



15 August 2023

Chichester Dam five-yearly risk assessment complete

Hunter Water has completed the detailed five-yearly risk assessment of Chichester Dam as part of our routine assessment program and has submitted the report to the independent regulator Dams Safety NSW.

This work informs our 15-yearly safety review of the dam and is part of Hunter Water's commitment as a responsible dam owner to ensure we meet modern engineering and safety standards and our commitment to meet regulatory obligations.

Chichester Dam was designed and built in the 1920s to serve the community for hundreds of years, yet over time, the water sector's understanding of the dam under conditions such as rare to extreme flooding and earthquake events has improved.

Hunter Water Managing Director, Darren Cleary, said the risk assessment identifies aspects of the dam that require actions to ensure Chichester Dam continues to operate safely for many decades to come.

"At the outset, I want to assure the Lower Hunter community that Chichester Dam is safe for normal, daily operations just as it has been for almost 100 years, and there is no immediate threat to community safety during regular conditions, nor to our drinking water supply.

"We are following well-established processes to ensure we know all that we possibly can to keep Chichester Dam operating safely for many decades to come supplying drinking water to our community," Mr Cleary said.

The five-yearly risk assessment considers two aspects: the likelihood of an event occurring and the consequence if it were to happen.

The modelling conducted considers how Chichester dam responds to rare, very rare and extreme events, such as extreme flooding or earthquakes, larger than any experienced since the dam was built.

The cumulative result of the likelihood and consequence of these events has been identified as being above the regulatory safety threshold in this assessment.

"Given the age of Chichester Dam, the impact of climate change, advances in dam technology over time and the appropriately thorough nature of the risk assessment, this finding is not unusual, and it is not unexpected that actions are needed to ensure the dam operates safely for many decades to come.

"This is the first time we have carried out a risk assessment in this way, under the new Dam Safety regulations, and the latest scientific and engineering methods informed the risk assessment.

"These methods included detailed onsite geotechnical surveys and high-powered LiDAR to generate 3D 'finite element modelling' of the dam structure and foundation, helping to improve our understanding of different scenarios.



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“Hunter Water is actively working through the recommendations, and we have commenced interim works. We will continue investigations to determine the right options for long-term solutions so that the dam can continue to operate safely. Long term options could take between five and 10 years from initial investigations to construction,” Mr Cleary said.

The interim works and construction investigations include:

- upgrading concrete on spillway aprons, as detailed in the report recommendations
- increasing flushing frequency of pressure relief drains and further enhanced monitoring
- installing additional modern monitoring equipment
- hydrologic (converting rainfall to runoff) and hydraulic (flow/movement of water) modelling
- site surveys and geotechnical investigations, including boreholes, to collect and test soil samples.

As the report findings relate to very rare conditions, Hunter Water is actively reassessing our existing Dam Safety Emergency Plan to ensure we continue to be well prepared for such events.

“We are in direct contact this week with residents and property owners immediately downstream of Chichester Dam to ensure they are aware of the findings and update them on any changes to our Dam Safety Emergency Plan.

“We have invited them to two community drop-in information sessions we’re holding at the **Bandon Grove School of Arts on Wednesday, 16 August and Saturday, 19 August.**

“We encourage the local community to come along to find out more about the findings and recommendations and to ask the project team questions,” Mr Cleary said.

A fact sheet, plain English report summary and the full risk assessment are available on our website.

The detailed, five-yearly risk assessment and the safety review for Grahamstown Dam is still underway, and we will inform the community when it is complete.

For more information, visit www.hunterwater.com.au/Chichester

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