

# **KARCHENS**

It's important to know how water is used in your kitchen so you can better understand the opportunities to improve water efficiency and save water.

#### Water use in kitchens

The main types of water-using equipment found in kitchens are dishwashers, sinks, pre-wash spray rinse guns, glass washers, ice-making machines and garbage disposal units.

There are many opportunities to improve the efficiency of appliances and water use behaviour in kitchens.

# **Behavioural change**

- Communicate the importance of saving water to your staff and seek their commitment to use water efficiently.
- Place stickers and simple signs in areas of high water usage to remind staff to save water.
- Post simple instructions near equipment that uses water to remind people to do the right thing.

#### Food service

- Instruct waiters to serve water from jugs to prevent. half empty bottles or carafes of water being discarded.
- Turn off any continuous flow used to wash drain trays of post-mix drink machines and cleaning trays.

# Food preparation

• Defrost frozen foods in the refrigerator rather than under a tap. It is more water efficient and is also recommended by NSW Health.



# Washing practices

- Wash vegetables or rice in a bowl or a plugged sink rather than under running water. Water collected from washing could be used to soak dirty utensils.
- Soak dishes in a plugged sink instead of under running water.
- Scrape food scraps from plates or use a five or six-star high pressure pre-rinse spray gun.
- Only run dishwashers on full loads.
- When hosing down floors and hard surfaces use a trigger nozzle or high pressure cleaning equipment with a maximum flow rate of 20 litres per minute. Use a broom wherever possible.



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#### Maintenance

- Check for worn gaskets in sinks.
- Check for dripping taps or obvious leaks.
- Ensure regular maintenance of water-using devices, such as dishwashers and ice-makers. Repairs and regular maintenance should be conducted by a qualified technician.

### **Equipment modification**

- Garbage disposal units, while not water intensive, add to pollutants in the sewer and reduce wastewater quality, making water harder to recycle. An alternative is to use strainers or traps that employ a mesh or steel screen to collect food waste for disposal. There are companies that collect food waste to make compost for garden fertiliser, which might be a good option for your kitchen.
- Install flow control to the rinse line to ensure the water flow and pressure is matched to the minimum settings recommended by the manufacturer.
- Where practical, consider modifying dishwashers to recycle final rinse water for next initial rinse.

#### **Equipment replacement**

#### Pre-rinse spray guns

- Replace pre-wash units with manually operated prerinse spray guns, which are used for rinsing cooking utensils, pots and pans, before soaking dishes and cleaning. They are designed with automatic shut-off valves at the hose head to supply water only when needed. Low-flow high pressure spray heads can be used as a replacement for conventional taps or automatic pre-rinsers. You can now get pre-rinse spray valves as low as 4L/min in flow.
- Investigate replacing pre-wash units with a high efficiency dishwasher which includes pre-rinsers that recycle water. The size of the dishwasher should match your kitchen's needs.

#### Ice-making machines

- The type of condenser in an ice-making machine will have the greatest effect on water use. There are two types of refrigeration condensers available: air cooled and water cooled. Air cooled condensers are significantly more water efficient. Ice-makers can consume water during cleaning cycles as well as during ice-making. High efficiency ice-makers should not exceed 12 litres of water per 10 kilograms of ice produced. Find out more at energyrating.gov.au.
- Consider buying ice from commercial suppliers instead of buying an ice-making machine.

- Transfer unused ice to the freezer for later use.
- Adjust the quantity of ice that is dispensed to ensure the machine is not used unnecessarily. When upgrading, ice-makers should be sized to dispense the amount of ice required.

#### Dishwashers

 If your dishwasher is over seven years old, upgrading to a newer model will likely provide significant water and energy savings. Typical water consumption for new commercial dishwashers is 2.5 to 4 litres per cycle and can differ between manufacturers and models. Make sure you have the right type of dishwasher to suit your business. The table below indicates what types of dishwashers are typically appropriate for various numbers of restaurant patrons.

Serving capacity (no. of patrons)	Optimal dishwasher type
Less than 60	Under counter
60-200	Pass through dishwasher (hood)
More than 200	Conveyer

• Train staff to follow the manufacturer's operating instructions for correct dishwasher use to ensure it is used efficiently.



# Saving water in business

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