

BUSHFIRE

Background information

Causes of bushfire

A bushfire or wildfire is an out-of-control fire, which may have been lit deliberately or accidentally, or may have been started by natural causes. With the expansion of homes and businesses into the so-called wildland-urban interface, the threat of bushfire to properties and lives continues to increase.

According to the US Department of the Interior National Park Service, as many as 90% of bushfires are caused by people; 10% are from natural causes.¹ In the Australian context, some 26% of fires in Victoria have been attributed to lightning strikes, nearly 70% of the remaining fires being attributed to human agency.²

Human causes of bushfire include:

- Arson
- Unsafe fires or fires (such as campfires) left unattended
- Discarded cigarettes/matches
- Burning of debris

- Sparks from equipment and/or exhausts
- Power lines arcing
- Accidents.

Natural causes of fire include:

- Lightning strikes
- Sparks from rockfalls
- Spontaneous combustion
- Lava.

Bushfires caused by lightning

Lightning has two components – leaders and strokes. The leader is a probe sent from the cloud, and the strokes are the return streaks of light that create the bolt or flash that we are familiar with.

There are two types of lightning, known as hot lightning and cold lightning. Cold lightning is a return stroke of intense electrical current that lasts only a short time; hot lightning is the reverse: it has lower voltage but may last for a longer period of time.

Bushfires are generally associated with hot lightning of unusually long duration.

Secondary impact of bushfire

It is important to be aware of the potential long-term (secondary) effects of bushfires, which may include:

- Exposure of bare ground and loss of vegetation, leading to or increasing erosion and landslides
- Introduction of invasive species
- Changes in water quality
- Higher risk of flood; increased flow of debris
- Smoke and pollutant-related health effects
- Destruction of community infrastructure
- Destruction of cultural and economic resources.

Everyday bushfire safety measures

- Be aware of your surroundings, the conditions (hot and dry conditions being the most dangerous for bushfires) and the potential bushfire hazard.
 - Follow local fire laws and observe burning restrictions.
 - Notify local authorities before burning debris in a wooded area and obtain a permit if necessary.
 - Do not drop cigarettes and matches on the ground.
 - Have a fire extinguisher or garden hose on hand when burning debris.
 - Make sure that fire vehicles can get to your place of business.
 - Clearly mark all driveway entrances. Display your name and street number and install non-combustible street signs.
- Display prominently fire emergency telephone numbers.
 - Plan several escape routes away from the property.
 - Talk to your neighbours, landlord/business owner and your local authorities about bushfire safety and risk.
 - Use the Liberty [Bushfire action plan](#) and [Bushfire emergency kit checklist](#) to prepare in advance for a bushfire.

Are you bushfire ready?

Test your bushfire readiness using this online [Bushfire ready assessment tool](#).

Want more information?

1 <https://www.nps.gov/fire/wildland-fire/learning-center/fire-in-depth/wildfire-causes.cfm>

2 <https://www.cfa.vic.gov.au/documents/20143/202133/Riparian-fire-risk-report-170302.pdf/b165acae-13c1-15dd-c68f-ae90a41aff53>

<https://disastersafety.org/wildfire/>

<http://sentinel.ga.gov.au>

http://www.cfs.sa.gov.au/site/prepare_for_bushfire.jsp