

Construction of Hume Dam, 1919-1936

Part 2: Planning a Dam

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'The Narrows' at Cumberoona, east of Albury, was originally the preferred location for the proposed Upper Murray Storage able to impound 600,000 acre-feet (740 gigalitres). Results of test boring to find bedrock however, were disappointing. Over the following two years, 24 other sites were investigated with 158 test bores drilled.

On October 15, 1918, NSW decided the site just below the Mitta Junction with the Murray River was the best location for the dam. They informed Victoria, who concurred, as did the River Murray Commission (RMC).



SURVEYING THE SITE: A surveyor working at the future site of the Hume Dam before construction commenced in 1919.

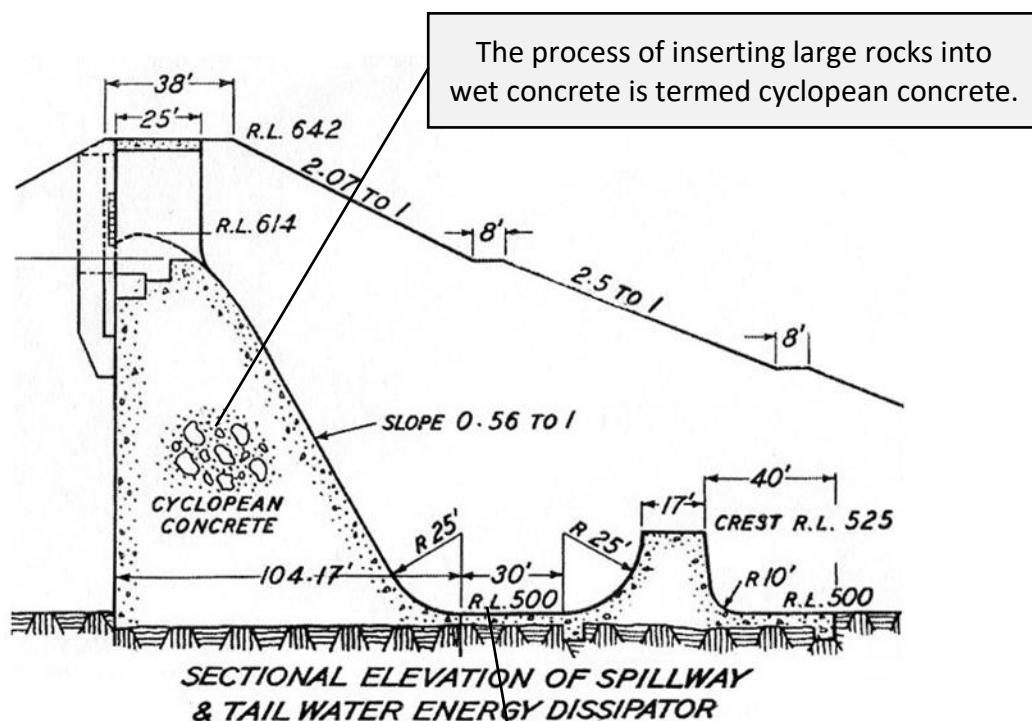
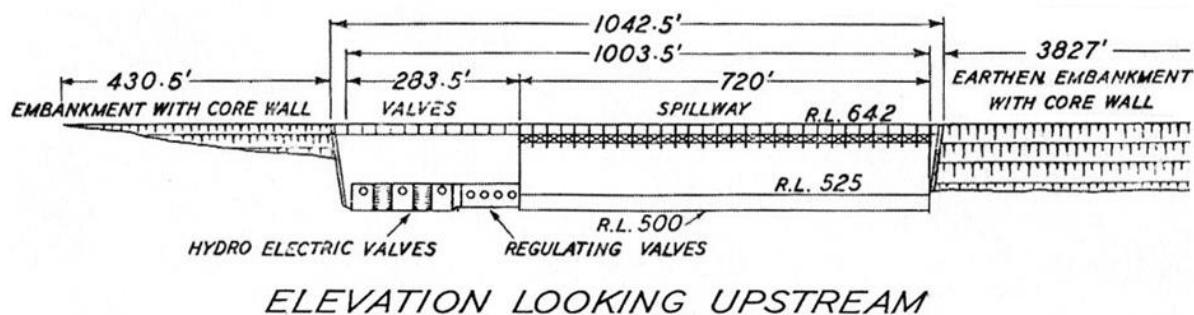
The Commission approved preliminary plans of the dam on April 25, 1919 with design work by prominent engineers E M De Burgh, J S Detheridge and G Stewart. Initially the construction site was referred to as Mitta Mitta Dam Site then in February 1920, the title Hume Weir was officially bestowed on the project. On November 12, 1919, Albury Municipal Council resolved to suggest to Government that the Dam be called Hume Reservoir.

RMC were keen to expedite works to facilitate drought protection along the Murray and to provide employment for return soldiers following World War I.

In law, the Murray is all NSW territory until it enters SA and to the high-water mark on the Victorian bank. As such, the NSW Public Works Department was responsible for location, design and construction of the spillway. The State Rivers and Water Supply Commission of Victoria had charge in their State where a gigantic earthen embankment with a reinforced concrete core wall keying into the spillway was to be built. This core wall was 1166 metres long, 1.8 metres wide at the base and tapering to 600 mm at the top. Both the spillway and core wall were bedded at least 900 mm into bedrock, the depth of which varied considerably across the valley.

By damming both rivers, the proposed capacity doubled to 1,250,000 acre-ft. (1,542 GI). With an eye to the future, the Commission acquired enough land to enable the capacity of the dam to be increased to 2,000,000 acre-ft, (2,467 GI) 'sometime in the future.' In NSW, 15,582 acres (6,305 ha), costing £215,000 and in Vic, 87,268 acres (35,316 ha), costing £598,500 was acquired. Not many were pleased with the compensation offered. Court cases and appeals continued for years.

'In the future' came in the decade of the 1950s. Work began on raising the water level, resulting in elevated uplift pressure on the wall. This was addressed by drilling scores of holes down to bedrock and inserting tensioning cables. Twenty-nine gates were installed and the Power Station with two turbines was commissioned in 1957. Tallangatta was relocated, allowing for the eight-metre increase of storage height.



The process of inserting large rocks into wet concrete is termed cyclopean concrete.

R.L. – Relative Level, the height (in feet) above sea level.