

Domestic and business retrofit project Sydney, Australia

water scarcity impact

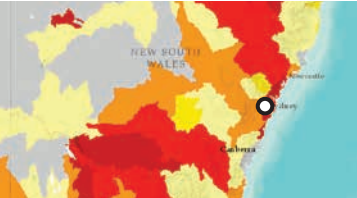
Reduced withdrawal	●
Reduced consumption	●
Improved water quality	●
Increased productivity	●
Net basin benefit	●

volumetric impact
12 410 000 m³/yr

programme cost
\$240 000 000

estimated unit cost of water
110¢/m³

Water Stress
Sydney, Australia



Arid & low water use
 Low (<10%)
 Low to med (10-20%)
 Med to high (20-40%)
 High (40-80%)
 Extremely high (>80%)
 No data available

Water Stress Map:
Gassert, F., M. Landis, M. Luck, P. Reig, and T. Shiao. 2013. "Aqueduct Global Maps 2.0."

Confidence level
● Low ● Medium ● High

Water Scarcity Impact Key
● Main ● Minor

Credits
 We wish to acknowledge the input of Andre Boerema, Fernando Ortega and Norm Ronis at Sydney Water in the preparation of this case study.

Project Overview

In response to long-term drought, Sydney Water launched the 'Every Drop Counts' initiative. The project is a key element of WaterPlan 21, a long-term strategy for sustainable water and wastewater management. In the past Sydney Water implemented infrastructure upgrades to dams, networks and wastewater treatment facilities. However, it was also realised that the demand for water consumption also needed to be addressed.

The 'Every Drop Counts' initiative has helped reduce the environmental impact of hard engineering whilst addressing water efficiency from the grass roots level. The initial aim of the project was to encourage residents of Sydney to consume less domestic water. Since then, Sydney Water has expanded the initiative to incorporate businesses, helping them to reduce their water consumption and to benefit from reduced costs.

The success of the programme has been widely noticed and it received the prestigious Stockholm Industry Water Award in 2006, the first time an Australian organisation received the award.

Key Elements

- Promoting the use of water efficient devices.
- Inspection of mains infrastructure.
- Reaching out to the business sector, such as; clubs, hotels, commercial premises and commercial shopping centres.
- Work with businesses to: identify technical solutions to water management problems, educate, managers and employees, and encourage citizenship.

Key Outcomes

- Projects implemented by Sydney Water since 2001 have helped to save 12 410 000m³/yr which would otherwise have been lost to the ocean.
- Water use per capita was reduced from 411 litres/day in 2001 to 297 litres/day in 2012.
- 18 080km of mains were inspected and repaired between 2006 and 2007, saving of more than 20 000m³/yr through reduced leakage.
- By July 2010, almost 420 large water using businesses were 'Every Drop Counts' partners.



Sydney, Australia

Intervention Features

- ▢ Low flow showerheads
- ▢ Low flow taps
- ▢ Low flow toilets
- ▢ Domestic leakage detection and repair
- ▢ Smart metering
- ▢ Water audits
- ▢ Stakeholder engagement

Project Levers

(1) Monitoring and Reporting:

Monitoring helps to identify opportunities to save water, as well as identifying any leakage. The installation of online monitoring equipment encouraged customers to actively monitor their own consumption and detect anomalies. A best practice approach has been developed to enable employees to report any leaks that have been detected.

(2) Employee awareness raising:

To increase awareness within the workplace, posters featuring a selection of water conservation messages are hung in areas of high water use, i.e. kitchens and bathrooms.

(3) Awards:

In 2006, the 'Every Drop Counts' Business Programme Water Conservation Awards recognised companies who showed leadership in water conservation. Awards were given for highest volume reduction, highest percentage reduction and innovation.

(4) Literature:

Sydney Water publishes a magazine called 'The Conserver' which showcases water conservation success stories and water efficiency projects. They have also developed fact sheets to show businesses numerous ways in which they can save water, with an emphasis on the financial benefit and payback periods. These fact sheets and back issues of 'The Conserver' are available from Sydney Water Business Customer Services.

(5) Council Partnership Programme:

Sydney water offered a heavily discounted Water-fix home retrofit programme and a similar water audit and retrofit programme for specific business sectors. A retrofit typically reduces household water use by an average of 20.9m³/year. The WaterFix programme is projected to save around 8 200 000m³ of drinking water each year, by 2015.

Outcomes and Challenges

From initially reaching out to houses, the 'Every Drop Counts' programme has gained momentum and diversified into businesses in order to spread the message and knowledge about water conservation.

Outcomes as a result of the 'Every Drop Counts' programme include:

- Personal water use in Sydney remains at historically low levels; in June 2012 total water use was 297 litres per person per day, well below the operating license target of 329 litres per day, down from 411 litres per day in 2001.
- In 2011/12 alone Sydney Water estimated water savings from large water using businesses were around 588 000m³/yr, at a cost of \$565 000. The cost has been met directly by the utility company.
- At the end of 2011/12, around 500 small to medium businesses had been engaged through the Council Partnership Programme. The total water savings are around 789 000m³/yr.
- The 'Every Drop Counts' in schools programme finished at the end of 2011. Most schools retained the smart meter installed as part of the programme. The water savings are estimated at 218 000m³/yr.
- In 1997, as part of the 'Every Drop Counts' Business Programme, Sydney Water and Manly Council commissioned a water usage study at the council's beach front properties. Changes were made, including implementing water saving devices in all new facilities. The initial investment of \$30 000 was recovered in just one year. The council saved \$48 900 in the first two years of the programme.

Current financial challenges and a temporary alleviation of drought mean that Sydney has started to scale back some of its water efficiency programme, but the scale of the work to-date has ensured a wide adoption of water conservation practices and culture.

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