

# This presentation premiered at WaterSmart Innovations

[watersmartinnovations.com](http://watersmartinnovations.com)

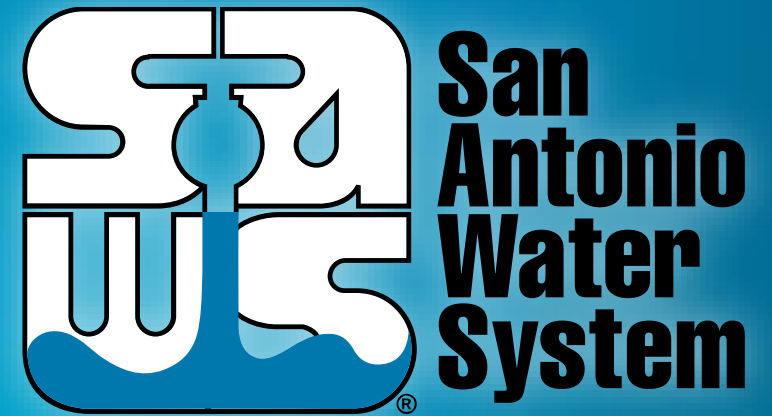




# Conservation Pilot: Flume

Karen Guz

Conservation Director



WaterSmart Conference

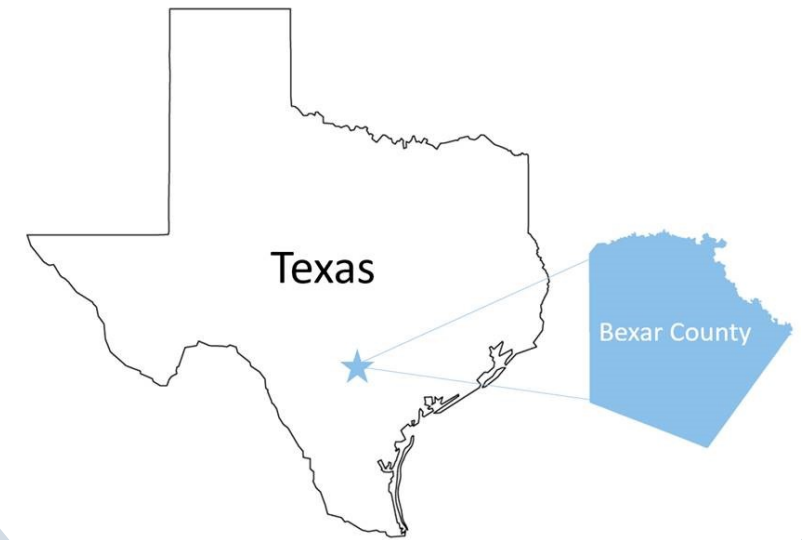
MAKING SAN ANTONIO  
**WATERFUL**





# San Antonio Water System

- 1.8 million served water & wastewater
- Produce and deliver water
- Over 500,000 accounts
- Diverse Customer Base
  - 71% volume residential (indoor & outdoor)
  - 23% volume commercial/industrial
  - 6% volume commercial landscape irrigation
- Conservation Drivers:
  - Fast growing region
  - Drought prone with strict aquifer regulations
  - Part of San Antonio culture



GARDEN STYLE  
SAN ANTONIO



# Flow Sensors Evolving VERY Quickly

- Sold on-line directly to our customers
- Fits internet of things trends
- Nearly real time by the minute consumption data
  - More immediate and discrete data than AMI





# Why Flume As Pilot? Cost-Effective & Fast Deployment

- Self-install product
- Straps onto utility meter and provides reads to smart phone app
- \$200 Price





# Questions On the Tech & Customer Response

- Is it really an “easy” install?
- Work with our SF meters?
- Will people use the app?
- Will people set up alerts?
- Will people want it?
- Will data differences from our meter read cause a problem?
- **How much will this save?**

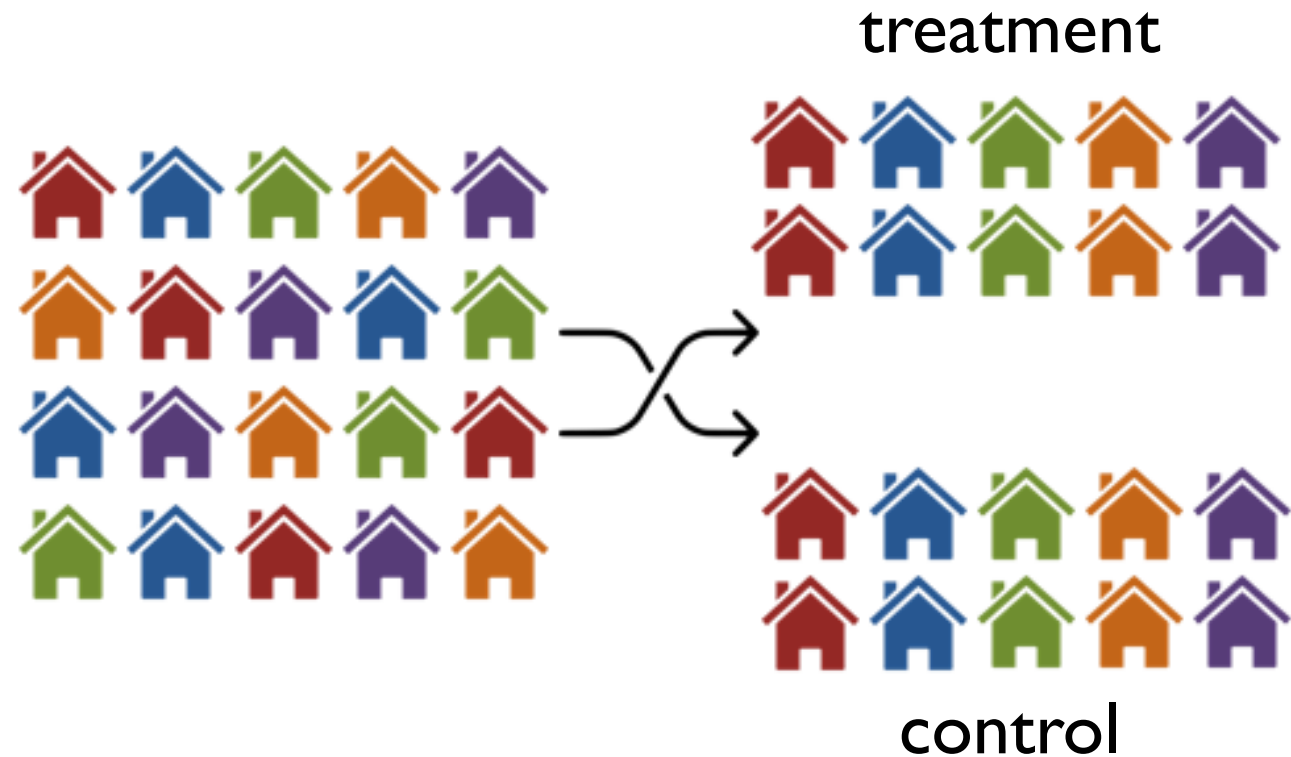


We designed a pilot test how customers respond to options because outcomes are not always logical.



# Random Control Trial Pilot Design

- RCT helpful in behavior based interventions
- 1. Start with target audience  
In this case all are “opt-in”
- 2. Randomize customers into:  
**Treatment:** gets product  
**Control:** no product
- 3. Differences between two groups attributed to program intervention

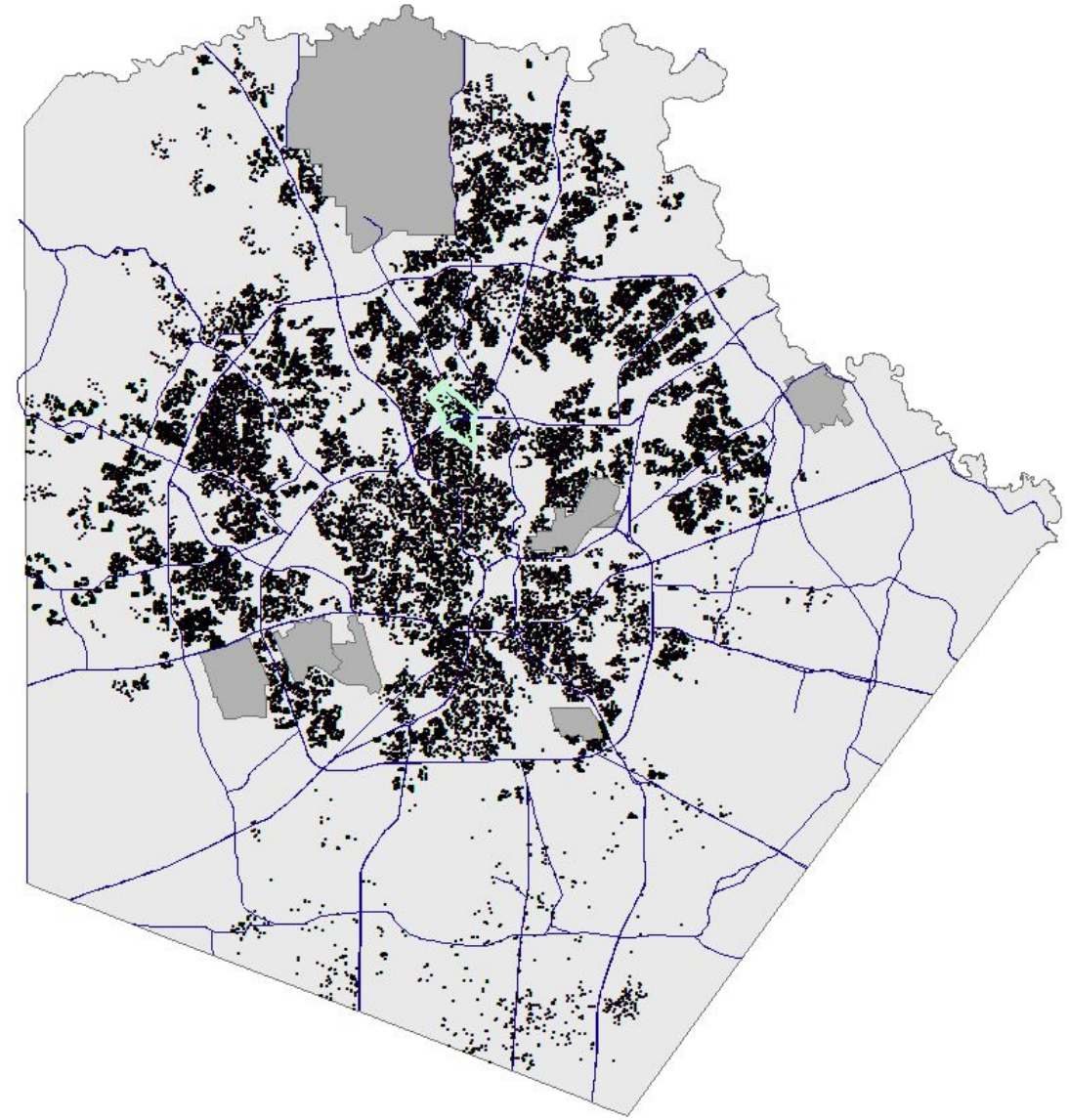




## December Flume Pilot: Invites

Invited 38,813 customers to participate

- About 5,000 customers from each of our eight billing tiers
- Promotions were 50% email, 50% snail mail
- Excluded customers in other Conservation Pilot Programs







IN PARTNERSHIP WITH:



SOLD OUT



5 Star Reviews  
on Amazon

## Flume Smart Water Sensor for only \$30 ~~\$199~~

Purchase your Flume intelligent leak detection and water management sensor before supplies run out! In partnership with SAWS, this limited-time offer helps you maximize efficiency, protect your home from damaging leaks and gain insight into your usage for only \$30 (a \$199 value).



UNAVAILABLE - SOLD OUT





# Flume Pilot: Responses

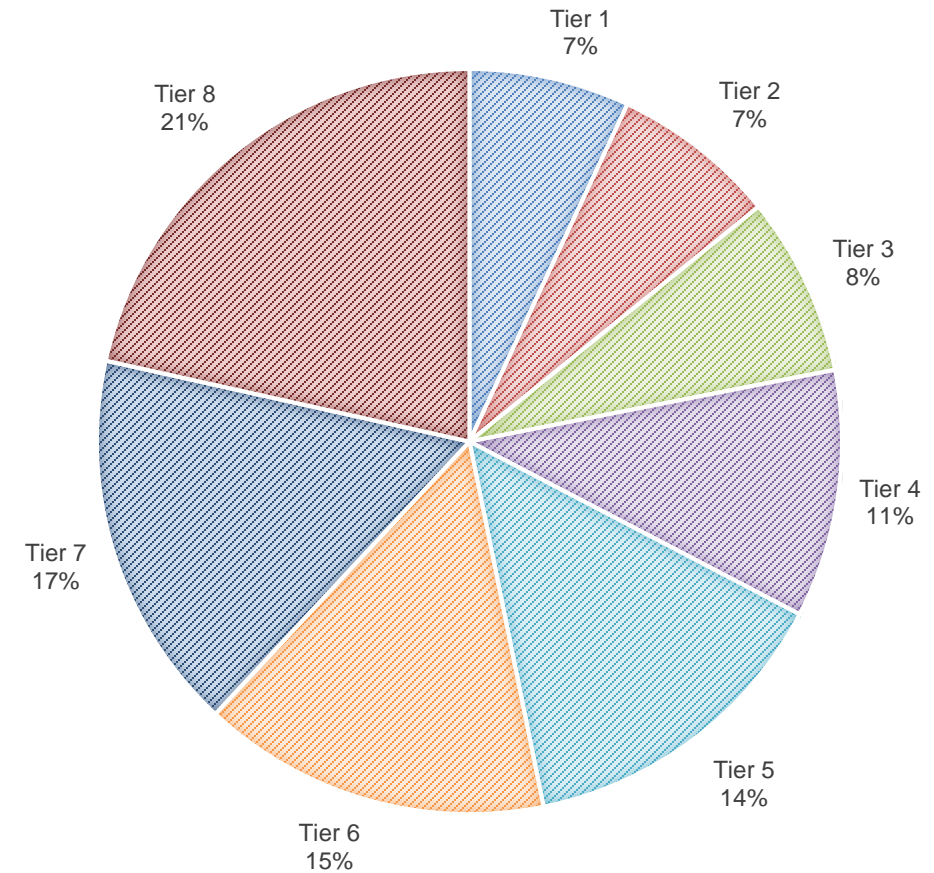
## Responses from 2,136

- 1,655 from email invites (8.7%)
- 481 from print mail invites (2.4%)

## Random selection for Acceptances

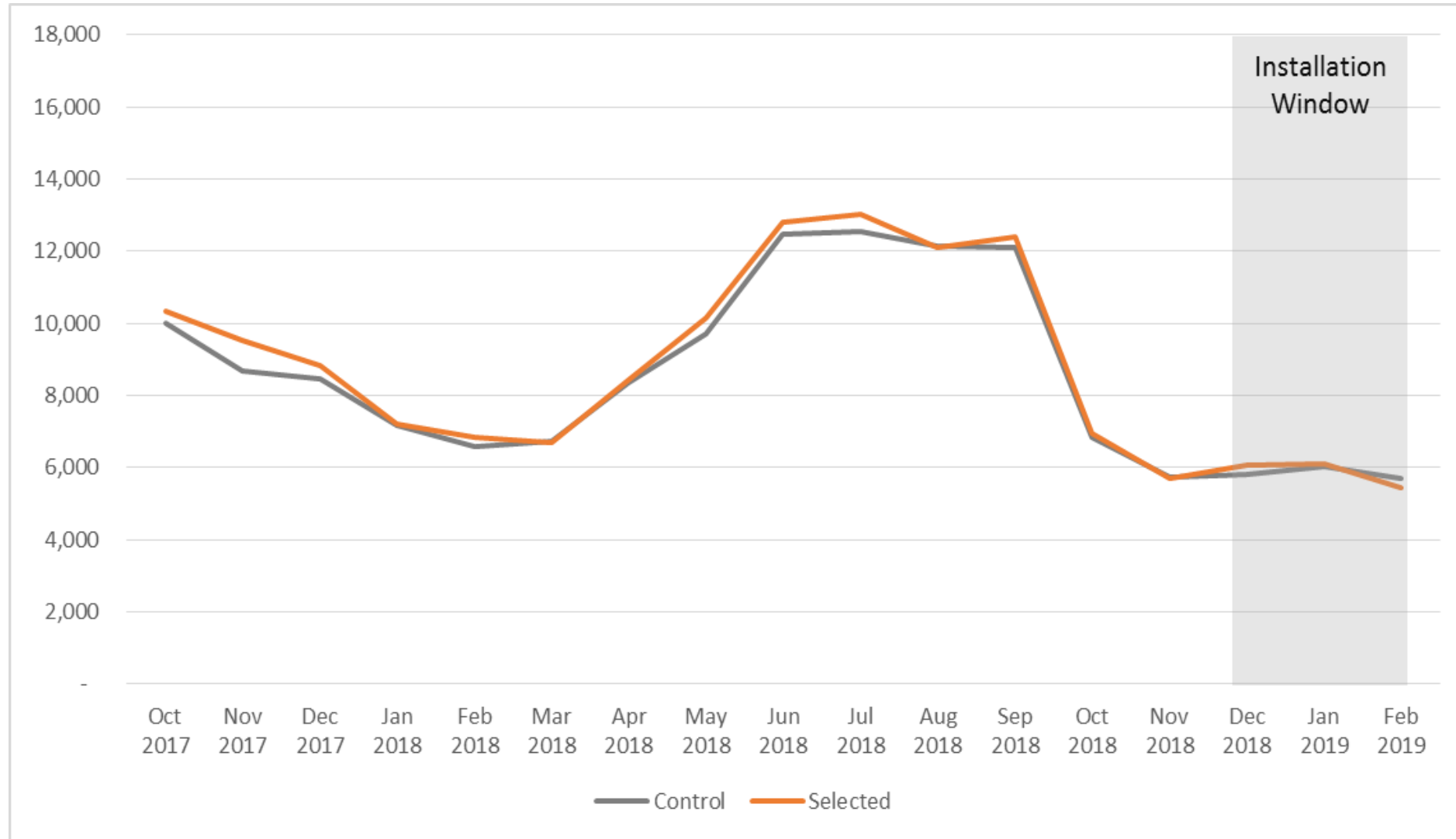
- 1488 were selected, 500 purchased devices
- Retained some from each billing tier
- BUT....Unequal redemption of coupons by customers

## Coupons Redeemed by Billing Tier





# Great Equivalency In Selected vs. Control!

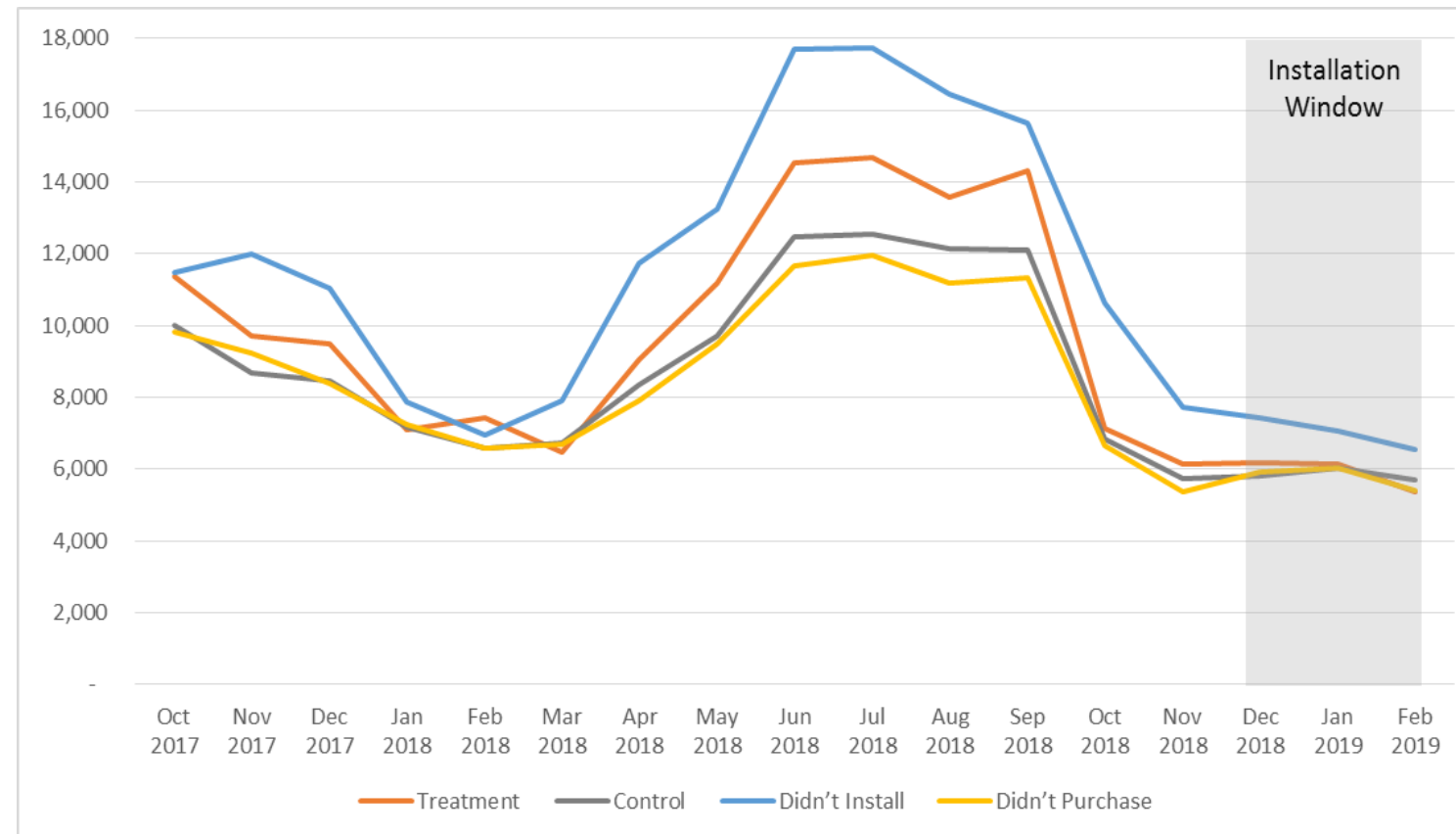




# BUT...We Had A Problem

No usage equivalency due to customer behavior post coupon redemption

Pilot Group	Count	Avg Yr Built	Avg Total Value	Avg Acre
Didn't Purchase	981	1988	\$324,152	.256
Didn't Install	69	1986	\$370,669	.375
Treatment	429	1995	\$342,693	.310
Control	513	1990	\$317,321	.309





# Adjusting the Experimental Design

## Created Control Group Process

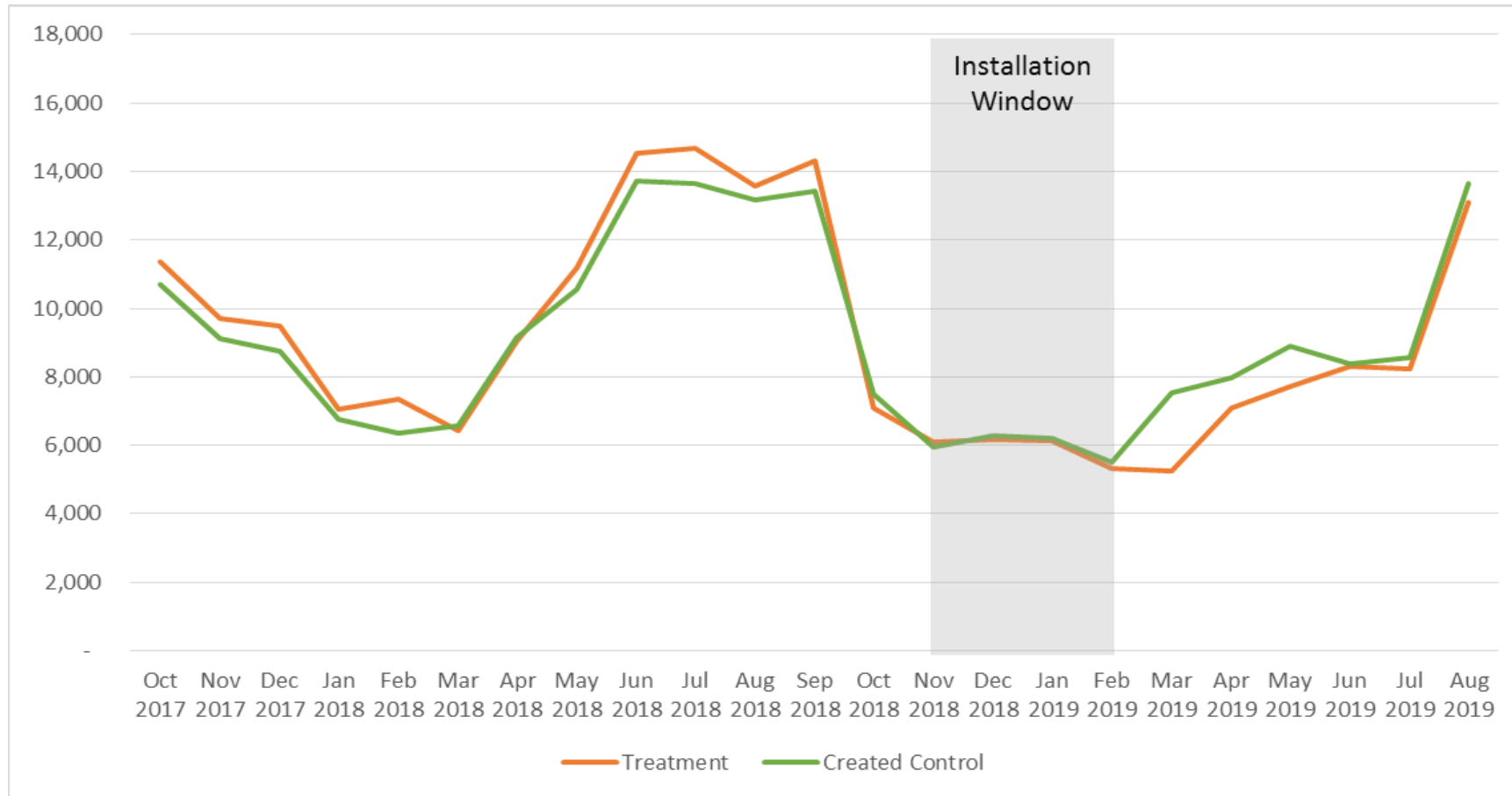
Pilot Group	Count	Avg Yr Built	Avg Total Val	Avg Acreage
Didn't Purchase	981	1988	\$324,152	.256
Didn't Install	69	1986	\$370,669	.375
Treatment	429	1995	\$342,693	.310
Created Control	341	1993	\$348,174	.314
Removed from Control	172	1984	\$255,615	.300

- Needed to adjust control group to make it equivalent to treatment
- Created an adjusted control group to track against treatment group



# Created Control vs. Intervention

Savings of 1,441 gallons for first three months (18% average drop)



Excludes those who did not install and adjusts control group to reasonable but not perfect equivalency

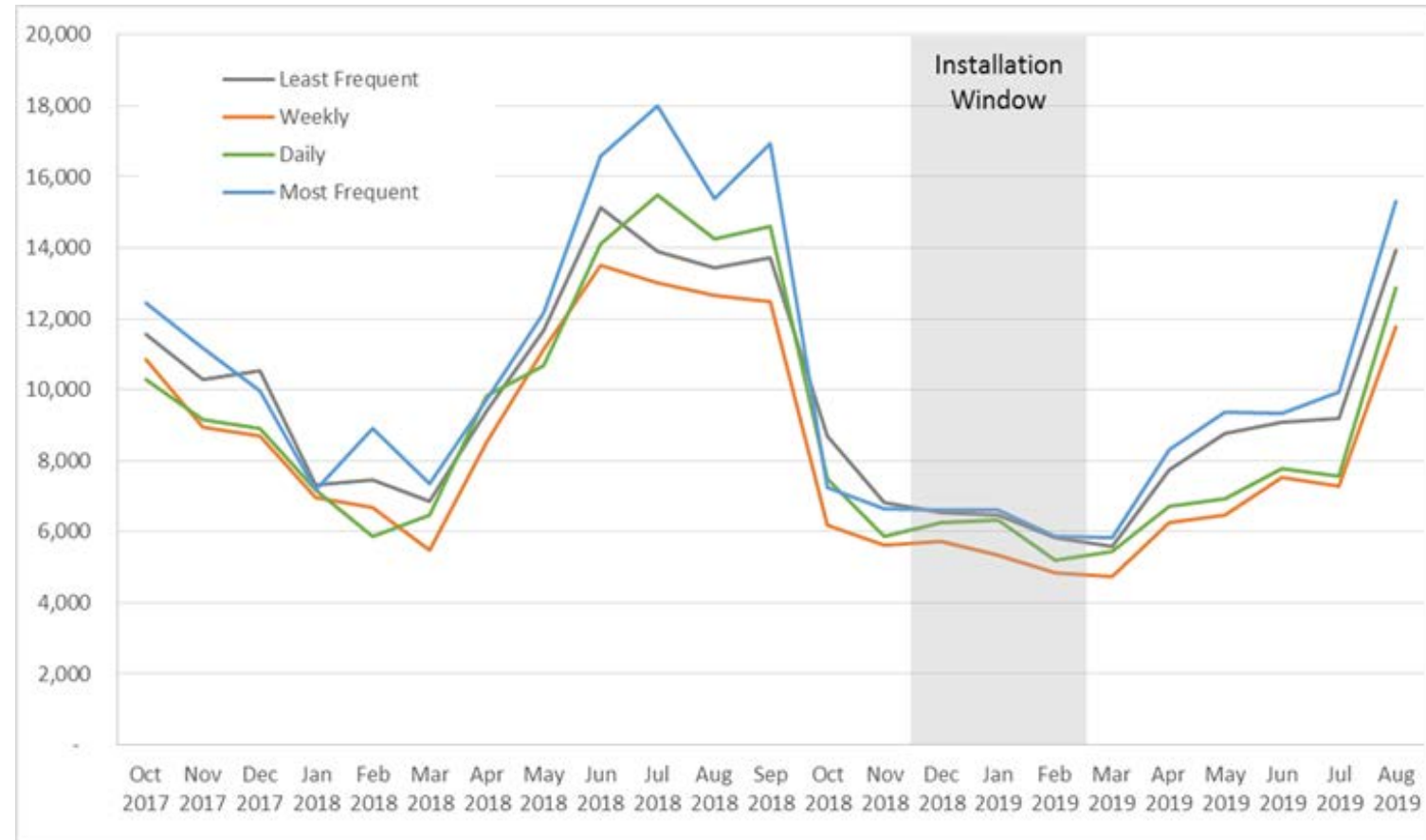


# Does App Usage Matter?

COMPLEX but...more app usage appears to result in more water savings!

- Once per day group dropped quite a bit in the summer months
- Less than once per week appeared to show the least change

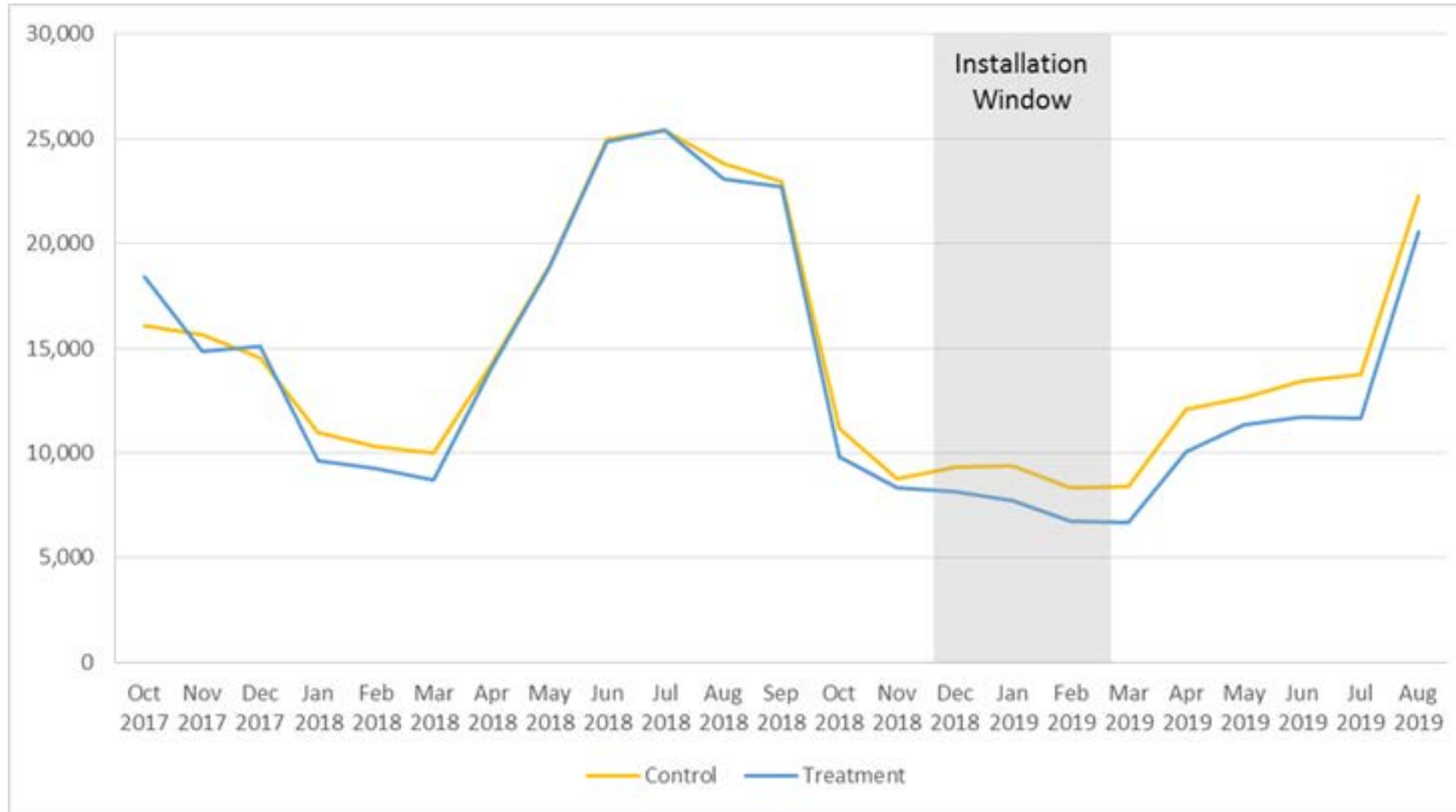
**We need to dig into this more!**





# High User Analysis; reduced in summer!

Just getting started on this ....need to dig in more!



- Top tier users showed distinct savings
- Savings persisted past initial three month period
- **Does this translate to fewer high bill complaints?**

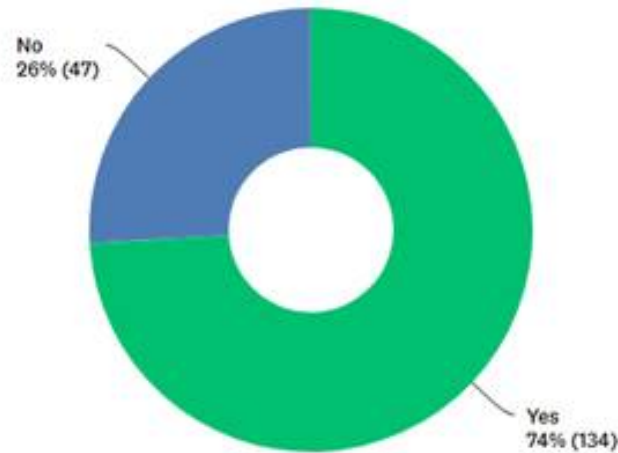


# Customer Reactions; Initial Survey

Very positive customer reactions to product

Do you believe the Flume has helped you save water?

Answered: 181 Skipped: 0



- 76% believed it them helped save water
- 66% changed a habit
- 98% enabled notifications
- 32% check several times per week
- 20% view it only as a leak notification device



# Rebate Launch August 2019

Wanted something out in time for HIGH BILL COMPLAINT SEASON

\$150.00 Rebate On Choice of:

- Flo
- Flume
- Buoy
- Phyn Plus

**\* Cash rebate AFTER we verify installation with product vendor**

- About 300 rebates issued so far (Consider this a Tepid customer response)
- Most choose Flume
- Anecdotal feedback is that the five choices are confusing
- Rebate vs. Coupon may also be reducing participation



# Other Benefits of Flow Sensor Rebate

## Escalated Bill Complaints

- “Behind the Scenes” offer only
- Flume loaner FREE for three months for highly escalated complaints
- Customer signs user agreement
  - Return in three months OR pay \$50
- Good for “I could not possibly have used this much water” situations

## High Bill Season Rebate Promo





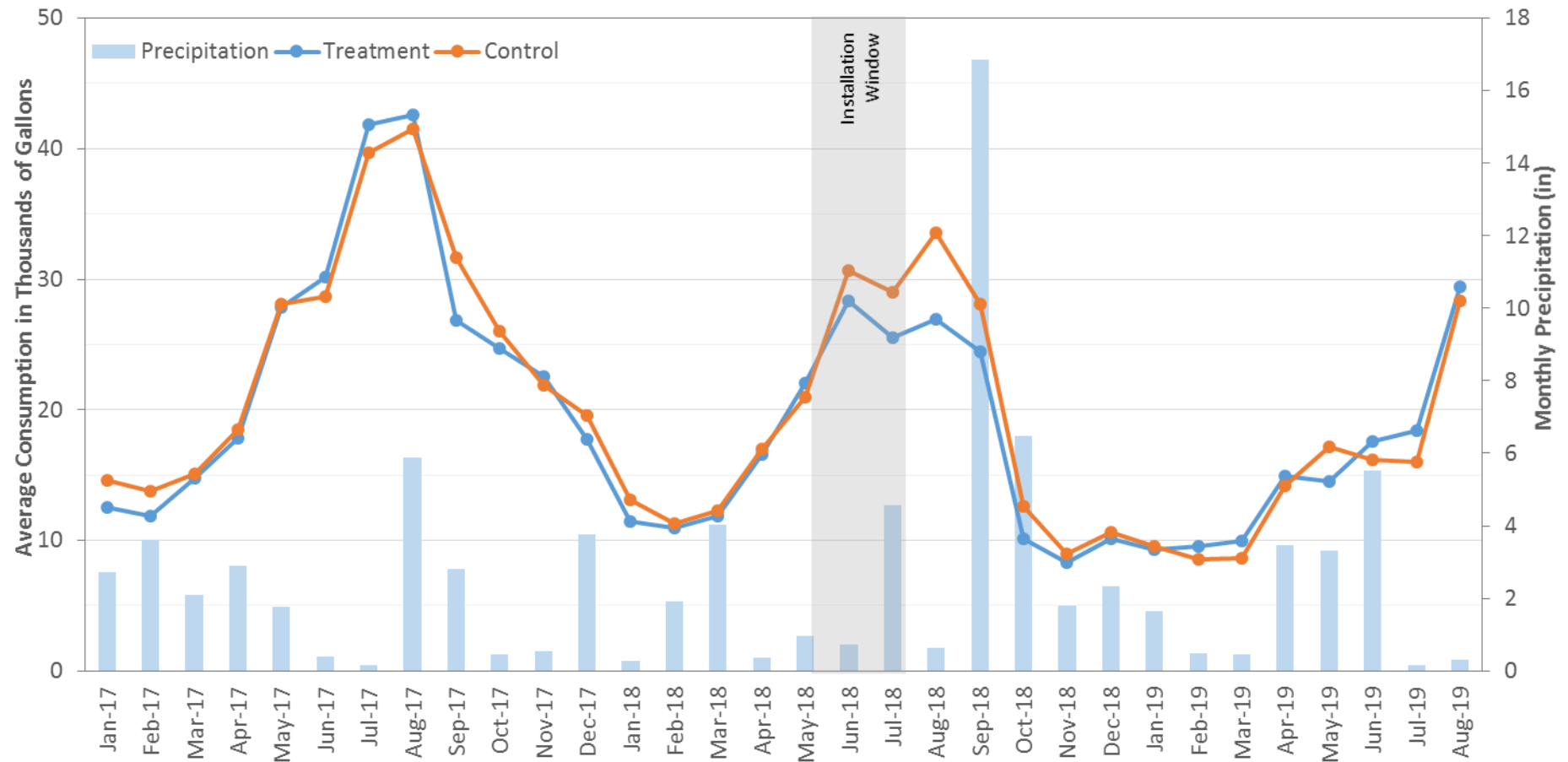
## What About Smart Controllers?

## Top Residential User Pilot (recruited very high use households)



### Random Control Pilot

- Two identical groups
- One gets WBIC
- WBIC group used less 1<sup>st</sup> summer
- WBIC group using same 2<sup>nd</sup> summer





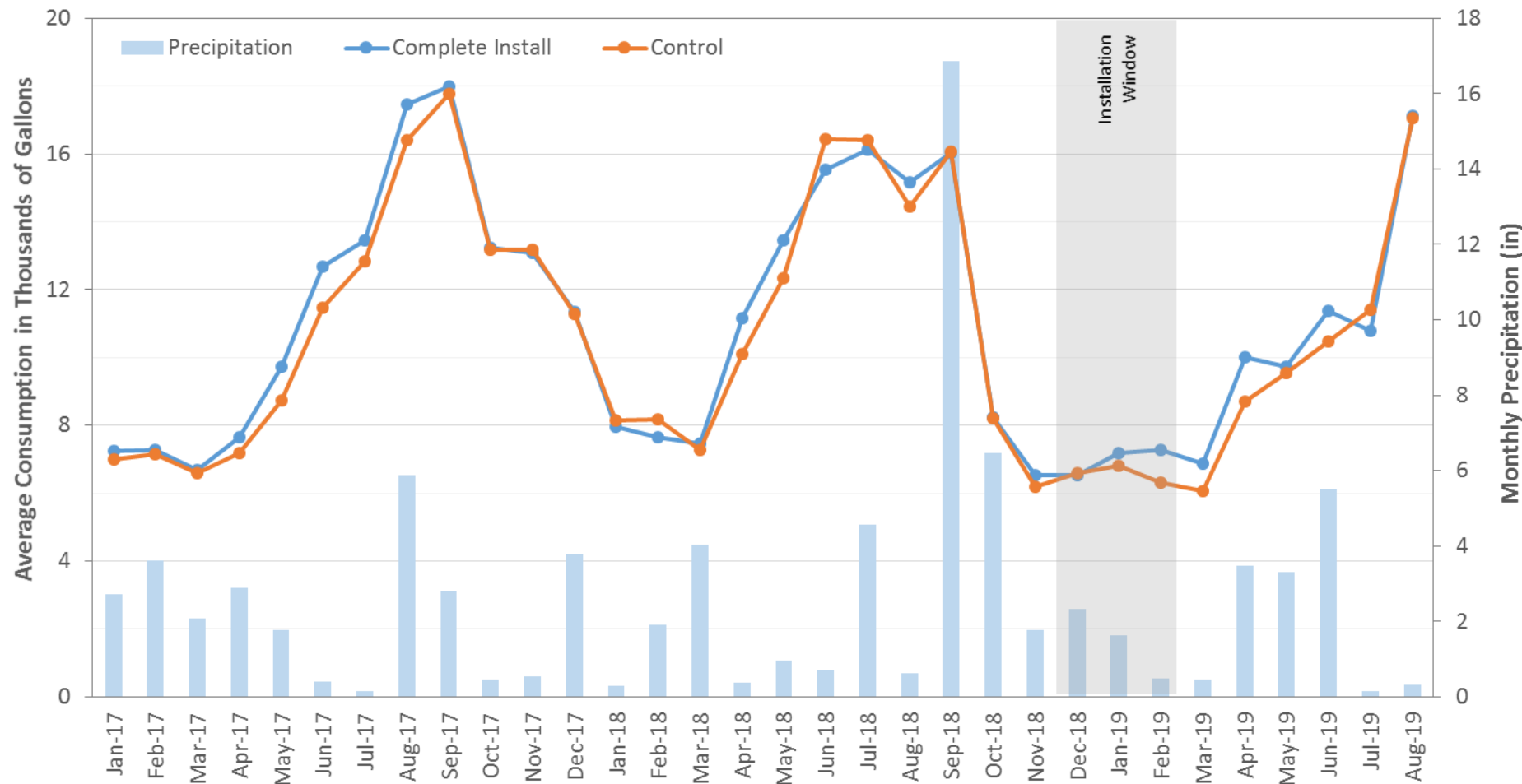
## What About Smart Controllers?

### High/Middle Irrigation Household Pilot: (Usage level 50% of top user pilot) **IRRIGATION FLOW SENSOR INCLUDED**



### Random Control Pilot

- Identical groups
- One gets WBIC
- WBIC group using more Spring & Summer
- Assessing settings of WBIC group





Behavior-Based Results Hard to Predict

Individual Results May Vary



A photograph of a garden scene. In the foreground, there are large, vibrant red roses and clusters of small purple flowers. A winding stone path leads through the garden. In the background, there is a green lawn, trees, and a portion of a house with a grey exterior and a dark door.

## Follow Up?

Join Flow Sensor  
Information Group

Madeline Wood  
[mwood@SantaBarbaraCA.gov](mailto:mwood@SantaBarbaraCA.gov)

Rebate Program at:  
[GardenStyleSA.com](http://GardenStyleSA.com)

More programs also at:  
[Saws.org/conservation](http://Saws.org/conservation)

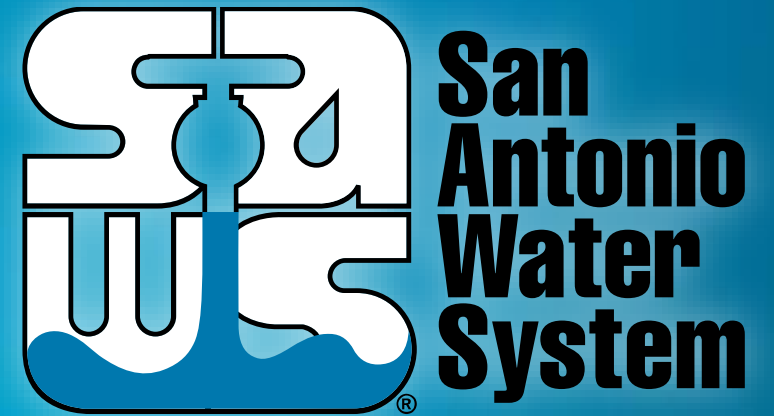
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