

Callide Dam Gates Project

Fact sheet: project overview

Updated June 2021

This fact sheet shares information about Callide Dam, its operations including the gate functions, project and the anticipated outcomes of the project in reinstating the gates for continued safe operations.

Project overview

The Callide Dam Gates Project has been set up to investigate, repair and restore the spillway gates to address intermittent occurrences of vibration during their operation and ensure ongoing dam safety and long-term water security.

Since their installation in 1988, the spillway gates have operated on seven flood event occasions, and during three of these, Sunwater has observed vibrations in the gates. Despite ongoing investigations, including engagement with numerous experts, no cause has been identified for the vibration events.

With current low water levels and the dry season ahead, this is an opportune time to gain access to the gates to conduct maintenance, testing and investigate and address the gate vibration whilst minimising the impact on available water supply.



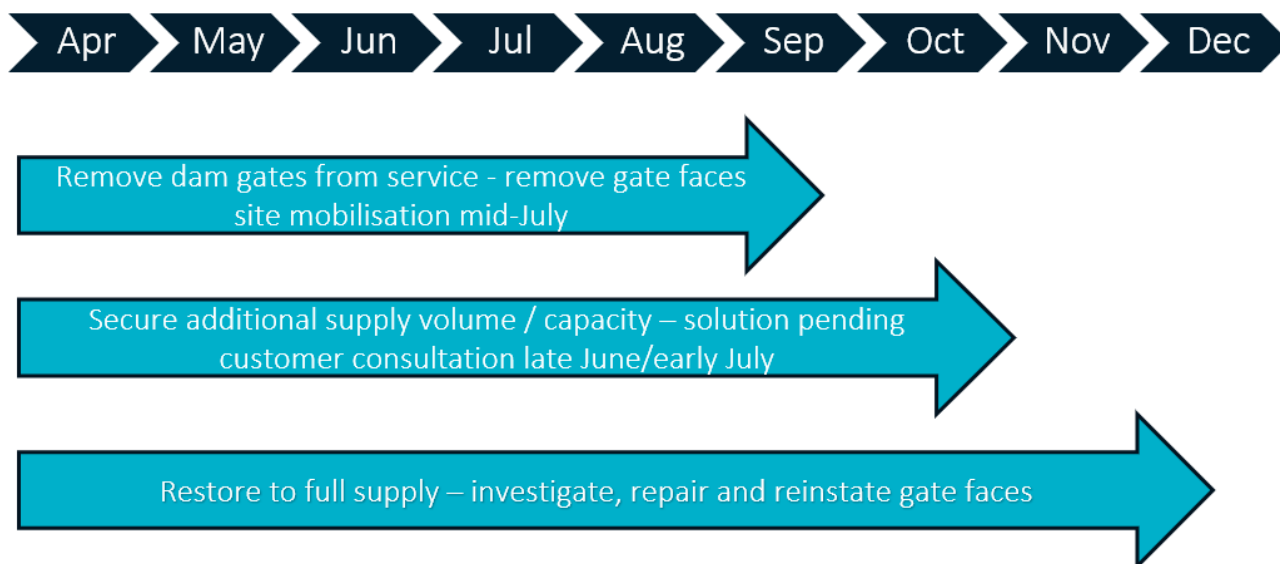
Project works

The project is made up of four work packages and targeted completion is the end of 2021. This is subject to determining a permanent solution for the gates. This work will involve:

- Removing the gates from service, including removing the gate faces from the gate arms
- Carrying out maintenance work
- Investigating temporarily increasing the dam storage level
- Investigating, remediating and restoring the gates with an engineering solution to address the gate vibration.

Removing the gates from service is the fastest and most effective way to undertake the required investigations. Physically removing the gate faces will enable expert inspections and testing of the faces, gate arms and associated infrastructure that would otherwise be difficult or impossible to carry out with the gates still in place.

Project timeline



Safety and emergency management

During the week of 21 June 2021 Sunwater issued a Section 399B notice to the Dam Safety Regulator. This notice means that Callide Dam is now operating at a reduced fully supply level (FSL) to enable the safe and dry removal of the gates as part of the Callide Dam Gates Project.

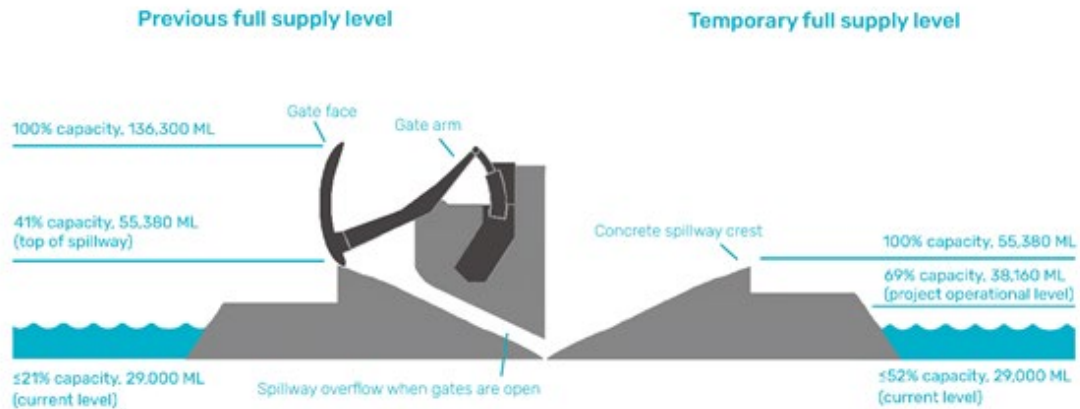
From the lodgement date of the 399B notice, the top of Callide Dam’s concrete spillway crest will reflect the maximum height of the dam wall. Prior to issuing the notice, the top of the concrete spillway crest represented 41% of the dam’s capacity, however, to prepare for the removal of the gates and when the gates are removed, Sunwater will refer to the top of the concrete spillway as the dam’s FSL of 100%.

This temporary change is necessary for communicating accurately and consistently to the community and emergency bodies because in the instance of extreme weather events, the water level reaching 100% must signal a forthcoming spill. In accordance with regulatory guidelines, Sunwater will update the Callide Dam Emergency Action Plan and the Operations and Maintenance Manual to reflect the changed conditions during the project.

Additionally, there will be a period between the 399B notice being issued and the gates being removed. During this time, should a rainfall event see the dam’s capacity reach the fixed crest, the gates will be operated, and slow releases made.

While the dam’s new FSL is the top of the concrete spillway crest, for the project works to take place the water level must remain below the temporary FSL at the project operational level of 38,160ML. Should unexpected dry season inflows occur, slow releases will be made to continue operating the dam at the project’s operational level.

The below infographic further explains this change.



About Callide Dam

Callide Dam, located near Biloela in Central Queensland, is an earth and rock-fill dam built on Callide Creek in 1965. The dam is filled by natural inflows from Callide Creek and water pumped from Awoonga Dam through the Awoonga-Callide pipeline to Stag Creek. The dam's main purpose is to supply water for the cooling towers at the Callide A, Callide B and Callide C Power Stations and to supply water for regional irrigation, industrial and urban use. The dam was not designed for flood mitigation and does not include a flood mitigation component.

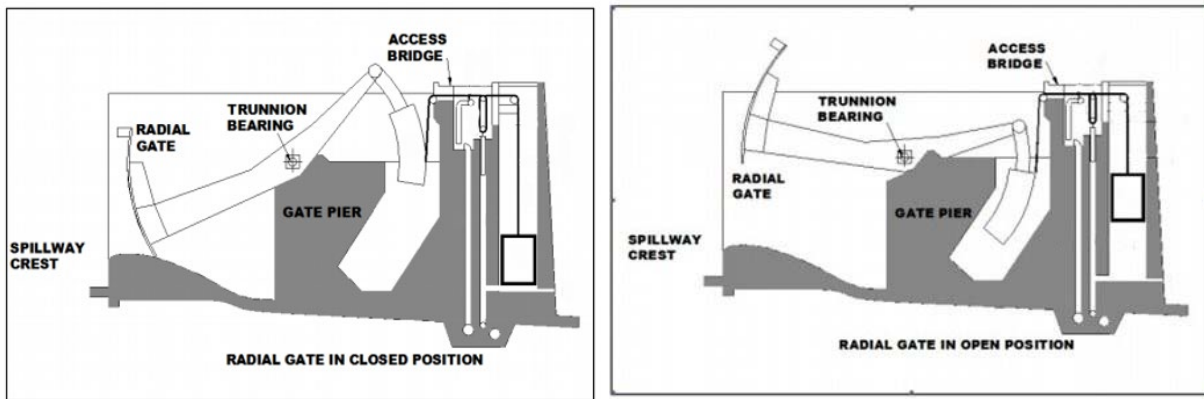


Callide Dam gates

Callide Dam has six large radial spillway gates (three sets) which were installed in 1988 to double its storage capacity to 136,300ML. The dam's spillway gates are positioned within the dam wall and are designed to protect the integrity of the dam structure from water rising above the full supply level to minimise the risk of dam overflow.

The three sets of spillway gates are configured to automatically respond to rising storage levels. The gates have a series of chambers and counterweights connected to the water and once the dam's water level rises above full supply level, the gates begin to open in a phased approach dependent on the volume and rate at which water is entering the storage.

In early 2019, an upgrade to the control system allowed for manual gate operations, which increased the ability for finer control of the gates.



Community engagement

Sunwater is committed to engaging openly and transparently with its customers, stakeholders and community. The safety of our people and the community is our number one priority.

Sunwater recently held customer and community information sessions in Biloela and is committed to ongoing engagement opportunities throughout the life of the project.

More information is available at sunwater.com.au/projects. If you have additional questions regarding the project, please contact community@sunwater.com.au or media@sunwater.com.au.