



PROPOSED PLAN CHANGE 1 TO THE HURUNUI AND WAIAU RIVER REGIONAL PLAN:

Dryland Farming


R19/22

4 May 2019

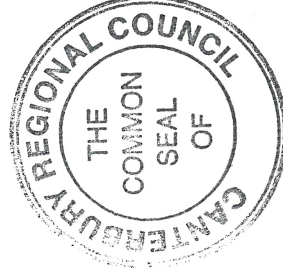
This is a true and correct copy of Proposed Plan Change 1 to the Hurunui and Waiau River Regional Plan, as adopted by the Canterbury Regional Council at its meeting on 11 April 2019.

At its 11 April 2019 meeting, the Canterbury Regional Council resolved to publicly notify Plan Change 1 to the Hurunui and Waiau River Regional Plan on 4 May 2019.

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



Bill Bayfield
Chief Executive
Canterbury Regional Council



Steve Lowndes
Chair
Canterbury Regional Council

11 April 2019

Note to the reader

Proposed Plan Change 1 to the Hurunui Waiau Rivers Regional Plan (HWRRP) is a plan change of limited scope. The proposed plan change is shown in this document that replicates the relevant provisions of the HWRRP and shows changes to those provisions. Where new text has been added, it is shown in underlined text. Where text has been deleted it is shown in ~~striketrough~~ text. Text that is neither struck through or underlined is not within the scope of this plan change.

direct hydraulic connection as defined in Schedule WQN7 of the Natural Resources Regional Plan and contained in Schedule 4 of this Plan, unless it can be demonstrated by means of aquifer testing and any other relevant information that a different classification should apply; and,

- c. groundwater takes with a direct, high or moderate hydraulic connection shall comply with the Environmental Flow and Allocation Regime in Table 1, to the degree specified in Schedule WQN7 of the Natural Resources Regional Plan as contained in Schedule 4 of this Plan.

Policy 4.3 To manage the interference effects between bores as per Schedule WQN10 of the Natural Resources Regional Plan, as contained in Schedule 4 of this Plan.

Policy 4.4 To maximise access to the available groundwater resource by ensuring that all bores adequately penetrate the aquifer as per Policy WQN142(b) of the Natural Resources Regional Plan, as contained in Schedule 4 of this Plan.

Policy 4.5 To manage the natural geothermal water resource in a way that maximises community wellbeing, while ensuring no long term decline in water temperature from human induced activities.

2.5 ***Cumulative effects of land use on water quality***

Objective 5.1 Concentrations of nutrients entering the mainstems of the Hurunui, Waiau and Jed rivers are managed to:

- a. protect the mauri of the waterbodies;
- b. protect natural biota including riverbed nesting birds, native fish, trout, and their associated feed supplies and habitat;
- c. control periphyton growth that would adversely affect recreational, cultural and amenity values;
- d. ensure aquatic species are protected from chronic nitrate toxicity effects; and,
- e. ensure concentrations of nitrogen do not result in water being unsuitable for human consumption.

Objective 5.2 Concentrations of nutrient entering tributaries to the Hurunui, Waiau and Jed rivers are managed to ensure they do not give rise to:

- a. chronic nitrate toxicity effects on aquatic species; and,
- b. water being unsuitable for human consumption.

Policy A4 1. When considering any application for a discharge the consent authority must have regard to the following matters:

1. the extent to which the discharge would avoid contamination that will have an adverse effect on the life-supporting capacity of fresh water including on any ecosystem associated with fresh water and
2. the extent to which it is feasible and dependable that any more than minor adverse effect on fresh water, and on any ecosystem associated with fresh water, resulting from the discharge would be avoided.

2. When considering any application for a discharge the consent authority must have regard to the following matters:

1. the extent to which the discharge would avoid contamination that will have an adverse effect on the health of people and communities as affected by their contact with freshwater; and
2. the extent to which it is feasible and dependable that any more than minor adverse effect on the health of people and communities as affected by their contact with fresh water resulting from the discharge would be avoided.

3. This policy applies to the following discharges (including a diffuse discharge by any person or animal):

1. a new discharge or
2. a change or increase in any discharge –

of any contaminant into fresh water, or onto or into land in circumstances that may result in that contaminant (or, as a result of any natural process from the discharge of that contaminant, any other contaminant) entering fresh water.

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

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

Policy 5.1

To take a tributary and community based approach to managing water quality and improving nutrient management practices.

Policy 5.2

To ensure all existing and new land use activities in the Nutrient Management Area shown on Map 4, have best nutrient management practices in place by 2017.

Policy 5.3

To manage water quality in the Hurunui River and its tributaries by setting water quality limits as follows:

- a. The 95th percentile of monthly periphyton biomass measurements in the mainstem of the Hurunui River shall not exceed 120 mg/m² chlorophyll a or 20% cover of filamentous algae more than 2 centimetres

- long;
- b. The 95th percentile of monthly periphyton biomass measurements in the Pahau and Waitohi Rivers shall not exceed 200 mg/m² chlorophyll a or 30% cover of filamentous algae more than 2 centimetres long;
- c. The average annual dissolved reactive phosphorus concentrations in the mainstem of the Hurunui River shall not exceed 0.0044 mg DRP/L;
- d. The annual median and 95th percentile nitrate-nitrogen concentrations in the mainstem of the Hurunui River and its tributaries above the Mandamus flow recorder site shall not exceed 1.1 and 2.0 mg NO₃-N/L respectively, these being the chronic nitrate-nitrogen toxicity thresholds for maintaining a 99% level of species protection; and
- e. The annual median and 95th percentile nitrate-nitrogen concentrations in the mainstem of the Hurunui River, and in its tributaries at their confluence with the mainstem, below the Mandamus flow recorder site shall not exceed 2.3 and 3.6 mg NO₃-N/L respectively, these being the chronic nitrate-nitrogen toxicity thresholds for maintaining a 95% level of species protection.

Policy 5.3A

To manage water quality in the Waiau River and its tributaries by setting water quality limits as follows:

- a. The 95th percentile of monthly periphyton biomass measurements in the mainstem of the Waiau River shall not exceed 120 mg/m² chlorophyll a or 20% cover of filamentous algae more than 2 centimetres long;
- b. The annual median and 95th percentile nitrate-nitrogen concentrations in the mainstem of the Waiau River and its tributaries above the Marble Point flow recorder site shall not exceed 1.1 and 2.0 mg NO₃-N/L respectively, these being the chronic nitrate-nitrogen toxicity thresholds for maintaining a 99% level of species protection; and
- c. The annual median and 95th percentile nitrate-nitrogen concentrations in the mainstem of the Waiau River, and in its tributaries at their confluence with the mainstem, below the Marble Point flow recorder site shall not exceed 2.3 and 3.6 mg NO₃-N/L respectively, these being the chronic nitrate-nitrogen toxicity thresholds for maintaining a 95% level of species protection.

Policy 5.3B

To protect existing values, uses and the mauri of the Hurunui and Waiau Rivers and their tributaries, while also allowing for a larger area of land to be irrigated, by only allowing land use changes that will not result in a breach of the water quality limits set in Policies 5.3 and 5.3A and additionally for the Hurunui River, will not result in a breach of the nitrogen load limits set in Schedule 1.

Policy 5.3C

To protect existing values, uses and the mauri of the Hurunui and Waiau Uwha Rivers and their tributaries, while recognising the comparatively small contribution of dryland farming to in-river nutrient concentrations

by allowing for the continued operation of low intensity dryland farms without resource consent.

Policy 5.4

To progressively review, and revise by way of plan change if necessary and appropriate, the Policy 5.3, Policy 5.3A and Schedule 1 water quality limits for the Hurunui and Waiau Rivers and their tributaries to ensure that objective 5.1 and 5.2 are met, by:

- a. Implementing a State of the Environment monitoring programme that includes, as a minimum, regular monitoring of instream Dissolved Inorganic Nitrogen (concentration and load), Dissolved Reactive Phosphorus (concentration and load), E. coli, nitrate-nitrogen, Periphyton, Total Nitrogen, Total Phosphorus and Quality Macro-Invertebrate Community; and
- b. At the stages set out in (c) below, review the following:
 - i. Correlation between total catchment load (if known) of Dissolved Inorganic Nitrogen and Dissolved Reactive Phosphorus, and instream concentrations;
 - ii. Corresponding effects of instream concentrations on matters set out in Objective 5.1 and 5.2,
 - iii. Revised projections of instream concentrations and instream effects resulting from full allocation up to the Schedule 1, Policy 5.3 and Policy 5.3A limits.
- c. The reviews will be undertaken at the following stages:
 - i. For the Hurunui River, the reviews shall be undertaken with reference to the Schedule 1 limit for Dissolved Inorganic Nitrogen at the State Highway One flow recorder, in 10% increments from the 2005-2011 average annual load starting point;
 - ii. For the Waiau River, the reviews shall be undertaken every 5 years.

Policy 5.4A

To further investigate the reasons for cyanobacteria blooms and revise by way of Plan change, if necessary and appropriate, the Schedule 1 nutrient loads to ensure that Objective 5.1(c) is met with regard to cyanobacteria.

2.6

Storage and Additional Demand for Water Resources

Objective 6

Infrastructure for out of stream uses of water is developed in a manner which:

- a. **protects areas with high intrinsic, cultural and recreational values;**
- b. **avoids areas with significant natural hazards;**
- c. **considers demand for community and/or stock drinking water supplies; and**
- d. **gives effect to Objectives 2 and 3.**

Policy 6.1

To prohibit the damming or impoundment of water within the parts of the Hurunui and Waiau River Catchments shown as Zone A 'High Value Areas', on Map 3, or on the mainstem of the Hurunui and Waiau Rivers.

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

- i. the reasonable need for the quantities of water sought, and the ability of the applicant to abstract those quantities, and whether storage of water is proposed having regard to Policy 8.1;
- ii. the adequacy of the Water Supply Asset Management Plan in achieving a reduction in the amount of water taken and used in times of low flow having regard to Policies 2.3 and 2.4;
- iii. the availability and practicality of using alternative supplies of water;
- iv. the technical efficiency of the take and use having regard to Policy 8.1;
- v. the effects the take has on surface water flows having regard to Policy 4.2;
- vi. interference effects between bores having regard to Policy 4.3;
- vii. the effects the take has on any other authorised takes;
- viii. the collection, recording, monitoring and provision of information concerning the exercise of the resource consent having regard to Policy 8.1; and
- ix. consent duration, having regard to Policies 9.1 and 9.2.

Non-complying Activities

Rule 8.1 Unless specified as a permitted activity or restricted discretionary activity or prohibited activity the taking and use of groundwater from any Groundwater Allocation Zone in Map 2, is a non-complying activity.

Prohibited Activities

Rule 9.1 The taking and use of groundwater in any groundwater allocation zone in Map 2 above the allocation limit specified in Policy 4.1, is a prohibited activity.

3.3 Cumulative Effects of Land Use on Water Quality

Permitted Activities

- Rule 10.1** Except for the use of land for Low Intensity Dryland Farming, Any existing land use as at the date the Plan is made operative that results in a discharge of nitrogen or phosphorus which may enter water, in the Nutrient Management Area shown on Map 4, is a permitted activity provided that:
- a. on or before 1 January 2017 the land is subject to:
 - i. an Industry Certification System; or
 - ii. a Catchment Agreement; or
 - iii. an Irrigation Scheme Management Plan; or
 - iv. a Lifestyle Block Management Plan.

And

- b. a record of the annual average amount of nitrate-nitrogen and phosphorus loss from the land, for the period from 1 July 2012 to 30 June 2016, calculated using the Overseer nutrient budget model (or an alternative nutrient budget model approved by the Canterbury Regional Council) shall be submitted to the Council by 1 October 2016. For production land use activities where Overseer cannot adequately model nutrient losses, an alternate method such as nutrient loading rates (e.g. kgN/ha/year deposited on the land) for the period from 1 July 2012 to 30 June 2016 shall be submitted to the Council by 1 October 2016;
- c. any nitrate-nitrogen leached from the land shall not cause or contribute to any measured{Footnote,208} exceedence of the Policy 5.3 and Policy 5.3A limits for the 95th percentile concentration of nitrate-nitrogen in the mainstem or tributaries of the Hurunui and Waiau Rivers; and
- d. contaminants leached from the land shall not cause or contribute to any measured{Footnote,209} breach of the Resource Management (National Environmental Standards for Human Drinking Water) Regulations 2007 or the guideline values or maximum acceptable values for determinands in the Drinking Water Standards of New Zealand 2008 for any registered drinking water supply takes.

Note: Canterbury Regional Council is satisfied that this permitted activity rule will not cause or contribute to a breach for any registered drinking water supplies, but condition (d) is included here for completeness.

Note: For the avoidance of doubt, in respect of tributaries, Rule 10.1(c) only applies to tributaries at their confluence with the mainstem of the Hurunui or Waiau River.

Rule 10.1A

The use of land for Low Intensity Dryland Farming that results in a discharge of nitrogen or phosphorus, which may enter water, in the Nutrient Management Area shown on Map 4, is a permitted activity provided that:

- a. either:
 - i. the property is registered in the Farm Portal by [12 months after the plan change becomes operative in accordance with clause 20 of Schedule 1 of the RMA] and information about the farming activity and the property is reviewed and updated by the property owner or their agent every 36 months thereafter, or whenever any boundary of the property is changed; or
 - ii. the property is subject to a Dryland Farmer Collective Agreement on or before [12 months after the plan change becomes operative in accordance with clause 20 of Schedule 1 of the

- RMA]; and
- b. a Management Plan in accordance with Schedule 6 has been prepared and is implemented by [12 months after the plan change becomes operative in accordance with clause 20 of Schedule 1 of the RMA] and is supplied to the Canterbury Regional Council, on request, to be viewed only. The Canterbury Regional Council will not retain copies of the Management Plan.

Rule 10.2

Any change in land use (refer Part 5 - Definitions), in the Nutrient Management Area shown on Map 4, is a permitted activity, provided that:

- a. Either:
 - i. conditions (b), (c) and (d) of Rule 10.1 are met; or
 - ii. if land use is changing from low intensity dryland farming to another land use, conditions (c) and (d) of Rule 10.1 and conditions (a) and (b) of Rule 10.1A are met; and
- b. for changes in land use in the Hurunui catchment above SH 1, the dissolved inorganic nitrogen and dissolved reactive phosphorus load limits specified in Schedule 1 are not exceeded, taking into account limits specified in resource consents; and
- c. a water permit has been granted that authorises irrigation on the land and includes conditions that:
 - i. specify the maximum annual amount of nitrate-nitrogen that may be leached;
 - ii. specify measures to minimise the loss of phosphorus; and
 - iii. the land is subject to:
 - i. an Industry Certification System; or
 - ii. a Catchment Agreement; or
 - iii. an Irrigation Scheme Management Plan; or
 - iv. a Lifestyle Block Management Plan

Or as an alternative to complying with (c):

- d. on or before 1 January 2017 the land is not irrigated with water but is subject to:
 - i. an Industry Certification System; or
 - ii. a Catchment Agreement; or
 - iii. an Irrigation Scheme Management Plan; or
 - iv. a Lifestyle Block Management Plan.

Restricted Discretionary Activities

Rule 11.1 Land use activities ~~which do not comply with~~ that are not permitted by Rules 10.1 or 10.1A, or which do not comply with conditions (a), (c) or (d) of Rule 10.2 are a discretionary activity.

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

- i. methods required to avoid, remedy or mitigate adverse effects on water quality resulting from nutrients lost or leached from the land, including whether the activity will cause or contribute to an exceedence of the nitrate-nitrogen toxicity limits or dissolved reactive phosphorus limits in Policies 5.3 and 5.3A;
- ii. methods required to avoid, remedy or mitigate adverse effects resulting from a breach of the Resource Management (National Environmental Standards for Human Drinking Water) Regulations 2007 or the guideline values or maximum acceptable values for determinands in the Drinking Water Standards of New Zealand 2008 for any registered drinking water supply take, having regard to Objectives 5.1 and 5.2 and Policies 5.1 to 5.4A;
- iii. methods required to avoid, remedy or mitigate adverse effects arising from issues managed under the systems, agreements or plans specified in Schedule 2, having regard to Objectives 5.1 and 5.2 and Policies 5.1 to 5.4A; and
- iv. consent duration, having regard to Policies 9.1 and 9.2.

Non-Complying Activities

Rule 11.1A Any change in land use (refer Part 5 - Definitions), in the Nutrient Management Area shown on Map 4, that does not comply with condition (b) of Rule 10.2 is a non-complying activity.

3.4 *Transfer of Resource Consents*

Restricted Discretionary Activities

Rule 12.1 The temporary or permanent transfer of a resource consent (or part thereof) to take or use surface water wholly within one surface water allocation zone, on Map 1, is a restricted discretionary activity provided it complies with the following standards and terms.

- a. the technical efficiency of the use of the water in the transferred location is at least as high as in the original location and provides for an application efficiency of 80% in the new location;

- b. the reliability of supply for any other lawfully established water take is not reduced;
- c. the Environmental Flow and Allocation Regime shown in Table 1;
- d. the maximum rate of take after the transfer is less than or equal to the rate of take prior to the transfer;
- e. the annual volume of take after the transfer is less than or equal to the volume of take prior to the transfer, or if no annual volume has been applied an annual volume is applied which provides for 80% or greater application efficiency and the reasonable water use for the intended land use for 9 out of 10 years: and
- f. fish are prevented from entering the water intake, as set out in Schedule WQN12 of the Natural Resources Regional Plan.

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

- i. the nature of the transfer, whether short term, long term, partial or full, and the apportioning of the maximum rate and annual volume in the case of a partial transfer;
- ii. the appropriateness of existing conditions, including conditions on minimum flow, annual volume and other restrictions to mitigate effects having regard to Policies 7.1, 7.2 and 7.3;
- iii. the reasonable need for the quantities of water sought, the intended use of the water and the ability of the applicant to abstract and apply those quantities having regard to Policy 8.1;
- iv. the technical efficiency of the exercise of the resource consent having regard to Policy 8.1;
- v. the reduction in the rate of take in times of low flow, having regard to Policies 2.3 and 2.4;
- vi. the collection, recording, monitoring and provision of information concerning the exercising of the resource consent having regard to Policy 8.1;
- vii. any effects on water quality, including whether the activity in combination with all other activities will result in the nutrient limits in Schedule 1, or the nitrogen toxicity limits in Policies 5.3 and 5.3A being exceeded;
- viii. the need for and provision of any additional restrictions to prevent the flow from reducing to zero having regard to Policies 2.3 and 2.4; and,
- ix. consent duration, having regard to Policies 9.1 and 9.2.

Resource consent applications for transfer under this rule shall not be notified or served on any affected persons, under section 95 of the Resource Management Act.

Rule 12.2

The temporary or permanent transfer of a resource consent (or part thereof) to take or use groundwater within the same groundwater zone in Map 2, is a restricted discretionary activity provided it complies with the following standards and terms.

- a. the technical efficiency of the use of the water in the transferred location is at least as high as in the original location and provides for an application efficiency of 80% in the new location;

5.1 Definitions

Catchment Agreement	<p>A Catchment Agreement is an agreement approved by Canterbury Regional Council that identifies actions to be undertaken to actively manage the use of natural resources in order to achieve high standards of environmental management and optimise production from all properties within a catchment or sub-catchment of the Hurunui, Waiau or Jed Rivers or their tributaries. Environment Canterbury will consider catchment agreements which do not include all properties on a case by case basis depending on the number of properties included in the agreement, the types of land uses in the catchment and the extent to which values may be compromised if not all properties are included in the agreement.</p> <p>Any Catchment Agreement must at a minimum, to the extent considered appropriate and corresponding to the scale and significance of the activities within the catchment or sub-catchment contain the elements identified in Schedule 2.</p>
Change of land use	<p>For the purposes of this Plan, a change in land use;</p> <ol style="list-style-type: none"> is calculated on a per property basis, and is determined as being an increase greater than 10% in the long term average release of Nitrogen or Phosphorus to land which may enter water, measured on a kg/ha basis, but calculated on the gross load per property from the date this Plan is made operative; <u>or</u> <u>where a farming activity met the definition of Low Intensity Dryland Farming at [the date the plan becomes operative in accordance with clause 20 of Schedule 1 of the RMA], any change that results in the farming activity not meeting the definition of Low Intensity Dryland Farming.</u>
Consumptive Activity	A consumptive water take is a take which uses water taken from a surface body and does not return the water to the same water body at the same or similar rate and in the same or better water quality.
Community and/or stock drinking water supply	Means a water supply that has been developed to provide <i>drinking water</i> for people or to provide water for stock (of more than one individual) to drink.
Drinking Water	Has the same meaning as that in section 69G of the Health Act 1956

5.1 Definitions

Dryland Farmer Collective Agreement	A Dryland Farmer Collective Agreement is an agreement that has been approved by Canterbury Regional Council as containing the matters identified in Schedule 2A, for members to collectively record compliance with Rule 10.1A.
Farm Portal	means the nutrient management database accessed at www.farmportal.ecan.govt.nz . For the purpose of Rule 10.1A, Farm Portal refers to the "N. Check" tool which can be accessed at www.farmportal.ecan.govt.nz .
Hydraulically connected groundwater	<p>A groundwater take which has a stream depletion effect on a surface water body. Groundwater takes are assessed under 2 methodologies to assess their stream depletion effect. Those takes that are less than 30m deep and within River Zone R1 or R2 in the Hurunui and Waiau Regional Plan are considered to have a direct degree of hydraulic connection and in most cases will be managed as surface water takes.</p> <p>Groundwater takes outside of River Zone R1 or R2 will be managed as per the methodology outlined in Schedule WQN7 of the Natural Resources Regional Plan, as contained in Schedule 4 of this Plan.</p>
Hurunui Waiau Zone or Waiau Hurunui Zone	<p>Means the area defined in the Canterbury Water Management Strategy as the Hurunui Waiau Zone or Waiau Hurunui Zone.</p> <p>Note these terms have historically been used interchangeably; the Waiau Hurunui Zone is identical to the Hurunui Waiau Zone.</p>
Industry Certification System	<p>An Industry Certification System is a system approved by Canterbury Regional Council that identifies actions to be undertaken to actively manage the use of natural resources in order to achieve high standards of environmental management and optimise production from all properties within an industry class.</p> <p>Any Industry Certification System must at a minimum, to the extent considered appropriate and corresponding to the scale and significance of the activities undertaken by that industry class, contain the elements identified in Schedule 2.</p>
Infrastructure	An Infrastructure Development Plan is a Plan submitted with a resource consent application that provides:

Development Plan	<p>For all proposals:</p> <ul style="list-style-type: none"> a. A description of the way that infrastructure will be developed to allow for the optimal irrigation (or in the case of hydro electricity generation proposals how it will not preclude the irrigation) of further land in the Hurunui and Waiau Zone and enable future irrigation of the currently un-irrigated areas adjacent to the site of the development; b. The location of any water storage reservoirs, and a description of: <ul style="list-style-type: none"> i. the size of these reservoirs; ii. the operating rules; iii. any recreational activities that these reservoirs could provide; and, iv. any riparian management, c. A map and a description of the location of the point(s) of take, any diversion(s) and any discharge(s); and d. A description of how existing abstractors' reliability, within the affected area, will remain the same or improve under the proposed development. <p>In addition, for irrigation takes, the Infrastructure Development Plan shall include:</p> <ul style="list-style-type: none"> e. A description, including the location, of any riparian planting or other biodiversity works proposed to assist in managing water quality f. A description of the properties, including their location, that will be provided with water from the proposed scheme (or where this is not confirmed, the properties that could be provided with water) and the application rate that is proposed for each property; and g. A description of how any water will be distributed and the measures proposed to ensure it is used with maximum efficiency. <p>In addition, for Hydro electric proposals, the Infrastructure Development Plan shall include:</p> <ul style="list-style-type: none"> h. A description of how effects on existing recreational opportunities are proposed to be managed; i. A description of how fish passage will be maintained; and, j. A description of how flows in the river will be moderated, both throughout the affected reach and downstream of the discharge point to provide for the health and safety of river users and to maintain sufficient invertebrate populations to support fish and river bird communities. <p>Note: the amount of detail provided in a Plan shall correspond to the scale and significance of the activity.</p>
Irrigation	<p>An Irrigation Scheme Management Plan is a Plan approved by Canterbury Regional Council that identifies</p>

5.1 Definitions

Scheme Management Plan	actions to be undertaken to actively manage the use of natural resources in order to achieve high standards of environmental management and optimise production from the land within the irrigation schemes command area. Any Irrigation Scheme Management Plan must at a minimum, to the extent considered appropriate and corresponding to the scale and significance of activities carried out within the irrigation scheme, contain the elements identified in Schedule 2.
Lifestyle Block Management Plan	A Lifestyle Block Management Plan is a Plan approved by Canterbury Regional Council that identifies actions to be undertaken to actively manage the use of natural resources in order to achieve high standards of environmental management. Any Lifestyle Block Management Plan must at a minimum, to the extent considered appropriate and corresponding to the scale and significance of activities carried out on the lifestyle block, contain the elements identified in Schedule 2.

<u>Low Intensity Dryland Farming</u>	<p><u>means the use of land for a farming activity, where:</u></p> <ul style="list-style-type: none"> a. <u>no part of the property is irrigated; and</u> b. <u>the area of the property used for Winter Grazing is less than:</u> <ul style="list-style-type: none"> i. <u>10% of the area of the property, for any property between 100 hectares and 1000 hectares in area; or</u> ii. <u>100 hectares, for any property greater than 1000 hectares in area; and</u> c. <u>the farming activity does not include the farming of more than 25 weaned pigs or more than 6 sows, or the farming of poultry fowl at a stocking rate of more than 10 birds per hectare, up to a maximum of 1000 birds; and</u> d. <u>the farming activity does not include a component where livestock are confined within a hard-stand area for the purpose of intensive controlled feeding with the purpose of encouraging high weight gain.</u>
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l/s	Means litres per second.
m³/s	Means one cubic metre per second or alternatively 1,000l/s, and is a measure of river flow.
m³	Means one cubic metre
Mainstem	Has the same meaning as that in the Canterbury Regional Policy Statement 2013

5.1 Definitions

Mauri	<p>Is the essential life force inherent in all things and includes:</p> <ul style="list-style-type: none"> a. Aesthetic qualities e.g. water clarity, natural character and indigenous flora and fauna; b. Life supporting capacity and ecosystem robustness; c. Depth and velocity of flow; d. Continuity of flow from the mountains to the sea; e. Fitness for cultural usage; and, f. Productive capacity.
Minimum Flow	The flow at which abstractions from a water body must cease other than for a community water supply with an approved asset management strategy or water taken for an individual's reasonable domestic needs under section 14(3)(b) of the RMA.
Dissolved inorganic nitrogen and dissolved reactive phosphorus load	The level, in tonnes per year, of dissolved inorganic nitrogen and/or dissolved reactive phosphorus averaged over the last six years.
Non-consumptive activity	Is an activity where water is taken and discharged back to the water body in the same or better quality and at the same or similar rate.
Nutrient loading rates	The deposition of nitrogen and phosphorus to soils across a property from excreta derived from animals (kg/ha/year).
Run of river	Run of river, when referring to a water take, means a take which is taken and used directly. For example a run of river irrigation take is where water is taken from the river and used to irrigate land.
Stream depletion effect	The calculated rate of impact or of groundwater abstraction on surface flow. See hydraulically connected groundwater.
Seven Day Mean Annual Low Flow	Is determined by taking the average of the seven consecutive lowest daily flows for each year of the flow record, summing those values and then dividing the total number of years of record. The 7dMALF will generally be calculated at the minimum flow site in any surface water allocation zone.

5.1 Definitions

(7day MALF or 7dMALF)	
Telemetry	The equipment which can transmit data from a remote field station to a central base for immediate interpretation of real time information.
Water Supply Asset Management Strategy	A Water Supply Asset Management Strategy is a strategy that describes how water usage will be reduced at times of low flow to ensure that no more than 250 l of water is provided to each person per day and no more than the limits specified in Schedule WQN11 of the Natural Resources Regional Plan (as contained in Schedule 4 of this Plan) is provided to stock, when the flow in the surface water body is at or below the minimum flow specified in the Environmental Flow and Allocation Regime as shown in Table 1.

<u>Winter Grazing</u>	<u>means the grazing of cattle within the period of 1 May to 30 September where the cattle are contained for break-feeding of in-situ brassica and root vegetable forage crops.</u>
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Schedule 2A: Matters to be addressed in any Dryland Farmer Collective Agreement in accordance with Rule 10.1A

Rule 10.1A provides an option for any Low Intensity Dryland Farming activity, in the Nutrient Management Area shown on Map 4, to implement, on or before [12 months after the plan change becomes operative in accordance with clause 20 of Schedule 1 of the RMA], a Dryland Farmer Collective Agreement. This schedule sets out the requirements that a Dryland Farmer Collective Agreement must contain and address for it to be approved by the Canterbury Regional Council.

As a minimum the 'Dryland Farmer Collective Agreement' shall include:

1. Details relating to the governance arrangements of the Collective;
2. A description of each property subject to the Collective Agreement, including property boundaries and ownership details;
3. The method by which the total area of land used for Winter Grazing will be reported to the Collective;
4. A statement of the actions that will be undertaken by the individual land managers (the 'Members') who commit to the Collective, including as a minimum:
 - i. the requirement for Members to report annually, to the Collective, on individual property area and the area of each property used for Winter Grazing.
5. A description of the reporting process that must include the following statements:
 - i. An annual report shall be prepared by [the collective governance] which describes the Collective area, including property boundaries, ownership details and total area of land used for Winter Grazing; and
 - ii. The report shall be submitted to the Canterbury Regional Council no later than 1 December each year.

Schedule 6: Management Plan for Low Intensity Dryland Farming Activities

Part A - Management Plans

A Management Plan can be either:

1. A Plan prepared in accordance with the requirements of Part B below; or
2. A Plan prepared in accordance with an industry prepared Farm Environment Plan template that has been certified by the Chief Executive of Environment Canterbury as providing at least an equivalent amount of information and practice guidance contained in Part B below.

Part B - Management Plan Default Content

The Management Plan shall contain as a minimum:

1. Property details
 - a. Physical address
 - b. Description of the ownership and name of a contact person
 - c. Legal description of the land and farm identifier
2. A map(s) or aerial photograph at a scale that clearly shows:
 - a. The boundaries of the property.
 - b. The boundaries of the main land management units on the property.
 - c. The location of permanent or intermittent rivers, streams, lakes, drains, ponds or wetlands.
 - d. The location of riparian vegetation and fences adjacent to water bodies.
 - e. The location on all waterways where stock access or crossing occurs.
3. The location of any source areas for phosphorus loss
4. A description of:
 - a. the on-farm actions, including applicable good management practices, that have been undertaken in the previous 01 July to 30 June period to implement the applicable practices described in the table below; and
 - b. the on-farm actions, including good management practices, that will be undertaken over the next 01 July to 30 June period to implement the applicable practices described in the table below
5. A copy of the Management Plan shall be retained by the landowner and updated at least once every 12 months as

necessary, and provided to the Canterbury Regional Council, for viewing, on request. The Canterbury Regional Council will not retain copies of the Management Plan.

<u>Practice</u>	<u>On-farm actions undertaken in the previous 12 months</u>	<u>On-farm actions to be undertaken in the next 12 months</u>
<u>Effluent and fertiliser is applied at a rate that does not exceed the water holding capacity of the soil or the agronomic requirements of the crop or pasture</u>		
<u>Effluent application systems, fertiliser or organic manure systems are assessed annually and maintained and operated to apply waste or nutrients efficiently to meet agronomic requirements of crop or pasture and not exceed soil water holding capacity.</u>		
<u>Silage pits, refuse pits and offal pits are sited, designed and managed to avoid the discharge of leachate into surface waterbodies or groundwater</u>		
<u>Mahinga kai values are identified and protected. To seek assistance in identifying mahinga kai values and practices to protect those values, contact the Canterbury Regional Council or tangata whenua</u>		
<u>Fertiliser is stored a minimum of 20 metres from surface waterbodies</u>		

<u>Stock are excluded from waterbodies in accordance with regional council rules or any granted resource consent.</u>		
<u>Vegetated buffer strips of at least 5 metres in width are maintained between areas of Winter Grazing and any river, lake, drain or wetland.</u>		
<u>Vegetated riparian margins of sufficient width are maintained to minimise nutrient, sediment and microbial pathogen losses to waterbodies.</u>		
<u>Critical phosphorus source areas are identified and appropriately managed to minimise sediment and phosphorus loss.</u>		