

Local Flood Guide

Riverine and flash flood information for the Seven Creeks and Castle Creek at Euroa and surrounding areas



RSL Memorial Park, 2017. Image by Michael Gouge



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







Euroa

Euroa is located at the foot of the Strathbogie Ranges on the Hume Freeway roughly midway between Melbourne and Albury. Two main creeks flow through the town: Seven Creeks and Castle Creek.

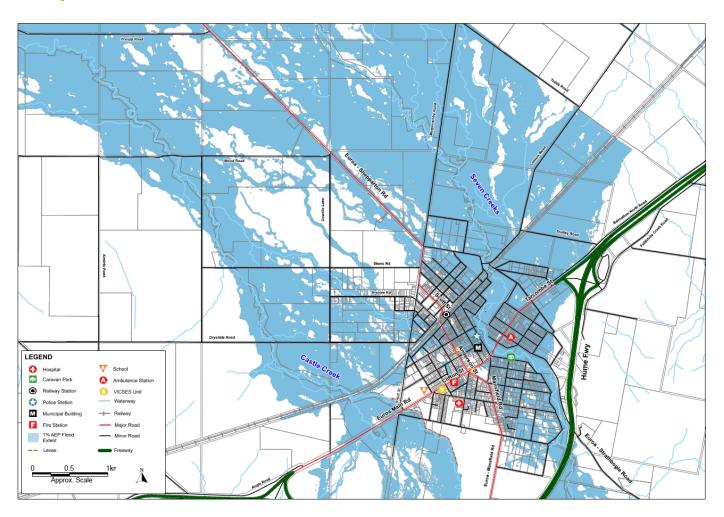
The larger Seven Creeks flows from near Strathbogie, through Euroa, then Miepoll and joins the Goulburn River south of Shepparton.

The Castle Creek flows from near Ruffy, passes on the south west edge of Euroa, then Molka and joins the Goulburn River north of Arcadia.

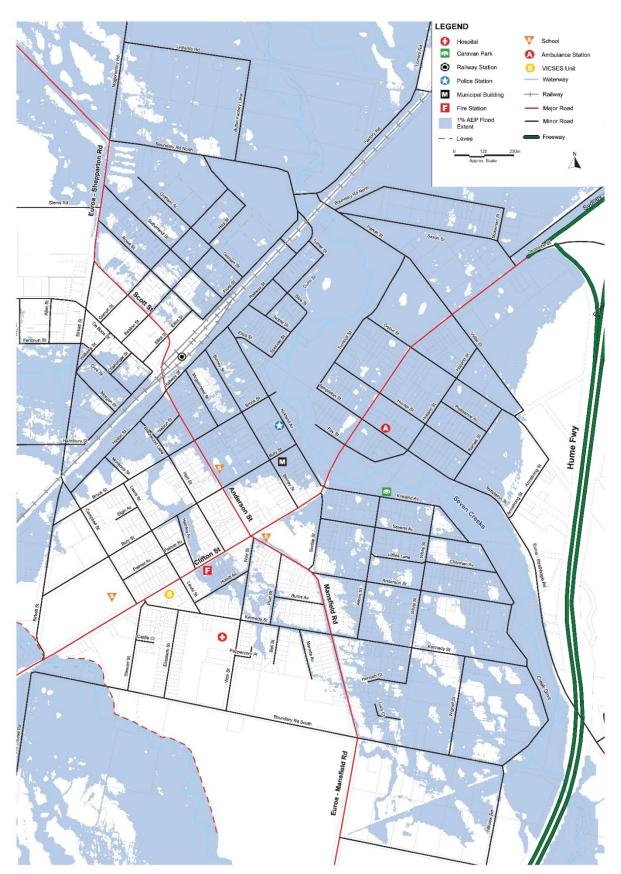
The following maps show the expected flooding in a **1% flood** in the Euroa area measuring 6.04 metres on the Seven Creeks gauge at Euroa.

A **1% flood** means there is a 1 in 100 chance (or greater) of this type of flood happening in any year.

Map 1: Greater Euroa area



Map 2: Euroa township area



Disclaimer

Both map publications above are presented by Victoria State Emergency Service for the purpose of disseminating emergency management information. The content of the information has 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 risk information is provided by Goulburn Broken Catchment Management Authority.

Are you at risk of flood?

Flash flooding can occur more often within the Euroa township due to local hilly terrain resulting in the flow of floodwater across land, roads and rural farmland after heavy rain or thunderstorms at any time of year.

Floods in Euroa vary depending on where and how much rain falls, which waterways flood, if the waterways flood at the same time and if more than one **peak** (high water level) occurs at the same time. Regardless of where rain falls, flooding can happen within hours, leaving residents limited time to act.



Individual property reports and depth info is available in the Goulburn **Broken Community Flood Intelligence Portal**

Visit my.floodreport.com.au/gbcma



Large severe floods in the Euroa area generally occur as a result of moderate to heavy rainfall over a period of 12 hours or more following a prolonged period of general rainfall in the Strathbogie Ranges. The period of general rainfall wets up the catchments and partially fills the natural floodplain storage. These two effects combine to increase the runoff generated during the period of heavy rainfall.

Flood warning times for Euroa are short. Floodwater can rise in Euroa 10 to 20 hours after heavy rain starts, and a flood peak occurs 5 to 12 hours from when the rain stops. Floodwater usually rises quickly, and falls three or more times more slowly, meaning floodwater stays high for 24 to 36 hours.

High risk areas in Euroa include Creek Drive, Turnbull, Spencer, Foy, Parker, Slee, Dunn and Railway Streets. The Caravan Park, Rotary Park, land opposite the Memorial Oval and the Bowls Club begin to flood around the minor flood level (2.5m at the Seven Creeks gauge at Euroa). Downstream from Euroa (to the north), rural land and roads between Euroa and the Miepoll and Arcadia areas are subject to flooding - during a large flood almost all roads in this area are inundated.

Floods and Landslides after Bushfires

In January 2020 at Balmattum Hill, which borders the east of the Euroa township, a fire burned 350 hectares of bush and farm land. Bushfires have long-lasting impacts on the natural environment, increasing dangers from floods and storms, and higher risk of landslides.

After bushfires, the loss of plants and roots that normally hold the ground together and absorb water from rain can make the ground soft and heavy. This results in a higher risk of landslides and flash flooding. Landslides can carry debris such as boulders and trees downhill, and cause serious damage to buildings. They can be extremely dangerous to anyone on or below the affected area.

The impacts on the natural environment after a bushfire can last 2 to 5 years, depending on the intensity of the fire, how quickly plants regrow and whether any floods or storms happen afterwards.



Turnbull Street during the flood in December 2017. Image by Michael Gouge.



Near Twomeys Bridge/ RSL during the flood in December 2017. Image by Michael Gouge.

Did you know?

Euroa has a history of flooding, including September 1916 (largest on record), October 1984, July 1986, October 1992, October 1993, September 2010 and December 2017. The 1993 flood was a result of more than 150 millimetres of rain falling over numerous days. The 1993 flood measured

5.68 metres on the Seven Creeks gauge at Euroa and

caused:

- Over-floor flooding to over 150 habitable buildings
- Flooding of more than 550 properties across Euroa
- Damages are estimated at greater than \$1.4 million
- Euroa Post Office in Binney Street has a flood marker representing the height the flood water reached



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.



Williams Garage, previously Dillon's Tyre Service during the flood in October 1993. Image from Strathbogie Shire Council.



flood in October 1993. Image from Strathbogie Shire Council.



Aerial Image of Euroa during the flood in October 1993. Water had started to recede when this image was taken. Click here to open the image.



RSL Memorial Park during the flood in October 1993. Image from Strathbogie Shire Council.

Seven Creeks flood levels at the Euroa gauge

When the Bureau of Meteorology (BoM) issues Flood Warnings they include a prediction of the flood height at the <u>Seven Creeks Euroa gauge</u>. While no two floods are the same, the following table can give you an indication of what you could expect at certain heights, including when your access may be cut off and when your property may be affected.

Height (metres)	Impact/level
6.04 m	1916 flood and 1% flood level (height shown on map pg. 2 & 3). There is a 1 in 100 chance a
	a flood this size (or greater) occurring in any year. 644 properties are likely to be flooded, 206
	above floor level. Access to the hospital likely to be compromised.
6.01 m	September 1975
5.80 m	May 1974. 463 properties were inundated with 106 flooded over-floor.
5.79 m	July 1986
5.68 m	October 1993. Over-floor flooding of 150 houses and 550 properties were impacted.
5.36 m	September 2010. 22 properties were impacted (a handful over-floor) and 19 people were
	displaced. 11 caravans/cabins were inundated in the Caravan park along with the Show
	Grounds, Memorial Oval and Golf Course.
5.21 m	October 1992. The Ambulance and Police Station are likely to be surrounded by water.
5.07 m	December 2017. Kirkland Avenue, Templeton, Turnbull, Dunn and Beaton Street likely to
	begin to be inundated with water. Euroa-Shepparton Road likely to be affected.
4.80 m	December 2010. Caravan Park is likely to be completely inundated and the Memorial Oval
	surrounded by water. Six properties are likely to be inundated with one flooded over-floor.
4.60 m	Major flood level. The first house is likely to be flooded and Creek Drive becoming isolated.
	Parker, Turnbull, Saxon, Slee, Dunn, Railway and Templeton Streets likely to get wet.
4.00 m	Moderate flood level. Factory Road is likely to begin being inundated with water.
3.50 m	January 2011
3.14 m	April 2020. Area around the Memorial Oval was inundated with water, closing the walking
	track. Minor flooding occurred on local roads. Moglonemby Road was inundated with water.
2.50 m	Minor flood level. Euroa Caravan Park, Rotary Park, park area around the Memorial Oval
	and Bowls Club likely to begin to be inundated with water.



Seven Creeks Gauge at Euroa during the flood in April 2020.



Rockies Bridge downstream of the Seven Creeks Gauge at Euroa during the flood in April 2020.

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Castle Creek flood levels at the Telford Bridge gauge

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

Height (metres)	Impact/level
4.60 m	The levee has no freeboard remaining and is likely to be overtopped if water rises. Levees can fail before this level.
4.26 m	1% flood level. The flow path between the Castle and Sevens Creek via Brock and Anderson Street likely to experience significant flows.
4.16 m	Euroa Main Road is likely to have a depth of up to 150 millimetres along a stretch of around 300 metres of road.
3.83 m	Water is likely to get deeper upstream of Euroa Main Road and the railway embankment. Euroa Main Road is likely to have a depth of up to 100 millimetres on it. Castle and Seven Creeks are likely to begin interaction with a flow path forming via Brock Street and Euroa-Shepparton Road near Wood Road.
3.79 m	Water is likely to overtop Euroa Main Road and further inundate the floodplain.
3.42 m	December 2017
2.75 m	December 2010
2.58 m	September 2010
2.40 m	Major flood level. Water is likely to overtop the bank and likely to wet the Euroa Golf Course and surrounding floodplain.
1.80 m	Moderate flood level.
1.20 m	Minor flood level.
1.13 m	April 2020. Floodplain south of Euroa Main Road began to be inundated with water run off from the Hume Freeway, no properties were impacted/inundated.



Castle Creek Gauge at Telfords Bridge on Euroa-Mansfield Rd.

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Flood Levees

A levee is an embankment usually along-side a river or creek designed to protect property from floodwater. Levees can reduce the frequency of flooding but no levee is guaranteed to be flood proof. A levee is designed to control a certain amount of floodwater. If larger floods occur, water will flow over the levee into lower areas. Floodwater may also damage the levee, allowing floodwater to flow through an opening or break. Flood levees are to protect property, not people. If the levee is in danger of failing you will be advised to evacuate flood prone areas. It is important that you follow this advice.

In Euroa, there is a levee along the north and east banks of the Castle Creek providing flood protection from the Castle Creek up to the 1% flood level. The levee should not overtop before 4.60 metres on the Castle Creek at Telfords Bridge Gauge, however the levee could fail prior to this level.





Castle Creek Levee which borders the eastern bank of the Castle Creek. These images were taken next to the Castle Creek Bridge on Clifton Street. The levee is not accessible to the public.

Staying Informed and Further Information

	Current	warnings	(VicEmerge	ency)	
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Bureau of Meteorology (BoM)

VicRoads Traffic

Emergency Broadcasters

VICSES Social Media

Preparing for Flood Emergencies

Creating an Emergency Plan

Catchment Management Authority

Strathbogie Shire Council

National Relay Service (NRS)

emergency.vic.gov.au bom.gov.au/vic/warnings

traffic.vicroads.vic.gov.au

ABC 97.7 FM HIT 96.9 FM TRIPLE M 95.3 FM UGFM 88.9 FM SKY NEWS Television

facebook.com/vicses twitter.com/vicsesnews ses.vic.gov.au/get-ready

redcross.org.au/prepare gbcma.vic.gov.au

strathbogie.vic.gov.au

relayservice.gov.au

1800 226 226

1300 659 217

Life-threatening Emergency 000

(03) 5822 7700

1800 065 993



Flood warnings and emergency checklist

Bureau of Meteorology Warnings

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

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 river banks and cover nearby low lying areas.	Spill over river banks 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.
Require the removal of stock in some cases.	Require evacuation in some areas.	Cause properties and whole areas to be isolated by water.
Cover riverside camping areas and affect some low-lying caravan parks.	Affect traffic routes.	Closes major roads and rail routes.
Cover minor roads paths, tracks and low level bridges.	Require the removal of stock in rural areas.	Require many evacuations.
Affect backyards and buildings below floor level.		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 <u>BoM website</u> and warnings through <u>VicEmergency</u>.



VICSES Warnings

VICSES utilises the VicEmergency app, website and hotline to distribute flood warnings and emergency information in Victoria. You can also access this information through our 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 of community impact.

WARNING LEVELS EMERGENCY WARNING You are in imminent danger and need to take action immediately. You will be impacted. A Major flood warning usually fits into this category. WARNING (WATCH AND ACT) 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. 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** PREPARE TO EVACUATE/ EVACUATE NOW An evacuation is recommended or procedures are in place to evacuate. **COMMUNITY INFORMATION** 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. **EMERGENCY ALERT** EMERGENCY ALERT. During some emergencies, communities may be alerted by the sounding of a local siren, or

Your emergency plan

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

by sending an SMS to mobile phones or a voice message to landlines.

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

IPLE THING TO MAKE YOU SAFE

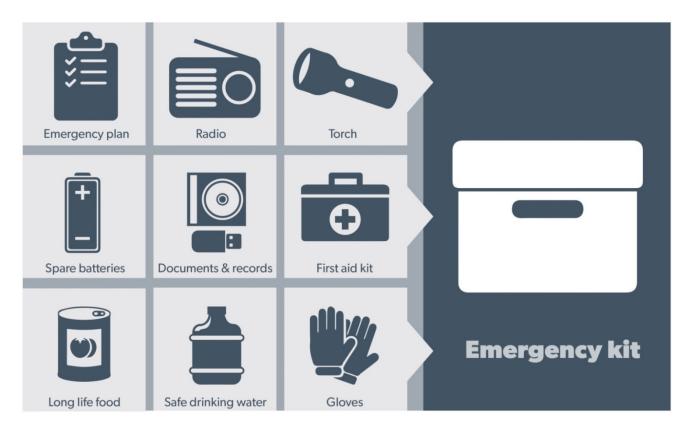
Visit <u>redcross.org.au/prepare</u> start creating your plan.

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

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Emergency Kit

Visit **Emergency Toolkit** for more information



Every home and business should have a basic emergency kit with a supply of 3 days:



Check your kit often. Make sure things work. Replace out of date items.

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 (e.g., 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 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 bom.vic.gov.au and warnings
through emergency.vic.gov.au . Secure objects likely to float and cause damage.
☐ 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.
☐ If you are staying in a caravan, move to higher ground before flooding begins.
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.Stay away from trees, drains, low-lying areas, creeks, canals, culverts and floodwater.
Evacuating in Flooding
 ☐ Flood water is dangerous. Never entering flood water. It can take just 15cm of water to float a car. ☐ Find alternative travel routes if roads or underpasses are flooded.
□ Find alternative traver routes it roads of underpasses are nooded. □ 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, go to the VicEmergency Relief and Recovery- 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. 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.
For VICSES emergency assistance,
U 400 500 T.'.I. 7 (000)

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