

**Revised Appendix 5**  
**Provisions for Fish and Game/Forest and Bird as per –**  
**Scott Pearson EIC 2014**

**Proposed Variation 1 to the Proposed Canterbury Land and Water Regional Plan –  
track changes NCFG version**

Table 11(i) = limits for nitrogen losses

Table 11(x) = limits for rivers at specific sites

Table 11(k) – (m) = limits for rivers/ lakes/ groundwater

**11.4.12 Improve water quality by ~~Reduce~~ reducing discharges of nitrogen, phosphorus, sediment and microbial contaminants from farming activities in the catchment by requiring farming activities to:**

- (a) Not exceed ~~Reduce~~ the nitrogen baseline where a property's nitrogen loss calculation is more than 15 kg of nitrogen per hectare per annum, unless the circumstances set out in Policy 11.4.14B apply; and
- (b) Implement the practices set out in Schedule 24; and
- (c) Implement a Farm Environment Plan prepared in accordance with Schedule 7 Part A, from 1 July 2015, when a property is greater than 10 hectares and is within the Lake Area in the Cultural Landscape/Values Management Area; and
- (d) Exclude stock from drains, in addition to the regional requirements to exclude stock from lakes, rivers and wetlands.

**11.4.13 From 1 January 2017, further reduce discharges of nitrogen, phosphorus, sediment and microbial contaminants from farming activities in the catchment by requiring farming activities to:**

- (a) Implement a Farm Environment Plan prepared in accordance with Schedule 7 Part A, where a property is greater than 50 hectares; and
- (b) Where a property's nitrogen loss calculation is greater than 15 kg of nitrogen per hectare per annum, meet the Good Management Practice Nitrogen and Phosphorus Loss Rates for the property's ~~baseline land use~~.

**11.4.14 From 1 January 2022, to achieve the interim catchment nitrogen load limit for farming for 2022 ~~water quality limits~~ in Section 11.7.3 require farming activities to:**

- (a) Implement a Farm Environment Plan prepared in accordance with Schedule 7 Part A, where a property is greater than 20 hectares; and
- (b) Where a property's nitrogen loss calculation is greater than 15 kg of nitrogen per hectare per annum, make the following further percentage

reduction in nitrogen loss rates, beyond those set out in Policy 11.4.13(b), to achieve the catchment target for farming activities in Table 11(i):

- (i) 30% for dairy
- (ii) 22% for dairy support; or
- (iii) 20% for pigs; or
- (iv) 13% for irrigated sheep, beef or deer; or
- (v) 10% for dryland sheep and beef; or
- (vi) 7% for arable; or
- (vii) 5% for fruit, viticulture or vegetables; or
- (viii) 0% for any other land use.

**11.4.14A** From 1 January 2037, to achieve the interim limit for nitrogen losses for farming for 2037 in Section 11.7.3, require farming activities to make further reductions in nitrogen loss rates, to achieve a ~~so that~~ further 20% reduction in catchment nitrogen loads from farming land use in the catchment. Note: for the avoidance of doubt this does not necessarily mean a 20% reduction in nitrogen loss rates on each individual property, but instead proportionate reductions for each land use as per the most equitable reductions deemed at that time will lead to a further ~~may mean smaller or larger reductions so that the total reduction~~ across the catchment of 20%. Note: the exact nature of reductions required by each land user is to be reviewed in accordance with policy 11.4.17A and this plan changed accordingly by 1 January 2027.

**11.4.14B** In circumstances where a farming activity seeks to increase its nitrogen loss above the amount calculated as the nitrogen baseline for the property this may only occur if:

- (a) records held by the council show that reductions in nitrogen loss calculations from other farming activities in the catchment have been achieved that are equal to or greater than the increase in nitrogen loss above the nitrogen baseline for the property sought; and
- (b) the nitrogen loss from the farming activity, in combination with all other nitrogen loss from farming activities in the catchment does not cause the relevant interim limit for nitrogen losses for farming in the

catchment to be exceeded; and

(c) the nitrogen loss calculation for the property does not exceed the rate calculated to be the Good Management Practice Nitrogen and Phosphorus Loss Rate for the farming activity less the percentage reduction in nitrogen loss rates required for the farming activity in Policy 11.4.14(b) and any further reductions required by Policy 11.4.14A; and

(d) the farming activity must implement a Farm Environment Plan prepared in accordance with Schedule 7 Part A.

**11.4.15** In circumstances where the reductions required in Policy 11.4.14(b) are unable to be achieved by 2022, or the reductions required in Policy 11.4.14A are unable to be achieved by 2037, any extension of time to achieve the reductions will be considered having regard to:

- a) The implications on achieving the catchment nitrogen load target in Table 11(i) by 2037; and
- b) The nature of any proposed steps to achieve the reduction; and
- c) The sequencing, measurability and enforceability of any steps proposed.
- d) The level of measured performance improvement achieved before or during measurement of the nitrogen baseline, to avoid penalising early adopters of Best Practice and Beyond Best Practice mitigations.

11.4.16 Despite Policy 11.4.14 and 11.4.15, from 2037 no property or farming enterprise shall leach more than 80kg of nitrogen per hectare per annum.

~~**11.4.17** To achieve the farming activity water quality targets in Section 11.7.3 require all farming activities within the command area of any Irrigation Scheme listed in Table 11(j), where they are irrigated with water from the Scheme:~~

- ~~a) To collectively not exceed the Irrigation Scheme Nitrogen Limits in Table 11(j); and~~
- ~~b) Where properties convert from dryland to irrigated land use, the nitrogen loss rates from the outset shall be managed in accordance with Policy 11.4.14(b).~~

**11.4.17A** To progressively review, and revise by way of plan change if necessary and appropriate the nitrogen load interim targets and limits for the Selwyn Waihora catchment to ensure that the nitrogen and phosphorus

**concentration limits set in Tables 11(k), 11(l) and 11(m) are met and the freshwater outcomes set in Tables 11(a) and 11(b) are achieved, by:**

(a) Implementing a State of the Environment monitoring programme at key indicator sites where listed in Table 11(x), 11(k), 11(l) and 11(m) 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 Quantitative** Macro-Invertebrate Community (QMCI); and

(b) Every 5 years, review the following:

(a) Time series and trends and progress towards the limits listed in Table 11(x), 11 (k), 11 (l) and 11 (m)

(i) Correlation between **total catchment load (if known)** measured load at each of the locations listed in Table 11(x) of Dissolved Inorganic Nitrogen and Dissolved Reactive Phosphorus, instream concentrations and QMCI;

(ii) Corresponding effects of instream concentrations on the freshwater outcomes set in Tables 11(a) and 11(b),

(ia) Comparison between the measured load of nitrogen and phosphorus, and QMCI at each of the locations listed in Table 11(x) and the limit set for nitrogen and phosphorus loads and QMCI at that location in Table 11(x),

(iib) Comparison between the measured load at each of the locations in Table 11(x) and the limits for nitrogen losses in Table 11(i) taking into account the most up to date understanding of groundwater lag times, attenuation and other environmental factors,

(iii) Revised projections of instream concentrations and instream effects resulting from full allocation **up to the Schedule 1, Policy 5.3 and 5.3A of the modelled farm output load limits** of the limits for nitrogen loss in Table 11(i).

(iv) The achievability of the reductions in nitrogen loss from farming activities required by policy 11.4.14 and 11.4.14A and whether new technologies make these reductions or further reductions more or less achievable.

(c) Publish the results of the state of the Environment Monitoring Programme each year, and publish the findings of the review required in (b) within 6 months of each 5 year review.

(d) If the monitoring and review of the information required in (b) shows that:

(i) the measured nitrogen load does not, or is not likely to, achieve the relevant limit set for nitrogen load in Table 11(x) for a particular site, or

(ii) the measured nitrogen load does not, or is not likely to achieve the limit for nitrate nitrogen concentration in Table 11(k)

then the regional council will:

(iii) initiate a review and propose a change or variation to this plan to revise the limits for nitrogen loss in Table 11(i) so that the limits for nitrogen loss in Table 11(i) will likely achieve the limits for nitrogen load in Table 11(x), and

(iv) review all existing consents to discharge nitrogen in the catchment so that the new limits for nitrogen loss in Table 11(i) are achieved.

### **Nutrient Management, Sediment and Microbial Contaminants**

*Rules 11.5.6, 11.5.7, 11.5.8, 11.5.9, 11.5.10, 11.5.11 11.5.12 and 11.5.13 prevail over Regional Rules 5.41 to 5.56A (Nutrient Management - Red, Orange and Lake Zones).*

*Note: the terms “farming enterprise”, “nitrogen loss calculation” “nitrogen baseline” are defined in Section 2.10 of this Plan. “Good Management Nitrogen and Phosphorus Loss Rates” is defined in this sub-regional section.*

**11.5.6 Despite any of Rules 11.5.7 to 11.5.13, the use of land for a farming activity in the Selwyn Waihora catchment is a permitted activity provided the following conditions are met:**

1. The property is less than 5 hectares; and
2. The nitrogen loss calculation for the property does not exceed 15 kg per hectare per annum.

**~~11.5.6A~~ 11.5.7 Until 1 January 2017 the use of land for a farming activity in the Selwyn Waihora catchment is a permitted activity provided the following conditions are met:**

1. The nitrogen loss calculation for the property does not exceed 15 kg per hectare per annum; or
2. The nitrogen loss calculation for the property is greater than 15 kg per hectare per annum and the nitrogen loss calculation for the property or farm enterprise will not increase above the nitrogen baseline; and
3. The Practices in Schedule 24 are being implemented and the information required is recorded in accordance with Schedule 24, and supplied to Canterbury Regional Council on request; and

4. From 1 July 2015, for properties within the Lake Area in the Cultural Landscape/Values Management Area a Farm Environment Plan has been prepared and implemented in accordance with Schedule 7 Part A for all properties greater than 10 hectares.

**11.5.8 ~~11.5.6B~~ From 1 January 2017, the use of land for a farming activity in the Selwyn Waihora catchment is a permitted activity, provided the following conditions are met:**

1. The nitrogen loss calculation for the property does not exceed 15 kg per hectare per annum; and
2. A Farm Environment Plan has been prepared and implemented in accordance with Schedule 7 Part A for all properties greater than 10 hectares within the Lake Area in the Cultural Landscape/Values Management Area, and is supplied to Canterbury Regional Council on request; and
3. A Farm Environment Plan has been prepared and implemented in accordance with Schedule 7 Part A for all properties greater than 50 hectares, and is supplied to Canterbury Regional Council on request;
4. For properties less than 50 hectares but greater than 20 hectares:
  - (a) Until 31 December 2021, the Practices in Schedule 24 are being implemented; and
  - (b) From 1 January 2022, a Farm Environment Plan has been prepared and implemented in accordance with Schedule 7 Part A.

**11.5.9 ~~11.5.6C~~ From 1 January 2017, the use of land for a farming activity in the Selwyn Waihora catchment is a restricted discretionary activity, provided the following conditions are met:**

1. The nitrogen loss calculation for the property is greater than 15 kg per hectare per annum; and
- 1A (a) Prior to 2022, the nitrogen loss calculation for the property is equal to or less than the Good Management Practice Nitrogen and Phosphorus Loss Rates for the property's baseline land use
- 1B (b) From 2022, and prior to 2037, the nitrogen loss calculation for the property is equal to or less than the Good Management Practice Nitrogen and Phosphorus Loss Rates for the property's baseline land use less the percentage reduction required for that land use set out in Policy 11.4.14(b).
- 1C (c) From 2037, the nitrogen loss calculation for the property is equal to or less than the Good Management Practice Nitrogen and Phosphorus Loss Rates for

the property's baseline land use less the percentage reduction required for that land use set out in Policy 11.4.14(b) and less the further reduction set out in Policy 11.4.14A.

2. A Farm Environment Plan has been prepared in accordance with Schedule 7 Part A; and
3. The nitrogen loss calculation for the property has not increased above the nitrogen baseline.

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

1. The quality of, and compliance with the Farm Environment Plan; and
2. The Good Management Practice Nitrogen and Phosphorus Loss Rates to be applied to the property in accordance with Policy 11.4.13(b); and
3. The nitrogen loss rates to be applied to the property in accordance with Policy 11.4.14 (b), Policy 11.4.15 and Policy 11.4.16; and
4. The nitrogen load target for farming activities in Table 11(i); and
5. The potential benefits of the activity to the applicant, the community and the environment.

**11.5.9A The use of land for a farming activity in the Selwyn Waihora catchment that does not comply with Rule 11.5.9 is a discretionary activity, provided the following conditions are met:**

- 1 Prior to 2022, the nitrogen loss calculation for the property is equal to or less than the Good Management Practice Nitrogen and Phosphorus Loss Rates for the property's land use.
- 2 From 2022, and prior to 2037, the nitrogen loss calculation for the property is equal to or less than the Good Management Practice Nitrogen and Phosphorus Loss Rates for the property's land use less the percentage reduction required for that land use set out in Policy 11.4.14(b).
- 3 From 2037, the nitrogen loss calculation for the property is equal to or less than the Good Management Practice Nitrogen and Phosphorus Loss Rates for the property's baseline land use less the percentage reduction required for that land use set out in Policy 11.4.14(b) and less the further reduction set out in Policy 11.4.14A.

- 4 The nitrogen loss calculation for the property, in combination with all other nitrogen loss calculation for all other farm properties in the catchment does not cause the relevant limit for nitrogen loss for farming in Table 11(i) to be exceeded.
- 5 A Farm Environment Plan has been prepared in accordance with Schedule 7 Part A; and

**11.5.10** ~~11.5.9B~~ **The use of land for a farming activity as part of a farming enterprise in the Selwyn Waihora catchment is a discretionary activity, provided the following conditions are met:**

1. A Farm Environment Plan has been prepared in accordance with Schedule 7 Part A; and
- ~~2. 3. The nitrogen loss calculation for the farming enterprise has not increased above the nitrogen baseline~~

**2A. The farming enterprise complies with all the conditions in Rule 11.5.9A.**

**11.5.11** ~~11.5.9B~~ **The use of land for a farming activity or farming enterprise that does not comply with conditions 3 or 4 of Rule 11.5.7, conditions 2, 3 or 4 of Rule 11.5.8, condition 2 of Rule 11.5.9, conditions 1,2,3 or 5 of Rule 11.5.9A or condition 1 of Rule 11.5.10 is a non-complying activity.**

**11.5.12** ~~11.5.9C~~ **The use of land for a farming activity or farming enterprise that does not comply with condition 2 of Rule 11.5.7, condition 3 of Rule 11.5.9, condition 4 of Rule 11.5.9A or condition 2 of Rule 11.5.10 is a prohibited activity.**

**11.5.13** ~~11.5.9D~~ **From 1 January 2037, the use of land for a farming activity or farming enterprise where the nitrogen loss calculation for the property is greater than 80 kg per hectare per annum is a prohibited activity.**

#### *Irrigation Schemes*

*Regional Rule 5.61 applies in the Selwyn Waihora catchment. Rules 11.5.14 and 11.5.15 prevail over Regional Rules 5.60 and 5.62.*

**11.5.14** ~~11.5.6~~ **Despite any of Rules 11.5.2 to 11.5.13, the use of land for a farming activity in the Selwyn Waihora catchment is a permitted activity provided the following conditions are met:**

- ~~1. The property is irrigated with water from an irrigation scheme and the discharge is a permitted activity under Regional Rule 5.61; or~~
- ~~2. The property is irrigated with water from an Irrigation Scheme listed in Table~~



~~11(j) and the irrigation scheme holds a discharge consent under Rule 11.5.15.~~

~~11.5.15 **11.5.6** The discharge of nitrogen, phosphorus, sediment and microbial contaminants onto or into land in circumstances that may result in a contaminant entering water that would otherwise contravene s15(1) of the RMA, in the Selwyn Waihora catchment, is a discretionary activity, provided the following conditions are met:~~

~~1. The applicant is an Irrigation Scheme listed in Table 11(j); and~~

~~2. The nitrogen loss calculation for the Scheme will not exceed the Irrigation Scheme Nitrogen Limits in Table 11(j).~~

#### *Notification*

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

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

#### *Incidental Discharges of Nutrients, Sediment and Microbial Contaminants*

*Rules 11.5.16 and 11.5.17 prevail over Regional Rules 5.63 and 5.64*

**11.5.16 ~~11.5.10~~** The discharge of nitrogen, phosphorus, sediment and microbial contaminants onto or into land in circumstances that may result in a contaminant entering water that would otherwise contravene s15(1) of the RMA, in the Selwyn Waihora catchment, is a permitted activity, provided the following condition is met:

1. The land use activity associated with the discharge is authorised under Rules 11.5.6 to Rule 11.5.14.

**11.5.17 ~~11.5.11~~** The discharge of nitrogen, phosphorus, sediment and microbial contaminants onto or into land in circumstances that may result in a contaminant entering water that would otherwise contravene s15(1) of the RMA, in the Selwyn Waihora catchment and does not meet Rule 11.5.15 or Rule 11.5.16 is a non-complying activity.

#### **Stock Exclusion**

*Regional Rules 5.68, 5.69, 5.70 and 5.71 (Stock Exclusion) apply in the Selwyn Waihora catchment. Rules 11.5.18, 11.5.19, and 11.5.20 apply as additions to Regional Rules 5.68, 5.69, 5.70 and 5.71.*

**11.5.18** ~~11.5.12~~ Within the Selwyn Waihora Catchment any reference to the bed of a lake, river or wetland in Rules 5.68, 5.69, 5.70 and 5.71 also includes an artificial watercourse (excluding an irrigation canal, water supply race or canal for the supply of water for electricity power generation).

**11.5.19** ~~11.5.13~~ Within the Selwyn Waihora catchment Regional Rule 5.68 shall include the following additional condition:

1. The activity is not within the Cultural Landscape/Values Management Area.

**11.5.20** ~~11.5.14~~ Within the Selwyn Waihora catchment Regional Rule 5.71 shall include the following additional condition:

1. In the Cultural Landscape/Values Management Area.

**Appendix 1 Table 11(x) Limits for Rivers at Specific Sites**  
**Appendix 1. Proposed Table X N&P Load & MCI**  
**Indicator/Limits Table for Selwyn Waihora Catchment**

River	Site	N load (kg/y)	N Load (kg/y)	N load (kg/y)	P load (kg/y)	P load (kg/y)	P load (kg/y)	QMCI Index	QMCI Index	QMCI Index
		Current <sup>1</sup> State Indicator 2018	Interim <sup>2</sup> Target Limit 2037	Ecosystem <sup>3</sup> Health Limit 2050	Current <sup>4</sup> State Indicator 2018	Interim <sup>5</sup> Target Limit 2037	Ecosystem <sup>6</sup> Health Limit 2050	Current <sup>7</sup> State Indicator 2018	Interim <sup>8</sup> Target Limit 2037	Ecosystem <sup>9</sup> Health Limit 2050
Selwyn*	Coes Ford	360,000 361,000	252,000	180,000	5000	3500	2500	4.5	5.0	5.5
Selwyn	White Cliffs (control site)	x	x	x	x	x	x	x	x	x
L II*	Pannetts Road	x	x	x	x	x	x	x	x	x
Halswell*	McCartney's Bridge	x	x	x	x	x	x	x	x	x
Harts Creek*	Lower Lake Road	x	x	x	x	x	x	x	x	x
Irwell*	Lake Road	x	x	x	x	x	x	x	x	x
Hororata	Above Selwyn Confluence	x	x	x	x	x	x	x	x	x
Hawkins	Above Selwyn Confluence	x	x	x	x	x	x	x	x	x
Hawkins	Upper River (control site)	x		x		x	x	x	x	x

**Table X Notes:**

- Current loads (3 year rolling average) - monthly samples, continuous flow measurement
- Monitoring upgraded including flow measurement, at least monthly sampling, load relationship established. Aim for estimate of annual load ± 5%
- QMCI annual sampling between December 1 and March 30, as per ECan State of the Environment Monitoring
- \*Lower river sites estimated to account for 83% of total inflow into Te Waihora
- Light blue shading row provides figures for demonstration purposes only – all data to be populated in table by 2018

<sup>1</sup> Current State Indicator of present environmental load (not a limit)

<sup>2</sup> Current State Level Less 30%

<sup>3</sup> Current State Level Less 50%

<sup>4</sup> Current State

<sup>5</sup> Current State Level Less 30%

<sup>6</sup> Current State Level Less 50%

<sup>7</sup> Current State

<sup>8</sup> QMCI 0.5 Point Improvement

<sup>9</sup> QMCI 1.0 Point Improvement

## 11.6 Fresh Water Outcomes

**Table 11(a) Freshwater Outcomes for Selwyn Waihora Catchment Rivers<sup>10</sup>**

Management Unit	River	Critical Values <sup>[c1]</sup>	QMCI [minimum score]	Dissolved oxygen [minimum daily saturation] (%)	Temperature [max]	Suitability for contact recreation (SFRG)		
Natural State	Headwaters of Selwyn / Waikirikiri	High biodiversity, High amenity, Natural character	Rivers are maintained in a healthy state					
Alpine – Upland	Headwaters of Selwyn/Waikirikiri	High biodiversity Salmonid Fishery	6	90	18 20	Good Good to Fair	Freshwater mahinga kai species are	
Hill-fed Upland	Upper Selwyn/Waikirikiri Hawkins	High Biodiversity Salmonid Fishery	6	90	18 20	Good	sufficiently abundant for	
Hill-fed Lower	Hawkins Hororata Selwyn/Waikirikiri Waianiwaniwa	Salmonid Fishery Amenity Contact recreation	5	90	18 20	Good Good to Fair	gathering water quality is suitable for their safe harvesting	
Banks Peninsula	Kaituna Prices Stream	High Biodiversity	5 6	90	18 20	Good No set value	and they are safe to eat.	

<sup>10</sup> Proposed changes marked

Spring-fed plains	Birdlings Brook	Moderate Biodiversity	5	70	18 <del>20</del>	No Value set	Freshwater mahinga kai species are sufficiently abundant for customary gathering water quality is suitable for their safe harvesting and they are safe to eat.
	Boggy Creek	Salmonid Fishery					
	Doyleston Drain						
	Halswell/ Huritini						
	Hanmer Road Drain						
	Harts Creek						
	Hororata						
	Irwell River						
	Jollies Brook						
	Knights Creek						
	Lee						
	LII						
	LowerSelwyn/ Waikirikiri						
	Silverstream						
	Snake Creek						
	Taumutu Creek						
	Tent burn Stream						
Waikewaia Creek and other							
Lowland Spring fed streams							

**Table 11(b): Freshwater Outcomes for Selwyn Waihora Catchment Lakes**

Management Unit	Lake	Ecological Health Indicators			Eutrophication Indicator	Visual Quality Indicator	Microbiological Indicator	Cultural Indicator
		Dissolved Oxygen <sup>11</sup>	Temperature (maximum) C	Lake SPI				
Coastal Lakes					Trophic Level Index (maximum annual average)		Suitability for contact recreation (SFRG)	Freshwater mahinga kai species are sufficiently abundant for customary gathering water quality is suitable for their safe harvesting and they are safe to eat.
	Te Waihora / Lake Ellesmere	90	19 (mid lake)	Moderate	5.5 (Mid lake) 6.6 5.0 (Lake Margins) 6.0	Clarity is greater in the lake margins than mid lake areas	Good Good-Fair	
	Muriwai / Coopers Lagoon	90	19	Moderate	4.0	No value set	No Value Set	

<sup>11</sup> The Selwyn Waihora Lakes are not considered to have a Hypo-limnion so this column has been removed (EIC, Brett Stansfield, paragraph 94).

### 11.7.1 Environmental Flow Regime

**Table 11(c)<sup>12</sup> Recommended Minimum Flows for Existing Minimum Flow Sites by 2025 to achieve Long Term Ecosystem Health<sup>13</sup>**

SITE	7 DAY MALF (l/s)	PLAN VARIATION 1	RECOMMENDED MINIMUM FLOW (l/s)
Kaituna River @ Kaituna Valley Rd*	35	32	35
Hawkins River @ Willows-Dalethorpe Rd*	37	33	37
Selwyn River @ Whitecliffs*	792	713	713
Selwyn River @ Coes Ford*	750	675	675
Hororata River @Halden Water Race Bridge*	424	382	382
Knights Creek @ Jiesons Property*	253	228	253
Halswell River @ Leadleys Rd~	582	407	524
Halswell River @ Ryans Bridge~	760	532	684
Halswell River @ Tobecks Bridge~	934	654	841
Haslwell River @ Neills Rd~	926	648	833
Halswell River @ Hodgens Bridge~	1157	810	1041
L-II river @ Pannetts Rd~	1820	1274	1638
L-II River @ Wolfes Rd~	1771	1240	1594
Baileys Creek @ Lincoln Leeston Rd*~	13	12	13
Silverstream @ Lincoln Leeston Rd*~	88	79	88

<sup>12</sup> The minimum flows in this table are to replace those in Table 11(c) in proposed Variation 1.

<sup>13</sup> From 1 January, 2025 for both existing and new consents.

Snake Creek @ Lincoln Leeston Rd*~	70	63	70
Miles Drain @ Pannets Rd*~	14	13	14
Irwell River @ Lake Rd~	910	637	819
Hamner Rd Drain @ Lower Lake Rd	369	258	332
Boggy Creek @ Lake Rd*	290	261	261
Doyleston Drain @ D/S Lake Rd*	6	5	6
Birdlings Brook @ Locheads Rd	685	480	617
Birdlings Brook @ Leggs Rd	637	446	573
<b>Harts Creek @ Lower Lake Rd</b>	1068	748	961
<b>Harts Creek @ Timber Yard Rd</b>	1370	959	1233
Waikewai Creek @ Taumutu Beach*	38	34	38
Lee River @ Temoana~	935	655	841
Jollies Brook @ outlet to sea~	424	297	381

Key: \* = Flow sensitive sites

~ = Sites display poor correlation with recorder sites

BoldText = sites are important trout spawning sites

### 11.7.3 Water Quality Targets and Limits

The water quality limits in Tables (11k) 11(l) and 11 (m) prevail over the region wide limits in Schedule 8. The limits and targets in these Tables are revised limits as proposed by Fish and Game for the Selwyn Waihora Catchment.



**Table 11(i): Catchment Target and Limits for Nitrogen Losses from Farming Activities, Community Sewerage Systems and Industrial or Trade Processes**

Catchment	Activity	Nitrogen Load (tonnes/year)	Limit/Target
Selwyn Waihora	Farming	— <u>Current load</u> 3366 <sup>14</sup>	<u>Interim Target to be met by 2017</u>
	Farming	<u>Interim load calculated to be current load less reductions achieved by implementing good practice in accordance with policy 11.4.12 and 11.4.13 and further reductions required by policy 11.4.14</u>	<u>Interim Target to be met by 2022</u>
	Farming	<u>4830<sup>(4)</sup></u> <u>Interim load calculated to be interim load for 2022 less 20%</u>	<u>Interim Target to be met by no later than 2037</u>
	Farming	<u>Final load to achieve ecosystem health) less amount allocated to community sewerage systems and industrial or trade process below</u>	<u>Target to be met by no later than 2050</u>
	Community sewerage systems	62	Limit
	Industrial or trade processes	106	Limit

3 A target is defined in the National Policy Statement for Freshwater Management 2011 as a limit to be met within a defined timeframe

4 This target includes the limit for 2022 in Table 11(j)

**Table 11(j): Irrigation Scheme Nitrogen and Phosphorus Limits**

Irrigation Scheme	Tonnes of nitrogen per year	
	From 1 January 2017	From 1 January 2022
Central Plains Water	1944	1742

See further tables below:

**Table 11(k): Limits for Rivers**

River type	Type	Measurement	Limit Nitrate-nitrogen concentration (mg/l)
Alpine-upland	Nitrate toxicity	Annual median	1.0
		Annual 95 <sup>th</sup> percentile	1.5
Hill-fed-upland	Nitrate toxicity	Annual median	1.0
		Annual 95 <sup>th</sup> percentile	1.5
Hill-fed-lower <sup>(1)</sup>	Nitrate toxicity	Annual median	2.4
		Annual 95 <sup>th</sup> percentile	3.5
Banks Peninsula	Nitrate toxicity	Annual median	1.0
		Annual 95 <sup>th</sup> percentile	1.5
Spring-fed-plains <sup>(2)</sup>	Nitrate toxicity	Annual median	6.9
		Annual 95 <sup>th</sup> percentile	9.8

(1) — Excluding Hawkins River which has an annual median limit of 3.8 mg/l and annual 95th percentile of 5.6 mg/l

(2) — Excluding Boggy Creek and Doyleston Drain.

**Table 11(K) Nutrient Targets for Rivers by 2037<sup>15</sup>**

Management Unit	Site Name	Dissolved Reactive Phosphorus Median (mg/l)	Dissolved Reactive Phosphorus 95th Percentile (mg/l)
Banks Peninsula	Kaituna Stream	0.013	0.03
Hill Fed Upland	Selwyn River @ Whitecliffs	0.0035	0.007
Hill Fed Lower	Hawkins River Deans Rd	0.007	0.014
Hill Fed Lower	Selwyn River@ Coes Ford	0.007	0.028
Hill Fed Lower	Waireka River Auchenflower Rd	0.021	0.042
Spring Fed Plains	LII Stream	0.014	0.056
Spring Fed Plains	Irwell River @ Lake Rd	0.007	0.112
Spring Fed Plains	Hamner Rd Drain	0.021	0.105
Spring Fed Plains	Boggy Creek @ Lake Rd	0.014	0.091
Spring Fed Plains	Doyleston Drain Lake Rd	0.021	0.112
Spring Fed Plains	Harts Creek - Lower Lake	0.007	0.014
Spring Fed Plains	Halswell River McCartneys Bridge	0.021	0.042
Spring Fed Plains	Jollies Brook Bullockds Rd	0.003	0.007
Spring Fed Plains	Lee River on Brooklands Farm	0.007	0.007
Spring Fed Plains	Waikewai Creek Gullivers	0.007	0.021

<sup>15</sup> This table to replace the existing Table 11(k) in proposed Variation 1.

Management Unit	Site Name	Nitrate Nitrogen Median (mg/l)	Nitrate Nitrogen 95th Percentile (mg/l)
Banks Peninsula	Kaituna Stream	0.08	0.38
Hill Fed Upland	Selwyn River @ Whitecliffs	0.15	0.32
Hill Fed Lower	Hawkins River Deans Rd	1.6	2.7
Hill Fed Lower	Selwyn River@ Coes Ford	3.3	4.3
Hill Fed Lower	Waireka River Auchenflower Rd	0.23	1.3
Spring Fed Plains	LII Stream	2.3	2.9
Spring Fed Plains	Irwell River @ Lake Rd	0.6	2.5
Spring Fed Plains	Hamner Rd Drain	1.6	3.4
Spring Fed Plains	Boggy Creek @ Lake Rd	3.8	6.2
Spring Fed Plains	Doyleston Drain Lake Rd	2.4	4.8
Spring Fed Plains	Harts Creek - Lower Lake Rd	3.1	4.8
Spring Fed Plains	Halswell River	2.24	2.9
Spring Fed Plains	Jollies Brook Bullockds Rd	0.7	1.7
Spring Fed Plains	Lee River on Brooklands Farm	0.08	0.38
Spring Fed Plains	Waikewai Creek Gullivers	0.15	0.32

**Table 11(K) Nutrient Limits for Rivers by 2050**

Management Unit	Site Name	Dissolved Reactive Phosphorus Median (mg/l)	Dissolved Reactive Phosphorus 95th Percentile (mg/l)
Banks Peninsula	Kaituna Stream	0.01	0.02
Hill Fed Upland	Selwyn River @ Whitecliffs	0.003	0.005
Hill Fed Lower	Hawkins River Deans Rd	0.005	0.01
Hill Fed Lower	Selwyn River@ Coes Ford	0.005	0.02
Hill Fed Lower	Waireka River Auchenflower Rd	0.015	0.03
Spring Fed Plains	LII Stream	0.01	0.08
Spring Fed Plains	Irwell River @ Lake Rd	0.01	0.08
Spring Fed Plains	Hamner Rd Drain	0.015	0.075
Spring Fed Plains	Boggy Creek @ Lake Rd	0.01	0.07
Spring Fed Plains	Doyleston Drain Lake Rd	0.015	0.08
Spring Fed Plains	Harts Creek - Lower Lake Rd	0.005	0.01
Spring Fed Plains	Halswell River	0.015	0.03
Spring Fed Plains	Jollies Brook Bullockds Rd	0.003	0.005
Spring Fed Plains	Lee River on Brooklands Farm	0.005	0.005
Spring Fed Plains	Waikewai Creek Gullivers	0.005	0.015

Management Unit	Site Name	Nitrate Nitrogen Median (mg/l)	Nitrate Nitrogen 95th Percentile (mg/l)
Banks Peninsula	Kaituna Stream	0.06	0.27
Hill Fed Upland	Selwyn River @ Whitecliffs	0.10	0.23
Hill Fed Lower	Hawkins River Deans Rd	1.2	1.9
Hill Fed Lower	Selwyn River@ Coes Ford	2.4	3.0
Hill Fed Lower	Waireka River Auchenflower Rd	0.17	0.9
Spring Fed Plains	LII Stream	1.7	2.1
Spring Fed Plains	Irwell River @ Lake Rd	0.4	1.8
Spring Fed Plains	Hamner Rd Drain	1.2	2.4
Spring Fed Plains	Boggy Creek @ Lake Rd	2.7	4.5
Spring Fed Plains	Doyleston Drain Lake Rd	1.7	3.5
Spring Fed Plains	Harts Creek - Lower Lake Rd	2.3	3.5
Spring Fed Plains	Halswell River	1.6	2.0
Spring Fed Plains	Jollies Brook Bullockds Rd	0.5	1.2
Spring Fed Plains	Lee River on Brooklands Farm	1.4	2.2
Spring Fed Plains	Waikewai Creek Gullivers	1.8	2.8

**Table 11(l) Nutrient Targets for Lakes by 2037<sup>16</sup>**

LAKE	LOCATION	TARGET			
		TLI	TP	TN	Chl a
Te Waihora / Lake Ellesmere	Mid Lake	6.0 <del>6.6</del>	0.07 <del>0.1</del>	2.2 <del>3.4</del>	74
	Margins	5.5 <del>6.0</del>			
Coopers Lagoon		4	0.020	0.34	5
As a maximum annual average			(mg/l)	(mg/l)	( $\mu$ g/ l)

**Table 11(l) Nutrient Limits for Lakes by 2050**

LAKE	LOCATION	LIMIT			
		TLI	TP	TN	Chl a
Te Waihora / Lake Ellesmere	Mid Lake	5.5 <del>6.6</del>	0.05 <del>0.1</del>	1.0 <del>3.4</del>	74
	Margins	5.0 <del>6.0</del>			
Coopers Lagoon		4	0.020	0.34	5
As a maximum annual average			(mg/l)	(mg/l)	( $\mu$ g/ l)

<sup>16</sup> These tables replaces Table 11(l) in Variation 1 and show both interim targets and limits.