



Pakenham

Local Flood Guide

Flash Flooding and Riverine information for Pakenham



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





Pakenham

Pakenham is located within the municipality of Cardinia Shire Council approximately 50km southeast of the Melbourne City Business District (straight line distance). The township consists of residential, business, and industrial areas as well as both old and newly established precincts.

Toomuc creek is located on the western side of Pakenham and Deep creek is located on its eastern side. Kennedy and Pakenham creeks run through the centre of the township of Pakenham.

The map below shows possible flooding in a 1% flood in Pakenham. A 1% flood means there is a 1% chance of a flood this size occurring in any year. This map represents one of many possible flooding scenarios in Pakenham.



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?



- High intensity, short duration rainfall events can cause flash flooding in and around Pakenham with Pakenham Creek generally the first watercourse to flood while prolonged rainfall may see Kennedy, Deep and Toomuc creeks flood.
- There are four retarding basins within Pakenham. These are located at Deep Creek, Edenbrook Park, Shearwater Weland and Tyalla Way.
- Pakenham sees moderate to slow water movement due to the mixed nature of gently undulating terrain and flatter areas. Flooding as a result may last for a number of days. Some localised short-duration isolation may occur due to flash flooding in a 1% AEP (1 in 100 years) event.
- Essential infrastructure that may be impacted during a flood are the Toomuc Valley CFA Station and Pakenham Railway Station’s Northern platform (Railway Avenue side).
- Levees are in place within Pakenham. Four are located along Deep Creek, one at Toomuc/Deep Creek Outfall, two at McDonalds Drain and four along the Northern Boundary Drain.
- No major isolation risks exist for Pakenham. If access via Princes Freeway or Princes Highway becomes closed for a period; routes via Pakenham Road or Army Road to the north may still remain passable. Pakenham Road has the potential to become flooded at the Pakenham Creek Bridge.

The following roads are subject to closure during a flooding event around the Pakenham area within a 1% AEP (100yr ARI) event. A 1% AEP flood means there is a 1% chance of a flood of this size occurring in any year.

| | | |
|--|-----------------|-------------------------|
| Arlington Avenue | Delphinium Road | Mulcahy Road |
| Ascot Court | Dunbarton Drive | Pommel Street |
| Barrington Drive | Duncan Drive | Purton Road |
| Belvedere Drive | Hein Road | Railway Avenue |
| Blue Horizons Way | Henry Road | Ryan Road at Canty Lane |
| Brown Road | Holt Place | Sandalwood Drive |
| Caitlin Drive | Isaac Court | Simon Drive |
| Cameron Way | James Street | Slattery Place |
| Canty Lane | Jason Lane | Snodgrass Street |
| Charles Street | John Street | Templeton Crescent |
| Cyprus Place | King Street | The Avenue |
| Deed Drive | Leppitt Road | Toomuc Valley Road |
| Deep Creek Road | Loz Court | Wakenshaw Crescent |
| Manna Gum Drive | | |
| Princes Highway, Eastbound Lane at Deep Creek crossing, Pakenham | | |
| Princes Highway Eastbound Lane between Deveney Street and The Avenue, Pakenham | | |



Did you know?

Victoria State Emergency Service received 32 requests for assistance in one day on the 20th of January 2020. All requests for assistance were due to flash flooding.

Pakenham has been impacted by flash flooding annually over the last ten years. On the 5th of February 2011 Pakenham and surrounding areas experienced a 1 in 100-year event (1% AEP). Gauges within Pakenham recorded the following level peaks exceeding 1% AEP:

- Pakenham West Gauge at Toomuc Creek reached 2.19m (1% AEP 2.11m)
- Pakenham Gauge, Kennedy Creek reached 1.85m (1% AEP 1.78m)



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.

Staying Informed and Further Information

- | | | |
|-----------------------------------|---|--------------|
| ■ Current warnings (VicEmergency) | emergency.vic.gov.au | 1800 226 226 |
| ■ Bureau of Meteorology (BoM) | bom.gov.au/vic/warnings | 1300 659 217 |
| ■ VicRoads Traffic | traffic.vicroads.vic.gov.au | |
| ■ Emergency Broadcasters | ABC 774 SKY NEWS Television | |
| ■ VICSES Social Media | facebook.com/vicses twitter.com/vicsesnews facebook.com/SESPakenhamUnit | |
| ■ Preparing for Flood Emergencies | ses.vic.gov.au/get-ready | |
| ■ Creating an Emergency Plan | redcross.org.au/prepare | |
| ■ Melbourne Water | melbournewater.com.au | 131 722 |
| ■ Cardinia Shire Council | cardinia.vic.gov.au | 1300 787 624 |

**Life-threatening
Emergency
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Toomuc Creek flood levels at the Pakenham West Gauge

When the Bureau of Meteorology (BoM) issues Flood Warnings they include a prediction of the flood height at Toomuc Creek Gauge located at Princes Highway Bridge, Pakenham. 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 |
|-----------------|---|
| | Height shown map page 2. |
| 2.11m | 1% AEP (100yr ARI) Flood Level |
| | 23 Properties in total at risk of flooding |
| | Community infrastructure likely flooded <ul style="list-style-type: none"> • Outlook Centre on Toomuc Valley Road, Pakenham |
| | Essential infrastructure likely impacted <ul style="list-style-type: none"> • Toomuc Valley CFA Station could have access cut to non 4x4 vehicles via Toomuc Valley Road & Brown Road from East |
| | Water over road (over 30cm in depth) <ul style="list-style-type: none"> • Berglund Road, Pakenham Upper • Brown Road at Toomuc Valley Road, Pakenham • Shelton Road, Pakenham Upper • Hein Road, Pakenham • Leppitt Road, Pakenham • Toomuc Valley Road, Pakenham at Outlook Centre • Watson Road, Officer South |
| 1.59m | 5% AEP (20yr ARI) Flood Level |
| | 18 Properties in total at risk of flooding |
| | Water over road (over 30cm depth) <ul style="list-style-type: none"> • Mulcahy Road, Pakenham • Purton Road, Pakenham |
| 1.15 | 20% AEP (5yr ARI) Flood Level |
| | 5 Properties in total at risk of flooding |



Kennedy Creek flood levels at the Pakenham Gauge

When the Bureau of Meteorology (BoM) issues Flood Warnings they include a prediction of the flood height at Pakenham Gauge, Kennedy Creek located at the west bank of the creek on Kennedy Road, Pakenham. 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 |
|-----------------|---|
| | Height shown map page 2. |
| 1.78 m | 1% AEP (100yr ARI) Flood Level |
| | 15 Properties in total at risk of flooding |
| | Community infrastructure likely flooded <ul style="list-style-type: none">• Cardinia Waters retirement village may be isolated by floodwaters along Racecourse Road and Neverland Boulevard |
| | Water over road (over 30cm depth) <ul style="list-style-type: none">• Caitlin Drive, Pakenham• Central Avenue, Pakenham• Manna Gum Drive, Pakenham• Racecourse Road between Cameron Way and Railway Line, Pakenham |
| 1.70m | 5% AEP (20yr ARI) Flood Level |
| | 10 Properties in total at risk of flooding |
| | Water over road (over 30cm depth) <ul style="list-style-type: none">• Caitlin Drive, Pakenham |
| 1.26m | 20% AEP (5yr ARI) Flood Level |
| | 5 Properties in total at risk of flooding |



Deep Creek flood levels at the Pakenham East Gauge

When the Bureau of Meteorology (BoM) issues Flood Warnings they include a prediction of the flood height at Pakenham East Gauge, Deep Creek located at the west side of the creek north of Prince Highway. 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 |
|-----------------|---|
| | Height shown map page 2. |
| 3.21 m | 1% AEP (100yr ARI) Flood Level |
| | 31 Properties in total at risk of flooding |
| | Community infrastructure likely flooded <ul style="list-style-type: none"> • Pakenham and District Golf Club on Oaktree Drive, Pakenham |
| | Water over road (over 30cm depth) <ul style="list-style-type: none"> • Deep Creek Road at Princes Highway, Pakenham |
| 3.07m | 5% AEP (20yr ARI) Flood Level |
| | 27 Properties in total at risk of flooding |
| 3.07m | Water over road (over 30cm depth) <ul style="list-style-type: none"> • Pakenham Road, Pakenham Upper at Crosby Road |
| 2.60m | Water over road (over 30cm depth) <ul style="list-style-type: none"> • Princes Highway Eastbound lanes at Dep Creek crossing, Pakenham |
| 2.52m | 20% AEP (5yr ARI) Flood Level |
| | 20 Properties in total at risk of flooding |
| | Water over road (over 30cm depth) <ul style="list-style-type: none"> • Intersection of Pakenham Road and Crosby Road, Pakenham Upper • Canty Lane, Pakenham |



Flood warnings and emergency checklist

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 [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 | |
|---|--|
|  | <p>EMERGENCY WARNING</p> <p>You are in imminent danger and need to take action now. You will be impacted. A Major flood warning usually fits into this category.</p> |
|  | <p>WATCH AND ACT</p> <p>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.</p> |
|  | <p>ADVICE</p> <p>An incident is occurring or has occurred in the area. Access information and monitor conditions. A Minor flood warning or Flood Watch usually fits into this category.</p> |

| EVACUATION | |
|--|---|
| If an evacuation is recommended, you will be guided to do so in the action statement in the warning. | |
|  | <p>PREPARE TO EVACUATE/ EVACUATE IMMEDIATELY</p> <p>An evacuation is recommended or procedures are in place to evacuate.</p> |

| ADDITIONAL MESSAGES | |
|---|---|
|  | <p>COMMUNITY INFORMATION</p> <p>Can be used as a notification that an incident has occurred but there is no threat to community; or to issue a newsletter containing updates for communities affected by an emergency.</p> |
|  | <p>EMERGENCY ALERT</p> <p>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.</p> |

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 emergencies and make your own plan helps you think clearly, have more control and make better decisions when an emergency occurs.

Visit redcross.org.au/prepare 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.



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 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 (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
- 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.

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.
- If you are staying in a caravan, move to higher ground before flooding begins.
- 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 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, 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 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.