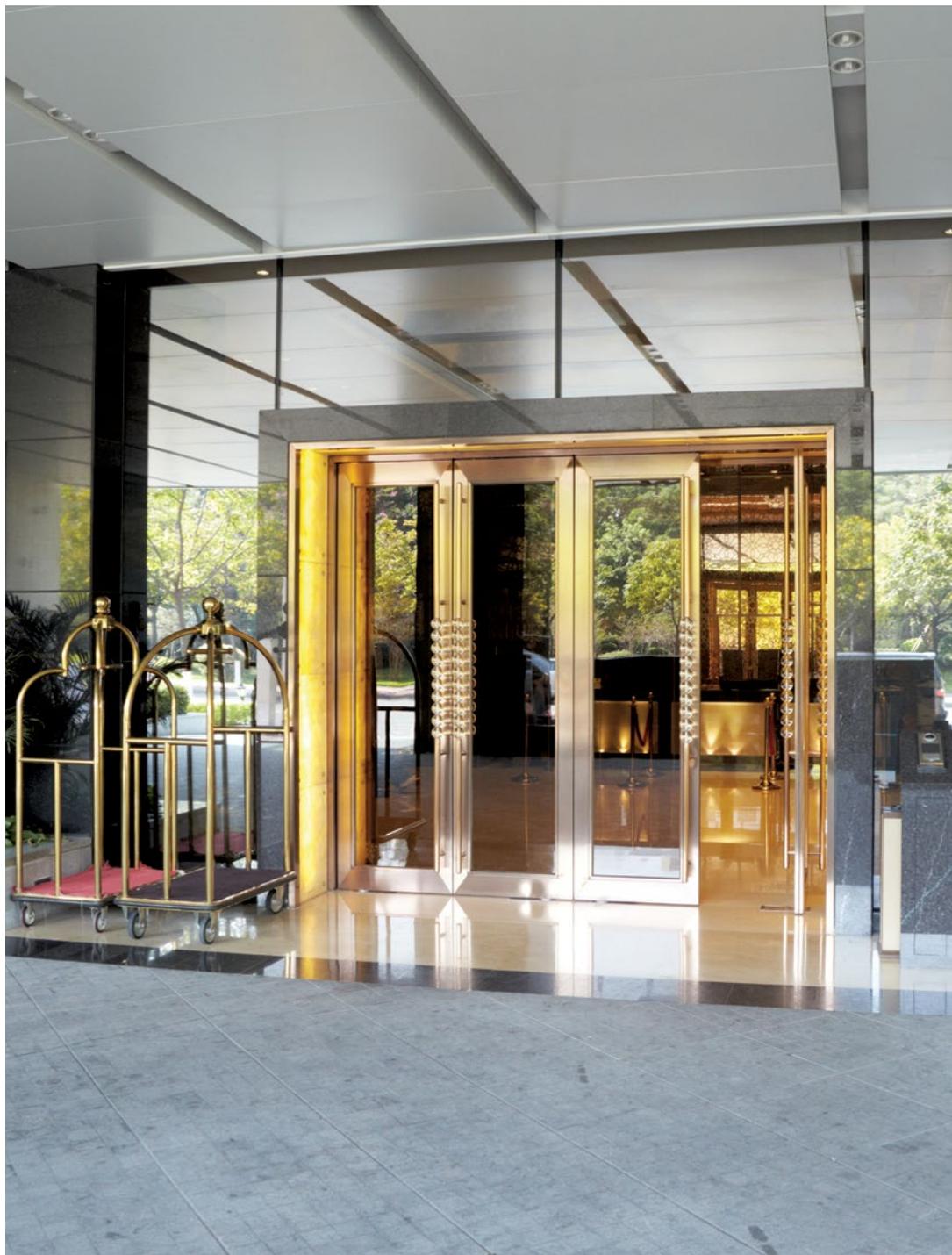


Best Practice Guidelines for Water Usage in Hotel Industry

English Version

November 2016





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

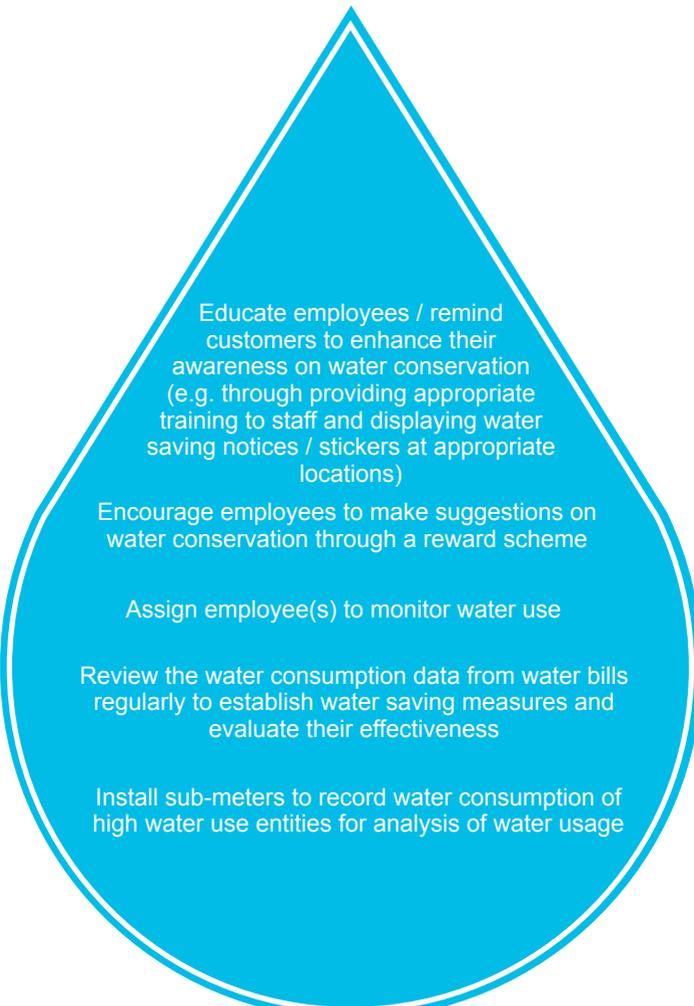
Objective of BPG

The aim of the BPG is to set out water saving measures applicable to the hotel industry. The BPG summarises water use efficiency practices for the local hotel 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, hospitality service, kitchen operation, dining area operation, swimming pool, water features and landscape management.

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

Install sub-meters to record water consumption of high water use entities for analysis of water usage

Best Practices - Maintenance



Inspect taps and shower heads regularly and repair any dripping promptly



Inspect water mains regularly and rectify leakage promptly



Install flow controllers in plumbing fixtures



Turn off taps and shower heads when they are not in use

Retrofit aged appliances and fixtures with high water use efficiency models



Install automatic on / off sensors on taps

A photograph of a hotel room. In the foreground, a bed is made with white linens and a dark patterned runner. Two white towels are rolled up and placed on the bed, with a small purple orchid flower tucked between them. Behind the bed, there are two white pillows and two dark purple pillows with a gold and white floral pattern. The headboard is made of light-colored wood. On the wall behind the bed, there is a framed picture. To the left, there is a small table with a vase of orange flowers and a decorative lantern. The wall is a warm, light brown color. A large, semi-transparent blue teardrop shape is overlaid on the center of the image, containing the text.

Best Practices Hospitality Service

Best Practices - Hospitality Service

- Encourage guests to support the “Reuse Towel and Linen” programme, and provide appropriate training to housekeeping staff.
- Turn off unnecessary taps when housekeeping staff is carrying out cleaning.
- Report and promptly repair leaking faucets, shower heads, running toilets and toilets flushing poorly.
- Use opened bottled water for irrigation.
- Do not replace unopened bottled water in guest rooms unnecessarily.
- Replace bathtubs with shower cubicles and retrofit appliances with high water use efficiency models whenever possible.





Best Practices Kitchen Operation

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.

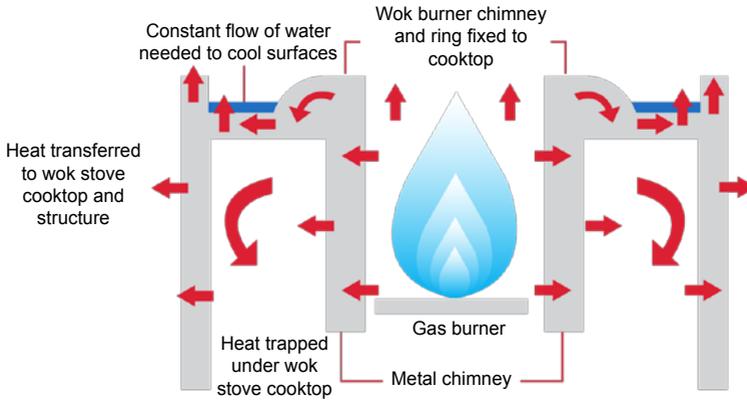
Food Defrosting

- Natural Defrosting - Wrap frozen food in cling film and take it from the freezer to the refrigerator (0 to 4 °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.

Type of Wok Stove

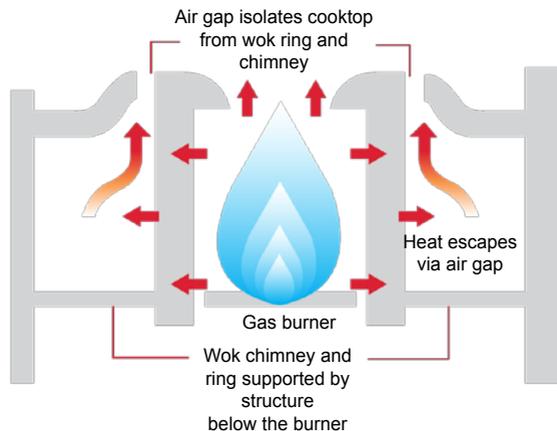
Water-cooled wok stove

- 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.

Comparison between New and Old Models of Kitchen Appliances

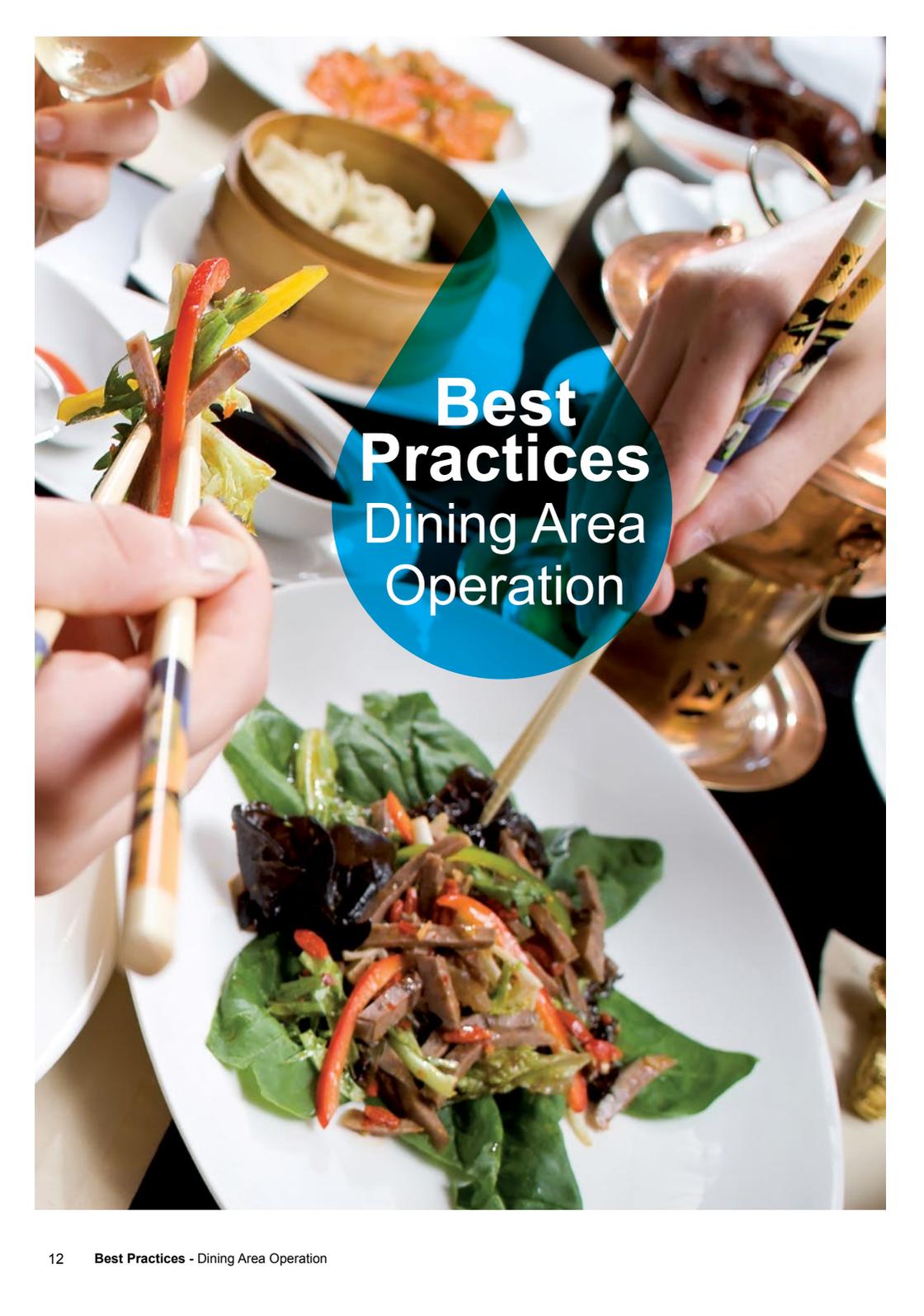
	Old Standard	New Standard	Water Saving Efficiency
 <p>Dishwasher</p>	5.3 L/rack	2.6 L/rack	2.7 L/rack
 <p>Pre-rinse spray valve</p>	7.5-19 L/min	6 L/min	1.5-13 L/min
 <p>Steam cabinet</p>	95-132 L/hr	7.5 L/hr	87.5-124.5 L/hr
 <p>Ice maker</p>	5.7 L/lb	1.1 L/lb	4.6 L/lb

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.



Best Practices Dining Area Operation

Best Practices - Dining Area Operation

Serve / refill water only upon customers' request



Provide self-service drinking water station for customers

Provide basic dining utensils and serve extra utensils only upon customers' request



Replace bone plates and dining utensils only upon customers' request

Use powder cleaning agent to clean carpet instead of water or steam



Display water saving notices to raise customers' awareness on water conservation



Best Practices Swimming Pool Operation

Best Practices - Swimming Pool Operation

Check level sensors and float gauges regularly to prevent overflow



Conduct regular reviews on the effectiveness of filtration plant



Use high efficiency tools, e.g. high pressure jets, for poolside cleaning



Cover up the pools when they are not in service to minimise evaporation



A close-up photograph of water flowing from a dark pipe into a pool of water, creating ripples and bubbles. A large, semi-transparent blue water drop shape is overlaid on the center of the image, containing the title text in white. The background is a blurred outdoor setting with green foliage and a light sky.

Best Practices Water Features Management

Best Practices - Water Features Management

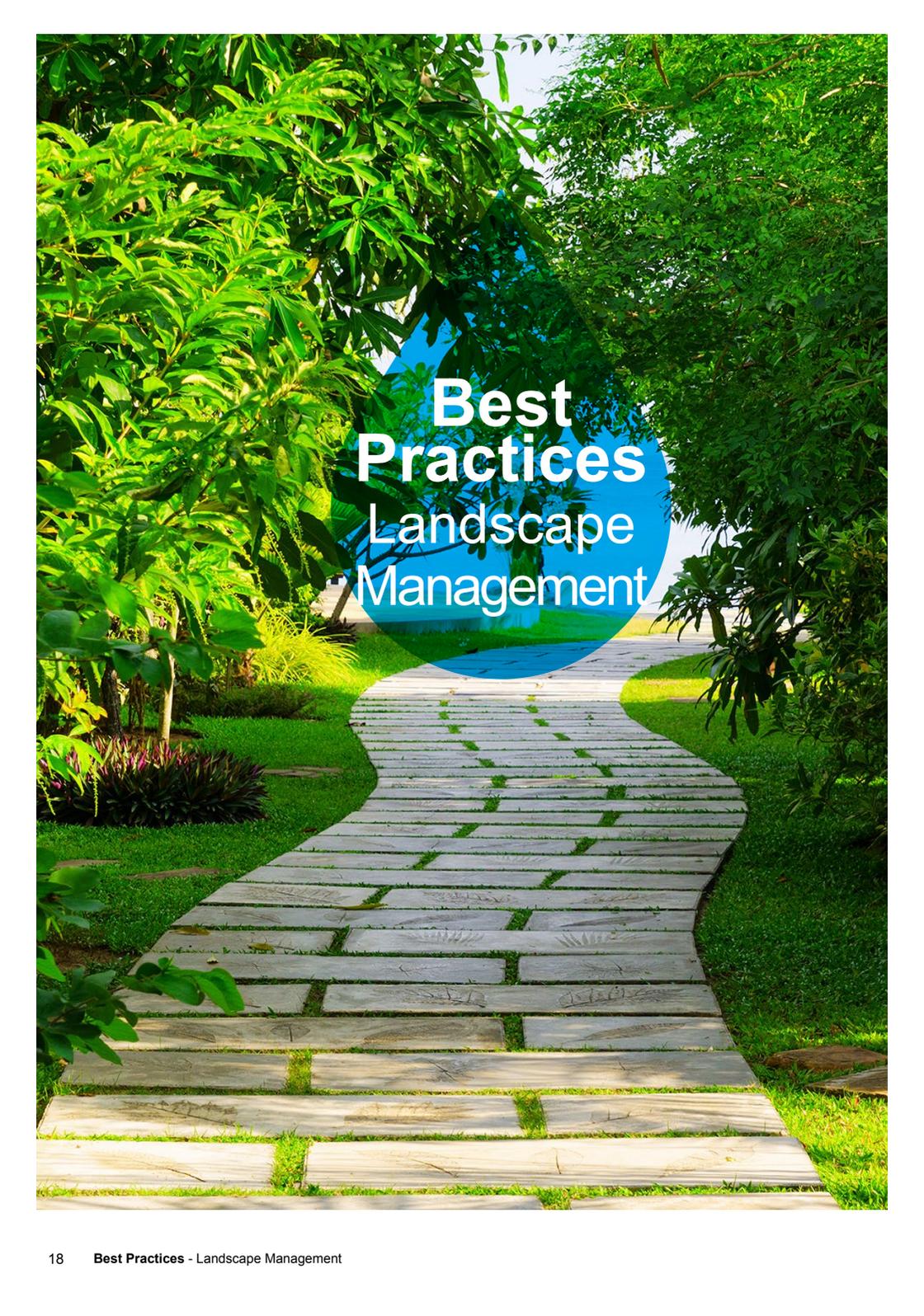


Install wind sensors to turn off fountains automatically during strong wind conditions to avoid water loss from splash

Check level sensors and float gauges regularly to avoid overflow



Install appropriate filtration system to recycle water and reduce water consumption

A photograph of a stone path winding through a lush green garden. The path is made of rectangular stone slabs with a grid pattern. The garden is filled with various green plants and trees. A large blue circular graphic is overlaid on the center of the image, containing the text "Best Practices Landscape Management" in white. The text is arranged in four lines: "Best", "Practices", "Landscape", and "Management".

Best Practices Landscape Management

Best Practices - Landscape Management

Select soil with high water holding capacity for landscaping works



Plants with similar water requirement should be grouped and planted together



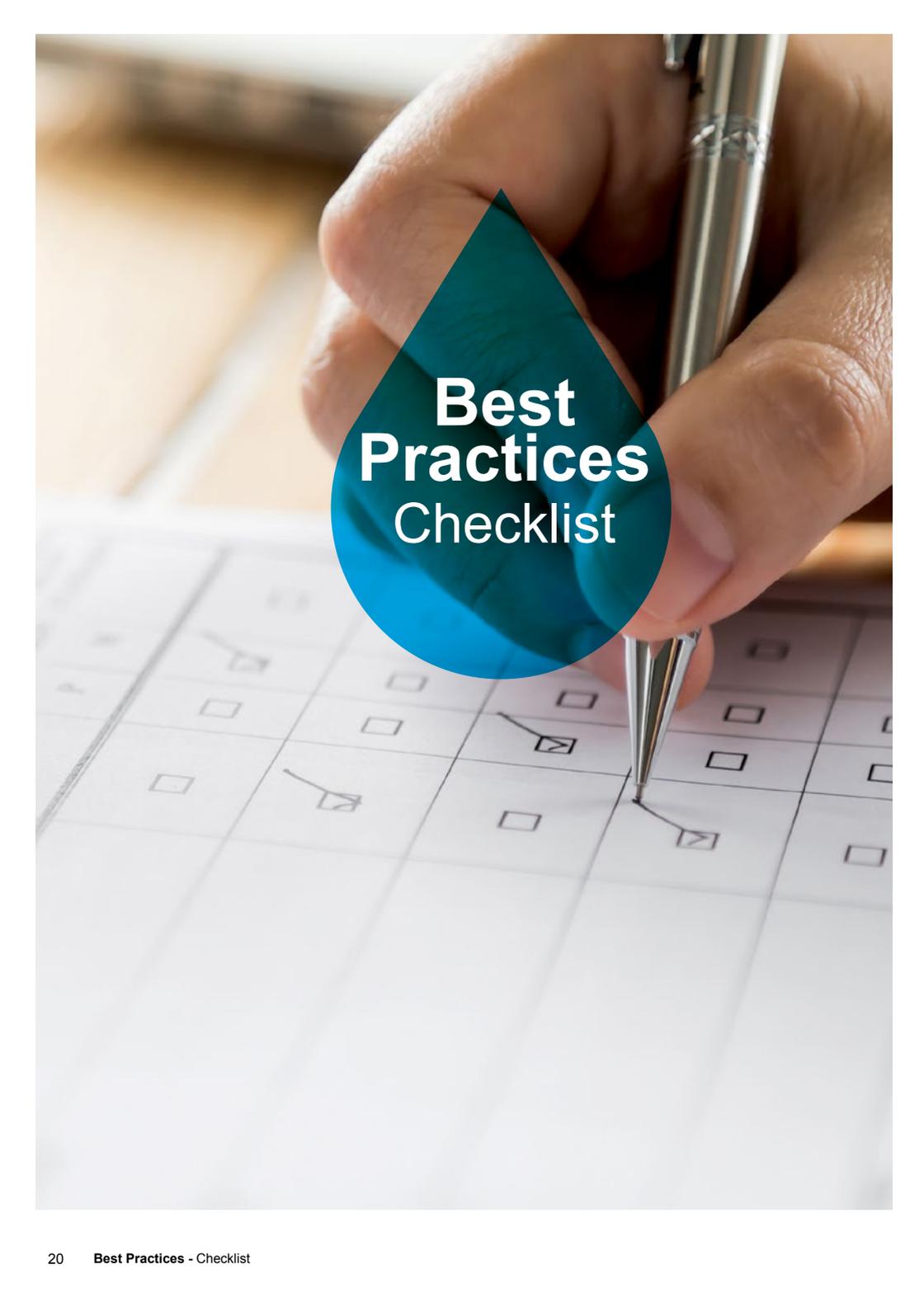
Adopt efficient irrigation, e.g. automatic irrigation, to control water consumption



Watering in the morning or evening instead of in the middle of the day to minimise water loss through evaporation



Inspect irrigation equipment regularly and repair any defects or leakage promptly



Best Practices Checklist



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 <input type="checkbox"/> No <input type="checkbox"/>
Encourage employees to make suggestions on water conservation through a reward scheme.	Yes <input type="checkbox"/> No <input type="checkbox"/>
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 <input type="checkbox"/> No <input type="checkbox"/>
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 <input type="checkbox"/> No <input type="checkbox"/>
Maintenance Operation	Yes/No
Inspect water mains regularly and rectify leakage promptly.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Inspect taps and shower heads regularly and repair any dripping promptly.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Turn off taps and shower heads when they are not in use.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Retrofit aged appliances and fixtures with high water use efficiency models to reduce water consumption.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Install flow controllers in plumbing fixtures if they cannot be retrofitted with high water use efficiency models to reduce water consumption.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Install automatic on / off sensors on taps.	Yes <input type="checkbox"/> No <input type="checkbox"/>



Best Practices - Checklist

Hospitality Service	Yes/No
Encourage guests to support the “Reuse Towel and Linen” programme, and provide appropriate training to housekeeping staff.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Turn off unnecessary taps when housekeeping staff is carrying out cleaning.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Report and promptly repair leaking faucets, shower heads, running toilets and toilets flushing poorly.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Use opened bottled water for irrigation.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Do not replace unopened bottled water in guest rooms unnecessarily.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Replace bathtubs with shower cubicles and retrofit appliances with high water use efficiency models whenever possible.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Kitchen Operation	Yes/No
Wash vegetables in a basin of water instead of under a running tap.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Soak utensils and dishes in a basin of water before cleaning for easy removal of food residues.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Use pressure sprays to wash dishes effectively and reduce water consumption.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Adopt suitable detergent and avoid excessive use of detergent.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Turn off dishwashers when not in use. Run dishwashers with a full load.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Recycle rinse water from dishwashers to wash away food residues on dishes.	Yes <input type="checkbox"/> No <input type="checkbox"/>
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 <input type="checkbox"/> No <input type="checkbox"/>
Use condensed water from steam cabinets for general cleaning purpose.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Turn off steam cabinets if not in use during off-peak hours.	Yes <input type="checkbox"/> No <input type="checkbox"/>



Best Practices - Checklist

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 <input type="checkbox"/> No <input type="checkbox"/>
Retrofit aged wok stoves with air-cooled wok stoves to reduce water consumption.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Install an air pump to assist in defrosting to reduce water consumption.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Dining Area Operation	Yes/No
Serve / refill water only upon customers' request.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Replace bone plates and dining utensils only upon customers' request.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Use powder cleaning agent to clean carpet instead of water or steam.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Display water saving notices to raise customers' awareness on water conservation.	Yes <input type="checkbox"/> No <input type="checkbox"/>



Best Practices - Checklist

Swimming Pool Operation	Yes/No
Conduct regular reviews on the effectiveness of filtration plant.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Check level sensors and float gauges regularly to prevent overflow.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Use high efficiency tools, e.g. high pressure jets, for poolside cleaning to reduce water use.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Cover up the pools when they are not in service to minimise evaporation.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Water Features Management	Yes/No
Install wind sensors to turn off fountains automatically during strong wind conditions to avoid water loss from splash.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Check level sensors and float gauges regularly to avoid overflow.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Install appropriate filtration system to recycle water and reduce water consumption.	Yes <input type="checkbox"/> No <input type="checkbox"/>



Best Practices - Checklist

Landscape Management	Yes/No
Select soil with high water holding capacity for landscaping works to reduce infiltration loss.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Group plants with similar water requirement together in the same area. Plants that require more water are grouped together and vice versa to reduce excessive watering.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Adopt efficient irrigation, e.g. automatic irrigation, to control water consumption.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Schedule watering in the morning or evening instead of in the middle of the day to minimise water loss through evaporation.	Yes <input type="checkbox"/> No <input type="checkbox"/>
Inspect irrigation equipment regularly and repair any defects or leakage promptly.	Yes <input type="checkbox"/> No <input type="checkbox"/>





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.

