

CITY OF SANTA ROSA

WATER-USE HOME SURVEY KIT

Thank you for your interest in becoming more water efficient! You can save up to 25% on your utility bill by implementing the recommendations in this kit.

This Home Survey Kit will walk you through some strategies to determine what you may be able to do to save water inside and outside your home or business.

Follow the 6 steps in this survey kit to determine if you have leaks, if you are irrigating your landscape appropriately and whether your home is already water-conserving or would benefit from our FREE high-efficiency fixtures.

To help you track your findings, fill out the attached Survey Form as you work through the kit. You can use the information yourself, or send it back to Water Conservation for further assistance in conserving water. Entering the data online at srcity.org/wc qualifies you for a drawing to receive \$100 as a credit on your utility bill (limited to one entry per year).

If you have any questions during your home survey, call us at (707) 543-3985.



STEP 1: CHECK FOR LEAKS

Don't forget to turn off things that cycle on and off, like ice-makers

If you live in an apartment or multi-family complex, skip to Step 3: Check for Toilet Leaks.

1. **Turn off all water-using appliances** (including ice makers).
2. **Locate your water meter.** The water meter is usually located near the curb in front of the house or place of business. It is in the ground housed in a concrete box marked WATER. Carefully remove the meter box lid using a tool such as a screwdriver. Some meters have wires attached to the lid for the antenna. Remove the meter lid slowly and gently to avoid breaking the wires.
3. **Check your meter for leaks.** If the water meter's low-flow indicator is moving when all your water-using fixtures and appliances are turned off, then you have a leak.



4. **Read the water meter** and record all seven digits including zeros. Reading a water meter is similar to reading an automobile odometer. Most meters have a seven-digit number on the face called the **readout** (see illustration). This shows the total number of gallons used since the meter was installed. When water passes through a traditional meter (Figure 1.A), all of the numbers revolve except the last one on the right which is a fixed zero. The large sweep hand registers for this last increment-revolving one time for every ten gallons used. TouchRead and RadioRead (Figure 1.B) meters do not have a sweep hand and, therefore, all numbers on the readout move.

Record your meter read and low-flow indicator results on the Leak Detection Section of the Survey Form.

STEP 2: ISOLATE THE LEAK

You may skip this step only if your low-flow indicator was not moving in Step 1.

- 1. Turn off the master water shut-off valve and the irrigation master valve (Figure 2).** The master water shut-off valve is usually located outside the front door or on the side of your house, in line with the hose bib. The irrigation master valve can either be in the same area, located on the “T” off the supply line as shown in the picture, or may be located somewhere else on your irrigation system. Check the low-flow indicator again. Is it still moving? If so, you have a leak in the supply line between the meter and the house. If the low-flow indicator stopped moving, the leak is either in the house, or in the irrigation system.
- 2. To determine if the leak is in the house,** open the master water shut-off valve, but leave the irrigation master valve closed. Check the low-flow indicator on the meter again. Is it moving? If so, the leak is in the house.
- 3. To determine if the leak is in the irrigation system,** close the master water shut-off valve and open the irrigation master valve. Check the low-flow indicator on the meter again. Is it moving? If so, the leak is in the irrigation system, and you should contact a landscape professional.

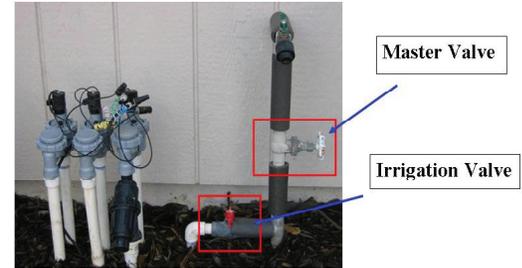


Figure 2

STEP 3: CHECK FOR TOILET LEAKS

Toilets are the most common source of leaks. Even if your meter's low-flow indicator is not moving, you may still have a leak. Here's how to see if yours is leaking.

1. Put a dye tablet (Figure 3.A) or several drops of food coloring in the toilet tank. Wait 15 minutes. Do not flush the toilet during this time. If colored water appears in the toilet bowl, you have a leak from the tank into the bowl! Check the flapper (Figure 3.B)(A). It may be worn and need replacing.
2. If the flapper isn't worn, check to see if it fits into the flush valve (B) snugly. The valve may need cleaning. Then, if the flapper still won't seat properly, straighten the guidewire (C) and make sure it's not catching on anything.
3. Sprinkle a small amount of talcum powder on top of the water in the tank. If this powder moves toward the overflow tube (D), you probably have an overflow leak.
4. Adjust the float arm (E) down to shut off the valve before water spills into the tube, or replace the float valve (F).
5. If your toilet won't shut off, or whistles or whines after adjusting the float valve, you may need a new ballcock assembly (G).



Figure 3.A

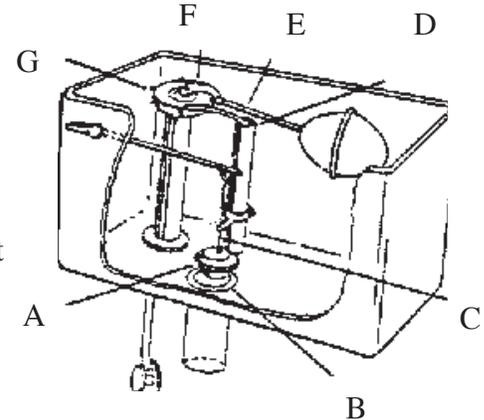


Figure 3.B

STEP 4: CHECK FOR OTHER LEAKS

What else could be leaking?

1. Look for dripping faucets both inside and outside your home.
2. Check the following areas for standing water or signs of moisture damage: around the water heater, dishwasher, under sinks, the ice-maker hose behind the refrigerator, or around the washing machine.
3. Check for breaks in the irrigation system by turning on the sprinklers or drip lines one station at a time and observing the system in operation.
4. Look for standing water on the surface of the ground or areas that are brighter green than the rest of the landscape.
5. Once you have determined that water is not being lost due to leaks, you can evaluate how water is used in your household and determine where and how water use could be reduced.



Complete the Leak Detection Section on the Survey Form.



STEP 5: INDOOR WATER USE

1. It is important to know the flush volume of your toilets as they account for a large portion of indoor water use. Each toilet with a flush volume of 3.5 gallons per flush (gpf) or more should be replaced with a new high-efficiency toilet (HET) which could save over 5,250 gallons per toilet per year. Toilets with 3.5 gpf or higher may be eligible for up to a \$150 rebate. Call the Water Conservation Hotline (707) 543-3985 to qualify for the rebate program and schedule your **free** rebate pre-inspection.
2. Determine the flush volume and efficiency of toilets:
 - a. Ultra low-flow toilets (ULFT) and HET toilets are the only toilets permitted by law to be sold in California since 1992. Newer toilets usually have a flush volume (1.6 gpf) stamped on the bowl rim between the seat and the tank.
 - b. Identifying the date the toilet was manufactured will also help you determine its flush volume. Toilets have the manufacture date stamped into the china on the inside of the tank. For the date, check the inside of the tank on the back wall (near the water level) or on the underside of the toilet tank lid.
3. Determine the gallons per flush (gpf) used by each toilet from the chart below.

Toilets Dated	Gallons Per Flush
1980 & Earlier	5 gpf
1980 – 1992	3.5 gpf
1992 – Present	1.6 gpf or 1.28 gpf (HET)



Complete the Toilet Portion of the Indoor Section on the Survey Form.

STEP 5: INDOOR WATER USE continued

Measure faucet and showerhead flow rates:

1. Use the plastic flow gauge bag (instructions are on the bag) included in the survey kit and record your findings on the attached Survey Form.
2. If you have showerheads that flow at a rate higher than 2.0 gallons per minute (gpm) or faucet aerators that flow at a rate higher than 1.5 gpm, we will provide free high-efficiency showerheads and faucet aerators to you.
3. FREE high-efficiency showerheads and faucet aerators are available at the following locations:

Utilities Department, 69 Stony Circle
City Hall Annex, 90 Santa Rosa Avenue



Complete the Faucet and Showerhead portion of the Indoor Section on the Survey Form.

STEP 6: REVIEW OUTDOOR WATER USES

Water management is key to conserving water in the landscape. By knowing how much water your plants need, you can apply the right amount, have healthier plants and save money. A site that implements all of the following may reduce their landscape water use by 50%.

1. Inspect your sprinklers.

- a. Water from one sprinkler head should reach the sprinkler head(s) adjacent to it. This overlapping pattern will provide the most even application of water, which is especially important for lawns.
- b. Straighten leaning sprinkler heads.
- c. Raise sprinklers that are too low.
- d. Clean clogged spray nozzles.
- e. Replace broken, worn or leaking sprinkler heads.
- f. Trim plant material to prevent interference with the spray pattern.



2. **Monitor and adjust your irrigation runtimes (minutes).** Monthly, or even weekly, adjustments that match weather conditions provide the greatest potential for water savings. For current information about sprinkler runtimes, call the Turf-Time Hotline at (707) 543-3466 or on the web at srcity.org/turftime. Turf-Time is updated every Thursday morning.
3. **Irrigate in the early morning, pre-dawn hours,** when less water is lost to wind and evaporation. If you have a manual watering system, choose the least windy period of the morning to water. Evening watering is less desirable because fungus diseases have all night to attack moist foliage.

STEP 6: REVIEW OUTDOOR WATER USES continued

- 4. Avoid water waste and run-off.** Irrigate for short periods of time instead of one long irrigation event so water is able to soak into the soil. For example, apply 15 minutes in three 5-minute applications, separated by an hour each. Most irrigation controllers will allow these “multiple start times.”
- 5. Group plants according to their water needs.** Irrigating plants of different water needs on the same irrigation valve means some plants can receive the right amount of water while the other plants receive too much or too little water.
- 6. Convert overhead sprinkler systems to drip irrigation.** Drip irrigation slowly applies water right to roots of the plant material, minimizing water lost to runoff and overspray.
- 7. Check for breaks or leaks in the irrigation system.** Just like a car, an irrigation system needs regular “tune-ups.”
8. By request, the City of Santa Rosa will provide you with an on-site Water Conservation Check-up to help you become more efficient. Contact our Water Conservation Staff at (707) 543-3985 to schedule an appointment. Rebates for the removal of lawn or improvement of irrigation systems are available and require a **free** pre-inspection.

Complete the Outdoor Section on the Survey Form.

***Tip:** Prevent and report water waste. If you see water flowing from broken irrigation equipment or water running down the street gutter, call the Water Conservation Hotline (707) 543-3985 or online at srcity.org/wc.*

Water-Use Comparison

Water Appliance	Water Conserving	Non-Water Conserving	Potential Savings per Year (gallons)
Toilet - Gallons Per Flush (gpf)	1.28 to 1.6 gpf	3.5 to 7.0 gpf	5,250
Faucet Flow - Gallons Per Minute (gpm)	1.5 to 2.2 gpm	3.0 to 6 gpm	1,000
Showerhead Flow (gpm)	2.0 to 2.5 gpm	3.0 to 7.0 gpm	2,000
Clothes Washer - Gallons Per Load (gpl)	15 to 25 gpl	40 to 60 gpl	5,250

How much can you save?:

Water Appliance	# of Non-Water Conserving Devices		Potential Savings		Yearly Savings
Toilet		X	5,250	=	
Faucet		X	1,000	=	
Showerhead		X	2,000	=	
Clothes Washer		X	5,250	=	
Landscape	(enter ft ²)	X	2.5*	=	
			Total	=	

*This figure represents the average gallons per square foot that could be saved annually if landscape water use is reduced by 20% by implementing measures in Step 6. Depending on site specifics, additional savings could be achieved (up to 50%).

Complete the Potential Water Savings Section on the Survey Form.

Call the City of Santa Rosa Water Conservation Hotline at: (707) 543-3985 or check our website for information on current rebate programs: srcity.org/wc.



WATER SURVEY RESULTS



Date:	Water Account Number:	Number of Residents:
Name:	Telephone Number: ()	
Name of Apartment/Condominium Complex (if applicable):		
Site Address:	Email:	
<input type="checkbox"/> Check here if you would like to sign up for our water conservation e-news.		

Leak Detection	Yes	No	Comments:
Current meter read (seven digits):	<input type="text"/>	<input type="text"/>	<input type="text"/>
Did your meter indicate a leak?	<input type="text"/>	<input type="text"/>	
Did you find any indoor leaks?	<input type="text"/>	<input type="text"/>	If yes, where did you find the leak?
Did you find any outdoor leaks?	<input type="text"/>	<input type="text"/>	If yes, where did you find the leak?

Indoor Water Use			
Number of non-conserving toilets	<input type="text"/>	Number of water conserving toilets	<input type="text"/>
Number of non-conserving faucets	<input type="text"/>	Number of water conserving faucets	<input type="text"/>
Number of non-conserving showerheads	<input type="text"/>	Number of water conserving showerheads	<input type="text"/>
Do you have a top-loading clothes washer?	Y	N	Do you have an efficient front-loading clothes washer? Y N

**see previous page for conserving vs. non-conserving flow rates.*

Survey continues on the reverse side

Water Survey Results

Outdoor Water Use	Yes	No
Do you: Have an electric irrigation controller/timer?		
Water your landscape by turning on manual irrigation valves?		
Hand water your landscape?		
Have overhead spray heads irrigating your shrub area?		
Have a drip system?		
Use Turf-Time to program your controller?		
Have a landscaper who programs your irrigation controller?		
Want to remove any portion of your lawn?		

Potential Water Savings	Yearly Savings (gallons)
How much can you save?	

Go to our website (srcity.org/wc) and enter your water survey results or mail the completed survey to the address below. All completed surveys received will qualify for a drawing to receive a \$100 credit on your utility bill. If you have any questions, please call the water conservation Hotline at (707) 543-3985.

City of Santa Rosa
 Water Conservation Program
 69 Stony Circle
 Santa Rosa, CA 95401