



# Wangaratta's Flood Mitigation System Levees, Drains & Pumps



## This Guide

This guide aims to provide residents and visitors with information about Wangaratta's flood mitigation infrastructure (eg levees) that help to protect assets and reduce damage from flooding.

They are not designed to protect people.

If you live in a levee-protected area:

- It is very important to read and keep this guide for future use.
- It is your responsibility to have a flood emergency plan.



## What is a flood levee?

Wangaratta's flood levees consist of earthen embankments built to reduce the affects of flooding on low-lying areas.

Key facts to remember about levees:

- Levees are designed to reduce the risk of flooding of properties, not to protect people
- No levee is flood proof. Levees can and do fail.
- In large floods, flood water can flow over the top (called "overtopping") into low-lying areas.
- Inundation and flood damage can also occur within areas protected by levees due to local very heavy rainfall.

## Levees in Wangaratta

Wangaratta sits at the junction of the Ovens and King Rivers and has two creeks that run through the town. This makes Wangaratta at risk of flooding, and can put homes and lives at risk.

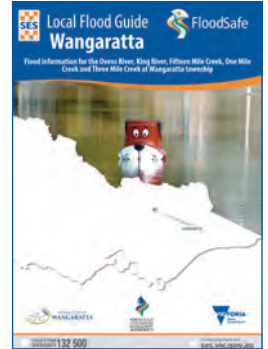
The Parfitt Road and Wilson Road levees on the Ovens and King River floodplain reduce how often floods affect low-lying businesses and homes . If both these rivers reach flood peak at the same time, the Wilson Rd levee in particular can come under intense pressure from deep and powerful floodwater.

This could result in partial or complete flooding of homes and businesses inside the levee.

The King River levee at Merriwa Park provides protection for the

park facilities and infrastructure. The Sunset Drive/Walter Street levee reduces the occurrence of flooding from the Three Mile Ck.

For more about what happens in Wangaratta during floods and how to be prepared, see the Wangaratta Local Flood Guide available at RCOW reception or [www.ses.vic.gov.au/get-ready/your-local-flood-information](http://www.ses.vic.gov.au/get-ready/your-local-flood-information).



## Levee failure

Levees can fail in a variety of ways including Breaching and Overtopping.

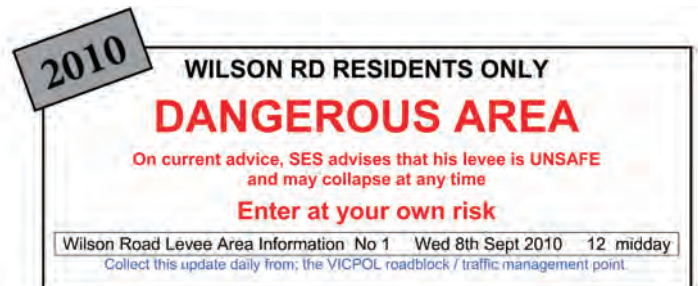
No levee is guaranteed to be "flood proof" and levees can and do fail. Flooding through or over a levee may be so fast that there may be no time to warn you or safely evacuate.

Depending on the height of flood, the inflowing floodwater can be so deep and powerful it can wash houses away, people and animals could drown. So, if a levee is in danger of failing, people will be advised to evacuate. It is very important to follow this advice.

## Breaching

Breaching - is when part of the levee fails due to erosion or damage, creating an opening that floodwater can get through. Breaches can happen over a long period of time or very suddenly. In September 2010, residents in 60 homes in Wilson Rd were advised to evacuate when the levee was in danger of breaching due to erosion. A breaching risk issue occurred with the Parfitt Road levee during the October 2016 flood.

To see a news report from the 2010 floods go to: <http://www.theage.com.au/video/national/wangaratta-levee-at-breaking-point-20100909-15310.html>



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WANGARATTA

### Overtopping

Overtopping is when the flood level is higher than the top of the levee and is one of the most common reasons for floodwater entering properties behind a levee. In 2005 Hurricane Katrina flooded 80% of New Orleans and many people lost their lives after levees were overtopped. Levees are designed to reduce the risk of flooding of properties, not to protect people

### Levee designs

No levee is flood proof. Levees can and do fail. Earthen levees usually contain the following features:

- **Crest** - The crest is the top of the levee.
- **Design Heights** - The height of floodwater that the levee is designed to withstand. This is always lower than the crest height.
- **Freeboard** - The difference between the design height of the levee and the crest. Freeboard is additional height added to the levee to ensure it can withstand a flood that reaches its design height. In the 2011 flood in Kerang, the flood height exceeded the design height of the levee but fortunately the levee did not overtop. Once flood levels exceed the design height the likelihood of failure increases. Freeboard should never be relied on to provide protection.
- **Toe** - The bottom of the levee.
- **Levee Gaps** - Sometimes levees have a built in gap (eg. so that a road can go through) when the area is not at risk of flooding. If flooding is expected, gaps need to be filled in by relevant authorities.

### Can levees increase my flood risk?

Building or increasing the height of a levee can have significant consequences to nearby areas. To ensure levees don't cause unexpected increases to flood risk, they must be designed and maintained by experts.

### Levees and floods

If you live behind or near a levee and flooding is predicted you should:

- Listen for **Evacuation Advice**. If a levee is failing or could fail, you will be advised to evacuate. If a levee fails, there may not be time to safely evacuate or rescue you. Leaving early is always the safest option.
- **Remember!** No levee is flood proof. Never rely on a levee to protect you, levees are designed to reduce damage to property, not protect people.
- Tune into Emergency Broadcasters including Local Radio **ABC 106.5 FM** or **Edge FM 102.1 FM** or **3NE 1566 AM** and **SKY NEWS pay TV** for up to date warnings and advice.
- If you notice any levee damage or leaking report it immediately to Rural City of Wangaratta 24/7 ph 5722 0888 and select the after hours option.
- If you are concerned a levee may be unexpectedly in danger of collapse or overtopping call 000.

### Warnings and Emergency Contacts

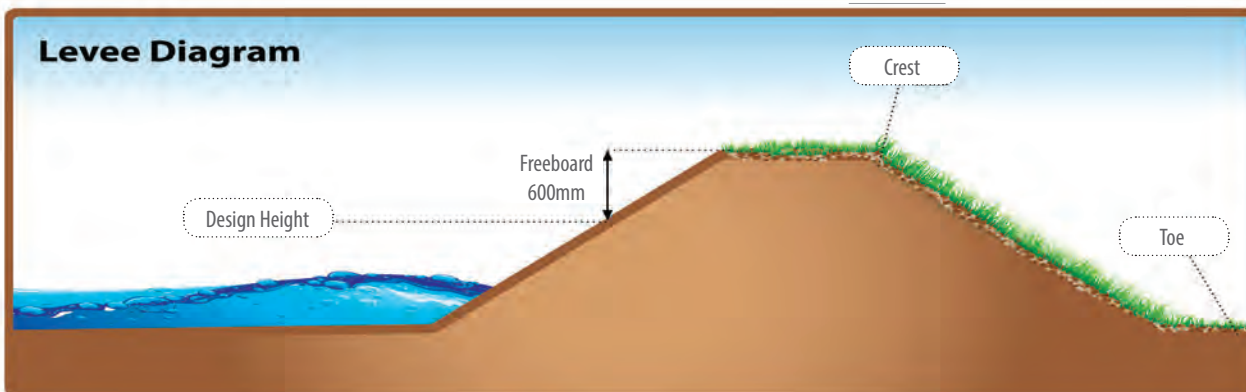
Flood warnings are issued by the **Bureau of Meteorology (BoM)** and can be found at their website: [www.bom.gov.au](http://www.bom.gov.au) or by calling 1300 659 217.

The **State Emergency Service (SES)** adds local information to a BoM warning (eg Evacuation Advice, which streets may flood, which roads closed, community meetings etc)

For warnings about floods, storms and other emergencies go to: [www.emergency.vic.gov.au](http://www.emergency.vic.gov.au) or call the VicEmergency hotline 1800 226 226. For **SES EMERGENCY ASSISTANCE** in floods or storms call : **132 500** For advice how to get prepared for floods and storms go to: [www.ses.vic.gov.au](http://www.ses.vic.gov.au)



If emergency is life threatening  
call **Triple Zero (000)**



**Remember in an emergency, you may not receive an official warning.**

**Never wait for a warning to take action to keep you and your family safe.**