



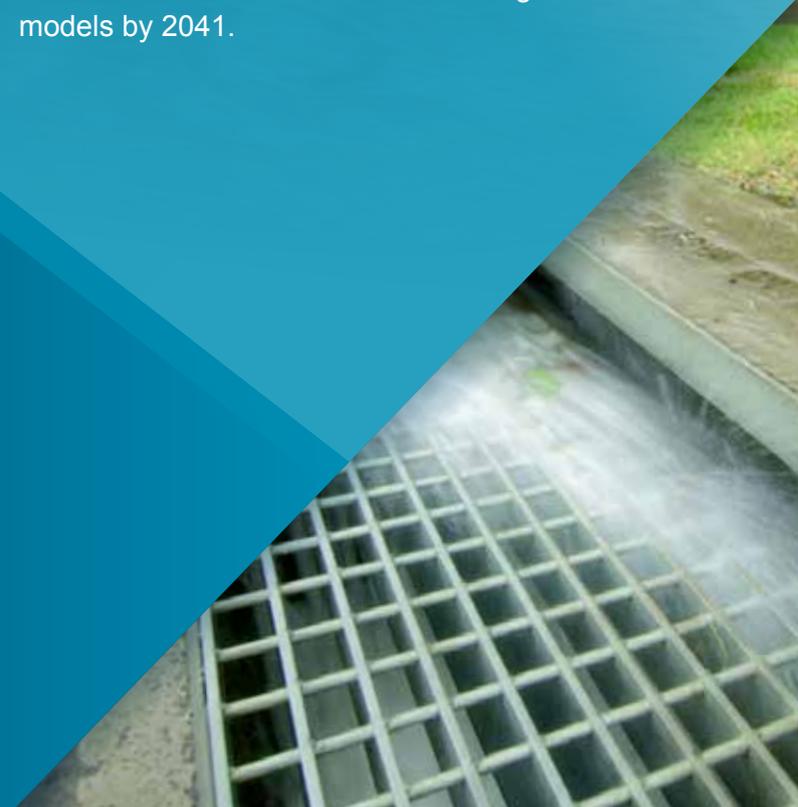
Flooding and Stormwater

Outcome 2041:

Flood risk is managed for community wellbeing, facilitated by an integrated stormwater network that contributes to waterway health.

Target:

All urban areas have local area drainage models by 2041.





Flooding and stormwater management are issues at the interface of the natural and built environments.

Flooding results from intense or sustained rainfall, storm tides or a combination of both, temporarily inundating or flowing across land that is normally dry. This will be exacerbated by permanent sea level rise and increased rainfall intensity due to a changing climate.

Rainfall-based flood waters are typically fresh and laden with sediment and other pollutants. Storm tides result from a temporary increase in sea level and their floodwaters are mostly marine and salty. They are generally caused by severe coastal weather systems such as tropical cyclones or east coast lows.

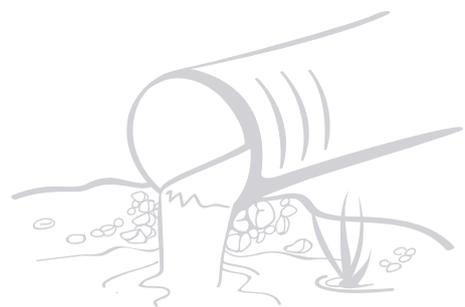
Flooding can be a risk to property and life. Its effects on the built environment and society range from nuisance to tragic and catastrophic. It is therefore critical that flood risk is managed and mitigated. Protecting flood storage, against the cumulative impacts of filling in the floodplain, and conveyance, to ensure the waterways flow effectively, is essential to the management of flood risk.

Stormwater is runoff from rainfall that flows overland and through an urban stormwater network. The urban stormwater network is critical for the movement of runoff through the built urban environment. Urban stormwater is commonly directed through underground pipes but can also travel as surface flows in open drains, culverts, roadways, natural channels and overland flow paths. It can be temporarily detained in storage structures such as dams or detention basins before being released to natural receiving waters.

During high rainfall events, runoff volumes can exceed the capacity of the underground pipe system. In these conditions, more stormwater is conveyed over the surface, which results in short-term flooding across roads and other surface flow paths, such as parks and sports grounds.

As stormwater runoff is conveyed through the urban environment it becomes polluted with litter, road and industrial sourced oils, chemicals and heavy metals, as well as sediment from areas of bare earth. Water quality usually gets worse when stormwater is stored, leading to low oxygen levels, algal blooms and other nuisance conditions. To protect the public and the environment, stormwater runoff needs to be intercepted and treated to remove pollutants, including litter, before being discharged or reused.

On the Sunshine Coast, stormwater is treated through a mix of engineered structures such as gross pollutant traps and more natural features such as wetlands and bio-retention basins. Stormwater treatment and flow-detention structures are commonly co-located with parks, sportsgrounds and other areas at the boundary between natural and built environments.



Planning for change

The drivers drivers of change will have varying levels of impacts on flooding and stormwater and will continue to present challenges for the future.

Key impacts may include:

- increases in the rainfall intensity of storms and the frequency of cyclones and permanent sea level rise will lead to increases in the magnitude, frequency and consequences of flooding
- increased impervious areas will lead to more stormwater runoff and pollutant loads, challenging the capacity of the existing network
- increasing demand for, and yield of, developable land increasing the pressures of locating stormwater infrastructure to avoid conflicts with other networks
- land identified for economic development will often be flood constrained.

To proactively respond to these likely impacts and seek new opportunities, a strong set of policy positions has been prepared to achieve the desired outcome.

Council's role

Council, in collaboration with the state government, manages flood risk through planning and development controls, disaster management activities, community education and advocating the need to be prepared for extreme weather events. Provision of local flood knowledge is a vital role of council in informing these activities.

In addition council has a key role as an infrastructure provider and custodian, planning, delivering and managing a stormwater network to manage the quantity and quality of stormwater runoff across the region.



Flooding and Stormwater policy positions

6.1 Flood risk is managed for the wellbeing and resilience of our communities:

- a Development will be provided with acceptable flood risk and will not burden emergency services.
- b Flood immunity or resilience (from rainfall induced flooding) of existing communities is improved through the exploration of effective flood mitigation or resilience measures where practical.
- c Disaster management activities cater for our communities before, during and after events.
- d Flood risk information is made available in a form that is easily understood.
- e Insurance affordability is promoted through the provision of information to community and industry.

6.2 Flooding and stormwater assets are effective and responsive to a changing environment:

- a Infrastructure is designed to be effective until the end of its design life.
- b Infrastructure that is a burden or liability for council is avoided.
- c Accurate and current models, mapping and other corporate datasets inform the understanding of flood risk and stormwater network effectiveness.
- d Performance and condition of assets is monitored to ensure effectiveness.
- e Land for stormwater management is appropriately allocated located and designated for its purpose.

6.3 Flooding and stormwater management protects the natural and built environment:

- a Flood plains are protected for their intrinsic environmental, social and economic values.
- b Development in the flood storage preservation area is avoided unless an overriding need in the public interest is demonstrated with acceptable associated impacts and minimal alteration to the floodplain.
- c Development ensures that areas of community isolation are not created.
- d Stormwater quality treatment is provided to protect receiving waters and the health of our community.
- e Stormwater treatment is complementary and integrated within the public realm, using natural processes to the greatest extent possible.
- f Flood conveyance pathways are protected or enhanced.
- g Natural waterways are not diverted.

