

## WHAT IS A BUSHFIRE?

Bushfire is a term used commonly in Australia to describe fires burning in natural vegetation, including (but not limited to) in a forest, a shrub land, a grassland, a crop or pasture or a tree plantation. They can start suddenly and move quickly, affecting large areas. Bushfires are often described in terms of their rate of spread (metres or kilometres per hour) and the size of their flames.

## HOW DO BUSHFIRES START?

Like all fires, a bushfire needs fuel, oxygen and an ignition source to start. Common ignitions for a bushfire are lightning, accidental ignition and arson. While many fires start due to arson, Western Australia is also prone to dry lightning, creating fires in remote regions, where fire fighting can be difficult. Fire intensity and the speed at which a bushfire can spread are dependent on key factors:

<b>Fuel Load</b>	Generally, the greater the fuel load, the more intense the fire.
<b>Fuel moisture</b>	Dry fuel will burn faster whereas moist fuel may not burn at all.
<b>Temperature</b>	The higher the ambient temperature, the closer the fuel is to its ignition point, therefore it is more likely a fire will start.
<b>Relative Humidity</b>	Dry air promotes a more intense fire than moist air.

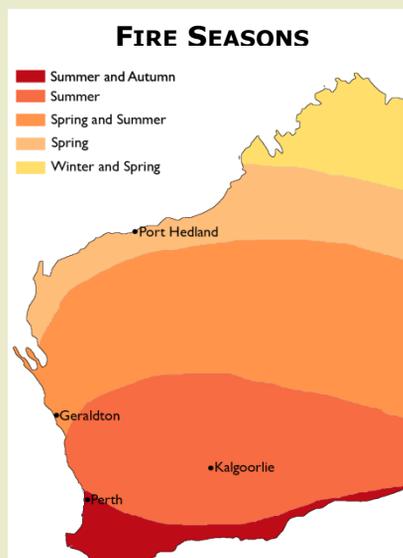
Wind speed and slope angle can also influence fire behaviour.

## WHERE DO BUSHFIRES OCCUR?

Bushfires occur right across Western Australia; however the areas most prone to fire are those with high fuel loads such as the Southwest and the Kimberley.

## WHEN DO BUSHFIRES OCCUR?

The fire season varies across the state. The northern fire season occurs between June and October, during the dry season, while the southern season occurs during the long hot summer between November and April.



## Examples of notable bushfires in WA:

- **1961 – Dwellingup**  
Almost all original wooden structures destroyed  
134,000ha burnt
- **2007 – Boorabbin NP**  
3 deaths  
39,630ha burnt
- **2009 – Toodyay**  
38 homes destroyed  
4 homes damaged  
>2,900ha burnt
- **Feb 2011 – Roleystone**  
12 injured  
39 homes damaged  
71 homes destroyed  
1,540ha burnt
- **Nov 2011 – Margaret River**  
Hundreds evacuated  
39 homes destroyed  
3,400ha burnt
- **Jan 2014 – Parkerville**  
1386 evacuated  
57 homes destroyed  
650ha burnt
- **Feb 2015: Northcliffe and Lower Hotham**  
Several evacuated  
2 homes destroyed  
150,000ha burnt

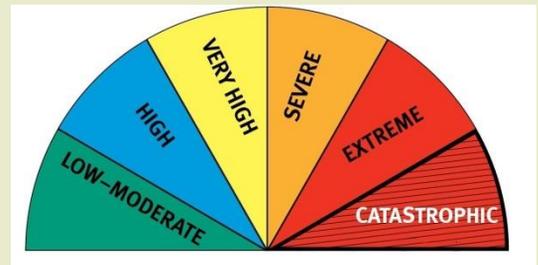
\*All numbers are approximate only.

## FIRE DANGER

Low and unreliable rainfall, coupled with hot air and warm temperatures lower the moisture content of vegetation, increasing the potential speed of a fire, particularly in high winds. In addition, extended periods of dry weather that follow a period of good rainfall also present a high fire danger as the rainfall is likely to have encouraged growth of vegetation. This vegetation then dries and cures, increasing fuel for the fire.

## FIRE DANGER RATING

The Fire Danger Rating (FDR) is based on forecast weather conditions and indicates the threat of bushfire on a given day. The fire danger rating goes from low-moderate, right through to catastrophic and with each rating, the fire behaviour and potential impacts may vary.



## WHAT ARE THE IMPACTS OF A BUSHFIRE?

While the impacts of bushfire are typically geographically limited, the impacts can be severe. Loss of life and damage/destruction of property caused by the fire may occur within the fire ground. Further afield, the impacts of smoke on health and transport can be severe. In addition economic impacts often result from recovery costs required to repair infrastructure as well as knock-on economic effects due to the closure of roads, airports and other key infrastructure and services.

## WHAT CONTROLS ARE EFFECTIVE?

- Physical Controls** A firebreak can be cut with earth moving equipment, reducing fuel and vegetation connectivity, so the fire cannot spread as rapidly. consequently the bushfire intensity.
- Prescribed Burning** Pre-emptive burning, carried out when the fire risk is low, removes fuel, reducing bushfire intensity.
- Back Burning** The use of secondary fire to remove fuel ahead of the primary fire.
- Water Bombing** Water and other agents dropped from fixed wing or rotor aircraft to douse the fire and hotspots.
- Land use planning** The use of regulation, which prevents building in bushfire prone areas or ensuring vegetation is clear from built up areas.

## More information can be found at:

[www.dfes.wa.gov.au](http://www.dfes.wa.gov.au)    [www.geoscience.gov.au](http://www.geoscience.gov.au)  
[www.dpaw.wa.gov.au](http://www.dpaw.wa.gov.au)    [www.bom.gov.au](http://www.bom.gov.au)