



## Be dam savvy

**Dams are a great asset within many of our communities.**

They irrigate our crops, keep industry moving and give us the water we drink. They provide water security and can be a great place to relax and have fun too!

In Queensland, we have nine state-owned dams operated by the Department of Natural Resources, Mines and Energy. An additional 49 large dams are owned and operated by SunWater and Seqwater – government-owned corporations responsible for operating and maintaining these vital assets.

Other important types of water supply infrastructure include weirs, barrages, pipelines and off-stream storage facilities. All are designed to help us capture and use water within our communities.

### All dams operate differently

#### Un-gated dams

Most of the major dams in Queensland are built for water supply, and most of these are un-gated. When an un-gated dam reaches 100 per cent of its capacity, water will begin to flow over the spillway.

As water (called 'inflows') continues to flow into a dam reservoir during a weather event, this water will naturally flow over the spillway (now called 'outflows') and continue its course downstream.

#### Gated dams

Every dam is different, and designed specifically for its intended use and surrounding environment. The number of gates on a dam can differ, as can the mechanism and rules for operating them.

Many gated dams – such as Callide Dam near Biloela and Coolmunda Dam near Inglewood – do not have additional flood storage compartments and will operate in a similar way to an un-gated dam. It is important for communities near these dams to understand that these gated dams were built to maximise the water storage capacity but when the dam has filled to its maximum level, the gates will need to open to release outflows.

**Dams are essential. We can't live without water! They can also be a lot of fun – but we have to be sure to be safe when we live near them, or play in them.**

**Residents living immediately downstream of a dam should register with their local dam operator (SunWater or Seqwater) as these guys do a great job of keeping you up-to-date on the levels of their dams and any spillway outflows.**

**If you plan on fishing, swimming or boating on a dam, be sure to play within the rules – for your safety, and others!**

#### Flood mitigation dams

Dams designed to mitigate floods typically include a dedicated flood storage compartment above their standard water storage capacity. During times of heavy rain, dam operators are able to store this additional water and make controlled releases to reduce the volume of water flowing downstream.

Flood mitigation dams are strictly regulated, with detailed procedures stipulating the timing and size of releases to be made, and with gate mechanisms designed to safely regulate flood outflows.

It is important to remember that within a catchment there can be many different creeks and streams that meet at different points – so a community downstream of a flood-mitigation dam could still receive flood waters from another source. Be sure to know how your catchment works!



**It's difficult to predict weather conditions. Some types of rain events and cyclones are more difficult than others, and we can't expect dams to release the water we desperately need every time heavy rain is forecast. Remember, the very nature of dams mean they help mitigate floods to some extent!**

## **Dams during weather events**

All dams are designed to hold and safely pass excess volumes of water during periods of extreme rainfall. During these times, they can be blamed for flooding within communities, or expected to hold all flood waters – this can be both an inaccurate and unsafe assumption.

Dams are designed to safely pass flood waters once the capacity of the dam is reached, protecting the structural integrity of the dam wall and therefore the safety of downstream communities.

Un-gated dams and those not intended as a flood mitigation dam are not designed to contain flood waters. These dams do not stop floods. They can, however, reduce peak flows downstream by holding back a volume of water until the dam fills and outflows must commence to protect the integrity of the dam.

While a dam will provide some level of flood mitigation simply by being there, it is unsafe to assume it can stop all flooding in your area. By the same token, expecting flood waters to always come through your local dam can mean you miss an important early warning relating to another creek, river or stream that may be experiencing peak-flows.



## **Keeping informed**

- 1 Visit [sunwater.com.au](http://sunwater.com.au) to register for dam release alerts and read more about your local dam.**
- 2 Check with local authorities as to what information is available in your community – they are primarily responsible for the management of floods.**
- 3 Monitor the Bureau of Meteorology website or your local Council resources for flood warnings on local rivers and creeks.**
- 4 If you are interested in reading further, emergency action plans for Queensland's referable dams are available through [www.dews.qld.gov.au/water/dams/](http://www.dews.qld.gov.au/water/dams/)**

