Fire Prevention at Forest Operations Procedure

Authorised by Forest Industry Fire Management Committee / Tasmania Fire Service

September 2024

Tasmania Fire Service

FOREST INDUSTRY
FIRE MANAGEMENT COMMITTEE

The Tasmanian Forest Industry Fire Management Committee (FIFMC) was established in the early 1990's, and consists of Forest Managers (industrial/Government), RTO's and Contractor representatives to establish fire management benchmarks and best practice for the industry.

This procedure has been developed by the FIFMC, and is endorsed by the Tasmania Fire Service.

The objective is to minimise the incidence of wildfire resulting from forest and related operations and to ensure compliance with relevant regulations.

It outlines minimum fire equipment requirements for forest operations and procedures to follow to reduce the risk of fire.

Forest Managers and Contractors can implement further requirements to reduce fire risk as required.

A copy of this procedure should be on site at all times.

Sustainable Timber Tasmania

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AFCA Australian Forest Contractors Association

Tasmania Fire Service

Midway

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TIMBERLANDS Pacific

SFM

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DEFINITIONS

High Risk Hazard Forest Activity:
Any work involving chainsaws, cables, machinery, vehicles or tools in contact with or close to forest, scrub or pasture fuels. A fire caused by the activity under the suspension conditions, would rapidly grow to an uncontrollable size and intensity. Examples of a High Risk Hazard Forest Activity are:

- Cable harvesting (including tethered machine harvesting);
- Mechanical harvesting or thinning;
- Manual clearfelling or thinning using chainsaws or scrubcutters;
- Roadline clearing;
- Mechanised clearing, cultivation or ground spraying in logging slash;
- Log loading between 0600 and 2200 hours (When the harvesting contractor is not on site a risk assessment must be completed and signed off by the relevant Forest Manager)

Low Risk Hazard Forest Activity:
Any work which poses little risk of fire and is being conducted away from forest, scrub or pasture fuels.
Examples of a Low Risk Hazard Forest Activity are:

- Gravelling or grading formed pavements;
- Mechanised clearing or cultivation where there is no residual vegetation (pasture);
- Aerial spraying or fertilising
- Manual activities involving non-motorised tools or equipment such as planting, hand pulling spot fertilising, pruning with loppers or hand saws and tending with a hook or mattock;
- Road construction where the vegetation clearing has been completed;
- Log loading between 2200 and 0600 hours (exempt from Weather Monitoring);
- Ground based spraying on cleared/cultivated ground without flammable debris.

FFDI: Forest Fire Danger Index

Regulation:
Regulation 8 of the Fire Service (Miscellaneous) Regulations 2017, or as subsequently amended.

Fire Weather Evaluator:
A person who holds a current statement of attainment for Fire Weather Evaluation or equivalent Tasmanian Fire Service qualification.

Bush Fire Awareness:
A person who holds a current statement of attainment for Bush Fire Awareness or equivalent Tasmanian Fire Service qualification.

Prescribed Period (Fire Season)
As determined by the Tasmania Fire Service under Regulation 8, usually from October 1 until at least April 30 in the following year.

Commencement of Operations: When a person begins using the machinery or tools on the site.

PCBU:
A "Person Conducting a Business or Undertaking" as defined under section 5 of the *Work Health and Safety Act 2012*. This can be an organisation or individual.

EQUIPMENT

(1) High risk hazard forest activity - all year minimum equipment requirements

a) Cable harvesting (tethered machine harvesting - during the prescribed period only)

- One filled and operational knapsack pump or charged air-water extinguisher (which has a capacity of not less than 9 litres) located at a landing site and the tail hold and blocks (exemption is if the tail hold and blocks are cleared to mineral earth for at least two metres in all directions)
- 1000 litres of water stored on site
- A tank of 300 litres capacity full of water, designed to be and capable of being transported within the site
- A motorised firefighting pump of 7.5 kW (10HP) or greater
- 10 x 30 metre lengths of 38mm firefighting hose
- All couplings the same as the Tasmania Fire Service and Sustainable Timber Tasmania equipment or with adapters that are compatible

b) All other high risk hazard forest activities
One filled and operational knapsack pump or charged air-water extinguisher (which has a capacity of not less than 9 litres) located at each operational landing site or on each machine where there is no landing site. (Regulation 8)

All activities will not commence until they:

A. Comply with the firefighting requirements established by the FIFMC and Fire Service Regulation; and
B. Have all firefighting equipment fully assembled, available and ready for immediate use at all times.
Note: Equipment will be audited by the Forest Manager each year to ensure compliance. The Forest Manager may also carry out spot checks throughout the year.

(2) High risk hazard forest activity - minimum fire season requirements on each operational landing or site during the prescribed period

a) Cable harvesting/tethered machine harvesting

- Each chainsaw in use must be provided with one filled and operational knapsack pump or charged air-water extinguisher (which has a capacity of not less than 9 litres) located within 100 metres of where the chainsaw is being operated, or fit for purpose "Mini Firefighter" extinguisher to be located with the operator
- Two (2) rakehoes
- A self-priming centrifugal pump producing a pressure of at least 400 kPa at shut off
- A working set of Fire Weather Evaluator's instruments, a fire weather logbook and two personnel accredited with Fire Weather Evaluation. At least one Fire Weather Evaluator is to be on site at all times.
- Two personnel accredited with Bushfire Awareness or equivalent Tasmanian Fire Service qualification (e.g. TFS Basic Fire Fighter).

b) All other high risk hazard forest activities

- Each chainsaw in use must be provided with one filled and operational knapsack pump or charged air-water extinguisher (which has a capacity of not less than 9 litres) located within 100 metres of where the chainsaw is being operated, or fit for purpose "Mini Firefighter" extinguisher to be located with the operator
- Two (2) rakehoes
- A self-priming centrifugal pump producing a pressure of at least 400 kPa at shut off
- 60 metres of 19 mm+ nominal bore delivery hose and an appropriately sized variable jet nozzle fitted with couplings the same as the Tasmania Fire Service and Sustainable Timber Tasmania equipment or with adapters that are compatible
- A tank of 300 litres capacity full of water, designed to be and capable of being transported within the site
- A working set of Fire Weather Evaluator's instruments, a fire weather logbook and two personnel accredited with Fire Weather Evaluation or equivalent Tasmanian Fire Service qualification (one Fire Weather Evaluator if a single operator). At least one Fire Weather Evaluator is to be on site at all times when forest activities are being conducted.
- Two personnel accredited with Bushfire Awareness or equivalent Tasmanian Fire Service qualification (one accredited if single operator) (e.g. TFS Basic Fire Fighter).

EQUIPMENT

(3) Low risk hazard forest activity - minimum fire season equipment requirements on each operational landing or site

- One (1) rakehoe
- One (1) filled and operational knapsack pump or charged air-water extinguisher (which has a capacity of not less than 9 litres) located at each site, operational landing site, or on each machine where there is no landing site
- A working set of Fire Weather Evaluator's instruments, a fire weather logbook and two personnel accredited with Fire Weather Evaluation (one Fire Weather Evaluator if a single operator)

(4) Alternative/additional fire suppression equipment

- Alternative fire suppression equipment may be used on a forest activity if a risk assessment has been completed by the Forest Manager and approved by the FIFMC
- Additional fire suppression equipment above the requirements of this procedure can be implemented by Forest Managers and Contractors as the need is identified

WEATHER MONITORING AND SUSPENSIONS

(1) High risk hazard forest activity prescribed period fire season weather monitoring and suspension of operations

Each day, the PCBU must ensure that:

- Weather readings are measured and recorded by a Fire Weather Evaluator on site every **two (2) hours**, from commencement of operations until the end of operations unless it is raining at the time of measurement;
- Weather readings are measured and recorded by a Fire Weather Evaluator on site **hourly**, once the **FFDI reaches HIGH 12**, or is likely to reach this rating within the next hour;
- Operations are **SUSPENDED IMMEDIATELY** once the FFDI is calculated as equal to or greater than **HIGH 20**, or the **relative humidity** is equal to or less than **30%**;
- Operations are **SUSPENDED IMMEDIATELY** if no Fire Weather Evaluator is on site at the time of scheduled readings unless it is raining;
- After suspended operations, sufficient personnel must remain on site for a minimum of **one (1) hour** to deal with any fire that may eventuate;
- Upon leaving the site, all affected parties are notified of the suspension. (e.g. cartage contractors, forest management).

It is at the Forest Managers discretion when PCBUs are to carry out weather monitoring outside of the fire season. During the prescribed period (fire season), the Fire Weather Forecast is posted on the Bureau of Meteorology's website daily between 1600 and 1630 and the Tasmanian Fire Service website. Principal companies may provide advice to the PCBUs on potential future suspensions of forest activities. The Forest Manager may carry out spot checks of Fire Weather Evaluator's records and instruments and monitor compliance of the conditions for suspension of forest activities.

The Forest Managers reserve the right to suspend any forest activity or close any forest area at any time, if it is deemed unsafe due to an anticipated high fire danger.

On declared TFB days the Forest Industry, in consultation with the Tasmanian Fire Service, will suspend forest operations where warranted when significant fire weather conditions (>40FFDI) are forecast.

Where a fire is unintentionally ignited at the site of forest operations:

- Forest operations at the site shall cease, where safe to do so;
- Those at the site shall take immediate and appropriate actions to extinguish the fire; and
- The TFS shall be notified of the fire including cases where the fire has been extinguished without consequence.

WEATHER MONITORING AND SUSPENSIONS

(2) High risk hazard forest activity - conditions for recommencement of operations

- Operations may recommence after a suspension when the FFDI, measured at the site, is less than **HIGH 20**, for two (2) consecutive measurements taken 30 minutes apart
- The decision to commence loading operations prior to 2200 hours will rest with the harvesting contractor on PTPZ land, or the Forest Manager on private property or PTPZ land under private management control

(3) Low risk hazard forest activity - fire season weather monitoring and suspension of operations

Each day, the PCBU must ensure that:

- They know what the Fire Weather Forecast is and if predicted to be a **TOTAL FIRE BAN DAY**, weather readings are measured and recorded by a Fire Weather Evaluator on site every **HOUR** from commencement of operations until the end of operations unless it is raining at the time of measurement;
- Operations are **SUSPENDED IMMEDIATELY** once the FFDI is calculated as equal to or greater than **VERY HIGH 35**;
- Operations are **SUSPENDED IMMEDIATELY** if no Fire Weather Evaluator is on site at the time of scheduled measurement unless it is raining;
- After suspended operations, sufficient personnel remain on site for a minimum of **ONE HOUR** to deal with any fire that may eventuate; and
- Upon leaving the site, all affected parties are notified of the suspension. (e.g. forest management).

Forest Managers will audit digital instruments that record temperature and humidity using a reputable sling psychrometer. Digital readings should be within 5%.

(4) Weather monitoring equipment

Fire Weather Evaluators in the field will require appropriate instruments. These can be digital or "bulb" type. Digital instruments must be checked for calibration annually to make sure they are providing correct weather readings.

(a) Temperature and Relative Humidity

If using bulb type instruments, ensure that:

- The wet bulb muslin is kept clean/moist and regularly changed;
- Only distilled or clean rainwater is used in the reservoir; and
- The evaluator takes care in using the correct tables to work out the relative humidity.

(b) Wind speed

Fire Weather Evaluators may use a cup anemometer, digital wind meter and Beaufort scale if used in conjunction with the above apparatus to determine wind speed at 10m (multiply by 1.5).

(c) Fire Danger Meters

Fire Weather Evaluators must have a McArthur Forest Fire Danger Meter Mark 5 (1992) on site. Fire Weather Evaluators may also consider using fire danger calculations apps. However, the only recommended fire danger app is the NSW Rural Fire Service app, it has been tested for accuracy. Be aware as there are other apps available but are not accurate. Please check with your supervisor if you are unsure.

(d) Logbook

A fire weather observation recording logbook which has columns to record: Date; Time; Local Drought Factor; Temperature; Relative Humidity; Wind Speed (km/h); Fire Danger Index and Observer must be completed on site during the prescribed period.

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