

Plan Change 3 (South Coastal Canterbury) to the Canterbury Land and Water Regional Plan

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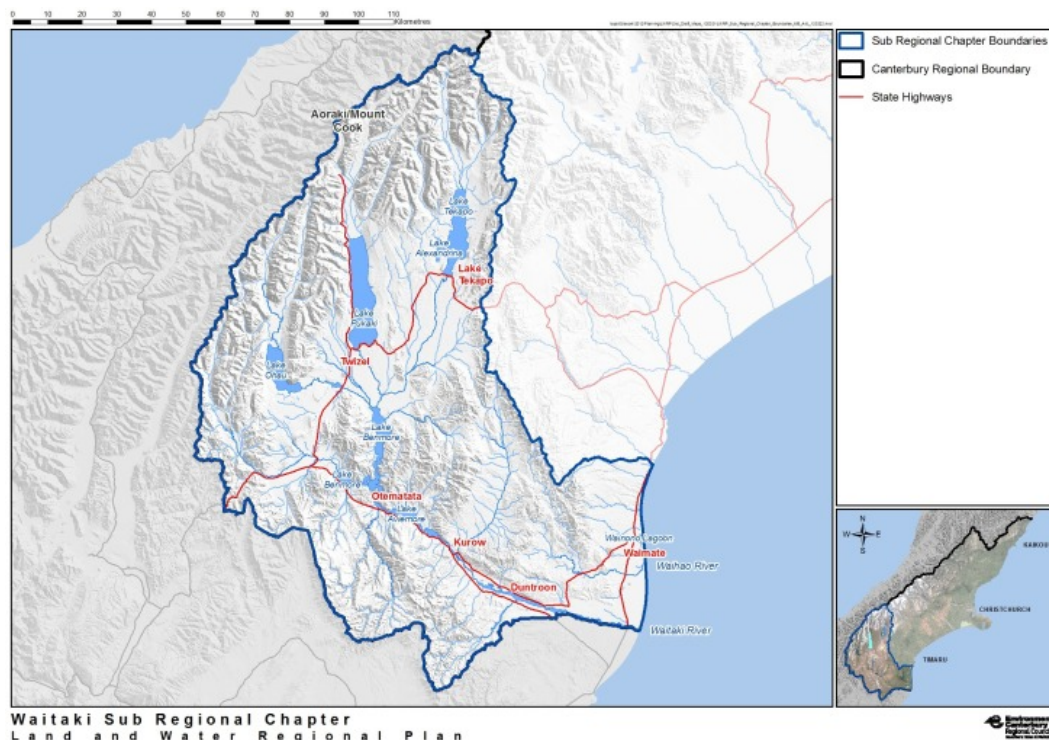
Plan Change 3 amendments to Section 15 of the Canterbury Land and Water Regional Plan

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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.

Waitaki sub-region



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

National Water Conservation (Ahuriri River) Order, 1990.

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

Zone (see Planning Maps)	Allocation Limit (million m ³ /yr)
Whitneys Creek	15.44

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.

Major Catchment (see Planning Maps)	Sub-catchment	Sensitive part of catchment	Monitoring site – lower boundary of catchment
Waitaki	Hakataramea River	Whole catchment	Above Main Highway Bridge recorder site
		Cattle Creek	Cattle yards Grid ref I39:208:319
		Padkins Stream	Hakataramea Valley Road
	Mt Harris Stream	Whole catchment	Pikes Point Road

15.8 High Naturalness Water Bodies

See relevant policies and rules in Sections 4, 5 and 15A.

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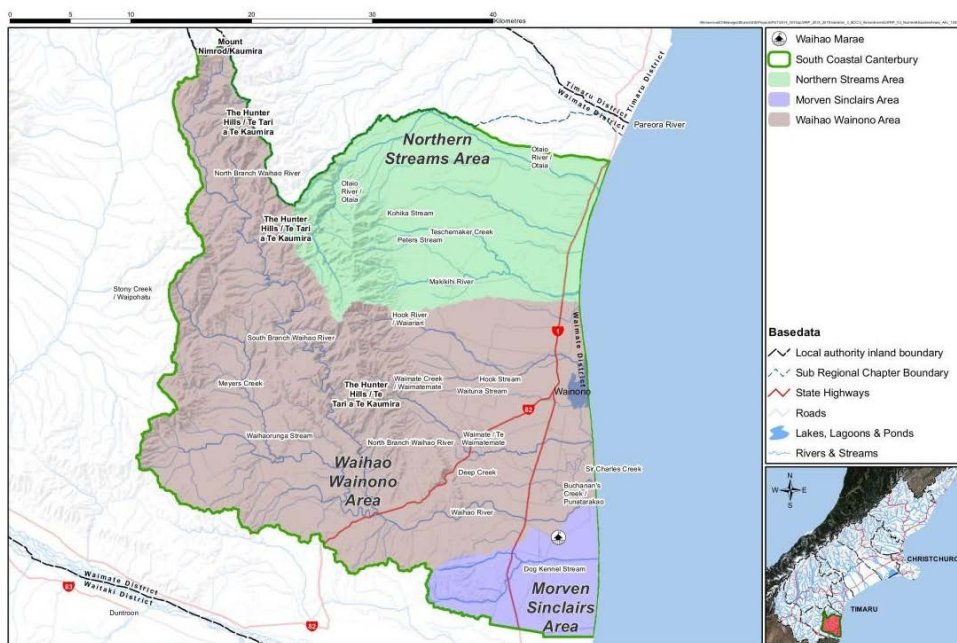
Section 15A Waitaki and South Coastal Canterbury

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.

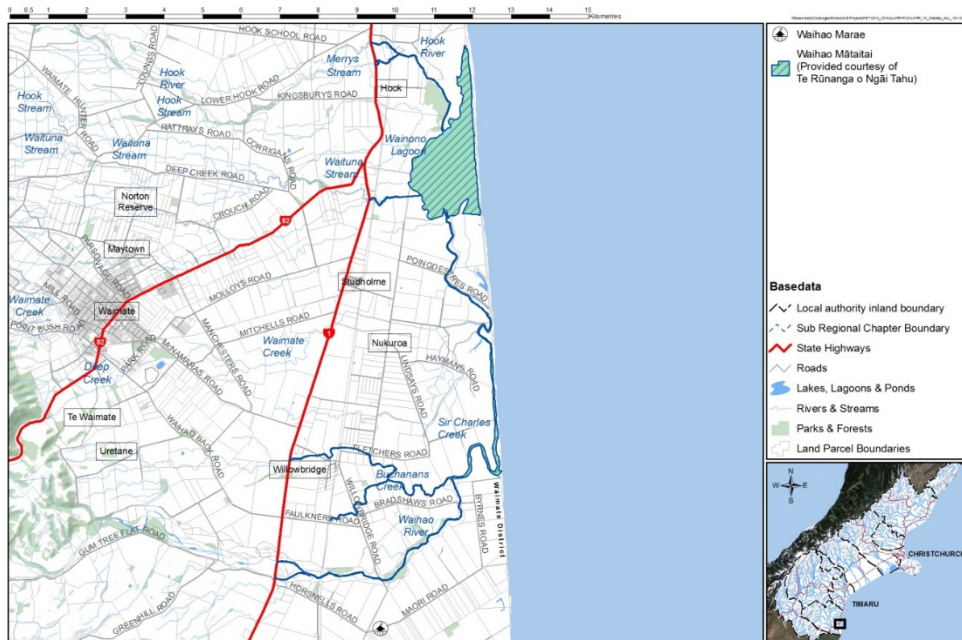
Map 15A.1: Boundaries within South Coastal Canterbury



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 Mātaaitai reserve. A Mātaaitai reserve only applies to species managed under the Fisheries Act 1996, which excludes whitebait and sports fish.

Map 15A.2: Waihao Mātaaitai



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.

¹ -Schallenberg, M. and Saulnier-Talbot, E. (May 2014). *Recent Environmental History of Wainono Lagoon*, University of Otago Limnology Report No.12

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-Sinclair's 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 Project² 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
- Restricting nitrogen load losses from the catchment, introducing flexibility caps and maximum caps (based on soil classes), and Nutrient User Groups.

2 - A works programme carried out by CRC and approved parties to improve ecological habitat, and water quality in Wainono Lagoon and its catchment

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.

<u>Word</u>	<u>Definition</u>
<u>Access to an irrigation scheme</u>	<u>means an irrigation scheme has developed to a stage where the land is able to be supplied with water.</u>
<u>Area weighted average</u>	<p><u>means:</u></p> <p><u>(a) for the purpose of calculating a maximum cap or updated maximum cap, a calculation undertaken as follows:</u> <u>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</u></p> <p><u>(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:</u> <u>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.</u></p> <p><u>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.</u></p>
<u>Augmentation</u>	<u>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.</u>
<u>Flow Protection Zone</u>	<u>means the area shown as the Flow Protection Zone on the Planning Maps.</u>
<u>Existing farming activity</u>	<u>means a farming activity in existence on the property at 1 May 2015.</u>
<u>Flexibility cap</u>	<u>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.</u>
<u>Individual farming activity</u>	<p><u>means a farming activity undertaken on land that:</u></p> <p><u>(a) is not part of a Nutrient User Group; or</u></p> <p><u>(b) is not part of a Farming Enterprise; or</u></p> <p><u>(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.</u></p>

<u>Word</u>	<u>Definition</u>
<u>Maximum cap</u>	<p><u>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.</u></p> <p><u>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.</u></p>
<u>Morven-Sinclairs Area</u>	<u>means the area shown as the Morven-Sinclairs Area on the Planning Maps.</u>
<u>Morven-Sinclairs Plains sub-area</u>	<u>means land within the Morven-Sinclairs Area identified on the Planning Maps as Morven-Sinclairs Plains sub-area.</u>
<u>New farming activity</u>	<u>means a farming activity that was not in existence on the property at 1 May 2015.</u>
<u>Nitrogen baseline</u>	<p><u>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.</u></p> <p><u>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.</u></p>
<u>Northern Streams Area</u>	<u>means the area shown as the Northern Streams Area on the Planning Maps.</u>
<u>Northern Streams Hill sub-area</u>	<u>means land within the Northern Streams Area identified on the Planning Maps as Northern Streams Hill sub-area.</u>
<u>Northern Streams Plains sub-area</u>	<u>means land within the Northern Streams Area identified on the Planning Maps as Northern Streams Plains sub-area.</u>
<u>Nutrient User Group</u>	<u>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.</u>
<u>Soil Class</u>	<u>means the soil types categorised as ‘shallower’, ‘wetter’ or ‘deeper’ as shown on the Planning Maps.</u>
<u>South Coastal Canterbury</u>	<u>means the area shown as South Coastal Canterbury on Map 15A.1.</u>
<u>Updated flexibility cap</u>	<u>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.</u>
<u>Updated maximum cap</u>	<u>means the maximum rate of nitrogen (below the root zone in kilograms per hectare per year), calculated by Environment Canterbury using the</u>

Word	Definition
	<p><u>methodology set out in Schedule 30, allowable from a farming activity for a specified soil class.</u></p> <p><u>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.</u></p>
<u>Waihao-Wainono Area</u>	<u>means the area shown as the Waihao-Wainono Area on the Planning Maps.</u>
<u>Waihao-Wainono Hill sub-area</u>	<u>means land within the Waihao-Wainono Area identified on the Planning Maps as Waihao-Wainono Hill sub-area.</u>
<u>Waihao-Wainono Plains sub-area</u>	<u>means land within the Waihao-Wainono Area identified on the Planning Maps as Waihao-Wainono Plains sub-area.</u>
<u>Wainono Restoration Project</u>	<u>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.</u>

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.

Iwi Management Plan of Kati Huirapa for the area Rakaia to Waitaki July 1992.

Te Whakatau Kaupapa – Resource Management Strategy for Canterbury.

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 in to 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
- (c) the annual reporting requirements; and
- (d) how compliance with the actions set out in each Farm Environment Plan will be achieved.

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 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
- (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.

Topic		Region-wide Rules	New rules that are additions to Region-wide Rules	South Coastal Canterbury Rules that prevail over Region-wide rules	New Rules
Nutrient Management	Red, Orange, Green Zones	<u>5.41 - 5.59</u>	-	<u>15A.5.1 - 15A.5.16</u>	-
	Irrigation Scheme	<u>5.60 - 5.62</u>	-	<u>15A.5.17 - 15A.5.19</u>	-
	Incidental Discharges	<u>5.63 - 5.64</u>	-	<u>15A.5.20 - 15A.5.21</u>	-
Stock Exclusion		<u>5.68 - 5.71</u>	<u>15A.5.26</u>	-	-
Sewerage Systems		<u>5.84</u>	-	<u>15A.5.22</u>	<u>15A.5.23</u>
Industrial and Trade Waste		<u>5.92</u>	-	<u>15A.5.24</u>	<u>15A.5.25</u>
Restoration - Wainono and General		-	-	-	<u>15A.5.27 - 15A.5.30</u>
Augmentation		-	-	-	<u>15A.5.31 - 15A.5.32</u>
Take and Use of Surface Water		<u>5.123 - 5.127</u>	-	<u>15A.5.34 - 15A.5.36</u>	<u>15A.5.33, 15A.5.41 - 15A.5.45</u>
Take and Use of Groundwater		<u>5.128 - 5.132</u>	-	<u>15A.5.37 - 15A.5.38</u>	<u>15A.5.39 - 15A.5.40</u>
Transfer of Water Permits		<u>5.133 - 5.134</u>	-	<u>15A.5.46 - 15A.5.48</u>	-
Damming		<u>5.154 - 5.158</u>	-	-	<u>15A.5.49 - 15A.5.50</u>

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;
 - (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, 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**
- 9. The matters set out in Policy 15A.4.4 to 15A.4.10.**

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 Pouhere 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/Rāranqi 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(I) 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(I); 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 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

Management Unit	River	Ecological Health attributes			Macrophyte attributes		Periphyton attributes			Siltation attribute	Human Health for Recreation attributes		Cultural attribute
		QMCI [min 80% samples in 5 year period]	Dissolved oxygen [min] (%)	Temperature [max] (°C)	Emergent macrophytes [max cover of bed] (%)	Total macrophytes [max cover of bed] (%)	Chlorophyll a [max biomass] (mg/m ³)	Filamentous algae >20 mm [max cover of bed] (%)	Cyano-bacteria mat cover >1mm (%)	Fine sediment <2 mm diameter [max cover of bed] (%)	Suitability for contact recreation [SFRG]	<i>E.coli</i> [number of <i>E.coli</i> per 100 millilitres] [annual median]	
Hill-fed - upland	Hook R. Waimate Ck.	6	90	20	No value set	No value set	50 ^a	10 ^a	20 ^a	15	Good	<260 ^d	Freshwater mahinga kai species sufficiently abundant for customary gathering, water quality is suitable for their safe harvesting, and they are safe to eat.
Hill-fed - lower	Horseshoe Bend Ck. Kohika R. Makikihi R. Otaio R. Waihao R.	6	90	20	No value set	No value set	200 ^{bc}	30 ^{bc}	50 ^{bc}	15	Good to Fair	<260 ^d	
Spring-fed - plains	Buchanans Ck. Hook Dn. Merrys Stm. Sir Charles Ck. Waituna Stm.	5	70	20	30	50	No value set	30 ^{bc}	50 ^{bc}	20	No value set	<260 ^d	

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

Management Unit	Lake	Ecological Health attributes				Eutrophication attributes	Visual Quality attributes	Human Health for Recreation attributes	Cultural attribute
		Dissolved Oxygen [min] (%)		Temp [max] (°C)	Lake SPI [min grade]	Trophic Level Index (TLI) ^a [maximum annual average]	Macrophytes and water clarity ^b	<i>E.coli</i> [number of <i>E.coli</i> per 100 millilitres] [annual median]	
		Hypo-limnion	Epilimnion						
Coastal Lakes	Wainono Lagoon	70	90	19	Moderate	6.0	Increase in native macrophyte beds to 20% cover and associated clearer water in the lake margins than mid-lake	≤260	Freshwater mahinga kai species sufficiently abundant for customary gathering, water quality is suitable for their safe harvesting, and they are safe to eat.

Key:

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

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)

a TLI assumed to be calculated as TLI₃ (using TP, TN and Chl a)

b Clarity = Measured using the SHMAK tube method

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

<u>River Type</u>	<u>River Name and Measurement Location</u>	<u>Dissolved Reactive Phosphorus (DRP) concentration (mg/L)^a</u>	<u>Dissolved Inorganic Nitrogen (DIN) concentration (mg/L)</u>		<u>Ammoniacal Nitrogen (NH₄-N) concentration (mg/L)^a</u>	
		<u>Annual median</u>	<u>Annual median</u>	<u>Annual 95th percentile</u>	<u>Annual median</u>	<u>Annual maximum</u>
<u>Hill-fed - upland</u>	<u>Waimate Creek, Kelceys Bush</u>	<u>0.012</u>	<u>0.39</u>	<u>0.93</u>	<u>0.006</u>	<u>0.013</u>
	<u>Hook River Tributary, Gunns Bush</u>	<u>0.012</u>	<u>0.12</u>	<u>0.56</u>	<u>0.01</u>	<u>0.028</u>
	<u>Hook River, Hook Bush</u>	<u>0.012</u>	<u>0.06</u>	<u>0.13</u>	<u>0.007</u>	<u>0.013</u>
	<u>Hook Stream Tributary Linnfield Rd</u>	<u>0.021</u>	<u>0.13</u>	<u>3.12</u>	<u>0.011</u>	<u>0.044</u>
<u>Hill-fed - lower</u>	<u>Makikihi River, Milnes Rd</u>	<u>0.011</u>	<u>0.74</u>	<u>1.34</u>	<u>0.0075</u>	<u>0.021</u>
	<u>Esk Valley Stream, Backline Rd</u>	<u>0.028</u>	<u>1.79</u>	<u>2.07</u>	<u>0.018</u>	<u>0.052</u>
	<u>Kohika River, Backline Rd.</u>	<u>0.018</u>	<u>0.11</u>	<u>0.82</u>	<u>0.005</u>	<u>0.011</u>
	<u>Otaio Gorge</u>	<u>0.005</u>	<u>0.04</u>	<u>0.14</u>	<u>0.005</u>	<u>0.01</u>
	<u>Hook Stream Tributary Lower-Gunns Rd</u>	<u>0.055</u>	<u>0.34</u>	<u>4.77</u>	<u>0.04</u>	<u>0.093</u>
	<u>Hook Stream, Waimate-Hunter Rd^b</u>	<u>0.019</u>	<u>1.62</u>	<u>2.76</u>	<u>0.022</u>	<u>0.073</u>
	<u>Hook River, Waimate-Hunter Rd^b</u>	<u>0.006</u>	<u>0.53</u>	<u>0.92</u>	<u>0.008</u>	<u>0.016</u>
	<u>Upper Horseshoe Bend Ck</u>	<u>0.027</u>	<u>0.54</u>	<u>0.99</u>	<u>0.058</u>	<u>0.632</u>
	<u>Otaio River, Drinnans Bridge</u>	<u>0.005</u>	<u>0.60</u>	<u>1.14</u>	<u>0.003</u>	<u>0.02</u>
	<u>Otaio River Tributary Esk Valley Rd</u>	<u>0.015</u>	<u>1.12</u>	<u>0.93</u>	<u>0.015</u>	<u>0.042</u>
	<u>Otaio River Tributary Esk Bank Rd Ford</u>	<u>0.005</u>	<u>0.53</u>	<u>0.96</u>	<u>0.011</u>	<u>0.021</u>

River Type	River Name and Measurement Location	Dissolved Reactive Phosphorus (DRP) concentration (mg/L) ^a	Dissolved Inorganic Nitrogen (DIN) concentration (mg/L)		Ammoniacal Nitrogen (NH ₄ -N) concentration (mg/L) ^a	
		Annual median	Annual median	Annual 95th percentile	Annual median	Annual maximum
	Waihao River, McCulloughs Bridge ^b	0.002	0.41	0.64	0.0085	0.036
	Hook River, SH1	0.009	2.05	3.55	0.007	0.067
	Hook River, Beach Rd. ^b	0.016	3.21	5.64	0.0155	0.065
	Waihao River, Bradshaws Bridge ^b	0.001	1.17	2.17	0.0095	0.043
	Kohika Stream, SH1	0.009	2.50	4.49	0.018	0.1
	Horseshoe Bend Ck. SH1	0.03	1.13	1.72	0.075	0.067
	Otaio River, SH1	0.007	1.23	2.19	0.0065	0.035
Spring-fed - plains	Buchanans Ck. upstream Waihao confluence ^b	0.01	1.38	2.57	0.014	0.044
	Sir Charles Ck. Haymans Rd ^b	0.02	5.20	6.64	0.04	0.088
	Hook Drain, Beach Rd. ^b	0.03	3.05	5.33	0.0435	0.27
	Merrys Stream, SH1	0.02	2.26	3.13	0.013	0.191
	Waituna Stream, SH1	0.46	0.39	0.74	0.115	0.26

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).

15A7.2 Water Quality Limits for Lakes

Table 15A(d): South Coastal Canterbury Water Quality Limits for Lakes

Lake	Trophic State	Target				Target Date
		TLI	TP maximum annual median	TN maximum annual median	Chl a maximum annual median	
Wainono Lagoon	Supertrophic	6.0	96mg/m ³	1560mg/m ³	30mg/m ³	2025

TLI assumed to be calculated as a TLI³ (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

<u>Contaminant</u>	<u>Measurement</u>	<u>Target</u>
<u>Nitrate-N</u>	<u>Maximum concentration</u>	<u><11.3mg/L^e</u>
<u>Nitrate-N</u>	<u>5-year annual average concentration^a</u>	<u>8.2mg/L^f</u>
<u>E.coli</u>	<u>Median concentration^b</u>	<u>< 1 organism/100 millilitres</u>
<u>Other contaminants^c</u>	<u>Any sample</u>	<u>< 50% MAV^d</u>

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

<u>Location</u>	<u>Topo 50 Map Reference</u>	<u>Allocation (L/s)</u>
<u>Upper Waihao</u> <u>(McCulloughs recorder)</u>	<u>CB18:3973-3715</u>	<u>10</u>
<u>Upper Hook</u> <u>(above community intake)</u>	<u>CA18:3899-5450</u>	<u>20</u>
<u>Otaio River</u> <u>(At gorge)</u>	<u>CA18:3573-6840</u>	<u>15</u>

Table 15A(g): South Coastal Canterbury Partial Restrictions, Environmental Flow and Allocation Limits for 'A' Permits

Location	Topo 50 Map Reference	Properties that do not have access to Irrigation Scheme water				Where a property can access Irrigation Scheme water or 01 Jan 2030, whichever occurs first.			
		Allocation (L/s)	Minimum flow (L/s)	Partial restrictions		Allocation (L/s)	Minimum flow (L/s)	Partial restrictions	
				Reduce take by	Flow rate at recorder(L/s)			Reduce take by	Flow rate at recorder (L/s)
Upper Waihao (McCullough recorder)	CB18:397 3-3715	379 ¹	300	50%	600	97	400	50%	600
				100%	300			100%	400
Lower Waihao (Bradshaw's recorder)	CB19:535 9-3913	186	100 ²	None	-	152	100 ²	None	-
Buchanans (Fletcher's Bridge recorder)	CB19:531 1-4033	95	150	None	-	95	150	None	-
Sir Charles Creek (Rooney's bridge)	CB19:541 0-4383	157	100	None	-	127	100	None	-
Waimate Creek (Kirk's Intake)	CA18:426 7-4608	41	15 (residual flow)	None	-	2	15 (residual flow)	None	-
Upper Hook (Above Intake)	CA18:389 9-5450	10	35	Pro-rata ³	Reduce take starting at a 50L/s	10	35	Pro-rata	Reduce take starting at a 50L/s
Lower Hook (Beach Road)	CA19:530 1-5145	84	64	25%	148	37	64	25%	110
				50%	127			50%	92
				75%	106			75%	83
				100%	64			100%	64
Makikihi (Teschemaker Valley Road)	CA19:481 6-5838	88	20	None	-	28	20	None	-
Kohika (Puttick Intake)	CA18:374 4-6367	2.8	2 (residual flow)	None	-	2.8	2 (residual flow)	None	-
Waihao Arm (Poingdesters Road)	CB19:539 7-4569	90	When the flow at the recorder is at 1.1 metres above mean sea level	50%	When the flow at the recorder is at 1.5 metres above mean sea level	45	When the flow at the recorder is at 1.1 metres above mean sea level	50%	When the flow at the recorder is at 1.5 metres above mean sea level
				100%	When the flow at the recorder is at 1.1 metres above mean sea level			100%	When the flow at the recorder is at 1.1 metres above mean sea level

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

<u>Location</u>	<u>Topo50 Map Reference</u>	<u>Applicable time period</u>	<u>'A' Allocation Max rates (L/s); 7 Day volume (m³)</u>				<u>Applicable time period</u>	<u>'A' Minimum flows (L/s)</u>	
			<u>Current</u>	<u>2019</u>	<u>From 2021</u>	<u>From 2030</u>		<u>Current</u>	<u>From 2019</u>
<u>Otaio River</u>	<u>CA18:3573-6840 (Gorge Recorder)</u>	<u>01 Jul - 30 Jun</u>					=		
			<u>406;</u>	<u>406;</u>	<u>206;</u>	<u>175;</u>	<u>01 Oct - 30 Apr</u>	<u>0</u>	<u>90</u>
			<u>207,386</u>	<u>207,386</u>	<u>124,600</u>	<u>106,000</u>	<u>01 May - 30 Sep</u>	<u>0</u>	<u>350</u>

Table 15A(i) Otaio River Partial Restrictions for 'A' Permits

<u>Location</u>	<u>Topo 50 Map Reference</u>	<u>Abstractors</u>	<u>Applicable time period</u>	<u>Reduce take by</u>	<u>Flow rate at recorder (L/s)</u>	
<u>Otaio River</u>	<u>CA18:3573-6840</u>	<u>Not part of the Otaio Water User Group</u>	<u>01 Oct - 30 Apr</u>	<u>Pro-rata¹</u>	<u>Reduce take starting at a flow rate of 500L/s at minimum flow site</u>	<u>Reduce take starting at a flow rate of 270L/s at minimum flow site</u>
			<u>01 May - 30 Sep</u>	<u>Pro-rata¹</u>	<u>Reduce take starting at a flow rate of 830L/s at minimum flow site</u>	<u>Reduce take starting at a flow rate of 530L/s at minimum flow site</u>
		<u>Part of the Otaio Water User Group</u>	<u>Applicable time period</u>	<u>Reduce take to (Max rate (L/s); 7 Day volume(m³))</u>	<u>Flow rate at recorder (L/s)</u>	
					<u>Current</u>	<u>From 2019</u>
			<u>01 Oct - 30 Apr</u>	<u>236; 120,960</u>	=	<u>200</u>
				<u>178; 90,720</u>	=	<u>150</u>
				<u>0; 0</u>	=	<u>90</u>
			<u>01 May - 30 Sep¹</u>	<u>236; 120,960</u>	=	<u>640</u>
				<u>178; 90,720</u>	=	<u>500</u>
				<u>0; 0</u>	=	<u>350</u>

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 15A(j): South Coastal Canterbury Partial Restrictions, Environmental Flow and Allocation Limits for 'B' Permits

<u>Location</u>	<u>Topo 50 Map Reference</u>	<u>Applicable time period</u>	<u>Allocation (L/s)</u>	<u>Minimum flow (L/s)</u>	<u>Minimum groundwater level in bore J39/0255 (m bgl)</u>	<u>Partial restrictions</u>	
						<u>Reduce take by</u>	<u>Flow rate at recorder (L/s)</u>
<u>Upper Waihao (McCullough recorder)</u>	<u>CB18:3973-3715</u>	<u>01 Oct- 30 April</u>	<u>285</u>	<u>1350</u>	<u>N/A</u>	<u>Pro-rata²</u>	<u>Reduce take starting at 1640</u>
		<u>01 May- 30 Sept</u>	<u>100</u>		<u>N/A</u>	<u>Pro-rata²</u>	<u>Reduce take starting at 1450</u>
<u>Lower Waihao (Bradshaws recorder)</u>	<u>CB19:5359-3913</u>	<u>01 Jul - 30 Jun</u>	<u>100</u>	<u>600¹</u>	<u>N/A</u>	<u>Pro-rata²</u>	<u>Reduce take starting at 700</u>
<u>Waimate Creek (Kirk's Intake)</u>	<u>CA18:4267-4608</u>	<u>01 Jul - 30 Jun</u>	<u>100</u>	<u>400</u>	<u>N/A</u>	<u>Pro-rata²</u>	<u>Reduce take starting at 500</u>
<u>Upper Hook (Above Intake)</u>	<u>CA18:3899-5450</u>	<u>01 Jul - 30 Jun</u>	<u>100</u>	<u>300</u>	<u>N/A</u>	<u>Pro-rata²</u>	<u>Reduce take starting at 400</u>
<u>Lower Hook (Beach Road) Excluding Merry's Stream</u>	<u>CA19:5301-5145</u>	<u>01 Jul - 30 Jun</u>	<u>100</u>	<u>590</u>	<u>N/A</u>	<u>Pro-rata²</u>	<u>Reduce take starting at 690</u>
<u>Makikihi (Teschemaker Valley Road)</u>	<u>CA19:4816-5838</u>	<u>01 Jul - 30 Jun</u>	<u>100</u>	<u>500</u>	<u>N/A</u>	<u>Pro-rata²</u>	<u>Reduce take starting at 600</u>
<u>Otaio River (Gorge recorder)</u>	<u>CA18:3573-6840</u>	<u>01 Jul - 30 Jun</u>	<u>1000</u>	<u>780</u>	<u>3</u>	<u>Pro-rata²</u>	<u>Reduce take starting at 1780</u>

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

Groundwater Allocation Zone	Groundwater block (Mm ³ /y)
<u>Waihao</u>	<u>7.73</u>
<u>Otaio</u>	<u>4.608</u>
<u>Makikihi</u>	<u>23.15</u>
<u>Hook</u>	<u>3.57</u>
<u>Waimate</u>	<u>10.3</u>

Table 15A(l): South Coastal Canterbury volume for surface water permit exchanges to deep groundwater permits

Groundwater Allocation Zone	Groundwater block (Mm ³ /y)
<u>Otaio</u>	<u>2.650</u>
<u>Makikihi</u>	<u>0.822</u>
<u>Hook</u>	<u>0.859</u>
<u>Waimate</u>	<u>1.374</u>

15A.7.6 Water Quality Limits and Targets

Table 15A(m): Nitrogen load limits for urban and industrial discharges in South Coastal Canterbury

Area	Timing	Load limit (t/yr)
<u>Northern Streams Area</u>	<u>From 1 May 2015</u>	<u>8 (Potato processing wastewater)</u>
<u>Waihao-Wainono Area</u>		<u>27 (Industrial)</u>
		<u>2 (Waimate community sewage)</u>
<u>Morven-Sinclairs Area</u>		<u>3.6 (Milk processing)</u>

Table 15A(n): Nitrogen load limits for farming in South Coastal Canterbury

Area	Timing	Load limit (t/yr) ²
<u>Northern Streams Area</u> (<u>Otaio, Kohika, Horseshoe, Makikihi</u>)	<u>From 1 May 2015</u>	<u>Otaio Plains 156</u> <u>Otaio Hill 31</u> <u>Kohika Plains 96</u> <u>Kohika Hill 2</u> <u>Horseshoe Plains 52</u> <u>Makikihi Plains 120</u> <u>Makikihi Hill 21</u>
<u>Waihao-Wainono Area</u>	<u>From 1 May 2015</u>	<u>Total catchment 1106 (which comprises Hill sub-area 265 plus Plains sub-area 841) and includes:</u> <u>Hunter Downs Irrigation Scheme total load limit 136</u> <u>Waihao Downs Irrigation Scheme total load limit 193</u>
<u>Morven-Sinclairs Area</u> ¹	<u>From 1 May 2015</u>	<u>Morven-Sinclairs Plains 575</u>

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.

<u>Major Catchment</u> <u>(see Planning Maps)</u>	<u>Sub-catchment</u>	<u>Sensitive part of catchment</u>	<u>Monitoring site – lower</u> <u>boundary of catchment</u>
<u>Otaio</u>	<u>Mainstem</u>	<u>Upstream of Otaio Gorge</u>	<u>Otaio Gorge recorder site</u>
	<u>Lyalldale Stream</u>	<u>Whole catchment</u>	<u>State Highway One</u>
<u>Morven</u>	<u>Dog Kennel Stream</u>	<u>Upstream from Old Ferry Road</u>	<u>Old Ferry Road</u>
<u>Waihao</u>	<u>Waihao River</u>	<u>Catchment upstream from McCulloughs Bridge</u>	<u>McCulloughs Bridge recorder site</u>
	<u>North Branch</u>	<u>Whole catchment</u>	<u>Waihao Forks</u>

15A.9 High Naturalness Water Bodies

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

<u>Main River</u>	<u>Location and Topo 50 Map Reference</u>	<u>Outstanding and Significant</u> <u>Characteristics</u>
<u>Hook River</u>	<u>Above the confluence of Hook stream and mainstem of the Hook River</u> <u>(at or about CA18:413-537)</u>	<ul style="list-style-type: none"> • <u>High degree of naturalness</u> • <u>High visual amenity value</u> • <u>Ecological habitat of high value</u>
<u>Waimate River</u>	<u>Above Kelceys Bush gauging site on the Waimate Creek</u> <u>Map</u> <u>(at or about CA18:390-482)</u>	<ul style="list-style-type: none"> • <u>High degree of naturalness</u> • <u>High visual amenity value</u>
<u>Otaio River</u>	<u>Above the Otaio Gorge Bridge on the Otaio River</u> <u>(at or about CA18:3546-6797)</u>	<ul style="list-style-type: none"> • <u>High degree of naturalness</u> • <u>High visual amenity value</u> • <u>Ecological habitat of high value</u>

Plan Change 3 amendments to Section 16 (Schedules) of the Canterbury Land and Water Regional Plan

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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:

- (i) All irrigation systems installed or replaced after 1 May 2015 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 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 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

	<u>Waihao-Wainono Area</u>			<u>Northern Streams Area</u>		
	<u>Waihao-Wainono Plains sub-area</u>		<u>Waihao-Wainono Hill sub-area</u>	<u>Northern Streams Plains sub-area</u>		<u>Northern Streams Hill sub-area</u>
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
	<u>From when Plan Change 3 becomes operative</u>	<u>When augmentation has occurred in the preceding calendar year and after 1 January 2025</u>	<u>From 01 May 2015</u>	<u>From 01 May 2015</u>	<u>From 01 January 2025</u>	<u>From 01 May 2015</u>
<u>Flexibility Cap (kg N/ha/yr)</u>	<u>12</u>	<u>14</u>	<u>9</u>	<u>12</u>	<u>14</u>	<u>9</u>

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.

Area	OVERSEER input file name	Nitrogen loss number (kg/ha/yr) using OVERSEER version 6.2.1						Nitrogen loss number (kg/ha/yr) following the first OVERSEER release that occurs after version 6.2.1	Nitrogen loss number (kg/ha/yr) following each subsequent OVERSEER version release
<u>Waihao- Wainono Plains sub- area</u> and <u>Northern Streams Plains sub-area</u>	<u>Plains A (6 files)</u> <u>Plains B (6 files)</u> <u>Plains C (6 files)</u> <u>Plains D (6 files)</u> <u>Plains E (6 files)</u> <u>Plains F (6 files)</u> <u>Plain G (6 files)</u> <u>Plains H (6 files)</u>	<u>For each soil class</u>						<u>[to be completed as soon as practicable following the first OVERSEER release after version 6.2.1]</u>	<u>[to be completed as soon as practicable following each subsequent OVERSEER version release</u>
		<u>VL</u>	<u>L</u>	<u>M</u>	<u>D</u>	<u>Pd</u>	<u>PdL</u>		
		<u>23</u>	<u>16</u>	<u>14</u>	<u>6</u>	<u>7</u>	<u>8</u>		
		<u>33</u>	<u>25</u>	<u>19</u>	<u>14</u>	<u>14</u>	<u>12</u>		
		<u>15</u>	<u>12</u>	<u>10</u>	<u>6</u>	<u>6</u>	<u>8</u>		
		<u>14</u>	<u>13</u>	<u>11</u>	<u>6</u>	<u>7</u>	<u>7</u>		
		<u>14</u>	<u>12</u>	<u>10</u>	<u>6</u>	<u>6</u>	<u>7</u>		
		<u>12</u>	<u>10</u>	<u>9</u>	<u>5</u>	<u>6</u>	<u>6</u>		
		<u>19</u>	<u>15</u>	<u>13</u>	<u>11</u>	<u>9</u>	<u>8</u>		
		<u>15</u>	<u>12</u>	<u>10</u>	<u>9</u>	<u>8</u>	<u>7</u>		
<u>Waihao- Wainono Hill sub-area</u> and <u>Northern Streams Hill sub-area</u>	<u>Hill A</u>	<u>14</u>						<u>[to be completed as soon as practicable following the first OVERSEER release after version 6.2.1]</u>	<u>[to be completed as soon as practicable following each subsequent OVERSEER version release</u>
	<u>Hill B</u>	<u>9</u>							

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.

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

<u>Soil type</u>	<u>Updated Maximum cap (kg/N/ha/yr)</u>
<u>Shallower (XL, VL, L)</u>	<u>40</u>
<u>Deeper (M, D)</u>	<u>25</u>
<u>Wetter (Pd, PdL)</u>	<u>21</u>

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.

<u>Soil type</u>	<u>OVERSEER input file name</u>	<u>N loss number (kg/ha/yr) using OVERSEER v 6.2.1</u>		<u>Nitrogen loss number(kg/ha/yr) following the first OVERSEER release that occurs after version 6.2.1</u>	<u>Nitrogen loss number (kg/ha/yr) following each subsequent OVERSEER version release</u>
<u>'Shallower' soils (XL, VL, L)</u>	<u>SHALLOWER A (2 files)</u> <u>SHALLOWER B (2 files)</u> <u>SHALLOWER C (2 files)</u> <u>SHALLOWER D (2 files)</u> <u>SHALLOWER E (2 files)</u> <u>SHALLOWER F (2 files)</u> <u>SHALLOWER G (2 files)</u>	<u>For each soil class</u>		<u>[to be completed as soon as practicable following the first OVERSEER release after version 6.2.1]</u>	<u>[[to be completed as soon as practicable following each subsequent OVERSEER version release</u>
		<u>VL</u>	<u>L</u>		
		<u>22</u>	<u>17</u>		
		<u>33</u>	<u>25</u>		
		<u>61</u>	<u>49</u>		
		<u>55</u>	<u>41</u>		
		<u>59</u>	<u>49</u>		
		<u>29</u>	<u>22</u>		
		<u>21</u>	<u>16</u>		
<u>'Deeper' soils (M, D)</u>	<u>DEEPER A (2 files)</u> <u>DEEPER B (2 files)</u> <u>DEEPER C (2 files)</u> <u>DEEPER D (2 files)</u> <u>DEEPER E (2 files)</u> <u>DEEPER F (2 files)</u> <u>DEEPER G (2 files)</u>	<u>For each soil class</u>		<u>[to be completed as soon as practicable following the first OVERSEER release after version 6.2.1]</u>	<u>[[to be completed as soon as practicable following each subsequent OVERSEER version release</u>
		<u>M</u>	<u>D</u>		
		<u>14</u>	<u>11</u>		
		<u>19</u>	<u>14</u>		
		<u>39</u>	<u>30</u>		
		<u>32</u>	<u>25</u>		
		<u>37</u>	<u>30</u>		
		<u>18</u>	<u>17</u>		
		<u>14</u>	<u>12</u>		

<u>'Wetter' soils</u> (Pd, PdL)	<u>WETTER A (2 files)</u> <u>WETTER B (2 files)</u> <u>WETTER C (2 files)</u> <u>WETTER D (2 files)</u> <u>WETTER E (2 files)</u> <u>WETTER F (2 files)</u> <u>WETTER G (2 files)</u>	<u>For each soil class</u>		<u>[to be completed as soon as practicable following the first OVERSEER release after version 6.2.1]</u>	<u>[[to be completed as soon as practicable following each subsequent OVERSEER version release</u>
		<u>Pd</u>	<u>PdL</u>		
		<u>10</u>	<u>9</u>		
		<u>14</u>	<u>12</u>		
		<u>28</u>	<u>20</u>		
		<u>19</u>	<u>15</u>		
		<u>21</u>	<u>15</u>		
		<u>12</u>	<u>10</u>		
		<u>10</u>	<u>8</u>		

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.

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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.

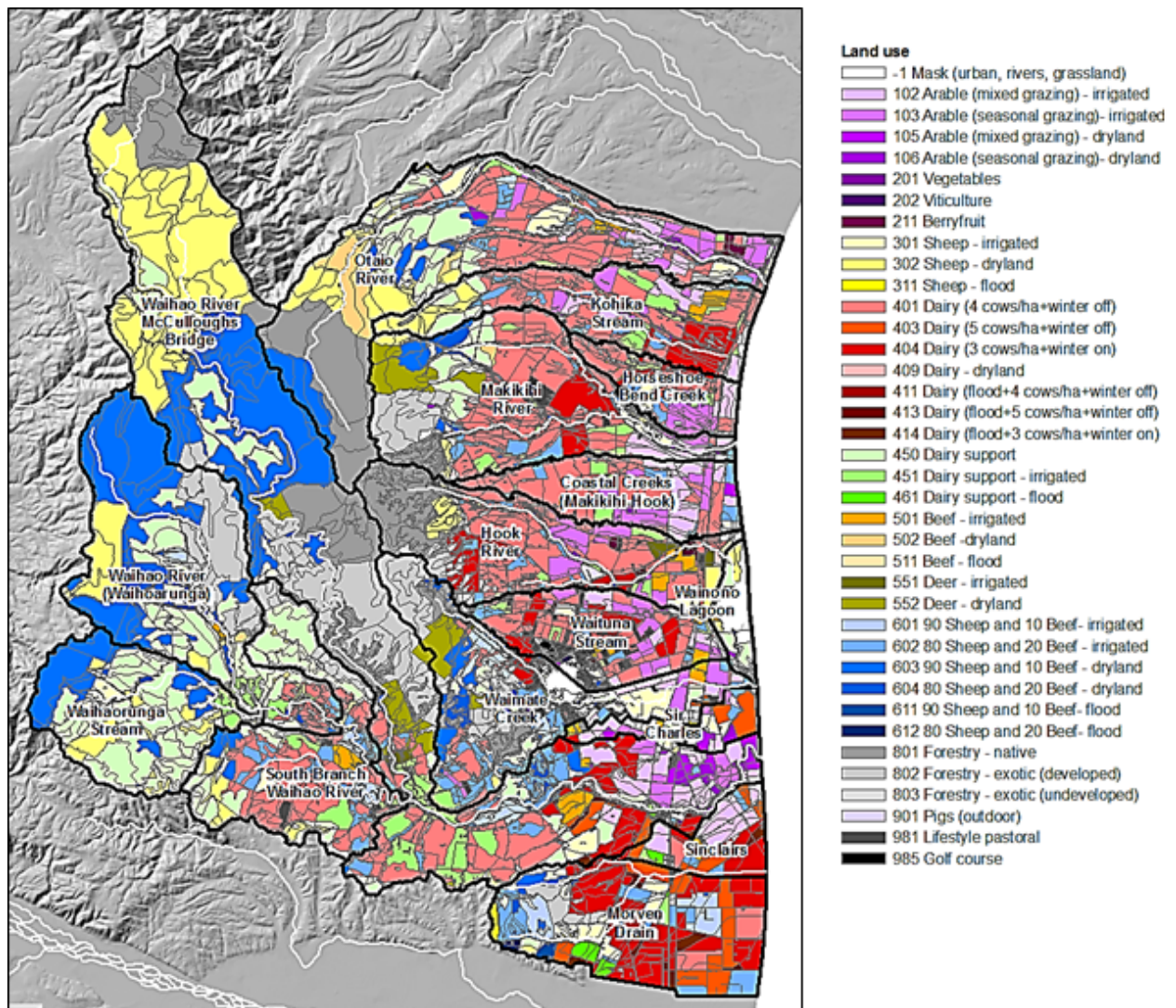
The updated load limits shall be calculated as follows:

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)**

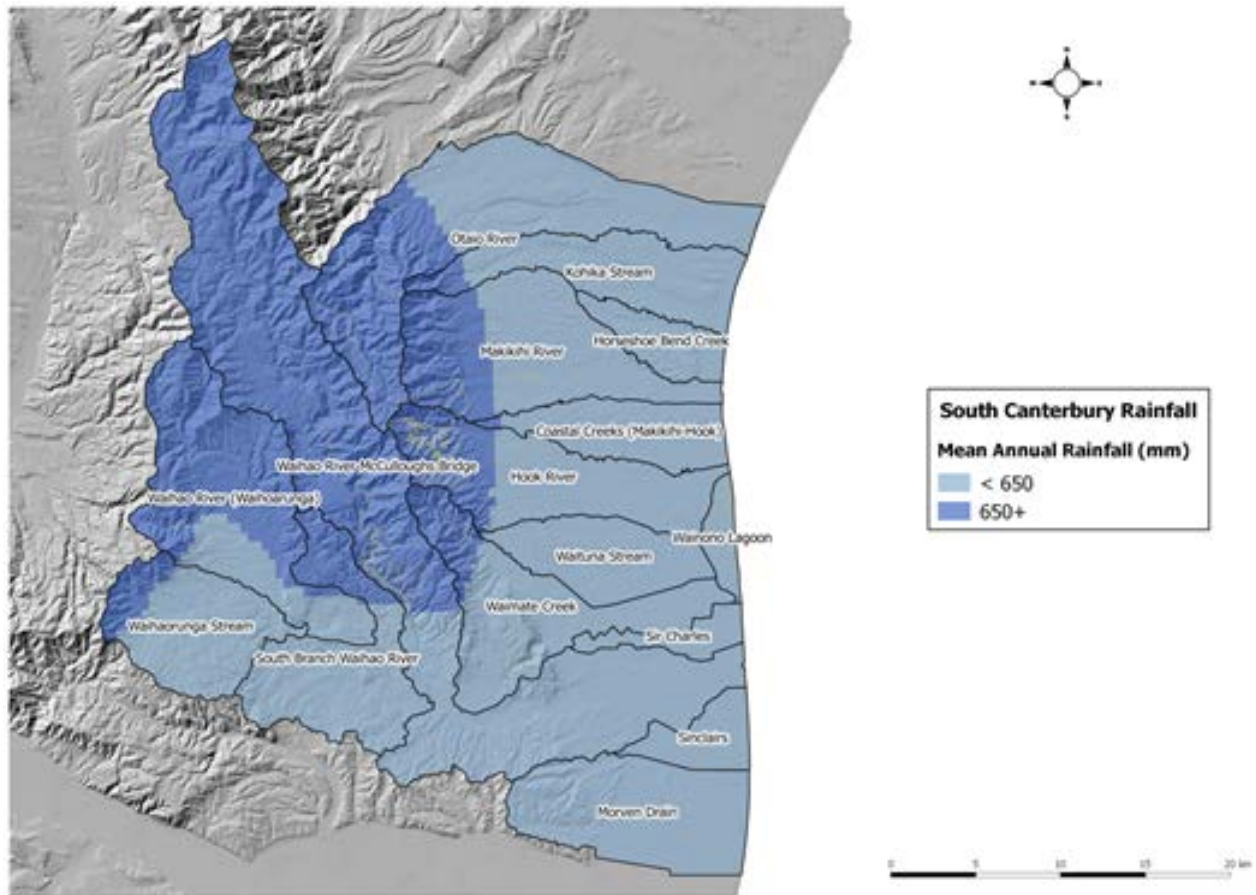


Table s31.1 Climate categories to use for load calculations

Original Look-up Table category	Matrix of Good Management (MGM) climate categories			
	Climate category	Annual rainfall (mm)	Annual PET (mm)	Mean daily temperature (°C)
< 650mm	9	554	752	10.7
650+	10	768	617	8.4

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.