### Feedback: Book 1 (PART B)



From:	Ursula Buckingham
To:	<u>Freshwater</u>
Subject:	NWC Feedback
Date:	Thursday, 28 March 2024 11:50:14 am
Attachments:	NRC Draft Freshwater Plan Change NWC feedback March 2024.pdf
	1. Forestry in Northland.pdf
	2. Benefits of Forestry.pdf
	3. NRC Freshwater Plan Challenges.pdf
	4. Case Study.pdf
	5. Mapping tools and Mgmt plans.pdf
	6. Summary.pdf

Please find attached feedback on the NRC Draft Freshwater Plan Change from the Northland Wood Council.

Attachments include:

- 1. Submission
- 2. Six presentations:
  - a. Forestry in Northland
  - b. Benefits of Forestry
  - c. NRC Freshwater Plan Challenges
  - d. Case Study
  - e. Mapping tools and Mgmt Plans
  - f. Summary

Regards,

**Ursula Buckingham** Executive Officer Northland Wood Council



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#### Northland Regional Council Draft Freshwater Plan Change

TO:	Northland Regional Council Private Bag 9021 WHANGAREI 0148 freshwater@nrc.govt.nz
SUBMISSION ON:	Draft Freshwater Plan Change
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#### Introductory Comments

Thank you for the opportunity to submit on the draft Freshwater Plan for Northland. We acknowledge the consultation NRC has afforded the Forest Industry to date and look forward to ongoing consultation. We would welcome any opportunity to discuss any of the points we raise in our submissions below further.

About the submitter

- 1 The Northland Wood Council (NWC) is a regional association that works to represent or lobby for and on behalf of its members in a range of areas where common objectives can be better achieved when working as a cohesive group. The NWC mission statement is to lead, promote, enhance and coordinate areas of strategic common interest for plantation Forest Owners in the Northland region.
- 2 NWC represent 85% of Northlands forests. Northland is the third largest forest region in New Zealand accounting for 161,672 hectares of total planted forest estate of 1,807,672 hectares. Approximately 11.5% of Northland land cover is in plantation forestry.
- 3 The below list shows the entities that comprise NWC membership:
  - Manulife Forest Management NZ Ltd
  - Rayonier Matariki Forests
  - PF Olsen Ltd



- Northland Forest Managers (1995) Ltd
- Summit Forests New Zealand Ltd
- New Zealand Farm Forestry Association
- Taitokerau Māori Collective Forests Inc
- China Forestry Group New Zealand Company Ltd
- Crown Forestry (MPI Te Uru Rakau/New Zealand Forest Service)
- Forest Industry Contractors Association
- 4 Forestry in Northland employs 807 people with wood products and manufacturing employing another 1483 people (source ecoprofile.infometrics.co.nz). This is a total of 2290 people, 2.8% of Northlands workforce. Overall forestry in the Northland Regional contributes a total of \$317.7M into Northland GPD (3.4%).
- 5 The attached presentation slides titled Forestry in Northland provides an overview of the Forest Industry in Northland.

#### Response to the draft Freshwater Plan Change for Northland

Northland Wood Council submission in brief:

- The Northland Wood Council (NWC) and its members recognise and support the need to sustainably manage our natural and physical resources. As a land use, commercial forestry provides wide ranging environmental benefits including land stabilisation, soil and water improvement, hydrological benefits (storm mitigation and yield), indigenous biodiversity, and economic and social wellbeing. The attached presentation slides titled Benefits of Forestry addresses these benefits in more detail.
- 2. While the NWC and its members have a number of concerns over the draft rule changes, we are specifically concerned over the changes to C.8 Land Use / Disturbance and, in particular, C.8.3 Earthworks and C.8.4 Vegetation Clearance. The attached presentation slides titled NRC Freshwater Plan Challenges and Case Study addresses these concerns in more detail.
- 3. All activities associated with commercial forestry are regulated under the National Environmental Standard for Commercial Forestry (NES-CF) – from afforestation, through pruning and thinning, earthworks, river crossings, to harvesting and replanting. This regime not only establishes a nationally consistent framework with effective performance standards that are well understood but it is also a framework by which NRC is notified of forestry activities before they occur. Detailed management plans for the activities are provided, and NRC are able to recover the costs for any compliance monitoring they do – permitted or consented. While the NES-CF does allow NRC to have rules that are more stringent, this would need to be justified based on the evidence of significant adverse effects. This evidence is neither provided or referred to in the consultation documentation. The NWC questions the need for the use of strict rules when the NRC already has an effective risk management regime already in place



under the NES-CF. The attached presentation slides titled Mapping tools and Mgmt Plans addresses the NES-CF in more detail.

- 4. One of the concerns NWC has about the draft rules is the use of slope as the trigger for the rules. This is simplistic and likely to unnecessarily capture activities in the uncertainty of a consent process with no environmental benefit. The presentation titled Mapping tools and Mgmt Plans also includes information on erosion and tools that are being developed that would help NRC better identify Highly Erodible Land. Landcare and others are continuing to develop these tools.
- 5. The draft rules set out in C.8 would have a significant detrimental effect on the viability of forestry in parts of Northland without any evidence of any environmental benefit. This is likely to render an interest in land incapable of reasonable use, making these draft rules challengeable under section 85 of the RMA. The attached presentation slides titled Case Study provides evidence of the impact the draft rules would have on forestry operations in the Region. The arbitrary imposition of a 40ha maximum harvest constraint on slopes greater than 25 degrees would see the age and size of the trees increase unfavourably creating a \$13.4 million loss as well as a 600ha loss of productive land.
- 6. In summary, the NCW believes the draft Freshwater Plan Change rules:
  - Will have significant economic impacts on the Forest Industry, its downstream supply chain, and the wider community;
  - Are not evidence based;
  - Are not fair, reasonable, or practical;
  - Are likely to render interests in land incapable of reasonable use; and
  - Will result in unintended consequences.

The NCW also believes that the NES-CF provides a comprehensive and nationally consistent framework for managing the environmental risks associated with commercial forestry and we would welcome the opportunity to work with Council to build a better understanding of how the NES-CF works in practice.

Ursula Buckingham Executive Officer Northland Wood Council

Dated this 28<sup>th</sup> day of March 2024

**Manulife** Investment Management

Manulife Investment Management Forest Management (NZ) Limited [MFM (NZ)]

Draft Freshwater Plan NRC Presentation

Ursula Buckingham

### Agenda

- Introduction to Forestry in Northland
- Benefits of Forestry
- Draft NRC Freshwater challenges
- Case Study Pipiwai Forest
- Further research and mapping tools available
- The solution Management Plans
- Conclusion

### Forestry in Northland

Northland is the 3rd largest forest region in NZ (approx. 11% of NZ forestry) Area Distribution by wood supply region



Source National Exotic Forest Description 2022

### Ownership by forest size

#### Table 7: Number of forest owners by national size class, as at 1 April 2022

	National size class				
Wood Supply Region	40-99 ha	100-499 ha	500-999 ha	1,000-9,999 ha	10,000+ ha
Northland	118	85	14	11	6
Central North Island	112	103	21	19	14
East Coast	43	40	7	15	9
Haw kes Bay	53	42	2	10	11
Southern North Island	198	162	15	14	9
Nelson and Marlborough	166	100	7	14	4
West Coast	5	4	1	1	2
Canterbury	70	77	4	6	4
Otago and Southland	135	78	14	14	9
New Zealand total	893	668	76	68	27

#### Notes

1. This table shows the size class of the forest owner at a national level and the regions where the owner has forests located. This does not show the size of the forest at regional level.

2. The New Zealand totals do not equal the sum of the wood supply regions because some owners have forests in more than one region. This is particularly the case for large owners in the 1000-9999 hectare and 10 000+ hectare size classes.

## Ownership by size con't

 Table 8: Forest area by forest owner national size class, as at 1 April 2022

	National size class						
Wood Supply Region	<40 ha	40-99 ha	100-499 ha	500-999 ha	1,000-9,999 ha	10,000+ ha	Total
Northland	35,497	7,600	16,115	8,744	29,540	102,534	200,030
Central North Island	57,737	6,875	21,071	13,586	51,145	414,442	564,856
East Coast	16,822	2,591	9,539	5,243	36,967	87,384	158,546
Haw kes Bay	21,963	3,221	8,228	1,358	16,609	90,065	141,444
Southern North Island	45,104	12,210	32,360	9,320	21,838	56,562	177,393
Nelson and Marlborough	24,860	10,361	17,995	4,956	21,690	88,378	168,240
West Coast	2,794	380	611	617	345	24,652	29,399
Canterbury	32,766	4,425	14,029	2,082	8,443	33,067	94,812
Otago and Southland	43,410	8,571	15,543	8,628	31,249	115,330	222,731
New Zealand total	280,953	56,233	135,491	54,534	217,826	1,012,414	1,757,451

### Forestry in Northland

Table 5: Area, standing volume, and area-weighted average age by territorial authority as at 1 April 2022

Territorial authority	Area (ha)	Standing volume (000 m <sup>3</sup> )	Area-weighted average age (years)
Northland wood supply region			
Far North District	90,748	20,063	16.7
Whangarei District	32,288	7,278	16.8
Kaipara District	38,636	7,556	14.9
Auckland Council	38,358	11,325	20.4
Region total	200,030	46,222	17.1

National Exotic Forest Description as at 1 April 2022

- 1,394,000 hectares in Northland (NRC website)
- 161,672 hectares of plantation forestry in Northland
- Approximately 11.5% of Northland land cover is in plantation forestry

## Forest ownership in Northland (approx.)



### Forestry in Northland Employment

- Wood Products and Manufacturing employs 1483 people
- Forestry and Logging employs 807 people
- A total of 2290 people, 2.8% of Northlands workforce
- Exports \$266.5M worth of logs, 12.4% of total exports
- Forestry and Logging contributes \$176.1M, Wood Products and Manufacturing \$141.6M into Northland's GDP.
- A total of \$317.7M into Northland GPD (3.4%)

\*ecoprofile.infometrics.co.nz



# NRC Draft FW Plan Change

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The benefits of Plantation Forestry

### Pinus radiata D. Don

- Native to California, Mexican Pacific / Northwest
- Naturalised to NZ in 1904 and now the predominant commercial timber species.
- Easily managed, quick growing, and tolerant of a wide range of sites.

#### Myths and misinformation

- Short lived will grow for more that 150 yrs reaching 60m and > 2m diameter
- Shallow rooted "are deeper rooted than most…" (Phillips C. et al, nd)
- Degrades the land actually improves soil quality
- Adversely effects water quality improves water quality to levels similar to indigenous forest
- Bad for biodiversity over 120 threatened species found in plantation forests

# **Erosion in the NZ Landscape**

- NZ produces ~1.7% of the world's sediment load to the oceans from 0.2% of the land area
- This is primarily a result of:
  - Geology/tectonics
  - Steep slopes
  - High rainfall

Land cover/management tends to be a secondary influence

- Erosion and sediment yield is highly variable spatially
- Work by Hicks et al (2019) shows current North Island sediment yields are around 20% more than pre-human yields



Current

Pre-human

## Forestry sediment yield

#### Pakuratahi Study

- For ~25 of the 30 yrs of a rotation, plantation forestry produces very low sediment yields
- For several years, during and postharvest, yields are elevated significantly

   dependant on storm condition over that period
- Majority of sediment generated during storm events (both catchments)
- Over a full rotation, a pasture catchment will generate 2 to 3 times the sediment of a forested catchment



## The impact of a forest

- In large storms, mature forests typically have 70-90% less land sliding than grassland
- Small forested catchments yield 50-90% less sediment than pasture catchments
- Earthflow movement rates under grassland 10x higher than forest

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• Planting of trees has been and is used widely to control landslide and gully erosion because it is effective.



# The root of the matter

- A closed tree canopy intercepts and evaporates rainfall
- Trees change the hydrology of a site
- Roots mechanically reinforce slopes
- Some trees are better than others
  - Growth rates (exotics vs indigenous)
  - Root morphology
  - Site occupancy
  - Rooting depth
  - Root strength
  - Root cross-sectional area per shear area

Deep rooted species planted at high stand densities will be more effective that shallow-rooted species planted at lower densities.

# Water yield

- Afforestation does change the hydrology of a catchment through
  - Interception and evaporation
  - Evapotranspiration
  - Increased infiltration
- Forests buffer storm events reducing the volume of surface water discharged from a catchment
- Forests buffer base flows and help maintain surface water flow during dry periods
- Forests increase rates of infiltration that increase aquifer recharge.



## The effects of harvesting

- When forests are harvested, soil disturbance increases:
  - Construction of roads and landings
  - Surface soil disturbance
- Slash produced benefits as well as risks
  - Organic matter return to soil
  - Nutrient cycling
  - Surface soil protection
  - Potential to be mobilised in large storms
- Runoff increases
  - Bank erosion can increase due to increase flows

## Landslides

- Landslides will occur
  - Within standing vegetation (exotic and indigenous)
  - Harvested areas
  - Associated with infrastructure (roads and landings)
- Generate the majority of sediment and debris
- Window of vulnerability
  - Soils and geology dependant



# Response to rainfall events

### Rainfall

- Total amount
- Intensity-duration-return period
- Area of storm
- Antecedent moisture
- NIWA has the data by region (depth, duration, frequency and effect of climate change)

#### Erodibility of the underlying rock/soil

Topography

- Slope steepness
- Aspect

#### Vegetation

- Tree density
- Species
- Time since harvested
- Landcover (pasture, forest, harvested, etc)

Rainfall intensity-duration threshold curve for Tasman



Rosser B, Mas 145 C, Lukovic B, Dellow S, Hill M 2020. Development of a rainfall-induced landslide forecast tool for New Zealand. In: Casagli N ed. Understanding and reducing landslide disaster risk.

# Summary

- Plantation Forestry
  - Numerous myths and misinformation
  - Wide ranging environmental benefits
    - Land stabilisation
    - Soil and water improvement
    - Hydrological benefits (storm mitigation and yield)
    - Indigenous biodiversity
    - Economic and social wellbeing
  - Not without risks
    - Standards establish under the NES-CF
    - NZFOA Forest Practice Guides
    - NZ Forest Road Engineering Manual
    - On going development
      - Equipment, knowledge, smart tools, etc



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## Proposed NRC Draft Freshwater Plan Challenges

Ursula Buckingham



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### C.8.4 Vegetation Clearance HEL

- Veg clearance on highly erodible land (applies to harvest of plantation forests planted after 1 Jan 2027):

- Up to 40ha permitted (12-month period) if 75% of HEL per property remains in woody vegetation; otherwise:
  - 2,500m<sup>2</sup> permitted on HEL 1
  - 1,000m<sub>2</sub> permitted on HEL 2
  - Discretionary activity if not permitted on HEL

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### Areas of concern continued

- 1. Earthworks thresholds around HEL1 and 2 along with outstanding water/lake etc. and inanga spawning sites will apply. Does this override the NES-CF.
- 2. Inanga spawning sites are not mapped but are defined. This will affect many coastal forests.
- 3. Resource consent needed for veg clearance (harvest) for trees planted after 1 Jan 2027 in riparian margins and 10m of inanga spawning sites and sites of significance to tangata whenua. Why 10m threshold?
- Afforestation and replanting have setbacks around dunes, rivers including intermittent, lakes etc. including needing a resource consent if you are in a dune lake catchment. Minimum of 10m setbacks.
- 5. What are the practical implications of "*must consider effects on tāngata whenua values and practice*"?

### **Over arching questions..**

1. Why are NRC wanting to control forestry more than they are currently regulated under the NES-CF?

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2. Where is the evidence to suggest forestry needs further regulation?



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## Ramifications of Proposed NRC Draft Freshwater Plan

Ursula Buckingham



•MFM (NZ) annually creates an optimal harvest plan (using a linear programing model called Woodstock) in perpetuity (80 years) which optimizes the harvest cut across all Northland forests to meet environmental, labour, transport and market constraints. This is known as the long term plan.

•MFM (NZ) already apply catchment harvesting constraints (explained in the next slide).

•Woodstock works to find the optimal solution given the constraints. Constraints can be forced or can be given a penalty value if they don't happen (goal constraints). The order of magnitude of the penalty value allows the modeler to priorities constraints.

•Forcing the model to restrict harvest to 40 ha maximum coop size on areas over 25 degrees slope resulted in an infeasibility. Therefore, a penalty much larger than another was applied as a goal.

•With a very large penalty, the Woodstock model still broke the 40 ha maximum coop size two times over the model period.

### **Catchment Constraints**

- MFM (NZ) has a catchment risk assessment process developed by MFM (NZ) environmental team to assess erosion, sediment and debris movement risk.
- The risk assessment takes into account a range of factors including topography, geology, catchment shape, the location of productive areas in the catchment, presence of riparian, likelihood of slash mobilization and downstream risk.
- All catchments were assessed and assigned a risk rating of low, medium or high.
- This risk assessment process was used to assess the need for catchment risk assessments as a tool to manage risk in high-risk catchments with a large area in production.
- Catchment constraints limit total harvesting area to a portion (between 30-50%) of the total catchment area over a period of time (between 3-6 years).
- Currently 28 catchments are constrained within the Northland Region.



### **Case study - Pipiwai**

- Presently, Pipiwai forest is MFM largest managed contiguous forest in the Northland region.
- Pipiwai has 3,465 ha productive, 3,395 ha of which is planted.
- 1,188 ha is over 25 degrees.
- Pipiwai is 100% freehold, on three titles.

### **Pipiwai Forest Age Class Distribution**



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### **Pipiwai Forest Categorised by Slope Class**



### **Pipiwai Forest Harvest Year Period - Optimal**



### Pipiwai Forest LTP 23 Woodflow (optimised)



### Note: Chart shows harvest of what is currently planted

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### **Pipiwai Forest Harvest Year Period – Constrained**



### **Pipiwai Forest Constrained Woodflow**



#### Note: Chart shows harvest of what is currently planted

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### **Pipiwai Forest Comparison of Harvest Areas**



### **Implications of Constraints**

- Impact on volume
  - Greater volume achieved for the forced harvest scenario, however not greater value (due to delayed cash flows and greater associated land costs)
- Impact on Harvest Age
  - Harvest age drastically increases



### **Implications of Constraints – Piece size**

- Impact on Piece size larger Piece size due to greater age.
- Flow on impact to deliveries, greater proportion of export logs due to debarker large end diameter constraints at local mills.
  - A decrease in percent of timber sold to the domestic market, compared to the export market. Forced coop scenario - 63% domestic/37% export, base case – 69% domestic/31% export.



Note: Piece size and grade mix will be underestimated in our modeling as yield tables only go up to age 40 and are then kept flat.

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### **Implications of Constraints**

- Impact on net Operating Cashflow
  - Over the model period, the net operating cashflow is down \$13.4 million compared to the base case, for all TPL forests in the Northland Region.
  - The Woodstock model does not take account the cost of crew shifts due to the coop size constraints this would mean increased shifts thereby further reducing cashflow.
  - There is likely to be a further decrease in value as a result of larger branches and LED's but we are not seeing this in our optimal modeling as our yield tables only go to age 40.
- In Pipiwai forest between 2063 and 2069, the Woodstock model shows 597.63 ha are not being replanted and are removed from the productive area, due to no longer being profitable or inability to harvest based on the time remaining on the model.



### Summary

- Proposed constraints will impact our forestry business
  - Profitability
  - Harvest age and piece size
  - Labour force/Machine requirements for harvesting
  - Supply to domestic customers
  - Increased windthrow risk

### Summary

The draft FW rules for Forestry:

- Significant economic impacts
  - Forest industry, supply chain, and wider community
- Not evidence based
- Not fair, reasonable, or practical
- Render an interest in land incapable of reasonable use
- Will result in unintended consequences

### The NES-CF

- a comprehensive and notionally consistent framework
- More stringent rules must be robustly justified

### PFOLSEN

## Highly Erodible Land Mapping & NES-CF Forest Activity Management Plans

Presentation for NRC in relation to Draft Freshwater Plan Change

## **Highly Erodible Land Mapping Layer**

- The rationale for changing the current Erosion Prone Land (EPL) is to improve the mapping layer identifying land at risk from erosion (NRC. 2023. Draft Freshwater Plan Change Background information Summary Report, p. 23).
- The proposed classification of erodible land is based solely on slope steepness:

Highly Erodible Land 1 (high risk)	HEL1	Land with a slope between 25 and 35 degrees	155,000ha (about 12% of the region)	Draft rules being considered:
			122,000ha in woody	Controls on earthworks, vegetation clearance and land preparation.
			33,500ha in pasture	We are also asking for feedback on excluding stock from these areas
Highly Erodible Land 2 (severe risk)	HELZ	Land with a slope >35 degrees	91,120 (about 7.2% of the region)	Draft rules being considered:
			81803ha in woody vegetation and 9,317ha in pasture	Tighter controls on earthworks, vegetation clearance and land preparation.
				We are also asking for feedback on excluding stock from these areas

## What is Erosion?

Erosion is a **NATURAL** geological process in which earth materials are worn away and transported by natural forces such as wind or water. A similar process, weathering, breaks down or dissolves rock, but does not involve movement.

Erosion can be accelerated by any land use. 139



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### The Science Behind the erosion processes

There is a lot of research that defines the different erosion processes in NZ. The report 'Bio-physical performance of Erosion Sediment Control techniques in New Zealand: a review' (Phillips et al. 2020) classifies the following types of erosion:

Surface Erosion - Sheet - Rill - Wind	Earthflow Erosion	Gully Erosion	"Sheet and rill" erosion is the
Mass Movement Erosion	Streambank		most common in Northland (Basher 2013)
- Shallow and deep landslides - Slumps	Erosion 140	Wind Erosion	

## Different Drivers Different Erosion and Sediment Controls

- Each one of the erosion types has different drivers, different responses to treatment and different downstream event consequences.
- To meet national freshwater objectives for catchment management (contaminant loss from land to water), regional councils and land managers need:
  - higher-resolution data on catchment erosion and sediment delivery to streams, and
  - new tools and models that provide information at the appropriate scale, but particularly at larger spatial scales.
- These are essential to implement national freshwater policy to justify investment in erosion and sediment control and to plan for the predicted increased storminess and erosion due to climate change (e.g. Crozier 2010; Basher et al. 2012; Manderson et al. 2015).
- The National Environmental Standards for Commercial Forestry provides this for forests through the Erosion Susceptibility Classification base of the regulations.



# Range of Excellent Mapping tool and Research

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 Highly erodible land mapping tool from Stats NZ <u>https://statisticsnz.shinyapps.io/highly\_erodibl</u> <u>e\_land/</u>

This mapping tool is modelled from three factors:

> Slope

- Land cover (from satellite imagery Land Cover Database (LCDB) version 4.0, nominal date 2012/13)
- Rock type.

 NZGS Slope Stability Guidance - A New Zealand Geotechnical Society sub-committee has been developing slope stability guidance for use in New Zealand. It is now ready in draft. <u>https://www.nzgs.org/nzgs-slope-stabilityguidance-draft-for-comment/</u>

The purpose is to provide technical and practical guidance to geo-professionals (engineers, engineering geologists, and other professionals involved in assessing and managing the stability of slopes) in a New Zealand context. It provides modelling as the foundation for hazard and risk assessment for different types of erosion and mitigation procedures.

 Modelling soil loss from surface erosion at high resolution to better understand sources and drivers across land users and catchments; a national-scale assessment of Aotearoa, New Zealand.

https://www.sciencedirect.com/science/article/pii/S136481522100270X

This is the first national-scale model of soil loss via surface erosion that accounts for the impacts of grazing and animal treading on ground cover and soil erodibility (Donovan and Monaghan, 2021). It uses a RUSLE modelling framework with a combination of factors:

- Rainfall erosivity.
- > Topography.
- Hydrologically connected terrain.
- Slope steepness and length.
- Soil erodibility.
- Land cover and management factor.
- Soil loss contributions across catchments and land uses.



 Smarter Targeting of Erosion Control (STEC) programme – Landcare Research

https://www.landcareresearch.co.nz/discover-our-research/land/erosionand-sediment/smarter-targeting-of-erosion-control/

This programme addresses global research questions and puts NZ at the forefront of international research by significantly improving understanding of:

- > spatial and temporal patterns of erosion
- > sediment-related water quality
- > sediment mitigation performance
- > model refinement (e.g. from average annual to storm-event scale)
- > the economic analysis of erosion and sediment mitigation.

A particular mapping layer, **Rainfall-induced shallow landslide susceptibility v1.0**, was produced for Tairāwhiti Gisborne as part of the STEC programme. The layer supported shallow landslide mapping using high-resolution satellite imagery (LIDAR) and the development of statistical models to predict susceptibility. The underpinning research has been described in several international peer-reviewed journal articles (Smith et al. 2021; 2023).

Currently, Dr Hugh Smith is working on expanding this layer and introducing waterways connectivity.



### Conclusion

There are various mapping tools accessible to the NRC.

Regulation must come from evidence-based policies.

Determining that erosion is solely a function of slope is not from an evidence base.

# NES-CF Forest Activity Management Plans

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## Forest Activity Management Plans

- Planning requirements in the NES-CF now include forest activity Management Plans for both exotic continuous-cover forests and plantation forests. Detailed information about what must be provided to councils is found in schedules 3-6 of the NES-CF.
- The NES-CF aims to improve forest planning by requiring foresters and landowners to document how they will meet the NES-CF requirements. The council may request these Management Plans. The activities requiring formal Management Plans are:
- > afforestation
- > replanting
- > earthworks
- Forest quarrying
- harvesting.
- To enable councils to integrate these Management Plans into their information management systems, councils can require that maps be submitted in a GIScompatible format. This will make it easier for councils to access and record the information.

#### Schedule 3 Afforestation and replanting plan specifications Administ 5 indianality on 5 Neurosciev 2011 by reprinting \$1 of the Remove bits 1 Person and property details The person and prodenote service (a) the rise and period date. (b) the name of and contact density for the land owner or their agent (c) the same of and commendancels for the forces occur (if deflarant) (d) the targe of and contact details for the linear manager or other manager relevant to the commencial lineary activity ( F different) (4) the contain details (for very top-postal address, error) address, phone reember(v) 10 the monot and distruct in which the itrate is incased. 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### Management Plan Information

The Management Plans require the methods and controls to be used around in many features:

#### Significant Natural Areas (SNAs)

- The plan must outline how SNAs are to be avoid during commercial forestry activities.
- Clearly specify any operational constraints, especially in afforestation, replanting, earthworks, or harvesting, ensuring no forestry activities occur within SNAs.

#### Water Quality and sediment

*Risk Identification and Contingency Measures:* 

- Identify the risk of downstream slash, wood debris, or sediment mobilisation, considering public roads, properties, rivers, lakes, and water supplies.
- Provide a proposed heavy rainfall contingency plan with triggers, thresholds, post-event monitoring, and remedial measures.

## Management Plan

### Erosion and Sedimentation

### Afforestation and Replanting:

- Describe erosion and sedimentation effects during activities and over the forest life cycle.
- Outline monitoring measures and maintain records for erosion and sedimentation.

### Earthworks Activities:

- Detail management practices to avoid, remedy, or mitigate risks from forestry earthworks.
- Specify erosion and sediment control measures, including water runoff and sediment control during construction and harvest.

### Forestry Quarry Activities:

Include erosion and sediment control measures? stability of cut faces, overburden management, sediment and stormwater control, and restoration measures.

## **Management Plan**

### **Erosion and Sedimentation**

Commercial Forest Harvesting

- Describe management practices to mitigate erosion and sedimentation risks, considering features like SNAs.
- Include detailed erosion and sediment control measures and their situational application.



## Management Plan

# Wilding trees (Afforestation and Replanting only)

- Include the wilding tree risk calculator score, calculation sheet, and required assessments.
- Describe adjacent properties, the wilding conifer inspection schedule, and the approach to wilding conifer removals.



## Earthworks and Harvest Management Plan (only)

### **Indigenous Birds**

• Describe procedures as required by regulation 102(2), if applicable.

### **Fish Species**

- Include descriptions and locations of relevant fish species identified using electronic tools or freshwater fish surveys.
- Confirm no-disturbance periods and procedures to avoid disturbance of wetlands or perennial river/lake beds.

### Other Indigenous Species of Fauna

• Outline procedures to identify and mitigate adverse effects on threatened or at-risk indigenous fauna.

### Slash Management Plan (Harvesting Activity only)

- Describe practices to avoid, remedy, or mitigate risks related to slash.
- Include procedures for avoiding instability, keeping slash away from high-risk areas, managing slash near waterways, and preventing mobilisation during heavy rain events.



# Further Ministerial Guidance

- A MPI Technical Advisory Group (TAG) is involved in developing National Guidance on Forestry Slash which will inform regulation 69.
- ➢ MfE is currently developing guidance for the NES-CF.



### **Guidance resources**

MPI has a wide range of guidance documents to help you with subjects from food safety in the home to complying with import requirements. Search for a document by subject or title.

# **Stringency Rules Limitation**

#### 6 Relationship between rules and these regulations

#### National instruments

- (1) A rule in a plan may be more stringent than these regulations if the rule gives effect to-
  - (a) an objective developed to give effect to the National Policy Statement for Freshwater Management:
  - (b) any of policies 11, 13, 15, and 22 of the New Zealand Coastal Policy Statement 2010.

Matters of national importance

- (2) A rule in a plan may be more stringent than these regulations if the rule recognises and provides for the protection of-
  - (a) outstanding natural features and landscapes from inappropriate use and development; or
  - (b) significant natural areas.

Unique and sensitive environments

- (3) A rule in a plan may be more stringent than these regulations if the rule manages any-
  - activities in any green, yellow, or orange zone containing separation point granite soils areas that are identified in a regional policy statement, regional plan, or district plan:
  - (b) activities in any geothermal area or any karst geology that are identified in a regional policy statement, regional plan, or district plan:
  - (c) activities conducted within 1 km upstream of the abstraction point of a drinking water supply for more than 25 people where the water take is from a water body:
  - d) forestry quarrying activities conducted over a shallow water table (less than 30 m below ground level) that is above an aquifer used for a human drinking water supply.
- (4) The areas and geology referred to in subclause (3)(b)-
  - (a) may be identified in a policy statement or plan by any form of description; and
  - (b) include only areas and geology where the location is identified in the policy statement or plan by a map, a schedule, or a description of the area or geology.

#### Afforestation

(4A) A rule in a plan may be more stringent or lenient than subpart 1 of Part 2 of these regulations.

- Even though the NES-CF provides some specific situations where a rule in a plan can be more stringent, the framework should be read in conjunction with the RMA framework.
- When local or Regional councils suggest a new regulation that is stricter than the NES or decide to continue enforcing an existing stricter rule, they must show that the stricter rule is justified based on the characteristics of the specific region or district. This requirement is outlined in section 32(4) of the Resource Management Act (RMA).
- (4) If the proposal will impose a greater or lesser prohibition or restriction on an activity to which a national environmental standard applies than the existing prohibitions or restrictions in that standard, the evaluation report must examine whether the prohibition or restriction is justified in the circumstances of each region or district in which the prohibition or restriction would have effect.

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### Conclusion

- The NES-CF provides consistent national regulation for commercial forests and exotic continuous-cover forests.
- It is crucial for the NRC to carefully consider the impact of the NES-CF regulations, particularly the management plans, where the rationale was to encourage the applicant holder to assess the methods and controls of sediment and erosion and other essential features that might be present in the forest area.

# Thank you.

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