



WaterSmart[®]
SOFTWARE



Behavioral Science, Big Data and Conservation

California Water Commission
November 19, 2014

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About WaterSmart

WaterSmart Software helps utilities educate and engage customers to save water, energy and money.

Headquartered in San Francisco and founded in 2009.

OUR PARTNERS INCLUDE
30+ UTILITIES in 4
STATES,
1M+ ACCOUNTS



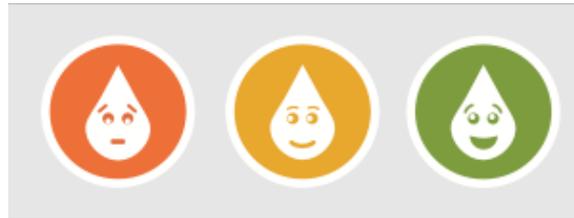
Behavioral Water Efficiency

Need engagement before action

EDUCATION



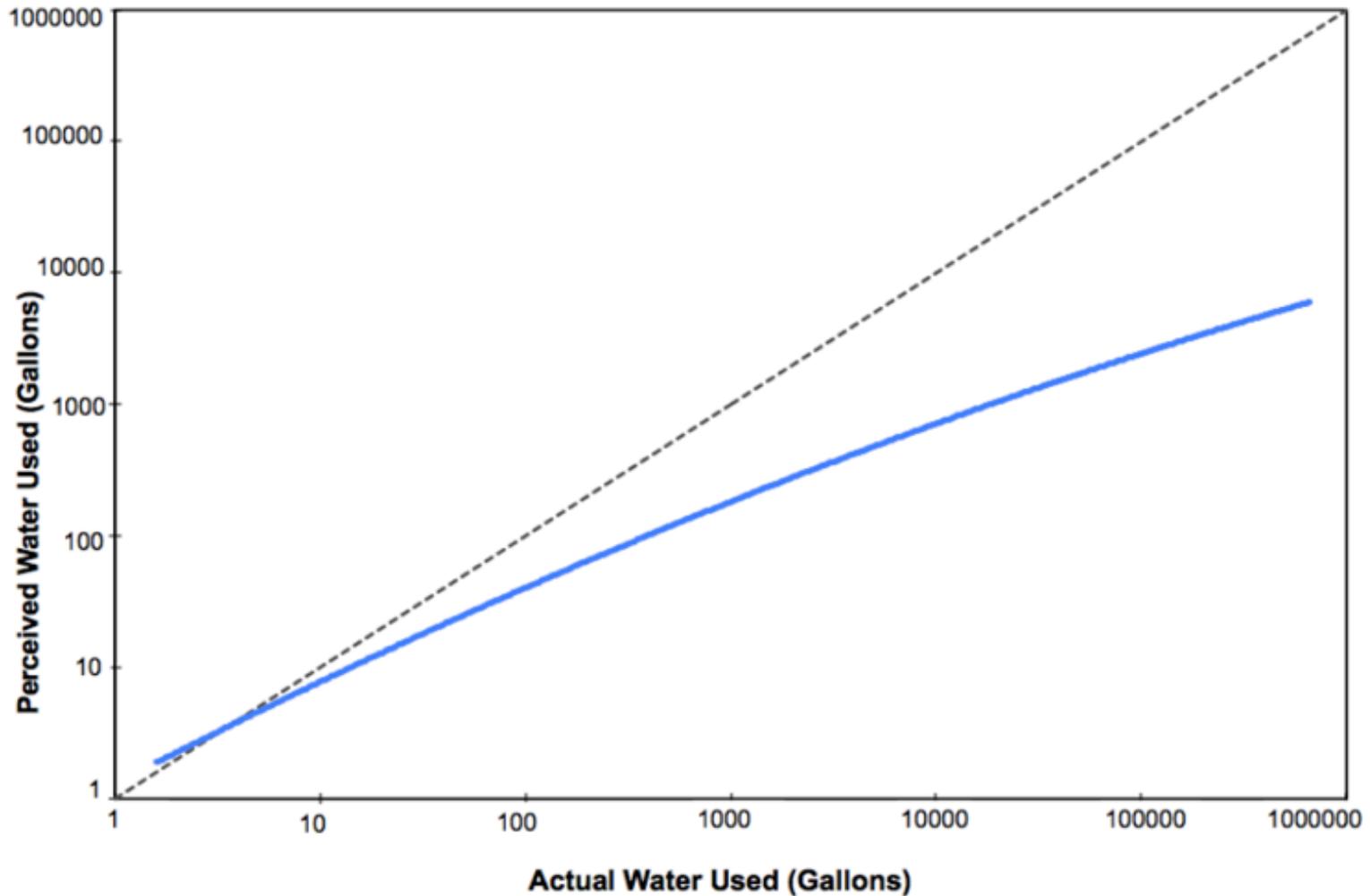
SOCIAL NORMS



Measurable
Results

Don't Know How Much they Use....

Perceptions of Water Use

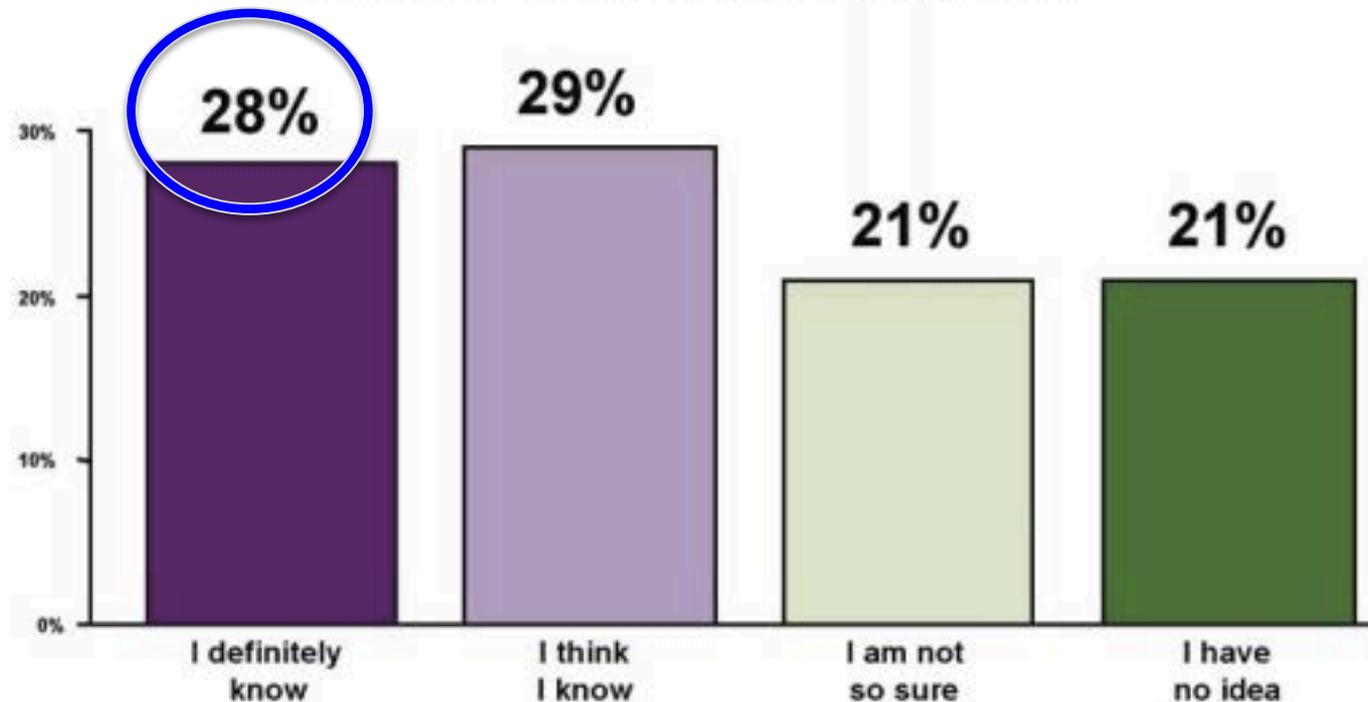


Source: Attari et al (2014)

Don't Know Where Their Water Comes From...

KNOWLEDGE OF SOURCE FOR DRINKING WATER

Which of the following best describes your knowledge of the natural source for your drinking water?



Bills Are Not Best Tool for Engagement or Conservation

ACCOUNT NUMBER	ID #	SERVICE ADDRESS				STATEMENT DATE	DUE DATE
						09/23/2010	10/03/2010
METER NUMBER	CLASS	FROM	SERVICE TO	# OF DAYS	READ TYPE	METER READINGS (000's Gallons)	USAGE (000's Gallons)
	R	08/19/2010	09/21/2010	33	ACTUAL	316	312
USAGE HISTORY (000's Gallons)							\$ 29.21
ONE YEAR AGO	BALANCE LAST BILL PAYMENT						(28.31)
3	BASE FACILITY FEE - WATER						10.36
LAST MONTH	BASE FACILITY FEE - WASTEWATER						11.63
3	WATER COMMODITY						4.12
	WASTEWATER COMMODITY						5.64
12 MONTH AVERAGE							4
PAY THIS AMOUNT =>							\$ 31.75

att.com



AT&T CUSTOMER
1234 TELEPHONE LN
AUSTIN, TX 78748-1234

Page: 1 of 4
Bill Cycle Date: 12/12/10 - 1/11/11
Account: 123456789105

Visit us online at: www.att.com

Monthly Statement

Bill-At-A-Glance

Previous Balance	\$228.33
Payment - Thank You!	\$189.49CR
Adjustments	\$38.84CR
Balance	\$0.00
New Charges	\$145.21
Total Amount Due	\$145.21
Amount Due in Full by	Jan 3, 2011

Simply fast.

Go almost 2x faster than your current speed with AT&T U-verse High Speed Internet Max and get \$20 CASH BACK.

Call 1.866.721.7840 today to speed up with AT&T.

Service Summary

Service	Page	Total
Wireless		\$145.21
512-555-1111	\$14.83	2
512-555-2222	\$27.03	3
512-555-3333	\$103.35	3
Total New Charges		\$145.21

Payments & Adjustments

Item No.	Description	Amount
1	Payment posted 12/08	189.49CR
2	Wireless - Media Net Usage 512-555-3333	36.63CR
3	Wireless - Government Fees & Taxes	3.21CR
	Adjustment 512-555-3333	
	Total Adjustments	39.84CR
Total Payments & Adjustments		228.33CR

Wireless

Group 1 Usage Summary - Nov 12 thru Dec 11
FamilyTalk Nation 850 w/Rollover* Minutes - \$9.99 Each
Additional Line, 850 Shared Anytime Minutes with Rollover,
Nationwide Long Distance & Roaming, Unlimited Mobile to Mobile
calling to/from other AT&T Mobiles, Unlimited Night (9pm-5am) &
Weekend Calling Call Forward Feature, Caller ID, Call Wait, Conference
Call Feature, Mobile Purchases & Downloads Detail, Basic Voicemail
Feature (Additional minutes \$0.40 each)

Plan	Mobile to	Night/Wknd	Billed
Minutes	Minutes	Minutes	Minutes
512-555-1111	269	415	93
512-555-2222	11	103	25
512-555-3333	333	776	54
Total	613	1,294	172

How to contact us:
• For questions about your account: 1.800-111-1111
• For Deaf/Hard of hearing TTY: 1.800-111-1111
• Visit us online at www.att.com

For Important Information about your bill, please see the News You Can Use section (Page 4).

Return bottom portion with your check to the enclosed envelope.
Payments may take 7-10 days to post.

Wireless Services provided by AT&T Mobility LLC
AT&T DIRECTV is a co-branded service provided by DIRECTV

Printed on Recycled Paper

DUE BY: Jan 3, 2011

\$145.21



AT&T CUSTOMER
1234 TELEPHONE LN
AUSTIN, TX 78748-1234

Account Number: **123456789105**
Please include account number on your check.

CHECK FOR AUTO PAY (SEE REVERSE)

Make checks payable to:
AT&T
PO Box 5014
Carol Stream, IL 60197-5014

41004034000123456789105000000000095170000000145210000000000000000

Social Norms!!!

Group behavior
is a powerful
force for most
individuals.



'EAST'

Your WaterScore AUG 18, 2014-OCT 18, 2014



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

Gallons Per Day (GPD)

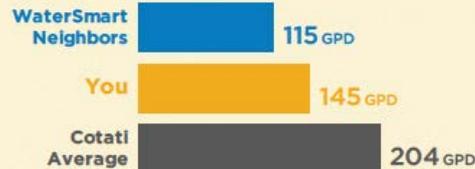


Your WaterScore AUG 18, 2014-OCT 18, 2014



Nice work, WaterSaver.
Take action to save even more.

Gallons Per Day (GPD)

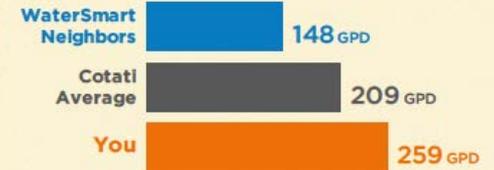


Your WaterScore AUG 18, 2014-OCT 18, 2014



You used **more water** than
most of your neighbors.

Gallons Per Day (GPD)



Water-saving actions just for you

Selected assuming your home has 2 occupants and a 2,000 to 4,000 sq. ft. yard

Log on to correct us!

Potential savings if you:



Install a faucet aerator



Fill up the clothes washer



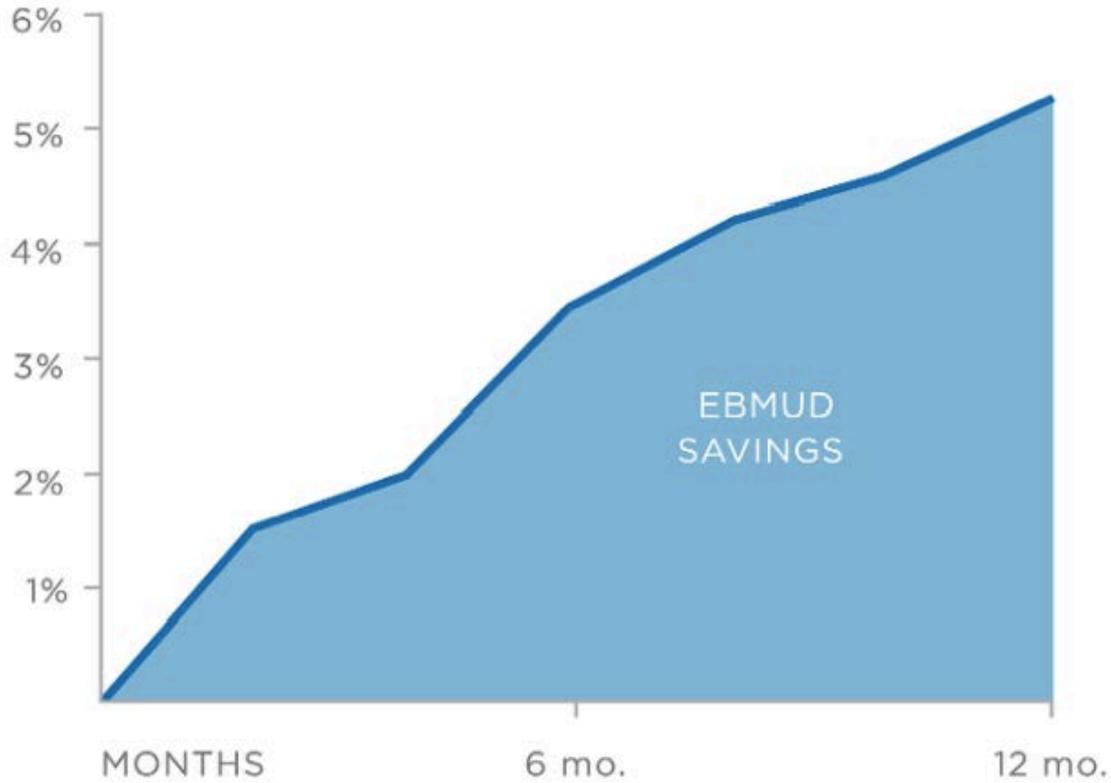
Change grass to native plants



Easy
Atractive
Social
Timely

RESULT 1

Proven water savings



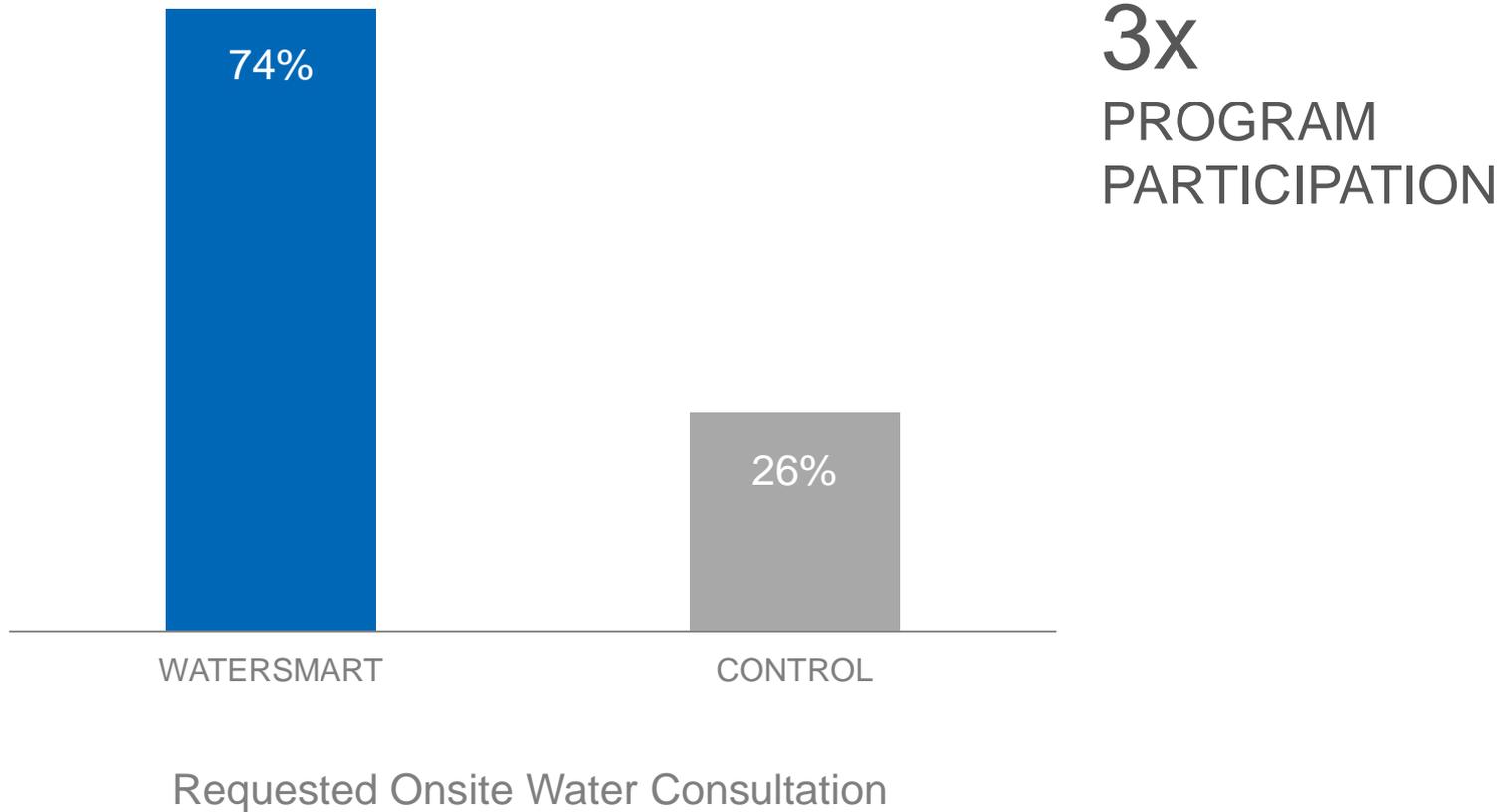
5%+
WATER SAVINGS

EBMUD Pilot Launched June 2012

Cumulative Percent Saved

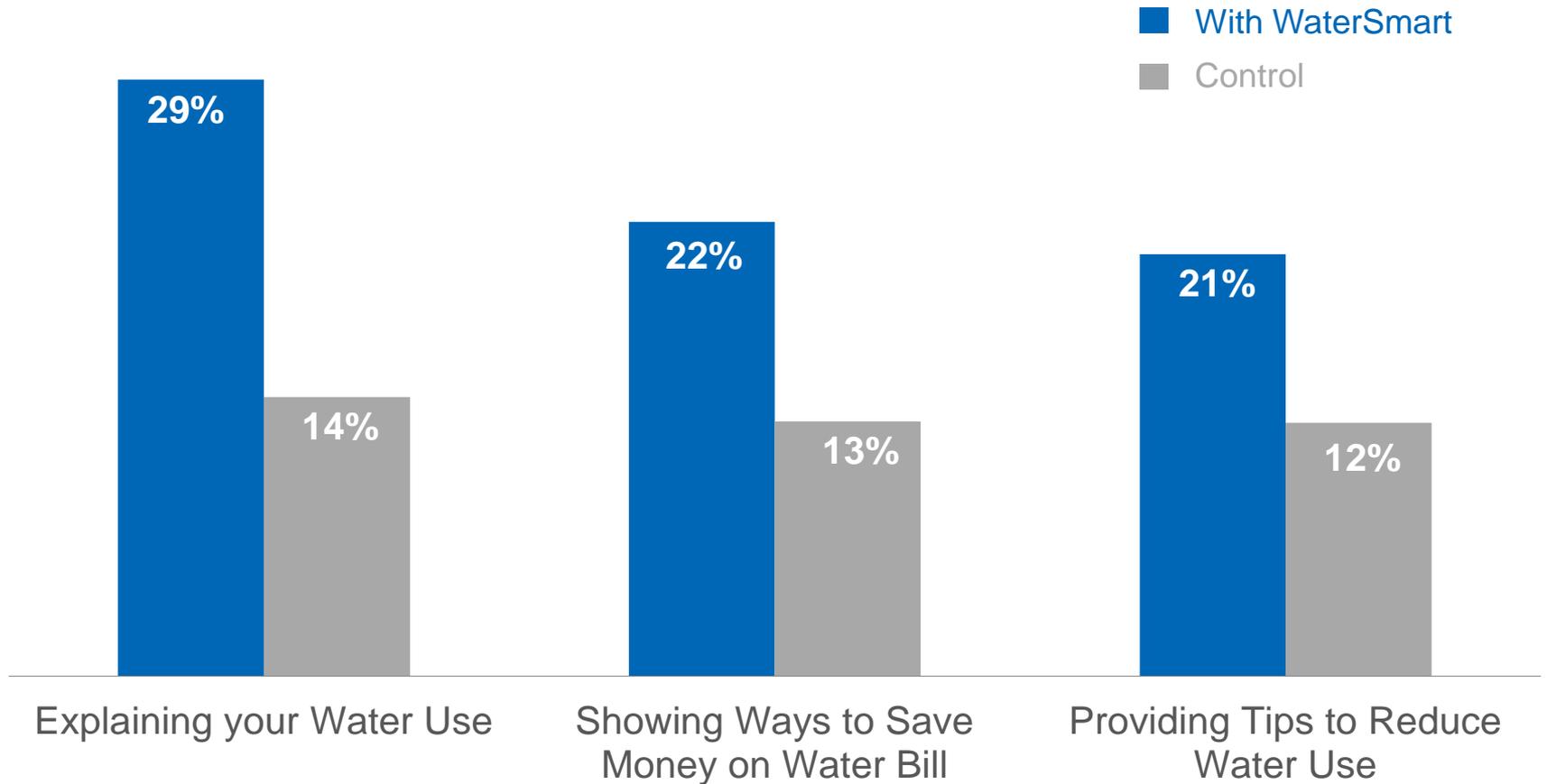
RESULT 2

Customer engagement



RESULT 3

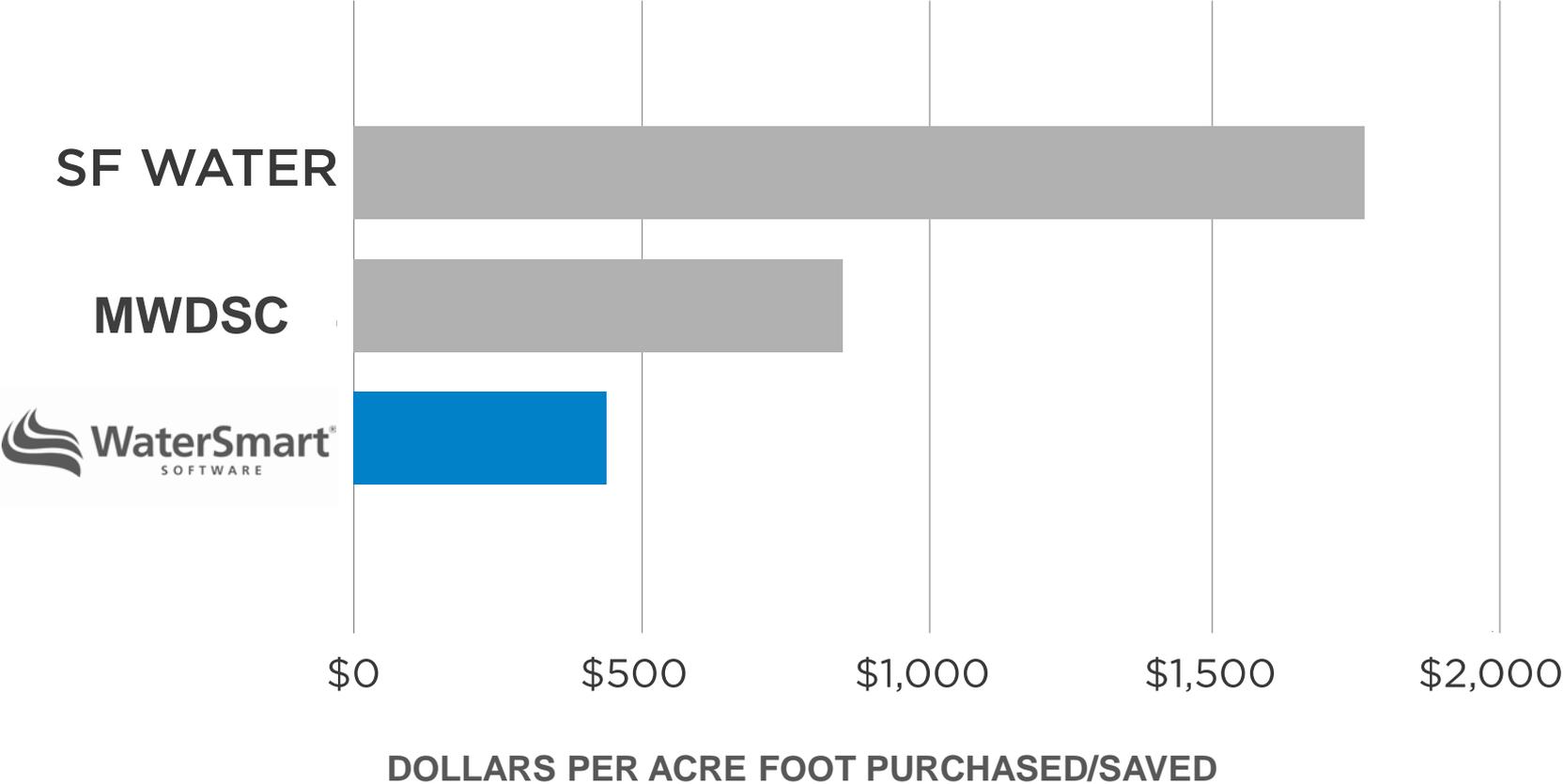
More satisfied consumers



% CUSTOMERS WHO RATED THE UTILITY "EXCELLENT"

Result 4

Lower operating costs



Behavioral Water Efficiency – Making It Work

Home Water Report

Contents

- WaterScore
- Water use in GPD
- Comparative consumption
- Customer segmentation
- Targeted messages
- Personalized actions
- Digital engagement

City Water Waterinsight Program
123 Main Street
Anytown, CA 98765

415.555.5555 info@citywater.com

YOUR HOME WATER REPORT

THIS IS AN INFORMATIONAL REPORT AND NOT A BILL.

SERVICE ADDRESS: 456 Washington St., Anytown
ACCOUNT NUMBER: 123873124-01

SIGN UP TO GET THIS REPORT VIA EMAIL:
citywater.com

Blair Jones
123 Washington St.
Anytown, CA 98765

Are we comparing you fairly?
2 occupants and a 2,000 to 4,000 sq. ft. yard.
Not right? Log on to correct us. Your comparisons
and recommendations will adjust accordingly.
citywater.com

Your WaterScore

AUG 1, 2014 - SEP 31, 2014

You used **more water** than most of your neighbors.

Gallons Per Day (GPD)

Efficient Neighbors	111 GPD
Average Neighbors	250 GPD
You	276 GPD

Water-saving actions just for you

Selected assuming your home has 2 occupants and a 2,000 to 4,000 sq. ft. yard.

Log on to correct us!

Potential savings if you:

Install a faucet aerator	24 GALLONS PER DAY	\$142 DOLLARS PER YEAR
Fill up the clothes washer	18 GALLONS PER DAY	\$92 DOLLARS PER YEAR
Change natural	82 GALLONS PER DAY	\$281 DOLLARS PER YEAR

Your Home Water Report

Nice work, WaterSaver. Take action to save even more.

Gallons Per Day (GPD) in 100% use only

WaterSmart Target	159 GPD
Similar Households	216 GPD
Your Home	216 GPD

Learn more about your water use

Your new Home Water Report
Redesigned to make it easier to learn about your water use and simpler to take action to reduce it.
Tell us what you think: watermart@city.org

WaterInsight Portal

Contents

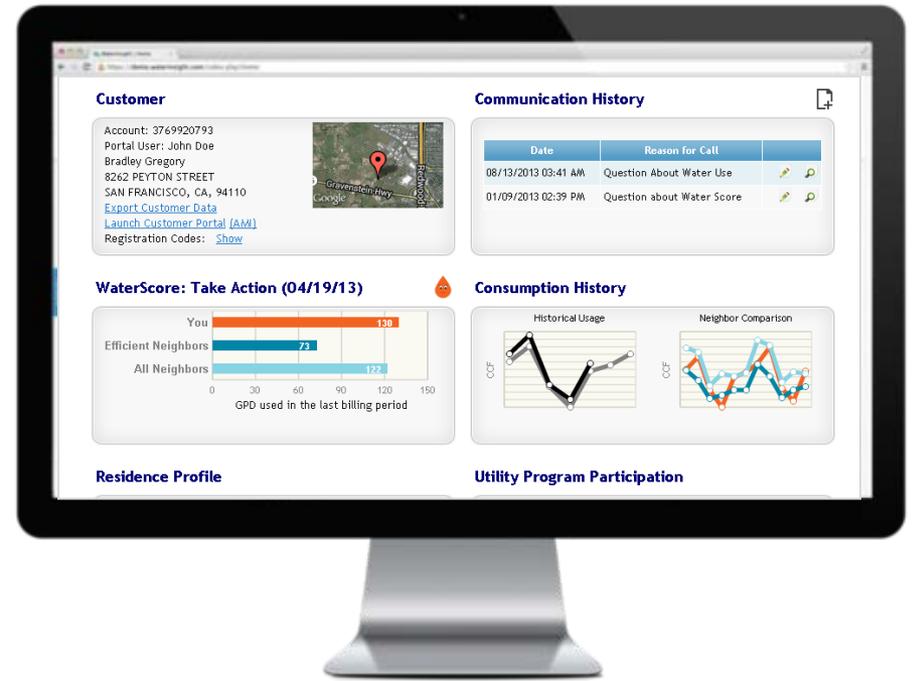
- Neighbor comparisons
- Historical trends
- Seasonal use
- Estimated end use
- Targeted suggestions
- “My Actions”
- Nudges & Leak Alerts
- AMI, AMR & Manual Read



Analytics Dashboard

Tools

- Customer relationship management
- Business intelligence & reporting functions
- Program management
- Water use analysis
- Feedback & tracking
- Leak & high use alerts
- Violation tracking
- GPCD reporting compliance



AMI makes a difference



AMI customers saved
50% more water



Customers
without AMI:
4.4%

Customers
with AMI:
6.6%

Real-time AMI + Leak Detection

Home

Track Usage

Real-Time

Ways To Save

My Actions 1



Possible Continuous Leak

You used at least 3 gallons per hour continuously since Wed, Jul 10 2013.
That's 1,277 gallons!

Investigate Possible Leak

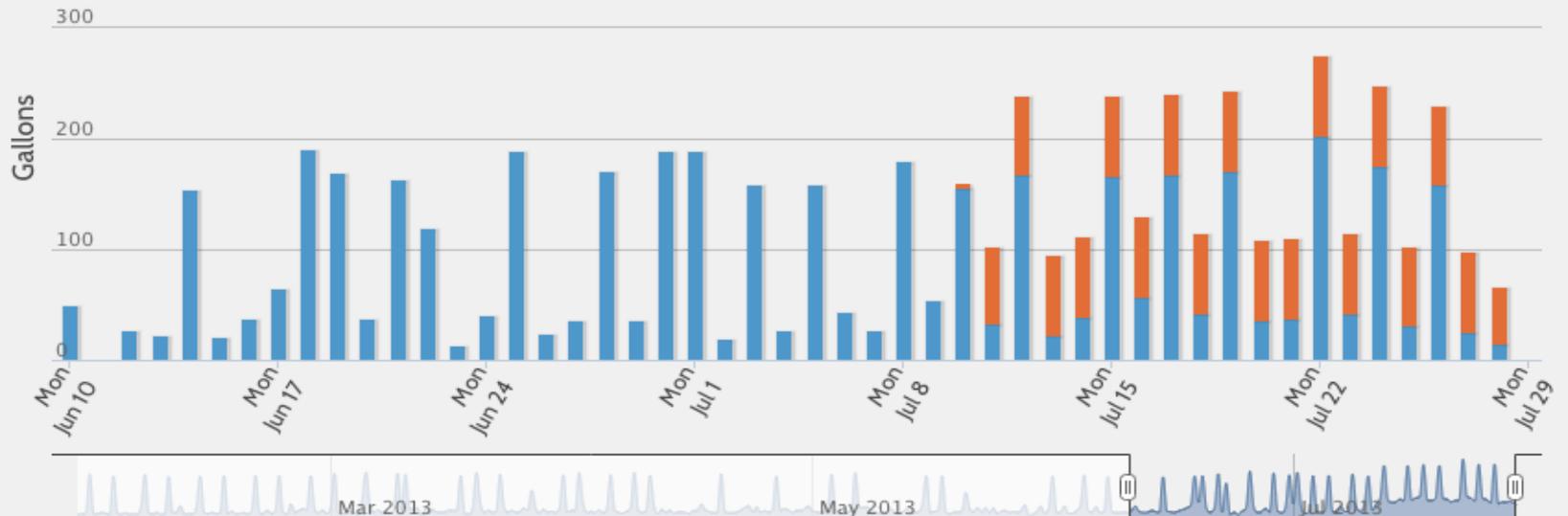
Day Week **2 Weeks** 2 Months Year

From: Jun 9, 2013 To: Jul 28, 2013

Your Water Use

Normal use Possible leak

Last updated Sunday, Jul 28, 2013, 4pm



Glendale Water and Power

- Provide AMI data to customers
- Catch up with energy
- Identify and notify about leaks in near real-time



City of Newport Beach



- Segmented marketing with targeted communications
- Promote irrigation controllers to specific users
- Reduce over-watering and runoff into Newport Bay

Irvine Ranch Water District

- Improve communications for water budget-based billing
- Reduce # homes in top tier
- Improve customer satisfaction and reduce calls



Behavioral Water Efficiency – Implementing in California

Emergency Drought Regulations Resolution #9

The State Water Board commends water suppliers that have increased conservation messaging and adopted innovative strategies to enhance customer awareness of water use, such as [applications that let customers compare their water use to water use by others](#);....

Emergency Drought Regulations Resolution #12

The State Water Board encourages its staff, the Department of Water Resources, the Public Utilities Commission, urban water suppliers, and other local agencies to look for opportunities to encourage and promote new technologies that reduce water usage, including through timely access to water usage information and behavioral response.

California Water Plan Bulletin 132 - 13

Box 3-7 Behavioral Water Efficiency — A New, Proven Conservation Tool

In addition to using conservation rate structures to incentivize water conservation, some water suppliers are using a new behavioral approach to encourage conservation. Based on insights from psychological research, behavioral water efficiency programs inform consumers of prevailing social norms, such as the average water use of neighbors, to drive conformity to a more efficient standard. This comparison creates a social framework in which water conservation is seen as highly valued by residents of a community.

The effectiveness of behavioral water efficiency programs has been tested in several communities, including in an East Bay Municipal Utility District pilot project. In this pilot, residents received home water reports with information about their water consumption, the consumption of similar households, and personalized recommendations on ways to save. The year-long pilot project involved 10,000 homes and a randomized control group. Households that received the home water reports reduced their water use from 4.6% to 6.6%, were more likely to participate in utility audit and rebate programs, and reported higher customer satisfaction. The unit cost of saved water was between \$250 and \$590 per acre-foot, with a mid-point cost of \$380 per acre-foot.

Thank you



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