

Why Sydney residents use 30% more water per day than Melburnians

24 May 2019, by Ian Wright



Melbourne's water supplies are running low after years of drought. Credit: shutterstock

This week Melbourne's water storage dropped below 50 percent, a sign of the prolonged and deepening drought gripping eastern Australia. Sydney is only marginally better off, at 53.8 percent of full storage.

Along with many regional towns across southeastern Australia, the two largest [capital city water supplies](#) are steadily shrinking.

But while Melbourne's water levels are lower, if we look at the last 12 months we see another story: Sydney has plummeted from 72.3 percent to 53.8 percent, while Melbourne has only dropped from 58.9 percent.

Melbourne's average residential water consumption is 161 liters per person per day. In Sydney, for 2018, it was 210 liters per person. That is nearly 50 liters more per person—a difference of about 30 percent.

So why do Sydney residents use so much more water than people in Melbourne?

Sydney is thirsty

Sydney is using far more water than experts predicted. In March 2017, Sydney released a [Metropolitan Water Plan](#). Among the glossy pictures is a graph that indicates how thirsty Sydney is.

It predicted that by 2018, Sydney would be using around 550 giga-liters (GL) a year. But Sydney's actual 2018 consumption was 600GL, far higher than the "high use" estimate.

In fact, back in 2017 experts thought Sydney would only need 600GL for normal use in 2040, when the population would be far higher.

Making the best use of our existing supplies

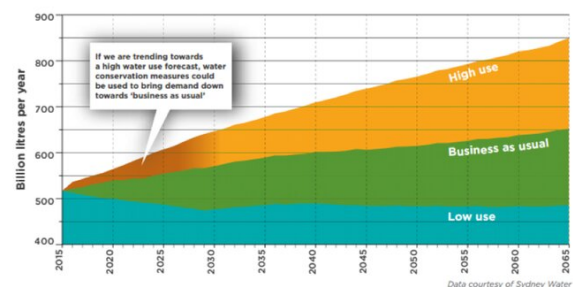


FIGURE 4: Forecast water demand (based on mid-population growth projection)

This chart, from the 2017 Sydney Metro Water Plan, fell far short of actual water use in 2018.

Sydney's actual water use is shown below. Crucially, the 2016 mark—where water use begins a sharp increase—is the same time water prices in Sydney fell by 13.5 percent (more on this in a moment).

It must be remembered that Sydney and Melbourne residents both consume less water than before the millennium drought. Sydney guzzled more than 600GL a year for seven of the years between 1991

and 2003.

Due to the influence of water restriction and the millennium drought, consumption fell to about 480GL. In Melbourne stores also fell steeply, even more sharply than in Sydney, from 500GL in 2000 to a low of 343GL in 2010.

Desalination

Both Sydney and Melbourne have large and expensive desalination plants, which supplement their water supplies.

Sydney Water will begin preliminary planning to double the size of its desalination plant when water stores fall to 50 percent. Based on [recent months](#), this is likely to be reached in the next [two months or so](#).

Sydney's desalination plant is relatively small, as it currently is capable of supplying 15 percent of the daily water demand. In comparison, Perth's two desalination plants can produce about 50 percent of its water demand.

live in Sydney and use the average amount of water a day (210 liters per person per day) that will cost you just 48 cents per day. The price is A\$2.28 per thousand liters.

Water is far more expensive in Melbourne, which has variable pricing for residential water. The more water you use, the higher the progressive cost per liter.

Each of Melbourne's three water retailers charge more money for low and high water usage. For example, Yarra Valley Water charges A\$2.64 (per 1,000 liters) for water use less than 440 liters a day. For more than 881 liters a day it charges A\$4.62, which is 75 percent higher than the lowest water use charge. For intermediate amounts the charge is A\$3.11. This sends an important price signal to residents—it pays to conserve water. In comparison, Sydney charges a flat rate for each liter of water, with no penalty for higher water users.

Sydney is not alone in charging a flat price for residential [water use](#). So do Darwin and Hobart. Canberra has the highest charge for higher water users (A\$4.88 per 1,000 liters).

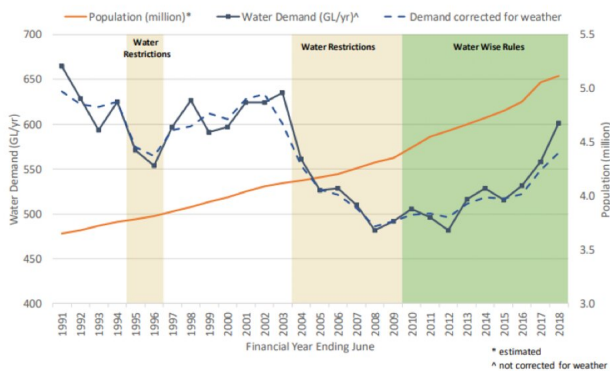


Figure 2-1 Despite a 25% increase in population the total demand for drinking water remains lower than it did before mandatory restrictions were introduced in late 2003. It is estimated that the hotter drier weather in 2017-18 resulted in a 33 GL increase in demand compared to what would be expected in a year with average weather conditions.

Was dropping Sydney's water prices in 2016 a mistake?

It is not a simple thing to change water prices in Sydney—the prices Sydney Water charges its customers are set by an [independent pricing regulator \(IPART\)](#).

Credit: Sydney Water 2017-18 Water Conservation report

Is water too cheap?

The lower water use per resident of Melbourne is a major element in the city's lower water thirst. If you

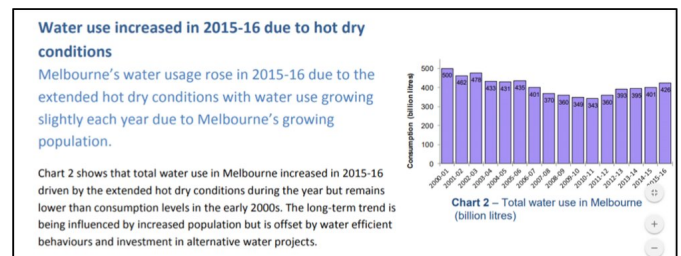


Chart 2 shows that total water use in Melbourne increased in 2015-16 driven by the extended hot dry conditions during the year but remains lower than consumption levels in the early 2000s. The long-term trend is being influenced by increased population but is offset by water efficient behaviours and investment in alternative water projects.

Melbourne's water stores dropped dramatically in 2010. Credit: [Melbourne Water, 2016](#)

Based on advice from Sydney Water, IPART dropped the price of residential water in 2016 by 13.5 percent. This was [broadly welcomed](#) as a reduction in the cost of living in Australia's most expensive city.

This coincides with a sharp rise in the total consumption of water in Sydney in 2016, 2017 and 2018.

As drought continues to bite in southeastern Australia the water authorities have a number of plans to save water, especially water lost from leaking infrastructure.

Currently about [7.5 percent of Sydney's water](#) (129.5 megalitres per day) is lost from leakage from its 22,000km of pipes. Sydney Water has explained that hotter weather in 2018 made clay soils expand and crack underground water pipes, exacerbating this problem.

Prepare for water restrictions

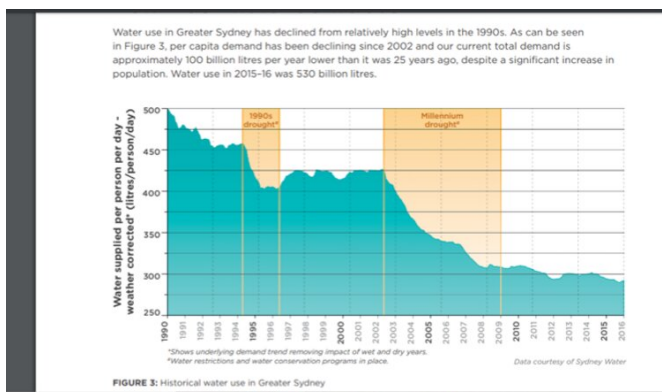
Compulsory [water restrictions](#) are planned to begin in Sydney as soon as the available storage drops below 50 percent.

This follows major success in millennium drought, when Sydney had water restriction from 2003 to 2009.

The Victorian government has [laws in place](#) to impose fines and even jail for offenders that breach water restrictions during the most severe drought conditions.

With no end to the drought in sight, it may be time for Sydney to learn from Melbourne. Sydney could easily put a higher price on [water](#), with higher users eventually paying more per liter.

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