


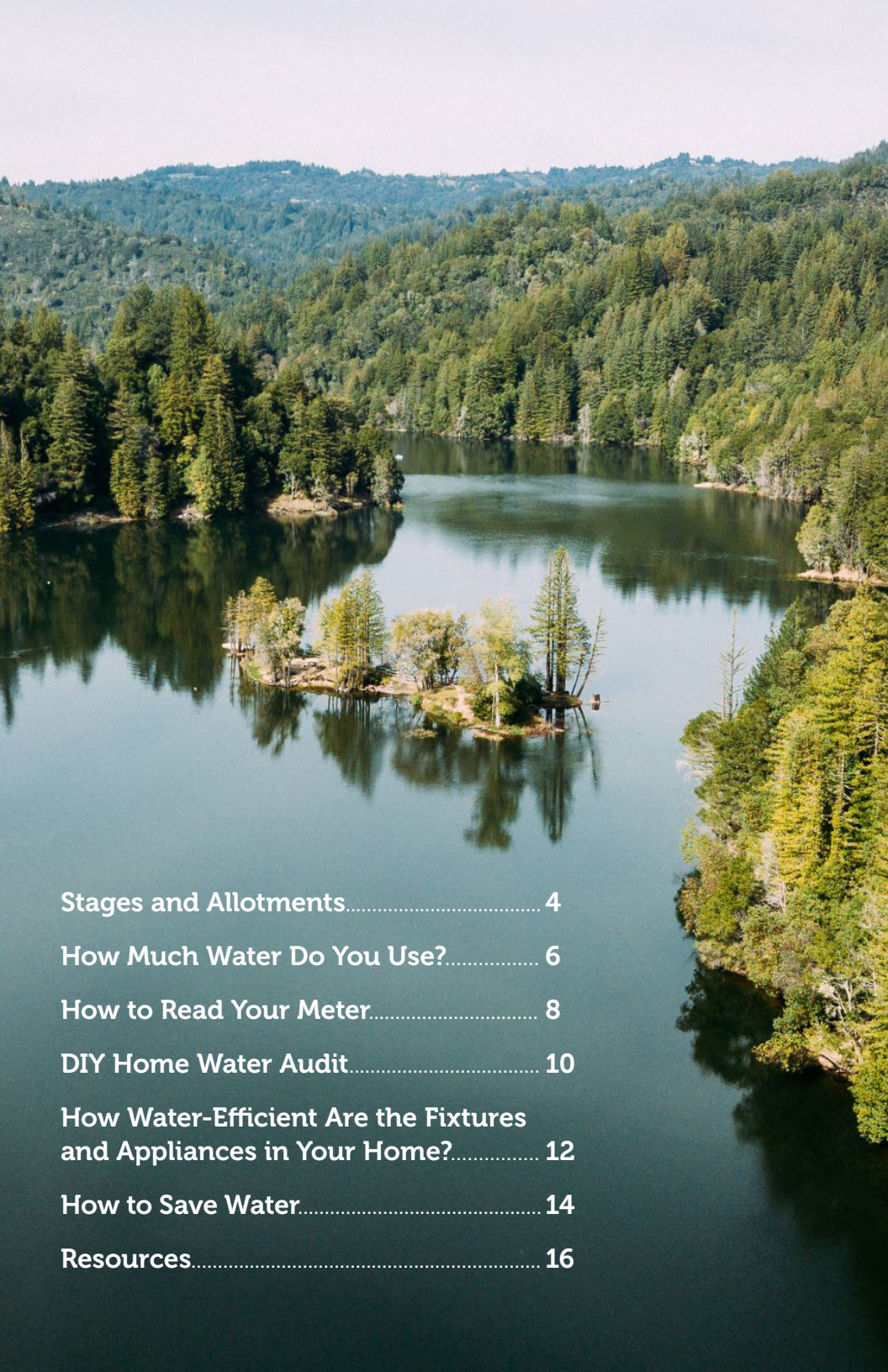
Water Conservation Guide



Water Department

Conserve to Preserve – Our Water, Our Future

 [cityofsantacruz.com/water](https://www.facebook.com/cityofsantacruz.com/water)



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Welcome to your Santa Cruz Water Conservation Guide!

Welcome to your Santa Cruz Water Conservation Guide! This booklet will provide you with the information you'll need to understand local water use restrictions, familiarize yourself with your own water use, and make your home more water efficient. In the following pages you'll find a summary of the different water shortage stages and water use allotments, information about indoor and outdoor water use, a "Read Your Meter" guide, and a DIY home water audit. All of this will help you to stay within your water use allotment and maintain a water efficient home.

One hundred percent of the City of Santa Cruz's water supply comes from local rainfall — 95% comes from coastal streams and the San Lorenzo River, and the remaining 5% from local groundwater basins. The City has one reservoir, Loch Lomond, which when full holds approximately one year's worth of water supply. When it doesn't rain in Santa Cruz, we are very vulnerable to water shortages.

Each winter, the Water Department analyzes several factors to determine whether the City's water supply is sufficient or if reductions in use are needed to maintain adequate supply. The results determine if a shortage is projected, the potential degree of shortage, and how much of a reduction in water use may be needed. Reductions in water use are guided by the City's Water Shortage Contingency Plan (WSCP).

The WSCP includes five stages of progressively more restrictive water use and penalties. Each stage requires customers to make a reduction from normal water use, with allotments assigned to each household. Allotments are made in the form of CCF per month. One CCF is equivalent to 100 cubic feet of water, which is 748 gallons. This unit of measurement is the same unit used on your water bill.

1 CCF = 100 cubic feet of water = 748 gallons



STAGES AND ALLOTMENTS

Below are each of the five stages for water use restrictions, including specific allotments, for an average single family home of three people. If you have more than three people in your household, you can apply for a higher allotment.

| Stage | Reduction | Allotment | Gallons/day | Penalty |
|-------|-----------|-------------|-------------|---------|
| 1 | 11% | 5 CCF/month | 125 | No |
| 2 | 21% | 5 CCF/month | 125 | Yes |
| 3 | 32% | 4CCF/month | 100 | Yes |
| 4 | 42% | 3 CCF/month | 75 | Yes |
| 5 | 49% | 3 CCF/month | 75 | Yes |



HOW MUCH WATER DO YOU USE?



Toilet

Older toilets can use 3.5-5 gallons per flush (gpf), while those installed after 1994 use a maximum of 1.6 gpf. Current California plumbing rules require all new toilets sold use 1.28 gpf or less. Replacing old toilets can reduce water use by 20-60%.



Showerheads

While the average showerhead uses 2.5 gallons of water per minute (gpm), current California plumbing rules require that new showerheads use a maximum of 1.8 gpm. Updating your showerheads can save hundreds of gallons of water per month.



Clothes Washer

Today's high-efficiency washing machines use 15-25 gallons per cycle, but an old one can use as much as 50 gallons per cycle. Replacing an old washing machine can cut water used for washing clothes by 50%.



Dishwasher

Older dishwashers can use 10-15 gallons per cycle, while newer high-efficiency dishwashers only need 3.5 gallons or less per cycle.

HOW MUCH WATER DO YOU USE?



Sinks

Bathroom faucets should flow at a max of 1.2 gpm, and kitchen faucets 1.8 gpm. If you have older faucets, these flow rates can easily be achieved by installing new aerators.



Outdoor

Outdoor water use is often hard to track because it can be difficult to calculate exactly how much water it takes to water your yard. Time of year, plant type, yard size and irrigation methods are all important factors. Your water meter can help you calculate how much water you use outside – see “How to Read Your Meter” on page 8 to learn how.

You can also get a rough estimate of monthly outdoor use by comparing winter and summer usage. Take the consumption in your highest summer month (like August), and subtract it from the consumption in your lowest winter month (such as February). This gives you a rough idea of much water (in CCF) is used on irrigation. Convert CCF to gallons by multiplying by 748 (1 CCF= 748 gallons).

Did You Know?



You use about 5 gallons of water if you leave the water running while brushing your teeth.

HOW TO READ YOUR METER



Why would you want to read your water meter?

By reading your water meter you can:

- Check your home for invisible or slow leaks
- Track your daily usage
- Determine how much water you're using for outdoor irrigation
- Avoid receiving a high water bill

To read your meter, locate the meter box, typically found near the curb in front of your home and housed in a concrete box in the sidewalk or driveway. Carefully remove the lid with a tool like a screwdriver and set it aside to expose the meter. Inside the meter box, you will likely see one of two common types of meters (see images A and B):



Check for Leaks

1. Firmly turn off all appliances and fixtures that use water inside and outside.
2. Record the meter reading (including all of the digits).
3. Wait 15 minutes and check the meter reading. If the reading is unchanged your house is water tight.

If the meter reading has changed, you have a leak somewhere in your system. The most common cause is a leaking toilet.

Track Your Daily Usage

EXAMPLE

Day 1 Reading: 0 1 3 0 3 2 6 0 6

Day 4 Reading: 0 1 3 1 5 3 7 0 8

Total Usage: $13153 - 13032 = 121 \text{ ft}^3$

$\times 7.48$

Usage (gallons): $= 905$

Days: $\div 4$

Daily Average (gallons): $= 226$

1. Record the meter reading using the first 6 digits starting on the left.
2. Take another reading a few days later.
3. Subtract the first reading from the second reading. Multiply this number by 7.48 to convert cubic feet to gallons. Divide by the number of days between readings to get your average daily use of water.

Find Out How Much Water is Used for Specific Tasks

1. Record your current meter reading.
2. Turn on the water for one minute and record the meter reading again. Subtract the first reading from the second reading. Multiply the number by 7.48 to convert the flow rate to gallons per minute.
3. Multiply the flow rate by the time it takes to do any specific task. Based on the example, an irrigation system running at 5 gallons per minute for 30 minutes uses 150 gallons.

Did You Know?



You can refill an 8-oz glass of water approximately 15,000 times for the same cost as a six-pack of soda.

DIY HOME WATER AUDIT



A do-it-yourself home audit can help you get to know your water use and pinpoint opportunities to save water. For support with this audit, visit cityofsantacruz.com/surfcitysavest or call 831-420-5230.

1. Figure out your daily usage.

Follow the “Track Your Daily Usage” instructions on page 9. If you are using more water than your allotment, you will need to lower your gallons of water used per day. The following questions will help you find ways to lower your usage.

2. Inventory all water-using fixtures and appliances in your home, using the following check list (see page 12 for more info):

- Number of toilets: _____
Efficiency of toilets: _____ gpf, _____ gpf, _____ gpf
All toilets are 1.6 gpf or less? Yes No
- Number of showerheads: _____
Efficiency of showerheads: _____ gpm, _____ gpm, _____ gpm
All showerheads are under 1.8 gpm? Yes No Unknown
- Is your washing machine Energy Star rated? Yes No Unknown
- Is your dishwasher Energy Star rated? Yes No Unknown
- Do you have aerators on your kitchen and bathroom faucets?
 Yes No Unknown
- What is the flow rate of these aerators?
_____ gpm, _____ gpm, _____ gpm
- Do you have a hot water recirculation pump? Yes No Unknown

3. Check for leaks

a. Use your meter to check for leaks. Reference the “Reading Your Meter” section of this booklet to learn more.

b. Check your toilets for leaks by conducting a dye test. Place food coloring (or toilet dye tabs) into the tank of your toilet. **Do not flush the toilet.**

c. Wait 15 minutes, then check the water in the bowl. If the water in the bowl has turned the color of the dye, you have a toilet leak.

d. Scan your home for apparent leaks. Look for dripping faucets or hose spigots, wet spots, or the sound of running or dripping water

4. If you have planted landscaping, take a look outside:

a. Estimate how much water you use when irrigating your yard.

- Reference “Reading Your Meter” to estimate how much water is used during one irrigation cycle. _____ gallons/cycle
- To estimate how much water is used in a month, reference the Outdoor section of “How much water do you use?” _____ CCF/month

b. Check your irrigation timer to ensure it is still set to the timing and frequency you need. Ideally, check every few months to make sure your irrigation system is still on track.

c. Run a physical test of your system. Turn it on manually during the day for the usual amount of time you would run it. Make note of any broken or malfunctioning equipment, runoff, or spraying onto the street or sidewalk. Make adjustments and repairs as necessary.

d. Do you have a drought tolerant yard? Yes No Unknown N/A

e. Do you use a drip irrigation system or water by hand?

Yes No Both Unknown

f. Is your irrigation timer scheduled to irrigate 3 or fewer days a week?

Yes No Unknown N/A

g. Is your irrigation timer scheduled to irrigate between 5pm and 10am?

Yes No Unknown N/A

h. Do you turn your irrigation off in the winter months?

Yes No Unknown N/A

Once you’ve completed your DIY Home Water Audit, you can review any questions for which you answered “No,” then check out page 14 for recommendations and information to help you reduce your water consumption and stay within your allotment.

HOW WATER-EFFICIENT ARE THE FIXTURES AND APPLIANCES IN YOUR HOME?

Toilets

Water efficiency in toilets is measured by the number of gallons the toilet uses for each flush. Common measurements are 3.5 gallons per flush (gpf), 1.6 gpf, 1.28 gpf, 1.0 gpf or 0.8 gpf. Dual flush toilets flush at two of these measurements.

To find out the gpf for your toilet, check the base of the toilet or the inside of the tank. The measurement is typically represented as both gallons per flush and liters per flush, such as "1.6 gpf/6.0 lpf." Alternatively, some toilets just have the date they were made, printed or stamped on the inside of the tank. If the date is pre-1994, your toilet uses at least 3.5 gpf. If the date is after 1994, your toilet most likely uses 1.6 gpf.

Showerheads

You can figure out how efficient your showerhead is by determining the gallons used per minute. This information is often printed on the showerhead, though it can be small and faint. So make sure to have a good light source available. You may have to remove the showerhead to check for a printed flow rate. If the flow rate can't be found, you can figure out the efficiency by measuring the amount of water that comes out of the showerhead over a set period of time. Here's how:

1. Get a bucket and a timer.
2. Turn your showerhead on.
3. Place the bucket under the water and start your timer at the same time. After 5 seconds remove your bucket and turn off the water.
4. Put the water in a measuring cup to determine the number of cups.
5. Multiply the number of cups by 12. This gives you the number of cups used in one minute. Convert this to gallons by dividing by 16 to determine your estimated flow rate.

Sink Aerators

To measure efficiency for both kitchen and bathroom sink aerators, following the instructions for showerheads.

Clothes Washers

The easiest way to find out if your clothes washer is efficient is to check if it has an Energy Star rating, usually identified with a sticker on the outside of the washer. Generally, front loading machines are more efficient than top loading machines, and newer machines are more efficient than older machines. If you can't find a sticker, or if the sticker might have been removed, here's what to do:

1. Locate the model number, usually found on the inside of the door frame, the door, the bottom corners, the back or on the back control panel.
2. Visit the Energy Star website and enter your model number in the search bar.
3. If your washer appears in the results, it is Energy Star certified. You can click on product details to learn more about your washer. If your washer did not come up in the results, it is not Energy Star rated.

Dishwashers

Like clothes washers, the best way to know if your dishwasher is efficient is to find out if it is Energy Star certified. Some dishwashers will have an Energy Star sticker somewhere on the outside of the washer. If there is no sticker, or you think it might have been removed, follow these steps:

1. Locate the model number, usually found on the inside of the door frame or on the door.
2. Visit the Energy Star website and enter your model number in the search bar.
3. If your dishwasher appears in the results, it is Energy Star certified. You can click on product details to learn more about your dishwasher. If your dishwasher did not come up in the results, it is not Energy Star certified.

Did You Know?



An automatic dishwasher uses 9 to 12 gallons of water while hand washing dishes can use up to 20 gallons.

HOW TO SAVE WATER

Repair Leaks

If you are aware of any leaks, repairing them is the best way to save water. In fact, sometimes repairing leaks is all that is required to stay within your allotment.



LEAK FUN FACTS:

A drop-a-second from a leaky faucet can waste 92 gallons per month.

Even a small toilet leak can waste as much as 200 gallons per day. If left leaking for a month, that's up to 6,000 gallons (8 CCF)!

Replace Fixtures and Appliances

The Santa Cruz Water Department offers a variety of rebates and free devices. Visit cityofsantacruz.com/surfcity saves to learn more. Here are some tips about replacing fixtures and appliances:

- Replace older toilets that use 3.5-5.0 gpf (installed pre-1994) with newer toilets that use 0.8-1.28 gpf.
- Install low-flow aerators on your kitchen and bathroom faucets – kitchen faucets should flow at or below 1.8gpm and bathroom faucets should flow at or below 1.2gpm.
- Replace 2.5gpm showerheads with one that uses 1.8gpm or less.
- Purchase an Energy Star-rated clothes washer or dishwasher.
- Install a hot water recirculation pump.
- Replace your lawn with a climate-friendly, drought tolerant landscape.

Change Habits

- Don't leave the faucet running when you are brushing your teeth or doing the dishes.
- Soak pots and pans rather than running hot water over them.
- Choose taking a shower over taking a bath, and reduce your time in the shower.
- Run only full loads in your clothes washer and dishwasher.
- Check your home often for leaks.
- Water your yard between 5pm and 10am and turn your irrigation off during the winter.
- Check you irrigation timer following a power outage to make sure it is still on schedule.
- Use a broom instead of a hose to clean to clean driveways and sidewalks.
- Turn off the hose when not in use while washing your car.
- Put mulch around your trees and plants.
- Use automatic shutoff nozzles on all outdoor water hoses.



RESOURCES

CalWEP's Practical Plumbing Handbook, California Edition, 2018

Know Your Water

Official Water Conservation Guide of Santa Cruz County

Energy Star Website

WaterSense Website

Maximum Performance (MaP) Toilet Testing Website

The Water Shortage Contingency Plan, 2020

Water Conservation Website

Watersavingtips.org, Water Conservation Coalition of Santa Cruz County

