

# BAWSCA Water Conservation 101



**Presented by:**

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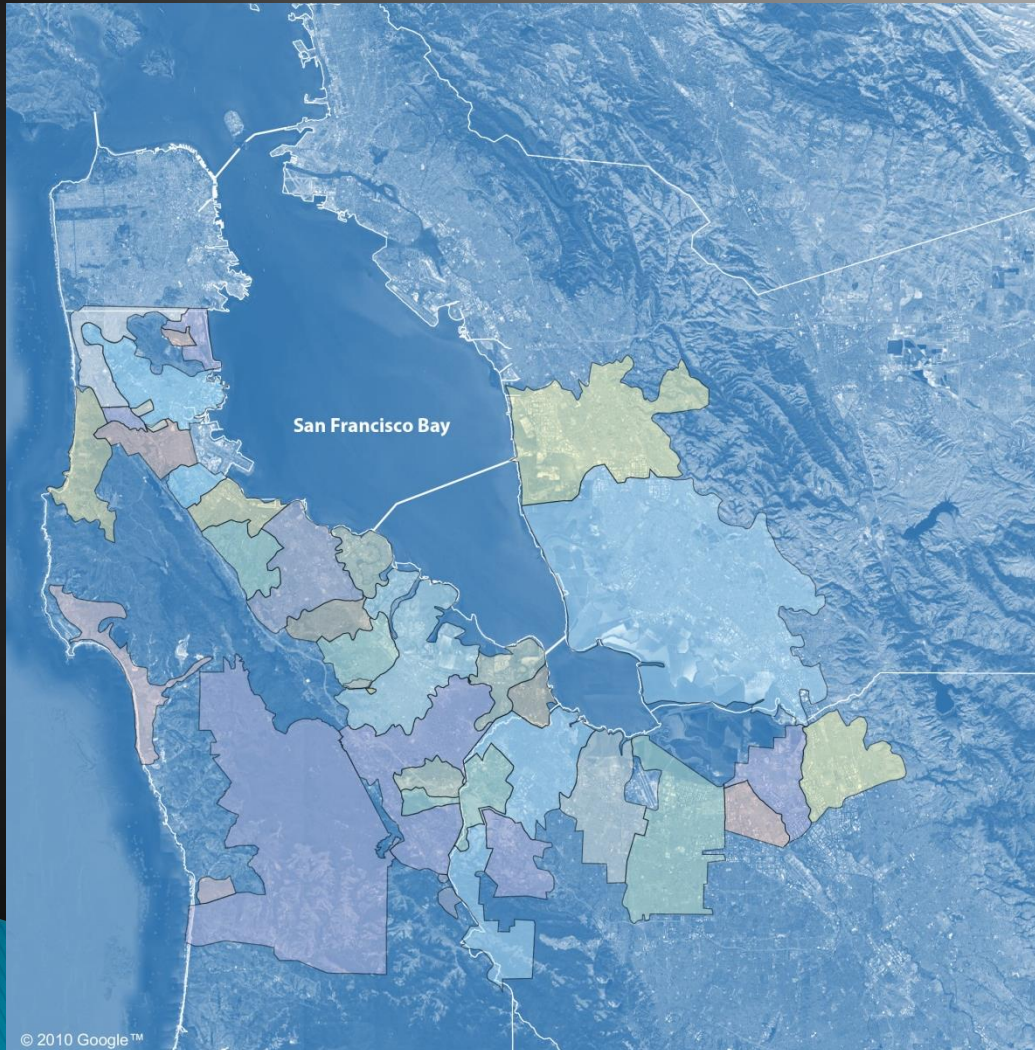
# Topics

- ▶ Introductions
- ▶ Water system overview
- ▶ Drought Update
  - Governor's order
  - Local actions
- ▶ Ways to Conserve
  - Current water use
  - Simple steps to save
  - Leak detection
- ▶ Rebate and Incentive Programs



# BAWSCA

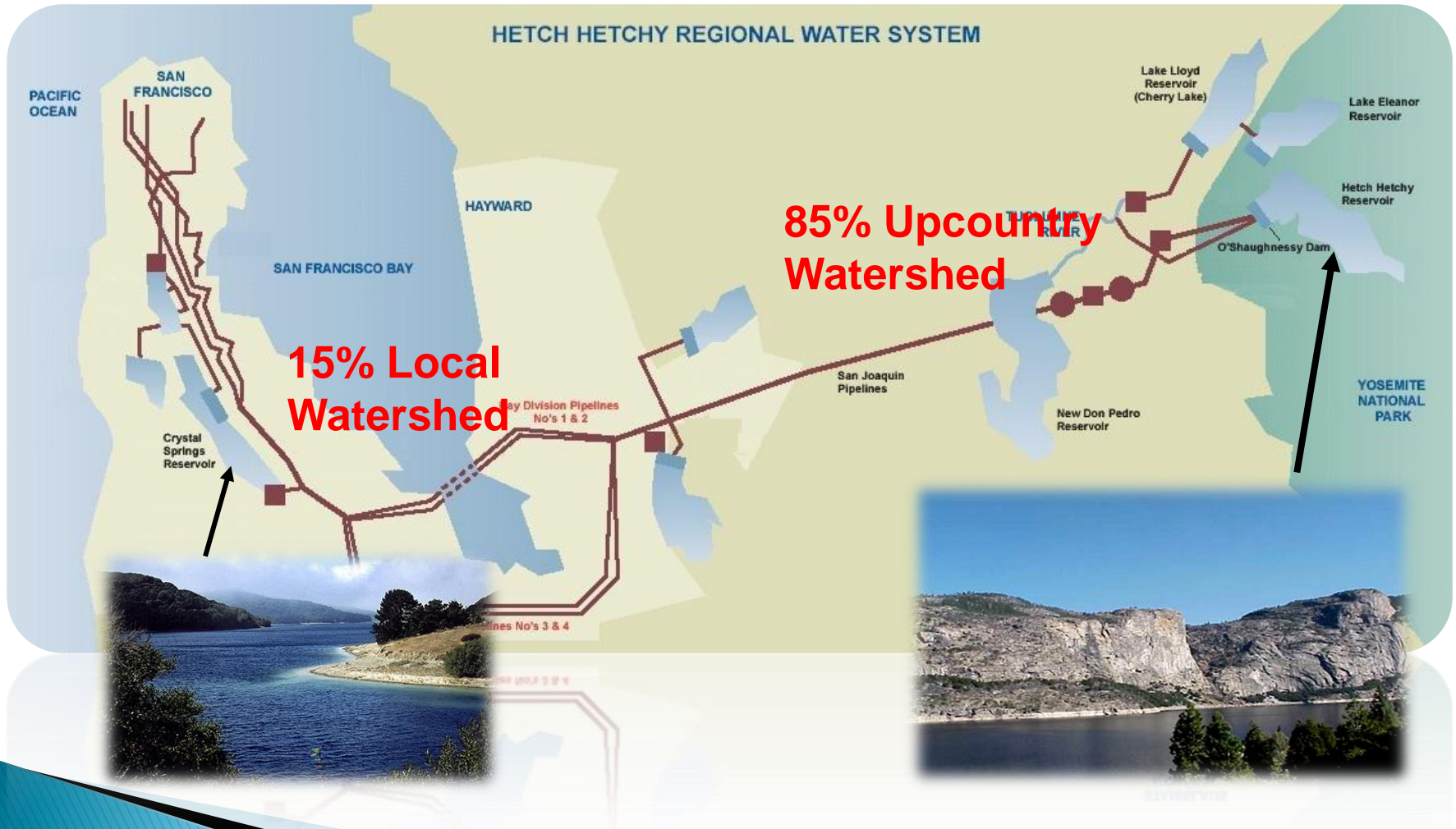
## *Bay Area Water Supply & Conservation Agency*



Special District  
representing the  
interests of

- ▶ 26 water suppliers in San Mateo, Santa Clara, and Alameda Counties
- ▶ 1.7 million residents and over 39,000 businesses
- ▶ All rely on the San Francisco Regional Water System

# BAWSCA Agencies Served by the SF Regional Water System



# Member Agencies



## Legend

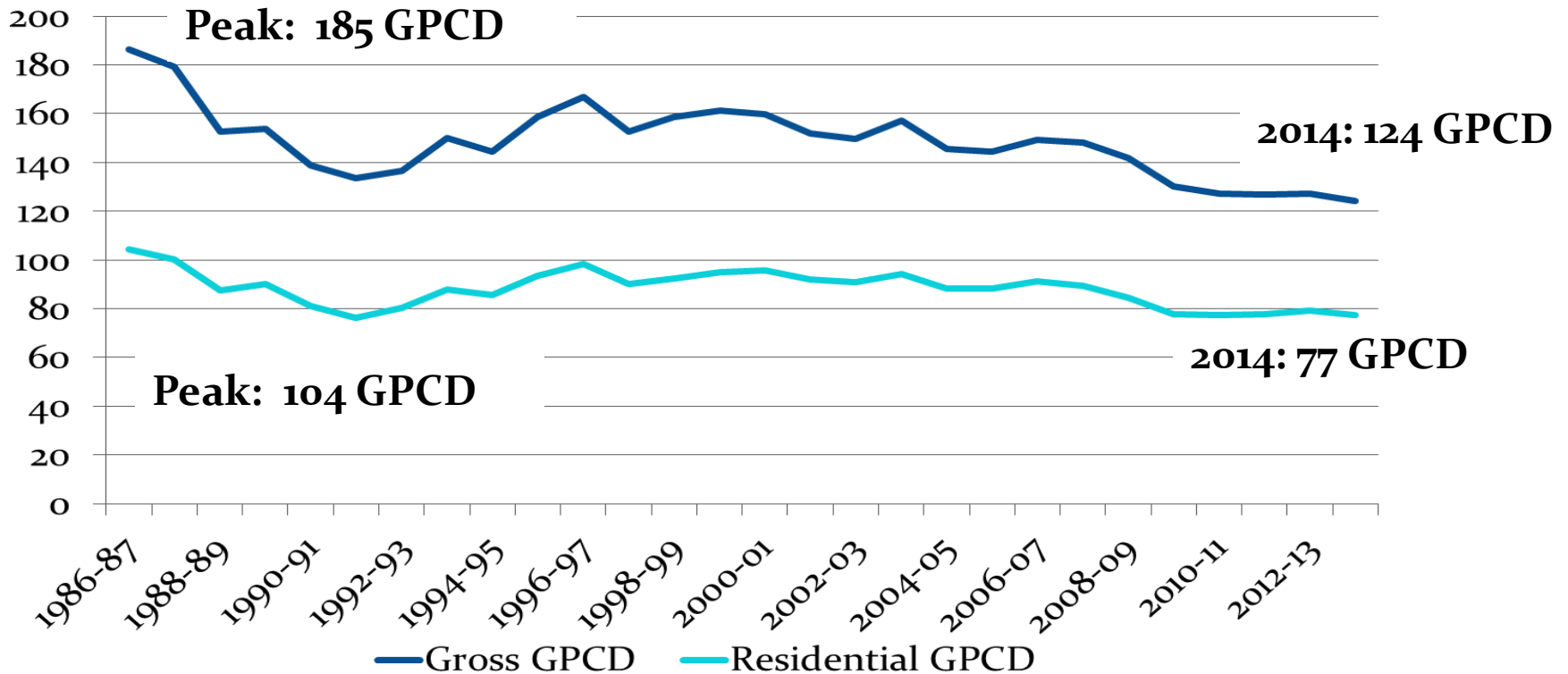
- 1 Alameda County Water District
- 2 City of Brisbane
- 3 City of Burlingame
- 4a CWS – Bear Gulch
- 4b CWS – Mid-Peninsula
- 4c CWS – South San Francisco
- 5 Coastside County Water District
- 6 City of Daly City
- 7 City of East Palo Alto
- 8 Estero Municipal Improvement District
- 9 Guadalupe Valley MID
- 10 City of Hayward
- 11 Town of Hillsborough
- 12 City of Menlo Park
- 13 Mid-Peninsula Water District
- 14 City of Millbrae
- 15 City of Milpitas
- 16 City of Mountain View
- 17 North Coast County Water District
- 18 City of Palo Alto
- 19 Purissima Hills Water District
- 20 City of Redwood City
- 21 City of San Bruno
- 22 San Jose Municipal Water System
- 23 City of Santa Clara
- 24 Stanford University
- 25 City of Sunnyvale
- 26 Westborough Water District

# Water Sources in Mountain View

- ▶ 87% from SFPUC
- ▶ 10% from SCVWD
- ▶ 3% from groundwater pumping

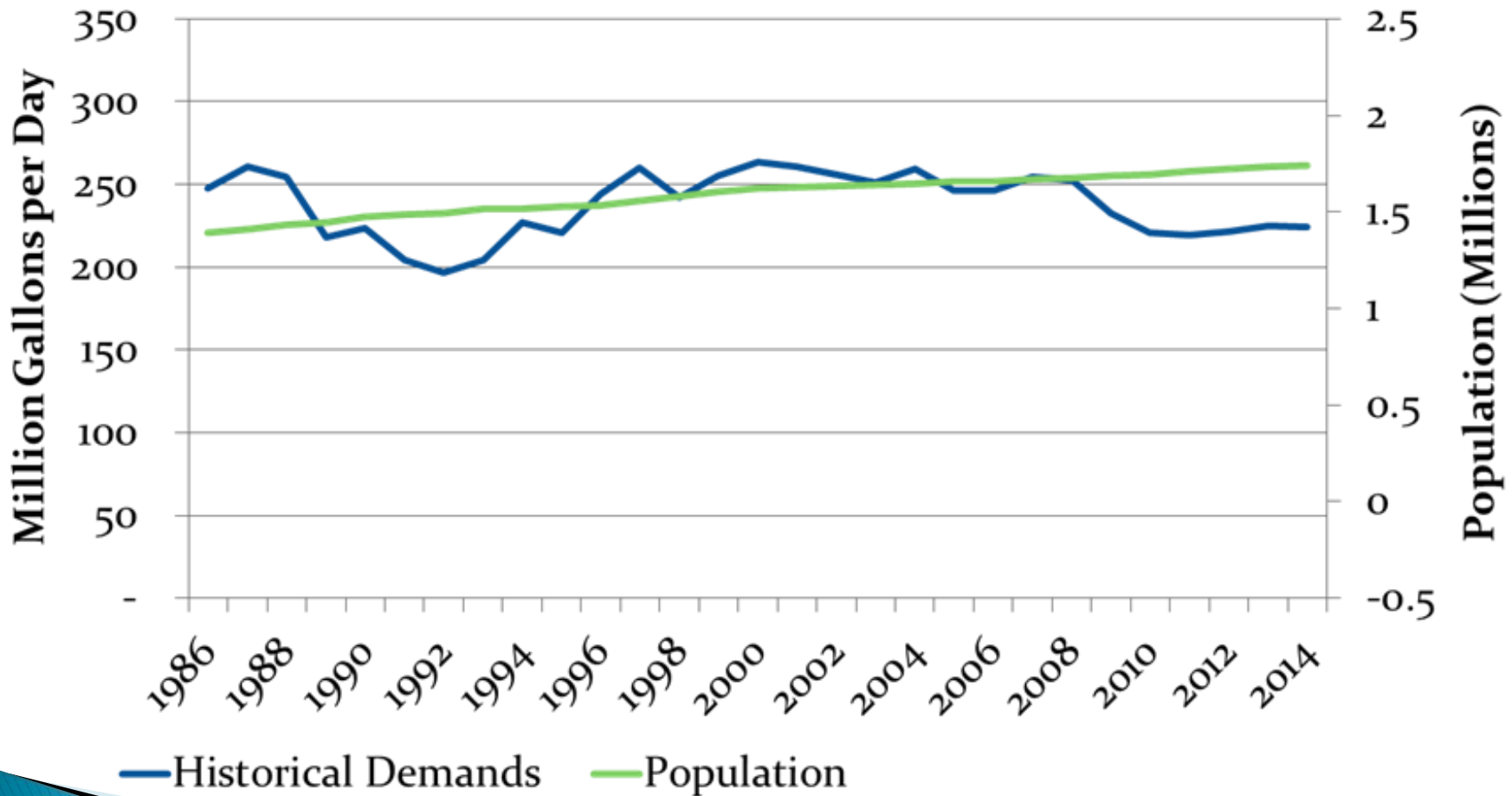


# Per Person Water Use in BAWSCA Service Area Decreasing



Mountain View GPCD = 63.4 for May 2015

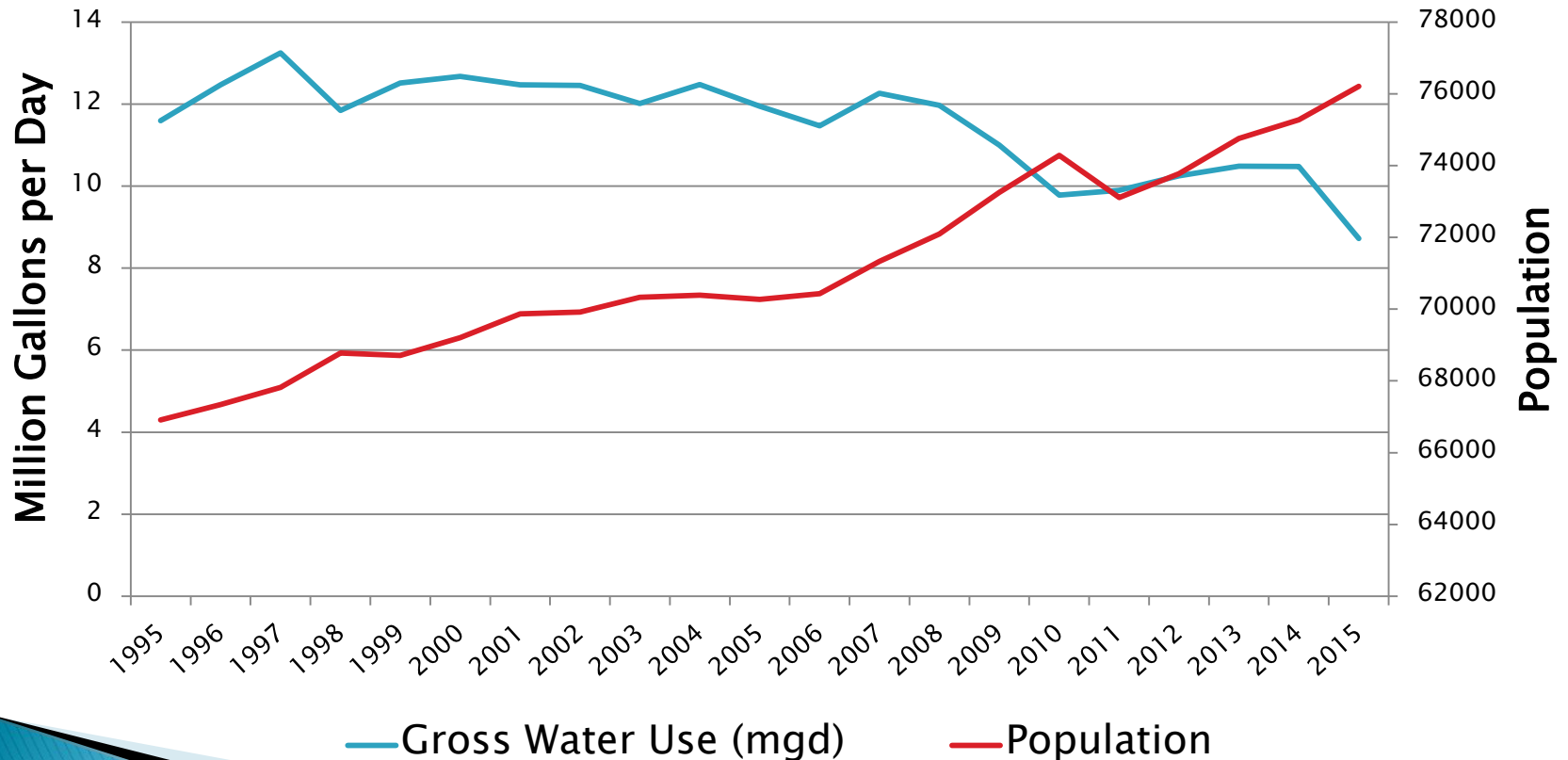
# 10% Less Water Used Today in Service Area Despite 25% More People





# Mountain View's population has increased by 14% since 1995, while water use has reduced by 25% for 2015

## Mountain View Population vs. Water Use



# Mountain View Total Reductions

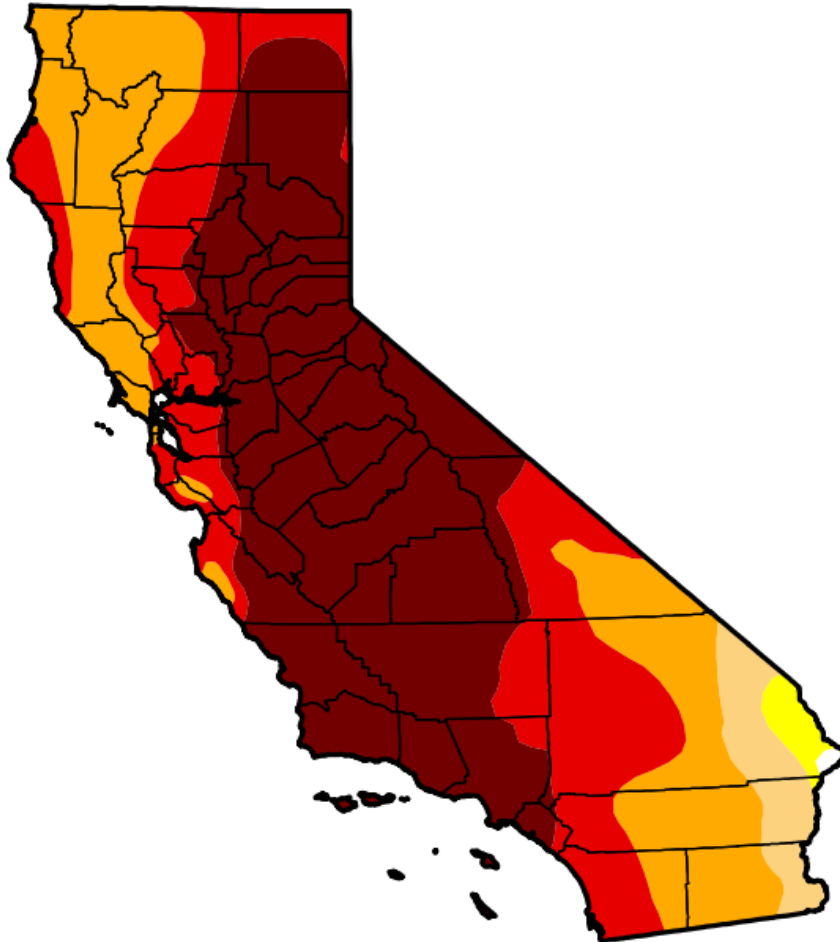
- ▶ January–June 2015 = 24% savings from 2013
- ▶ 461 million gal. of water saved during 2015
- ▶ 992 million gal. of water saved since drought declaration in January 2014



# Drought Update

## U.S. Drought Monitor California

**June 30, 2015**  
(Released Thursday, Jul. 2, 2015)  
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	0.14	99.86	98.71	94.59	71.08	46.73
<b>Last Week</b> <i>6/23/2015</i>	0.14	99.86	98.71	94.59	71.08	46.73
<b>3 Months Ago</b> <i>3/31/2015</i>	0.15	99.85	98.11	93.44	66.60	41.41
<b>Start of Calendar Year</b> <i>12/30/2014</i>	0.00	100.00	98.12	94.34	77.94	32.21
<b>Start of Water Year</b> <i>9/30/2014</i>	0.00	100.00	100.00	95.04	81.92	58.41
<b>One Year Ago</b> <i>7/1/2014</i>	0.00	100.00	100.00	100.00	78.97	36.46

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

*The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.*

**Author:**  
*Brian Fuchs*  
National Drought Mitigation Center



# California drought: State water board passes first mandatory urban water limits in state history

By Paul Rogers | [progers@mercurynews.com](mailto:progers@mercurynews.com)

POSTED: 05/05/2015 10:29:52 AM PDT | UPDATED: ABOUT 15 HOURS AGO

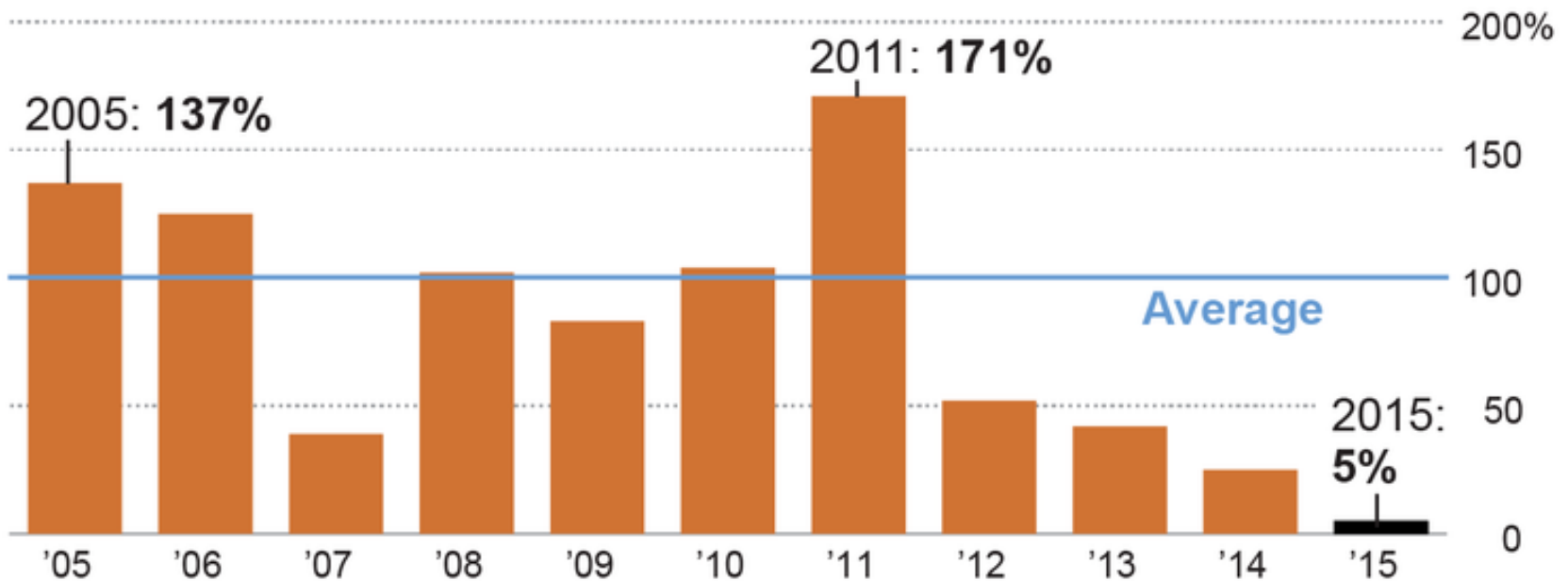
28 COMMENTS



# A Primary Driver for Governor's Action

## California's thin snowpack

Readings taken at about 100 stations Wednesday showed the water content of the Sierra Nevada snowpack was only about 5% of the average for April 1.



Source: California Department of Water Resources

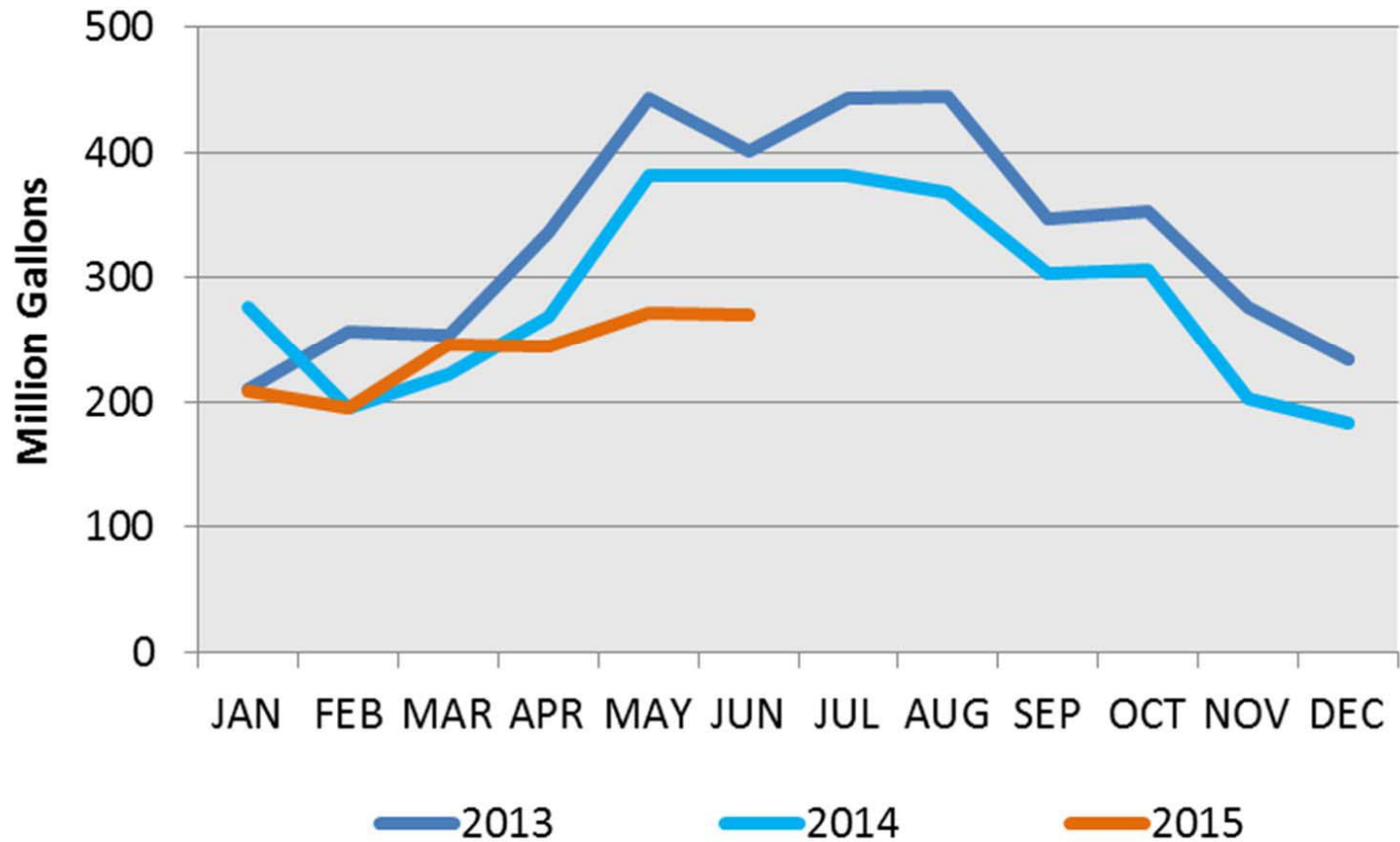
@latimesgraphics

# Overall 25% Statewide Reduction Target, but Local Targets Vary

Tier	Gal. Per Capita Day (GPCD)	Mandatory Reduction
1	Upon approval by SWRCB	4%
2	0-64.99	8%
3	65-79.99	12%
<b>4</b>	<b>80-94.99</b>	<b>16%</b>
5	95-109.99	20%
6	110-129.99	24%
7	130-169.99	28%
8	170-214.99	32%
9	215+	36%

Mountain View GPCD = 63.4 for May 2015

## City of Mountain View Water Use



# Additional Restrictions in Mountain View

## Do Not:

- ▶ Allow water to run off into paved areas (gutters, sidewalks, streets)
- ▶ Wash paved surfaces (except by bucket or for health and safety reasons)
- ▶ Allow broken equipment to waste water
- ▶ Fill fountains (except to sustain aquatic life)





# Additional Restrictions in Mountain View

## Do:

- ▶ Fix leaks within five days of noticing them
- ▶ Install an automatic shut-off valve on your hose
- ▶ Operate your irrigation system according to the rules\*
  - Days: Limit watering to 2-days per week (or less)
    - § Odd addresses: Monday & Thursday
    - § Even addresses: Tuesday & Friday
  - Duration: Limit watering to 15 minutes per day (per station) (we recommend the “cycle and soak” method to prevent runoff)
  - Time: Limit watering to after 5:00 p.m. and before 9:00 a.m.
- ▶ Use a bucket when washing your car at home
- ▶ Restaurants: Install a high-efficiency dishwasher spray valve
- ▶ Restaurants: Ask before serving water
- ▶ Hotels: Ask before laundering sheets and towels

# Mountain View Restrictions Exceptions

- ▶ **Hand watering (with a shutoff valve)** – exempt from day, duration and time restrictions
- ▶ **Drip irrigation** – exempt from duration and time restrictions
- ▶ **High-efficiency sprinkler nozzles** – exempt from duration restriction
- ▶ **System testing and repair** – exempt from day, duration and time restrictions



# WaterInsight Program

- ▶ Home water reports that help you manage your water usage
- ▶ Compare your usage to similar households
- ▶ Get personalized ways to save water

<https://mountainview.waterinsight.com/>



650-903-6216    conservewater@mountainview.gov



## YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: [REDACTED]  
ACCOUNT NUMBER: [REDACTED]

GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:  
[mountainview.waterinsight.com](http://mountainview.waterinsight.com)

<RecipientID>=mountainview-1</RecipientID>

### Your first Home Water Report!

- Hi, [REDACTED] Welcome to your new report.
- Learn how much water you use, in gallons per day (1 CCF = 748 gallons)
  - See how that use compares to the use of similar households
  - Identify ways to use water more efficiently

### Surprised by your WaterScore?

Your WaterScore compares your use to others in Mountain View who also have **2 occupants** and a **similar yard size**. Is your household different? Log on to tune your profile and see adjusted comparisons.

[mountainview.waterinsight.com](http://mountainview.waterinsight.com)

### Water-saving actions just for you

Selected based on your household characteristics, yard size, and historical water use.

[Log on to update us!](#)

Potential annual savings if you:



### Log On

Get your full list of recommended actions, and see:

- Where you're using the most
- Your progress over time
- Efficient products for purchase

[mountainview.waterinsight.com](http://mountainview.waterinsight.com)

Registration Code: [REDACTED]  
Zip Code: [REDACTED]

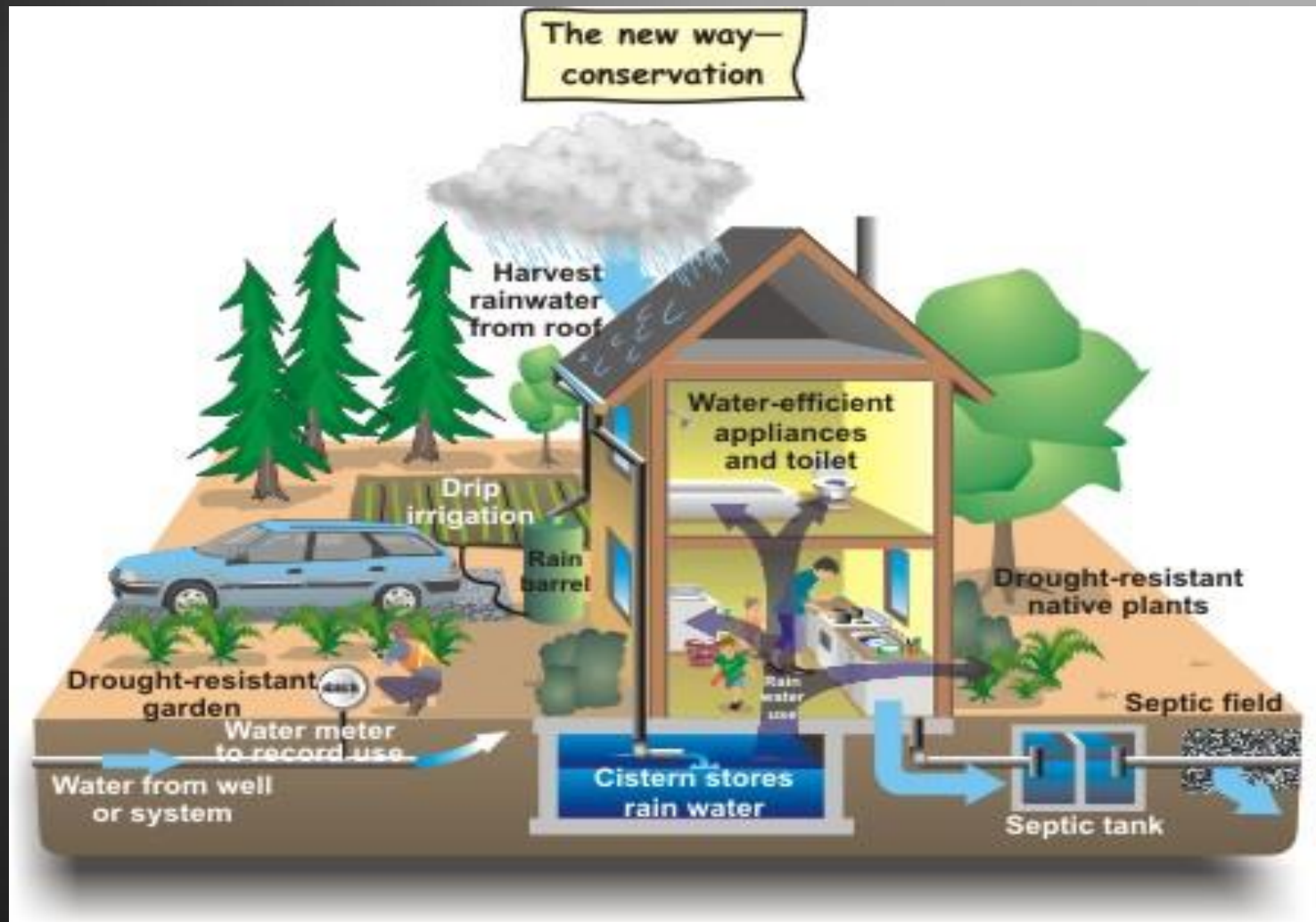
A free service offered by your water utility and powered by WaterSmart Software®

# What Can Be Done to Conserve?

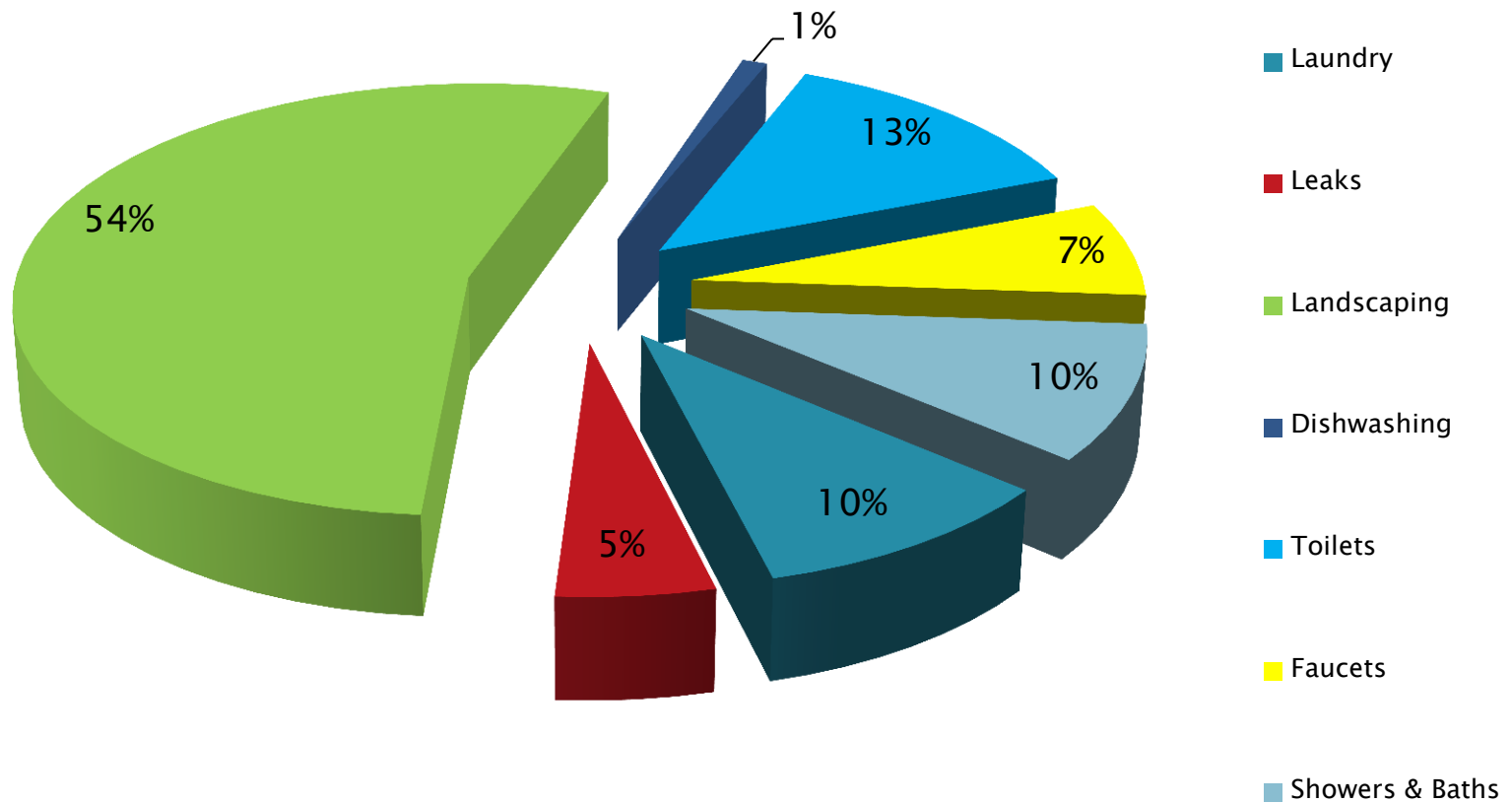
- ▶ BAWSCA and its member agencies offer a variety of programs to assist customers in conserving
  - Rebates
  - Education
  - Free stuff



# Ways To Conserve

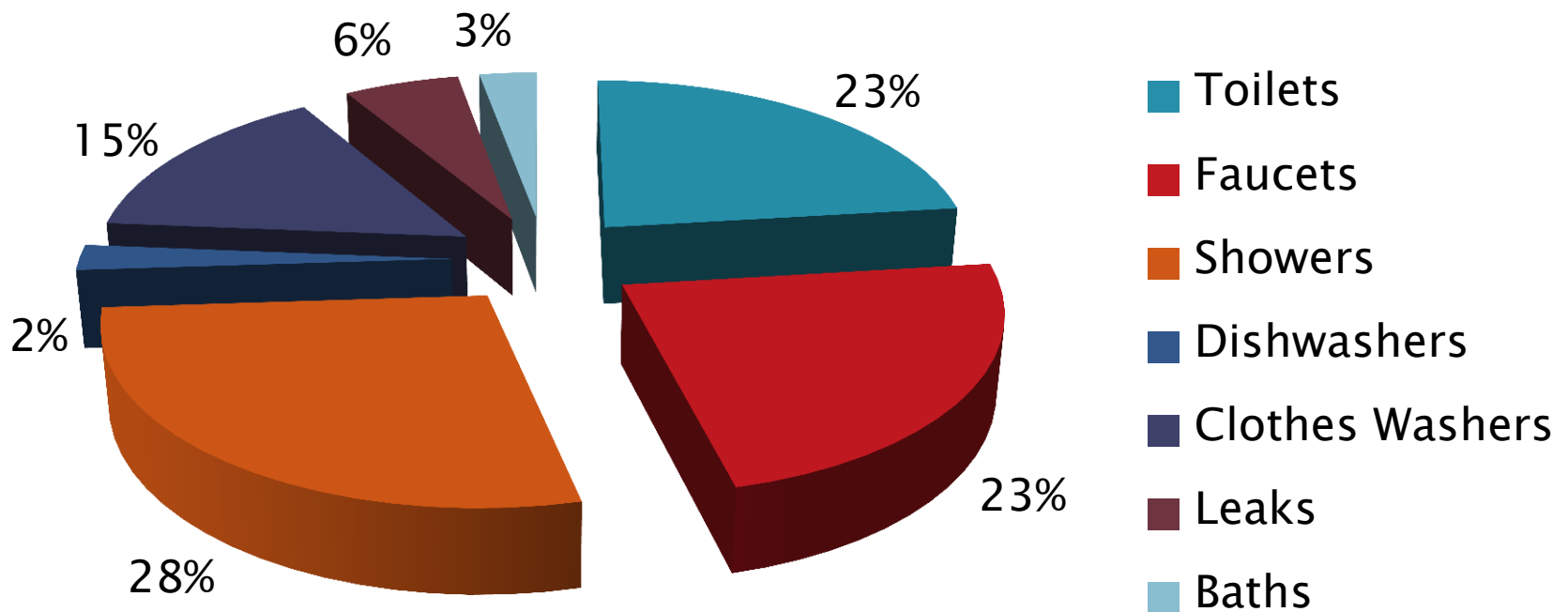


# Biggest Water Users for Single Family Residences in the USA



# Biggest Water Users Inside the Home

## Cal Water – Mid Peninsula Indoor Water Uses



Source: 2014 BAWSCA/Cal Water – Mid-Peninsula DSS Model

# Low Flow Shower Heads

***Inefficient:*** 5–8 gpm

***Standard:*** 2.0 gpm

***Low Flow:*** 1.5 gpm

## Other Flow Options:

- 1) Flow Control Inserts
- 2) Shower Shut-Off Control Valves



## How to Check the flow:

- ▶ Hold a gallon container under shower head.
- ▶ Clock the time it takes to fill
- ▶ If it fills in 15 seconds, the flow rate is 4 gpm



# Water-Efficient Faucets

*Standard:* 2.2 gpm

*Water-Efficient:*

Kitchen: 2.0 gpm or less

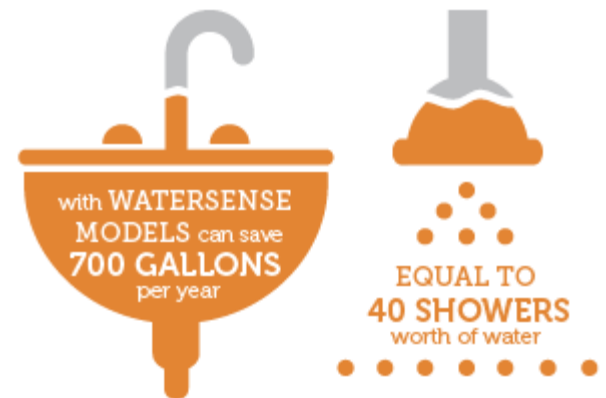
Bathroom: 1.5 gpm or less

Public bathroom: 0.5 gpm or less



*Mountain View provides free faucet aerators upon request*

REPLACING FAUCETS AND AERATORS



# How To Check for Toilet Leaks

- ▶ [https://www.youtube.com/watch?v=xj2rW0\\_titE](https://www.youtube.com/watch?v=xj2rW0_titE)

*Simple Steps to Fix a Leaky Toilet*

- 1** Purchase a fill valve and flapper replacement kit.
- 2** Turn off the water supply valve that is located behind the toilet, near, or on the wall, and then give the toilet a flush.
- 3** Open the lid of the top-back portion of the toilet.
- 4** Remove the old fill valve and flapper and replace with the new ones. Put the top lid back on when complete.

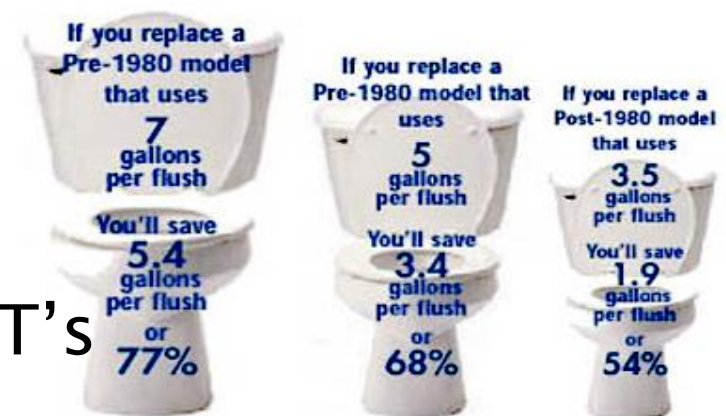


The diagram illustrates the four steps for fixing a leaky toilet. It shows a toilet with four numbered callouts (1-4) pointing to specific components. Callout 1 points to the water supply valve, callout 2 points to the flapper valve, callout 3 points to the toilet tank lid, and callout 4 points to the replacement parts. Each callout is accompanied by a circular icon: 1. Wrench and pipe, 2. Flapper valve, 3. Toilet tank lid, and 4. Replacement parts.

# What Is An HET?



- ▶ HET's are modern water-efficient toilets that are designed to use 1.28 GPF or less:
  - Use less water
  - Perform well
  - Remove waste efficiently
- Save up to 13,000 gallons per year if you replace a toilet that uses 3.5 GPF
- Water Agency rebates of up to \$125 available for Premium HET's



# What is a MaP Premium HET?



- ▶ MaP Premium Residential Models Must:
  - Flush with no more than 1.06 gallons
    - Saves almost 20% more water compared to the current WaterSense requirement
  - Demonstrate a MaP rating of at least 600 grams of solid waste removed in a single flush
  - Be certified to U.S. EPA WaterSense specifications
- ▶ 164 qualified toilet fixtures from 30 different brands
- ▶ Water agency rebates of up to \$125 available

<http://www.map-testing.com/>



# How To Check Your Toilet Flush Volume



- ▶ <https://www.youtube.com/watch?v=s2CKJwfeDI0>

# Simple Steps to Save Water Outdoors

- ▶ Use a broom to clean sidewalks and pavement instead of a hose.
- ▶ Hose nozzle with automatic shut-off



**There's a Drought On. Turn the Water Off.**

Californians Don't Waste.

**BAWSCA**  
Bay Area Water Supply & Conservation Agency



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# More Simple Steps to Save Water Outdoors

- ▶ Water lawns and plants only at night or early morning before dawn to reduce evaporation
- ▶ Test soil moisture before watering- if the top 2 inches feel damp, you do not need to water.
- ▶ Follow Mountain View's watering days requirement
  - 2 days per week maximum



[bawasca.org/DROUGHT](http://bawasca.org/DROUGHT)



# TAKE TURNS

Know when to irrigate. It's a DROUGHT.

Odd # address: Monday & Thursday | Even # address: Tuesday & Friday





# Drought Survival: Lawn Care

*Here are a few tips to help you reduce your water use while managing your landscaping during the drought.*

## Watering a Lawn During a Drought:

- Water no more than 2 days/week
- Use the “cycle and soak” method
- Check your sprinkler heads regularly
- Install high efficiency rotating nozzles
- Water between midnight & 6am
- Watch your lawn rather than a calendar
- Hand-water small dry spots
- Apply less water to shaded areas



## Maintain a Lawn During a Drought:

- Mow lawns to 2.5 - 3 inches high
- Use a lawn aerator
- Reduce fertilization
- Minimize foot traffic
- Leave clippings on the lawn

# How to Check for Leaks

<http://www.cuwcc.org/Resources/Video-Library/emodule/2607/egallery/9>

## Leak Tests

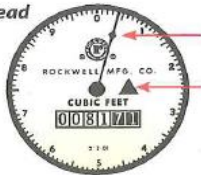
### Test 1: the "Pin" Test

You will use the meter to check for leaks in your pipes and appliances. Allow at least 30 minutes for the test.

**Step 1** Turn off all water-using fixtures and appliances, both indoors and outdoors.

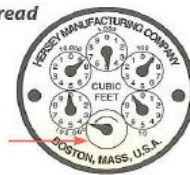
**Step 2** Determine your meter type. There are two types: straight-read and round-read meters.

**Straight-read meter**

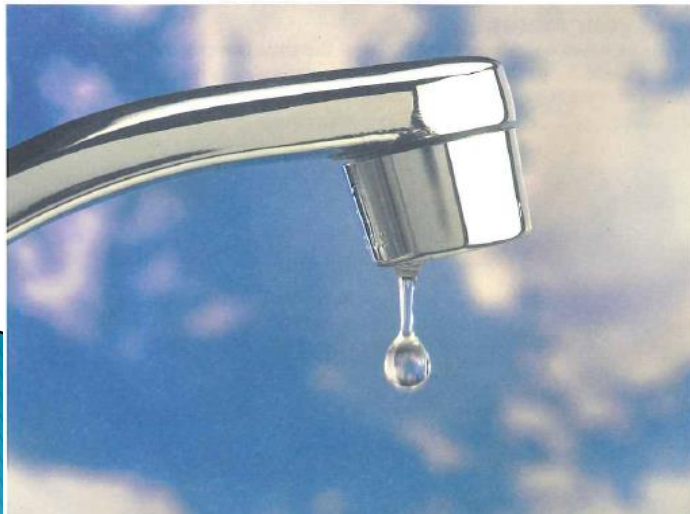


The large hand on the dial or a small triangle is used to test for leaks.

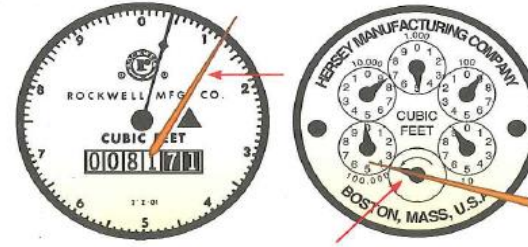
**Round-read meter**



The "one foot" hand, or blank hand, is used to test for leaks.



**Step 3** Place a toothpick or pin on the face of the dial so that it lines up exactly with the hand or the edge of the triangle.

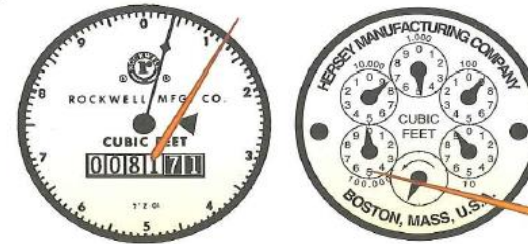


**Step 4** Wait for 30 minutes. Then, before turning on any faucets or hoses, check the dial of the meter to see if the hand has moved.

**If the hand moved:**

There is most likely a leak somewhere on the "house" side of the meter, either in a toilet, a faucet, or a pipe.

Write the results on the worksheet and go to Test 2, where you will try to locate the leak.



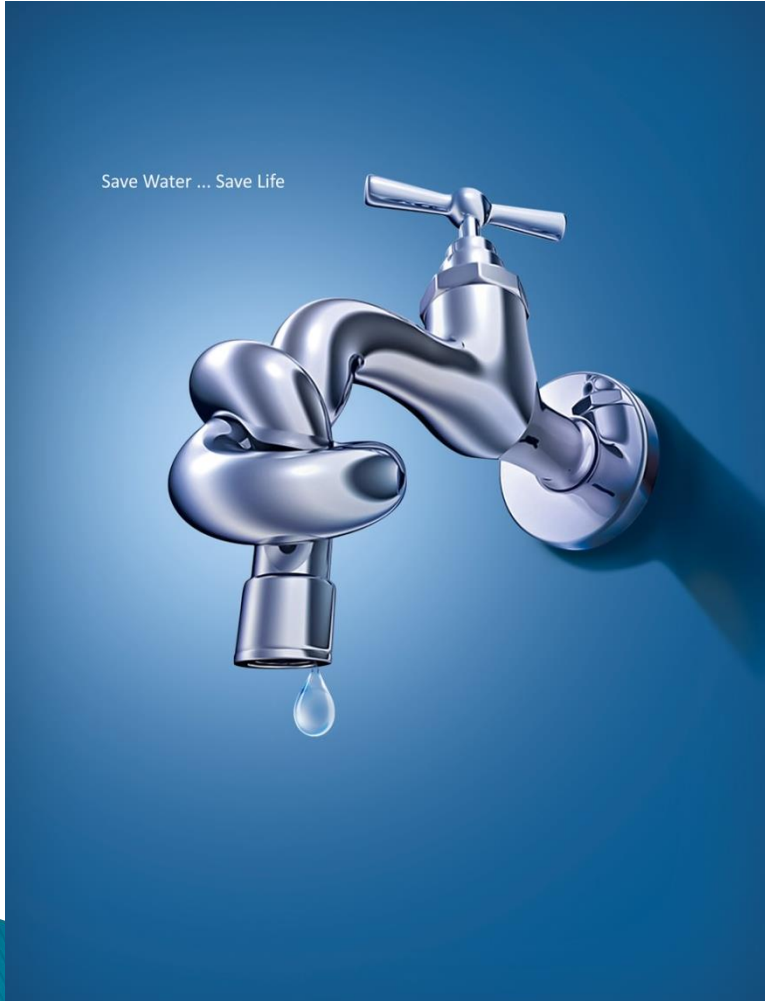
**If the hand did not move:**

There is no leak. Write the result on the worksheet and go to Test 3.



# What Else?

## How do you conserve at home?



# Water Efficient Landscape Classes

*BAWSCA offers Free Landscape Education Classes in the Spring and Fall of each year.*

Classes are designed to introduce homeowners, commercial property managers, landscape service providers, and others to concepts of water efficient and sustainable landscaping.



Registration is Required  
Go to [www.bawsca.org](http://www.bawsca.org) to register!

## BAWSCA's FREE classroom lectures and hands-on workshops focus on:

- Sustainable Landscaping
  - Understanding Water-Use Efficiency in the Landscape
  - Use of CA Native and Drought Tolerant Plants
  - Creating Healthy Soil
- Alternatives to Lawn
- Habitat Gardening
- Edible Landscaping
- Water-Efficient Irrigation Practices
- Parent/Child Gardening Activities

## BAWSCA's Hands-on Workshops Provide Lasting Value



Photo from City of Redwood City Hands-on Workshop, 2013

<http://bawsca.org/classes/>

# Mountain View Landscape Class Schedule

Date & Time	Class Title
Wednesday, September 2 <sup>nd</sup> 6:00pm–8:30pm	How-to-Convert Spray Irrigation to Drip
Thursday, September 24 <sup>th</sup> 6:00pm–8:30pm	Landscape Designs and Hydrozones
Wednesday, October 14 <sup>th</sup> 6:00pm–8:30pm	Water-Wise Color Palette

All classes are held at the Mountain View Library – 585 Franklin St.  
Visit <http://bawasca.org/classes/> for more class information and registration



[www.BayAreaGardening.org](http://www.BayAreaGardening.org)  
[www.BayAreaGardening.org](http://www.BayAreaGardening.org)

# Home Water Use Calculator

How much water do I use? How do I compare? How can I Conserve?

**How much water** do you use?

Let's Get Started!

Click an area on the home to input data to learn how much water you use and how you can conserve water there. Answer for yourself only and assume you are in your home for a 24-hour cycle.

Home Water Use Calculator



<http://www.home-water-works.org/calculator>

# Water Conservation Benefits Everyone

- ▶ Increased water system reliability
- ▶ Solution to meet planned needs of community
- ▶ Reduced water and energy costs
- ▶ Promotes efficient use of resources
- ▶ Benefits the environment & community sustainability

**If Everyone Saves A Little, We Can All Save A Lot**

Conserve





# Recommendations & Rebate Opportunities



- High Efficiency Toilet Rebate
- High Efficiency Clothes Washer Rebate
- Landscape Rebate Program
- Graywater – Laundry to Landscape Rebate Program
- Water-Wise House Call

# High Efficiency Toilet Rebate

*The SCVWD is offering a rebate of up to \$125 for installing Premium model HETs – operate at 1.06 GPF or less*



**Shop for the EPA  
WaterSense Logo:**



# HET Eligibility

- ▶ HET installation and rebate application must be completed within 90 days of purchase date
- ▶ Original receipts must be included
- ▶ HET must be installed within the Santa Clara County
- ▶ Installation location must not have received a prior toilet rebate nor were received through a direct installation, distribution, voucher, or other District funded toilet program

# Requirements

- ▶ Rebates may take 12 weeks to process from application submittal date (issued as a check)
- ▶ Limit to *three* rebates per household
- ▶ All sites are subject to post-installation inspections
- ▶ If applicant is not property owner, applicant must submit property owner consent

# Clothes Washer Rebate

*Through a partnership with PG&E and SCVWD, a combined rebate is available for purchasing and installing qualifying high efficiency clothes washers*




**High-Efficiency Clothes Washer Rebate**

# How To Apply

- ▶ Read the Terms and Conditions
  - PG&E's rebate of \$50 is added to your participating water agency's rebate of \$100
- ▶ Verify that the clothes washer you are going to install qualifies for the rebate
  - **\$150 Rebate:** Clothes washer must be on Energy Star Most Efficient 2015 Models

**1 Consider** what features are important to you.


Look for the ENERGY STAR® when you are shopping.



Choose the right size to suit your home's needs.


**2 Compare** the energy efficiency of models you like.

Use the yellow EnergyGuide label to determine each model's energy use, and estimate annual operating costs.



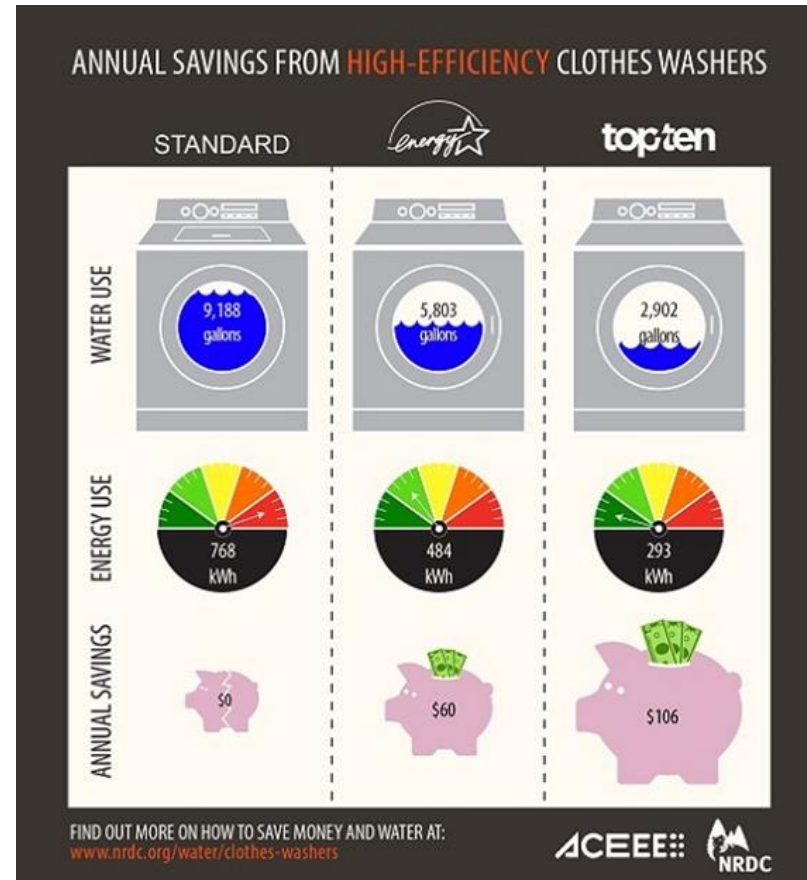
**3 Check out** TopTenUSA.org

TopTen USA provides an independent ranking of the top ten most efficient products available.



# How To Apply

- ▶ Purchase and install
  - Ensure product(s) are installed and operational before submitting your application
- ▶ Complete application
  - Apply by mail or online at [waterenergysavings.com](http://waterenergysavings.com)
  - *You will need to refer to your PG&E bill and proof of purchase*
  - Include copy of proof of purchase, keep originals



# How To Apply

- ▶ Mail your completed application as soon as possible.
  - Rebates are limited and awarded on a first-come, first-serve basis
- ▶ All rebate applications must be postmarked or received online **NO LATER** than 60 days after purchase date.
  - Limit one water agency rebate per five-year period
- ▶ Rebate checks may take 6 to 8 weeks to process





# Landscape Rebate Program

*Get paid to transform your landscaping!*

*SCVWD is offering rebates to approved customers that convert water-thirsty lawns or pools to water efficient landscaping, or for upgrading to high efficiency irrigation equipment*



pre-conversion



post-conversion

Imagine...

Create...

Enjoy...



# How Do You Qualify?

- ▶ An applicant must be a resident within Santa Clara County
- ▶ A minimum of **75 square feet** of lawn must be converted, or \$75 worth of irrigation upgrades
- ▶ The pre-conversion landscape must be irrigated lawn (brown lawns DO qualify)
- ▶ After pre-qualification, an application must be submitted and approved before work begins.
- ▶ Rebates cannot be issued retroactively



# How Do You Qualify?



THE  
LAWN  
GOOD  
BYE

- ▶ Pre and Post Conversion inspections are required
- ▶ If applicant is not the property owner, written permission from property owner is required
- ▶ A proposed site plan must be submitted prior to the start of the project

# Rebate Amounts – Equipment

- ▶ Up to \$5 for upgrading to qualifying high efficiency nozzles
- ▶ Up to \$20 for upgrading to spray bodies with pressure regulation and/or check valve
- ▶ Up to \$300 for upgrading to a qualifying weather-based irrigation controller with a rain sensor



# Rebate Amounts – Conversion

- \$2 per square foot for qualifying conversion areas (until December 31<sup>st</sup>, 2015)



- \$50,000 cap per site
- First come, first serve basis
- Receipts are not required, based solely on square footage converted
- Rebate may take up to 8 weeks to process

# Project Requirements



- ▶ The converted area must contain at least 50% low water use plants
  - Choose from SCVWD approved plant list
- ▶ Permeable hardscape includes: pavers, bricks, flagstone set in sand, gravel, or decomposed granite

<http://www.valleywater.org/Programs/LandscapeRebateProgram.aspx>

# Project Requirements

- ▶ Existing irrigation system within converted area must be capped in place, converted to drip irrigation, or removed
- ▶ All exposed soil surfaces must have at least a 3 inch layer of mulch



**Note:** SCVWD reserves the right to deny a rebate to any applicant that does not meet the program requirements

# Non-Qualifying Projects

- ▶ Impermeable surfaces such as concrete, bricks, or flagstone mortared into place
- ▶ Non-biodegradable weed-block material
- ▶ Overhead spray / sprinkler systems
- ▶ Artificial turf installations
- ▶ High water use plants
- ▶ Trees





# Artificial Turf Facts

*While artificial turf requires less water than a natural turf lawn, there are healthier and more ecologically sound alternatives that we would like to promote.*

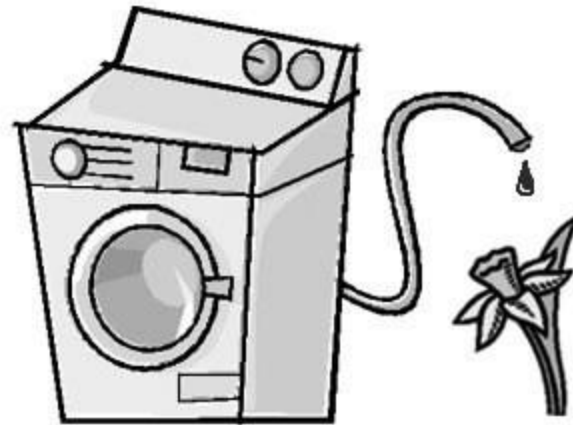
- Artificial Turf Does Not:
  - Increase biodiversity
  - Provide habitat
  - Foster healthy soils
  - Sequester Carbon or produce oxygen

- ▶ Artificial Turf Environmental Concerns:
  - Runoff contains pollutants like heavy metals and chemicals
  - Short life-span: 10–20 years and eventually end up in landfills
  - Water is needed to clean and cool turf



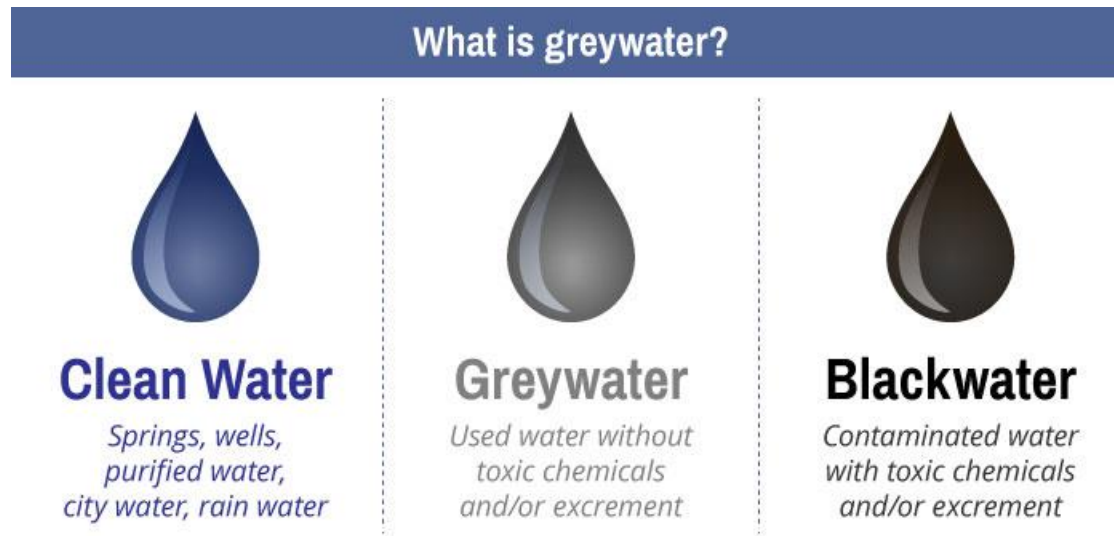
# Graywater Rebate Program

- ▶ Use the water from your washing machine to irrigate your landscape
- ▶ Receive a \$200 rebate for installing an approved laundry to landscape graywater system



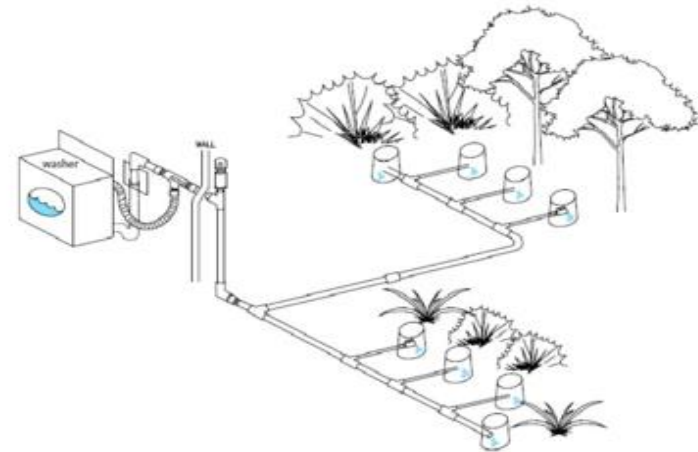
# What is Graywater?

- ▶ Graywater is water that comes from your showers, bath tubs, washing machines, and bathroom sinks
- ▶ Graywater is safe and clean enough to water plants



# Program Requirements

- ▶ Must pre-qualify by answering a series of site assessment questions
- ▶ Agree to pre and post-inspection
- ▶ Submit a plan for approval
- ▶ Adhere to state and local regulations, including Chapter 16 of the CA Plumbing Code



# Additional Requirements

- ▶ Must use subsurface irrigation (no overhead spray used for lawns)
- ▶ The water must be contained and used on site without runoff into the streets or gutter
- ▶ The water cannot pool or come in contact with humans or animals
- ▶ Additional requirements can be found at <http://www.valleywater.org/GraywaterRebate.aspx>



# Water Wise House Call

- ▶ Free water use survey offered by the SCVWD
- ▶ Learn where you can use water more efficiently in your home
- ▶ Have your toilet flappers, faucet aerators, and showerheads replaced if needed
- ▶ Pre-qualify for rebates
  
- ▶ To schedule, call 1(800)-548-1882

Santa Clara Valley  
Water District<sup>SM</sup>



Visit [www.conservewater.mountainview.gov](http://www.conservewater.mountainview.gov) for drought updates, rebates, and other helpful information

Additional helpful links:

[www.BAWSCA.org](http://www.BAWSCA.org)

[www.valleywater.org](http://www.valleywater.org)



**TAKE TURNS**

Know when to irrigate. It's a DROUGHT.

Odd # address: Monday & Thursday | Even # address: Tuesday & Friday

**BAWSCA**  
Bay Area Water Supply & Conservation Agency

 Hetch Hetchy  
Regional Water System  
Service of the San Francisco Public Utilities Commission

[bawsca.org/DROUGHT](http://bawsca.org/DROUGHT)