



# Floods and storms after fires

## How does fire affect the environment?

Bushfires have a significant impact on the landscape due to the loss of vegetation caused by fire. In some cases, fires can leave the landscape as just ash and rockbed, with little or no vegetation.

The reduction or loss of vegetation changes how floods and storms affect the environment in a number of ways, including:

- Trees that have been burnt or damaged by heat and fire can become unstable and are more prone to falling in windy or wet conditions.
- The lack of vegetation on the ground, and the potential change in soil properties, can increase the runoff of water during rainfall, changing how floods behave.
- During heavy rain, runoff may cause flash flooding. Flash floods are fast flowing and can carry dangerous debris including boulders, branches and trees, especially after fires when this debris can be easily dislodged.
- Flash floods after fires are more likely to cause erosion of river beds and banks due to an increase of debris. Flash flooding is also more likely to damage or wash away roads and bridges after fires because of the debris.
- Rocks and soil are more easily dislodged, with the potential to trigger a landslide in wet conditions.

## How long will the effect last?

Depending on the intensity of the fire, the potential for damage from storms and floods in the area can remain high for over two years. The effects of floods and storms in the area will remain unpredictable as vegetation regrows.

## What should I look out for?

Fire damaged trees are more prone to falling in high winds or wet conditions. If you have burnt trees in close proximity to your house, you may need to consider having these trees inspected.

If your house is near or on low-lying land near a creek or river, you need to be aware of the increased risk of flooding after fires.

After fires, floods can bring a greater amount of soil, trees and rocks blocking waterways and causing erosion. In some cases, blocked waterways can change the expected flow of floodwater.

## Staying safe

There are a few simple steps you can take now to reduce the impact of storms and floods after fires:

- Avoid walking in burnt areas or along stream banks during or directly after heavy rainfall due to the risk of flash flooding.
- Do not drive in adverse conditions such as storms and heavy rain. Follow any cautionary road signs including detours.
- Clean your gutters, downpipes and drains to ensure they are not blocked.
- Trim any branches overhanging your property that could fall.
- Tidy your yard and ensure it's free of any loose objects.
- Prepare a home emergency kit and a home emergency plan, visit [ses.wa.gov.au](https://www.ses.wa.gov.au) for more information.
- Call Triple Zero (000) for a life-threatening emergency.
- Call 132 500 for the SES if you require emergency assistance during a flood or storm.

## Landslides

A landslide can occur after fires followed by periods of heavy rain, when the ground is soft and at its heaviest, causing a slope to collapse. Land slippage can result in significant damage to buildings and infrastructure and is a risk to life, both on and below the landslip area.

Vegetation helps to reduce the risk of landslides by drawing moisture out of the ground, and the roots of plants, particularly trees hold the ground together. The loss of forest cover due to fire has a destabilising effect on the soil, when extensive root systems that bind the soil have largely gone and excess water formerly used by trees now remains in the soil.

The risk of landslides happening in your area depends not only on the slope of the land and whether or not there are trees, but also on the structure of the soils and rocks below the surface.

## Warnings

Flood and storm warnings are issued by the Bureau of Meteorology. State Emergency Service (SES) distributes these warnings with further information about the potential impacts in the local area.

Storms can occur at any time of the year but are more common from October to May in Victoria. Storm warnings are issued in two major categories:

- **Severe Thunderstorm Warnings** - Thunderstorms are classified as severe, due to their potential to cause significant localised damage through wind gusts, large hail, tornadoes or flash flooding.
- **Severe Weather Warnings** - These warnings are issued when severe weather is expected that is not directly related to severe thunderstorms or bushfires. Examples of severe weather include damaging winds and flash flooding.

**Flash Flooding** happens quickly. There may be little or no warning. The arrival time or depth of a flash flood can usually not be predicted.

**Remember, you may not receive any official warning.**

**Never wait for a warning to act.**

## Where are warnings issued?

Warnings are issued through the following channels:

- **Emergency broadcasters** - through television and radio stations
- On the Bureau of Meteorology website at **bom.gov.au**
- On the SES website at **ses.wa.gov.au**
- On the VicEmergency website at **emergency.wa.gov.au**
- Through SES social media channels including **facebook.com/wases** and **twitter.com/waseswarnings**
- In an emergency, you may receive a text message to your mobile or a voice message to your landline via the **Emergency Alert** system. If you receive an Emergency Alert pay attention and act.



## During a flood

- **Never** drive, ride, swim or walk through floodwater.
- Floodwater can be deep and damage roads and bridges, especially after fires.
- **Do not** let your children play or swim in floodwater. It is dirty, dangerous and deadly.
- Tune in to your emergency broadcasters.
- Stay away from all waterways including drains and culverts.
- Stay away from fallen power lines – electricity travels easily through water.
- Be prepared to act quickly.
- In a **flash flood**, If you decide to leave, do so **well before** flooding occurs. Leaving early before flooding occurs is always the safest option. You may decide to shelter with neighbours, family or friends in a safer area.
- **Do not** attempt to evacuate through floodwater. If you do not leave early enough and become trapped by rising floodwater inside your home or business, stay inside your building and seek the highest part e.g. a second storey. Stay there and call Triple Zero (**000**) if your emergency is life-threatening.
- Call **132 500** for the SES if you require emergency assistance during a storm or flood.

## During a storm

- Stay indoors and away from windows.
- If driving, pull over clear of traffic, waterways, powerlines and trees and turn on your hazard lights.
- If outdoors, seek shelter away from drains, causeways, gutters, creeks, trees and powerlines.
- Where possible, seek shelter in a building or vehicle.
- **Never** drive, ride or walk through floodwaters. This is the main cause of death during storms and floods.
- Call Triple Zero (**000**) for a life-threatening emergency.
- Call **132 500** for the SES if you require emergency assistance during a flood or storm.

## More information

Visit [ses.wa.gov.au/floodsafe](https://ses.wa.gov.au/floodsafe) for more information about flood safety.

Visit [ses.wa.gov.au/stormsafe](https://ses.wa.gov.au/stormsafe) for more information about storm safety.