

# Procedure: Fire Prevention at Forest Operations

Custodian: FIFMC

Authorised by: Forest Industry Fire Management Committee

This procedure has been developed by the Tasmanian Forest Industry Fire Management Committee (FIFMC). The objective is to minimise the incidence of wildfire resulting from forest and related operations. It outlines minimum fire equipment requirements for forest operations and procedures to follow to reduce the risk of fire. A copy of this procedure should be on site at all times.

## 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:

- 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

## ***Fire Prevention at Forest Operations – Operation Shutdown Requirements***

### **FFDI:**

Forest Fire Danger Index

### **Fire Service Regulation:**

Regulation 8 of the *Fire Service (Miscellaneous) Regulations 2007*, or as subsequently amended.

### **Fire Weather Evaluator:**

A person who holds a current ForestWorks Fire Weather Evaluation FOLS endorsement, unit completed FWPCOR3203 – Evaluate fire potential and prevention

### **Bush Fire Awareness:**

A person who holds a current ForestWorks Bush Fire Awareness FOLS endorsement, units completed

FWPCOR2204 – Follow Fire Prevention Procedures

PUAFIR215- Prevent Injury

PUAEQU001B- Prepare, maintain and test response equipment

### **Fire Season:**

From the 1<sup>st</sup> of October until at least the 30<sup>th</sup> of April in the following year as determined by the Tasmanian Fire Service (*Regulation 8*).

### **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**

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.

### **(1) HIGH RISK HAZARD FOREST ACTIVITY – ALL YEAR MINIMUM EQUIPMENT REQUIREMENTS**

#### **a) CABLE HARVESTING**

- 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

## ***Fire Prevention at Forest Operations – Operation Shutdown Requirements***

- 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 (10 HP) 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*)

## **(2) HIGH RISK HAZARD FOREST ACTIVITY – ADDITIONAL MINIMUM FIRE SEASON REQUIREMENTS ON EACH OPERATIONAL LANDING OR SITE**

### **a) CABLE 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
- 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 **ForestWorks Fire Weather Evaluation**. At least one **Fire Weather Evaluator** is to be on site at all times.
- **Two** personnel accredited with **ForestWorks Bushfire Awareness** or similar firefighting accreditation (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
- 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

## ***Fire Prevention at Forest Operations – Operation Shutdown Requirements***

- A working set of Fire Weather Evaluator's instruments, a fire weather logbook and **two** personnel accredited with **ForestWorks Fire Weather Evaluation** (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 **ForestWorks Bushfire Awareness** (one accredited if single operator) or similar firefighting accreditation (e.g. TFS Basic Fire Fighter).

### **(3) LOW RISK HAZARD FOREST ACTIVITY – MINIMUM FIRE SEASON EQUIPMENT REQUIREMENTS ON EACH OPERATIONAL LANDING OR SITE**

- 1 rakehoe
- One 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 **ForestWorks Fire Weather Evaluation** (**one** Fire Weather Evaluator if a single operator)

## **WEATHER MONITORING AND SUSPENSIONS**

### **(4) HIGH RISK HAZARD FOREST ACTIVITY – 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 **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 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)

#### Note

It is at the Forest Mangers discretion when PCBUs are to carry out weather monitoring outside of the fire season.

## ***Fire Prevention at Forest Operations – Operation Shutdown Requirements***

During the fire season, the Fire Weather Forecast is posted on the Bureau of Meteorology's web site daily between 1600 and 1630. 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 Mangers reserves 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.

### **(5) 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 **2 consecutive measurements taken 30 minutes apart**
- The decision to commence loading operations prior to 2200 hrs will rest with the harvesting contractor on PTPZ land, or the Forest Manger on private property or PTPZ land under private management control

### **(6) 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).

#### Note

It is at the Forest Manager's discretion when PCBUs are to carry out weather monitoring outside of the fire season.

During the fire season, the Fire Weather Forecast is posted on the Bureau of Meteorology's web site daily between 1600 and 1630. 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 Manager reserves the right to suspend any forest activity **at any time**, if it is deemed unsafe due to an anticipated high fire danger.

## ***Fire Prevention at Forest Operations – Operation Shutdown Requirements***

### **(7) WEATHER MONITORING EQUIPMENT**

Fire Weather Evaluators in the field will require appropriate instruments. These can be digital or “bulb” type. Digital instruments must be calibrated annually and carry a certificate to verify this has been done. (Suppliers should be able to organise calibration).

#### **(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.

#### **Wind speed**

Fire Weather Evaluators may use a cup anemometer or digital wind meter

#### **(b) 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.

#### **(c) Beaufort Scale**

Fire Weather Evaluators are to use the Beaufort Scale applicable to forest operations (as printed in the Fire Weather Evaluator’s Logbook)

#### **(d) Logbook**

A fire weather observation recording logbook which has columns to record: Date; Time; Local Drought Factor; Temperature; Relative Humidity; Wind Speed (km/hr); Fire Danger Index and Observer. It also outlines the recommended procedures and instruments to use when recording these parameters

#### **Note**

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

# Forest Industry Fire Preparedness & Equipment Minimum Requirements

Custodian: - FIFMC

Authorised by: Forest Industry Fire Management Committee

Date of Audit:.....Name of Auditor:.....

Contractor:.....Company:.....

Location:.....Operation Type:.....

For each item below, tick the “Yes” or “No” boxes or write N/A and write in “Comments” as appropriate.

	Operation Type										
	Harvesting					Other					
	Conventional (including thinning)		Cable Suspended <input type="checkbox"/> or Ground Haul <input type="checkbox"/> (tick)		Road Construction		Site Preparation				
Item	Y	N	Y	N	Y	N	Y	N	Y	N	Comments
<b>For ALL High Risk Operations. Low Risk Operations exempt</b> (eg. pasture establishment, gravelling, pruning etc)											(Site preparation includes spot cultivation, excavator heaping, firebreak construction and maintenance etc)
No of persons on site with current competency in Bushfire Awareness (minimum 2 people for harvesting and 1 for other operations)											Enter number of persons
Full 300 l water tank and means to move it											
1000 l of stored water on site for cable ops, and 300 l in a movable tank											
Do movable water tanks have fixing points suitable to attach lifting chains or strops											
Centrifugal pump (self – priming)											
60m of 19mm or greater hose, nozzle, fittings											
300m of 38mm hose (for cable ops)											Optional for Suspended Cable
9 litre extinguisher or Knapsack at tailhold or clear ground 2m radius											
Hose, fittings, nozzle in operational condition											
Support Vehicle to include at least 1 rakehoe and 1 knapsack or fire extinguisher on board											
2 Rakehoes, grubbing hoes or pulaskis											
Days since last practice session											Enter number of days
9 lt water with each chainsaw/machine #											# See note at foot of table
Number of Fire Weather Evaluators (minimum of 1 on all operation types)											Enter number of Evaluators
Fire Weather Evaluator checked +											+ See note at foot of table
Masons hygrometer & correct RH tables, or, Sling psychrometer & correct RH tables											
Electronic weather meter											
Calibration completed as per manufactures specifications (date completed sticker)											
Auditor checked accuracy of readings											Use Sling Psychrometer
Within +/- 5% accuracy of Auditors readings*											* See note at foot of table
Windspeed meter?											N/A if have electronic meter
Beaufort Scale Description Sheet											
McArthur Fire Danger Meter											
Fire Weather Evaluators Log Book											
No of Stihl 066 Magnum chainsaws on site											Enter number of saws
Exhaust baffle plate fitted to each 066											
Faller has working radio comms											

**Notes**

# 9 litres can include knapsacks or charged air-water extinguishers, as specified under Regulation 8 *Tasmanian Fire Service (Miscellaneous) Regulations 2007*. Must be within 100m of saw or on associated machinery. Additional to any dry powder or chemical extinguishers which may be specified under other legislation for machinery protection.

+ Fire Weather Evaluator must demonstrate ability to conduct a weather recording and calculate fire weather readings.

\* Allowance of 5% of auditors reading of Temp & RH (eg. Auditor reading = 30% RH thus Contractor allowable range = 28.5% to 31.5% RH)

**Any Additional Comments?:**    Yes / No            (Use reverse side for comments)