

Raising the dam wall by 16 metres is a strange proposal as **previous statements and actions were that another spillway was needed to reduce vibration of the dam wall in a large flood,** this new spillway has been built as the photo shows.



Major flooding can happen in the Hawkesbury-Nepean Valley at any time. Extreme weather events often strike without warning, making it important that we prepare for such events now and into the future.

The dam wall has already been extended by FIVE METRES when the second spillway was built!

An extra sixteen metre higher dam wall suggests it will need to be a complete new wall, not added on to this present construction, it would not have been designed for the suggested extra load placed on it.

A family cousin Dan Moyer was a geologist on the site when the build started in 1948, as a child I remember him saying there was a problem finding an area of solid sandstone amongst the mostly soft, unsuitable rock for a large dam wall foundation!

The blue metal and sand for the concrete was obtained just north of Penrith and transported on a flying fox to the site, all this Blue Metal has been dug up used and the site closed.

The Basalt rocks were deposited in the above site by large floods over a great length of time, these rocks are seen in photos of the Wollondilly River in the Burragorang valley - and then the river also deposited soil on top of the rocks.

Now we have the push is to build houses on the filled and levelled areas of the flood plain???????

The dams History: Warragamba Dam supplies water to more than 5 million people living in Sydney and the lower Blue Mountains.

The best quality water is selected and drawn through screens on three outlets in the upstream face of the dam. Water flows by gravity through a valve house into two pipelines that feed the raw water to Prospect water filtration plant and via off-takes to smaller filtration plants at Orchard Hills and Warragamba.

Early history

The location of the dam was first suggested in 1845. The deep narrow gorge of the Warragamba River, at the exit to Burratorang Valley, was identified as an ideal place for a dam by Polish explorer Count Paul Strzelecki. More than a century and many droughts later, work finally started in 1948 to build a reliable new water supply for Sydney's growing population. It took 12 years and 1,800 workers to build the dam, which opened in 1960. It was such a major undertaking that a town was built next to the site to house the dam builders.

Why the dam was built

The Warragamba River offered two important advantages as a site for a major dam - a large catchment area, and a river flowing through a narrow gorge. A tall and narrow dam capable of holding a vast amount of water could be built.

A population boom after World War I followed by the worst drought in recorded history, from 1934 to 1942, placed immense pressure on Sydney's water supply. However, despite the first sketch plans for Warragamba Dam being drawn up in 1867, plans were deferred during the construction of the Upper Nepean dams (1907-35), the Great Depression (1929-32) and World War II (1939-45).

How the dam was built

Warragamba Dam was a major engineering feat of the mid-20th Century. In 1946 the Warragamba River was diverted so excavation for the dam could start. Trees were cleared from the Burratorang Valley, and two temporary (coffer) dams and a tunnel were built to keep the site dry. More than 2.3 million tonnes of sandstone was removed.

Concrete was mixed on site using 305,000 tonnes of cement and 2.5 million tonnes of sand and gravel. The sand and gravel was transported from McCann's Island in the Nepean River via an aerial ropeway.

The dam was built in a series of large interlocking concrete blocks. Overhead cableways lifted 18 tonne buckets to place the concrete. Ice was mixed with the concrete to control heat generation and prevent cracks. One of the first pre-stressed concrete towers in Australia was built to house the ice-making plant.

To get to the work site from Warragamba township, the dam builders used two suspension bridges, one across Folly Creek, upstream of the dam wall, and the other across the Warragamba Gorge just downstream from the dam. These Folly Creek bridge was removed after the dam was built but the bridge over the gorge was kept and incorporated into the beautification works at the dam. In 2001 it suffered damage in a bushfire and was subsequently demolished.

Later improvements

To meet modern dam safety standards, in the late 1980s the dam wall was strengthened and raised by five metres. In the early 2000s an [auxiliary spillway](#) was built to divert floodwaters around the dam in a rare and extreme flood so as to protect the dam and ensure it remains safe in an extreme flood. A deep water pumping station was established in 2006 to allow water to be accessed lower down in the lake during times of drought

Now the push is to build houses on the filled and levelled areas of the flood plain??????

Two new areas that have been filled and levelled, one in the Camden Municipality - Many residents in **Spring Farm**, in Sydney's west, have been left hundreds of thousands of dollars out of pocket as they deal with damaged and potentially worthless properties. The other at Penrith, are now having problems, Jordan Springs East, Penrith council has placed notices on 841 homes.

These are areas of filled creeks – Penrith, or building on sand dumped by the Nepean River, we should be able to do much better than this – **build on the rock and not a upon the sand, this sounds about right!!!**

How could anything go wrong?

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