



Managing Intensive Winter Grazing

DairyNZ Submission

7 October 2021

DairyNZ 

Summary of main recommendations

The DairyNZ view on the proposed changes to the intensive winter grazing default conditions is summarised in the table. Our feedback also includes the following submission points:

- ✓ DairyNZ supports the three pathways as currently outlined in the regulations.
- ✓ We prefer farmers having the option to manage intensive winter grazing (IWG) as part of their freshwater farm plan (FW-FP) as an alternative to a resource consent.
- ✓ We are concerned that delays in the development of the FW-FP regulations and guidance material might mean that this pathway will not be available in time for the winter season 2023.
- ✓ It will also take several years before the FW-FP pathway is available to all farmers, depending on how they are rolled out.
- ✓ We suggest that it should be possible for farmers to undertake an IWG module as an interim solution if FW-FP regulation is delayed past November 2022. The module can form part of a more comprehensive FW-FP once available.
- ✓ The assessment of IWG practices in a FW-FP means that certifiers must be experts on comparative effects of IWG practices. Clear guidelines are needed for how this judgment call should be made.
- ✓ We encourage the Government to continue to take a collaborative approach going forward, involving both regional and primary sector, as well as NGOs, in the development of guidance material.

DEFAULT CONDITION	PROPOSED CHANGE	DAIRYNZ RECOMMENDATION
TOTAL AREA	No change (i.e. max 50 ha or 10% of the farm, whichever is greater)	Oppose. Amend to 100 hectares to avoid intensification or large number of consents.
SLOPE THRESHOLD	Measure as maximum allowable slope, instead of mean slope across a paddock	Oppose. Amend to 15 degrees maximum to follow SAG recommendations.
PUGGING	Take steps to manage the effect on freshwater from pugging	Oppose. Remove condition for pugging entirely as already managed through new critical source area condition and buffer zones.
BUFFER ZONES FROM WATERWAYS	Amend the definition of 'drains' to exclude sub-surface drains	Support the removal of sub-surface drains from the definition.
RESOWING	Remove the requirement to resow by a specific date and, instead, require farmers to resow 'as soon as practicable'	Support removal of dates for re-sowing.
CRITICAL SOURCE AREA (NEW)	Require that critical source areas must be protected (uncultivated and ungrazed)	Support. A new condition should be aligned with GMP.
	Further deferral to Nov 2022	Support. Enables farmers to keep planning with certainty for next season.

Introduction

We thank the Government for the opportunity to provide feedback on the proposed changes to the intensive winter grazing regulations in the National Environmental Standards for freshwater regulations (NES-F). It is positive that Government has listened to farmer and primary sector concerns and are now consulting on changes to make the regulations more workable.

It is positive that most of the proposed amendments are based on the recommendations from the Southland Advisory group (SAG). The purpose of SAG was to provide a review of the intensive winter grazing (IWG) regulations in the NES-F and make recommendations to improve practical implementation and enforcement. This was in response to potential negative impact on landowners and Council of imposing one-size-fits-all restrictions on farmers.

The collaborative approach involved representatives from the farming community, regional councils, primary sector as well as Fish and Game, Iwi and Ministry officials. DairyNZ participated in the work done by the group, and we believe that the good outcomes reached was very much due to the collaborative approach of different sectors working together. We support this approach and encourage Government to continue to adopt this for future work, specifically for the development of necessary guidance for the intensive winter grazing regulations.

DairyNZ support the recommendations from SAG, recognising that the recommendations were done as a package of proposed changes and that some practical difficulties still exist with the proposal.

Parts of the national IWG regulations were deferred earlier this year, and in the interim the regional and farming sectors have committed to increased monitoring and reporting to show improvement in wintering practices. In response, the regional sector delivered its first progress report on 1 August 2021 to Ministers, outlining progress with IWG practices so far this year. DairyNZ among others contributed with data showing the large effort that has been made this winter, with particular focus on implementing good practices for IWG.

We acknowledge that intensive winter grazing is a high-risk activity that needs to be well-managed to protect waterways and animal welfare, and that practices must improve. The work DairyNZ has been doing to support dairy farmers to improve their IWG practices has already delivered significant progress and will continue. This is a long-term commitment from the sector, and from farmers.

To not stifle practice improvements or the development of innovative solutions, we encourage the Government to deliver regulations that are practical and easy to understand and implement for farmers, while reducing the risk of adverse effects on the environment.

We agree with the conclusion in the discussion document that freshwater farm plans will be the best way to manage intensive winter grazing activities in the future. We are concerned that the roll-out of FW-FPs will mean that it will take several years until this pathway becomes available for many farmers. This is something we urge Government to have in mind when deciding on amended default conditions.

Regardless of which amendments are decided on, there will be a need to develop guidance for the regulations. It is critical to involve the primary and regional sector in the development of the necessary guidance. This would ensure practical implementation and successful outcomes for what the policies are trying to achieve.

Freshwater farm plans pathway to meet regulations

DairyNZ supports the three pathways as currently outlined in the regulations. We prefer farmers having the option to manage IWG as part of their FW-FP as an alternative to a resource consent. We believe this pathway is the best approach for addressing farm-specific environmental risks and achieving improvements in IWG practices.

The Southland Advisory Group's primary recommendation was to institute an interim regime that would mean IWG could occur as permitted activity provided it is undertaken consistent with the farm-specific IWG module. This was a solution proposed to overcome the gap in timing between freshwater farm plans (FW-FP) being rolled out and the NES-F regulations coming into force.

The Government choose to not adopt this recommendation, and wintering activities will instead be managed either as permitted activities or through a restricted discretionary consent until freshwater farm plans are available.

If FW-FP regulation is delayed past June 2022, DairyNZ is concerned farmers doing IWG will be disadvantaged. It is critical that contingency for this situation is developed, and we suggest that changes to regulations are made to make the IWG module available as an interim pathway, as proposed by SAG. The module could be used as a transitional arrangement until FW-FPs are available.

Even though it is proposed that FW-FP should be rolled out from mid-2022, it will most likely take several years before a FW-FP is available to all farmers, depending on how the Government choose to introduce the plans across the country.

An issue with this gap in timing for when FW-FPs will become available is raised in the regulatory impact statement, saying that it could result in a double-up of costs if a farmer would need first a consent and then a FW-FP a short time later. However, there is no estimate of number of farmers potentially impacted under the proposed default conditions nor cost. This is something that we consider needs to be taken into account when Government decides on how to roll out FW-FPs and when amending the default conditions. Hence, an assessment would be needed to inform decisions.

DairyNZ have made a submission on Freshwater farm plans where we have outlined our preferred approach for how to roll out FW-FPs once regulation is in place.

DairyNZs view is that farmers undertaking IWG should be able to choose to do a FW-FP when the IWG regulations come into force in November 2022. If FW-FPs are not available at that time, the IWG module should be used as a transitional arrangement.

We believe that effects of IWG can be managed through a FW-FP and that this is a valid option instead of meeting permitted activity rule conditions or applying for a resource consent. We understand from officials there are RMA drafting issues with making FW-FPs voluntary in some specific instances. The alternative is that catchments where there is a high percentage of land currently being used for IWG could be first in line to do FW-FPs.

It is our understanding that the PA default conditions will be used as a benchmark, to assess environmental effect for IWG practices in a FW-FP against. A key issue is how a FW-FP will be able to demonstrate that different IWG practices will have the same or lesser effect compared to complying with the PA conditions.

FW-FP certifiers must be experts on comparative effects of IWG practices. When it comes to effects of different IWG practices, the judgment call is a big ask. Certifiers must be able to assess the farms

proposed IWG practices in the FW-FP and compare them with the PA conditions of the NES-F. How this is developed will need careful consideration. To make it workable, clear guidelines are needed for how this judgment call will be made and whether a farmer is meeting the permitted activity default conditions or not. This is important since it will decide whether a farmers would require a resource consent or not.

Since a FW-FP is proposed to include a farm specific risk assessment, any further practice change a farmer is required to make above the default conditions, should be based on the risk assessment.

Feedback on consultation questions

Context for the proposed changes to the intensive winter grazing regulations

1. Do you agree with our framing of the issue? If not, why not?

DairyNZ agrees in part with the framing of the issues. We think that the discussion document should have focused more on the gap in timing between IWG regulations coming into force and freshwater farm plans (FW-FP) being rolled out. We support the three pathways for farmers to undertake intensive winter grazing, either following the default conditions, using a FW-FP, or applying for a consent. These options should remain in the regulations and the availability of FW-FPs should be taken into consideration when amending the default conditions.

The delay for FW-FPs becoming available is highlighted as a risk in the Regulatory Impact Statement (RIS), outlining that some farmers will be negatively impacted by needing first a consent for their winter grazing practices and after some time, also a certified freshwater farm plan. However, the extent of this problem (number of farmers affected and associated consenting cost) is not properly assessed or adequately quantified.

If freshwater farm plans are rolled out using a catchment-by-catchment approach it will take several years before all farms have FW-FPs, meaning they won't be available to all farms as an alternative pathway unless farmers are able to choose to do a FW-FP. DairyNZ have included our view on roll out in our submission for the FW-FPs consultation, as well as a short summary in this submission.

We also consider that the consenting pathway should have been discussed more, and the difficulties with this pathway outlined clearly. The discussion document only mentions this pathway briefly as a way of obtaining a resource consent. For a restricted discretionary consent, it can be difficult to meet the consent conditions and an application can be denied by regional councils. A proper explanation of this is missing in the consultation material.

2. What other information should we consider?

See question 1. Other than that, there are no additional information we think should have been considered.

3. Are there any other implementation issues with the current default conditions that have not been discussed above?

A guidance document should be developed for the IWG regulations as proposed in the consultation document. This is best done in collaboration with primary sector and regional council representatives, well in advance of the regulations coming into force. Including the primary sector would ensure that the work has an on the ground practical input.

There is still a question regarding practicality of surface drain setbacks, especially in smaller, or more narrow paddocks where a 5-metre buffer might lead to difficulties when cultivating. We consider this to be something that could be solved on a case-by-case basis with the use of FW-FPs. It should be based on a farm risk assessment.

Definitions of farm and landholding. We propose an amendment to the definition of landholding and to include some more advice on these definitions in guidance material.

We have also received questions from farmers concerning the *definition of annual forage crop* for example if an annual grass would be considered as an annual forage crop. We propose to include advice on this definition in guidance as well, to avoid different interpretations being made.

Amendments to the default conditions

4. Do you think these proposed changes are the right way to manage intensive winter grazing? If not, why not?

We agree with the proposed changes to default condition (d) and (e). We also agree with the proposal to include a new condition for critical source areas (CSAs).

DairyNZ has proposed amendments to the default conditions as well as new definitions which can be found in appendix 1. We have also made recommendations for how we think CSAs should be managed. This could be a starting point for development of guidance for the regulations.

We do not agree with the proposed changes to default condition (b): slope or with the proposal to not make any amendments to condition (a): area thresholds.

We propose to delete condition (c) for pugging entirely.

Our reasons for proposing further amendments are set out in the following summary:

Reg 26(4)(a) total area: we propose to change the area limit to 100 hectares or 10 %, whichever is the greater. We do not agree with the proposal to keep the area threshold at 50 hectares. We consider that the control on the extent of IWG is well managed with the interim restriction on expansion, as an interim before regional plans are notified and/or FW-FPs fully rolled out. To limit the area on a farm scale, have the potential to lock in certain practices such as which crops are grown, in order to meet feed demand, and drive the wrong behaviour.

The Southland Advisory Group pointed out some risks with the threshold but didn't recommend any changes since it was assumed that FW-FPs would be available and provide a more flexible way of dealing with the area threshold. DairyNZ shares the concerns raised by the SAG about the current area limit leading to unintended consequences. We suggest that the position on area is reconsidered and propose an increase in threshold for the following reasons:

1. A lower threshold encourages farmers to be more intensive with the land available for IWG

2. If farmers wish to avoid the cost of getting a consent and try to remain within the permitted activity threshold it will stifle the innovation attempts those farmers are currently trialling
3. It could potentially result in large number of consents in some regions

This is further explained under each heading.

Regardless of which total limit is set, it needs to be clear in the regulations and in guidance material, that any area of a crop paddock kept in pasture can be deducted from the total area winter grazed. This is particularly important since it is proposed to exclude CSAs from intensive winter grazing. If these areas cannot be excluded from the total area, there will be no incentive for farmers to exclude them.

We propose a methodology be developed for how areas should be measured, and this be included in guidance material.

1. Intensification. In our view there are two types of intensification with winter cropping that the current restrictions in area could lead to:

The first is through growing a higher yielding crop (therefore increasing stocking density/ha) to avoid triggering the need for a consent. A higher yielding crop means the cows need less area per day to meet their crop allocation i.e. a 20 T fodder beet crop has 2 kg dry matter (DM)/m² whereas a 12 T kale crop only has 1.2 kg DM/m². Therefore, to provide 10 kg DM of crop you only have to offer 5 m²/cow/day for fodder beet whereas for the kale you need to offer 8.3 m²/day. This is increased intensification due to increased stocking density to meet feed demand on a limited area.

The more traditional type of intensification is importing more feed into the farming system which either allows you to run more cows or produce more from the same number of cows. By importing more feed, you are importing more nutrients so if outputs don't increase then it results in increased nutrient loading in the soils. Since cows are not lactating over winter you cannot increase the outputs thus intensification increases nutrient loss risk.

To avoid these unintended outcomes, we propose to increase the area threshold to 100 hectares.

2. Hinder innovation. Last winter (the winter of 2021) we observed farmers trialling innovative solutions to reduce their environmental footprint and comply with animal welfare requirements. These solutions included:

- Much wider buffers around waterways and swales (20-40m)
- In paddocks with a variety of slopes ranging from flat to highly slopping, farmers only established crop in the flatter parts of the paddock
- Wintering paddocks alternating between strips of crop and strips of permanent pasture. The strips of permanent pasture were used during periods of high rainfall for cows to lay on (to support cow lying time) and avoid excess pugging and generation of mud while still allowing access to the crop to prevent animal health issues.

All these innovative solutions to minimise or eliminate environmental and animal care risks didn't expand the total area of crop used but did expand the total area of the farm used for wintering.

To address this, we recommend that the rule should apply to the total hectares of crop established, not the total hectares of the paddocks that have crop in them. To be able to exclude parts of a

paddock when calculating the total area, there needs to be some guidance to what GPS tools are acceptable to use.

3. Number of consents. The RIS doesn't have an estimate of the number of properties impacted by the area threshold. It is only possible to get an approximate indication of number of properties affected by looking at previous calculations. They indicate that number of properties impacted by a 50-hectare limit is between 10-20 %, depending on region.

The Essential Freshwater Regulatory Impact Analysis (2019) included some information regarding number of properties with winter grazing above 50 hectares.

It gave the following information: number of properties with area >50 ha (2018): 1152, out of 9345 in total with winter crop across the country. This is about 12%.

Most of those properties are in Canterbury, Southland and Otago (Table 2).

Table 2. Number of properties in Southland and Otago and their area of winter crop

	50 to<100 ha	Above 100	Total, number of properties
Otago	13 %	7 %	1338
Southland	5 %	5 %	1611

Another report *Analysis of wintering in Southland* (2016), had the following information:

Number of properties above 50 ha: 260 or 8 % of total number, with 179 properties between 50-100 ha. This is roughly the same estimate as the one made in 2019.

Total area grown: 64 000 ha, and total number of properties: 3225.

This indicates that the number of farms in the EFW regulatory impact analysis might be underestimating the number of properties and the need for consents connected to area threshold.

Reg 26(4)(b) slope threshold: DairyNZ doesn't agree with the proposal to keep the slope at 10 degrees. We agree with the proposal to change the way slope is measured from mean to maximum but only if combined with changing the threshold to 15 degrees. This is in line with the recommendation from the Southland Advisory Group which we support.

- We agree with the conclusion in the SAG report that a maximum slope is more straightforward for farmers and regulators to measure.
- We don't agree with the description of slope threshold and conclusions for keeping the slope at 10 degrees, as outlined in the discussion document.

Changing to a maximum slope

We support this change as measuring a maximum slope is less complicated and subjective than measuring the mean slope. An example methodology for how to do this, should be included in guidance material.

It is also our view that areas within a paddock could be excluded from winter grazing, and deducted from the total area limit, if above the threshold.

Slope threshold and increased risk for the environment

We do not agree with the justifications for keeping the slope at 10 degrees as outlined in the discussion document. The modelling work referenced is too limited (since it is done only for one location) to be able to draw the conclusion that 10 degrees is an optimal threshold in order to reduce the risk of sediment loss. We believe that IWG practices can be well-managed up to a slope of 15 degrees through the regulatory pathways and conditions proposed.

We have done a review of readily available literature to assess if the proposed 10-degree slope and associated sediment loss rates are justified. We have found no scientific justification to indicate optimal slope threshold for intensive winter grazing to reduce the risk of erosion. This is consistent with the fact that slope gradients have been litigated in a number of regions when discussing cultivation and winter grazing and very little, if any, scientific evidence has been provided to justify any slope gradient.

We do not dispute the positive correlation between slope and sediment loss, but it cannot be concluded from available research that a threshold above 10-degrees would lead to IWG having significantly higher adverse effects on the receiving environment. We propose a 15-degree slope threshold to avoid a potentially large number of resource consent applications in the interim before a FW-FP pathway is available across the country. A FW-FP would include a risk assessment taking into account other factors that influence sediment loss, such as soil type, climate, and management practices which would be a more appropriate approach.

Risk factors associated with slope will also be managed via other practices, particularly management of critical source areas and using waterway buffers.

We also suggest for Government to fund research to refine the slope threshold and build a more solid understanding for factors driving and mitigating sediment loss under New Zealand conditions.

Reg 26(4)(c) pugging: We propose to remove this condition entirely. Our reasons for this are:

- A condition for pugging will not lead to any added environmental protection if critical source areas and buffers are managed well.
- Pugging is already regulated as an animal welfare issue and should not be regulated in two legislations.
- There is no, or little correlation between pugging depth and sediment loss (see question 6).

The condition for buffer width and the proposal to exclude critical source areas from intensive winter grazing are practices that effectively decrease and manage adverse environmental effects from winter grazing. It is our opinion that a specific condition for pugging is not needed if these two default conditions are included in the regulations.

Muddy paddocks are already regulated as an animal welfare issue, and we do not see that doubling up will add any increased protection for the environment.

The Code of welfare: Dairy cattle includes minimum standards and recommendations to meet the behavioural needs of dairy cattle, and their need for a dry area to lie¹ on. It is our opinion that regulating the same problem twice is not efficient or good practice when writing legislation. To be able to follow the code of welfare, the same steps must be taken as a farmer would have to take to minimize pugging under this condition.

Individual paddock plans are important to managing the impact of wet weather. Steps farmers are taking to manage pugging/animal welfare are:

- considering bale placement and positioning of portable water troughs,
- paddock selection,
- back fencing,
- giving more area in wet weather,
- experimenting with block grazing, and
- experimenting with nil or low till crop establishment methods.

New condition for critical source areas: We support the proposal to include a new condition requiring farmers to manage CSAs. DairyNZ propose farmers should manage CSAs in line with good management practice (GMP) since this is already recommended by industry and a practice many farmers are already doing. We think CSAs should:

- be uncultivated, and
- ungrazed during the winter period (May to September), and
- have a large enough buffer towards cropped area to protect against water levels in a typical year. The width of the buffer should not be defined in legislation.

Some key issues for introducing a condition for CSAs, which would be appropriate to include in guidance:

- clear examples of what a CSA is,
- how they can be identified, and
- recommended management.

However, it is also proposed to manage sub-surface drains/tile drains through the new condition for CSAs. We would need more details on this component to be able to fully understand its practical implications and provide relevant feedback. DairyNZ recommend subsurface drains be managed in regional plans if limit-setting has established this as an appropriate measure to manage contaminant loss.

It is unclear if the purpose with this proposal is to manage the tile drain outlet, or the entire network of sub-surface drains, or both. There are several challenges with either approach. One main issue is what kind of evidence would be required to demonstrate farmers have taken appropriate actions. If the purpose is to manage the network for example, how can this be proved unless using a tool to calculate contaminant loss.

¹ Minimum Standard No. 6 – Providing for Behavioural Needs (b) Dairy cattle must be able to lie and rest comfortably for sufficient periods to meet their behavioural needs.
Recommended Best Practice a) Under usual conditions cattle should be able to lie and rest comfortably on a dry, clean and wellbedded/soft surface for 10-12 hours a day to meet their behavioural needs.

5. Do you think these proposed changes would improve the workability of the permitted activity standards? If not, why not? (Please be specific about which provisions you are commenting on when you are responding.)

The proposed changes would considerably improve the workability of the default conditions, but further changes would be needed as proposed by DairyNZ to not drive unintended outcomes. See also our response to question 4 above.

A key to ensure practical and workable regulations is that guidance is developed in a way that facilitates this when the regulations are implemented on farm.

6. Do you think these proposed changes would manage adverse environmental effects of intensive winter grazing effectively? If not, why not?

We believe our proposed changes would lead to an increased protection for the environment as well as a more practical implementation of the regulations on farm. Our reasoning for this is summarised for the conditions where we are proposing further changes: total area, pugging and critical source areas. Justification for our proposed changes to the slope condition is given in question 4.

Total area

If the total area is kept at 50 hectares, it might lead to the following perverse environmental effects.

If farmers can only crop on a limited area of their farm, they will look for options that provide the most feed per square metre to ensure sufficient feed for the feed budget without having to go to the market to find additional feed i.e. from a grazier as this creates increased business risk.

The other option is that farmers stay with their current crops but import more supplements to make up the feed deficit. By importing more supplement feed, farmers would increase the nutrient loading on their crop paddocks and thus increase the risk of nutrient loss via leaching and overland flow. With more supplement in the diet the cows will be offered a smaller area of the paddock each day increasing the risk of soil damage, especially during adverse weather events.

The other unintended consequence of limiting the area that can be cropped is that it might discourage farmers from trying alternative crop establishment methods, i.e. reduced till or direct drill if there is a risk of decreased crop yields. There is research by Plant and Food to show that reduced tillage establishment of winter crop results in better soil structure and better establishment of a subsequent catch crop but there have been mixed results with yields.

A larger area threshold would allow for innovations in terms of which crops are grown and the crop establishment practices that are used.

Pugging

The relationship between pugging in a cultivated paddock and sediment loss is complex. One study (summarised below) found an inverse correlation, but further studies are probably needed to confirm this. We believe the adverse environmental effects will be managed indirectly through the current animal code of welfare, and directly through the new critical source area condition and the condition on buffer distance between crops and waterways.

Research investigating the influence of soil treading on sediment and phosphorus losses in overland flow (McDowell et al. 2003) in artificially trodden soils in a rain shelter concluded that in grassland

soil, sediment and particulate P fractions in overland flow increased with treading due to soil disturbance and decreased protection from erosion by grass cover.

In contrast, for the cultivated soil, sediment and P concentration and load decreased with increasing treading, due to greater ponding which decreased the erosive power of raindrop impact. The authors expected similar relationships between treading and sediment loss for the grassland and cultivated soils if physical disturbance is the primary factor influencing sediment loss, but this was not observed.

Visually, the lack of a relationship was difficult to accept given the obvious physical disturbance and muddy looking surface water in winter grazed crop paddocks. They did note that overland flow would occur sooner in the cultivated soils compared with the grassland because of the soil structural changes highlighting the importance of critical source area protection and buffers.

The authors proposed 2 main reasons for decreasing sediment loss with treading in cultivated soils and these were (1) the increase in soil strength and cohesion and therefore resistance to detachment by raindrop impact and during flow and (2) the increased ponding with treading (due to decreased microporosity and saturated hydraulic conductivity and increased surface roughness from imprints), causing a decrease in erosion by raindrop impact. Heavier particles are likely to sink in the puddles and not lost in flow with only fine particles moving.

Critical source areas

DairyNZ supports excluding CSAs from grazing during winter and consider this being a cost-effective mitigation to reduce contaminant loss from an annual forage crop.

To the best of our knowledge there are no studies that have considered contaminant loss from swales that are left in grass compared to those which are grazed by livestock in the New Zealand context. However, research conducted in the P21 Project at Telford has demonstrated sediment loss reductions of up to 90% compared to the control when dairy cows were strategically grazed (along with the use of back fencing and portable water troughs) and the crop established in the critical source area was not grazed until the end of the season. We believe that it is a logistical extension that if the critical source areas are left uncultivated and stock excluded during winter, this will be a further benefit to reducing contaminant loss from winter paddocks.

Most critical source areas (swales and gullies) are going to be obvious to identify. However, in flatter land, in some instances they may be more challenging to identify. It would be useful if a tool (e.g., Digital Elevation Model) was made available and easily available/ usable for farmers to help identify these landscape features. Identification of these landscape features should not be solely determined by this tool with on the ground observation being the final assessment as to whether these features do exist and need to be managed.

One of the challenges will be how wide is the critical source area and determining where the critical source area starts and where the paddock ends. We foresee it being difficult, if not impossible, to come up with a simple buffer width requirement that will be nationally applicable. In this instance the extent of the critical source area buffer should be left to the individual farmer with the guiding principle being 'the buffer should be as wide as the maximum water level experienced in a typical year'.

Despite our agreement that critical source areas (swales and gullies) should be left uncultivated, and stock temporarily excluded during the wintering period, farmers should be allowed to cultivate these features when the paddock is being restored to permanent pasture.

Implementation timeframes

7. Do you have any comments on implementation timeframes and whether a further deferral would be necessary?

We agree with the proposal to further defer the regulations to 1 November 2022. It would provide certainty for farmers for next season (2022) and allow them to keep progressing with plans already made to date. It will also mean that there is certainty which rules they will need to follow at the start of the cropping season for winter 2023.

However, the planning for cultivation of winter crops starts as early as September/October the year before, which means it will be imperative for Government to have the regulations and guidance in place before September next year.

If a consent is required, it would provide certainty if a farmer could apply for that well in advance before they start planning for winter 2023. This would avoid a situation where a consent might not be granted, or granted with certain conditions, when the next winter crop is already in the ground and planning for next winter on its way. The same would be relevant for a FW-FP, it will need to be available well in advance to be able to cover winter 2023, or a transition period to achieve a complete FW-FP be allowed.

We urge Government to work together with the regional and primary sector to ensure regulations, supporting information and systems are in place well in advance before planning starts for the cropping season 2023.

References

Analysis of wintering in Southland. 2016. [Memo template - Environment Southland \(es.govt.nz\)](#)

Essential Freshwater Regulatory Impact Analysis. 2019. [interim-regulatory-impact-analysis-for-consultation-essential-freshwater-part-2-v3.pdf \(environment.govt.nz\)](#)

McDowell RW, Drewry JJ, Paton RJ, Carey PL, Monaghan RM and Condrón LM. 2003. Influence of soil treading on sediment and phosphorus losses in overland flow. Australian Journal of Soil Research 41: 949-961

Appendix 1. DairyNZ proposed amendments to the default conditions and definitions

Regulations

26 Permitted activities

	Support or oppose the proposed amendments
(4) In any other case, the conditions are that,—	
(a) at all times, the area of the farm that is used for intensive winter grazing must be no greater than 50 <u>100</u> ha or 10% of the area of the farm, whichever is greater; and	<p>Oppose DairyNZ doesn't support keeping the area threshold at 50 ha. We propose setting the limit to 100 ha.</p> <p>It needs to be clear that the area limit only refers to the area in an annual forage crop. If some parts of the paddock are excluded from crops and kept in pasture, such as critical source areas, they should be excluded from the total area.</p> <p>We propose that methodology for calculating area is included in guidance material.</p>
(b) the mean <u>maximum</u> slope of a paddock that is used for intensive winter grazing must be 10 <u>15</u> degrees or less; and	<p>Support in part DairyNZ proposes changes to this condition and propose to align with the recommendations from SAG, setting the slope threshold to maximum 15 degrees.</p> <p>We also recommend that <u>parts of paddocks</u> if above 15 degrees can be excluded from cropping and be deducted from the total area (condition a). See also comments for condition a.</p>
c) on a paddock that is used for intensive winter grazing,—	
(i) pugging at any one point must not be deeper than 20 cm, other than in an area that is within 10 m of an entrance gate or a fixed water trough; and (ii) pugging of any depth must not cover more than 50% of the paddock; and	<p>Oppose DairyNZ propose to remove this condition entirely. We do not support including pugging as a condition.</p>
(d) livestock must be kept at least 5 m away from the bed of any river, lake, wetland, or drain (regardless of whether there is any water in it at the time); and	<p>Support DairyNZ support this condition and the proposed amendment of the definition of 'drains' to exclude sub-surface drains.</p>

<p>(e) the <u>time that land that is used for intensive winter grazing is exposed to weather after livestock have grazed the land's annual forage crop, must be minimised must be by replanted replanting as soon as practicable <u>or by using a companion cover crop after livestock have grazed the land's annual forage crop (but no later than 1 October of the same year); and</u>;</u></p>	<p>Support DairyNZ supports excluding specific dates for replanting from this condition. We propose a new definition of “replanting as soon as practicable”, see below.</p>
<p>(f) <u>there is no intensive winter grazing in any critical source area.</u></p>	<p>Support in part DairyNZ support the addition of a condition for protecting CSAs². We also propose a definition, see below.</p> <p>DairyNZ oppose the proposal to manage sub-surface drains through critical source areas. There is not enough information provided in the proposal to fully understand the implications of this proposal.</p>

Proposed changes to definitions

In this subpart,-

Drain means any artificial watercourse designed, constructed, or used for the drainage of surface ~~or subsurface water~~, but excludes artificial watercourses used for the conveyance of water for electricity generation, irrigation, or water supply purposes.

~~pugging means the penetration of soil to a depth of 5 cm or more by the hooves of grazing livestock~~

farm means a landholding whose activities include agriculture

Landholding means 1 or more parcels of land (whether or not they are contiguous) that are managed as a single operation regardless of ownership structure

Insert new definition

Critical Source Area means a landscape feature such as a gully, swale, or depression that accumulates runoff from adjacent land and delivers contaminants to surface water bodies such as rivers, lakes, wetlands and artificial watercourses (excluding subsurface drains, and artificial watercourses (e.g. ponds) that do not connect to natural water bodies).

Replanting as soon as practicable means at a time when weather and soil conditions allows replanting without risk for further soil damage and/or compaction occurring, and ensuring successful plant establishment

² Adapted from mediated condition and definition of CSAs in Otago PC8.

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