



### Water demand can be reduced through behaviour change, technology and design.

Demand reduction is applicable at all development and building scales, is appropriate for retrofitting, and can be achieved by:

- Increasing water use efficiency, with a resultant reduction in the use of mains water; and
- Developing and maximising the resource potential of rainwater, surface runoff (or stormwater) and wastewater to supply a range of water uses usually met by the mains water supply.

Water efficiency is a core component of total water cycle management.

Reducing consumption also minimises wastewater generation and subsequent treated wastewater discharge.

#### What is Water Sensitive Urban Design?

Water Sensitive Urban Design (WSUD) is an approach to urban planning and design that integrates the management of the total water cycle into the urban development process.

WSUD incorporates all water resources, including surface water, groundwater, urban and roof runoff, drinking water and wastewater. It includes:

- Utilising water saving measures within and outside domestic, commercial, industrial and institutional premises to minimise requirements for drinking and non-drinking water supplies;
- Storage, treatment and beneficial use of runoff (at building and street level, including stormwater);
- Treatment and reuse of wastewater; and
- Using vegetation for treatment purposes, water efficient landscaping and enhancing biodiversity and amenity.

There are many different WSUD measures which together form a 'tool kit' from which individual measures can be selected to form a specific response suiting the characteristics of each development (or redevelopment).

Those measures are described in detail in the WSUD Technical Manual, which can be found online at [www.planning.sa.gov.au/go/wsud](http://www.planning.sa.gov.au/go/wsud)

**Demand reduction** is one such measure.

## Demand Reduction Approaches

There are numerous steps which can be taken to determine the demand reduction measures which are most appropriate for your particular situation or development. These include:

- Undertaking a site analysis to understand the site conditions and land capability, as demand reduction cannot be applied in a standard way. It is important to understand how much water is used, where it is used, by whom, when and how it is used;
- Setting realistic water conservation objectives and targets, and tracking progress against any targets. If the objectives for selecting a demand reduction approach are clearly defined, the task is simplified;
- Selecting the most appropriate techniques, which involves identifying and prioritising water conservation and water reuse opportunities, and determining which measures will be the most appropriate. Selection needs to consider site conditions, effectiveness, cost, and energy consumption;
- Liaising with local council and other relevant authorities to check whether there are any planning regulations, building regulations or local health requirements that apply to demand reduction measures you have selected; and
- Identifying funding opportunities provided by governments at all levels. Examples include funding from the Adelaide and Mt Lofty Ranges Natural Resources Management Board (community grants), local government (rebate schemes) and the State Government (home rebate scheme).

## Techniques for Reducing Water Demand

- Making changes to the maintenance of appliances and fixtures or the type of products purchased (i.e. ensuring no leaks, installing tap aerators and water (and energy) efficient washing machines and toilets);
- Applying WSUD principles to landscape design, including integrated planning of landscape measures with other water management measures (e.g. locating plants with similar water needs together);
- Minimising the area of lawn and selecting the most appropriate species to reduce the demand for water, need for fertiliser, the cost and the maintenance time required for a landscaped area;
- Installing irrigation systems only if needed. Landscape measures that collect and utilise rainwater and runoff by slow infiltration can replace reliance on supplementary water. If irrigation is necessary, it should be applied in the most efficient manner;
- Mulching can reduce irrigation water use by as much as 70 per cent and provides protection from harsh climatic forces, making garden areas more pleasant and reducing moisture loss from soil and plant tissue; and
- Reducing drinking (or mains) water demand. Most domestic, commercial and industrial water does not need to be of drinking standard, so it is possible to obtain water from alternative sources.

## Water Restrictions

Permanent water conservation measures are effectively base level water restrictions that South Australians are required to comply with on an ongoing basis. These were introduced in 2003.

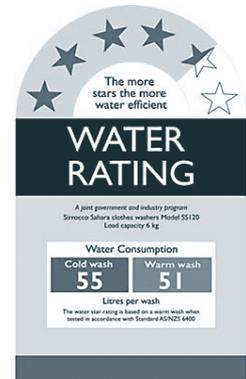
Depending on water supply issues relating to the River Murray and in the Greater Adelaide Region catchments, the level of water restrictions will be revised to match prevailing circumstances and conditions.

Information on the current level of restrictions can be obtained from the SA Water website, [www.sawater.com.au](http://www.sawater.com.au)

## Water Efficiency Labelling and Standards Scheme

Labelling under the Water Efficiency Labelling Scheme (WELS) is compulsory and applies to items such as showerheads, washing machines, dishwashers, toilets, taps, flow regulators and urinals.

The labels provide valuable information to consumers to enable an assessment of the water efficiency of the products they purchase. Products with an ★★★ rating should be purchased as a minimum.



## Education and Incentives

Raising awareness is one of the most cost-effective and sustainable methods to save water. Education and incentive schemes can be used to encourage the uptake of water conservation practices and technologies.

There are two main types of programs; ideally the two should be linked:

- Those that contain incentives of free or discounted products or services, such as offering discounted water-efficient showerheads; and
- Those that consist of education and communication programs.



## Further Information

While there is a large range of useful resources and further information available on demand reduction, in the first instance it is suggested that people read Chapter 4 of the *Water Sensitive Urban Design in Greater Adelaide: Technical Manual*. Further information is available at [www.planning.sa.gov.au/go/wsud](http://www.planning.sa.gov.au/go/wsud)

## Other Summary Sheets

Other Water Sensitive Urban Design Summary Sheets for the Greater Adelaide Region are available in this series. To download the summary sheets visit [www.planning.sa.gov.au/go/wsud](http://www.planning.sa.gov.au/go/wsud)

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