



TARGETED OUTDOOR WATER USE & LEAK OUTREACH

BEND WATER OVERVIEW



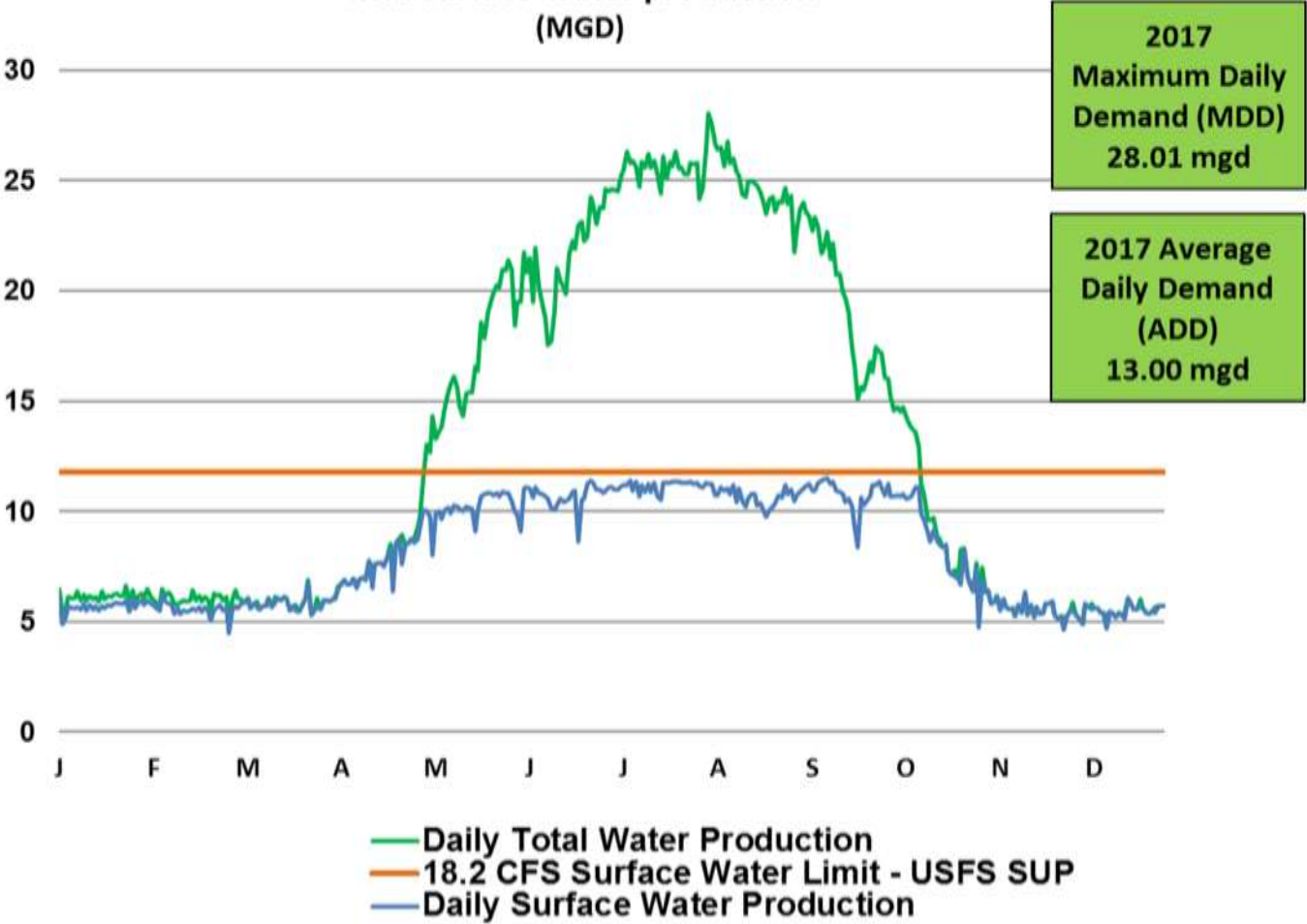
- Estimated population 85K +/-
- Service population 63K +/-
- Water connections 25K +/-
- Annual production 4,700 MG +/-
- Two primary water sources
- Water @ \$1.90 / CCF + base (\$22.91)
- Sewer @ \$3.62 / CCF + base (\$34.55)



BEND WATER OVERVIEW



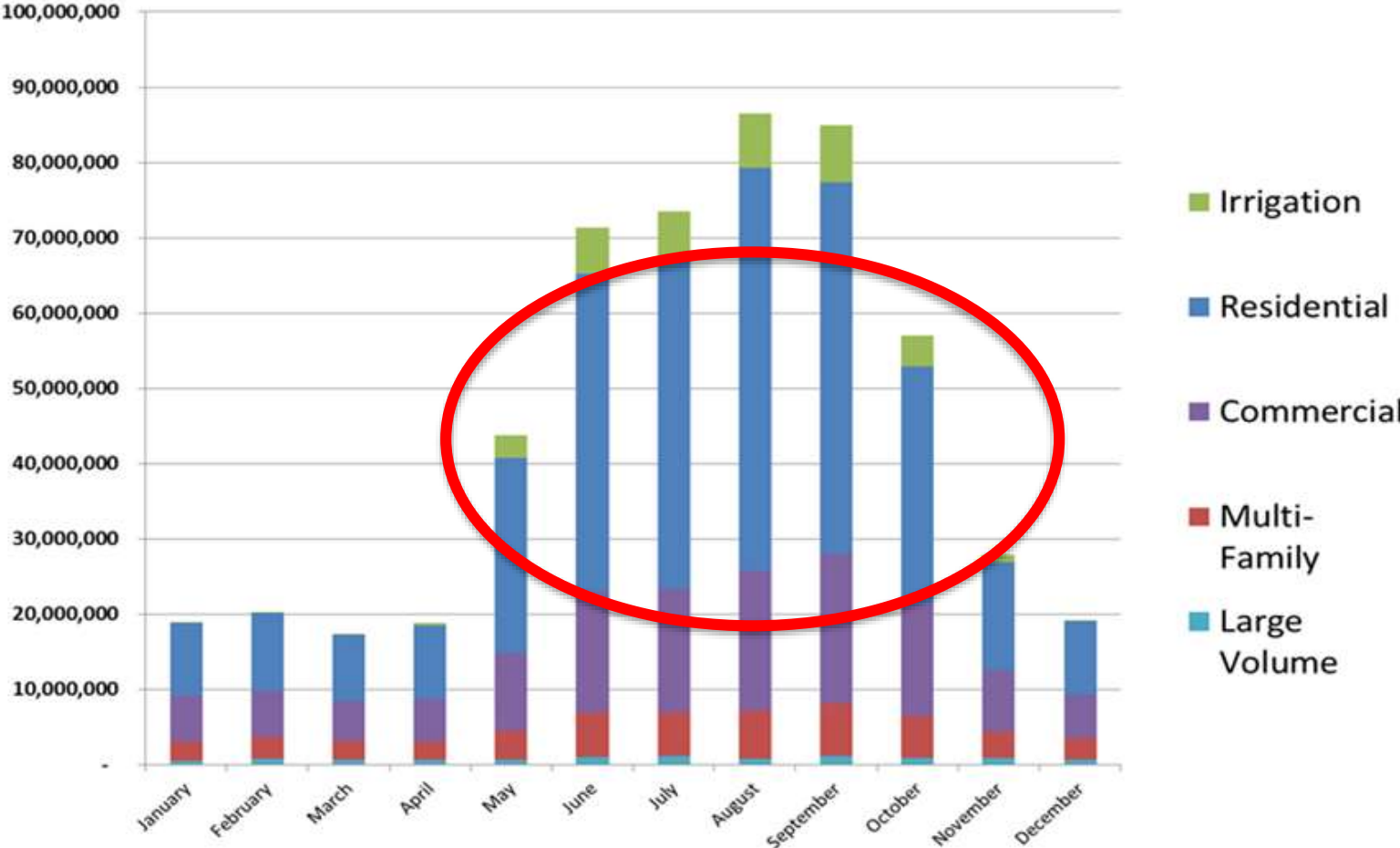
2017 Total Daily Water Production with surface water production (MGD)



BEND WATER OVERVIEW



Monthly Water Consumption (cf)



BEND WATER OVERVIEW





Sprinkler Inspection Program

Goal: Help customers manage water

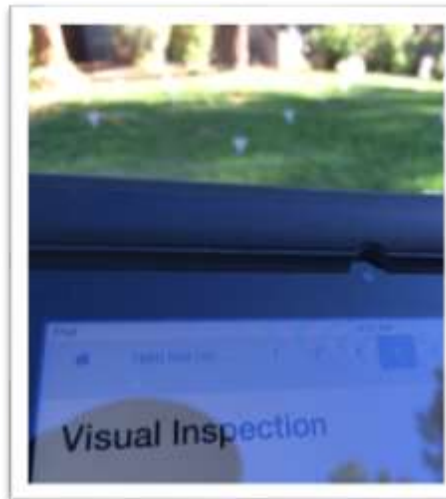
- Free to Bend utility customers
- Takes about 1 hour
- Thorough inspection w/ Q & A
- Customized inspection & report





1. Opt In Approach

- Promoted to utility customers
- One hour in the field for staff
- Labor intensive measure
- Great customer service program
- Lots of deficit irrigators
- Aligns w/ Residential End Uses



A Newsletter for Bend Citizens
PUBLISHED BY THE CITY OF BEND

CITY OF BEND

AUGUST 2015

CONTENTS:

- New Utility Rates
- Free Irrigation Sprinkler Inspections
- Bus Service Expansion

NEW UTILITY RATES

The City Council adopted rate increases for the water, sewer and stormwater utilities on June 17. In addition, the Council adopted changes to water and sewer rate structures, which will change the way the City assigns charges to its customers. These changes went into effect July 1, the start of the City's new fiscal year. You will now be charged for all water used. Sewer volume charges will be based on winter water usage for residential and non-residential customers. Non-residential customers who discharge higher concentrations of "stuff" in their wastewater will be charged more as part of the Extra Strength Charge program.

Customers' bills will reflect these changes beginning in August 2015. If you have questions about these changes, please visit www.bendoregon.gov/utilityrates or contact the Billing and Customer Service department at 541-388-5515.

The look of your utility bill is also changing. See the special insert on *How to Read Your Bill* that will arrive with your new bill.

FREE IRRIGATION SPRINKLER INSPECTIONS

The City is launching a free Sprinkler Inspection Pilot Program for Bend water customers this summer in an effort to increase irrigation efficiency and conserve our most precious natural resource, water.

It is estimated that approximately 60 percent of all residential water use is used for landscape irrigation. Much of that water is wasted due to misaligned or damaged sprinklers, runoff, and improper scheduling.

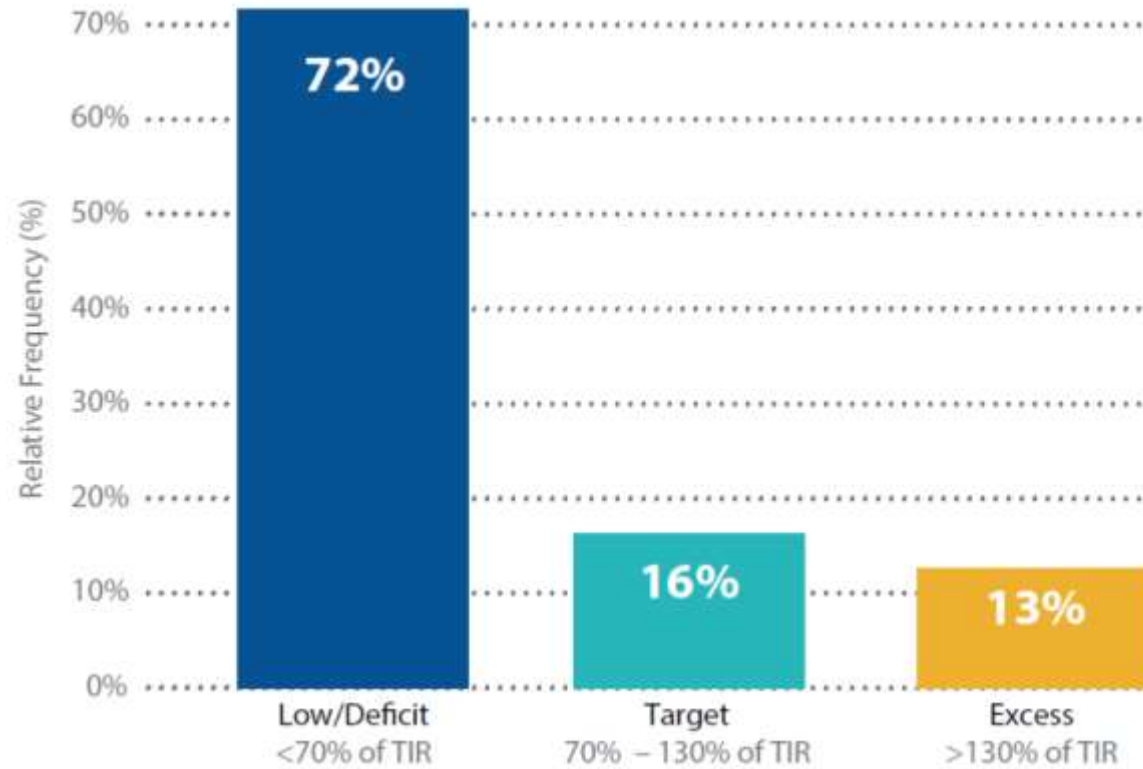
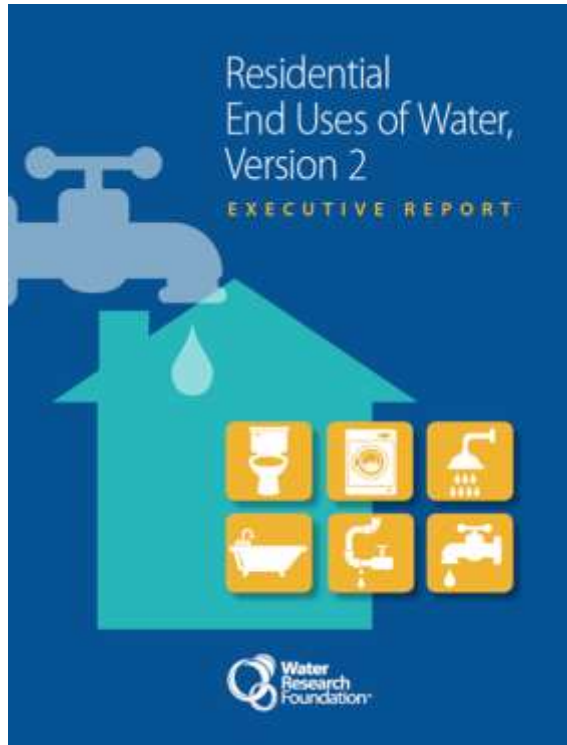
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CITY COUNCIL

The Bend City Council meets the first and third Wednesdays of each month. For upcoming meeting dates, agendas and more information, visit www.bendoregon.gov.



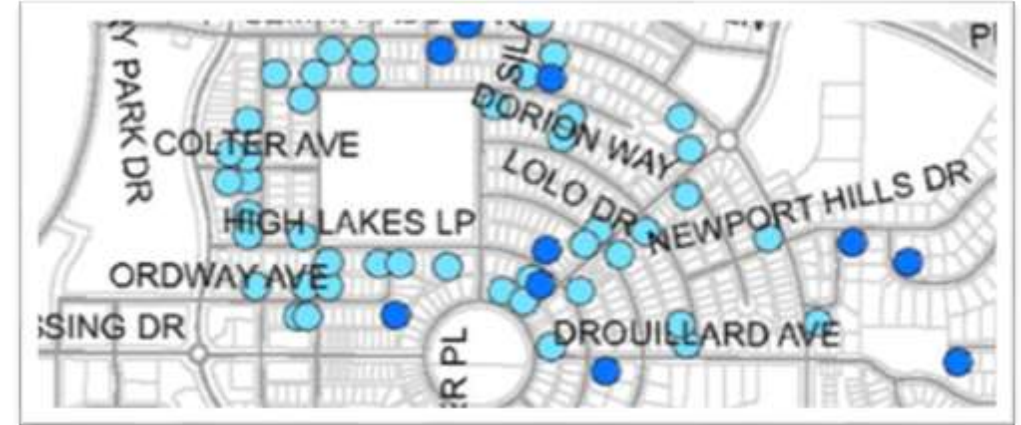
On outdoor water use...





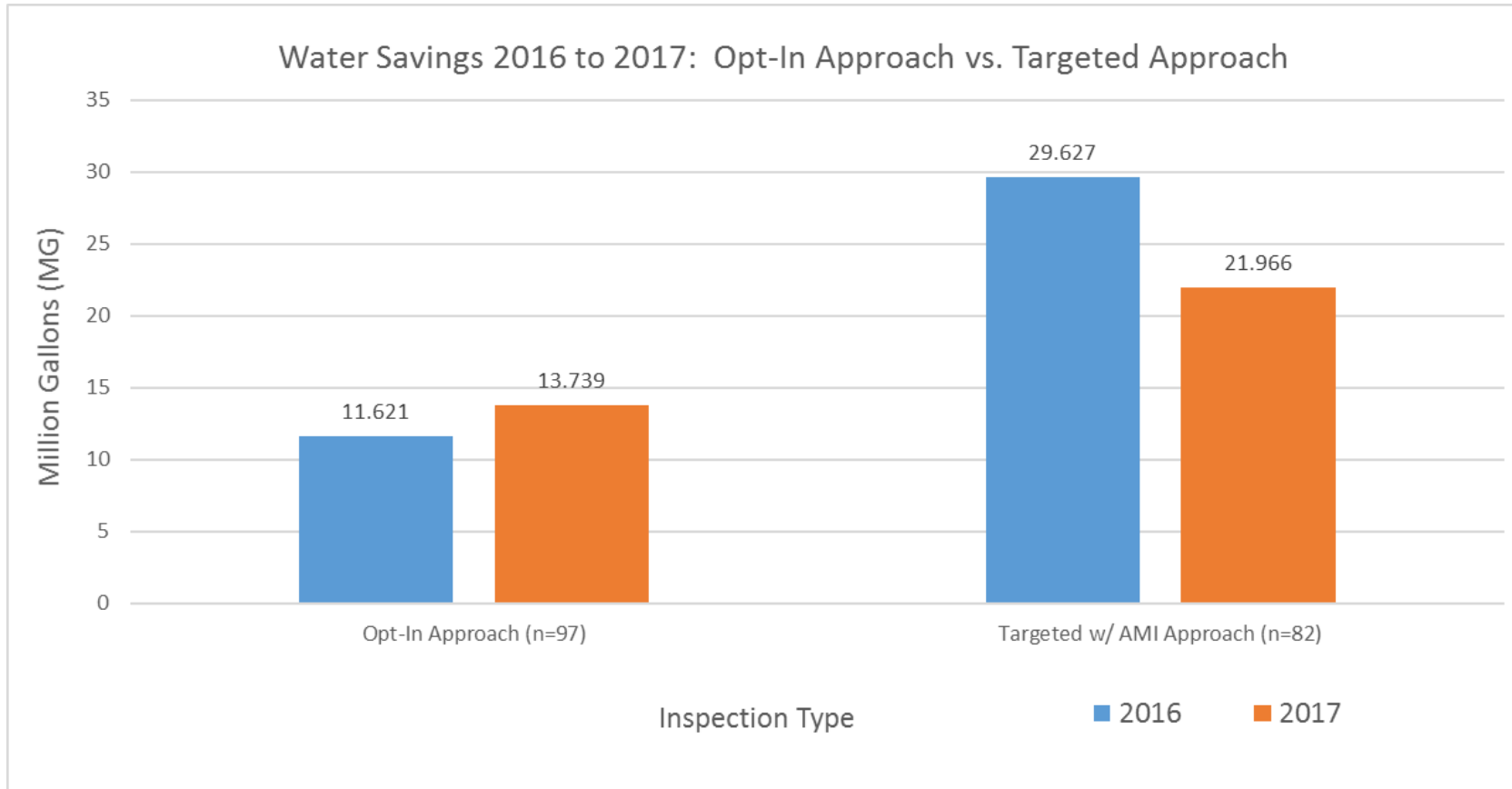
2. Targeting with AMI Data

- Compared water use & lot size ranges
- Identified EXCESSIVE water use
- Mapped for geographic evaluation
- Targeted customers via mail & phone
- High conservation potential
- High water savings





Targeting with AMI Data





3. Recruiting Through WaterSmart

- New water use analytics
- New reporting perspectives
- New customer engagement tools
- New city-wide internal users

Top Consumers by Period 300 weeks

The accounts that consume the most water by CF in the selected billing period. Suspect data (water reads that are so low or high that they appear to be errors) are excluded by default.

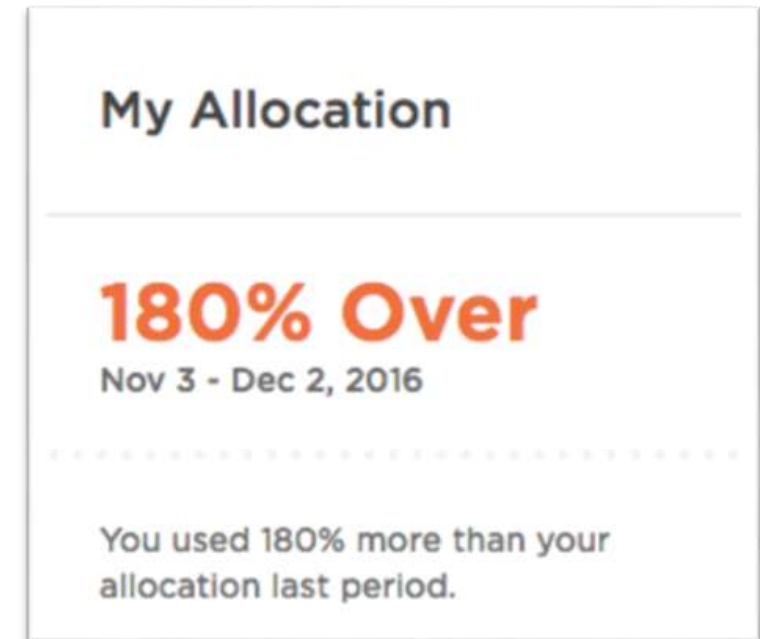
ACCOUNT	PERIOD	MIN	MAX	CF #	CONSUMERS	TYPE
W Magic Water Solutions Inc 10011 W. Sunnyside Rd Bend, OR 97701	Feb 26, 2020	3,800	3,700	20,000	2	Residential
W Matthew R Laska 2234 NW Riverside Blvd Bend, OR 97701	Feb 26, 2020	1,412	200	5,000	5	Large Outdoor
W C V D 2000 NW Maple Avenue NE Bend, OR 97701	Feb 26, 2020	1,267	277	5,200	5	Residential
W High A S Shook & T Hall 2130 NW Riverside Dr Bend, OR 97701	Feb 26, 2020	1,208	524	4,000	4	2nd Outdoor
W Susan Smith 2234 NW Riverside Dr Bend, OR 97701	Feb 26, 2020	1,098	419	5,700	5	1st Outdoor
W Carol A S Shook & T Hall 2130 NW Riverside Dr Bend, OR 97701	Feb 26, 2020	1,010	417	4,000	4	2nd Outdoor
W Dan Finkbeiner 2234 NW Riverside Dr Bend, OR 97701	Feb 26, 2020	1,010	200	5,000	5	Residential



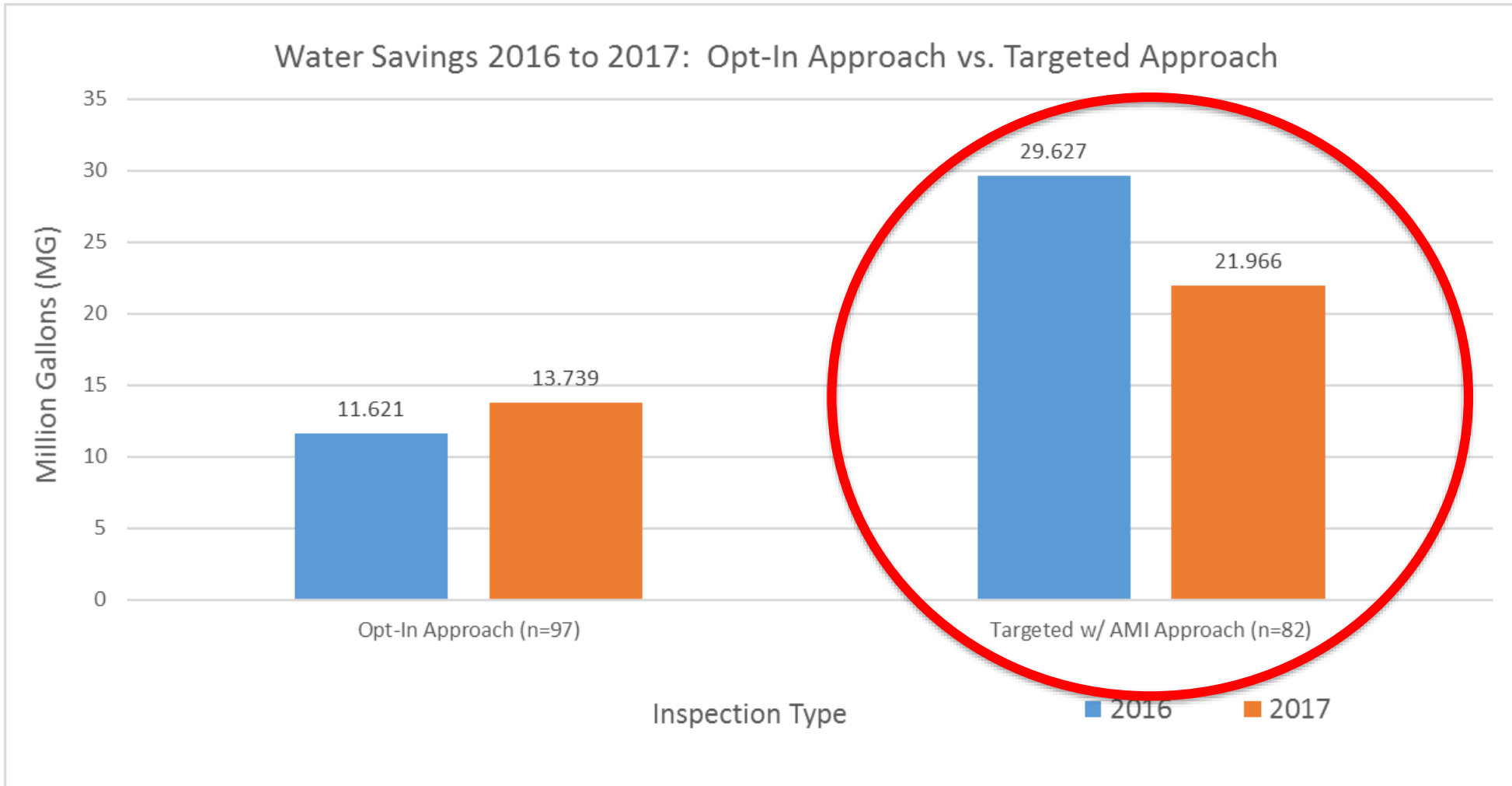


Recruiting Through WaterSmart - TOMORROW

- Utilize WaterSmart water budget feature
- Recruit directly thru customer engagement
- Track and measure thru WaterSmart
- Send reminders thru customer engagement
- One software application!



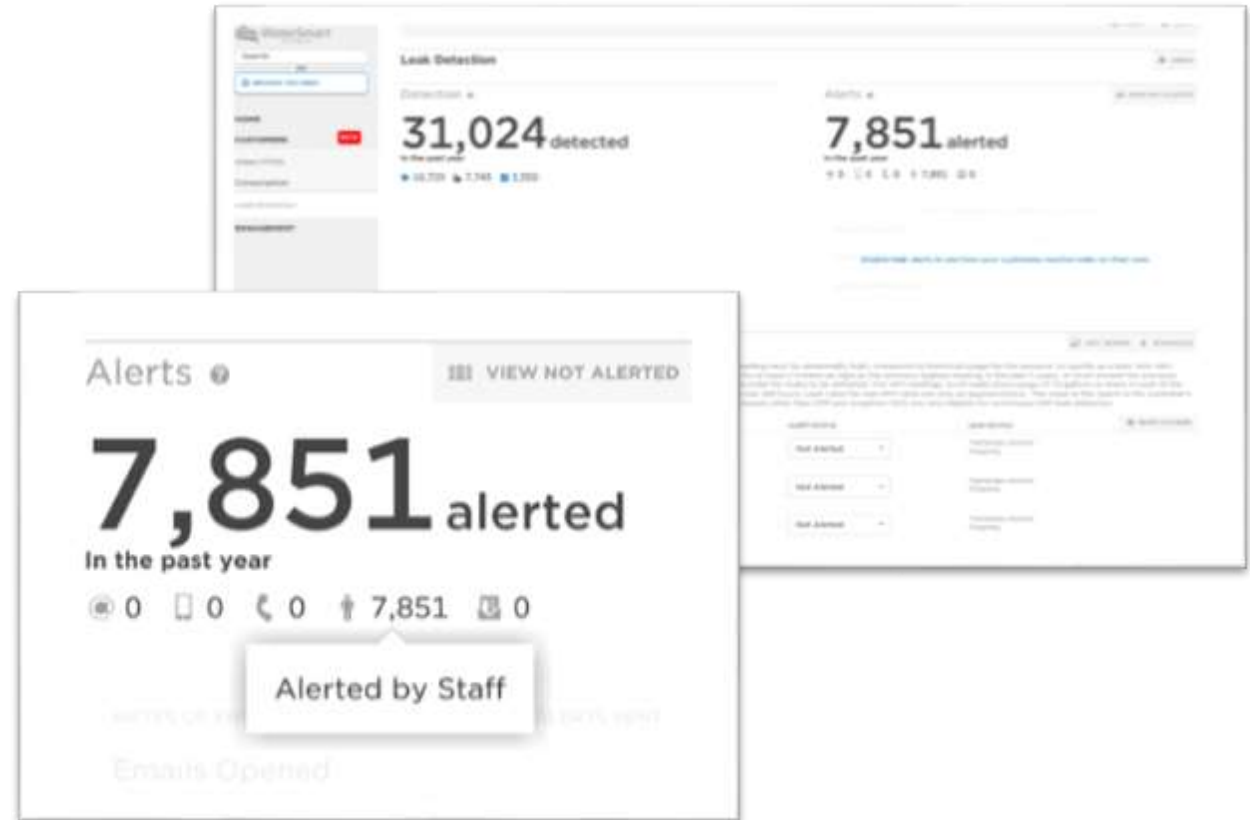
TARGETING OUTDOOR WATER USE





Targeting Leaks for Residential Customers

- Initially a bulk of historical leaks
- Now down to a handful daily
- Utilizing existing processes
- Labor intensive & **EFFECTIVE**
- Huge customer service wins



Leaks...



**Where do you
begin?**

The reach of leaks is very large

According to the EPA:

- On any given day, 10% of homes have leaks that waste 90 gallons or more per day

Based on WaterSmart Analysis:

- Over the course of one year, **almost every account has one event of continuous consumption** that is detectable through AMI metering data.

Leaks cost everybody:

- **Customers** – higher water bills, possible water damage
- **Utilities** – effects on customer satisfaction, field and customer service time and labor, and chargebacks if maintain a leak forgiveness policy

In the past year at Bend:

31,034 leaks have been detected

7,831 accounts have been alerted

Leak detection at five sample utilities

Utility	Accounts	Leaks (year)
Bend, Oregon	25,486	31,034
Utility A	27,290	21,060
Utility B	34,204	126,645
Utility C	8,293	14,675
Utility D	14,431	35,126

What is the impact?

Utility	Accounts	Open leaks (MGD)	% of metered use
Bend, Oregon	25,486	0.22	5%
Utility A	27,290	0.51	4%
Utility B	34,204	0.76	3%
Utility C	8,293	0.29	5%
Utility D	14,431	0.13	5%

What about the impact on customers?

How are utilities trying to address this problem?

1. Customers might notice continuous consumption on graph of hourly water use
2. Customers are manually alerted of a leak by staff (phone call or letter)
3. Customers are automatically alerted via email, text, voice, or print

Am I spamming my customers?

78% of customers were alerted to a leak or other wasteful use they were not aware of

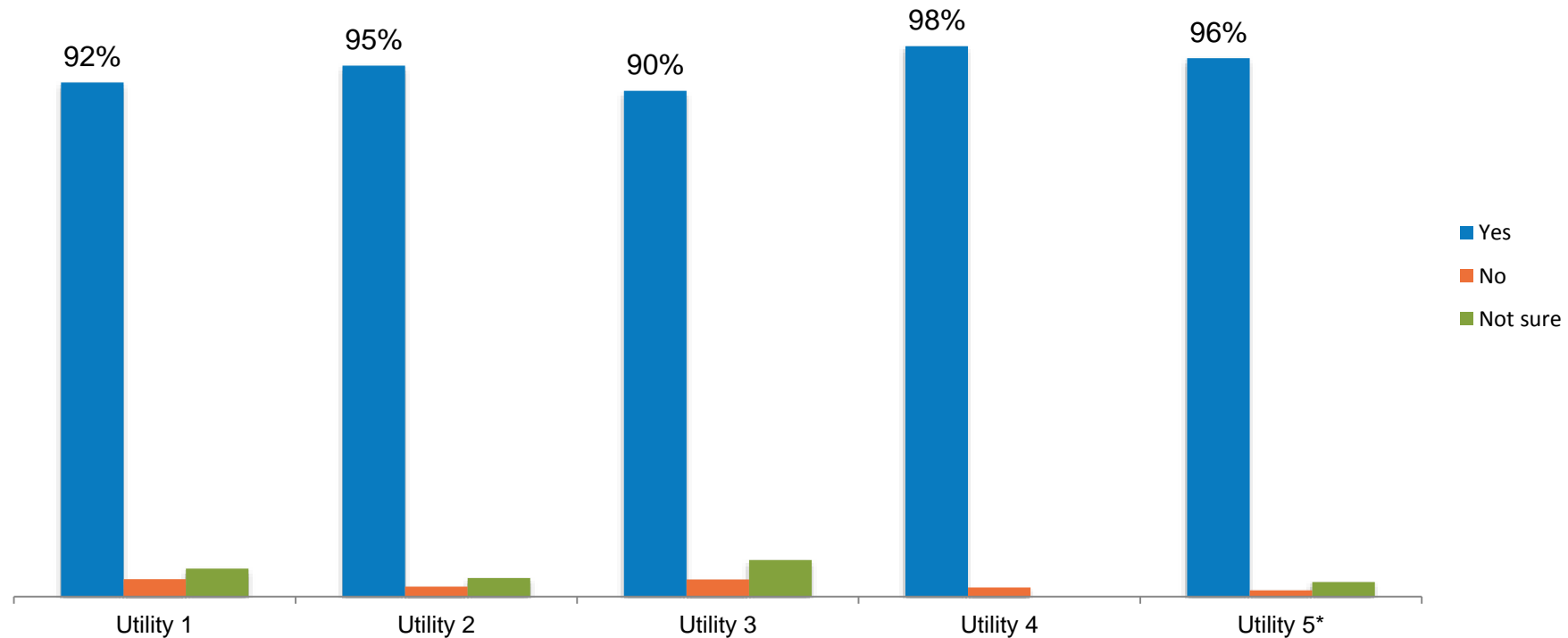


Was this alert about...

- A leak you were not aware of
- Water use that was not a leak
- A leak you were already aware of
- Not sure

95% of customers want to continue receiving leak alerts

Do you find leak alerts valuable and wish to continue receiving them?



TL;DR

95% of customers responded that it was “valuable that Utility continue to provide this leak alerting, detection and resolution service”

78% of customers were alerted to a leak or other irregular use they were not aware of

73% of leaks were confirmed to be actual leaks (not false positives)

Leak notification at 5 sample utilities

Utility	Accounts	Leaks (last year)	Alerts (last year)
City of Bend	25,486	31,034	7,831
Utility A	27,290	21,060	3,438
Utility B	34,204	126,645	16,535
Utility C	8,293	14,675	3,069
Utility D	14,431	35,126	10,196

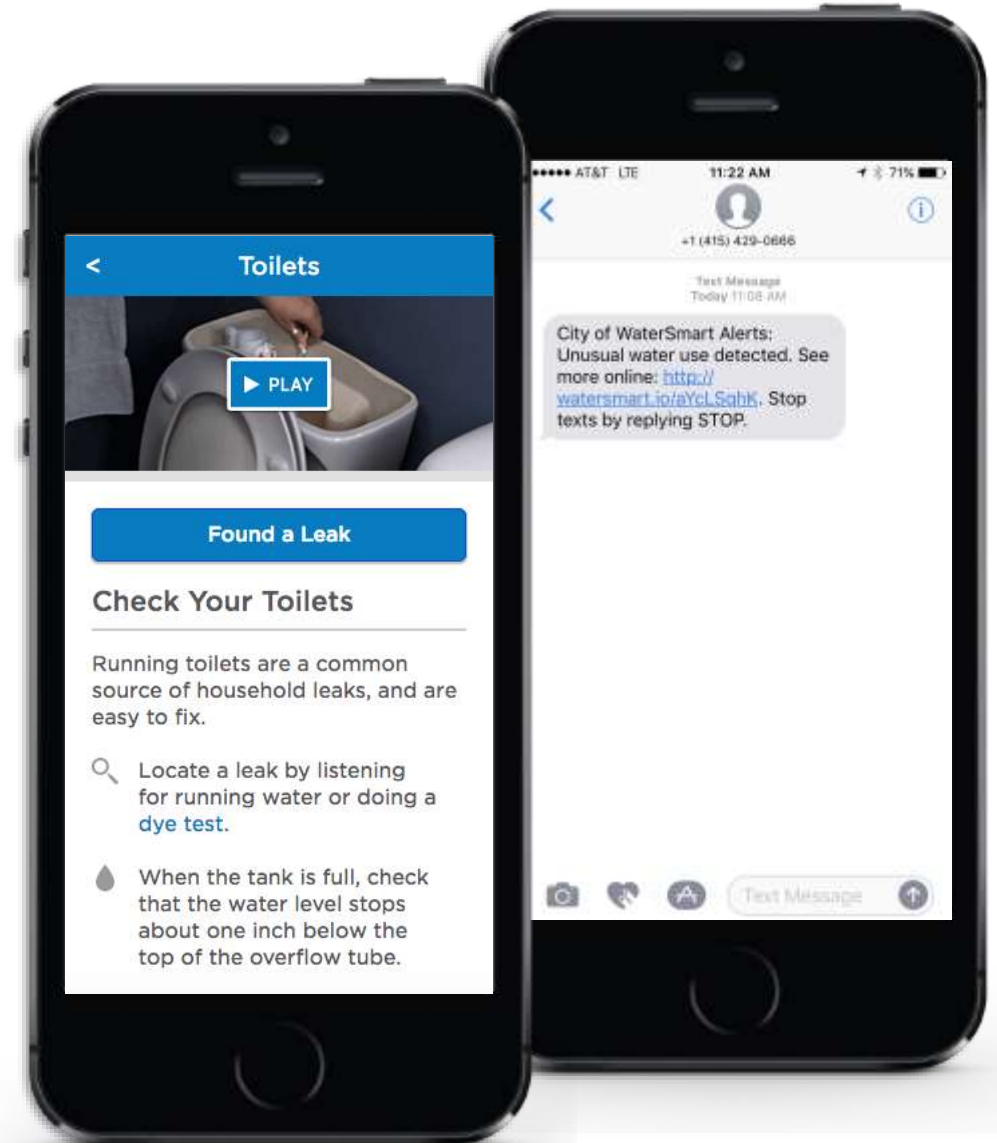
Does the solution lead to another problem? What do customers do when alerted?

Accessible

- No login or registration required
- Leak alerts are sent by email, text, voice, or print letter, depending on channel availability
- Help customers investigate leaks, and report resolution back to the utility

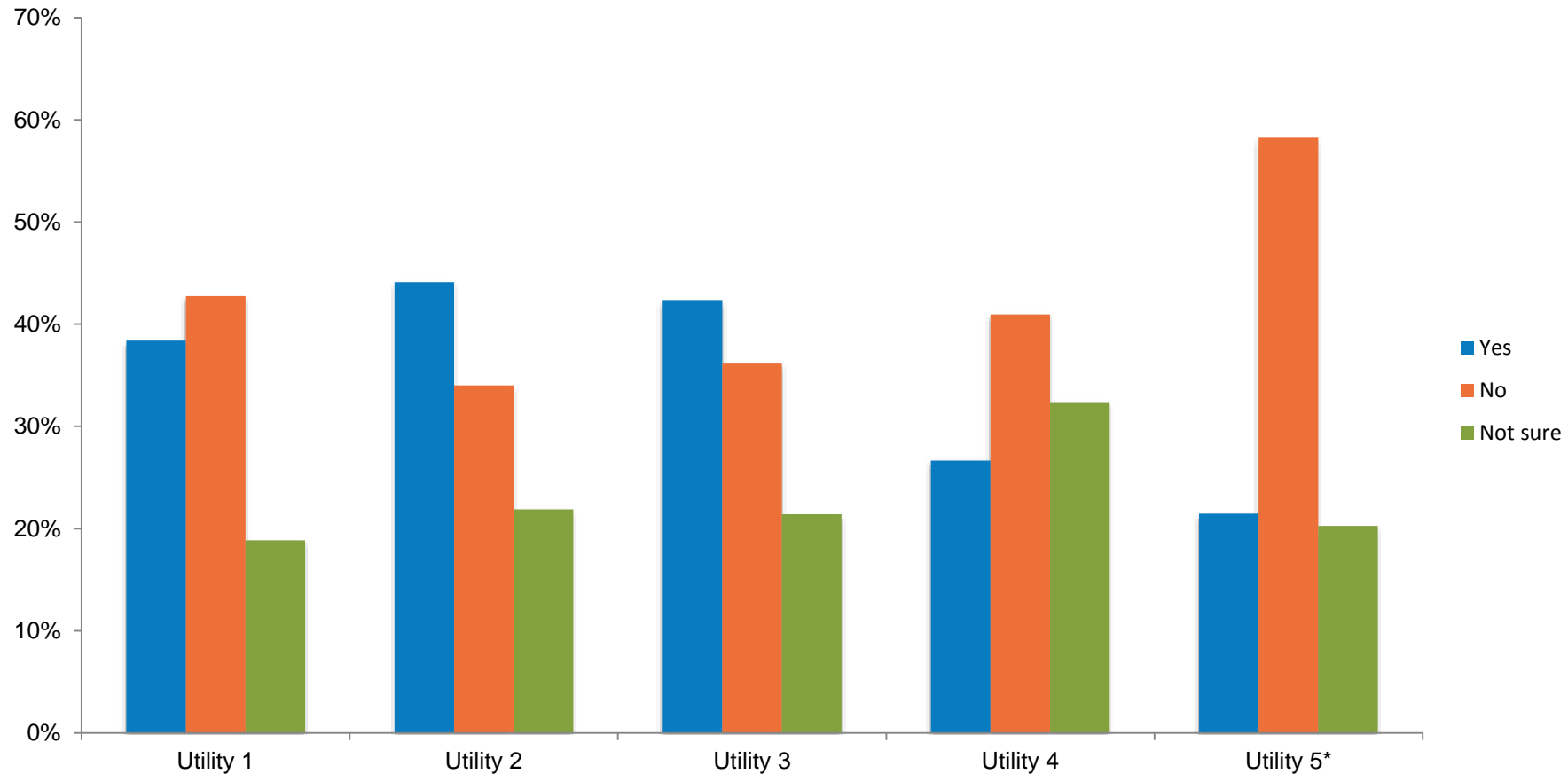
Smart

- Algorithm adjusts to customers' unique attributes, reducing false positives

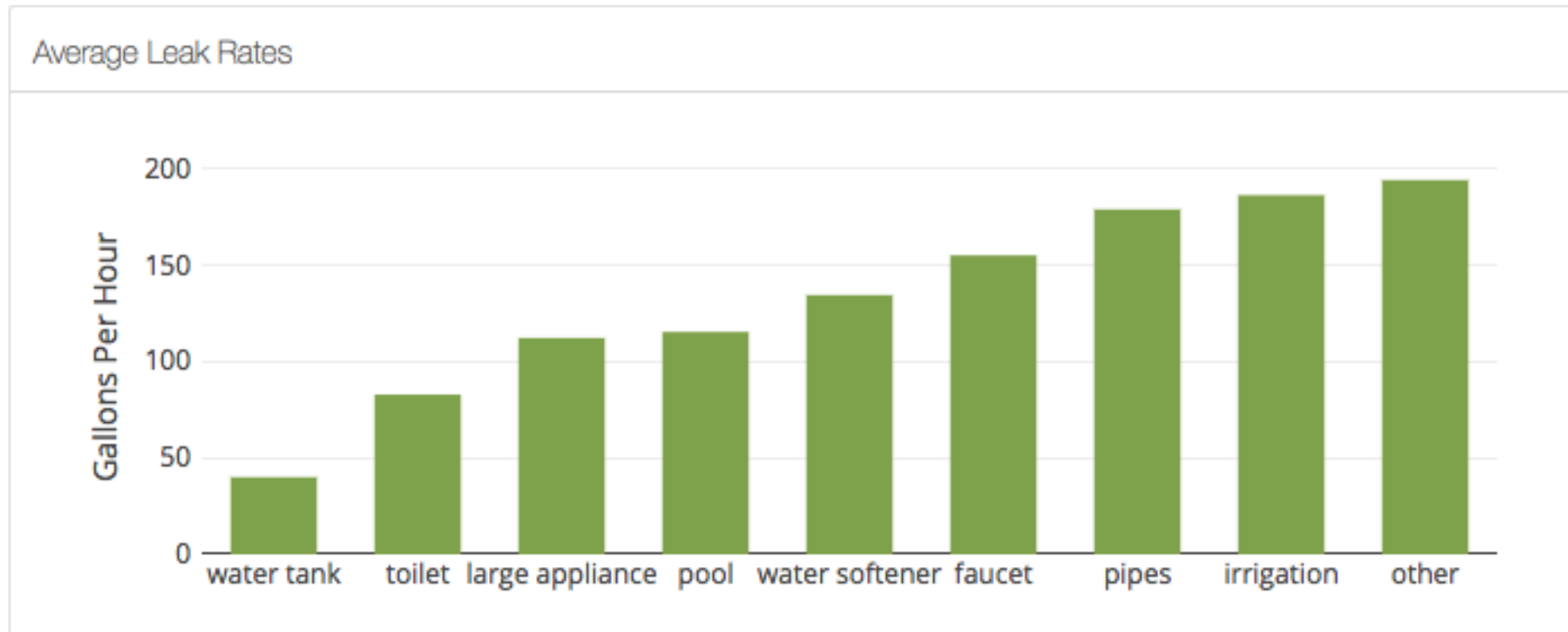


Many customers self-resolve their leaks without calling!

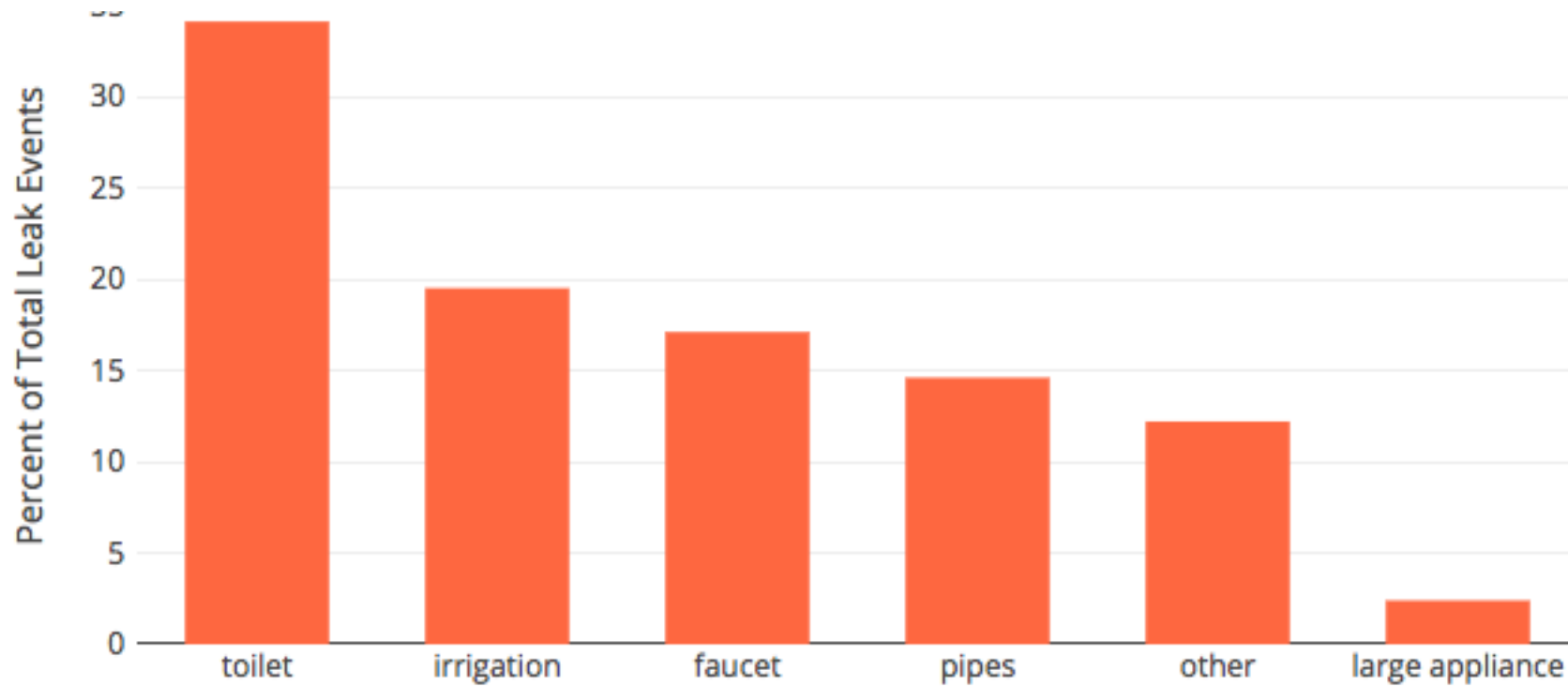
Were you able to self-resolve leak?



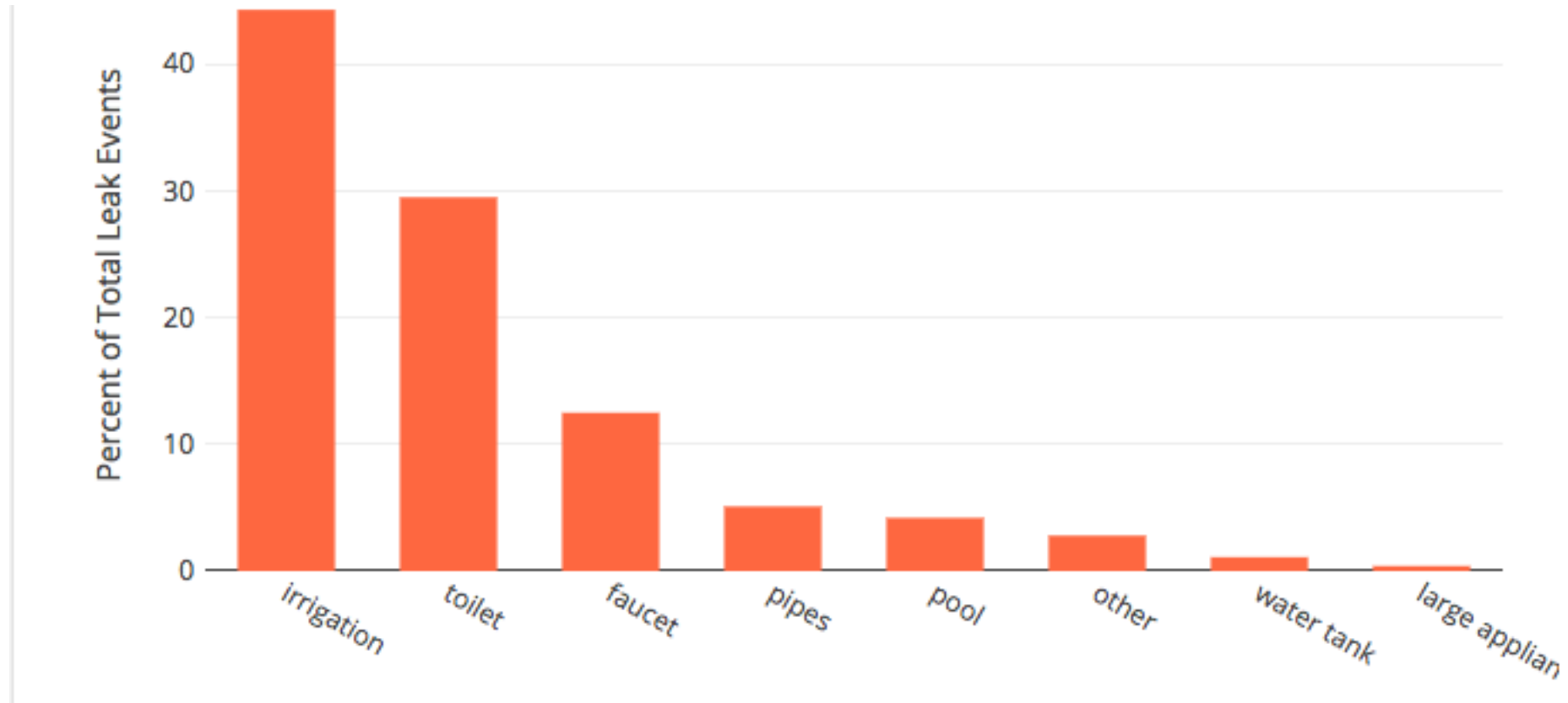
Where are the average leak rates by source?



Most common leak sources—high desert, seasonal snow



Most common leak sources—year-round irrigators



On average, customers save 10% following receipt of an alert

WaterSmart evaluated water consumption following receipt of a leak alert for the Treatment vs. Control groups across all our utility partners

The *average* customer receiving a leak alert for a continuous leak reduces their consumption by 9.85% in the month following receipt of a leak alert, relative to the “control” group*

Automated leak alerting and resolution allows utilities to:

- Improve customer satisfaction
- Quantifiably reduce water waste
- Reduce the cost of managing leaks
- Reduce customer bill shock
- Create the opportunity for a positive customer interaction