

Green Tool Kit

WATER CONSERVATION



Appliances

Clothes Washers

HECWs: High Efficiency Clothes Washers (HECWs) utilize technological advances to deliver excellent wash performance while saving both water and energy. Resource efficient models use 35-50% less water and approximately 50% less energy.

The water efficiency of clothes washers is rated using the term “water factor” to describe and compare its water use. Water factor is measured by the quantity of water (gallons) used to wash each cubic foot of laundry. A lower water factor represents greater water and energy efficiency. Go to the [Energy Star website](#) for more information on high efficiency clothes washers.

Check with Green Business Program staff about rebate opportunities.



HECWs use 35-50% less water than non efficient models.

Dishwashers

Dishwashers use at least two times less water than washing by hand. Commercial dishwashers are now using less than 3 gallons per cycle. If you are looking to purchase a new, efficient commercial dishwasher, visit the [Food Service Technology Center](#) for water and energy efficient models. Be sure to look for Energy Star rated appliances.

Check with Green Business Program staff about rebate opportunities.

Ice Machines

Water-cooled ice machines use far more water and energy than air-cooled models.

Various retrofit options for water-cooled ice machines can be found on the [Food Service Technology Center website](#).

Check with Green Business Program staff about rebate opportunities.



Air-cooled ice machine.

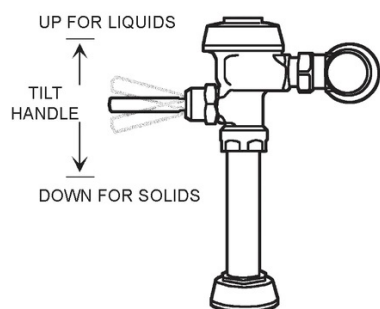
Restroom

Toilets

All Santa Barbara Green Businesses must replace or retrofit toilets flushing at higher than 1.6 gallons with high efficiency toilets (1.28 gallons or less per flush). ULFTs and HETs are approved for use. Your water utility may have a rebate program for high efficiency toilets.

ULFTs: In 1994 new water conserving toilets, called ultra-low-flush toilets (ULFTs) were required in all new construction. ULFTs use 1.6 gallons per flush and are much more water-efficient than older toilets, which use up to 7 gallons per flush. Each installed ULFT can save a typical family 70 gallons a day in water use. A number of commercial ULFTs are available in a range of designs that have 1.6 gallons per flush. The efficiency of a flushometer and bowl combination toilet depends mainly upon the regular maintenance of the flushometer valve.

HETs: High-Efficiency toilets (HET) are now the standard and flush at least 20% below the US maximum of 1.6 gpf, equating to 1.28 gpf or less. Many HET's are dual-flush toilets, which have two separate flush volume options, a half flush (.8 gallons) and a full flush (1.6 gallons). There are several industrial flushometer HET's on the market, and over a dozen have passed performance standards set by the CUWCC (California Urban Water Conservation Council).



Dual-flush handle retrofit for flushvalves: This water saving mechanism retrofits to most existing valves and reduces water volume by up to 30% when activated for half-flush.

Check with Green Busienss Program staff about rebate opportunities.

Urinals

Santa Barbara Green Businesses must replace all urinals flushing at greater than 1.0 gallons with urinals flushing at less than 0.5 gallons, or waterless urinals, as shown in the photo below.

HEUs: High-Efficiency Urinals (HEUs) are defined as fixtures that function at 0.5-gpf or less. Based on data from studies of actual usage, these urinals save 20,000 gallons of water per year with an estimated 20-year life.

Urinal retrofit kit: The flush volume in typical 1.0 gallon per flush urinals can be retrofitted with a .5 gpf diaphragm kit. This is a great, cost-effective way to turn the ultra-low flush urinal into a high-efficiency urinal for around \$50 a fixture.

Check with Green Busienss Program staff about rebate opportunities.



Waterless urinal.

Faucet Aerators And Low-Flow Shower Heads

Installing faucet aerators and low-flow shower heads is one of the most effective water conservation methods you can use for your home or office. These fixtures are required for Green Business applicants.

- For lavatory faucets, the aerator flow rate must be 0.5 gpm or less.
- For kitchen faucets (except in fill sinks) and shower heads, the flow rate must be 1.5 gpm or less.

Faucet Aerators: Standard aerators are devices that are designed to reduce the flow of the water coming out of the faucet while introducing air into the water flow. That is why they are called “aerators”. Water has to pass through very small holes and spreads out to cover more surface. If an aerator is already installed on your faucet, it will usually have its rated flow (in gallons per minute or gpm) imprinted on the side. If there appears to be an aerator installed, but there is no flow rate stamped on the side, the aerator may not be a low flow type and should be replaced with a new one. If no aerator is visible, check to see if there are threads just inside the tip of the faucet. Most modern faucets are threaded to accept aerators.

Some designer faucets have an internal built in “laminar” restrictor. Laminar restrictors work differently than standard faucet aerators by producing dozens of parallel streams of water. You can ask the manufacturer for the flow rate of these faucets or Green Business Program staff can help you measure the flow rate of your unstamped faucet aerators.

If your faucets are not threaded for aerators, installing flow control valves or flow regulator devices are the best option for reducing flow rates since the flow can be varied to fit the function. Located under the sink, flow control valves go undetected by the faucet user. They cost about \$20 a pair, pricing reduces with bulk purchasing.

If your aerators keep suddenly disappearing, tamper proof aerators are a great alternative. Inexpensive and simple to install, low-flow shower heads and faucet aerators can reduce water consumption and also energy cost associated with heating water by as much as 50%.



Faucet aerator.



Flow control valves.



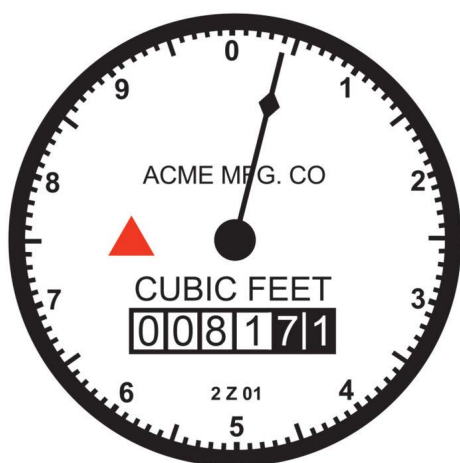
Tamper proof aerators require a key to be removed.

Water Meters

There are several reasons why your business should be able to locate and read your water meter. By reading your meter at the beginning and the end of the day you can determine how much water your business has used. You can also use the reading to check for leaks. For instance, if you turn off all the taps on the property and see that the meter is still turning, this may indicate a leak.

How to Locate Your Meter:

Your water meter is generally located near the curb in front of your home or place of business in a direct line with the main outside faucet. Some water meters in commercial properties are located in the basement under the sidewalk of the property. Water meters are usually housed in a gray plastic or concrete box at ground level. Carefully remove the lid by using a tool, such as a large screwdriver, to pry it off.



How to Read Your Water Meter:

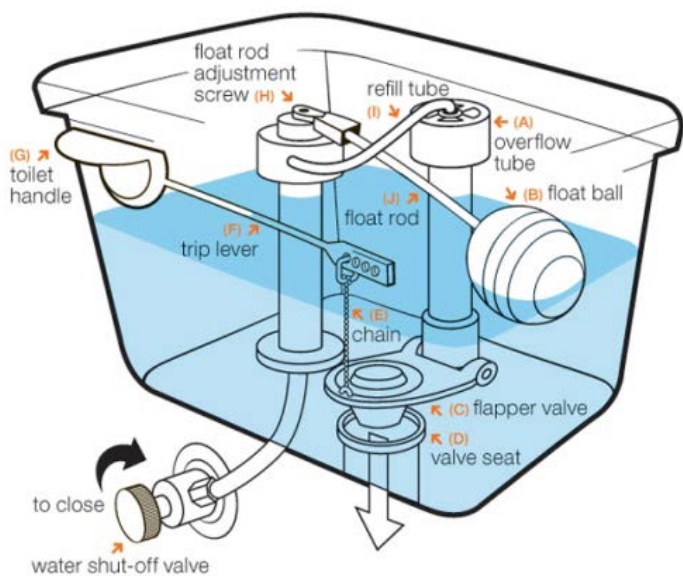
All Santa Barbara County water utilities customers have their water use measured by a meter. The water and wastewater charges are based on the amount of water that passes through the meter on a monthly or bimonthly basis.

Most Santa Barbara County water utilities provide the straight-reading meter, which resembles the mileage odometer in an automobile. It records water use in cubic feet. The water utility bills in units of 100 Cubic Feet; **1 UNIT EQUALS 748 GALLONS**. Some straight reading meters also have a leak detection dial, shown as the red triangle in the image on the left. If all fixtures are off and the dial rotates continuously in one direction even slightly, this could mean there is a leak somewhere on the property.

Leaks

Once you figure out how to read the water meter, you can use it to detect leaks, notice sudden spikes in usage, and monitor daily usage.

Detecting Leaks: Start by turning all water-using appliances off, so that no water is being used anywhere in the building. Then check the position of the meter dial and wait. If after 15 minutes, the dials haven't moved, your meter is "holding" and all fixtures are tight. However, if you notice that the dials have moved, check the toilets for leaks. Put a few drops of food coloring or dye tablets (provided by your water utility) into the toilet tank and wait a few minutes. If there is blue in your toilet tank, you have a leak, probably at your flapper valve. More information on flapper replacement is available at toiletflapper.org.



Also check the water level in your toilet's tank. In a standard toilet, the water level should be one inch below the overflow tube. If the water is overflowing into the tube, try to reset the water level according to manufacturer's specifications. If the valve fails to shut off, your fill valve should be replaced. If there is no leak in the toilets, check all angle stops under your sinks and hose bib connections. If the connections are tight, there may be a hidden leak or a blind leak in an underground pipe or within the walls of the property.

Detecting "Blind" Leaks: If you think you might have a blind leak, you can try to isolate the leak by use of your main house valve or supply valve. You can also contact your local water utility to assist with leak detection and give recommendations for reducing your water use. Go to WaterWiseSB for a list of agencies that provide water checkups.

Landscaping

This refers to the conservation of water through creative landscaping. With water now considered an expensive and limited resource, all landscaping projects, residential or commercial, can benefit from this sustainable alternative. In order to address California's severe drought conditions, it is important to consider the variety of ways to reduce water usage for your plants and landscaping.

To meet our standards, a business should have landscaping with:

- check valves;
- rain shut-off sensors;
- matched sprinklers with same precipitation rates;
- 2-3" of mulch on non-turf planting areas.

The business should also:

- water during pre-dawn hours;
- repair or replace defective or broken water fixtures.

Check with Green Business Program staff to see if you are eligible for a rebate program for implementing more drought-tolerant landscaping.

Pre-Rinse Spray Valves



A low-flow pre-rinse spray valve is one of the easiest and most cost-effective energy saving devices available to the foodservice operator. In addition to minimizing water consumption, water heating energy and sewer charges are also reduced. Pre-rinse spray valves can use as little as .65 gallons per minute compared with older models that use 3 or more gallons per minute.

In order to qualify for Green Business program recognition, applicants must use 1.28 gpm spray valves or less.

Check with Green Business Program staff about rebate opportunities.