This presentation premiered at WaterSmart Innovations

watersmartinnovations.com
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
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
  our eight billing tiers
– Promotions were 50% email, 50%
  snail mail
– Excluded customers in other
  Conservation Pilot Programs
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).
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

<table>
<thead>
<tr>
<th>Pilot Group</th>
<th>Count</th>
<th>Avg Yr Built</th>
<th>Avg Total Value</th>
<th>Avg Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Didn’t Purchase</td>
<td>981</td>
<td>1988</td>
<td>$324,152</td>
<td>.256</td>
</tr>
<tr>
<td>Didn’t Install</td>
<td>69</td>
<td>1986</td>
<td>$370,669</td>
<td>.375</td>
</tr>
<tr>
<td>Treatment</td>
<td>429</td>
<td>1995</td>
<td>$342,693</td>
<td>.310</td>
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<tr>
<td>Control</td>
<td>513</td>
<td>1990</td>
<td>$317,321</td>
<td>.309</td>
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Created Control Group Process

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<tr>
<td>Created Control</td>
<td>341</td>
<td>1993</td>
<td>$348,174</td>
<td>.314</td>
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<tr>
<td>Removed from Control</td>
<td>172</td>
<td>1984</td>
<td>$255,615</td>
<td>.300</td>
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- 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?

- 76% believed it 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

[Image of a promotional offer]
Top Residential User Pilot
(recruited very high use households)

Random Control Pilot

• Two identical groups
• One gets WBIC
• WBIC group used less 1st summer
• WBIC group using same 2nd summer

What About Smart Controllers?
Random Control Pilot

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

What About Smart Controllers?

High/Middle Irrigation Household Pilot: (Usage level 50% of top user pilot)

IRRIGATION FLOW SENSOR INCLUDED
Behavior-Based Results Hard to Predict

Individual Results May Vary
Follow Up?
Join Flow Sensor Information Group

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Rebate Program at:
GardenStyleSA.com

More programs also at:
Saws.org/conservation

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WaterSmart Conference