

**Disclaimer:** This document refers to Proposed Plan Change 5 to the Land and Water Regional Plan (Nutrient Management and Waitaki). All aspects of this Plan Change are currently under appeal. The final form of Plan Change 5 will not be known until all appeals are resolved.

## Memo

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Date	25 September 2017
To	OTOP Zone Committee
CC	Shirley Hayward, Dan Clark, Peter Constantine
From	Craig Davison

### Current Nutrient Management Planning Framework in the OTOP Zone

#### Background and Key Outcomes Sought

##### PURPOSE:

The purpose of this paper is to inform the Orari, Temuka, Opihi, Pareora (OTOP) Zone Committee (ZC) on:

- a. The nutrient management framework under the Land and Water Regional Plan (LWRP);
- b. The nutrient management framework of Plan Change 5 (PC5), and the context as to why this plan change was developed; and
- c. The key outcomes sought from Plan Change 5.

##### BACKGROUND:

In the OTOP Zone, the current regional plans apply with respect to managing the diffuse discharge of nutrients from farming activities:

- a. Land and Water Regional Plan (operative); and
- b. Plan Change 5 Decisions to the LWRP (under appeal).

##### LWRP

The LWRP uses a fixed nitrogen threshold of 20 kilograms of nitrogen per hectare per year to regulate permitted farming activities. This threshold was considered appropriate to distinguish between permitted (lower emitter/ low risk) farming activities, and consented (higher emitter/ high risk) farming activities and to provide for some flexibility for low emitter farming. High risk farming activities require a resource consent to farm, and are subject to an audited Farm Environment Plan (FEP). The framework of the LWRP also “holds the line” with regard to nitrogen losses with the “nitrogen baseline” being the nitrogen limit for a property (within red and Lake Nutrient Allocation Zones (NAZs). A consenting pathway for small increases in nitrogen losses above a property’s Nitrogen Baseline is provided for in Orange, Green and Blue NAZs to be considered on a case by case basis.

As the LWRP was implemented, and Overseer version updates occurred, the use of fixed numerical thresholds to determine the status of an activity created administrative problems and uncertainty for land owners. The estimate of nitrogen losses from properties was shown to change under different versions of Overseer despite no change in land use or intensity in the farming activity. Inadvertently, this resulted in different rules applying to farming activities, and some properties being permitted activities under one version of Overseer but then requiring a resource consent under an updated version, or vice versa.

The concept of using the nitrogen baseline as the limit for a property recognises existing investment and holds the line (effectively grandparenting). However, this approach led to a perception of inequity. Some land owners were seen to have been rewarded for poor performance by having higher nitrogen losses during the baseline period, which can be maintained with no requirement to reduce. The same can be said for good performers who may have initiated measures to reduce nitrogen losses during the baseline period which are required to be maintained.

The LWRP also acknowledged that all farming activities should operate at Good Management Practice across the region, but did not define Good Management Practice. After the public hearings on the LWRP, a policy was introduced which bound Environment Canterbury to codify and introduce Good Management Practice via a plan change by 30 October 2016.

## **PC5**

PC5 was developed primarily to fulfil the obligation of defining Good Management Practice as a tool to improve water quality in Canterbury. PC5 builds on the existing concepts of the LWRP, such as distinguishing between lower and higher risk farming activities, the use of the nitrogen baseline as a property limit, and audited FEPs. It is therefore an evolution of the LWRP rather than a revolution. The development of PC5 also provided an opportunity to provide more certainty to landowners, and address the issue of the perceived inequity with nitrogen losses. These outcomes, and how they are achieved in Plan Change 5, are described below. The relationship between the outcomes is illustrated in Figure 1. A table comparing the framework under the LWRP and PC5 is provided in Appendix One.

### **Certainty to Landowners for Permitted Activities**

PC5 introduces activity based thresholds to regulate permitted farming activities, and to differentiate between lower risk (permitted) and higher risk (consented) farming activities. These thresholds are up to 50 hectares of irrigation, or winter grazing of up to 10 hectares or 10 percent of the area of a property up to a total of 100 hectares. This still provides some flexibility for largely dryland or small irrigated farming operations, while controlling the amount of higher risk activities (irrigation and intensive winter grazing). Any farming activity in excess of either of these thresholds requires a resource consent.

## **Farming Activities to Operate at Good Management Practice**

PC5 defines Good Management Practice (GMP) as the practices described in the booklet titled “Industry-agreed Good Management Practices related to water quality” released in September 2015 (the booklet).

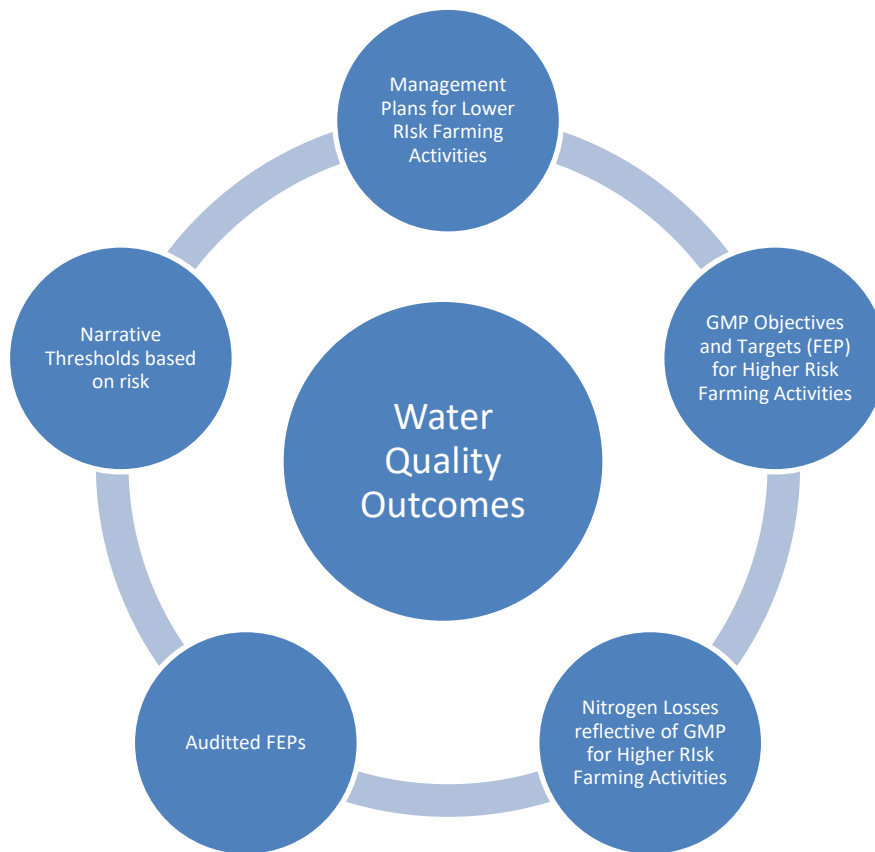
From 1 July 2020 for high risk farming activities, a property’s nitrogen loss limit becomes its “Baseline Good Management Practice Loss Rate”, which is a property’s nitrogen losses during the baseline period, if it were operated at GMP as calculated by the Farm Portal<sup>1</sup>.

Higher risk farming activities remain subject to an audited FEP, which now includes objectives and targets reflective of the GMPs contained in the booklet. While the nutrient management rules in the LWRP and PC5 appear to primarily control nitrogen losses from farming activities, FEPs address the broader range of impacts of farming activities on water quality and biodiversity.

The practices in the booklet have been FEPs through objectives and targets into to minimise nitrogen, phosphorus, sediment and faecal contaminant losses through on the ground farm actions. FEPs also address other matters such as efficient water use, biodiversity and managing wastes. PC5 also identified high runoff risk phosphorus areas, and requires that these are identified where applicable in FEPs (Appendix Two and Appendix Three).

PC5 also obligates lower risk (permitted) farming activities to implement good practice on-farm through the preparation of a Management Plan, which is not audited. The Management Plan is required to be made available to Environment Canterbury on request, and must describe the practices being undertaken on farm relating to efficient irrigation and fertiliser application, stock exclusion, and riparian planting between winter grazing areas and any surface waterbody (Appendix Two).

<sup>1</sup>The Farm Portal is the tool used to estimate GMP nitrogen losses. It uses a farm’s Overseer file and applies modelling proxies that have been developed to model the Industry Agreed GMPs.



**Figure 1: Plan Change 5 Outcomes**

## References

Canterbury Land and Water Regional Plan (2017)

Plan Change 5 to the Land and Water Regional Plan (Nutrient Management and Waitaki) 2017

## Attachments

Appendix One – Rule Framework Comparison

Appendix Two - PC5 Schedules 7 and 7A (Farm Environment Plan Requirements, Management Plan Requirements)

Appendix Three - PC5 High runoff risk phosphorus zone map for OTOP

## Appendix One – Rule Framework Comparison

Activity Type	LWRP	PC5
<b>All Nutrient Allocation Zones</b>		
<b>Permitted</b>	Property <5 ha; or  Nitrogen losses <10 kg N/ha/yr	Area of property <10 hectares
<b>Red Nutrient Allocation Zones</b>		
<b>Permitted</b>	<u>All Properties &gt;5 ha</u> Nitrogen losses >10 kg N/ha/yr but <20 kg N/ha/yr and no increase above Nitrogen Baseline	<u>All Properties &gt;10 ha</u> Irrigated Area <50 hectares, with no more than a 10 hectare increase beyond 13 February 2016 irrigation area; or  Area of property used for winter grazing of cattle does not exceed 10 ha or 10% of the area or the property up to 100 ha
<b>Consented</b>	<u>All Properties &gt;5 ha</u> Nitrogen losses >20 kg N/ha/yr with increases above Nitrogen Baseline <b>prohibited</b> .	<u>All Properties &gt;10 ha</u> Area of property use for irrigation or winter grazing exceeds activity thresholds.  Increases above Nitrogen Baseline <b>prohibited</b> .  From 1 July 2020, Baseline GMP Loss Rate applies.
<b>Orange Nutrient Allocation Zones</b>		
<b>Permitted</b>	<u>All Properties &gt;5 ha</u> Nitrogen losses >10 kg N/ha/yr but ≤20 kg N/ha/yr; or  Nitrogen losses > 20 kg N/ha/yr, with no increase above Nitrogen Baseline, and property is less than 50 ha	<u>All Properties &gt;10 ha</u> Irrigated Area <50 hectares; or  Area of property used for winter grazing of cattle does not exceed 10 ha or 10% of the area or the property up to 100 ha
<b>Consented</b>	<u>All Properties &gt;5 ha</u> Nitrogen losses >20 kg N/ha/yr; or	<u>All Properties &gt;10 ha</u> Area of property use for irrigation or winter grazing exceeds activity thresholds.

	Nitrogen losses >20 kgN/ha/yr, and property is >50 ha, and nitrogen losses have increase above Nitrogen Baseline.	Increases above Nitrogen Baseline are <b>inappropriate</b> .  From 1 July 2020, Baseline GMP Loss Rate applies.
<b>Green Nutrient Allocation Zones</b>		
<b>Permitted</b>	<p><u>All Properties &gt;5 ha</u> Nitrogen losses &gt;10 kg N/ha/yr but ≤20 kg N/ha/yr; or</p> <p>Nitrogen losses &gt;20 kgN/ha/yr, and the area of property is &lt;50 ha, or nitrogen losses &lt;5kg N/ha/yr above Nitrogen Baseline.</p>	<p><u>All Properties &gt;10 ha</u> Irrigated Area &lt;50 hectares; or</p> <p>Area of property used for winter grazing of cattle does not exceed 10 ha or 10% of the area or the property up to 100 ha</p>
<b>Consented</b>	<p><u>All Properties &gt;5 ha</u> Nitrogen losses &gt;20 kgN/ha/yr, and area of property &gt;50 ha</p> <p>Nitrogen losses &gt;20 kgN/ha/yr, and the area of property is &gt;50 hectares, or nitrogen losses &gt;5kg N/ha/yr above Nitrogen Baseline</p>	<p><u>All Properties &gt;10 ha</u> Area of property use for irrigation or winter grazing exceeds activity thresholds.</p> <p>From 1 July 2020, Baseline GMP Loss Rate applies.</p> <p>Nitrogen losses ≤5kg N/ha/yr above Nitrogen Baseline / Baseline GMP Loss Rate.</p> <p>Increases &gt;5kg N/ha/yr above Nitrogen Baseline / Baseline GMP Loss Rate are <b>inappropriate</b>.</p>

**Note 1:** Provisions for Blue Zone and Lake Zones not listed because these zones do not occur in the OTOP zone.

**Note 2:** This is not the complete or detailed set of the nutrient management rules – it is merely intended to provide an indication of the rule framework used to control nutrient loss risks for farming activities.

**Note 3:** With all consented activities under the LWRP and PC5, a FEP is required to be prepared and implemented

**Appendix Two – Schedules 7 and 7A of Plan Change 5 to the Land and Water Regional Plan**

## Schedule 7 Farm Environment Plan

Amend Schedule 7 as follows:

### **Definitions**

In Schedule 7 the following definitions apply:

**Management Area** – means the ~~list of topics~~ areas of farm management practice<sup>119</sup> as set out below:

(a) ~~Nutrient~~ s management<sup>120</sup>

(b) ~~Irrigation~~ management<sup>121</sup>

(c) ~~Cultivation and soil structure~~<sup>122</sup> management

(d) ~~Collected~~ Animal Effluent and Solid Animal Waste<sup>123</sup>

(e) ~~Waterbody~~ ies management<sup>124</sup> (riparian areas, drains, rivers, lakes, wetlands)

(f) ~~Point sources – offal pits, farm rubbish pits, silage pits~~

(g) ~~Water use~~ management<sup>125</sup> (excluding water associated with irrigation) – stock water and wash-down water

~~Management~~<sup>126</sup> **Objective** – means the overarching outcome sought in relation to each **Management Area**

**Target** – means a measureable, auditable statement that contributes to achievement of the ~~Management~~ Objective in each Management Area<sup>127</sup>

### **Part A – Farm Environment Plans**

A Farm Environment Plan can be based on either of:

1. The material set out in Part B below; OR
2. Industry prepared Farm Environment Plan templates and guidance material that:
  - (a) includes the following minimum components:
    - (i) the matters set out in 1, 2, ~~and~~ 3, 4B and 5 of Part B below;
    - (ii) contains a methodology that will enable development of a plan that will identify actual and potential environmental effects and risks specific to the property, addresses those effects and risks and has a high likelihood of appropriately avoiding, remedying or mitigating those effects;
    - (iii) performance measures that are capable of being audited as set out in Part C below; and
    - (iv) matters or requirements set out in Part B of Schedule 7 that have been added as a result of a sub-region planning process; and<sup>128</sup>
  - (b) has been approved as meeting the criteria in (a) and being acceptable to the Canterbury Regional Council by the Chief Executive of the Canterbury Regional Council.

### **Part B – Farm Environment Plan Default Content**

The plan requirements will apply to:

1. ~~—~~ (a) a plan prepared for an individual property or farm enterprise; or

<sup>119</sup> Forest and Bird PC5 LWRP-1846

<sup>120</sup> Cl16(2) of Schedule 1 to the RMA - alteration of minor effect

<sup>121</sup> Cl16(2) of Schedule 1 to the RMA - alteration of minor effect

<sup>122</sup> Beef & Lamb PC5 LWRP-1553

<sup>123</sup> Cl16(2) of Schedule 1 to the RMA - alteration of minor effect

<sup>124</sup> Cl16(2) of Schedule 1 to the RMA - alteration of minor effect

<sup>125</sup> Cl16(2) of Schedule 1 to the RMA - alteration of minor effect

<sup>126</sup> Cl16(2) of Schedule 1 to the RMA - alteration of minor effect

<sup>127</sup> Cl16(2) of Schedule 1 to the RMA - alteration of minor effect

<sup>128</sup> Cl16(2) of Schedule 1 to the RMA - alteration of minor effect



~~2.~~<sup>129</sup>(b) a plan prepared for an individual property which is part of a collective of properties, including an irrigation scheme, principal water supplier, or an Industry Certification Scheme

The plan shall contain as a minimum:

1. Property or farm enterprise details
  - (a) Physical address
  - (b) Description of the ownership and name of a contact person
  - (c) Legal description of the land and farm identifier
2. A map(s) or aerial photograph at a scale that clearly shows:
  - (a) The boundaries of the property or land areas comprising the farm~~ing~~<sup>130</sup> enterprise.
  - (b) The boundaries of the main land management units on the property or within the farm~~ing~~<sup>131</sup> enterprise.
  - (c) The location of permanent or intermittent rivers, streams, lakes, drains, ponds or wetlands.
  - (d) The location of riparian vegetation and fences adjacent to water bodies.
  - (e) The location on all waterways where stock access or crossing occurs.
  - (f) The location of any areas within or adjoining the property that are identified in a District Plan as “significant indigenous biodiversity”.
  - (g) The location of any critical source areas for phosphorus or sediment loss for any part of the property including any land<sup>132</sup> within the High Runoff Risk Phosphorus Risk<sup>133</sup> Zone.
  - (h) The location of flood protection or erosion control assets, including flood protection vegetation.
  - (i) Public access routes or access routes used to maintain the rivers, streams, or drains.
3. A list of all Canterbury Regional Council resource consents held for the property or farm~~ing~~<sup>134</sup> enterprise.
- 4A. An assessment of the adverse environmental effects and risks associated with the farming activities and how the identified effects and risks will be managed, including irrigation, application of nutrients, effluent application, stock exclusion from waterways, offal pits and farm rubbish pits.
- 4B. ~~(a) a nutrient budgets which shows<sup>135</sup> the nitrogen baseline and nitrogen loss calculation for the property or farming enterprise; and~~  
(b) a report from the Farm Portal which shows for any property or farming enterprise<sup>136</sup> the Baseline GMP Loss Rate and Good Management Practice Loss Rates<sup>137</sup> or in those circumstances provided for in this Plan, the Equivalent Baseline GMP Loss Rate and Equivalent Good Management Practice Loss Rate<sup>138</sup> for any property or farming enterprise, at the dates specified below:
  - (i) From 1 July 2016 for any property within the Lake Zone;
  - (ii) From 1 January 2017 for any property or farming enterprise within the Orange Nutrient Allocation Zone;

<sup>129</sup> Cl16(2) of Schedule 1 to the RMA - alteration of minor effect

<sup>130</sup> Cl16(2) of Schedule 1 to the RMA- correction of a minor error

<sup>131</sup> Cl16(2) of Schedule 1 to the RMA- correction of a minor error

<sup>132</sup> Cl16(2) of Schedule 1 to the RMA - alteration of minor effect

<sup>133</sup> Cl16(2) of Schedule 1 to the RMA – alteration of minor effect

<sup>134</sup> Cl16(2) of Schedule 1 to the RMA- correction of a minor error

<sup>135</sup> Ravensdown PC5 LWRP-2042

<sup>136</sup> Cl16(2) of Schedule 1 to the RMA - alteration of minor effect (phrase relocated)

<sup>137</sup> Cl16(2) of Schedule 1 to the RMA- correction of a minor error

<sup>138</sup> Cl(10)(2)(b) of Schedule 1 to the RMA - consequential on Fonterra Co-operative Group Ltd PC5 LWRP-1857 and PC5 LWRP-1160; Dairy NZ - PC5 LWRP-214; Central Plains Water Ltd PC5 LWRP-518A; Ravensdown Limited PC5 LWRP-2053A PC5 LWRP-1771B;

- ~~(iii) From 1 July 2017 for any property or farming enterprise within the Red Nutrient Allocation Zone;~~  
~~(iv) From 1 January 2018 for any property or farming enterprise within the Green or Light Blue Nutrient Allocation Zone.~~<sup>139</sup>

5. A description of how each of the following objectives will, where relevant, be met. A description of how each of the following objectives and targets for each Management Area, ~~where relevant, will, where relevant,~~ be met and the specific actions that will be ~~undertaken to~~ implemented to attain the targets.  
Good Management Practices:<sup>140</sup>
- (a) Nutrient management: To maximise nutrient use efficiency while minimising nutrient losses to water.
  - (b) Irrigation management: To operate irrigation systems efficiently and ensuring that the actual use of water is monitored and is efficient.
  - (c) Soils management: To maintain or improve the physical and biological condition of soils in order to minimise the movement of sediment, phosphorus and other contaminants to waterways.
  - (d) Collected animal effluent management: To manage the risks associated with the operation of effluent systems to ensure effluent systems are compliant 365 days of the year
  - (e) Livestock management: To manage wetlands and water bodies so that stock are excluded as far as practicable from water, to avoid damage to the bed and margins of a waterbody, and to avoid the direct input of nutrients, sediment, and microbial pathogens.
  - (f) Offal pits: To manage the numbers and locations of pits to minimise risks to health and water quality.

#### 5A Management Area: Nutrients Management<sup>141</sup>

##### Objectives:

- (1) ~~To maximise nutrients use efficiency while minimising~~ Use nutrients efficiently and minimise<sup>142</sup> nutrient losses to water.
- (2) ~~Nutrient losses do not exceed consented nitrogen loss limits.~~<sup>143</sup>

##### Targets:

- (1) Nitrogen losses from farming activities are at or below the:
  - (a) ~~Baseline GMP Loss Rate or Good Management Practice Loss Rates (whichever is the lesser) for the property;~~<sup>144</sup> or
  - (b) ~~consented nitrogen loss limits.~~<sup>145</sup>
- (1A) ~~Available nitrogen loss mitigation measures (excluding those associated with irrigation, fertiliser or effluent management) are implemented.~~<sup>146</sup>
- (2) Phosphorus and sediment losses from farming activities are minimised.
- (3) ~~Manage the amount, timing and application~~<sup>147</sup> ~~and rate of fertiliser inputs applied does not exceed the agronomic requirements of the crop to match the predicted plant requirements and minimise nutrient losses~~<sup>148</sup>
- (4) ~~Store and load fertiliser to minimise the risk of spillage, leaching and loss into water bodies.~~<sup>149</sup>

<sup>139</sup> Irrigation NZ PC5 LWRP-2176A; Ellesmere Sustainable Agriculture Inc PC5 LWRP-325E

<sup>140</sup> Cl16(2) of Schedule 1 to the RMA - alteration of minor effect

<sup>141</sup> Cl(10)(2)(b) of Schedule 1 to the RMA - consequential on Beef & Lamb PC5 LWRP 1553

<sup>142</sup> Ravensdown PC5 LWRP-2042B; New Zealand Deer Farmers Association PC5 LWRP2094A

<sup>143</sup> Barrhill Chertsey Irrigation PC5 LWRP-685C

<sup>144</sup> Cl16(2) of Schedule 1 to the RMA- correction of a minor error

<sup>145</sup> Barrhill Chertsey Irrigation PC5 LWRP-685C

<sup>146</sup> Barrhill Chertsey Irrigation PC5 LWRP-685C

<sup>147</sup> Banks J and T PC5 LWRP-1598

<sup>148</sup> Dairy NZ PC5 LWRP-354

<sup>149</sup> Banks J and T PC5 LWRP-1598

## **5B Management Area: Irrigation ~~Management~~**<sup>150</sup>

### **Objective:**

~~To operate irrigation systems efficiently ensuring that the actual use of water is monitored and is efficient. The amount and timing of irrigation is managed to meet plant demands, minimise risk of leaching and runoff and ensure efficient water use.~~<sup>151</sup>

### **Targets:**

- (1) ~~New irrigation infrastructure is systems are designed, and installed and operated~~ in accordance with industry ~~best codes of practice and standards.~~<sup>152</sup>
- (2) ~~The performance of existing irrigation systems are calibrated, is assessed annually and irrigation systems are~~<sup>153</sup> maintained and operated to apply irrigation water at ~~the their~~ optimal efficiency.<sup>154</sup>
- (3) ~~All applications of~~ The timing and depth of irrigation water applied takes account of crop requirements<sup>155</sup> ~~and is are justified on the basis of through-soil moisture monitoring data or soil water budgets~~<sup>156</sup> and climatic information.<sup>157</sup>
- (4) ~~The timing and rate of application of water is managed so as to not exceed crop requirements or the available water holding capacity of the soil.~~<sup>158</sup>
- (5) Staff are trained in the operation, maintenance and use of irrigation systems.

## **5C Management Area: Cultivation and ~~Soil Structures Management~~**<sup>159</sup><sup>160</sup>

### **Objective:**

~~To maintain or improve~~<sup>161</sup> The physical and biological condition of soils ~~is maintained or improved~~<sup>162</sup> in order to minimise the movement of sediment, phosphorus and other contaminants to waterways.

### **Targets:**

- (1) Farming activities are managed so as to not exacerbate erosion.
- (2) Farming practices are implemented that optimise infiltration of water into the soil profile and minimise run-off of water, sediment loss and erosion.

## **5D Management Area: ~~Collected~~ Animal Effluent and Solid Animal Waste ~~Management~~**<sup>163</sup>

### **Objective:**

~~To manage the risks associated with the operation of effluent systems to ensure effluent systems are compliant 365 days of the year. Animal effluent and solid animal waste is managed to minimise nutrient leaching and run-off.~~<sup>164</sup>

<sup>150</sup> Cl16(2) of Schedule 1 to the RMA – alteration of minor effect

<sup>151</sup> Banks J and T PC5 LWRP-1598

<sup>152</sup> Irrigation NZ PC5 LWRP-2176B

<sup>153</sup> Cl(10)(2)(b) of Schedule 1 to the RMA - consequential on Banks J and T PC5 LWRP-1598

<sup>154</sup> Irrigation NZ PC5 LWRP-2176C

<sup>155</sup> Irrigation NZ PC5 LWRP-2176E

<sup>156</sup> Irrigation NZ PC5 LWRP-2176D

<sup>157</sup> Irrigation NZ PC5 LWRP-2176E

<sup>158</sup> Cl(10)(2)(b) of Schedule 1 to the RMA – deletion consequential on Irrigation NZ PC5 LWRP-2176D and PC5 LWRP-2176E

<sup>159</sup> Cl(10)(2)(b) of Schedule 1 to the RMA - consequential on Beef & Lamb PC5 LWRP-1553

<sup>160</sup> Cl(10)(2)(b) of Schedule 1 to the RMA - consequential on Beef & Lamb PC5 LWRP-1553

<sup>161</sup> Cl16(2) of Schedule 1 to the RMA – alteration of minor effect – phrase relocated within paragraph

<sup>162</sup> Cl16(2) of Schedule 1 to the RMA – alteration of minor effect – phrase relocated within paragraph

<sup>163</sup> Cl16(2) of Schedule 1 to the RMA – alteration of minor effect

<sup>164</sup> Banks J and T PC5 LWRP-1598

**Targets:**

- (1) ~~Effluent storage facilities and effluent discharges comply with regional council rules or any granted resource consent.~~ Effluent systems meet industry Codes of Practice or an equivalent standard.<sup>165</sup>
- (2) The timing and rate of application of effluent and solid animal waste to land is managed so as to minimise the risk of contamination of groundwater or surface water bodies.
- (3) Sufficient and suitable storage is available to ~~store effluent and any wastewater enable animal effluent and wash-down water to be stored~~<sup>166</sup> when soil conditions are unsuitable for application.
- (4) Staff are trained in the operation, maintenance and use of effluent storage and application systems.

**5E Management Area: Waterbody ~~iesy~~ Management<sup>167</sup> (wetlands, riparian areas, drains, rivers, lakes)**

**Objective:**

~~To manage~~<sup>168</sup> Wetlands, riparian areas and ~~the margins of~~<sup>169</sup> surface waterbodies ~~are managed~~<sup>170</sup> to avoid damage to the bed and margins of ~~a the~~<sup>171</sup> water body, and to avoid the direct input of nutrients, sediment, and microbial pathogens.

**Targets:**

- (1) Stock are excluded from waterbodies in accordance with regional council rules or any granted resource consent.
- (2) Vegetated riparian margins ~~of sufficient width~~<sup>172</sup> are maintained to minimise nutrient, sediment and microbial pathogen losses to waterbodies.
- (3) Farm tracks, gateways, water troughs, self-feeding areas, stock camps wallows and other ~~farm~~<sup>173</sup> activities that are potential sources of sediment, nutrient and microbial loss are located so as to minimise the risks to surface water quality.
- (4) ~~Mahinga kai values are protected as a result of measures taken to protect and enhance water quality and stream health.~~<sup>174</sup>

**5F Management Area: Point Sources (offal pits, farm rubbish pits, silage pits)**

**Objective:**

~~To manage~~<sup>175</sup> The number and location of pits ~~are managed~~<sup>176</sup> to minimise risks to health and water quality.

**Target:**

- (1) All on-farm silage, offal pit and rubbish dump discharges are managed to avoid direct discharges of contaminants to groundwater or surface water.

**5G Management Area: Water-use ~~Management~~ (excluding irrigation water)**

**Objective:**

To use water efficiently ensuring that actual use of water is monitored and efficient.

**Target:**

<sup>165</sup> Cl(10)(2)(b) of Schedule 1 to the RMA - consequential on PC5 LWRP-1598

<sup>166</sup> Cl(10)(2)(b) of Schedule 1 to the RMA - consequential on PC5 LWRP-1598

<sup>167</sup> Cl16(2) of Schedule 1 to the RMA – alteration of minor effect

<sup>168</sup> Cl16(2) of Schedule 1 to the RMA – alteration of minor effect - phrase relocated

<sup>169</sup> Cl(10)(2)(b) of Schedule 1 to the RMA - consequential on PC5 LWRP-1598

<sup>170</sup> Cl16(2) of Schedule 1 to the RMA – alteration of minor effect – phrase relocated

<sup>171</sup> Cl16(2) of Schedule 1 to the RMA – correction of a minor error

<sup>172</sup> Cl(10)(2)(b) of Schedule 1 to the RMA - consequential on PC5 LWRP-1598

<sup>173</sup> Dairy NZ PC5 LWRP-354B; New Zealand Deer Farmers Association PC5 LWRP-2094F

<sup>174</sup> Ngāi Tahu PC5 LWRP-861

<sup>175</sup> Cl16(2) of Schedule 1 to the RMA – alteration of minor effect – phrase relocated

<sup>176</sup> Cl16(2) of Schedule 1 to the RMA – alteration of minor effect – phrase relocated

(1) Actual water use is efficient for the end use.

The plan shall include for each objective and target in section 5 above:

- (a) detail commensurate with the scale of the environmental effects and risks;
  - (b) ~~defined measurable targets that clearly set a pathway and timeframe for achievement and set out defined and auditable “pass/fail” criteria~~ a description of the actions and Good Management Practices (and a timeframe within which those actions will be completed) that will be implemented to achieve the objectives and targets.
  - (c) ~~the records required to be kept for measuring performance and~~ achievement attainment<sup>177</sup> of the targets and objectives.
6. Nutrient budgets, prepared by a suitably qualified person using the Overseer nutrient budget model, or equivalent model approved by the Chief Executive of Environment Canterbury, for each of the identified land management units and the overall farm or farm enterprise.
7. Selwyn Te Waihora – Additional Requirements
- Within the Selwyn Te Waihora sub-region the following additional requirements for Farm Environment Plans apply:
1. include a map(s) or aerial photograph at a scale that clearly shows the location of any known mahinga kai, wāhi tapu or wāhi tāonga within any property or farming enterprise located in the Cultural Landscape/Values Management Area.
  2. include a description of how the following objective will be met:  
Nutrient Management: To maximise the nutrient use efficiency while minimising nutrient losses to water by:
    - (a) minimising the loss of phosphorus and sediment within the Phosphorus Sediment Risk Area as shown in the Planning Maps; and
    - (b) achieving good management practice in respect of nutrient losses; and
    - (c) managing the discharge from drains within the Lake area of the Cultural Landscape/Values Management Area; and
    - (d) further reducing the nitrogen loss calculation from 2022 where a property or farming enterprise’s nitrogen loss calculation is greater than 15kg of nitrogen per hectare per annum.

## **Part C – Farm Environment Plan Audit Requirements**

The Farm Environment Plan must be audited by a Certified Farm Environment Plan Auditor who is independent of the farm being audited (i.e. is not a professional adviser for the property) and has not been involved in the preparation of the Farm Environment Plan.

The farming activity occurring on the property will be audited against the following minimum criteria:

1. An assessment of the performance of the farming activity against the objectives, targets, ~~good management practices~~<sup>178</sup> and timeframes specified in the Farm Environment Plan;
2. An assessment of the robustness of the nutrient budget/s;
3. An assessment of the efficiency of water use (if irrigated).

The Environment Canterbury Certified Farm Environment Plan Auditor Manual sets out the standards and methods to be used by a Certified Farm Environment Plan Auditor to demonstrate proficiency and competency in the auditing of Farm Environment Plans.

<sup>177</sup> Cl16(2) of Schedule 1 to the RMA – alteration of minor effect

<sup>178</sup> Ellesmere Sustainable Agriculture Inc PC5 LWRP-325C

## **Part D – Farming Information**

Whenever one of Rules 5.41–5.58 requires information to be submitted, the following is to be provided:

1. The OVERSEER™, or equivalent model approved by the Chief Executive of Environment Canterbury, input and output files for the property; or
2. Information detailing:
  - (a) The site area to which the farming activity relates;
  - (b) Monthly stocking rates (numbers, types and classes) including breakdown by stock class;
  - (c) Annual yield of arable or horticultural produce;
  - (d) A description of the farm management practices used on each block including:
    - (i) Ground cover – pasture, crops, fodder crops, non-grazed areas (including forestry, riparian and tree areas) and any crop rotation;
    - (ii) Stock management – lambing/calving/fawning dates and percentages, any purchases and sales and associated dates, types and age of stock;
    - (iii) Fertiliser application – types and quantities per hectare for each identified block, taking into account any crop rotation;
    - (iv) Quantities of introduced or exported feed;
  - (e) Farm animal effluent, pig farm effluent, feed pad and stand-off pad effluent management including:
    - (i) Area of land used for effluent application;
    - (ii) Annual nitrogen loading rate and nitrogen load rate per application;
    - (iii) Instantaneous application rate;
  - (f) Irrigation – areas, rates, monthly volumes and system type.

The information is to be collated for the period 1 July to 30 June in the following year and be provided annually, no later than 31 of October.

## Schedule 7A Management Plan for Farming Activities

### Part A – Management Plans

A Management Plan can be either:

1. A Plan prepared in accordance with the requirements of Part B below; or
2. A Plan prepared in accordance with an industry prepared Farm Environment Plan template that has been certified by the Chief Executive of Environment Canterbury as providing at least an equivalent amount of information and practice guidance contained in Part B below.<sup>179</sup>

### Part B – Management Plan Default Content<sup>180</sup>

The Management Plan shall contain as a minimum:

1. Property details
  - (a) Physical address
  - (b) Description of the ownership and name of a contact person
  - (c) Legal description of the land and farm identifier
2. A map(s) or aerial photograph at a scale that clearly shows:
  - (a) The boundaries of the property.
  - (b) The boundaries of the main land management units on the property.
  - (c) The location of permanent or intermittent rivers, streams, lakes, drains, ponds or wetlands.
  - (d) The location of riparian vegetation and fences adjacent to water bodies.
  - (e) The location on all waterways where stock access or crossing occurs.
  - (f) The location of any areas within or adjoining the property that are identified in a District Plan as “significant indigenous biodiversity”.
  - (g) The location of any critical source areas for phosphorus loss ~~including for~~<sup>181</sup> any part of the property within the High Runoff Risk Phosphorus Zone.
3. A description of:
  - (a) the on-farm actions that have been undertaken in the previous 01 July to 30 June period to implement the applicable<sup>182</sup> ~~Good~~ practices described in the table below; and
  - (b) the on-farm actions that will be undertaken over the next 01 July to 30 June period to implement the applicable<sup>183</sup> ~~Good~~ practices described below
4. A copy of ~~this plan~~ the Farm Environment Plan or Management Plan<sup>184</sup> shall be retained by the landowner and updated at least once every 12 months as necessary, and provided to the Canterbury Regional Council on request.

<sup>179</sup> New Zealand Deer Farmers Association PC5 LWRP-2134B; Banks J and T PC5 LWRP-1621

<sup>180</sup> Cl16(2) of Schedule 1 to the RMA – alteration of minor effect

<sup>181</sup> Cl16(2) of Schedule 1 to the RMA – alteration of minor effect

<sup>182</sup> Cl(10)(2)(b) of Schedule 1 to the RMA - consequential on PC5 LWRP-2134B

<sup>183</sup> Cl(10)(2)(b) of Schedule 1 to the RMA - consequential on PC5 LWRP-2134B

<sup>184</sup> Cl16(2) of Schedule 1 to the RMA – alteration of minor effect

<u>Good Practice</u>	<u>On-farm actions undertaken <del>to</del> implement good practice<sup>185</sup> in the previous 12 months</u>	<u>On-farm actions to be undertaken in the next 12 months</u>
<u>Water, effluent and fertiliser is applied at a rate that does not exceed the water holding capacity of the soil or the agronomic requirements of the crop.</u>		
<u>Irrigation systems, effluent application systems, fertigation systems and fertiliser or organic manure systems are <del>assessed annually and maintained and operated to apply irrigation water, waste or nutrients efficiently calibrated by a suitably qualified person at least once every 12 months</del></u>		
<u>Silage pits, refuse pits and offal pits are sited, designed and managed to avoid the discharge of leachate into surface waterbodies</u>		
<u><del>Effluent storage systems comply with the regional council rules or the conditions of any resource consent granted.</del> Effluent systems meet industry Codes of Practice or an equivalent standard.</u>		
<u>Fertiliser is stored a minimum of 20 metres from surface waterbodies</u>		
<u><del>Non irrigation water use is monitored and efficient.</del></u>		
<u><del>Stock are excluded from waterbodies in accordance with regional council rules or any granted resource consent.</del></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><del>Vegetated riparian margins of sufficient width are maintained to minimise nutrient, sediment and microbial pathogen losses to waterbodies.</del><sup>186</sup></u>		

<sup>185</sup> Cl16(2) of Schedule 1 to the RMA – alteration of minor effect

<sup>186</sup> Cl(10)(2)(b) of Schedule 1 to the RMA – consequential amendments to this table to align the practices with the *Industry-agreed good management practices relating to water quality* booklet; September 2015; as sought by B Banks PC5 LWRP-1021 and Federated Farmers PC5 LWRP-2326.



### Appendix Three – Mapped Phosphorus Risk Areas in the OTOP Zone under PC5

