

# Googong Dam



## What is the purpose of Googong Dam?

Googong is a water supply dam. It forms a major component of a network of other dams, reservoirs, treatment plants and pump stations providing secure drinking water for Canberra and Queanbeyan. In fact it represents 43% of Canberra's water supply storage capacity.

Googong Dam was not designed with specific features to prevent downstream flooding. Typically dams that are designed to help prevent downstream flooding have complicated gate structures on the spillway (e.g. Wivenhoe Dam, upstream of Brisbane) or very large storage spaces which remain empty until floods occur.

However, simply by being a dam on the Queanbeyan River upstream of Queanbeyan, Googong does help mitigate downstream flooding. Googong dam cannot prevent flooding in Queanbeyan, but the flooding would be worse if Googong wasn't there.



## Will lowering the water level in the dam before a flood help in a flood?

Not much, probably not at all. The two main reasons are:

- Googong Dam has a capacity of 119,000 megalitres (ML). This volume is dwarfed by the amount of water that comes down the river in a flood. For example the peak inflow rate in the 2010 flood was around 98,000ML/d. (i.e. if that flow was maintained it would fill the dam, from empty, in about 30 hours). If the dam were 85% full before this flood started, this flow rate would fill it in around 4 hours. Peak flow is not generally maintained for 4 hours, and certainly not for 30 hours, but these numbers give a scale to the amount of water that comes down the river in a flood, compared to the volume of water stored behind Googong Dam.
- It's hard to keep Googong Dam partly empty. A flood forms from a period of wet weather that firstly wets the catchment and subsequent rainfall runs off more readily, causing large flows. Typically these high flows (i.e. those that occur before the peak flood flow) are much greater than the rate at which we can release water from Googong Dam (the maximum release rate is around 500ML/d, or 0.5% of the peak inflow rate in the case of the 2010 flood.) So Googong Dam is typically full at the critical time, when the flood peak hits because, in general, rains in the lead up to a flood peak have created a situation whereby more water is coming into the dam than we have the capacity to let out.



## What did Icon Water do to Googong Dam in 2010?

Recent construction work on Googong Dam was to strengthen the spillway. The work made the spillway capable of passing very large floods. Without a spillway, very large floods could overtop the dam itself and potentially cause the dam to fail. This work did not change Googong Dam's performance during a flood, however it has reduced the potential for a flood to damage the spillway.



## What is being done to reduce impacts from future events?

Queanbeyan City Council and Icon Water have agreed to co-fund a new study to look at possible options in mitigating the impact of a future flooding event in the area. This will include input from the NCA who look after water catchments in the ACT including Scrivener Dam.

## What is Icon Water's role during a flood event?

Icon Water is responsible for the safety and operation of Googong Dam. Icon Water is responsible for preparing Googong Dam so it can withstand flooding, and generally keeping the dam in good working order. Icon Water has no particular role in a flood event, other than monitoring how Googong Dam is working during the event. All other flood related operations are undertaken by the Bureau of Metrology (rainfall and streamflow projections and warnings) and the NSW State Emergency Service (SES).



## Where do I get more information about Googong Dam and flooding?

If you are seeking information about:

### Flood warnings & flood level forecast

The Bureau of Meteorology

[www.bom.gov.au](http://www.bom.gov.au)

### Flood damage and road closures, crowd control

Queanbeyan City Council

[www.qcc.nsw.gov.au](http://www.qcc.nsw.gov.au)

Phone: (02) 6285 6000

After hours phone: (02) 6298 1234

Police

Phone: 000

### Disaster relief

State Emergency Service (SES)

[queanbeyan.ses.nsw.gov.au](http://queanbeyan.ses.nsw.gov.au)

Phone: 132 500

### For more information contact us

**E** [talktous@iconwater.com.au](mailto:talktous@iconwater.com.au)

**T** 02 6248 3111

**T** [@iconwater](https://twitter.com/iconwater)

GPO Box 366,  
Canberra ACT 2601

**[iconwater.com.au/googong](http://iconwater.com.au/googong)**