



# Southbank

## Local Flood Guide

Flooding information for Southbank



For flood emergency assistance call  
**VICSES on 132 500**





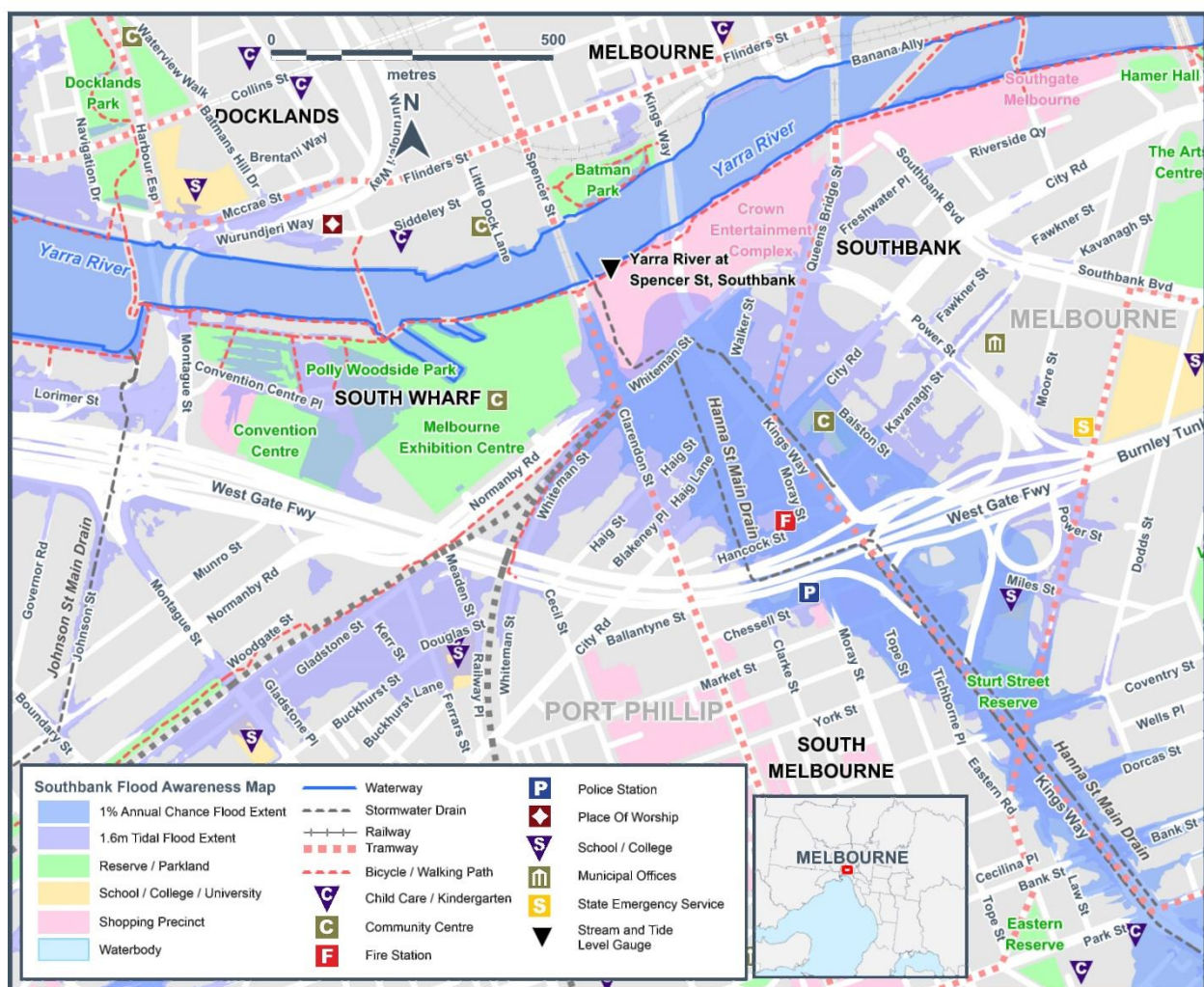
## Southbank

This guide focusses on one of Melbourne's primary business' areas, Southbank. It is home to numerous cultural and entertainment facilities. Southbank stretches from St Kilda Road to Clarendon Street along the banks of the Yarra River, leaving it susceptible to riverine flooding as well as flash flooding.

The area is prone to flooding during heavy rainfall events that can result in road closures and effect private and commercial properties. This guide provides an overview of the risk of flood and includes information that can help you to be more prepared in case of an emergency.

This guide provides an overview of the localised risk of flood and includes information that can help you be more prepared in case of an emergency. It covers key agencies that can provide assistance, where to find flood warning and storm information, helpful websites, and practical tips for packing an Emergency Kit.

## Map of potential flood extent



The map above shows the possible flood impact of a 1 in 100-year flood (1% chance of occurring in any given year) within the Melbourne CBD area

### Disclaimer

This map publication is presented by Victoria State Emergency Service for the purpose of disseminating emergency management information. The contents of the information have not been independently verified by Victoria State Emergency Service. No liability is accepted for any damage, loss or injury caused by errors or omissions in this information or for any action taken by any person in reliance upon it. Flood information is provided by Melbourne Water



## Are you at risk of flood?

Most areas within the municipality of Melbourne experience some level of flooding during an extreme storm event. Suburbs with buildings and street systems constructed prior to the 1970's tend to experience greater impacts.



The Southbank area is prone to flash flooding caused by high intensity, short rainfall events, which can occur as a result of storms as well as risks of riverine flooding, caused by prolonged rainfall along the Yarra River catchment which can cause the Yarra River to overflow into the surrounding areas. A significant number of businesses and residential building areas are at risk of flooding.

In highly developed areas like Southbank, a majority of rainwater will run off to lower lying areas instead of soak into the ground. During high intensity rainfall, this run-off can lead to flash flooding. Flash flooding occurs with little warning, only lasts a short time but can cause severe localised damage.

Within Southbank, City Road, Clarendon Street and Kings Way are particularly susceptible to flooding during storm events. Along these roads and in the surrounding areas, many ground floor businesses and residential buildings are expected to be flooded and tram and traffic along these routes are expected to be affected as the roads may be closed for a period.

## Did you know?

- On the 15<sup>th</sup> of December 2018, a storm bringing torrential rain to Southbank and the Melbourne CBD caused wide-spread flash flooding. This resulted in water at car door level on some streets and disruptions to public transport.
- On 23<sup>rd</sup> June 2014, extreme winds of over 100 kilometres per hour forced tidal waters back up the Yarra River, resulting in riverine flooding in Southbank that saw footpaths and bike lanes underwater and the river coming close to touching the bottom of the Queens Street Bridge. Bars and restaurants along the bank were inundated with water when the river broke its banks.
- Other significant flooding occurred in February 2011, March 2010, July 2008, December 2007, January 2004 and January 1998.

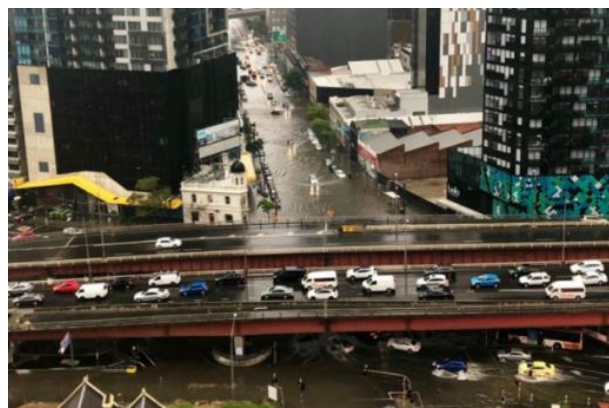


**No two floods are the same. Floods like this or worse could occur again.**

**If you live in a low-lying area you may be at risk of flooding or need to detour around flooded areas.**

**Knowing what to do can save your life and help protect your property.**

If you require assistance during a flood or storm, contact SES on 132 500.



City Road at Kings Way, Southbank 6th November 2018





## Yarra River flood levels at the Southbank Gauge

When the Bureau of Meteorology (BoM) issues Flood Warnings they include a prediction of the flood height at Southbank Gauge at Spencer Street Bridge. While no two floods are the same, the following table can give you an indication of what you could expect at certain flood heights, including when your access may be cut off and when your property may be affected.

Height (metres)	Impact/level
1.6 metres	Major flood level
	<p>Community infrastructure that may be flooded includes:</p> <ul style="list-style-type: none"> <li>Victorian College of the Arts Secondary School on Miles Street, Southbank likely has access/ egress issues with flooding on Miles Street and Sturt Street</li> </ul> <p>Essential Infrastructure Impacted</p> <ul style="list-style-type: none"> <li>Southbank MFB Station on Moray Street, Southbank likely has access issues with flooding in surrounding roads</li> <li>Tram Services on Routes 96, 109 &amp; 12 likely affected by flooding along Clarendon Street, Southbank at Stops 124B, 125 &amp; 126</li> <li>Tram Services on Route 55 likely affected by flooding along Queens Bridge Street and Kings Way, Southbank at Stops 12, 122A, 113, 114 &amp; 115</li> <li>Tram Services on Route 1 likely affected by flooding along Sturt Street, Southbank at Stop 19</li> </ul>
	63 Properties are at risk of flooding
	<p>Flood water at depths of 300 millimetres or greater may occur on the following roads:</p> <p>Hanna Street Drain</p> <ul style="list-style-type: none"> <li>Sturt Street, Southbank between Miles Street and Grant Street</li> <li>Moore Street, Southbank</li> <li>Miles Street, Southbank</li> <li>Kings Street, Southbank between Westgate Fwy Underpass and Coventry Street</li> <li>Moray Street, Southbank between City Road and Westgate Fwy Underpass</li> <li>Hancock Street, Southbank</li> <li>Catherine Street, Southbank</li> <li>Clarke Street, Southbank with significant levels ( &gt;800m) possible</li> <li>Haig Lane, Southbank</li> <li>City Road, Southbank between Clarendon Street and Balston Street</li> <li>Balston Street, Southbank</li> <li>Kavanagh Street, Southbank</li> <li>Queens Bridge Street, Southbank</li> <li>Whiteman Street, Southbank between King Street underpass and West Gate Fwy underpass</li> <li>Clarendon Street, Southbank at Whiteman Street</li> </ul>
1.3 metres	Moderate flood level
	<p>Community infrastructure that may be flooded includes:</p> <ul style="list-style-type: none"> <li>Victorian College of the Arts Secondary School on Miles Street, Southbank likely has access/ egress issues with flooding on Miles Street and Sturt Street</li> </ul> <p>Essential Infrastructure Impacted</p> <ul style="list-style-type: none"> <li>Southbank MFB Station on Moray Street, Southbank likely has access issues with flooding in surrounding roads</li> <li>Tram Services on Routes 96, 109 &amp; 12 likely affected by flooding along Clarendon Street, Southbank at Stops 124B &amp; 125</li> </ul>



Height (metres)	Impact/level
	Tram Services on Route 55 likely affected by flooding along Queens Bridge Street and Kings Way, Southbank at Stops 12, 122A, 113, 114 & 115
	40 Properties are at risk of flooding
	<p>Flood water at depths of 300 millimetres or greater may occur on the following roads:</p> <p>Hanna Street Drain</p> <ul style="list-style-type: none"> <li>• Moore Street, Southbank</li> <li>• Miles Street, Southbank</li> <li>• Kings Street, Southbank between Westgate Fwy Underpass and Coventry Street</li> <li>• Moray Street, Southbank between City Road and Westgate Fwy Underpass</li> <li>• Hancock Street, Southbank</li> <li>• Catherine Street, Southbank</li> <li>• Clarke Street, Southbank</li> <li>• Haig Lane, Southbank</li> <li>• City Road, Southbank between Clarendon Street and Balston Street</li> <li>• Balston Street, Southbank</li> <li>• Queens Bridge Street, Southbank near Power Street</li> <li>• Whiteman Street, Southbank between King Street underpass and West Gate Fwy underpass</li> <li>• Clarendon Street, Southbank at Whiteman Street</li> </ul>
1.1 metres	Minor flood level
	<p>Community infrastructure that may be flooded includes:</p> <p>Yarra River</p> <ul style="list-style-type: none"> <li>• Yarra Promenade starts to flood</li> </ul>
1.2 metres	39 Properties are at risk of flooding
	<p>Flood water at depths of 300 millimetres or greater may occur on the following roads:</p> <p>Hanna Street Drain</p> <ul style="list-style-type: none"> <li>• Kings Street, Southbank between Westgate Fwy Underpass and Coventry Street</li> <li>• Moray Street, Southbank between City Road and Westgate Fwy Underpass</li> <li>• Catherine Street, Southbank</li> <li>• Clarke Street, Southbank</li> <li>• Haig Lane, Southbank</li> <li>• City Road, Southbank between Clarendon Street and Balston Street</li> <li>• Queens Bridge Street, Southbank near Power Street</li> <li>• Whiteman Street, Southbank between King Street underpass and West Gate Fwy underpass</li> <li>• Clarendon Street, Southbank at Whiteman Street</li> </ul>



## Staying Informed and Further Information

■ Current warnings (VicEmergency)	<a href="https://emergency.vic.gov.au">emergency.vic.gov.au</a>	1800 226 226
■ Bureau of Meteorology (BoM)	<a href="https://bom.gov.au/vic/warnings">bom.gov.au/vic/warnings</a>	1300 659 217
■ VicRoads Traffic	<a href="https://traffic.vicroads.vic.gov.au">traffic.vicroads.vic.gov.au</a>	
■ Emergency Broadcasters	ABC 774 AM SKY NEWS Television	
■ VICSES Social Media	<a href="https://facebook.com/vicses">facebook.com/vicses</a> <a href="https://twitter.com/vicsesnews">twitter.com/vicsesnews</a>	
■ Preparing for Flood Emergencies	<a href="https://ses.vic.gov.au/get-ready">ses.vic.gov.au/get-ready</a>	
■ Creating an Emergency Plan	<a href="https://redcross.org.au/prepare">redcross.org.au/prepare</a>	
■ Melbourne Water	<a href="https://melbournewater.com.au">melbournewater.com.au</a>	131 722
■ City of Melbourne	<a href="https://Melbourne.vic.gov.au">Melbourne.vic.gov.au</a>	9658 9658

**Life-threatening  
Emergency  
000**



# Flood warnings and emergency checklist




## Bureau of Meteorology Warnings

**Warnings** are issued by the Bureau of Meteorology (BoM) to tell people about possible flooding.

## Understanding Weather and Emergency Warnings

A **Flood Watch** means there is a developing weather pattern that might cause floods in one or two days. This service covers the whole state.

A **Flood Warning** means flooding is about to happen or is already happening. There are minor, moderate and major flood warnings. This service is only available where flood warning systems are in place.

 A Minor Flood Warning means floodwater can:	 A Moderate Flood Warning means floodwater can:	 A Major Flood Warning means floodwater can:
Spill over riverbanks and cover nearby low-lying areas.	Spill over riverbanks and cover larger areas of land.	Cause widespread flooding.
Come up through drains in nearby streets.	Reach above floor levels in some houses and buildings.	Many houses and businesses are inundated above floor level.
Cover minor roads paths, tracks, and low-level bridges.	Require evacuation in some areas.	Cause properties and whole areas to be isolated by water.
Affect backyards and buildings below floor level.	Affect traffic routes.	Closes major roads and rail routes.
		Require many evacuations.
		Affect utility services (power, water, sewage etc).

## Severe Thunderstorm Warnings

Thunderstorms are classified as severe when there is potential to cause significant localised damage through wind gusts, large hail, tornadoes, or flash flooding. Severe Thunderstorm Warnings are issued to the community by BoM.

## Severe Weather Warnings

These warnings are issued to the community by BoM 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

- Flash Flooding can occur quickly due to heavy rainfall. You may not receive an official warning.
- Stay informed- monitor weather warnings, forecasts and river levels at the [BoM website](#) and warnings through [VicEmergency](#).









## VICSES Warnings

VICSES utilises the VicEmergency app, website and hotline to distribute flood warnings and emergency information in Victoria. Communities can also access this information through VICSES social media channels and emergency broadcasters.

VICSES warnings aim to provide you with information to help you make good decisions to protect yourself and your family

The warning level is based on severity, conditions and the likelihood that the emergency could impact on the community.

WARNING LEVELS	
	<b>EMERGENCY WARNING</b> You are in imminent danger and need to take action immediately. You will be impacted. A Major flood warning usually fits into this category
	<b>WARNING (WATCH AND ACT)</b> An emergency is developing nearby. You need to take action now to protect yourself and others. A Moderate flood warning usually fits into this category.
	<b>ADVICE</b> An incident is occurring or has occurred in the area. Access information and monitor conditions. Can also be used as a notification that activity in the area has subsided and is no longer a danger to you. A Minor flood warning or Flood Watch usually fits into this category.

ADDITIONAL MESSAGES	
	<b>PREPARE TO EVACUATE/ EVACUATE NOW</b> An evacuation is recommended or procedures are in place to evacuate.
	<b>COMMUNITY INFORMATION</b> A newsletter containing updates for communities affected by an emergency. Can also be used as a notification that an incident has occurred but there is no threat to community.
	<b>EMERGENCY ALERT</b> During some emergencies, we may alert communities by sounding a local siren, or by sending an SMS to mobile phones or a voice message to landlines.

## Your emergency plan

Emergencies can happen at any time and with little warning. People who plan and prepare for emergencies can reduce the impact and recover faster.

Taking the time to think about emergency scenarios and making your own plan helps you to think clearly, have more control and make better decisions when an emergency occurs.



Visit [redcross.org.au/prepare](https://redcross.org.au/prepare) to develop your plan today.

- Remember, you may not receive any official warning. Never wait for a warning to act.
- Emergency assistance may not be immediately available.
- Be aware of what is happening around you to stay safe.





## Pack an Emergency Kit

Visit [Emergency Toolkit](#) for more information

Every home and business should have a basic emergency kit with supplies for 3 days.

**Check your kit regularly. Keep it in a high place. Make sure things work. Replace out of date items.**



### Tips:

- Large plastic zip-lock bags are useful for keeping your important documents and photos dry.
- You may also like to pack a book, earphones, a deck of playing cards or colouring books to help pass time, if you're required to wait in a Recovery Centre for an extended period.
- When a warning is issued, be ready to pack additional personal items such as medications, pet food and care products.

### When a warning is issued, have ready for use or pack into your kit:

#### I need to add:

Write your list here. Tick items as you pack them into your kit.

Special needs (eg, babies, elderly and people with a disability)	
Photos	
Family keepsakes	
Valuables	
Other	



## Emergency Checklist

- ☐ Check if your insurance policy covers flooding.
- ☐ Keep this list of emergency numbers in your mobile phone.
- ☐ Download the Vic Emergency app on your mobile phone.
- ☐ Put together an emergency kit and prepare a home or business.
- ☐ Emergency plan, see <https://www.redcross.org.au/prepare>



## Before Flooding

- ☐ Leaving early before flooding occurs is always the safest option. Evacuating through floodwater is very dangerous and you may be swept away.
- ☐ Stay informed- monitor weather warnings, forecasts and river levels at the <http://www.bom.gov.au> and warnings through [www.emergency.vic.gov.au](http://www.emergency.vic.gov.au)
- ☐ Secure objects likely to float and cause damage.
- ☐ Consider sand-bagging the property entrance doors, low windows and drains.
- ☐ Listen to the radio and check the VICSES website for information and advice.
- ☐ Go over your emergency plan. Pack clothing and other extra items into your emergency kit and take this with you if you evacuate.

## During Flooding

- ☐ Make sure your family members and neighbours are aware of what is happening.
- ☐ Conditions change rapidly; roads and escape routes can be covered or blocked.
- ☐ Put household valuables and electrical items as high as possible.
- ☐ Turn off water, gas and electricity at the mains.
- ☐ Seek shelter indoors, away from floodwater.
- ☐ If floodwater comes inside, move to a higher point such as a kitchen bench or second storey.
- ☐ Do not use lifts or escalators, as electrical systems may be damaged, and you risk electrocution.
- ☐ Stay away from trees, drains, low-lying areas, creeks, canals, culverts, and floodwater.

## Evacuating in Flooding

- ☐ Flood water is dangerous. Never enter floodwater. It can take just 15cm of water to float a car.
- ☐ Find alternative travel routes if roads or underpasses are flooded.
- ☐ Be aware of driving hazards, such as mud, debris, damaged roads and fallen trees. If driving conditions are dangerous, safely pull over away from trees, drains and floodwater.

## After Flooding

- ☐ For recovery information, contact your local council, visit - [emergency.vic.gov.au/Relief](http://emergency.vic.gov.au/Relief) page or call the VicEmergency Hotline (1800 226 226).
- ☐ Have all electrical and gas equipment professionally tested before use.
- ☐ Stay away from damaged and flooded buildings, fallen trees and powerlines and damaged roads until authorities advise it is safe to do so.
- ☐ Drive slowly, obey all road signs and never drive through floodwater.
- ☐ When cleaning, protect your health and safety. Wear strong boots, gloves and protective clothing and wash your hands and clothes regularly.

For VICSES emergency assistance,  
call **132 500**, or **Triple Zero (000)**  
in life threatening emergencies.