Technical Information

# Overland Flow Factsheet

## What is overland flow?

Overland flow flooding typically occurs during or immediately following intense rainfall. Overland flow describes how runoff from rainfall flows across the surface of the land (such as lawns, roads, roofs, car parks and natural ground) as it finds its way to the nearest watercourse or waterbody (Fig. 1). Overland flow paths typically follow natural depressions, open channels, roadways and public reserves.

Overland flow flooding may also occur when rainfall runoff exceeds the capacity of the underground drainage network or smaller creek systems are exceeded.

*Fig. 1 Overland flow travels downhill towards drains or watercourses (Image: J Goonan 2025)*

Flooding and nuisance issues from overland flow can sometimes result in damage to property and distress to residents. Even properties that are located on hills, far away from creeks or rivers, can be at risk of flooding from overland flow. Overland flow flood risk should be considered when planning development or designing and constructing buildings and infrastructure.

**Is overland flow classified as flooding?**

From a floodplain management perspective, flooding is a broad term that encompasses riverine, creek, coastal and overland flow inundation. Overland flow is considered a type of flooding for planning, building and emergency management purposes.

*Overland flow along a roadway (Photo W. Prentice 2025)*

**Characteristics of overland flow:**

- Relatively short warning times (if any);
- Relatively short duration of inundation (up to a few hours);
- Generally shallow, although overland flow can also be deep and fast moving – particularly when there are significant upstream catchment areas and/or steep terrain.

**Typical issues caused by overland flow:**

- Safety hazards to motorists and pedestrians;
- Traffic disruptions where overland flow paths occur on or near roads;
- Inundation and damage to buildings;
- Scour and erosion around buildings and outdoor areas (e.g. parks and playing fields); and
- Inundation of open space and ancillary areas of private and public property.

**Is overland flow the same as flash flooding?**

No. Flash flooding is the term given to any type of inundation that happens within 6 hours of rainfall occurring. Overland flow flooding can be

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described as a type of flash flooding as it usually occurs during or quickly after rainfall events. However, it is also possible for other sources of flooding, such as creek or riverine flooding, to be described as flash flooding, if the flooding occurs within 6 hours of the rainfall.

**Awareness of flooding in your catchment**

Whilst some flood events may be similar, no two floods are rarely the same. It is important that you are aware of environmental features such as where your local watercourses are, and if the nearby topography (i.e. ground levels) slopes towards or away from your property. This information can help you minimise disruption and damage in the event of a flood.

*Overland flow accumulating in a backyard (Photo W. Prentice 2025)*

**Do I need Flood Insurance for overland flow?**

The standard insurers' definition of flood in Australia is defined in the Insurance Council of Australia's (ICA's) General Code of Practice. It defines flood as:

*The covering of normally dry land by water that has escaped or been released from the normal confines of: any lake, or any river, creek or other natural watercourse, whether or not altered or modified; or any reservoir, canal or dam.*

Overland flow does not fit into this definition and is sometimes considered as 'stormwater' by insurers. However, it is recommended that you speak with your insurer for a full understanding of policy coverage and other types of flood risk at your property.

**How are overland flow paths identified?**

Overland flow paths (like any other type of flooding) can be mapped through detailed hydraulic modelling investigations. Hydraulic models simulate how runoff from rainfall moves across the land, so using the best available topographic data and information about rainfall and drainage infrastructure is critical to understanding overland flow.

**Will overland flow mapping affect my property value?**

Having access to modelled overland flow behaviour helps your local Council plan infrastructure upgrades and manage development in the LGA. It also helps you manage your own risk. Property values are influenced by a broad range of factors. There is no clear evidence that the adoption of overland flow information on its own would result in a sustained impact on property values.

**Will overland flow mapping affect my insurance premium?**

The adoption of overland flow information by Council's may impact insurance premiums. Each insurance provider has its own risk assessment process used to set premium prices. It is advised to always shop around when reviewing insurance options as pricing and inclusions vary between providers.