

## Saving Water: Make it Your Business Commercial Kitchens and Food Service

By conserving water you're not only saving money, but assisting South Australia to secure water resources for our future.

The main areas of water usage in kitchens include sinks, dishwashers, garbage disposal units and icemakers. By adopting water wise principles in these areas you can significantly reduce your operating costs and improve your businesses water efficiency.

There are many basic ways you can improve the water efficiency of your kitchen and food service area. These include understanding your water use, tracking your water efficiency (benchmarking), improving your general maintenance, encouraging staff to adopt water saving practices and introducing water efficient fixtures.

### Understanding your water consumption

The best way to gain an understanding of your water use and to track water saving improvements is to understand your historical water consumption. This information is available on your SA Water account. Using the account information you can record and compare your quarterly water consumption. If your kitchen and food service area is part of a larger business, consider fitting a separate water meter on your mains water supply to this area. Over time an average consumption will become apparent and fluctuations above or below this average will highlight water saving improvements or indicate costly leaks and improvement opportunities.

Reducing your business' water consumption will reduce your operating costs by saving on water and energy costs and reducing wastewater charges and chemical costs.

### Tracking your water efficiency

Water tracking can help your business gauge its water efficiency performance and help establish goals for water reduction. The efficiency of your kitchen can be expressed in terms of litres per food item, or meals prepared.

By determining your daily water consumption and dividing it by the number of meals prepared you can calculate your daily water efficiency benchmark. Use the table below as a performance guide and compare your water efficiency.

Benchmarks for water usage in kitchens

Rating	Water usage*(litres per food item or meals prepared)
Good	Less than 35
Fair	35-45
Poor	More than 45

\*Note: usage based on total kitchen usage divided by number of meals prepared.

Figures from Brisbane City Council fact sheet 2 'Commercial Kitchens' [www.brisbane.qld.gov.au](http://www.brisbane.qld.gov.au)

### Further information

(08) 7424 1336

[www.sawater.com.au](http://www.sawater.com.au)

[businesswatersaver@sawater.com.au](mailto:businesswatersaver@sawater.com.au)

## General maintenance, leaks & monitoring

Often leaks go unnoticed due to a lack of regular inspection and leaks not being reported for repair. An easy way to detect a leak in your business is to check your water meter once every water-using process is turned off. Observing a change in your meter reading during your off period can indicate possible leaks.

With an established leak identification program and some minor staff education unnecessary water wastage can be avoided.

Common areas where leaks occur include toilets, tapware, piping joints, pump seals, hose nozzles, shut off valves and cooling systems.

Our [General maintenance, leaks and monitoring](#) fact sheet provides detailed information in this area.

## Amenities

Water use in public and staff amenities can account for 15% to 40% of the total water usage depending on the business activity. Often the water used by toilets, showers and basins are overlooked making this area an easy target for water savings. The installation of water efficient devices in heavily used guest areas can be very cost effective.

E.g. If you have 100 users installing a dual flush toilet could save up to 700,000 litres annually by replacing full flush toilets with efficient dual flush toilets.

Our [Amenities](#) fact sheet provides detailed information in this area.

## Adopt water saving practices

Water savings can often be achieved by working with staff to improve everyday procedures and practices.

- Talk to your staff on a regular basis about potential water saving ideas.
- Get staff to turn off taps when they are not in use.
- Encourage staff to proactively report and repair leaks quickly (signage may be help remind staff).
- Undertake regular kitchen inspections to help identify equipment leaks and malfunctions.
- Discourage staff from using running water to thaw frozen food.
- Dry sweep floors and use a mop and a bucket instead of hosing (except when it is conducted to protect public health and safety).

## Dishwasher use

- Train your staff to use the best wash program for the job.
- Only run rack dishwashers when they are full.
- Consider recycling the final rinse and using it as a pre-rinse water source.
- Hand scrape dishes instead of excessive rinsing before loading into the dishwasher.
- Wash and rinse dishes in the sink with the plug in without the kitchen tap continuously running.

## Introducing water efficient fixtures

The majority of water used in the kitchen comes from taps due to their frequent high use. Often taps flow at excessive rates well above recommended best practice flows. The following table shows potential water savings from common hand basin and kitchen taps. For more information regarding WELS rated products please visit [www.waterrating.gov.au](http://www.waterrating.gov.au).

### Best practice flow rates for water saving fixtures

Appliance type	Best practice flow rate	Non water saving fixtures	Water savings per fixture kL/year	Water savings \$/year
Kitchen Tap	9 Litres/minute	20-25 Litres/minute	97	\$266.75
Hand Basin	4.5 Litres/minute	16 Litres/minute	71	\$195.25
Pre-rinse spray gun	4 Litres/minute	15 Litres/minute	466	\$1,281.50

\* Calculation of water cost is based on 2010/11 second tier commercial water pricing of \$2.75 per kL

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## Potential water saving opportunities - equipment modifications and replacements

- Install water efficient devices and fixtures (above WELS 3-star), such as in line flow restrictors or flow restriction aerators\* to both hot and cold kitchen taps and hand basins.
- Adjust flow to best practice flow rates.
- Install pedal or sensor operated tap controllers; this will eliminate taps left running and also improve user hygiene. Installing spring loaded taps will ensure that water shuts off immediately when the handle is released.
- Replace inefficient pre-rinse spray guns with WELS 6 star rated low flow, high pressure guns. Pre-rinse spray guns typically use between 11 and 22 litres of water per minute whereas 6 star rated models can use as little as 4 litres of water per minute.
- Check flow rates on all equipment and adjust to the manufacturer's recommendations.
- Check with manufacturer to see if dishwasher spray heads can be replaced with more efficient heads, or if flow regulators can be installed.
- Check the WELS rating on equipment to assess water consumption per use, an upgrade to a suitable more water efficient product may produce significant savings.
- Use strainers or traps that employ a mesh screen to collect food waste and dispose of food waste in bins or compost instead of garbage disposal units which use water to flush scraps to the sewer.
- Consider replacing water cooled wok stoves with air cooled wok stoves. Use flange restriction devices or valve controllers to reduce the amount of water used on existing water cooled woks.



6 Star WELS rated pre-rinse spray gun  
(4.5L/min)

### Ice machines

- Replace water cooled 'once through' ice machines with air cooled ice machines to save water. Typical air cooled machines use 10 times less water in a day than similar water cooled machines.
- Investigate recirculating cooling water for water cooled ice machines
- Adjust ice machines to manufacture only the required amount of ice.
- Adjust machine to dispense only the required amount of ice if possible.

For more information on water conservation solutions within your business please contact us via email [businesswatersaver@sawater.com.au](mailto:businesswatersaver@sawater.com.au)

To measure your current appliance flow rates simply use a jug / bucket and stopwatch and record the water volume against time elapsed

For further information on water efficient products visit the product registry on the WELS website [www.waterrating.gov.au](http://www.waterrating.gov.au). \*When altering flow rates ensure restriction devices are watermark certified and compatible with your water heater and the Australian Standard for Plumbing and Drainage AS/NZS 3500 is adhered to.

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