

# Water Wise at Home

A guide to finding leaks and creating a more water-efficient home



Look for the water drop symbol to find instructions on measuring your daily household water use



**YourWater**  
is our promise

Coachella Valley Water District

# 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 budgets are useful tools

CVWD uses a water budget-based tiered rate billing structure. Customers are assigned a personalized water budget that represents the amount of water each home or landscaped area needs for reasonable use.

Efficient water users who stay within their budget (tiers 1 and 2) pay a lower rate than inefficient users in tiers 3, 4 and 5.



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

Record your water usage this past month:

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

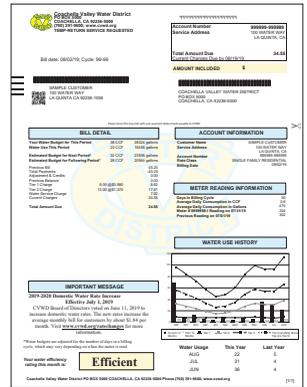
Record your water budget this past month:



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.



## Understanding Water-Budget Based Tiered Rates

Residential water budgets include an indoor budget and an outdoor budget.

**Tier 1** is the water allocated for all indoor water needs.

**Tier 2** is the water allocated for outdoor needs. Water use that exceeds tiers 1 and 2 does not fall within the water budget and is charged at higher rates.



## Outdoor water budgets are calculated based on the following information:

- ✓ Size of landscaped area of each parcel.
- ✓ Historical weather data which provides an advanced monthly water use target.
- ✓ A plant factor that reflects how much water needs to be applied to your landscape.
- ✓ An irrigation efficiency factor, which is a reflection of a system's efficiency.
- ✓ Water budgets are also adjusted for the number of days in a billing cycle, which can vary depending on when the meter is read.



## 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.

### Learn how to read your 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. See instructions below:

1. Once meter is located, use a screwdriver or a similar tool to lift the rectangular lid open. Be careful when opening the lid as there may be spiders, snakes, bees or bugs inside!
2. If the glass on the meter is worn or dirty, spray water on the glass with a spray bottle. This will help visibility.
3. Record meter reading from the cubic feet section: \_\_\_\_\_  
(Be sure to add a decimal before the last two digits in black.)
4. Wait until after a full irrigation cycle or 24 hours to check your meter again.
5. Record second meter reading: \_\_\_\_\_

For every 748 gallons you used, the reading will have increased by one CCF, which equals one unit.

6. Subtract the first reading from the second reading: \_\_\_\_\_
7. Multiply #6 by 748 gallons to learn how many gallons you used between meter readings: \_\_\_\_\_
8. Divide #6 by the number of days since the last reading to show how much water was used per day: \_\_\_\_\_

Multiply #8 by 30 days to get an estimate of your monthly usage: \_\_\_\_\_



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 can also cause you to exceed your water budget and receive a higher bill.

The small dial shown to the left is a flow indicator or a leak detector. This will help you determine if you have a leak. Learn more on the next page.

# 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 COLORED DIAL** 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: \_\_\_\_\_

(Be sure to add a decimal before the last two digits in black.)

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: \_\_\_\_\_

(Be sure to add a decimal before the last two digits in black.)

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

(Be sure to add a decimal before the last two digits in black.)

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.

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. If not, you have a leak indoors.



House gate valve



The average leak can add significantly to your monthly water bill.

## 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 caused by 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 level 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

A leaky outdoor sprinkler head can waste up to 500 gallons of water per month!



## STEP 4 Create a water-efficient landscape outside your home

### Grass doesn't grow on streets, sidewalks or driveways



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.

**Install multi-stream rotating sprinkler nozzles or MP Rotators.** These sprinklers water a lawn with rotating streams of water instead of spraying or misting. These nozzles can also be adjusted to any arc or radius to help with better coverage and less waste.

**Install a decorative rock buffer** around your lawn to prevent sprinkler run-off.

### 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.

### 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:** \_\_\_\_\_  
(Be sure to add a decimal before the last two digits in black.)

Turn on the sprinklers and water as usual.

**When the sprinklers shut off, read the meter again:** \_\_\_\_\_  
(Be sure to add a decimal before the last two digits in black.)

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

Enter the total sprinkler system water usage on page 10.

### Water your plants just the right amount

It is possible to maintain a lush and efficient landscape in the desert without wasting water. Throughout the year, adjust your sprinkler times to make sure plants get the right amount of water by using the CVWD's monthly watering guide, which can be downloaded at [www.cvwd.org/conservation](http://www.cvwd.org/conservation).



**A well-designed sprinkler system saves money and reduces water waste.**



Desert landscaping needs less water than lawns.

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

### Garden hoses



Conserve water at the tap

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 according to state law.

In addition, hoses must be equipped with a shut off nozzle to wash vehicles and windows according to state law. CVWD expects customers to continue managing water wisely based on the important lessons learned during the drought emergency.

### Sprinkler clocks

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 receive one for free. Visit [www.cvwd.org/rebates](http://www.cvwd.org/rebates) to fill out an application.



Adjust sprinklers with the seasons

### Sprinkler heads

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

Installing new generation nozzles are a great way to conserve water. These nozzles water your lawn at a slower rate, allowing the water to be absorbed rather than flooding and running off. Residential customers can receive rebate of \$4 per nozzle for a maximum of \$2,000. Visit [www.cvwd.org/rebates](http://www.cvwd.org/rebates) for details.

Place irrigation for water-efficient plants on separate valves than the grass so they get the correct amount of water. In areas with plants but no grass, replace spray head sprinklers with a drip irrigation system.



Multi-stream, rotating nozzles apply water more efficiently than traditional spray heads

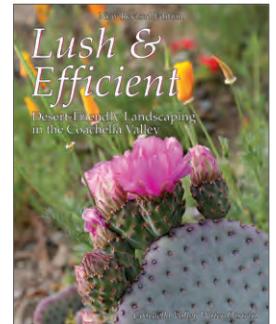


After a good rainstorm passes, keep your sprinklers off for a few days! It's a state water-use restriction.

## Create lush and efficient landscapes and get a rebate

Replacing your lawn with desert-friendly landscaping is an excellent way to conserve water. In fact, CVWD offers rebates for converting.

Homeowners can receive \$2 per square foot up to \$10,000. Pre-approval is required, while funds last. Rebates are subject to change. For more information, visit [www.cvwd.org/rebates](http://www.cvwd.org/rebates).



This revised book is an excellent resource for designing a water-efficient landscape. It includes 300 plant photos with descriptions and water-efficient irrigation methods.

Purchase online at [www.cvwd.org](http://www.cvwd.org) or call (760) 391-9600.

# STEP 5 Determine how much water you use indoors

## Does too much water flow out of the faucets?



Faucet aerator

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



Only wash full loads of dishes and laundry to save water!

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.

To find out how much water flows out of your faucets, place 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 – minutes to fill a 1-gallon container:  \_\_\_\_\_

Kitchen faucet – minutes 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 2 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 high-efficiency toilets.

To find out if you have a high-efficiency model, 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 a high-efficiency model that uses 1.28 gallons or less.



Gallons per flush are printed on the toilet bowl or tank



Shorten your shower by a couple minutes and save at least 5 gallons each time!

## Where is the most common indoor leak?

Toilet leaks can waste 200 or more gallons per day! Toilet leaks are often caused by the following:

- 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

# STEP 6 Calculate your daily water use

## Average water use around the house



Standard flow shower head

2.5 gallons per minute

Low-flow shower head

2 gallons per minute

High-efficiency shower head

1.5 gallons per minute

Pre-1994 toilets

3.5 gallons or more per flush

High-efficiency toilets

1.28 gallons per flush

Pre-1994 automatic dishwasher

15.8 gallons per load

High-efficiency automatic dishwasher

5.5 gallons per load

Washing machine

40 gallons per full load

High-efficiency washing machine

14 gallons per full load

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	Household
<b>SHOWERS</b>		
Minutes showering per day		
Shower head's gallons per minute	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	=
<b>Add up "household" column for your TOTAL daily indoor water use:</b>		=
<b>SPRINKLERS</b>		
A: Sprinkler system usage from Page 6 in gallons		
B: Number of times sprinkler system runs daily:		
<b>Multiply A &amp; B for total daily outdoor water usage:</b>		=
Add total indoor and outdoor water use:		=
Convert gallons to hundred cubic feet (CCF) for total outdoor and indoor water use in CCF:	÷ 748	=



Desert-friendly landscaping uses less water and requires less maintenance than grass

### Residential water usage

The average household of four uses 200 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.

**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.

As the weather changes, so does your plants' water needs. That is why your water budget is different each month. The easiest way to stay on top of changing factors is to have CVWD install a FREE smart irrigation controller. Learn more about our many conservation programs at [www.cvwd.org/rebates](http://www.cvwd.org/rebates).

If you have questions or concerns about your water bill, contact us! We are here to help answer questions or provide assistance, including on-site conservation review visits. Call us at (760) 391-9600 or email [customerservice@cvwd.org](mailto:customerservice@cvwd.org).



Coachella Valley Water District has partnered with United Way of the Desert to provide assistance to customers who need help paying their water bill.

Program highlights are listed below:

- ✓ Eligible residential customers can receive a \$100 credit on their water bill once in a 12 month period.
- ✓ The program is limited to CVWD residential customers only.
- ✓ United Way of the Desert manages the program and helps customers with the application process.

**For assistance, call United Way of the Desert at (760) 323-2731 to make an appointment to apply in person.**

### Water-Efficiency Workshops & Events

CVWD offers a variety of water-efficiency workshops and events to help home gardeners learn how to better manage water on landscapes.

Visit [www.cvwd.org](http://www.cvwd.org) to view a list of upcoming events, usually offered during the fall, winter and spring seasons.



# STEP 8 Create a water-efficient home inside and outside

COACHELLA VALLEY WATER DISTRICT 2019

## Good water-efficient practices



Only wash full loads of dishes and laundry.



Adjust your sprinklers with the seasons.



Use a broom instead of the garden hose.

## Better water-efficient practices



Check your toilet for leaks.



Install a smart irrigation controller.



Replace sprinkler spray heads with MSMT nozzles.

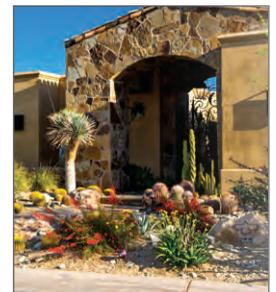
## Best water-efficient practices



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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is our promise

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