



# Non-Price Approaches to Conservation

Glenn Barnes

Environmental Finance Center

The University of North Carolina at Chapel Hill

919-962-2789

[glennbarnes@sog.unc.edu](mailto:glennbarnes@sog.unc.edu)

# Two Approaches to Conservation



Pricing signals  
through your rates

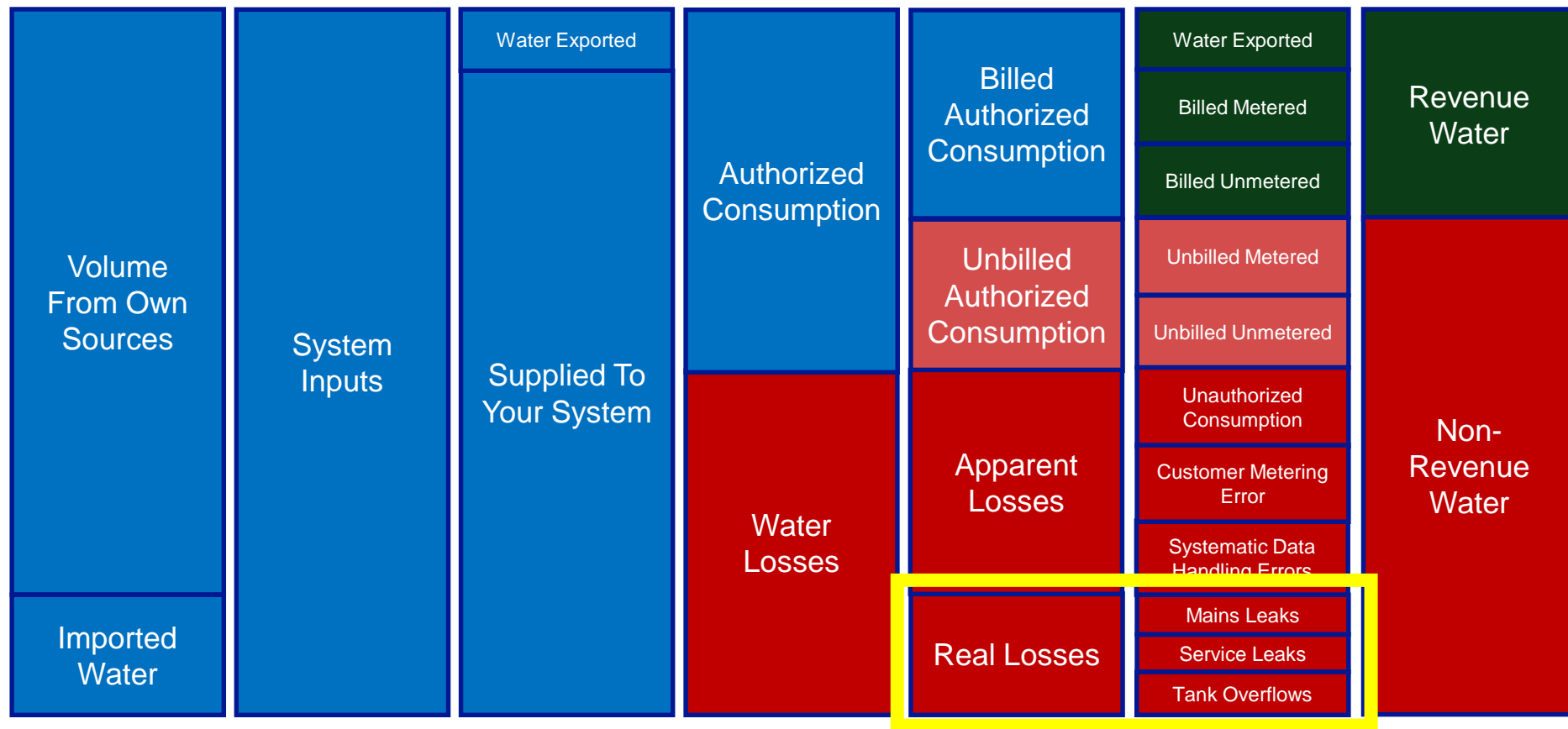


Non-price strategies



# System Level Conservation

# Fix Real Water Loss





# Customer Focused Conservation

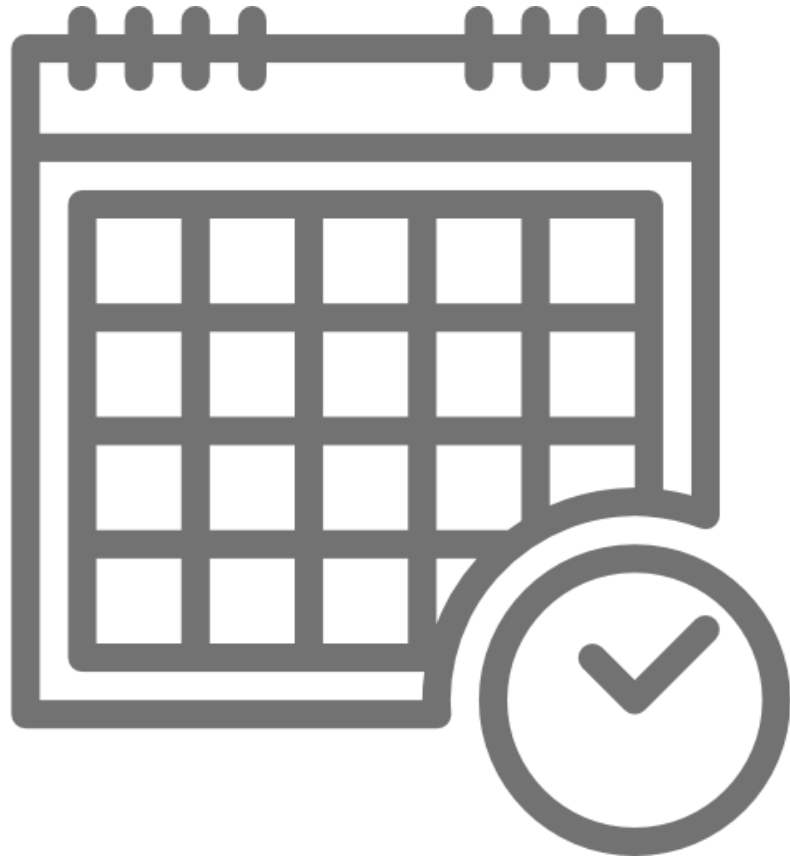
- Increase customer information
- Help customers reduce usage
- Usage restrictions
- Alternative sources for outdoor irrigation



# Increase Customer Information



# Use Monthly Billing

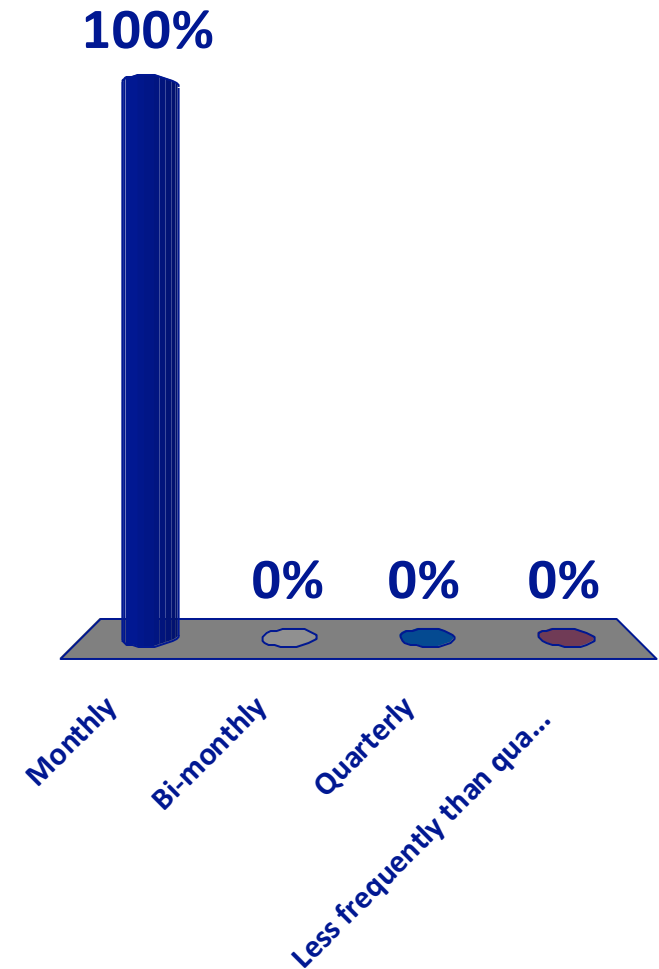


Customers are more aware of their usage with monthly billing

Able to catch leaks on the customer side of meter more quickly

# How often do you bill customers?

- A. Monthly
- B. Bi-monthly
- C. Quarterly
- D. Less frequently than quarterly





# Provide Price and Historic Use Information on Customer Bills

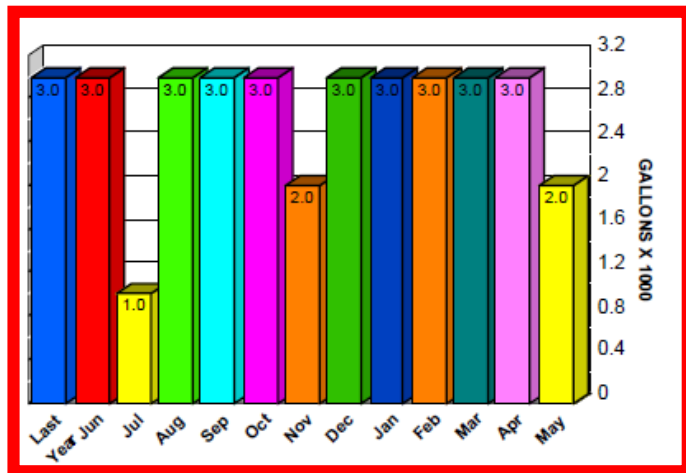


Bills are the main way we communicate with customers

This information will help customers understand usage and pricing better to conserve

# Orange Water & Sewer Authority

ACCOUNT NUMBER		SERVICE ADDRESS			BILL CYCLE	NO. OF USAGE DAYS	
		, CHAPEL HILL			700	30	
METER #	CURR. READ DATE	CURRENT READING	READING TYPE	PREV. READ DATE	PREV. READING	USAGE (1000s)	
06404859	5/19/2016	365	Actual	4/18/2016	363	2	



Historic Usage

Previous Balance \$26.35  
Balance Forward \$26.35

Late Payment Fee \$2.40  
Overdue Interest \$0.11

Water Service Charge - 5/8" \$14.70  
Water Usage Charge- Block 1-2000 gal X \$2.63 \$5.26

Current Charges: \$22.47

Total Due: \$48.82

Bank Draft - Do Not Pay

Rate Structure

# Compare Customer Usage to Local Averages



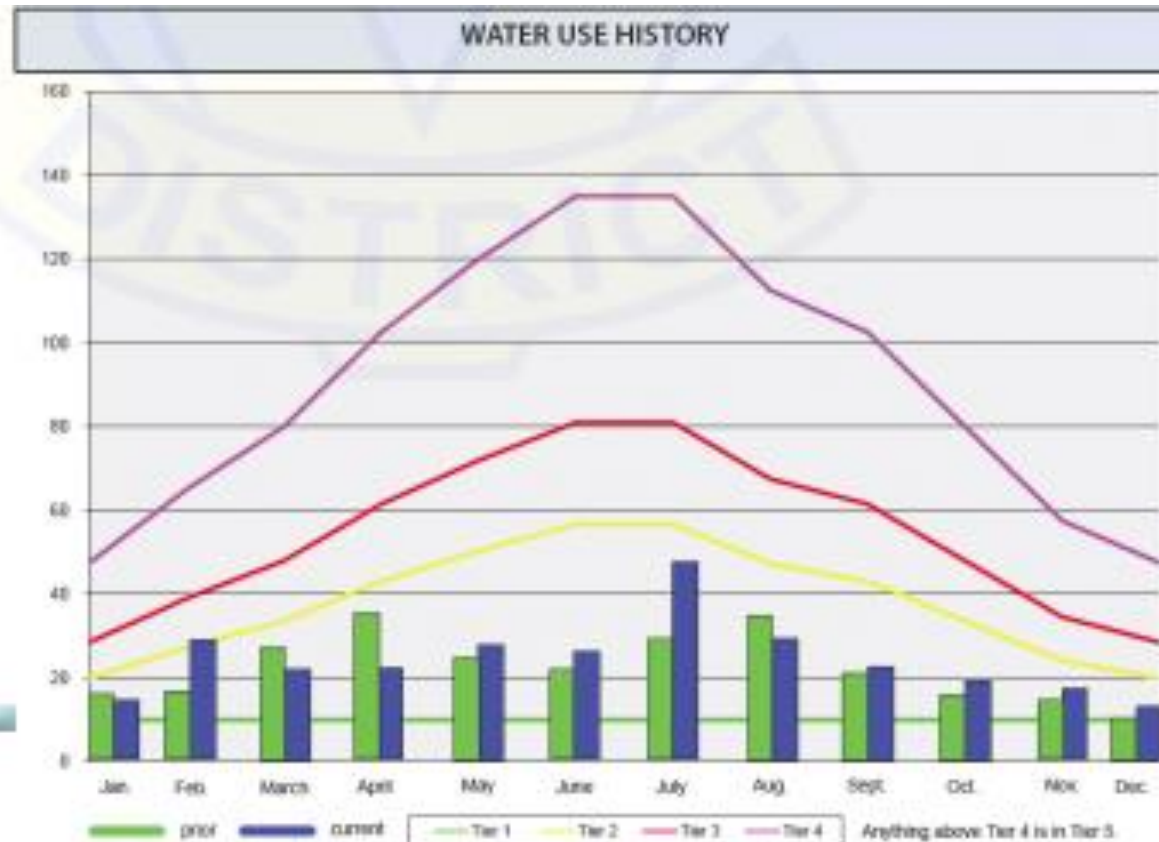
Help customers put  
their usage into  
context

Stoke competition!

# Coachella Valley Water District

**Thank you for  
being an efficient  
water user!**

Your water use last month shows you stayed within your personalized water budget. Your efficiency helps reduce the water demand on the environment and the need to import additional water to the valley. Efficient water users save money with tiered rates. For more information about water conservation and how to improve your efficiency even more visit Coachella Valley Water District's web site at [www.cvwd.org](http://www.cvwd.org).



Your water efficiency  
rating this month is:

**Efficient**

Water Usage	This Year	Last Year
Dec.	12	10
Nov.	18	14
Oct.	20	16



# Sub-Meter Multi-Family Units



For customers who don't pay bills directly, they can be unaware of their usage

Often also don't understand the impact of leaks



## WaterSense

WaterSense Home

About WaterSense

WaterSense Products

WaterSense for Kids

Our Water

Outdoors

Homes

Commercial Buildings

WaterSense Partners

Specifications and  
Certifications

Product Search

# Understanding Your Water Bill



The first step in changing the way you use water in the future is by understanding how much water you use today. The best place to find this information is on your monthly water bill. Pull out your water bill and follow the steps below to learn more about it and your own water use.

How much do you use?



What is your usage trend?



How does your use compare to that of your neighbor?



How are you being charged?





# Increase Customer Information

Is your system doing any of these items?



# Help Customers Reduce Usage





# Reduce Indoor Water Use

- Help customers afford fixtures and appliances that use less water
- Also help customers fix leaks

# City of Ashland

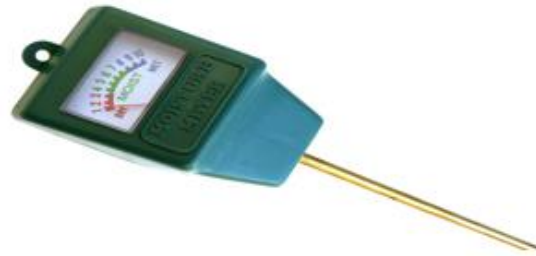
## CITY OF ASHLAND Giveaways

The Water Conservation Department is offering **FREE** showerheads, bathroom aerators, kitchen aerators, and moisture meters. Ask at the front counter for more information!

Showerhead



Moisture Meter



51 Winburn Way

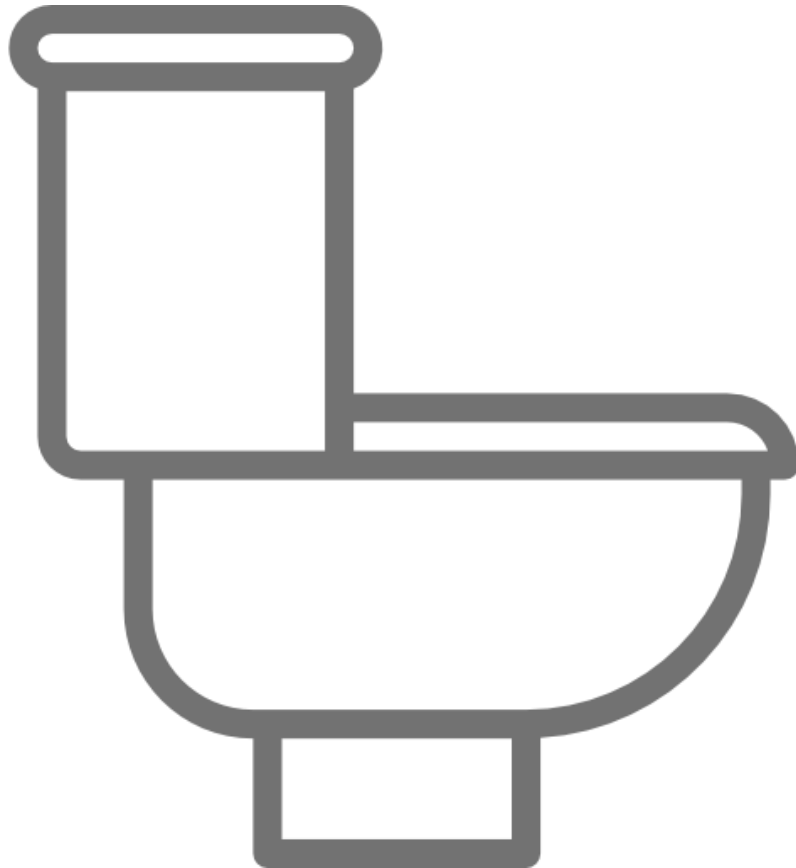
Kitchen aerator



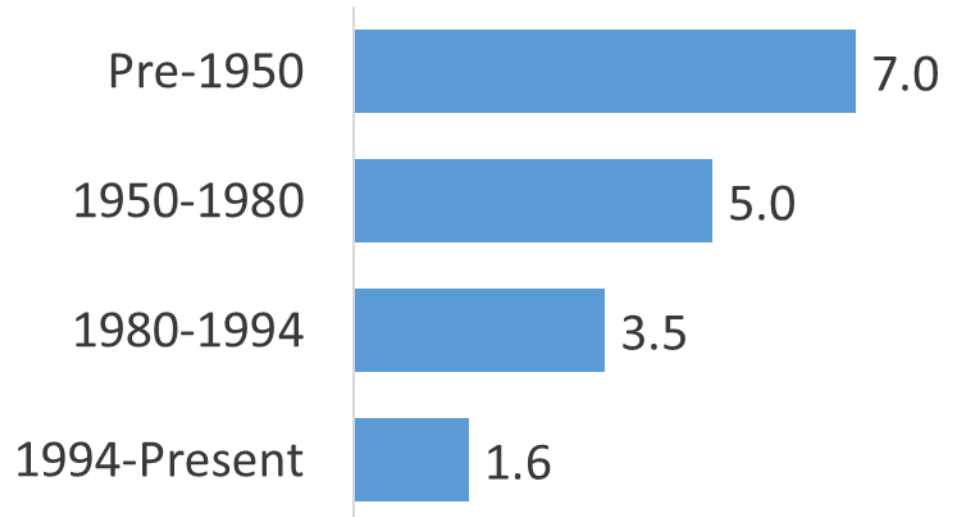
Bathroom  
aerator



# Toilets



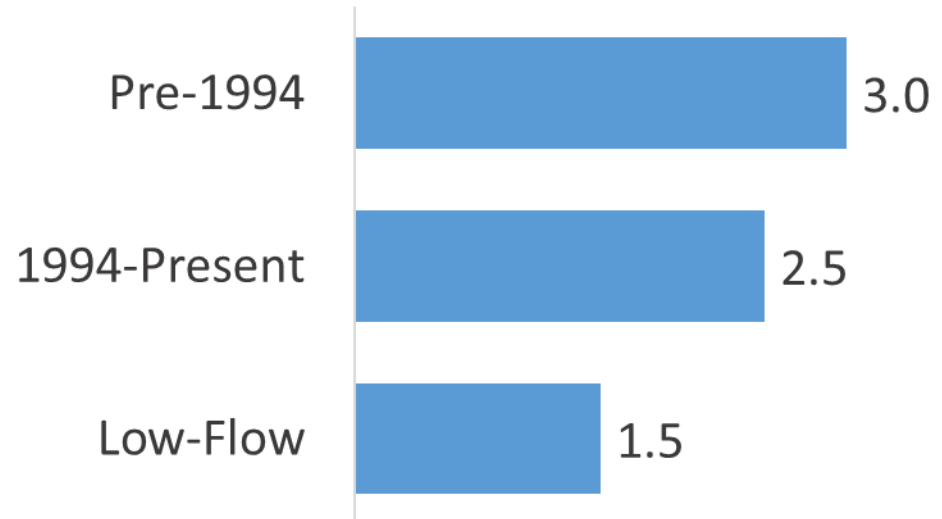
## Gallons per Flush:



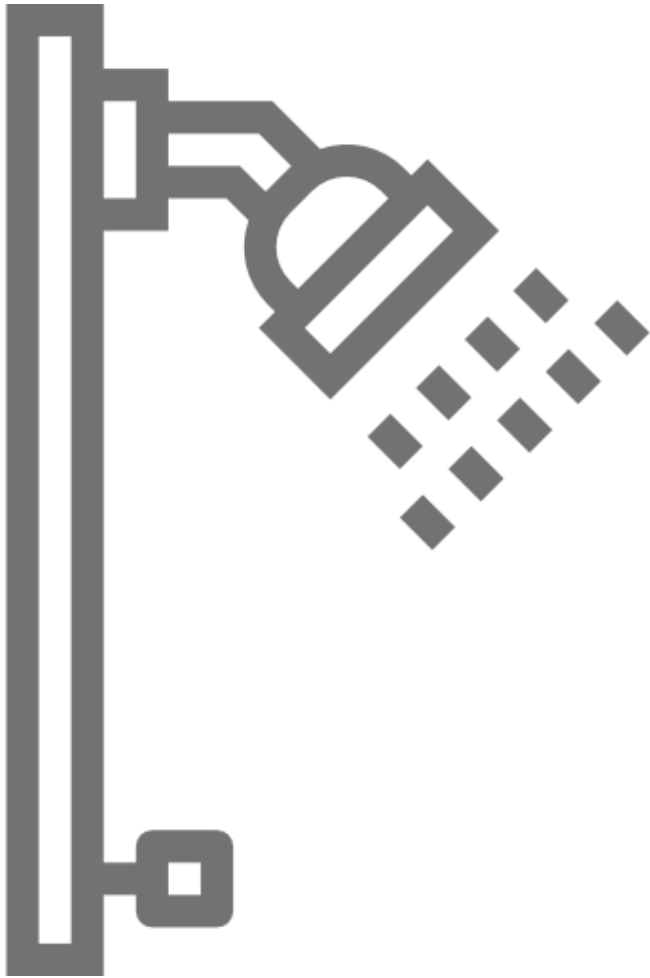
# Faucets



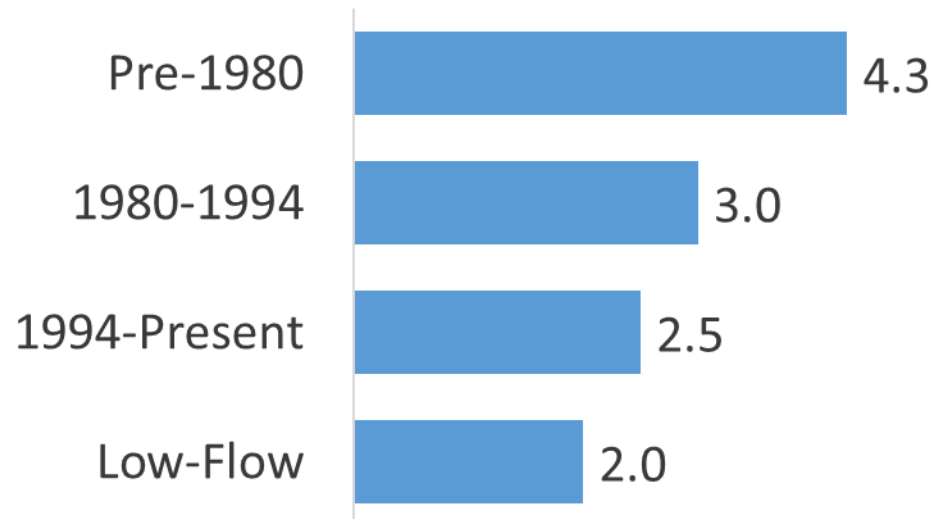
## Gallons per Minute:



# Showerheads



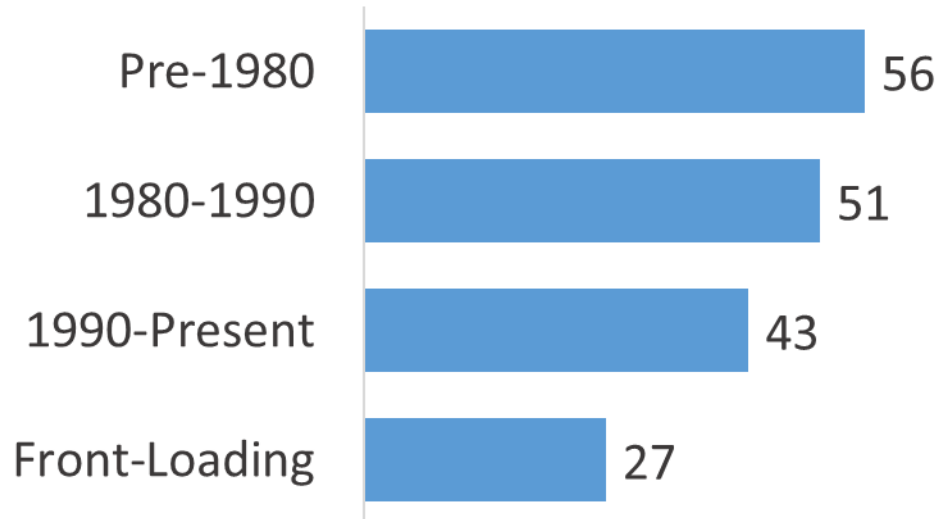
## Gallons per Minute:



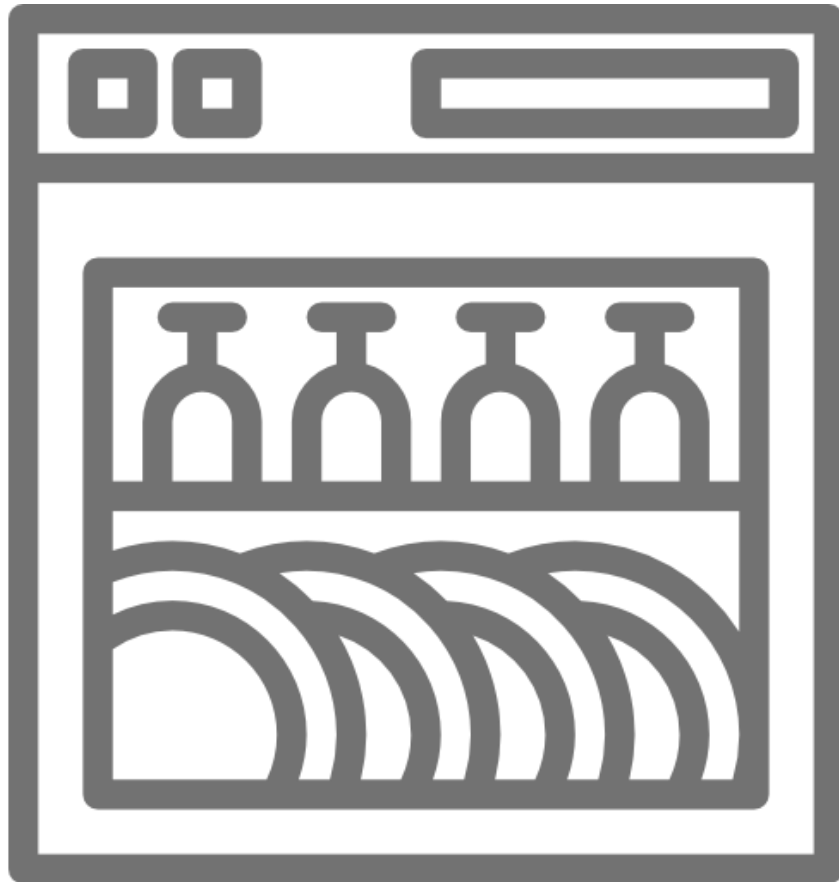
# Washing Machines



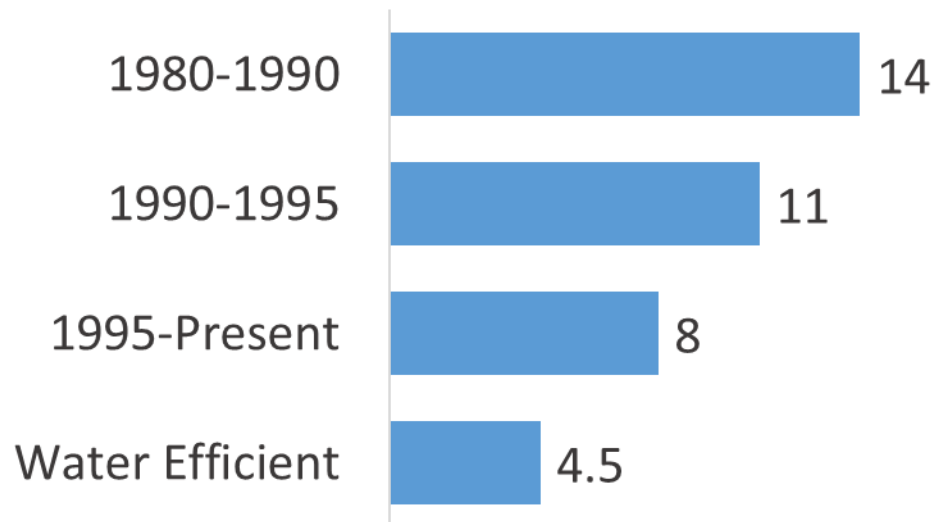
## Gallons per Load:



# Dishwashers



## Gallons per Load:







# Reduce Outdoor Water Use

- Help customers replace grass and other water-intensive landscape with vegetation that requires less water to maintain



# Santa Clara Valley Water District

Santa Clara Valley  
Water District



[Home](#)

[Services](#)

[Newsroom](#)

[Business](#)

[Jobs](#)

[About](#)

[GO](#)

[PRINT](#) Font Size: [A](#) [A](#) [A](#)

## [SAFE, CLEAN WATER PROGRAM](#)

### [CLEAN SAFE CREEKS PLAN](#)

#### [WATER CONSERVATION](#)

- [Rebates](#)
- ☒ [Conservation In The Home](#)
- ☒ [Conservation For Businesses](#)
- ☒ [Landscaping](#)
  - [Landscape Survey Program](#)
  - [Landscape Conversion Rebates](#)
  - [Irrigation Equipment Upgrade Rebates](#)
  - [Graywater Laundry To Landscape Rebates](#)
- [Agriculture](#)
- [Free Conservation Items](#)
- [Events And Workshops](#)
- [Conservation Program Reports & Studies](#)

## [GRANTS & PARTNERSHIPS](#)

## [TEACHERS & STUDENTS](#)

[Programs](#) > [Water Conservation](#) > [Landscaping](#) > [Landscape Conversion Rebates](#)

## Landscape Conversion Rebates

### Landscape Rebate Program

This program is designed to encourage residents and businesses to convert approved high water use landscape, such as lawns and pools, to low water use landscape as well as to retrofit existing irrigation equipment with approved high efficiency irrigation equipment.

The Landscape Rebate Program includes:

- [Landscape Conversion Rebate](#)
- [In-Line Drip Irrigation Conversion Rebate](#)
- [Irrigation Equipment Upgrade Rebates \(including Weather Based Irrigation Controllers\)](#)



### Important Program Updates

Starting on July 1, 2017, all requests for Pre-Inspections and applications for the Landscape Rebate



# Help Customers Reduce Usage

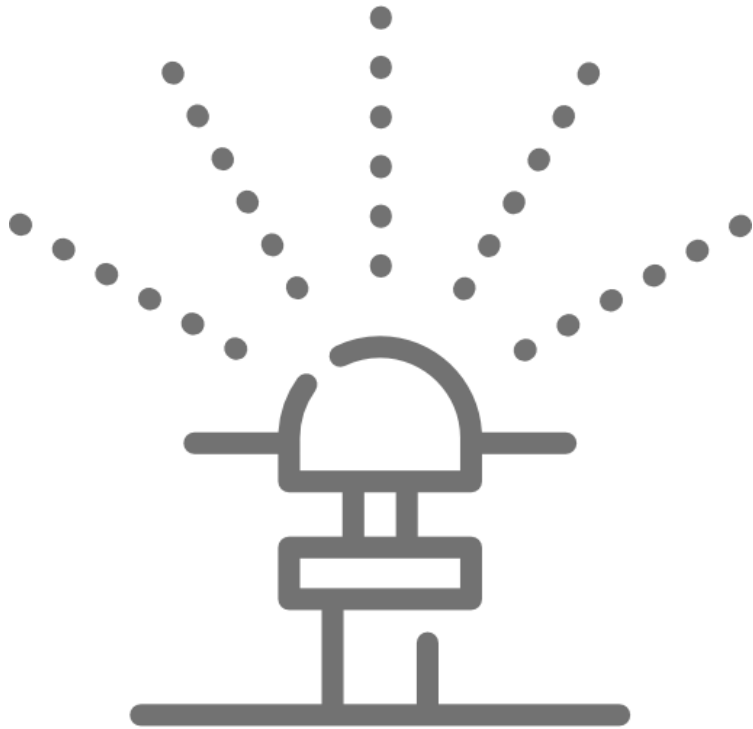
Is your system doing any of these items?



# Restrict Usage



# Regular Water Use Restrictions

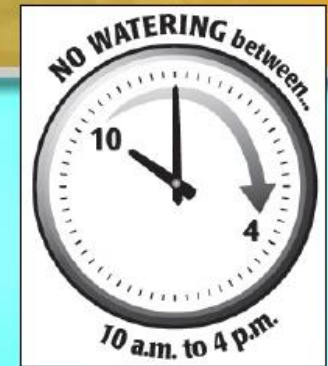


All the time, restrict the days and times that customers can do outdoor irrigation

Ensure water is used when evaporation loss is least

# South Florida Water Mgmt District

SOUTH FLORIDA WATER MANAGEMENT DISTRICT					
SFWMD 3-Day-A-Week Watering					
WATERING DAYS AND TIMES					
IF YOUR HOME ADDRESS ENDS IN...		1, 3, 5, 7, 9		0, 2, 4, 6, 8	
Monday	Before 10 am	✓			
	After 4 pm		✓		
Tuesday	Before 10 am			✓	
	After 4 pm				✓
Wednesday	Before 10 am	✓			
	After 4 pm		✓		
	Before 10 am			✓	

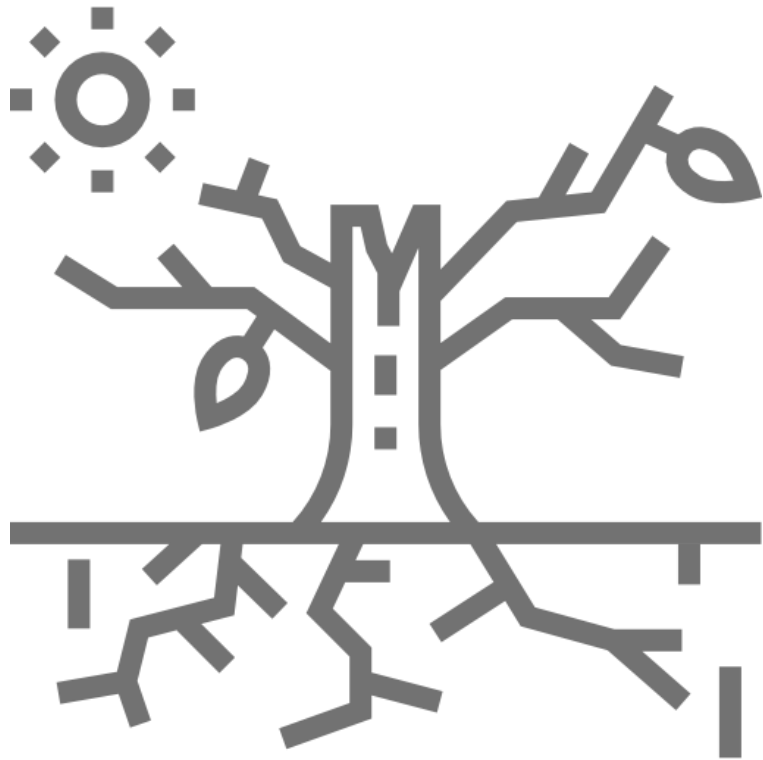


Restrict days of the week

Restrict time



# Low Water Supply Restrictions



Limit customer usage  
during times of low  
water supply or  
drought



# Sonoma County

## Water Use Restrictions

### Water Restrictions Continue in 2016

With California still experiencing severe drought despite recent rains, the State Water Board adopted an extended and revised emergency regulation to ensure that urban water conservation continues in 2016. You can learn more about the regulation [here](#).

### Outdoor Watering Restrictions for Sonoma County Water Districts

#### When is it OK to water outdoors?

Outdoor watering for ornamental landscaping is limited to two days a week: Tuesday and Friday, between 12:00 AM and 6:00 AM, or between 8:00 PM and 11:59 PM. Restrictions do not apply to food grown for consumption.

- Sunday: Outdoor watering is not permitted.
- Monday: Outdoor watering is not permitted.
- **Tuesday: Outdoor watering is OK between 12:00 AM and 6:00 AM, or between 8:00 PM and 11:59 PM.**
- Wednesday: Outdoor watering is not permitted.
- Thursday: Outdoor watering is not permitted.
- **Friday: Outdoor watering is OK between 12:00 AM and 6:00 AM, or**



# Restrict Usage

Is your system doing any of these items?






# Alternative sources for outdoor irrigation



# Non-Potable Water for Irrigation

- Use raw water, discharge water from water treatment, or treated wastewater for irrigation in lieu of using potable water

# City of Evans



City of  
**Evans, Colorado**

[Home](#) | [Contact Us](#)

[Departments](#) | [Community](#) | [City Projects](#) | [Doing Business](#)



## Water

2017 Watering Restriction Information

+ Billing

Conservation


Non-potable Water 101

Water Master Plan Hydrant Project

## Water

Municipal water systems have been around a long time – almost 4,000 years – and the City of Evans continues this long-standing tradition by ensuring our residents have constant access to the water they need. Whether it be for drinking, cleaning, or cooking, you can rest easy knowing that your water is taken care of.

Not all water is treated to pass drinking standards. In Evans non-potable water can come from a wastewater treatment plant or the Evans ditch, and while it may not be treated, it can still be used in many areas. The City of Evans supplies non-potable water for irrigation, industrial sites, and even everyday items like car washes.



# Rain Barrels



- Help customers collect rain water for outdoor irrigation in lieu of using potable water
- Check local ordinances



# Parish of Lafayette

## RAIN BARREL PROGRAM



**Save a raindrop.  
Save so much more.**

**Lafayette Utilities System | Lafayette Consolidated Government**

**Help save the Bayou Vermilion Watershed  
along with some green of your own!**

Email: [RainBarrel@LUS.org](mailto:RainBarrel@LUS.org)

### **LUS/LCG Rain Barrel Program**

The Rain Barrel Program is a Lafayette Consolidated Government (LCG) interdepartmental collaboration between Lafayette Utilities System (LUS) and the Environmental Quality division of Public Works (PW). The purpose of the program is to promote outdoor water conservation and sustainable stormwater management of the Bayou Vermilion Watershed.

The LUS/LCG Rain Barrel Program is designed to offer rain barrels to Lafayette Parish residents at a reduced retail cost and make them easily available for purchase during the spring season of each calendar year. 2018 orders will be taken through this program from March 2, 2018 – April 22, 2018. [Click here to order your Rain Barrel now.](#)

### **Program Eligibility**

There will be a limited supply of 300 rain barrels were available for the subsidized price of \$37.50 and up. Before any purchase



# Alternative sources for outdoor irrigation

Is your system doing any of these items?



What non-pricing strategies do you use at your water systems?

What works best?



# Other Non-Price Approaches to Conservation

Glenn Barnes

Environmental Finance Center

The University of North Carolina at Chapel Hill

919-962-2789

[glennbarnes@sog.unc.edu](mailto:glennbarnes@sog.unc.edu)