



Forestry in the Motueka Catchment

History & Environmental Management

the creative fibre group



“OneFortyOne's story began over 90 years ago with the first area of Golden Downs Forest in 1927.”



OneFortyOne Forest Overview

Land & Forest Area Description	
Planted Area	Current ha
1. Pinus radiata	55,072
2. Douglas fir	4,059
3. Minor species	987
Total Planted Area	60,118
Available for Planting	2,916
Potentially plantable (unstocked gaps/windthrow)	3,974
Total Productive Land	67,008
Non-Productive Land	Current ha
Covenants / Significant Natural Areas	2,604
Bush / indigenous forests / wetlands	5,928
Unplanted riparians / transmission lines / fire breaks	962
Retired from production	1,525
Roads / landings	1,440
Unplanted other	460
Total Non-Productive Land	12,919
Total Land	79,927



Table 1: Land and Forest area description as at 1 February 2020



A sustainable harvest of 1.1 million m3

Contractors

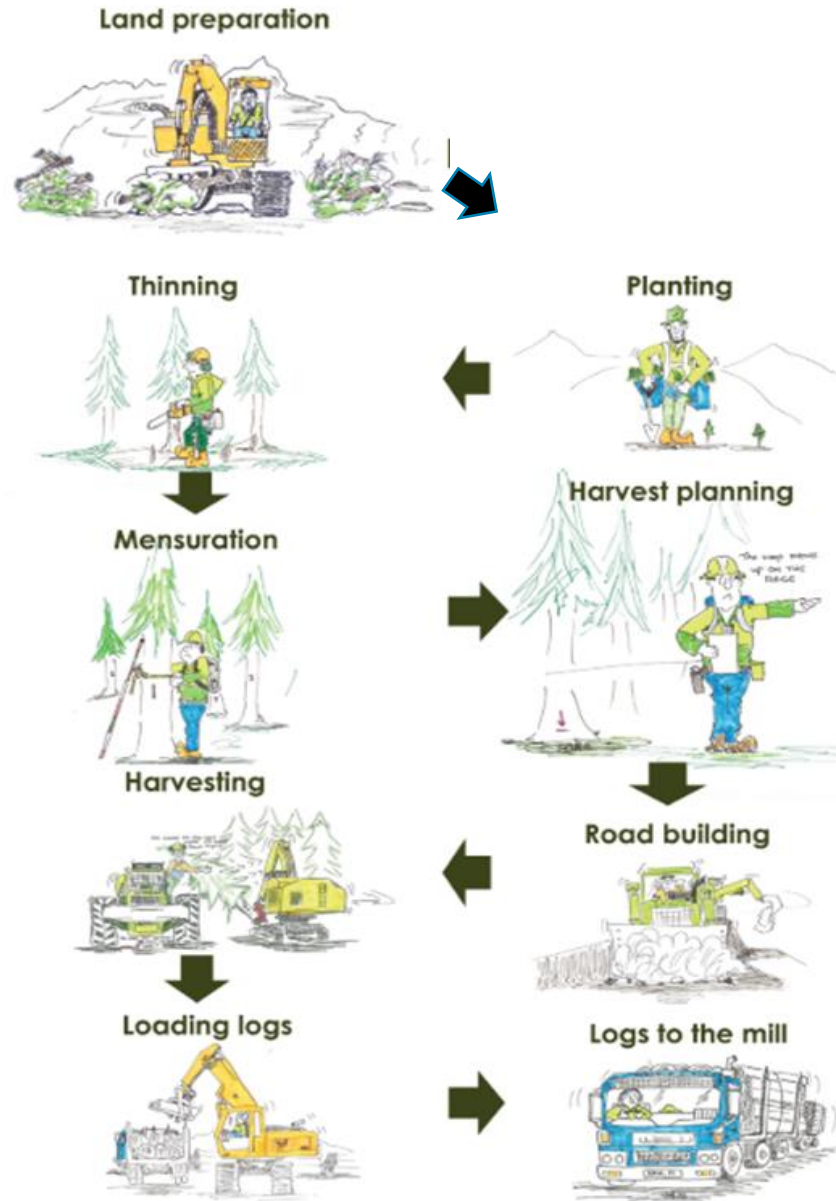
8 Harvesting (14 crews)

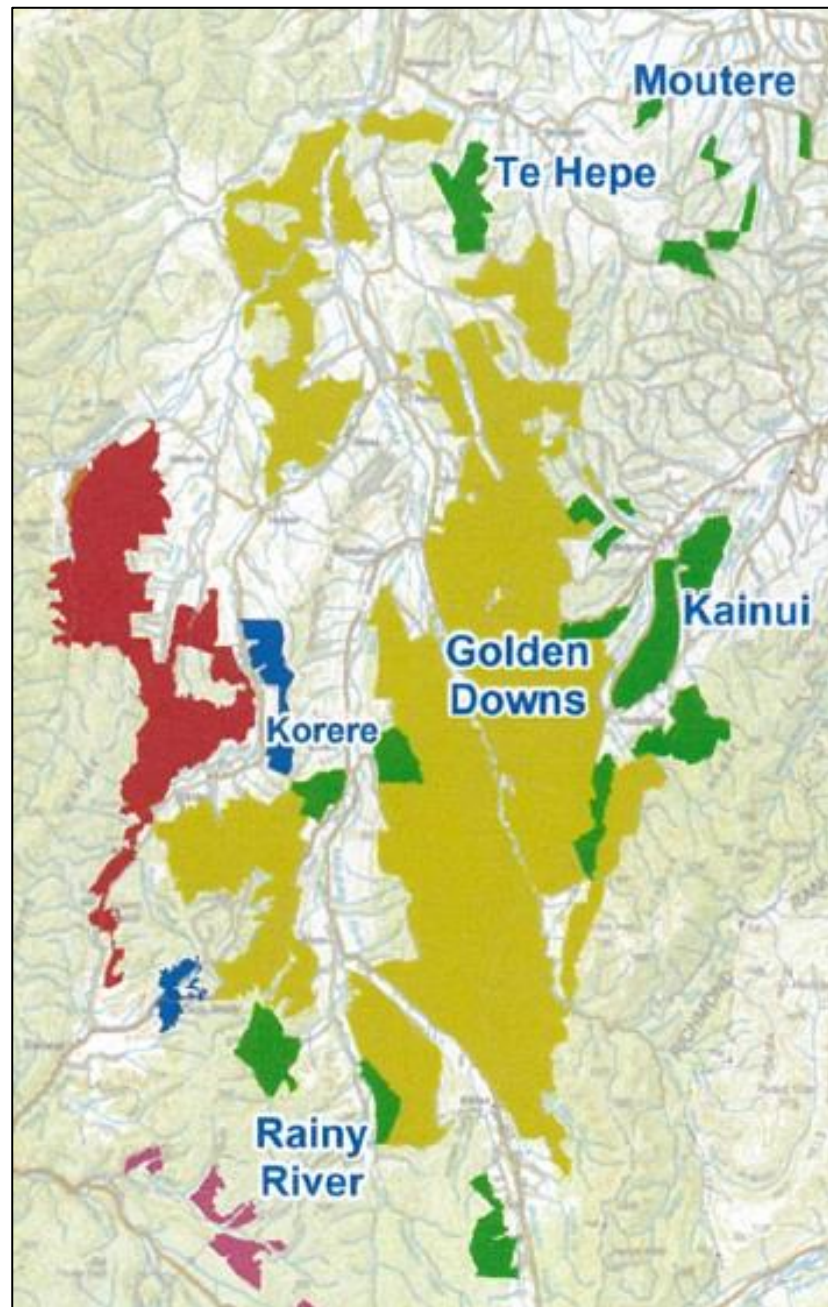
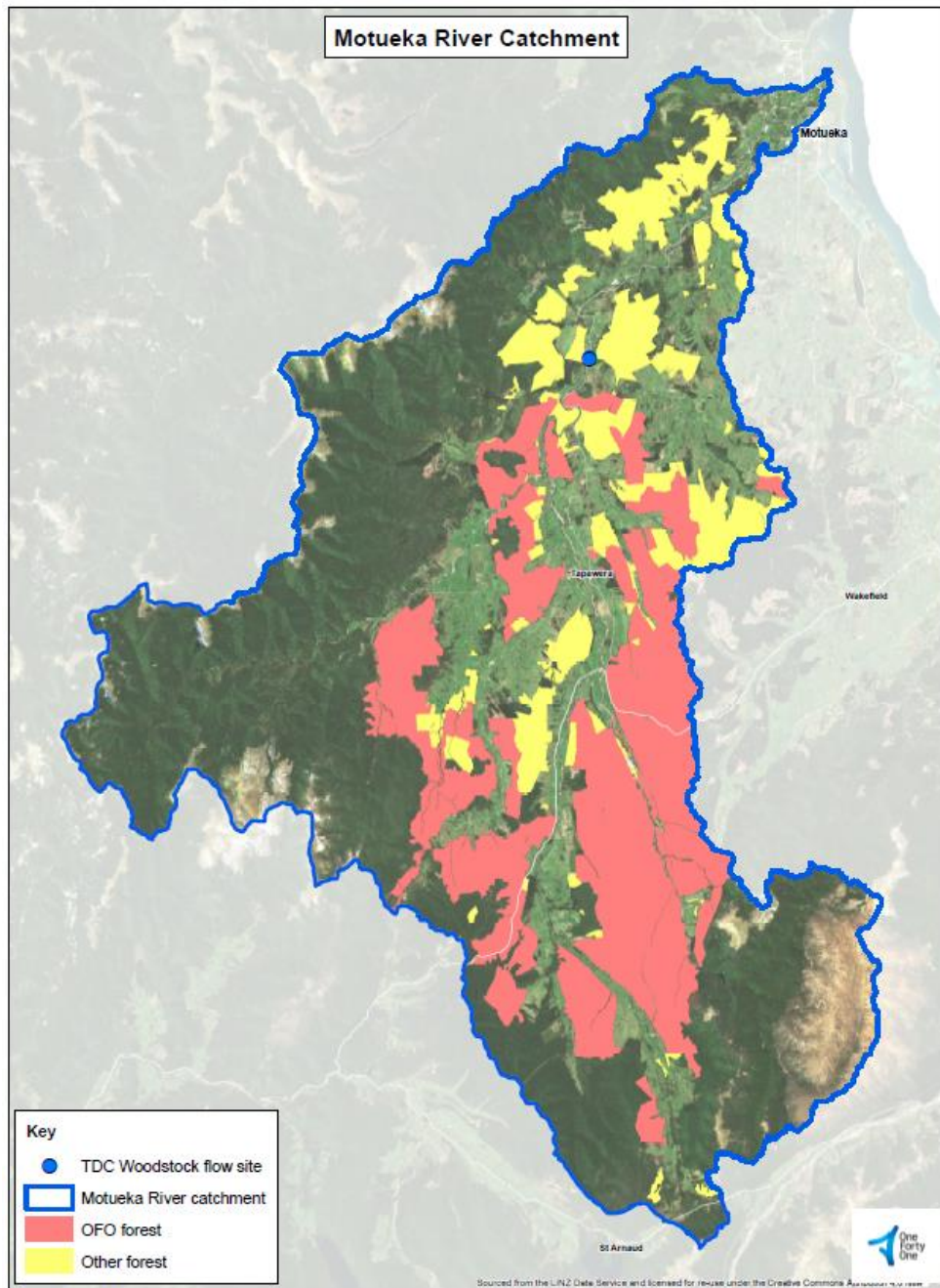
6 Silviculture

2 Roding Engineering

4 Transport

1 Sawmill - Kaituna

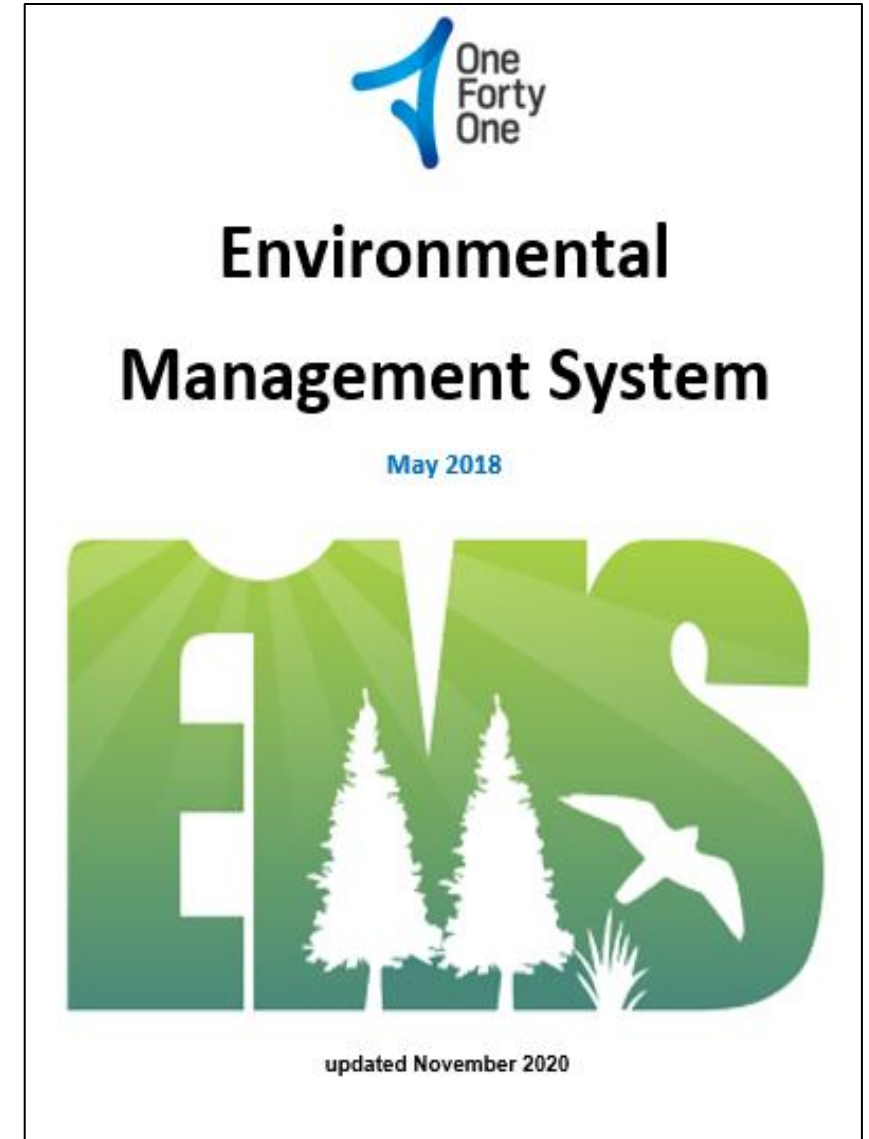
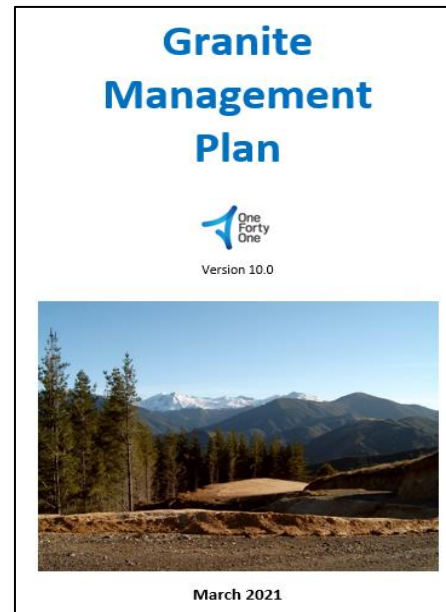




Behind the scenes

- Forest Stewardship Council
- Motueka River Water Conservation Order
- Resource Management Act
- National Environmental Standards for Plantation Forestry
- NZ Environmental Code of Practice for Plantation Forestry
- NZ Climate Change Accord
- NZ Forest Accord
- NZ Wilding Conifer Management Strategy
- Principles for Commercial Plantation Forestry Management in New Zealand

Environmental Management System Granite Management Plan



Environmental Impacts

- Community and neighbours
- Compaction
- Concentrating run-off
- Threatened species
- Community infrastructure
- Riparian vegetation
- Debris flows
- Dust
- Erosion & sedimentation
- Fences
- Fish passage
- Flood mitigation
- Landscape changes
- Loss of productive land
- Nutrient losses
- Noise
- Plant and animal pests
- Pollution from fuel and chemicals
- Processing slash stability
- Protected sites (historic, trig)
- Skid fires
- Slash in streams
- Spray drift
- Water yield
- Wilding conifers
- windthrow



Environmental Management System



All plantation forest activities

Community Charter

Streams

Reserves

Historic Sites

Fish passage

Carbon Footprint

Stream health monitoring

Threatened species

Pest plants

Pest animals



Environmental Management System

Environmental performance standards and guidelines for all forestry activities



Stream class / Activity	Class 1 setback	Class 2 setback	Class 3 setback
Planting (replanting and afforestation)	20 m	5 m < 3 m wide 10 m > 3 m wide	5 m or existing stump line
Earthworks	20 m*	20 m*	10 m*
Harvesting	20 m*	5 m* < 3 m wide 10 m* > 3 m wide 20 m***	5 m*
Spraying & fertiliser	20 m**	10 m**	5 m**

* Closer for stream crossings, to remove existing plantation crop and in exceptional circumstances with separate approval

** Closer to remove pest plants and wildings

*** Slash storage, harvesting earthworks (new tracks or use of existing tracks)

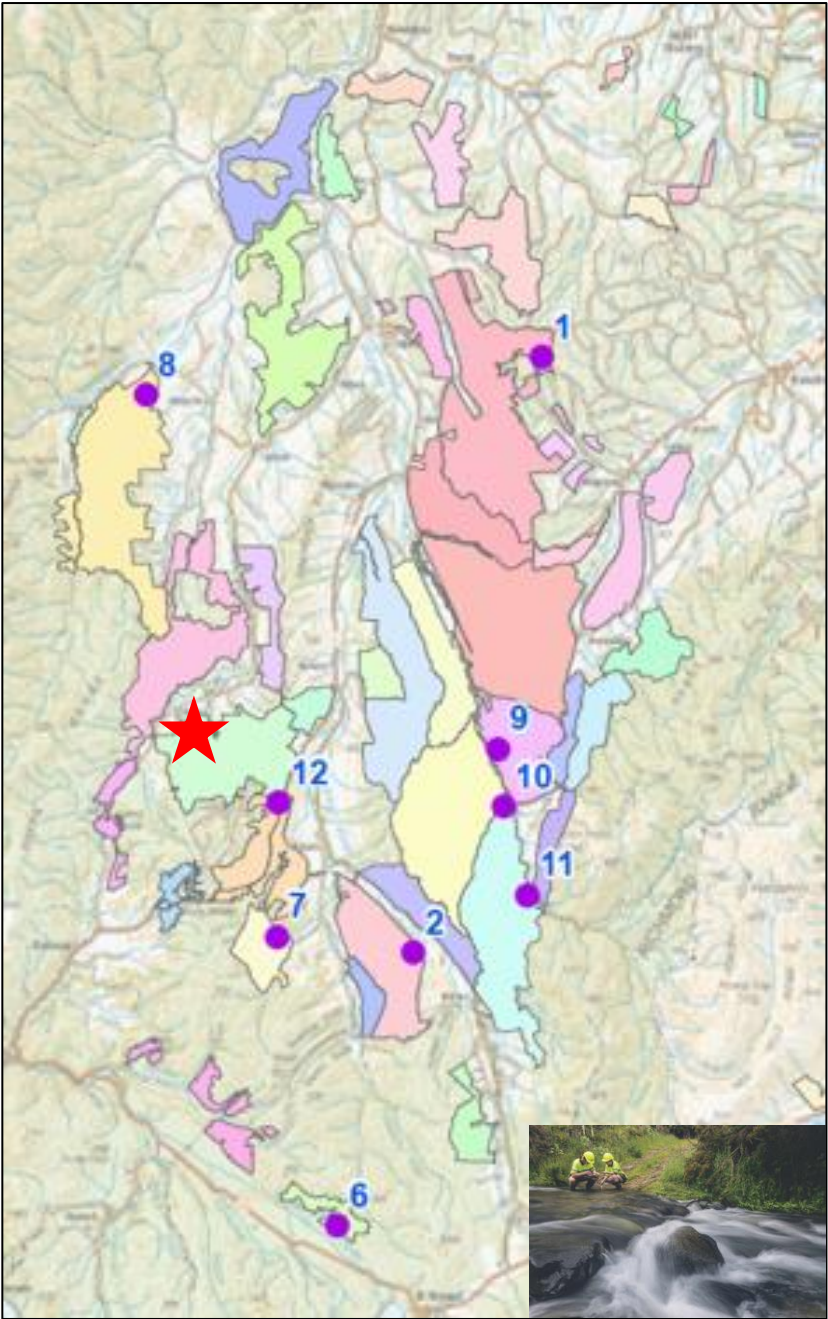
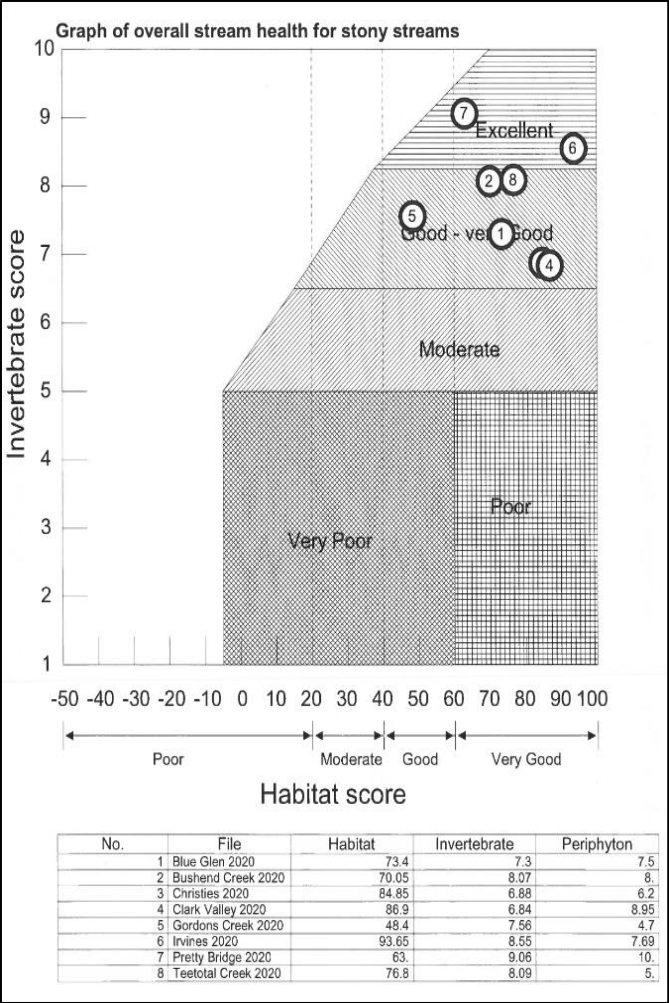


Stream Health Monitoring

- 2 Graham Stream - Christies
- 7 Big Gully West Branch - Rainy
- 8 Bushend Creek - Sherry
- 9 Gordon Creek - Gordons
- 10 Long Gully – Kings Ridge
- 11 Blue Glenn – Motueka Gorge
- 12 Clark River – Clark Valley

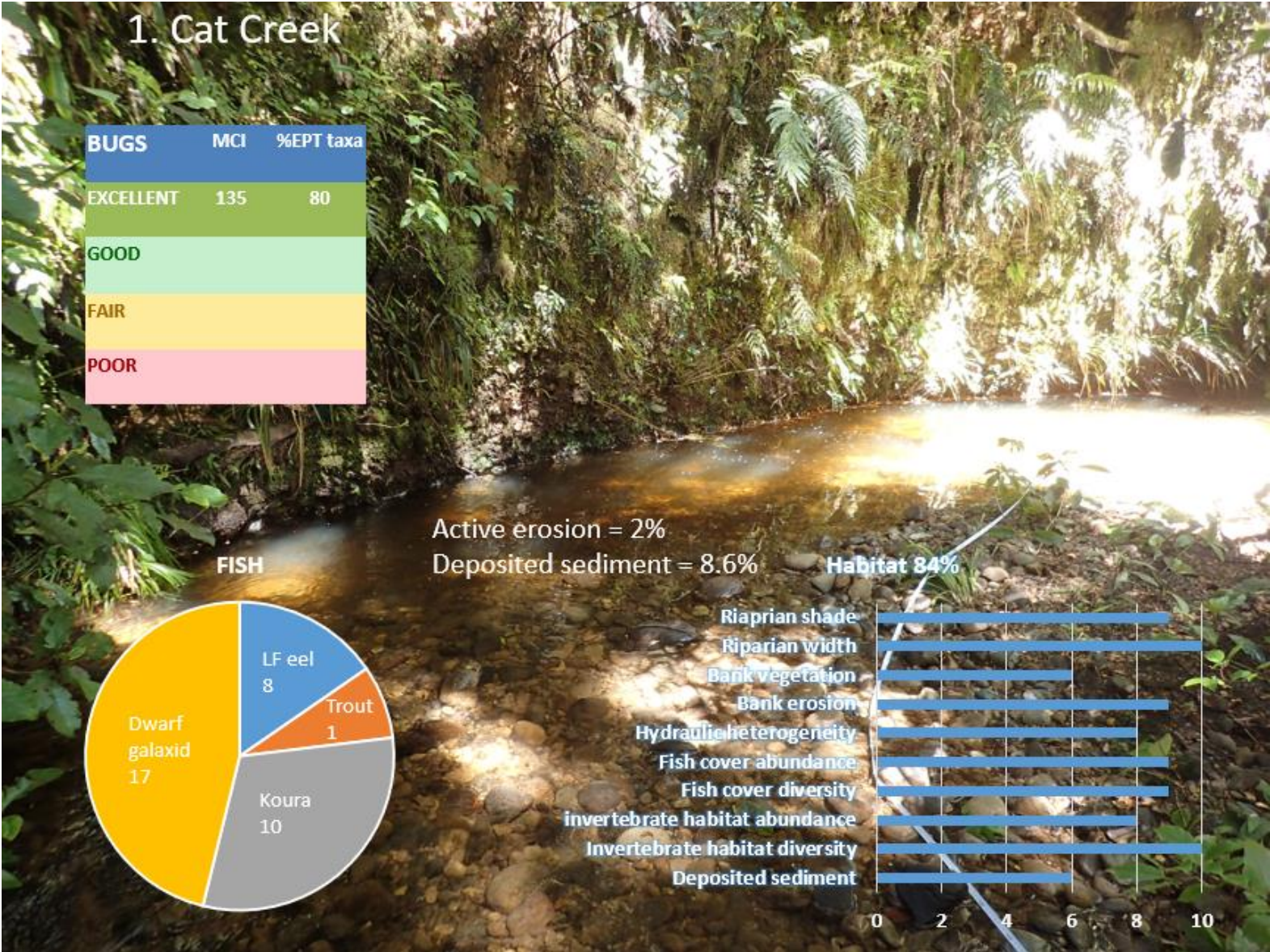
Deception Creek – Suttons

★ Cat Creek – Donald Creek
(Paired Catchment Study)



Sedimentation Research

- Y1 – Baseline monitoring
- Y2 - Earthworks and harvesting
- Y6 - Constructed wetland



Threatened Species



New Zealand Falcon
Management Guide
Plantation Forestry

BEST-PRACTICE FORESTRY GUIDELINES





KEA
GUIDELINES
FOR
PLANTATION
FORESTRY



FOREST OWNERS ASSOCIATION
supported by
forestgrowers
commodity levy



Wildlands
Version dated March 2018

WHAT TO DO
WHEN YOU FIND
A BAT AT WORK

Threatened Species
Field Guide





September
2020



One
Forty
One



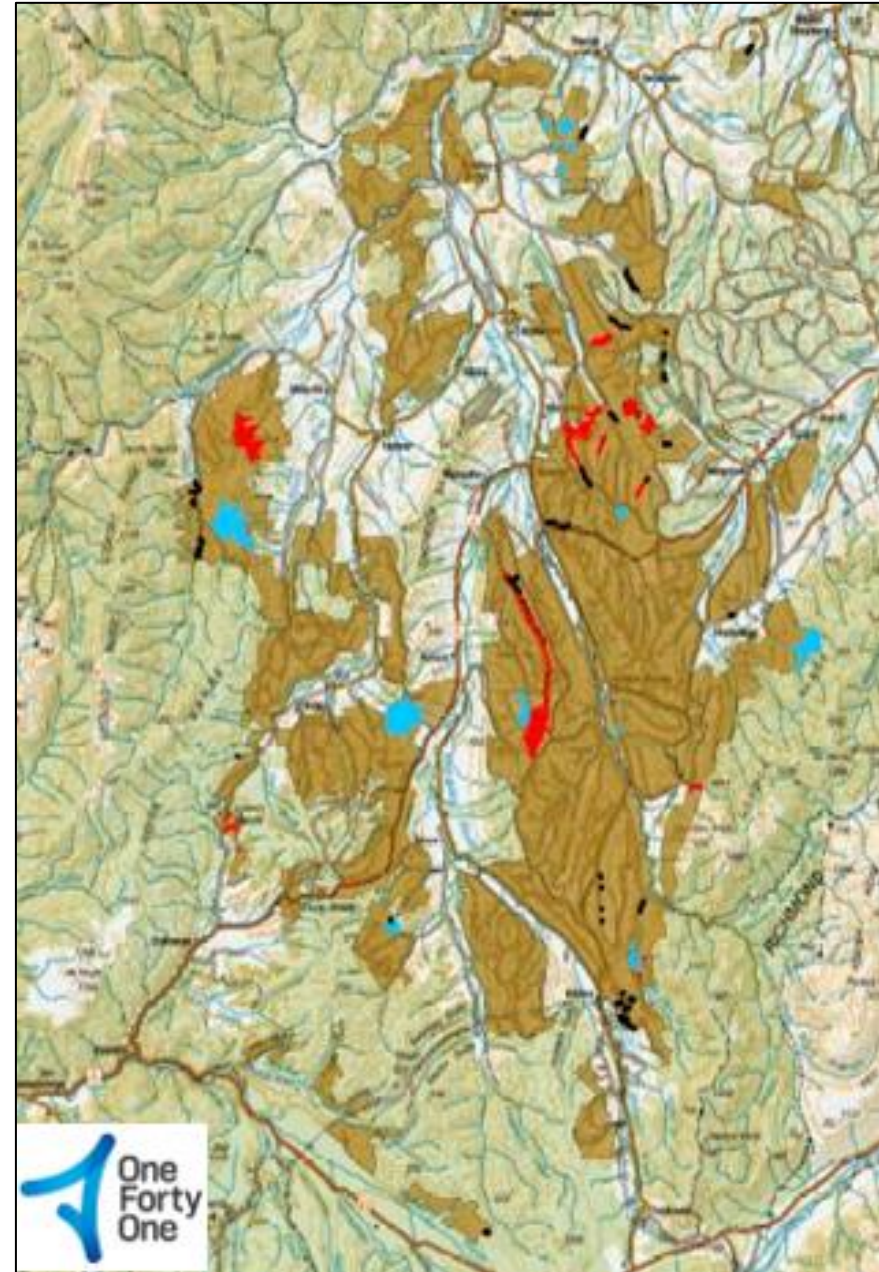




Reserves



Additional Significant Natural Areas




Regulation

Reprint as at 1 May 2018



**Resource Management (National Environmental Standards for
Plantation Forestry) Regulations 2017**
(LI 2017/174)



TASMAN RESOURCE MANAGEMENT PLAN

VOLUME 1 : TEXT

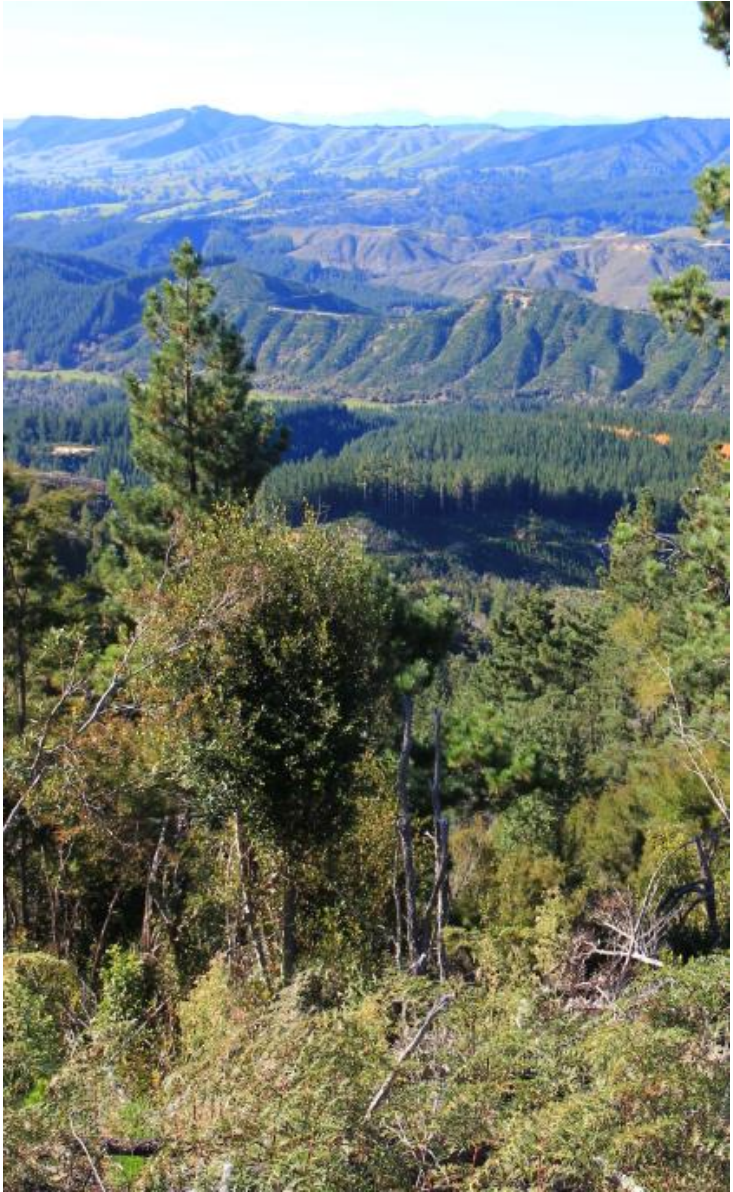
**Operative in Part
(Parts I and II)
1 November 2008**

**Operative in Part
(Parts V and VI)
26 February 2011**

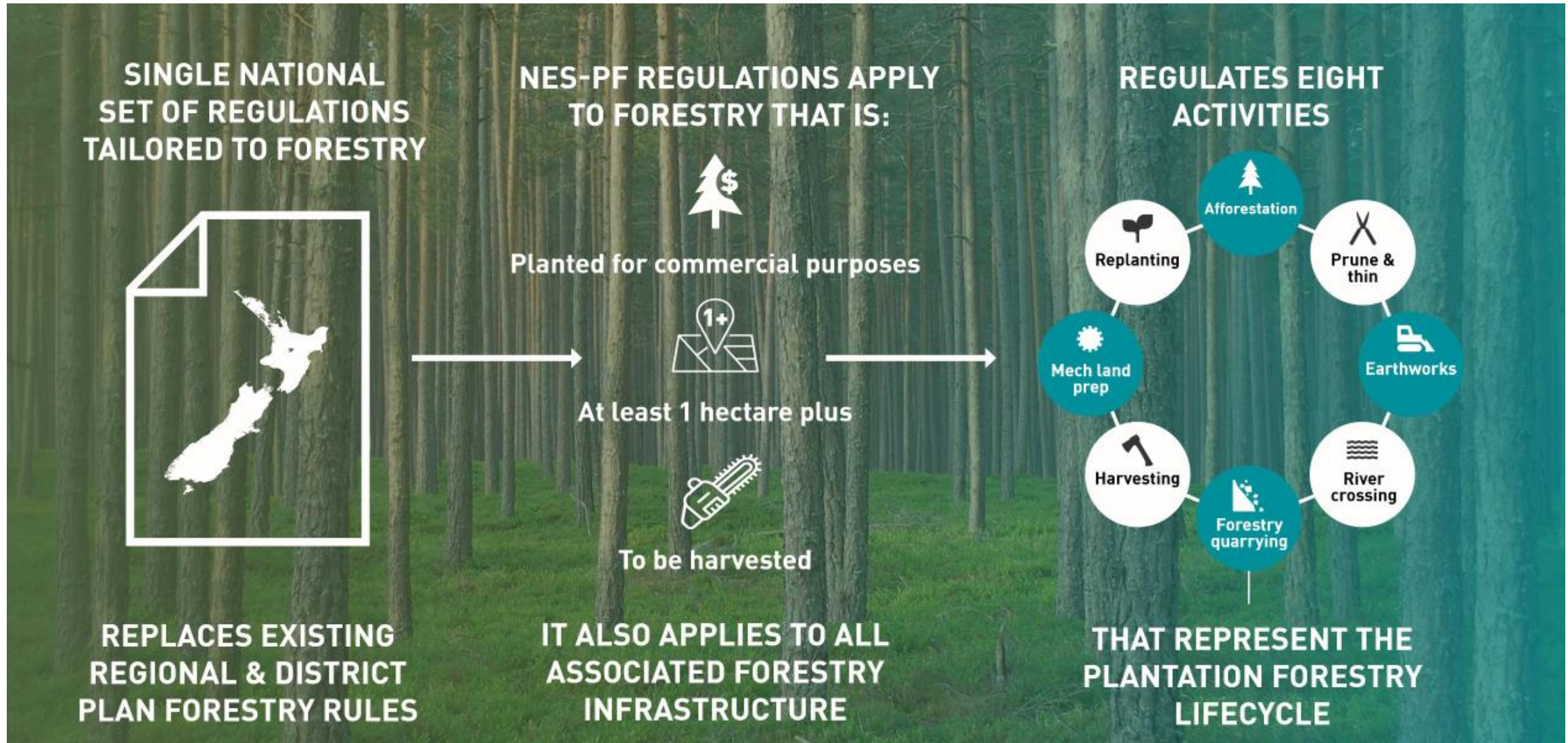
**Operative
(Part III)
1 October 2011**

**Operative
(Part IV)
8 March 2014**

Resource Management Act 1991



National Environmental Standards for Plantation Forestry

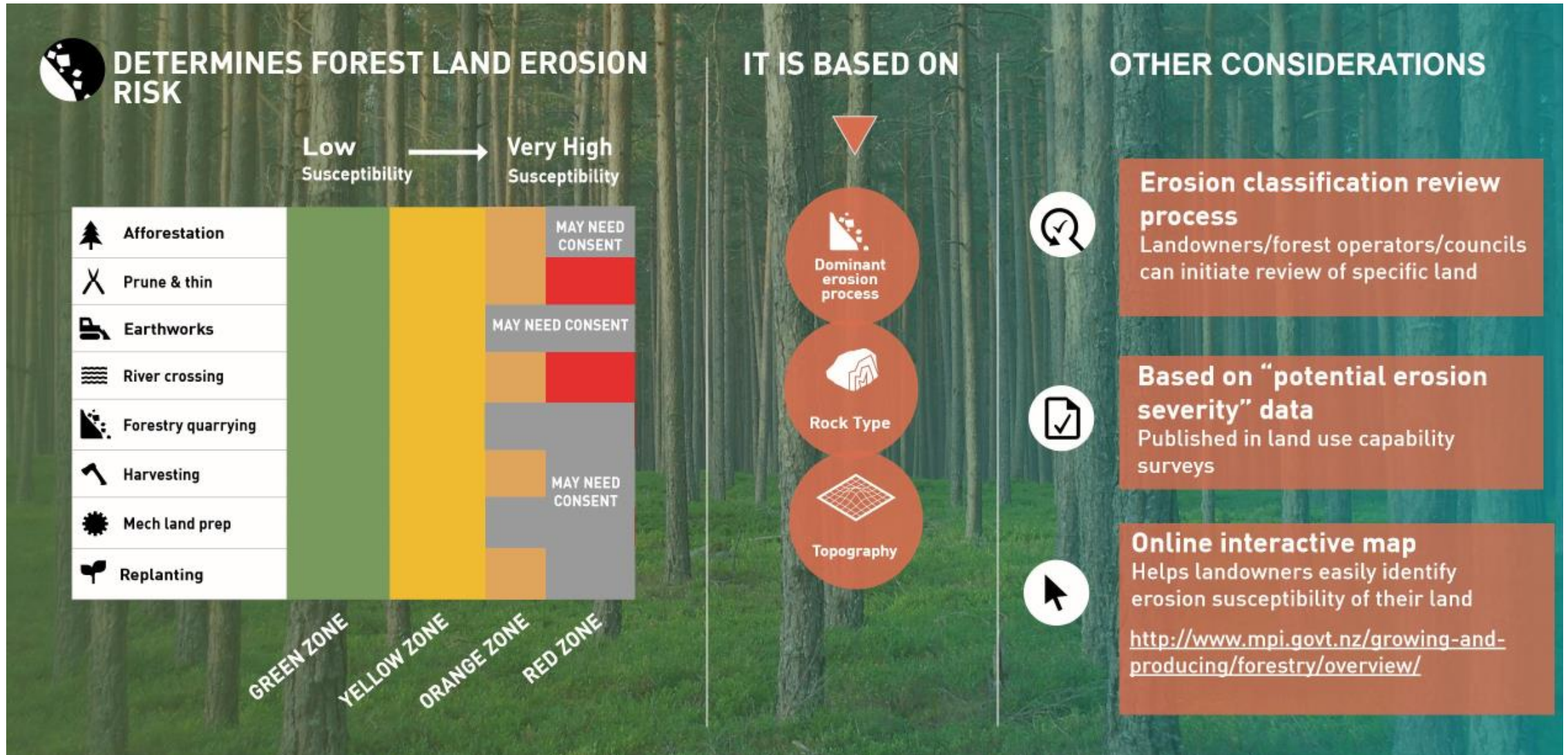


National Environmental Standards for Plantation Forestry









Activities +	Ancillary activities	+ General requirements
Afforestation	Slash traps	Discharge, dam, divert
Prune and Thin	Indigenous veg clearance	Noise, vibration
Earthworks	Other vegetation clearance	Dust
River Crossings		Indigenous bird nesting
Forestry Quarrying		Fuel
Harvesting		
Mechanical land prep		
Replanting		

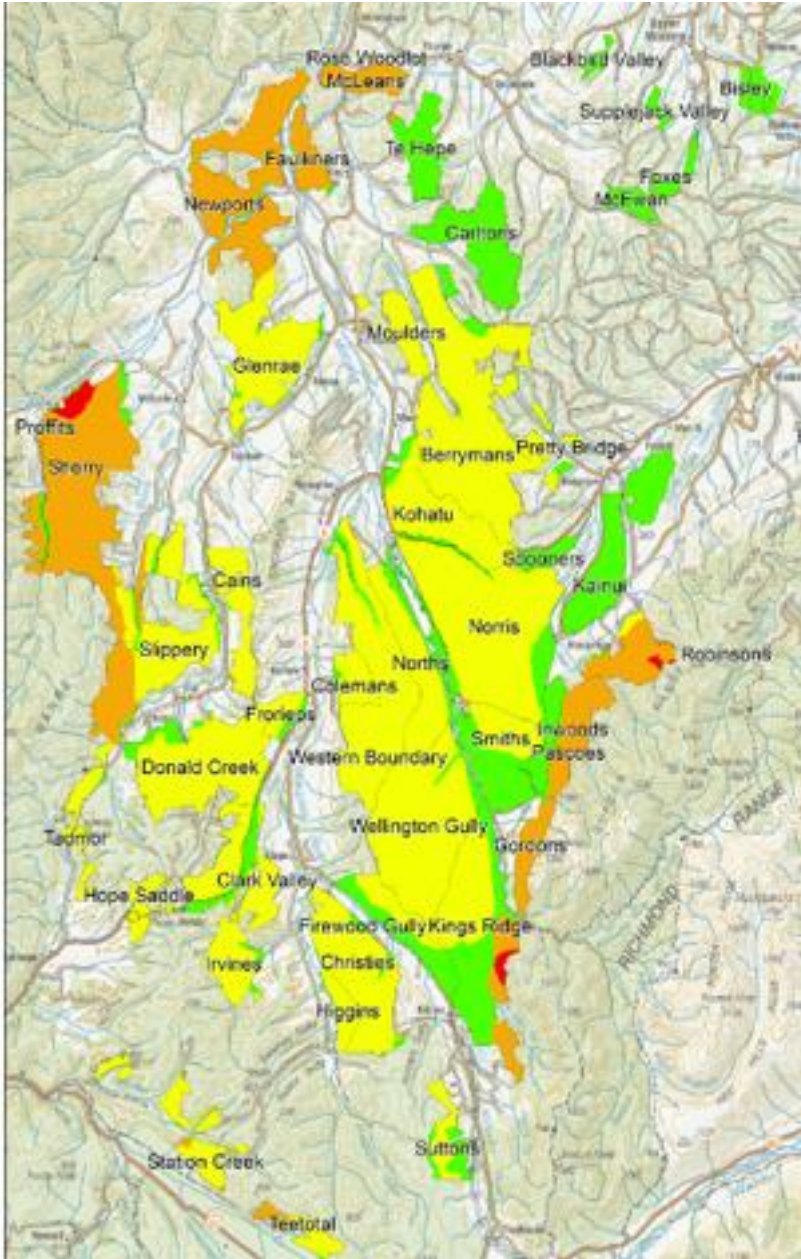


NES-PF Erosion Susceptibility Classification

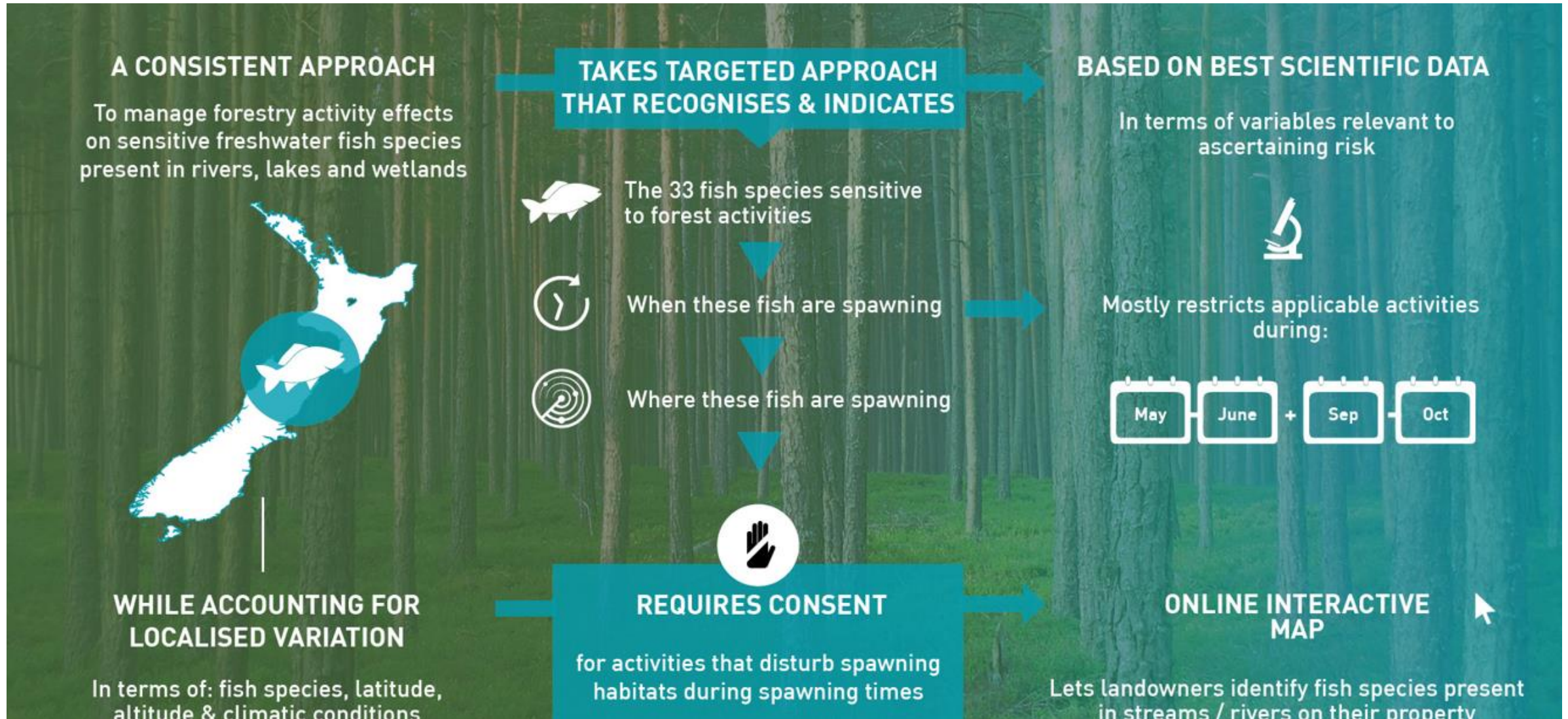


NES-PF Erosion Susceptibility Classification

	Afforestation				MAY NEED CONSENT
	Prune & thin				
	Earthworks				MAY NEED CONSENT
	River crossing				
	Forestry quarrying				
	Harvesting				MAY NEED CONSENT
	Mech land prep				
	Replanting				



NES-PF Fish Spawning Indicator Tool



NES-PF Harvesting – to be permitted.....

Regulation 64: NOTICE

1. Tasman District Council must be given written notice of—
 - (a) the place where harvesting will be carried out; and
 - (b) the dates on which the harvesting is planned to begin and end.
2. Notice must occur—
 - (a) at least 20 and no more than 60 working days before the date on which the harvesting is planned to begin; or
 - (b) a minimum of 2 days before the date on which harvesting required for salvage operations is planned to begin; or
 - (c) annually, in the case of ongoing harvesting operations.



NES-PF Harvesting – to be permitted....cont.

Regulation 65: SEDIMENT

Sediment originating from harvesting must be managed to ensure that after reasonable mixing it does not give rise to any of the following effects in the receiving waters:

- (a) any conspicuous change in colour or visual clarity:
- (b) the rendering of fresh water unsuitable for consumption by farm animals:
- (c) any significant adverse effect on aquatic life.



NES-PF Harvesting – to be permitted....cont.

Regulation 66: HARVEST PLAN

1. A harvest plan is required for all erosion susceptibility classification zones.
2. A harvest plan must—
 - (a) identify environmental risks and provide operational responses to those risks that avoid, remedy, or mitigate the adverse effects of the activity on the environment; and
 - (b) contain the details required by [Schedule 3 \(harvest and Earthworks Management Plan\)](#); and
 - (c) be in place at least 20 working days before harvesting begins, except
 - (d) if the harvesting is a salvage operation, be in place before harvesting begins.
3. If harvesting is in an orange or red ESC zone, a harvest plan must be accompanied by a forestry earthworks management plan.
4. Tasman District can request the harvest plan.
5. Material amendments must be documented and dated, and TDC advised.

Any harvesting activities must be undertaken in accordance with the harvest plan.



NES-PF Harvesting – to be permitted....cont.

Regulation 67: GROUND DISTURBANCE

1. Harvest systems must be planned and located to achieve butt suspension wherever practicable.
2. Disturbed soil must be stabilised or contained to minimise sediment entering into any water and resulting in—
 - (a) the diversion or damming of any water body; or
 - (b) degradation of the aquatic habitat, riparian zone, freshwater body, or coastal environment; or
 - (c) damage to downstream infrastructure and properties.



NES-PF Harvesting – to be permitted....cont.

Regulation 68: MARGINS OF WATERWAYS

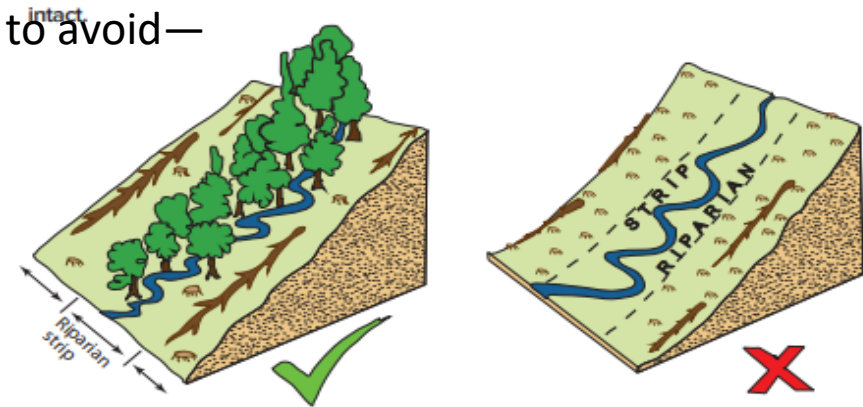
1. Trees must be **felled away** from any water body or riparian zone during harvesting, except if unsafe to do so.
2. If it unsafe, trees must be felled directly across the water body for full-length extraction before de-limbing or heading.
3. **Full suspension** tree harvesting must be achieved across rivers of 3 m or more in width.



NES-PF Harvesting – to be permitted....cont.

Regulation 68: MARGINS OF WATERWAYS....cont

4. Harvesting machinery must not be operated,—
 - (a) within 5 m of a perennial river < 3 m wide or a wetland > 0.25 ha
 - (b) within 10 m of a perennial river > 3 m wide, a lake > 0.25 ha, an outstanding freshwater body, or a water body subject to a water conservation order;
 - (c) within 30 m of the coastal marine area.
5. Harvesting machinery may be operated in the setbacks only if—
 - (a) any disturbance to the water body from the machinery is minimised; and
 - (b) the harvest machinery is at water body crossing points; where slash removal is necessary; or where essential for directional felling or extraction of trees from within the setbacks
6. When harvesting occurs within or across a riparian zone, all disturbed vegetation, soil, or debris must be deposited to avoid it entering into water, and to avoid—
 - (a) diversion or damming of any water body or coastal water:
 - (b) degradation of any aquatic habitat or riparian zone:
 - (c) damage to downstream infrastructure or property.



NES-PF Harvesting – to be permitted....cont.

Regulation 69: SLASH & DEBRIS MANAGEMENT

1. Slash must be placed onto stable ground.
2. Slash on the edge of landing sites must be managed to avoid the collapse of slash piles.
3. Slash must not be deposited into a water body or onto the land that would be covered by water during a 5% AEP event.
4. If subclause (3) is not complied with, slash from harvesting must be removed from a water body and the land that would be covered by water during a 5% AEP flood event, unless to do so would be unsafe, to avoid—
 - (a) blocking or damming of a water body:
 - (b) eroding river banks:
 - (c) significant adverse effects on aquatic life:
 - (d) damaging downstream infrastructure, property, or receiving environments, including the coastal environment.



Forest Practice Guides

NES-PF tool – 28 guides

Earthworks construction

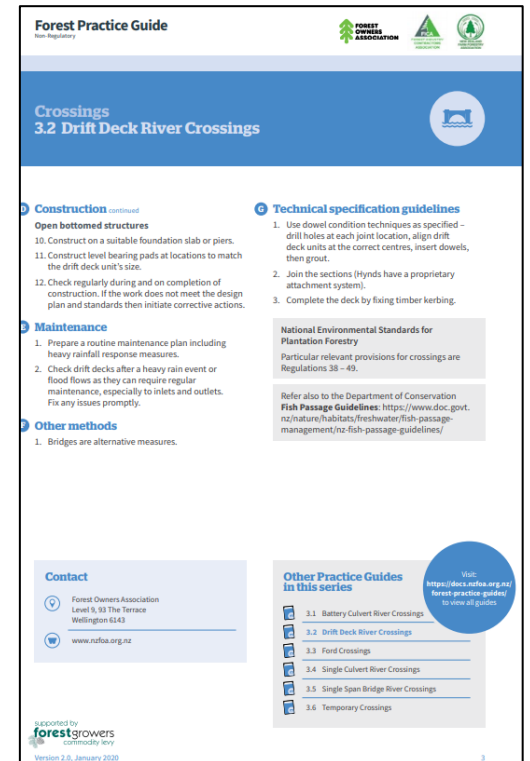
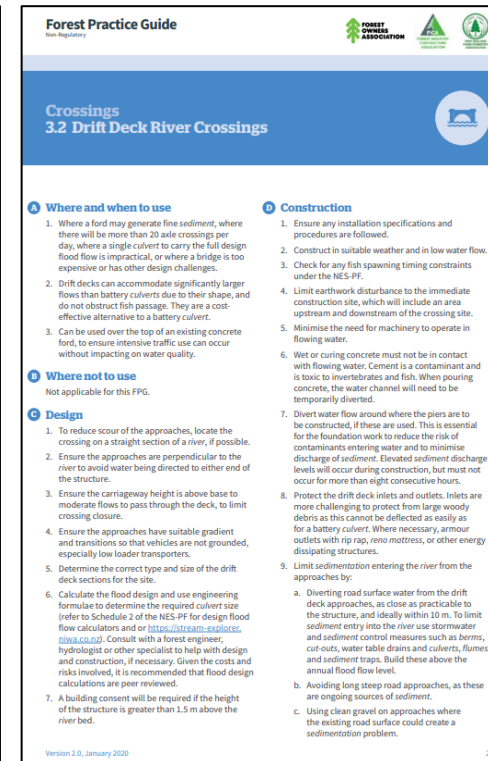
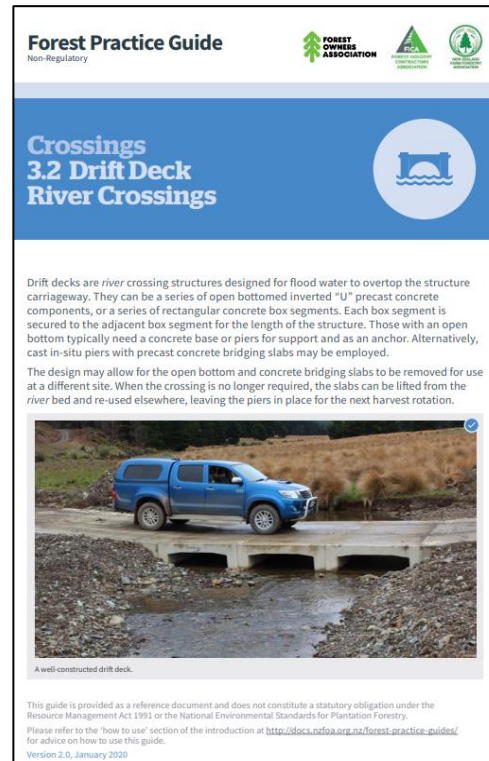
Erosion & sediment control measures

Stream crossings

Tracks

Vegetation to manage erosion

Harvest slash



<https://docs.nzfoa.org.nz/forest-practice-guides/>

Fact sheets





Radiata pine pollen


New Zealand planted forest environmental facts.


Radiata pine forests in New Zealand produce large clouds of pollen every spring. This pollen may concern people who suffer from allergies.




Right: Pollen cones on the end of pine branches.
Left: Pollen grain section viewed under a microscope.


<https://www.nzfoa.org.nz/resources/file-libraries-resources/environment/factsheets>





Water quality

New Zealand planted forests environmental facts.









Response of a stream ecosystem to debris flows

A case study following the recovery of a recently harvested headwater riparian and stream ecosystems after extreme rain, flooding and debris flows.








Wood in streams

Large, stable pieces of wood in planted forest streams enhance in-stream habitat and biodiversity.









Planted forests and carbon

Trees, forests and using wood products are some of the best immediate responses to climate change.









Forest ecosystem services

New Zealand planted forests environmental facts.










Fertiliser use

New Zealand planted forests environmental facts.










Biodiversity

New Zealand planted forests environmental facts.








Forest water dynamics

Water can be available from planted forest catchments even in the driest parts of New Zealand. Forests have the potential to release water during dry periods and regulate stream flow during storms and floods.



Part of the community – a phone call away 03 543-8115

Recreation (hunting, horse riding, walking..... permits)

Coronation Forest

Pests (plants and animals)

Water supplies

Tapawera MTB park

Sponsorship

Scholarships

Fences

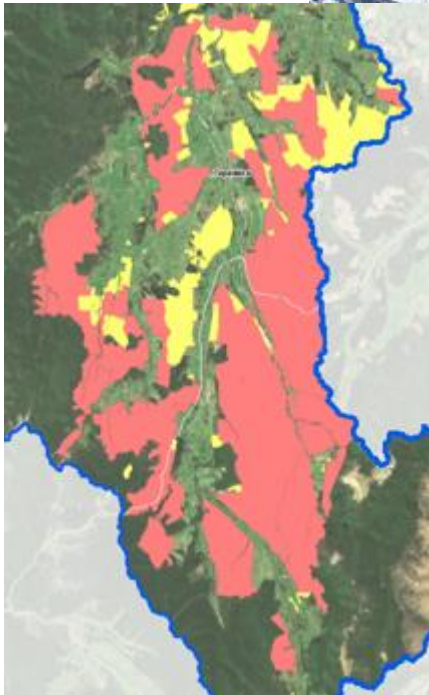
Security

Concerns

Feedback

Questions

.....







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