This presentation premiered at WaterSmart Innovations

watersmartinnovations.com
Cool Tunes: Technology + Behavior

WaterSmart Innovations 2014
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Background & Formation

- SWP: Group of 18 utilities served by Seattle water supply
- Conservation programs for 20 years
- Perception of low hanging fruit in short supply
- End use emphasis
- Series of workshops
- Field and lab analysis determining local conditions
- Interview technical and water treatment professionals
- Cool Tunes manual
Designing our Program

- Incentives for action
  - Measure list
  - Rebate levels
  - Empowerment
  - Longevity
- Conductivity targets
  - 750-1,000 uS
- Behavior change goals and tactics
Step 1 Recruitment

- Developed flyer
- Outreach through team connections
- Very effective to partner with water treatment providers
**Step 2: Enrollment Visit**

- Discuss the customer’s goals first
- Explain the program rules
- Inspect the tower to determine existing conditions
- Enter data into spreadsheet
- Follow up with next steps
Step ③ Participation Agreement

- Keep it as simple as possible
- A letter is too simple, but a contract type doc can cause added customer scrutiny
- Clearly detail
  - Equipment to install
  - Required actions/expectations
  - Rebate process
Step ④ Launch Visit

- Provide thank you for participation
- Clarify data collection and other requirements
- Confirm equipment is installed and properly functioning
- Capture all of the above in a form signed by both parties
Step 5 Rebate and Data Collection

- Rebate processed after Launch Visit
  - Create a “carrot” so participants actually collect and enter data
  - SurveyMonkey monthly as prompt
  - Collect data weekly to build habit
Case Studies
ADOBE SYSTEMS

- Comfort and server farm cooling
- Had failed conductivity controller, old float, and no rack
- Installed all equipment and providing great data
One large tower with best practices
One small tower with outdated and poorly maintained equipment
Due to leak, small tower using more water
Didn’t participate due to admin/indemnification!
Northwest Hospital & Seattle Central Community College

- Chemical backflow during air cooled winter operation
  - ~6gpm overflow for months due to lack of monitoring
- Mechanical floats with common sumps are a big risk

Saved lots of water with enrollment visits, even if didn’t participate
Results

Ongoing data collection and intent to build a full scale program
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<th>Enrollment Visit</th>
<th>Bids Received</th>
<th>Signed PA</th>
<th>Installed Equip</th>
<th>Verified</th>
<th>Rebate Request Submitted</th>
<th>Initial Data Collection</th>
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Data Analysis

![Watermark Tower Graph](image)

- **Conductivity (µS)**
- **Make-Up Water Volume (CF/wk)**

**Dates:**
- 21-Apr
- 12-May
- 2-Jun
- 23-Jun
- 14-Jul
- 4-Aug
- 25-Aug
- 15-Sep

**Lines:**
- Max T
- Controller
- Hand-Held
- Make-Up
Data Analysis EcoNet

**ECONET - North**

- **Conductivity (US)**
- **Make-Up Water Volume (CF/wk)**

- **Dates**: 13-Jan to 11-Aug
- **Graph Lines**:
  - Relative Avg High Temp
  - Controller
  - Hand-Held
  - Make-Up (Net)

- **Legend**:
  - Relative Avg High Temp
  - Controller
  - Hand-Held
  - Make-Up (Net)
Data Analysis

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SafeCo

Conductivity (μS)

Make-Up Water Volume (CF/Wk)

Date

15-Jun 6-Jul 27-Jul 17-Aug

Relative Avg High Temp Controller Hand-Held Make-Up

CASCADIA

Seattle Public Utilities
Key Challenges
Selling long term value is a big challenge

Participation agreements are scary

Need more frequent monitoring and reporting
1. Behavior > Technology

2. Handholding is necessary

3. Simple tools are effective for engagement
Next Steps
1. **Focus groups**

2. **More frequent reporting**
Thank You!

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