

# Water Wise at Home



**A GUIDE TO FINDING LEAKS, CONSERVING WATER  
AND MAKING EVERY DROP COUNT IN  
YOUR COACHELLA VALLEY HOME**



Look for the water drop symbol inside this guide to find instructions on measuring your weekly household water use.



**Coachella Valley Water District**  
(760) 398-2651  
[www.cvwd.org](http://www.cvwd.org)  
[www.waterfun4kids.org](http://www.waterfun4kids.org)

# STEP 1 Review your water bill to find how much water you use

## What is a CCF?

Water is measured and billed in units of 100 cubic feet (CCF).

One unit, or 1 CCF, is equal to 748 gallons.

For example, a homeowner who used 20 CCF in a billing cycle, used 14,960 gallons.

Water use varies greatly depending on the home's square footage, type of landscaping, irrigation system efficiency and number of residents in the household.

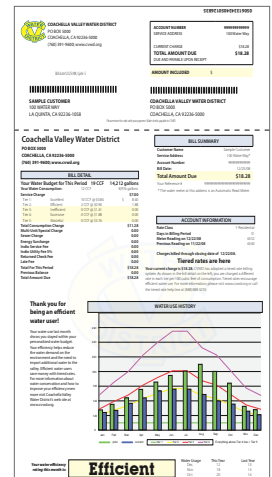


## Water budgets are useful tools

Coachella Valley Water District bills all customers for water use by tiered rates. The more water efficient you are, the lower your tier and the lower your rate.

To determine tiers, each customer is assigned a water budget. Water budgets help you understand what is reasonable water usage for your home. The water budget is calculated based on household size, your home's landscaped area and daily weather. Each customer's water budget is different. Your monthly bill details your water budget and water use history.

In the **WATER USE HISTORY** section of your monthly bill, there is a graph and chart with the current and previous months' water usage.



Monthly customer bill

Record your water usage this past month: \_\_\_\_\_

Your bill's **DETAIL** section lists how much water you were budgeted last month.

Record your water budget this past month: \_\_\_\_\_

If you were over budget, then you may have a leak or are using water inefficiently. If you were under budget, congratulations! Your water use is efficient.

## STEP 2 Locate your residential water meter and take a reading

Your water meter mechanically measures water as it flows through the pipes. For most residences, a CVWD employee goes in person to read the meter each month. If the reading is unusually high or low, the employee will take a second reading. Newer, automated meters send the information electronically to the billing department.

When meters do fail it is usually due to excessive wear or corrosion. The result of a faulty meter is water moves through undetected and causes an inaccurate low reading. In this case, the homeowner will receive a lower, not higher, bill.

### Learn to read your water meter

Your water meter is inside a rectangular concrete box, flush with the ground. The meter is usually located near a roadway curb or sidewalk near the property line of your residence.

It can tell you how much water you are using. Be careful when opening the lid as there may be spiders, snakes, bees or bugs inside!

**Record meter reading:** \_\_\_\_\_

Wait several hours, or an entire day and check your meter again.

**Record second meter reading:** \_\_\_\_\_

For every 748 gallons you used, the reading will have increased by one hundred cubic feet. One hundred cubic feet, also known as a CCF, equals one unit.

**Subtract the first reading from the second reading:** \_\_\_\_\_

**Multiply by 748 gallons:** \_\_\_\_\_

The final number is how many gallons you used between meter readings.



CVWD meter reader



Meter box



Residential water meter

### Why is my bill unusually high?

The number one reason for an unusually high water bill is a leak.

Refilling a pool, or not adjusting your sprinkler times to match the seasons also can cause you to exceed your water budget and receive a higher bill.

## STEP 3 Roll up your sleeves and become a leak detective

How big can a little leak be?



In one day,  
a leak this big



will waste  
200 GALLONS  
of water.

In one day,  
a leak this big



will waste  
810 GALLONS  
of water.

### Get ready to find household leaks

Unusually high water bills are most often caused by leaks. To test for leaks in your plumbing system, turn off everything that uses water indoors and outdoors, including all appliances, faucets, hoses and sprinklers.

### Find the leak and measure it

Go to your water meter and look for a small red **DIAMOND SHAPED DIAL** or a **SILVER COLORED DISK** on the meter face. If this is turning you have a leak somewhere in your home or yard.

To estimate the severity of the leak,  
record the number on your water meter:

Wait four hours (overnight if possible) without turning on any water inside or outside of the house. Reread your meter to determine how many gallons of water leaked.

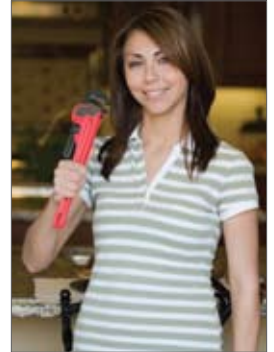
Time period elapsed:

Re-record the number on your water meter:

Subtract the first reading from the second reading:

Multiply by 748 gallons:

The final number is how many gallons leaked during the time period you measured. Enter the size of your household leak on page 10.



Fix leaks immediately



### Is the leak inside or outside?

If you have a leak, you will want to find and repair it right away.

To determine if the leak is outside your home turn off the house gate valve. The gate valve is usually located at a faucet on an outside wall, generally in a direct line from the water meter. Turn off all your sprinklers and outdoor faucets and garden hoses. Check the meter. If the meter leak dial or disk still moves, you have a leak outdoors, in your irrigation system or in the water line between the meter and the house.



House gate valve

If the leak is outside, finding the exact location takes investigation

## Sprinkler system

To find leaks in your sprinkler system, walk your irrigation lines and inspect your valves. Check for unusual wet spots, leaky or broken sprinkler heads. Run your sprinklers and if you have any broken sprinkler heads, replace them as soon as possible.



Check sprinkler nozzles for leaks

## Outdoor faucets

The outdoor faucet or spigot where your garden hose is connected can also be a source of leaks. Locate all outdoor faucets (also known as hose bibs). Check for leaks and drips. Accumulation of mineral deposits or slime often suggests a leak. Soil moisture even when the faucet has been turned off for some time may also indicate a leak.



Hose bib

## Pool and pool equipment

Outdoor leaks are often located in and around pools. The pool's fill valve is a common site for leaks. If the leak cannot be seen or heard, accumulation of mineral deposits or slime often indicates a leak.

To find leaks around pool equipment, first look closely at the filter, pump, heater and pool fill valves. Turn the pump on and off then look closely for spraying or leaking water when the pump is turned off. Take a walk around the pool's edge and between the pool and the equipment pad. Check for wet soil and eroded areas.

If you are routinely adding more than two inches of water to your pool per week, you may have a leak inside the pool. To find out, place a 1-gallon bucket of water beside the pool and mark both the water in the bucket and the pool water level.

Wait 24 hours. With a ruler, measure how much water has evaporated from the pool.

Record that number: \_\_\_\_\_

With a ruler, measure how much water has evaporated from the bucket.

Record that number: \_\_\_\_\_

If the pool lost more water than the bucket, then you have a leak.

If your pool has a vinyl liner, look for sinkholes where sand under the liner may have washed away. If the liner is old, it may have small pinhole leaks. If an animal has fallen into your pool it may have clawed the liner and torn a hole. Spending time underwater with a mask may be required to find small leaks in the liner.



Pool fill valve

## STEP 4 Make every drop count outside your home

Grass never grows on cement



Does this front lawn look like yours? When sprinklers sit on the edge of a lawn, much of the water runs onto streets and sidewalks. Move sprinklers 24 inches or more from the curb and place borders around the edges to keep water from the sidewalk and streets. A well-designed sprinkler system saves money and reduces water waste.

### Water use in your yard and garden

Desert residents use nearly 80 percent of all water outdoors!

Overwatering, inefficient sprinklers, older irrigation systems, poorly designed landscapes and water-thirsty plants are the biggest water wasters.

Improving your outdoor water efficiency will conserve the most water.



Desert landscaping needs less water than lawns.

### How much water does your irrigation system use?

Use your water meter to find out how much water your sprinklers use.

Turn off all water use inside the house. \_\_\_\_\_

Record the reading on the water meter: \_\_\_\_\_

Turn on the sprinklers and water as usual. \_\_\_\_\_

When the sprinklers shut off, read the meter again: \_\_\_\_\_

Multiply the difference by 748 gallons of water:  \_\_\_\_\_

Enter the total sprinkler system water usage on page 11.

### Water your plants just the right amount

It is possible to maintain a lush and efficient landscape in the desert without wasting water. The amount of water you use in July to irrigate your yard and garden is known as your **PEAK SUMMER USE**. The **WEEKLY WATERING INDEX** is a percentage of your peak summer use. Throughout the year, adjust your sprinkler times to make sure plants get the right amount of water by using the CVWD weekly watering index posted at [www.cvwd.org](http://www.cvwd.org).

## Make the biggest impact on your monthly bill by reducing your outdoor water use

### Garden hoses

A typical 5/8" garden hose can use 12 to 15 gallons a minute. Use a broom instead of the hose to clean walkways and driveways.

When you do use your garden hose, make sure to attach a shut-off nozzle. This is an easy and inexpensive way to reduce how much water flows from your garden hose.



Use a broom, not the hose

### Sprinkler clocks

Homeowners often forget to adjust their sprinkler timers when the summer heat turns into mild desert fall and winter. Smart irrigation controllers can change that!



Adjust sprinkler clocks with the seasons

Smart irrigation controllers use historical or daily weather data to calculate the amount of water needed by your landscaping. CVWD customers who install a smart irrigation controller, may reduce their outdoor water use by up to 26 percent! If you do not have a smart irrigation controller, you may be eligible to purchase one at a reduced rate from CVWD. Visit [www.cvwd.org](http://www.cvwd.org) to download an application.

### Sprinkler heads

Dry or yellow spots on your lawn or a wilted plant may not always be the result of underwatering. Check for clogged or broken sprinkler nozzles before increasing watering times.

Installing multi-stream, multi-trajectory (MSMT) nozzles are a great way to conserve water. These nozzles water your lawn or plants at a slower rate, increasing absorption.

In areas with plants but no grass, replace spray head sprinklers with bubblers or a drip irrigation system.

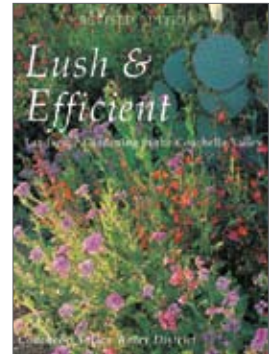


MSMT sprinkler nozzle

### Create lush and efficient landscapes

Replacing your lawn with desert-friendly landscaping is an excellent way to conserve water.

For tips on lawn conversion, purchase a copy of *Lush & Efficient Landscape Gardening in the Coachella Valley* at a CVWD office.



This 160-page book is an excellent resource for designing a desert-friendly and water-efficient landscape.

## STEP 5 Determine how much water you use indoors

Does too much water flow out the faucets?



Faucet aerator

Reduce your faucets' water flow in half by installing inexpensive aerators. Purchase aerators at your local hardware store.

Or, conserve water by reducing the water pressure. Do this by turning down the valve under the sink that supplies water to the faucet.

How much water do you use around your house?

### Appliances

If you are shopping for a new washing machine or dishwasher, consider water-efficient models. An ultra high-efficient washing machine may use up to 60 percent less water than your older machine.



Wash full loads of dishes and laundry

Check the manufacturer's instructions and record how much water each appliance uses.

Water used for full dishwasher load:



Water used for full laundry load:



Enter the water use for each appliance on page 10.

### Faucets

Letting the water flow while you brush your teeth, shave or move around the kitchen is an obvious water waster. Find out how much water flows out of your faucets by placing a 1-gallon container under a faucet. Turn on to the normal flow and measure how long it takes to fill the container.



Conserve water at the tap

Bathroom faucet – seconds to fill a 1-gallon container:



Kitchen faucet – seconds to fill a 1-gallon container:



Enter the gallons per minute of each faucet on page 10.



## Showerheads



Measure shower head output

Lots of people love a long shower. But do you know how much water you use for every extra minute you spend in the shower?

To find out how much water your shower head outputs, place a bucket under the shower head and turn on the water full blast. Record the number of minutes it takes to fill the bucket. Divide by the number of gallons in your bucket.

Record your shower head's gallons per minute:



Enter the gallons per minute of each of your home's shower heads on page 10.

Newer, water-efficient shower heads can output 3 gallons per minute or less.

## Toilets

Inside a home, the toilet will use more water than any indoor appliance or fixture.

Improved technology means newer low-flow toilets are more effective than they once were. Newer homes are more likely to have low-flow and ultra-low-flow toilets.

To find out if you have an ultra low-flow toilet, check the tank size. The tank size (gallons per flush) may be stamped on the inside walls of the tank, seat or bowl.

If the size is not marked on the toilet, turn off the shut-off valve located on the wall behind the tank. Flush the toilet. The tank should be empty. Use a 1-gallon container to refill the tank. Record the number of gallons it takes to refill to the normal level.

Record your toilet's gallons per flush:



Enter the gallons per flush of each of your home's toilets on page 10.

If you need 3 gallons or more of water to fill the tank, replace the toilet with an ultra-low-flow model that uses 1.6 gallons or less.



Gallons per flush are printed on toilet bowl or tank

## Where is the most common indoor leak?

Toilet leaks can waste up to 200 or more gallons per day!

Toilet leaks are often caused by

- deteriorated valve seat
- improperly working flushing arm or lift chain
- corroded float rod, ball cock or float ball
- flapper valve
- overflowing tank water level

Leaks in toilets always get larger and more costly over time.



Fix toilet tank leaks

Average water use  
around the house



Regular flow shower  
head  
7 gallons per minute

Low-flow shower head  
3 gallons per minute

Ultra low-flow shower  
head  
1.75 gallons per minute

Pre-1994 toilets  
3.5 gallons or more  
per flush

Ultra low-flush toilets  
1.6 gallons per flush

Automatic dishwasher  
full cycle  
12 gallons per load

Automatic dishwasher  
short cycle  
8 gallons per load

Washing machine  
43 gallons per full load

High-efficiency  
washing machine  
18 gallons per full load

## STEP 6 Calculate your daily indoor water use



Use this worksheet to help calculate your average daily indoor household water use. Look for the water drop symbol throughout this guide to find instructions on measuring your indoor and outdoor water use.

Activity	Calculate	Our household
<b>SHOWERS</b>		
Minutes showering per day		
Shower head's gallons per minutes	X	=
<b>BATHS</b>		
Number of baths per day		
Gallons per full bathtub	X 38 gallons	=
<b>TOILETS</b>		
Number of flushes per day		
Gallons per flush	X	=
<b>RUNNING FAUCETS</b>		
Minutes bathroom faucet flows in one day		
Bathroom faucet's gallons per minute	X	=
Minutes kitchen faucet flows in one day		
Kitchen faucet's gallons per minute	X	=
<b>AUTOMATIC DISHWASHER</b>		
Number of daily full dishwasher loads		
Gallons of water per load	X	=
<b>WASHING MACHINE</b>		
Number of daily full washing machine loads		
Gallons of water per load	X	=
<b>LEAKS</b>		
Water leakage from page 4 in gallons		
If you measured for 4 hours then multiply by	x 6	=

ADD UP "OUR HOUSEHOLD" COLUMN FOR  
YOUR TOTAL DAILY INDOOR WATER USE: \_\_\_\_\_

# STEP 7 Calculate your weekly household water use



## Residential water usage

The average household of four uses 250 gallons indoors per day and nearly 80 percent of all their water outdoors. Calculating how much water your household uses is a good way to determine where and when you can reduce your water usage.

### OUTDOOR WATER USE

- A. Sprinkler system water usage in gallons (pg 6): \_\_\_\_\_
- B. Number of times sprinkler system runs weekly: \_\_\_\_\_
- C. Multiply A and B for total **weekly outdoor** water usage: \_\_\_\_\_
- D. Divide C by 7 to find your average **daily outdoor** water use:  $\div 7 =$  \_\_\_\_\_

### INDOOR WATER USE

- E. **Daily indoor** water use in gallons (pg 10): \_\_\_\_\_
  - F. Multiply E by 7 to find your **weekly indoor** water use:  $\times 7 =$  \_\_\_\_\_
  - G. Add C and F for **total weekly household** water usage: \_\_\_\_\_
- To convert gallons to hundred cubic feet (CCF) divide by 748  $\div 748$
- TOTAL WEEKLY HOUSEHOLD WATER USE IN CCF: \_\_\_\_\_ CCF

\* CVWD measures and bills water in units of hundred cubic feet (CCF). 1 CCF = 748 gallons.

## Is your water use efficient?

CVWD's water budgets take into consideration the lot size, landscaped area and the number of residents in your home. If your monthly water use is below your water budget then your bill will note your use as EXCELLENT or EFFICIENT. If you exceed your water budget, your bill will note your use as INEFFICIENT, EXCESSIVE or WASTEFUL.

# STEP 8 Conserve water today inside and outside your home

💧 Good ways to conserve water



Wash full loads of dishes and laundry.



Adjust your sprinklers with the seasons.

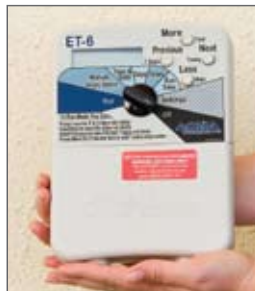


Use a broom instead of the garden hose.

💧💧 Better ways to conserve water



Check your toilet for leaks.



Install a smart irrigation controller.



Replace sprinkler spray heads with MSMT nozzles.

💧💧💧 Best ways to conserve water



Replace appliances and fixtures with water-efficient models.



Determine your household water usage and fix leaks immediately.



Replace your lawn with desert-friendly, water-efficient plants.



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