



CALIFORNIA  
AMERICAN WATER

# Guide to Water Conservation Fixtures & Irrigation Systems

July 2013



## GENERAL INDOOR

### Sinks

The aerator is a device located at most sinks' faucet openings. It screws onto the opening and disperses the water with air to reduce the rate of water flow. Without an aerator, water would flow out of a faucet as one stream. An aerator allows water to flow at different rates, measured in gallons per minute (GPM). Aerators often have the flow rate engraved on them. For example, one may read, 2.5 GPM, 2.2 GPM, or 2.0 GPM. A faucet aerator of 2.5 GPM on hand sinks (wash basins and lavatory sinks) is considered a Rate Best Management Practice (BMP).

Low flow aerators (0.5 GPM) are available at no charge from California American Water and the Monterey Peninsula Water Management District.



### Showerheads

Showerheads usually have the flow rate printed or engraved in the middle of the face of the showerhead or elsewhere on the showerhead. The flow rate is measured in gallons per minute (GPM). A showerhead with a flow rate of 2.5 GPM meets Rate Best Management Practices (BMP).

Water efficient 1.5 GPM showerheads are available at no charge from California American Water and the Monterey Peninsula Water Management District.



## GENERAL INDOOR

### Toilets

Toilets come in a variety of different types and use different amounts of water. There are tank-type toilets that use gravity to flush and pressure-type toilets that have a pressure device inside the tank. There are also flush-valve-type toilets that do not have a tank. All of these types have different flush volumes, but are usually 3.5 gallons per flush (GPF), 1.6 GPF, 1.28 GPF (High Efficiency Toilets), or even 0.8 GPF (Ultra High Efficiency Toilets). Some toilets have dual-flush handles that allow for a smaller flush volume for liquid waste and a larger flush volume for solid waste. If you have a dual-flush toilet, it meets the Rate BMP. A toilet with a flush rate of 1.6 GPF or less also meets the Rate BMP requirement.

Most toilets installed after 1993 will have the gallons per flush identified either inside the tank or along the bowl at the back of the toilet seat. All toilets installed after 1993 will be Rate BMP compliant.

For pressure-type toilets, look inside the tank and look at the pressure system for the GPF.



### Flush-Valve Toilets (Commercial)

Flush-valve toilets are not easily identified as being water efficient High Efficiency Toilets. Please check your receipt or have a plumber verify the flush volume using the model numbers of the flush valve and the toilet bowl. Some flush-valve toilets will be identified by markings at the back of the bowl behind the toilet seat.

## GENERAL INDOOR

### Urinals

Water efficient urinals use 1.0 Gallons Per Flush (GPF), 0.5 GPF, or are waterless types. Finding the GPF for urinals is similar to finding it for flush valve toilets. You will need to look up the information from the model number of the flush mechanism. A urinal with a flush rate of 1.0 GPF meets the Rate BMP requirement.



## COMMERCIAL FOOD SERVICE

For current information about other water efficient food service appliances and practices, visit the Food Service Technology Center at [http://www.fishnick.com/savewater/bestpractices/Water\\_Conservation\\_in\\_CFS.pdf](http://www.fishnick.com/savewater/bestpractices/Water_Conservation_in_CFS.pdf).

### Pre-Rinse Spray Valve

A pre-rinse spray valve is a handheld device that uses a spray of water to remove food and grease from dishware, utensils and pans before placing them in the dishwasher. Water efficient pre-rinse spray valves are inexpensive and easily interchangeable with different manufacturers' assemblies. Local law enacted in 2010 requires that all pre-rinse spray valves operate at 1.6 gallons per minute (GPM) or less. This is the Rate Best Management Practice (BMP) for a pre-rinse spray valve.

Rate BMP qualifying pre-rinse spray valves are currently available from California American Water and the Monterey Peninsula Water Management District.



## COMMERCIAL FOOD SERVICE

### Door-Type Dishwashers Are Lowered Over A Rack Of Dishes

High Efficiency Commercial Dishwasher meets or exceeds the High Efficiency Specifications for Commercial Dishwashers as determined by the Consortium for Energy Efficiency (CEE) and as listed on the CEE website. <http://www.cee1.org/com/com-kit/files/DishwasherSpecification.pdf>

Please contact the manufacturer or maintenance personnel to determine the gallons per cycle.



Conveyor dishwashers have a conveyor belt that carries the dishes through the machine. Please contact the manufacturer or maintenance personnel of your dishwasher and ask for the gallons per rack (GPR) of the highest cycle.

# CLOTHES WASHERS

A High Efficiency Clothes Washer has a Water Factor of 5.0 or less.  
[http://www.energystar.gov/index.cfm?c=products.pr\\_find\\_es\\_products](http://www.energystar.gov/index.cfm?c=products.pr_find_es_products)

Please contact the manufacturer or maintenance personnel of your clothes washer and ask for the water factor (WF) of the highest cycle.



## Front-Loading Washers

Front-loading clothes washers have a door in the front.

## Top-Loading Washers

Top-loading washing machines have a door on the top. Please contact the manufacturer or maintenance personnel of your clothes washer and ask for the WF of the highest cycle.



## Washer-Extractors

Washer-extractors and dedicated washers are very large and have a door in the front. Please contact the manufacturer or maintenance personnel of your clothes washer and ask for the WF of the highest cycle.

# IRRIGATION CONTROLLERS

## Rain Sensors

Rain sensors interrupt or delay a scheduled irrigation event due to rainfall that exceeds an established threshold. They are easily adapted to an existing controller as an add on device. A rain sensor along with an automatic irrigation system controller is required to meet the Rate Best Management Practice (BMP).



## Automated Irrigation Controller with Water Budget Feature

## Weather Based Controllers

Weather based controllers adjust irrigation schedules to account for daily variations in weather and seasonal changes in day length.



## Moisture Sensors

Moisture sensors monitor soil moisture levels and allow the irrigation system to operate only when the soil has sufficiently dried out.



## Controllers

Controllers with a water budget feature allow the user to adjust programmed run times, up or down, by a percentage to account for seasonal changes in weather and day length.



# LOW VOLUME IRRIGATION

## Low Volume Surface Dripline

Low volume surface dripline is placed on the soil surface in a grid pattern and covered with mulch. It is effectively used in dense plantings of shrubs and annuals.



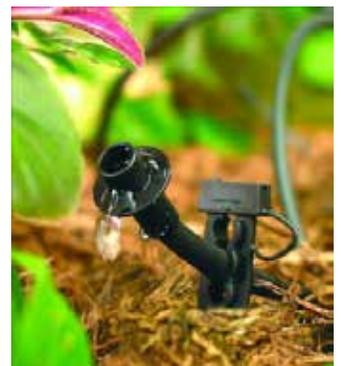
## Low Volume Subsurface Dripline

Low volume subsurface dripline is buried underground in a grid pattern. It is ideal for use in both small and narrow turf areas and narrow shrub and annual planters.



## Low Volume Point Source Emitters

Low volume point source emitters apply water at rates between 0.5 and 2.0 gallons per hour and are ideal for use in sparse plantings of trees and shrubs.



# SPRINKLERS

## Gear Drive Rotor Sprinklers

Gear drive rotor sprinklers rotate by a series of gears in either an adjustable part circle or full circle arc generally through a single stream with application rates of less than 1" per hour. They are ideal for use in medium to large turf areas.



## Multi Stream, Multi Trajectory Rotating Sprinklers

Multi stream, multi trajectory rotating sprinklers apply water in multi streams at varying trajectories in either an adjustable part circle or full circle arc with application rates of less than 0.5" per hour. They are ideal for use in small and medium turf areas and medium sized shrub beds.



# SPRINKLERS

## Rainbird SQ Low Volume Nozzles

Rainbird SQ low volume nozzles apply water at very low rates with a large droplet size. The pattern is an adjustable square. They are ideal for use in narrow planters of shrubs, annuals and groundcover.



## Rainbird HE - VAN Nozzles

Rainbird HE - VAN nozzles apply water in an adjustable arc, with a larger droplet size than standard fixed spray nozzles at a precipitation rate of 1.6" per hour. They are an acceptable choice in small to medium turf areas.



## Toro Precision Spray Nozzles

Toro Precision Spray nozzles apply water in an adjustable arc, with a larger droplet size than standard fixed spray nozzles at a precipitation rate of 1" per hour. They are an acceptable choice in small to medium turf areas.

