

MEETING ITEM: 6	SUBJECT MATTER: <b>Options for collective and nutrient loss reporting requirements for normal dryland farming</b>
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### Action required

The Zone Committee considers options to address the Hurunui Waiau Rivers Regional Plan (HWRRP) requirements for normal dryland farming in relation to nutrient management collectives and catchment accounting.

The options for nutrient loss accounting include:

1. Retain current HWRRP requirements (report N and P losses, estimated using OVERSEER, for 2012 – 2016);
2. Require dryland farms to register with the Farm Portal and answer the questions that relate to their farm;
3. Use MGM (Matrix of Good Management) N and P loss estimates for dryland farming for the different soils and rainfall, with the area of winter forage provided annually from estimates from remote monitoring, including:
  - a. Satellite or aerial imagery;
  - a. Surveys from dryland farming collectives;
  - b. Estimates from Beef + Lamb NZ (noting that the B+LNZ definition of “winter feed” does not match the regional planning framework definition of “winter forage”)

The options for addressing the intent of the collectives include:

1. Retain current HWRRP requirements (nutrient management collectives with audited Farm Environment Plans (FEPs));
2. Do not require any collectives or other provisions to drive Good Management Practice (GMP)
3. Create a new type of “normal dryland farming collective” that does not have the auditing requirements that apply to other land uses
4. Require all dryland farms to have a Farm Environment Plan. This could be:
  - a. An FEP as described in Schedule 7 of LWRP;
  - b. A Farm Management Plan as described in Schedule 7A of LWRP

### Background

- As per the recommendations made by the Zone Committee, normal dryland farming is characterised by:
  1. No irrigation
  2. Up to 10% of farm area, capped at 100ha, in winter grazing<sup>1</sup>

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<sup>1</sup> Winter grazing means the grazing of cattle within the period of 1 May to 30 September, where the cattle are contained for break-feeding of in-situ brassica and root vegetable forage crops or for consuming supplementary feed that has been brought onto the property.

- The National Policy Statement for Freshwater Management (NPSFM) requires regional councils to account for nutrient losses within freshwater management units (i.e. at the “catchment” level).
- There are options for the zone committee to consider regarding the need or not for normal dryland farming to be subject to collectives.
- Collectives were intended to provide a mechanism to drive good management practices in a collaborative manner. Collectives were established at a time where there was no common understanding of good management practice, or regional framework in place to drive adoption of good management practice.
- Over the past six years, industry has agreed to a common understanding of good management practice and a regional framework has been developed that provides a mechanism (farm plans) for driving GMP on farms.
- The Hurunui Waiiau Zone Committee has agreed to ten principles that should be considered in relation to nutrient management.

## **Discussion – Catchment accounting / reporting nutrient losses**

### *NPSFM requirements*

The NPSFM requires every regional council to establish and maintain a freshwater quality accounting system. This means we are required to monitor nutrient losses for each freshwater management unit.

Under the existing HWRRP framework, we are able to account for nutrient losses via the requirements for farmers to:

- Establish a nutrient loss baseline (through overseer) and not increase losses by more than 10% as a permitted activity; and
- Be a member of a collective that establishes and reports on an environmental management strategy that requires members to operate to industry agreed best nutrient management practice loss rates.

### *Catchment accounting options*

The options available for meeting the catchment accounting requirements, as they apply to normal dryland farming, are

1. Retain current HWRRP requirements (report N and P losses, estimated using OVERSEER, for 2012 – 2016);
2. Require dryland farms to register with the Farm Portal and answer the questions that relate to their farm;
3. Use MGM (Matrix of Good Management) N and P loss estimates for dryland farming for the different soils and rainfall, with the area of winter forage provided annually from estimates from remote monitoring, including:

- a. Satellite or aerial imagery;
- b. Surveys from dryland farming collectives;
- c. Estimates from Beef + Lamb NZ (noting that the B+LNZ definition of “winter feed” does not match the regional planning framework definition of “winter forage”)

The current HWRRP requirements to establish an OVERSEER baseline loss (average losses 2012 – 2016) is overly onerous. The per farm cost of establishing an OVERSEER baseline is around \$3000, with an additional \$3000 cost each time loss rates are updated. Given the Plan Change will likely change the rule framework from one that relies on understanding loss rates to establish activity status, to a narrative framework that does not require an OVERSEER number to determine activity status, the cost is not justified.

Requiring dryland farms to register with the Farm Portal and answer questions relating to their farm would provide the appropriate information to meet the catchment accounting requirements. The Land and Water Regional Plan (LWRP) framework requires farmers to enter farm details every 3 years. Because the Portal is already in place and will likely be refined by the time a plan change becomes operative, the cost of this option to farmers and to Environment Canterbury would be very low, while the information it will generate will be a regionally consistent estimate of losses from normal dryland farming, assuming farmers are operating at GMP.

The Portal uses the Matrix of Good Management (MGM) to estimate losses. Another option available is for Environment Canterbury staff (as opposed to farmers) to use the MGM to estimate losses from dryland farming where the information on farm practices (i.e. area of winter forage) is collected using remote monitoring. Methods for remote monitoring could include:

- a. Satellite or aerial imagery;
- b. Surveys from dryland farming collectives;
- c. Estimates from Beef + Lamb NZ (noting that the B+LNZ definition of “winter feed” does not match the regional planning framework definition of “winter forage”)

Satellite or aerial imagery could be used to establish area of winter forage. There would likely be a need to ground-truth estimates based on imagery and this could be achieved through surveys (similar to the Survey the HDLG conducted to inform the 10% rule fix options; Brown 2018). Estimates from B+LNZ surveys could also be used, but it has been established that the B+LNZ survey does not distinguish between winter feed such as Italian ryegrass and winter forage such as fodder beet.

### **Discussion – Collectives**

Collectives were intended to provide a mechanism to drive Good Management Practices (GMP) in a collaborative manner. Collectives were established at a time where there was no common understanding of GMP, or regional framework in place to drive adoption of GMP. The lack of a common understanding of GMP necessitated a collaborative effort to agree on the farm practices that would be considered the minimum standard.

Over the past six years, industry has developed a common understanding of GMP and a regional framework has been developed that provides a mechanism (FEPs) for driving GMP on farms.

The Hurunui District Landcare Group (HDLG) has been established. While the HDLG does not meet the requirements of a collective for Plan compliance purposes, the group does provide collaboration and leadership among dryland farmers, promoting the adoption of GMP through FEPs.

The Hurunui Waiau Zone Committee has agreed to ten principles that should be considered in relation to the plan options for achieving the outcomes that were intended to be achieved through the establishment of farmer collectives. The principles are set out in Attachment 1.

*Options relating to collectives for normal dryland farming*

1. Retain current HWRRP requirements (nutrient management collectives with audited FEPs);
2. Do not require any collectives or other provisions to drive GMP
3. Create a new type of “normal dryland farming collective” that does not have the auditing requirements that apply to other land uses
4. Require all dryland farms to have a Farm Environment Plan. This could be:
  - a. An FEP as described in Schedule 7 of LWRP;
  - b. A Farm Management Plan as described in Schedule 7A of LWRP

Retaining the current requirements of the HWRRP will likely be overly onerous. Dryland farmers have indicated that the auditing requirements associated with the collective requirements set out in Schedule 2 of the HWRRP are an administrative burden that is out of proportion to the risks associated with dryland farming.

The option of not requiring any mechanism to drive GMP carries some risk. This option will not achieve a number of the nutrient management principles the Zone Committee has committed to. In particular there will be no regulatory requirement to work towards or operate at GMP. In addition, this option would not provide a pathway to managing phosphorus losses from permitting dryland farming. With no mechanism driving GMP it would be impossible to make a credible case that water quality can be maintained or improved where phosphorous load already exceeds limits.

The option of creating a new type of collective for normal dryland farmers would build on existing work and continue to encourage collaboration and leadership among dryland farmers. The HDLG could be used as a model. Collective requirements could be similar to the collective requirements for other land uses (members would be required to have and implement an FEP) but without the auditing requirements. This option would make permitted activity status contingent on membership in such a collective.

If the Zone Committee consider that the administration of a collective group is a regulatory burden that is excessive, another option to ensure the principles relating to good management practice and management of all nutrients are applied to normal dryland farming is to require FEPs as a condition of a permitted activity rule.

A requirement for farmers to have and implement an FEP will provide a mechanism to drive GMP, without the administrative requirements of having a collective in place. An FEP requirement will provide some certainty around the management of nutrient losses from winter grazing, and in particular will provide certainty that phosphorous losses are being minimised.

The requirement to have an FEP could be as simple as all farmers must have and implement an FEP that meets the requirements set out in the Land and Water Regional Plan Schedule 7 (similar to HWRRP collective requirements) or Schedule 7A, which was introduced as a part of Plan Change 5 (FEP “lite”) (see Attachment 2). In this case the FEPs would only need to be provided to Environment Canterbury on request (in response to compliance checks).

## Attachment 1: Nutrient Management Principles and analysis of options against those principles

### *Nutrient management principles*

In August 2016, the Zone Committee agreed to a set of nutrient management principles. Those principles were:

1. Manage all contaminants (N, P, sediment and pathogens)
2. All land users are required to use good management practices or better
3. The properties, land uses or activities that contribute most to a water quality issue should have to contribute most to addressing the issue
4. Where change is required, timeframes should be realistic
5. Where regulatory control is justified – including rules and conditions, monitoring, auditing and reporting – it should be commensurate with the degree of environmental impact pressure
6. Support the use of group approaches to discharge management
7. Use the best available technical information from all sources to inform evidence-based decision making
8. A right to discharge nutrient should be coupled with an obligation to minimise that discharge and to periodically surrender all discharge rights in excess of reasonable requirements
9. The framework for property-scale nutrient management should be technically feasible, simple to operate and understandable
10. Approaches to nutrient management should be able to accommodate “adaptive management” solutions that could be needed with future changes in farm practices or land use and to respond to major climatic events.

In the table that follows, the options for requirements for collectives and FEPs are assessed against the extent to which the option meets the nutrient management principles agreed by the Zone Committee.

	Require FEPs	Don't require FEPs	Require collectives	Don't require collectives
Manage all contaminants (N, P, sediment and pathogens)	✓	✗	✓	✓
	A requirement to have and implement an FEP will ensure farmers are implementing GMP, and therefore they will be managing N, P and pathogens. This could be achieved with or without collectives			
All land users are required to use good management practices or better	✓	✗	✓	✓
	A requirement to have and implement an FEP will ensure farmers are implementing GMP. This could be achieved with or without collectives			

<p>The properties, land uses or activities that contribute most to a water quality issue should have to contribute most to addressing the issue</p>	✓	✗	✗	✓
	<p>A requirement to have and implement an FEP will ensure farmers are implementing GMP, and therefore doing their part towards managing water quality issues. A requirement for a collective to manage the uptake of FEPs be an overly onerous administrative burden.</p>			
<p>Where change is required, timeframes should be realistic</p>	✓	✓	✓	✓
	<p>Timeframes can be applied as appropriate</p>			
<p>Where regulatory control is justified – including rules and conditions, monitoring, auditing and reporting – it should be commensurate with the degree of environmental impact pressure</p>	✓	✗	✗	✓
	<p>Normal dryland farming is inherently low risk for nutrient loss. FEP requirements can be justified as a mechanism to drive GMP. Collective arrangements and auditing programmes (other than as a compliance check) are not justified as the administrative burden (on farmers required to set up and run a collective) is excessive and necessary information can be gathered in other ways.</p>			
<p>Support the use of group approaches to discharge management</p>	✓	✗	✓	✗
	<p>“collectives” or farmer groups are a requirement for permitted activity status. This requirement has encouraged some group approaches to discharge management. The requirement has not been 100% effective in getting dryland farmers to collectively manage nutrient discharges. The dryland collectives that exist do not monitor or report on nutrient losses or GMP uptake. Requiring collectives for normal dryland farming will encourage membership in collectives, but may not encourage group approaches to nutrient management. Voluntary collectives for normal dryland farming may be a more effective means of encouraging uptake of GMP.</p>			
<p>Use the best available technical information from all sources to inform evidence-based decision making</p>	✗	✗	✗	✗
	<p>Not applicable. Technical information can be gathered from sources outside of collectives for future decision making</p>			
	✓	✗	✓	✗

<p>A right to discharge nutrient should be coupled with an obligation to minimise that discharge and to periodically surrender all discharge rights in excess of reasonable requirements</p>	<p>Minimising losses can be achieved through the use of GMP, implemented through FEPs and that can be achieved with or without collectives. The concept of periodic surrendering of discharge rights is most likely best addressed through a collective arrangement.</p>			
<p>The framework for property-scale nutrient management should be technically feasible, simple to operate and understandable</p>	✓	✓	✗	✓
<p>Approaches to nutrient management should be able to accommodate “adaptive management” solutions that could be needed with future changes in farm practices or land use and to respond to major climatic events.</p>	✓	✗	✓	✓
	<p>A requirement to be a part of a collective may not be feasible within the life of the Plan. Assuming the plan is operative by the end of 2019, there would effectively be 2-3 years for collectives to be established, approved (including an Environmental Management Strategy) and for farmers to meet the requirements to join.</p>			
	<p>FEPs and collectives both provide opportunities for adaptive management to occur. If no FEPs are required, there would be no vehicle through which to drive GMP.</p>			

**Attachment 2: Schedules 7 and 7A of the Land and Water Regional Plan**