# Best Practice Guidelines for Water Usage in Catering Industry

## Introduction

The Government has promulgated the Total Water Management (TWM) strategy in Hong Kong putting emphasis on containing the growth of water demand through conservation and strengthening our water supply management. With a view to achieving sustainability of water resources, in collaboration with all stakeholders concerned, Water Supplies Department (WSD) has been promoting water conservation actively and providing support for non-domestic sectors to enhance their water use efficiency, thereby reducing their water consumption.

To enhance water use efficiency in the catering industry, WSD has developed a set of Best Practice Guidelines (BPG) to the industry practitioners for reference. It is expected that the catering industry could implement the water use efficiency measures in their daily operation.

### Objective of BPG

The aim of the BPG is to set out water saving measures applicable to the catering industry. The BPG summarises water use efficiency practices for the local catering industry operation, making reference to the experience of other countries.

### Measures for Enhancing Water Use Efficiency

Water conservation can be achieved through adopting water saving measures in different aspects of operation, including general operation, maintenance, kitchen operation and dining area operation.

**Best Practices - General Operation**

- Educate employees / remind customers to enhance their awareness on water conservation (e.g. through providing appropriate training to staff and displaying water saving notices / stickers at appropriate locations)
- Encourage employees to make suggestions on water conservation through a reward scheme
- Assign employee(s) to monitor water use
- Review the water consumption data from water bills regularly to establish water saving measures and evaluate their effectiveness

**Best Practices – Maintenance**

- Inspect water mains regularly and rectify leakage promptly
- Turn off taps and shower heads when they are not in use
- Retrofit aged appliances and fixtures with high water use efficiency models
- Inspect taps and shower heads regularly and repair any dripping promptly
- Install flow controllers in plumbing fixtures
- Install pedal or knee-control valves to ease the on / off control by staff

**Best Practices - Kitchen Operation**

Food Rinsing

- Wash vegetables in a basin of water instead of under a running tap.

Dish Washing

- Soak utensils and dishes in a basin of water before cleaning for easy removal of food residues.
- Use pressure sprays to wash dishes effectively and reduce water consumption.
- Adopt suitable detergent and avoid excessive use of detergent.
- Turn off dishwashers when not in use. Run dishwashers with a full load.
- Recycle rinse water from dishwashers to wash away food residues on dishes.
- For manual dishwashing, install 3-compartment washing basins for handling cleaning processes with different levels of water consumption including soaking, washing and rinsing separately to reduce water use and to recycle rinse water more easily.

Operation of Steam Cabinet

- Use condensed water from steam cabinets for general cleaning purpose.
- Turn off steam cabinets if not in use during off-peak hours.

**Comparison between New and Old Models of Kitchen Appliances**

| | Old Standard | New Standard | Water Saving Efficiency |
|---|---|---|---|
| Dishwasher | 5.3 L/rack | 2.6 L/rack | 2.7 L/rack |
| Pre-rinse spray valve | 7.5-19 L/min | 6 L/min | 1.5-13 L/min |
| Steam cabinet | 95-132 L/hr | 7.5 L/hr | 87.5-124.5 L/hr |
| Ice maker | 5.7 L/lb | 1.1 L/lb | 4.6 L/lb |

Steam Recovery Cabinet

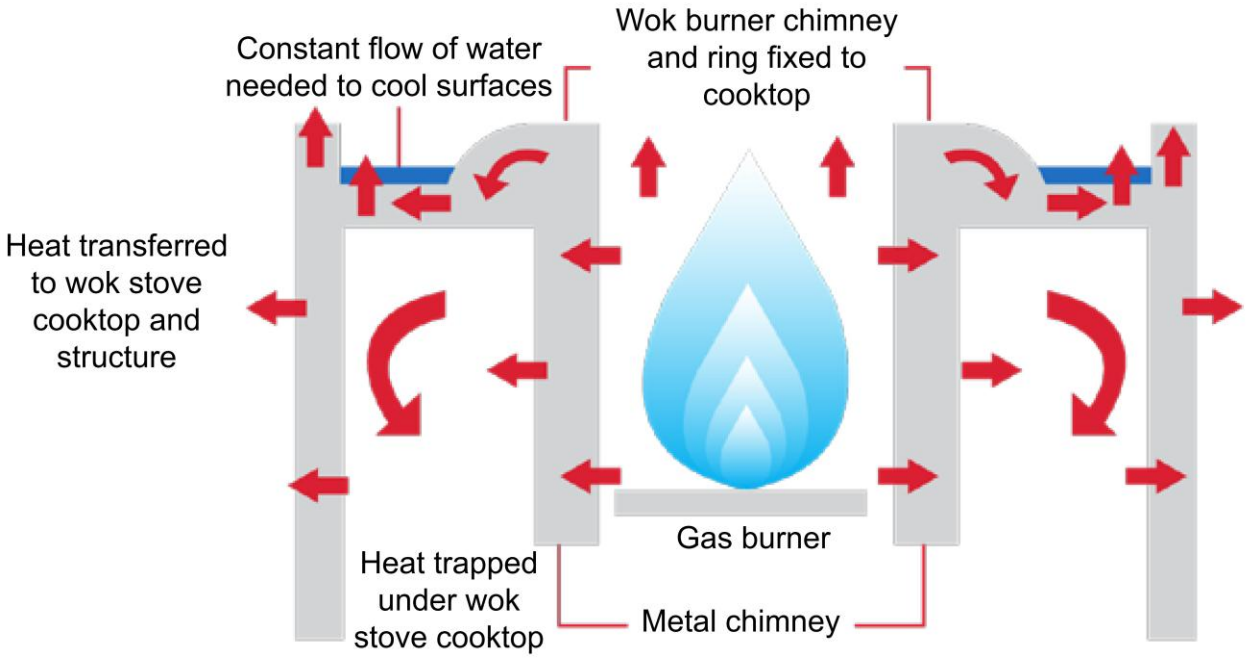
- Through the 'heat exchange' process, transform the heat of emitting steam to heat energy.
- The heat energy collected can then be used to heat up tap water which can be used by kitchen appliances like steam cabinets, dishwashers and heaters etc.
- The steam can be transformed to condensed water for general cleaning purpose.

✓ Retrofit aged kitchen appliances with high water use efficiency models and steam recovery cabinets to reduce water consumption.

**Type of Wok Stove**

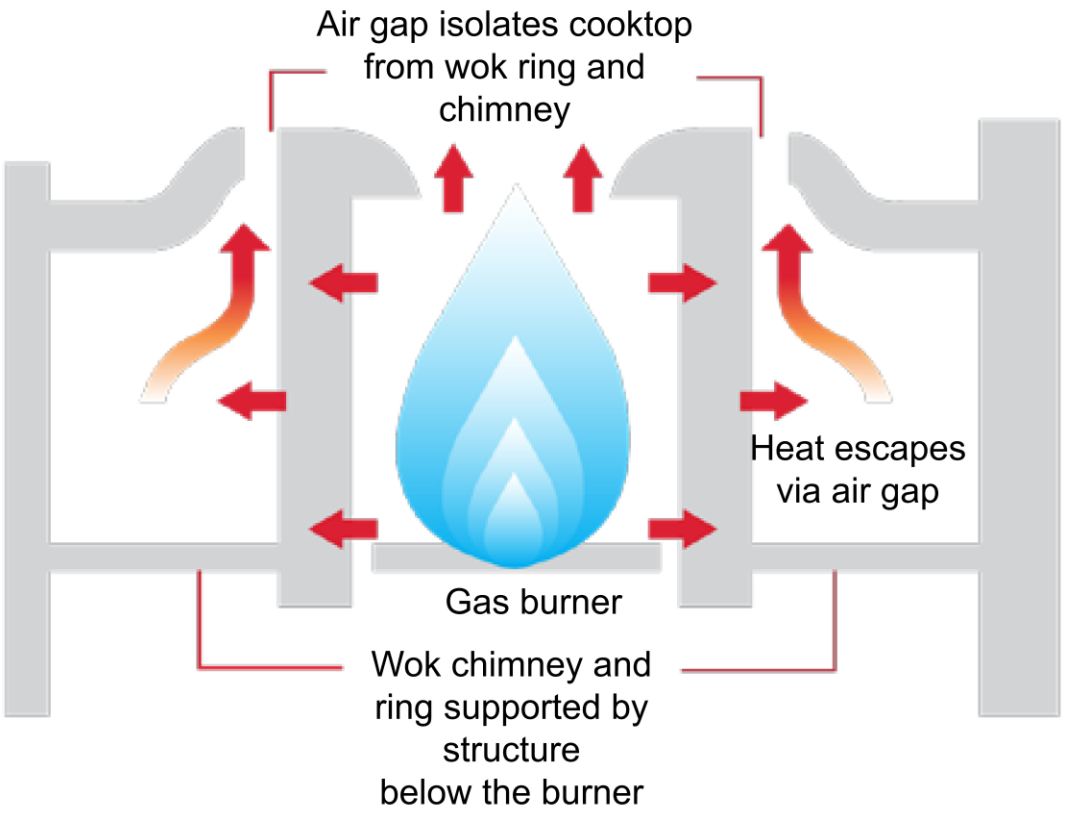
Water-cooled wok stove

- Water-cooled wok stove has one or more taps which are rarely turned off, for cooling the cooktop. These continuous running taps consume large amounts of water



Air-cooled wok stove

- The air-cooled wok stove consists of an air gap which isolates the cooktop from the wok ring and chimney, so that heat can escape via the gap and eliminate the need of water to cool down the stove.




✓ Retrofit aged wok stoves with air-cooled wok stoves to reduce water consumption.

**Food Defrosting**

- Natural Defrosting - Wrap frozen food in cling film and take it from the freezer to the refrigerator (0 to 4 $^{o}$C ) for pre-defrosting.

- Aerated Defrosting - Install an air pump to the defrosting sink to create currents which keep the frozen food rotating in the sink. The defrosting process can then be speeded up. This method can significantly reduce water consumption compared with defrosting under a running tap.

**Best Practices - Dining Area Operation**

- Serve / refill water only upon customers' request
- Provide basic dining utensils and serve extra utensils only upon customers' request
- Use powder cleaning agent to clean carpet instead of water or steam
- Provide self-service drinking water station for customers
- Replace bone plates and dining utensils only upon customers' request
- Display water saving notices to raise customers' awareness on water conservation

## Best Practices – Checklist

| **General Operation** | **Yes/No** |
|---|---|
| Display water saving stickers and posters at appropriate locations to educate staff and enhance customers' awareness on water conservation, and provide appropriate training to staff. | Yes ☐ No ☐ |
| Encourage employees to make suggestions on water conservation through a reward scheme. | Yes ☐ No ☐ |
| Assign employee(s) to monitor water meter reading regularly or install data loggers to continuously record water meter reading. Separate sub-meters can also be installed to monitor individual water use. Water consumption record helps to identify changes in water use. | Yes ☐ No ☐ |
| Compare current water consumption with previous records from water bills regularly to identify areas that can be improved and to enhance water use efficiency. | Yes ☐ No ☐ |
| **Maintenance Operation** | **Yes/No** |
| Inspect water mains regularly and rectify leakage promptly. | Yes ☐ No ☐ |
| Inspect taps and shower heads regularly and repair any dripping promptly. | Yes ☐ No ☐ |
| Turn off taps and shower heads when they are not in use. | Yes ☐ No ☐ |
| Retrofit aged appliances and fixtures with high water use efficiency models to reduce water consumption. | Yes ☐ No ☐ |
| Install flow controllers in plumbing fixtures if they cannot be retrofitted with high water use efficiency models to reduce water consumption. | Yes ☐ No ☐ |
| Install pedal or knee-control valves to ease the on / off control by staff. | Yes ☐ No ☐ |

| **Kitchen Operation** | **Yes/No** |
|---|---|
| Wash vegetables in a basin of water instead of under a running tap. | Yes ☐ No ☐ |
| Soak utensils and dishes in a basin of water before cleaning for easy removal of food residues. | Yes ☐ No ☐ |
| Use pressure sprays to wash dishes effectively and reduce water consumption. | Yes ☐ No ☐ |
| Adopt suitable detergent and avoid excessive use of detergent. | Yes ☐ No ☐ |
| Turn off dishwashers when not in use. Run dishwashers with a full load. | Yes ☐ No ☐ |
| Recycle rinse water from dishwashers to wash away food residues on dishes. | Yes ☐ No ☐ |
| For manual dishwashing, install 3-compartment washing basins for handling cleaning processes with different levels of water consumption including soaking, washing and rinsing separately to reduce water use and to recycle rinse water more easily. | Yes ☐ No ☐ |
| Use condensed water from steam cabinets for general cleaning purpose. | Yes ☐ No ☐ |
| Turn off steam cabinets if not in use during off-peak hours. | Yes ☐ No ☐ |

| **Water Saving Kitchen Appliances** | **Yes/No** |
|---|---|
| Retrofit aged kitchen appliances with high water use efficiency models and steam recovery cabinets to reduce water consumption. | Yes ☐ No ☐ |
| Retrofit aged wok stoves with air-cooled wok stoves to reduce water consumption. | Yes ☐ No ☐ |
| Install an air pump to assist in defrosting to reduce water consumption. | Yes ☐ No ☐ |
| **Dining Area Operation** | **Yes/No** |
| Serve / refill water only upon customers' request. | Yes ☐ No ☐ |
| Replace bone plates and dining utensils only upon customers' request. | Yes ☐ No ☐ |
| Use powder cleaning agent to clean carpet instead of water or steam. | Yes ☐ No ☐ |
| Display water saving notices to raise customers' awareness on water conservation. | Yes ☐ No ☐ |

The information contained in this Guide is compiled for general information only. Whilst the Government endeavours to ensure the accuracy of this general information, no statement, representation, warranty or guarantee, expressed or implied, is given as to its accuracy or appropriateness for use in any particular circumstances.

**Contact Us**

Your suggestions, comments and enquiries on this Best Practice Guidelines booklet are welcome. Please email your views to Water Supplies Department at waterconservation@wsd.gov.hk.