

Seqwater Dam Improvement Program

Ewen Maddock Dam

April 2020



Dams are long-life assets and require continual assessment, monitoring and maintenance.

In 2012, Seqwater commissioned an independent review of our 26 referable dams, which found improvements were needed at a number of our dams to meet the Queensland Dam Safety Management Guidelines into the future.

Ewen Maddock Dam is located near Landsborough on the Sunshine Coast, and is one of a number of dams identified for upgrade in the next six years.

Assessing our dams

In Queensland, dam owners are responsible for the safety of their dams under the Water Supply (Safety and Reliability) Act 2008 (the Act). The Department of Natural Resources, Mines and Energy requires Seqwater to comply with the Queensland Dam Safety Management Guidelines under the Act. Like all dam operators across the country, we also seek to meet the national guidelines set by the Australian National Committee on Large Dams (ANCOLD).

Our Dam Improvement Program considers all of these factors, so our dams can operate as they should, now and into the future. There are some key changes since Ewen Maddock Dam was built, which impact on its compliance with the dam safety guidelines, including:

- the latest estimates of extreme rainfall
- data from flood events and updated flood modelling
- improved understanding of earthquake probabilities and loads

- significant population growth downstream
- advances in dam design and development of consistent methodologies for assessment of dam condition.

About the upgrade

Ewen Maddock Dam is part of the SEQ Water Grid – a connected network of dams, treatment plants, reservoirs and pipelines supplying drinking water to the region. The dam was constructed across Addlington Creek, a tributary of the Mooloolah River. Construction of the dam was completed in 1976 and the full supply level (FSL) was raised in 1982.

Following the independent dam safety review in 2010, a number of improvements were identified at Ewen Maddock Dam and approved for delivery in two stages.

In 2012, the stage one upgrade of the dam involved the installation of pressure relief wells into the foundation materials, and construction of a sand filter buttress and overlying weighting berm made of clay along the downstream embankment toe.

In 2016, Seqwater engaged an engineering consultant to develop the second stage of the upgrade design. More than twenty-one options were identified during this process. The selected stage two upgrade option will:

- upgrade the existing earthfill embankment with sand filters
- raise the existing earthfill embankment to increase flood capacity
- strengthen the concrete spillway
- raise the training walls of the spillway, but not the ogee crest
- install emergency outlets in the spillway to enable reservoir drawdown in the case of a dam safety incident.

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Timing

The upcoming work will be undertaken in two stages. The first stage (Stage 2A) will include strengthening the existing embankment and increasing its floodwater capacity. Stage 2A includes the lake lowering and embankment work and is scheduled to take place in 2020 after the conclusion of the wet season.

This will be followed by work on the spillway in 2021 (Stage 2B).

Recreation

During the upgrade we will need to lower the water level of the lake to about 60 per cent of the Full Supply Level. Lowering water levels is an industry accepted practice to manage dam safety and bank stability during upgrades. The lake will return to the current Full Supply Level following completion of the Stage 2A work and adequate rainfall.

For the safety of the public, all on-water recreation, access to the designated swimming area and the recreational use of Maddock Park will be closed for the duration of the Stage 2A work.

Seqwater has recently modified the access points to the multi-use trails to ensure the trails can remain open during the upgrade. The project has also invested in rejuvenating the wetlands picnic area on Steve Irwin Way, the wetlands will remain open for recreation throughout the upgrade.



2011-14	✓
DAM SAFETY REVIEW	
2014	✓
OPTION ANALYSIS & CONCEPT DESIGN	
2015-16	✓
PRELIMINARY DESIGN & APPROVALS	
2017-19	✓
DETAILED DESIGN & APPROVALS	
2019	✓
PROJECT PLANNING	
2020-21	←
CONSTRUCTION (STAGE 2A)	

Living near our dams

It's important neighbours and people downstream of Ewen Maddock Dam know what to do in the unlikely event of an emergency. The dam has an Emergency Action Plan in place to enable us to respond quickly to potential incidents in partnership with emergency services and local council and, through targeted intervention, prevent an incident from developing into an emergency.

You can subscribe to dam release notifications for Ewen Maddock Dam on Seqwater's website or by download our app from Google Play or the App Store.

In addition, emergency services have a range of ways to warn the community about severe weather and other emergencies that require preparation and action at the household level. For help with preparing an emergency kit and evacuation plan, visit getready.qld.gov.au

Keeping you informed

You can stay up to date with the progress of the Ewen Maddock Dam upgrade by subscribing to our e-updates. To subscribe or for more information:

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