

NZ Insight: Freshwater regulatory change

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Contact

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Clear vision but details murky

Key takeouts

- A new National Policy Statement for Freshwater Management and a raft of supporting legislation was recently released with the first rules becoming effective on 3rd September.
- All regional councils will be required to have rules in place that meet or exceed national standards. Interim rules have been put in place to manage risky activities in the meantime.
- Strict guidelines are now in place for wintering stock on forage crops which apply next winter. A large number of farms are expected to fall outside the guidelines and therefore will require a consent.
- Rules will continue to evolve at both the national and regional level and the government is already tweaking rules which are unclear or impractical to implement.
- Farm plans which include a plan to manage risks to freshwater are expected to become mandatory - which the government now has the power to enforce - but at present the government is consulting with interested parties on how these plans will be developed.
- The area which is considered 'low-slope' land includes more land than initially expected and incorporates all paddocks within land parcels categorised as 'low-slope' regardless of the actual paddock slope. This means cattle and deer will have to be excluded from more waterways than initially expected.

In summary

New regulations to protect water quality have recently been released. This includes a National Policy Statement - which determines requirements for regional councils - national standards, and various amendments to Resource Management Act rules.

The new National Policy Statement for Freshwater Management (NPS-FM) requires councils to plan long-term objectives for freshwater. By the end of 2024 regional councils must have notified their plans and at that time these plans become enforceable. Once notified a hearing process then takes place, which will be open to appeal on limited grounds. This entire process must be completed before the end of 2026 at which time the plans must be fully operational¹.

New National Environmental Standards for Freshwater (NES) were released in June and take effect on 3 September 2020. However the timing of how quickly changes apply differs, with some rules coming into play immediately whilst others won't apply for some years.

¹ In some circumstance's an extension of up to 12 months may be granted to regional taking the process out to a final deadline of 31 Dec 2027.

The standards aim to limit activities that pose a threat to freshwater. Some of the standards are output-based ie relate to measurable attributes in the freshwater environment, whilst other standards limit activities that have the potential to detrimentally impact water quality, such as winter grazing practices.

When the regional plans come into play these may be more restrictive than the national standards, so at this point there is still some degree of ambiguity on the actual rules that will apply to any particular parcel of land. However as the regional rules generally have to be at least as strict as the national rules, there is a little more certainty than previously. Exactly how some rules will be applied at the regional level is open to interpretation, meaning some regulations remain opaque for the time being.

Several amendments under the Resource Management Act regulatory suite have also been made. Regulations have been passed which give Ministers the ability to make Farm Plans mandatory. At this stage no rules have been set relating to farm plans and consultation with industry is happening. However it is highly likely that farm plans which include a freshwater management plan will become mandatory and are already a requirement for various consents. These will firstly be rolled out in the 'at-risk' areas. These 'at-risk' areas have not yet been defined but are expected to include the areas surrounding the rivers recently identified as having high nitrate levels.

Other regulatory changes include the stock exclusion rules and water-take reporting rules. More details on these please see the [Regulatory Changes by Activity](#) section.

How will the regulations impact my farming operation?

New regulations will impact farming businesses in different ways. In general more intensive operations, 'low-slope' farms, and those located in 'at-risk' catchments will face more restrictions than other operations. Some of the regulations, particularly the interim rules, are more stringent for dairy operations than for other land uses.

Farm Plans (FP's)² for individual farming operations are very likely to become compulsory. Initially these plans are expected to be focused on identify potential risks to freshwater, and detailing how the farm will be managed to mitigate these risks. Eventually these plans are likely to become much more wide-reaching covering all consented and regulated activities. At present some farms have a different plan for each consented activity but the aim is for each farm to have a single plan covering all activities which, in theory, should streamline planning and auditing processes. Regulations relating to farm plans are still being consulted on and developed.

The regulations will eventually result in all regional councils having enforceable freshwater management plans and will require all land users to be able to prove that they are compliant with these rules. At present there are massive differences in regulations between regions with some councils having already implemented plans whilst other regions have very few rules in place. Councils will need to have plans written, and notified by the end of 2024 (a year later than originally proposed).

When do the rules come into effect?

What is happening now?

To make sure that improvements in environmental performance are not further delayed, some new rules will apply immediately, some will come into force next year, whilst others won't apply until regional councils submit their region-specific plans.

² Farm plans are also referred to as Farm Environmental Plans (FEP's)

Rules that apply immediately relate to protection of wetlands, further intensification of land and controlling some existing intensive land uses. The majority of these regulations will have the greatest impact on cattle farming – particularly dairying.

Regulations applicable from 3 September 2020 include:

- **Intensification of land use** is now controlled. This specifically applies to dairy conversions (of which very few have occurred in recent years), expanding the area under irrigation on dairy farms, and converting land from forestry to pasture. Vegetable and arable production are exempt.
- **Intensive winter grazing** must now comply with 'good management practice' guidelines and consents will be required for most operations before next winter.
- **Minimum standards for feedlots** now apply.
- **Protection of wetlands/streams** means wetlands cannot be developed or drained and stock must be excluded. This applies to all wetlands that have been identified in either regional or district council plans. Consents will be required for earthworks in streams.

Regulations applicable from July 2021 include:

- **Nutrient limits apply** with a cap of 190kg nitrogen (N) per hectare per year applying to all farms except arable and horticulture crops. But only dairy farms will be required to report their N use to councils annually (first due mid-2022 for preceding 12 months). Estimates on the number of dairy farms that currently would exceed the nitrogen cap range from approximately 20%³ to 35%⁴.
- **Stock holding pads** must comply with standards or will need to apply for resource consent. Resource consents will be required for areas used to hold stock for more than 30 days per annum or 10 days in a row. Pads must be 50m away from waterways and have a plan to manage effluent.
- **Intensive winter grazing** will become an activity requiring consent. This will apply if forage crops are grown on more than 10% of the farm or 50ha (whichever is greater), paddocks that have a slope of more than 10-degrees or cropping is within 5m of a waterway.

Regulations applicable from Sep 2022 include:

- Telemetry devices required for permit holders of water takes greater than 20 litres per second.

Regulations applicable from July 2023 include:

- All dairy cattle and pigs must be excluded from waterways as well as beef cattle and deer that are intensively grazed or are located on low-slope land.

Regulations applicable from July 2025 include:

- All dairy support cattle must be excluded from all waterways and all beef and deer farmed on low-slope land.

³ MfE "Action for healthy waterways information for dairy farmers"
<https://www.mfe.govt.nz/sites/default/files/media/Fresh%20water/action-for-healthy-waterways-information-for-dairy-farmers.pdf>

⁴Journeaux, P. "Impact of the 190kg Fertiliser N/ha Limit on Dairy Farms", AgFirst, June 2020, <http://www.fertiliser.org.nz/includes/download.ashx?ID=157498>

Table 1. Timeline of implementation of freshwater rules

Activity	2020	2021	2022	2023	2024	2025	2026	
Land use change	Land use change - need consent for intensification (interim controls)							
Wetland protection	Wetland protection (earthworks, drainage, vegetation clearance etc)							
Winter forage grazing			If standards can't be met then a consent is required					
Nitrogen fertiliser			Cap of 190kg N/ha/yr (excludes arable and horticulture)					
Stock holding/stand off pads			Stock holding pads/stand off pads to meet minimum standards					
Water use reporting				Consented takes of >20 L/second	>10 L/sec	>5L/sec		
Stock exclusion from waterways (excl's sheep)					Dairy cattle & pigs and intensive beef & deer	Stock on 'low-slope' land		
Stock exclusion from wetlands					Currently identified wetlands	All wetlands		
Regional Plan development	Developing regulations to notify new Regional Plans before end of 2024					Hearing process to finalise regional plans		

Source: MfE, DairyNZ, B+LNZ, ANZ Research

Regulatory changes by activity

Winter grazing

New rules apply to grazing stock (including sheep) on a winter forage crop.

A large number of farms are expected to require a consent for wintering stock next year (grazing anytime from beginning of May to the end of September).

Winter grazing will be permitted if the following standards are met:

- Land area in winter crop is less than 10% of the farm or less than 50ha ie if your farm is over 500ha then the 10% rule applies, whereas the 50ha threshold will apply to farms smaller than 500ha.
- Paddock slope can't be greater than 10 degrees⁵.
- Pugging will be limited to a depth of 20cm, although regulations have recently been changed to exclude the area within 10 metres of permanent troughs and entrance gateways.
- Pugging covering less than 50% of the paddock regardless of depth (ie can't turn the whole paddock to mud). Pugging refers to areas where the hooves of livestock have penetrated the soil by 5cm or more.
- A farm plan exists containing a certified freshwater management section.

If the above conditions can't be met then a permit will be required. A permit will only be granted if the area in winter forage crop isn't more than has been previously cropped (from 2014 to 2019). This will effectively limit the ability of new land being used for large scale wintering of cattle.

Water takes

The regulation relating to the measurement and reporting of water takes has been amended with additional requirements for water users coming into force from 2022. Water meters with the ability to store data and electronically transfer data to councils will be required for water takes used for irrigation purposes. Known as telemetry devices, these must be able to monitor water usage at 15 minute intervals and transfer this data to the relevant council on a

⁵ The definition of 10 degrees is open to interpretation by Regional Councils but it is to apply at the paddock level and isn't defined by the map used to define 'low-slope' land for the stock exclusion regulations.

daily basis. The timing of the requirement for water permit holders to have these devices in place depends on the rate of water usage permitted. The regulations relating to water takes apply to water permit holders.

Table 2: Water take reporting requirements

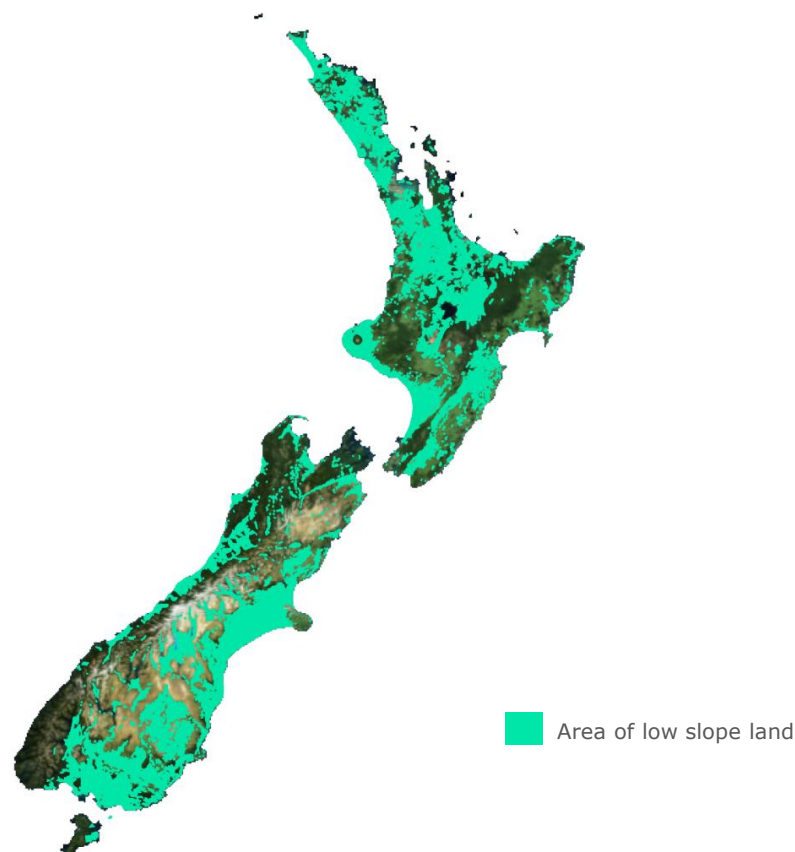
Consented rate of water take (litres per second)	When the regulation applies
20+	Sep 2022
10 – 20	Sep 2024
5 – 10	Sep 2026

Source: MfE⁶

Stock exclusion

Cattle, deer and pigs will need to be excluded from waterways where the farm is considered to be low slope⁷ or is intensively grazed. Low slope land is defined as the land areas highlighted green in the [Low Slope Land viewer – RM \(Stock Exclusion\) Regulations 2020](#) map. Please note that this applies to the entire land parcel identified regardless of the actual slope of a particular paddock which in some cases will be very considerably steeper than the 10 degrees. Intensively grazed refers to land where stock are break fed, fed annual forage crops, or pasture that has been irrigated in the previous 12 months.

Land classified as 'low-slope' within the Resource Management (Stock Exclusion) Regulations 2020



Source: LINZ

⁶ NZ Government "Resource Management (Measuring and Reporting of Water Takes) Amendment Regulations 2020" 3 August 2020

⁷ A map detailing Low Slope Land can be viewed here: <https://mfe.maps.arcgis.com/apps/View/index.html?appid=4431febca3854ee19bb4c67bc94029bb> (land highlighted green is considered to be 'low slope').

Fences need to be 3 metres from the edge of the river bed but if a permanent fence (of at least 2 wires) is already in place (as at 3 September 2020) then this doesn't need to be moved. A river includes any stream beds that are 1 metre or wider (bank to bank) at any point within the land parcel, irrespective of whether they run permanently or not.

Several regional councils already have regulations in place relating to stock exclusion. Councils may elect to put in place stricter regulations than the national guidelines which may mean fences need to be further away from rivers in sensitive catchments.

The Ministry for the Environment (MfE) estimate 81,000 km of rivers (wider than 1 metre) flow through farm land considered to be low slope. Fences are already in place on 60% of this land leaving a further 32,000 km of streams to be fenced before 1 July 2025.

Canterbury and Otago have by far the largest expanse of rivers that require stock exclusion. The table below estimates the length of river in each region that needs to be fenced. The majority of the fencing required is on sheep and beef farms. Much of the required fencing is already in place on dairy farms but this is not necessarily the case on dairy runoff blocks. Additional fencing will also be required on some deer farms.

Table 3. River length requiring exclusion per region and setback area

Region	River length requiring exclusion (km)	Setback area (ha) for 3 metre setback
Auckland	618	371
Bay of Plenty	397	238
Canterbury	7,399	4,439
Gisborne	490	294
Hawke's Bay	1,551	931
Manawatu-Wanganui	2,378	1,427
Marlborough	619	371
Nelson	37	22
Northland	1,284	771
Otago	5,122	3,073
Southland	2,542	1,525
Taranaki	893	536
Tasman	499	299
Waikato	2,198	1,319
Wellington	1,023	614
West Coast	974	584
Total	31,721	19,033

Source: MfE⁸

In addition dairy cattle, dairy support cattle and pigs need to be excluded from waterways no matter what the terrain is. This may make it less viable for sheep and beef farms to graze dairy stock, including young stock, carry over cows, and winter dairy cows.

Any intensively farmed hill country will also be subjected to stock exclusion requirements. Cattle, pigs and deer will need to be kept out of waterways on farms that have a carrying capacity of greater than 14 SU/ha or for individual paddocks if they carry more than 18 SU/ha, are irrigated (or have previously been irrigated), or where crops are break-fed.

⁸ MfE "Regulatory Impact Analysis Action for healthy waterways Part II: Detailed Analysis, 6 May 2020.

The stock exclusion regulations apply on 1 July 2023 for all dairy cattle and pigs, and for beef cattle and deer that are intensively grazed. From 1 July 2025 the rules apply to all dairy support cattle (regardless of slope of land) and all beef and deer on low-slope land. The rules apply from 3 Sep 2020 for any new pastoral farms (ie conversions from forestry).

By July 2023 all stock need to be excluded from natural wetlands that are identified in regional or district plans, and from July 2025 all stock must be excluded from all wetlands on low-slope land and wetlands that support threatened species.

Fences used to exclude livestock from waterways can be permanent fences, temporary fences, or virtual fences⁹ which are linked to GPS-enabled collars worn by livestock.

Anyone who owns or controls stock will be required to comply with the stock exclusion regulations.

Farm plans

Farm plans that include a freshwater module will most likely be required by all farms greater than 20ha but they are not required immediately. Over the next year or so the Government will liaise with various groups to develop the regulations. The MfE has indicated that it is likely that farm plans for freshwater will need to include:

- Farm map identifying waterways, discharge area, erosion prone land, etc
- Risk assessment for specific activities such as effluent and nutrient applications, irrigation, winter grazing, stock exclusion, offal and rubbish pits.
- A plan as to how risks and features will be managed.

It is expected¹⁰ that these plans will need to be approved by a qualified person, audited by independent auditors, and enforced by regional councils.

Farm plans are expected to be phased in over time with priority placed on less healthy water ways such as those with high nitrogen levels.

Other points of interest

- In addition to farmers reporting on fertiliser use, fertiliser companies will also need to report on their sales of all nitrogen fertilisers.
- Councils currently spend \$310 million¹¹ per annum on freshwater management. The total per annum cost of implementing all new freshwater requirements (both NPS-FM and the actions proposed in the Action for Healthy Waterways document) is estimated at \$135 million¹². This equates to a 43% increase in costs to councils.
- MfE has indicated that it expects costs to farmers will be highest in areas that have experienced more agricultural intensification in recent years such as Canterbury, Waikato, and Southland. Their economic modelling

⁹ MfE & MPI, "Essential Freshwater: Action for healthy waterways Information for livestock farmers", <https://www.mfe.govt.nz/sites/default/files/media/Fresh%20water/farmers-info-sheet.pdf>

¹⁰ MfE "Essential Freshwater: Action for healthy waterways Information for livestock farmers" <https://www.mfe.govt.nz/sites/default/files/media/Fresh%20water/farmers-info-sheet.pdf>

¹¹ Ministry for Environment "Regulatory Impact Analysis: Action for healthy waterways Part 1: Summary and Overall impacts" 6 May 2020 (page 24)

<https://www.mfe.govt.nz/sites/default/files/media/Legislation/RIS/essential-freshwater-ria-part-I-summary.docx>

¹² Ministry for Environment "Regulatory Impact Analysis: Action for healthy waterways Part 1: Summary and Overall impacts" 6 May 2020 (page 24)

<https://www.mfe.govt.nz/sites/default/files/media/Legislation/RIS/essential-freshwater-ria-part-I-summary.docx>

suggests that the primary costs to resource users are the stock exclusion proposals, the strengthened nitrogen toxicity attributes, and delivery of auditable FWFPs.

- A bottom line for dissolved inorganic nitrogen (DIN) is still being considered and could potentially be included in the NPS-FM.
- The cap on the use of synthetic nitrogen fertiliser will be reviewed by 2023. It has been made clear that if there is not rapid progress in reducing nutrient losses then the 190kg N/ha limit could be revised down and/or restrictions on input measures such as stocking rates and limits on supplementary feed.
- The use of tools such as taxes on farm inputs have been ruled out by the Government in the current term (election due to be held in 17 October 2020) but could be brought back to the table at a subsequent date. Fertiliser and supplementary feed are potential targets.

Schedule of regulations

Copies of the regulations can be found here:

[National Policy Statement Freshwater Management \(NPS-FM\)](#)

[National Environmental Standards \(NES\) for Freshwater](#)

[National Environmental Standards \(NES\) for Freshwater – Amendments 24 Aug 2020](#)

[Stock exclusion regulations](#)

[Farm Plan regulations](#)

[Irrigation monitoring regulations](#)

Ministry of Environment

[Information for sheep, beef and deer farmers](#)

[Information for dairy farmers](#)

[Information for horticultural growers](#)

Industry guidance

B+LNZ <https://beeflambnz.com/freshwaterconsultation>

Dairy NZ <https://www.dairynz.co.nz/environment/environment-policy-and-leadership/national-freshwater-regulations/>

Foundation for Arable Research

<https://www.far.org.nz/assets/files/blog/files//d39d9f71-6dfe-513a-90e7-f1ba7818d042.pdf>

B+LNZ & Federated Farmers Essential Freshwater Factsheet – Aug 2020
<https://beeflambnz.com/sites/default/files/consultations/Essential-Freshwater-Aug-2020.pdf>

Glossary

DIN	Dissolved inorganic nitrogen comprises of nitrate plus nitrite and ammonium. These forms of nitrogen are readily available to phytoplankton and often control the formation of blooms.
DRP	Dissolved reactive phosphorus is a measure of the soluble phosphorus that are readily available for use by plants and algae. Excessive concentrations of DRP can cause rapid weed growth or algal blooms.
FP	Farm Plan (also known as Farm Environmental Plan (FEP))
FW-FPs	Freshwater module of farm plan is a plan for an individual farm which identifies risks to freshwater and plans to manage risks.
Ha	Hectare
N	Nitrogen
NES	National Environmental Standards for Freshwater establishes national rules including minimum standards and will help address short-term objectives
NPS-FM	National Policy Statement for Freshwater Management policy sets the framework for the regional plans that regulate water use, including setting long term objectives for water quality and flows.



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