

Reducing Water Demand

Reducing water consumption in the home is a simple and easy way to decrease water and energy bills and reduce your household's impact on the environment.

Conserving scarce water resources helps reduce the need to dam rivers, reduce wastewater produced and treated at sewage plants, lower energy requirements for treating and transporting water and wastewater, and reduce greenhouse gas emissions.

Low cost water reduction can take place in every household, often with costs recouped through water and energy savings within one year.

FIVE WAYS TO MINIMISE WATER USE

1. Reduce indoor water use by choosing water efficient showers, toilets, taps and appliances.
2. Minimise outdoor water use through reducing grassy areas and planting native species. Minimise paving of outdoor areas as this increases heat radiation and water run-off from the site.
3. Wash cars and bikes on the lawn so that the grass is watered at the same time.
4. Sweep your paths and drives instead of hosing them down.
5. Re-use water where possible.

Fitting a water efficient showerhead takes about five minutes for a plumber or handy person. If you do it yourself, don't forget to use plumber's thread tape.

THE WELS PRODUCT RATING SYSTEM

The national Water Efficiency Labelling and Standards (WELS) *scheme* provides consumers with information about the water efficiency of products.

The WELS scheme requires certain products sold anywhere in Australia to be registered, rated and labelled for their water efficiency in accordance with Australian/New Zealand Standard AS/NZS 6400:2005.

The Standard currently covers showers, dishwashers, clothes washing machines, lavatory equipment, urinal equipment, tap equipment and flow controllers. These products are legally required to display the WELS label. Labelling is voluntary only for flow controllers. Other products may be added to the scheme in the future.

The water efficiency rating is displayed on WELS products in the form of a blue 'star rating label'. Labels for different categories of products differ slightly, but all share two key pieces of information:

- > The star rating – the stars indicate water efficiency. The more stars, the more water efficient.
- > The water consumption or flow figures.
- > The average water consumption per use (dishwashers, washing machines, toilets, urinals).
- > The average water flow per minute (taps, showers).



A product search database that enables consumers to compare the water efficiency of products is available at <http://search.waterrating.com.au>

For further information about the labelling scheme and to search for products, see the WELS web-site at www.waterrating.gov.au

Some council development control plans specify water efficient fixtures in new developments and renovations. Check with your council on its requirements.

SHOWERS

The shower is one of the easiest and most cost effective places to decrease your water use.

An inefficient showerhead can use more than 20L of water every minute while an efficient WELS 4 Star rated one will provide a high quality shower using a maximum of 7L every minute. Depending on the model you choose it is possible to get additional features such as massage, self-cleaning, and flow cut-off control.



Water efficient showerheads can save around \$60-\$90 annually on household water bills. The reduction in hot water means less energy is needed for water heating, and can save up to \$160 on energy bills depending on the sort of water heating system you use.

Many water authorities offer retrofit kits, free showerhead exchange or generous rebates on water efficient showerheads. Check with your local water authority.

The environmental benefits are:

- > Lower water use.
- > Decreased wastewater volume.
- > Reduced CO₂ emissions from reduced hot water use.

TOILETS

There are many ways to reduce the amount of water used by your toilet:

- > Use the half-flush button when appropriate.
- > If you have a single flush toilet:
 - Insert a water displacement device into your tank if you have a single flush toilet. You can purchase these or place a plastic bottle filled with water in the cistern. Make sure it doesn't obstruct the mechanism. Don't use bricks as they can crumble and stop the system working properly; or
 - Have a plumber adjust the flush volume of your cistern.
 - Even better, replace the toilet with a water efficient dual flush model. This could be one of the common 6/3 litre models with WELS 3 Star rating, or a more modern 4.5/3 litre model with 4 Star rating. You could even fit a 5 star model which re-uses water from hand washing (see below).



The 4.5/3 litre toilet suite re-uses water from the hand basin, and has a WELS 5 Star water efficiency rating.

Replacing a 12 litre single flush toilet with a 4.5/3 litre WELS 4 Star toilet in a household of four people could save more than 60,000L of water per year.

- > Fix leaking toilets immediately. A slow, barely visible leak can waste more than 4,000L per year. Visible, constant leaks can waste more than 96,000L.

- > Check for leaks by placing a couple of drops of food colouring or dye into the cistern. If colour appears in the bowl within 15 minutes without flushing, then a leak exists and the system should be repaired.

What leaking toilets cost

	LITRES PER HOUR	LITRES PER YEAR	COST PER YEAR (2007)
Slow leak, barely visible	0.5	4,400	\$5
Leak visible in bowl, no noise	1.5	13,100	\$16
Visible leak, just audible	6	52,600	\$63
Visible leak, constant hissing sound	11	96,400	\$116

Based on a water price of \$1.20 per kL of water.

The most water efficient toilet is a waterless toilet, of which there are a range of models and types available. They work with no odour and little maintenance while providing excellent compost. For more information on waterless toilet systems see 7.7 Low Impact Toilets.

TAPS

There are a number of things you can do to ensure that your taps are not using more water than necessary:

- > Fix leaks immediately.
- > Don't over tighten taps. This can wear the washer and cause leaks.

A tap leaking at the rate of one drip per second will waste more than 12,000L of water a year.

- > Install a flow regulator on kitchen and bathroom sink taps.
- > Ensure that all new taps are water efficient. Check the WELS Star rating.
- > Install mixer taps in showers. They can reduce the potential for scalding and save large quantities of water wasted through running the shower while trying to get a comfortable water temperature.

- > Install separate hot and cold taps or mixer taps that provide cold water only in the middle position over basins and sinks. Mixer type taps are usually left in the middle position. This means that each time the tap is run for a glass of water or to rinse a toothbrush, hot water is drawn off just to cool in the pipe without ever being used.



WASHING MACHINES

The laundry is a great place to reduce your water consumption and is a potential source of water for your garden. There are a number of ways to improve the efficiency of your water use in the laundry:

- > Adjust the water level on the machine so it is appropriate for the size of the load. Try to wash only full loads of laundry and use the economy cycle if you have one.
- > Use the suds saver function if your machine has one.
- > Divert the wash water from your laundry to other uses, such as flushing your toilet or watering your garden. You will need to check with your council to make sure this is allowed and installed to comply with regulations. **[See: 7.4 Wastewater Re-use]**
- > Purchase a water efficient washer. Check the WELS star rating. Most front loaders are efficient, and there are now some efficient top loaders on the market. A 5 star model will save 50L or more per load. Water efficient washers also use less detergent (the big money saver).

DISHWASHING

Dishwashers are also WELS star rated and the most efficient models will use half the water of an older model.

A couple of simple ways to use your water more efficiently when washing dishes are:

Avoid rinsing prior to washing. Scrape food remains off dishes and dispose of them in the compost or garbage bin rather than rinsing them away.

Always use a plug in the sink rather than letting the tap run continuously.

Purchase a water efficient dishwasher. Some newer model dishwashers are very water efficient: WELS 4 Star dishwashers can use less than 1 litre per place setting – that's less water than many people use washing dishes by hand. Look for the WELS label to check the water efficiency.

Always try to fully load the dishwasher before using it and use the economy cycle if you have one.

OTHER WATER SAVING TIPS

In-sink waste disposal units use water when operating and also mix wastewater with food scraps. From an environmental viewpoint well controlled and managed home composting is the most favoured option (CRC Waste Management and Pollution Control, 2000).

Storage water heaters release water through a release valve when they are heating water. Have a professional check the release valves on your water heater. The amount of water used may be minimised by setting the release rate to the minimum recommended by the manufacturer. Turn your heater off when going on holidays so that water is not being heated and wasted while you are away.

Evaporative air conditioners have a bleed valve that releases water while the air conditioner is in use. Ensure that the bleed valve is set to the minimum required for the air conditioner to work with your water supply. Make sure the air conditioner is turned off when you go on holidays.



Reticulated drip fed systems are preferable.

Outdoor water use

See 7.6 Outdoor Water Use fact sheet for tips on:

- > Watering gardens and lawns.
- > Washing cars, houses, pathways and garden tools.
- > Pool filling and maintenance.
- > Other recreational uses.

REBATES FOR WATER EFFICIENT PRODUCTS

Depending on where you live, you are likely to be eligible for rebates, subsidies or free offers on some water efficient/water saving products. Check with your council and water utility.

The following website is also useful for identifying rebate offers. http://www.smartwatermark.info/home/rebate_links.asp

ADDITIONAL READING

Contact your State / Territory government or local council for further information on using water wisely, including what rebates are available. www.gov.au

Australian Consumer Association
www.choice.com.au

Australian Water Conservation Tips
www.savewater.com.au

CRC for Waste and Pollution Control (2000), *Assessment of Food Disposal Options in Multi-Unit Dwellings in Sydney*, Document 2883R. www.insinkerator.com/environmental.shtml/

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Mobbs M (1998), *Sustainable House: living for our future*, Choice Magazine, Sydney.

NABERS – water saving tips for your home
www.nabers.gov.au

Water Efficient Labelling and Standards, Australian Government
www.waterrating.gov.au

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www.waterrating.gov.au

Windust A (2003), *Waterwise House and Garden – A Guide for Sustainable Living*, Landlinks Press, Victoria.

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