

INCREASING SUPPLY

Sydney has an extensive water storage network with a total usable capacity of 2,600 billion litres making it, on a per capita basis, one of the largest in the world.

However, dam storages are reliant on rain and are thus susceptible to the variability of nature. No matter how big or how many dams a city has, deep and prolonged drought can put a city's water supply at risk. Until now, the risks to Sydney of extreme drought have been managed through the option of applying tougher drought restrictions, which would, if imposed, have significant social and economic impacts.

Along with increased recycling, water sourced from rainfall collected in dams will now be supplemented by accessing deep storages in our dams and by transferring extra water from the Shoalhaven.

The Government's new approach to managing drought – as explained in the 2006 Metropolitan Water Plan – is also to be ready to access groundwater reserves in a severe drought and construct a desalination plant in the unlikely event of extreme drought.

Accessing deep water

The Sydney Catchment Authority is improving infrastructure to increase the water supply over the next decade. New pipes and pumps are being built to reach deep water in the dams, adding an extra 40 billion litres a year.

In April 2006, a 17 tonne plug of concrete was removed from Warragamba Dam, which enables previously inaccessible water at low levels to be pumped into Sydney's water supply system. As a result, dam levels that had been at approximately 40% rose to about 45%.

Increasing Shoalhaven Transfers

The Shoalhaven Transfers Scheme has provided 25% of Sydney's water supplies during this current drought.

In consultation with the Shoalhaven and Southern Highlands communities, the Government is looking at ways to transfer extra water from the Shoalhaven without raising the Tallowa Dam wall.

New groundwater supplies

The Sydney Catchment Authority has investigated groundwater reserves that could be used to supply Sydney in drought times. A viable resource has been identified in the Upper Nepean and there are encouraging early results at Leonay near Penrith.

Bore fields to tap groundwater reserves will be constructed if dam levels drop to around 40% of the system's capacity. In that situation, groundwater would supply around 30 billion litres of water each year for about three years.

Desalination

In the extremely unlikely event that dam levels drop further, to around 30%, then work on building a desalination plant would commence.

To ensure that a plant could be quickly constructed, desalination planning is well under way. Sydney Water has purchased a site, sought planning approval, will undertake pilot testing, and has called tenders for final design blueprints so that construction of a desalination plant could be initiated in the event that the current drought worsens.

For more information visit waterforlife.nsw.gov.au