

A blue-tinted photograph of industrial machinery, possibly a water treatment system, featuring large pipes and mechanical components.

# Encouraging Conservation— An In-Depth Look at Non-Pricing Approaches

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<http://efcnetwork.org/events/webinar-encouraging-customers-to-conserve-pricing-and-non-pricing-approaches/>



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The slide features a blue header image of industrial water pipes. Below this, a logo for 'Smart Management for Small Water Systems' is shown. The main title is 'Encouraging Customers to Conserve: Pricing and Non-Pricing Approaches'. The date and time are 'Thursday, May 31, 2018 2:00-3:00pm EST'. A note states 'This program is made possible under a cooperative agreement with EPA.' The bottom of the slide displays logos for the Environmental Finance Center, UNC, EFCN, Government Finance Officers Association, NADO, Great Lakes Environmental Infrastructure Center, and American Water Works Association. A macOS-style dock with various application icons is visible at the very bottom of the slide frame.

Smart Management for Small Water Systems

**Encouraging Customers to Conserve: Pricing and Non-Pricing Approaches**

Thursday, May 31, 2018  
2:00-3:00pm EST

This program is made possible under a cooperative agreement with EPA.

Environmental Finance Center  
UNC  
EFCN  
Government Finance Officers Association  
NADO  
Great Lakes Environmental Infrastructure Center  
American Water Works Association

Webinar | Encouraging Customers to Conserve: Pricing and Nonpricing Approaches

24 views



# Two Approaches to Conservation



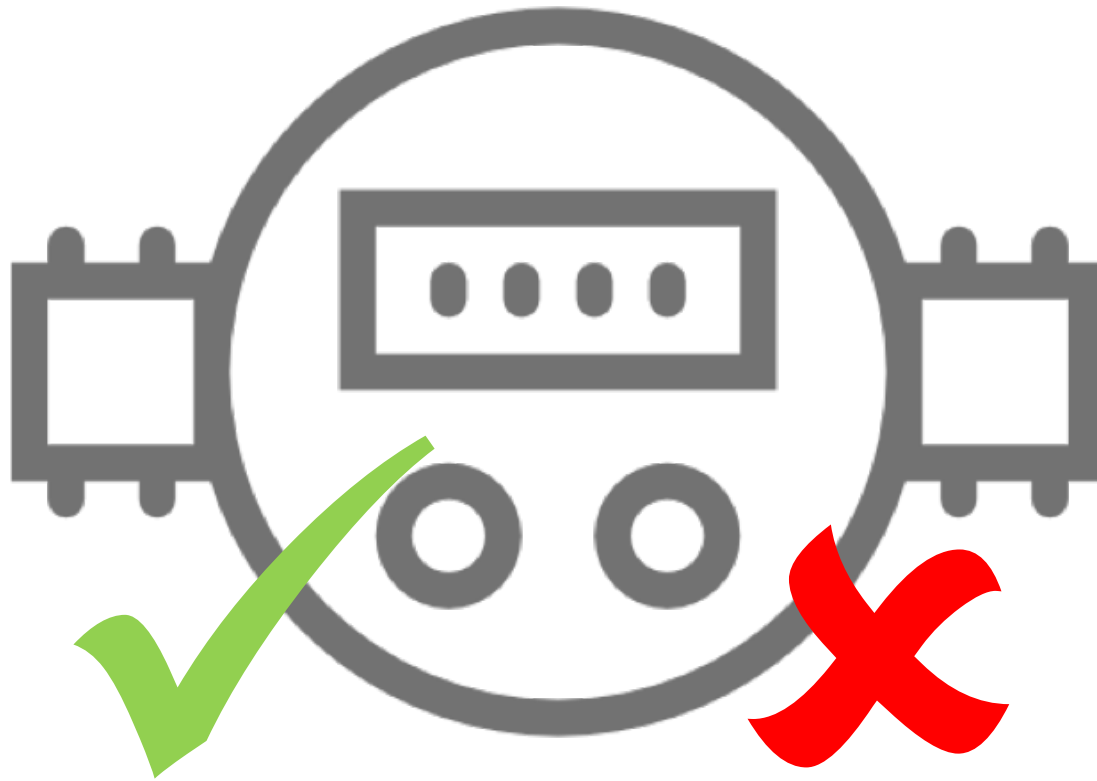
Pricing signals  
through your rates



Non-price strategies



Why do water systems want to promote conservation?

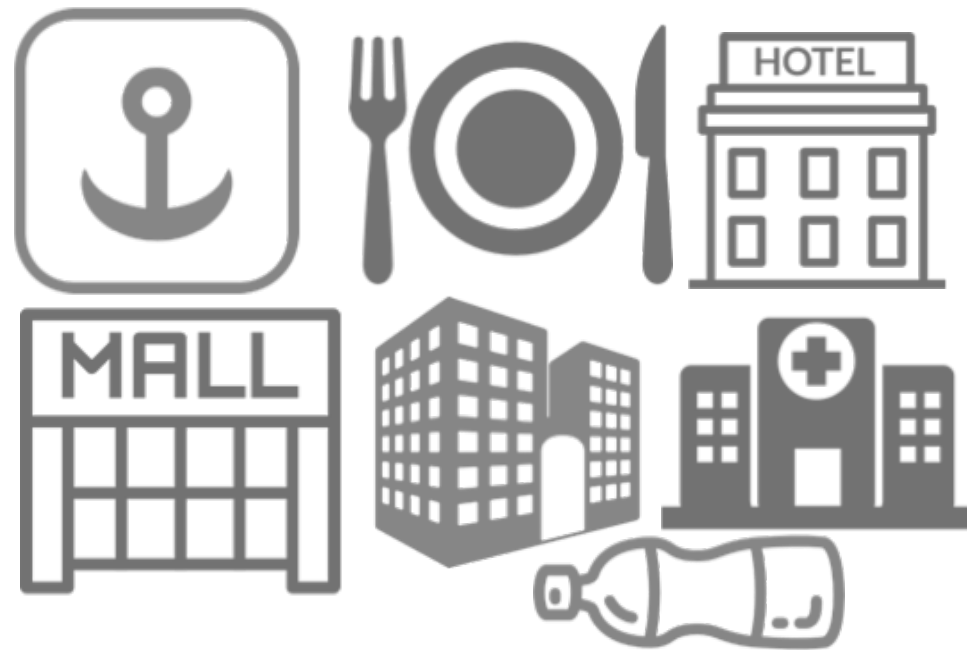




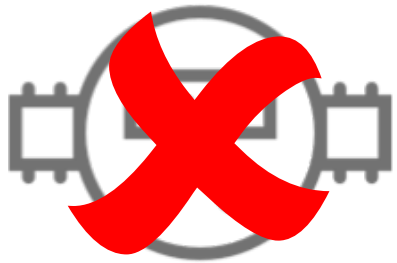
Who doesn't charge per unit of water consumed?



Some community systems with a flat rate or no rate

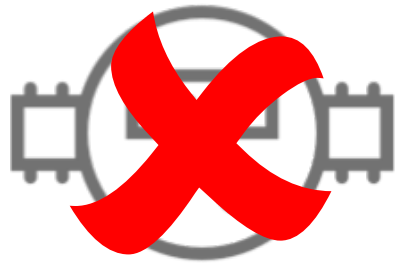


Virtually all non-community water systems



If you don't charge per unit of water consumed, you have at least a financial incentive for your water users to conserve...

But your water users have no incentive to conserve



# Broad Conservation Strategies

- Water efficient devices
- Fix leaks
- Ask water users to use less water
- Incentivize water users to use less water



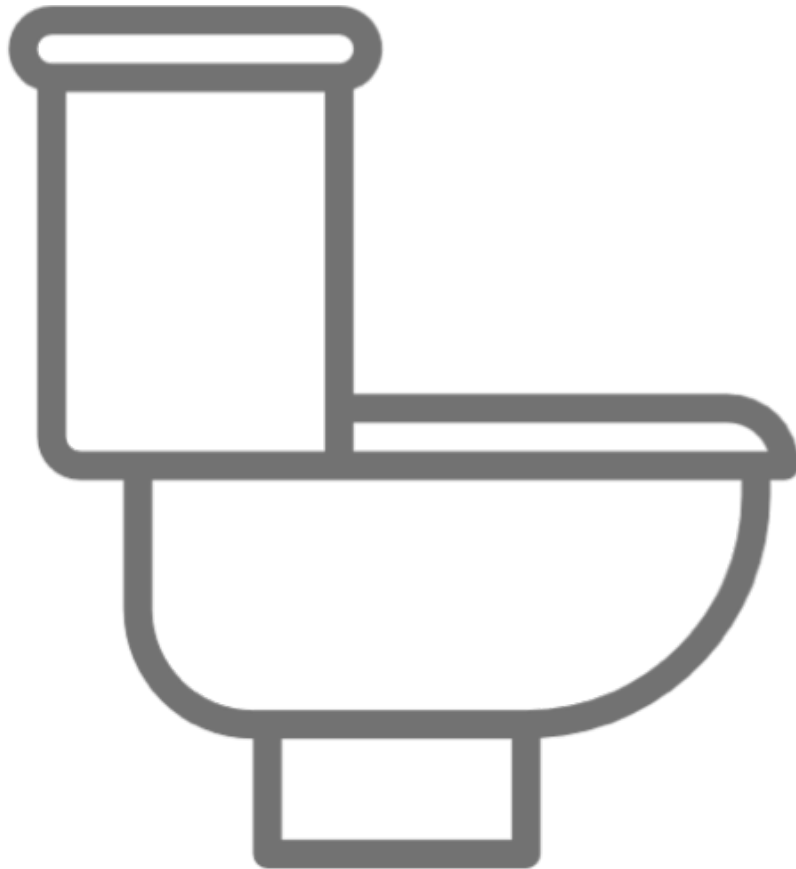


# Water Efficient Devices and Fixing Leaks

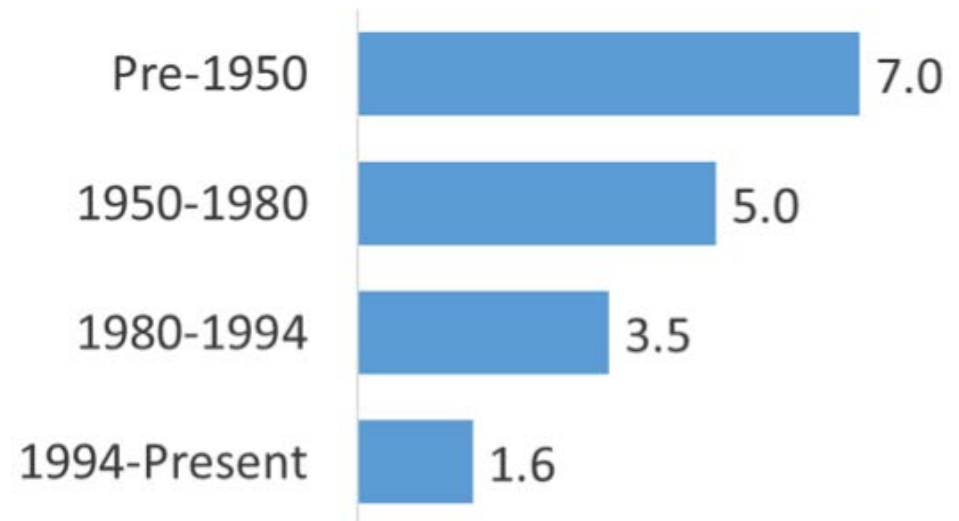




# Toilets



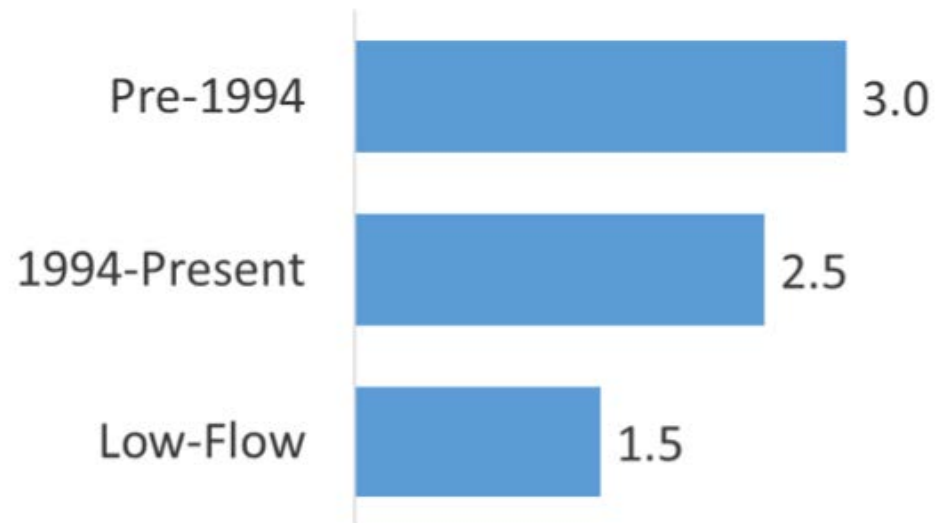
## Gallons per Flush:



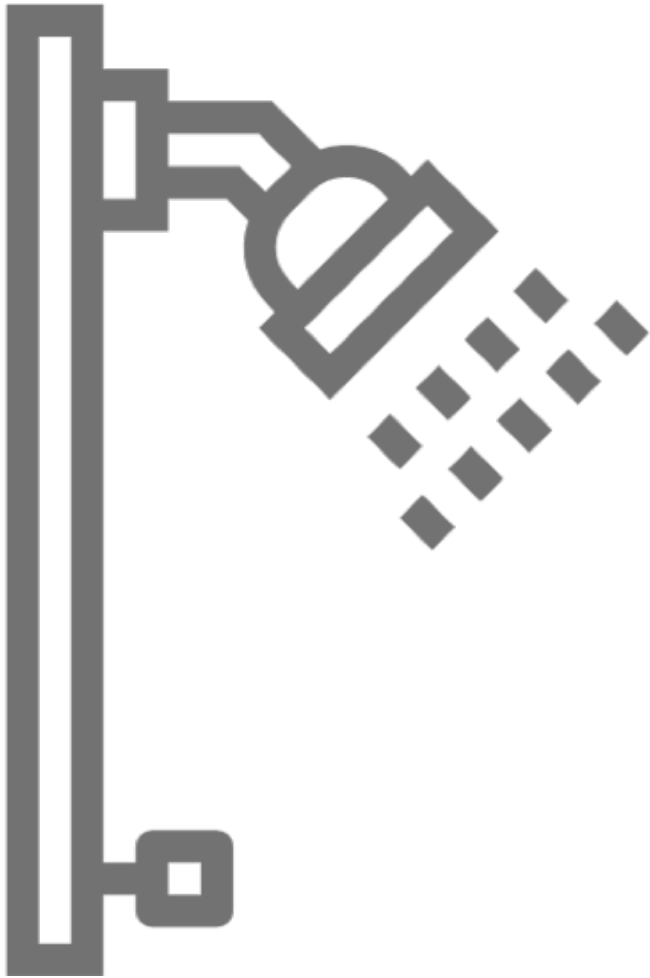
# Faucets



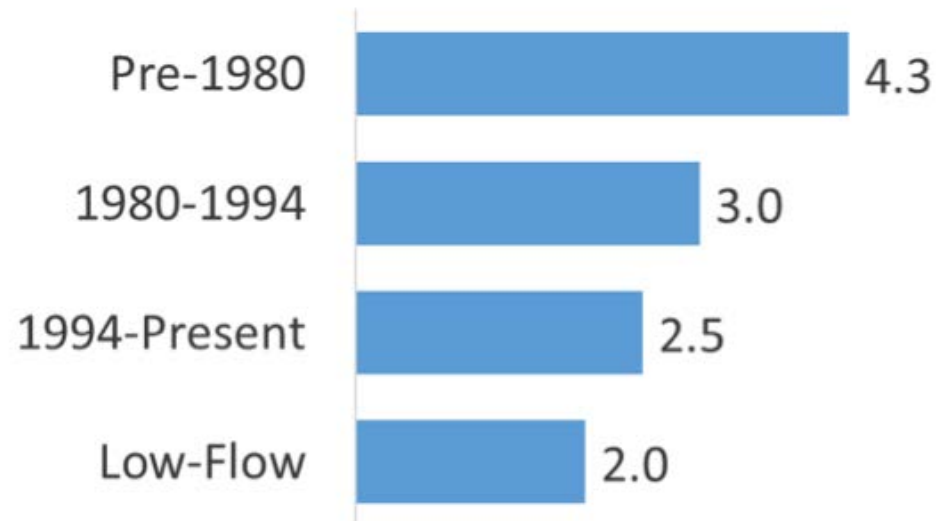
Gallons per Minute:



# Showerheads



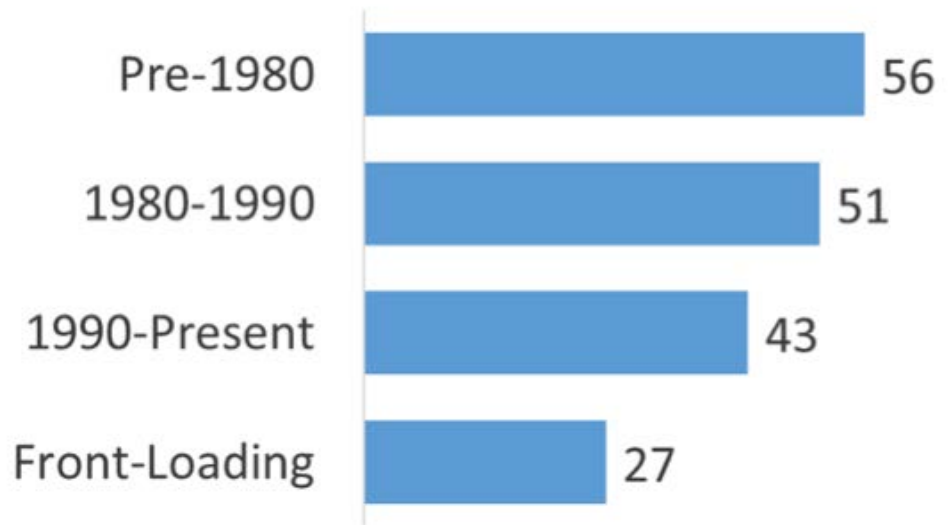
Gallons per Minute:



# Washing Machines



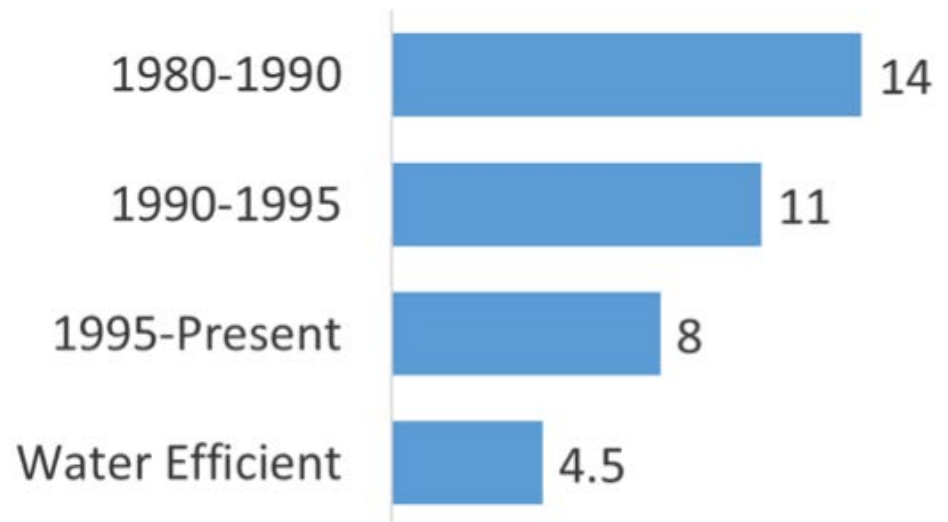
## Gallons per Load:



# Dishwashers

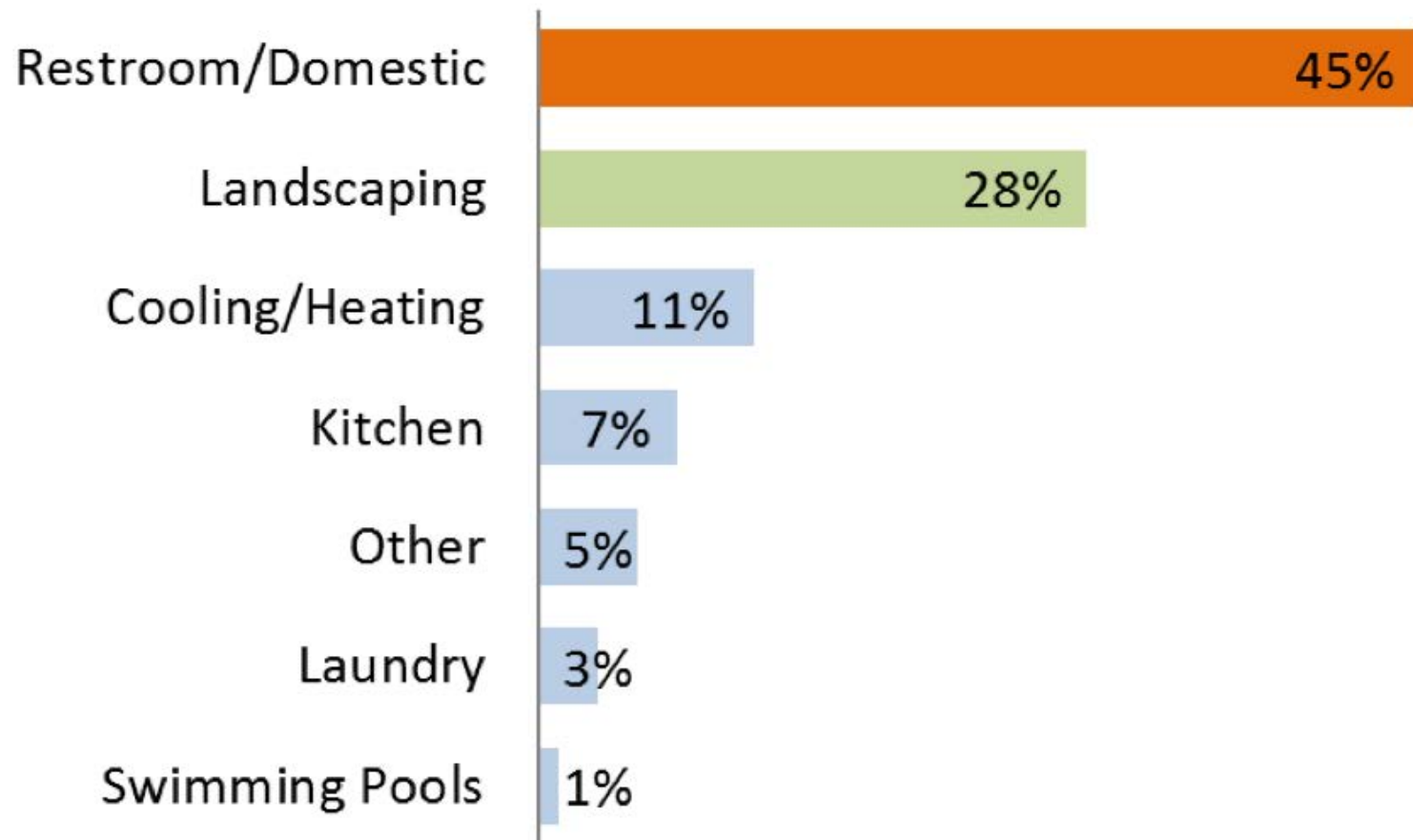


## Gallons per Load:

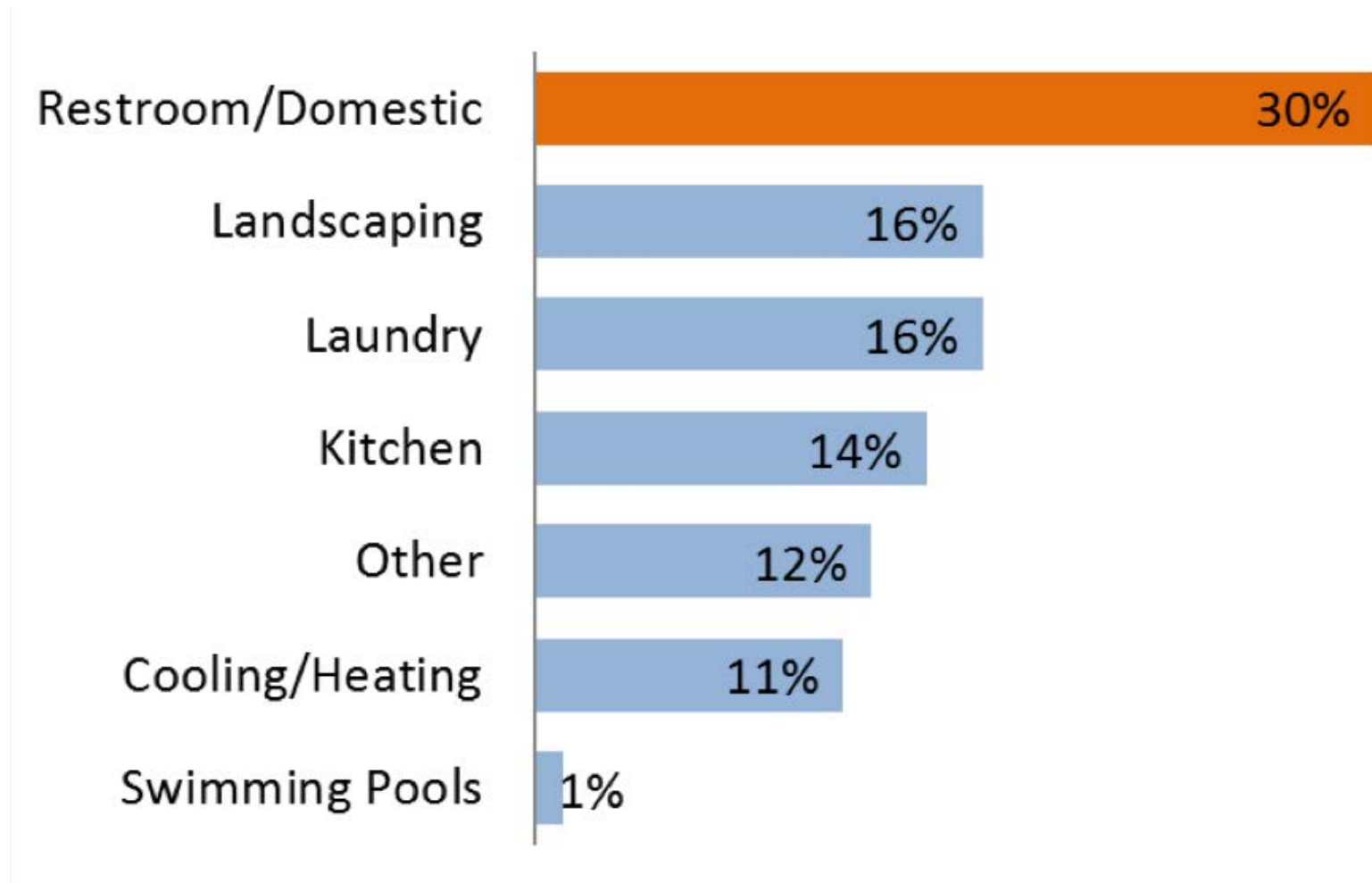





# Restrooms are the biggest water users in Schools



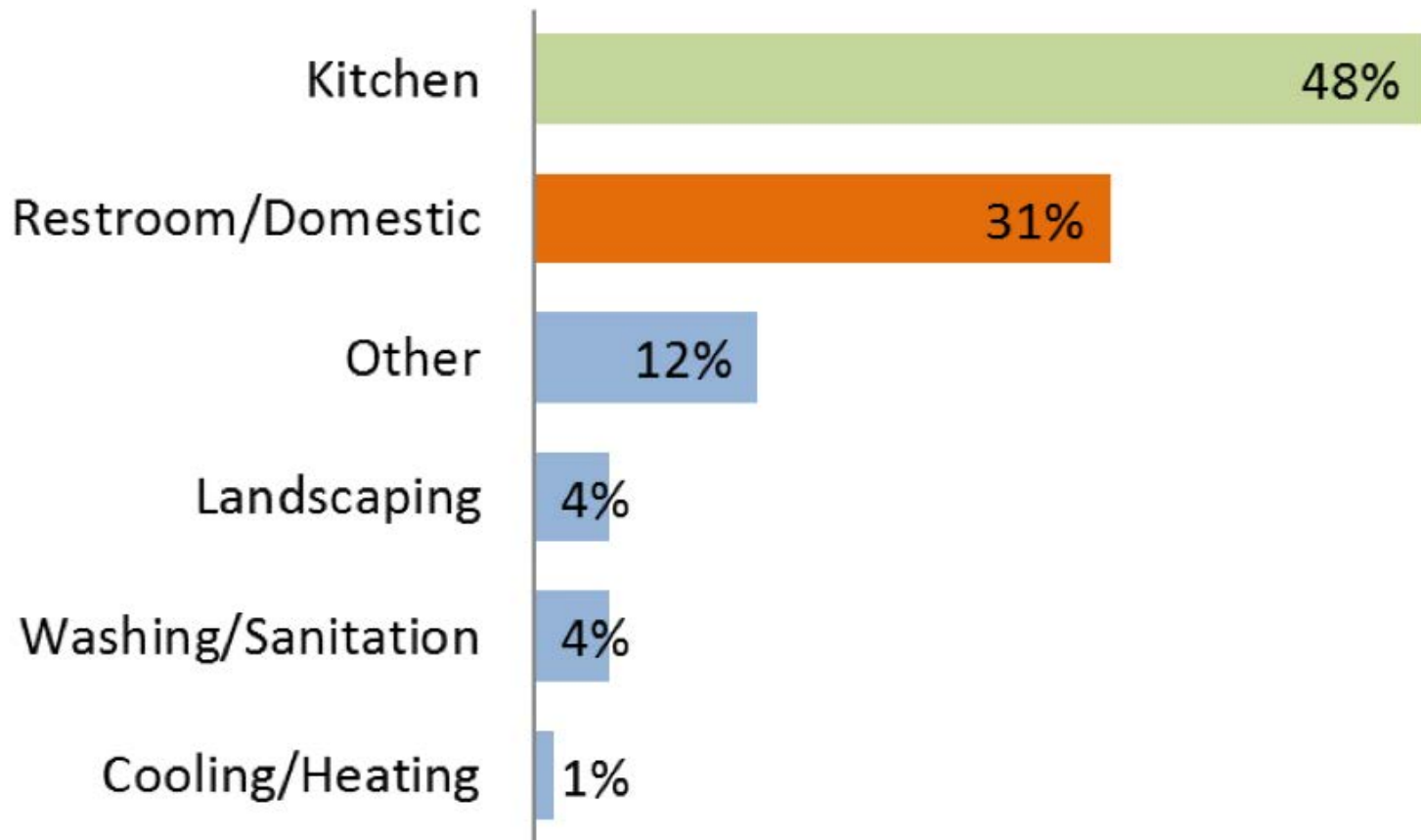
# Restrooms are the biggest water users in Hotels







# Kitchens and Restrooms are the biggest water users in Restaurants





# Ask Water Users to Use Less Water



Opt into conservation



Opt out of conservation



# Public Conservation Notices



**Please  
Conserve  
Water**

Require public facilities to post a notice in water-use locations (such as bathrooms) encouraging people to conserve water



# City of Santa Fe, NM

## 25-2.5 Conservation Signage and Literature Distribution.

A. Public, semi-public, and governmental restroom and shower facilities shall provide not less than one (1) water conservation sign in each restroom and shower facility which shall not be less than eight and one-half (8.5") inches by eleven (11") inches. The sign may use a city-provided sign or develop their own sign using city-provided text which shall cite this section. A "public facility" shall not include those facilities used only by the entity's employees. A "semi-public facility" shall include all private facilities used by organizations.

B. Hotels, motels, and other lodging facilities shall provide an informational card or brochure in a visible location in each guest room. The card or brochure may use city-provided literature or develop their own using city-provided text. Lodging facilities shall provide daily linen and towel changing for those guests staying multiple nights. Facilities shall provide specific requests each day that the linen and towels be changed.

C. Retail plant nurseries shall provide their "end-use customer" with low water use landscape literature and water efficient irrigation guidelines for any outdoor perennial plants. An "end-use customer" is the person who will ultimately own the plant material. A landscape contractor or architect is not an end-use customer. In order to facilitate the purchasing of low water use plants, nurseries are

## **Saving water is always in season!**

Santa Fe is located in a high desert area with limited water supplies. Regardless of weather conditions or reservoir levels, water should always be treated as a precious natural resource.

Whether you live here or are just visiting our fine city, please help preserve Santa Fe's future by conserving water whenever you can.

Thank you for helping to keep Santa Fe a "water friendly" community!

Posted pursuant to the City of Santa Fe's Water Conservation Ordinance  
(Section 25-2.5 SFCC 1987)

# West Basin Muni Water Dist., CA

## NO-COST operational tips to SAVE WATER & MONEY



### CUSTOMER ENGAGEMENT

#### "Serve Water Only Upon Request"

Consider asking customers, "What would you like to drink?" rather than bringing water immediately to the table.

For every glass of untouched water, not only is the water in the glass wasted, but the water needed to wash the glass is also wasted.



### FOOD PREPARATION

Do not use running water to melt ice in sinks.

Use refrigeration rather than running water to thaw foods. Designate a place in the refrigerator for over-night thawing of frozen foods.

Investigate the use of food-grade pan liners; the pan can then be used several times between washings on the same day.



### EQUIPMENT MAINTENANCE

Adjust ice machines to dispense less ice if it is noticed that ice is being wasted.

Adjust the flow to dipper wells, if possible according to health department standards.

Wash only full loads in the dishwashers. Your water and heating expenses are the same for a full or half load. Running a full load will use your kitchen's resources most efficiently.

Turn dishwashers off when dishes are not being processed.



### DISHWASHING + CLEANING

Before washing dishes, dry-scrape and pre-soak dishes and utensils in a basin of water rather than under running water. Run only fully loaded dish racks through the machine.

When possible, use dry surface cleaning methods, followed by damp mopping or wipes. Do not continue to do flood-type cleaning of floors; use a mop and a bucket.

Use brooms rather than water for sweeping outside parking lots or paved areas. When necessary to use water, use a waterbroom or similar device to clean efficiently.



visit [www.westbasin.org](http://www.westbasin.org) for more information and to download the Cash For Kitchens Training Manual

Cash for Kitchens







# Incentivize Water Users to Use Less Water

## Make a Green Choice

### EARN REWARDS WHEN YOU CONSERVE

For each night you forgo full housekeeping:\*

### YOU'LL HELP SAVE

37.2 gallons of water  
25,000 BTU of natural gas  
0.19 kWh of electricity  
7 oz. of cleaning-product chemicals

### YOU'LL RECEIVE

\$5.00 to spend at participating food and beverage venues or  
500 SPG® Starpoints®

To participate and receive your rewards, please hang this card outside your door or call the front desk before 2:00 a.m. If you would rather not take part in the program, place this card on your bed to let us know you'd like fresh linens, and leave towels to be cleaned on the floor.



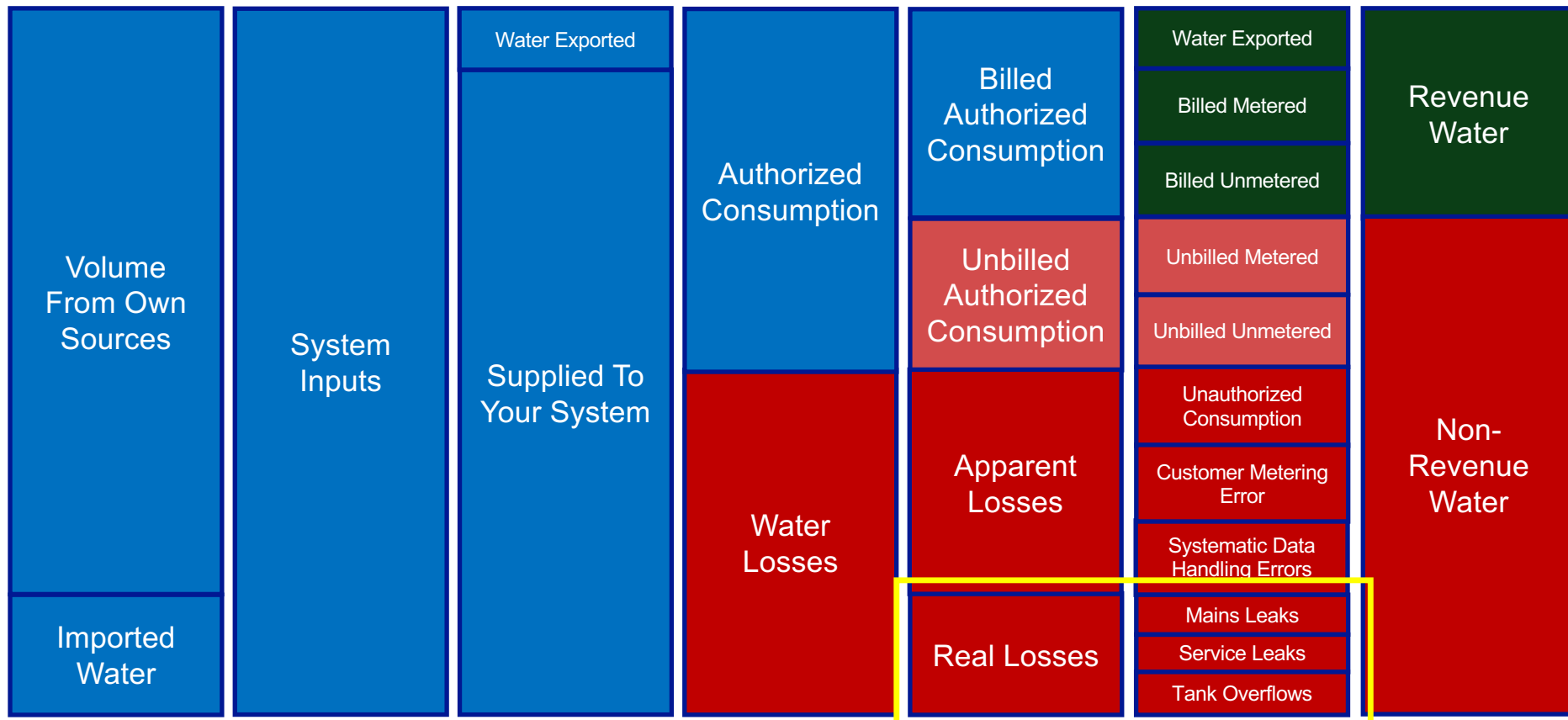
# Broad Conservation Strategies

- All of the above plus...
- Conserving water at the system level
- Promoting conservation at the water customer level





# Fix Real Water Loss



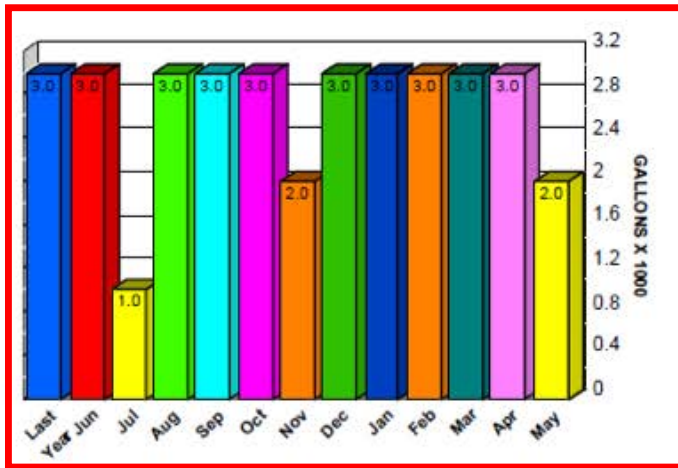


# Increase Customer Information through the Water Bill



# Orange Water & Sewer Auth., NC

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

Bank Draft - Do Not Pay

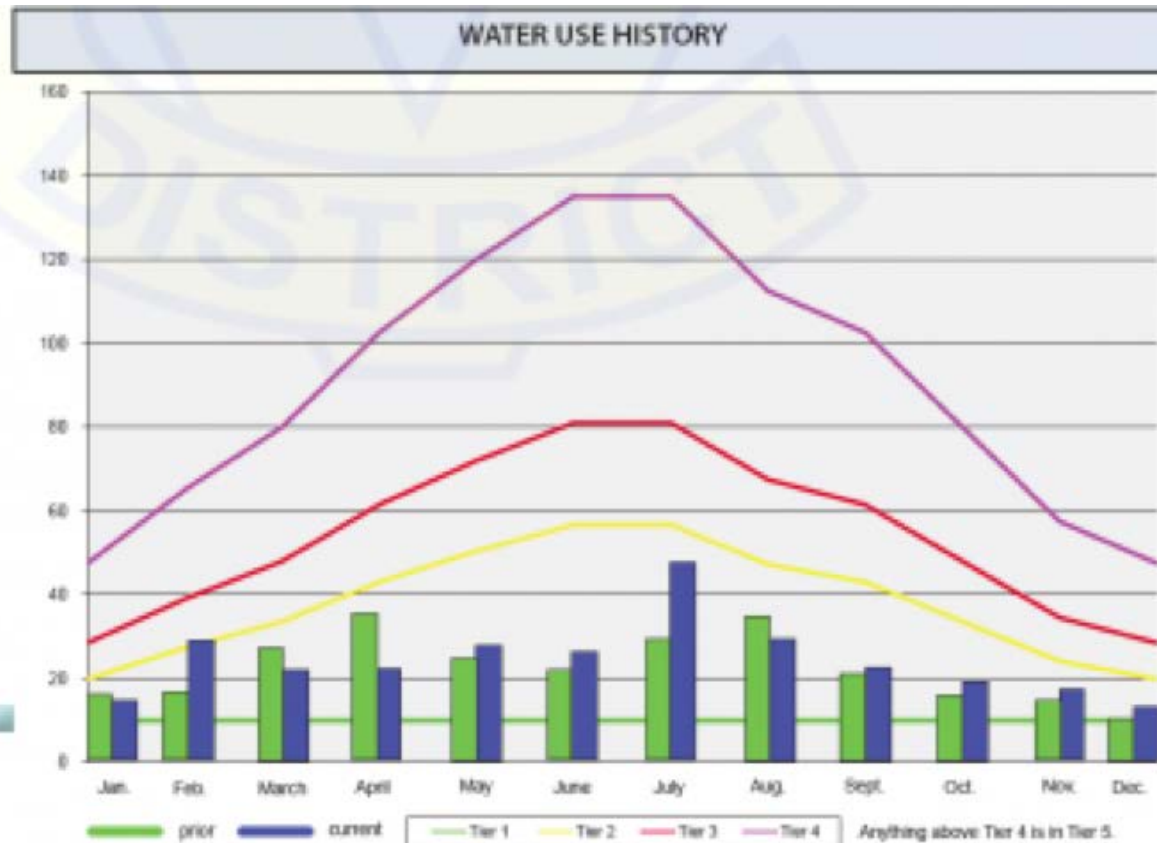
Total Due: \$48.82

Rate Structure

# Coachella Valley Water Dist., CA

**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



# Poll question



Help Customers Reduce  
Usage—Indoor and  
Outdoor, Residential and  
Commercial



<https://www.epa.gov/watersense/rebate-finder>

## WaterSense

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Commercial Buildings

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## Rebate Finder



## Water Efficiency Can Pay Off!

Many WaterSense partners offer rebates for WaterSense labeled products—such as water-efficient toilets, showerheads, and faucets—as well as water conservation services. Search below to see what money-saving rebates are available in your area.

Note about the WaterSense Rebate Finder



Rebate Type

All Rebates ▼

Partner Name

State/Province

All States ▼



# Mammoth Community Water Dist.



Mammoth Community Water District

WATER IS OUR FUTURE



☐ **High Efficiency WaterSense® Labeled Toilets (HET):** Eligible toilets must be WaterSense labeled and use 1.28 gallons per flush (GPF) or have a high/low flush option (dual flush). Rebates are up to \$200 per toilet for the first two toilets in a unit, additional toilets are eligible for a rebate up to \$100. WaterSense toilets can be found online at: <http://www.epa.gov/WaterSense/products/toilets.html>



☐ **High Efficiency Clothes Washer (HECW):** Eligible washers must have a water factor (WF) of 4.5 or less. Rebate is up to \$400. Commercial clothes washers are eligible for up to \$600, special terms apply, call MCWD for more information. HECW water factors can be found online at the Consortium for Energy Efficiency website product list: <http://www.cee1.org> New machine installations require permit from Town of Mammoth Lakes.

## MCWD Rebates

Save water and money with MCWD's rebate program. We are currently offering rebates on toilets, clothes washers and pressure reducing valves for irrigation systems. Replacing old appliances and fixtures with new water efficient ones is an easy way to incorporate water savings in your daily life. For more information call Kris McDaniel at 760-934-2596 ext. 223, or by [clicking here](#) to send Kris McDaniel an email.

### PDF Rebate Downloads

Indoor Residential Rebate [Click Here](#)

Outdoor PRV Rebate [Click Here](#)

(W-9 Form - for Rebate(s) exceeding \$599.99)

Product List Links

# Blue Lake Springs MWC, CA



BLUE LAKE SPRINGS  
MUTUAL WATER COMPANY

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**Rebate:** If all of the requirements listed below are satisfied, a rebate of \$50.00 per toilet (limit 2 per household) will be applied to the shareholders account. *Important – please read terms and conditions below.*





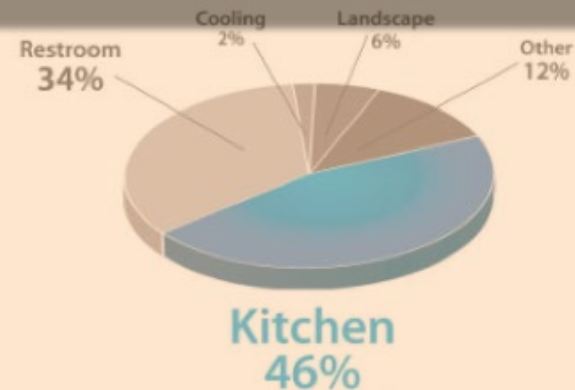
# West Basin Muni Water Dist., CA



WEST BASIN MUNICIPAL WATER DISTRICT

Providing a safe and reliable supply of high-quality water to the communities we serve

*Cash for Kitchens* was developed by West Basin Municipal Water District to provide restaurants and other food service facilities such as corporate kitchens, hotels, & schools, with water-use assessments to assist them in their efforts to save water. The assessments provide information on current water usage, strategies on how to conserve water and free materials to assist management in training their employees to be more water-efficient. Some kitchens may also qualify for free water-saving devices, such as a pre-rinse spray valve, faucet aerators, and flow restrictors.



# Santa Clara Valley Water Dist., CA

## Santa Clara Valley

### Qualifying Irrigation Hardware and Rebate Amounts

In-line Drip Irrigation (see below for requirements)	\$0.25 per square foot
--	------------------------

Multi-Family (5 or more units) and Business/Institutional properties

\$1.00 per sq ft

### Qualifying Irrigation Hardware and Rebate Amounts

High-Efficiency Nozzles	Up to \$5 per nozzle
Rotor Sprinklers or Spray Bodies with Pressure Regulation and/or Check Valves	Up to \$20 per body
Rain Sensor	Up to \$50 per sensor
Dedicated Landscape Meter, Flow Sensor*, Hydrometer*	Up to \$1,000 per meter
Weather Based Irrigation Controller, 1-12 Stations**	Up to \$300 per controller
Weather-Based Irrigation Controller, 13-24 Stations**	Up to \$1,000 per controller
Weather-Based Irrigation Controller, 25 Stations Or Greater**	Up to \$2,000 per controller

# City of Big Bear Lake, CA

## **TURF BUYBACK PROGRAM**

Save money and time. Save water and get paid. It's that easy. Are you ready to remove some, or all, of your lawn? If you answered yes, then you're in the right place. If you answered no, please visit Addicted to Grass.

**The Department of Water and Power (DWP) pays our customers \$0.50 for each square foot of turf removed.**

**There is no minimum amount removed or 1,000 square foot exclusion to the turf rebate. HOWEVER, if the same customer later decides to replant any turf they must reimburse the DWP for all turf rebates and abide by all current landscape regulations.**





# City of Kennedale, TX

## Residential Sprinkler System Evaluation Program

The Kennedale Public Works Department, in cooperation with the Tarrant Regional Water District, is proud to offer a [free sprinkler system evaluation program](#) for our residential customers.

The free evaluation will provide homeowners with basic knowledge of how their sprinkler system works, feedback on the current condition of equipment, and recommendations for improvement. When an appointment is scheduled, a licensed irrigator will perform a 45-minute assessment with the resident.

A summary of results and recommendations will then be provided. This program is not a sales pitch for additional contracting services and you will be under no pressure to make specific changes. We hope this opportunity will assist Kennedale residents to efficiently manage outdoor water use.

CLICK HERE TO LEARN MORE ABOUT THE



Tarrant  
Regional  
Water  
District

Sprinkler System Evaluation Program





# Poll question





Restrict usage—all the time, seasonally, or in times of drought



# Town of Milliken, CO



## Watering Schedule

12:00 am to 9:00 am  
OR  
7:00 pm to 12:00 am

Restrict  
time of  
day

Monday, Wednesday, Friday  
Home Addresses ending in  
0, 2, 4, 6, 8

Tuesday, Thursday, Saturday  
Home Addresses ending in  
1, 3, 5, 7, 9

Restrict days of the  
week



# City of Victoria, MN

## Watering Restrictions

Seasonal



### Schedule

Odd / Even and time of day watering restrictions in effect from May 1 through September 30.

### Odd / Even

The use of the City of Victoria's water supply system for lawn and garden sprinkling and irrigation shall be limited to an odd / even schedule corresponding to property addresses each year from May 1 through September 30.

Homes with even number addresses are allowed to water only on even number calendar days and odd number addresses are allowed to water only on odd number calendar days. To conserve water and prevent the wasteful effects of irrigation during the day, no person shall irrigate using the public water supply system between the hours of 10 a.m. and 5 p.m. on any day of the week.

### Citations

The city will be issuing citations for property owners if measures are necessary to protect our natural resources and remain within the city's DNR water usage allocation. Failure to conserve water will result in higher costs for all our residents, so please water responsibly.

Restri Restricts Time of Day

# Blue Lake Springs MWC, CA

Drought Stage 1

Drought Stage 2

Drought Stage 3

Drought Stage 1

Drought Stage 2

Drought Stage 3

## Water Supply Conditions

- Severely Restricted Water Supplies
- Necessary 35% Total Supply Reduction

## Drought Stage

- Mandatory restrictions (severe prohibitions) on use
- ABSOLUTELY NO OUTSIDE WATERING
- No watering of forest trees (Bark Beetle Trees)
- No unnecessary watering (decks, driveways, cars, etc.)





# Forney Lake Water Supply Co, TX

Stage     Stage 3 – Severe Water Shortage Conditions

Goal:     Goal: Achieve a 20 percent reduction in daily water demand

Supply     Supply Management Measures:

Forney     Forney Lake water Supply shall reduce flushing of water lines, discontinue irrigation of public  
use of     and private landscaped areas, and no commercial use from fire hydrants.

Volun     Water Use Restrictions: All requirements of Stage 2 shall remain in effect during Stage 3  
except:

(a) W     (a) Irrigation of landscaped areas shall be limited to designated watering days between the  
de     hours of 6:00 p.m. and 10:00 a.m. and shall be by means of hand-held hoses, hand-held  
buckets, or drip irrigation only. The use of hose-end sprinklers or permanently installed  
automatic sprinkler systems are prohibited at all times.

A.     (b) Use of water to wash any motor vehicle, motorbike, boat, trailer, airplane or other vehicle  
E.     shall occur only between the hours of 9:00 a.m. and 12:00 p.m.

I-I     (c) The use of water for construction purposes from designated fire hydrants under special  
N     permit is to be discontinued.

T.     (d) All restaurants are prohibited from serving water to its patrons except when requested.

(e) The filling, refilling, or adding of water to swimming pools, wading pools, and Jacuzzi-type  
pools is prohibited.

(b) W     (f) No applications for new, additional, expanded, or increase-in-size water service  
di     connections, meters, service lines, pipeline extensions, mains, or water service facilities of  
any kind shall be allowed or approved.

(g) No watering

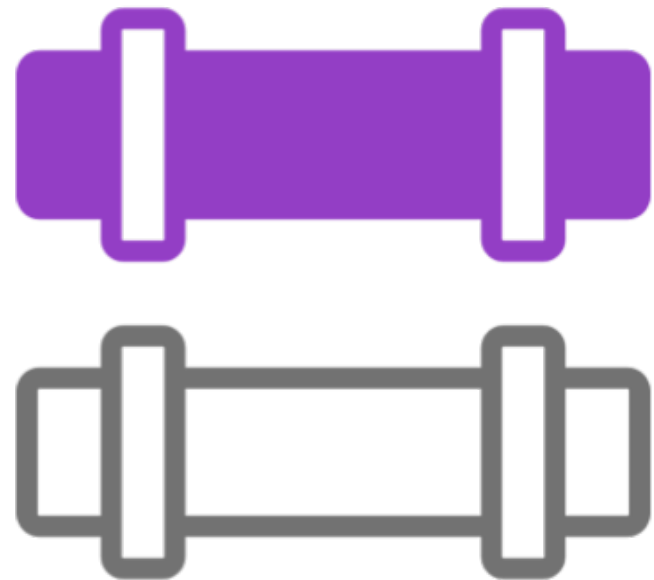


# Poll question





Alternative sources for  
outdoor irrigation





# Todd Creek Village, CO



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## Irrigation

In order to fully utilize our water resources, Todd Creek Village was developed with a dual-water pipe system. This allows for purified drinking water for inside the home, while having raw (non-potable) water for outdoor irrigation.

The irrigation system (raw water) is completely separate infrastructure from the purified drinking water supply system. Both systems, drinking and irrigation water, have their own separate pipelines, pump stations, and water sources.



# Rutland Water Department, MA



*Town of*  
**Rutland**



MASSDEP for the state since 2010. Barrels are being offered for \$69. Barrels will be available for pick up on Thursday PM May 31<sup>st</sup> and Friday AM June 1<sup>st</sup>, exact hours TBA, at the Rutland DPW, 17 Pommoguessett Rd, Rutland, MA Deadline for purchase is May 28<sup>th</sup>, Midnight. To participate in the Rain Barrel Program and find out more about the barrels, please visit: [www.greatamericanrainbarrel.com/community/](http://www.greatamericanrainbarrel.com/community/) and select your town.

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# Groveport, OH

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## Rain Barrels

### Purchasing a Rain Barrel

Residents interested in obtaining a rain barrel may purchase them at a cost of \$30 each. Rain barrels are limited to one per household and available to Groveport residents only. Each rain barrel comes with all the instructions and fittings for complete installation. The rain barrels can be purchased at the Groveport Municipal Building, 655 Blacklick Street, Groveport, Ohio. The application below can be downloaded and must be turned in when purchasing your rain barrel.

[Rain Barrel Presentation](#)

Phone: 614-830-2067

### Why Use a Rain Barrel?

Stormwater management is a major concern for communities, including Groveport. Everything that goes into Groveport's storm sewers eventually ends up in Big Walnut, Walnut or Blacklick Creek. Retaining stormwater on-site for reuse through diversion of rainwater to rain barrels is a great way to reduce stormwater pollution in the City and conserve water. Rain gardens can have lasting effects on stormwater quality by retaining stormwater on-site while showcasing a beautiful landscape project.

[Directory](#)

### Rain Barrel Example



### Purchasing a Rain Barrel

Residents interested in obtaining a rain barrel may purchase them at a cost of \$30 each. Rain



# Poll question

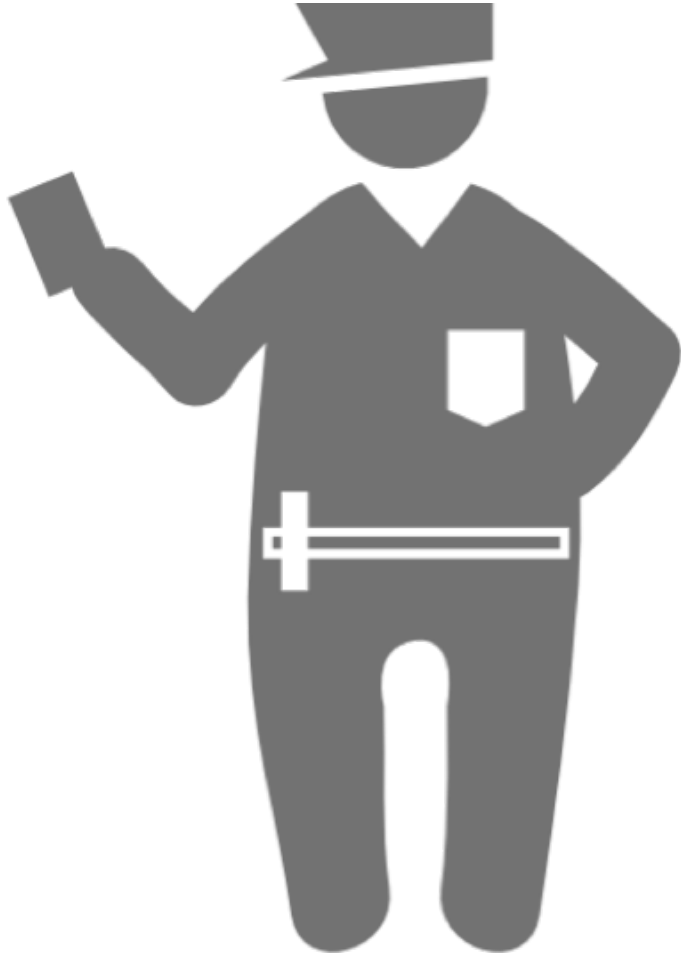


And finally...





# Enforce Your Mandates!



Having mandates in place is only effective if they are enforced

# Trophy Club Muni Utility Dist., TX



TROPHY CLUB  
MUNICIPAL UTILITY DISTRICT No.1

PAY ONLINE



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**Violations of this plan are enforceable in accordance with Section XI of the Water Management and Drought Contingency Plan. These procedures include:**

- Written warning for a first violation.
- \$50 administrative penalty for second and subsequent violations.
- Disconnection of service for a third violation with a \$200 reconnection charge in addition to \$50 administrative penalty.

Please [contact us](#) or call us at (682) 831-4600, option 2 for questions or more information. Residents watering on unscheduled days without a posted Variance Permit are subject to penalties. To report repeated violations of the water restrictions use this [anonymous form](#) or call us at 682-831-4600, option 2. We encourage all residents to use water wisely and follow the [Lawn Whisperer on facebook](#) for weekly watering advice. See the [Water Conservation page](#) for more information about saving water and money. For the most current information, [subscribe to our email news service](#). Updates about drought, water restrictions, and other District news are normally sent weekly.

# Blue Lake Springs MWC, CA

## Waste Water Fines

- 1<sup>st</sup> – Written Warning
- 2<sup>nd</sup> – \$100 fine and install meter at shareholder's expense
- 3<sup>rd</sup> – \$1,000 fine

## Drought Stage 3

## Response Actions

- Enforce extensive restrictions on water use and implement water rationing to decrease "normal" demand up to 50%
- NO OUTSIDE WATERING
- Fines are DOUBLED
- Restrictors added to non-compliant shareholders



# The Problem with Conservation

- We are in the business of selling water
- If we want customers to use less water, what impact does that have on our revenues?



When you conserve water...  
we have a deficit... So I  
have to raise your rates!



A blue-tinted photograph of industrial machinery, possibly a water treatment plant, featuring large pipes and mechanical components.

# Encouraging Conservation— An In-Depth Look at Non-Pricing Approaches

Glenn Barnes

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The University of North Carolina at Chapel Hill

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