, fresh water mussels and the sports fish brown trout. High visual amenity value.</td>
</tr>
<tr>
<td>Lake Camp</td>
<td>BX18:431-891</td>
<td>Outstanding natural features and landscapes. High habitat value for Longfinned eel, fresh water mussel, Crested grebe and the sports fish Rainbow trout.</td>
</tr>
<tr>
<td>Lake Emma</td>
<td>BX19:471-668</td>
<td>Outstanding natural features and landscapes including pedestal Carex secta and schoenus wetlands. Habitat of threatened/endangered indigenous birds. High habitat value for indigenous fish such as galaxiidae, eel, fresh water mussels and the sports fish brown trout. High visual amenity value.</td>
</tr>
</tbody>
</table>
Ashburton River/ Hakatere Environmental Flow and Allocation Limits
(This page is intentionally left blank)
Section 14 Orari-Opihi-Pareora

The area covered by this section is bordered by the Rangitata River (an alpine braided river) in the north and the hill-fed Pareora River in the south, and has the Orari and Opihi hill-fed rivers in the middle. The Opihi catchment includes significant tributaries, including the Tengawai and Opuha Rivers.

Coastal erosion has considerably reduced the size of coastal wetlands and hapua in the Zone, but significant ones remain, most notably Spider, Horseshoe, and Washdyke lagoons, and Milford hapua. Some inland and hill country wetlands remain, such as Seven Sisters wetland, Peel Forest wetland and Deep Spring (Mesopotamia) wetland.

Orari-Opihi-Pareora Sub-region

The vision in the Orari-Opihi-Pareora ZIP is:

‘Water is precious and limited. It must be managed in ways that recognise and balance its importance for cultural, economic and recreational use, aesthetic and landscape values and biodiversity values and delivers both individual and community good. We affirm and recognise tangata whenua and the value they place on mahinga kai, and the priority of available high quality sources of drinking water in rivers, waterways and aquifers. We also recognise the intrinsic value of aquatic ecosystems and river health (quality and flow), and the need to both prevent further decline and then restore wetlands and waterways. We know that to achieve all the targets of the CWMS within our zone it is necessary to find a way to bring more water into the zone.’
The Orari-Opihi-Pareora Zone Committee has identified a suite of recommendations covering ecological, cultural and economic outcomes for the Zone. The Orari Integrated Catchment Management (ICM) Group has prepared a Catchment Management Strategy and the review of environmental flows is identified as an action point.

In the Orari catchment a three stepped approach to managing flow and allocation in the catchment was developed by the Orari Environmental Flow and Allocation Regime Steering Committee to assist with achieving the Zone vision and the objectives to this Plan. The first step caps current allocation. The next step is introduced three years after the LWRP becomes operative and the final step is a vision for 2040.

The steps involve a combination of increasing environmental flows and reducing allocation limits for the Orari catchment so that in-stream ecological, cultural and economic values are better met. The limits are to be achieved through managing transfers of water permits, storage, metering, reasonable use, water user groups, augmentation and efficiency. Alongside the policies and rules in this Plan, there is also an accord between the Orari Environmental Flow and Allocation Regime Steering Committee and the Zone Committee to implement other actions to achieve the vision for the catchment. The 2040 environmental flow and allocation regime is a vision that may change along with new scientific information. Actions include a collaborative approach to improving water quality through fencing and planting waterways and investigating other practical on the ground solutions to achieve outcomes. There is also a need for increased certainty surrounding the science within the Orari catchment.

Within the Orari environmental flow and allocation regime, two maps along with definitions of each minimum flow site and the different zones are provided at the back of this section. A background to each of the sites is provided below.

Orari mainstem permits are attached to the Upstream Ohapi minimum flow site and allocation limit. The Orari mainstem contains the mainstem conjunctive use zone and the Coopers Creek conjunctive use zone. Given the lack of hydrological data and scientific understanding with the upper section of Coopers Creek and the Upstream Ohapi, mainstem minimum flow will apply to users within this catchment.

For Ohapi Creek, the existing minimum flows and flow-sharing regimes, including a Water Users’ Group within this catchment, have worked well historically and the ecological situation is considered to be supported under this regime. Therefore the status quo is to remain in place in this Plan, with the addition of a conjunctive use zone.

Given the lack of hydrological data available for Rhodes Stream, the minimum flow and allocation regime is proposed to remain unchanged until a more complete hydrological understanding is obtained. Therefore the status quo is to remain in place in this Plan with the addition of a conjunctive use zone.
14.1 Other Regional Plans that apply to the Orari-Opihi-Pareora Sub-region

14.1.1 The Opihi River Regional Plan

The Opihi River Regional Plan controls the taking, using, damming and diverting of water from the Opihi River and its tributaries (including hydraulically connected groundwater), and the discharge of contaminants into the Opihi River or its tributaries or onto or into land within the catchment.

The LWRP’s objectives, policies and rules do not apply to the matters controlled by the Opihi River Regional Plan.

14.1.2 Pareora Catchment Environmental Flow and Water Allocation Regional Plan

The Pareora Catchment Environmental Flow and Water Allocation Regional Plan controls the taking, using, damming and diverting of water from within the Pareora catchment.

The LWRP’s objectives, policies and rules do not apply to the matters controlled by the Pareora Catchment Environmental Flow and Water Allocation Regional Plan.

14.1A Orari Environmental Flow and Allocation Definitions

**Orari Catchment:** The entire catchment, including mainstem and tributaries and the three minimum flow sites.

**Orari mainstem:** Orari headwaters through to the lower catchment including all tributaries that do not have their own specific allocation limit as per Table 15 and are attached to the Upstream Ohapi minimum flow site and allocation limit. This also includes the Orari mainstem conjunctive use zone and the Coopers Creek conjunctive use zone.

**Ohapi Creek:** A tributary to the mainstem of the Orari, attached to Ohapi Creek minimum flow site. This also includes the Ohapi Creek conjunctive use zone.

**Rhodes Stream:** A tributary to the mainstem of the Orari, attached to Rhodes Stream minimum flow site. This also includes the Rhodes Creek conjunctive use zone.

**Upper Coopers Creek:** A tributary to the mainstem of the Orari, attached to Upstream Ohapi minimum flow site.

**Orari conjunctive use zone:** Groundwater takes which are 30 m deep or less and are considered to have a direct hydraulic connection with surface water.

14.2 Water Conservation Orders that apply to the Orari-Opihi-Pareora Sub-region

14.3 Fresh water Outcomes

Objectives in Section 3, Policies 4.1, 4.2, 4.3 and 4.4.

14.4 Policies

The following policies apply in the Orari-Opihi-Pareora sub-region, in addition to those set out in Section 4 of this Plan.

14.4.1 Over-allocation of fresh water from the Orari Catchment is addressed by prioritising the use of Rangitata South Irrigation Limited scheme water ahead of the use of fresh water in the Orari Catchment.

14.4.2 On application for a water permit in the Orari Catchment affected by Section 124B or when consents are reviewed, any property that is supplied by Rangitata South Irrigation Limited scheme water must demonstrate that Rangitata South Irrigation Limited scheme water is being used to the fullest extent possible and minimising the use of fresh water from the Orari Catchment.

14.4.3 Over-allocation of fresh water in the Orari Catchment is addressed by Timaru District Council surrendering CRC011982 or its replacement in 2013 and increased efficiency with any renewal of CRC011991 in 2017. However, for security of supply a total flow rate of 235 L/s in 2025 of surface water will continue to be reserved for Timaru District Council community drinking and stock water, in addition to the volumes in Table 15, as part of the flow and allocation regime for Orari River.

14.4.4 Over-allocation of fresh water in the Orari Catchment is addressed by preventing the transfer of water permits, other than to new owners of the same property at the same location.

14.4.5 As an exception to Policy 14.4.4, to address environmental and reliability issues, water permits in the Upper Coopers Creek zone, identified on Map 2 Orari Catchment may be transferred if scientific studies show an environmental benefit.

14.4.6 Over-allocation of fresh water in the Orari Catchment is addressed by requiring that future allocation of water to any new or replacement resource consent does not exceed the allocation limits in Table 15 and is based on demonstrated need and efficiency.

14.4.7 To prevent the flow falling below the A permit allocation limit minimum flows for the Orari Catchment in Table 15 the following restrictions shall be applied and strictly adhered to in respect of the abstraction of surface water, stream depleting groundwater and abstractions from within the Orari conjunctive use zone.

(a) In the Orari Catchment, all partial restrictions for water permits in the Orari Catchment including takes to storage shall be stepped unless the consent applicant is part of a water users group;
(b) In the Orari Catchment, when the stepped approach applies, the rate of take is to be reduced in increments of 50% and 100% of the available flow rate to ensure the minimum flow is not breached;
(c) In the Orari Catchment, if a water permit holder is part of a water users group, any restrictions will be managed according to the water users group roster.

14.4.8 To prevent the flow falling below the B permit allocation minimum flows for the Orari mainstem in Table 15 the following restrictions shall be applied and strictly adhered to in respect of the abstraction of surface water and stream depleting groundwater and abstractions from within the Orari conjunctive use zone:
(a) In the Orari mainstem, if the water permit is part of a water users group then all takes shall cease when the river falls to the B block minimum flow;
(b) In the Orari mainstem, if the water permit is not part of a water users group, when the flow is above the B block minimum flow but below the sum of the minimum flow and the B permit allocation limit, all permits shall share the available flow above the B permit allocation limit minimum flow and cease when the minimum flow is reached.

14.4.9 All permits for groundwater takes from the Orari Catchment within the conjunctive use zone and where the screen is less than 30 m deep shall have minimum flow conditions consistent with the minimum flow sites and allocations in Table 15.

14.4.10 In the Orari Catchment, in addition to the requirements of the Resource Management (measurement and reporting of water takes) Regulations 2010, replacement of an expiring water permit, review or transfer of an existing permit to take 5 L/s or more of water shall include a condition requiring water use to be metered and water use records to be telemetered to the CRC or nominated agent.

14.4.11 In the Orari Catchment, water used for irrigation shall achieve at least 80% efficiency.

14.4.12 The in-stream damming of the mainstem of the Orari River below the Orari Gorge is avoided unless:
(a) The dam was lawfully established prior to 1 July 2012; or,
(b) No more than 25% of the flow is diverted into the dam at any point in time; and,
(c) No more than 5,000 m³ of water is impounded by the dam.
(d) The damming of water maintains a residual flow that ensures that the minimum flow limits in Table 15 will not be exceeded more often than they would be in the absence of the damming and also maintains flow variability.

14.4.13 Prior to water permits in the Orari Catchment being reviewed as a result of this Plan, any water permit holder may seek a change of consent conditions to alter the minimum flow restrictions on their permit, to accord with the Orari environmental flow and allocation limits in Table 15.
14.5 Rules

Note: Consent may be required under the Building Act 2004

The following rules apply in the Orari-Opihi-Pareora sub-region, in addition to those set out in Section 5 of this Plan.

14.5.1 The use of land to store water, including any associated impounding of water outside the bed of a river or natural lake in the Orari Catchment is a permitted activity, provided the following conditions are met:
1. If the volume of water impounded is greater than 5,000 m³, the design and construction of the dam is certified by a Recognised Engineer;
2. The impounded water is less than 3 m deep; and
3. The land is not contaminated or potentially contaminated.

14.5.2 The damming of water within the bed of the mainstem of the Orari River and within the tributaries below the gorge, at or about map reference BY19:553-335, including the associated constructing, maintaining and operating of structures is a non-complying activity.

14.5.3 The damming of water within the bed of the mainstem of the Orari River upstream from the mouth of the gorge and within any tributary above the gorge, at or about map reference BY19:553-335, is a prohibited activity.

14.5.4 The temporary or permanent transfer, in whole or in part, of a water permit to take or use surface water or groundwater in the Orari catchment, except for Upper Coopers Creek, identified in Map 2 - Orari Catchment, including stream depleting groundwater, is a prohibited activity until allocation limits in Table 15 are met.

14.5.5 The temporary or permanent transfer, in whole or in part, of a water permit to take or use groundwater in the Upper Coopers Creek area, identified in Map 2 - Orari Catchment, including stream depleting groundwater, is a discretionary activity.

14.6 Allocation Limits

14.6.1 Environmental Flow and Allocation Limits

The following flow and allocation limits are to be applied when reading policies and rules in Sections 4, 5 and 14.
Table 15: Orari River Environmental Flow and Allocation Limits

<table>
<thead>
<tr>
<th>River or stream (see Planning Maps)</th>
<th>Location of recorder site, or site where flow is measured</th>
<th>Topo 50 Map Reference</th>
<th>Minimum flow for A permits (L/s)</th>
<th>Allocation limit for A permits (L/s)</th>
<th>Minimum flow for B permits (L/s)</th>
<th>Allocation limit for B permits (L/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Current 3yrs from Operative Plan 2040</td>
<td>Current 3yrs from Operative Plan 2040</td>
<td>Current 3yrs from Operative Plan 2040</td>
<td>Current 3yrs from Operative Plan 2040</td>
</tr>
<tr>
<td>Orari</td>
<td>Upstream Ohapi</td>
<td>B220:714-005</td>
<td>Dec-Apr 200 (restrictions commence at 1,724) May-Jul 900 (restrictions commence at 2,424) Aug-Oct 400 (restrictions commence at 1,924) Nov 300 (restrictions 1,824)</td>
<td>500 (stepped restrictions commence at 2,400 for non-water user groups) (Water users groups self manage above 1,500) 1:1 Flow sharing 500-1,500</td>
<td>900 (stepped restrictions commence at 2,000 for non-water user groups) (Water users groups self manage above 1,500) 1:1 flow sharing 900-1,500</td>
<td>1,524 1,400 800 - 3,800 3,800 1,400 1,400</td>
</tr>
<tr>
<td>Ohapi Creek</td>
<td>Ohapi Creek at Houston’s</td>
<td>B220:711-002</td>
<td>Oct-Jan 570 (restrictions 1,000) Feb-Sep 730 (restrictions 1,000)</td>
<td>2,055 - - - -</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rhodes Creek</td>
<td>Rhodes Stream at Parke Road</td>
<td>B220:728-017</td>
<td>60 (no partial restrictions)</td>
<td>501 - - - -</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
14.6.2 Groundwater Allocation Limits

The following groundwater allocation limits are to be applied when reading relevant policies and rules in sections 4, 5 and 14.

Table 16: Orari-Opihi-Pareora Groundwater Limits

<table>
<thead>
<tr>
<th>Zone (see Planning Maps)</th>
<th>Allocation Limit (million m³/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rangitata-Orton</td>
<td>42.5</td>
</tr>
<tr>
<td>Fairlie</td>
<td>37.0</td>
</tr>
<tr>
<td>Levels Plain</td>
<td>32.9</td>
</tr>
<tr>
<td>Orari-Opihi</td>
<td>71.1</td>
</tr>
<tr>
<td>Pareora</td>
<td>7.19</td>
</tr>
<tr>
<td>Timaru</td>
<td>4.24</td>
</tr>
</tbody>
</table>

See the Pareora Catchment Environmental Flow and Allocation Regional Plan for groundwater limits under that Plan.

14.6.3 Catchment Nutrient Load Limits and Allowances

Nil. See Rules 5.41 to 5.64.

14.7 Flow Sensitive Catchments

The following are to be applied when reading relevant policies and rules in Sections 4 and 5.

<table>
<thead>
<tr>
<th>Major Catchment (see Planning Maps)</th>
<th>Sub-catchment</th>
<th>Sensitive part of catchment</th>
<th>Monitoring site – lower boundary of catchment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opihi</td>
<td>Opuha River</td>
<td>Gooseberry Stream</td>
<td>Inflow site to Lake Opuha</td>
</tr>
<tr>
<td></td>
<td>Opihi River</td>
<td>Halls Creek</td>
<td>State Highway 8</td>
</tr>
<tr>
<td>Temuka River</td>
<td>Hae Hae Te Moana River</td>
<td></td>
<td>Confluence with Kakahu River</td>
</tr>
<tr>
<td>Kakahu River</td>
<td>Catchment upstream from hall Road</td>
<td></td>
<td>Hall Road</td>
</tr>
<tr>
<td>Tengawai River</td>
<td>Whole catchment</td>
<td></td>
<td>Picnic Grounds recorder site</td>
</tr>
<tr>
<td></td>
<td>Opawa River</td>
<td></td>
<td>Te Ngawai confluence</td>
</tr>
<tr>
<td>Pareora</td>
<td>Pareora River</td>
<td>Catchment upstream from Pareora Huts</td>
<td>Pareora at Huts recorder site</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Taiko Stream</td>
<td>Confluence with Pareora River</td>
</tr>
</tbody>
</table>
14.8  High Naturalness Water Bodies

The following are to be applied when reading relevant policies and rules in Sections 4 and 5.

<table>
<thead>
<tr>
<th>Main River/Lake (see Planning Maps)</th>
<th>Location and Topo 50 Map Reference</th>
<th>Outstanding and significant characteristics</th>
</tr>
</thead>
</table>
| Orari River and tributaries         | From the mouth of the gorge (at or about BY19:553-335) to the headwaters. | • High degree of naturalness.  
• High visual amenity value - very high scenic and recreational values, and very high water clarity. |
Section 15 Waitaki and South Coastal Canterbury

The area covered by this section contains two of the CWMS Zones – ‘Upper Waitaki’ and ‘Lower Waitaki – South Coastal Canterbury’ – and includes the Waitaki River and Lakes Tekapo, Pukaki, Ohau and Benmore.

Upper Waitaki Zone

The Upper Waitaki catchment is the most distinctive and largest of New Zealand’s high inland basins. The landscape is almost completely derived from glacial activity with features ranging from alpine ice fields and active glaciers with fresh terminal moraines and lakes, to immense valley moraines, braided river plains and extensive intact sequences of basin floor features of moraine and outwash plains. These latter features are the most extensive in New Zealand.

The following priority outcomes for sustainable water management have been identified by the Upper Waitaki Zone Committee in their ZIP:

- Water quality and water quantity supports mahinga kai gathering and a diversity of aquatic life.
- All lakes and rivers are safe for contact recreation, have improved lake habitat, fish passage, and customary use, and flows that support natural processes. In particular, the water quality in Lake Benmore is, at all times of the year, consistent with its very high recreational value.
• The braided river systems support ecosystems and the rivers are protected as an outstanding recreation resource.
• The zone has safe and secure drinking water for community supplies.
• The biodiversity of the Zone’s water bodies and dry land systems that are affected by water use are protected with improved biodiversity.
• Highly reliable irrigation water, to a target of 95% reliability, is available in the Zone.
• There is no further reduction in water quality within the Zone and that water quality is set by the community across the Zone.
• Optimal water and nutrient management is common practice.
• Energy security and efficiency – maintains the Zone’s existing contribution to New Zealand’s security of electricity supply.
• Maintenance of communities and sustainable population growth.
• Decisions seek the greatest good for the present community and future generations.
• A balanced and sustainable economic growth strategy and plan.

15.1 Other Regional Plans that apply to the Waitaki

15.1.1 Waitaki Catchment Water Allocation Regional Plan (September 2005)

The Waitaki Catchment Water Allocation Regional Plan was prepared by the Waitaki Catchment Water Allocation Board under the Resource Management (Waitaki Catchment) Amendment Act 2004, and controls the taking, using, damming and diverting of water from within the Waitaki catchment.

The LWRP’s objectives, policies and rules do not apply to the matters controlled by the Waitaki Catchment Water Allocation Regional Plan.

15.2 Water Conservation Orders that apply to the Waitaki


15.3 Fresh water Outcomes

Objectives in Section 3, Policies 4.1, 4.2, 4.3 and 4.4.

15.4 Policies

15.5 Rules

15.6 Allocation Limits

15.6.1 Environmental Flow and Allocation Limits

See the Waitaki Catchment Water Allocation Regional Plan for the Waitaki catchment flow and allocation limits. For all other areas see policies and rules in Sections 4, 5 and 15A.
15.6.2 Groundwater Allocation limits

The following groundwater allocation limits are to be applied when reading relevant policies and rules in Sections 4, 5 and 15A.

**Table 18: Waitaki and South Coastal Canterbury Groundwater Limits**

<table>
<thead>
<tr>
<th>Zone (see Planning Maps)</th>
<th>Allocation Limit (million m³/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whitneys Creek</td>
<td>15.44</td>
</tr>
</tbody>
</table>

Whitneys Creek Groundwater Allocation Zone is within both Waitaki and South Coastal Canterbury. For groundwater allocation zones wholly within South Coastal Canterbury see Section 15A. For all other areas, see Rule 5.128.

15.7 Flow Sensitive Catchments

The following are to be applied when reading relevant policies and rules in Sections 4 and 5.

<table>
<thead>
<tr>
<th>Major Catchment (see Planning Maps)</th>
<th>Sub-catchment</th>
<th>Sensitive part of catchment</th>
<th>Monitoring site – lower boundary of catchment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waitaki</td>
<td>Hakataramea River</td>
<td>Whole catchment</td>
<td>Above Main Highway Bridge recorder site</td>
</tr>
<tr>
<td></td>
<td>Cattle Creek</td>
<td>Cattle yards Grid ref I39:208:319</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Padkins Stream</td>
<td>Hakataramea Valley Road</td>
<td></td>
</tr>
<tr>
<td>Mt Harris Stream</td>
<td>Whole catchment</td>
<td>Pikes Point Road</td>
<td></td>
</tr>
</tbody>
</table>

15.8 High Naturalness Water Bodies

See relevant policies and rules in Sections 4, 5 and 15A.
(This page is intentionally left blank)
Section 15A Waitaki and South Coastal Canterbury

South Coastal Canterbury spans from the Otaio catchment in the north to the Morven catchment in the south and to the Hunters Hills in the west (Map 15A.1). The area includes hill-fed intermittent flowing rivers and lowland springs with the major feature of the area being Wainono Lagoon. The area is within the takiwā of Te Rūnanga o Waihao and Te Rūnanga o Arowhenua. As a result of the geography and distinguishing features of the area, South Coastal Canterbury has been divided into three areas to manage freshwater quality:

- **Northern Streams Area** includes the Otaio River and the Makikihi River catchments and is characterised by the rivers and streams flowing directly to the Pacific Ocean.

- **Waihao-Wainono Area** includes all the waterbodies from the Hook Beach drain catchment to the Waihao River which flow to, or have a flow connection with, Wainono Lagoon. Wainono Lagoon is the distinguishing feature of this area; it holds important ecological values and is a taonga for tangata whenua.

- **Morven-Sinclairs Area** includes Morven Drain and Sinclairs Creek catchments. The streams in this area flow directly to the Pacific Ocean. The majority of landowners are shareholders in the Morven Glenavy Irrigation Scheme which has been running since the 1970s.

Included in the Northern Streams Area and Waihao-Wainono Area are the coastal hills that form the western edge to the coastal plain. These hills have been identified as the Hill sub-area.

Map 15A.1: Boundaries within South Coastal Canterbury

The Wainono Lagoon has long been an abundant source of mahinga kai for tangata whenua. The Waihao Mātaitai was approved in 2012 by the Ministry for Primary Industries. The Waihao Mātaitai Reserve is located north-east of the Waimate township and includes the Wainono Lagoon, and these portions of the Waihao River catchment, Waituna Stream and Hook River that lie east of the State Highway. The boundaries of the Mātaitai are shown on Map 15A.2 below. The Waihao
Mātaitai does not prevent recreational fishing, access to reserves, beaches or rivers, and does not change existing arrangements for access to private land. Only commercial fishing is prohibited in a Mātaitai reserve. A Mātaitai reserve only applies to species managed under the Fisheries Act 1996, which excludes whitebait and sports fish.

**Map 15A.2: Waihao Mātaitai**

The Wainono Lagoon holds significant recreational and historic values. It has a regular opening to the sea via the 100 year old ‘Waihao Box’, a wood and concrete structure that allows lagoon water to flow to the sea. The Box provides drainage and alleviates flooding of low lying land, as well as providing passage for fish species that migrate to and from the sea.

In the last 30 years water use, irrigation and intensive land use have increased substantially in South Coastal Canterbury. In general, in-catchment water use is at or beyond sustainable limits for both surface and groundwater, and water quality has declined. Wainono Lagoon has seen the greatest effects on water quality with a continual decline since the first land clearance in the 1860s and 1870s.¹

The area is now dependent on sourcing additional water for irrigation for further economic development to occur. South Coastal Canterbury lies to the north of the Waitaki River, and out-of-catchment water is accessible to irrigation schemes in the area.

The Morven Glenavy Irrigation Scheme (MGIS) has been in existence since the 1970s and serves most of the landowners in the Morven-Sinclairs Area. The scheme discharges into the lower Waihao River via irrigation bywash which is now consented as an environmental flow to the river. Another two irrigation schemes, Waihao Downs Irrigation Scheme (WDIS) and Hunter Downs Irrigation Scheme (HDIS) are consented but not yet operational. WDIS covers a small area in the Upper Waihao and the HDIS will cover portions of the Waihao-Wainono Area and Northern Streams Area.

HDIS and WDIS propose to increase the irrigation area by a total of 27,000 hectares, but along with this additional irrigation capacity comes an increase in nutrient discharges which will eventually reach Wainono Lagoon. The key to allowing the discharge of these additional nutrients is an agreement between HDIS and Te Rūnanga o Ngāi Tahu to augment surface water flows into the lagoon. This will bring Waitaki water to the lagoon which will offset the extra nutrients.

That part of the Lower Waitaki that is within South Coastal Canterbury and that is addressed in Section 15A of the Plan includes a diverse range of farming, industrial and township based activities. The area is of significant economic, social and cultural importance to the wider Canterbury and Otago Regions.

South Coastal Canterbury is an important area for agriculture and food production which provides significant employment, both on-farm and in processing and service industries.

The Lower Waitaki South Coastal Canterbury Zone Committee led the community through a two year consultation phase during which a solutions package was developed. The resulting overall vision for South Coastal Canterbury is to continue to increase economic development while achieving the environmental and cultural outcomes. The Lower Waitaki South Coastal Canterbury Zone Committee's solutions package aims to reduce the trophic level for Wainono Lagoon from the current 6.5 to a Trophic Level Index (TLI) score of 6 or less, improve Waihao and other tributary flows over time, and provide the streams a protection level of 90% for nitrate toxicity, while the irrigated land area increases 27,000ha via the consented WDIS and HDIS. For the Northern Streams Area, the package aims to improve flows and habitat over time, while maintaining freshwater nitrate-nitrogen concentrations at a level where there is No Observable Effect on 90% of species, and providing for development at good farm practice. For Morven-Sinclairs Area, the package aims to protect the current quality of surface water and groundwater.

The Lower Waitaki South Coastal Canterbury Zone Implementation Programme Addendum 2014 records the full package of actions to be implemented and includes both regulatory and non-regulatory recommendations. The key actions include:

- The use of Farm Environment Plans throughout South Coastal Canterbury, specifically to help reduce the loss of sediment, phosphorus and nitrogen;
- Good practice requirements for agricultural, urban and industrial discharges;
- Realising the gains from the Wainono Restoration Project\(^2\) and a successor to the project including, but not limited to, on-farm actions such as stream battering, wetland rehabilitation and identification of critical sediment source areas;
- Abstracting Waitaki River water to provide for additional irrigation development;
- Augmentation of Wainono Lagoon to improve lagoon health;
- Capping current water allocation and phasing out over-allocation over time, by reducing the quantum of water able to be abstracted from over-allocated resources; enabling access to alternative supplies such as new irrigation scheme water, on-farm storage and, where appropriate, deep groundwater; and increasing environmental flows in over-allocated rivers and streams; and

\(^2\) A works programme carried out by CRC and approved parties to improve ecological habitat, and water quality in Wainono Lagoon and its catchment
• Restricting nitrogen load losses from the catchment, introducing flexibility caps and maximum caps (based on soil classes), and Nutrient User Groups.

It is acknowledged by the Zone Committee, tangata whenua, the wider community and stakeholders that this package of solutions will be reached over time. This section focuses on the regulatory actions while enabling the non-regulatory actions where possible.

15A.1 South Coastal Canterbury Definitions

In section 15A of the Plan the following definitions apply in addition to the definitions contained in Section 2.9.

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to an irrigation scheme</td>
<td>means an irrigation scheme has developed to a stage where the land is able to be supplied with water.</td>
</tr>
<tr>
<td>Area weighted average</td>
<td>means: (a) for the purpose of calculating a maximum cap or updated maximum cap, a calculation undertaken as follows:</td>
</tr>
<tr>
<td></td>
<td>the sum of the individual maximum cap or updated maximum cap loads (where each load is calculated by multiplying the maximum cap or updated maximum cap by the area of land to which that cap applies) divided by the total area of land; or</td>
</tr>
<tr>
<td></td>
<td>(b) for the purpose of calculating any applicable nitrogen loss rate or limit (including updated maximum caps and nitrogen baselines) for a nutrient user group, a calculation undertaken as follows:</td>
</tr>
<tr>
<td></td>
<td>the sum of the nitrogen loads (where each load is calculated by multiplying the applicable nitrogen loss rate by the area to which it applies) of all land forming part of the nutrient user group, divided by the total area of land that forms the nutrient user group.</td>
</tr>
<tr>
<td></td>
<td>NOTE: “Farming enterprise” is not included in the definition of ‘area weighted average’ because a single OVERSEER budget is produced for that farming enterprise which already incorporates area-weighting.</td>
</tr>
<tr>
<td>Augmentation</td>
<td>means the discharge of water to the Wainono Lagoon through a wetland, the primary purpose of which is to improve water quality by meeting and sustaining a TLI of 6.0 or lower in the Wainono Lagoon.</td>
</tr>
<tr>
<td>Flow Protection Zone</td>
<td>means the area shown as the Flow Protection Zone on the Planning Maps.</td>
</tr>
<tr>
<td>Existing farming activity</td>
<td>means a farming activity in existence on the property at 1 May 2015.</td>
</tr>
<tr>
<td>Flexibility cap</td>
<td>means the rate of nitrogen loss (below the root zone in kilograms per hectare per year) allowable from a farming activity, as a permitted activity, within a specified area or sub-area.</td>
</tr>
<tr>
<td>Word</td>
<td>Definition</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Individual farming activity</td>
<td>means a farming activity undertaken on land that: (a) is not part of a Nutrient User Group; or (b) is not part of a Farming Enterprise; or (c) is not within the command area of an Irrigation Scheme where the nutrient loss from the farming activity is being managed by the scheme and the scheme has a water permit or a discharge permit that limits nitrogen loss.</td>
</tr>
<tr>
<td>Maximum cap</td>
<td>means the maximum rate of nitrogen loss (below the root zone in kilograms per hectare per year) allowable from a farming activity, as a permitted activity, for a specified soil class. Where the subject land comprises more than one soil class or soil type the maximum cap that applies is equal to the area-weighted average of the relevant maximum cap.</td>
</tr>
<tr>
<td>Morven-Sinclairs Area</td>
<td>means the area shown as the Morven-Sinclairs Area on the Planning Maps.</td>
</tr>
<tr>
<td>Morven-Sinclairs Plains sub-area</td>
<td>means land within the Morven-Sinclairs Area identified on the Planning Maps as Morven-Sinclairs Plains sub-area.</td>
</tr>
<tr>
<td>New farming activity</td>
<td>means a farming activity that was not in existence on the property at 1 May 2015.</td>
</tr>
<tr>
<td>Nitrogen baseline</td>
<td>means the definition as set out in Section 2.9, except that for the purposes of Section 15A, the term nitrogen baseline applies separately to that area of land that is entirely located within the Northern Streams Hill sub-area or Northern Streams Plains sub-area or Waihao-Wainono Plains sub-area or Waihao-Wainono Hill sub-area. For the avoidance of doubt, where a property, Farming Enterprise or Nutrient User Group comprises land in more than one of the Northern Streams Hill sub-area or Northern Streams Plains sub-area or Waihao-Wainono Plains sub-area or Waihao-Wainono Hill sub-area, individual nitrogen baselines shall be prepared for the part of the property, Farming Enterprise or Nutrient User Group in each area, and the individual nitrogen baseline limits shall apply respectively.</td>
</tr>
<tr>
<td>Northern Streams Area</td>
<td>means the area shown as the Northern Streams Area on the Planning Maps.</td>
</tr>
<tr>
<td>Northern Streams Hill sub-area</td>
<td>means land within the Northern Streams Area identified on the Planning Maps as Northern Streams Hill sub-area.</td>
</tr>
<tr>
<td>Northern Streams Plains sub-area</td>
<td>means land within the Northern Streams Area identified on the Planning Maps as Northern Streams Plains sub-area.</td>
</tr>
<tr>
<td>Nutrient User Group</td>
<td>means a group of properties in multiple ownership, where the owners of those properties undertake farming activities and operate as a collective for the purposes of nutrient management.</td>
</tr>
<tr>
<td>Soil Class</td>
<td>means the soil types categorised as ‘shallower’, ‘wetter’ or ‘deeper’ as shown on the Planning Maps.</td>
</tr>
</tbody>
</table>
South Coastal Canterbury means the area shown as South Coastal Canterbury on Map 15A.1.

Updated flexibility cap means the maximum rate of nitrogen loss (below the root zone in kilograms per hectare per year), calculated by Environment Canterbury using the methodology set out in Schedule 29, that is allowable from a farming activity within a specified area or sub-area.

Updated maximum cap means the maximum rate of nitrogen (below the root zone in kilograms per hectare per year), calculated by Environment Canterbury using the methodology set out in Schedule 30, allowable from a farming activity for a specified soil class.

Where the subject land comprises more than one soil class, the updated maximum cap that applies is equal to the area-weighted average of the relevant updated maximum cap.

Waihao-Wainono Area means the area shown as the Waihao-Wainono Area on the Planning Maps.

Waihao-Wainono Hill sub-area means land within the Waihao-Wainono Area identified on the Planning Maps as Waihao-Wainono Hill sub-area.

Waihao-Wainono Plains sub-area means land within the Waihao-Wainono Area identified on the Planning Maps as Waihao-Wainono Plains sub-area.

Wainono Restoration Project means a works programme carried out by or on behalf of or in partnership with a local authority for the purposes of reducing sediment or nutrient loss to water and improving ecological habitat, to improve the water quality in Wainono Lagoon and its catchment and shown as Waihao-Wainono on the Planning Maps.

15A.2 Other Plans and Instruments that apply to South Coastal Canterbury

15A.2.1 Other Regional Plans that apply to South Coastal Canterbury

Nil.

15A.2.2 Iwi Management Plans that apply to South Coastal Canterbury

Te Rūnanga o Ngāi Tahu Freshwater Policy Statement.

15A.2.3 Water conservation orders that apply to South Coastal Canterbury

Nil.

15A.3 Freshwater Outcomes

See Objectives in Section 3, and freshwater outcomes in Tables 15A(a) and 15A(b).
15A.4 Policies

The following policies apply in South Coastal Canterbury, in addition to those set out in Section 4 of the Plan.

Managing land use to maintain or improve water quality

15A.4.1 Improve water quality in South Coastal Canterbury by:
(a) reducing losses of microbial contaminants, phosphorus and sediment through excluding intensively farmed stock from drains (in addition to the Region-wide stock exclusion provisions); and
(b) requiring farming activities to comply with the good farm practices set out in Schedule 24b, or better; and
(c) requiring any farming activity which requires a resource consent to prepare and implement a Farm Environment Plan prepared in accordance with Part A of Schedule 7; and
(d) limiting the aggregate of the nitrogen loss from industrial activities to the load limit set out in Table 15A(m); and the aggregate of the nitrogen loss from farming activities to the load limit set out in Table 15A(n) or the load limit as recalculated using the methodology in Schedule 31.

15A.4.2 Recognise the cultural significance of South Coastal Canterbury to Ngāi Tahu, and enable Ngāi Tahu to exercise kaitiakitanga and enhance mahinga kai through:
(a) minimising the discharge of any contaminants into water;
(b) protecting natural wetlands and springheads;
(c) maintaining flow and water quality in the Waihao River;
(d) improving flows in spring-fed plains streams over time;
(e) restoring the quality of water in spring-fed plains streams to enable mahinga kai; and
(f) improving the water quality and biodiversity of Wainono Lagoon.

15A.4.3 Meet the nitrogen load limits for the Northern Streams Area, Waihao-Wainono Area and Morven-Sinclairs Area by avoiding the sharing of allowable nitrogen loss rates between the Plains sub-areas and the Hill sub-areas.

15A.4.4 Improve water quality in the Northern Streams Area by:
(a) permitting farming activities provided the nitrogen loss calculation for the farming activity does not exceed the greater of the flexibility cap or the nitrogen baseline;
(b) providing by way of a resource consent, for farming activities to have a nitrogen loss calculation that exceeds the updated flexibility cap provided that:
(i) the nitrogen loss calculation does not exceed the nitrogen baseline; and
(ii) the nitrogen baseline does not exceed the maximum cap;
(c) requiring existing farming activities with a nitrogen loss calculation that exceeds the maximum cap (or where applicable the updated maximum cap) to reduce their nitrogen losses so that, by 1 January 2025, the nitrogen loss calculation does not exceed the maximum cap or updated maximum cap (if applicable); and
(d) allowing new farming activities to exceed the nitrogen baseline (in accordance with Policy 15A.4.11), provided the nitrogen loss calculation does not exceed the maximum cap or updated maximum cap (if applicable).

15A.4.5 Improve water quality within the Waihao-Wainono Area by:
(a) facilitating the augmentation of Wainono Lagoon with water taken from the Waitaki River;
(b) permitting farming activities provided the nitrogen loss calculation for the farming activity does not exceed the greater of the flexibility cap or the nitrogen baseline;
(c) providing by way of a resource consent, for farming activities to have a nitrogen loss calculation that exceeds the updated flexibility cap provided that:
(i) the nitrogen loss calculation does not exceed the nitrogen baseline; and
(ii) the nitrogen baseline does not exceed the maximum cap;
(d) requiring existing farming activities with a nitrogen loss calculation that exceeds the maximum cap (or where applicable the updated maximum cap) to reduce their nitrogen losses so that, by 1 January 2025, the nitrogen loss calculation does not exceed the maximum cap or updated maximum cap (if applicable); and
(e) allowing new farming activities to exceed the nitrogen baseline or the updated flexibility cap (in accordance with Policy 15A.4.11), provided the nitrogen loss calculation does not exceed the maximum cap or updated maximum cap (if applicable); and
(f) enabling farming activities to access a higher flexibility cap only after 1 January 2025 and provided the freshwater outcomes in Tables 15A(a) and 15A(b) are being met.

15A.4.6 Notwithstanding Policies 15A.4.4 and 15A.5.5, on soils shown on the Planning Maps as Extremely light, allow by way of a resource consent, farming activities that have a nitrogen loss calculation that exceeds the updated maximum cap to continue after 1 January 2025 provided that:
(a) the farming activity is subject to a Farm Environment Plan that shows how the updated maximum cap will be met and the timeframe within which those reductions will be achieved; and
(b) there is no change in land use, unless that change of land use results in a reduction in the nitrogen losses from the farming activity.

15A.4.7 Manage nitrogen losses within the Morven-Sinclairs Area while providing for intensification by:
(a) providing for farming activities to increase their nitrogen loss calculation above the nitrogen baseline only if the nitrogen load limit in Table 15A(n), or where applicable the load limit as recalculated in accordance with the methodology set out in Schedule 31, is not exceeded; and
(b) requiring any proposal for a farming activity to increase the nitrogen loss calculation above the nitrogen baseline to be considered through a resource consent process.

15A.4.8 Recognise the need to take into account version changes to OVERSEER® when considering resource consent applications for the use of land for farming activities or the discharge of nutrients onto or into land within the command area of an Irrigation Scheme, by
remodelling the flexibility caps, maximum caps and nitrogen load limits in Table 15A(n) using the methodologies set out in Schedules 29, 30 and 31.

15A.4.9 Require any person discharging liquid waste or waste sludge from an industrial or trade process into or onto land to adopt the best practicable option to manage the treatment and discharge of contaminants so that the nitrogen load limit for industrial and trade processes in Table 15A(m) is not exceeded unless Policy 15A.4.10 applies.

15A.4.10 Enable the discharge of liquid waste or waste sludge from an industrial or trade process into or onto land which cumulatively will result in the exceedance of the nitrogen load limit for industrial and trade processes in Table 15A(m) only in circumstances where the combined nitrogen loss from those discharges and from any farming activity occurring on the land does not exceed the lesser of either:
(a) the nitrogen loss rate from any authorised discharge that occurred on the land prior to the discharge of liquid waste or waste sludge; or
(b) the maximum cap, or where applicable the updated maximum cap, relevant to the land.

Nutrient User Groups and Farming Enterprises

15A.4.11 Flexibility in nitrogen management is enabled by allowing an increase in nitrogen loss beyond the respective nitrogen baseline, except for any land within the Northern Streams Hill sub-area and Waihao-Wainono Hill sub-area, provided the property is part of:
(a) a Nutrient User Group; or
(b) an Irrigation Scheme; or
(c) a Farming Enterprise.

15A.4.12 Avoid catchment nutrient load limits being exceeded by only allowing Farming Enterprises or Nutrient User Groups to establish and operate where all the properties are located in the same Surface Water Allocation Zone.

15A.4.13 Maintain water quality by restricting the sharing of nitrogen loss rates between properties unless:
(a) the property is part of a Farming Enterprise or Nutrient User Group; and
(b) the combined nitrogen loss calculation from all properties forming the Nutrient User Group does not exceed the area weighted average of either:
   (i) the relevant updated flexibility caps; or
   (ii) the nitrogen baseline;
   whichever is the greater; and
(c) the updated maximum cap is not exceeded on any individual property.

15A.4.14 Manage nutrient losses by requiring applications for a resource consent to establish a Nutrient User Group to describe:
(a) the procedures and methods for recording nitrogen losses from properties within the Nutrient User Group; and
(b) the methods for redistributing nitrogen losses when a property joins or leaves the Nutrient User Group; and
Irrigation Schemes

15A.4.15 Nutrient discharges within the command area of an irrigation scheme are managed by requiring any discharge permit granted to an irrigation scheme to include conditions that:

(a) restrict the total nitrogen loss in accordance with the limits in Table 15A(n) or any update to that limit as recalculated in accordance with the methodology set out in Schedule 31; and

(b) apportion the irrigation scheme load in Table 15A(n), or any update to that limit as recalculated using the methodology set out in Schedule 31, in proportion to the area of the scheme that is operational; and

(c) prevent the updated maximum caps being exceeded on any property; and

(d) require all properties within the irrigation scheme command area to be subject to a Farm Environment Plan specific to each property, prepared and implemented in accordance with Schedule 7; and

(e) require a map and schedule which sets out the legal description and ownership of the properties to be supplied by the irrigation scheme; and

(f) require the irrigation scheme to manage all nitrogen losses from properties that are partially or fully supplied with water from the irrigation scheme.

Lake, catchment and flow restoration

15A.4.16 Improve water quality of the Waihao-Wainono Area by enabling augmentation of Wainono Lagoon and catchment restoration activities, and in the absence of either occurring require nutrient loss reductions beyond those achieved by good farm practice.

15A.4.17 Improve water quality in Wainono Lagoon by enabling the discharge of water to the lagoon through a constructed wetland, provided:

(a) adverse effects on cultural values and sites of importance to Ngāi Tahu are, as a first priority avoided, and where avoidance is not practicable, mitigated; and

(b) adverse effects on the availability and quality of community drinking water supplies are avoided; and

(c) adverse effects on fish passage are mitigated; and

(d) net loss of significant biodiversity habitat and habitats of significant indigenous biodiversity is avoided; and

(e) adverse effects on people and property from raised groundwater levels and land inundation are avoided; and

(f) the application for a resource consent is accompanied by a management plan that describes the works and how the effects arising from those works will be avoided or mitigated, and how the wetland(s) will be maintained.

15A.4.18 Catchment restoration activities focus on the protection of springheads, the protection, establishment or enhancement of planted riparian margins, the creation, restoration or
Canterbury Land and Water Regional Plan

enhancement of wetlands, indigenous biodiversity in riparian planting, weed and pest control and the targeted removal of fine sediments from waterways.

Works in waterways

15A.4.19 Any resource consent application to modify the course of a waterway shall consider the cumulative effects of the activity on flows, water quality, riparian and aquatic habitats.

Sustainable use of water and improvement of flows

15A.4.20 Surface water and groundwater flows are improved by:
   (a) providing for out-of-river storage; and
   (b) utilising water available from irrigation schemes to the fullest extent possible before utilising run-of-river takes; and
   (c) avoiding the reallocation of any surrendered water, until such time as the allocation zone is no longer over-allocated; and
   (d) avoiding the granting of any resource consent within any 'A' surface water allocation block or in the Otaio, Makikihi, Waimate and Hook Groundwater Allocation Zones, excluding any activity affected by the provisions of Sections 124 - 124C of the RMA.

15A.4.21 Groundwater is sustainably managed within the Waihao Groundwater Allocation Zone by:
   (a) for irrigation takes, using demonstrated use or reasonable use calculated in accordance with Schedule 10, to establish annual volume and maximum rate of take conditions; and
   (b) for other takes, despite Policy 4.50(b)(i), establishing annual volume and maximum rate of take conditions on the basis of the amount of water that is reasonable and demonstrates efficient use of water; and
   (c) not exceeding the applicable allocation limit set out in Table 15A(k); and
   (d) aligning the term of the resource consent with Policy 15A.4.36.

15A.4.22 Outside the Waihao Groundwater Allocation Zone, groundwater is sustainably managed by only granting resource consents that replace a lawfully established groundwater take and where:
   (a) for irrigation takes, the annual volume and maximum rate of take is based upon demonstrated use or reasonable use calculated in accordance with Schedule 10; and
   (b) there is no increase in the annual volume; and
   (c) for other takes, despite Policy 4.50(b)(i), the rate and volume of take reflects the amount of water that is reasonable and demonstrates efficient use of water; and
   (d) the term of the consent aligns with Policy 15A.4.36.

15A.4.23 Any application for a change in consent conditions concerning annual volume or rate of take or timing of the take shall be assessed against demonstrated use or reasonable use, calculated in accordance with Schedule 10 for the take of water for the purpose of irrigation; or if the take of water is for other purposes, on the basis of the amount of water that is reasonable and demonstrated efficient.
15A.4.24 Surface water flows are improved by enabling an applicant to take deep groundwater provided:

(a) the applicant has a lawfully established surface water take or stream depleting groundwater take for an equal or greater rate and volume than is sought from the deep groundwater, and the surface water take or stream depleting groundwater take is surrendered; and

(b) there are no stream depletion effects; and

(c) the allocation limit described in Table 15A(l) is not exceeded; and

(d) the annual volume and maximum rate of take of deep groundwater abstracted for the purpose of irrigation is based upon reasonable use calculated in accordance with Schedule 10, and must not exceed the annual volume calculated in accordance with Schedule 10 for the area of land that was irrigated on or before 24 April 2015 under the surface water or stream depleting groundwater permit; or

(e) the annual volume and maximum rate of take of deep groundwater abstracted for any purpose other than irrigation, is based upon an amount of water that is reasonable and demonstrated to be efficient; and

(f) the term of the consent aligns with Policy 15A.4.36.

15A.4.25 Achieve the surface water and groundwater outcomes by only granting resource consents to take and use water where it is demonstrated that:

(a) the water permit will not exceed the allocation limits in Tables 15A(f) to 15A(l); and

(b) the volume and rate of water to be taken for the purpose of irrigation is reasonable, determined in accordance with Schedule 10, and for water taken for other uses, the volume and rate of water taken is reasonable and demonstrated to be efficient.

15A.4.26 Over-allocation of water is reduced by requiring applications for water permits affected by Sections 124-124C of the RMA to use irrigation scheme water, where available, to the fullest extent possible.

15A.4.27 In addition to Policy 4.61, include conditions that specify the seven day volume to demonstrate compliance with Tables 15A(h) and 15A(i) and a seasonal volume.

15A.4.28 Protect the ecological health of surface water bodies within South Coastal Canterbury by requiring minimum flow conditions in accordance with the limits in Tables 15A(g) to 15A(j) on any groundwater permit where the abstraction point is located within any Flow Protection Zone, and where the top of the screen is less than 30 metres below ground level.

15A.4.29 Facilitate aquifer recharge between 1 September and 30 April by only allowing the abstraction of ‘B’ allocation block water from the Otaio River when the flow at the Otaio Gorge is above the relevant ‘B’ allocation block minimum flow limits and the depth to water in bore J39/0255 is less than 3m below ground level.

15A.4.30 Improve water supply reliability, and support a reduction in the use of run-of-river takes, by enabling takes to out-of-river storage facilities provided:

(a) the limits in Tables 15A(g) to 15A(j) are not exceeded; and
Canterbury Land and Water Regional Plan

(b) the take does not reduce flows that provide for:
   (i) flushing of periphyton and fine sediment accumulation; and
   (ii) mobilisation and transportation of bed material for the purposes of maintaining channel character; and
   (iii) the maintenance of river mouth clearance and opening frequency; and
   (c) aquifer recharge is maintained; and
   (d) existing recreational values are protected.

15A.4.31 Meet environmental flow and allocation limits by only allowing the transfer of water permits (other than to the new owner of the same property at the same location), to occur where:
   (a) the transferred water is to be used for a community water supply; or
   (b) the total rate and volume of water transferred and retained does not exceed the rate or volume of water previously abstracted under the consent that is to be transferred.

15A.4.32 Protect the availability of water for community drinking water supplies in the Upper Hook, Upper Waihao and Otaio catchments by refusing any application for a permit that would result in a reduction in the allocation listed in Table 15A(f).

15A.4.33 Environmental benefits from the discharge of water for augmentation or environmental purposes into a surface water body are protected by avoiding the allocation of that discharged water for abstraction.

Sharing water in times of restrictions

15A.4.34 Where the take is from the Otaio River, the Otaio Water User Group operates in accordance with Tables 15A(h) and 15A(i).

Water metering

15A.4.35 Require all water permits to take 5L/s or more of water to include a condition requiring the water taken to be metered and records of the rate and volume to be telemetered to the Canterbury Regional Council or its nominated agent.

Consent duration

15A.4.36 Integrated catchment management is facilitated by:
   (a) applying a common catchment expiry date of:
       (i) 1 January 2030 for any permit within the Waihao-Wainono Area; or
       (ii) 1 January 2031 for any permit within the Northern Streams Area; or
       (iii) 1 January 2032 for any permit within the Morven-Sinclairs Area; and
   (b) limiting subsequent catchment expiry dates to ten yearly intervals thereafter except that a 10 year maximum term is not mandatory in relation to the taking and use of water for regionally significant infrastructure; and
   (c) aligning the duration of any consent granted three years prior to the next common catchment expiry date with the subsequent common catchment expiry date (that is, the number of years to the next common catchment expiry date plus ten years).
## 15A.5 Rules

The following index identifies Region-wide rules that are modified by this sub-region section and new rules that have been introduced.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Region-wide Rules</th>
<th>New rules that are additions to Region-wide Rules</th>
<th>South Coastal Canterbury Rules that prevail over Region-wide rules</th>
<th>New Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nutrient Management</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red, Orange, Green Zones</td>
<td>5.41 - 5.59</td>
<td>-</td>
<td>15A.5.1 - 15A.5.16</td>
<td>-</td>
</tr>
<tr>
<td><strong>Irrigation Scheme</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.60 - 5.62</td>
<td>-</td>
<td>15A.5.17 - 15A.5.19</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td><strong>Incidental Discharges</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.63 - 5.64</td>
<td>-</td>
<td>15A.5.20 - 15A.5.21</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td><strong>Stock Exclusion</strong></td>
<td>5.68 - 5.71</td>
<td>15A.5.26</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td><strong>Sewerage Systems</strong></td>
<td>5.84</td>
<td>-</td>
<td>15A.5.22</td>
<td>15A.5.23</td>
</tr>
<tr>
<td><strong>Industrial and Trade Waste</strong></td>
<td>5.92</td>
<td>-</td>
<td>15A.5.24</td>
<td>15A.5.25</td>
</tr>
<tr>
<td><strong>Restoration - Wainono and General</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Augmentation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Take and Use of Surface Water</strong></td>
<td>5.123 - 5.127</td>
<td>-</td>
<td>15A.5.34 - 15A.5.36</td>
<td>15A.5.33, 15A.5.41 - 15A.5.45</td>
</tr>
<tr>
<td><strong>Transfer of Water Permits</strong></td>
<td>5.133 - 5.134</td>
<td>-</td>
<td>15A.5.46 - 15A.5.48</td>
<td>-</td>
</tr>
<tr>
<td><strong>Damming</strong></td>
<td>5.154 - 5.158</td>
<td>-</td>
<td></td>
<td>15A.5.49 - 15A.5.50</td>
</tr>
</tbody>
</table>

**Nutrient management, sediment and microbial contaminants**

*Note:* **Rules 15A.5.1 to 15A.5.16 and 15A.5.20 to 15A.5.21 prevail over Region-wide Rules 5.41 to 5.59.**

**15A.5.1** Despite any of Rules 15A.5.2 to 15A.5.19, the use of land for a farming activity on a property that is less than 5 hectares, except any land that is part of a Nutrient User Group or Farming Enterprise, or a property that is supplied with water by an irrigation scheme, is a permitted activity.
**Individual farming activities in Waihao-Wainono Plains sub-area**

15A.5.2 The use of land for an individual farming activity in the Waihao-Wainono Plains sub-area is a permitted activity provided the following conditions are met:

1. The nitrogen loss calculation does not exceed the greater of:
   (a) the nitrogen baseline; or
   (b) a flexibility cap of 15kg N/ha/yr; or
   (c) from 1 January 2025, and provided the water quality outcomes in Tables 15A(a) and 15A(b) are met, a flexibility cap of 17kg N/ha/yr; and

2. The nitrogen loss calculation does not exceed the following maximum cap loss rates:
   (a) (i) 35kg N/ha/yr for land shown on the Planning Maps as comprising Shallower soils;
   (ii) 25kg N/ha/yr for land shown on the Planning Maps as comprising Deeper soils;
   (iii) 20kg N/ha/yr for land shown on the Planning Maps as comprising Wetter soils; or
   (b) the area-weighted average of the maximum cap loss rates set out in condition 2(a) for that property if the land comprises more than one soil class shown on the Planning Maps; and

3. The good farm practices in Schedule 24b are being implemented and the information required is recorded in accordance with Schedule 24b, and supplied to Canterbury Regional Council on request.

**Individual farming activities in Waihao-Wainono Hill sub-area**

15A.5.3 The use of land for an individual farming activity in the Waihao-Wainono Hill sub-area is a permitted activity provided the following conditions are met:

1. The nitrogen loss calculation does not exceed the greater of either:
   (a) the nitrogen baseline; or
   (b) a flexibility cap of 5kg N/ha/yr; and

2. The good farm practices in Schedule 24b are being implemented and the information required is recorded in accordance with Schedule 24b, and supplied to Canterbury Regional Council on request.

**Individual farming activities in Northern Streams Plains sub-area**

15A.5.4 The use of land for an individual farming activity in the Northern Streams Plains sub-area is a permitted activity provided the following conditions are met:

1. The nitrogen loss calculation does not exceed the greater of:
   (a) the nitrogen baseline; or
   (b) a flexibility cap of 15kg N/ha/yr; or
   (c) from 1 January 2025, and provided the water quality outcomes in Tables 15A(a) and 15A(b) are met, a flexibility cap of 17kg N/ha/yr; and

2. The nitrogen loss calculation does not exceed the following maximum cap loss rates:
   (a) (i) 35kg N/ha/yr for land shown on the Planning Maps as comprising Shallower soils;
Canterbury Land and Water Regional Plan

(ii) 25kg N/ha/yr for land shown on the Planning Maps as comprising Deeper soils;
(iii) 20kg N/ha/yr for land shown on the Planning Maps as comprising Wetter soils; or
(b) the area-weighted average of the maximum cap loss rates set out in condition 2(a) for that property if the land comprises more than one soil class shown on the Planning Maps; and

3. The good farm practices in Schedule 24b are being implemented and the information required is recorded in accordance with Schedule 24b, and supplied to Canterbury Regional Council on request.

Individual farming activities in Northern Streams Hill sub-area

15A.5.5 The use of land for an individual farming activity in the Northern Streams Hill sub-area is a permitted activity provided the following conditions are met:
1. The nitrogen loss calculation does not exceed the greater of either:
   (a) the nitrogen baseline; or
   (b) a flexibility cap of 5kg N/ha/yr; and
2. The good farm practices in Schedule 24b are being implemented and the information required is recorded in accordance with Schedule 24b, and supplied to Canterbury Regional Council on request.

Individual farming activities in Morven-Sinclairs Area

15A.5.6 The use of land for an individual farming activity in the Morven-Sinclairs Area is a permitted activity provided the following conditions are met:
1. The nitrogen loss calculation for any part of the property within the Morven-Sinclairs Area does not exceed the nitrogen baseline; and
2. The good farm practices in Schedule 24b are being implemented and the information required is recorded in accordance with Schedule 24b, and supplied to Canterbury Regional Council on request.

15A.5.7 The use of land for an individual farming activity that does not meet condition 1 or condition 2 of Rules 15A.5.2 or 15A.5.4 or condition 1 of Rule 15A.5.3 or Rule 15A.5.5, is a controlled activity provided the following conditions are met:
1. The nitrogen loss calculation does not exceed the greater of either:
   (a) the updated flexibility cap for the relevant area; or
   (b) the nitrogen baseline; and
2. The nitrogen loss calculation does not exceed the updated maximum cap; and
3. A Farm Environment Plan has been prepared in accordance with Part A of Schedule 7 and is submitted with the application for resource consent.

The CRC reserves control over the following matters:
1. The nitrogen loss rates to be applied to the property; and
2. The quality of, compliance with, and auditing of the Farm Environment Plan; and
3. The proposed management practices to avoid or minimise the discharge of nitrogen,
Canterbury Land and Water Regional Plan

phosphorus, sediment and microbiological contaminants to water from the use of land.

15A.5.8 The use of land for an individual farming activity in the:
(a) Waihao-Wainono Plains sub-area, after 1 January 2025, that does not meet condition 3 of Rule 15A.5.2 or any condition of Rule 15A.5.7;
(b) Waihao-Wainono Hill sub-area that does not meet condition 2 of Rule 15A.5.3;
(c) Northern Streams Plains sub-area that does not meet condition 3 of Rule 15A.5.4 or any condition of Rule 15A.5.7;
(d) Northern Streams Hill sub-area that does not meet condition 2 of Rule 15A.5.5; or
(e) Morven Sinclairs Area that does not meet any of the conditions of Rule 15A.5.6 is a restricted discretionary activity provided the following conditions are met:
1. A Farm Environment Plan has been prepared in accordance with Part A of Schedule 7, and is submitted with the application for resource consent; and
2. If the use of land is a new farming activity, the nitrogen loss calculation does not exceed the updated maximum cap.

The exercise of discretion is restricted to the following matters:
1. Whether the nitrogen loss from the farming activity will result in the total catchment load limits set out in Table 15A(n) or the load limit as recalculated in accordance with the methodology set out in Schedule 31, or the updated flexibility caps being exceeded; and
2. The nitrogen loss rates to be applied to the property and rate at which they should reduce to achieve the updated maximum cap; and
3. The quality of, compliance with, and auditing of the Farm Environment Plan; and
4. The proposed management practices to avoid or minimise the discharge of nitrogen, phosphorus, sediment and microbiological contaminants to water from the use of land; and
5. The potential effects of the land use on surface and groundwater quality and sources of drinking-water; and
6. The appropriateness of the actions and time-frames described in the Farm Environment Plan in achieving the nitrogen baseline, updated flexibility cap and updated maximum cap; and
7. The soil class having regard to the quality and appropriateness of any soil mapping carried out for the property; and
8. The potential adverse effects of the activity on Ngāi Tahu cultural values; and

15A.5.9 The use of land for an individual farming activity in the Waihao-Wainono Plains sub-area prior to 1 January 2025, or an individual farming activity in the Waihao-Wainono Hill sub-area or the Northern Streams Hill sub-area that does not meet condition 1 of Rule 15A.5.7 is a discretionary activity provided the following conditions are met:
1. The use of land is for an existing farming activity and the nitrogen loss lawfully exceeded the updated flexibility cap or nitrogen baseline prior to 24 April 2015; and
2. A Farm Environment Plan has been prepared in accordance with Part A of Schedule 7 and is submitted with the application for resource consent.
15A.5.10 The use of land for an individual farming activity that does not meet condition 1 of Rule 15A.5.8 or condition 2 of Rule 15A.5.9 is a non-complying activity.

15A.5.11 The use of land for an individual farming activity, that does not meet condition 2 of Rule 15A.5.8 or condition 1 of Rule 15A.5.9 is a prohibited activity.

**Farming Enterprises**

15A.5.12 The use of land for a farming activity as part of a Farming Enterprise is a discretionary activity provided the following conditions are met:

1. A Farm Environment Plan for the Farming Enterprise has been prepared in accordance with Part A of Schedule 7, and is submitted with the application for resource consent; and
2. In the Northern Streams Plains sub-area and Waihao-Wainono Plains sub-area the updated maximum cap is not exceeded on any land comprising part of the Farming Enterprise; and
3. The nitrogen loss calculation for the Farming Enterprise does not exceed the greater of the updated flexibility cap or the nitrogen baseline for the Farming Enterprise; and
4. The properties comprising the Farming Enterprise are located in the same Surface Water Allocation Zone; and
5. The land comprising the Farming Enterprise does not form part of a Nutrient Group and is not supplied with water from an Irrigation Scheme; and
6. The nitrogen loss calculation for the Farming Enterprise does not exceed the updated maximum cap.

15A.5.13 The use of land for a farming activity as part of a Farming Enterprise that does not comply with condition 1 of Rule 15A.5.12 is a non-complying activity.

15A.5.14 The use of land for a farming activity as part of a Farming Enterprise that does not meet one or more of conditions 2, 3, 4, 5, or 6 of Rule 15A.5.12 is a prohibited activity.

**Nutrient User Groups**

15A.5.15 The use of land for a farming activity that forms part of a Nutrient User Group is a discretionary activity provided the following conditions are met:

1. A management plan is submitted with the application for resource consent, which sets out:
   (a) the properties forming the Nutrient User Group; and
   (b) a map showing the location of all properties forming part of the Nutrient User Group; and
   (c) the legal description of all properties and the legal names of the property owners forming part of the Nutrient User Group; and
   (d) the method by which nitrogen losses will be managed and accounted for within the Nutrient User Group; and
   (e) the method by which nitrogen losses will be redistributed upon any property or any part of the property withdrawing from the Nutrient User Group; and
(f) how the Nutrient User Group will ensure each property complies with the updated maximum caps; and

2. A Farm Environment Plan has been prepared for each property in the Nutrient User Group in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and

3. All properties within the Nutrient User Group are located within the same Surface Water Allocation Zone; and

4. The land comprising the Nutrient User Group does not form part of a Farming Enterprise and is not supplied with water from an Irrigation Scheme.

15A.5.16 The use of land for a farming activity that forms part of a Nutrient User Group that does not comply with one or more of the conditions in Rule 15A.5.15 is a prohibited activity.

Irrigation Schemes

Note: Rules 15A.5.17 to 15A.5.19 prevail over Region-wide Rules 5.60 to 5.62.

15A.5.17 The discharge of nutrients onto or into land within the command area of an Irrigation Scheme in circumstances which may result in contaminants entering water and where the property is supplied with water by an irrigation scheme is a discretionary activity provided the following conditions are met:

1. The nitrogen load limits in Table 15A(n) or the load limit as recalculated in accordance with the methodology set out in Schedule 31 are not exceeded; and

2. The application for resource consent does not include any land that is part of a Nutrient User Group or Farming Enterprise.

15A.5.18 The discharge of nutrients onto or into land within the command area of an Irrigation Scheme in circumstances which may result in contaminants entering water and where the property is supplied with water by an irrigation scheme that does not meet any of the conditions of Rule 15A.5.17 is a prohibited activity.

15A.5.19 The use of land for an individual farming activity, on a property that is supplied with water by an irrigation scheme where the nitrogen loss from that property is managed by the irrigation scheme and that scheme holds a discharge permit that specifies the rate of nutrients that may be discharged or leached, is a permitted activity.

Incidental Discharges

Note: Rules 15A.5.20 and 15A.5.21 prevail over Region-wide Rules 5.63 and 5.64.

15A.5.20 The discharge of nitrogen, phosphorus, sediment and microbial contaminants onto or into land in circumstances that may result in a contaminant entering water that would otherwise contravene section 15(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 Rule 15A.5.1 to Rule 15A.5.19.
15A.5.21 The discharge of nitrogen, phosphorus, sediment and microbial contaminants onto or into land in circumstances that may result in a contaminant entering water that would otherwise contravene section 15(1) of the RMA that does not meet condition 1 of Rule 15A.5.20 is a non-complying activity.

Sewerage Systems

Note: Region-wide Rules 5.85, 5.86, 5.87 and 5.88 apply in South Coastal Canterbury. Rule 15A.5.22 prevails over Region-wide Rule 5.84. Rule 15A.5.23 is a new rule.

15A.5.22 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 wastewater treatment system into or onto land, or into or onto land in circumstances where a contaminant may enter water is a discretionary activity provided the following conditions are met:

1. The discharge in addition to all lawfully established existing discharges does not exceed the nitrogen load limit in Table 15A(m) for community sewerage systems; and
2. The best practicable option is used for the treatment and discharge.

15A.5.23 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 wastewater treatment system into or onto land, or into or onto land in circumstances where a contaminant may enter water that does meet one or more of the conditions of Rule 15A.5.22 is a non-complying activity.

Industrial and Trade Waste

Note: Region-wide Rule 5.91 applies in South Coastal Canterbury. Rule 15A.5.24 prevails over Region-wide Rule 5.92. Rule 15A.5.25 is a new rule.

15A.5.24 Despite Rules 15A.5.1 to 15A.5.19, the discharge of any liquid waste or sludge waste from an industrial or trade process, including livestock processing, excluding wastewater into or onto land, or into or onto land in circumstances where a contaminant may enter water is a discretionary activity provided the following conditions are met:

1. The discharge in addition to all lawfully established existing discharges from trade and industrial processes, does not exceed the nitrogen load limit in Table 15A(m) for industrial or trade processes; or
2. The nitrogen loss from the discharge in combination with any other activity, including farming, occurring on the land, does not exceed either:
   (a) any authorised nitrogen loss from the activity that is being replaced; or
   (b) the updated maximum cap; and
3. For all discharges, the best practicable option is used for the treatment and discharge.
15A.5.25 The discharge of any liquid waste or sludge waste from an industrial or trade process, including livestock processing, excluding wastewater 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 15A.5.24 is a non-complying activity.

Stock Exclusion

Note: Rules 5.68A, 5.68B, 5.68, 5.69, 5.70 and 5.71 (Stock Exclusion) apply in South Coastal Canterbury. Rule 15A.5.26 applies in addition to Rules 5.68A, 5.68B, 5.68, 5.69, 5.70 and 5.71.

15A.5.26 Any reference to the bed of a lake, river or wetland in Rules 5.68, 5.69, 5.70 and 5.71 also includes a drain, but does not include any sub-surface drain, stormwater swale, other artificial watercourse or ephemeral waterway.

Wainono Restoration Project

Note: For all activities in or near waterways, refer also to the requirements and restrictions under the Canterbury Flood Protection and Drainage Bylaw 2013.

15A.5.27 The use of land in the riparian margin and the disturbance of the bed and banks of a river for the purposes of planting or removal of vegetation and any associated discharge of sediment, the take and use of water for the purposes of removing fine sediment less than 2mm in diameter and any consequential discharge of that water, carried out for the purposes of the Wainono Restoration Project, is a permitted activity provided the following conditions are met:

1. The activity is undertaken at a distance greater than 10m from any dam, weir, bridge, or network utility pole, pylon, drainage network scheme or flood protection vegetation, or 150m from any water level recorder, or 50m from any defence against water, flood protection works; unless there is written 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 owner; and
2. Any discharge is only of sediment, organic material and water from the bed, banks or riparian margin of a waterway; and
3. The concentration of total suspended solids in the discharge does not exceed 100g/m³; and
4. Each area of disturbed land is stabilised within 10 days of completion of the disturbance; and
5. 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; and
6. No vegetation used for flood control or bank stabilisation is disturbed, removed, damaged or destroyed except by or on behalf of, or there is written evidence that permission has been obtained from, the person or agency responsible for maintaining that vegetation for flood control purposes; and
7. The activity is undertaken between 1 November and 31 March inclusive.
15A.5.28 The use of land in the riparian margin and the disturbance of the bed and banks of a river for the purposes of planting or removal of vegetation and any associated discharge of sediment, the take and use of water for the purposes of removing fine sediment less than 2mm in diameter and any consequential discharge of that water, carried out for the purposes of the Wainono Restoration Project that does not meet one or more of the conditions of Rule 15A.5.27 is a restricted discretionary activity.

The exercise of discretion is restricted to the following matters:
1. Adverse effects on cultural values and sites of importance to Ngāi Tahu; and
2. Adverse effects on the availability and quality of community drinking water supplies; and
3. Adverse effects on fish passage; and
4. Adverse effects on areas of significant biodiversity and habitats of indigenous biodiversity; and
5. The potential benefits of the activity to the community and the environment; and
6. Adverse effects on structures; and
7. Adverse effects on water quality and ecosystems; and
8. Adverse effects on bank stability (such as accelerated erosion) and capacity of the waterway.

Habitat Restoration Works

Note: The take and use of water from a river and the discharge of fine sediment for the purposes of the Wainono Restoration Project is assessed under Rules 15A.5.27 and 15A.5.28.

15A.5.29 The take and use of water from a river and the disturbance of the bed of the river to remove fine sediment less than 2mm in diameter for the sole purpose of habitat restoration and the consequential discharge of water and contaminants is a restricted discretionary activity provided the following conditions are met:
1. The application for resource consent includes a management plan that describes:
   (a) the location and methods of sediment removal, and the methods for management and disposal of that material; and
   (b) the methods for avoiding or mitigating erosion and sediment loss; and
   (c) the location of any sensitive ecological habitats and species, and the methods proposed to avoid or mitigate any adverse effects; and
2. Any abstracted water is discharged to the river no more than 250m from the point of take; and
3. The maximum instantaneous rate of water abstraction does not exceed 50% of the flow in the stream at the site being remediated; and
4. The activity does not take place on land that is listed as an archaeological site; and
5. The activity is not undertaken within a Community Drinking Water Protection Zone as defined in Schedule 1; and
6. The activity is undertaken at a distance greater than 50m from any lawfully established surface water intake.
**The exercise of discretion is restricted to the following matters:**

1. The content and adequacy of the management plan in ensuring environmental effects will be minimised; and
2. The location, method and timing of sediment removal with respect to the life stage and habitat of sensitive ecological communities including fish and invertebrates; and
3. The adverse effects of the activity on downstream water quality, flows and significant habitats of indigenous fauna and flora; and
4. The effect of the activity on reliability for any authorised surface water take; and
5. The volume and rate at which water is abstracted and returned to the river, including any effects on bank stability (such as accelerated erosion) and the capacity of the waterway; and
6. The minimum flow in the river at the time the activity is carried out; and
7. The adverse effects of the activities on sites used for freshwater bathing described in Schedule 6; and
8. Any adverse effects on mahinga kai, wāhi tapu or wāhi taonga; and
9. The benefits of the activity to the community and the environment.

**15A.5.30** The take and use of water from a river and the disturbance of the bed of the river to remove fine sediment less than 2mm in diameter for the sole purpose of habitat restoration and the consequential discharge of water and contaminants that does not meet one or more of the conditions in Rule 15A.5.29 is a discretionary activity.

**Augmentation of Wainono Lagoon**

**Note:** In addition to the provisions of this Plan and any relevant district plan, any activity which may modify, damage or destroy pre 1900 archaeological sites is subject to the archaeological authority process under the Heritage New Zealand Poutere Taonga Act 2014. An archaeological authority is required from New Zealand Historic Places Trust to modify, damage or destroy any archaeological site, whether recorded or not in the New Zealand Heritage List/Rārangi Kōrero website.

**15A.5.31** The use of land for a wetland, the discharge of water into that wetland, and the subsequent discharge of water from that wetland for the purpose of augmenting Wainono Lagoon, is a restricted discretionary activity, provided the following conditions are met:

1. The activity does not take place on land that is listed as an archaeological site; and
2. The activity is not within a Community Drinking Water Protection Zone as defined in Schedule 1; and
3. The discharge from the wetland is not within 100m of any abstraction point used for drinking water; and
4. A management plan is prepared and submitted with the application for resource consent; and
5. The discharge does not result in the erosion of the bed or banks of any receiving waterbody.
The exercise of discretion is restricted to the following matters:

1. The appropriateness of the location of the wetland and any associated discharge points.
2. The content and quality of the management plan, and the methods proposed to:
   (a) avoid or mitigate adverse effects resulting from the construction and use of the wetland; and
   (b) control livestock access to and within the wetland including any proposed grazing regimes; and
   (c) control plant and animal pest species within the wetland; and
   (d) ensure the purpose and ongoing functioning of the wetland is achieved; and
   (e) monitor and report on the discharges to and from the wetland; and
   (f) manage the timing of the discharge to the wetland; and
3. The appropriateness of integration with existing or planned infrastructure and water conveyance systems; and
4. Adverse effects on people and property arising from raised groundwater levels and reduced drainage capacity in the drainage system; and
5. Adverse effects on the Wainono Lagoon and the Waihao Box; and
6. Adverse effects on water quality in Wainono Lagoon and significant habitats of indigenous flora and fauna; and
7. Adverse effects on sites or areas of wāhi tapu, wāhi taonga or mahinga kai; and
8. The potential benefits of the activity to the community and the environment; and
9. Adverse effects on Ngāi Tahu cultural values; and
10. The rate and volume of the discharge.

15A.5.32 The use of land for a wetland, the discharge of water into that wetland, and the subsequent discharge of water from that wetland for the purpose of augmenting Wainono Lagoon, that does not meet one or more of the conditions of Rule 15A.5.31 is a discretionary activity.

Take and Use of Water

Note: Region-wide Rules 5.111 to 5.115 apply within South Coastal Canterbury.

15A.5.33 Except as provided for by Rules 5.111 to 5.115, the take and use of groundwater with a direct, high or moderate stream depletion effect or the take and use of surface water from any waterbody that is not listed in Tables 15A(f) to 15A(j) inclusive is a prohibited activity.

Note: Rule 15A.5.34 prevails over Region-wide Rule 5.123.

15A.5.34 Except as provided for in Rules 15A.5.41 to 15A.5.45 inclusive, the take and use of surface water from a surface waterbody listed in Tables 15A(g) to 15A(j) inclusive is a restricted discretionary activity, provided the following conditions are met:

1. The take does not result in any exceedance of any limits set out for that waterbody in Tables 15A(g) to 15A(j) inclusive; and
2. The annual volume and rate of water to be taken is reasonable, determined in accordance with:
   (a) methods 1, 2 or 3 of Schedule 10, for applications to take and use water for irrigation affected by the provisions of Sections 124 – 124C of the RMA, received prior to 20 December 2021; or
   (b) method 1 of Schedule 10, for applications affected by the provisions of Sections 124 – 124C of the RMA, received on or after 20 December 2021 to take and use water for irrigation; or
   (c) an amount of water that is reasonable and demonstrates efficient use of water for the particular end use, where the water is to be used for any purpose other than irrigation; or
   (d) methods 1, 2 or 3 of Schedule 10, for all new applications to take and use water for irrigation; and
3. Unless it is associated with the artificial opening of a hāpua, lagoon or coastal lake to the sea, the take is not from a hāpua, wetland or high naturalness river.

The exercise of discretion is restricted to the following matters:
1. The rate, volume and timing of the take; and
2. Whether the amount of water to be taken and used is reasonable for the proposed use; and
3. For water used for irrigation, the management of water allocation and resulting nutrient discharges on individual farms; and
4. The potential effects on groundwater recharge; and
5. The availability and practicality of using alternative supplies of water; and
6. The effects the take has on any other authorised take; and
7. The reduction in the rate of take in times of low flow and partial restrictions; and
8. Whether and how fish are prevented from entering the water intake; and
9. The actual or potential adverse environmental effects of water use on and the proximity of the use to any significant indigenous biodiversity and adjacent dryland habitats.
10. Whether and how the take and use is proposed to be managed through a Farm Environment Plan that has been prepared in accordance with Part A of Schedule 7.

15A.5.35 The take and use of surface water from a surface waterbody listed in Tables 15A(g) to 15A(j) inclusive that does not meet condition 3 in Rule 15A.5.34 is a non-complying activity.

15A.5.36 The take and use of surface water from a surface waterbody listed in Tables 15A(g) to 15A(j) inclusive that does not meet one or more of conditions 1 or 2 in Rule 15A.5.34 is a prohibited activity.

Note: Rules 15A.5.37 and 15A.5.38 prevail over Region-wide Rules 5.128 - 5.130.

15A.5.37 The take and use of groundwater is a restricted discretionary activity, provided the following conditions are met:
1. Where the proposed take is within the Waihao Groundwater Allocation Zone, the take in combination with all other lawfully established groundwater takes does not result in an exceedance of the limits set out in Table 15A(k); or
2. Where the proposed take is outside the Waihao Groundwater Allocation Zone, the take is the replacement of a lawfully established take affected by the provisions of Sections 124 – 124C of the RMA and the take does not exceed the volume on the consent to be replaced; and
3. For stream depleting groundwater takes with a direct, high or moderate stream depletion effect, the take in combination with all existing consented surface water takes, does not result in any exceedance of any environmental flow and allocation limit described in Tables 15A(g) to 15A(j) inclusive, for that waterbody; and
4. The annual the volume and rate of water to be taken is reasonable, determined in accordance with:
   (a) methods 1, 2 or 3 of Schedule 10, for applications to take and use water for irrigation affected by the provisions of Sections 124 – 124C of the RMA, received prior to 20 December 2021; or
   (b) method 1 of Schedule 10 for applications to take and use water for irrigation affected by the provisions of Sections 124 – 124C of the RMA, lodged on or after 20 December 2021; or
   (c) an amount of water that is reasonable and demonstrates efficient use of water for the particular end use, where the water is to be used for any purpose other than irrigation; or
   (d) methods 1, 2 or 3 of Schedule 10, for all new applications to take and use water for irrigation.

The exercise of discretion is restricted to the following matters:
1. The rate, volume and timing of the take; and
2. The availability and practicality of using alternative supplies of water; and
3. The maximum rate of take, including the capacity of the bore or bore field to achieve that rate, and the rate required to service any irrigation system; and
4. The actual or potential adverse environmental effects the take has on any other authorised takes, including interference effects as set out in Schedule 12; and
5. For stream depleting groundwater takes, the matters of discretion under Rule 15A.5.34; and
6. Whether salt-water intrusion into the aquifer or landward movement of the salt-water/fresh water interface is prevented; and
7. The actual or potential adverse environmental effects of water use on, and the proximity of the use to, any significant indigenous biodiversity and adjacent dryland habitats; and
8. The protection of groundwater sources, including the prevention of backflow of water or contaminants; and
9. Whether and how the take and use is proposed to be managed through a Farm Environment Plan that has been prepared in accordance with Part A of Schedule 7.
15A.5.38 The take and use of groundwater that does not meet one or more of the conditions of Rule 15A.5.37 is a prohibited activity.

15A.5.39 The take and use of groundwater within a groundwater allocation zone described in Table 15A(l) that will replace an existing lawfully established surface water or stream depleting groundwater permit, is a restricted discretionary activity provided the following conditions are met:

1. The take does not result in any exceedance of any limits for that waterbody described in Table 15A(l); and
2. The point of take is from a depth not less than 30 metres below the ground level; and
3. The abstraction does not cause a direct, high or moderate stream depletion effect; and
4. The point of abstraction is within the same groundwater allocation zone as the existing take and there is no increase in the annual volume; and
5. The bore interference effects are acceptable, as determined in accordance with Schedule 12; and
6. The annual volume and maximum rate of take for the purpose of irrigation has been calculated in accordance with Schedule 10 and does not exceed the annual volume calculated in accordance with Schedule 10 for the area of land that was irrigated on or before 24 April 2015 under the surface water or stream depleting groundwater permit.

The exercise of discretion is restricted to the following matters:

1. The volume of water to be taken and the proposed use of that water; and
2. The timing of the cessation of the existing surface water or stream depleting groundwater take; and
3. Where the take is less than 2km from the coast, the methods to control saltwater intrusion into the aquifer or inland movement of the salt-water/freshwater interface; and
4. The methods to prevent the backflow of contaminants into groundwater; and
5. Whether and how the take and use is proposed to be managed through a Farm Environment Plan that has been prepared in accordance with Part A of Schedule 7; and
6. The timing of the surrender of the surface water or stream depleting groundwater permit.

15A.5.40 The take and use of groundwater within a groundwater allocation zone described in Table 15A(l) that will replace an existing lawfully established surface water or stream depleting groundwater permit that does not meet one or more of the conditions in Rule 15A.5.39 is a prohibited activity.

15A.5.41 The take of surface water to out-of-river storage from a surface waterbody listed in Tables 15A(g) to 15A(j) inclusive and the use of that stored water, is a restricted discretionary activity provided the following conditions are met:

1. The take of water does not result in any exceedance of any limits set out for that waterbody in Tables 15A(g) to 15A(j) inclusive; and
2. The application for resource consent sets out the proposed uses for the water; and

3. Unless it is associated with the artificial opening of a hāpua, lagoon or coastal lake to the sea, the take is not from a hāpua, wetland or high naturalness river.

The exercise of discretion is restricted to the following matters:

1. The rate, volume and timing of the take; and

2. The effects the take may have on any other authorised takes; and

3. Whether the amount of water to be taken and used is reasonable and efficient for the proposed use; and

4. The effect of the take on flows required to recharge the groundwater aquifers; and

5. The actual and potential effects of the take and use on water quality, aquatic ecosystems, in-stream habitat, wetlands, dryland habitats, significant indigenous biodiversity, sites of significance to Ngāi Tahu, amenity and recreational values in the area of the river subject to the take; and

6. Adverse effects on fish passage; and

7. Methods to prevent fish from entering the water intake; and

8. The cumulative effects on the surface water body from the proposed take and any other take on the property; and

9. Whether and how the take and use is proposed to be managed through a Farm Environment Plan that has been prepared in accordance with Part A of Schedule 7.

15A.5.42 The take and use of surface water to out-of-river storage from a surface waterbody listed in Tables 15A(g) to 15A(j) inclusive that does not meet condition 3 in Rule 15A.5.41 is a non-complying activity.

15A.5.43 The take and use of surface water to out-of-river storage from a surface waterbody listed in Tables 15A(g) to 15A(j) inclusive that does not meet one or more of conditions 1 or 2 in Rule 15A.5.41 is a prohibited activity.

15A.5.44 The take and use of ‘B’ allocation water from the Otaio River is a restricted discretionary activity provided the following conditions are met:

1. The applicant holds an existing resource consent to take water from the Otaio River ‘A’ allocation block; and
   (a) the application for consent is received by the CRC prior to 20 December 2021; and
   (b) not more than 500l/s from the ‘B’ allocation block is allocated in combination with other water permits granted to consent holders who also hold an existing resource consent to take from the Otaio River ‘A’ allocation block; or

2. The applicant does not hold an existing resource consent to take water from the Otaio River ‘A’ allocation block; and
   (a) the application is received by the CRC prior to 20 December 2021; and
   (b) not more than 500l/s from the ‘B’ allocation block is allocated in combination with other water permits granted to consent holders who do not hold an existing resource consent to take from the Otaio River “A” allocation block; or
3. The application is received by the CRC after 20 December 2021, and the 'B' allocation block has not been fully allocated.

**The exercise of discretion is restricted to the following matters:**

1. The rate, volume and timing of the take; and
2. The effects the take has on any other authorised takes; and
3. Whether the amount of water to be taken and used is reasonable and demonstrates efficient use of water for the proposed use; and
4. The effect of the take on flows required to recharge the groundwater aquifers; and
5. The actual and potential effects of the take and use on water quality, aquatic ecosystems, in-stream habitat, wetlands, dryland habitats, significant indigenous biodiversity, sites of significance to Ngāi Tahu, amenity and recreational values in the area of the river subject to the take; and
6. Adverse effects on fish passage; and
7. Methods to prevent fish from entering the water intake; and
8. The cumulative effects on the surface water body from the proposed take and any other take on the property; and
9. Whether and how the take and use is proposed to be managed through a Farm Environment Plan that has been prepared in accordance with Part A of Schedule 7.

15A.5.45 The take and use of 'B' allocation water from the Otaio River that does not meet one or more of the conditions in Rule 15A.5.44 is a prohibited activity.

**Transfer of water permits**

**Note:** Rules 15A.5.46, 15A.5.47 and 15A.5.48 prevail over Region-wide Rules 5.133 and 5.134

15A.5.46 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 water relates and where the location of the take and use of water does not change) of a water permit to take and use surface water or groundwater, is considered as a controlled activity provided the following condition is met:

1. The transferred water is to be used for a community water supply.

The CRC reserves control over the follow matter:

1. The provision of information on the location, maximum rate of take and annual volume.

15A.5.47 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 water relates and where the location of the take and use of water does not change) of a water permit to take and use surface water or groundwater that does not meet condition 1 of Rule 15A.5.46 shall be considered as if it is a discretionary activity where the following conditions are met:

1. The total volume of water retained and transferred does not exceed:
   (a) for irrigation takes, the lesser of the volume of water which is reasonable for the existing land use for the transferor, calculated in accordance with Schedule 10
Canterbury Land and Water Regional Plan

or the volume which the permit holder has demonstrated that they have abstracted on average each year over the last two years; and
(b) for other takes, the lesser of the volume which is reasonable for existing end use or the volume which the permit holder has demonstrated that they have abstracted on average each year over the last two years; and
2. The reliability of supply for any other lawfully established water take is not reduced; and
3. The water permit has been exercised by the permit holder within the last two years; and
4. In the case of surface water, the point of take remains within the same surface water allocation zone catchment and the take complies with the allocation limits and minimum flows and partial restrictions set in Tables 15A(i) to 15A(j); and
5. In the case of groundwater:
   (a) the point of take is within the same groundwater allocation zone; and
   (b) the bore interference effects as set out in Schedule 12 of the Land and Water Regional Plan are acceptable; and
   (c) in addition for stream depleting groundwater takes:
      (i) the transfer is within the same surface water allocation zone; and
      (ii) the take complies with the allocation limits and minimum flows and partial restrictions set in Tables 15A(i) to 15A(j); and
      (iii) the stream depletion effect is no greater in the transferred location than in the original location.

15A.5.48 The permanent or temporary transfer in whole or in part, (other than to the new owner of the site to which the take and use of water relates and where the location of the take and use of water does not change) of a water permit to take and use surface water or groundwater which does not meet one or more of the conditions of Rule 15A.5.47 shall be considered as if it is a prohibited activity.

Damming of water

15A.5.49 The damming of water on the mainstem of the North Branch and the associated tributaries of the Waihao River, upstream of the confluence of the North and South branches of the Waihao River (Waihao Forks at or about Topo 50 CB18:372-388) is a prohibited activity.

15A.5.50 The damming of water on the main stem of the Otaio River and the associated tributaries at or upstream of Topo 50 CA18:3573-6840 is a prohibited activity.
### 15A.6 Freshwater Outcomes -Tables

#### South Coastal Canterbury Rivers

**Table 15A(a) Freshwater Outcomes for South Coastal Canterbury Rivers to be achieved by 2030**

<table>
<thead>
<tr>
<th>Management Unit</th>
<th>River</th>
<th>QMCI [min 80% samples in 5 year period]</th>
<th>Dissolved oxygen [min] (%)</th>
<th>Temperature [max] (°C)</th>
<th>Emergent macrophytes [max cover of bed] (%)</th>
<th>Total macrophytes [max cover of bed] (%)</th>
<th>Chlorophyll a [max biomass] (mg/m³)</th>
<th>Filamentous algae [max cover &gt;1mm] (%)</th>
<th>Cyanobacteria mat cover &gt;1mm (%)</th>
<th>Fine sediment &lt;2 mm diameter [max cover of bed] (%)</th>
<th>Suitability for contact recreation [SFRG]</th>
<th>Human Health for Recreation attributes</th>
<th>Cultural attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hill-fed - upland</td>
<td>Hook R. Waimate Ck.</td>
<td>6</td>
<td>90</td>
<td>20</td>
<td>No value set</td>
<td>No value set</td>
<td>50ª</td>
<td>10ª</td>
<td>20ª</td>
<td>15</td>
<td>Good</td>
<td>&lt;260ª</td>
<td>Freshwater mahinga kai species sufficiently abundant for customary gathering, water quality is suitable for their safe harvesting, and they are safe to eat.</td>
</tr>
<tr>
<td>Hill-fed - lower</td>
<td>Horseshoe Bend Ck. Kohika R. Makikiki R Otaio R. Waihao R.</td>
<td>6</td>
<td>90</td>
<td>20</td>
<td>No value set</td>
<td>No value set</td>
<td>200º</td>
<td>30º</td>
<td>50º</td>
<td>15</td>
<td>Good to Fair</td>
<td>&lt;260ª</td>
<td></td>
</tr>
<tr>
<td>Spring-fed – plains</td>
<td>Buchanans Ck. Hook Dn. Merrys Stm. Sir Charles Ck. Waituna Stm.</td>
<td>5</td>
<td>70</td>
<td>20</td>
<td>30</td>
<td>50</td>
<td>No value set</td>
<td>30º</td>
<td>50º</td>
<td>20</td>
<td>No value set</td>
<td>&lt;260ª</td>
<td></td>
</tr>
</tbody>
</table>

**Key:**
- **QMCI** = Quantitative macro invertebrate community index
- **SFRG** = Suitability for Recreation Grade from Microbiological Water Quality Guidelines for Marine and Freshwater Recreational Areas 2003
- a Exceeded in no more than 8% of samples (1 in 12)
- b Exceeded in no more than 17% of samples (2 in 12)
- c Exceeded in no more than 33% of samples (4 in 12) for Waihao River from Forks to SH1
- d Annual median less than 260 E.coli per 100 millilitres is the threshold for meeting B and A under the National Objectives Framework
### South Coastal Canterbury Lakes

#### Table 15A(b): Freshwater Outcomes for South Coastal Canterbury Lakes to be achieved by 2030

<table>
<thead>
<tr>
<th>Management Unit</th>
<th>Lake</th>
<th>Ecological Health attributes</th>
<th>Eutrophication attributes</th>
<th>Visual Quality attributes</th>
<th>Human Health for Recreation attributes</th>
<th>Cultural attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Dissolved Oxygen [min] (%)</td>
<td>Temp [max] (°C)</td>
<td>Lake SPI [min grade]</td>
<td>Trophic Level Index (TLI)(\text{a}) [maximum annual average]</td>
<td>Macrophytes and water clarity(\text{b})</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hypo-limnion</td>
<td>Epilimnion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coastal Lakes</td>
<td>Wainono Lagoon</td>
<td>70</td>
<td>90</td>
<td>19</td>
<td>Moderate</td>
<td>6.0</td>
</tr>
</tbody>
</table>

**Key:**
- TLI = Trophic Level Index from: Protocol for Monitoring Trophic Levels of New Zealand Lakes and Reservoirs (Report by Lakes Consulting, March 2000) provides a pragmatic and widely used numeric scale for measuring the trophic status of New Zealand lakes. The scale is from less than 1 (very low nutrients) to more than 7 (very high nutrients)
- \(\text{a}\) = TLI assumed to be calculated as TLI\(3\) (using TP, TN and Chl a)
- \(\text{b}\) = Clarity = Measured using the SHMAK tube method

Freshwater mahinga kai species sufficiently abundant for customary gathering, water quality is suitable for their safe harvesting, and they are safe to eat.
### 15A.7 Environmental Flow and Allocation and Water Quality Targets and Limits

#### 15A.7.1 Water Quality Limits for Rivers

**Table 15A(c) South Coastal Canterbury Water Quality Limits for Rivers**

<table>
<thead>
<tr>
<th>River Type</th>
<th>River Name and Measurement Location</th>
<th>Dissolved Reactive Phosphorus (DRP) concentration (mg/L)</th>
<th>Dissolved Inorganic Nitrogen (DIN) concentration (mg/L)</th>
<th>Ammoniacal Nitrogen (NH₄-N) concentration (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Annual median</td>
<td>Annual median</td>
<td>Annual 95th percentile</td>
</tr>
<tr>
<td>Hill-fed upland</td>
<td>Waimate Creek, Kelceys Bush</td>
<td>0.012</td>
<td>0.39</td>
<td>0.93</td>
</tr>
<tr>
<td></td>
<td>Hook River Tributary, Gunns Bush</td>
<td>0.012</td>
<td>0.12</td>
<td>0.56</td>
</tr>
<tr>
<td></td>
<td>Hook River, Hook Bush</td>
<td>0.012</td>
<td>0.06</td>
<td>0.13</td>
</tr>
<tr>
<td></td>
<td>Hook Stream Tributary Linnfield Rd</td>
<td>0.021</td>
<td>0.13</td>
<td>3.12</td>
</tr>
<tr>
<td>Hill-fed lower</td>
<td>Makikihi River, Milnes Rd</td>
<td>0.011</td>
<td>0.74</td>
<td>1.34</td>
</tr>
<tr>
<td></td>
<td>Esk Valley Stream, Backline Rd</td>
<td>0.028</td>
<td>1.79</td>
<td>2.07</td>
</tr>
<tr>
<td></td>
<td>Kohika River, Backline Rd.</td>
<td>0.018</td>
<td>0.11</td>
<td>0.82</td>
</tr>
<tr>
<td></td>
<td>Otaio Gorge</td>
<td>0.005</td>
<td>0.04</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>Hook Stream Tributary Lower-Gunns Rd</td>
<td>0.055</td>
<td>0.34</td>
<td>4.77</td>
</tr>
<tr>
<td></td>
<td>Hook Stream, Waimate-Hunter Rd</td>
<td>0.019</td>
<td>1.62</td>
<td>2.76</td>
</tr>
<tr>
<td></td>
<td>Hook River, Waimate-Hunter Rd</td>
<td>0.006</td>
<td>0.53</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>Upper Horseshoe Bend Ck</td>
<td>0.027</td>
<td>0.54</td>
<td>0.99</td>
</tr>
<tr>
<td></td>
<td>Otaio River, Drinnans Bridge</td>
<td>0.005</td>
<td>0.60</td>
<td>1.14</td>
</tr>
<tr>
<td></td>
<td>Otaio River Tributary Esk Valley Rd</td>
<td>0.015</td>
<td>1.12</td>
<td>0.93</td>
</tr>
<tr>
<td></td>
<td>Otaio River Tributary Esk Bank Rd Ford</td>
<td>0.005</td>
<td>0.53</td>
<td>0.96</td>
</tr>
<tr>
<td>River Type</td>
<td>River Name and Measurement Location</td>
<td>Dissolved Reactive Phosphorus (DRP) concentration (mg/L)</td>
<td>Dissolved Inorganic Nitrogen (DIN) concentration (mg/L)</td>
<td>Ammoniacal Nitrogen (NH4-N) concentration (mg/L)</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------------------------------------</td>
<td>--------------------------------------------------------</td>
<td>--------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Annual median</td>
<td>Annual 95th percentile</td>
<td>Annual median</td>
</tr>
<tr>
<td>River Type</td>
<td>River Name and Measurement Location</td>
<td>Dissolved Reactive Phosphorus (DRP) concentration (mg/L)</td>
<td>Dissolved Inorganic Nitrogen (DIN) concentration (mg/L)</td>
<td>Ammoniacal Nitrogen (NH4-N) concentration (mg/L)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Annual median</td>
<td>Annual 95th percentile</td>
<td>Annual median</td>
</tr>
<tr>
<td></td>
<td>Hook River, SH1</td>
<td>0.009</td>
<td>2.05</td>
<td>3.55</td>
</tr>
<tr>
<td></td>
<td>Hook River, Beach Rd. b</td>
<td>0.016</td>
<td>3.21</td>
<td>5.64</td>
</tr>
<tr>
<td></td>
<td>Waihao River, McCulloughs Bridge b</td>
<td>0.002</td>
<td>0.41</td>
<td>0.64</td>
</tr>
<tr>
<td></td>
<td>Hook River, SH1</td>
<td>0.009</td>
<td>2.05</td>
<td>3.55</td>
</tr>
<tr>
<td></td>
<td>Hook River, Beach Rd. b</td>
<td>0.016</td>
<td>3.21</td>
<td>5.64</td>
</tr>
<tr>
<td></td>
<td>Waihao River, Bradshaws Bridge b</td>
<td>0.001</td>
<td>1.17</td>
<td>2.17</td>
</tr>
<tr>
<td></td>
<td>Kohika Stream, SH1</td>
<td>0.009</td>
<td>2.50</td>
<td>4.49</td>
</tr>
<tr>
<td></td>
<td>Horseshoe Bend Ck. SH1</td>
<td>0.03</td>
<td>1.13</td>
<td>1.72</td>
</tr>
<tr>
<td></td>
<td>Otaio River, SH1</td>
<td>0.007</td>
<td>1.23</td>
<td>2.19</td>
</tr>
<tr>
<td>Spring-fed plains</td>
<td>Buchanans Ck. upstream Waihao confluence b</td>
<td>0.01</td>
<td>1.38</td>
<td>2.57</td>
</tr>
<tr>
<td>Sir Charles Ck. Haymans Rd b</td>
<td></td>
<td>0.02</td>
<td>5.20</td>
<td>6.64</td>
</tr>
<tr>
<td>Hook Drain, Beach Rd. b</td>
<td></td>
<td>0.03</td>
<td>3.05</td>
<td>5.33</td>
</tr>
<tr>
<td>Merrys Stream, SH1</td>
<td>0.02</td>
<td>2.26</td>
<td>3.13</td>
<td>0.013</td>
</tr>
<tr>
<td>Waituna Stream, SH1</td>
<td>0.46</td>
<td>0.39</td>
<td>0.74</td>
<td>0.115</td>
</tr>
</tbody>
</table>

Key:
- **a** Dissolved Reactive Phosphorus (DRP) and Ammoniacal Nitrogen (NH4-N) limits are based on the current measured state using data for the period July 2007 to February 2012.
- **b** Environment Canterbury State of the Environment (SoE) monitoring sites (other sites are Environment Canterbury Investigation sites or sites previously monitored by NIWA).
15A.7.2 Water Quality Limits for Lakes

Table 15A(d): South Coastal Canterbury Water Quality Limits for Lakes

<table>
<thead>
<tr>
<th>Lake</th>
<th>Trophic State</th>
<th>TLI</th>
<th>TP maximum annual median</th>
<th>TN maximum annual median</th>
<th>Chl a maximum annual median</th>
<th>Target Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wainono Lagoon</td>
<td>Supertrophic</td>
<td>6.0</td>
<td>96mg/m$^3$</td>
<td>1560mg/m$^3$</td>
<td>30mg/m$^3$</td>
<td>2025</td>
</tr>
</tbody>
</table>

TLI assumed to be calculated as a TLI$^3$ (using TP, TN and Chl a)

15A.7.3 Water Quality Limits for Groundwater

Table 15A(e): South Coastal Canterbury Water Quality Limits for Groundwater

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Measurement</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrate-N</td>
<td>Maximum concentration</td>
<td>&lt;11.3mg/L $^a$</td>
</tr>
<tr>
<td>Nitrate-N</td>
<td>5-year annual average concentration $^b$</td>
<td>8.2mg/L $^f$</td>
</tr>
<tr>
<td>E.coli</td>
<td>Median concentration $^c$</td>
<td>&lt; 1 organism/100 millilitres</td>
</tr>
<tr>
<td>Other contaminants $^d$</td>
<td>Any sample</td>
<td>&lt; 50% MAV $^d$</td>
</tr>
</tbody>
</table>

Key:

$^a$ In groundwater sourced from land surface recharge

$^b$ Measured over the length of the record

$^c$ Other contaminants of health significance as listed in NZ Drinking Water Standards

$^d$ Maximum Acceptable Value

$^e$ Target is not predicted to be achieved all of the time everywhere in South Coastal Canterbury

$^f$ This is the predicted future average concentration across South Coastal Canterbury and assumes maximum caps, flexibility caps and good farm practice are met.

15A.7.4 Environmental Flow and Allocation Limits

The following flow and allocation limits are to be applied when reading policies and rules in Sections 4, 5 and 15A.

Table 15A(f): South Coastal Canterbury Community water supply allocation limits - surface water

<table>
<thead>
<tr>
<th>Location</th>
<th>Topo 50 Map Reference</th>
<th>Allocation (L/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Waihao (McCulloughs recorder)</td>
<td>CB18:3973-3715</td>
<td>10</td>
</tr>
<tr>
<td>Upper Hook (above community intake)</td>
<td>CA18:3899-5450</td>
<td>20</td>
</tr>
<tr>
<td>Otaio River (At gorge)</td>
<td>CA18:3573-6840</td>
<td>15</td>
</tr>
</tbody>
</table>
Table 15A(g): South Coastal Canterbury Partial Restrictions, Environmental Flow and Allocation Limits for 'A' Permits

<table>
<thead>
<tr>
<th>Location</th>
<th>Topo 50 Map Reference</th>
<th>Properties that do not have access to Irrigation Scheme water</th>
<th>Where a property can access Irrigation Scheme water or 01 Jan 2030, whichever occurs first.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Allocation (L/s)</td>
<td>Minimum flow (L/s)</td>
</tr>
<tr>
<td>Upper Waihao</td>
<td>CB18:3973-3715</td>
<td>379¹ 300</td>
<td>50%</td>
</tr>
<tr>
<td>(McCullough recorder)</td>
<td></td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>Lower Waihao</td>
<td>CB19:5359-3913</td>
<td>186 100² None</td>
<td>-</td>
</tr>
<tr>
<td>(Bradshaw’s recorder)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buchanan’s</td>
<td>CB19:5311-4033</td>
<td>95 150</td>
<td>None</td>
</tr>
<tr>
<td>(Fletcher’s Bridge recorder)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sir Charles Creek</td>
<td>CB19:5410-4383</td>
<td>157 100</td>
<td>None</td>
</tr>
<tr>
<td>(Rooney’s bridge)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waimate Creek</td>
<td>CA18:4267-4608</td>
<td>41 15 (residual flow)</td>
<td>None</td>
</tr>
<tr>
<td>(Kirk’s Intake)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Hook</td>
<td>CA18:3899-5450</td>
<td>10 35</td>
<td>Pro-rata³</td>
</tr>
<tr>
<td>(Above Intake)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Hook</td>
<td>CA19:5301-5145</td>
<td>84 64</td>
<td>25%</td>
</tr>
<tr>
<td>(Beach Road)</td>
<td></td>
<td></td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>75%</td>
</tr>
<tr>
<td>Makikihi</td>
<td>CA19:4816-5838</td>
<td>88 20</td>
<td>None</td>
</tr>
<tr>
<td>(Teschemaker Valley Road)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kohika</td>
<td>CA18:3744-6367</td>
<td>2.8 2 (residual flow)</td>
<td>None</td>
</tr>
<tr>
<td>(Puttick Intake)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waihao Arm</td>
<td>CB19:5397-4569</td>
<td>90</td>
<td>Where the flow at the recorder is at 1.1 metres above mean sea level</td>
</tr>
<tr>
<td>(Poingdesters Road)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ Where an irrigation scheme is operational within the Upper Waihao Surface Water Allocation Zone the allocation reduces to 56L/s.
² The modified minimum flow is calculated by the flow at Bradshaw’s recorder less the Morven Glenavy Irrigation Scheme telemetered discharge into the Lower Waihao.
³ Pro-rata means the proportional reduction of a take between the flow at which the take is required to start reducing and the minimum flow.
### Table 15A(h) Otaio River Environmental Flow and Allocation Limits for 'A' Permits

<table>
<thead>
<tr>
<th>Location</th>
<th>Topo50 Map Reference</th>
<th>Applicable time period</th>
<th>'A' Allocation Max rates (L/s); 7 Day volume (m³)</th>
<th>Applicable time period</th>
<th>'A' Minimum flows (L/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Otaio River</td>
<td>CA18:3573-6840</td>
<td>01 Jul - 30 Jun</td>
<td>Current: 406; 207,386</td>
<td>From 2019: 406; 207,386</td>
<td>From 2021: 206; 124,600</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Current</td>
<td>From 2019</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>From 2019: 0; 0</td>
</tr>
</tbody>
</table>

### Table 15A(i) Otaio River Partial Restrictions for 'A' Permits

<table>
<thead>
<tr>
<th>Location</th>
<th>Topo 50 Map Reference</th>
<th>Abstractors</th>
<th>Applicable time period</th>
<th>Reduce take by</th>
<th>Flow rate at recorder (L/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Otaio River</td>
<td>CA18:3573-6840</td>
<td>Not part of the Otaio Water User Group</td>
<td>01 Oct - 30 Apr</td>
<td>Pro-rata¹ Reduce take starting at a flow rate of 500L/s at minimum flow site</td>
<td>Reduce take starting at a flow rate of 270L/s at minimum flow site</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>01 May - 30 Sep</td>
<td>Pro-rata¹ Reduce take starting at a flow rate of 830L/s at minimum flow site</td>
<td>Reduce take starting at a flow rate of 530L/s at minimum flow site</td>
</tr>
</tbody>
</table>

¹Pro-rata means the proportional reduction of a take between the flow at which the take is required to start reducing and the minimum flow.
<table>
<thead>
<tr>
<th>Location</th>
<th>Topo 50 Map Reference</th>
<th>Applicable time period</th>
<th>Allocation (L/s)</th>
<th>Minimum flow (L/s)</th>
<th>Minimum groundwater level in bore J39/0255 (m bgl)</th>
<th>Partial restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Waihao (McCullough recorder)</td>
<td>CB18:3973-3715</td>
<td>01 Oct-30 April</td>
<td>285</td>
<td>1350</td>
<td>N/A</td>
<td>Pro-rata²</td>
</tr>
<tr>
<td></td>
<td></td>
<td>01 May-30 Sept</td>
<td>100</td>
<td></td>
<td>N/A</td>
<td>Pro-rata²</td>
</tr>
<tr>
<td>Lower Waihao (Bradshaws recorder)</td>
<td>CB19:5359-3913</td>
<td>01 Jul-30 Jun</td>
<td>100</td>
<td>600¹</td>
<td>N/A</td>
<td>Pro-rata²</td>
</tr>
<tr>
<td>Waimate Creek (Kirk's Intake)</td>
<td>CA18:4267-4608</td>
<td>01 Jul-30 Jun</td>
<td>100</td>
<td>400</td>
<td>N/A</td>
<td>Pro-rata²</td>
</tr>
<tr>
<td>Upper Hook (Above Intake)</td>
<td>CA18:3899-5450</td>
<td>01 Jul-30 Jun</td>
<td>100</td>
<td>300</td>
<td>N/A</td>
<td>Pro-rata²</td>
</tr>
<tr>
<td>Lower Hook (Beach Road) Excluding Merry's Stream</td>
<td>CA19:5301-5145</td>
<td>01 Jul-30 Jun</td>
<td>100</td>
<td>590</td>
<td>N/A</td>
<td>Pro-rata²</td>
</tr>
<tr>
<td>Makikihi (Teschemaker Valley Road)</td>
<td>CA19:4816-5838</td>
<td>01 Jul-30 Jun</td>
<td>100</td>
<td>500</td>
<td>N/A</td>
<td>Pro-rata²</td>
</tr>
<tr>
<td>Otaio River (Gorge recorder)</td>
<td>CA18:3573-6840</td>
<td>01 Jul-30 Jun</td>
<td>1000</td>
<td>780</td>
<td>3</td>
<td>Pro-rata²</td>
</tr>
</tbody>
</table>

¹ The modified minimum flow is calculated by the flow at Bradshaw's recorder less the Morven Glenavy Irrigation Scheme telemetered discharge into the Lower Waihao.
² Pro-rata means the proportional reduction of a take between the flow at which the take is required to start reducing and the minimum flow.
15A.7.5 Groundwater Allocation Limits

The following groundwater allocation limits are to be applied when reading relevant policies and rules in Section 4, 5 and 15A.

Table 15A(k): South Coastal Canterbury Groundwater Allocation

<table>
<thead>
<tr>
<th>Groundwater Allocation Zone</th>
<th>Groundwater block (Mm³/y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waihao</td>
<td>7.73</td>
</tr>
<tr>
<td>Otaio</td>
<td>4.608</td>
</tr>
<tr>
<td>Makikihi</td>
<td>23.15</td>
</tr>
<tr>
<td>Hook</td>
<td>3.57</td>
</tr>
<tr>
<td>Waimate</td>
<td>10.3</td>
</tr>
</tbody>
</table>

Table 15A(l): South Coastal Canterbury volume for surface water permit exchanges to deep groundwater permits

<table>
<thead>
<tr>
<th>Groundwater Allocation Zone</th>
<th>Groundwater block (Mm³/y)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Otaio</td>
<td>2.650</td>
</tr>
<tr>
<td>Makikihi</td>
<td>0.822</td>
</tr>
<tr>
<td>Hook</td>
<td>0.859</td>
</tr>
<tr>
<td>Waimate</td>
<td>1.374</td>
</tr>
</tbody>
</table>

15A.7.6 Water Quality Limits and Targets

Table 15A(m): Nitrogen load limits for urban and industrial discharges in South Coastal Canterbury

<table>
<thead>
<tr>
<th>Area</th>
<th>Timing</th>
<th>Load limit (t/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Streams Area</td>
<td>From 1 May 2015</td>
<td>8 (Potato processing wastewater)</td>
</tr>
<tr>
<td>Waihao-Wainono Area</td>
<td></td>
<td>27 (Industrial)</td>
</tr>
<tr>
<td>Morven-Sinclairs Area</td>
<td></td>
<td>2 (Waimate community sewage)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.6 (Milk processing)</td>
</tr>
</tbody>
</table>

Table 15A(n): Nitrogen load limits for farming in South Coastal Canterbury

<table>
<thead>
<tr>
<th>Area</th>
<th>Timing</th>
<th>Load limit (t/yr)</th>
</tr>
</thead>
</table>
| Northern Streams Area (Otaio, Kohika, Horseshoe, Makikihi) | From 1 May 2015 | Otaio Plains 156
|                                     |                         | Otaio Hill 31                                          |
|                                     |                         | Kohika Plains 96                                       |
|                                     |                         | Kohika Hill 2                                          |
|                                     |                         | Horseshoe Plains 52                                    |
|                                     |                         | Makikihi Plains 120                                   |
|                                     |                         | Makikihi Hill 21                                       |
| Waihao-Wainono Area                 | From 1 May 2015         | Total catchment 1106 (which comprises Hill sub-area 265 plus Plains sub-area 841) and includes: Hunter Downs Irrigation Scheme total load limit 136 Waihao Downs Irrigation Scheme total load limit 193 |
| Morven-Sinclairs Area ¹             | From 1 May 2015         | Morven-Sinclairs Plains 575                           |

¹ Morven Glenavy Irrigation Scheme does not have a Nitrogen load limit. Within the command area the sum of each individual property’s nitrogen baseline makes up the total scheme load limit.

² The N load limits were modelled using OVERSEER® Version 6.2.1, using the input data files and assumptions documented in Schedule 31 and available on the Environment Canterbury website.
15A.8 Flow Sensitive Catchments

The following are to be applied when reading relevant policies and rules in Sections 4 and 5.

<table>
<thead>
<tr>
<th>Major Catchment (see Planning Maps)</th>
<th>Sub-catchment</th>
<th>Sensitive part of catchment</th>
<th>Monitoring site – lower boundary of catchment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Otaio</td>
<td>Mainstem</td>
<td>Upstream of Otaio Gorge</td>
<td>Otaio Gorge recorder site</td>
</tr>
<tr>
<td></td>
<td>Lyalldale Stream</td>
<td>Whole catchment</td>
<td>State Highway One</td>
</tr>
<tr>
<td>Morven</td>
<td>Dog Kennel Stream</td>
<td>Upstream from Old Ferry Road</td>
<td>Old Ferry Road</td>
</tr>
<tr>
<td>Waihao</td>
<td>Waihao River</td>
<td>Catchment upstream from McCulloughs Bridge</td>
<td>McCulloughs Bridge recorder site</td>
</tr>
<tr>
<td></td>
<td>North Branch</td>
<td>Whole catchment</td>
<td>Waihao Forks</td>
</tr>
</tbody>
</table>

15A.9 High Naturalness Water Bodies

The following are to be applied when reading relevant policies and rules in Sections 4 and 5.

<table>
<thead>
<tr>
<th>Main River</th>
<th>Location and Topo 50 Map Reference</th>
<th>Outstanding and Significant Characteristics</th>
</tr>
</thead>
</table>
| Hook River      | Above the confluence of Hook stream and mainstem of the Hook River (at or about CA18:413-537)   | • High degree of naturalness  
• High visual amenity value  
• Ecological habitat of high value |
| Waimate River   | Above Kelceys Bush gauging site on the Waimate Creek Map (at or about CA18:390-482)             | • High degree of naturalness  
• High visual amenity value |
| Otaio River     | Above the Otaio Gorge Bridge on the Otaio River (at or about CA18:3546-6797)                    | • High degree of naturalness  
• High visual amenity value  
• Ecological habitat of high value |
Section 15B Waitaki

The boundary of the Waitaki begins at the main divide, near Aoraki/Mt Cook and the Southern Alps/Kā Tiritiri o te Moana and encompasses a network of glacial lakes and alpine rivers that flow into the lakes of the Mackenzie and Ahuriri basins. These waterbodies are drawn together to form the large Waitaki River that characterises the lower half of the catchment. The Waitaki River discharges to the Pacific Ocean, on the east coast of Canterbury approximately 22 km north of Oamaru. There is marked variability in climate and topography throughout the Waitaki, and the area supports a diverse community. In recognition of these factors, and to ensure hydrological coherence, the Waitaki has been divided into four freshwater management units for the purposes of managing freshwater quality, as shown in Map 15B.1 and described below.

Upper Waitaki Freshwater Management Unit

The Upper Waitaki Freshwater Management Unit encompasses the area of the Waitaki catchment above the Waitaki Dam. This area includes the Ahuriri sub-catchment and the Haldon sub-catchment which contains the Tekapo and Twizel groundwater basins. The Ahuriri sub-catchment includes the Ahuriri River which drains into the Ahuriri Arm of Lake Benmore/Te Ao Mārama and Omarama Stream as well as smaller tributaries including the Quailburn, Henburn and Willowburn Streams. The outstanding characteristics and features associated with the Ahuriri River and its tributaries are recognised through the National Water Conservation (Ahuriri River) Order (1990). The Haldon sub-catchment includes the glacial lakes Ōhau, Pūkaki and Tekapo/Takapo and the water that flows through rivers, streams and canals into the Haldon Arm of Lake Benmore/Te Ao Mārama. This includes smaller lakes such as Alexandrina, Kellands Pond/Wairepo Arm and Middleton which are particularly vulnerable to nutrient enrichment. The middle section of the Waitaki River is dammed in three places, forming Lakes Benmore/Te Ao Mārama, Aviemore/Mahi Tikumu and Waitaki.

Hakataramea Freshwater Management Unit

The Hakataramea Freshwater Management Unit encompasses an area of the Waitaki catchment located on the northern side of the Waitaki River below the Waitaki Dam. This area includes the Hakataramea River and a number of spring-fed tributaries that flow into the main stem of the Hakataramea River.

Valley and Tributaries Freshwater Management Unit

The Valley and Tributaries Freshwater Management Unit encompasses areas in the Waitaki catchment on the northern and southern sides of the Waitaki River below the Waitaki Dam, and also includes the mainstem of the Waitaki River (below the Waitaki Dam). The area on the southern side of the Waitaki River includes the Awakino River, Otiake River, Otekaieke River and Maerewhenua River and their tributaries, while the area on the northern side includes the mainstem and tributaries of Penticotico Stream. These rivers and streams flow directly into the Waitaki River.

Northern Fan Freshwater Management Unit

The Northern Fan Freshwater Management Unit encompasses an area of the Waitaki catchment on the northern side of the Lower Waitaki River. This area includes a number of tributaries that
flow into the mainstem of the Waitaki River, and several that flow to the mouth of the Waitaki River, including Whitneys Creek and Waikākahi Stream.

Map 15B.1 Waitaki Freshwater Management Units
The Waitaki includes the iconic Mackenzie Basin, an area recognised as nationally significant for its diverse range of range of dryland and aquatic ecosystems, which provide habitat to a large number of indigenous fish, invertebrates and birds. The Waitaki catchment is a distinct centre of endemism and diversity for native species.

The Upper Waitaki catchment, including Aoraki/Mt Cook National Park, is a nationally and internationally recognised nature and tourism location. The landscape values associated with the area have resulted in tourism becoming a key component for the economy of the Upper Waitaki.

The Waitaki is an area of shared responsibility within the takiwā of Te Rūnanga o Waihao, Te Rūnanga o Moeraki and Te Rūnanga o Arowhenua. The Waitaki River is of paramount importance to Ngāi Tahu as the pathway of the waters from Aoraki/Mt Cook to the sea. Ngāi Tahu’s relationship with the Waitaki River extends back to the first human habitation between 800 and 1000 years ago, and therefore the river is a significant element of the being and identity for Ngāi Tahu.

The importance of the Waitaki area to Ngāi Tahu was acknowledged by the Crown through the Ngāi Tahu Claims Settlement Act (1998) which identifies Aoraki/Mount Cook and eight waterbodies within the Waitaki as Statutory Acknowledgements. Mahinga kai values are present in surface waterbodies throughout the Waitaki. The Ahuriri Arm of Lake Benmore/Te Ao Mārama is closed to commercial eeling, and a trap and transfer programme is reseeding this area with elvers (juvenile eels) for customary use.
Many sites of historical significance to Ngāi Tahu are located in the Waitaki as shown in Map 15B.2.

Map 15B.2 Ngāi Tahu Historical Sites

Waterbodies in the Waitaki area provide essential water supplies to towns and communities, including Tekapo, Twizel, Omarama, Kurow, Oamaru and Glenavy. The area is also a significant source of water for irrigation on land located within and outside of the catchment and a very important source of electricity and hydro-electricity storage nationally.

The water in the Waitaki catchment has been used to generate hydroelectricity since 1935. Between 1935 and 1985 the three main glacial lakes (Tekapo/Takapo, Pūkaki and Ōhau) were dammed and water levels in Lakes Tekapo/Takapo and Pūkaki were raised. The braided rivers of the Mackenzie Basin were diverted into man-made canals, and the upper portion of the Waitaki River dammed to create the artificial lakes of Benmore/Te Ao Mārama, Aviemore/Mahi Tikumu and Waitaki to generate water for hydro-electricity supply. The hydro-electricity scheme comprises eight power stations with an installed capacity of 1,723 megawatts and produces approximately 8,000 gigawatt-hours annually.

There are several irrigation schemes in the lower Waitaki catchment. The Morven-Glenavy Ikawai Irrigation Company operates a large scheme which supplies water to the majority of landowners in the Northern Fan Freshwater Management Unit. This includes the Waihao Downs Irrigation Scheme which is in the process of being built. The Haka Valley Irrigation Company delivers water from the Waitaki River to approximately 1,200 hectares of land in the Hakataramea Valley.

On the south side of the Waitaki River, the Kurow-Duntroon Irrigation Company (which takes water from Lake Waitaki) and the Maerewhenua District Water Resource Company (which takes water from the Lower Waitaki River) irrigate several thousand hectares. The Lower Waitaki Irrigation Scheme and the North Otago Irrigation Company are large schemes which also take water from Lower Waitaki River, but use that water to irrigate land within the Otago Region. There are also numerous independent irrigators on both the north and south sides of the Waitaki River who have their own consents to irrigate, outside of the irrigation schemes.

Aquaculture is significant primary industry that exists in the Mackenzie Basin. The five sites that farm salmon within the lakes and hydro canals of the Waitaki Rover attract large numbers of visitors.

**Zone Committee Outcomes**

The Lower Waitaki South Coastal Canterbury Zone Committee led the lower Waitaki community groups through a consultation phase during which a Solutions Package was developed. The package aims to protect the high water quality in the Waitaki River, enhance biodiversity across the valley, and provide for opportunities for new and existing business. Sub-catchment outcomes include maintaining low nitrate-nitrogen concentrations in waterbodies, reducing E.coli and sediment in Whitneys Creek, gradually improving the water quality in Waikākahi Stream, and maintaining water quality in the Hakataramea catchment.

The Lower Waitaki Zone Implementation Programme Addendum 2015 records the full package of actions to be implemented and includes both regulatory and non-regulatory recommendations. The key actions to give effect to these recommendations include:
Canterbury Land and Water Regional Plan

- Establishing three freshwater management units (FMUs) for the lower Waitaki and setting zones within FMUs for the purpose of nutrient management, including the Valley and Tributaries Zone within the Valley and Tributaries FMU; the Hakataramea Hills, River and Flat Zones within the Hakataramea FMU; and the Greater Waikākahi and Whitneys Creek Zones within the Northern Fan FMU;
- The implementation of Farm Environment Plans for all farming activities located throughout the lower Waitaki area;
- The adoption of good practices for agriculture, aquaculture, urban and industrial activities;
- Restricting nitrogen losses; and
- The setting of surface water flow and allocation limits for Whitneys Creek.

The Upper Waitaki Zone Committee led the Upper Waitaki community through a consultation phase during which a solutions package was developed. The package aims to maintain the oligotrophic state of Lake Benmore/Te Ao Mārama, maintain the ecosystem health of streams, improve mahinga kai gathering and nohoanga, provide for the intensification of farming activities on small blocks of land within extensive properties, and provide for consented aquaculture and opportunities for urban expansion.

The Upper Waitaki Zone Implementation Programme Addendum 2015 records the full package of actions to be implemented and includes both regulatory and non-regulatory recommendations. The key actions that give effect to this recommendation include:
- Establishing one FMU for the upper Waitaki, and setting zones within the Upper Waitaki FMU for the purpose of nutrient management, including the Ahuriri, Upper Waitaki Hill, Haldon and Mid Catchment Zones;
- The implementation of Farm Environment Plans for farming activities;
- The adoption of good practices for agriculture, aquaculture, urban and industrial activities;
- Providing opportunities for the establishment or intensification of farming activities on small blocks of land on extensive properties in order to align with The Mackenzie Agreement;\(^{11}\)
- The setting of catchment load limits for discharges of nitrogen from urban, agricultural and aquaculture; and
- Restricting nitrogen losses.

15B.1 Waitaki Definitions

The following definitions apply only in the Waitaki.

<table>
<thead>
<tr>
<th>Word or Phrase</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ahuriri Zone</td>
<td>means the area identified as the Ahuriri Zone on the Planning Maps.</td>
</tr>
<tr>
<td>Aquaculture</td>
<td>means the farming of aquatic organisms, including but not limited to fish, crustaceans, shellfish and plants, in a freshwater environment</td>
</tr>
<tr>
<td>Aquaculture Nitrogen Loss Modelling</td>
<td>means the modelling of nitrogen losses using a mass balance model that has been supported by calibration data.</td>
</tr>
<tr>
<td>Aquaculture Nutrient User Group</td>
<td>means a group of aquaculture operations in multiple ownership, where the owners of those operations undertake aquaculture and operate as a collective for the purposes of nutrient management.</td>
</tr>
<tr>
<td>Greater Waikākahi Zone</td>
<td>means the area identified as the Greater Waikākahi Zone on the Planning Maps.</td>
</tr>
<tr>
<td>Hakataramea Freshwater Management Unit</td>
<td>means the area identified as the Hakataramea Freshwater Management Unit on the Planning Maps and which comprises the Hakataramea Flat Zone, Hakataramea Hill Zone and Hakataramea River Zone.</td>
</tr>
<tr>
<td>Hakataramea Flat Zone</td>
<td>means the area identified as the Hakataramea Flat Zone on the Planning Maps.</td>
</tr>
<tr>
<td>Hakataramea River Zone</td>
<td>means the area identified as the Hakataramea River Zone on the Planning Maps.</td>
</tr>
<tr>
<td>Hakataramea Hill Zone</td>
<td>means the area identified as the Hakataramea Hill Zone on the Planning Maps.</td>
</tr>
<tr>
<td>Haldon Zone</td>
<td>means the area identified as the Haldon Zone on the Planning Maps.</td>
</tr>
<tr>
<td>Mid Catchment Zone</td>
<td>means the area identified as the Mid Catchment Zone on the Planning Maps.</td>
</tr>
<tr>
<td>Northern Fan Freshwater Management Unit</td>
<td>means the area identified as the Northern Fan Freshwater Management Unit on the Planning Maps and which comprises the Greater Waikākahi Zone and Whitneys Creek Zone.</td>
</tr>
<tr>
<td>Nutrient User Group</td>
<td>means a group of properties in multiple ownership, where the owners of those properties undertake farming activities and operate as a collective for the purposes of nutrient management.</td>
</tr>
<tr>
<td>Upper Waitaki Freshwater Management Unit</td>
<td>means the catchment identified as the Upper Waitaki Freshwater Management Unit on the Planning Maps which comprises the Ahuriri Zone, Haldon Zone, Mid-Catchment Zone, Upper Waitaki Hill Zone and the Lake Zones within these catchments.</td>
</tr>
<tr>
<td>Upper Waitaki Hill Zone</td>
<td>means the catchment identified as the Upper Waitaki Hill Zone on the Planning Maps.</td>
</tr>
<tr>
<td>Upper Waitaki Nitrogen Headroom</td>
<td>means within the Haldon Zone or Mid Catchment Zone the maximum nitrogen loss rate (measured in kg/ha/yr) available to a farming activity (inclusive of their Baseline GMP Loss Rate) as estimated by Environment Canterbury using the formula set out in Schedule 27.</td>
</tr>
</tbody>
</table>
Valley and Tributaries Freshwater Management Unit means the area identified as the Valley and Tributaries Freshwater Management Unit on the Planning Maps and which comprises the Valley and Tributaries Zone.

Valley and Tributaries Zone means the area identified as the Valley and Tributaries Zone on the Planning Maps.

Whitneys Creek Zone means the area identified as the Whitneys Creek Zone on the Planning Maps.

## 15B.2 Other Plans and Instruments that apply to the Waitaki

### 15B.2.1 Other Regional Plans that apply to the Waitaki

- **Waitaki Catchment Allocation Regional Plan (September 2005)**
  - The Waitaki Catchment Water Allocation Regional Plan was prepared by the Waitaki Catchment Water Allocation Board under the Resource Management (Waitaki Catchment) Amendment Act 2004, and controls the taking, using, damming and diverting of water from within the Waitaki catchment.
  - The LWRP’s objectives, policies and rules do not apply to the matters controlled by the Waitaki Catchment Water Allocation Regional Plan.

### 15B.2.2 Iwi Management Plans that apply to the Waitaki


### 15B.2.3 Water Conservation Orders that apply to the Waitaki


## 15B.3 Freshwater Outcomes

See Objectives in Section 3, and freshwater outcomes in Tables 15B(a) and 15B(b).

## 15B.4 Policies

The following policies apply in the Waitaki, in addition to those set out in Section 4 of the Plan.

### Tangata Whenua

15B.4.1 The management of water quality in the Waitaki supports the exercise of kaitiakitanga, and ensures freshwater mahinga kai species are sufficiently abundant for customary gathering and safe to consume or use.
15B.4.2 Protect wāhi tapu and wāhi taonga values in the Waitaki by avoiding or mitigating the adverse effects of land use intensification on wāhi tapu or wāhi taonga.

15B.4.3 Have regard to mahinga kai values for all lakes, rivers, wetlands and springs in the Waitaki when considering applications for resource consent to use land for a farming activity, including the actions and timeframes described in the Farm Environment Plan.

**Surface Water Flows**

15B.4.4 Surface water flows are maintained in Whitneys Creek by avoiding:

(a) the transfer of any part of a surface water take from any point at or below map reference CB19: 5410-2531 to any point on Whitneys Creek above that map reference; and

(b) any future allocation of surface water upstream of map reference CB19: 5410-2531.

**Fresh Water Management Units**

15B.4.5 Management of water quality in the Waitaki is achieved through the establishment of four Freshwater Management Units and the setting of water quality limits for each of those areas.

**Industrial Discharges**

15B.4.6 Maintain water quality in the Whitneys Creek Zone by requiring nitrogen losses from industrial discharges to not exceed the industrial nitrogen load limit specified in Table 15B(g), and where those limits cannot be met, requiring nitrogen losses from industrial discharges to be accommodated within the relevant nitrogen loss limits for any property receiving the discharge.

**Community Wastewater**

15B.4.7 Water quality is maintained by:

(a) restricting any discharge of sewage sludge, bio-solids or treated sewage effluent from a community wastewater treatment system to the relevant nitrogen load limit in Table 15B(h), unless the exceedance is less than the nitrogen load contribution from the aggregation of on-site domestic wastewater treatment systems that would be replaced by the community wastewater system; and

(b) adoption of the best practicable option to treat and manage the discharge.

**Aquaculture**

15B.4.8 Water quality is maintained in the Waitaki by:

(a) restricting the location of individual aquaculture operations to either the Haldon Zone or the Valley and Tributaries Zone; and

(b) avoiding any new aquaculture development that will or is likely to exceed the load limits in Table 15B(h), the water quality standards in Schedule 5, and where applicable the aquaculture nitrogen load limit as calculated in accordance with
Schedule 27; and
(c) requiring aquaculture to utilise best practicable options to minimise the loss of contaminants; and
(d) avoiding the sharing of nutrient losses between aquaculture operations, except where the aquaculture operations are located within the Haldon Zone and the operations are part of an Aquaculture Nutrient User Group; and
(e) restricting nutrient losses from operations forming part of an Aquaculture Nutrient User Group to the sum of the consented limits of all operations forming the Aquaculture Nutrient User Group; and
(f) including on resource consents granted for aquaculture, conditions that enable a review of the resource consent under section 128(1) of the RMA, whenever an exceedance of any limit in Tables 15B(c), 15B(d) or 15B(e) is identified.

15B.4.9 Applications for resource consent for aquaculture will be accompanied by an Aquaculture Environment Plan that has been prepared in accordance with Schedule 26 and the conditions of any resource consent granted will specify:
(a) procedures and criteria for the timely review and updating of the Aquaculture Environment Plan; and
(b) a requirement to meaningfully implement the Aquaculture Environment Plan; and
(c) requirements for monitoring, and reporting of monitoring information, including annual aquaculture nitrogen loss modelling; and
(d) requirements for the independent auditing of the Aquaculture Environment Plan and the remediation of compliance issues raised in the audit; and
(e) the timing of any subsequent audits.

15B.4.10 Applications for resource consent to establish an Aquaculture Nutrient User Group shall, in addition to those requirements set out in Policy 15B.4.9, describe:
(a) the procedures and methods for recording nutrient losses from all individual operations within the Aquaculture Nutrient User Group; and
(b) the methods for redistributing nutrient losses when an aquaculture operation joins or leaves an Aquaculture Nutrient User Group; and
(c) the annual reporting requirements; and
(d) how compliance with the actions set out in the individual Aquaculture Environment Plan will be achieved.

Nutrient Management

15B.4.11 Water Quality outcomes in the Waitaki are achieved by:
(a) all farming activities minimising nutrient losses through implementation of good practice; and
(b) all permitted farming activities on properties greater than 10 hectares preparing and implementing a Management Plan in accordance with Schedule 7A; and
(c) requiring farming activities with the potential for more significant nutrient losses to hold a resource consent that includes conditions which ensure compliance with the water quality limits in Tables 15B(c), 15B(d) and 15B(e).
15B.4.12 The contribution that land management practices make to the attainment of the water quality outcomes in the Waitaki, is recognised by requiring a Farm Environment Plan to be part of any application for resource consent to use land for a farming activity, and by requiring that Farm Environment Plan to:

(a) describe the specific on-farm actions that will be undertaken (and the timeframe within which these actions will be undertaken) to implement the Good Management Practices; and

(b) provide an explanation of how those on-farm actions will ensure progress towards the attainment of the management objectives and targets in Schedule 7 of this Plan.

15B.4.13 In recognition of the need to account for changes to modelled nutrient losses as a result of updates to OVERSEER®, on-land nitrogen limits are recalculated in accordance with the methodology set out in Schedule 27 to ensure the limits in Table 15B(f) are not exceeded.

**Nutrient User Groups**

15B.4.14 Applications for a resource consent to establish a Nutrient User Group shall describe:

(a) the procedures and methods for recording nitrogen losses from properties within the Nutrient User Group; and

(b) the methods for redistributing nitrogen losses when a property joins or leaves a Nutrient User Group; and

(c) the annual reporting requirements; and

(d) how compliance with the actions set out in each Farm Environment Plan will be achieved.

**Irrigation Schemes and Principal Water Suppliers**

15B.4.15 Within the Waitaki, water quality is maintained by requiring:

(a) any resource consent application for the discharge of nutrients, submitted by an irrigation scheme or principal water supplier to describe the methods that will be used to implement the Good Management Practices on any land that will be supplied with water by the scheme or principal water supplier; and

(b) any discharge permit granted to an irrigation scheme or principal water supplier to be subject to conditions that restrict the combined nitrogen loss calculation from properties partially or fully supplied with water from the scheme to limits that:

(i) do not exceed the aggregate of the Upper Waitaki Nitrogen Headroom applicable to those properties supplied with water from the scheme and that are located in the Haldon Zone or Mid-Catchment Zone;

(ii) do not cause the nitrogen load limit calculated in accordance with Schedule 27 and the local in-stream and groundwater quality limits set out in Tables 15B(c) and 15B(e) for the Valley and Tributaries Zone or Whitneys Creek Zone to be exceeded;

(iii) do not exceed the aggregate of the Baseline GMP Loss Rate for any land not specified above;

unless the application for resource consent is for replacement of an expiring water permit or discharge permit that authorised land use intensification that occurred prior to 13 February 2016 and the nitrogen loss on the replacement permit reflects Good Management Practice.
Upper Waitaki Freshwater Management Unit

15B.4.16 Water quality is maintained in the Upper Waitaki Freshwater Management Unit by:
   (a) restricting increases in nitrogen loss from farming activities in the Haldon Zone or Mid Catchment Zone to land not irrigated and to a nitrogen loss limit that does not exceed the Upper Waitaki Nitrogen Headroom; and
   (b) avoiding the granting of any resource consent that will allow nitrogen losses from farming activities in the Ahuriri Zone or Upper Waitaki Hill Zone to exceed the Baseline GMP Loss Rate, except where Policy 15B.4.24 applies; and
   (c) including, on any resource consent granted for the use of land for a farming activity, conditions that require farming activities to operate at or below the Good Management Practice Loss Rate, in any circumstance where that Good Management Practice Loss Rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than either the Baseline GMP Loss Rate or the Upper Waitaki Nitrogen Headroom Limit; and
   (d) applying to any resource consent granted for the use of land for a farming activity, or any permit granted for a discharge associated with an aquaculture operation or community wastewater activity, monitoring and response conditions which align with the water quality limits set out in Tables 15B(c), 15B(d) and 15B(e) and relate specifically to the effects caused by the activity.

15B.4.17 Maintain water quality in the Upper Waitaki Freshwater Management Unit by restricting the sharing of nitrogen losses between properties and requiring that:
   (a) the property is part of a Nutrient User Group; and
   (b) all of the properties forming the Nutrient User Group are located within the Ahuriri Zone, and the combined nitrogen loss calculation from those properties does not exceed their combined Baseline GMP Loss Rate; or
   (c) all of the properties forming the Nutrient User Group are located within either the Mid Catchment or the Haldon Zone, and the combined nitrogen loss calculation from those properties does not exceed the sum of the Upper Waitaki Nitrogen Headroom associated with those properties; or
   (d) where properties are located within either the Haldon Zone or Lake Zone:
      (i) the sharing of nitrogen only occurs from the Lake Zone to the Haldon Zone, or occurs entirely within either zone; and
      (ii) the nitrogen loss calculation does not exceed the aggregated consented nitrogen loss rate of all the properties forming the Nutrient User Group; and
      (iii) the nitrogen shared by properties within the Lake Zone is not more than the Upper Waitaki Headroom associated with the area of the property within the Lake Zone; and
   (e) any property that forms part of a Nutrient User Group is not part of a farming enterprise or supplied with water by an irrigation scheme or principal water supplier.

15B.4.18 Prior to Rules 15B.5.15 to 15B.5.22 and Rules 15B.5.26 to 15B.5.32 becoming operative in accordance with clause 20 of Schedule 1 to the Resource Management Act 1991, water quality outcomes are met:
   (a) in the Haldon Zone and Mid Catchment Zone, by requiring farming activities that exceed the average nitrogen loss that occurred on the property between 1 January
2011 and 31 December 2015 to restrict their nitrogen loss calculation to no more than 1.6 kgN/ha/yr above the nitrogen baseline for non-irrigated land; and

(b) in the Ahuriri Zone, by requiring farming activities to restrict their nitrogen loss calculation to no more than the average nitrogen loss that occurred on the property between 1 January 2011 and 31 December 2015, or the nitrogen baseline, whichever is the greater.

15B.4.19 Without limiting the generality of the protection of all significant indigenous vegetation and significant habitats of indigenous fauna and their ecosystem functions, significant indigenous biodiversity is protected in the Haldon Zone and Mid Catchment Zone by:

(a) the implementation of any relevant district council plan provisions that are notified and take legal effect after 13 February 2016 and which require the identification and protection of significant indigenous biodiversity; or

(b) until such district council plan provisions are notified and take legal effect, requiring as part of any application for resource consent for a farming activity to exceed the nitrogen baseline, an assessment of environmental effects which identifies the indigenous biodiversity values present within the application area, identifies the sites of significant indigenous biodiversity, and demonstrates that no net loss of significant indigenous biodiversity will occur.

Hakataramea Freshwater Management Unit

15B.4.20 Water quality is maintained within the Hakataramea Freshwater Management Unit by:

(a) avoiding the granting of any resource consent that will allow nitrogen losses from farming activities in the Hakataramea Freshwater Management Unit to exceed the Baseline GMP Loss Rate, except where Policy 15B.4.24 applies; and

(b) requiring, in the Hakataramea Freshwater Management Unit farming activities to operate at the Good Management Practice Loss Rate, where that loss rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than the Baseline GMP Loss Rate.

Valley and Tributaries Freshwater Management Unit

15B.4.21 Water quality is maintained within the Valley and Tributaries Freshwater Management Unit by:

(a) avoiding increases in nitrogen loss from farming activities that would cause the Valley and Tributaries Zone nitrogen load limit (calculated in accordance with Schedule 27) to be exceeded; and

(b) only granting a resource consent for the use of land for a farming activity to exceed the nitrogen baseline where the application demonstrates that the local in-stream and groundwater quality limits in Table 15B(c) and 15B(e) will not be exceeded; and

(c) including, on any resource consent granted for the use of land for a farming activity, conditions that:

(i) restrict the nitrogen losses from farming activities to a rate that, in combination with all other activities, will not cause the Valley and Tributaries Zone nitrogen load limit (calculated in accordance with Schedule 27) to be exceeded; and

(ii) require farming activities to operate at or below the Good Management Practice
Loss Rate, in any circumstance where that Good Management Practice Loss has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than either the Baseline GMP Loss Rate or the nitrogen loss rate required by part (c)(i) of this policy.

**Northern Fan Freshwater Management Unit**

15B.4.22 Water quality is maintained within the Greater Waikākahi Zone by:
(a) avoiding, from 1 July 2020, the granting of a resource consent that will allow the nitrogen loss calculation from a farming activity within the Greater Waikākahi Zone to exceed the Baseline GMP Loss Rate, except where Policy 15B.4.24 applies; and
(b) requiring, from 1 July 2020, farming activities in the Greater Waikākahi Zone to operate at the Good Management Practice Loss Rate, in any circumstance where that Good Management Practice Loss Rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than the Baseline GMP Loss Rate.

15B.4.23 Water quality is maintained within the Whitneys Creek Zone by:
(a) avoiding increases in nitrogen loss from farming activities that would cause the Whitneys Creek Zone nitrogen load limit (calculated in accordance with Schedule 27) to be exceeded; and
(b) only granting a resource consent for the use of land for a farming activity to exceed the nitrogen baseline where the application demonstrates that the local in-stream nitrogen concentrations in Table 15B(c) and the groundwater nitrogen limits in Table 15B(e) will not be exceeded; and
(c) including, on any resource consent granted for the use of land for a farming activity within the Whitneys Creek Zone, conditions that:
   (i) restrict the nitrogen loss from a farming activity to a rate that, in combination with all other activities, will not cause the Whitneys Creek Zone nitrogen load limit (calculated in accordance with Schedule 27) to be exceeded; and
   (ii) require farming activities to operate at or below the Good Management Practice Loss Rate, in any circumstance where that Good Management Practice Loss Rate is less than the Baseline GMP Loss Rate.

**Consenting Considerations**

15B.4.24 Within the Waitaki when granting any application for any resource consent for the use of land for a farming activity, impose conditions that:
(a) prevent the nitrogen loss calculation from exceeding the nitrogen baseline except where that nitrogen baseline has been lawfully exceeded prior to 13 February 2016 and the application for resource consent contains evidence that directly and specifically establishes that the exceedance was lawful; and
(b) limit the nitrogen loss calculation to the lesser of the Good Management Practice Loss Rate or the nitrogen loss that occurred in the four years prior to 13 February 2016.

15B.4.25 Within the Waitaki, resource consents granted for the use of land for farming activities and the associated discharge of nutrients are restricted to a term of no more than 15 years.
and include conditions that enable a review of the resource consent under section 128(1)(a) of the RMA whenever an exceedance of any limit in Tables 15B(c), 15B(d) and 15B(e) is identified.

**Monitoring and Review**

15B.4.26 Progress towards achieving the water quality outcomes and limits, and the effectiveness of the methods used in Section 15B will be periodically reviewed, using environmental monitoring data and information on the effectiveness of Plan administration, and if necessary and appropriate Section 15B will be revised by way of plan change.

**15B.5 Rules**

**Industrial and Trade Wastes**

**Notes:**

1. *Regional Rule 5.91 (discharges from industrial or trade processes) applies throughout the Waitaki.*
2. *Regional Rule 5.92 applies throughout the Waitaki except within the Whitneys Creek Zone.*
3. *Rules 15B.5.1 and 15B.5.2 prevail over Regional Rule 5.92 in the Whitneys Creek Zone.*

15B.5.1 Within the Whitneys Creek Zone, the discharge of any liquid waste or sludge waste from an industrial or trade process, including livestock processing, excluding wastewater, 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 of Regional Rule 5.91 is a discretionary activity, provided the following condition is met:

1. The discharge does not exceed the nitrogen load limit for industrial discharges as specified in Table 15B(g).

15B.5.2 Within the Whitneys Creek Zone, the discharge of any liquid waste or sludge waste from an industrial or trade process, including livestock processing, excluding wastewater, into or onto land, or into or onto land in circumstances where a contaminant may enter water, that does not meet the condition of Rule 15B.5.1, is a non-complying activity.

**Aquaculture**

**Note:** *Rules 15B.5.3, 15B.5.4 and 15B.5.5 had immediate legal effect at notification of proposed Plan Change 5 (13 February 2016).*

15B.5.3 The discharge of contaminants from an individual aquaculture operation onto or into land in circumstances where contaminants may enter water, or into surface water is a discretionary activity, provided the following conditions are met:

1. The application for resource consent is accompanied by an Aquaculture Environment Plan prepared in accordance with Schedule 26; and
2. The discharge, in combination with the discharges from all lawfully established aquaculture in the Haldon Zone, does not exceed the aquaculture nitrogen load limit in Table 15B(h); and
3. The discharge, in combination with the discharges from all lawfully established aquaculture in the Valley and Tributaries Zone, does not exceed the aquaculture
nitrogen load limit calculated in accordance with Schedule 27; and
4. The discharge, after reasonable mixing, does not cause the water quality standards in Schedule 5 to be exceeded; and
5. The discharge is only within the Haldon Zone or the Valley and Tributaries Zone.

15B.5.4 The discharge of contaminants from an individual aquaculture operation onto or into land in circumstances where contaminants may enter water, or into surface water that does not meet condition 1 or 5 of Rule 15B.5.3 is a non-complying activity.

15B.5.5 The discharge of contaminants from an individual aquaculture operation onto or into land in circumstances where contaminants may enter water, or into surface water that does not meet condition 2, 3 or 4 of Rule 15B.5.3 is a prohibited activity.

15B.5.6 The discharge of contaminants from an Aquaculture Nutrient User Group onto or into land in circumstances where contaminants may enter water, or into surface water, is a discretionary activity provided the following conditions are met:
1. A management plan is submitted with the application for resource consent, which sets out:
   (a) the aquaculture operations forming the Aquaculture Nutrient User Group; and
   (b) a map showing the location of all aquaculture operations forming part of the Aquaculture Nutrient User Group; and
   (c) the legal description of all land forming part of the aquaculture operation and the name(s) of the legal owner(s) of each operation forming part of the Aquaculture Nutrient User Group; and
   (d) how nitrogen losses will be managed and accounted for within the Aquaculture Nutrient User Group; and
   (e) how any nitrogen losses will be redistributed upon any aquaculture operation or any part of the aquaculture operation withdrawing from the Aquaculture Nutrient User Group; and
   (f) how the Aquaculture Nutrient User Group will ensure each aquaculture operation complies with the relevant limits set out in Tables 15B(c), 15B(d), 15B(h), and Schedule 5; and
2. An Aquaculture Environment Plan has been prepared in accordance with Schedule 26 for each aquaculture operation in the Aquaculture Nutrient User Group and is submitted with the application for resource consent; and
3. The nitrogen loss rate for the Aquaculture Nutrient User Group does not exceed the aggregate of the consented nitrogen loss rates for the aquaculture operations forming the Aquaculture Nutrient User Group; and
4. All aquaculture operations forming the Aquaculture Nutrient User Group are within the Haldon Zone.

15B.5.7 The discharge of contaminants from an Aquaculture Nutrient User Group onto or into land in circumstances where contaminants may enter water, or into surface water, that does not comply with one or more of the conditions in Rule 15B.5.6 is a prohibited activity.
Nutrient Management

**General Rules**

15B.5.8 Despite Rules 15B.5.9 to 15B.5.12, 15B.5.16 to 15B.5.22 and 15B.5.28 to 15B.5.43 the use of land for a farming activity in the Waitaki where either:

(a) the nitrogen loss from the farming activity is being managed under a resource consent that is held by an irrigation scheme or principal water supplier and the permit contains conditions which limit the maximum rate or amount of nitrogen that may be leached from the subject land;

or

(b) the land is subject to a water permit that authorises the use of water for irrigation; and

(i) the permit was granted prior to 18 February 2016; and

(ii) the permit has commenced as specified in section 116 of the RMA; and

(iii) the permit is subject to conditions that specify the maximum rate of nitrogen (kg/ha/yr) or amount of nitrogen (kg/yr) that may be leached from the land; and

(iv) the water permit is subject to conditions which require the preparation and implementation of a plan to mitigate the effects of the loss of nutrients to water;

or

(c) the land is within the Valley and Tributaries Zone, Hakataramea Flat Zone, Hakataramea Hill Zone, Hakataramea River Zone or the Greater Waikākahi Zone and is subject to a water permit that authorises the use of water for irrigation; and

(i) the permit was granted between 1 November 2009 and 20 December 2016; and

(ii) the permit has commenced as specified in section 116 of the RMA; and

(iii) the permit is subject to conditions which require the preparation and implementation of a plan to mitigate the effects of the loss of nutrients to water and that plan specifies auditing requirements; and

(iv) any change to the condition of a water permit granted before 20 December 2016 does not increase the volume or rate of water abstracted, or authorise a change in the use of the water, or increase the scale, intensity or character of the activity for which the water is used; and

(v) the property is registered in the Farm Portal by 1 July 2018 and information about the farming activity and the property is reviewed and updated by the property owner or their agent every 36 months thereafter, or whenever a material change in the land use associated with the farming activity occurs; or whenever any boundary of the property is changed

is a permitted activity.

15B.5.9 Despite Rules 15B.5.10 to 15B.5.12, 15B.5.16 to 15B.5.22 and 15B.5.28 to 15B.5.43, the use of land for a farming activity within the Waitaki, on a property greater than 10 hectares in area, is a controlled activity, provided the following conditions are met:

1. A Farm Environment Plan has been prepared for the property in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and

2. The land is subject to a water permit that authorises the use of water for irrigation and that water permit:
Canterbury Land and Water Regional Plan

(a) replaces an existing water permit that
   (i) was granted prior to 18 February 2016; or
   (ii) was granted between 18 February 2016 and 20 December 2016, where the
        land is within the Valley and Tributaries Zone, Hakataramea Flat Zone,
        Hakataramea Hill Zone, Hakataramea River Zone or the Greater Waikākahi
        Zone; and

(b) is for the same activity in character, intensity and scale as that authorised under
    the previous water permit; and

(c) includes conditions that limit the maximum rate (kg/ha/yr) or amount (kg/yr) of
    nitrogen that may be leached from the subject land to a rate or amount that
    does not exceed that authorised by the water permit that was replaced; and

3. The Farm Environment Plan and nutrient budget submitted with the application for
   resource consent has been prepared or reviewed by an Accredited Farm Consultant.

The CRC reserves control over the following matters:

1. The commencement date for the first audit of the Farm Environment Plan; and

2. The content, quality and accuracy of the nutrient budgets provided with the
   application for resource consent; and

3. The timing of any actions or Good Management Practices proposed to achieve the
   objectives and targets described in Schedule 7; and

4. Methods that limit the nitrogen loss calculation for the farming activity to a rate not
   exceeding the lesser of the Good Management Practice Loss Rate or the maximum
   rate of nitrogen (kg/ha/yr) that may be leached from the land; and

5. Methods to avoid or mitigate adverse effects of the activity on surface water quality,
   groundwater quality and sources of drinking water; and

6. Methods to address any non-compliance identified as a result of a Farm Environment
   Plan audit, including the timing of subsequent audits; and

7. Reporting of estimated nutrient losses and audit results of the Farm Environment
   Plan to the Canterbury Regional Council.

15B.5.10 Despite Rules 15B.5.8, 15B.5.9, 15B.5.16 to 15B.5.22, 15B.5.28 to 15B.5.43, the use of
land for a farming activity on a property greater than 10 hectares where:

(a) the Farm Portal is unable to generate a Baseline GMP Loss Rate or Good
    Management Practice Loss Rate or the number generated is demonstrated to be
    erroneous; or

(b) more than 25% of the property is used to produce, farm, or rear a crop or animal
    type that is not able to be selected as an option in OVERSEER® and where the
    OVERSEER® Best Practice Data Input Standard does not recommend an alternative;
    or

(c) the Farm Portal is unable to generate a Baseline GMP Loss Rate or Good
    Management Practice Loss Rate that is representative for the property as a
    consequence of that property being subject to nutrient management rules in:
    (i) both the region-wide section of this Plan and rules in a sub-region section of
        this Plan; or
    (ii) more than one sub-region of this Plan; or
    (iii) a single sub-region section of this Plan where that section contains nutrient
        management rules introduced by separate plan change processes; or
    (iv) this Plan and the nutrient management rules in another regional Plan;
is a discretionary activity provided the following conditions are met:

1. The nitrogen loss calculation:
   (a) for any part of the property within a Lake Zone, Ahuriri Zone, Upper Waitaki Hill Zone, Hakataramea Flat Zone, Hakataramea Hill Zone, Hakataramea River Zone or Greater Waikakahi Zone does not exceed the nitrogen baseline; and
   (b) for any part of the property within the Haldon Zone or Mid Catchment Zone does not exceed the Upper Waitaki Headroom; and
   (c) for any part of the property within the Valley and Tributaries Zone or Whitneys Creek Zone does not cause the nitrogen load limit calculated in accordance with Schedule 27 to be exceeded; and

2. An Accredited Farm Consultant has prepared a Farm Environment Plan and nutrient budgets for the property in accordance with Part A of Schedule 7 and these are submitted with the application for resource consent; and

3. The application for resource consent includes a calculation of the Equivalent Baseline GMP Loss Rate and Equivalent Good Management Practice Loss Rate for the farming activity, and the methodology used to derive those numbers.

15B.5.11 The use of land for a farming activity on a property greater than 10 hectares where:
   (a) the Farm Portal is unable to generate a Baseline GMP Loss Rate or Good Management Practice Loss Rate or the number generated is demonstrated to be erroneous; or
   (b) more than 25% of the property is used to produce, farm, or rear a crop or animal type that is not able to be selected as an option in OVERSEER® and where the OVERSEER® Best Practice Data Input Standard does not recommend an alternative; or
   (c) the Farm Portal is unable to generate a Baseline GMP Loss Rate or Good Management Practice Loss Rate that is representative for the property as a consequence of that property being subject to nutrient management rules in:
       (i) both the region-wide section of this Plan and rules in a sub-region section of this Plan; or
       (ii) more than one sub-region of this Plan; or
       (iii) a single sub-region section of this Plan where that section contains nutrient management rules introduced by separate plan change processes; or
       (iv) this Plan and the nutrient management rules in another regional Plan; that does not meet condition 2 of Rule 15B.5.10 is a non-complying activity.

15B.5.12 The use of land for a farming activity on a property greater than 10 hectares where:
   (a) the Farm Portal is unable to generate a Baseline GMP Loss Rate or Good Management Practice Loss Rate or the number generated is demonstrated to be erroneous; or
   (b) more than 25% of the property is used to produce, farm, or rear a crop or animal type that is not able to be selected as an option in OVERSEER® and where the OVERSEER® Best Practice Data Input Standard does not recommend an alternative; or
   (c) the Farm Portal is unable to generate a Baseline GMP Loss Rate or Good Management Practice Loss Rate that is representative for the property as a consequence of that property being subject to nutrient management rules in:
       (i) both the region-wide section of this Plan and rules in a sub-region section of
this Plan; or
(ii) more than one sub-region of this Plan; or
(iii) a single sub-region section of this Plan where that section contains nutrient management rules introduced by separate plan change processes; or
(iv) this Plan and the nutrient management rules in another regional Plan; that does not meet condition 1 or 3 of Rule 15B.5.10 is a prohibited activity.

Individual Farming Activities

Lake Zones

Note: Lake Zone Regional Rules 5.49, 5.50, 5.51 and 5.52 apply to the use of land for a farming activity that is located within a Lake Zone within the Waitaki, except where those properties form part of a nutrient user group, in which case Rules 15B.5.40 and 15B.5.41 apply.

Ahuriri Zone, Upper Waitaki Hill Zone, Hakataramea Flat Zone, Hakataramea Hill Zone, Hakataramea River Zone and Greater Waikākahi Zone

Notes:
1. Rules 15B.5.13 and 15B.5.14 (Use of land for a farming activity in the Ahuriri Zone or Upper Waitaki Hill Zone) had immediate legal effect at notification of proposed Plan Change 5 (13 February 2016).
2. All other rules have legal effect only when they are made operative in accordance with Clause 20 of Schedule 1 of the Resource Management Act 1991.

15B.5.13 Until Rules 15B.5.8 and Rules 15B.5.15 to 15B.5.22 become operative in accordance with clause 20 of Schedule 1 to the Resource Management Act 1991, the use of land for a farming activity within the Ahuriri Zone and Upper Waitaki Hill Zone, on a property greater than 10 hectares in area, is a permitted activity, provided the following applicable condition is met:

1. The nitrogen loss calculation does not exceed the lawful average nitrogen loss that occurred on the property between 1 January 2011 and 31 December 2015, or the nitrogen baseline, whichever is greater; or

2. The nitrogen loss from the farming activity is managed under a resource consent that is held by an irrigation scheme or principal water supplier and the resource consent contains conditions which limit the maximum rate or amount of nitrogen that may be leached from the subject land; or

3. The land is subject to a water permit that authorises the use of water for irrigation; and

   (a) the permit was granted prior to 18 February 2016; and
   (b) the permit has commenced, in accordance with section 116 of the Resource Management Act (1991); and
   (c) the permit is subject to conditions that specify the maximum rate of nitrogen (kg/ha/yr) or amount of nitrogen (kg/yr) that may be leached from the land; and
   (d) the water permit is subject to conditions which require the preparation and implementation of a plan to mitigate the effects of the loss of nutrients to water.
15B.5.14 Until Rules 15B.5.8 and Rules 15B.5.15 to 15B.5.22 become operative in accordance with clause 20 of Schedule 1 to the Resource Management Act 1991, the use of land for a farming activity within the Ahuriri Zone or the Upper Waitaki Hill Zone that does not comply with any applicable condition of Rule 15B.5.13, is a non-complying activity.

15B.5.15 Within the Ahuriri Zone or Upper Waitaki Hill Zone, Hakataramea Flat Zone, Hakataramea Hill Zone, Hakataramea River Zone or the Greater Waikākahi Zone the use of land for a farming activity on a property 10 hectares or less in area is a permitted activity.

15B.5.16 Within the Ahuriri Zone or Upper Waitaki Hill Zone, the use of land for a farming activity on a property greater than 10 hectares in area is a permitted activity, provided the following conditions are met:

1. The property is registered in the Farm Portal by 1 July 2019 and information about the farming activity and the property is reviewed and updated by the property owner or their agent every 36 months thereafter, or whenever a material change in the land use associated with the farming activity occurs, or whenever any boundary of the property is changed; and
2. The area of the property authorised to be irrigated with water is less than 50 hectares; and
3. The area of the property used for winter grazing is less than 20 hectares; and
4. For any property with less than 50 hectares of irrigation or 20 hectares of winter grazing as at 13 February 2016, there is no increase in the area of land irrigated with water or used for winter grazing beyond that which was irrigated or used for winter grazing as at 13 February 2016; and
5. A Management Plan has been prepared in accordance with Schedule 7A and is implemented within 12 months of the rule being made operative and is supplied to the Canterbury Regional Council on request.

15B.5.17 Within the Hakataramea Flat Zone, Hakataramea Hill Zone, Hakataramea River Zone or Greater Waikākahi Zone, the use of land for a farming activity on a property greater than 10 hectares in area is a permitted activity provided the following conditions are met:

1. The property is registered in the Farm Portal by 1 July 2019 and information about the farming activity and the property is reviewed and updated by the property owner or their agent every 36 months thereafter, or whenever a material change in the land use associated with the farming activity occurs, or whenever any boundary of the property is changed; and
2. The area of the property irrigated with water is less than 50 hectares; and
3. For any property where, as at 13 February 2016, the area of the property authorised to be irrigated with water is less than 50 hectares, any increase in the irrigated area of the property is limited to 10 hectares above that which was irrigated at 13 February 2016; and
4. The area of the property used for winter grazing does not exceed 20 hectares; and
5. A Management Plan has been prepared in accordance with Schedule 7A and implemented within 12 months of the rule being made operative, and is supplied to the Canterbury Regional Council on request.
15B.5.18 Within the Ahuriri Zone, Upper Waitaki Hill Zone, Hakataramea Flat Zone, Hakataramea Hill Zone, Hakataramea River Zone or Greater Waikākahi Zone, the use of land for a farming activity on a property greater than 10 hectares in area that does not comply with one or more of the conditions of Rule 15B.5.16 or Rule 15B.5.17 is a controlled activity, provided the following conditions are met:

1. A Farm Environment Plan has been prepared for the property in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and
2. Until 30 June 2020, the nitrogen loss calculation for the part of the property within the Ahuriri Zone, Upper Waitaki Hill Zone, Hakataramea Flat Zone, Hakataramea Hill Zone, Hakataramea River Zone or Greater Waikākahi Zone does not exceed the nitrogen baseline, and from 1 July 2020 the Baseline GMP Loss Rate; unless the nitrogen baseline was lawfully exceeded prior to 13 February 2016, and the application for resource consent demonstrates that the exceedance was lawful; and
3. The Farm Environment Plan and nutrient budget submitted with the application for resource consent has been prepared or reviewed by an Accredited Farm Consultant.

The CRC reserves control over the following matters:

1. The commencement date for the first audit of the Farm Environment Plan; and
2. The content, quality and accuracy of the nutrient budgets provided with the application for resource consent; and
3. The timing of any actions or Good Management Practices proposed to achieve the objectives and targets described in Schedule 7; and
4. Methods that limit the nitrogen loss calculation for the farming activity to a rate not exceeding:
   (i) the Baseline GMP Loss Rate; or
   (ii) the lesser of the Good Management Practice Loss Rate or the lawful nitrogen loss rate that occurred in the four years prior to 13 February 2016; and
5. Methods that require the farming activity to operate at or below the Good Management Practice Loss Rate, in any circumstance where that Good Management Practice Loss Rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than the Baseline GMP Loss Rate; and
6. Methods to avoid or mitigate adverse effects of the activity on surface water quality, groundwater quality and sources of drinking water; and
7. Methods to address any non-compliance identified as a result of a Farm Environment Plan audit, including the timing of subsequent audits; and
8. Reporting of estimated nutrient losses and audit results of the Farm Environment Plan to the Canterbury Regional Council, including via the Farm Portal; and
9. Methods to exclude intensively farmed stock from within 12 m of the bed of the Hakataramea River and from within 5 m of the bed of all tributaries of the Hakataramea River.

15B.5.19 Within the Ahuriri Zone, Upper Waitaki Hill Zone, Hakataramea Flat Zone, Hakataramea Hill Zone, Hakataramea River Zone or Greater Waikākahi Zone the use of land for a farming activity on a property greater than 10 hectares in area that does not comply with condition 3 of Rule 15B.5.18 is a restricted discretionary activity, provided the following conditions are met:
1. A Farm Environment Plan has been prepared for the property in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and

2. Until 30 June 2020, the nitrogen loss calculation for the part of the property within the Ahuriri Zone, Upper Waitaki Hill Zone, Hakatamea Flat Zone, Hakatamea Hill Zone, Hakatamea River Zone or Greater Waikākahi Zone does not exceed the nitrogen baseline, and from 1 July 2020 the Baseline GMP Loss Rate; unless the nitrogen baseline was lawfully exceeded prior to 13 February 2016, and the application for resource consent demonstrates that the exceedance was lawful.

The exercise of discretion is restricted to the following matters:

1. The content of, compliance with, and auditing of the Farm Environment Plan; and
2. The content, quality and accuracy of the nutrient budgets provided with the application for resource consent; and
3. The actual or potential adverse effects of the activity on surface water quality, groundwater quality and sources of drinking water and how these will be avoided or mitigated; and
4. The timing of any actions or Good Management Practices proposed to achieve the objectives and targets described in Schedule 7; and
5. Methods that limit the nitrogen loss calculation for the farming activity to a rate not exceeding the Baseline GMP Loss Rate; and
6. Methods that require the farming activity to operate at or below the Good Management Practice Loss Rate, in any circumstance where that Good Management Practice Loss Rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than the Baseline GMP Loss Rate; and
7. Methods to address any non-compliances identified as a result of a Farm Environment Plan audit, and including the timing of subsequent audits; and
8. Reporting of nutrient losses and audit results of the Farm Environment Plan to the Canterbury Regional Council, including via the Farm Portal; and
9. The consistency of the proposal with Policy 15B.4.24; and
10. Any adverse effects on mahinga kai, wāhi tapu or wāhi taonga within the Greater Waikākahi Zone, Hakatamea Flat Zone, Hakatamea Hill Zone, Hakatamea River Zone; and
11. Methods to exclude intensively farmed stock from within 12m of the bed of the Hakatamea River and from within 5m of the bed of all tributaries of the Hakatamea River.

15B.5.20 Within the Ahuriri Zone, Upper Waitaki Hill Zone, Hakatamea Flat Zone, Hakatamea Hill Zone, Hakatamea River Zone or Greater Waikākahi Zone the use of land for a farming activity as part of a farming enterprise is a discretionary activity, provided the following conditions are met:

1. A Farm Environment Plan has been prepared for the farming enterprise in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and

2. Until 30 June 2020 the nitrogen loss calculation for the farming enterprise does not exceed the nitrogen baseline, and from 1 July 2020 the Baseline GMP Loss Rate; and
3. The properties comprising the farming enterprise are in the same surface water catchment and Nutrient Allocation Zone as shown on the Planning Maps.

15B.5.21 Within the Ahuriri Zone, Upper Waitaki Hill Zone, Hakataramea Flat Zone, Hakataramea Hill Zone, Hakataramea River Zone or Greater Waikākahi Zone, the use of land for a farming activity on a property greater than 10 hectares in area that does not comply with condition 1 of Rule 15B.5.18 or condition 1 of Rule 15B.5.19, or the use of land for a farming activity as part of a farming enterprise that does not comply with conditions 1 or 3 of Rule 15B.5.20, is a non-complying activity.

15B.5.22 Within the Ahuriri Zone, Upper Waitaki Hill Zone, Hakataramea Flat Zone, Hakataramea Hill Zone, Hakataramea River Zone or Greater Waikākahi Zone, the use of land for a farming activity on a property greater than 10 hectares in area that does not comply with condition 2 of Rule 15B.5.18, or condition 2 of Rule 15B.5.19, or the use of land for a farming activity as part of a farming enterprise that does not comply with condition 2 of 15B.5.20, is a prohibited activity.

Haldon Zone and Mid Catchment Zone

Notes:
1. Rules 15B.5.23, 15B.5.24 and 15B.5.25 (Use of land for a farming activity in the Haldon Zone or Mid Catchment Zone) had legal effect from the date of notification of proposed Plan Change 5 (13 February 2016).
2. All other rules have legal effect only when the rules are made operative in accordance with clause 20 of Schedule 1 to the Resource Management Act 1991.
3. Rules 15B.5.23, 15B.5.24 and 15B.5.25 ceased to have legal effect at the point in time that Rules 15B.5.26 and 15B.5.27 were made operative.

15B.5.23 Until Rules 15B.5.8, 15B.5.26 to 15B.5.32 become operative, in accordance with clause 20 of Schedule 1 to the Resource Management Act 1991, the use of land for a farming activity within the Haldon Zone or Mid Catchment Zone, on a property greater than 10 hectares, is a permitted activity, provided the following applicable condition is met:
1. The nitrogen loss calculation does not exceed the lawful average nitrogen loss that occurred on the property between 1 January 2011 and 31 December 2015, or the nitrogen baseline, whichever is greater; or
2. The nitrogen loss from the farming activity is being managed under a resource consent that is held by an irrigation scheme or principal water supplier and the resource consent contains conditions which limit the maximum rate or amount of nitrogen that may be leached from the subject land; or
3. The land is subject to a water permit that authorises the use of water for irrigation; and
   (a) the permit was granted prior to 18 February 2016; and
   (b) the permit has commenced, as specified in section 116 of the RMA; and
   (c) the permit is subject to conditions that specify the maximum rate of nitrogen (kg/ha/yr) or amount of nitrogen (kg/yr) that may be leached from the land; and
   (d) the water permit is subject to conditions which require the preparation and implementation of a plan to mitigate the effects of the loss of nutrients to water.
15B.5.24 Until Rules 15B.5.26 to 15B.5.32 become operative in accordance with clause 20 of Schedule 1 to the Resource Management Act 1991, the use of land for a farming activity on a property greater than 10 hectares within the Haldon Zone or Mid Catchment Zone that does not comply with a condition of Rule 15B.5.23 is a restricted discretionary activity, provided the following conditions are met:

1. A Farm Environment Plan has been prepared for the property in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and
2. Except in respect of a property on which the nitrogen baseline was lawfully exceeded prior to 13 February 2016 and where application for the resource consent demonstrates that the exceedance was lawful, the nitrogen loss calculation for the land does not exceed the aggregate of:
   (a) the nitrogen baseline; and
   (b) an additional amount equivalent to 1.6kg of nitrogen per hectare for the part of the land that is not irrigated; and
3. Except where areas of significant indigenous biodiversity on the property have been identified and maintained in accordance with the relevant provisions of any district plan that is notified and takes legal effect after 13 February 2016, the application for resource consent is accompanied by an assessment, undertaken by a suitably qualified ecologist, which identifies any areas of significant indigenous biodiversity located on the application area, and proposes methods to avoid or mitigate any adverse effects on significant indigenous biodiversity.

The exercise of discretion is restricted to the following matters:

1. The content of, compliance with, and auditing of the Farm Environment Plan; and
2. The content, quality and accuracy of the nutrient budgets provided with the application for resource consent; and
3. Any adverse effects on mahinga kai, wāhi tapu or wāhi taonga; and
4. The timing of any actions or Good Management Practices proposed to achieve the objectives and targets described in Schedule 7; and
5. Methods to restrict the nitrogen loss from the activity; and
6. The actual or potential adverse effects of the activity on surface water quality, groundwater quality and sources of drinking water and how these will be avoided or mitigated; and
7. Methods to address any non-compliance identified as a result of a Farm Environment Plan audit, including the timing of subsequent audits; and
8. Reporting of estimated nutrient losses and audit results of the Farm Environment Plan to the Canterbury Regional Council, including via the Farm Portal; and
9. Until provisions in a district plan have been notified and take legal effect after 13 February 2016, the extent to which the proposal avoids or mitigates any adverse effect on any areas of significant indigenous biodiversity.

15B.5.25 Until Rules 15B.5.26 to 15B.5.32 become operative in accordance with clause 20 to Schedule 1 of the Resource Management Act 1991, the use of land for a farming activity within the Haldon Zone or Mid Catchment Zone that does not meet one or more of the conditions of Rule 15B.5.24, is a non-complying activity.
15B.5.26 Within the Haldon Zone or Mid Catchment Zone the use of land for a farming activity on a property 10 hectares or less in area is a permitted activity.

15B.5.27 Within the Haldon Zone or Mid Catchment Zone the use of land for a farming activity on a property greater than 10 hectares in area is a permitted activity provided the following conditions are met:

1. The property is registered in the Farm Portal by 1 July 2019 and information about the farming activity and the property is reviewed and updated by the property owner of their agent every 36 months thereafter, or whenever a material change in the land use associated with the farming activity occurs, or whenever any boundary of the property is changed; and
2. The area of the property irrigated with water is less than 50 hectares; and
3. The area of the property used for winter grazing is less than:
   (a) 10 hectares, for any property less than 100 hectares in area; or
   (b) 10% of the area of the property, for any property between 100 hectares and 1000 hectares in area; or
   (c) 100 hectares, for any property greater than 1000 hectares in area; and
4. A Management Plan in accordance with Schedule 7A has been prepared and is implemented within 12 months of the rule being made operative and is supplied to the Canterbury Regional Council on request.

15B.5.28 Within the Haldon Zone or Mid Catchment Zone, the use of land for a farming activity on a property greater than 10 hectares in area that does not comply with one or more of the conditions of Rule 15B.5.27 is a controlled activity, provided the following conditions are met:

1. A Farm Environment Plan has been prepared for the property in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and
2. Until 30 June 2020, the nitrogen loss calculation for the part of the property within the Haldon Zone or Mid Catchment Zone does not exceed the nitrogen baseline, and from 1 July 2020 the Baseline GMP Loss Rate; unless the nitrogen baseline was lawfully exceeded prior to 13 February 2016, and the application for resource consent demonstrates that the exceedance was lawful; and
3. The Farm Environment Plan and nutrient budget submitted with the application for resource consent has been prepared or reviewed by an Accredited Farm Consultant.

The CRC reserves control over the following matters:

1. The commencement date for the first audit of the Farm Environment Plan; and
2. The content, quality and accuracy of the nutrient budget provided with the application for resource consent; and
3. The timing of any actions or Good Management Practices proposed to achieve the objectives and targets described in Schedule 7; and
4. Methods that limit the nitrogen loss calculation for the farming activity to a rate not exceeding the Baseline GMP Loss Rate, or the lesser of the Good Management Practice Loss Rate or the nitrogen loss that occurred in the four years prior to 13 February 2016; and
5. Methods that require the farming activity to operate at or below the Good Management Practice Loss Rate, in any circumstance where that Good Management
Practice Loss Rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than the Baseline GMP Loss Rate; and

6. Methods to avoid or mitigate adverse effects of the activity on surface water quality, groundwater quality and sources of drinking water; and

7. Methods to address any non-compliance identified as a result of a Farm Environment Plan audit, including the timing of subsequent audits; and

8. Reporting of nutrient losses and audit results of the Farm Environment Plan to the Canterbury Regional Council, including via the Farm Portal.

15B.5.29 Within the Haldon Zone or Mid Catchment Zone, the use of land for a farming activity on a property greater than 10 hectares in area that does not comply with condition 2 of Rule 15B.5.28 is a restricted discretionary activity, provided the following conditions are met:

1. A Farm Environment Plan has been prepared for the property in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and

2. The nitrogen loss calculation for the property does not exceed the Upper Waitaki Nitrogen Headroom available to the property; and

3. Except where areas of significant indigenous biodiversity have been identified and maintained in accordance with the provisions of any relevant district plan that is notified and takes legal effect after 13 February 2016, the application for resource consent is accompanied by an assessment, undertaken by a suitably qualified ecologist, which identifies any areas of significant indigenous biodiversity located on the application area, and proposes methods to avoid or mitigate any adverse effects on significant indigenous biodiversity.

The exercise of discretion is restricted to the following matters:

1. The content of, compliance with, and auditing of the Farm Environment Plan; and

2. The content quality and accuracy of the nutrient budgets provided with the application for resource consent; and

3. Any adverse effects on mahinga kai, wāhi tapu or wāhi taonga; and

4. The actual or potential adverse effects of the proposal on surface water quality, groundwater quality and sources of drinking water and how these will be avoided or mitigated; and

5. The timing of any actions or Good Management Practices proposed to achieve the objectives and targets described in Schedule 7; and

6. Methods that limit the nitrogen loss calculation for the farming activity to a rate not exceeding the Upper Waitaki Headroom; and

7. Methods that require the farming activity to operate at or below the Good Management Practice Loss Rate, in any circumstance where that Good Management Practice Loss Rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than the Upper Waitaki Headroom available for the property; and

8. Methods to address any non-compliances that are identified as a result of a Farm Environment Plan audit, including the timing of any subsequent audits; and

9. Reporting of nutrient losses and audit results of the Farm Environment Plan to the Canterbury Regional Council.
Canterbury Regional Council, including via the Farm Portal; and

10. Until biodiversity provisions in a district plan have been notified and take legal effect after 13 February 2016, the extent to which the proposal avoids or mitigates any adverse effect on any areas of significant indigenous biodiversity.

15B.5.30 Within the Haldon Zone or Mid Catchment Zone, the use of land for a farming activity as part of a farming enterprise is a discretionary activity, provided the following conditions are met:
1. A Farm Environment Plan has been prepared in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and
2. The nitrogen loss calculation for the farming enterprise does not exceed the sum of the Upper Waitaki Nitrogen Headroom available to the properties forming the farming enterprise; and
3. The properties comprising the farming enterprise are in the same surface water catchment and solely within either the Haldon Zone or Mid Catchment Zone, as shown on the Planning Maps.

15B.5.31 Within the Haldon Zone or Mid Catchment Zone, the use of land for a farming activity on a property greater than 10 hectares in area that does not meet condition 1 or 3 of Rule 15B.5.28, or condition 1 or 3 of Rule 15B.5.29, or the use of land for a farming activity as part of a farming enterprise that does not comply with condition 1 or 3 of Rule 15B.5.30, is a non-complying activity.

15B.5.32 Within the Haldon Zone or Mid Catchment Zone, the use of land for a farming activity on a property greater than 10 hectares in area that does not meet condition 2 of Rule 15B.5.29, or the use of land for a farming activity as part of a farming enterprise that does not comply with condition 2 of Rule 15B.5.30, is a prohibited activity.

Valley and Tributaries Zone and Whitneys Creek Zone

15B.5.33 Within the Valley and Tributaries Zone or Whitneys Creek Zone, the use of land for a farming activity on a property 10 hectares or less is a permitted activity.

15B.5.34 Within the Valley and Tributaries Zone or Whitneys Creek Zone, the use of land for a farming activity on a property greater than 10 hectares in area is a permitted activity provided the following conditions are met:
1. The property is registered in the Farm Portal by 1 January 2020 and information about the farming activity and the property is reviewed and updated by the property owner or their agent every 36 months thereafter, or whenever a material change in the land use associated with the farming activity occurs, or whenever any boundary of the property is changed; and
2. The area of the property irrigated with water is less than 50 hectares; and
3. The area of the property used for winter grazing is less than:
   (a) 10 hectares, for any property less than 100 hectares in area; or
   (b) 10% of the area of the property, for any property between 100 hectares and 600 hectares in area; or
   (c) 60 hectares, for any property greater than 600 hectares in area; and
4. A Management Plan has been prepared in accordance with Schedule 7A and is implemented within 12 months of the rule being made operative and supplied to the
Canterbury Regional Council on request.

15B.5.35 Within the Valley and Tributaries Zone or Whitneys Creek Zone, the use of land for a farming activity on a property greater than 10 hectares in area that does not comply with one or more of the conditions of Rule 15B.5.34 is a controlled activity provided the following conditions are met:

1. A Farm Environment Plan has been prepared for the property in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and
2. Until 30 June 2020, the nitrogen loss calculation for the part of the property within the Valley and Tributaries Zone or Whitneys Creek Zone does not exceed the nitrogen baseline, and from 1 July 2020 the Baseline GMP Loss Rate; unless the nitrogen baseline was lawfully exceeded prior to 13 February 2016, and the application for resource consent demonstrates that the exceedance was lawful; and
3. The Farm Environment Plan and nutrient budget submitted with the application for resource consent has been prepared or reviewed by an Accredited Farm Consultant.

The CRC reserves control over the following matters:

1. The commencement date for the first audit of the Farm Environment Plan; and
2. The content, quality and accuracy of the nutrient budgets provided with the application for resource consent; and
3. The timing of any actions or Good Management Practices proposed to achieve the objectives and targets described in Schedule 7; and
4. Methods that limit the nitrogen loss calculation for the farming activity to a rate not exceeding the Baseline GMP Loss Rate, or the lesser of the Good Management Practice Loss Rate or the nitrogen loss that occurred in the four years prior to 13 February 2016; and
5. Methods that require the farming activity to operate at or below the Good Management Practice Loss Rate, in any circumstance where that Good Management Practice Loss Rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods) and is less than the Baseline GMP Loss Rate; and
6. Methods to avoid or mitigate adverse effects of the activity on surface water quality, groundwater quality and sources of drinking water; and
7. Methods to address any non-compliance identified as a result of a Farm Environment Plan audit, including the timing of subsequent audits; and
8. Reporting of estimated nutrient losses and audit results of the Farm Environment Plan to the Canterbury Regional Council, including via the Farm Portal; and
9. Within the Whitneys Creek Zone, methods to ensure compliance with the Good Management Practice Loss Rate for the farming activity inclusive, where relevant, of any nitrogen from any industrial discharge.

15B.5.36 Within the Valley and Tributaries Zone or Whitneys Creek Zone, the use of land for a farming activity on a property greater than 10 hectares in area that does not meet condition 2 or 3 of Rule 15B.5.35, is a restricted discretionary activity provided the following conditions are met:

1. A Farm Environment Plan has been prepared for the property in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and
2. The nitrogen loss from the farming activity does not cause the Valley and Tributaries Zone or Whitneys Creek Zone nitrogen load limit calculated in accordance with Schedule 27 to be exceeded.

**The exercise of discretion is restricted to the following matters:**

1. The commencement date for the first audit of the Farm Environment Plan; and
2. The content, quality and accuracy of the nutrient budgets provided with the application for resource consent; and
3. The timing of any actions or Good Management Practices proposed to achieve the objectives and targets described in Schedule 7; and
4. Methods that limit the nitrogen loss calculation for the farming activity to a rate not exceeding the nitrogen load limit calculated in accordance with Policy 15B.4.21(c)(i) for the relevant zone that the property is located in; and
5. Methods that require the farming activity to operate at or below the Good Management Practice Loss Rate, in any circumstance where that Good Management Practice Loss Rate has not been influenced by severe extraordinary events (including but not limited to droughts or floods); and
6. The actual or potential adverse effects of the activity on surface water quality, groundwater quality and sources of drinking and how these will be avoided or mitigated; and
7. Methods to address any non-compliance identified as a result of a Farm Environment Plan audit, including the timing of subsequent audits; and
8. Reporting of estimated nutrient losses and audit results of the Farm Environment Plan to the Canterbury Regional Council; and
9. Methods to ensure compliance with the in-stream and groundwater concentration limits in Tables 15B(c) and 15B(e) for the applicable node; and
10. Within the Whitney Creek Zone, any adverse effects on mahinga kai, wāhi tapu or wāhi taonga; and
11. Within the Whitney Creek Zone, methods to ensure compliance with the Good Management Practice Loss Rate for the farming activity, inclusive where relevant, of any nitrogen from any industrial discharge.

**15B.5.37** Within the Valley and Tributaries Zone or Whitneys Creek Zone the use of land for a farming activity as part of a farming enterprise is a discretionary activity, provided the following conditions are met:

1. A Farm Environment Plan has been prepared in accordance with Part A of Schedule 7 and is submitted with the application for resource consent; and
2. The nitrogen loss calculation for the farming enterprise does not cause the Valley and Tributaries Zone or Whitneys Creek Zone nitrogen load limit calculated in accordance with Schedule 27 to be exceeded; and
3. The properties comprising the farming enterprise are located in the same surface water catchment and within the Valley and Tributaries Zone or Whitneys Creek Zone, as shown on the Planning Maps.

**15B.5.38** Within the Valley and Tributaries Zone or Whitneys Creek Zone, the use of land for a farming activity on a property greater than 10 hectares in area that does not meet
condition 1 of Rule 15B.5.35, or condition 1 of 15B.5.36, or the use of land for a farming activity as part of a farming enterprise that does not comply with condition 1 of Rule 15B.5.37, is a non-complying activity.

**15B.5.39** Within the Valley and Tributaries Zone or Whitneys Creek Zone, the use of land for a farming activity on a property greater than 10 hectares in area that does not meet condition 2 of Rule 15B.5.36, or the use of land for a farming activity as part of a farming enterprise that does not comply with conditions 2 or 3 of Rule 15B.5.37, is a prohibited activity.

**Nutrient User Groups**

**15B.5.40** The use of land for a farming activity on a property that forms part of a Nutrient User Group is a discretionary activity, provided the following conditions are met:

1. A Management Plan is submitted with the application for resource consent which sets out:
   
   (a) the properties forming the Nutrient User Group; and
   
   (b) a map showing the location of all properties forming part of the Nutrient User Group; and
   
   (c) the legal description of all properties and the legal names of the property owners forming part of the Nutrient User Group; and
   
   (d) the method by which nitrogen losses will be managed and accounted for within the Nutrient User Group; and
   
   (e) the method by which nitrogen losses will be redistributed upon any property or any part of any property withdrawing from the Nutrient User Group; and

2. A Farm Environment Plan has been prepared for each property in the Nutrient User Group in accordance with Schedule 7 and is submitted with the application for resource consent; and

3. The nitrogen loss calculation for the Nutrient User Group does not cause the relevant limits set out in Tables 15B(c), 15B(d) and 15B(e) to be exceeded; and

4. The properties forming the Nutrient User Group are located:
   
   (a) within the Ahuriri Zone, and the aggregated nitrogen loss calculation for those properties does not exceed the aggregate of the Baseline GMP Loss Rate for those properties; or
   
   (b) within the Haldon or Mid-Catchment Zone, and the aggregated nitrogen loss calculation for those properties does not exceed the aggregate of the Upper Waitaki Headroom available to those properties; and

5. For any property within a Lake Zone, the nitrogen loss calculation for the property does not exceed the lesser of the nitrogen baseline or the Baseline GMP Loss Rate; and

6. The land comprising the Nutrient User Group does not form part of a Farming Enterprise and is not supplied with water from an Irrigation Scheme or Principal Water Supplier.

**15B.5.41** The use of land for a farming activity that forms part of a Nutrient User Group that does not comply with one or more of the conditions in Rule 15B.5.40 is a prohibited activity.
Irrigation Schemes

Notes:
1. Regional Rules 5.60 and 5.61 apply to irrigation schemes and principal water suppliers within the Waitaki.
2. Rules 15B.5.42 and 15B.5.43 prevail over Regional Rule 5.62 and applies to irrigation schemes and principal water suppliers within the Waitaki.
3. Within the Waitaki, if the applicant is not an irrigation scheme or a principal water supplier, or the holder of the discharge permit will not be an irrigation scheme or a principal water supplier, then the discharge is assessed under Rules 15B.5.8 to 15B.5.41.

15B.5.42 The discharge of nutrients onto or into land where the property is supplied with water by an irrigation scheme or principal water supplier is a discretionary activity, provided the following condition is met:
1. The application for resource consent does not include any land that is part of a Nutrient User Group or Farming Enterprise.

15B.5.43 The discharge of nutrients onto or into land where the property is supplied with water by an irrigation scheme or principal water supplier that does not meet condition 1 of Rule 15B.5.42 is a prohibited activity.

Incidental Discharges

15B.5.44 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 15B.5.8 to 15B.5.41.

15B.5.45 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 condition 1 of Rule 15B.5.44 is a non-complying activity.

Whitneys Creek Transfers of Water Permits

Notes
1. Rule 15B.5.46 applies as an addition to Regional Rule 5.133 for applications to transfer a water permit to take or use surface water from Whitneys Creek.
2. Rule 15B.5.47 is a new rule which applies to applications to transfer a water permit to take or use water from Whitneys Creek.

15B.5.46 Regional Rule 5.133 applies to the temporary or permanent transfer, in whole or in part, of a water permit to take or use of surface water from Whitneys Creek, with the additional condition:
1. The point of take remains at or downstream of map reference CB19:5410-2531.

15B.5.47 The temporary or permanent transfer, in whole or in part, of a water permit to take or use of surface water from Whitneys Creek that does meet condition 1 of Rule 15B.5.46 is a prohibited activity.
### 15B.6 Freshwater Outcomes – Tables

The following table sets out, in combination with Policies 4.3 and 4.4, fresh water outcomes for rivers in the Waitaki that are to be maintained (where outcomes are already met), or achieved by 2030 (where outcomes are not currently met). Where existing water quality is better than the freshwater outcome, the outcome is to maintain that water quality.

**Table 15B(a): Freshwater Outcomes for Waitaki Rivers to be achieved by 2030**

<table>
<thead>
<tr>
<th>Freshwater Management Unit</th>
<th>River Type</th>
<th>Ecological Health Attributes</th>
<th>Macrophyte Attributes</th>
<th>Periphyton Attributes</th>
<th>Siltation Attribute</th>
<th>Human Health for Recreation Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>QMCI (min score)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>80% of samples in a five year period</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dissolved oxygen (min saturation [%])</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Temp. (Max) [degrees C]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Emergent macrophytes [max cover of bed] [%]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total macrophytes [max cover of bed] [%]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chlorophyll a [mg chl-a/m2]^2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>filamentous algae &gt;20mm [max cover of bed]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>filamentous algaefilementous algae &lt;2mm diameter [%]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>filamentous algaeCyano-bacteria mat [%]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>E.Coli (E.coli/100ml)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Annual Median</td>
<td>95th Percentile</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural State</td>
<td></td>
<td>Rivers are maintained in a natural state</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Waitaki</td>
<td>Alpine-upland</td>
<td>6</td>
<td>90</td>
<td>19</td>
<td>No Values Set</td>
<td>No Values Set</td>
</tr>
<tr>
<td></td>
<td>Hill-fed upland</td>
<td>No Values Set</td>
<td>No Values Set</td>
<td></td>
<td>200</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Hill-fed lower</td>
<td>No Values Set</td>
<td>No Values Set</td>
<td></td>
<td>200</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Lake-fed^4</td>
<td>20</td>
<td>30</td>
<td>50</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Spring-fed upland</td>
<td>No Values Set</td>
<td>No Values Set</td>
<td></td>
<td>200</td>
<td>30</td>
</tr>
<tr>
<td>Valley and Tributaries</td>
<td>Hill-fed lower</td>
<td>No Values Set</td>
<td>No Values Set</td>
<td></td>
<td>200</td>
<td>30</td>
</tr>
</tbody>
</table>

Freshwater mahinga kai species sufficiently abundant for customary gathering, water quality is suitable for their safe harvesting, and they are safe to eat.
<table>
<thead>
<tr>
<th>Location</th>
<th>Type</th>
<th>Value Set</th>
<th>Value Set</th>
<th>Value Set</th>
<th>Value Set</th>
<th>Value Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake-fed</td>
<td></td>
<td>10</td>
<td>20</td>
<td>Good</td>
<td>No Value Set</td>
<td>&lt;540</td>
</tr>
<tr>
<td>Spring-fed plains</td>
<td>5</td>
<td>30</td>
<td>50</td>
<td>10</td>
<td>Good</td>
<td>No Value Set</td>
</tr>
<tr>
<td>Hill-fed lower</td>
<td>6</td>
<td>No Value Set</td>
<td>No Value Set</td>
<td>15</td>
<td>Good to Fair</td>
<td>&lt;540</td>
</tr>
<tr>
<td>Spring-fed lower basin</td>
<td>5</td>
<td>30</td>
<td>30</td>
<td>10</td>
<td>Fair</td>
<td></td>
</tr>
<tr>
<td>Hakataramea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Fan Catchment</td>
<td>6</td>
<td>No Value Set</td>
<td>No Value Set</td>
<td>15</td>
<td>Good to Fair</td>
<td>&lt;540</td>
</tr>
<tr>
<td>Hill-fed lower</td>
<td>6</td>
<td>No Value Set</td>
<td>No Value Set</td>
<td>15</td>
<td>Good to Fair</td>
<td>&lt;540</td>
</tr>
<tr>
<td>Spring-fed plains</td>
<td>5</td>
<td>30</td>
<td>50</td>
<td>20</td>
<td>No Value Set</td>
<td>&lt;540</td>
</tr>
<tr>
<td>Hill-fed lower</td>
<td>6</td>
<td>No Value Set</td>
<td>No Value Set</td>
<td>15</td>
<td>Good to Fair</td>
<td>&lt;540</td>
</tr>
<tr>
<td>Spring-fed plains</td>
<td>5</td>
<td>30</td>
<td>50</td>
<td>20</td>
<td>No Value Set</td>
<td>&lt;540</td>
</tr>
</tbody>
</table>

1. QMCI = quantitative macro invertebrate community index.
2. Outcomes shall only be exceeded in 1 out of 12 samples for rivers classified as default class in the River Environment Classification system, and only in 2 out of 12 samples for rivers classified as productive class.
4. Excludes the Tekapo River above its confluence with Forks Stream, the Pukaki River, and the Lower Ohau River, to the extent that the achievement of any outcome in these waterbodies is affected by the effects of existing hydroelectricity infrastructure on river flows.
5. As required by the National Policy Statement for Freshwater Management 2014, lake-fed rivers shall also achieve additional cyanobacteria outcomes of <0.5mm³/L biovolume equivalent for all cyanobacteria or <500 cells/mL of total cyanobacteria.
The following table sets out, in combination with Policies 4.3 and 4.4, fresh water outcomes for lakes in the Upper Waitaki Freshwater Management Unit that are to be maintained (where outcomes are already met), or achieved by 2030 (where outcomes are not currently met). Except for the TLI for ‘Lake Benmore at Haldon Arm’ and ‘Lake Benmore at Dam’, where existing water quality is better than the freshwater outcome, the outcome is to maintain that water quality. The achievement of these outcomes will be through a combination of the implementation of this Plan along with implementation of the recommendations of the Upper Waitaki Zone Implementation Programme Addendum.

### Table 15B(b): Freshwater Outcomes for Lakes in the Upper Waitaki Freshwater Management Unit to be achieved by 2030

<table>
<thead>
<tr>
<th>Lake Type</th>
<th>Lakes</th>
<th>Ecological Health Attribute</th>
<th>Eutrophication Attribute</th>
<th>Visual Quality Attribute</th>
<th>Human Health for Recreation Attribute</th>
<th>Tangata Whenua Attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural state</td>
<td>Dumb-bell Lake Tasman Lake Blue Lake Hooker Lake</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large High country lakes</td>
<td>Lake Tekapo/Takapo Lake Ōhau Lake Pukaki</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small to medium sized high country lakes</td>
<td>Lake Alexandrina Lake McGregor Lake Middleton</td>
<td>Dissolved Oxygen (min saturation) [%]</td>
<td>Temp. (max) [°C]</td>
<td>Lake SPI₁ [min grade]</td>
<td>TLI² [max. annual average]</td>
<td>Colour</td>
</tr>
<tr>
<td>Artificial lakes – on-river</td>
<td>Lake Benmore Lake Aviemore Lake Waitaki Lake Ruataniwha</td>
<td></td>
<td>70% - hypolimnion/ 90% epilimnion</td>
<td>19</td>
<td>Excellent</td>
<td>1.7 for all lakes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Lakes are maintained in a natural state</th>
</tr>
</thead>
</table>

Notes:
- **Dissolved Oxygen (min saturation) [%]**
- **Temp. (max) [°C]**
- **Lake SPI₁ [min grade]**
- **TLI² [max. annual average]**
- **Colour**
- **Cyanobacteria [either mm³/L or cells/mL] [80th percentile]**
- **SFRG**
- **E.coli [E.Coli/100mL]**
- **Annual median**
- **95th percentile**
<table>
<thead>
<tr>
<th>Artificial lakes - other</th>
<th>Kellands Pond Wairepo Arm</th>
<th>20% hypolimnion</th>
<th>Suitable for the purpose of the Lake</th>
<th>Suitable for the purpose of the Lake</th>
<th>Suitable for the purpose of the Lake</th>
<th>Suitable for the purpose of the Lake</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>3.2 for all Lakes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


2. TLI = Trophic Index from: Protocol for Monitoring Trophic Levels of New Zealand Lakes and Reservoirs (Report by Lakes Consulting, March 2000). The scale is from less than 1 (very low nutrients) to more than 7 (very high nutrients). The TLI is calculated as TLI3 (using TP, TN and Chl. a).
15B.7 Water Quality Limits

15B.7.1 Water Quality Limits for Rivers

Table 15B(c): Water Quality Limits for Waitaki Rivers

<table>
<thead>
<tr>
<th>Freshwater Management Unit</th>
<th>River Type</th>
<th>River Name and Measurement Location</th>
<th>Dissolved Reactive Phosphorus (DRP) concentration (mg/L)</th>
<th>Nitrate-nitrogen concentration (mg/L)</th>
<th>Ammoniacal nitrogen concentration (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Annual Median</td>
<td>95th Percentile</td>
<td>Annual Median</td>
</tr>
<tr>
<td>Upper Waitaki</td>
<td>Alpine upland</td>
<td>Ahuriri River – Ben Omar: map reference 1366154 5069744</td>
<td>0.002</td>
<td>0.051</td>
<td>0.330</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Forks Stream - SH8: map reference 1392498 5124790</td>
<td>0.002</td>
<td>0.012</td>
<td>0.060</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Otematata River - SH8: map reference 1378031 5057173</td>
<td>0.002</td>
<td>0.013</td>
<td>0.088</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Twizel River -SH8: map reference 1369345 5095358</td>
<td>0.002</td>
<td>0.020</td>
<td>0.093</td>
</tr>
<tr>
<td>Hill-fed upland</td>
<td></td>
<td>Grays River – Lower: map reference 1388636 5097801</td>
<td>0.005</td>
<td>0.079</td>
<td>0.230</td>
</tr>
<tr>
<td>Lake-fed</td>
<td></td>
<td>Tekapo River – Above Grays Confluence: map reference 1388284 5098352</td>
<td>0.002</td>
<td>0.017</td>
<td>0.097</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tekapo River – Steel Bridge: map reference 1379394 5090144</td>
<td>0.002</td>
<td>0.016</td>
<td>0.144</td>
</tr>
<tr>
<td>Spring-fed - upland</td>
<td></td>
<td>Henburn – Henburn Rd: map reference 1352624 5072011</td>
<td>0.004</td>
<td>0.244</td>
<td>0.428</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Omarama Stream – Omarama (SH8): map reference 1358123 5069262</td>
<td>0.006</td>
<td>0.195</td>
<td>0.532</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Irishman Creek – SH8: map reference 1387751 5115008</td>
<td>0.002</td>
<td>0.013</td>
<td>0.059</td>
</tr>
<tr>
<td>Freshwater Management Unit</td>
<td>River Type</td>
<td>River Name and Measurement Location</td>
<td>Dissolved Reactive Phosphorus (DRP) concentration [mg/L] [Annual Median]</td>
<td>Nitrate-nitrogen concentration (mg/L)</td>
<td>Ammoniacal nitrogen concentration (mg/L)</td>
</tr>
<tr>
<td>----------------------------</td>
<td>------------</td>
<td>-----------------------------------</td>
<td>-------------------------------------------------</td>
<td>-------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Annual Median</td>
<td>95th Percentile</td>
<td>Annual Median</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canterbury Land and Water Regional Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.002</td>
<td>0.022</td>
<td>0.108</td>
</tr>
<tr>
<td>Maryburn Stream – Fill: map reference 1382933 5115958</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.002</td>
<td>0.034</td>
<td>0.163</td>
</tr>
<tr>
<td>Maryburn Stream – SH8: map reference 1386024 5105219</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.003</td>
<td>0.086</td>
<td>0.243</td>
</tr>
<tr>
<td>Maryburn Stream Lower: map reference 1386175 5096592</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.003</td>
<td>0.044</td>
<td>0.231</td>
</tr>
<tr>
<td>Quailburn – Quailburn Rd Recorder: map reference 1353252 5076910</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.007</td>
<td>0.087</td>
<td>0.667</td>
</tr>
<tr>
<td>Sutherlands Creek: map reference 1364372 5072185</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.002</td>
<td>0.019</td>
<td>0.157</td>
</tr>
<tr>
<td>Twizel River – Lower: map reference 1375701 5087548</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.002</td>
<td>0.020</td>
<td>0.194</td>
</tr>
<tr>
<td>Upper Wairepo Creek: map reference 1358244 5084932</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.002</td>
<td>0.020</td>
<td>1.081</td>
</tr>
<tr>
<td>Wairepo Creek – Arm Inlet: map reference 1366321 5090122</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.01</td>
<td>0.648</td>
<td>1.047</td>
</tr>
<tr>
<td>Willowburn – Quailburn Rd: map reference 1359156 5072727</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hill – fed – lower</td>
<td>Awakino Stream: map reference 1397202 5047068</td>
<td>0.001</td>
<td>0.110</td>
<td>0.364</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Maerewhenua River at Duntroon: map reference 1417481 5030395</td>
<td>0.002</td>
<td>0.144</td>
<td>0.633</td>
</tr>
<tr>
<td></td>
<td>Spring-fed plains</td>
<td>Penticotico Stream: map reference 1413126 5034783</td>
<td>0.003</td>
<td>1.21</td>
<td>4.307</td>
</tr>
<tr>
<td>Freshwater Management Unit</td>
<td>River Type</td>
<td>River Name and Measurement Location</td>
<td>Dissolved Reactive Phosphorus (DRP) concentration [mg/L] [Annual Median]</td>
<td>Nitrate-nitrogen concentration (mg/L)</td>
<td>Ammoniacal nitrogen concentration (mg/L)</td>
</tr>
<tr>
<td>---------------------------</td>
<td>------------</td>
<td>------------------------------------</td>
<td>-----------------------------------------------------------------------</td>
<td>-------------------------------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Annual Median</td>
<td>95th Percentile</td>
<td>Annual Median</td>
</tr>
<tr>
<td>Lake-fed</td>
<td></td>
<td>Waitaki River at Kurow: map reference 1400249 5044189</td>
<td>0.001</td>
<td>0.007</td>
<td>0.036</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Waitaki River at SH1: map reference 1450073 5023328</td>
<td>0.001</td>
<td>0.054</td>
<td>0.188</td>
</tr>
<tr>
<td>Hakataramea</td>
<td>Hill-fed - lower</td>
<td>Hakataramea River at Main Rd: map reference 1401262 5044382</td>
<td>0.004</td>
<td>0.050</td>
<td>1.592</td>
</tr>
<tr>
<td>Northern Fan</td>
<td>Spring-fed plains</td>
<td>Whitneys Creek: map reference 1451757 5026547</td>
<td>0.090</td>
<td>1.76</td>
<td>3.916</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Waikākahi Stream at Te Maiharoa Rd: map reference 1449636 5024541</td>
<td>0.06</td>
<td>2.64</td>
<td>5.45</td>
</tr>
</tbody>
</table>

1 Based on a pH 8 and temperature 20°C.
### 15B.7.2 Water Quality Limits for Lakes

<table>
<thead>
<tr>
<th>Lake Type</th>
<th>Lake Name and measurement location</th>
<th>TLI¹ [maximum annual average]</th>
<th>Total Phosphorus (TP) concentration [mg/m³] [annual median]</th>
<th>Total Nitrogen concentration [mg/m³] [annual median]</th>
<th>Chlorophyll a concentration (mg/m³)</th>
<th>Ammoniacal Nitrogen concentration (mg/l)²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Large high country lakes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Tekapo:</td>
<td>map reference 2311557 5694042</td>
<td>1.7</td>
<td>&lt;10</td>
<td></td>
<td>&lt;160 (seasonally stratified) for all lakes</td>
<td></td>
</tr>
<tr>
<td>Lake Ohau:</td>
<td>map reference 2292672 5653482</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Pukaki:</td>
<td>map reference 2285797 5675254</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Small to medium sized high country lakes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Alexandrina:</td>
<td>map reference 2305600 5694000</td>
<td>3.0</td>
<td></td>
<td></td>
<td>&lt;350 (seasonally stratified)</td>
<td></td>
</tr>
<tr>
<td>Lake McGregor:</td>
<td>map reference 2306958 5693747</td>
<td>3.2</td>
<td>&lt;20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Middleton:</td>
<td>map reference 22585000 5654000</td>
<td>3.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Artificial lakes – on-river</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Benmore Ahuriri Arm:</td>
<td>map reference 2280270 5626670</td>
<td>2.9</td>
<td></td>
<td>&lt;5</td>
<td>&lt;160 (seasonally stratified)</td>
<td></td>
</tr>
<tr>
<td>Lake Benmore Haldon Arm:</td>
<td>map reference 2288092 5636130</td>
<td>2.7</td>
<td></td>
<td></td>
<td></td>
<td>&lt;0.03</td>
</tr>
<tr>
<td>Lake Benmore at Dam:</td>
<td>map reference 2287977 5623571</td>
<td>2.7</td>
<td>&lt;10</td>
<td></td>
<td>&lt;160 (seasonally stratified)</td>
<td></td>
</tr>
<tr>
<td>Lake Aviemore:</td>
<td>map reference 2295464 5615958</td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td>&lt;2</td>
</tr>
<tr>
<td>Kellands Pond</td>
<td>map reference 1365987 090651</td>
<td>3.2</td>
<td></td>
<td></td>
<td></td>
<td>&lt;500 (polymictic)</td>
</tr>
<tr>
<td>Wairepo Arm</td>
<td>map reference 1366987 5090850</td>
<td>3.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Ruataniwha</td>
<td>map reference 1367245 5092423</td>
<td>1.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ TLI = Trophic Level Index from: Protocol for Monitoring Trophic Levels of New Zealand Lakes and Reservoirs (Report by Lakes Consulting, March 2000). The scale is from less than 1 (very low nutrients) to more than 7 (very high nutrients). The TLI is calculated as TL13 (using TP, TN and Chl. a)

² Based on a pH 8 and temperature of 20°C
15B.7.3 Water Quality Limits for Groundwater

Table 15B(e): Water Quality Limits for Waitaki Groundwater

<table>
<thead>
<tr>
<th>Freshwater Management Unit</th>
<th>Sub-unit (Groundwater Basin)</th>
<th>Nitrate Nitrogen</th>
<th>E. coli</th>
<th>Other Contaminants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Maximum(^1) nitrate nitrogen concentration (mg/l)</td>
<td>Annual average concentration (mg/l)</td>
<td>Annual 80(^{th}) percentile(^2) (MPN/100 ml)</td>
</tr>
<tr>
<td>Upper Waitaki</td>
<td>Haldon Arm (Tekapo Basin)</td>
<td>2.4</td>
<td>&lt;1</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Ahuriri Arm (Ahuriri Basin)</td>
<td>1.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mid-Waitaki North bank</td>
<td>2.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mid-Waitaki South bank</td>
<td>2.6</td>
<td>N/A</td>
<td>&lt;50% MAV(^4)</td>
</tr>
<tr>
<td></td>
<td>Mid-Waitaki South bank tributaries</td>
<td>2.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hakataramea</td>
<td>Hakataramea</td>
<td>4.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Fan Catchment</td>
<td>Greater Waikākahi</td>
<td>4.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Whitneys Creek</td>
<td>4.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Maximum concentration in groundwater used for drinking water supply
2 Annual 80\(^{th}\) percentile in representative monitoring wells (as defined by Environment Canterbury).
3 Other contaminants of health significance as listed in the New Zealand Drinking Water Standards.
4 Maximum Acceptable Value.

15B.7.4 Waitaki Nitrogen Load Limits

The following table sets out nitrogen load limits for areas in the Waitaki. The nitrogen load limits are the tonnes of nitrogen per year that shall not be exceeded to achieve the outcomes and limits for waterbodies in that area. The limits in Table 15B(f) are calculated in-river or in-lake after attenuation.

Table 15B(f): Waitaki Nitrogen Load Limits

<table>
<thead>
<tr>
<th>Area</th>
<th>Nitrogen Load Limit (tonnes nitrogen /year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haldon Zone*</td>
<td>737</td>
</tr>
<tr>
<td>Ahuriri Zone</td>
<td>209</td>
</tr>
<tr>
<td>Mid Catchment Zone*</td>
<td>929</td>
</tr>
<tr>
<td>Hakataramea Freshwater Unit</td>
<td>146</td>
</tr>
<tr>
<td>Valley and Tributaries Unit</td>
<td>244</td>
</tr>
<tr>
<td>Northern Fan Freshwater Unit</td>
<td>73</td>
</tr>
</tbody>
</table>

* To calculate the nitrogen load limits available for agriculture intensification refer to Schedule 27.

Table 15B(g): Nitrogen Load Limits for Industrial Discharges

<table>
<thead>
<tr>
<th>Area</th>
<th>Tonnes nitrogen/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whitney Creek Zone</td>
<td>9</td>
</tr>
</tbody>
</table>
Table 15B(h): Nitrogen Load Limits for Community Wastewater Discharges and Aquaculture

<table>
<thead>
<tr>
<th>Area</th>
<th>Community Wastewater Discharge Limit (Tonnes nitrogen/year)</th>
<th>Aquaculture Load Limit (Tonnes nitrogen/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haldon Zone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Tekapo Township</td>
<td>22</td>
<td>-</td>
</tr>
<tr>
<td>(b) Twizel Township</td>
<td>18</td>
<td>-</td>
</tr>
<tr>
<td>(c) Aoraki Cook Village</td>
<td>3.5</td>
<td>-</td>
</tr>
<tr>
<td>Haldon Zone Aquaculture</td>
<td>-</td>
<td>185</td>
</tr>
<tr>
<td>Ahurirri Zone</td>
<td>10</td>
<td>-</td>
</tr>
<tr>
<td>Valley and Tributaries Zone</td>
<td>0.5</td>
<td>-</td>
</tr>
</tbody>
</table>

15B.8 Environment Flow and Allocation Limits

15B.8.1 Environmental Flows and Allocation Limits

Table 15B(i): Whitneys Creek Environmental Flow Regime

<table>
<thead>
<tr>
<th>Location</th>
<th>Topo 50 Map Ref</th>
<th>Allocation L/s</th>
<th>Minimum Flow L/s</th>
<th>Other Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whitneys Creek</td>
<td>CB19:5410-2531</td>
<td>35</td>
<td>45</td>
<td>Any take must occur at or downstream of CB19:5410-2531</td>
</tr>
</tbody>
</table>

See the Waitaki Catchment Water Allocation Regional Plan for the Waitaki catchment flow and allocation limits.

15B.8.2 Groundwater Allocation Limits

The following groundwater allocation limits are to be applied when reading relevant policies and rules in Sections 4, 5 and 15B.

Table 15B(j): Waitaki Groundwater Limits

<table>
<thead>
<tr>
<th>Zone (see Planning Maps)</th>
<th>Allocation Limit (million m$^3$/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whitneys Creek</td>
<td>15.44</td>
</tr>
</tbody>
</table>

For all other areas, see Rule 5.128.

15B.9 Flow Sensitive Catchments

The following are to be applied when reading relevant policies and rules in Sections 4 and 5.

<table>
<thead>
<tr>
<th>Major Catchment (see Planning Maps)</th>
<th>Sub-catchment</th>
<th>Sensitive part of catchment</th>
<th>Monitoring site – lower boundary of catchment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waitaki</td>
<td>Hakataramea River</td>
<td>Whole catchment</td>
<td>Above Main Highway Bridge recorder site</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cattle Creek</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Cattle yards grid ref I39:208:319</td>
</tr>
<tr>
<td></td>
<td>Padkins Stream</td>
<td></td>
<td>Hakataramea Valley Road</td>
</tr>
<tr>
<td>Mt Harris Stream</td>
<td></td>
<td>Whole catchment</td>
<td>Pikes Point Road</td>
</tr>
</tbody>
</table>
## Section 16 Schedules

<table>
<thead>
<tr>
<th>Number</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schedule 1</td>
<td>Community Drinking-water Protection Zone</td>
</tr>
<tr>
<td>Schedule 2</td>
<td>Fish Screen Standards and Guidelines</td>
</tr>
<tr>
<td>Schedule 3</td>
<td>Hazardous Industries and Activities</td>
</tr>
<tr>
<td>Schedule 4</td>
<td>Hazardous Substances</td>
</tr>
<tr>
<td>Schedule 5</td>
<td>Mixing Zones and Receiving Water Standards</td>
</tr>
<tr>
<td>Schedule 6</td>
<td>Areas on Rivers or Lakes Commonly used for Freshwater Bathing</td>
</tr>
<tr>
<td>Schedule 7</td>
<td>Farm Environment Plan</td>
</tr>
<tr>
<td>Schedule 7A</td>
<td>Management Plan for Farming Activities</td>
</tr>
<tr>
<td>Schedule 8</td>
<td>Region-wide Water Quality Limits</td>
</tr>
<tr>
<td>Schedule 9</td>
<td>Assessment of Stream Depletion Effect</td>
</tr>
<tr>
<td>Schedule 10</td>
<td>Reasonable Use Test</td>
</tr>
<tr>
<td>Schedule 11</td>
<td>Aquifer Testing</td>
</tr>
<tr>
<td>Schedule 12</td>
<td>Well Interference Effects</td>
</tr>
<tr>
<td>Schedule 13</td>
<td>Requirements for Implementation of Water Allocation Regimes</td>
</tr>
<tr>
<td>Schedule 14</td>
<td>Excavation of Bed Material (10 m³)</td>
</tr>
<tr>
<td>Schedule 15</td>
<td>Excavation of Bed Material (20 m³)</td>
</tr>
<tr>
<td>Schedule 16</td>
<td>Regional Concept Plan</td>
</tr>
<tr>
<td>Schedule 17</td>
<td>Salmon Spawning Sites</td>
</tr>
<tr>
<td>Schedule 18</td>
<td>Rūnanga Takiwā in the Canterbury Region</td>
</tr>
<tr>
<td>Schedule 19</td>
<td>Ngāi Tahu Statutory Acknowledgement Areas</td>
</tr>
<tr>
<td>Schedule 20</td>
<td>Tōpuni Areas and Descriptions</td>
</tr>
<tr>
<td>Schedule 21</td>
<td>Sites over which Nohoanga Entitlements are to be Granted in the Canterbury region</td>
</tr>
<tr>
<td>Schedule 22</td>
<td>Taonga Species List</td>
</tr>
<tr>
<td>Schedule 23</td>
<td>Customary Fisheries Species List</td>
</tr>
<tr>
<td>Schedule 24</td>
<td>Farm Practices</td>
</tr>
<tr>
<td>Schedule 24a</td>
<td>Farm Practices</td>
</tr>
<tr>
<td>Schedule 24b</td>
<td>Good Farm Practices</td>
</tr>
<tr>
<td>Schedule 24c</td>
<td>Valley Floor Area River Bank Erosion Plan</td>
</tr>
<tr>
<td>Schedule 25</td>
<td>Water Supply Strategy</td>
</tr>
<tr>
<td>Schedule 26</td>
<td>Aquaculture Environment Plan</td>
</tr>
<tr>
<td>Schedule 27</td>
<td>Nitrogen Load Conversion Method</td>
</tr>
<tr>
<td>Schedule 28</td>
<td>Good Management Practice Modelling Rules</td>
</tr>
<tr>
<td>Schedule 29</td>
<td>Methodology for Updated Flexibility Caps</td>
</tr>
<tr>
<td>Schedule 30</td>
<td>Methodology for Updating Maximum Caps</td>
</tr>
<tr>
<td>Schedule 31</td>
<td>Methodology for Recalculating Catchment Load Limits</td>
</tr>
</tbody>
</table>
Schedule 1 Community Drinking-water Protection Zones

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 25 people with drinking-water for not less than 60 days each calendar year, or is a site listed in (a) below.

The location and details of groundwater wells (including water infiltration galleries) and surface water intakes used as the source of a community drinking-water supply can be found on the Community Supply Wells and Community Water Supply Protection Zone map layers on the CRC’s online GIS mapping website.

Existing community drinking-water supplies will have provisional Community Drinking-water Supply Protection Zones (established using the method set out in this schedule) until the relevant resource consent requires replacement or until an application for resource consent to apply a specific protection zone is made.

Where the holder of a water permit for an existing community drinking-water supply considers the provisional protection zone is not adequate for the level of protection required for that supply, an application for resource consent to amend the conditions of the water permit may be made.

The dimensions of a specific protection zone shall form part of any application for resource consent to take or use water for a new community drinking-water supply or the replacement of an existing permit for that purpose. The dimensions of a specific protection zone around a community drinking-water supply are to be determined using site specific information, including:

1. the topography, geography and geology of the site;
2. the depth of the well;
3. the construction of the well;
4. pumping rates;
5. the type of aquifer;
6. the rate of flow in the surface waterbody;
7. the types of actual or potential contaminants;
8. the level of treatment that the abstracted water will receive;
9. any potential risk to water quality.

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

Existing groundwater community drinking-water supplies are protected for distances specified in Figure S1A and Table S1A.
Figure S1A Method for calculating the area of a provisional Group or Community Drinking-water 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 S1A - Protection Areas**

<table>
<thead>
<tr>
<th>Screen Depth (or well depth if no screen depth is recorded)</th>
<th>Aquifer Type</th>
<th>Protection distances (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Upgradient from the bore (A)</td>
</tr>
<tr>
<td>&lt;10 m</td>
<td>All</td>
<td>2,000</td>
</tr>
<tr>
<td>10–&lt; 30 m</td>
<td>Unconfined or semi confined</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Confined</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Coastal Confined Gravel Aquifer 1</td>
<td>400</td>
</tr>
<tr>
<td>30–70 m</td>
<td>Unconfined or semi confined</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>Confined</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Coastal Confined Gravel Aquifer 1</td>
<td>400</td>
</tr>
<tr>
<td>&gt;70 m</td>
<td>Unconfined or semi confined</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Confined</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Coastal Confined Gravel Aquifer 1</td>
<td>400</td>
</tr>
</tbody>
</table>

Existing surface water 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: 1,000 m
- Downstream on a river: 100 m
- On a lake: 500 m radius from the point of take

**Schedule 1(a) – Community Drinking Water Supply Sites**

1. Kimbell Rural Supply
2. Burkes Pass
3. Pukaki Airport
Schedule 2 Fish Screen Standards and Guidelines

1. Where the diversion or 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:
   \[ \pi = 3.14159 \]
   \[ r = \text{radius of cylinder (m)} \]
   \[ h = \text{length or height of cylinder (m)} \]
   \[ z = \text{proportional open mesh area of screen material} \]
   (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 or 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 1 above; or where the diversion or 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:
   (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 2 (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 2 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 2 above.
Schedule 3 Hazardous Industries and Activities

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. Livestock dip or spray race operations
   7. 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
   8. Pesticide manufacture (including animal poisons, insecticides, fungicides or herbicides) including the commercial manufacturing, blending, mixing or formulating of pesticides
   9. Power stations, substations or switchyards
   10. Printing including commercial printing using metal type, inks, dyes, or solvents (excluding photocopy shops)
   11. 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
   12. Storage tanks or drums for fuel, chemicals or liquid waste
   13. 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)
   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

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.
(This page is intentionally left blank)
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; and

(c) is environmentally persistent or will bio-accumulate to a level that has acute or chronic toxic effects on humans or other non-target species.

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;
   (a) no longer than 200 m along the longest axis of the zone, and
   (b) occupies no greater than two-thirds of the wetted channel width\(^1\) at the estimated 7DMALF\(^2\) for that location; and
   (c) no longer than 10 times the wetted channel width\(^1\) at the estimated 7DMALF\(^2\) 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 50 m of the lake water edge\(^3\) at any time, a circle with a diameter of 50 m; or
   (b) if the discharge location is greater than 50 m from the lake water edge\(^3\) at all times, a circle with a diameter of 100 m; and

4. When within a 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 S5A

<table>
<thead>
<tr>
<th>Water quality class</th>
<th>DOC*</th>
<th>Temperature</th>
<th>pH</th>
<th>Visual clarity</th>
<th>Colour</th>
<th>DIN*</th>
<th>DRP*</th>
<th>E. coli*</th>
<th>Toxicants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Change shall be less than (mg/l)</td>
<td>Average change shall not exceed (°C)</td>
<td>Shall be between (no units)</td>
<td>% change shall not exceed</td>
<td>% change shall not exceed (Munsell units)</td>
<td>Shall be less than (mg/l)</td>
<td>Shall be less than (mg/l)</td>
<td>95% of samples shall be less than (E. coli* per 100 ml)</td>
<td>Shall not exceed the concentration specified in Table s5B for the relevant level of protection (see note below)</td>
</tr>
<tr>
<td><strong>Rivers and artificial watercourses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alpine-upland</td>
<td>2.0</td>
<td>2.0</td>
<td>6.5 – 8.5</td>
<td>20</td>
<td>5</td>
<td>0.08</td>
<td>0.005</td>
<td>260</td>
<td>99%</td>
</tr>
<tr>
<td>Alpine-lower</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.18</td>
<td>0.007</td>
<td>550</td>
<td>95%</td>
</tr>
<tr>
<td>Hill-fed – upland</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.21</td>
<td>0.006</td>
<td>260</td>
<td>99%</td>
</tr>
<tr>
<td>Hill-fed – lower</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.47</td>
<td>0.006</td>
<td>550</td>
<td>95%</td>
</tr>
<tr>
<td>Hill-fed – lower – urban</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.47</td>
<td>0.006</td>
<td>550</td>
<td>90%</td>
</tr>
<tr>
<td>Lake-fed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.21</td>
<td>0.003</td>
<td>260</td>
<td>99%</td>
</tr>
<tr>
<td>Banks Peninsula</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.09</td>
<td>0.025</td>
<td>550</td>
<td>99%</td>
</tr>
<tr>
<td>Spring-fed - upland</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.10</td>
<td>0.007</td>
<td>260</td>
<td>99%</td>
</tr>
<tr>
<td>Spring-fed - lower basin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.47</td>
<td>0.010</td>
<td>550</td>
<td>95%</td>
</tr>
<tr>
<td>Spring-fed - plains</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.50</td>
<td>0.016</td>
<td>550</td>
<td>95%</td>
</tr>
<tr>
<td>Spring-fed - plains - urban</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Lakes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large high country lakes</td>
<td>2.0</td>
<td>2.0</td>
<td>6.5 - 8.5</td>
<td>20</td>
<td>5</td>
<td>0.073</td>
<td>0.004</td>
<td>260</td>
<td>99%</td>
</tr>
<tr>
<td>Small to medium high country lakes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.16</td>
<td>0.009</td>
<td>260</td>
<td>99%</td>
</tr>
<tr>
<td>Coastal lakes and lagoons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.340</td>
<td>0.020</td>
<td>550</td>
<td>95%</td>
</tr>
<tr>
<td>Artificial – on-river</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.016</td>
<td>0.009</td>
<td>260</td>
<td>99%</td>
</tr>
<tr>
<td>Artificial – other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.340</td>
<td>0.020</td>
<td>260</td>
<td>95%</td>
</tr>
</tbody>
</table>

**Key to Abbreviations**

- DOC = Dissolved organic carbon
- DIN = Dissolved inorganic nitrogen
- TN = Total nitrogen
- DRP = Dissolved reactive phosphorus
- TP = Total phosphorus
- *E. coli* = *Escherichia coli*
### Table SSB

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

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>LEVEL OF PROTECTION (% species)</th>
<th>99%</th>
<th>95%</th>
<th>90%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,4-dinitrotoluene</td>
<td></td>
<td>16</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>2,4,6-trinitrotoluene</td>
<td></td>
<td>100</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>CHLOROBENZENES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,2-dichlorobenzene</td>
<td></td>
<td>120</td>
<td>160</td>
<td></td>
</tr>
<tr>
<td>Chemical</td>
<td>1,3-dichlorobenzene</td>
<td>1,4-dichlorobenzene</td>
<td>1,2,3-trichlorobenzene</td>
<td>1,2,4-trichlorobenzene</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------------------</td>
<td>---------------------</td>
<td>------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td></td>
<td>160</td>
<td>40</td>
<td>3</td>
<td>85</td>
</tr>
<tr>
<td>PHENOLS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phenol</td>
<td>85</td>
<td>320</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-chlorophenol</td>
<td>340</td>
<td>340</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-chlorophenol</td>
<td>160</td>
<td>220</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,4-dichlorophenol</td>
<td>120</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,4,6-trichlorophenol</td>
<td>3</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,3,4,6-tetrachlorophenol</td>
<td>10</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2,4-dinitrophenol</td>
<td>13</td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHTHALATES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimethylphthalate</td>
<td>3000</td>
<td>3700</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diethylphthalate</td>
<td>900</td>
<td>1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dibutylphthalate</td>
<td>9.9</td>
<td>9.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MISCELLANEOUS INDUSTRIAL CHEMICALS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poly(acrylonitrile-co-butadiene-co-styrene)</td>
<td>200</td>
<td>530</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ORGANOPHOSPHORUS PESTICIDES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Azinphos methyl</td>
<td>0.01</td>
<td>0.02</td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>Chloropyrifos</td>
<td>0.00004</td>
<td>0.00004</td>
<td>0.11</td>
<td></td>
</tr>
<tr>
<td>Diazinon</td>
<td>0.000003</td>
<td>0.01</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>Dimethoate</td>
<td>0.1</td>
<td>0.15</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>Fenitrothion</td>
<td>0.1</td>
<td>0.2</td>
<td>0.3</td>
<td></td>
</tr>
<tr>
<td>Malathion</td>
<td>0.002</td>
<td>0.05</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>Carbofuran</td>
<td>0.06</td>
<td>0.06</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Methomyl</td>
<td>0.5</td>
<td>3.5</td>
<td>9.5</td>
<td></td>
</tr>
<tr>
<td>HERBICIDES AND FUNGICIDES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diquat</td>
<td>0.01</td>
<td>1.4</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>2,4-D</td>
<td>140</td>
<td>280</td>
<td>450</td>
<td></td>
</tr>
<tr>
<td>Molinate</td>
<td>0.1</td>
<td>3.4</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Thiobencarb</td>
<td>1</td>
<td>2.8</td>
<td>4.6</td>
<td></td>
</tr>
<tr>
<td>Thiram</td>
<td>0.01</td>
<td>0.2</td>
<td>0.8</td>
<td></td>
</tr>
<tr>
<td>Atrazine</td>
<td>0.7</td>
<td>13</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Simazine</td>
<td>0.2</td>
<td>3.2</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Tebuthiuron</td>
<td>0.02</td>
<td>2.2</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Glyphosate</td>
<td>370</td>
<td>1200</td>
<td>2000</td>
<td></td>
</tr>
<tr>
<td>Trifluralin</td>
<td>2.6</td>
<td>2.6</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>SURFACTANTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear alkylbenzene sulfonates (LAS)</td>
<td>65</td>
<td>280</td>
<td>520</td>
<td></td>
</tr>
<tr>
<td>Alcohol ethoxylated sulfate (AES)</td>
<td>340</td>
<td>650</td>
<td>850</td>
<td></td>
</tr>
<tr>
<td>Alcoholethoxylated surfactants (AE)</td>
<td>50</td>
<td>140</td>
<td>220</td>
<td></td>
</tr>
</tbody>
</table>
Table S5C: Maximum total ammonia concentrations for 95% species protection at different pH

<table>
<thead>
<tr>
<th>pH</th>
<th>Total Ammonia (N µg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0</td>
<td>2,570</td>
</tr>
<tr>
<td>6.1</td>
<td>2,555</td>
</tr>
<tr>
<td>6.2</td>
<td>2,540</td>
</tr>
<tr>
<td>6.3</td>
<td>2,520</td>
</tr>
<tr>
<td>6.4</td>
<td>2,490</td>
</tr>
<tr>
<td>6.5</td>
<td>2,460</td>
</tr>
<tr>
<td>6.6</td>
<td>2,430</td>
</tr>
<tr>
<td>6.7</td>
<td>2,380</td>
</tr>
<tr>
<td>6.8</td>
<td>2,330</td>
</tr>
<tr>
<td>6.9</td>
<td>2,260</td>
</tr>
<tr>
<td>7.0</td>
<td>2,180</td>
</tr>
<tr>
<td>7.1</td>
<td>2,090</td>
</tr>
<tr>
<td>7.2</td>
<td>1,990</td>
</tr>
<tr>
<td>7.3</td>
<td>1,880</td>
</tr>
<tr>
<td>7.4</td>
<td>1,750</td>
</tr>
<tr>
<td>7.5</td>
<td>1,610</td>
</tr>
<tr>
<td>7.6</td>
<td>1,470</td>
</tr>
<tr>
<td>7.7</td>
<td>1,320</td>
</tr>
<tr>
<td>7.8</td>
<td>1,180</td>
</tr>
<tr>
<td>7.9</td>
<td>1,030</td>
</tr>
<tr>
<td>8.0</td>
<td>900</td>
</tr>
<tr>
<td>8.1</td>
<td>780</td>
</tr>
<tr>
<td>8.2</td>
<td>660</td>
</tr>
<tr>
<td>8.3</td>
<td>560</td>
</tr>
<tr>
<td>8.4</td>
<td>480</td>
</tr>
<tr>
<td>8.5</td>
<td>400</td>
</tr>
<tr>
<td>8.6</td>
<td>340</td>
</tr>
<tr>
<td>8.7</td>
<td>290</td>
</tr>
<tr>
<td>8.8</td>
<td>240</td>
</tr>
<tr>
<td>8.9</td>
<td>210</td>
</tr>
<tr>
<td>9.0</td>
<td>180</td>
</tr>
</tbody>
</table>
(This page is intentionally left blank)
Schedule 6 Areas on rivers or lakes commonly used for freshwater bathing

<table>
<thead>
<tr>
<th>Area</th>
<th>River or lake site</th>
<th>Map reference of site</th>
<th>The distance upstream from the site where stock are excluded from the river or lake. (metres)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>North Canterbury</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ashley Gorge Picnic Ground</td>
<td>L34:473-752</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Hurunui River SH1</td>
<td>N33:179-121</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Hurunui River SH7</td>
<td>N33:909-150</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Waipara River - Boys Brigade Camp</td>
<td>N34:901-929</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Selwyn - Upper Huts</td>
<td>M36:648-215</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Selwyn - Coes Ford</td>
<td>M36:627-234</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Selwyn - Chamberlains</td>
<td>M36:596-242</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Selwyn - Glentunnel</td>
<td>L35:242-463</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>Mid Canterbury</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ashburton River/Hakatere - SH1</td>
<td>K37:087-990</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Lake Clearwater</td>
<td>J36:525-315</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Lake Camp</td>
<td>J36:526-310</td>
<td>2,000</td>
</tr>
<tr>
<td></td>
<td>Orari Gorge</td>
<td>J37:653-951</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>South Canterbury</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pareora River - Brasells Bridge</td>
<td>J39:618-371</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Pareora - Pareora Huts</td>
<td>J39:552-422</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Pareora - Evans Crossing</td>
<td>J39:540-437</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Otaio Gorge</td>
<td>J39:454-296</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Waihao - Bradshaws</td>
<td>J40:643-015</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Waihao - Black Hole</td>
<td>J40:479-995</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>Waitaki catchment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hakataraema River at the hotel</td>
<td>I40:112-061</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Lake Benmore – Falstone</td>
<td>H39:870-419</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Lake Benmore – Haldon</td>
<td>H39:888-475</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Lake Benmore – Ohau C</td>
<td>H38:772-543</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Lake Benmore – Sailors Cutting</td>
<td>H39:788-250</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Lake Benmore - Glenburn</td>
<td>H39:759-276</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Lake Aviemore – Loch Laird</td>
<td>H39:862-228</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Lake Aviemore - Waitangi</td>
<td>I40:959-192</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Lake Aviemore – Te Akatarawa</td>
<td>I40:933-187</td>
<td>1,000</td>
</tr>
<tr>
<td></td>
<td>Lake Ruataniwha – Camping Ground</td>
<td>H38:743-552</td>
<td>1,000</td>
</tr>
</tbody>
</table>
(This page is intentionally left blank)
Schedule 7 Farm Environment Plan

Definitions

In Schedule 7 the following definitions apply:

Management Area means the areas of farm management practice as set out below:
(a) Nutrients
(b) Irrigation
(c) Cultivation and soil structure
(d) Animal effluent and solid animal waste
(e) Waterbodies (riparian areas, drains, rivers, lakes, wetlands)
(f) Point sources – offal pits, farm rubbish pits, silage pits
(g) Water use (excluding water associated with irrigation) – stock water and wash-down water

Objective – means the overarching outcome sought in relation to each Management Area.

Target – means a measurable, auditable statement that contributes to achievement of the Objective in each Management Area.

Part A – Farm Environment Plans

A Farm Environment Plan can be based on either of:

1. The material set out in Part B below;

OR

2. Industry prepared Farm Environment Plan templates and guidance material that:  
   (a) Includes the following minimum components:
      (i) The matters set out in 1, 2, 3, 4B and 5 of Part B below;
      (ii) Contains a methodology that will enable development of a plan that will identify actual and potential environmental effects and risks specific to the property, addresses those effects and risks and has a high likelihood of appropriately avoiding, remedying or mitigating those effects;
      (iii) Performance measures that are capable of being audited as set out in Part C below; and
      (iv) matters or requirements set out in Part B of Schedule 7 that have been added as a result of a sub-region planning process; and
   (b) Has been approved as meeting the criteria in (a) and being acceptable to the Canterbury Regional Council by the Chief Executive of the Canterbury Regional Council.

Part B – Farm Environment Plan Default Content

The plan requirements will apply to:
(a) a plan prepared for an individual property or farm enterprise; or
(b) a plan prepared for an individual property which is part of a collective of properties, including an irrigation scheme, principal water supplier, or an Industry Certification Scheme.
The plan shall contain as a minimum:

1. **Property or farm enterprise 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 or land areas comprising the farming enterprise.
   (b) The boundaries of the main land management units on the property or within the farming enterprise.
   (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 on all waterways where stock access or crossing occurs.
   (f) The location of any areas within or adjoining the property that are identified in a District Plan as “significant indigenous biodiversity”.
   (g) The location of any critical source areas for phosphorus or sediment loss for any part of the property including any land within the High Runoff Risk Phosphorus Zone.
   (h) The location of flood protection or erosion control assets, including flood protection vegetation.
   (i) Public access routes or access routes used to maintain the rivers, streams, or drains.

3. **A list of all Canterbury Regional Council resource consents held for the property or farming enterprise.**

4A. **An assessment of the adverse environmental effects and risks associated with the farming activities and how the identified effects and risks will be managed, including irrigation, application of nutrients, effluent application, stock exclusion from waterways, offal pits and farm rubbish pits.**

4B. (a) nutrient budgets which show the nitrogen baseline and nitrogen loss calculation for the property or farming enterprise; and
   (b) a report from the Farm Portal which shows for any property or farming enterprise the Baseline GMP Loss Rate and Good Management Practice Loss Rate or in those circumstances provided for in this Plan, the Equivalent Baseline GMP Loss Rate and Equivalent Good Management Practice Loss Rate.

5. **A description of how each of the following objectives and targets for each Management Area, where relevant, will be met and the specific actions that will be implemented to attain the targets:**

5A **Management Area: Nutrients**
**Objectives:**
(1) Use nutrients efficiently and minimise nutrient losses to water.
(2) Nutrient losses do not exceed consented nitrogen loss limits.
Targets:

1. Nitrogen losses from farming activities are at or below the:
   a. Baseline GMP Loss Rate or Good Management Practice Loss Rate (whichever is the lesser); or
   b. consented nitrogen loss limits.
2. Available nitrogen loss mitigation measures (excluding those associated with irrigation, fertiliser or effluent management) are implemented.
3. Phosphorus and sediment losses from farming activities are minimised.
4. Manage the amount, timing and application of fertiliser inputs to match the predicted plant requirements and minimise nutrient losses.
5. Store and load fertiliser to minimise the risk of spillage, leaching and loss into water bodies.

5B Management Area: Irrigation

Objective:
The amount and timing of irrigation is managed to meet plant demands, minimise risk of leaching and runoff and ensure efficient water use.

Targets:

1. New irrigation systems are designed and installed in accordance with industry codes of practice and standards.
2. The performance of irrigation systems is assessed annually and irrigation systems are maintained and operated to apply irrigation water at their optimal efficiency.
3. The timing and depth of irrigation water applied takes account of crop requirements and is justified through soil moisture monitoring or soil water budgets and climatic information.
4. Staff are trained in the operation, maintenance and use of irrigation systems.

5C Management Area: Cultivation and Soil Structure

Objective:
The physical and biological condition of soils is maintained or improved in order to minimise the movement of sediment, phosphorus and other contaminants to waterways.

Targets:

1. Farming activities are managed so as to not exacerbate erosion.
2. Farming practices are implemented that optimise infiltration of water into the soil profile and minimise run-off of water, sediment loss and erosion.

5D Management Area: Animal Effluent and Solid Animal Waste

Objective:
Animal effluent and solid animal waste is managed to minimise nutrient leaching and run-off.

Targets:

1. Effluent systems meet industry Codes of Practice or an equivalent standard.
2. The timing and rate of application of effluent and solid animal waste to land is managed so as to minimise the risk of contamination of groundwater or surface water bodies.
3. Sufficient and suitable storage is available to enable animal effluent and wash-down water to be stored when soil conditions are unsuitable for application.
4. Staff are trained in the operation, maintenance and use of effluent storage and application systems.
5E Management Area: Waterbodies (wetlands, riparian areas, drains, rivers, lakes)

Objective:
Wetlands, riparian areas and the margins of surface waterbodies are managed to avoid damage to the bed and margins of the water body, and to avoid the direct input of nutrients, sediment, and microbial pathogens.

Targets:
(1) Stock are excluded from waterbodies in accordance with regional council rules or any granted resource consent.
(2) Vegetated riparian margins of sufficient width are maintained to minimise nutrient, sediment and microbial pathogen losses to waterbodies.
(3) Farm tracks, gateways, water troughs, self-feeding areas, stock camps, wallows and other farming activities that are potential sources of sediment, nutrients and microbial loss are located so as to minimise the risks to surface water quality.
(4) Mahinga kai values are protected as a result of measures taken to protect and enhance water quality and stream health.

5F Management Area: Point Sources (offal pits, farm rubbish pits, silage pits)

Objective:
The number and location of pits are managed to minimise risks to health and water quality.

Target:
(1) All on-farm silage, offal pit and rubbish dump discharges are managed to avoid direct discharges of contaminants to groundwater or surface water.

5G Management Area: Water-use (excluding irrigation water)

Objective:
To use water efficiently ensuring that actual use of water is monitored and efficient.

Target:
(1) Actual water use is efficient for the end use.

The plan shall include for each objective in 5 above;
(a) detail commensurate with the scale of the environmental effects and risks;
(b) a description of the actions and Good Management Practices (and a timeframe within which those actions will be completed) that will be implemented to achieve the objectives and targets.
(c) a description of the good management practices together with actions required
(d) records required to be kept for measuring performance and attainment of the targets and objectives.

6. Nutrient budgets, prepared by a suitably qualified person, using the OVERSEER® nutrient budget model, or equivalent model approved by the Chief Executive of Environment Canterbury, for each of the identified land management units and the overall farm or farm enterprise.

Sub-region Additions

7. Selwyn Te Waihora – Additional Requirements
Within the Selwyn Te Waihora sub-region the following additional requirements for farm environment plans apply:
1. Include a map(s) or aerial photograph at a scale that clearly shows the location of any known mahinga kai, wāhi tapu or wāhi taonga within any property or farming enterprise located in the Cultural Landscape/Values Management Area.

2. Include a description of how the following objective will be met:

   **Nutrient management:** To maximise nutrient use efficiency while minimising nutrient losses to water by:
   
   (a) minimising the loss of phosphorus and sediment within the Phosphorus Sediment Risk Area as shown in the planning maps; and
   
   (b) achieving good management practice in respect of nutrient losses; and
   
   (c) managing the discharge from drains within the Lake area of the Cultural Landscape/Values Management Area; and
   
   (d) further reducing the nitrogen loss calculation from 2022 where a property or farming enterprise’s nitrogen loss calculation is greater than 15 kg of nitrogen per hectare per annum.

8. **Hinds – Additional Requirements**

   Within the Hinds/Hekeao Plains Area include a description of how the following objectives will be met:

   **Nutrient Management:**
   
   (a) To maximise the nutrient use efficiency while minimising nutrient losses to water.
   
   (b) Achieve from 2017 the loss rates that could reasonably be expected from implementing good management practices.
   
   (c) In the Upper and Lower Hinds/Hekeao Plains Area further reduce the nitrogen loss rate in accordance with Policies 13.4.13 and 13.4.15.

9. **Waitaki – Additional Requirements**

   Within the Waitaki, Part A of Schedule 7 includes the following:

   **Note:** *A Farm Environment Plan developed under this schedule may also contain information about the management of any other environmental effect and can be used to assist in demonstrating compliance with other regulatory requirements in any other Regional Plan or the District Plan.*

   Within the Waitaki, Part B includes the following:

   **Management Area:** Mahinga kai

   **Objective:**

   To protect mahinga kai values.

   **Target:**

   Mahinga kai values of surface waterbodies on the property are recognised by achieving other objectives and targets in the Farm Environment Plan, and in addition by:

   (a) maintaining existing indigenous vegetation in accordance with relevant regional council and district council vegetation clearance rules or any granted resource consent;
(b) identifying opportunities to undertake additional plantings of indigenous vegetation, and carrying out and managing any additional plantings in accordance with regional council guidelines for riparian planting;
(c) undertaking farming activities in a manner that minimises adverse effects on existing indigenous vegetation and on any additional plantings of indigenous riparian vegetation; and
(d) managing pest plants in accordance with regional council rules.

**Management Area: In-stream Biodiversity Values**

**Objective:**
To protect and enhance in-stream biodiversity values.

**Targets:**
(1) On the map or aerial photograph of waterbodies required under Part A of this Schedule, specify the location of any spring heads, wetlands and spring-fed streams on the property or within the farming enterprise to recognise their high instream biodiversity values.
(2) Prioritise achievement of the targets for Management Area: Waterbody Management for any spring heads, wetlands and spring-fed streams so as to protect and enhance the instream biodiversity values.

**Part C – Farm Environment Plan Audit Requirements**

The Farm Environment Plan must be audited by a Certified Farm Environment Plan Auditor who is independent of the farm being audited (i.e. is not a professional adviser for the property) and has not been involved in the preparation of the Farm Environment Plan.

The farming activity occurring on the property will be audited against the following minimum criteria:
1. An assessment of the performance against the objectives, targets, good practices and timeframes in the Farm Environment Plan;
2. An assessment of the robustness of the nutrient budget/s;
3. An assessment of the efficiency of water use (if irrigated).

_The Environment Canterbury Certified Farm Environment Plan Auditor Manual sets out the standards and methods to be used by a Certified Farm Environment Plan Auditor to demonstrate proficiency and competency in the auditing of Farm Environment Plans._
Schedule 7A Management Plan for Farming Activities

Part A – Management Plans

A Management Plan can be either:
1. A Plan prepared in accordance with the requirements of Part B below; or
2. A Plan prepared in accordance with an industry prepared Farm Environment Plan template that has been certified by the Chief Executive of Environment Canterbury as providing at least an equivalent amount of information and practice guidance contained in Part B below.

Part B – Management Plan Default Content

The Management 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 on all waterways where stock access or crossing occurs.
   (f) The location of any areas within or adjoining the property that are identified in a District Plan as “significant indigenous biodiversity”.
   (g) The location of any critical source areas for phosphorus loss including any part of the property within the High Runoff Risk Phosphorus Zone.

3. A description of:
   (a) the on-farm actions that have been undertaken in the previous 01 July to 30 June period to implement the applicable practices described in the table below; and
   (b) the on-farm actions that will be undertaken over the next 01 July to 30 June period to implement the applicable practices described below.

4. A copy of the Farm Environment Plan or Management Plan shall be retained by the landowner and updated at least once every 12 months as necessary, and provided to the Canterbury Regional Council on request.
<table>
<thead>
<tr>
<th>Practice</th>
<th>On-farm actions undertaken in the previous 12 months</th>
<th>On-farm actions to be undertaken in the next 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water, effluent and fertiliser is applied at a rate that does not exceed the water holding capacity of the soil or the agronomic requirements of the crop.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irrigation systems, effluent application systems, fertigation systems and fertiliser or organic manure systems are assessed annually, and maintained and operated to apply irrigation water, waste or nutrients efficiently.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silage pits, refuse pits and offal pits are sited, designed and managed to avoid the discharge of leachate into surface waterbodies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effluent systems meet industry Codes of Practice or an equivalent standard.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fertiliser is stored a minimum of 20 metres from surface waterbodies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non irrigation water use is monitored and efficient.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stock are excluded from waterbodies in accordance with regional council rules or any granted resource consent.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetated buffer strips of at least 5 metres in width are maintained between areas of winter grazing and any river, lake, drain or wetland.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetated riparian margins of sufficient width are maintained to minimise nutrient, sediment and microbial pathogen losses to waterbodies.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Schedule 8 Region-wide Water Quality Limits

Rivers

<table>
<thead>
<tr>
<th>River type</th>
<th>Parameter</th>
<th>Measurement</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring-fed plains</td>
<td>Nitrate toxicity</td>
<td>annual median</td>
<td>3.8 mgN/L</td>
</tr>
<tr>
<td>Spring-fed plains urban</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Lakes

<table>
<thead>
<tr>
<th>TLI</th>
<th>Trophic State</th>
<th>Lake types</th>
<th>TP$^1$ mg/l</th>
<th>TN$^1$ mg/l</th>
<th>Chl A$^1$ µg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Oligotrophic</td>
<td>Large High Country</td>
<td>0.004</td>
<td>0.073</td>
<td>0.82</td>
</tr>
<tr>
<td>3</td>
<td>Mesotrophic</td>
<td>small/medium high country lakes on-river artificial lakes</td>
<td>0.009</td>
<td>0.160</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>Eutrophic</td>
<td>other artificial lakes</td>
<td>0.020</td>
<td>0.340</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Coopers Lagoon/Muriwai</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Supertrophic</td>
<td>All other coastal lakes</td>
<td>0.096</td>
<td>1.560</td>
<td>30</td>
</tr>
</tbody>
</table>

$^1$ as a maximum annual average

Groundwater

<table>
<thead>
<tr>
<th>Contaminant</th>
<th>Measurement</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrate-N</td>
<td>Maximum concentration</td>
<td>&lt;11.3 mg/L</td>
</tr>
<tr>
<td>Nitrate-N</td>
<td>Annual average concn</td>
<td>&lt;5.65 mg/L</td>
</tr>
<tr>
<td><em>E.coli</em></td>
<td>95% of samples</td>
<td>&lt;1 organism/100 millilitres</td>
</tr>
<tr>
<td>Other contaminants$^2$</td>
<td>any sample</td>
<td>&lt;50% MAV$^3$</td>
</tr>
</tbody>
</table>

$^2$ Other contaminants of health significance as listed in NZ Drinking-water Standards.
$^3$ Maximum acceptable value (as listed in $^2$ above)
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 waterbody 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 waterbody 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 waterbody 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 waterbody 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 to 15.

A **low degree of stream depletion effect** is where the effect of 150 days of steady continuous groundwater abstraction on the surface waterbody 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 to 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 S9.1: Stream depletion effect to be included in the surface and groundwater allocations

<table>
<thead>
<tr>
<th>Stream depletion effect</th>
<th>Amount to be included in the surface water allocation limit</th>
<th>Amount allocated from the groundwater zone</th>
<th>Pumping schedule</th>
<th>Subject to surface water minimum flow restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>Maximum daily rate of take² (the rate at which water can be continuously taken to abstract the maximum daily volume that)</td>
<td>None</td>
<td>Not applicable</td>
<td>Yes</td>
</tr>
<tr>
<td>Stream depletion effect</td>
<td>Amount to be included in the surface water allocation limit</td>
<td>Amount allocated from the groundwater zone</td>
<td>Pumping schedule</td>
<td>Subject to surface water minimum flow restrictions</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------------------------------------------------------------</td>
<td>---------------------------------------------</td>
<td>-----------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>High</td>
<td>The stream depletion effect(^1) estimated using the <em>pumping schedule</em>; and 75% of the annual volume</td>
<td>25% of the annual volume</td>
<td>150 days continuous steady pumping required to deliver the annual volume</td>
<td>Yes if above stream depletion effect cut-off.</td>
</tr>
<tr>
<td>Moderate</td>
<td>The stream depletion effect(^2) estimated using the <em>pumping schedule</em>; and 50% of the annual volume</td>
<td>50% of the annual volume</td>
<td>150 days continuous steady pumping required to deliver the annual volume</td>
<td>No</td>
</tr>
<tr>
<td>Low</td>
<td>None</td>
<td>100% of the annual volume</td>
<td>Not applicable</td>
<td>No</td>
</tr>
</tbody>
</table>

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 Sections 6 to 15, or where none has been set in Sections 6 to 15, 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;
   (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 S10.1.

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

1. find the total seasonal demand from Table S10.1 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 S10.1 and S10.2: 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

<table>
<thead>
<tr>
<th>Consent details:</th>
<th>110 L/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum instantaneous pump rate</td>
<td>110 L/s</td>
</tr>
<tr>
<td>Volume per DRP:</td>
<td>9,108 m³</td>
</tr>
<tr>
<td>Design Return Period (DRP):</td>
<td>1 day</td>
</tr>
<tr>
<td>Area to be irrigated:</td>
<td>200 ha</td>
</tr>
<tr>
<td>Profile Available Water (PAW) at location:</td>
<td>69 mm</td>
</tr>
<tr>
<td>Total Seasonal Demand:</td>
<td>910 mm (taken from Table 10.1)</td>
</tr>
<tr>
<td>Effective rainfall (exceeded 60% of time)</td>
<td>230 mm (determined from Figure 10.1)</td>
</tr>
<tr>
<td>Annual irrigation allocation (910 mm – 230 mm) X 10 X 200 ha = 1,360,000 m³</td>
<td></td>
</tr>
</tbody>
</table>
Table S10.1: Total seasonal demand to meet plant water requirements

<table>
<thead>
<tr>
<th>Soil PAW Class</th>
<th>Total Seasonal Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;100 mm</td>
<td>910 mm</td>
</tr>
<tr>
<td>100-200 mm</td>
<td>910 – 1.6 (PAW – 100) mm</td>
</tr>
<tr>
<td>&gt;200 mm</td>
<td>750 mm</td>
</tr>
</tbody>
</table>

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;
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.
Figure S10.1: Map of effective irrigation season rainfall (millimetres) (northern and central Canterbury)

Figure S10.2: Map of effective irrigation season rainfall (millimetres) (mid and southern Canterbury)
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 2,880 minutes or two days, unless sufficient information is provided to justify a more appropriate duration.
7. Discharge water from the pumping test shall be diverted to a drain, water race or surface waterbody 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 is 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 waterbody not hydraulically connected to the pumped aquifer. However, if water is being pumped from 50 m or deeper, water may be discharged to ground

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)
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 0.1 m, 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 S12.1).

Figure S12.1: Illustration showing the available drawdown in a well

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 it can be demonstrated that the proposal will not have an impact upon the yield of the bore that is any more than minor or the effect is mitigated.

For a bore to adequately penetrate the aquifer, an adequate penetration depth shall be determined as follows:

1. where the aquifer is included in Section 6 to 15, the depth specified in Section 6 to 15; or

2. for aquifers where the depth is not specified in Section 6 to 15:
   (a) either a depth below the calculated minimum water level, or below the level to which 50% of bores within 2 km 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 limit is the sum of:
   (a) the maximum rate of abstraction of each surface water take 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 take of water required for the effective operation of a fish screen where the water is used to facilitate the return of fish back to the river.

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 waterbody is dammed and/or water is stored, the allocation limit for each class of permit may also be set to include an annual volume. Where the annual volume is used, the 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 limit 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;
      (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.

Combined groundwater and surface water allocation regimes

- The following additional requirements for combined groundwater and surface water regimes apply within the Selwyn Te Waihora sub-region.

1. The amount of water allocated within a water allocation block is the sum of each seasonal or annual volume of each groundwater take and surface water take;

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 in the same way as set out for groundwater allocation zones in Schedule 13 above.
Schedule 14 Excavation of bed material (10 m³)

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 Road (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 Road Bridge (at or about L35:3400:4665), downstream to the confluence with the Selwyn River/Waikirikiri (at or about L36:3974:3264).
32. Waianiwanawa 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 Road Bridge (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 Road Bridge, (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 Puikawai 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 (20 m³)

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 Road 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 Road 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/Waikirikiri 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 Bridge (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 J40:1016:0584) downstream to the coastal marine area (at or about J41:6290:8410).

26. Hakataramea River from 250 m above Moorland Settlement Road (at or about I39:2553:3065), downstream to the confluence with the Waitaki River (at or about I40:1079:0557).
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-Waiau 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.
Water Availability

The options for making more water available include:
1. Run of river water takes
2. Storage – which includes:
   - On-farm storage
   - Centralised in the foothills
   - Distributed in the foothills

Hunumui-Wakau community demands
- Improved water supply
- Options for storage
- Improved reliability
- Sustainable resource for rivers

Waimakariri community demands
- Instream flows
- Livestock
- Water intake
- Water quality
- Improved reliability
- Increased use for irrigation

Saxeyn-Waikohe community demands
- Groundwater for the zone
- Livestock
- Instream flows
- Irrigated areas
- Improved reliability and increased use for irrigation

Ashburton community demands
- Water intake
- Improved reliability
- Increased area for irrigation
- Improved storage
- Imberton and Northam flows

Ora-i-Opiki-Pamore community demands
- Water available from the Ngatikata or Wamurai rivers
- Improved supply and reliability
- Improved flow to the Ngatikata, Opiki, and Pamore streams
- Increased area of irrigation

Critical Node
These are important because they:
- Include multiple interests
- Associated with key infrastructure
- They straddle river boundaries
- Water can be moved in various directions
- They are key to the regional picture

Water movement across zones
Enhanced flow in lowland streams
## Schedule 17 Salmon Spawning Sites

<table>
<thead>
<tr>
<th>River Catchment</th>
<th>River, stream or reach name</th>
<th>Upstream Location Description</th>
<th>Downstream Location Description</th>
<th>Downstream Grid Reference</th>
<th>Upstream Grid Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiau</td>
<td>Henry River</td>
<td>Approximately 2 km above Anne River</td>
<td>St James walkway bridge</td>
<td>BT23:629-114</td>
<td>BT23:588-115</td>
</tr>
<tr>
<td>Waiau River - headwaters</td>
<td></td>
<td>Approximately 15.3 km upstream Waiau River from confluence with Ada River</td>
<td>Confluence of Ada River with Waiau River</td>
<td>BT24:677-145</td>
<td>BT24:720-281</td>
</tr>
<tr>
<td>Matagouri Point Stream</td>
<td></td>
<td>Approximately 2.7 km upstream Matagouri Stream from confluence with Waiau River at 790 m contour</td>
<td>Confluence of Matagouri Stream with Waiau River</td>
<td>BT24:690-194</td>
<td>(790 m)</td>
</tr>
<tr>
<td></td>
<td>Homestead Creek</td>
<td>700 m contour</td>
<td>Confluence of Homestead Creek with the Hurunui South Branch</td>
<td>BV22:348-611</td>
<td>BU22:315-631</td>
</tr>
<tr>
<td>Rakaia</td>
<td>Glenariffe Stream</td>
<td>Top of Glenariffe Stream (approx. 4.8 km from confluence with Double Hill Stream)</td>
<td>Confluence of Glenariffe Stream with Rakaia</td>
<td>BW20:681-034</td>
<td>BW19:628-044</td>
</tr>
<tr>
<td></td>
<td>Double Hill Stream</td>
<td>Approximately 3.6 km upstream Double Hill Stream from Double Hill Run Road Bridge</td>
<td>Confluence of Double Hill Stream with Rakaia River</td>
<td>BW20:682-033</td>
<td>(450 m)</td>
</tr>
<tr>
<td></td>
<td>Manuka Point Stream</td>
<td>540 m contour</td>
<td>Confluence of Manuka Point Stream and Rakaia River</td>
<td>BW19;579-064</td>
<td>(540 m)</td>
</tr>
<tr>
<td></td>
<td>Hydra waters, Titan Stream, Chimera Stream</td>
<td>480 m contour</td>
<td>Confluence of Titan Stream with Rakaia River</td>
<td>BW19:671-068</td>
<td>(480 m)</td>
</tr>
<tr>
<td>River Catchment</td>
<td>River, stream or reach name</td>
<td>Upstream Location Description</td>
<td>Downstream Location Description</td>
<td>Downstream Grid Reference</td>
<td>Upstream Grid Reference</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------------</td>
<td>--------------------------------</td>
<td>---------------------------------</td>
<td>---------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Ryton River</td>
<td>Approximately 11 km upstream Ryton River from entrance to Lake Coleridge</td>
<td>Entrance of Ryton River into Lake Coleridge</td>
<td>BW20:805-062</td>
<td>BW20:831-085</td>
<td></td>
</tr>
<tr>
<td>Goat Hill</td>
<td>500 m contour</td>
<td>Confluence with Wilberforce River</td>
<td>BW20:685-126</td>
<td>(500 m)</td>
<td></td>
</tr>
<tr>
<td>Mellish Stream</td>
<td>4WD track 1.5 km upstream</td>
<td>Inlet of Mellish Stream to Harrisons Bight, Lake Heron</td>
<td>BX19:556-854</td>
<td>BX19:564-844</td>
<td></td>
</tr>
<tr>
<td>Rangitata</td>
<td>Approximately 500 m downstream Scour Stream from Rangitata Gorge Road crossing to the 470 m contour</td>
<td>Confluence of Scour Stream with Rangitata River</td>
<td>BX18:364-625</td>
<td>(470 m)</td>
<td></td>
</tr>
<tr>
<td>Deep Creek</td>
<td>Approximately 2.3 km south west of Rabbit Hill to the 500 m contour</td>
<td>Confluence of Deep Creek complex with Rangitata River (approximately 3 km west of Potts Road Bridge over Potts River)</td>
<td>BX18:314-723</td>
<td>(530 m)</td>
<td></td>
</tr>
<tr>
<td>Brabazon Fan</td>
<td>Unnamed tributaries of the Rangitata River to the 500 m contour</td>
<td>Confluence with the Rangitata River</td>
<td>BX18:312-696</td>
<td>(500 m)</td>
<td></td>
</tr>
<tr>
<td>Black Mountain</td>
<td>Unnamed tributaries of the Rangitata River to the 580 m contour</td>
<td>Confluence with the Rangitata River</td>
<td>BX18:248-763</td>
<td>(580 m)</td>
<td></td>
</tr>
<tr>
<td>Ealing Springs</td>
<td>Unnamed tributaries of the Rangitata River to the 140 m contour</td>
<td>Confluence with the Rangitata River</td>
<td>BY20:724-215</td>
<td>BY20:704-232</td>
<td></td>
</tr>
<tr>
<td>River Catchment</td>
<td>River, stream or reach name</td>
<td>Upstream Location Description</td>
<td>Downstream Location Description</td>
<td>Downstream Grid Reference</td>
<td>Upstream Grid Reference</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------------</td>
<td>-------------------------------</td>
<td>---------------------------------</td>
<td>---------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>McKinnons Creek</td>
<td>Unnamed tributary of the Rangitata River known as McKinnons Creek to the 40 m contour</td>
<td>Confluence with the Rangitata River</td>
<td>B220:793-086</td>
<td>(40 m)</td>
<td></td>
</tr>
<tr>
<td>Opihi</td>
<td>Opihi River</td>
<td>Fairlie at SH79 Bridge</td>
<td>Temuka River confluence</td>
<td>B219:652-975</td>
<td>B218:266-152</td>
</tr>
<tr>
<td>Temuka River</td>
<td>Ford at Oxford Crossing Road</td>
<td>Confluence of Temuka River with Opihi River (Approximately 3.5 km downstream of SH1 Bridge over Opihi River)</td>
<td>B219:652-975</td>
<td>B219:614-018</td>
<td></td>
</tr>
<tr>
<td>Waihi River</td>
<td>Beeby Road ford</td>
<td>Oxford Crossing Road</td>
<td></td>
<td>B219:614-018</td>
<td>B219:613-093</td>
</tr>
<tr>
<td>Opuha River Gorge</td>
<td>Approximately 1.5 km below dam</td>
<td>Skipton (SH79 Bridge over Opuha River)</td>
<td></td>
<td>B218:382-173</td>
<td>BY18:312-242</td>
</tr>
<tr>
<td>Tengawai River</td>
<td>Albury</td>
<td>Confluence of Tengawai River with Opihi River (Approximately 800 m upstream of Waitohi Pleasant Point Road over Opihi River)</td>
<td>B219:510-990</td>
<td>B218:306-006</td>
<td></td>
</tr>
<tr>
<td>Orari</td>
<td>Orari River - Lower Section</td>
<td>Orari River at Badham Bridge</td>
<td>Orari River mouth</td>
<td>B220:728-001</td>
<td>B219:677-063</td>
</tr>
<tr>
<td>Ohapi Creek</td>
<td>Ohapi South, Middle and North Branches at Guild Rd/20 m contour</td>
<td>Confluence with the mouth of the Orari River</td>
<td>B220:724-000</td>
<td>B219:662-028, B219:663-029, B219:677-044</td>
<td></td>
</tr>
<tr>
<td>Waitaki</td>
<td>Lower Waitaki River</td>
<td>Waitaki Dam</td>
<td>SH1 Bridge</td>
<td>CB19:500-232</td>
<td>CA17:962-486</td>
</tr>
<tr>
<td>Hakataramea River</td>
<td>Cattle Creek</td>
<td>Confluence of Hakataramea River with Waitaki River</td>
<td>CB17:008-439</td>
<td>CA17:156-690</td>
<td></td>
</tr>
<tr>
<td>Larch Stream</td>
<td>540 m contour</td>
<td>Hopkins confluence</td>
<td></td>
<td>B215:481-084</td>
<td>(540 m)</td>
</tr>
<tr>
<td>Stockyard Creek</td>
<td>555 m contour</td>
<td>Hopkins confluence</td>
<td></td>
<td>B215:498-135</td>
<td>(555 m)</td>
</tr>
<tr>
<td>River Catchment</td>
<td>River, stream or reach name</td>
<td>Upstream Location Description</td>
<td>Downstream Location Description</td>
<td>Downstream Grid Reference</td>
<td>Upstream Grid Reference</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------------</td>
<td>-----------------------------</td>
<td>-------------------------------</td>
<td>---------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Ohau tributary 1</td>
<td>Just below 560 m contour</td>
<td>Lake Benmore</td>
<td>BZ16:763-861</td>
<td>BZ16:755-870</td>
<td></td>
</tr>
<tr>
<td>Ohau tributary 2</td>
<td>Ponds beside Ohau C</td>
<td>Ohau confluence</td>
<td>BZ15:705-912</td>
<td>BZ15:682-926</td>
<td></td>
</tr>
</tbody>
</table>
(This page is intentionally left blank)
## Schedule 18 Rūnanga Takiwā in the Canterbury Region

Descriptions from the Te Rūnanga o Ngāi Tahu Act 1996, Schedule 1:

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Te Rūnanga o Kaikōura</td>
<td>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.</td>
</tr>
<tr>
<td>Te Ngāi Tuahuriri Rūnanga.</td>
<td>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.</td>
</tr>
<tr>
<td>Rapaki Rūnanga*</td>
<td>The takiwā of Rapaki Rūnanga centres on Rapaki and includes the catchment of Whakaraupo and Te Kaituna.</td>
</tr>
<tr>
<td>Te Rūnanga o Koukourarata</td>
<td>The takiwā of Te Rūnanga o Koukourarata centres on Koukourarata and extends from Pohatu Pa to the shores of Te Waihora including Te Kaituna.</td>
</tr>
<tr>
<td>Wairewa Rūnanga</td>
<td>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.</td>
</tr>
<tr>
<td>Te Rūnanga o Onuku</td>
<td>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.</td>
</tr>
<tr>
<td>Taumutu Rūnanga</td>
<td>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.</td>
</tr>
<tr>
<td>Te Rūnanga o Arowhenua</td>
<td>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.</td>
</tr>
<tr>
<td>Te Rūnanga o Waihao</td>
<td>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.</td>
</tr>
<tr>
<td>Te Rūnanga o Moeraki</td>
<td>The takiwā of Te Rūnanga o Moeraki centres on Moeraki and extends from Waitaki to Waihemo and inland to the Main Divide.</td>
</tr>
</tbody>
</table>

*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;
Canterbury Land and Water Regional Plan

- 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.
Schedule 19 Ngai Tahu statutory acknowledgement areas

What are statutory acknowledgements?

A statutory acknowledgement is an acknowledgement by the Crown of the special relationship of Ngai Tahu with identifiable areas. Namely the particular cultural, spiritual, historical and traditional association of Ngai Tahu with those areas (known as statutory areas).

What are the purposes of statutory acknowledgements?

The purposes of statutory acknowledgements are:

- to ensure that the particular association of Ngai Tahu with certain significant areas in the South Island are identified and that Te Runanga o Ngai Tahu is informed when a proposal may affect one of these areas.
- to improve the implementation of Resource Management Act 1991 processes, in particular by requiring consent authorities to have regard to statutory acknowledgements when making decisions on the identification of affected parties.

Who may be affected by statutory acknowledgements?

You may be affected by a statutory acknowledgement if you are applying for a resource consent for an activity that is within, adjacent to, or directly impacting on a statutory acknowledgement area.

What happens when you apply?

If you are applying for a resource consent for an activity within, adjacent to, or directly impacting on a statutory area:

- Environment Canterbury must send a summary of your resource consent application to Te Runanga o Ngai Tahu, and
- Environment Canterbury must have regard to the statutory acknowledgement in going through the decision-making process on whether Te Runanga o Ngai Tahu is an affected party in relation to the resource consent application.

Statutory acknowledgements can be used in submissions as set out in section 211 of the Ngai Tahu Claims Settlement Act 1998. Pursuant to section 211:

- Te Runanga o Ngai Tahu and any member of Ngai Tahu Whanui may cite the relevant statutory acknowledgement in submissions to, and in proceedings before, a consent authority or the Environment Court concerning activities within, adjacent to, or impacting directly on a statutory area as evidence of Ngai Tahu's association with the statutory area.
- The content of the association, as recorded in a statutory acknowledgement, is not by virtue of the statutory acknowledgement binding as deemed fact upon consent authorities, the Environment Court, parties to proceedings before those bodies, or any other person able to participate in those proceedings, but the statutory acknowledgement may be taken into account by them.
- Neither Te Runanga o Ngai Tahu nor any member of Ngai Tahu Whanui is precluded from stating that Ngai Tahu has any association with the statutory area not described in the
relevant statutory acknowledgement, nor does the content or existence of the statutory acknowledgement derogate from any such statement.

**Purpose of statutory acknowledgements**

Pursuant to section 215, and without limiting sections 216 to 219 of the Ngāi Tahu Claims Settlement Act 1998, the purposes of statutory acknowledgements are:

(a) to require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu, as required by regulations made pursuant to section 207; and

(b) to require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to the statutory acknowledgements in relation to the statutory areas, as provided in sections 208 to 210; and

(c) to empower the Minister of the Crown responsible for management of the statutory areas, or the Commissioner of Crown Lands, as the case may be, to enter into deeds of recognition, as provided in section 212; and

(d) to enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite statutory acknowledgements as evidence of the association of Ngāi Tahu to the statutory areas, as provided in section 211.

**Limitations on effect of statutory acknowledgements**

From Section 217 of the Ngāi Tahu Claims Settlement Act 1998 Except as expressly provided in sections 208 to 211, 213, and 215:

(a) these statutory acknowledgements do not affect, and are not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu’s association with these areas (as described in the statutory acknowledgements) than that person or entity would give under the relevant statute, regulation, or bylaw, if these statutory acknowledgements did not exist.

Except as expressly provided in this Act, these statutory acknowledgements do not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, these statutory acknowledgements do not, of themselves, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to these statutory acknowledgement areas.

**Coastal marine area statutory acknowledgements**

There are also two statutory acknowledgements within the Canterbury Region in the Coastal Marine Area. These are Te Tai o Marokura (Kaikōura Coastal Marine Area) and Te Tai o Mahaanui (Banks Peninsula Coastal Marine Area). Details of these statutory acknowledgements are recorded in the Regional Coastal Environment Plan.

**STATUTORY ACKNOWLEDGEMENT FOR UERAU (MOUNT UWERAU)**

From Schedule 67 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998
Statutory area

The statutory area to which this statutory acknowledgement applies is the area known as Uerau (Mount Uwerau), as shown on Allocation Plan MS 101 (SO 7318).

Ngāi Tahu association with Uerau

The name Uwerau should properly be spelt Uerau, which is the name of an important Ngāi Tahu tūpuna (ancestor) with Ngāti Mamoe descent lines. In particular, those descent lines lead down to Tura, a principal tūpuna for Ngāti Mamoe, Ngāti Wairaki and Rapuwai all of which are constituents of the iwi known today as Ngāi Tahu. For Ngāi Tahu, such placing of tūpuna names on significant landscape features serves as a reminder of tribal identity and solidarity, and continuity between generations, and documents events that have shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

As with all principal maunga (mountains), Uerau is imbued with the spiritual elements of Raki and Papa, in tradition and practice regarded as an important link to the primeval parents. Like the rest of the mountains in this region, Uerau is closely connected with the Arai Te Uru tradition, which tells that many of the mountains of the Southern Alps and Kaikōura Ranges are the manifestations of the survivors of the Arai Te Uru waka (canoe) which foundered at Moeraki, on the North Otago coast.

This area was used by Ngāi Tahu as a mahinga kai (food gathering place) where birds, particularly titi (muttonbirds) were harvested. The tūpuna had considerable knowledge of such places for gathering kai and other taonga, ways in which to use the resources of the land, the relationship of people with the land and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

There are a number of urupā (burial places) in this area unique to the descendants of Tura. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The Kāti Kuri hapū of Ngāi Tahu has manawhenua (tribal authority over land) and carries the responsibilities of kaitiaki in relation to the area. The hapū is represented by the tribal structure, Te Rūnanga o Ngāi Tahu.

The mauri of Uerau represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the land.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—
(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Uerau, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Uerau or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Uerau as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

From Section 217 of the Ngāi Tahu Claims Settlement Act 1998

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Uerau (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Uerau.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Uerau.

STATUTORY ACKNOWLEDGEMENT FOR MOANA RUA (LAKE PEARSON)

From Schedule 43 - refer to sections 205 and 206 Ngāi Tahu Claims Settlement Act 1998

Statutory area

The statutory area to which this statutory acknowledgement applies is the wetland known as Moana Rua (Lake Pearson), the location of which is shown on Allocation Plan MD 51 (SO 19840).
Ngāi Tahu association with Moana Rua

The wetland area known to Pākehā as Lake Pearson is known to Ngāi Tahu as Moana Rua. The area falls along the route across the main divide which is now known as Arthurs Pass. The area was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the area.

This area was primarily used as a mahinga kai by Canterbury Ngāi Tahu, with weka, kākāpō and tuna (eels) being the main foods taken. The tūpuna had considerable knowledge of whakapapa, traditional trails, places for gathering kai and other taonga, ways in which to use the resources of the land, the relationship of people with the land and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

Several urupā are recorded in this immediate area. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The mauri of Moana Rua represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the area.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Moana Rua, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Moana Rua or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Moana Rua as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—
(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu’s association to Moana Rua (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Moana Rua.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Moana Rua.

STATUTORY ACKNOWLEDGEMENT FOR WAIREWA (LAKE FORSYTH)

From Schedule 71 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

Statutory area

The statutory area to which this statutory acknowledgement applies is the lake known as Wairewa (Lake Forsyth), the location of which is shown on Allocation Plan MD 45 (SO 19839).

Ngāi Tahu Association with Wairewa

Wairewa is one of the lakes referred to in the tradition of ‘Ngā Puna Wai Karikari o Rakaihautu’ which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New Zealand. Rakaihautu beached his canoe at Whakatū (Nelson). From Whakatū, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu taking another southwards by an inland route. On his inland journey southward, Rakaihautu used his famous kō (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Wairewa.

There are place names connected with Wairewa which evoke earlier histories. One example is the mountain which Wairewa lies in the lee of, ‘Te Upoko o Tahu Mataa’. This name refers to the Ngāi Tahu ancestor Tahu Mataa, who lived and fought in Hawkes Bay. Like many other lakes, Wairewa was occupied by a taniwha called Tu Te Rakiwhānoa, whose origins stem back to the creation traditions.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity
between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

The local hapū of this region is Ngāti Irakehu. Irakehu was the descendant of Mako, the Ngāi Tuhaitara chief who took Banks Peninsula with his cohort, Moki. Tradition has it that both Moki and Mako are buried near Wairewa. Poutakai and Ōtūngākau are two principal urupā associated with Wairewa. Urupā are the resting places of Ngāi Tahu tupuna and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tupuna, and are frequently protected by secret locations.

Wairewa has been used by the descendants of Rakaihautu ever since it was formed. It is famous for the tuna (eels) that it holds and which migrate out to the sea in the autumn months. Ngāi Tahu gather here annually to take the tuna.

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the lake, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Wairewa represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.

**Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Wairewa, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Wairewa or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Wairewa as provided in section 211 (clause 12.2.5 of the deed of settlement).

**Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw;
(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu’s association to Wairewa (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Wairewa.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Wairewa.

STATUTORY ACKNOWLEDGEMENT FOR ŌRAKI PAOA WETLAND

From Schedule 49 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

Statutory area

The statutory area to which this statutory acknowledgement applies is the wetland known as Ōrakipaoa, the location of which is shown on Allocation Plan MD 54 (SO 19842).

Ngāi Tahu association with Ōrakipaoa

The creation of the Ōrakipaoa wetlands is associated with Tū Te Rakiwhānoa and his shaping of the island to make it habitable for humans. Ōrakipaoa was created as Tū Te Rakiwhānoa arranged the debris from the Waka o Aoraki while forming the harbours and plains and heaping up mountains of the interior.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

One of the first explorers recorded in the area was Rakaihouia, son of Rakaihautu, who was given the task of exploring the east coast of the South Island for suitable harbours, settlement sites and food resources. Rakaihouia met up with Rakaihautu at Waihao, just to the south of Ōrakipaoa, as Rakaihautu returned overland from Murihiku. From the time of Rakaihouia, the area was occupied in succession by Waitaha, Ngāti Mamoe and Ngāi Tahu, who established a number of settlements and pā at Ōrakipaoa.

The old pā site of Te Waiaruati was occupied as a strong defensive position during the time of Te Rauparaha and earlier periods. The kāinga of Te Rehe was on an island (Harakeke Tautoro) which was once surrounded by extensive swamplands, through which ran numerous creeks and waterways. Other pit and settlements within the Ōrakipaoa wetland complex include Ōrāhui and Hawea.
As well as being an area of permanent occupation, Ōrakipaoa formed part of numerous trails. Trails followed river valleys into the interior, as the populous settlements in the area required regular excursions to gather mahinga kai and other resources from further afield. Ōrakipaoa was also a tauranga waka and one of the stopping-off places for those travelling between Te Taumutu and Ōtākou.

The tūpuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the trails. The wetlands were an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the wetlands.

Mahinga kai resources were gathered from Ōrakipaoa over many generations. A wide range of mahinga kai was found within the complex, including coastal and estuarine as well as fresh water resources. The area was renowned for its eeling and bird hunting. Other fisheries for which the area was known included inaka (whitebait) and wet fish, minnows, the now-extinct grayling, giant kōkopu, flounder, mullet, and small fish known as panako, pipiki and paraki. The complex was also a source of ti kouka (cabbage tree).

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the wetlands, the relationship of people with the area and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Ōrakipaoa represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the area.

**Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Ōrakipaoa, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Ōrakipaoa or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Ōrakipaoa as provided in section 211 (clause of the deed of settlement).

**Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Ōrakipaoa (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Ōrakipaoa.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Ōrakipaoa.

**STATUTORY ACKNOWLEDGEMENT FOR TŪTAE PUTAPUTA (CONWAY RIVER)**

From Schedule 65 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

**Statutory area**

The statutory area to which this statutory acknowledgement applies is the area known as Tūtae Putaputa (Conway River), the location of which is shown on Allocation Plan MD 109 ((SO 7328 (Marlborough Land District) and SO 19906 (Canterbury Land District)).

**Ngāi Tahu association with the Tūtae Putaputa**

This river, and the mahinga kai which it provided, fell under the mana of the Ngāti Wairaki chief Rakaturua until Ngāi Tahu gained manawhenua (tribal authority over the area) by way of the Ngāti Kurī hapū.

The resources of the river once supported a nearby pā built by the Ngāti Mamoe leader, Tukiauau. Tukiauau eventually abandoned this pā for another site just south of Dunedin.

There are numerous urupā and wāhi tapu associated with the river, particularly in the vicinity of the pa, Pariwhakatau. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the
focus for whānau traditions. Urupā and wāhi tapu are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The mauri of Tūtae Putaputa represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.

**Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Tūtae Putaputa, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of the Tūtae Putaputa or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Tūtae Putaputa as provided in section 211 (clause 12.2.5 of the deed of settlement).

**Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Tūtae Putaputa (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Tūtae Putaputa.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Tūtae Putaputa.
STATUTORY ACKNOWLEDGEMENT FOR HOKA KURA (LAKE SUMNER)

From Schedule 20 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

Statutory area

The statutory area to which this statutory acknowledgement applies is the lake known as Hoka Kura (Lake Sumner), the location of which is shown on Allocation Plan MD 127 (SO 19854).

Ngāi Tahu association with Hoka Kura

Hoka Kura is one of the lakes referred to in the tradition of ‘Ngā Puna Wai Karikari o Rakaihautu’ which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New Zealand. Rakaihautu beached his canoe at Whakatū (Nelson). From Whakatū, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu taking another southwards by an inland route. On his inland journey southward, Rakaihautu used his famous kō (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Hoka Kura. The origins of the name Hoka Kura have now been lost, although it is likely that it refers to one of the descendants of Rakaihautu.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Hoka Kura was used as a mahinga kai by North Canterbury Ngāi Tahu. The tūpuna had considerable knowledge of whakapapa, traditional trails, places for gathering kai and other taonga, ways in which to use the resources of the lake, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mahinga kai values of the lake were particularly important to Ngāi Tahu parties travelling to Te Tai Poutini (the West Coast). The lake was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the lake.

There are a number of urupā and wāhi tapu in this region. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. Urupā and wāhi tapu are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The mauri of Hoka Kura represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a
life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.

**Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Hoka Kura, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Hoka Kura or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Hoka Kura as provided in section 211 (clause 12.2.5 of the deed of settlement).

**Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu’s association to Hoka Kura (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Hoka Kura.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Hoka Kura.

**STATUTORY ACKNOWLEDGEMENT FOR HURUNUI RIVER**

From Schedule 21 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998
Statutory area

The statutory area to which this statutory acknowledgement applies is the river known as Hurunui, the location of which is shown on Allocation Plan MD 112 (SO 19848).

Ngāi Tahu association with the Hurunui River

The Hurunui River once provided an important mahinga kai resource for Ngāi Tahu, although those resources are now in a modified and depleted condition. Traditionally, the river was particularly known for its tuna (eel) and inaka (whitebait).

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the Hurunui, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

Nohoanga (settlements) were located at points along the length of this river, with some wāhi tapu located near the mouth. Wāhi tapu are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The mauri of the Hurunui represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Hurunui River, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
(c) To empower the Minister responsible for management of the Hurunui River or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Hurunui River as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—
(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu’s association to the Hurunui River (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Hurunui River.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Hurunui River.

STATUTORY ACKNOWLEDGEMENT FOR WAIPARA RIVER

From Schedule 74 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

Statutory area

The statutory area to which this statutory acknowledgement applies is the river known as Waipara, the location of which is shown on Allocation Plan MD 113 (SO 19849).

Ngāi Tahu association with the Waipara River

Tradition tells of the duel between two famous rangatira (chiefs) which happened in this area. Tūtewaimate, a Ngāti Mamoe rangatira from Rakaia, found that the northward trade route that he sent his goods along was being disrupted by Moko, a rangatira of the Ngāti Kuri hapū of Ngāi Tahu who had been acting as a bandit along the route. Tūtewaimate went to confront Moko, who lived in a cave at Waipara, but found him sleeping. Tūtewaimate allowed Moko to awake before attacking him. Tūtewaimate’s sense of fair play cost him his life and is recalled in a tribal proverb.

For Ngāi Tahu, such histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped Ngāi Tahu as an iwi.

There are a number of Ngāti Wairaki, Ngāti Mamoe and Ngāi Tahu urupā and wāhi tapu along the river and associated coastline. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. Urupā and wāhi tapu are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The river and associated coastline was also a significant mahinga kai, with kai moana, particularly pāua, being taken at the mouth. The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the
resources of the river, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of the Waipara River represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.

**Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Waipara River, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of the Waipara River or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Waipara River as provided in section 211 (clause 12.2.5 of the deed of settlement).

**Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw;

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Waipara River (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Waipara River.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Waipara River.
STATUTORY ACKNOWLEDGEMENT FOR KŌWAI RIVER

From Schedule 26 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

Statutory area

The statutory area to which this statutory acknowledgement applies is the river known as Kōwai, the location of which is shown on Allocation Plan MD 114 (SO 19850).

Ngāi Tahu association with the Kōwai River

The Kōwai River once provided an important mahinga kai resource for North Canterbury Ngāi Tahu. Traditionally, the river was known for its tuna (eel) and inaka (whitebait), although those resources have now been depleted.

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the river, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

Nohoanga (settlements) were located at points along the length of this river, with some wāhi tapu located near the mouth. Wāhi tapu are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The mauri of the Kōwai River represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Kōwai River, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of the Kōwai River or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Kōwai River as provided in section 211 (clause 12.2.5 of the deed of settlement).
Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Kōwai River (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Kōwai River.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Kōwai River.

STATUTORY ACKNOWLEDGEMENT FOR WHAKAMATAU (LAKE COLERIDGE)

From Schedule 76 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

Statutory area

The statutory area to which this statutory acknowledgement applies is the lake known as Whakamatau (Lake Coleridge), the location of which is shown on Allocation Plan MD 128 (SO 19855).

Ngāi Tahu association with Whakamatau

Whakamatau is one of the lakes referred to in the tradition of ‘Ngā Puna Wai Karikari o Rakaihautu’ which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New Zealand. Rakaihautu beached his canoe at Whakatū (Nelson). From Whakatū, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu taking another southwards by an inland route. On his inland journey southward, Rakaihautu used his famous kō (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Whakamatau.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.
This lake was occupied by the Ngāi Tū Te Piriraki hapū. Tū Te Piriraki was the son of Tū Te Kawa, a Ngāi Mamoe chief who held manawhenua in this region. When Tū Te Kawa died, his family, including Tū Te Piriraki, married into the senior Ngāi Tahu families. Such strategic marriages between hapū strengthened the kupenga (net) of whakapapa and thus rights to use the resources of the lake.

Whakamatau was a notable mahinga kai where tuna (eel) and water fowl were taken. The kiore (polynesian rat) was also taken in this region. The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the lake, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

Whakamatau was an integral part of a network of trails linking North Canterbury and Te Tai Poutini (the West Coast) which were used by the tūpuna in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the lake.

As a result of the area’s history as a settlement site and part of a trail, there are many urupā associated with the lake. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The mauri of Whakamatau represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Whakamatau, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Whakamatau or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Whakamatau as provided in section 211 (clause 12.2.5 of the deed of settlement).
Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—
(a) This statutory acknowledgement does not affect, and is not to be taken into account in the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association Whakamatau (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Whakamatau.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Whakamatau.

STATUTORY ACKNOWLEDGEMENT FOR HAKATERE (ASHBURTON RIVER)

From Schedule 17 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

Statutory area

The statutory area to which this statutory acknowledgement applies is the river known as Hakatere (Ashburton River), the location of which is shown on Allocation Plan MD 116 (SO 19852).

Ngāi Tahu association with the Hakatere

The Hakatere was a major mahinga kai for Canterbury Ngāi Tahu. The main foods taken from the river were tuna (eels), inaka (whitebait) and the giant kōkopu. Rats, weka, kiwi and waterfowl such as pūtakitaki (paradise duck) were also hunted along the river.

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the river, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of the Hakatere represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.
Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Hakatere, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of the Hakatere or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Hakatere as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Hakatere (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Hakatere.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Hakatere.

STATUTORY ACKNOWLEDGEMENT FOR RANGITATA RIVER

From Schedule 55 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

Statutory area

The statutory area to which this statutory acknowledgement applies is the river known as Rangitata, the location of which is shown on Allocation Plan MD 115 (SO 19851).
Ngāi Tahu association with the Rangitata River

The Rangitata was a major mahinga kai for Canterbury Ngāi Tahu. Weka and other forest birds were the main foods taken from the inland reaches of the Rangitata. Tutu berries were also taken along the waterway.

The tupuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the river, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The river was sometimes used by Ngāi Tahu parties from Canterbury as part of a trail to Te Tai Poutini (the West Coast). The tupuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the river. The river was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the river.

The mauri of the Rangitata represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Rangitata River, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of the Rangitata River or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Rangitata River as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—
(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Rangitata River (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Rangitata River.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Rangitata River.

**STATUTORY ACKNOWLEDGEMENT FOR Ō TŪ WHAREKAI (ASHBURTON LAKES)**

From Schedule 46 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

**Statutory area**

The statutory area to which this statutory acknowledgement applies is the wetland known as Ō Tū Wharekai (Ashburton Lakes), the location of which is shown on Allocation Plan MD 53 (SO 19841).

**Ngāi Tahu association with Ō Tū Wharekai**

The creation of the Ō Tū Wharekai wetlands is associated with Tū Te Rakiwhanoa and his shaping of Te Wai Pounamu (the South Island) to make it habitable for humans. The Ō Tū Wharekai complex was created as Tū Te Rakiwhanoa arranged the debris in the Waka o Aoraki while forming the harbours and plains and heaping up mountains of the interior.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

The name Ō Tū Wharekai actually relates to the part of the complex known as the Māori Lakes. The other lakes and wetlands which make up the complex also have their own names.

Important nohoanga (settlements) associated with seasonal mahinga kai gathering and travel to and through this area included: Tūtaewera, Hatere, Uhi, Matakou, Kiriwhonuwhonu, Ōtautari, Punataka, Te Kiakia, and Tamatakou.

The complex was a part of the seasonal trail of mahinga kai and resource gathering, and hapū and whānau bonding. Knowledge of these trails continues to be held by whānau and hapū and is
regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the wetlands. Mahinga kai resources taken from the area included: tuna (eels), weka, kākā, kererū, tūi, pūkeko and other waterfowl, aruhe, kiore, kauru, matai and pōkākā.

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the wetlands, the relationship of people with the area and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Ō Tū Wharekai represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the area.

**Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Ō Tū Wharekai, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Ō Tū Wharekai or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Ō Tū Wharekai as provided in section 211 (clause 12.2.5 of the deed of settlement).

**Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu’s association to Ō Tū Wharekai (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Ō Tū Wharekai.
Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Ō Tū Wharekai.

STATUTORY ACKNOWLEDGEMENT FOR HEKEAO (HINDS RIVER)

From Schedule 19 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

Statutory area

The statutory area to which this statutory acknowledgement applies is the river known as Hekeao (Hinds River), the location of which is shown on Allocation Plan MD 117 (SO 19853).

Ngāi Tahu association with the Hekeao

Hekeao and Tokara (the two branches of the Hinds River) traditionally supported a number of nohoanga (settlements), including Hekeao, Kakaho, Koroki, Te Mihi, Pakutahi, Karipo, Pūrākaunui, Rukuhia and Tokara. As a result of this history of occupations, there are a number of urupā associated with the river. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

The river was an important mahinga kai, known particularly as a source of tuna (eel) and kanakana (lamprey). The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the river, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Hekeao and Tokara represent the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Hekeao, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
(c) To empower the Minister responsible for management of the Hekeao or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Hekeao as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu’s association to the Hekeao (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Hekeao.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Hekeao

STATUTORY ACKNOWLEDGEMENT FOR TAKAPO (LAKE TEKAPO)

From Schedule 57 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

Statutory area

The statutory area to which this statutory acknowledgement applies is the lake known as Takapo (Lake Tekapo), the location of which is shown on Allocation Plan MD 34 (SO 19836).

Ngāi Tahu association with Takapo

Takapo is one of the lakes referred to in the tradition of 'Ngā Puna Wai Karikari o Rakaihautu' which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New Zealand. Rakaihautu beached his canoe at Whakatū (Nelson). From Whakatū, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu taking another southwards by an inland route. On his inland journey southward, Rakaihautu used his famous kō (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Takapo.
For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Takapo was often occupied by Ngāi Tahu and, like most lakes, there are traditions of a taniwha connected with it. Tradition has it that the tohunga Te Maiharoa is the only person to have swum the lake and escaped the taniwha. This story is told to demonstrate that the mana of Te Maiharoa was greater than that of the taniwha of the lake.

As a result of this history of occupation, there are a number of urupā associated with the lake. Urupā are the resting places of Ngāi Tahu ākākā and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu ākākā, and are frequently protected by secret locations.

Takapo served as a mahinga kai for South Canterbury Ngāi Tahu. Waterfowl and eel were the main foods taken from this lake. The ākākā had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the lake, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Takapo represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.

**Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Takapo, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Takapo or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Takapo as provided in section 211 (clause 12.2.5 of the deed of settlement).

**Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215,—
(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Takapo (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Takapo.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Takapo.

**STATUTORY ACKNOWLEDGEMENT FOR LAKE PŪKAKI**

From Schedule 34 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

**Statutory area**

The statutory area to which this statutory acknowledgement applies is the lake known as Pūkaki, the location of which is shown on Allocation Plan MD 35 (SO 19837).

**Ngāi Tahu association with Lake Pūkaki**

Pūkaki is one of the lakes referred to in the tradition of 'Ngā Puna Wai Karikari o Rakaihautu' which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New Zealand. Rakaihautu beached his canoe at Whakatū (Nelson). From Whakatū, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu taking another southwards by an inland route. On his inland journey southward, Rakaihautu used his famous kō (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Pūkaki.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Pūkaki is referred to in Ngāi Tahu tradition as the basin that captures the tears of Aoraki: a reference to the melt waters that flow from Aoraki into the lake in the spring time.

As well as its association with Aoraki, Pūkaki is also a mahinga kai, noted particularly for its water fowl. The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka,
places for gathering kai and other taonga, ways in which to use the resources of the lake, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Pūkaki represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Lake Pūkaki, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Lake Pūkaki or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Lake Pūkaki as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Lake Pūkaki (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Lake Pūkaki.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Lake Pūkaki.
STATUTORY ACKNOWLEDGEMENT FOR WHAKARUKUMOANA (LAKE MCGREGOR)

From Schedule 77 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

Statutory area

The statutory area to which this statutory acknowledgement applies is the lake known as Whakarukumoana (Lake McGregor), the location of which is shown on Allocation Plan MD 120 (SO 19856).

Ngāi Tahu association with Whakarukumoana

Whakarukumoana is one of the lakes referred to in the tradition of 'Ngā Puna Wai Karikari o Rakaihautu' which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New Zealand. Rakaihautu beached his canoe at Whakatū (Nelson). From Whakatū, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu taking another southwards by an inland route. On his inland journey southward, Rakaihautu used his famous kō (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Whakarukumoana.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Draining into Takapo (Lake Tekapo) via Te Waiātekāmana, Whakarukumoana forms a part of the network of waterways and land-based mahinga kai in this part of the interior. This area was a part of the seasonal trail of mahinga kai and resource gathering, and hapū and whānau bonding. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the lake.

The lake was very productive, although the indigenous fishery has now been depleted. The warmer shallows are important habitats for tuna (eels) and indigenous fish which prefer such conditions. This rain-fed lake is a habitat for upland bully, common bully, long-finned eel and galaxids as well as introduced trout.

Waterfowl, including a range of duck species, crested grebe and weka (formerly) are another important mahinga kai associated with the lake. Flora gathered from land adjoining the lake included matagouri, taramea, tutu, tataraheka, manuka, snowgrass, and raupo. The succulent kiore (polynesian rat) was once an important food resource, as was the moa.

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the lake, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.
The mauri of Whakarukumoana represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.

**Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Whakarukumoana, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Whakarukumoana or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Whakarukumoana as provided in section 211 (clause 12.2.5 of the deed of settlement).

**Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Whakarukumoana (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Whakarukumoana.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Whakarukumoana.

**STATUTORY ACKNOWLEDGEMENT FOR LAKE ŌHĀU**

From Schedule 32 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998
Statutory area

The statutory area to which this statutory acknowledgement applies is the lake known as Ōhau, the location of which is shown on Allocation Plan MD 36 (SO 19838).

Ngāi Tahu association with Lake Ōhau

Ōhau is one of the lakes referred to in the tradition of 'Ngā Puna Wai Karikari o Rakaihautu' which tells how the principal lakes of Te Wai Pounamu were dug by the rangatira (chief) Rakaihautu. Rakaihautu was the captain of the canoe, Uruao, which brought the tribe, Waitaha, to New Zealand. Rakaihautu beached his canoe at Whakatū (Nelson). From Whakatū, Rakaihautu divided the new arrivals in two, with his son taking one party to explore the coastline southwards and Rakaihautu taking another southwards by an inland route. On his inland journey southward, Rakaihautu used his famous kō (a tool similar to a spade) to dig the principal lakes of Te Wai Pounamu, including Ōhau. It is probable that the name 'Ōhau' comes from one of the descendants of Rakaihautu, Hau.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Ōhau was traditionally occupied by the descendants of Te Rakitauhope and was the site of several battles between Ngāi Tahu and Ngāti Mamoe. Later, it supported Te Maiharoa and his followers in the 1870s when they took occupation of land in the interior in protest against the Crown's failure to honour the 1848 Canterbury Purchase.

As a result of this history of occupation, there are a number of urupā and wāhi tapu associated with the lake. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. Urupā and wāhi tapu are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

Ōhau was an important mahinga kai, and part of a wider mahinga kai trail that ran from Lake Pūkaki to the coast. The main foods taken in this area were weka, forest and water fowl and fresh water fish such as tuna (eel) and kōkopu.

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the lake, the relationship of people with the lake and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Ōhau represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.
Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and
(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Lake Ōhau, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and
(c) To empower the Minister responsible for management of Lake Ōhau or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Lake Ōhau as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and
(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Lake Ōhau (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Lake Ōhau.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Lake Ōhau.

STATUTORY ACKNOWLEDGEMENT FOR HAKATARAMEA RIVER

From Schedule 16 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

Statutory area

The statutory area to which this statutory acknowledgement applies is the river known as Hakataramea the location of which is shown on Allocation Plan MD 119 (SO 24724).
Ngāi Tahu association with the Hakataramea River

The creation of the Hakataramea relates in time to Te Waka o Aoraki, and the further shaping of the island by Tū Te Rakiwhanao and his assistants, including Marokura who stocked the waterways and Kahukura, who stocked the forests. For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

The name 'Hakataramea' refers to the taramea plant from which a prized perfume was extracted. The name reflects the fact that taramea once grew in abundance in the vicinity of the river, and was easily accessed.

As well as being a mahinga kai in its own right, the Hakataramea was also an alternative route to the Aoraki region, forming part of the network of waterways and land-based mahinga kai in this part of the interior. This area was a part of the seasonal trail of mahinga kai and resource gathering, and hapū and whānau interaction. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the river.

The Hakataramea was a noted and popular indigenous fishery, offering tuna (eel), kanakana (lamprey), kōkopu, waikoura (fresh water crayfish) and waikakahi (fresh water mussel). Other mahinga kai taken from the Hakataramea included weka, ti kouka (cabbage tree) and taramea (spaniard grass). The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the Hakataramea, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

These mahinga kai resources supported both semi-permanent and seasonal occupations, including a kāinga called Te Wai-tohi near the confluence of the Hakataramea and Waitaki rivers. The surviving rock art remnants and rock shelters are a particular taonga of the area, providing a unique record of the lives and beliefs of the people who travelled the river.

Because of the long history of use of the river as both a highway and a mahinga kai, supporting permanent and temporary occupation, there are a number of urupā, wāhi tapu and wāhi taonga associated with the river. These are all places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are a particular focus for whānau traditions.

The mauri of the Hakataramea represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.
Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Hakataramea River, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of the Hakataramea River or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to the Hakataramea River as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to the Hakataramea River (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Hakataramea River.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Hakataramea River.

STATUTORY ACKNOWLEDGEMENT FOR TE AO MĀRAMA (LAKE BENMORE)

From Schedule 59 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998
Statutory area

The statutory area to which this statutory acknowledgement applies is the lake known as Te Ao Mārama (Lake Benmore), the location of which is shown on Allocation Plan MD 130 (SO 19857 (Canterbury Land District) and SO 24748 (Otago Land District)).

Ngāi Tahu association with Te Ao Mārama

While the man-made Te Ao Mārama is obviously a comparatively recent creation on the landscape, it overlays the path of the Waitaki River, which is very significant to Ngāi Tahu as the pathway of the waters from Aoraki to the sea. Ngāi Tahu Whānui always recognise and pay respects to Waitaki as a significant element of their being and identity - a creation of the atua (gods), further moulded by Tū Te Rakiwhānoa and his assistants, one of whom was Marokura who stocked the waterways.

In addition, the lake now covers areas which have been very important in Ngāi Tahu history. The Ahuriri arm of the lake was the site of Te Ao Mārama, the nohoanga that Te Maiharoa was evicted from by the constabulary in the late 1800s. It is in memory of this that the lake is now referred to by the same name. A number of other nohoanga existed in the area the lake now covers, and these were among the 170 which one record lists as existing in the Waitaki basin. One of these was at Sailors Cutting, and was known as Te Whakapiri a Te Kaiokai.

Many wāhi tapu and wāhi taonga were also drowned by Te Ao Mārama, including a number of rock art sites, while others still survive. Urupā associated with the nohoanga in the area also lie under the lake. These are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

An important and productive fishery exists in the lake, with the Haldane and Ahuriri arms once rich in long-finned eels, although in more recent times the fishery has been depleted. Fresh water mussels (waikākahi) are also available in the Ahuriri shallows. Excellent stands of raupō grow on the edge of the lake, adjacent to the deep water. This hardy plant, which was traditionally used for kai and in the making of mōkihi (a type of waka, or canoe, used on inland waterways) is not affected by the heavy frosts of the area or cattle grazing. The Ahuriri arm was also an important waterfowl and weka habitat.

Strategic marriages between hapū strengthened the kupenga (net) of whakapapa and thus rights to use the resources of the area. These whakapapa rights and relationships still apply to the lake itself.

The area which the lake now covers was once a major route from coast to coast: to Hawea and Wanaka via the Lindis Pass, and to the West Coast via Ōkuru or Haast Pass. There was also a trail via the Lindis through into the Central Otago summer resorts, mahinga kai and pounamu resources. Trails linked to seasonal resource gathering lead into the Ōhau, Pūkaki and Takapo, Alexandrina and Whakarukumoana catchments. These were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the land and waterways.
Wai-para-hoanga meaning literally ‘water of grinding stone dirt’ is a descriptive name for the water that once flowed unhindered in the Waitaki, sourced from Pūkaki, Takapo and Ōhau, and ultimately from Aoraki itself. Notwithstanding more recent man-made changes to the landscape and waterways, the mauri of Te Ao Mārama represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Te Ao Mārama, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Te Ao Mārama or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Te Ao Mārama as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu’s association to Te Ao Mārama (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Te Ao Mārama.

 Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Te Ao Mārama.
STATUTORY ACKNOWLEDGEMENT FOR MAHI TIKUMU (LAKE AVIEMORE)

From Schedule 37 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

Statutory area

The statutory area to which this statutory acknowledgement applies is the lake known as Mahi Tikumu (Lake Aviemore), the location of which is shown on Allocation Plan MD 492 (SO 19907 (Canterbury Land District) and SO 24731 (Otago Land District)).

Ngāi Tahu association with Mahi Tikumu

While the man-made Mahi Tikumu is obviously a comparatively recent creation on the landscape, it overlays the path of the Waitaki River, which is very significant to Ngāi Tahu as the pathway of the waters from Aoraki to the sea. Ngāi Tahu Whānui always recognise and pay respects to Waitaki as a significant element of their being and identity, a creation of the atua (gods), further moulded by Tū Te Rakihuhōoa and his assistants, one of whom was Marokura who stocked the waterways.

In addition, the lake now covers areas which have been very important in Ngāi Tahu history. A number of nohoanga existed along the former river basin, among the 170 which one record lists as existing in the Waitaki basin.

Many wāhi tapu and wāhi taonga were also drowned by Mahi Tikumu, including a number of rock art sites. Other areas of the lake’s catchment are awaiting survey for rock art. Urupā associated with the nohoanga in the area also lie under the lake. These are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

An important and productive tuna (eel) fishery existed in the lake, although in more recent times the customary fishery has become depleted. Fresh water mussels (waikākahi) are also available in the shallows. Excellent stands of raupō grow on the edge of the lake, adjacent to the deep water. This hardy plant, which was traditionally used for kai and in the making of mōkihi (a type of waka, or canoe, used on inland waterways) is not affected by the heavy frosts of the area or cattle grazing.

The area which the lake now covers was once a major route from coast to coast: to Hawea and Wanaka via the Lindis Pass, and to the West Coast via Ōkuru or Haast Pass. There was also a trail via the Lindis through into the Central Otago summer resorts, mahinga kai and pounamu resources. Trails linked to seasonal resource gathering lead into the Ōhau, Pūkaki and Takapo, Alexandrina and Whakarukumoana catchments.

The area covered by the lake was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the land and waterways.
Wai-para-hoanga, meaning literally 'water of grinding stone dirt' is a descriptive name for the water that once flowed unhindered in the Waitaki, sourced from Pūkaki, Takapo and Ōhau, and ultimately from Aoraki itself.

Notwithstanding more recent man-made changes to the landscape and waterways, the mauri of Mahi Tikumu represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the lake.

**Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Mahi Tikumu, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Mahi Tikumu or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Mahi Tikumu as provided in section 211 (clause 12.2.5 of the deed of settlement).

**Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Mahi Tikumu (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Mahi Tikumu.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Mahi Tikumu.
STATUTORY ACKNOWLEDGEMENT FOR PUNATARAKAO WETLAND

From Schedule 54 – refer to sections 205 and 206 of the Ngāi Tahu claim Settlement Act 1998.

Statutory Area

The statutory area to which this statutory acknowledgement applies is the Wetland known as Punatarakao, the location of which is shown on Allocation Plan MD 137 (SO 19858).

Preamble

Under section 206, the Crown acknowledges Te Rūnanga o Ngāi Tahu’s statement of Ngāi Tahu's cultural, spiritual, historic, and traditional association to Punatarakao, as set out below.

Ngāi Tahu Association with Punatarakao

The Punatarakao wetland near the mouth of the Waihao river was a noted mahinga kai and traditional Ngāi Tahu occupation site. One of the principal traditions relating to the area tells that it is guarded by the taniwha, Tu Te Rakiwhanoa, who was said to appear as a sign of death.

For Ngāi Tahu, traditions such as this represent the links between the cosmological world of the gods and present generations, these histories reinforce tribal identity and solidarity, and continuity between generations and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

Punatarakao was the site of a Ngāi Tahu village, and was also famous for its Whare Wananga, where tohunga went to learn. As a result of this history of occupation, there are a number of urupā and wāhi tapu in the area. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are the focus for whānau traditions. Urupā and wāhi tapu are places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations.

It was the mahinga kai of the Punatarakao wetland area which made it attractive as an occupation site. The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the area, the relationship of people with the area and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The mauri of Punatarakao represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the area.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—
(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement);

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Punatarakao, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement);

(c) To empower the Minister responsible for management of Punatarakao or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Punatarakao as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu’s association to Punatarakao (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Punatarakao.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Punatarakao.

STATUTORY ACKNOWLEDGEMENT FOR WAITAKI RIVER

From Schedule 72 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

Statutory area

The statutory area to which this statutory acknowledgement applies is the river known as Waitaki, the location of which is shown on Allocation Plan MD 118 (SO 24723).

Ngāi Tahu association with the Waitaki

The name Waitaki (a South Island variant of the name Waitangi which is found throughout the North Island) is a common place name throughout Polynesia. Although the specific tradition behind the
Canterbury Land and Water Regional Plan

name has been lost in this case, it literally means ‘the waterway of tears’, and the Waitaki is often referred to in whaikōrero (oratory) as representing the tears of Aoraki which spill into Lake Pūkaki and eventually make their way south along the river to the coast. This image is captured in the whakatauākī: 'Ko Waitaki te awa, kā roimata na Aoraki i riringi' ('Waitaki is the river, the tears spilled by Aoraki').

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

The Ngāi Tahu association with the Waitaki extends back to the first human habitation of Te Wai Pounamu. As such, the river is an essential element of the identity of Ngāi Tahu as an iwi. A moa butchery site at the mouth of the river is one of the oldest recorded settlement sites in the South Island and other sites further up the river are also extremely ancient.

The Waitaki was a traditional route to the mahinga kai resources of inland North Otago and the once bush-clad Waitaki Valley. The use of mōkihi (river craft constructed from raupō, or reeds), to carry the spoils of hunting expeditions down the river is particularly associated with the Waitaki, one of the few places where the construction and navigation of these vessels is still practised to this day.

The river also led to the central lakes district - itself a rich source of mahinga kai - and from there across the Southern Alps to the treasured pounamu resource of Te Tai Poutini (the West Coast). The river served as a major highway for such travels from both North Otago and South Canterbury.

Thus, there were numerous tauranga waka (or landing places) on the river. The tūpuna had an intimate knowledge of navigation, river routes, safe harbours and landing places, and the locations of food and other resources on the river. The Waitaki was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the river.

In 1877, the leader Te Maiharoa, a descendant of Te Rakaihautu, led his people up the Waitaki to establish a settlement at Te Ao Mārama (near modern-day Omarama), to demonstrate his assertion that the interior had not been sold by Ngāi Tahu, and therefore still belonged to the iwi. Although the settlement was eventually broken up by the constabulary, and the people forced to retreat back down the river, the episode is a significant one in the long history of Te Kerēme (the Ngāi Tahu Claim).

As well as acting as a route to the inland mahinga kai sources, the river itself provided many forms of kai for those living near it or travelling on it. The Waitaki was, and still is, noted for its indigenous fisheries, including tuna (eel), inaka, kōkopu and kōaro species (whitebait), kanakana (lamprey) and waikōura (fresh water crayfish); with aua (yellow-eyed mullet) and mōhoao (black flounder) being found at the mouth. Many of these species are diadromous (migrating between sea and fresh water to spawn).
The extensive wetland areas formerly associated with the river once provided important spawning, rearing and feeding grounds for all of these species and were among the richest mahinga kai areas on the river. Although many of these species have now been depleted, the Waitaki remains a nationally important fishery.

The tūpuna had considerable knowledge of whakapapa, traditional trails and tauranga waka, places for gathering kai and other taonga, ways in which to use the resources of the Waitaki, the relationship of people with the river and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

The Waitaki Valley holds one of the country's major collections of rock art, and the river itself seems to have acted as a form of cultural barrier in rock art design. The surviving rock art remnants are a particular taonga of the area, providing a unique record of the lives and beliefs of the people who travelled the river.

Because of the long history of use of the river as both a highway and a mahinga kai, supporting permanent and temporary nohoanga (occupation sites), there are numerous urupā, wāhi tapu and wāhi taonga associated with the river. These are all places holding the memories, traditions, victories and defeats of Ngāi Tahu tūpuna, and are frequently protected by secret locations. Urupā are the resting places of Ngāi Tahu tūpuna and, as such, are a particular focus for whānau traditions.

The mauri of the Waitaki River represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the river.

**Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to the Waitaki, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of the Waitaki or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu Whānui with the river.

**Limitations on Effect of Statutory Acknowledgement**

Except as expressly provided in sections 208 to 211, 213, and 215,—
(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu’s association to the Waitaki (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of the Waitaki.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, the Waitaki.

**STATUTORY ACKNOWLEDGEMENT FOR AORAKI/MOUNT COOK**

From Schedule 14 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

**Statutory area**

The statutory area to which this statutory acknowledgement applies is the area known as Aoraki/Mount Cook located in Kā Tiritiri o te Moana (the Southern Alps), as shown on Allocation Plan MS 1 (SO 19831).

**Ngāi Tahu association with Aoraki**

In the beginning there was no Te Wai Pounamu or Aotearoa. The waters of Kiwa rolled over the place now occupied by the South Island, the North Island and Stewart Island. No sign of land existed.

Before Raki (the Sky Father) wedded Papatūānuku (the Earth Mother), each of them already had children by other unions. After the marriage, some of the Sky Children came down to greet their father’s new wife and some even married Earth Daughters.

Among the celestial visitors were four sons of Raki who were named Aoraki (Cloud in the Sky), Rakiroa (Long Raki), Rakirua (Raki the Second), and Rārakiroa (Long Unbroken Line). They came down in a canoe which was known as Te Waka o Aoraki. They cruised around Papatūānuku who lay as one body in a huge continent known as Hawaiiki.

Then, keen to explore, the voyagers set out to sea, but no matter how far they travelled, they could not find land. They decided to return to their celestial home but the karakia (incantation) which should have lifted the waka (canoe) back to the heavens failed and their craft ran aground on a hidden reef, turning to stone and earth in the process.
The waka listed and settled with the west side much higher out of the water than the east. Thus the whole waka formed the South Island, hence the name: Te Waka o Aoraki. Aoraki and his brothers clambered onto the high side and were turned to stone. They are still there today. Aoraki is the mountain known to Pākehā as Mount Cook, and his brothers are the next highest peaks near him. The present day shape of the South Island owes much to the subsequent deeds of Tū Te Rakiwhānoa, who took on the job of shaping the land to make it fit for human habitation.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

The meltwaters that flow from Aoraki are sacred. On special occasions of cultural moment, the blessings of Aoraki are sought through taking of small amounts of its special waters, back to other parts of the island for use in ceremonial occasions.

The mauri of Aoraki represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the mountain.

The saying 'He kapua kei runga i Aoraki, whakarewa whakarewa' ('The cloud that floats aloft Aoraki, for ever fly, stay aloft') refers to the cloud that often surrounds Aoraki. Aoraki does not always 'come out' for visitors to see, just as a great chief is not always giving audience, or is on 'show'. It is for Aoraki to choose when to emerge from his cloak of mist, a power and influence that is beyond mortals, symbolising the mana of Aoraki.

To Ngāi Tahu, Aoraki represents the most sacred of ancestors, from whom Ngāi Tahu descend and who provides the iwi with its sense of communal identity, solidarity, and purpose. It follows that the ancestor embodied in the mountain remains the physical manifestation of Aoraki, the link between the supernatural and the natural world. The tapu associated with Aoraki is a significant dimension of the tribal value, and is the source of the power over life and death which the mountain possesses.

**Purposes of Statutory Acknowledgement**

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Aoraki, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Aoraki or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and
(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Aoraki as provided in section 211 (clause 12.2.5 of the deed of settlement).

Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu's association to Aoraki (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Aoraki.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Aoraki.

STATUTORY ACKNOWLEDGEMENT FOR KURA TĀWHITI (CASTLE HILL)

From Schedule 27 - refer to sections 205 and 206 of the Ngāi Tahu Claims Settlement Act 1998

Statutory area

The statutory area to which this statutory acknowledgement applies is the area known as Kura Tāwhiti (Castle Hill Conservation Area), as shown on Allocation Plan MS 14 (SO 19832).

Ngāi Tahu association with Kura Tāwhiti

Kura Tāwhiti (Castle Hill) is located between the Torlesse and Craigieburn Ranges, in the Broken River catchment. The name Kura Tāwhiti literally means 'the treasure from a distant land', and is an allusion to the kūmara, an important food once cultivated in this region. However, Kura Tāwhiti was also the name of one of the tūpuna (ancestors) who was aboard the Arai Te Uru canoe when it sank off Matakaea (Shag Point) in North Otago.

Kura Tāwhiti was one of the mountains claimed by the Ngāi Tahu ancestor, Tane Tiki. Tane Tiki claimed this mountain range for his daughter Hine Mihi because he wanted the feathers from the kākāpō taken in this area to make a cloak for her.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity
between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

This region was a well-used mahinga kai for Kaiapoi Ngāi Tahu. The main food taken from this mountain range was the kiore (polynesian rat). Other foods taken included tuna (eel), kākāpō, weka and kiwi.

The tūpuna had considerable knowledge of whakapapa, traditional trails, places for gathering kai and other taonga, ways in which to use the resources of Kura Tāwhiti, the relationship of people with the land and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

Kura Tāwhiti was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai. Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the area.

A particular taonga of Kura Tāwhiti are the ancient rock art remnants found on the rock outcrops. These outcrops provided vital shelters from the elements for the people in their travels, and they left their artworks behind as a record of their lives and beliefs. The combination of this long association with the rock outcrops, and the significance of the art on them, gives rise to their tapu status for Ngāi Tahu.

The mauri of Kura Tāwhiti represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the area.

Purposes of Statutory Acknowledgement

Pursuant to section 215, and without limiting the rest of this schedule, the only purposes of this statutory acknowledgement are—

(a) To require that consent authorities forward summaries of resource consent applications to Te Rūnanga o Ngāi Tahu as required by regulations made pursuant to section 207 (clause 12.2.3 of the deed of settlement); and

(b) To require that consent authorities, the Historic Places Trust, or the Environment Court, as the case may be, have regard to this statutory acknowledgement in relation to Kura Tāwhiti, as provided in sections 208 to 210 (clause 12.2.4 of the deed of settlement); and

(c) To empower the Minister responsible for management of Kura Tāwhiti or the Commissioner of Crown Lands, as the case may be, to enter into a Deed of Recognition as provided in section 212 (clause 12.2.6 of the deed of settlement); and

(d) To enable Te Rūnanga o Ngāi Tahu and any member of Ngāi Tahu Whānui to cite this statutory acknowledgement as evidence of the association of Ngāi Tahu to Kura Tāwhiti as provided in section 211 (clause 12.2.5 of the deed of settlement).
Limitations on Effect of Statutory Acknowledgement

Except as expressly provided in sections 208 to 211, 213, and 215,—

(a) This statutory acknowledgement does not affect, and is not to be taken into account in, the exercise of any power, duty, or function by any person or entity under any statute, regulation, or bylaw; and

(b) Without limiting paragraph (a), no person or entity, in considering any matter or making any decision or recommendation under any statute, regulation, or bylaw, may give any greater or lesser weight to Ngāi Tahu’s association to Kura Tāwhiti (as described in this statutory acknowledgement) than that person or entity would give under the relevant statute, regulation, or bylaw, if this statutory acknowledgement did not exist in respect of Kura Tāwhiti.

Except as expressly provided in this Act, this statutory acknowledgement does not affect the lawful rights or interests of any person who is not a party to the deed of settlement.

Except as expressly provided in this Act, this statutory acknowledgement does not, of itself, have the effect of granting, creating, or providing evidence of any estate or interest in, or any rights of any kind whatsoever relating to, Kura Tāwhiti.
Schedule 20 Tōpuni areas and descriptions

TŌPUNI FOR AORAKI/MOUNT COOK

From Schedule 80 - refer to sections 238 and 239 of the Ngāi Tahu Claims Settlement Act 1998

Description of area

The area over which the Tōpuni is created is the area known as Aoraki/Mount Cook, located in Kā Tiritiri o te Moana, shown as Aoraki on Allocation Plan MS 1 (SO 19831).

Ngāi Tahu values relating to Aoraki

In the beginning there was no Te Wai Pounamu or Aotearoa. The waters of Kiwa rolled over the place now occupied by the South Island, the North Island and Stewart Island. No sign of land existed.

Before Raki (the Sky Father) wedded Papatūānuku (the Earth Mother), each of them already, had children by other unions. After, the marriage, some of the Sky Children came down to greet their father’s new wife and some even married Earth Daughters.

Among the celestial visitors were four sons of Raki who were named Aoraki (Cloud in the Sky), Rakiroa (Long Raki), Rakirua (Raki the Second), and Rārakiroa (Long Unbroken Line). They came down in a canoe which was known as Te Waka o Aoraki. They cruised around Papatūānuku who lay as one body in a huge continent known as Hawaiiki.

Then, keen to explore, the voyagers set out to sea, but no matter how far they travelled, they could not find land. They decided to return to their celestial home but the karakia (incantation) which should have lifted the waka (canoe) back to the heavens failed and their craft ran aground on a hidden reef, turning to stone and earth in the process.

The waka listed and settled with the west side much higher out of the water than the east. Thus the whole waka formed the South Island, hence the name: Te Waka o Aoraki. Aoraki and his brothers clambered onto the high side and were turned to stone. They are still there today. Aoraki is the mountain known to Pākehā as Mount Cook, and his brothers are the next highest peaks near him. The present-day shape of the South Island owes much to the subsequent deeds of Tū Te Rakiwhanoa, who took on the job of shaping the land to make it fit for human habitation.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.

The meltwaters that flow from Aoraki are sacred. On special occasions of cultural moment, the blessings of Aoraki are sought through taking of small amounts of its 'special' waters, back to other parts of the island for use in ceremonial occasions.
The mauri of Aoraki represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the mountain.

The saying 'He kapua kei runga i Aoraki, whakarewa, whakarewa' ('The cloud that floats aloft Aoraki, for ever fly, stay aloft') refers to the cloud that often surrounds Aoraki. Aoraki does not always 'come out' for visitors to see, just as a great chief is not always giving audience, or is on 'show'. It is for Aoraki to choose when to emerge from his cloak of mist, a power and influence that is beyond mortals, symbolising the mana of Aoraki.

To Ngāi Tahu, Aoraki represents the most sacred of ancestors, from whom Ngāi Tahu descend and who provides the iwi with its sense of communal identity, solidarity and purpose. It follows that the ancestor embodied in the mountain remains the physical manifestation of Aoraki, the link between the supernatural and the natural world. The tapu associated with Aoraki is a significant dimension of the tribal value, and is the source of the power over life and death which the mountain possesses.

**TŌPUNI FOR KURA TĀWHITI (CASTLE HILL)**

From Schedule 82 - refer to sections 238 and 239 of the Ngāi Tahu Claims Settlement Act 1998

**Description of area**

The area over which the Tōpuni is created is the area known as the Castle Hill Conservation Area, as shown on Allocation Plan MS 14 (SO 19832).

**Ngāi Tahu values relating to Kura Tāwhiti (Castle Hill)**

Kura Tāwhiti (Castle Hill) is located between the Torlesse and Craigieburn Ranges, in the Broken Hill catchment. The name Kura Tāwhiti literally means ‘the treasure from a distant land’, and is an allusion to the kūmarā, an important food once cultivated in this region. However, Kura Tāwhiti was also the name of one of the tūpuna (ancestors) who was aboard the Arai Te Uru canoe when it sank off Matakea (Shag Point) in North Otago.

Kura Tāwhiti was one of the mountains claimed by the Ngāi Tahu ancestor, Tane Tiki. Tane Tiki claimed this mountain range for his daughter Hine Mihi because he wanted the feathers from the kākāpō taken in this area to make a cloak for her.

For Ngāi Tahu, such traditions represent the links between the cosmological world of the gods and present generations. These histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi.
This region was a well-used mahinga kai for Kaiapoi Ngāi Tahu. The main food taken from this mountain range was the kiore (polynesian rat). Other foods taken included tuna (eel), kākāpō, weka and kiwi.

The tūpuna had considerable knowledge of whakapapa, traditional trails, places for gathering kai and other taonga, ways in which to use the resources of the Kura Tāwhiti, the relationship of people with the land and their dependence on it, and tikanga for the proper and sustainable utilisation of resources. All of these values remain important to Ngāi Tahu today.

Kura Tāwhiti was an integral part of a network of trails which were used in order to ensure the safest journey and incorporated locations along the way that were identified for activities including camping overnight and gathering kai (food). Knowledge of these trails continues to be held by whānau and hapū and is regarded as a taonga. The traditional mobile lifestyle of the people led to their dependence on the resources of the area.

A particular taonga of Kura Tāwhiti are the ancient rock art remnants found on the rock outcrops. These outcrops provided vital shelters from the elements for the people in their travels, and they left their artworks behind as a record of their lives and beliefs. The combination of the long association with these rock outcrops, and the significance of the artwork on them, gives rise to their tapu status for Ngāi Tahu.

The mauri of Kura Tāwhiti represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with the area.

TŌPUNI FOR TAPUAES O UENUKU

From Schedule 90 - refer to sections 238 and 239 of the Ngāi Tahu Claims Settlement Act 1998

Description of area

The area over which the Tōpuni is created is the area known as Tapuae o Uenuku as shown on Allocation Plan MS 100 (SO 7317).

Ngāi Tahu values relating to Tapuae o Uenuku

The name Tapuae o Uenuku refers to the sacred footsteps of Uenuku. Uenuku was one of the principal Ngāi Tahu atua (gods), who is represented as a rainbow. Uenuku is often found in tribal traditions as a tūpuna (ancestor) who instigates migration from Hawaiiki to New Zealand. According to the traditions of Kaikoura Ngāi Tahu, Uenuku cursed his son, Ruatapu, for an infringement on his tapu. The curse referred to the fact that Ruatapu's mother was of lowly origins, so that his younger brother, Paikea, was in fact his senior because of his mother's superior descent lines. Ruatapu's response was to attempt to kill all of the leading sons of the chiefs of Hawaiiki, including Paikea. Ruatapu took all of the sons out in a waka (canoe), then set about killing them with a spear. Paikea survived by diving overboard and swimming away. He was rescued by a whale and brought to New
Zealand, where he eventually settled at Whangarā, on the East Coast of the North Island. There he coupled with a woman called Te Waiaruatuatatai, who bore him Tahu Potiki, who went on to become the founding ancestor of Ngāi Tahu.

As well as being a reminder of the traditions of Paikea and Tahu Potiki, the mountain Tapuae o Uenuku is a manifestation of the tūpuna Uenuku. Uenuku was more than just a human ancestor, he was an atua and thus is also seen manifested in the rainbow.

In another Ngāi Tahu tradition, Uenuku is portrayed as one of the survivors of the Arai Te Uru waka which foundered at Moeraki, on the North Otago coast. These survivors are now manifested as the Southern Alps. Uenuku continued further north where he too eventually turned to stone on the spot where the maunga (mountain) Tapuae o Uenuku now stands. Thus, when Ngāi Tahu refer to the old people’s hair turning grey, they are speaking of the snow which caps the Southern Alps, including Tapuae o Uenuku.

These physical and enduring manifestations of tūpuna represent the links between the cosmological world of the gods and present generations. Creation stories, and whakapapa recall links of fifty or more generations from the time of the Hawaiiki Pacific migrations. These traditional histories reinforce tribal identity and solidarity, and continuity between generations, and document the events which shaped the environment of Te Wai Pounamu and Ngāi Tahu as an iwi. They are frequently woven around major landscape features.

In Ngāi Tahu oratory, Tapuae o Uenuku is likened to an overarching portal which must be crossed by all visitors from the North Island. For this reason, visitors to the takiwā of Ngāi Tahu are welcomed as ‘Ngā Tapuae o Uenuku’ - those whose feet have been made sacred by passing beneath Uenuku.

The mauri of Tapuae o Uenuku represents the essence that binds the physical and spiritual elements of all things together, generating and upholding all life. All elements of the natural environment possess a life force, and all forms of life are related. Mauri is a critical element of the spiritual relationship of Ngāi Tahu Whānui with Tapuae o Uenuku.

**TŌPUNI FOR RIPAPA ISLAND, LYTTELTON HARBOUR**

From Schedule 88 – refer to sections 238 and 239 of the Ngāi Tahu Claims Settlement Act 1998

**Description of area**

The area over which the Tōpuni is created is the area known as Ripapa Island Historic Reserve, located in Whakaraupō (Lyttelton Harbour), as shown on Allocation Plan MS 29 (SO 19834).

**Ngāi Tahu values relating to Ripapa**

Ripapa is significant, to Ngāi Tahu, particularly the Rūnanga of Canterbury and Banks Peninsula, for its many urupā (burial places). Urupā are the resting places of Ngāi Tahu tūpuna (ancestors) and, as such, are the focus for whānau traditions. These are places holding the memories, traditions, victories and defeats of our tūpuna, and are frequently protected by secret locations.
Ripapa was also a pā (fortress) of Taununu, a leading Ngāi Tahu warrior prominent during the 1820s. Taununu was a Kaikōura chief who had decided to live at Kaiapoi. However, after settling at Kaiapoi, Taununu saw that Ripapa was a better place to live, so he and his people moved on and settled on the island. Taununu fortified Ripapa Island to withstand attacks from tribes armed with muskets.

Taununu eventually became involved in an inter-tribal war and attacked a village at Te Taumutu. Because the Taumutu people were connected to the southern hapū of Ngāi Tahu, a chieftainess and seer called Hine-Haaka was sent south from Te Taumutu to seek reinforcements. Tradition tells that when Hine-Haaka arrived at Ruapuke, near Stewart Island, she composed a song telling Taununu to weep as in the morning he would be killed. Hine-Haaka's kai oreore (a chant that curses) ran thus:

Taununu of Bank's Peninsula
Weep for yourself
On the morning, your bones will
be transformed into fishhooks
To be used in my fishing grounds to the South
This is my retaliation, an avenging
for your attacks
All I need is one fish to take my bait.

Taununu's pā was attacked from both sea and land by an alliance of related hapū from Southland, Otago and Kaiapoi. Hine-Haaka’s vision was proved right. Taununu managed to escape this attack, but was later killed at Wairewa (Little River).

To end the hostilities between the two regions, the southern chiefs arranged for the daughter of Hine-Haaka, Makei Te Kura, to marry into one of the families of Rapaki Ngāi Tahu. This union took place in the mid-1800s, and peace was cemented between Rapaki and Murihiku Ngāi Tahu.

For Ngāi Tahu, histories such as this represent the links and continuity between past and present generations, reinforce tribal identity and solidarity, and document the events which shaped Ngāi Tahu as an iwi.
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

<table>
<thead>
<tr>
<th>Site number</th>
<th>Waterway</th>
<th>Legal description/allocation plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Hurunui River</td>
<td>1 hectare, approximately, being Part Rural Section 40222. Part Gazette 1972, page 2346. Subject to survey, as shown on Allocation Plan MN 142 (SO 19859).</td>
</tr>
<tr>
<td>5</td>
<td>Lake Alexandrina/Takamoana</td>
<td>1 hectare, approximately, being Part Section 14 (SO 18830). Part Gazette 1996, page 4759. Subject to survey, as shown hatched on Allocation Plan MN 472 (SO 19885).</td>
</tr>
</tbody>
</table>
| 6           | Lake Benmore/Haldon | 1 hectare, approximately, being:  
(a) 7000 square metres, approximately, being Part Reserve 1358 (SO 10143). Part Gazette 1967, page 444;  
(b) 3000 square metres, approximately, being Part Reserve 1358 (SO 13546). Part Gazette 1992, page 1986: Subject to survey, as shown on Allocation Plan MN 473 (SO 19886). |
<p>| 7           | Lake McGregor Whakarukumoana | 5000 square metres, approximately, being Part Section 13 (SO 18830). Part Gazette 1996, page 4759. Subject to survey, as shown on Allocation Plan MN 471 (SO 19884). |
| 8           | Lake Pūkaki | 1 hectare, approximately, being Part Reserve 5195 (SO 9656). Part Gazette Notice 171402/1. Subject to survey, as shown on Allocation Plan MN 68 (SO 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 (SO19877). |
| 10          | Ōhau River | 1 hectare, approximately, being Part Ōhau Riverbed (SO 16047). Part Gazette Notice A78078/1. Subject to survey, as shown on Allocation Plan MN 151 (SO 19861). |
| 11          | Ōhau River (No 2) | 1 hectare, approximately, being Part Rural Section 36867 (SO 5620 and 5621). Part Certificate of Title 26F/698. Subject to survey, as shown on Allocation Plan MN 469 (SO 19883). |
| 12          | Pareora River (No 1) | 1 hectare, approximately, being Part Reserve 3571 (SO 1064). Part Gazette Notice 553820/1. Subject to survey, as shown on Allocation Plan MN 465 (SO 19879). |
| 13          | Pareora River (No 2) | 1 hectare, approximately, being Part Reserve 3577 (SO 1064) and Part Motukaika Riverbed. Part Gazette 1902, page 2559. Subject to survey, as shown on Allocation Plan MN 466 (SO 19880). |
| 14          | Rakaia River (No 1) | 1 hectare, approximately, being Part Reserve 3047 (BM 71). |</p>
<table>
<thead>
<tr>
<th>Site number</th>
<th>Waterway</th>
<th>Legal description/allocation plan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Part Gazette 1898, page 245. Subject to survey, as shown on Allocation Plan MN 80 (SO 19846).</td>
</tr>
<tr>
<td>15</td>
<td>Rakaia River (No 2)</td>
<td>1 hectare, approximately, being Part Tengawai Riverbed. Subject to survey, as shown hatched on Allocation Plan MN 489 (SO 19887).</td>
</tr>
<tr>
<td>16</td>
<td>Tengawai River</td>
<td>1 hectare, approximately, being Part Tengawai Riverbed. Subject to survey, as shown on Allocation Plan MN 437 (SO 19878).</td>
</tr>
<tr>
<td>17</td>
<td>Waiau River</td>
<td>1 hectare, approximately, being Part Reserve 3215 (SO 1407). Part Gazette 1898, page 1720. Subject to survey, as shown on Allocation Plan MN 79 (SO 19845).</td>
</tr>
<tr>
<td>18</td>
<td>Waihao River (No 1)</td>
<td>1 hectare, approximately, being Part Waihao Riverbed. Subject to survey, as shown hatched on Allocation Plan MN 467 (SO 19881).</td>
</tr>
<tr>
<td>19</td>
<td>Waihao River (No 2)</td>
<td>1 hectare, approximately, being Part Rural Sections 41962 (SO 16307) and Part Waihao Riverbed. Part Gazette Notice 553820/1. Subject to survey, as shown on Allocation Plan MN 84 (SO 19847).</td>
</tr>
<tr>
<td>20</td>
<td>Waipara River Waipara Rivermouth</td>
<td>1 hectare, approximately, being Part Waipara Riverbed opposite Lot 1 DP 17853. Subject to survey, as shown on Allocation Plan MN 143 (SO 19860).</td>
</tr>
<tr>
<td>21</td>
<td>Waipara River</td>
<td>1 hectare, approximately, being Part Waipara Riverbed adjoining legal road (Barnetts Road, Waipara). Subject to survey, as shown hatched on Allocation Plan MN 468 (SO 19882).</td>
</tr>
</tbody>
</table>
Schedule 22 Taonga species list

"Taonga species" means the species of birds, plants, and animals described in Schedule 97 found within the Ngāi Tahu claim area (takiwā of Ngāi Tahu) Section 287 (NTCSA).

### Birds

<table>
<thead>
<tr>
<th>Name in Māori</th>
<th>Name in English</th>
<th>Scientific name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hoiho</td>
<td>Yellow-eyed penguin</td>
<td>Megadyptes antipodes</td>
</tr>
<tr>
<td>Kāhu</td>
<td>Australasian harrier</td>
<td>Circus approximans</td>
</tr>
<tr>
<td>Kākā</td>
<td>South Island kākā</td>
<td>Nestor meridionalis meridionalis</td>
</tr>
<tr>
<td>Kākāpō</td>
<td>Kākāpō</td>
<td>Strigops habroptilus</td>
</tr>
<tr>
<td>Kākāriki</td>
<td>New Zealand parakeet</td>
<td>Cyanoramphus spp.</td>
</tr>
<tr>
<td>Kakaruai</td>
<td>South Island robin</td>
<td>Petroica australis australis</td>
</tr>
<tr>
<td>Kākī</td>
<td>Black stilt</td>
<td>Himantopus novaeboundiae</td>
</tr>
<tr>
<td>Kāmana</td>
<td>Crested grebe</td>
<td>Podiceps cristatus</td>
</tr>
<tr>
<td>Kārearea</td>
<td>New Zealand falcon</td>
<td>Falco novaeboundiae</td>
</tr>
<tr>
<td>Karoro</td>
<td>Black-backed gull</td>
<td>Larus dominicanus</td>
</tr>
<tr>
<td>Kea</td>
<td>Kea</td>
<td>Nestor notabilis</td>
</tr>
<tr>
<td>Kōau</td>
<td>Black shag</td>
<td>Phalacrocorax carbo</td>
</tr>
<tr>
<td></td>
<td>Pied shag</td>
<td>Phalacrocorax varius</td>
</tr>
<tr>
<td></td>
<td>Little shag</td>
<td>Phalacrocorax varius melanoleucos brevirostris</td>
</tr>
<tr>
<td>Koekoeā</td>
<td>Long-tailed cuckoo</td>
<td>Eudynamys taitensis</td>
</tr>
<tr>
<td>Köparapara/ Korimako</td>
<td>Bellbird</td>
<td>Anthornis melanura melanura</td>
</tr>
<tr>
<td>Kororā</td>
<td>Blue Penguin</td>
<td>Eudyptula minor</td>
</tr>
<tr>
<td>Kōtare</td>
<td>Kingfisher</td>
<td>Halcyon sancta</td>
</tr>
<tr>
<td>Kōtuku</td>
<td>White heron</td>
<td>Egretta alba</td>
</tr>
<tr>
<td>Köwhiowhio</td>
<td>Blue duck</td>
<td>Hymenolaimus malacorhynchos</td>
</tr>
<tr>
<td>Kūaka</td>
<td>Bar-tailed godwit</td>
<td>Limosa lapponica</td>
</tr>
<tr>
<td>Kūkupa/Kererū</td>
<td>New Zealand wood pigeon</td>
<td>Hemiphaga novaeboundiae</td>
</tr>
<tr>
<td>Kuruwhengu/Kuruwhengi</td>
<td>New Zealand shoveller</td>
<td>Anas rhynchotis</td>
</tr>
<tr>
<td>Mātā</td>
<td>Fernbird</td>
<td>Bowdleria punctata punctata, bowdleria punctata stewartiana, bowdleria punctata wilsoni, bowdleria punctata candata</td>
</tr>
<tr>
<td>Matuku moana</td>
<td>Reef heron</td>
<td>Egretta sacra</td>
</tr>
<tr>
<td>Miromiro</td>
<td>South Island tomtit</td>
<td>Petroica macrocephala macrocephala</td>
</tr>
<tr>
<td>Miromiro</td>
<td>Snares Island tomtit</td>
<td>Petroica macrocephala dannefaerdi</td>
</tr>
<tr>
<td>Name in Māori</td>
<td>Name in English</td>
<td>Scientific name</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Mohua</td>
<td>Yellowhead</td>
<td>Mohoua ochrocephala</td>
</tr>
<tr>
<td>Pākura/Pūkeko</td>
<td>Swamp hen/ Pūkeko</td>
<td>Porphyrio porphyrio</td>
</tr>
<tr>
<td>Pārera</td>
<td>Grey duck</td>
<td>Anas superciliosa</td>
</tr>
<tr>
<td>Pateke</td>
<td>Brown teal</td>
<td>Anas aucklandica</td>
</tr>
<tr>
<td>Pihoihoi</td>
<td>New Zealand pipit</td>
<td>Anser novaeseelandiae</td>
</tr>
<tr>
<td>Pipiwharauroa</td>
<td>Shining cuckoo</td>
<td>Chrysococcyx lucidus</td>
</tr>
<tr>
<td>Piwakawaka</td>
<td>South Island fantail</td>
<td>Rhipidura fuliginosa fuliginosa</td>
</tr>
<tr>
<td>Poaka</td>
<td>Pied stilt</td>
<td>Himantopus himantopus</td>
</tr>
<tr>
<td>Pokotiwha</td>
<td>Snares crested penguin</td>
<td>Eudyptes robustus</td>
</tr>
<tr>
<td>Pūtakitaki</td>
<td>Paradise shelduck</td>
<td>Tadorna variegata</td>
</tr>
<tr>
<td>Riroriro</td>
<td>Grey warbler</td>
<td>Gerygone igata</td>
</tr>
<tr>
<td>Roroa</td>
<td>Great spotted kiwi</td>
<td>Apteryx haastii</td>
</tr>
<tr>
<td>Rowi</td>
<td>Okarito brown kiwi</td>
<td>Apteryx mantelli</td>
</tr>
<tr>
<td>Ruru koukou</td>
<td>Morepork</td>
<td>Ninox novaeseelandiae</td>
</tr>
<tr>
<td>Takahē</td>
<td>Takahē</td>
<td>Porphyrio mantelli</td>
</tr>
<tr>
<td>Tara</td>
<td>Terns</td>
<td>Sterna spp.</td>
</tr>
<tr>
<td>Tawaki</td>
<td>Fiordland crested penguin</td>
<td>Eudyptes pachyrhynchos</td>
</tr>
<tr>
<td>Tete</td>
<td>Grey teal</td>
<td>Anas gracilis</td>
</tr>
<tr>
<td>Tieke</td>
<td>South Island saddleback</td>
<td>Philodromus carunculatus carunculatus</td>
</tr>
<tr>
<td>Titi</td>
<td>Sooty shearwater/ Muttonbird/ Hutton's shearwater</td>
<td>Puffinus griseus and Puffinus huttoni</td>
</tr>
<tr>
<td></td>
<td>Common diving petrel</td>
<td>Pelecanoides urinatrix</td>
</tr>
<tr>
<td></td>
<td>South Georgian diving petrel</td>
<td>Pelecanoides georgicus</td>
</tr>
<tr>
<td></td>
<td>Westland petrel</td>
<td>Procellaria westlandica</td>
</tr>
<tr>
<td></td>
<td>Fairy prion</td>
<td>Pachyptila turtur</td>
</tr>
<tr>
<td></td>
<td>Broad-billed prion</td>
<td>Pachyptila vittata</td>
</tr>
<tr>
<td></td>
<td>White-faced storm petrel</td>
<td>Pelagodroma marina</td>
</tr>
<tr>
<td></td>
<td>Cook's petrel</td>
<td>Pterodroma cookii and</td>
</tr>
<tr>
<td></td>
<td>Mottled petrel</td>
<td>Pterodroma inexpectata</td>
</tr>
<tr>
<td>Tititipounamu</td>
<td>South Island rifleman</td>
<td>Acanthisitta chloris chloris</td>
</tr>
<tr>
<td>Tokoeka</td>
<td>South Island brown kiwi</td>
<td>Apteryx australis</td>
</tr>
<tr>
<td>Toroa</td>
<td>Albatrosses and Molymawks</td>
<td>Diomedea spp.</td>
</tr>
<tr>
<td>Toutouwai</td>
<td>Stewart Island robin</td>
<td>Petroica australis rakiura</td>
</tr>
<tr>
<td>Tūi</td>
<td>Tūi</td>
<td>Prosthemadera novaeseelandiae</td>
</tr>
<tr>
<td>Tutukiwi</td>
<td>Snares Island snipe</td>
<td>Coenocorypha aucklandica huegeli</td>
</tr>
<tr>
<td>Weka</td>
<td>Western weka</td>
<td>Gallirallus australis australis</td>
</tr>
<tr>
<td>Weka</td>
<td>Stewart Island weka</td>
<td>Gallirallus australis scotti</td>
</tr>
</tbody>
</table>
### Weka
- **Name in Māori:** Weka
- **Name in English:** Buff weka
- **Scientific name:** Gallirallus australis hectori

### Plants

<table>
<thead>
<tr>
<th>Name in Māori</th>
<th>Name in English</th>
<th>Scientific name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akatorotoro</td>
<td>White rata</td>
<td>Metrosideros perforata</td>
</tr>
<tr>
<td>Aruhe</td>
<td>Fernroot (bracken)</td>
<td>Pteridium aquilinum var. esculentum</td>
</tr>
<tr>
<td>Harakeke</td>
<td>Flax</td>
<td>Phormium tenax</td>
</tr>
<tr>
<td>Horoeka</td>
<td>Lancewood</td>
<td>Pseudopanax crassifolius</td>
</tr>
<tr>
<td>Houhi</td>
<td>Mountain ribbonwood</td>
<td>Hoheria lyalli and H. glabata</td>
</tr>
<tr>
<td>Kahikatea</td>
<td>Kahikatea/White pine</td>
<td>Dacrycarpus dacrydioides</td>
</tr>
<tr>
<td>Kāmahi</td>
<td>Kāmahi</td>
<td>Weinmannia racemosa</td>
</tr>
<tr>
<td>Kānuka</td>
<td>Kānuka</td>
<td>Kunzia ericoides</td>
</tr>
<tr>
<td>Kāpuka</td>
<td>Broadleaf</td>
<td>Griselinia littoralis</td>
</tr>
<tr>
<td>Kāraeopirita</td>
<td>Supplejack</td>
<td>Ripogonum scandens</td>
</tr>
<tr>
<td>Karaka</td>
<td>New Zealand laurel/ Karaka</td>
<td>Corynocarpus laevigata</td>
</tr>
<tr>
<td>Karamū</td>
<td>Coprosma</td>
<td>Coprosma robusta, coprosma lucida, coprosma foetidissima</td>
</tr>
<tr>
<td>Kātote</td>
<td>Tree fern</td>
<td>Cyathea smithii</td>
</tr>
<tr>
<td>Kiekie</td>
<td>Kiekie</td>
<td>Freycinetia baueriana subsp. banksii</td>
</tr>
<tr>
<td>Kōhia</td>
<td>NZ Passionfruit</td>
<td>Passiflora tetrandra</td>
</tr>
<tr>
<td>Korokio</td>
<td>Korokio wire-netting bush</td>
<td>Corokia cotoneaster</td>
</tr>
<tr>
<td>Koromiko/ Kōkōmuka</td>
<td>Koromiko</td>
<td>Hebe salicifolia</td>
</tr>
<tr>
<td>Kōtukutuku</td>
<td>Tree fuchsia</td>
<td>Fuchsia excorticata</td>
</tr>
<tr>
<td>Kōwhai Kōhai</td>
<td>Kowhai</td>
<td>Sophora microphylla</td>
</tr>
<tr>
<td>Mamaku</td>
<td>Tree fern</td>
<td>Cyathea medullaris</td>
</tr>
<tr>
<td>Mānia</td>
<td>Sedge</td>
<td>Carex flagellifera</td>
</tr>
<tr>
<td>Mānuka /Kahikātoa</td>
<td>Tea-tree</td>
<td>Leptospermum scoparium</td>
</tr>
<tr>
<td>Māpou</td>
<td>Red matipo</td>
<td>Myrsine australis</td>
</tr>
<tr>
<td>Matai</td>
<td>Matai/Black pine</td>
<td>Prumnopitys taxifolia</td>
</tr>
<tr>
<td>Miro</td>
<td>Miro/Brown pine</td>
<td>Podocarpus ferrugineus</td>
</tr>
<tr>
<td>Ngaio</td>
<td>Ngaio</td>
<td>Myoporum laetum</td>
</tr>
<tr>
<td>Nikau</td>
<td>New Zealand palm</td>
<td>Rhopalostylis sapida</td>
</tr>
<tr>
<td>Pānako</td>
<td>(Species of fern)</td>
<td>Asplenium obtusatum</td>
</tr>
<tr>
<td>Pānako</td>
<td>(Species of fern)</td>
<td>Botychium australe and B. biforme</td>
</tr>
<tr>
<td>Pātōtara</td>
<td>Dwarf mingimingi</td>
<td>Leucopogon fraseri</td>
</tr>
<tr>
<td>Pingao</td>
<td>Pingao</td>
<td>Desmoschoenus spiralis</td>
</tr>
<tr>
<td>Pōkākā</td>
<td>Pokaka</td>
<td>Elaeocarpus hookerianus</td>
</tr>
<tr>
<td>Ponga/Poka</td>
<td>Tree fern</td>
<td>Cyathea dealbata</td>
</tr>
<tr>
<td>Rātā</td>
<td>Southern rata</td>
<td>Metrosideros umbellata</td>
</tr>
<tr>
<td>Name in Māori</td>
<td>Name in English</td>
<td>Scientific name</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Raupō</td>
<td>Bullrush</td>
<td>Typha angustifolia</td>
</tr>
<tr>
<td>Rautāwhiri/ Kōhūhū</td>
<td>Black matipo/Mapou</td>
<td>Pittosporum tenuifolium</td>
</tr>
<tr>
<td>Rimu</td>
<td>Rimu/Red pine</td>
<td>Dacrydium cypressinum</td>
</tr>
<tr>
<td>Rimurapa</td>
<td>Bull kelp</td>
<td>Durvillaea antarctica</td>
</tr>
<tr>
<td>Taramea</td>
<td>Speargrass, spaniard</td>
<td>Aciphya spp.</td>
</tr>
<tr>
<td>Tarata</td>
<td>Lemonwood</td>
<td>Pittosporum eugenioides</td>
</tr>
<tr>
<td>Tawai</td>
<td>Beech</td>
<td>Nothofagus spp.</td>
</tr>
<tr>
<td>Tētēaweka</td>
<td>Muttonbird scrub</td>
<td>Olearia angustifolia</td>
</tr>
<tr>
<td>Ti rākau/ Ti Kōuka</td>
<td>Cabbage tree</td>
<td>Cordyline australis</td>
</tr>
<tr>
<td>Tikumu</td>
<td>Mountain daisy</td>
<td>Celmisia spectabilis and C. semicordata</td>
</tr>
<tr>
<td>Titoki</td>
<td>New Zealand ash</td>
<td>Alectryon excelsus</td>
</tr>
<tr>
<td>Toatoa</td>
<td>Mountain Toatoa, Celery pine</td>
<td>Phyllocladus alpinus</td>
</tr>
<tr>
<td>Toetoe</td>
<td>Toetoe</td>
<td>Cortaderia richardii</td>
</tr>
<tr>
<td>Tōtara</td>
<td>Totara</td>
<td>Podocarpus totara</td>
</tr>
<tr>
<td>Tutu</td>
<td>Tutu</td>
<td>Coriaria spp.</td>
</tr>
<tr>
<td>Wharariki</td>
<td>Mountain flax</td>
<td>Phormium cookianum</td>
</tr>
<tr>
<td>Whinau</td>
<td>Hinau</td>
<td>Elaeocarpus dentatus</td>
</tr>
<tr>
<td>Wi</td>
<td>Silver tussock</td>
<td>Poa cita</td>
</tr>
<tr>
<td>Wiwi</td>
<td>Rushes</td>
<td>Juncus all indigenous Juncus spp. and J. maritimus</td>
</tr>
</tbody>
</table>

**Marine mammals**

<table>
<thead>
<tr>
<th>Name in Māori</th>
<th>Name in English</th>
<th>Scientific name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ihupuku</td>
<td>Southern elephant seal</td>
<td>Mirounga leonina</td>
</tr>
<tr>
<td>Kekeno</td>
<td>New Zealand fur seals</td>
<td>Arctocephalus forsteri</td>
</tr>
<tr>
<td>Paikea</td>
<td>Humpback whales</td>
<td>Megaptera novaeangliae</td>
</tr>
<tr>
<td>Parāoa</td>
<td>Sperm whale</td>
<td>Physeter macrocephalus</td>
</tr>
<tr>
<td>Rāpoka/ Whakahao</td>
<td>New Zealand sea lion/ Hooker's sea lion</td>
<td>Phocarctos hookeri</td>
</tr>
<tr>
<td>Tohorā</td>
<td>Southern right whale</td>
<td>Balaena australis</td>
</tr>
</tbody>
</table>
Schedule 23 Customary fisheries species lists

From Schedule 98 – pursuant to section 297 Ngāi Tahu Claims Settlement Act 1998

Part A: Taonga fish species

<table>
<thead>
<tr>
<th>Name in Māori</th>
<th>Name in English</th>
<th>Scientific name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kāeo</td>
<td>Sea tulip</td>
<td>Pyura pachydermatum</td>
</tr>
<tr>
<td>Koeke</td>
<td>Common shrimp</td>
<td>Palaemon affinis</td>
</tr>
<tr>
<td>Kōkopu/Hawai</td>
<td>Giant bully</td>
<td>Gobiomorphus gobioides</td>
</tr>
<tr>
<td>Kōwaro</td>
<td>Canterbury mudfish</td>
<td>Neochanna burrowsius</td>
</tr>
<tr>
<td>Paraki/Ngaiore</td>
<td>Common smelt</td>
<td>Retropinna retropinna</td>
</tr>
<tr>
<td>Piripiripōhatu</td>
<td>Torrent fish</td>
<td>Cheimarrichthys fosteri</td>
</tr>
<tr>
<td>Taiwharu</td>
<td>Giant kokopu</td>
<td>Galaxias argenteus</td>
</tr>
</tbody>
</table>

Part B: Shellfish species

<table>
<thead>
<tr>
<th>Name in Māori</th>
<th>Name in English</th>
<th>Scientific name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipi/Kakāhi</td>
<td>Pipi</td>
<td>Paphies australe</td>
</tr>
<tr>
<td>Tuaki</td>
<td>Cockle</td>
<td>Austrovenus stutchburgi</td>
</tr>
<tr>
<td>Tuaki/Hākiari</td>
<td>Surfclam</td>
<td>Dosinia anus, Paphies</td>
</tr>
<tr>
<td>Kuhakuha/Pūrimu</td>
<td></td>
<td>donacina, Mactra discor, Mactra murchsoni, Paphies</td>
</tr>
<tr>
<td>Tuatua</td>
<td>Tuatua</td>
<td>Paphies subtriangulata, Paphies donacina</td>
</tr>
<tr>
<td>Waikaka/Pūpū</td>
<td>Mudsnaill</td>
<td>Amphibola crenata, Turbo smaragdus, Zedilom</td>
</tr>
</tbody>
</table>
(This page is intentionally left blank)
Schedule 24 Farm Practices

Definitions
In Schedule 24 the following definitions apply:

‘Cultivation’ means the preparation of land for growing pasture or a crop and the planting, tending and harvesting of that pasture or crop, but excludes:
• direct drilling of seed;
• no-tillage practices;
• re-contouring of land; and
• forestry.

‘Intensive winter grazing’ means grazing of stock between 1 May and 30 September on fodder crops or pasture where the grazing results in significant pugging or de-vegetation or the exposure of bare ground. This is usually associated with break feeding behind temporary fencing.

‘Soil moisture monitoring’ means methods of monitoring soil moisture that use either volumetric or tension based methodology.

(a) Nutrient Management:
   (i) A nutrient budget based on soil tests has been prepared, using OVERSEER® in accordance with the latest version of the OVERSEER® Best Practice Data Input Standards, or an equivalent model approved by the Chief Executive of Environment Canterbury;

   (ia) Where a material change in the land use associated with the farming activity occurs (being a change exceeding that resulting from normal crop rotations or variations in climatic or market conditions) the nutrient budget shall be prepared at the end of the year in which the change occurs, and also three years after the change occurs;

   (ib) Where a material change in the land use associated with the farming activity does not occur, the nutrient budget shall be prepared once every three years;

   (ic) An annual review of the input data used to prepare the nutrient budget shall be carried out by or on behalf of the landowner for the purposes of ensuring the nutrient budget accurately reflects the farming system. A record of the review shall be kept by the landowner.

   (ii) Fertiliser is applied in accordance with the Code of Practice for Nutrient Management [2007]; and either:
      (a) the Spreadmark Code of Practice [Feb 2014]; or
      (b) With spreading equipment that is maintained and user-calibrated to Spreadmark Code of Practice [Feb 2014] standards.

   (iii) Records of soil tests, nutrient budgets and fertiliser applications are kept and provided to the Canterbury Regional Council upon request.
(b) **Irrigation management:**  
(ii) The irrigation system application depth and uniformity are self-checked annually in accordance with the relevant Irrigation NZ Pre-Season Checklist and IRRIG8Quick Irrigation Performance Quick Tests for any irrigation system operating on the property.  
(iii) Irrigation applications are undertaken in accordance with property specific soil moisture monitoring, or a soil water budget, or an irrigation scheduling calculator.  
(iv) Records of irrigation system application depth and uniformity checklists, irrigation applications, soil moisture monitoring or soil water budget or irrigation scheduling calculator results and rainfall are kept and provided to the Canterbury Regional Council upon request.  

(c) **Intensive winter grazing:**  
(i) For all intensive winter grazing adjacent to any river, lake, artificial watercourse (excluding irrigation canals or stock water races) or a wetland, a 5m vegetative strip (measured from the edge of the bed of the river, lake, artificial watercourse, or wetland) from which stock are excluded, is maintained around the water body.  

(d) **Cultivation:**  
(i) For all cultivation adjacent to any river, lake, artificial watercourse (excluding irrigation canals, stock water races or ephemeral drains) or a wetland, a 2m uncultivated vegetative strip (measured from the edge of the bed of the river, lake, artificial watercourse, or wetland) is maintained around the water body.  

(e) **Collected Animal Effluent:**  
(i) All collection, storage and treatment systems for animal effluent installed or replaced after 1 January 2014 meet the Dairy NZ Farm Dairy Effluent Design Standard and Code of Practice [2013].  
(iii) Records of self-checked animal effluent disposal system application separation distances, depth, uniformity and intensity in accordance with Section 4 ‘Land Application’ in the Dairy NZ Farm Dairy Effluent Design Standard [2013] are kept and provided to the Canterbury Regional Council upon request.
Schedule 24a Farm Practices

(a) Nutrient Management:

(i) A nutrient budget based on soil nutrient tests has been prepared, using OVERSEER in accordance with latest version of the OVERSEER Best Practice Data Input Standards, or an equivalent model approved by the Chief Executive of Canterbury Regional Council.

(ia) Where a material change in the land use associated with the farming activity occurs (being a change exceeding that resulting from normal crop rotations or variations in climatic or market conditions) the nutrient budget shall be prepared at the end of the year in which the change occurs, and also three years after the change occurs;

(ib) Where a material change in the land use associated with the farming activity does not occur, the nutrient budget shall be prepared once every three years;

(ic) An annual review of the input data used to prepare the nutrient budget shall be carried out by or on behalf of the landowner for the purposes of ensuring the nutrient budget accurately reflects the farming system. A record of the review shall be kept by the landowner.

(ii) Fertiliser is applied in accordance with the Code of Practice for Nutrient Management [2007].

(iii) Records of soil nutrient tests, nutrient budgets and fertiliser applications are kept and provided to the Canterbury Regional Council upon request.

(b) Irrigation Management:

(i) All irrigation systems installed or replaced after 1 October 2014 meet the Irrigation New Zealand Piped Irrigation Systems Design Code of Practice [2013], Irrigation New Zealand Piped Irrigation Systems Design Standards [2013] and the Irrigation New Zealand Piped Irrigation Systems Installation Code of Practice [2013].

(ii) The irrigation system application depth and uniformity are self-checked annually in accordance with the Irrigation New Zealand Piped Irrigation System Performance Assessment Code of Practice [2015].

(iii) Irrigation applications are undertaken in accordance with property specific soil moisture monitoring, or a soil water budget, or an irrigation scheduling calculator. Soil monitoring means monitoring soil moisture using either volumetric or tension based methodology.

(iv) Records of irrigation system application depth and uniformity checklists, irrigation applications, soil moisture monitoring or soil water budget or irrigation scheduling calculator results and rainfall are kept and provided to the Canterbury Regional Council upon request.

(c) Winter grazing of intensively farmed stock:

(i) Winter grazing means grazing of stock between 1 May and 30 September. This is usually associated with break feeding behind temporary fencing.

(ii) For all winter grazing of intensively farmed stock adjacent to any river, lake, artificial watercourse (excluding irrigation canals or stock water races) or a wetland, a 3 m vegetative strip (measured from the edge of the bed of the river, lake, artificial watercourse, or wetland) from which stock are excluded, is maintained around the water body.
(d) Cultivation:

(i) Cultivation means the preparation of land for growing pasture or a crop and the planting, tending and harvesting of that pasture or crop, but excludes:
   - direct drilling of seed;
   - no-tillage practices;
   - re-contouring of land; and
   - forestry.

(ii) For all cultivation adjacent to any river, lake, artificial watercourse (excluding irrigation canals, stock water races or ephemeral drains) or a wetland, a 3 m uncultivated vegetative strip (measured from the edge of the bed of the river, lake, artificial watercourse, or wetland) is maintained around the water body.

(e) Collected Animal Effluent:

(i) Collection, storage and treatment systems for dairy effluent installed or replaced after 1 October 2014 meet the Dairy NZ Farm Dairy Effluent Design Standard and Code of Practice [2013].

(ii) The animal effluent disposal system, application, depth, separation distances, depth, uniformity and intensity are self-checked annually in accordance with Section 4 'Land Application' in the guideline "A Farmer's Guide to Managing Farm Dairy Effluent - A Good Practice Guide for Land Application Systems" [2013].

(iii) Records of the application, depth, separation distances, uniformity and intensity of dairy effluent disposal, in accordance with (e)(ii) above, are kept and provided to the Canterbury Regional Council upon request.
Schedule 24b Good Farm Practices

(a) Nutrient Management:
(i) A nutrient budget based on soil nutrient tests has been prepared, using OVERSEER in accordance with the OVERSEER Best Practice Data Input Standards [2013], or an equivalent model approved by the Chief Executive of Canterbury Regional Council.
(ii) Where a material change in the land use associated with the farming activity occurs (being a change exceeding that resulting from normal crop rotations or variations in climatic or market conditions) the nutrient budget shall be prepared at the end of the year in which the change occurs, and also three years after the change occurs.
(iii) Where a material change in the land use associated with the farming activity does not occur, the nutrient budget shall be prepared once every three years.
(iv) An annual review of the input data used to prepare the nutrient budget shall be carried out by or on behalf of the landowner for the purposes of ensuring the nutrient budget accurately reflects the farming system. A record of the review shall be kept by the landowner.
(v) Fertiliser is applied in accordance with the Code of Practice for Nutrient Management [2013].
(vi) Records of soil tests, nutrient budgets and fertiliser applications are kept and provided to the Canterbury Regional Council upon request.

(b) Irrigation Management:
(ii) The irrigation system application depth and uniformity are self-checked annually in accordance with the relevant Irrigation NZ Pre-Season Checklist and IRRIG8 Quick Irrigation Performance Quick Tests for any irrigation system operating on the property.
(iii) Irrigation applications are undertaken in accordance with property specific soil moisture monitoring, or a soil water budget, or an irrigation scheduling calculator. Soil monitoring means monitoring soil moisture using either volumetric or tension based methodology.
(iv) Records of irrigation system application depth and uniformity checklists, irrigation applications, soil moisture monitoring or soil water budget or irrigation scheduling calculator results and rainfall are kept and provided to the Canterbury Regional Council upon request.

(c) Grazing of intensively farmed stock:
(i) All grazing of intensively farmed stock adjacent to any river, lake, drain, artificial watercourse (excluding irrigation canals or stock water races) or a wetland to be prevented by fencing or a minimum of 3m vegetative strip (measured from the edge of the bed of the river, lake, artificial watercourse, or wetland) from which stock are excluded, is maintained around the water body.
(d) **Cultivation:**

(i) Cultivation means the preparation of land for growing pasture or a crop and the planting, tending and harvesting of that pasture or crop, but excludes:

- direct drilling of seed;
- no-tillage practices;
- re-contouring of land; and
- forestry.

(ii) For all cultivation adjacent to any river, lake, artificial watercourse (excluding irrigation canals, stock water races or ephemeral streams) or a wetland, a minimum of 3m uncultivated vegetative strip (measured from the edge of the bed of the river, lake, artificial watercourse, or wetland) is maintained around the water body or other appropriate sediment control measures are adopted, such as benched headlands, interception drains, bunds, grassed swales, contour drains or sediment ponds in accordance with “Horticultural NZ Erosion and Sediment Control Guidelines Vegetable Production” June 2014.

(e) **Collected Animal Effluent:**

(i) Collection, storage and treatment systems for dairy effluent installed or replaced after 1 May 2015 meet the Dairy NZ Farm Dairy Effluent Design Standard and Code of Practice [2013].

(ii) The animal effluent disposal system application separation distances, depth, uniformity and intensity are self-checked annually in accordance with Section 4 ‘Land Application’ in the guideline “A Farmers Guide to Managing Farm Dairy Effluent – A Good Practice Guide for Land Application Systems” [2013].

(iii) Records of the application, separation distances, depth, uniformity and intensity of dairy effluent disposal, in accordance with (e)(ii) above, are kept and provided to the Canterbury Regional Council upon request.
Schedule 24c Valley Floor Area River Bank Erosion Plan

A Valley Floor Area River Bank Erosion Plan must:

1. include a map(s) and aerial and other photograph(s) at a scale that clearly shows:
   (a) the area where activities to stabilise river banks will be undertaken, including a photograph of the view immediately upstream and downstream of the area of proposed activity; and
   (b) the location of existing riparian vegetation and fences adjacent to surface water bodies within the proposed works area; and

2. describe the proposed works, including any earthworks, contouring of river banks, anchored and/or weighted tree protection, and vegetation removal and planting, to stabilise the river banks and reduce bank erosion and collapse; and

3. describe the maintenance programme including the nature and frequency of expected works, and the period over which maintenance is expected to be required; and

4. describe the actions that will occur after flood events, the timing of those actions, and the responsibility for undertaking the actions, to ensure the effectiveness of the activities described in (2) above is maintained; and

5. provide an assessment of the effects of the proposed activities, at a level of detail commensurate with the scale and significance of the effects, on:
   (a) water quality of surface waterbodies, sources of human or animal drinking-water, aquatic ecosystems inanga spawning habitat of other fish and inanga spawning habitat; and
   (b) the flood carrying capacity of the river; and
   (c) mahinga kai or sites of importance to Ngāi Tahu; and
   (d) fish passage; and
   (e) lawfully established structures and access to those structures; and
   (f) flood protection vegetation; and
   (g) river bank stability, including the stability of neighbouring or downstream banks and any adjacent installed erosion control measures; and
   (h) surface water flowpaths and any deflection of surface run-off, including the potential for it to be deflected onto other properties.
Schedule 25 Water Supply Strategy

A water supply strategy is a document required to accompany an application for resource consent to take and use water for a community water supply. It must contain the following information in sufficient detail to enable the consent authority to be reasonable informed on the nature and extent of the activity and any effects of that activity on the environment:

1. A description of the community water supply system including:
   (a) the location of the water source, surface water or groundwater abstraction point, and any relevant bore numbers; and
   (b) a description of the water conveyance method; and
   (c) the geographical extent of the water supply distribution network; and
   (d) the estimated population supplied, or to be supplied, by the network; and
   (e) primary water uses e.g. stockwater, domestic, industrial or commercial use; and
   (f) expected peak demand water requirements; and
   (g) water treatment methods; and

2. An assessment of existing and future demand for water to meet:
   (a) reasonable domestic needs; and
   (b) public health needs; and
   (c) the responsibilities of municipal water supply authorities under the Local Government Act 2002 with respect to the supply of water; and
   (d) any staged increase in allocation that may be sought during the term of the water permit to meet these demands; and

3. A description of:
   (a) any proposed water conservation methods and measures to ensure efficient use of water (including both regulatory and non-regulatory actions); and
   (b) measures to minimise water loss from the water reticulation network; and
   (c) how the above measures in (3)(a) and (3)(b) will be implemented; and
   (d) performance targets to measure the effectiveness of the methods implemented; and
   (e) the timeframe for review of any specified actions listed in the implementation plan; and

4. An assessment of any alternative water sources available or alternative means of sourcing water; and

5. A drought management plan that includes:
   (a) methods to reduce consumption during water shortage conditions and particularly consumption by non-essential agricultural, residential, industrial or trade processes; and
   (b) a description of any methods to ensure water conservancy during times of drought, including but not limited to public education programmes and compliance or enforcement measures.
Schedule 26 Aquaculture Environment Plan

Part A – Aquaculture Environment Plans

An Aquaculture Environment Plan can be based on either of:

1. The material set out in Part B below;

OR

2. An industry prepared Aquaculture Environment Plan template and guidance material that:
   (a) Includes the following minimum components:
       (i) The matters set out in 1, 2, and 3 of Part B below;
       (ii) Contains a methodology that will enable development of a plan that will identify actual and potential environmental effects and risks specific to the aquaculture operation at each site, addresses those effects and risks and has a high likelihood of appropriately avoiding, remedying or mitigating those effects;
       (iii) Performance measures that are capable of being audited as set out in Part C below; and
   (b) Has been approved as meeting the criteria in (a) and being acceptable to the Canterbury Regional Council by the Chief Executive of the Canterbury Regional Council.

Part B- Aquaculture Environment Plan Default Content

The plan requirements will apply to a plan prepared for an individual aquaculture operation.

The plan shall contain as a minimum:

1. Site detail:
   (a) Physical location.
   (b) Description of the ownership and name of a contact person.

2. A map(s) or aerial photograph(s) at a scale that clearly shows:
   (a) The boundaries of the aquaculture operation including all land-based components.
   (b) The location of instream structures within the waterbodies.

3. A list of all Canterbury Regional Council resource consents held for operations at the site.

4. An assessment of the adverse environmental effects and risks associated with the aquaculture operation and how the identified effects and risks will be managed, including feed storage, feeding practice to minimise uneaten food and maximise conversion ratio, use of feed additives, stock numbers, disposal of offal and dead fish and discharge of other waste.

5. A description of how each of the following objectives will, where relevant, be met:
   (a) Feed management: Maximise feed conversion efficiency and minimise wastage.
   (b) Feed additives: Feed additives are used in accordance with manufacturer’s instructions and authorised, where applicable, by resource consent.
   (c) Offal pits: The number and location of pits is managed to minimise risks to health and water quality.

6. The plan shall include for each objective in 5 above;
   (a) detail commensurate with the scale of the environmental effects and risks;
(b) defined measurable targets that clearly set a pathway and timeframe for achievement and set out defined and auditable “pass/fail” criteria;
(c) a description of the practices and actions required to achieve the objectives; and
(d) the records required to be kept for measuring performance and achievement of the objective.

7. Nutrient budgets are prepared by a suitably qualified person, and include information relating to nitrogen inputs, outputs and losses to water for the aquaculture operation at each site, including calibration data to support key assumptions.

Part C – Aquaculture Environment Plan Audit Requirements

The Aquaculture Environment Plan must be audited by a qualified auditor who is independent of the operation being audited (i.e. is not a professional adviser for the operation) and has not been involved in the preparation of the Aquaculture Environment Plan.

The aquaculture operation will be audited against the following minimum criteria:

1. An assessment of the performance against the objectives, practices and timeframe in the Aquaculture Environment Plan;

2. An assessment of the robustness of the nutrient budget(s); and

3. An assessment of the efficiency of feed used.

The audit shall be carried each year to for the period 1 July to 30 June in the following year and a copy of the audit report shall be provided annually, no later than 31 October.
Schedule 27 On-Land Nitrogen Load Conversion

The Haldon Zone, Mid Catchment Zone, Valley and Tributaries Zone and Whitneys Creek Zone all have a portion of the load limit (stated in Table 15B(f)) that has not been utilised prior to 13 February 2016. This portion is available for agricultural intensification in these areas.

The load limits in Table 15B(f) are calculated in-river or in-lake after attenuation has occurred. To establish what amount of nitrogen (t/yr) is available to consent applicants on land, nitrogen loads need to be converted to land based nitrogen loads. To calculate land based nitrogen loads the latest version of OVERSEER® needs to be used. When a new version of OVERSEER® is released to the public, Environment Canterbury will adjust the land based load limits using the new version of OVERSEER® and the updated land based load limits will be published on the Environment Canterbury website.

When a new version of OVERSEER® is released, Environment Canterbury will use the equations specified in Schedule 27 to determine the land based amount of nitrogen available for further intensification in the Haldon Zone, Mid Catchment Zone, Valley and Tributaries Zone and Whitneys Creek Zone.

The equations to calculate the land based amount of nitrogen available for intensification include a set of fixed inputs (in-lake and in-river loads, and reference land uses). The equations also include a changing input, being the Matrix of Good Management loss rates, which change in response to OVERSEER® version updates.

Part A: Calculating Land Based Nitrogen Loads for the Haldon Zone and Mid Catchment Zone

In the Haldon Zone and the Mid Catchment Zone, an agricultural calibration factor is used as the link between the agricultural portion of the land based nitrogen load and in-lake nitrogen load. The same calibration factor is used in both zones. The relationship between on land and in-lake nitrogen loads is depicted in Figure 1 below.

Figure 1. Relationship between on-land nitrogen loads and in-lake nitrogen loads
The input data includes:

A  =  ‘Reference’ land use pattern provided in Part C of Schedule 27, representing the current and consented agricultural land use at 1 December 2013 in the Haldon Zone.

B  =  Unutilised portion of the Community Wastewater load (22.1 tonnes) for the Haldon Zone.

C  =  328 tonnes N/yr (the agricultural portion of the Haldon Zone Nitrogen Load Limit in Table 15B(f)).

E1 =  66 tonnes N/yr (the unutilised portion of the Haldon Zone Load Limit in Table 15B(f) as at 13 February 2016)).

E2 =  5 tonnes N/yr (the unutilised portion of the Mid Catchment Zone Load Limit in Table 15B(f) as at 13 February 2016).

F  =  Matrix of Good Management Practice Loss Rates.

Step 1

Calculating the calibration factor (G) which is the relationship between the in-lake nitrogen load and the land based agriculture nitrogen load.

Calculate the land based nitrogen load (H1) associated with the reference land use for the Haldon Zone using the below equation (this is the sum of the losses for all of the land use/climate/soil combination blocks in the area):

\[ H1 = \sum A \times F \text{ (tonnes N/yr)} \]

Use H1 to calculate the calibration factor (G):

\[ G = \frac{H1}{C} \]

Step 2

Calculating the Upper Waitaki Nitrogen Headroom per property (J1 - Haldon Zone and J2 - Mid-Catchment Zone)

Haldon Zone

Additional input data for calculating J1 includes:

K1 =  172,000, which is the hectares of non-irrigated land in the Haldon Zone that meets the criteria of under 900 metres above sea level and on a slope less than 25 degrees.

L1 =  hectares of non-irrigated land on property within the Haldon Zone that meets the criteria of under 900 metres above sea level and on a slope less than 25 degrees.

90\% of the unutilised portion of the Nitrogen Load Limit in the Haldon Zone is for agriculture. Calculate this portion (I1) using:

\[ I1 = \left( \frac{E1 \times G - B}{2} \times 0.9 \text{ (tonnes N/yr)} \right) - \text{the amount of on-land based agricultural N load allocated in excess of the Baseline GMP Loss Rate + 1.6 kg/N/ha via a resource consent granted after 1 December 2013 in respect of an application made before Rules 15B.5.26 to 15B.5.32 become operative).} \]
Calculate the Upper Waitaki Nitrogen Headroom available per property in the Haldon Zone (J1) using:

\[ J_1 = \frac{(I_1/K_1)}{L_1} \text{ (tonnes N/yr)} \]

**Mid-Catchment Zone**

**Additional input data for calculating J2 includes:**

- \( K_2 = 16,000 \) is the hectares of non-irrigated land in the Mid Catchment Zone that meets the criteria of under 900 metres above sea level and on a slope less than 25 degrees.
- \( L_2 \) = hectares of non-irrigated land on property within the Mid Catchment Zone that meets the criteria of under 900 metres above sea level and on a slope less than 25 degrees.

Calculate the unutilised portion of the Nitrogen Load Limit available in the Mid Catchment Zone (I2) using:

\[ I_2 = E_2 x G \text{ (tonnes N/yr)} \]

Calculate the Upper Waitaki Nitrogen Headroom available per property in the Mid Catchment Zone (J2) using:

\[ J_2 = \frac{(I_2/K_2)}{L_2} \text{ (tonnes N/yr)} \]

**Part B: Calculating Land Based Loads for Valley and Tributaries Zone and Whitneys Creek Zone**

In the Valley and Tributaries Zone and Whitneys Creek Zone, reference maps are used to calculate the load limit, and consents are granted on a first come, first served basis.

**The input data includes:**

- \( A \) = ‘Reference’ land use pattern provided in Part C of Schedule 27, representing the current and consented land use at 1 January 2015 in the Valley and Tributaries Zone (Map s27.3) or the Whitneys Creek Zone (Map s27.5).
- \( C \) = Consented aquaculture nitrogen annual load (Valley and Tributaries Zone only).
- \( D \) = ‘Reference’ land use pattern provided in Part C of Schedule 27, representing the nitrogen load limit in the Valley and Tributaries Zone (Map s27.4) or Whitneys Creek Zone (Map s27.6).
- \( M \) = nitrogen loss rates (tonnes/ha/yr) specified in land use consents granted after 13 February 2016.
- \( F \) = Matrix of Good Management Practice Loss Rates.

**Step 1**

Calculate the land based nitrogen load limit (G) associated with the reference land use pattern (D) and the land based nitrogen load limit (H) associated with the reference land use pattern (A) using the below equation (this is the sum of the losses for all of the land use ‘blocks’ in the area):

\[ G = \sum D \times F \]

\[ H = (\sum A \times F) + M \]
Step 2
Calculate the consented load (I)

\[ I = H + C \]

Step 3
Calculate the load available for allocation (J)

\[ J = (G \times 1.1) - I \]

Part C: Reference Land Use Patterns
Map s27.1: Haldon Zone land use reference map
Map s27.2: Mid-Catchment Zone land use reference map
Map s27.3: Valley and Tributaries Zone land use reference map (current and consented land use at 1 January 2015)

Map s27.4: Valley and Tributaries Zone land use reference map (nitrogen load limit)
Map s27.5: Whitneys Creek Zone land use reference map (current and consented land use at 1 January 2015)

Map s27.6: Whitneys Creek Zone land use reference map (nitrogen load limit)
Schedule 28 Good Management Practice Modelling Rules

The Farm Portal (farmportal.ecan.govt.nz) is a web-based tool that estimates the nutrient losses from a farming activity operating under Good Management Practice. The Farm Portal achieves this by applying a set of modelling proxies that correlate with 'Good Management Practice' to uploaded OVERSEER® nutrient budgets.

Table s28 sets out each of the 'Good Management Practices' modelled by the Farm Portal. Included beside each 'Good Management Practice' is a description of the modelling proxies, OVERSEER® settings and methodologies applied by the Farm Portal to a nutrient budget to model each of the listed practices.

The following should be noted when reading Table s28:
- Text in italics refers to the name of a data entry webpage in OVERSEER®
- Text in double quotation marks refers to the title of a data entry field in OVERSEER®
- Text in single quotation marks refers to the option selected from a drop-down menu, or the value that has been entered into a data entry field.

Disclaimer
Schedule 28 summarises the methodologies, formulae and OVERSEER® settings applied by the Farm Portal to a nutrient budget, when modelling nutrient losses under Good Management Practice. This schedule may not include all of the detailed figures, parameters and formulae applied by the Farm Portal to a nutrient budget when modelling a nutrient loss under Good Management Practice. For the avoidance of doubt, Baseline GMP Loss Rates and Good Management Practice Loss Rates as estimated by the Farm Portal prevail over the formulae, methodologies and figures contained in Schedule 28.

Future updates to OVERSEER® may result in inconsistencies between the terminology used in this schedule and the terminology used in the latest version of OVERSEER®. Inconsistencies between the terminology used in this schedule and the terminology used in the latest version of OVERSEER® are not to be interpreted by the reader as implying OVERSEER® settings referred to in this Schedule do not apply. The Farm Portal will be operated in such a way as to ensure that the terminology and settings used in this schedule are applied to the latest version of OVERSEER® with any necessary adjustments or modification required to ensure that the Farm Portal operates as intended.
Table s28: Good Management Practices and Modelling Rules applied by the Farm Portal

<table>
<thead>
<tr>
<th>Topic</th>
<th>Good Management Practice</th>
<th>OVERSEER® settings, methodologies and rules applied by the Farm Portal to model Good Management Practice</th>
<th>Applicable farming activities</th>
</tr>
</thead>
</table>
| **Cultivation and Soil Structure** | Manage farming operations to minimise direct and indirect losses of sediment and nutrients to water, and maintain or enhance soil structure where agronomically appropriate. | The following settings are applied to the Blocks - Soil Profile page in OVERSEER®:  
• In the section "Top soil texture" the option ‘Is compacted’ is not selected.  
The following settings are applied to the Blocks - Drainage/Runoff page in OVERSEER® for all pastoral blocks:  
• The option 'Run-off is intercepted by a grass filter strip' is selected.  
• Grass filter strips established in accordance with the values set out in Table s28.1.  
• In the section "Susceptibility to pugging or treading damage", the option 'occasional' is selected. | All                           |
| **Ground Cover**          | Manage periods of exposed soil between crops/pasture to reduce risk of erosion, overland flow and leaching. | Where the fallow period for a block is greater than three months, the modelling rules set out in Table s28.2 are applied.                                                                 | All crop and fodder blocks    |
| **Sediment, phosphorus and faecal bacteria** | Identify risk of overland flow of sediment and E.coli, and implement measures to minimise transport of these to water bodies. | The following settings are applied to the Blocks - Drainage/Runoff page in OVERSEER® for all pastoral blocks:  
• The option ‘Run-off is intercepted by a grass filter strip’ is selected.  
• Grass filter strips established in accordance with the values set out in Table s28.1. | Pastoral                     |
<table>
<thead>
<tr>
<th>Topic</th>
<th>Good Management Practice</th>
<th>OVERSEER® settings, methodologies and rules applied by the Farm Portal to model Good Management Practice</th>
<th>Applicable farming activities</th>
</tr>
</thead>
</table>
| Locate and manage farm tracks, gateways, water troughs, self-feeding areas, stock camps, wallows and other sources of runoff to minimise risks to water quality. | The following settings are applied to the Blocks - Drainage/Runoff page in OVERSEER®:  
- The option 'Run-off is intercepted by a grass filter strip' is selected.  
- Grass filter strips established in accordance with the values set out in Table s28.1. | Pastoral |
| To the extent that is compatible with land form, stock class and intensity, exclude stock from waterways. | The following settings are applied to the Blocks - Animals page in OVERSEER®:  
- In the section "Animal Water Connectivity" the options 'Pace Fence line' and 'Wallows visible' are not selected. | Deer |
| Monitor soil phosphorus levels and maintain them at or below the agronomic optimum for the farm system. | The following rules are applied:  
- The Olsen P value is set to 20 for each crop sown (averaged over the whole rotation).  
- Any phosphorus removed in the product and residue is replaced, taking into account a fertiliser efficiency factor of 75%.  
- The phosphorus fertiliser requirements are calculated in accordance with Method s28.1  
- Phosphorus is applied in the form of superphosphate.  
- Phosphorus is applied in the same month as the crop is sown.  
- Phosphorus fertiliser is only applied if the plant requirements are 5kg P/ha or greater. | Cropping |
| | The following rules are applied:  
- The Olsen P value is set to the applicable value, as set out in Table s28.3.  
- Maintenance fertiliser amounts (kg P/ha/yr), as calculated by OVERSEER® are used to maintain the Olsen P value.  
- Maintenance Phosphorus fertiliser is applied in the soluble form and applied in the month of October. | Pastoral |
<table>
<thead>
<tr>
<th>Topic</th>
<th>Good Management Practice</th>
<th>OVERSEER® settings, methodologies and rules applied by the Farm Portal to model Good Management Practice</th>
<th>Applicable farming activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nutrient Management</strong></td>
<td>Manage the amount and timing of fertiliser inputs, taking account of all sources of nutrients, to match plant requirements and minimise risk of losses.</td>
<td>The following rules are applied:</td>
<td>Cropping</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Phosphorus that is supplied in any effluent applied is subtracted from the maintenance Phosphorus requirement.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Nitrogen fertiliser applied is based on the deficit between the amount of nitrogen already in the soil (e.g. from organic matter mineralisation and residue) and the amount of nitrogen taken up by the crop (driven by yield), as calculated in accordance with Method s28.2.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• A fertiliser inefficiency factor of 0.3 is assumed.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Nitrogen fertiliser is only applied where the nitrogen requirements of the crop are &gt;46 kg N/ha (equivalent to 100kg urea).</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• No fertiliser is applied in the period May to July, unless more than 75% of a vegetable crop’s growing period occurs within this time period.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Where more than 75% of a vegetable crop’s growing period occurs within May to July:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Fertiliser is applied in the month where uptake of nitrogen by the crop is at its peak.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Nitrogen fertiliser is applied in split and equal applications.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Nitrogen is applied in the form of urea.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Where nitrogen is applied during sowing:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Nitrogen fertiliser is incorporated into soils.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Where nitrogen is applied during the growing period:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Nitrogen fertiliser is surface applied.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The following rules are applied:</td>
<td>Pastoral</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Nitrogen fertiliser is applied in accordance with Method s28.3.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• No fertiliser is applied in May, June or July.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Maximum fertiliser application rate is 50kg/N/ha/month for pastoral blocks.</td>
<td></td>
</tr>
<tr>
<td><strong>Irrigation and water use</strong></td>
<td>Manage the amount and timing of irrigation inputs to meet plant demands and</td>
<td>The following settings are applied to the Blocks - Irrigation Management page in OVERSEER® for spray irrigation systems:</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Spray Irrigation</td>
<td></td>
</tr>
<tr>
<td>Topic</td>
<td>Good Management Practice</td>
<td>OVERSEER® settings, methodologies and rules applied by the Farm Portal to model Good Management Practice</td>
<td>Applicable farming activities</td>
</tr>
<tr>
<td>---------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------</td>
</tr>
<tr>
<td></td>
<td>minimise risk of leaching and runoff.</td>
<td>In the section &quot;Management Options&quot;:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The category &quot;Based On&quot; is set as 'Soil Water Budget'</td>
<td>• The category &quot;Based On&quot; is set as 'Soil Water Budget'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The &quot;Strategy&quot; selected is 'Trigger Point, Fixed Depth Applied'</td>
<td>• The &quot;Strategy&quot; selected is 'Trigger Point, Fixed Depth Applied'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The &quot;Management Systems&quot; selected is 'User Defined'</td>
<td>• The &quot;Management Systems&quot; selected is 'User Defined'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The &quot;Units&quot; is set at '%PAW'</td>
<td>• The &quot;Units&quot; is set at '%PAW'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The &quot;Trigger Point&quot; is set at '50%'</td>
<td>• The &quot;Trigger Point&quot; is set at '50%'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The following rules are also applied to cropping blocks:</td>
<td>The following rules are also applied to cropping blocks:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Irrigation occurs in accordance with Method s28.4</td>
<td>• Irrigation occurs in accordance with Method s28.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• No irrigation in fallow months</td>
<td>• No irrigation in fallow months</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• No irrigation of seed crops at time of harvest.</td>
<td>• No irrigation of seed crops at time of harvest.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No irrigation of grain, dried legumes, root vegetables and onions:</td>
<td>No irrigation of grain, dried legumes, root vegetables and onions:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• in the final growing month of crop; or</td>
<td>• in the final growing month of crop; or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• if the total nitrogen uptake of the crop is ≥96%.</td>
<td>• if the total nitrogen uptake of the crop is ≥96%.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Borderdyke Irrigation</strong></td>
<td><strong>Borderdyke Irrigation</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The following settings are applied to the Blocks - Irrigation Management page in OVERSEER® for borderdyke irrigation systems:</td>
<td>The following settings are applied to the Blocks - Irrigation Management page in OVERSEER® for borderdyke irrigation systems:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>In the section &quot;Management Options&quot;:</td>
<td>In the section &quot;Management Options&quot;:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The &quot;Outwash Management&quot; option is set as 'No outwash'</td>
<td>• The &quot;Outwash Management&quot; option is set as 'No outwash'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The &quot;Management Systems Definition&quot; is set as 'User Defined'</td>
<td>• The &quot;Management Systems Definition&quot; is set as 'User Defined'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The &quot;Depth per application&quot; is set at '85'</td>
<td>• The &quot;Depth per application&quot; is set at '85'</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• The &quot;Return Period&quot; is set at '14'.</td>
<td>• The &quot;Return Period&quot; is set at '14'.</td>
<td></td>
</tr>
<tr>
<td>Feed</td>
<td>Store, transport and distribute feed to minimise wastage, leachate and soil damage.</td>
<td>The following settings are applied to the Blocks - Supplements Made page in OVERSEER® where the supplements are made on the farm and the &quot;Category&quot; selected is 'Silage' or 'Baleage':</td>
<td>All</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Where the &quot;Destination&quot; selected is 'Paddocks', 'Enterprise on Pastoral' or 'To Storage'</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The &quot;Storage Conditions&quot; are set to 'Average'</td>
<td></td>
</tr>
<tr>
<td>Topic</td>
<td>Good Management Practice</td>
<td>OVERSEER® settings, methodologies and rules applied by the Farm Portal to model Good Management Practice</td>
<td>Applicable farming activities</td>
</tr>
<tr>
<td>------------------------------</td>
<td>--------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
<td>-------------------------------</td>
</tr>
</tbody>
</table>
| Farm effluent and waste water management | Have suitable storage available to enable farm effluent and waste water to be stored when soil conditions are unsuitable for application. | - The option 'Supplements wrapped or covered in plastic' is selected.  
- The option 'Silage stack is used' is selected (This setting only applies where the category of supplement is silage)  
- The additional OVERSEER® settings are applied where the "Destination" selected is 'Paddocks':  
  - The "Utilisation" is set to 'Average'  
- The following rules are also applied:  
  - Effluent from the silage stack is contained.  
- The following settings are applied to the Farm Scenario - Supplements Imported page in OVERSEER® where supplements have been imported on to the property:  
  - Where the "Category" selected is 'Purchased':  
    - The "Storage Conditions" are set to 'Average'  
| All                          |                          | All                                                                                               | All                          |
| Apply effluent to pasture and crops at depths, rates and times to minimise risk to water bodies. | The following rules are applied:  
- The liquid effluent is applied at a rate not exceeding 200 kgN/ha/yr (organic nitrogen).  
- No application of effluent or feed pad scrapings occurs in the months of May June or July. | All                                                                                               |
<table>
<thead>
<tr>
<th>Topic</th>
<th>Good Management Practice</th>
<th>OVERSEER® settings, methodologies and rules applied by the Farm Portal to model Good Management Practice</th>
<th>Applicable farming activities</th>
</tr>
</thead>
</table>
| **Intensive winter grazing** | Select appropriate wintering paddocks recognising and mitigating possible nutrient and sediment loss from critical source areas. | The following settings are applied to the *Blocks -Drainage/Runoff* page in OVERSEER® for all pastoral blocks:  
   - The option ‘Run-off is intercepted by a grass filter strip’ is selected.  
   - Grass filter strips established in accordance with the values set out in Table s28.1. | All                         |
Table s28.1: Grass filter strip parameters

<table>
<thead>
<tr>
<th>OVERSEER® Parameter</th>
<th>Modelling rule applied or value entered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catchment Area captured (as percentage of the block)</td>
<td>5</td>
</tr>
<tr>
<td>Area of block in grass filter strip (%)</td>
<td>1</td>
</tr>
<tr>
<td>Width of strip (m)</td>
<td>2</td>
</tr>
<tr>
<td>Length of strip (m)</td>
<td>Calculated from the area and width of the block used as the grass filter strip</td>
</tr>
<tr>
<td>Age of strip (years)</td>
<td>5</td>
</tr>
<tr>
<td>Entry condition</td>
<td>Flat entry</td>
</tr>
<tr>
<td>Percentage of flow that drains through the strip</td>
<td>50</td>
</tr>
<tr>
<td>Percentage of runoff that is intercepted by the strip or runoff not in channels</td>
<td>50</td>
</tr>
</tbody>
</table>

Table s28.2: Good Management Practice Modelling Rules for Fallow Periods

<table>
<thead>
<tr>
<th>Fallow Period</th>
<th>Modelling Rule Applied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irrigated Land</td>
<td></td>
</tr>
<tr>
<td>Where the fallow period commences in any month between August and May inclusive</td>
<td>Cover crops planted in the month following harvest</td>
</tr>
<tr>
<td>Where the fallow period commences in June or July inclusive</td>
<td>Cover crops planted in August</td>
</tr>
<tr>
<td>Dry Land</td>
<td></td>
</tr>
<tr>
<td>Where the fallow period commences between December and April</td>
<td>Cover crops planted in April</td>
</tr>
<tr>
<td>Where the fallow period commences in June or July</td>
<td>Cover crops planted in August</td>
</tr>
<tr>
<td>Where the fallow period commences in any other month</td>
<td>Cover crops planted in the month following harvest.</td>
</tr>
</tbody>
</table>

Table s28.3: Target Olsen P Values at Good Management Practice

<table>
<thead>
<tr>
<th>Pastoral system</th>
<th>Target Olsen P Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dairy Pasture</td>
<td>30 for ash and sedimentary soils, 45 for peat and pumice</td>
</tr>
<tr>
<td>Sheep, Beef and Deer Pasture on Flat Land</td>
<td>20</td>
</tr>
<tr>
<td>Sheep, Beef and Deer on Cultivatable Downs</td>
<td>20</td>
</tr>
<tr>
<td>Sheep, Beef and Deer on High and Hill Country</td>
<td>15</td>
</tr>
</tbody>
</table>
Method s28.1: Methodology for the application of phosphorus fertiliser to crops under Good Management Practice

The phosphorus fertiliser requirement (kg P/ha/yr) of each crop (Pfert) is calculated as an O balance state, assuming a steady state Olsen P:

\[ Pfert = \frac{1}{P_{RetentionFactor}} \cdot Premoved \]

where: \( Premoved = ProductP_{removed} + StoverP_{removed} \)

\( Pfert \) is calculated to replace any \( Premoved \) in product and stover (ie residue) after taking into account the \( P_{RetentionFactor} \) in cultivated soils.

\( P_{RetentionFactor} \) is a constant of the value 0.75. This is describing an average P efficiency of 75% in arable systems in New Zealand.

To calculate the parameters in the above equations:

\( ProductP_{removed} \)

\[ ProductP_{removed} = ProductYield \times DM \times \frac{P_{prodmin}}{100} \times 1000 \]

\( StoverP_{removed} \) is a series of equations as follows

\[ HI = a_{harvest} + (b_{harvest} \times ProductYield \times 1000) \]

\[ StoverWt = \left( \frac{ProductYield}{HI} - ProductYield \right) \times DM \]

\( ResidueCoef \) describes how much residue would be remaining in the field after the residue disposal method has occurred. The disposal method and associated co-efficient is set out below

<table>
<thead>
<tr>
<th>Residue Disposal Method</th>
<th>Residue Coefficient (ResidueCoef)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burnt</td>
<td>0.3</td>
</tr>
<tr>
<td>Grazed</td>
<td>0.5</td>
</tr>
<tr>
<td>Removed</td>
<td>0.2</td>
</tr>
<tr>
<td>Retained</td>
<td>1</td>
</tr>
</tbody>
</table>
Method s28.2: Methodology for the application of nitrogen to crops under Good Management Practice

The fertiliser requirement of each crop ($N_{fert}$) is calculated from a nitrogen balance as:

$$N_{fert} = (N_{plant} - N_{nonfert}) \times (1 + FertInEff)$$

where:

- $N_{plant}$ is the amount of nitrogen the plant needs to achieve its stated yield.
- $FertInEff$ has a value of 0.3

$N_{nonfert}$ is the sum of non-fertiliser nitrogen sources that will be available to the crop, including:

<table>
<thead>
<tr>
<th>Source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>$N_{residue}$</td>
<td>nitrogen mineralised from previous crop residues and dung from grazing animals</td>
</tr>
<tr>
<td>$N_{som}$</td>
<td>nitrogen mineralised from soil organic matter</td>
</tr>
<tr>
<td>$N_{irrigation}$</td>
<td>nitrogen dissolved in irrigation water</td>
</tr>
<tr>
<td>$N_{atmosphere}$</td>
<td>nitrogen dissolved in rain water and from biological fixation</td>
</tr>
<tr>
<td>$N_{urine}$</td>
<td>nitrogen from urine of grazing animals</td>
</tr>
<tr>
<td>$N_{effluent}$</td>
<td>nitrogen from the application of liquid or solid dairy effluent.</td>
</tr>
</tbody>
</table>

$$N_{nonfert} = N_{residue} + N_{som} + N_{irrigation} + N_{atmosphere} + N_{urine} + N_{effluent}$$

$N_{urine}$ is calculated for grazing that occurs within the duration of a crop. $N_{urine}$ returns from final grazings are not considered.

For each grazing event that is not occurring on the final month of a crop, $N_{urine}$ is calculated as:

$$N_{urine} = (N_{standing_{m-1}} + N_{plant_{m}}) - N_{standing_{m}} \times Utilisation \times UrineFactor$$

where:

- $Utilisation$ has a value of 0.8
- $Urine Factor$ has a value of 0.2
- $N_{plant_{m}}$ is the nitrogen uptake by the plant in the final month of grazing
- $N_{standing_{m}}$ is the amount of nitrogen standing in crop biomass in the month of grazing
- $N_{standing_{m-1}}$ is the amount of nitrogen standing in crop biomass in the month prior to grazing.
Method s28.3: Methodology for the application of nitrogen to pastoral systems under Good Management Practice

The fertiliser requirement of permanent pastures is calculated as follows:

\[ N_{fert} = (N_{plant} - N_{effluent} - N_{irrigation} - N_{nonfert}) \times (1 + Fert\&InEff) \]

where:

- \( N_{plant} \) is the net uptake of nitrogen by the pasture when no fertiliser applications are made and is the difference between the total pasture uptake and the pasture residues. \( N_{plant} \) is taken from background calculations in OVERSEER, and is the area of pasture between urine patches.
- \( N_{effluent} \) is the amount of effluent nitrogen applied to the pasture when no fertiliser applications are made
- \( N_{irrigation} \) is the amount of nitrogen in the irrigation water applied to the pasture.
- \( Fert\&InEff \) is a value of 0.4
- \( N_{nonfert} \) is the sum of other non-fertiliser nitrogen sources available to the pasture (including that from the mineralisation of soil organic matter and biological fixation of atmospheric nitrogen).

The following \( N_{nonfert} \) values apply:

<table>
<thead>
<tr>
<th>Overseer Pasture Type</th>
<th>( N_{nonfert} ) (kg N/ha/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grass only</td>
<td>125</td>
</tr>
<tr>
<td>Lucerne</td>
<td>2000</td>
</tr>
<tr>
<td>All other types</td>
<td>250</td>
</tr>
</tbody>
</table>
Method s28.4: Methodology for the application of irrigation water by spray irrigation systems under Good Management Practice

Irrigation water applied in accordance with the values set out below:

<table>
<thead>
<tr>
<th>Irrigation System</th>
<th>Trigger Point for Irrigation</th>
<th>Target Refill Point</th>
<th>Application Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear and Centre Pivot systems</td>
<td>50% PAW&lt;sub&gt;60&lt;/sub&gt;</td>
<td>90% PAW&lt;sub&gt;60&lt;/sub&gt;</td>
<td>Minimum – 10mm&lt;br&gt;Maximum – 40mm</td>
</tr>
<tr>
<td>Micro-irrigation or solid set irrigation systems</td>
<td>50% PAW&lt;sub&gt;60&lt;/sub&gt;</td>
<td>90% PAW&lt;sub&gt;60&lt;/sub&gt;</td>
<td>Minimum – 10mm&lt;br&gt;Maximum – 65mm</td>
</tr>
<tr>
<td>Travelling irrigation systems</td>
<td>50% PAW&lt;sub&gt;60&lt;/sub&gt;</td>
<td>90% PAW&lt;sub&gt;60&lt;/sub&gt;</td>
<td>Where PAW&lt;sub&gt;60&lt;/sub&gt; is &lt;40 mm:&lt;br&gt;• Minimum application is 10mm (application rate unachievable with travelling irrigation system) change system to Linear or Centre Pivot.&lt;br&gt;Where the PAW&lt;sub&gt;60&lt;/sub&gt; is ≥40 mm and &lt;80mm:&lt;br&gt;• Application depth is 40mm&lt;br&gt;Where PAW&lt;sub&gt;60&lt;/sub&gt; is ≥80 mm:&lt;br&gt;• Maximum application is 40mm</td>
</tr>
<tr>
<td>Sprayline irrigation systems</td>
<td>50% PAW&lt;sub&gt;60&lt;/sub&gt;</td>
<td>90% PAW&lt;sub&gt;60&lt;/sub&gt;</td>
<td>Where the PAW&lt;sub&gt;60&lt;/sub&gt; is ≤40 mm:&lt;br&gt;• Minimum application is 10mm (application rate unachievable with travelling irrigation system) change system to Linear or Centre Pivot.&lt;br&gt;Where the PAW&lt;sub&gt;60&lt;/sub&gt; is ≥40 mm and &lt;80mm:&lt;br&gt;• Application depth is 35mm&lt;br&gt;Where the PAW&lt;sub&gt;60&lt;/sub&gt; is ≥80 mm:&lt;br&gt;• Maximum application is 65mm</td>
</tr>
</tbody>
</table>
Schedule 29 Methodology for Updated Flexibility Caps

Updated flexibility caps will be calculated by the Council, as soon as practicable each time the nutrient model used for determining compliance with the updated flexibility caps is updated. For the purpose of this schedule, “the nutrient model” is either OVERSEER or an equivalent model approved by the Chief Executive of Environment Canterbury.

Table s29.1 shows the updated flexibility caps calculated using OVERSEER® version 6.2.1 employing the “nominal method” (Option 1) and using the “first listed” input files (as described in Appendix 4 to “Caucusing statement in relation to nutrient management rule framework 5 February 2016”).

Until the nutrient model is superseded by an updated version, the updated flexibility caps are shown in Table s29.1.

Table s29.1 Updated Flexibility Caps for the Northern Streams Area and Waihao-Wainono Area calculated using OVERSEER version 6.2.1

<table>
<thead>
<tr>
<th>Waihao-Wainono Area</th>
<th>Northern Streams Area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Waihao-Wainono Plains sub-area</td>
</tr>
<tr>
<td>Flexibility Cap (kg N/ha/yr)</td>
<td>A</td>
</tr>
<tr>
<td>From when Plan Change 3 becomes operative</td>
<td>From when augmentation has occurred in the preceding calendar year and after 1 January 2025</td>
</tr>
<tr>
<td>12</td>
<td>14</td>
</tr>
</tbody>
</table>

Whenever the current version of the nutrient model is superseded by an updated version, updated flexibility caps will be shown in a table entitled “Updated flexibility cap for the Northern Streams Area and Waihao-Wainono Area” and published on the Environment Canterbury website. The updated flexibility cap shall be calculated as follows:

1. After each version change to the nutrient model, using the most recent version of the model and the associated Best Practice Input Data standards, calculate the nitrogen loss (expressed as kg N/ha/yr) for each OVERSEER input file referenced in Table s29.2, as defined in Appendix 4 to the Minute 7 Caucus Report and published on the Environment Canterbury website (ecan.govt.nz).
Table s29.2: Referenced OVERSEER input files required to calculate the Updated Flexibility Caps as published on the Environment Canterbury website.

<table>
<thead>
<tr>
<th>Area</th>
<th>OVERSEER input file name</th>
<th>Nitrogen loss number (kg/ha/yr) using OVERSEER version 6.2.1</th>
<th>Nitrogen loss number (kg/ha/yr) following the first OVERSEER release that occurs after version 6.2.1</th>
<th>Nitrogen loss number (kg/ha/yr) following each subsequent OVERSEER version release</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waihao-Wainono Plains sub-area and Northern Streams Plains sub-area</td>
<td>Plains A (6 files)</td>
<td>For each soil class</td>
<td>[to be completed as soon as practicable following the first OVERSEER release after version 6.2.1]</td>
<td>[to be completed as soon as practicable following each subsequent OVERSEER version release]</td>
</tr>
<tr>
<td></td>
<td>Plains B (6 files)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plains C (6 files)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plains D (6 files)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plains E (6 files)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plains F (6 files)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plain G (6 files)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plains H (6 files)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waihao-Wainono Hill sub-area and Northern Streams Hill sub-area</td>
<td>Hill A</td>
<td>14</td>
<td>[to be completed as soon as practicable following the first OVERSEER release after version 6.2.1]</td>
<td>[to be completed as soon as practicable following each subsequent OVERSEER version release]</td>
</tr>
<tr>
<td></td>
<td>Hill B</td>
<td>9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Using the nitrogen loss numbers calculated in accordance with step 1 above, prepare an update to Table s29.2 by adding a new column with the new nitrogen loss numbers for each new version of the nutrient model.

3. Calculate the percentage change in nitrogen loss numbers between the latest version of the nutrient model and its predecessor for each OVERSEER input file referenced in Table s29.2.

4. Calculate the mean percentage change for all of the nitrogen loss numbers listed within each of the three Area rows in the latest Table s29.2 and publish the “Referenced OVERSEER input files required to calculate the Updated Flexibility Caps” on the Environment Canterbury website.

5. Apply the mean percentage change for each area calculated above to each of the corresponding flexibility cap numbers that are published on the Environment Canterbury website. For the purposes of undertaking this step, the results of that calculation will be published in a table entitled “Updated flexibility cap for the Northern Streams Area and Waihao-Wainono Area” on the Environment Canterbury website.

6. The steps described in 1-5 above must be undertaken by a suitably qualified and experienced person.

7. The suitably qualified and experienced person shall be appointed by the Chief Executive.
of the Canterbury Regional Council and that person holds either:

a. a Certificate of Completion in Advanced Sustainable Nutrient Management in New Zealand Agriculture from Massey University; or

b. holds a tertiary qualification in agricultural science or demonstrates an equivalent level of knowledge and experience.
(This page is intentionally left blank)
Schedule 30 Methodology for Updating Maximum Caps

Updated maximum caps will be calculated by the Council, as soon as practicable, each time the nutrient model used for determining compliance with the updated maximum caps is updated. For the purpose of this schedule, “the nutrient model” is either OVERSEER or an equivalent model approved by the Chief Executive of Environment Canterbury.

Table s30.1 shows the updated maximum caps calculated using OVERSEER® version 6.2.1 employing the “nominal method” (Option 1) and using the “first listed” input files (as described in Appendix 4 to “Caucusing statement in relation to nutrient management rule framework 5 February 2016”).

Until the nutrient model is superseded by an updated version, updated maximum caps are shown in Table s30.1.

A. The updated soil maps for the South Coastal Canterbury Streams area shall be produced as follows:

1. Use the GIS layer that identifies all of the relevant catchment area boundaries in the SCCS plan area as published in the referenced technical reports and as shown on the Planning Maps, for the following areas:
   - Otaio
   - Kohika
   - Horseshoe
   - Makikihi
   - Waihao-Wainono
   - Morven-Sinclairs

2. Access the most recent version of the national S-map database and the linked Interim Canterbury Soils database as provided on the website http://smap.landcareresearch.co.nz;

3. Use the information from steps 1 and 2 and a GIS (geographical information system) tool to delineate the spatial area of all S-map and other relevant Canterbury soil classes (i.e., classes XL, VL, L, M, D, Pd, PdL, S1, S2, S3 and S4) within South Coastal Canterbury, group these classes into ‘Shallower’, ‘Deeper’, ‘Wetter’ and ‘Hill’ as defined below, and display these on a map showing overlain labelled catchment boundaries as listed in step 1:
   - ‘Shallower’ soils (XL, VL, L)
   - ‘Deeper’ soils (M, D)
   - ‘Wetter’ soils (Pd, PdL)
   - ‘Hill’ soils (S1, S2, S3, S4);

4. Publish the updated soil maps for South Coastal Canterbury on the Environment Canterbury website (ecan.govt.nz);

5. The steps described in 1 - 4 above must be undertaken by a suitably qualified and experienced person. The suitably qualified and experienced person shall be appointed
by the Chief Executive of the Canterbury Regional Council and be experienced in operating GIS tools using existing databases to produce maps.

Table s30.1: Updated Maximum caps for the Northern Streams Area and Waihao-Wainono Area calculated using OVERSEER version 6.2.1

<table>
<thead>
<tr>
<th>Soil type</th>
<th>Updated Maximum cap (kg/N/ha/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shallow (XL, VL, L)</td>
<td>40</td>
</tr>
<tr>
<td>Deeper (M, D)</td>
<td>25</td>
</tr>
<tr>
<td>Wetter (Pd, PdL)</td>
<td>21</td>
</tr>
</tbody>
</table>

B The Updated Maximum Cap shall be calculated as follows:

1. After each version change to the nutrient model, using the most recent version of the nutrient model and the associated Best Practice Input Data standards, calculate the nitrogen loss (expressed as kg N/ha/yr) for each OVERSEER input file referenced in Table s30.2, as defined in Appendix 4 to the Minute 7 Caucus Report and published on the Environment Canterbury website (ecan.govt.nz).

Table s30.2: Referenced OVERSEER input files required to calculate the Updated Maximum Caps as published on the Environment Canterbury website.

<table>
<thead>
<tr>
<th>Soil type</th>
<th>OVERSEER input file name</th>
<th>N loss number (kg/ha/yr) using OVERSEER v 6.2.1</th>
<th>Nitrogen loss number (kg/ha/yr) following the first OVERSEER release that occurs after version 6.2.1</th>
<th>Nitrogen loss number (kg/ha/yr) following each subsequent OVERSEER version release</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘Shallower’ soils (XL, VL, L)</td>
<td>SHALLOWER A (2 files)</td>
<td>For each soil class</td>
<td>[to be completed as soon as practicable following the first OVERSEER release after version 6.2.1]</td>
<td>[to be completed as soon as practicable following each subsequent OVERSEER version release]</td>
</tr>
<tr>
<td></td>
<td>SHALLOWER B (2 files)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SHALLOWER C (2 files)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SHALLOWER D (2 files)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SHALLOWER E (2 files)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SHALLOWER F (2 files)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SHALLOWER G (2 files)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘Deeper’ soils (M, D)</td>
<td>For each soil class</td>
<td>[to be completed as soon as practicable following each subsequent OVERSEER version release]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>D</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2. Using the nitrogen losses calculated in accordance with step 1 above, prepare an updated Table s30.2 by adding a new column with the new nitrogen loss for each new version of the nutrient model.

3. Calculate the percentage change in nitrogen loss between the latest version of the nutrient model version and its predecessor for each OVERSEER input file referenced in the updated Table s30.2.

4. Calculate the mean percentage change for all of the nitrogen losses listed within each of the three soil type rows in the updated Table s30.2.

5. Apply the mean percentage change for each of the three soil types calculated above to each of the corresponding maximum caps in Table s30.1 that is published on the Environment Canterbury website. For the purposes of undertaking this step, the most recently updated Table s30.1 shall be published on the Environment Canterbury website.

6. The steps described in 1-5 above must be undertaken by a suitably qualified and experienced person.

The suitably qualified and experienced person shall be appointed by the Chief Executive of the Canterbury Regional Council and someone who holds either:

(a) a Certificate of Completion in Advanced Sustainable Nutrient Management in New Zealand Agriculture from Massey University; or

(b) any other such qualification that has been approved by the Chief Executive of the Canterbury Regional Council as providing adequate expertise on agricultural sciences and nutrient management.
Schedule 31 Methodology for Recalculating Catchment Load Limits

The nitrogen load limits in Table 15A(n) will be recalculated by the Council, as soon as practicable, each time the nutrient model used for determining compliance with the load limits is updated. For the purpose of this schedule, “the nutrient model” is either OVERSEER or an equivalent model approved by the Chief Executive of Environment Canterbury.

The updated load limits shall be calculated as follows:

1. Use a GIS (geographical information system) tool to combine several spatial input layers (for farm type, soil and climate as defined below) and use a nitrogen loss look-up table (defined below) to calculate the estimated nitrogen losses within South Coastal Canterbury. Then sum these losses, assuming that flexibility caps are utilised and maximum caps are complied with, to produce updated nitrogen load limits (in tonnes per year) for each catchment area (defined below).

2. The catchment layer is a GIS layer that identifies the following catchment boundaries for all catchments within South Coastal Canterbury and as shown on the Planning Maps:
   - Otaio
   - Kohika
   - Horseshoe
   - Makikihi
   - Waihao-Wainono
   - Morven-Sinclair

3. The farm type layer is a GIS land use layer for “Scenario 2” as documented in Environment Canterbury Technical Report R15/29 (ISBN:978-0-478-15142-8) and as shown in Figure s31.1;

4. The climate layer is a GIS layer based on the Matrix of Good Management (MGM) climate clusters as documented in Environment Canterbury Technical Report R15/104 and shown in Figure s31.2 and Table s31.1;

5. The soil layer is derived from S-map. Obtain an updated soil GIS layer for South Coastal Canterbury is described in Part A of Schedule 30 using the most recent version of S-map and its related soil databases as provided on the website http://smap.landcareresearch.co.nz;

6. Update the nitrogen loss look-up table (Table s31.2) by applying the most recent version of the nutrient model to the designated OVERSEER input files listed in Table s31.2, (which comply with the OVERSEER Best Practice Input standards). Each cell in the updated version of Table s31.2 should contain either the updated estimate of nitrogen loss (as output from the specified OVERSEER file expressed as kg N/ha/yr), or the nitrogen loss values provided in Table s31.2 for the farm types without an OVERSEER input file.

7. Use the most recently updated flexibility caps calculated in accordance with Schedule 29, and assume for the purpose of calculating the load limits, that the flexibility caps are fully utilised (i.e. increase all loss rates in the updated nitrogen loss look-up table that are less than the relevant flexibility cap up to the relevant flexibility cap);

8. Use the most recently updated maximum caps calculated in accordance with Schedule 30 and assume, for the purpose of calculating the load limits, that the maximum caps are complied with (i.e. reduce all loss rates in the updated nitrogen loss look-up table that are greater than the soil relevant maximum cap down to the soil-relevant maximum cap);

9. Use the GIS layers and assumptions listed above to calculate the total catchment nitrogen...
load limit for each catchment area listed in step 2 above, by summing all of the look-up table nitrogen losses within each catchment.

10. Use the soil map GIS layer created at step 5 to subdivide each total catchment nitrogen load into two areas: the ‘Hill’ sub-area (defined as the area of soil classes S1, S2, S3 and S4) and the ‘Plains’ sub-area (defined as the remaining area comprising soil classes XL, VL, L, M, D, Pd and PdL).

11. Calculate the total load of the newly irrigated land in the farm type layer that is north of Buchanans Creek – this represents the total load limit of the Hunter Downs Irrigation Scheme. Similarly, calculate the total load of the newly irrigated land in the farm type layer that is south west of Buchanans Creek – this represents the total load limit of the Waihao Downs Irrigation Scheme. [Note: It is assumed that any currently irrigated property that joins either of these two irrigation schemes may relinquish the existing (2009-2013) nitrogen baseline load for that property to the irrigation scheme to manage. Any such relinquished load would be additional to that irrigation scheme’s total nitrogen load limit to manage].

12. Use the calculations at steps 9, 10 and 11 to create an updated version of Table 15A(n) showing catchment nitrogen load limits for each of the catchments within the Hill and Plains sub-areas, and irrigation scheme total nitrogen load limits for each of the Hunter Downs and Waihao Downs irrigation schemes, and publish the updated Table 15A(n) on the Environment Canterbury website www.ecan.govt.nz.

13. The steps described in 1-12 above must be undertaken by a suitably qualified and experienced person. The suitably qualified and experienced person shall be appointed by the Chief Executive of the Canterbury Regional Council and be experienced in the methodologies employed above, including the use of nutrient models and the operation of GIS tools.
Figure s31.1. Map of the farm type layer showing the “Scenario 2” land-use as documented in Environment Canterbury Technical Report R15/29 (ISBN:978-0-478-15142-8)
Figure s31.2. Map of climate zones to be used for calculating load limits (based on the MGM climate categories 9 and 10 as shown in Table s31.1)

Table s31.1 Climate categories to use for load calculations

<table>
<thead>
<tr>
<th>Original Look-up Table category</th>
<th>Matrix of Good Management (MGM) climate categories</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Climate category</td>
<td>Annual rainfall (mm)</td>
<td>Annual PET (mm)</td>
<td>Mean daily temperature (°C)</td>
</tr>
<tr>
<td>&lt; 650mm</td>
<td>9</td>
<td>554</td>
<td>752</td>
<td>10.7</td>
</tr>
<tr>
<td>650+</td>
<td>10</td>
<td>768</td>
<td>617</td>
<td>8.4</td>
</tr>
</tbody>
</table>

Table s31.2 (Nitrogen Loss Look-up Table for South Coastal Canterbury) may be accessed from the Canterbury Regional Council website at www.ecan.govt.nz.