



Numurkah Local Flood Guide

Riverine and flash flood information for the Broken Creek and Muckatah Depression at Numurkah



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



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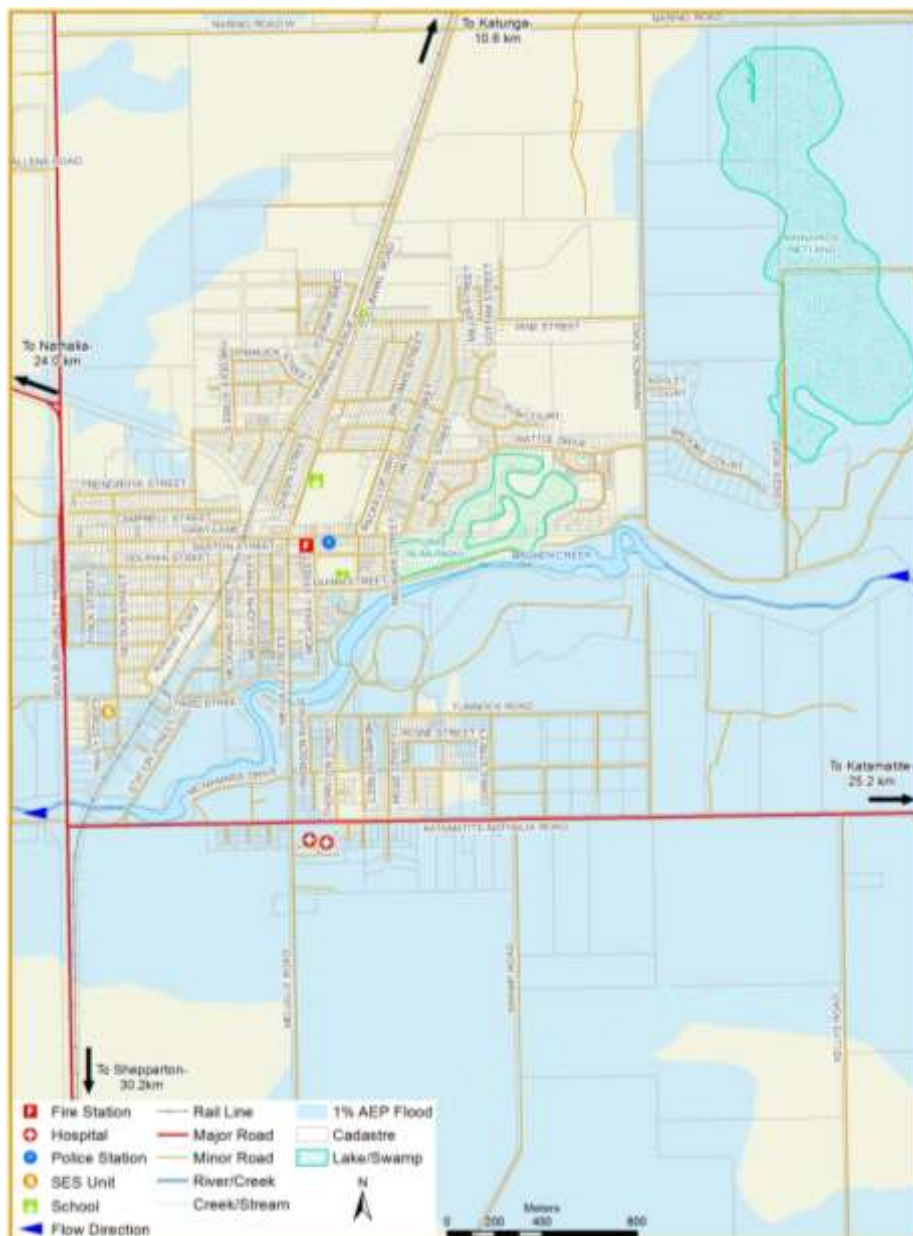


Numurkah

Numurkah is located in northern Victoria along the banks of the Broken Creek, in the Moira Shire. Numurkah and nearby rural areas have a long history of floods.

The Broken Creek catchment is a very complex system that stretches from the Warby Ranges through Numurkah to Barmah and includes the Muckatah Depression and the Boosey, Sandy, Broken, Major, Wild Dog, Box and Nine Mile Creeks.

The following map shows the expected flooding in a 1% flood in Numurkah. A 1% flood means that there is a 1% chance of a flood measuring 107.80 metres on the Melville Street gauge at Numurkah occurring in any year. Flooding shown on this map is approximately 10 centimetres lower than the 2012 flood.



Disclaimer

This map publication is presented by Victoria State Emergency Service for the purpose of disseminating emergency management information. The contents 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?



Flooding in the Numurkah area can happen when:

- Floodwater from heavy rainfall in the upper catchment overflows the banks of the Broken creek.
- Heavy local rainfall overwhelms local creeks and drains, such as the 2012 record-breaking rainfall. The reason for this flood moving so quickly was that heavy rain fell twice in a week and the sheer volume of runoff from rain that fell in both the wider catchment and the local area.

During large floods, the flat nature of the area and its location on the floodplain means isolation is likely for Numurkah and surrounding low-lying rural properties. Large flood events usually take more than a week to pass Numurkah with low-lying areas taking longer to clear and may increase damage to the area.

Areas of the town that may be affected during large floods include those south of the Broken Creek and East of Kinnairds Road. Major roads can be closed including the Goulburn Valley Highway, Katamatite - Nathalia Road and most roads across the Muckatah Depression and the Broken and Boosey floodplains.

Did you know?

Numurkah has a long history of floods occurring on average every 18 years including in 1939, 1956, 1974, 1993 and 2012.

Markers indicate that the 2012 flood was one of Numurkah's highest and floodwater travelled much faster than expected. The 2012 flood peaked at Numurkah just 14 hours after it peaked at Katamatite. In past floods, this journey had taken up to five days. The Melbourne to Tocumwal Railway line held the first flow of water, with the main body of water reaching Numurkah four days later.

The Muckatah Depression is a natural drainage basin that extends from near Bundalong to Numurkah. Water draining from this basin can cause high water levels to stay around longer or add to flooding in the Broken Creek in and around Numurkah. The variable direction of water flow can make it hard to predict exact flood impacts and how fast the floodwater will clear. See the Muckatah Depression Fact Sheet for more information (available from the Moira Shire or SES website).

Impacts of past floods in Numurkah include:

- In 1974 around seven buildings were damaged by floods.
- In 2012, the Numurkah Hospital and the aged care facility was affected by floodwater damaging the sewage system. A total of 43 patients and residents had to be evacuated. The Caravan Park, 77 houses, 10 businesses and the Cemetery were also inundated.
- Across the Moira Shire in 2012, flood damage to farms totalled nearly \$75 million with over \$40 million damage to roads, bridges and community facilities.



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.



Broken Creek flood levels at the Melville Street gauge

There is currently no flood gauge automatically monitored by the Bureau of Meteorology (BoM) in Numurkah. During floods, the manually monitored Melville Street gauge is often referred to during flooding. While no two floods are the same, the following heights at the Melville Street gauge at Numurkah can provide a guide as to what might happen in your area. Some warnings might give heights from a previous flood in the area to guide your preparations.

Height (metres)	Impact/level
Height Unknown	1917 flood level. Although specific details are not available, these floods on the Murray River at Albury, Corowa and Yarrawonga were amongst this areas highest known floods. In this flood, Murray River floodwater spread into the Broken Creek system. This is unlikely to occur today with the works completed for the Murray Valley Irrigation area.
107.90 m	2012 and 1916 flood levels. In 2012 over 160 buildings damaged above floor level. The Shepparton - Numurkah Railway line badly damaged. 130 local roads closed including the Goulburn Valley Highway, Katamatite Road and Numurkah - Nathalia Road isolating many properties. Floodwater from the Muckatah Depression added to flooding in Numurkah, Yarrawonga, Burramine South, Katamatite East and Naring.
107.80 m	1974 flood level. Height shown on map page 2, a 1% flood. During this flood, very heavy rain fell right across local catchments of the Muckatah Depression, the Boosey, Broken, Nine Mile, Wild Dog and Box Creeks. The Broken, Nine Mile and Box Creeks all merged and flooding lasted nearly two months. Wild Dog and Box Creeks significantly added to flooding upstream of Numurkah. Parts of the commercial and residential areas flooded. Major sandbagging efforts by locals saved the town from more damage.
107.77 m	1993 flood level. This flood was caused by heavy rainfall across the Broken River area near Benalla causing significant flooding and damage to rural properties. No major effects in the Numurkah township. Katamatite-Nathalia Road closed.
107.18 m	Estimated 1939 flood level.
107.01 m	Estimated 1956 flood level.

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 97.7 FM
 - HIT 96.9 FM
 - TRIPLE M 95.3 FM
 - SKY NEWS Television
- VICSES Social Media
 - facebook.com/vices
 - twitter.com/vicesnews
- Preparing for Flood Emergencies ses.vic.gov.au/get-ready
- Creating an Emergency Plan redcross.org.au/prepare
- Catchment Management Authority gbcma.vic.gov.au (03) 5822 7700
- Moira Shire Council moira.vic.gov.au (03) 5871 9222
- National Relay Service (NRS) relayservice.gov.au

Life-threatening
Emergency
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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 [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. 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

	<p>EMERGENCY WARNING</p> <p>You are in imminent danger and need to take action immediately. You will be impacted. A Major flood warning usually fits into this category.</p>
	<p>WARNING (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. 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.</p>

ADDITIONAL MESSAGES

	<p>PREPARE TO EVACUATE/ EVACUATE NOW</p> <p>An evacuation is recommended or procedures are in place to evacuate.</p>
	<p>COMMUNITY INFORMATION</p> <p>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.</p>
	<p>EMERGENCY ALERT</p> <p>During some emergencies, communities may be alerted by the sounding of 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, with little warning. People who plan and prepare for emergencies reduce the impact and recover faster.

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.

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 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 (eg, babies, Elderly)
- | 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. Stay safe by 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.
- 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, call 132 500, or Triple Zero (000) in life threatening emergencies.