

Local Flood Guide

Ballarat City

Understand, prepare, and respond effectively to your flood risk.

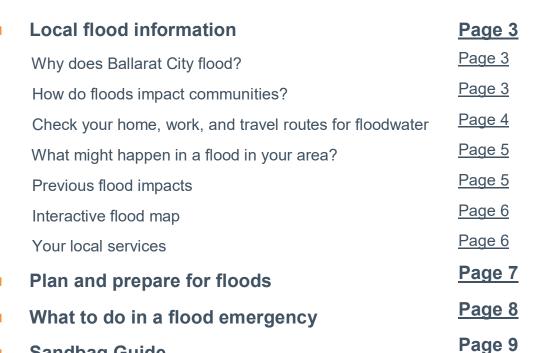








Contents







Victorian State Emergency Service acknowledges Aboriginal Traditional Owners of Country throughout Victoria and pays respect to their cultures and Elders past and present.

Disclaimer: Victoria State Emergency Service assumes no responsibility or liability for any errors or omissions for any of the content in this document.

Content reviewed: October 2025

Sandbag Guide



For more information visit: ses.vic.gov.au/plan-and-stay-safe





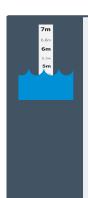
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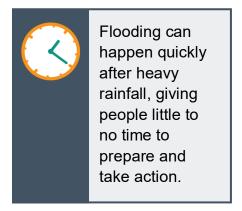
Local flood information



There have been 4 significant flood events in Ballarat City between 1988 and 2011.



The most severe flood event in living memory was in 1991 when 76mm of rain fell in just 2 hours.



Why does Ballarat City flood?

Heavy rainfall can cause **flash flooding**. This can happen quickly and many not receive an official warning. Although these floods only last a short time, they can cause severe damage.

- Flooding in Ballarat CBD is usually caused by very heavy rainfall from local thunderstorms. This type of flooding can happen quickly and you may not receive an official warning. Although these floods only last short time, they can cause severe damage.
- Gnarr Creek may quickly rise, causing water to overflow it's banks near Doveton Street.
- The floodwater then flows down Market, Mair and Grenville Streets before reaching and flooding Bridge Mall.
- Gnarr Creek rises very quickly during major storms and can take as little as two hours to reach highest levels.
- In areas with higher development, very little of the water can be absorbed into the ground.



How do floods impact communities?

Even if your home or workplace stays dry, floods can impact you in many ways.



Buildings flooded



Road closures



Drinking water supply and quality affected



Power outages



Mobile and internet network outage

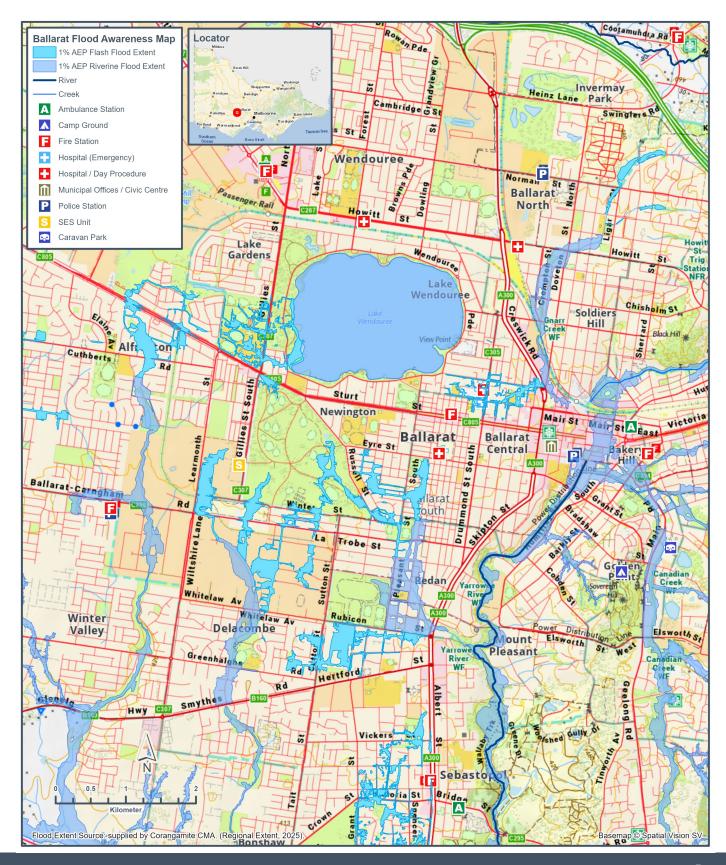


Sewage overflows inside building

Check your home, work, and travel routes for floodwater

If this map shows potential flood risk for you, ensure you take action to **plan and prepare for floods**. See <u>page 8</u> for more information.

- This map shows the area likely to flood in a significant flood event.
- This is referred to as a 1% Annual Exceedance Probability (AEP), which means there is a 1% chance of this size flood (or greater) happening in any year.



What might happen in a flood in your area?

Although no two floods are the same and the environment is constantly changing, the below table provides an idea of the amount of rainfall that could cause flooding in the area.

- Before a flood: Use the rainfall details in the table to help you decide when you will need to act to protect yourself and your property in a flood event. The rainfall in the CBD may be quite different than recorded at the Ballarat Aerodrome given it is over 10 kilometres away from the CBD.
- During a flood: Use the predicted rainfall and warning information to understand what the potential impacts may be for you and your community.

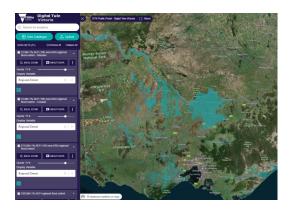


Rainfall (millimetres)	Potential impacts and previous flood events^
76mm in 2 hours	 1991 flood event Flood level shown on map, see page 4. 1991 was the largest flood for Gnarr Creek. A significant number of buildings were impacted in Lydiard Street and Bridge Mall areas. Access may be cut to most roads (greater than 0.5m), including Main Road, Bridge Mall, Lydiard Street and Doveton Street.
118mm in 12 hours	Rainfall level causes major impacts
148mm in 48 hours	 1933 flood event The Yarrowee River flooded. The White Horse Bridge across the Yarrowee River was destroyed.
100mm in 48 hours	 1988 flood event The Gnarr Creek flooded. Buildings were impacted in Creswick Road, Lydiard Street North, Mair and Curtis Streets.
84mm in 12 hours	Rainfall level causes moderate impacts
71mm in 12 hours	 More extensive flooding may impact the Ballarat Bowling Club and the Ballarat Croquet Club next to the Eastern Oval. Minor flooding may impact Steinfeld Street.
62 mm in 12 hours	Rainfall level causes minor impacts
100mm in 72	1909 flood event
hours	Yarrowee River flooded but most damage was as a result of the storm.2011 flood event
31mm in 12 hours	 Businesses in Mair Street and Bridge Mall were impacted by floodwater and storm damage.
	■ Flooding may cut access to Havelock and Anderson Streets.

^{*}The rainfall measurement is recorded at the Ballarat Aerodrome Rainfall Gauge.

[^]This table includes information from previous flood events and flood studies, which are scientific models used to predict impacts at different flood heights and flows.

View the interactive flood map on Digital Twin Victoria (DTV)



The <u>Digital Twin Victoria Public Portal</u> brings together 2D, 3D and live data in a single online place for everyone to use. The portal hosts some flood mapping data.

Use the map to zoom in on where you live, work and travel to see if it's likely to be affected in a flood event.



In a flood emergency, stay informed through <u>VicEmergency</u>, see <u>page 8</u> for more information.

Your local services

Catchment Management Authority

For general advice about flooding and controls on planning scheme amendments.

Corangamite CatchmentManagement Authorityccma.vic.gov.au | 1800 002 262

Local Council

For relief support after a flood event and general land use planning.

City of Ballarat

ballarat.vic.gov.au | 03 5320 5500



Stay safe by never driving through floodwater. It can take just 15cm of flowing water to float a car, that's the height of an average pen.





Plan and prepare for floods



How to stay informed

VicEmergency is Victoria's source of emergency information and warnings.

- Set-up a watch zone for your area for alerts when warnings are issued.
- Learn about the three different warning levels.





Make an Emergency Plan

Use information from your Local Flood Guide and your Catchment Management Authority, to help you decide;



- What you will do in a flood emergency
- When you will do it
- Who you will inform



Red Cross RediPlan is a free tool that helps you create a simple emergency plan that supports the flood actions you have chosen.

- Visit <u>redcross.org.au/prepare</u>
- Download the <u>Get Prepared</u> app







You may need to stay safe for 72 hours in a disaster before help arrives. Make sure you have safe drinking water, food, and any special needs or medications for all family.



There will be extra items to be added to your emergency kit in an emergency like clothes, a phone and charger.



Watch a video on how to get your Emergency kit ready.

voutu.be/XavLnKDMkNo



Reduce impacts to your property

- Keep gutters and drains clear of debris including leaves and any other items.
- Check your building and contents insurance, what kind of flooding does it cover?
- Move your valuable possessions up high.
- Back up important files and documents to a cloud storage or USB kept elsewhere.
- Identify higher ground on or around your property, away from the danger area.
- Consider buying sand and sandbags ahead of time, refer to our Sandbag Guide for more information.









What to do in a flood emergency

When to call VICSES





Flood emergency assistance call VICSES 132 500



If life threatening call triple zero 000

Stay Informed

VicEmergency

Emergency warnings will provide information on what is happening and advice of what you should do.

You may not receive an official warning before a flood.



VicEmergency app emergency.vic.gov.au





1800 226 226

vicemergency @vicemergency

Set-up a watch zone for alerts for your area.

Bureau of Meteorology



Monitor rainfall, river levels, weather forecasts/warnings. bom.gov.au/vic/flood/corangamite.shtml

Emergency broadcasters



Radio | ABC 107.9 FM , 584 AM and 774 AM, 102.3 FM, 103.1 FM

TV | Sky News

If you expect floodwater at your property



Bag it

Sandbag doorways and low-lying windows to slow floodwater entering your home.



Block it

Block toilets, bath and drains using a sandbag ideally placed inside a plastic rubbish bag.



Lift it

Take your emergency kit and add the items below:

Put your valuables and electrical items as high as possible. Turn off power, gas, and water at the mains.



Leave

- Leave before the flood arrives.
- Check warnings from VicEmergency for information like evacuation or relief centres, and road closures.
- Travel to the home of family or friends who are in a safe location, away from the flooded area.

Never drive through floodwater



A Large 4WD can be moved by water only 45cm deep.



A small car can be moved by water only 15cm deep.





For more details and other tips, visit: ses.vic.qov.au/flood



Sandbagging

Sandbags won't stop the water completely, but can reduce the amount of water entering your home.

How do I fill a sandbag?

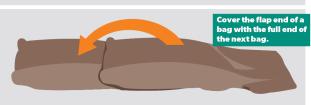
- Only use sand to fill hessian bags. Do not use dirt.
- Only fill sandbag two-thirds full.
- Do not over fill the sandbag as it will be too heavy to carry.
- Do not tie the top of the sandbag.
- Take care when filling and lifting the sandbag, to avoid injury.

Flap end 2/3 full Sand

How do I lay sandbags?

- Lay sandbags like brickwork. Stagger rows so that the joins do not line up.
- Start at one end and work to the other end.
- Ensure the unfilled part of the bag is covered by the next bag.
- Tuck flap under the bag at the end of the row.
- If the sandbag wall is going to be more than five (5) bags high, you will need to lay two (2) rows wide.







Where do I place the sandbags?

Place sandbags in plastic bags to cover drainage holes in home (e.g. showers, toilets, sinks) to stop back flow of water.

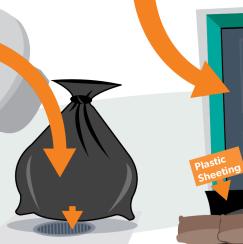
Place a small wall across doorways, at least the height of the expected water level. Be careful not to trap yourself inside.

If available, plastic sheeting may be used under sandbags to reduce the seepage.

What do I do once I have finished with the sandbags?

- Sturdy gloves should be worn when handling wet sandbags as they can contain chemicals, waste and diseases.
- Sandbags that have been in contact with floodwater need to be thrown away.
- Contact your local council to find out how to dispose of your sandbags safely.







Sandbags and sand

Preparing your home

Having sandbag supplies ready can assist you before a flooding emergency occurs.



What supplies do I need to sandbag my home?

- Sandbags
- Sand
- Plastic sheeting
- Gloves and safety goggles
- Shovel and hand scoop

Where can I purchase these supplies?

- Many sandbag supplies can be purchased from hardware stores or garden centres.
- VICSES do not routinely supply sandbags to households.
- During floods, sandbag distribution points may be established in flood-affected areas.





How many sandbags will I need and how much sand?

- Most homes can be protected by less than 25 sandbags.
- The number of sandbags will depend on your local flood risk and availability.
- Sandbags are filled 2/3 full which requires around 15-20kgs of sand per bag.

How do I store my sand and sandbags?

- Filled sandbags only have a short shelf life.
- It is recommended to store sandbags empty.
- Sandbags should be stored in a cool dry area away from UV light.
- Sand should be kept dry and can be stored in water resistant containers or under a tarp.
- Sand is heavy ensure it is stored so it can be moved safely.





When should I sandbag my home?

- You are best placed to decide if there is a need to sandbag your home, based on local knowledge and past flood events.
- Monitor your local conditions. Stay up-to-date with weather forecasts and warnings by downloading the **BOM Weather** and **VicEmergency** apps, or call the VicEmergency Hotline on 1800 226 226.
- If you think you are at risk, do not wait for an official warning to act.