

# Elderly Warragamba pipes flushed with a new lease of life

September 2 2012

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EVER since Governor Arthur Phillip arrived with the First Fleet in 1788, the population of Sydney has grappled with the challenge of guaranteeing a drink of fresh water in a place of great extremes in rainfall.

The city's first official water supply earned the name "Tank Stream" because of the reservoirs that had to be carved into its sandstone so the convicts and their guards did not die of thirst.



Maintenance ... a pipe from Warragamba Dam. Photo: Adam Hollingworth

More than two centuries on, one of Sydney's most crucial pieces of infrastructure comprises the two huge pipelines – one 2.1 metres in diameter, the other 3m – that carry water between Warragamba Dam at the foot of the Blue Mountains and Prospect Reservoir in the western suburbs of Sydney.

They are 27 kilometres long and can transport 2600 megalitres a day, providing water to most of Sydney's population. But, just like Warragamba Dam, which was completed in 1960, the pipes are no longer young.

Construction work on the smaller pipeline began in 1946, while the large pipeline was completed in 1969.

A major pipeline maintenance project by the Sydney Catchment Authority and Sydney Water started in May and has just finished.

Each year – always in winter when the city's water demand is lower – maintenance work is done on a section of pipeline, but this year this involved a major shutdown of both pipelines so that 13km of the larger pipeline could be thoroughly overhauled.

The work included valve replacements as well as repairs to the internal concrete lining of the steel pipes.

The manager of north-west operations with the Sydney Catchment Authority, Brian Simmons, said that the pipelines were in "excellent" condition.

If the maintenance is kept up, he has no doubt they will still be serving Sydney's water needs well into their second century.

When the two pipes were out of action for several weeks, Sydney instead got its water from what was stored deep in Prospect Reservoir and from increased flows from the 64km of tunnels, canals and aqueducts that are known collectively as the Upper Canal.

This connects dams on the Cataract, Cordeaux, Avon and Nepean rivers with Prospect Reservoir.

The maintenance job also had to be done with sensitivity because the pipelines are on the State Heritage Register.

The register says in its statement of significance that Warragamba Dam, "associated infrastructure and pipelines is one of the largest (possibly the largest) of any type of dam in the world constructed specifically for an urban water supply".