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A. Modesto Home Water Reports



WaterSmart Program
P.O. Box 767
Modesto, CA 95353

WS Cycle #1

209.577.5395

watersmartmodesto@modestogov.com

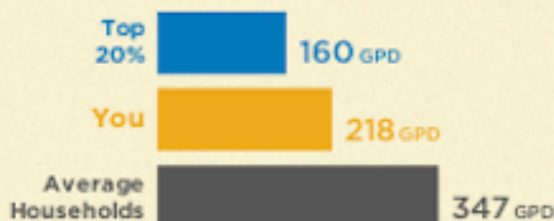
Your WaterScore

AUG 16 TO SEP 8, 2016



Nice work, WaterSaver.
Continue to use water wisely.

Gallons Per Day (GPD)
7 CCF = 218 GPD



Your water use is compared to homes in Modesto with 1 occupant and a similar yard size.

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 2504 WOLFEBORO LN
ACCOUNT NUMBER: 105679-39960



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
modesto.watersmart.com

<RecipientID>modesto420403</RecipientID>



Your first Home Water Report!

Hi, Dennis. Welcome to your new report.

- Learn how much water you use, in gallons per day (1 CCF = 748 gallons)
- See how that use compares, and where it goes
- Choose ways to use water more efficiently



When can you water?

By ordinance of City of Modesto:

- **Even house numbers:** Tuesday and Saturday
- **Odd house numbers:** Wednesday and Sunday
- No outdoor water between 9:00am and 7:00pm

Water waste is subject to fines.

Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Run a full dishwasher

Fill your dishwasher completely to avoid using excess water.



Install faucet aerators

9
\$14

GALLONS PER DAY
DOLLARS PER YEAR



Fully load clothes washer

4
\$4

GALLONS PER DAY
DOLLARS PER YEAR



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

modesto.watersmart.com

Account: 105679-39960
Zip Code: 95358

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



WaterSmart Program
P.O. Box 767
Modesto, CA 95353

WS Cycle #2

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 3400 LAUDING WAY
ACCOUNT NUMBER: 295809-156926



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
modesto.watersmart.com

209.577.5395

watersmartmodesto@modestogov.com

Your WaterScore

OCT 4 TO NOV 1, 2016



You used **more water** than
similar households.

Gallons Per Day (GPD)
44 CCF = 1,134 GPD



Your water use is compared to homes in Modesto
with 5+ occupants and a similar yard size.

<RecipientID>modesto521464</RecipientID>



We can help!

High water users often have leaks that they didn't know existed. Check for household leaks today:

- Visually inspect showerheads and faucets.
- Use dye tablets to check for slow toilet leaks.
- Examine irrigation nozzles and hoses.
- Call 209.342.2246 to schedule a free water audit.



Fall back to one day per week

It's still warm, but fewer hours of daylight mean your plants need less water.

Please choose to help City of Modesto meet our water savings goal this fall or winter. Reduce or turn off your irrigation today.

Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Don't water
if soil is
moist



Mulch
Under
Shrubs,
Bushes and
Trees



Upgrade to
rotating
nozzles



71

GALLONS
PER DAY



\$48

DOLLARS
PER YEAR



34

GALLONS
PER DAY



\$24

DOLLARS
PER YEAR



22

GALLONS
PER DAY



\$15

DOLLARS
PER YEAR

REBATE
OFFERED



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

modesto.watersmart.com

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



WaterSmart Program
P.O. Box 767
Modesto, CA 95353

WS Cycle #3

209.577.5395

watersmartmodesto@modestogov.com

Your WaterScore

DEC 13 TO JAN 9, 2017



Way to go, WaterSaver!
You ranked in the top 20%.

Gallons Per Day (GPD)
5 CCF = 133 GPD



Your water use is compared to homes in Modesto with 4 occupants and a similar yard size.

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 3200 BOUQUET CT
ACCOUNT NUMBER: 273163-110242



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
modesto.watersmart.com

<RecipientID>modesto930780</RecipientID>



Protect your pipes

Take these steps to prevent costly property damage when temperatures drop:

- Turn irrigation off for the winter season.
- Cover irrigation control valves to prevent leakage and freezing.
- Insulate pipes that could freeze.



What is GPD?

Gallons Per Day (GPD) is a daily average of your household use in your 28-day billing period.



Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Fully load clothes washer



10

GALLONS PER DAY



\$9

DOLLARS PER YEAR



Install high-efficiency showerheads



10

GALLONS PER DAY



\$16

DOLLARS PER YEAR



Fill bath 1/3 of the way



7

GALLONS PER DAY



\$13

DOLLARS PER YEAR



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

modesto.watersmart.com

Account: 273163-110242

Zip Code: 95356

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



WaterSmart Program
P.O. Box 767
Modesto, CA 95353

WS Cycle #4

209.577.5395

watersmartmodesto@modestogov.com

Your WaterScore

FEB 16 TO MAR 15, 2017



Nice work, WaterSaver.
Continue to use water wisely.

Gallons Per Day (GPD)
8 CCF = 213 GPD



Your water use is compared to homes in Modesto with 4 occupants and a similar yard size.

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 1821 HITO DR
ACCOUNT NUMBER: 311123-132130



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
modesto.watersmart.com

<RecipientID>modesto1422096</RecipientID>



Your use compared to last year

You are using **32% less** water than you did in the previous twelve-month period.



Did you know?



An average sprinkler zone uses **12 gallons** of water per minute.

Running your sprinkler 20 minutes a day will use **240 GPD**.

Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Don't water if soil is moist

424 GALLONS PER DAY
\$289 DOLLARS PER YEAR



Upgrade to rotating nozzles

130 GALLONS PER DAY
\$89 DOLLARS PER YEAR
REBATE OFFERED



Install faucet aerators

24 GALLONS PER DAY
\$38 DOLLARS PER YEAR

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

modesto.watersmart.com

Account: 311123-132130
Zip Code: 95363

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



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P.O. Box 767
Modesto, CA 95353

WS Cycle #5

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 3144 KNIGHTSBRIDGE DR
ACCOUNT NUMBER: 398143-202506



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
modesto.watersmart.com

209.577.5395

watersmartmodesto@modestogov.com

Your WaterScore

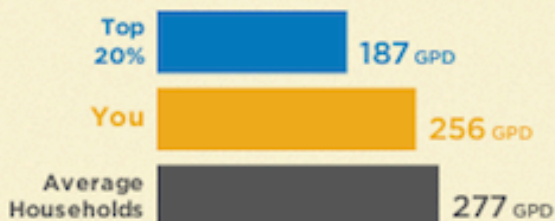
MAY 2 TO JUN 5, 2017



Nice work, WaterSaver.
Continue to use water wisely.

Gallons Per Day (GPD)

12 CCF = 256 GPD



Your water use is compared to homes in Modesto with 4 occupants and a similar yard size.

<RecipientID>modesto1908906</RecipientID>



Seasonal irrigation tune-up

Remember to look for:

- Shrubs or fences blocking your sprinkler heads
- Broken or clogged sprinkler heads
- Sprinklers spraying sidewalks or not popping up
- Punctured hoses or leaky valves



Get the best recommendations

Log on now and adjust your Household Profile. The more we get to know you, the better we can recommend actions that fit your household.



modesto.watersmart.com

Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Fully load clothes washer



10

GALLONS PER DAY



\$9

DOLLARS PER YEAR



Fill bath 1/3 of the way



7

GALLONS PER DAY



\$13

DOLLARS PER YEAR



Turn off water when scrubbing



7

GALLONS PER DAY



\$4

DOLLARS PER YEAR



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

modesto.watersmart.com

Account: 398143-202506

Zip Code: 95355

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



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P.O. Box 767
Modesto, CA 95353

WS Cycle #6

209.577.5395

watersmartmodesto@modestogov.com

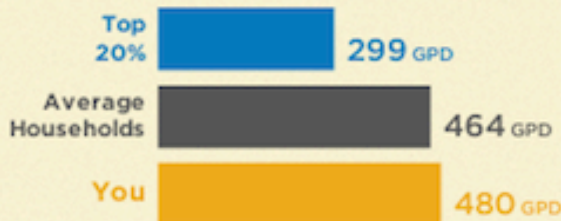
Your WaterScore

JUN 15 TO JUL 12, 2017



Nice work, WaterSaver.
Continue to use water wisely.

Gallons Per Day (GPD)
18 CCF = 480 GPD



Your water use is compared to homes in Modesto with 4 occupants and a similar yard size.

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 1716 HITO DR
ACCOUNT NUMBER: 409985-132252



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
modesto.watersmart.com

<RecipientID>modesto2201222</RecipientID>



When can you water?

A new watering schedule is in effect:

- **Even house numbers:** Tues., Thur., & Sat.
- **Odd house numbers:** Wed., Fri., & Sun.
- No outdoor watering from 12:00pm to 7:00pm or during (and for 48 hours following) rain

Visit modestogov.com/915/Watering-Schedule for more information.



We're here to help



The Water Rate Assistance Program and Senior/Disabled Low Income Assistance Program were created to assist households who need help with their water bill.

For more information, visit modestogov.com or call (209) 577-5395.

Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



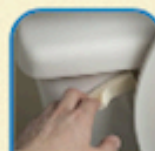
Upgrade clothes washer

14 GALLONS PER DAY
\$15 DOLLARS PER YEAR REBATE OFFERED



Upgrade to rotating nozzles

10 GALLONS PER DAY
\$7 DOLLARS PER YEAR REBATE OFFERED



Think before you flush

10 GALLONS PER DAY
\$7 DOLLARS PER YEAR

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

modesto.watersmart.com

Account: 409985-132252
Zip Code: 95363

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



WaterSmart Program
P.O. Box 767
Modesto, CA 95353

HWS Cycle #1

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: [REDACTED]

ACCOUNT NUMBER: [REDACTED]

209.577.5395

watersmartmodesto@modestogov.com



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
modesto.watersmart.com

<RecipientID>modesto436097</RecipientID>

Welcome to Your Water Report

AUG 4 TO SEP 7, 2016



You'll see how your water use
compares to similar homes.

Gallons Per Day (GPD)

115 CCF = 2,457 GPD



Your water use is compared to homes in Modesto
with 5+ occupants and a similar yard size.



Your first Home Water Report!

Hi, John. Welcome to your new report.

- Learn how much water you use,
in gallons per day (1 CCF = 748 gallons)
- See how that use compares, and where it goes
- Choose ways to use water more efficiently



Save Water. Save Money

The City of Modesto has a new rebate program!



- Sprinkler controller and nozzles
- Drip irrigation
- Turf replacement
- Toilet and clothes washer
- Rain barrels

Visit modestogov.com/1659/Water-Rebates
or call 209.577.5395

Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Turn down
your water
heater to
120°

Water heating is the
second largest energy
use in the home. Turn
down to 120° to save!

SAVES GAS! 29 therms/year



Run a full
dishwasher

3
\$5

GALLONS
PER DAY
DOLLARS
PER YEAR



Summer
savings:
water-wise
plants

320
\$218

GALLONS
PER DAY
DOLLARS
PER YEAR

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

modesto.watersmart.com

Account: 84121-16682

Zip Code: 95355

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P.O. Box 767
Modesto, CA 95353

HWS Cycle #2

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 501 N. JEFFERSON ST
ACCOUNT NUMBER: 123-4567-89

209.577.5395

watersmartmodesto@modestogov.com



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
modesto.watersmart.com

<RecipientID>modesto538974</RecipientID>

Your WaterScore

OCT 4 TO NOV 1, 2016

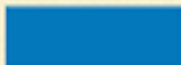


Nice work, WaterSaver.
Continue to use water wisely.

Gallons Per Day (GPD)

13 CCF = 335 GPD

Top
20%



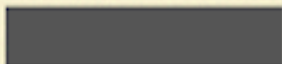
240 GPD

You



335 GPD

Average
Households

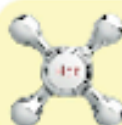


374 GPD

Your water use is compared to homes in Modesto
with 4 occupants and a similar yard size.



Reduce hot water use



Did you know that heating
water is the second most
energy intensive activity in
your home?

Log on for information and offers for the water,
energy, and money saving actions below!



Fall back to one day per week

It's still warm, but fewer hours of daylight mean
your plants need less water.

Please choose to help City of Modesto meet our
water savings goal this fall or winter. Reduce or
turn off your irrigation today.

Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Switch to
smart
controller



30

GALLONS
PER DAY



\$20

DOLLARS
PER YEAR

REBATE
OFFERED



Install
faucet
aerators



24

GALLONS
PER DAY



\$38

DOLLARS
PER YEAR

SAVES GAS! 22 therms/year



Reduce
shower to
5 minutes



19

GALLONS
PER DAY



\$32

DOLLARS
PER YEAR

SAVES GAS! 20 therms/year



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

modesto.watersmart.com

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



WaterSmart Program
P.O. Box 767
Modesto, CA 95353

HWS Cycle #3

209.577.5395

watersmartmodesto@modestogov.com

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 20 CALIFORNIA ST, SUITE 200
ACCOUNT NUMBER: 123-4567-89



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
modesto.watersmart.com

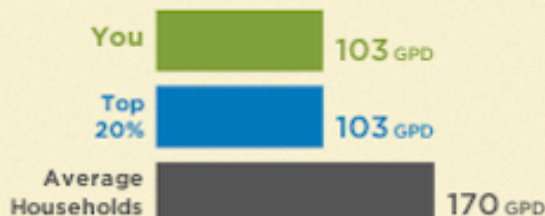
Your WaterScore

DEC 6 TO JAN 3, 2017



Way to go, WaterSaver!
You ranked in the top 20%.

Gallons Per Day (GPD)
4 CCF = 103 GPD



Your water use is compared to homes in Modesto with 2 occupants and a similar yard size.

<RecipientID>modesto960906</RecipientID>



Did you know?



Hot water running for 5 minutes uses as much energy as a 60-watt light bulb switched on for 14 hours.



Protect your pipes

Take these steps to prevent costly property damage when temperatures drop:

- Turn irrigation off for the winter season.
- Cover irrigation control valves to prevent leakage and freezing.
- Insulate pipes that could freeze.

Your personalized action plan

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

Log on to update your profile

Save money and protect your home with the following actions:



Upgrade to rotating nozzles



9

GALLONS PER DAY



\$6

DOLLARS PER YEAR

REBATE OFFERED



Reduce shower to 5 minutes



8

GALLONS PER DAY



\$14

DOLLARS PER YEAR

SAVES GAS! 9 therms/year



Mulch around your plants



5

GALLONS PER DAY



\$4

DOLLARS PER YEAR



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

modesto.watersmart.com

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



WaterSmart Program
P.O. Box 767
Modesto, CA 95353

HWS Cycle #4

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 1808 PLAZA DE MARIA
ACCOUNT NUMBER: 532819-13536

209.577.5395

watersmartmodesto@modestogov.com



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
modesto.watersmart.com

Your WaterScore

FEB 8 TO MAR 7, 2017



Way to go, WaterSaver!
You ranked in the top 20%.

Gallons Per Day (GPD)
4 CCF = 106 GPD



Your water use is compared to homes in Modesto with 3 occupants and a similar yard size.

<RecipientID>modesto1426316</RecipientID>



What uses the most hot water?

Boost your water savings with energy savings! Log on for ideas to save water with your showers.



Did you know?



An average sprinkler zone uses **12 gallons** of water per minute.

Running your sprinkler 20 minutes a day will use **240 GPD**.

Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Turn down your water heater to 120°

Water heating is the second largest energy use in the home. Turn down to 120° to save!

SAVES GAS! 19 therms/year



Run a full dishwasher

2 GALLONS PER DAY
\$3 DOLLARS PER YEAR

SAVES GAS! 2 therms/year



Install faucet aerators

19 GALLONS PER DAY
\$30 DOLLARS PER YEAR

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

modesto.watersmart.com

Account: 532819-13536

Zip Code: 95350

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



WaterSmart Program
P.O. Box 767
Modesto, CA 95353

HWS Cycle #5

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 917 NARVIK LN
ACCOUNT NUMBER: 34013-13400

209.577.5395

watersmartmodesto@modestogov.com



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
modesto.watersmart.com

<RecipientID>modesto1909068</RecipientID>

Your WaterScore

MAY 3 TO JUN 6, 2017



Way to go, WaterSaver!
You ranked in the top 20%.

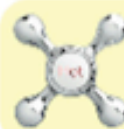
Gallons Per Day (GPD)
5 CCF = 106 GPD



Your water use is compared to homes in Modesto with 1 occupant and a similar yard size.



Did you Know?



Saving 10 gallons per day of hot water saves 3,650 gallons of water, 49 therms of gas, and an average of \$60 per year.

Install high-efficiency showerheads and wash clothes in cold water to save hot water.



Seasonal irrigation tune-up

Remember to look for:

- Shrubs or fences blocking your sprinkler heads
- Broken or clogged sprinkler heads
- Sprinklers spraying sidewalks or not popping up
- Punctured hoses or leaky valves

Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Install high-efficiency showerheads

3 GALLONS PER DAY
\$5 DOLLARS PER YEAR

SAVES GAS! 3 therms/year



Switch to smart controller

23 GALLONS PER DAY
\$16 DOLLARS PER YEAR
REBATE OFFERED



Install faucet aerators

9 GALLONS PER DAY
\$14 DOLLARS PER YEAR

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

modesto.watersmart.com

Account: 34013-13400

Zip Code: 95350

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



WaterSmart Program
P.O. Box 767
Modesto, CA 95353

HWS Cycle #6

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 8405 YAMAMOTO WAY
ACCOUNT NUMBER: 495393-132192

209.577.5395

watersmartmodesto@modestogov.com



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
modesto.watersmart.com

<RecipientID>modesto2201263</RecipientID>

Your WaterScore

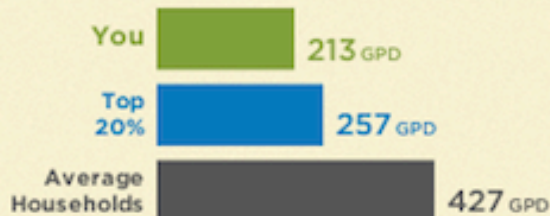
JUN 15 TO JUL 12, 2017



Way to go, WaterSaver!
You ranked in the top 20%.

Gallons Per Day (GPD)

8 CCF = 213 GPD



Your water use is compared to homes in Modesto with 3 occupants and a similar yard size.



Save water and energy



Replace your clothes washer with a new high efficiency clothes washer and receive a rebate. Find out more at modestogov.com.



When can you water?

A new watering schedule is in effect:

- **Even house numbers:** Tues., Thur., & Sat.
- **Odd house numbers:** Wed., Fri., & Sun.
- No outdoor watering from 12:00pm to 7:00pm or during (and for 48 hours following) rain

Visit modestogov.com/915/Watering-Schedule for more information.

Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Fill bath 1/3 of the way

5 GALLONS PER DAY
\$9 DOLLARS PER YEAR

SAVES GAS! 6 therms/year



Fully load clothes washer

8 GALLONS PER DAY
\$8 DOLLARS PER YEAR

SAVES GAS! 2 therms/year



Install faucet aerators

19 GALLONS PER DAY
\$30 DOLLARS PER YEAR



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

modesto.watersmart.com

Account: 495393-132192

Zip Code: 95363

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

B. Modesto Home Water Report Messaging Schedule

Cycle	WS	WS+	HWS	HWS+
1 September	welcome message 1% water drinkable Modesto rebate info box 3 water recs, prioritized by savings	welcome message water ordinance water ordinance 3 water recs, prioritized by savings	welcome message 1% water drinkable Modesto rebate info box 1 hot water rec, 2 water recs	welcome message water ordinance water ordinance 1 hot water rec, 2 water recs
2 November	we can help (water leaks - high users); save water, rain or shine (med/low users) fall back to one (or two) day a week irrigation 3 water recs, prioritized by savings	we can help (water leaks - high users); save water, rain or shine (med/low users) water ordinance 3 water recs, prioritized by savings	reduce hot water use fall back to one (or two) day a week irrigation 2 hot water recs, 1 water rec	reduce hot water use water ordinance 2 hot water recs, 1 water rec
3 January	Protect your pipes Surprised? (high users); what is GPD (low users) 3 water recs, prioritized by savings	Protect your pipes Surprised? (high users); what is GPD (low users) 3 water recs, prioritized by savings	Protect your pipes did you know: HW and light bulb 1 hot water rec, 2 water recs	Protect your pipes did you know: HW and light bulb 1 hot water rec, 2 water recs
4 March	sprinkler zone your use compared to last year 3 water recs, prioritized by savings	sprinkler zone water ordinance 3 water recs, prioritized by savings	What uses most hot water? your use compared to last year 2 hot water recs, 1 water rec	What uses most hot water? water ordinance 2 hot water recs, 1 water rec
5 May	seasonal irrigation tune-up water wise garden 3 water recs, prioritized by savings	seasonal irrigation tune-up water ordinance 3 water recs, prioritized by savings	DYK 10 G water wise garden 1 hot water rec, 2 water recs	DYK 10 G water ordinance 1 hot water rec, 2 water recs
6 July	your use is/isn't seasonal water ordinance 3 water recs, prioritized by savings	your use is/isn't seasonal water ordinance 3 water recs, prioritized by savings	your use is/isn't seasonal water ordinance 2 hot water recs, 1 water rec	your use is/isn't seasonal water ordinance 2 hot water recs, 1 water rec

C. Modesto Detailed Description of Data by Source

Table 1 Detailed description of data by source (Modesto)

	Measurement Unit	Observational Unit	Frequency	Time period
<i>City of Modesto</i>				
water consumption	CCF	customer-site	monthly	2011-2017
billing period length	days	customer-site	monthly	2011-2018
primary site use (e.g. commercial)		customer-site	monthly	2011-2017
address		customer-site	monthly	2011-2017
customer type (e.g. owner, agent)		customer-site	monthly	2013-2017
discount eligibility	binary	customer-site	monthly	2013-2017
water prices	dollars per CCF	meter size	daily	2011-2020
water appliance rebate applications	binary	household	daily	2016-2017
meter installation date	date	customer-site	one time	Jan 2012- Jul 2017
meter size	inches	customer-site	monthly	2011-2017
<i>Pacific Gas & Electric</i>				
natural gas consumption	therms	customer-site	monthly	2012-2017
<i>Watersmart</i>				
pre-treatment water habits		household	one time	2016
Home Water Report dates and messages		household	bi-monthly	2016-2017
treatment group		household	monthly	2016
<i>County Assessor Office</i>				
property size	square feet	site	one time	2015
property characteristics (e.g pool, AC)	varies	site	one time	2015
property value	dollars	site	one time	2015
<i>NOAA</i>				
average, min, max, temperature	degrees F	city	hourly	Aug 2015 - Dec 2017
precipitation	inches	city	hourly	Aug 2015 - Dec 2017

D. Riverside Home Water Reports



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
riversideca.gov/utilities/watersmart

<RecipientID>riverside263601</RecipientID>

Your WaterScore

AUG 9 TO SEP 9, 2016



Way to go, WaterSaver!
You ranked in the top 20%.

Gallons Per Day (GPD)
2 CCF = 46 GPD



Your water use is compared to homes in the City of Riverside with 3 occupants and a similar yard size.



Your water use in context

Your WaterScore compares your use to others in Riverside who also have **3 occupants** and a **similar yard size**. Is your household different? Log on to tune your profile and see adjusted comparisons.

riversideca.gov/utilities/watersmart



Where is your water from?



Riverside is 100% water independent—your drinking water comes from local groundwater sources.

Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Install faucet aerators

19 GALLONS PER DAY
\$37 DOLLARS PER YEAR



Upgrade to a high-efficiency toilet

17 GALLONS PER DAY
\$15 DOLLARS PER YEAR
REBATE OFFERED



Upgrade clothes washer

13 GALLONS PER DAY
\$15 DOLLARS PER YEAR

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

riversideca.gov/utilities/watersmart

Account Number: 0188786001
Zip Code: 92505

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



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
riversideca.gov/utilities/watersmart

<RecipientID>riverside427796</RecipientID>

Your WaterScore

OCT 26 TO NOV 28, 2016



Way to go, WaterSaver!
You ranked in the top 20%.

Gallons Per Day (GPD)
9 CCF = 198 GPD



Your water use is compared to homes in the City of Riverside with 2 occupants and a similar yard size.



Adjust your irrigation controller

It's still warm, but fewer hours of daylight mean your plants need less water.

Please help the City of Riverside use water efficiently this winter. Reduce or turn off your irrigation today.



How does water get to you?



Riverside Public Utilities owns and maintains over 1,000 miles of pipes that deliver water to your home.

Your personalized action plan

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

Log on to update your profile

Save money and protect your home with the following actions:



Mulch around your plants

22 GALLONS PER DAY
\$19 DOLLARS PER YEAR



Install faucet aerators

14 GALLONS PER DAY
\$28 DOLLARS PER YEAR



Upgrade to rotating nozzles

14 GALLONS PER DAY
\$12 DOLLARS PER YEAR
REBATE OFFERED

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

riversideca.gov/utilities/watersmart

Account Number: 0168367000
Zip Code: 92504

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

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 11282 SWENSON ST
ACCOUNT NUMBER: 0188786001



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
riversideca.gov/utilities/watersmart

<RecipientID>riverside621951</RecipientID>

Your WaterScore

JAN 11 TO FEB 7, 2017



You used **more water** than
similar households.

Gallons Per Day (GPD)
16 CCF = 427 GPD



Your water use is compared to homes in the City of Riverside
with 3 occupants and a similar yard size.



Don't miss another leak

Not all leaks are easily visible. Protect your property by signing up for alerts. Log on and we'll email you or send you a text message when we spot irregular water use.

riversideca.gov/utilities/watersmart



Surprised by your water use?

Many people are. Their use seems high and they wonder if they have a leak. However, it looks like **427 GPD is a typical level of use for you.**

Want help reducing?

- **Focus on your irrigation** - that accounts for an estimated 75% of your annual water use.
- **Go online** for more ways to save, help ruling out a leak, and to update your household profile.

Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Install
faucet
aerators

19 GALLONS
PER DAY
\$37 DOLLARS
PER YEAR



Switch to
weather-
based
controller

18 GALLONS
PER DAY
\$16 DOLLAR
PER YEAR
REBATE
OFFERED



Upgrade to
a high-
efficiency
toilet

17 GALLONS
PER DAY
\$15 DOLLAR
PER YEAR
REBATE
OFFERED

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

riversideca.gov/utilities/watersmart

Account Number: 0188786001
Zip Code: 92505

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

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 11282 SWENSON ST
 ACCOUNT NUMBER: 0188786001



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
riversideca.gov/utilities/watersmart

<RecipientID>riverside1103692</RecipientID>

Your WaterScore

MAR 10 TO APR 10, 2017



You used **more water** than
 similar households.

Gallons Per Day (GPD)
 25 CCF = 584 GPD



Your water use is compared to homes in the City of Riverside with 3 occupants and a similar yard size.



Get the best recommendations

Log on now and adjust your Household Profile. The more we get to know you, the better we can recommend actions that fit your household.

riversideca.gov/utilities/watersmart



All health standards met



Staff work hard to keep your tap water high-quality:
 - **200** components tested
 - **Daily**, weekly, and annual testing

More information: BlueRiverside.com

Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Upgrade clothes washer

13 GALLONS PER DAY
\$15 DOLLARS PER YEAR
 REBATE OFFERED



Water at dawn or dusk

4 GALLONS PER DAY
\$4 DOLLARS PER YEAR



Mulch around your plants

2 GALLONS PER DAY
\$2 DOLLARS PER YEAR

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

riversideca.gov/utilities/watersmart

Account Number: 0188786001
 Zip Code: 92505

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



WaterSmart Program
3750 University Ave
3rd Floor
Riverside, CA 92501

WS Cycle #5

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 11282 SWENSON ST
ACCOUNT NUMBER: 0188786001

951.826.5485 watersmart@riversideca.gov



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
riversideca.gov/utilities/watersmart

<RecipientID>riverside1267917</RecipientID>

Your WaterScore

MAY 10 TO JUN 8, 2017



You used **more water** than
similar households.

Gallons Per Day (GPD)
57 CCF = 1,421 GPD



Your water use is compared to homes in the City of Riverside with 3 occupants and a similar yard size.



RPU is working for you

Water may fall from the sky, but it takes resources to get that water to you safely and reliably:

- Pumping and transporting water
- Treating and testing water and wastewater
- Developing and maintaining infrastructure
- Planning for changing water supplies



Sign up for My Use Notifications

Patricia, get notified if your use is higher than normal. Go online today to set up your alerts. Choose to get an email, text or voice message when your use exceeds the threshold you set.



riversideca.gov/utilities/watersmart

Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Fully load
clothes
washer



8

GALLONS
PER DAY



\$10

DOLLARS
PER YEAR



Think
before you
flush



7

GALLONS
PER DAY



\$7

DOLLARS
PER YEAR



Install high-
efficiency
showerheads



7

GALLONS
PER DAY



\$15

DOLLARS
PER YEAR



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

riversideca.gov/utilities/watersmart

Account Number: 0188786001
Zip Code: 92505

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

951.826.5485

watersmart@riversideca.gov



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
riversideca.gov/utilities/watersmart

<RecipientID>riverside1432120</RecipientID>

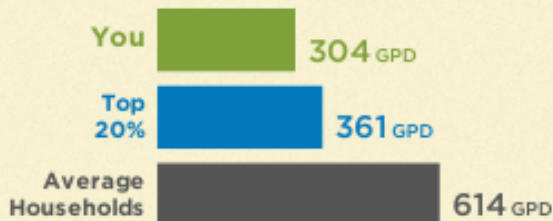
Your WaterScore

JUL 7 TO AUG 2, 2017



Way to go, WaterSaver!
You ranked in the top 20%.

Gallons Per Day (GPD)
11 CCF = 304 GPD



Your water use is compared to homes in the City of Riverside with 3 occupants and a similar yard size.



Get your report by email



Thanks for doing your part to save water in August. Reduce your impact even more by signing up to receive your Water Report via email.

Sign up online:

riversideca.gov/utilities/watersmart



Did you know?



An average sprinkler zone uses **12 gallons** of water per minute.

Running your sprinkler 20 minutes a day will use **240 GPD**.

Your personalized plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Fully load clothes washer



8

GALLONS PER DAY



\$10

DOLLARS PER YEAR



Install high-efficiency showerheads



7

GALLONS PER DAY



\$15

DOLLARS PER YEAR



Mulch around your plants



3

GALLONS PER DAY



\$3

DOLLARS PER YEAR



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

riversideca.gov/utilities/watersmart

Account Number: 0136886000
Zip Code: 92503

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

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 5330 HERRERA CT
 ACCOUNT NUMBER: 0143182000



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
riversideca.gov/utilities/watersmart

<RecipientID>riverside263554</RecipientID>

Your WaterScore

AUG 9 TO SEP 9, 2016



Nice work, WaterSaver.
 Continue to use water wisely.

Gallons Per Day (GPD)
 24 CCF = 561 GPD



Your water use is compared to homes in the City of Riverside with 2 occupants and a similar yard size.



Your water use in context

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

riversideca.gov/utilities/watersmart



Reduce hot water use



Did you know that heating water is the second most energy intensive activity in your home?

Log on for information and offers for the water, energy, and money saving actions below!

Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Turn down your water heater to 120°

Water heating is the second largest energy use in the home. Turn down to 120° to save!

SAVES GAS! 12 therms/year



Reduce shower to 5 minutes

8

GALLONS PER DAY

\$17

DOLLARS PER YEAR

SAVES GAS! 9 therms/year



Switch to weather-based controller

75

GALLONS PER DAY

\$67

DOLLARS PER YEAR

REBATE OFFERED

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

riversideca.gov/utilities/watersmart

Account Number: 0143182000
 Zip Code: 92505

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



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
riversideca.gov/utilities/watersmart

951.826.5485 watersmart@riversideca.gov

<RecipientID>riverside428268</RecipientID>

Welcome to Your Water Report

OCT 27 TO NOV 28, 2016



You'll see how your water use compares to similar homes.

Gallons Per Day (GPD)

93 CCF = 2,108 GPD



Your water use is compared to homes in the City of Riverside with 2 occupants and a similar yard size.



Your first Home Water Report!

Hi, Louis. Welcome to your new report.

- Learn how much water you use, in gallons per day (1 CCF = 748 gallons).
- See how that use compares, and where it goes.
- Learn about ways to use water more efficiently.



Get a free efficiency starter kit!




The kit includes three faucet aerators and a high-efficiency showerhead to help you save water and gas.

Request yours today: www.socalgas.com/for-your-home/energy-savings/starter-kit.shtml

Your personalized action plan

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

 [Log on to update your profile](#)

Save money and protect your home with the following actions:



Turn down your water heater to 120°

Water heating is the second largest energy use in the home. Turn down to 120° to save!

SAVES GAS! 14 therms/year



Switch to weather-based controller

577

GALLONS PER DAY

\$515

DOLLARS PER YEAR

REBATE OFFERED



Water at dawn or dusk

432

GALLONS PER DAY

\$386

DOLLARS PER YEAR



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

riversideca.gov/utilities/watersmart

Account Number: 0167149000
 Zip Code: 92504

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



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
riversideca.gov/utilities/watersmart

951.826.5485 watersmart@riversideca.gov

Your WaterScore

JAN 11 TO FEB 7, 2017



Nice work, WaterSaver.
Continue to use water wisely.

Gallons Per Day (GPD)
6 CCF = 160 GPD



Your water use is compared to homes in the City of Riverside with 2 occupants and a similar yard size.

<RecipientID>riverside621904</RecipientID>



What uses the most hot water?

Boost your water savings with energy savings! Log on for ideas to save water with your showers.



Don't miss another leak

Not all leaks are easily visible. Protect your property by signing up for alerts. Log on and we'll email you or send you a text message when we spot irregular water use.

riversideca.gov/utilities/watersmart

Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Turn down your water heater to 120°

Water heating is the second largest energy use in the home. Turn down to 120° to save!

SAVES GAS! 12 therms/year



Reduce shower to 5 minutes

8

GALLONS PER DAY

\$17

DOLLARS PER YEAR

SAVES GAS! 9 therms/year



Switch to weather-based controller

70

GALLONS PER DAY

\$63

DOLLARS PER YEAR

REBATE OFFERED

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

riversideca.gov/utilities/watersmart

Account Number: 0143182000
Zip Code: 92505

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



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
riversideca.gov/utilities/watersmart

<RecipientID>riverside1103655</RecipientID>

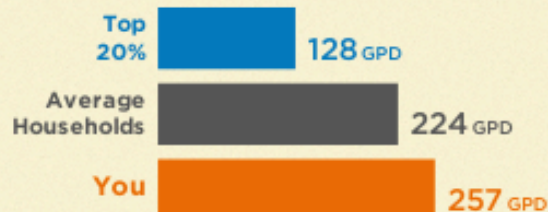
Your WaterScore

MAR 15 TO APR 12, 2017



You used **more water** than
 similar households.

Gallons Per Day (GPD)
 10 CCF = 257 GPD



Your water use is compared to homes in the City of Riverside with 2 occupants and a similar yard size.



Get a tankless water heater



A tankless water heater can save you over \$100 per year on your energy bill.

Rebates are available at
socialgas.com.



Seasonal irrigation tune-up

Remember to look for:

- Shrubs or fences blocking your sprinkler heads
- Broken or clogged sprinkler heads
- Sprinklers spraying sidewalks or not popping up
- Punctured hoses or leaky valves

Your personalized action plan

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

[Log on to update your profile](#)

Save money and protect your home with the following actions:



Reduce shower to 5 minutes

11 GALLONS PER DAY
\$22 DOLLARS PER YEAR

SAVES GAS! 11 therms/year



Mulch around your plants

16 GALLONS PER DAY
\$14 DOLLARS PER YEAR



Install faucet aerators

14 GALLONS PER DAY
\$28 DOLLARS PER YEAR

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

riversideca.gov/utilities/watersmart

Account Number: 0198637000
 Zip Code: 92505

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



WaterSmart Program
3750 University Ave
3rd Floor
Riverside, CA 92501

HWS Cycle #5

951.826.5485

watersmart@riversideca.gov

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 5330 HERRERA CT
ACCOUNT NUMBER: 0143182000



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
riversideca.gov/utilities/watersmart

<RecipientID>riverside1267870</RecipientID>

Your WaterScore

MAY 9 TO JUN 7, 2017



Nice work, WaterSaver.
Continue to use water wisely.

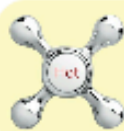
Gallons Per Day (GPD)
25 CCF = 623 GPD



Your water use is compared to homes in the City of Riverside with 2 occupants and a similar yard size.



Did you Know?



Saving 10 gallons per day of hot water saves 3,650 gallons of water, 49 therms of gas, and \$44 per year.

Install high-efficiency showerheads and wash clothes in cold water to save hot water.



RPU is working for you

Water may fall from the sky, but it takes resources to get that water to you safely and reliably:

- Pumping and transporting water
- Treating and testing water and wastewater
- Developing and maintaining infrastructure
- Planning for changing water supplies

Your personalized action plan

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

Log on to update your profile

Save money and protect your home with the following actions:



Fill bath 1/3 of the way



3

GALLONS PER DAY



\$8

DOLLARS PER YEAR

SAVES GAS! 4 therms/year



Fully load clothes washer



6

GALLONS PER DAY



\$8

DOLLARS PER YEAR

SAVES GAS! 2 therms/year



Water at dawn or dusk



58

GALLONS PER DAY



\$52

DOLLARS PER YEAR



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

riversideca.gov/utilities/watersmart

Account Number: 0143182000
Zip Code: 92505

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

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 5412 CHALLEN AVE
ACCOUNT NUMBER: 0123897000



GO PAPERLESS. SEE ALL INFO & PRODUCTS AT:
riversideca.gov/utilities/watersmart

<RecipientID>riverside1432343</RecipientID>

Your WaterScore

JUL 6 TO AUG 1, 2017



Way to go, WaterSaver!
You ranked in the top 20%.

Gallons Per Day (GPD)
9 CCF = 249 GPD



Your water use is compared to homes in the City of Riverside with 2 occupants and a similar yard size.



Want to save water and energy?

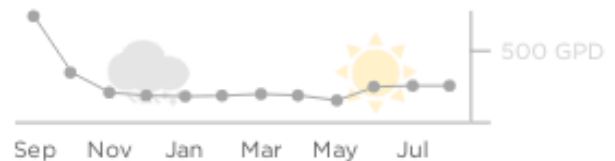


Replace your clothes washer with an Energy Star-rated high efficiency clothes washer and receive a rebate. Find out more at greenriverside.com and socialgas.com/rebates



Your use is seasonal

Your summer water use is **more than double** your winter use, likely due to irrigation. Log on for watering advice and water-saving plant choices.



Your personalized plan

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

Log on to update your profile

Save money and protect your home with the following actions:



Install faucet aerators

14 GALLONS PER DAY

\$28 DOLLARS PER YEAR

SAVES GAS! 13 therms/year



Water at dawn or dusk

9 GALLONS PER DAY

\$9 DOLLARS PER YEAR



Think before you flush

8 GALLONS PER DAY

\$7 DOLLARS PER YEAR

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

riversideca.gov/utilities/watersmart

Account Number: 0123897000
Zip Code: 92503

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

E. Riverside Home Water Report Messaging Schedule

Riverside HWS messaging

Cycle 1

Reduce hot water use



Did you know that heating water is the second most energy intensive activity in your home?

Log on for information and offers for the water, energy, and money saving actions below!

Cycle 2

Get a free efficiency starter kit!



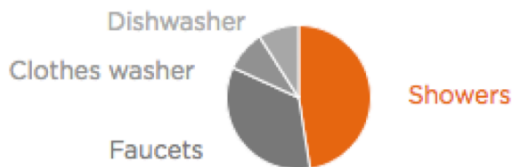
The kit includes three faucet aerators and a high-efficiency showerhead to help you save water and gas.

Request yours today: www.socalgas.com/for-your-home/energy-savings/starter-kit.shtml

Cycle 2

What uses the most hot water?

Boost your water savings with energy savings! Log on for ideas to save water with your showers.



Cycle 4

Get a tankless water heater



A tankless water heater can save you over \$100/year on your energy bill. Rebates are available at www.socalgas.com/err:empty

Cycle 5

Did you Know?



If you saved 10 gallons per day of hot water, you would save 3,650 gallons of water, 49 therms of gas, and \$44 per year.

Some of the best ways to save hot water are installing a high-efficiency showerhead or washing your clothes in cold water.

Cycle 6

Want to save water and energy?



Replace your clothes washer with a new ENERGY STAR certified or ENERGY STAR Most Efficient 2016 clothes washer and receive a rebate. Find out more at [socalgas.com/rebates](http://www.socalgas.com/rebates)

F. Riverside Detailed Description of Data by Source

Table 1 Detailed description of data by source (Riverside)

	Measurement Unit	Observational Unit	Frequency	Time period
<i>Riverside Public Utility</i>				
water consumption	CCF	customer-site	monthly	Aug 2015 - Dec 2017
billing period length	days	customer-site	monthly	Aug 2015 - Dec 2017
primary site use		customer-site	monthly	Aug 2015 - Dec 2017
address		customer-site	monthly	Aug 2015 - Dec 2017
electricity consumption	Kwh	Customer-site	Monthly	Jan 2015 - Dec 2017
<i>SoCal Gas</i>				
natural gas consumption*	therms	customer-site	monthly	Aug 2015 - Dec 2017
<i>WaterSmart</i>				
pre-treatment water habits		household	one time	2016
Home Water Report dates and messages		household	bi-monthly	2016-2017
post-treatment water habits		household	one time	2017
treatment group		household	monthly	Sep 2016 - Dec 2017
<i>NOAA</i>				
average, min, max, temperature	degrees F	city	hourly	Aug 2015 - Dec 2017
precipitation	inches	city	hourly	Aug 2015 - Dec 2017
*Data Pending				

G. Hot Water Messaging Development

Hot Water Messaging Content

Various hot water saving measures were brainstormed, developed, and analyzed to determine the top recommended hot water saving measures to be developed into WaterSmart messages and/or recommendations. The selected top three water saving measures (based on water savings and ability of the customer to participate in the measure) were found to be: decreasing water heater temperature by 10°F, decreasing pool temperature a few degrees, and running laundry in cold water.

The initial step in identifying the most feasible and effective hot water savings measures and messages, was to brainstorm as a team. Below, is a summary table of the measures developed by the CWEE team that have the potential to save hot water.

Table 1: Hot Water Savings Measures Brainstorm

Hot Water Sources:	Method of Reduction:
Dishwashing	<ol style="list-style-type: none">1) Install a new high-efficiency, Energy Star and WaterSense certified/approved, dishwasher2) When hand washing - rinse with cool water and use warm (vs. hot) water for washing when hot isn't needed (non-greasy dishes)3) Don't leave water running while washing dishes. Try filling up one side of the sink with soapy water, or using a dish tub, to wash dishes4) run FULL dishwasher loads and choose a) short cycles and b) option to use the "heater booster"
Clothes Washing	<ol style="list-style-type: none">1) Use FULL loads. Make sure you adjust the settings to medium or low if you need to do a wash that isn't "full"2) Use cool or cold water. No need for hot or warm water for the rinse cycle.3) Install a new high-efficiency top-loader, Energy Star and WaterSense certified/approved, dishwasher
Kitchen Sink	<ol style="list-style-type: none">1) Wash hands with cold water2) Avoid using hot water unless needed3) Install water efficient aerator

Hot Water Sources: Method of Reduction:**Bathroom/other**

- 1) Wash hands with cold water (especially if you have a tankless water heater, as it uses a surge of gas/electricity each time the hot water is activated - even if the sink just turns off and on)
- 2) Install water efficient aerator < 1.5 gpm

Showers

- 1) Take shorter showers
- 2) Limit to one shower a day or every other day
- 3) Take a shower instead of a bath
- 4) Take a cooler shower
- 5) Install a low-flow shower head. If you aren't sure if yours is low-flow, do a bucket test.

Other Measures

- 1) Install an energy efficient water heater - tank or tankless
- 2) Install insulation around a tank water heater
- 3) FIX water leaks
- 4) Use COLD or warm water whenever possible - make an effort not to use hot/warm water unless it really makes sense
- 5) Install a drain-water or graywater waste heat recovery system
- 6) Boil the amount you need - don't fill the entire tea pot if only a cup of water is needed
- 7) Put a LID on a pot while waiting for water to boil
- 8) Turn your hot tub down when not in use
- 9) Set water heater thermostat to 120 degrees
- 10) Insulate the first 6 feet of the hot and cold water pipes connected to the water heater
- 11) Install heat traps on the hot and cold pipes at the water heater to prevent heat loss. Most new water heaters have built-in heat traps.
- 12) Drain a quart of water from your water tank every 3 months to remove sediment that impedes heat transfer and lowers the efficiency of your heater
- 13) Install a hot water circulation system (to avoid wasting cold/warm water)
- 14) Install a solar hot water system
- 15) Don't let the water run

We then worked as a team to decide which hot water saving measures were most realistic and likely to be adopted by customers. Once the team narrowed down the brainstorming list, the remaining measures were further investigated and developed. We calculated the energy savings of the associated measure using the specific heat equation to determine the heat required to heat one gallon of water and calculate projected energy savings of each measure (see examples of the hot water savings calculations in Appendix 1). We were then able to identify the top three hot water savings measures and an overall list of priority measures for use by WaterSmart.

The energy variables used for calculations to estimate natural gas savings can be seen in Table 2 and Table 3 below. It was assumed that a typical gas water heater uses approximately 64 gallons of hot water a day and that typical water change in a residential heater is from 58°F to 140°F. Gas energy rates and water rates were gathered from the Southern California Gas Company and Burbank Water and Power, respectively. These rates were used only to develop prototypes of the hot water savings estimates. The hot water saving measures and associated energy savings calculated were used as prototypes for WaterSmart to develop the hot water messaging to be used in the project.

Table 2: Summary of Energy Values Used for Initial Evaluation

1 kwh =	3,412	BTU
1 therm =	100,000	BTU
mass H2O	8.33	lb/gal
volume hot water/day	64	gal/day
c H2O	1	BTU/lb*F
Gas energy rate	0.9	\$/therm
Water Rates	0.00154	\$/gal
Q =	43,716	BTU (per day)
Q =	0.44	therms (per day)

Table 3: Gas Water Heater Energy Consumption

Heater Type	Energy Factor	Q, therms/day
Old tank EF	0.61	0.7167
Energy Star tank EF	0.7	0.6245
Energy Star tankless EF	0.95	0.4602

Below are summary tables showing the savings of the top three hot water saving measures selected.

- 1. Decrease water heater temperature by 10°F.** The energy required for a water heater at 140°F was compared to the energy required for a water heater at 130°F. Table 4 compares the energy savings of these two.

Table 4: Energy Savings for Decreasing Water Heater Temperature by 10°F*

	Therms/day	Therms/year	\$/year
Temp 140F	0.72	261.58	235.42
Temp 130F	0.63	229.68	206.71
Savings =	0.09	31.90	\$ 28.71

*Assumptions: a typical conventional gas water heater and using approximately 64 gallons of hot water a day (typical average but this can be customized for the WaterSmart customer).

- Decreasing Pool Temperature a few degrees.** For calculations, the heat added (3.75 therms/day) was the energy required to raise the pool temperature two degrees.

Table 5: Energy Savings for Decreasing Pool Temperature 2°F*

Pool Size	18,000	Gallons
Decrease	2	Degrees Fahrenheit
Q =	3.75	therms/day
Savings	112	therms/month
	\$ 101.21	Per mo
	675	therms/yr
	\$ 607.26	Per year

*Assumptions: average LA pool volume is 18,000 gallons, gas pool heater 80% efficient, 6-month pool season, no pool cover, reduce pool temp from 82 to 80 degrees. Energy requirements for heating a pool are a function of temperature, evaporation, wind speed, etc. and fairly complicated. To simplify, the below calculations estimate heat requirements as if the pool heater was a hot water heater and used to heat the pool a difference of two degrees daily (to calculate the approximate savings for reducing the pool temp by 2 degrees). This estimate compares nicely to the more complicated pool heating energy requirements (as tested using online calculators)

- Run laundry in cold water.**

Table 6: Energy Savings for Running Laundry in Cold Water*

Hot Water Reductions	7.4	Gal/day/person
	2701	Gal/year/person
Energy Savings		
Q =	0.08	therms/day/person
	30.25	therms /year/person
	\$27.22	\$/person/year

*Assumptions: assume old gas hot water heater and older washing machine that consumes 40 gal/load and baseline use is 50% hot water use/load, using a typical average (per literature) use of 0.37 loads/day per person (this is roughly 1 load per day for a family of 3), and hot water is heated from a typical 58 to 140 degrees.

Other measures that were investigated as saving hot water, include: replacing a gas tank water heater with a tank less gas water heater, replacing an electric tank water heater with a new tank heater, replacing an electric tank water heater with an electric heat pump, replacing an old washing machine with

energy star, replacing a dishwasher with energy star, reducing shower time by three minutes, and turning off the water while showering when soaping down and shaving. The results for these measures can be seen in the tables below.

Table 7: Energy Savings for Replacing a Gas Tank Water Heater with a Tank Less Gas Water Heater*

Savings	Units
0.0066	therms/gal saved
115	therms/year
\$ 103	per year

*Assumptions: 17% water used is hot (energy.gov), family of 4 using avg. 70 gpd (inside water).

Table 8: Energy Savings for Replacing an Electric Tank Water Heater with a New Tank Heater*

Savings	Units
0.0530	Kwh/gal savings
921	Kwh/year
\$ 155	per year

*Assumptions: 17% water used is hot (energy.gov) family of 4 using avg. 70 gpd per person (inside water).

Table 9: Replacing an Electric Tank Water Heater with an Electric Heat Pump*

Savings	Units
0.1658	Kwh/gal savings
2,881	Kwh/year
\$ 486	per year

*Assumptions: 17% water used is hot (energy.gov), family of 4 using avg. 70 gpd per person (inside water).

Table 10: Replacing an Old Washing Machine with Energy Star*

Savings:	
Cold Water	4,045 GPY
Cold Water	11 GPD
Hot Water	1,133 GPY
Energy (Gas)	15 therms
Energy (Electric)	273 kwh
Total Savings (Gas)	\$ 20/yr
Total savings (Electric)	\$ 52/yr

*Assumptions: 28% hot water used in machine, old tank water heater.

Table 11: Replacing a Dishwasher with an Energy Star*

Savings:	
Hot Water	3,449 GPY
Hot Water	9 GPD
Energy (Gas)	46 therms
Energy (Electric)	831 kwh
Total Savings (Gas)	\$ 47/yr
Total Savings (Electric)	\$ 146/yr

*Assumptions: 100% hot water used, old tank water heater.

Table 12: Reducing Shower Time by Three Minutes*

Savings:	
Cold water	17,520 GPY
Cold water	48 GPD
Hot water	12,790 GPY
Energy (Gas)	171 therms
Energy (Electric)	3,082 kwh
Total savings (Gas)	\$ 181/yr
Total savings (Electric)	\$ 547/yr

*Assumptions: Family of 4, assuming avg. of 4 gpm showerhead, 73% hot water used, old tank water heaters, 1 shower/day.

Table 13: Turn Off the Water While Showering when Soaping Down and Shaving*

Savings:	
Cold water	17,520 GPY
Hot water	12,790 GPY
Energy (Gas)	171 therms
Energy (Electric)	3,082 kwh
Total savings (Gas)	\$ 181/yr
Total savings (Electric)	\$ 547/yr

*Assumptions: Family of 4, assuming avg. of 4 gpm showerhead, 73% hot water used, old tank water heaters, 1 shower/day, avg. of 3 minutes saved per person.

WaterSmart integrated the hot water measures into the WaterSmart platform and developed the calculations per their internal standards. Together, WaterSmart and CWEE developed a priority list for the hot water recommendations for WaterSmart to utilize when deploying the hot water Home Water Reports. These priority hot water saving measures are shown in the table below. In addition, examples of hot water messaging prototypes are shown in Appendix 2. A complete sample of the hot water messages used for this project will be submitted at the end of the project, after all messages have been developed and deployed (which occurs every two weeks throughout the 12-month WaterSmart deployment).

Table 14: Priority “Hot” WaterSmart Recommendations

Hot Water Recommendations	Priority for display
Upgrade ULF faucet/aerator	3
Take A 5 Minute Shower	4
Upgrade to LF showerhead	5
Fill bath 1/3 full	6
Upgrade HE dishwasher	7
Upgrade HE washer	8
Fully load washer	9
Fully load dishwasher	10
Turn down water heater	1
Turn down pool temp	2
Wash in cold water	11

Appendix 1

Hot Water Calculations (Example)

HOT WATER CALCULATIONS

Using the specific heat equation to determine the heat required to heat one gallon of water:

$$Q_{\text{water heater}} = (m \cdot c \cdot T) \div EF$$

Q = heat added (in BTU)

m = mass water (density x volume hot water used)

c = specific heat of water (1 BTU/lb°F)

T = change of temperature (°F)

EF = hot water heater energy factor (measure of combustion efficiency, as specified by manufacturer)

Required Energy *not accounting for water heater combustion inefficiency*

dynamic value

1 kwh =	3412.14	BTU
1 therm =	100,000	BTU
mass H2O	8.33	lb/gal
volume hot water/day	64	gal/day
c H2O	1	BTU/lb*°F
Change Temp	82	°F
Gas energy rate	0.9	\$/therm
Water Rates	0.00154	\$/gal
Q =	43716	BTU (per day)
Q =	0.44	therms (per day)

Gas Water Heater Energy Consumption *accounting for water heater energy factor*

Heater Type	Energy Factor	Q, therms/day
Old tank EF	0.61	0.7167
Energy Star tank EF	0.7	0.6245
Energy Star tankless EF	0.95	0.4602

1) Decrease your water heater temperature by 10°F

The difference of energy used for heating up to 140 degrees vs. 130 degrees is 10 degrees.

Assumptions: a typical conventional gas water heater and using approximately 64 gallons of hot water a day (typical average but this can be customized for the WaterSmart customer)

	therms/day	therms/year	\$/year	
Temp 140F	0.72	261.58	235.42	
Temp 130F	0.63	229.68	206.71	
Savings =	0.09	31.90	\$	28.71

2) Decrease pool temp a few degrees

Assumptions: ave LA pool volume is 18,000 gallons, gas pool heater 80% efficient, 6 month pool season, no pool cover, reduce pool temp from 82 to 80 degrees. Energy requirements for heating a pool are a function of temperature, evaporation, wind speed, ect an fairly complicated. To simplify, the below calculations estimate heat requirements as if the pool heater was a hot water heater and used to heat the pool a difference of two degrees daily (to calculate the approximate savings for reducing the pool temp by 2 degrees). This estimate compares nicely to the more complicated pool heating energy requiriements (as tested using online calculators).

pool size	18000 gallons
decrease	2 degrees F
Q =	3.75 therms/day <i>energy required to raise pool temp 2 degrees</i>
Savings	112 therms/month
	\$ 101.21 per mo
	675 therms/yr
	\$ 607.26 per year

3) Run laundry in cold water

Assumptions: assume old gas hot water heater and older washing machine that consumes 40 gal/load and baseline use is 50% hot water use/load, using a typical average (per literature) use of 0.37 loads/day per person (this is roughly 1 load per day for a family of 3), and hot water is heated from a typical 58 to 140 degrees.

Hot Water

Reductions	7.4 gal/day/person
	2701 gal/year/person

Energy Savings

Q =	0.08 therms/day/person
	30.25 therms/year/person
	\$ 27.22 \$/person/year

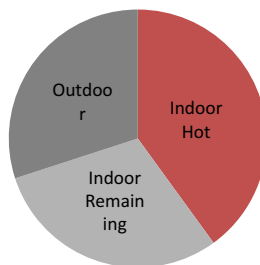
Appendix 2

Hot Water Messages (Prototypes)

EXAMPLE HOT WATER MESSAGES

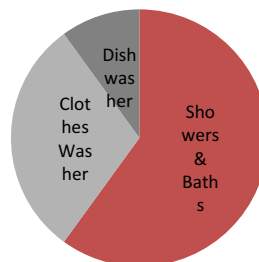
How much HOT water do you use?

Last month you used 400 gallons of water per day (GPD). Approximately 120 GPD, or 30%, was used for hot water -- showers, clothes washing and dishwashing.



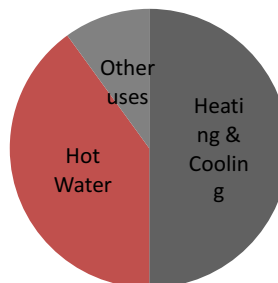
Where do you use the most HOT water?

Most of your hot water is used for showering. While showering accounts for 20% of all the water you use, it accounts for 60% of your hot water. Clothes washing accounts for 30% and dishwashing is 10%.



Do you use more gas to heat your home, or to heat your water?

For the average home in your area, 40% of the gas you use is to heat hot water



How much can you save by shortening your shower?

Most homes like yours have showers that use 4 gallons of water each minute. Shortening your shower by 1 minute will save 4 gallons of water and 2 therms of gas every time you shower.



How much can you save by washing one less load of laundry?

Most homes like yours have clothes washers that use 40 gallons of water for each load, about 20 gallons of which is hot water. By running only full loads, you may be able to run one less load per week, saving 20 gallons of hot water and 4 therms of gas.



How much can you save by washing one less load of dishes?

Most homes like yours have dishwashers that use 16 gallons of water for each load, about 12 gallons of which is hot water. By running only full loads, you may be able to run one less load per week, saving 12 gallons of hot water and 3 therms of gas.



Here's a mind-bender: it takes water to produce and transport the gas needed to heat your hot water.

Producing 1 therm of natural gas requires about 2 gallons of water, and heating a gallon of gas uses about 1 therm of gas. That means using 1 gallon less of hot water saves 3 more gallons in avoided heating costs.



TIP: Try washing your clothes in warm water and rinsing in cold.













Changing the settings on your washing machine will reduce the energy needed to wash your clothes, while cleaning them just as effectively.



























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H. Library of Hot Water Messages













17 Hot water related recommendations — only 9 will be shown to any individual during the study period





Rec #	
400 Y	<div>  <p>Reduce shower to 5 minutes</p> <div> <div>  <p>XX</p> </div> <div>GALLONS PER DAY</div> <hr/> <div>  <p>XX</p> </div> <div>DOLLARS PER YEAR</div> </div> </div>
8 Y	<div>  <p>Install high-efficiency showerheads</p> <div> <div>  <p>XX</p> </div> <div>GALLONS PER DAY</div> <hr/> <div>  <p>XX</p> </div> <div>DOLLARS PER YEAR</div> </div> </div>
63 N	<div>  <p>Fix leaking showerheads</p> <div> <div>  <p>XX</p> </div> <div>GALLONS PER DAY</div> <hr/> <div>  <p>XX</p> </div> <div>DOLLARS PER YEAR</div> </div> </div>
29 Y	<div>  <p>Run a full dishwasher</p> <div> <div>  <p>XX</p> </div> <div>GALLONS PER DAY</div> <hr/> <div>  <p>XX</p> </div> <div>DOLLARS PER YEAR</div> </div> </div>

<p>9 Y</p>	<div>  </div> <div> <p>Upgrade dishwasher</p> </div> <div>  <p>XX</p> </div> <div> <p>GALLONS PER DAY</p> </div> <div>  <p>XX</p> </div> <div> <p>DOLLARS PER YEAR</p> </div>	
<p>1 Y</p>	<div>  </div> <div> <p>Upgrade clothes washer</p> </div> <div>  <p>XX</p> </div> <div> <p>GALLONS PER DAY</p> </div> <div>  <p>XX</p> </div> <div> <p>DOLLARS PER YEAR</p> </div>	
<p>61 N</p>	<div>  </div> <div> <p>Only wash what's necessary</p> </div> <div>  <p>XX</p> </div> <div> <p>GALLONS PER DAY</p> </div> <div>  <p>XX</p> </div> <div> <p>DOLLARS PER YEAR</p> </div>	
<p>30 Y</p>	<div>  </div> <div> <p>Fully load clothes washer</p> </div> <div>  <p>XX</p> </div> <div> <p>GALLONS PER DAY</p> </div> <div>  <p>XX</p> </div> <div> <p>DOLLARS PER YEAR</p> </div>	

<p>12 Y</p>	 <p>Replace old aerators</p> <div>  <p>XX</p> <p>GALLONS PER DAY</p> </div> <div>  <p>XX</p> <p>DOLLARS PER YEAR</p> </div>	
<p>35 Y</p>	 <p>Fill bath 1/3 of the way</p> <div>  <p>XX</p> <p>GALLONS PER DAY</p> </div> <div>  <p>XX</p> <p>DOLLARS PER YEAR</p> </div>	
<p>13 N</p>	 <p>Cover your pool / spa</p> <div>  <p>XX</p> <p>GALLONS PER DAY</p> </div> <div>  <p>XX</p> <p>DOLLARS PER YEAR</p> </div>	
<p>49 N</p>	 <p>Install a recirculation pump</p> <div>  <p>XX</p> <p>GALLONS PER DAY</p> </div> <div>  <p>XX</p> <p>DOLLARS PER YEAR</p> </div>	

<p>48 N</p>	<div> </div> <div> <p>Insulate hot water pipes</p> </div> <div> <div> </div> <div> <p>XX</p> </div> <div> <p>GALLONS PER DAY</p> </div> <div> </div> <div> <p>XX</p> </div> <div> <p>DOLLARS PER YEAR</p> </div> </div>
<p>407 N</p>	<div> </div> <div> <p>Check pool for leaks</p> </div> <div> <div> </div> <div> <p>XX</p> </div> <div> <p>GALLONS PER DAY</p> </div> <div> </div> <div> <p>XX</p> </div> <div> <p>DOLLARS PER YEAR</p> </div> </div>
<p>33 N</p>	<div> </div> <div> <p>Brush teeth with the water off</p> </div> <div> <div> </div> <div> <p>XX</p> </div> <div> <p>GALLONS PER DAY</p> </div> <div> </div> <div> <p>XX</p> </div> <div> <p>DOLLARS PER YEAR</p> </div> </div>
<p>47 N</p>	<div> </div> <div> <p>Turn off water while shaving</p> </div> <div> <div> </div> <div> <p>XX</p> </div> <div> <p>GALLONS PER DAY</p> </div> <div> </div> <div> <p>XX</p> </div> <div> <p>DOLLARS PER YEAR</p> </div> </div>

28 N	 <p>Turn off water when scrubbing</p> <div>  <p>XX</p> <p>GALLONS PER DAY</p> </div> <div>  <p>XX</p> <p>DOLLARS PER YEAR</p> </div>	
	New content developed for HWS	
665 Y	 <p>Wash your laundry in cold water</p> <div>  <p>XX</p> <p>GALLONS PER DAY</p> </div> <div>  <p>XX</p> <p>DOLLARS PER YEAR</p> </div> <p>SAVE ENERGY! XX therms/year</p>	
655 Y	 <p>Turn down pool temp by 2 degrees</p> <div>  <p>XX</p> <p>GALLONS PER DAY</p> </div> <div>  <p>XX</p> <p>DOLLARS PER YEAR</p> </div> <p>SAVE ENERGY! XX therms/year</p>	
654 Y	 <p>Turn down your water heater to 120°</p> <div>  <p>XX</p> <p>GALLONS PER DAY</p> </div> <div>  <p>XX</p> <p>DOLLARS PER YEAR</p> </div> <p>SAVE ENERGY! XX therms/year</p>	

	HWS Messages
694	<div> <div>\$</div> <div> <p>Want to save water and energy?</p>  <p>Replace your clothes washer with a new ENERGY STAR certified or ENERGY STAR Most Efficient 2016 clothes washer and receive a rebate. Find out more at www.ny.gov/energy_star</p> </div> </div>
693	<div> <div>?</div> <div> <p>Did you Know?</p>  <p>If you saved 10 gallons per day of hot water, you would save 3,650 gallons of water, 49 therms of gas, and \$44 per year.</p> <p>Some of the best ways to save hot water are installing a high-efficiency showerhead or washing your clothes in cold water.</p> </div> </div>
666	<div> <div>\$</div> <div> <p>Get a tankless water heater</p>  <p>A tankless water heater can save you over \$100/year on your energy bill. Rebates are available at www.ny.gov/energy_star</p> </div> </div>
657	<div> <div>\$</div> <div> <p>Get a free efficiency starter kit!</p>  <p>The kit includes three faucet aerators and a high-efficiency showerhead to help you save water and gas.</p> </div> </div>

632



Reduce hot water use



Did you know that heating water is the second most energy intensive activity in your home?

Log on for information and offers for the water, energy, and money saving actions below!

I. Welcome Survey



2016 WATER SURVEY

How satisfied are you with:

Very satisfied Somewhat satisfied Neutral Somewhat dissatisfied Very dissatisfied

The value of the services provided by your water utility?

☐ ☐ ☐ ☐ ☐

City of WaterSmart makes it easy for you to:

Strongly agree Somewhat agree Neutral Somewhat disagree Strongly disagree

Understand your water use

☐ ☐ ☐ ☐ ☐

Save money on your water bill

☐ ☐ ☐ ☐ ☐

Take steps to use water efficiently

☐ ☐ ☐ ☐ ☐

Communicate with us

☐ ☐ ☐ ☐ ☐

How many people typically live in your home?

If this changes regularly, choose the number of occupants that are in the home most of the time.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9+

What is your home's lot size?

square feet

Do you have a yard?

If you live in an apartment or a condo, you might not have a yard.

☐ Yes ☐ No

How much of your front and back yard is hardscape?

For example, your driveway, patio, or any paved or gravel-covered area.

- ☐ 1-25%
- ☐ 26-50%
- ☐ 51-75%
- ☐ 76-100%
- ☐ Don't know

How much of your planted area is grass?

- ☐ 0%
- ☐ 1-25%
- ☐ 26-50%
- ☐ 51-75%
- ☐ 76-100%
- ☐ Don't know

During which seasons do you water your yard?

Mark all that apply.

- ☐ Spring
- ☐ Summer
- ☐ Fall
- ☐ Winter
- ☐ None

How do you water your yard?

Mark all that apply.

- ☐ Drip irrigation
- ☐ Underground irrigation
- ☐ Watering can
- ☐ Above-ground sprinklers
- ☐ Hand-held hose
- ☐ Other

Do you use an irrigation controller to automate your watering schedule?

- ☐ Yes, a timed controller
- ☐ Yes, a weather-based controller
- ☐ No

Would you consider replacing some or all of your grass with low water-use plants?

- ☐ Yes
- ☐ No
- ☐ Maybe

Do you have a pool?

- ☐ Yes, uncovered
- ☐ Yes, covered
- ☐ No

Do you own or rent

This information helps us provide the most relevant home improvement recommendations.

- ☐ Own ☐ Rent

How many toilets are in your home?

- ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5+

How many of your toilets are high-efficiency?

If your toilets have an EPA WaterSense label, or have been replaced since 1994, or use less than 1.6 gallons of water per flush, they are high-efficiency.

- ☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5+ ☐ Not sure



What type of clothes washer do you have?

Front-loading models are usually high-efficiency. Top-loading models can be either HE or conventional. Look for the HE logo.

- ☐ High-efficiency (HE) ☐ Not sure
☐ Conventional ☐ None



Are any of your bathroom faucets older than 1994?

Faucets purchased prior to 1994 typically have higher flow rates

- ☐ Yes ☐ Don't know
☐ No

What type of dishwasher do you have?

Dishwashers purchased in 1994 or later are about twice as efficient as older models.

- ☐ Older model from 1994 or before ☐ None
☐ Newer model from 1994 or after

Does your home have any of the following items?

Mark all that apply.

- ☐ High-efficiency showerheads ☐ Faucet aerators
☐ None of the above

Which of the following outdoor actions do you regularly take?

Mark all that apply.

- ☐ Check for irrigation system / sprinkler / hose leaks
 - ☐ Water only at dawn or dusk
 - ☐ Adjust irrigation / sprinkler timer monthly
 - ☐ Ensure water isn't running onto paved surfaces during watering cycles
 - ☐ Use multiple irrigation / watering start times
 - ☐ None of the above
-

Do you utilize any other sources of water beyond those metered by your utility, such as a private well or irrigation ditch?

- ☐ No
 - ☐ Yes, for irrigation or other outdoor use
 - ☐ Yes, for indoor use
 - ☐ Yes, for other use
 - ☐ Don't know
-

Which of the following indoor actions do you regularly take?

Mark all that apply.

- ☐ Check for showerhead, faucet and toilet leaks
- ☐ Fully load dishwasher
- ☐ Fully load clothes washer
- ☐ None of the above

Are there any other household activities or attributes that impact your water use?

Mark all that apply.

- ☐ Resident(s) with special medical needs
 - ☐ Temporary/part-time residents
 - ☐ Vacation home
 - ☐ Daycare or eldercare in-home business
 - ☐ HOA or property manager controls irrigation
 - ☐ Vegetable garden and/or fruit trees
 - ☐ Horses or other livestock
 - ☐ Fish pond or fountain
 - ☐ Hot tub
 - ☐ Evaporative cooler
 - ☐ None of the above
-

Please share any other measures your household has taken to conserve water or energy, including habits, household projects, upgrades, or maintenance.

Enter comments



Is there anything else you would like us to know about your water use?

Enter comments

Do you want to receive text alerts or emergency messages on your mobile phone?

Your mobile phone number will be used to send text messages if we suspect you may have a leak. It will not be sold to any third party.

Mobile phone number

By clicking Continue, I agree to the [Terms of service](#)

Do you want to receive voice alerts or emergency messages on your home phone?

Your home phone number will be used to send automated voice messages if we suspect you may have a leak. It will not be sold to any third party.

Home phone number

By clicking Continue, I agree to the [Terms of service](#)

☒ I am willing to be contacted to provide more feedback on this program.

J. Post-launch Survey



Welcome!

As you may know, you have been part of the City of Modesto WaterSmart Program. Please help us refine the program, provide more value, and serve you better by taking this short survey. Your feedback is important - please respond by March 14, 2017.

**Thank you,
City of Modesto**



1. How satisfied are you with the value of the services provided by City of Modesto Water Services Division?

- ☐ Very satisfied
- ☐ Satisfied
- ☐ Neutral
- ☐ Somewhat dissatisfied
- ☐ Very dissatisfied

2. To what extent do you agree or disagree that the City of Modesto makes it easy for you to:

	Strongly Agree	Somewhat Agree	Neutral	Somewhat Disagree	Strongly Disagree
Understand your water use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Save money on your water bill.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Take steps to use water efficiently.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicate with the utility.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



3. Do you recall getting personalized Water Reports by mail or email in the past year?

☐ Yes ☐ No ☐ Not Sure

4. If yes, did you look at these reports?

- ☐ Yes, most of them
- ☐ Yes, once or twice
- ☐ No
- ☐ Not Sure



5. Please indicate which, if any, water-saving actions you have taken since receiving the reports. (Check all that apply.)

- ☐ Reduced outdoor landscape irrigation
- ☐ Switched some or all of my outdoor landscaping to water-efficient plants
- ☐ Employed more efficient watering practices (e.g., rotating nozzles, drip irrigation)
- ☐ Installed a weather-based irrigation controller
- ☐ Captured rainwater for irrigation or other uses
- ☐ Fixed an outdoor leak (e.g., hose, irrigation system)
- ☐ Fixed an indoor leak (e.g., sink, toilet, shower, water heater)
- ☐ Upgraded to more efficient indoor fixtures (e.g., toilets, faucets)
- ☐ Took shorter showers
- ☐ Turned off water while brushing teeth, soaping up, or shaving
- ☐ Flushed less frequently
- ☐ Washed only full loads of laundry
- ☐ Collected greywater (i.e., water from showers, sinks, or washing machines)
- ☐ Upgraded to high efficiency (HE) appliances (e.g., dishwasher, washing machine, water softener)
- ☐ None of these

6. Have the Water Reports prompted any other changes in your household related to water or energy use?

☐ Yes

☐ No

If yes, please describe

7. Would you agree or disagree that the Water Reports prompted you to be more water efficient?

☐ Strongly agree ☐ Somewhat agree ☐ Neutral ☐ Somewhat disagree ☐ Strongly disagree

8. What aspects of the Water Report do you find most valuable or interesting? (Check all that apply.)

- ☐ Information about how many gallons of water are used per day
- ☐ My water use compared to similar households
- ☐ Personalized recommendations on how to save water
- ☐ The Water Report itself as a reminder to be aware of my water use
- ☐ The companion website modesto.watersmart.com, which lets me learn more about my water use and select water-saving actions
- ☐ Charts showing current use vs. past use
- ☐ None of the above

9. If you have visited the companion website, which features do you find most valuable? (Check all that apply.)

- ☐ My water use history
- ☐ Charts showing where I use water
- ☐ Videos and step-by-step instructions on ways to detect leaks and use water efficiently
- ☐ Ability to add alerts if my water use is higher than a level I select
- ☐ Ability to add users to my account (e.g., tenants, landscapers, property managers)
- ☐ My hourly data
- ☐ None of the above

Other (please specify)

10. Would you agree or disagree that these Water Reports are valuable for City of Modesto customers?

- ☐ Strongly agree
- ☐ Somewhat agree
- ☐ Neutral
- ☐ Somewhat disagree
- ☐ Strongly disagree



11. If you have any other feedback about how to improve the Water Reports, or suggestions about additional resources we could provide in order to help you be more water efficient, please comment here.

Note: If you have a question that requires an immediate response, please contact the City of Modesto at watersmartmodesto@modestogov.com or 209.577.5395.

Thank you for helping us improve your water service!

K. Post-treatment Survey

Introduction and Consent

Welcome!

In this survey, you will be asked about **actions you take that save water and energy in your home**.

It will take approximately 10 minutes.

At the end of the survey you will be asked to enter your email in order to receive your \$20 gift card.

This research has been approved by the Institutional Review Board of University of California, Davis. You may discontinue participation at any time. Your responses will be confidential; no identifying information, such as your name or address, will be accessible outside the research team, used in analysis, or retained beyond February 1, 2018. Only one gift card will be awarded per participating household. Please complete the survey by December 20, 2018. Gift cards will be sent via email by December 22. If you have questions or concerns please contact the lead researcher, Dr. Angela Sanguinetti at asanguinetti@ucdavis.edu. By proceeding you confirm that you were the original recipient of the survey invitation and consent to the conditions outlined above.

Actions

Which of the following actions do you regularly take at home?

Mark all that apply.

- ☐ Use a cloth instead of hose when cleaning lawn furniture and outdoor toys / sports equipment
- ☐ Set water heater temperature to 120 degrees
- ☐ Caulk or seal around leaky doors, window frames, or baseboards
- ☐ Turn off computer when not in use
- ☐ Check for showerhead, faucet, or toilet leaks
- ☐ Turn off TV when not in use
- ☐ Hang / air dry laundry
- ☐ Check for thermal leaks (e.g., around doors, windows, or baseboards)
- ☐ Fully load clothes washer
- ☐ Turn heater down / off at night in the winter

- ☐ Use a broom instead of hose when cleaning driveways, walkways, decks, or patios
- ☐ Turn air conditioner down / off at night in the summer
- ☐ Turn off lights when leaving room
- ☐ Clean light bulbs
- ☐ Clean and/or replace air conditioner filters
- ☐ None of the above

Which of the following actions do you regularly take while bathing / grooming?

Mark all that apply.

- ☐ Turn off water while soaping hands
- ☐ Reuse bath towels
- ☐ Take short showers (5 minutes or less)
- ☐ Turn off water while brushing teeth
- ☐ Turn off water while scrubbing face / hair / body
- ☐ Turn off water while shaving
- ☐ Capture cold water in a bucket while waiting for hot water
- ☐ None of the above

Which of the following actions do you regularly take in the kitchen?

Mark all that apply.

- ☐ Cover pots and pans when cooking
- ☐ Turn off water when scraping / scrubbing dishes
- ☐ Fully load dishwasher
- ☐ Turn off water when scrubbing fruits and vegetables
- ☐ Clean refrigerator coils
- ☐ Reuse cooking water after boiling (e.g., to make soup or water plants)
- ☐ Close refrigerator door quickly after opening
- ☐ None of the above

Do you have a yard?

- ☐ Yes
- ☐ No

Which of the following do you have at your home?

Mark all that apply.

- ☐ Dishwasher
- ☐ Pool
- ☐ Spa
- ☐ None of the above

Which of the following actions do you regularly take in your yard?

Mark all that apply.

- ☐ Check for irrigation system / sprinkler / hose leaks
- ☐ Use multiple irrigation / watering start times
- ☐ Check soil moisture level before watering
- ☐ Ensure water isn't running onto paved surfaces during watering
- ☐ Adjust irrigation / sprinkler timer monthly
- ☐ Water different plants according to their different needs
- ☐ Compost grass / leaves / food scraps for soil nutrients
- ☐ Stop watering when it rains
- ☐ Water only at dawn or dusk
- ☐ Mulch leaves and leave in yard rather than disposing of them
- ☐ Trim plants around sprinkler heads
- ☐ None of the above
- ☐ My yard does not require watering
- ☐ Someone else in my household does the yard work

Which of the following actions do you regularly take for your pool / spa?

Mark all that apply.

- ☐ Reduce or shorten pool pump cycles
- ☐ Cover pool / spa when not in use
- ☐ Check for pool / spa leaks
- ☐ None of the above

Here are the energy-saving and water-saving actions you regularly take at home:

Around the house:

`{q://QID62/ChoiceGroup/SelectedChoices}`

Bathing / grooming:

`{q://QID59/ChoiceGroup/SelectedChoices}`

In the kitchen:

`{q://QID74/ChoiceGroup/SelectedChoices}`

In the yard:

`{q://QID67/ChoiceGroup/SelectedChoices}`

Pool / spa:

`{q://QID68/ChoiceGroup/SelectedChoices}`

Which of the following describe your reasons for taking these actions?

Mark all that apply.

- ☐ To care for the environment
- ☐ To be efficient / save money
- ☐ Pressure from other member(s) of my household
- ☐ I feel guilty if I am wasteful
- ☐ Other

Investments

Which of following energy-saving or water-saving investments / measures do you have in your home?

Mark all that apply.

- ☐ Low-flow faucet aerator(s)
- ☐ Insulation around hot water pipes
- ☐ Weather-stripping on doors or windows
- ☐ Smart thermostat
- ☐ Clothes dryer with moisture sensor
- ☐ High-efficiency toilets
- ☐ ENERGY STAR refrigerator
- ☐ High-efficiency showerhead(s)

- ☐ Tankless water heater
- ☐ High-efficiency or double-paned windows
- ☐ ENERGY STAR TV
- ☐ Water pressure regulator valves
- ☐ Hot water recirculation pump
- ☐ ENERGY STAR dryer
- ☐ LED lights
- ☐ Insulation around hot water tank
- ☐ ENERGY STAR computer
- ☐ Motion sensors, dimmers, or timers for lights
- ☐ Water displacement device in toilet(s)
- ☐ Insulation in walls, ceilings, roofs, attic
- ☐ Whole-house fan
- ☐ None of the above

Were any of these investments made in the past 12 months?

	Yes	No	Not sure
» High-efficiency showerhead(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Low-flow faucet aerator(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Insulation around hot water pipes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Insulation around hot water tank	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Tankless water heater	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» High-efficiency toilets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Water displacement device in toilet(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Hot water recirculation pump	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Water pressure regulator valves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» LED lights	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Insulation in walls, ceilings, roofs, attic	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» High-efficiency or double-paned windows	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Weather-stripping on doors or windows	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» ENERGY STAR refrigerator	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Clothes dryer with moisture sensor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Smart thermostat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Motion sensors, dimmers, or timers for lights	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Whole-house fan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» ENERGY STAR dryer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Yes	No	Not sure
» ENERGY STAR TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» ENERGY STAR computer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» None of the above	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Which of following energy-saving or water-saving investments / measures do you have in your yard?

Mark all that apply.

- ☐ Replaced lawn with artificial turf
- ☐ Permeable pavement
- ☐ Rotating sprinkler heads
- ☐ Soil moisture sensor system
- ☐ Changed grass to native plants
- ☐ Graywater system
- ☐ Mulching lawnmower
- ☐ Pool or spa cover
- ☐ Drip irrigation
- ☐ Replaced high-water use plants with low water-use plants
- ☐ Rainwater catchment system
- ☐ Hose faucet timer
- ☐ Put mulch at the base of trees / bushes / shrubs
- ☐ Weather-based irrigation controller
- ☐ Solar-powered garden lights
- ☐ None of the above

Were any of these investments made in the past 12 months?

	Yes	No	Not sure
» Weather-based irrigation controller	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Rotating sprinkler heads	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Soil moisture sensor system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Hose faucet timer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Rainwater catchment system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Drip irrigation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Permeable pavement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Mulching lawnmower	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Yes	No	Not sure
» Changed grass to native plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Replaced high-water use plants with low water-use plants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Put mulch at the base of trees / bushes / shrubs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Replaced lawn with artificial turf	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Graywater system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Pool or spa cover	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» Solar-powered garden lights	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
» None of the above	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Here are the energy-saving and water-saving measures you have invested in:

For your home:

`#{q://QID99/ChoiceGroup/SelectedChoices}`

For your yard:

`#{q://QID101/ChoiceGroup/SelectedChoices}`

Which of the following describe your reasons for taking these actions?

Mark all that apply.

- ☐ Someone else in my household made the decision / purchase
- ☐ To care for the environment
- ☐ I received a rebate
- ☐ To be efficient / save money in the long term
- ☐ Other

Attitudes

How much do you agree or disagree with the following statements?

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
I carefully examine my household energy bills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have put a lot of effort into saving energy at home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
I wish I knew more about how to save energy at home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

How much do you agree or disagree with the following statements?

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
I carefully examine my household water bills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have put a lot of effort into saving water at home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wish I knew more about how to save water at home	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Demographics

What is your gender?

- ☐ Male
- ☐ Female
- ☐ Other

What is your age?

 ▼

What is the highest level of school you have completed?

- ☐ Less than high school
- ☐ High school diploma or GED
- ☐ Some college but no degree
- ☐ Associate's degree
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Doctoral degree

Household Characteristics

Do you own or rent your home?

- ☐ My home is owned by me and/or someone else in my household
- ☐ My home is rented
- ☐ Other

How many people typically live in your home?

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8 or more

Who lives in your home with you? (Select all that apply)

- ☐ My spouse/partner
- ☐ My child/children under 18
- ☐ My adult child/children
- ☐ Other adult relative(s)
- ☐ Non-related roommates
- ☐ Pet(s)
- ☐ Other

Who pays your household water and energy bills? (Select all that apply)

- ☐ I do
- ☐ My spouse/partner
- ☐ Other

What is your annual household income?

Experience with Reports

Do you recall getting personalized Home Water Reports by mail or email in the past year?

- ☐ Yes
- ☐ No
- ☐ Not sure

Did you look at these reports?

- ☐ Yes, most of them
- ☐ Yes, once or twice
- ☐ No
- ☐ Not sure

Did the reports help you take actions to save water at home?

- ☐ Yes
- ☐ No
- ☐ Not sure

Did the reports help you save money on your water bills?

- ☐ Yes
- ☐ No
- ☐ Not sure

Identifying Information

Please enter your **home address** so we can verify you are the original recipient of our survey invitation:

We will not use your mailing address for any other purpose.

Street number and name:

City, state and ZIP code:

Please enter your **email address** so we can send you your \$20 Starbucks e-gift card:

We will not use your email address for any other purpose. Your gift card will be sent on or before December 1st.

Thank you very much for participating!

Please use the space below to share anything else you would like us to know about your household water and energy use:

Survey Powered By **Qualtrics**

L. Survey Items Used in Spillover Analysis

- **Question Prompts**

- Welcome Survey
 - Does your home have any of the following items? (faucet aerators, he showerheads)
 - Which of the following outdoor actions do you regularly take?
 - Which of the following indoor actions do you regularly take?
 - How many of your toilets are high efficiency? (coded as 0=0, missing and not sure=SYSMIS, else=1)
 - What type of clothes washer do you have? (HE, conventional, not sure, none; coded as 1=HE, 0=conventional, other=SYSMIS)
 - What type of dishwasher do you have? (HE, conventional, not sure, none; coded as 1=HE, 0=conventional, other=SYSMIS)
- Post-launch Survey
 - Please indicate which, if any, water-saving actions you have taken since receiving the reports. (Check all that apply.)
- Post-treatment Survey
 - Which of the following actions do you regularly take [at home; while bathing / grooming; in the kitchen; in your yard; for your pool / spa]?
 - Which of the following energy-saving or water-saving investments / measure do you have [in your home; in your yard]?

Response options for above questions, i.e., water- and energy-saving measures

Measures Common to More than One Survey		
Welcome Survey	Post-launch Survey	Post-treatment Survey
High-efficiency toilet(s)	Upgraded to more efficient indoor fixtures (e.g., toilets, faucets)	High-efficiency toilets
Faucet aerators		Low-flow faucet aerator(s)
High-efficiency showerheads		High-efficiency showerhead(s)
High-efficiency clothes washer	Upgraded to high efficiency (HE) appliances (e.g., dishwasher, washing machine, water softener)	--
High-efficiency dishwasher		--
Check for showerhead, faucet and toilet leaks	Fixed an indoor leak (e.g., sink, toilet, shower, water heater)	Check for showerhead, faucet, or toilet leaks
Check for irrigation system/sprinkler/hose leaks	Fixed an outdoor leak (e.g., hose, irrigation system)	Check for irrigation system/sprinkler/hose leaks
Weather-based irrigation controller	Installed a weather-based irrigation controller	Weather-based irrigation controller
Adjust irrigation/sprinkler time monthly	Employed more efficient watering practices (e.g., rotating nozzles, drip irrigation)	Adjust irrigation/sprinkler timer monthly
Drip irrigation		Drip irrigation
Use multiple irrigation/watering start times		Use multiple irrigation/watering start times
--		Rotating sprinkler heads
Ensure water isn't running onto paved surfaces during watering cycles		Ensure water isn't running onto paved surfaces during watering
Water only a dawn or dusk		Water only at dawn or dusk
--	Reduced outdoor landscape irrigation	--
--	Collected greywater (i.e., water from showers, sinks, or washing machines)	Greywater system

--	Captured rainwater for irrigation or other uses	Rainwater catchment system
--	Switched some or all of my outdoor landscaping to water-efficient plants	Replaced high-water use plants with low water-use plants
Fully load dishwasher	--	Fully load dishwasher
Fully load clothes washer	Washed only full loads of laundry	Full load clothes washer
--	Turned off water while brushing teeth, soaping up, or shaving	Turn off water while brushing teeth
		Turn off water while scrubbing face/hair/body
		Turn off water while shaving
		Turn off water while soaping hands
--	Took shorter showers	Take short showers (5 min or less)
--	Flushed less frequently	--
Additional Water- and Energy-saving Measures in Post-treatment Survey Only		
Tankless water heater		
Soil moisture sensor system		
Use a cloth instead of hose when cleaning lawn furniture and outdoor toys/sports equipment		
Use a broom instead of hose when cleaning driveways, walkways, decks, or patios		
Reuse bath towels		
Capture cold water in a bucket while waiting for hot water		
Cover pots and pans when cooking		
Turn off water when scraping/scrubbing dishes		
Turn off water when scrubbing fruits and vegetables		
Reuse cooking water after boiling		
Check soil moisture level before watering		
Water different plants according to their different needs		
Stop watering when it rains		
Trim plants around sprinkler heads		
Reduce or shorten pool pump cycles		
Cover pool/spa when not in use		
Check for pool/spa leaks		
Water pressure regulator valves		
Hot water recirculation pump		
Water displacement device in toilet(s)		
Replaced lawn with artificial turf		
Permeable pavement		
Mulching lawnmower		
Pool or spa cover		
Hose faucet timer		
Put mulch at the base of trees/bushes/shrubs		
Insulation around hot water pipes		
Insulation around hot water tank		
Changed grass to native plants		
Caulk or seal around leaky doors/window frames/or baseboards		
Check for thermal leaks		
Clean and/or replace air conditioner filters		

Clean light bulbs
Hang/air dry laundry
Set water heater temperature to 120 degrees
Turn air conditioner down/off at night in the summer
Turn heater down/off at night in the winter
Turn off TV when not in use
Turn off computer when not in use
Turn off lights when leaving room
Clean refrigerator coils
Close refrigerator door quickly after opening
Compost grass/leaves/food scraps for soil nutrients
Clothes dryer with moisture sensor
ENERGY STAR TV
ENERGY STAR computer
ENERGY STAR dryer
ENERGY STAR refrigerator
High-efficiency or double-paned windows
Insulation in walls/ceilings/roofs/attic
LED lights
Motion sensors/dimmers/or timers for lights
Smart thermostat
Weather-stripping on doors or windows
Whole-house fan
Solar-powered garden lights

M. Factor Analysis Results from Post-treatment Survey

Water- and Energy-saving Measures	Efficient Envelope	Water Curtailment & Conservation	Efficient Irrigation	Efficient Appliance	Energy Curtailment & Conservation	Edge of Efficiency	Green Gardening	Efficient Pool & Spa	Green Landscape Foundations
Check for thermal leaks (e.g., around doors, windows, or baseboards)	.64	.20	.04	-.08	.14	-.02	.05	.02	-.05
Caulk or seal around leaky doors, window frames, or baseboards	.61	.12	.06	.01	.22	.05	.01	-.08	.07
Weather-stripping on doors or windows	.55	-.13	-.05	.28	.15	.21	.07	.04	.09
Clean refrigerator coils	.48	.27	.08	.08	-.03	-.07	.12	-.05	.05
Insulation around hot water pipes	.44	-.11	.09	.17	.04	.27	.05	-.01	.05
Insulation around hot water tank	.43	-.08	.03	.21	.06	.07	.20	.03	.12
Check for showerhead, faucet, or toilet leaks	.42	.07	.20	.11	.23	-.01	.05	.03	-.02
Water pressure regulator valves	.38	.04	.15	.21	.01	.12	.14	.12	.11
Set water heater temperature to 120 degrees	.36	.14	.14	.07	.20	.17	.02	.02	.01
Clean light bulbs	.36	.36	.03	.00	.09	-.03	.02	.00	.03
High-efficiency or double-paned windows	.36	-.17	.07	.21	.11	.32	.05	-.01	.01
Low-flow faucet aerator(s)	.33	.06	-.05	.34	.08	.09	.17	.10	.14
Water displacement device in toilet(s)	.31	.11	.10	.09	-.09	.16	.15	.02	-.13
Insulation in walls, ceilings, roofs, attic	.29	-.03	.06	.18	.22	.31	.03	.07	.08
Clean air conditioner filters	.23	.06	.19	.17	.34	.20	-.06	-.03	.00
Whole house fan	.24	.07	.03	.12	-.02	.11	.08	.03	-.04
Hot water recirculation pump	.24	.09	.10	.03	-.19	.11	.08	.20	.03
Turn off water while soaping hands	-.04	.65	-.07	.02	-.06	-.04	.05	-.01	.03
Turn off water while scrubbing face / hair / body	.00	.62	.01	-.07	-.02	.18	-.03	-.02	-.02
Turn off water when scrubbing fruits and vegetables	-.01	.59	.01	.08	.04	-.07	.05	.01	.02
Turn off water while shaving	.09	.50	.07	.13	.09	.02	-.08	.04	.11
Turn off water when scraping / scrubbing dishes	-.02	.47	-.01	.06	.21	-.17	.01	.11	.10

Turn off water while brushing teeth	-.08	.46	.09	.13	.24	-.03	-.02	-.06	-.06
Reuse cooking water after boiling (e.g., to make soup or water plants)	.06	.40	.00	-.04	-.03	-.01	.29	-.07	.12
Take short showers (5 minutes or less)	.16	.38	-.01	.07	.02	.04	.05	.01	.04
Use a cloth instead of hose when cleaning lawn furniture and outdoor toys / sports equipment	.17	.33	.00	-.03	.13	.11	.03	.01	-.05
Use a broom instead of hose when cleaning driveways, walkways, decks, or patios	.00	.28	.05	-.13	.01	-.07	.16	-.05	-.02
Capture cold water in a bucket while waiting for hot water	.11	.28	-.02	.00	.27	-.02	-.07	.01	-.03
Check for irrigation system / sprinkler / hose leaks	.11	-.01	.66	.09	.18	.19	.07	.07	-.02
Trim plants around sprinkler heads	.15	.01	.61	.11	.21	.10	.10	.07	-.01
Adjust irrigation / sprinkler timer monthly	.16	.09	.59	.11	.01	.18	.03	-.01	-.05
Rotating sprinkler heads	.08	.03	.57	.02	.02	.02	-.06	.13	.18
Use multiple irrigation / watering start times	.06	-.05	.51	.09	.06	.44	.09	.17	.05
Stop watering when it rains	-.06	.02	.44	.09	.39	-.25	.25	.06	-.07
Water only at dawn or dusk	-.08	-.05	.38	.11	.42	-.04	.23	.01	-.14
Weather-based irrigation controller	.03	.06	.35	.15	-.21	.12	.03	.11	.09
Ensure water isn't running onto paved surfaces during watering	.05	.11	.31	.13	.40	.07	.19	.09	-.03
Hose faucet timer	.12	.00	.23	-.02	-.03	.00	.13	-.02	.10
ENERGY STAR TV	.14	.00	.14	.71	.08	-.01	.02	-.08	-.05
ENERGY STAR dryer	.09	.05	.10	.67	.10	.10	.00	.00	-.06
ENERGY STAR refrigerator	.08	.07	.08	.65	.11	.09	-.01	.00	-.05
ENERGY STAR computer	.12	.03	.07	.65	.02	.11	.04	.04	-.03
High-efficiency toilet	.17	.06	.00	.42	.14	.27	.18	.12	.08
High-efficiency showerhead	.25	.08	.08	.42	.12	.09	.18	.11	.09
Turn off lights when leaving room	.05	.07	.08	.12	.48	-.05	-.06	-.10	.12
Turn off TV when not in use	.09	.08	.07	.02	.43	.01	-.06	-.06	.13
Fully load clothes washer	.03	-.04	-.05	.10	.41	.05	.07	.03	-.15
Turn air conditioner down / off at night in the summer	-.03	.13	-.02	.02	.40	.45	.14	.03	-.08
Reuse bath towels	.04	-.08	-.06	.02	.39	.22	.10	-.05	-.03
Close refrigerator door quickly after opening	.11	.10	.07	.04	.39	-.01	-.01	.04	-.01
Turn heater down / off at night in the winter	.03	.12	.07	-.05	.38	.42	.03	.01	-.12

Cover pots and pans when cooking	.19	.15	-.10	.02	.34	-.03	.01	.15	.06
Turn off computers when not in use	.11	.28	-.02	.004	.27	-.02	-.07	.01	-.03
Drip irrigation	.05	-.09	.32	.10	-.01	.51	.15	-.04	.19
Smart thermostat	.15	.02	.01	.22	-.07	.46	.03	.21	.03
LED lights	.10	.03	.07	.19	.07	.31	.06	-.04	.05
Tankless water heater	.10	.05	.04	.11	-.15	.28	.12	.00	.04
Motion sensors, dimmers, or timers for lights	.26	-.03	.22	.07	-.07	.26	.06	.12	-.08
Mulch leaves and leave in yard rather than disposing of them	.17	.09	-.02	.02	.01	.07	.67	.00	-.04
Compost grass / leaves / food scraps for soil nutrients	.03	.17	.05	.03	-.07	.07	.63	-.05	.00
Put mulch at the base of trees / bushes / shrubs	.10	.02	.09	.11	.03	.16	.61	.00	.07
Mulching lawnmower	.18	-.02	.13	.09	-.03	-.04	.45	.03	.02
Water different plants according to their different needs	.12	.05	.20	.00	.27	.04	.45	.12	.02
Replaced high water plants	-.01	.00	.01	.12	.13	.21	.43	.08	.38
Check soil moisture level before watering	.24	.19	.21	-.02	.05	.04	.30	.14	-.17
Solar-powered garden lights	.10	-.08	.08	.08	.15	.07	.19	.13	.16
Changed grass to native plants	-.02	.03	-.10	.03	.10	.28	.42	.01	.38
Cover pool / spa when not in use	.05	-.03	.03	.06	-.07	-.06	.12	.85	-.03
Pool or spa cover	.05	-.04	.03	.05	-.04	-.07	.06	.85	.01
Check for pool / spa leaks	.05	.00	.23	.00	.05	.22	-.09	.67	.02
Reduce or shorten pool pump cycles	-.03	.01	.21	-.03	.07	.26	-.04	.51	.02
Graywater system	-.03	.10	.06	-.07	-.02	-.03	.04	-.06	.59
Soil moisture system	.10	.00	.13	-.12	-.14	-.12	-.02	-.07	.52
Rainwater catchment system	.02	.13	.14	-.02	-.05	-.04	.11	.06	.49
Permeable pavement	.05	.01	-.09	.05	.12	.02	.08	.19	.46
Replaced lawn with artificial turf	.02	-.05	-.03	.08	.00	.15	-.10	-.06	.45