This presentation premiered at WaterSmart Innovations

watersmartinnovations.com
Customer-side Leak Detection Pilot Study
ABOUT WATERNOW

WaterNow Alliance is a forum for local water leaders who want to champion sustainable, affordable and climate resilient water strategies.
<table>
<thead>
<tr>
<th><strong>What’s the challenge?</strong></th>
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<tbody>
<tr>
<td><strong>Leak Detection</strong></td>
<td><strong>Access to the Info</strong></td>
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<td>• On average, 12% of household water use is lost to leaks</td>
<td>• Water bills often come once a month or bi-monthly</td>
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<td>• Often, the first sign of a problem is an abnormally high water bill</td>
<td>• Bills provided in units not typically understood by customers (e.g. ccfs)</td>
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### Customer-side Leak Detection Devices

<table>
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<tr>
<th>Moisture Sensors</th>
<th>Meter Flow Sensors</th>
<th>In-line Flow Monitors</th>
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</table>
| • Strategically placed around the home to sense moisture and send alerts | • Attached to the water meter  
• Monitors the register on the meter  
• Transmits signal to customer | • Installed on the water supply line to monitor flow and send leak alerts  
• Remote shutoff capabilities |

![Moisture Sensor](image1.png)  
![Water Meter Flow Sensor](image2.png)  
![In-line Flow Monitor](image3.png)
In-line Flow Monitors

1. Real time water use
2. Disaggregating water use
3. Units we all understand
Characterize the typical water savings – both from leak detection and conservation – that a customer experiences following installation of one of these devices.
Pilot Study

**Funders**
- Valley Water

**Partner Cities**
- City of San Mateo, California
- City of Foster City
- City of Santa Clara, California
- City of San Jose, California

**Details**
- 80 devices in single-family homes
- 80 control group households
- 1-year study
- Random Control Trial Method
Recruitment

Apply now for your chance to receive a FREE LEAK DETECTION DEVICE

WaterNow Alliance, together with its partners, is seeking participants for a study of next generation leak detection devices. Single-family homeowners living in Foster City, Burlingame, San Jose Municipal Water System, and Santa Clara are eligible to apply today!

Smart Apps Make a Smart Home
Access real-time water use, receive leak alerts, and shut off the water to your home all from your phone.

Save Water and Money
Use real-time water data and set conservation targets to identify water and money saving opportunities to lower your bill.

Apply Today
Apply for your chance to participate in a leak detection pilot study and receive a free leak detection device with installation. If you are selected, the device is yours to keep!

Visit: bit.ly/LeakDetectionPilotStudy

GOT LEAKS?

Participate in a leak detection pilot study! Single-family homeowners living in Foster City, Burlingame, San Jose Municipal Water System, and Santa Clara are eligible to apply today.

Smart Apps Make a Smart Home
Access real-time water use, receive leak alerts, and shut off the water to your home all from your phone using next generation technology.

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Recruitment

FC press release and eNewsletter

SC NextDoor post and tweet; FC tweet and retweet from Santa Clara Weekly

CoB NextDoor post and direct email

CoB Facebook post and eNewsletter

SJ direct email to 3,000+ customers
HOW FAMILIAR ARE YOU WITH LEAK DETECTION DEVICES?

- Unfamiliar: 78%
- Somewhat Familiar: 21%
- Very Familiar: 1%
Recruitment

WHY ARE YOU INTERESTED IN APPLYING FOR THE PILOT STUDY?

- I want to lower my water use: 27%
- My neighbor/friend/HOA told me about the program: 43%
- I have had problems with leaks in the past: 14%
- I am interested in water-efficient technology: 20%
Preliminary Results

The graph shows Preliminary Results with the x-axis representing months from January to December and the y-axis ranging from 0 to 12,000. There are two sets of data represented by different lines:

- Treatment
- Control

The graph includes data from 2019 for both treatment and control groups.
Preliminary Results

TODAY
0.0 gallons

THIS MONTH
228.1 gallons

30-DAY SUMMARY
- Average daily usage: 0.1 events per day
- Average event duration: 13m 20s
- Average flow rate: 5.7 gallons/minute

MONTHLY SUMMARY
- May: 3 events, 228.1 gallons
- April: 0 events, 0.0 gallons
- March: 0 events, 0.0 gallons
Insights/Lessons Learned

• Free vs. nominal fee – “skin in the game”

• Installer network – recognizing value add to their business accelerates installs

• Streamline installation process
  • Verify installation compatibility

• Clear channel of communication of what is permissible for the cities
What about AMI?

- Real time water use vs 15 min to 1 hour delay
- AMI is cost prohibitive for many utilities
- Low sign up rate for AMI online portals (~3%-9%)
- Bridge to AMI
  - Early adopters/folks that want to conserve
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