

This presentation premiered at WaterSmart Innovations

watersmartinnovations.com





Making Waves in the Utility Sector: Cloud-based Solutions for Water Conservation

Frio River

Presentation Overview

- **What is the cloud?**
- **How does it work?**
- **Cloud-based solutions for water conservation**
- **Choosing a cloud-based solution**



What is cloud-based software?

Rio Grande River

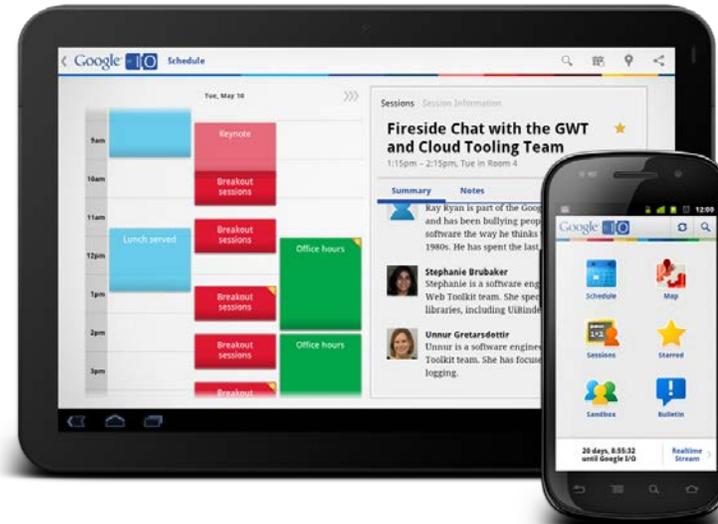
The cloud provides software and services

- **The concept of cloud computing first appeared in the 1960s—but it did not take off until the late 1990s**
- **Examples of risk-adverse, regulated markets that have adopted cloud-based solutions:**
 - Utilities
 - Government
 - Banking
 - Retail



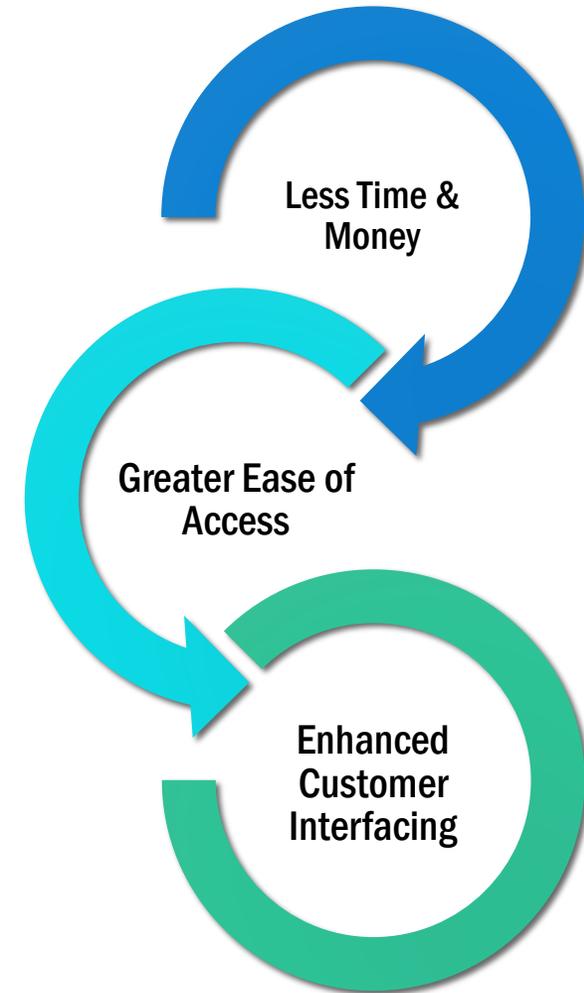
Examples of cloud services

- **Google Docs**
- **Apple iCloud**
- **Dropbox**
- **Netflix**
- **Amazon**
- **Facebook**
- **etc.**



Benefits of using the cloud

- **Cost Savings**
- **Automatic software updates**
- **Enhanced security**
- **Facilitates collaboration**





Solutions for water conservation

Pecos River

Types of cloud-based solutions

- **Behavior-based programs**
- **Smart irrigation technology**
- **Program management platforms**

Behavior-based programs

- Platforms facilitating messaging and other outreach strategies to encourage reduced consumption

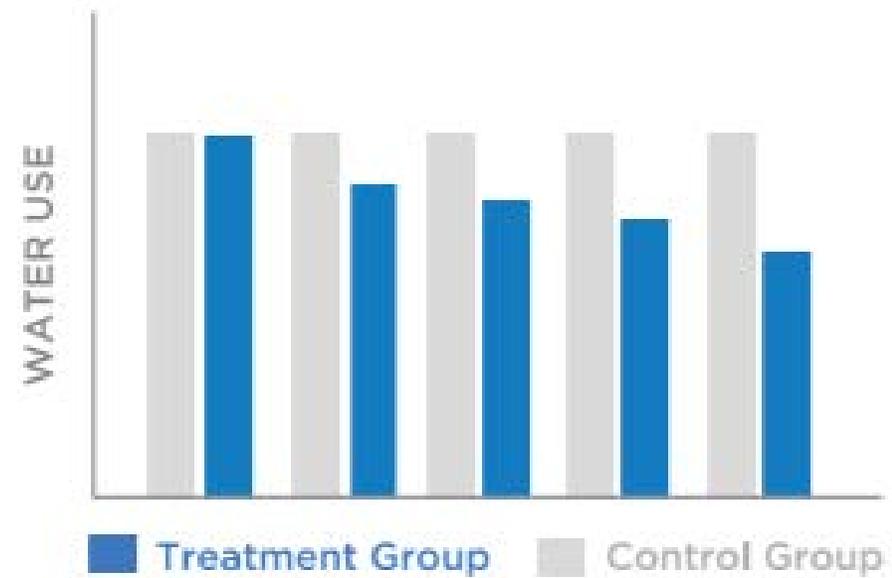
- Providers:

- [Dropcountr](#)
- [AquaHawk](#)
- [Meterhero](#)
- Smart Utility Systems ([Smart iQ](#))
- [WaterSmart](#)

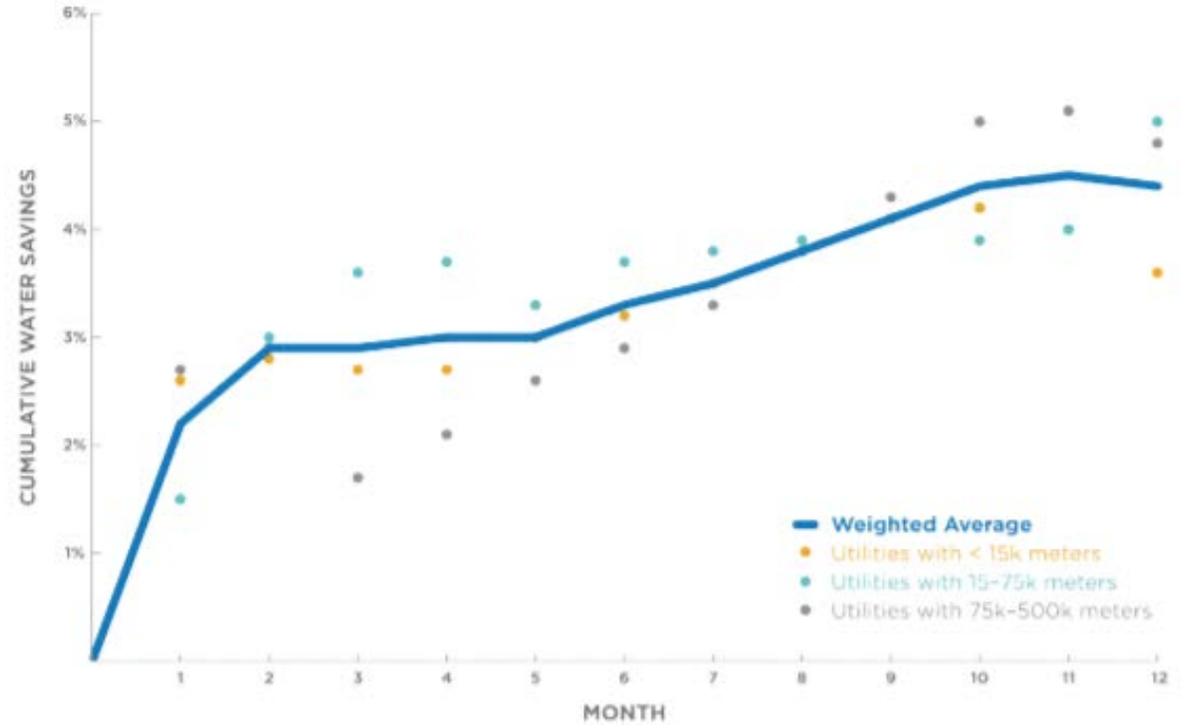


Behavior-based programs

Reduced water use by treatment group



5% cumulative savings in first 12 months



Behavior-based programs

■ **Benefits:**

- Can yield program savings not provided by pure data visualization
- Can improve customer engagement
- Can improve strategic communications
- Can build greater trust between utility & customer

■ **Challenges:**

- Securing adoption by customers
- Measuring associated water savings
- Training customers on how to interpret results/information
- Potential increase in call volume

Smart irrigation platforms

Smart controller providers:

Residential controllers

- [Skydrop](#)*
- [Rachio](#)*
- [Weathermatic](#)*
- [WeatherTRAK](#)*
- [Hunter](#)*
- [Sprinkl](#)⁺
- [Cyber Rain](#)⁺
- [Rain Bird](#)⁺

Commercial controllers

- [Banyan](#)*
- [Weathermatic](#)*
- [Hunter](#)*
- [WeatherTRAK](#)*
- [Cyber Rain](#)⁺
- [Rain Bird](#)⁺



* ET-based controllers

⁺ Weather-based controllers

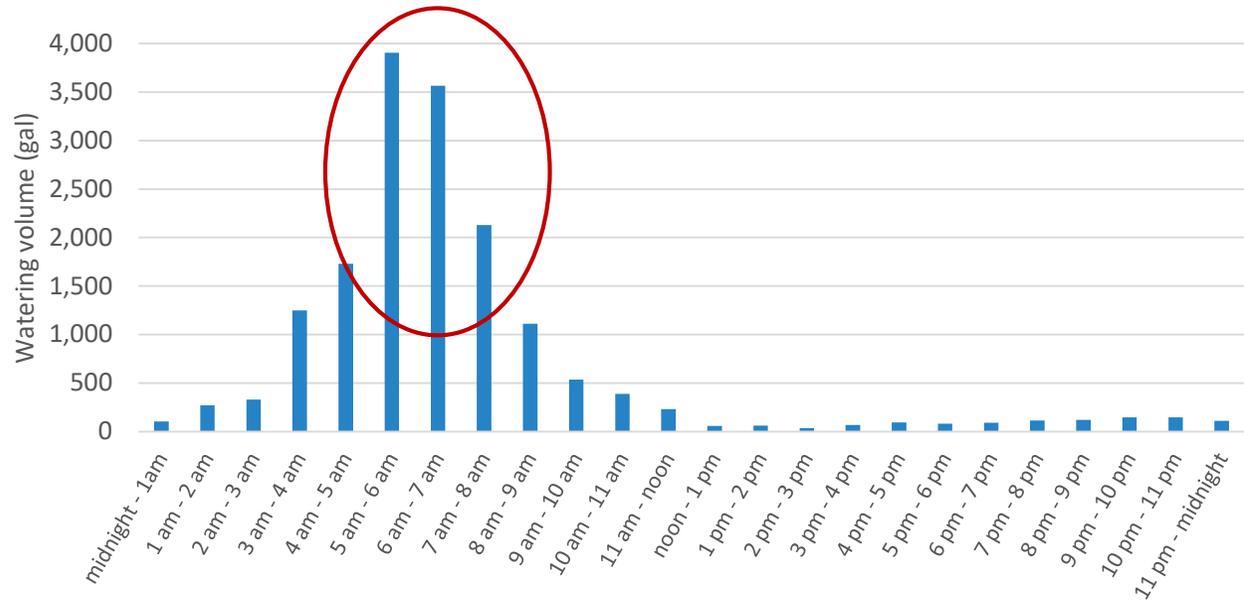
Smart irrigation platforms

| Conservation Savings | | | |
|-----------------------------|-----------------|--------|------|
| Cohort | Low | Medium | High |
| % Water Savings | -10% | 2% | 23% |
| Total Savings (all cohorts) | 123,931 gallons | | |
| % Total Water Savings | 9% | | |
| Price per Gallon Saved* | \$0.05 | | |
| Household Financial Savings | | | |
| Cohort | Low | Medium | High |
| % Savings | -10% | 1% | 27% |
| # of summers until payback* | Not beneficial | 54 | 2 |

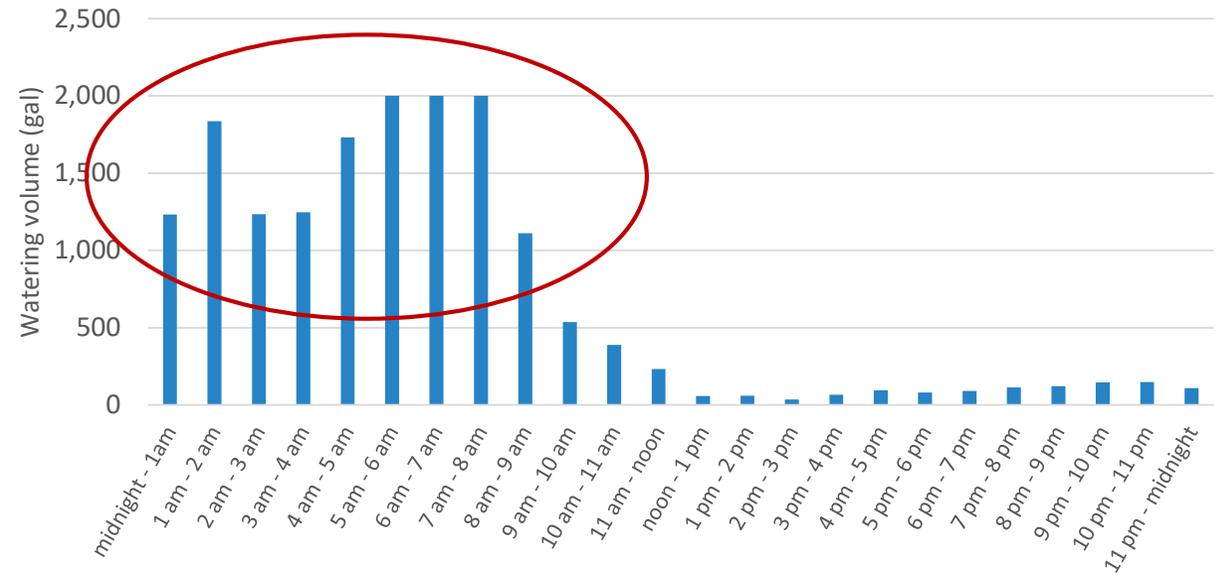
Estimated water savings greatest among high water users (23%)

Smart irrigation platforms

Peak demand (before)



Peak demand (after)

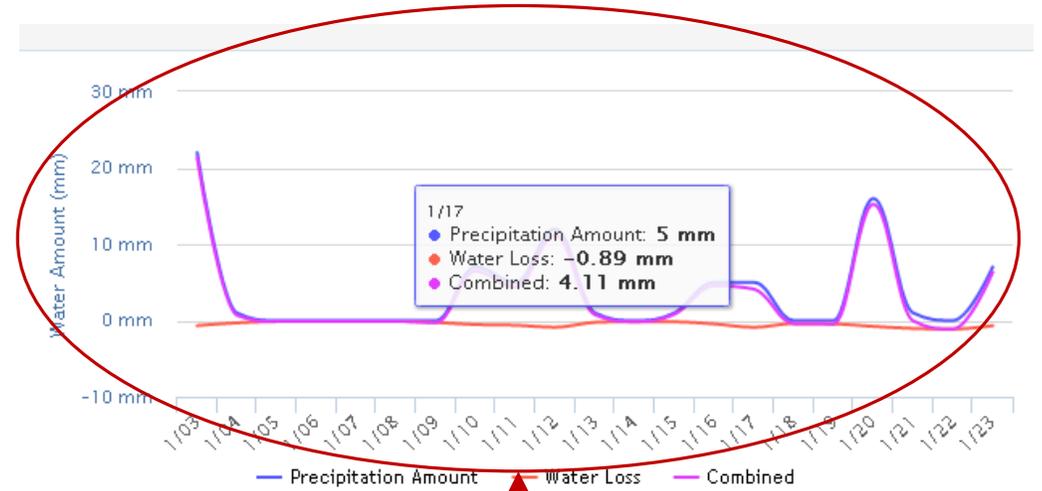


Use control settings available through smart irrigation technology to spread out watering schedules and reduce peak demand

Smart irrigation platforms



Track current & historical water usage



Monitor precipitation & evapotranspiration conditions

Smart irrigation platforms

■ Benefits:

- Water savings
- Can help manage peak demand
- Can increase customer satisfaction & notification

■ Challenges:

- Securing adoption by customers
- Customer technical training/ obstacles
- Measuring associated water savings

Program management platforms

■ Providers:

- AIQUEOUS (WaterWays)
- ConserveTrack
- iEnergy (Nexant)
- Droplet Technologies



DROPLET
TECHNOLOGIES



Program management platforms

Home **Calendar** Reports Accounts Programs Applications Projects Measures

FY 2018: Reserved

FY 2018: Paid

FY 2018: Projects by Stage

Items to Approve

- 08.17.17-011 Application - Submitted by Howard Jones
- 08.16.17-009 Application - Submitted by Howard Jones
- 08.15.17-008 Application - Submitted by Howard Jones
- 08.15.17-006 Application - Submitted by Howard Jones
- 08.15.17-005 Application - Submitted by Joe McCaul

[View All](#)

Today's Events

Looks like you're free and clear the rest of the day.

[View Calendar](#)

Today's Tasks

Nothing due today--go grab a coffee while there's still time.

Today < > **Aug 13 - 19, 2017** Day Week Month

| | Sun 8/13 | Mon 8/14 | Tue 8/15 | Wed 8/16 | Thu 8/17 | Fri 8/18 | Sat 8/19 |
|---------|----------|----------|----------|----------|----------|------------------------------|----------|
| all-day | | | | | | | |
| 8am | | | | | | | |
| 9am | | | | | | | |
| 10am | | | | | | | |
| 11am | | | | | | 10:56 - 10:56 #0114-#0114 | |
| 12pm | | | | | | | |

Home Reports Dashboards **Accounts** Contacts Transactions Consults Coupons Irrigation Checkups Rebates Variances Cases Documents Applications

Account **000898187-2692496-0002**

Account Detail Edit Delete Manage External Account

| | | | |
|-------------------------|---|---------------------|------------|
| Account Name | 000898187-2692496-0002 (View Hierarchy) | Account Status | Active |
| Parent Account | Dallas Schools | Account Type | Commercial |
| Aux1 Title | | Account Services | None |
| Aux1 First (Given) Name | WILLIAM | Account Opened | 9/3/2015 |
| Aux1 Middle Name | | Move In Date | 9/4/2015 |
| Aux1 Last (Family) Name | GERTH | Account Closed | N/A |
| Aux1 Suffix | | Move Out Date | |
| Aux1 Daytime Phone | 555-555-5555 | Billing Status Date | 9/9/2015 |
| Aux1 Evening Phone | | Account Key | 3377939 |
| Aux1 Mobile | | Coupon Code | 173377939 |
| Aux1 Email | School123@Gmail.com | | |

Account Flags

- Affordability Code
- Affordability Effective Date
- ID Alert Definition Timestamp
- ID Alert Appended Text
- ID Alert Definition Key
- ID Alert Comments Search

Review water consumption history

Related Contacts New Contact Merge Contacts Add Relationship

| Action | Contact Name | Business Name | Title | Email | Mobile | Phone | Account Name |
|--------------------------|----------------|---------------|-------|------------------|----------------|-------|------------------------|
| Edit View Rel Delete | William Gerth | | | billg_@gmail.com | (484) 300-3051 | | 000898187-2692496-0002 |
| Edit View Rel Delete | Jennifer Gerth | | | gtjr_@aol.com | (215) 768-6363 | | 000898187-2692496-0002 |

Transactions New Transactions

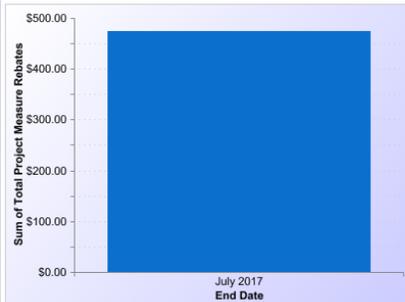
| Action | Order # | Campaign | Created Date | Approval Status | Irrigation Present? | Irrigation Consult Required? | Phone Consult Required? |
|--------|---------|----------|--------------|-----------------|---------------------|------------------------------|-------------------------|
|--------|---------|----------|--------------|-----------------|---------------------|------------------------------|-------------------------|

Program management platforms

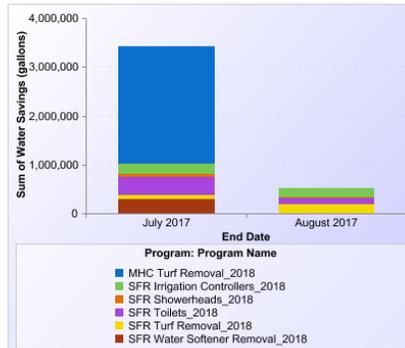


Dashboard FY2018

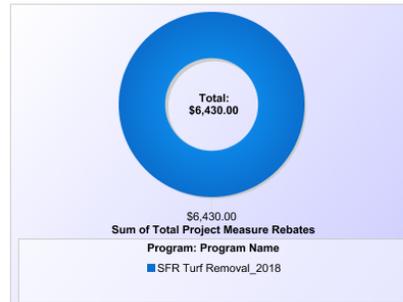
FY 2018 Monthly Rebates (Paid)



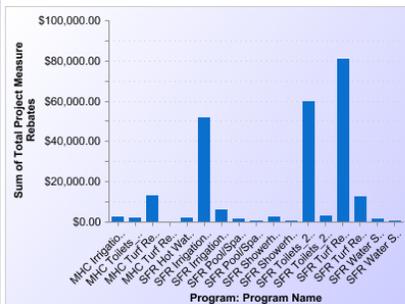
FY 2018 Monthly Savings



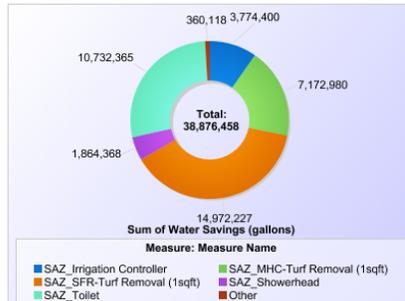
+\$600 Rebates



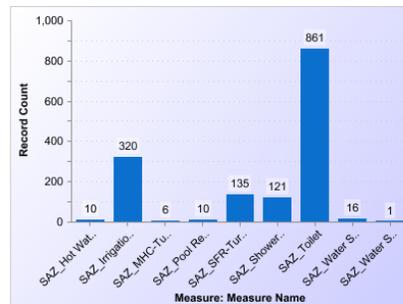
Measures Paid (All-time)



All-Time Savings (Gallons)



Quantity Measures (All-time)



Program management platforms

■ Benefits:

- Organizes/simplifies program management
- Can help create more efficient workflows (e.g., reduced paperwork, call volume)
- Can reduce audit risk
- Can improve effectiveness of customer outreach

■ Challenges:

- Getting IT department onboard (if necessary)
- Department apprehension regarding data security
- Getting customers to switch to electronic submissions



Choosing a cloud-based solution

Medina River

Where should you start?

1. Identify what problem you are trying to solve

- Water Conservation
- Customer Engagement
- Water Waste

2. Figure out your options

- Can this be cost-effectively developed in-house in a timely manner?

3. Identify and engage internal stakeholders

- IT, Management, Billing, Procurement

AIQUEOUS

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Certified Energy Manager

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