

# Forest Enterprises Estate Monitoring Report

For Forest Enterprises Limited Estate Forests (to be certified)

December 2021

# Monitoring Strategy

Forest Enterprises' monitoring strategy is aligned with Forest Stewardship Council Certification. It covers the criteria outlined in FSC-STD-01-001 V5-2 International Standard and FSC New Zealand Standard 3.8 2019 draft.

As at December 2021, Forest Enterprises pursuing FSC Forest Certification for part of the forest estate it manages on behalf of 6,500 retail investors who proportionally own the forests. Forest Enterprises Limited (FEL) is a licensed manager of forestry Managed Investment Schemes under New Zealand's Financial Markets Conduct Act 2013. Forest Enterprises Growth Limited is the Forest Manager for the forestry investments.

Forest Enterprises aims to follow the mentioned principles for other forest land under its management.

Forest Enterprises staff, contractors and their employees follow sound environmental practices for all operations, so that the value of the forest asset continues to be enhanced.

Below is Forest Enterprises' Monitoring Plan, from which a public summary will be published annually.

**Note: Commercially sensitive or personal details are not publicised.**

**Table 1. Forest Enterprises monitoring plan**

Element	Indicators	Rationale	Procedures	Frequency
Crop Yields/ Reconciliation	Tonnes/ha	Efficiency and effectiveness of harvest Accuracy of planning	Volumes from FLITS Compare volumes and grades against inventory predictions	Monthly Full reconciliation at completion of the block
Growth Rates	Increment in tonnes or productivity m <sup>3</sup> /ha	Productivity of the forest	Permanent Sample Plots (PSP)	Annual Bi-annual Tri-annual
Changes to Flora & Fauna	Species presence/absence Regen present Rare, Threatened & Endangered species (RTE)	Biodiversity monitoring	As per agreed forest monitoring plan Contractor and staff reporting	5-yearly Before and after harvest Summarised annually
Forest Health	New forest pests or diseases	Crop health	Routine forest inspections	As required
Environmental Impacts Assessment	See EIA procedure			As required
Social Impacts	Employee numbers H&S statistics – Loss Time Injury Rate (LTIR)			
Post-Harvest	Waste Soil disturbance	Contract management	Staff visits Post-harvest inspection	Monthly
High Conservation Areas	Weed and pest control Photo points Ecological consultant analysis	Protect and monitor sensitive ecological areas	Weed and pest control visits and monitoring Photo points Ecological consultant analysis	Annually and pest control as required Bi-annually
Water Quality	As required by Resource Consent	Ensure operations maintain water quality	SHMAK testing in specific catchments of operational forests	March/April and October/November
Efficacy of Pest Control	Possum Residual Trap Catch (RTC) Hunter returns Compliance reports (weeds)	Maintain forests in good condition Comply with Regional Pest Management Strategy	Cooperate with AHB	As required and annually



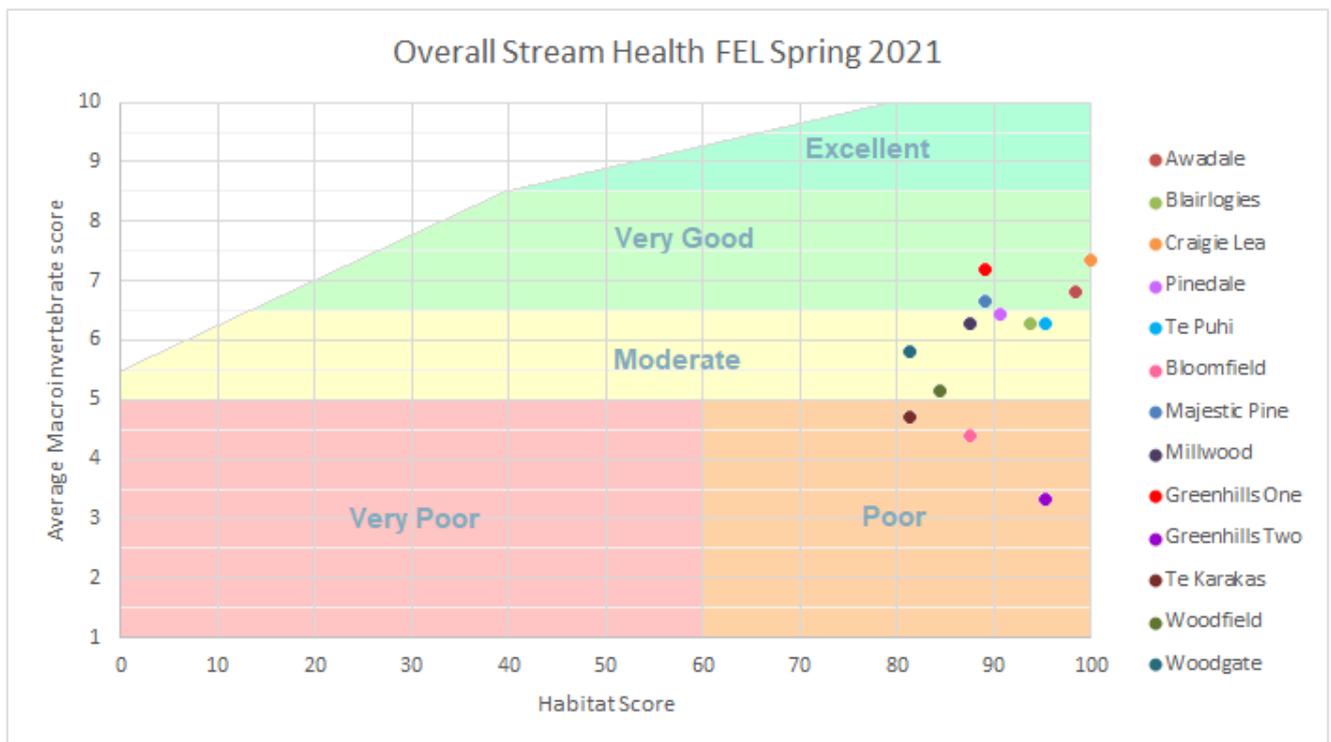
Wildings	Removal	Good management practice Comply with RPMS	Spray or fell	As required
Pesticide Use	See chemical requirements			Annual report

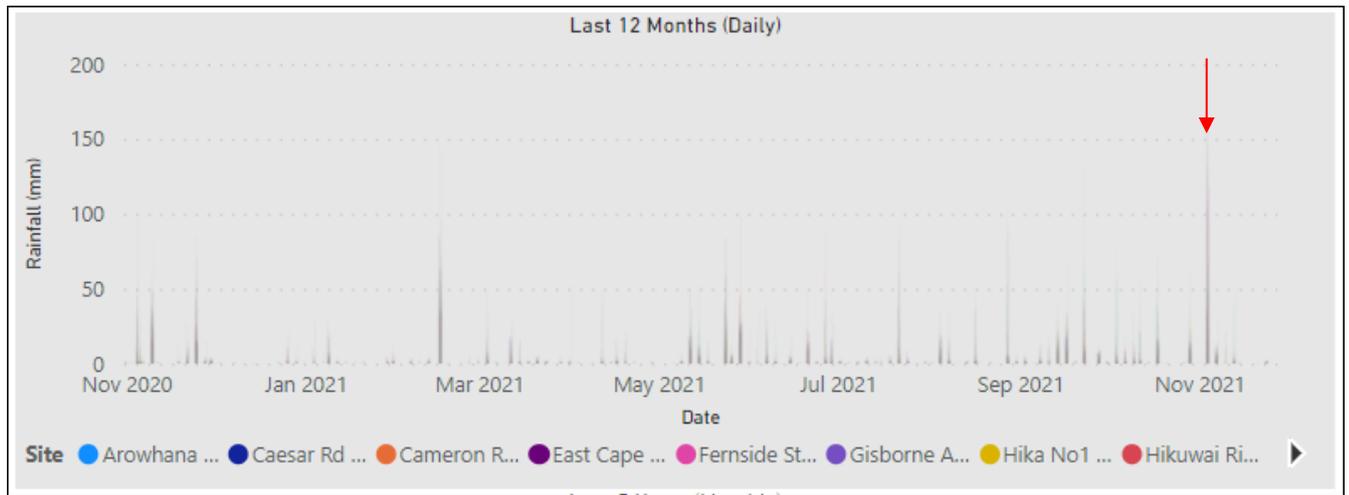
### Native Flora and Fauna

- Plant and pest control are monitored by Forest Enterprises staff (wildings, etc.) and Hunting Permit Kill count results.
- Rare, Threatened and Endangered (RTE) Species: Ecological consultants surveyed 19 forests and reports were produced in June 2021. Results from the reports are that RTE species such as Falcon, Whitehead and Long-tail bats may be present. RTE posters have been distributed to contractors. The Survey123 app has had 8 RTE submissions of NZ Falcon. One other RTE species have been identified in the FEL Estate.
- High Conservation Value Sites: Ecological consultants surveyed 19 forests and reports were produced in June 2021. One HCV3 site was identified in Gisborne. No HCV 4-6 sites were identified.

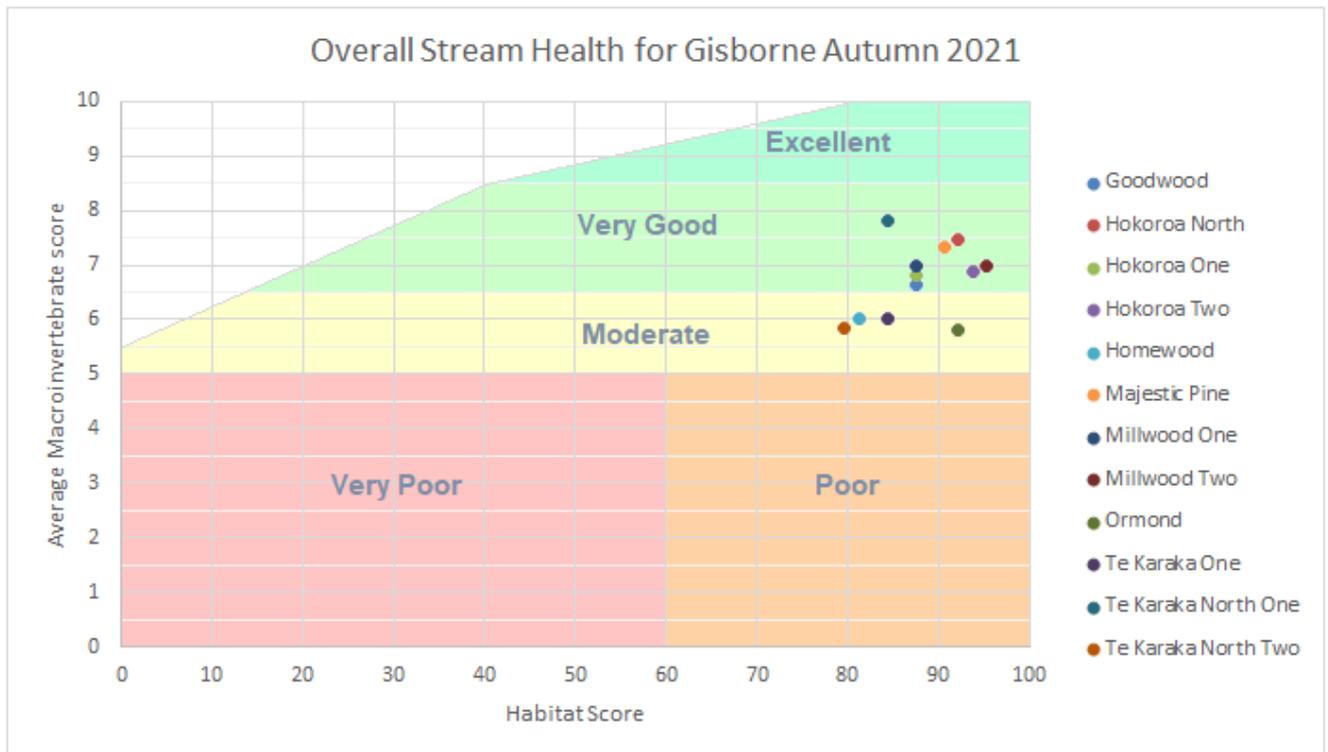
### Water Monitoring

- SHMAK (Stream Health Monitoring and Assessment Kit) monitoring sites for FEL catchments have been tested for the Spring season and the results show Wairarapa forests are Very good to Moderate and Gisborne forests are Moderate to Poor. On November 4<sup>th</sup> Gisborne, more specifically Tairāwhiti district, was declared to be in a state of emergency due to one months’ worth of rainfall in 24 hours. This caused townships to evacuate due to surface flooding. The river tests for Gisborne were performed 3 weeks after the rainfall event and look to have not normalized (<https://www.lawa.org.nz/learn/factsheets/benthic-macroinvertebrates/>). In Autumn 2021, Gisborne testing sites showed Very Good to Moderate results but note the Autumn testing sites are in different locations to the Spring testing sites.





Source: <https://www.gdc.govt.nz/environment/maps-and-data/rainfall-data>



- Due to the seeking of further certification of Forest Enterprises Growth FSC Forest Management, before the 2021 Spring season the testing sites were reviewed and were refined to be more strategic to cover larger catchments. If the quality of the results decline, an investigation will occur to identify the cause of the degradation (whether is it a cause of our own or a neighbour etc).
- Rivers in Forest Enterprises management are classified in accordance with National Environmental Standards for Plantation Forestry (NES-PF) and Regional Water Plans therefore ensuring appropriate and best environment practices are used.

### Forest Health Monitoring

- Forest health surveys are underway for 2021.

### Waahi Tapu and Archaeological Sites

- Waahi Tapu and Archaeological Sites are mapped, and identification/notification booklets and posters have been issued to contractors. No new sites have been identified during 2021.

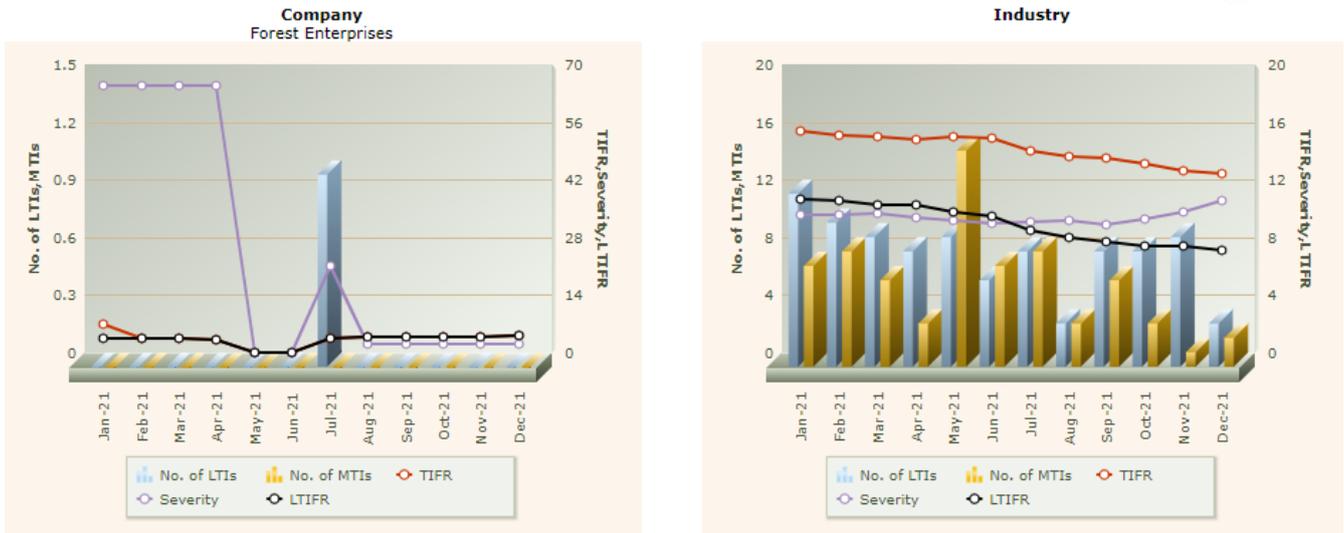


## Health and Safety

Forest Enterprises uses the IRIS (Incident Recording Information System) through the New Zealand Forest Owners Association (FOA) to input all accident and incidents data which includes:

- Hours worked
- Near misses
- Medical injuries
- Lost time injuries

The system is used to monitor improvements in Health and Safety, to compare data against industry and is aligned with our system and goal of “Zero Harm” by 2020.



**Figure 1. Health and Safety Statistics – Forest Enterprises and Industry, January to December 2021**

Figure one shows FELs health and safety statistics for; Total Injury Frequency Rate (TIFR), Lost Time Injury Frequency Rate (LTIFR), and Injury Severity Rate.

- TIFR is calculated using lost time injuries and medical treatment injuries per 1,000,000 labour-hours worked.
- LTIFR calculates the number of lost time injuries per 1,000,000 labour-hours worked. For example, an LTIFR of 7 shows that 7 lost time injuries occur on a jobsite every 1 million labour-hours worked.
- The Injury Severity Rate is the number of lost workdays experienced per 100 workers. The injury severity rate shows the extent of the safety anomalies by revealing how critical the injuries and illnesses are. The theory is that an employee who takes time to return to work after injury had a more severe problem than one who can return immediately.

## Pesticides and Chemical Use

- Forest Enterprises has 14 FSC approved ESRA’s.
- Forest Enterprises continues to be a part an FSC cluster group and follow industry best practices (ECoP).
- Forest Enterprises continues to provide funding into industry cooperative research programmes in order to develop alternatives to highly hazardous chemicals.
- Forest Enterprises monitors the use of pesticides and chemicals (active ingredient and rate applied) within FEL Estate. Below is the list of pesticides and chemicals used during this year:



Type of Pesticide	Commercial name of pesticide / herbicide	Active ingredient	Reason for use
Herbicide	Glyosphate 510	510g/L of glyphosate as the isopropylamine salt	Pre plant spray
Herbicide	Meturon	metsulfuron-methyl	Pre plant spray
Other	Organosilicone	Polyether modified polysiloxane	Pre plant spray
Herbicide	Valzine	Hexzinone + Terbutylazine	Post Plant Release Spray

