Study busts water saving myths

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A comprehensive scientific study of outdoor water use has found some water saving ideas could actually be urban myths that are wasting thousands of litres each day. The project by the Cooperative Research Centre for Irrigation Futures is headed by Associate Professor Basant Maheshwari, from the University of Western Sydney.

"Despite a perception of significant water use outside the house, no one had comprehensively monitored and analysed the outdoor watering practices of Australians - without this vital information we don't know if water saving strategies like automated watering systems and smaller gardens are effective," says Associate Professor Maheshwari.

Remarkably, the study found a lush green lawn may not always be the biggest water guzzler in the yard - instead it's the plants in the garden beds.

"It was a surprise to find two thirds of the total irrigation water used in the home goes on the garden, but it covers only half the total area of the yard," Associate Professor Maheshwari says.

"This suggests garden areas are substantial water users and need to be targeted for improved watering practices to make a significant decrease in our water consumption."

The study also found water-wise small gardens could be an urban myth.

"Homeowners in the study frequently over irrigated smaller areas of less

than 50 square metres.

"Four times the water per square metre is applied to small gardens compared to larger ones," Associate Professor Maheshwari says.

"Most people don't have a clear understanding of the water needs of their gardens, with plants receiving on average three times the water they can actually use.

"People in the five-month study turned on their outside taps almost 3,500 times to use over 2,000 kilolitres - the equivalent of 40 backyard swimming pools," he says.

Many households install automatic watering systems believing it will deliver water to plants more effectively and efficiently - saving them time and water - but the study shows this too could be wasting thousands of litres.

"Many watering systems examined in the study are poorly designed, installed and are not maintained," says Associate Professor Maheshwari.

He says it's possible an approval or inspection service for home irrigation systems issuing special 'waterworthiness' certificates - similar to roadworthy certificates for cars - may be one way to reign in the unnecessary wastage.

The research project has received funding from Sydney Water Corporation and has been conducted in collaboration with the Irrigation Association of Australia.

Mr Jolyon Burnett, CEO for the Irrigation Association of Australia, says the report highlights several issues.

"Human behaviour is clearly the most important factor in water use, and significant opportunities exist for water conservation through encouraging good watering practices by homeowners and the use of technology that removes human error," Mr Burnett says.

"Do-it-yourself microjet irrigation was found to be the most inefficient due to homeowners not understanding how to choose or design a system - efficient irrigation requires significant training and knowledge.

"Judging by the 50 sites examined across Greater Sydney, we need to rethink current restrictions and aim for greater use of professional installers and smart controlled systems. This approach is already well accepted and encouraged in rural and commercial irrigation - the study shows it also works in the backyard," Mr Burnett says.

Mr Tony Robinson, a water conservation specialist from Sydney Water Corporation, believes the study's findings will contribute to even more effective water-wise programs in the future.

"Sydney Water has initiated a number of measures to save Sydney's scarce potable water supplies - especially over the last few years. This study provides valuable 'hard' data about how Australians use water, which will contribute to refining future demand management strategies," Mr Robinson says.
Ends.

Background information

50 households of varying sizes participated in the study

Over 16,000 square metres of irrigated area monitored

Houses located across the Greater Sydney area - from the Western

suburbs, to the inner city, to the Northern and Southern districts.

Each had their yards surveyed for plant type and garden design, and their water use monitored for five months using data loggers that recorded consumption every 15 minutes at each home site.

Households participating in the study were exempt from water restrictions.

Every drop of water used outside on the garden, lawn, paths or washing cars was measured.

Average daily water use outside: 392 litres
Average daily water use inside: 592 litres

Irrigation accounted for 34% of total household water use.

The percentage of total household's water use used on irrigation varied from 2% to 84%.

Almost a third of spaces are irrigated by hand watering.

Gardens account for 50% of the area in the study but consumed 66% of the irrigation water.

Small areas (less than 50 square metres) receive as much as four times the water per unit area compared to larger irrigated areas.

Homeowners irrigated small spaces (less than 50 square metres) two or more times the amount the area required.

Do-it-yourself microjet irrigation is the most inefficient method.

The most popular day for watering was Sunday.

The most popular time for watering was 3pm to 9pm.

A copy of the full report can be downloaded from:
www.irrigationfutures.org.au/n … s.asp?catID=9&ID=270

Irrigation Association of Australia information on garden watering:
www.irrigation.org.au/download/standards/Home%20Gardener%20FINAL%20web.pdf

Source: University of Western Sydney