

CEDRR: A Guide to Household Flood Mitigation Actions

A short summary by the CEDRR team to guide you through reducing flood risk at the household scale. Please contact our lead researcher brian.cook@unimelb.edu.au with any questions.



Why is flooding important?

Flood risk is an increasingly important hazard. Factors such as climate change, land-use change, social-change, and the continued encroachment of development into floodplains are resulting in the spatial expansion of flood risk for Australians. Alterations to catchments can affect recently built homes (i.e., those in floodplains) as well as older homes as flood risk expands and is displaced.

Together, these factors will expose growing numbers of Australian households to flood risk and to flooding. Those with pre-existing flood risk are likely to experience more frequent and severe flooding; while many others will experience flooding for the first time as flood risk shifts geographically.

- In Victoria “there are more than **200,000 properties** across the [greater Melbourne] region with at least a 1% chance of flooding in any given year” (Melbourne Water, 2020, p. 8).

Floods are the costliest environmental disaster in Australia: affecting material, financial, and psychological lasting harm to those who experience disaster events.

- “The total cost of flooding is estimated at **\$735 million a year** for the greater Melbourne region. The costs include damage to property, infrastructure such as roads, disruption of services such as public transport and social impacts” (Melbourne Water, 2020, p. 8).
- The social costs of flooding are much more difficult to calculate, but the working assumption is that they are at least equal to the physical costs, suggesting that floods cost Victoria approximately **\$1.5 billion dollars annually**.

Who is responsible for flood response?

The **Victoria State Emergency Service (SES)** is the ‘control agency’ for flooding in Victoria, meaning:

- “The Victoria State Emergency Service (VICSES) are responsible for planning for floods, supporting community preparedness and managing flood response if they do occur” (VicSES, 2022).

Despite this broad range of responsibilities, **emphasis is almost exclusively on response to flood disasters, rather than preparations or wider risk management.** With flood risk growing, taking actions to prepare for flood at the household scale can help avoid or reduce the severity of flooding experiences. By limiting the severity of impacts, taking action at the household scale can

subsequently mitigate the costs of damages, insurance premiums, psychological distress associated with home damages, and more general disruption of lives and livelihoods.

For the average homeowner, **the most common experience of flooding is through flash flooding and the failure of drainage** (e.g., gutters, drains). With increased climate variability and intensity, this experience is very likely to become more common, offering individuals opportunities for mitigation actions that can be taken with relatively little cost.

How can I mitigate flood in my household?

Please note, the CEDRR research team are not experts in flood risk and in no way can provide guidance on what individuals should do to address their household flood risk. Using the materials available from the SES, from Catchment Management Authorities, and from Melbourne Water, we are able to discuss flood risk in general, direct you to **useful resources**, and offer you a **typology of potential actions you can take at home**.

Flood resilient design

Melbourne Water has several publications and workshops oriented towards household-scale flood mitigation. Their 2020 ***Flood Resilient Guide to Retrofitting Your Home*** provides homeowners advice on household modification actions that can be taken and actions that are suited to smaller scale and flash flood events.

Resilient design is divided into four flood risk mitigation 'strategies':

- **Wetproofing:** using materials that are resilient or that will minimise damages if water enters.
- **Dryproofing:** sealing a structure so that water cannot enter.
- **Elevating:** raising the home or services above predicted flood levels.
- **Absorption:** using landscape features and permeability to encourage infiltration of floodwaters.

Access Melbourne Water's [Flood Resilient Guide to Retrofitting Your Home](#) for more info.

Actions that every household can consider

- **Clear gutters and drains**
 - Regularly clearing drains and gutters is one of the easiest ways to reduce flood risk in your household.
 - Please be aware: falling from ladders is extremely dangerous and requires a second person to hold the ladder. Make sure you are aware of the need to clean gutters safely or to have this done professionally.
- **Know where the water 'shut off' is located, and how it works**
 - A common type of flooding involves pipes, drains, and appliances, which would require the household to shut off water to the home to stop the flooding. Knowing where the valve is and how it operates is an easy and cost-free action that can help to mitigate flood damages.
- **Improve permeability of surrounding property**
 - Your property can act as a 'sponge' that can receive and absorb water into ground surfaces. By increasing permeable surfaces on your property, you can decrease the amount of water flowing into your home, onto other properties, and streets. Consider increasing garden surfaces and installing permeable fencing solutions.
- **Talk to your neighbours!**

- A key aspect of disaster resilience is the role of neighbours. Researchers have demonstrated that it is neighbours who provide most of the support during disasters. Neighbours are also a source of information for newly arrived individuals, who can uncover whether local households have been flooded in the past.
- “Talking to your neighbours is an important part of developing flood resilience. You can talk about each other’s experiences with flooding, approaches to reduce flooding, and ways you might work together in a flood event.” (Melbourne Water, 2020, p. 16).
- **Wetproof ground-levels**
 - Having an electrician raise electrical outlets and appliances, (e.g., hot water, aircon) above 1% of the annual exceedance probability, is an achievable and relatively low-cost action that can limit damages significantly.
- **Follow up with a professional**
 - If your home is at risk of flooding, or has a history flooding, follow up with a flood professional.
- **Get prepared**
 - Check your local flood overlays, sign up for notifications, develop Emergency Plans and Kits and check your flood insurance cover and premiums.
 - See the [Melbourne Water website](#) or the **Further Resources** section at the end of this document for more info.



Figure 1: Steps you can take to prepare for flooding (Melbourne Water, 2025)

Further Resources

- Understand and prepare for flooding via the **Melbourne Water website**: <https://www.melbournewater.com.au/water-and-environment/flooding-advice>
- Download and read Melbourne Waters’ 2020 **Flood Resilient Guide to Retrofitting Your Home** from: <https://www.melbournewater.com.au/media/15581>
- Assess your local flood risk with the **VicSES Local Flood Guides**: <https://www.ses.vic.gov.au/plan-and-staysafe/emergencies/flood>
- Get notified about emergency warnings and events via **VicEmergency**: <https://www.emergency.vic.gov.au/respond/>
- Understand flood insurance cover via the **Insurance Council**: <https://insurancecouncil.com.au/resource/flood-insurance-explained/>
- Get help after a flood via **Emergency Recovery Victoria**: <https://www.vic.gov.au/help-after-flood> or the **VicEmergency website**: <https://www.emergency.vic.gov.au/relief/>
- Develop Emergency Plans and Kits via the **Redcross**: <https://www.redcross.org.au/prepare/>
- Explore further risk reduction resources and get involved via the **CEDRR website**: <https://communityriskreduction.org.au/>