Sharing AMI Data with Customers: An Arlington Experience

Dustan Compton

trwd Tarrant Regional Water District

Tarrant Regional Water District

- Raw water supplier
- Serve the water needs of about two million people across 11 counties – most in Tarrant
- Fort Worth, Arlington, Mansfield, and Trinity River Authority
- Four major reservoirs:
  - Lake Bridgeport
  - Eagle Mountain Lake
  - Cedar Creek Reservoir
  - Richland-Chambers Reservoir
- About 75% of our water supplies come from East Texas

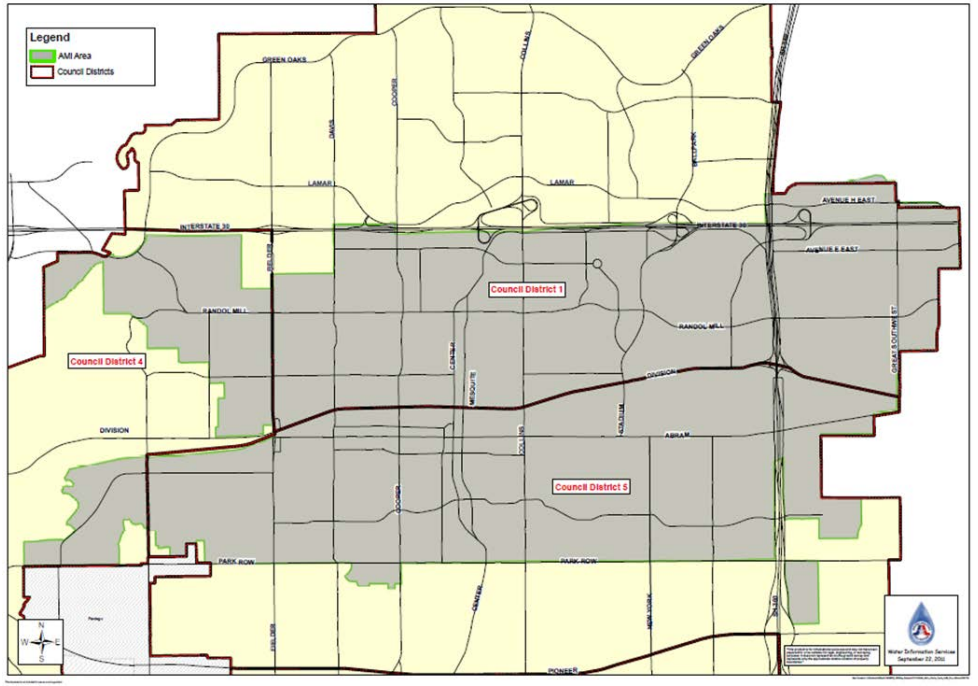
City of Arlington

- Population: 370,367 – ~428,000 Buildout
- Land Area: 99.5 square miles
- Visitors to Arlington: 6.8 million visitors
- Number of Water Treatment Plants: 2
    - Total treatment system capacity: 174.11 MGD
- Miles of Distribution Pipe: 1,531
- Annual Gallons Billed Consumption: ~18.5 billion

ARLINGTON℠
THE AMERICAN DREAM CITY

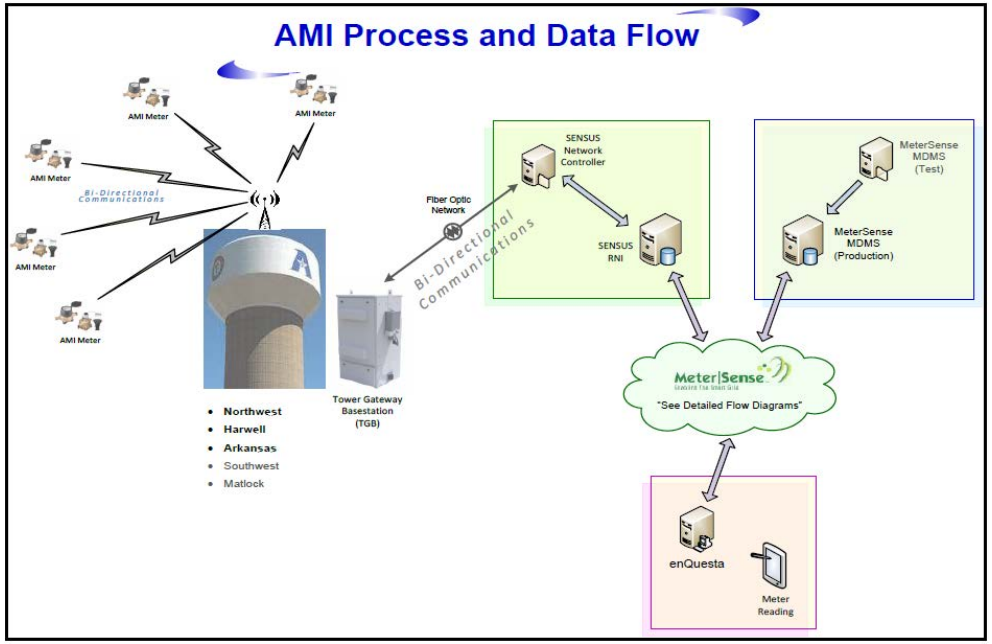
Arlington Water Utilities AMI

- First phase started in April 2011 and completed August 2012
  - Sensus meters and FlexNet; MeterSense MDM
  - 17,000 installations targeting most costly 4 billing groups
- Today: 35,665 AMI meters out of 108,098
- Long-term AMI meter conversion
  - Full coverage of the city
  - Ability to use in-house labor
  - Existing meter change-out program
  - Street renewal project inclusion
  - ~9,000/year installed



Additional Benefits of AMI Investment

- Decrease in account/bill related work
  - Reduced truck trips
  - Faster billing audit process
  - Reduced billing groups
- Leak detection system integration
- Exact location of new meter
- Backflow reports
- Watering notifications
- Negatives of “more information”

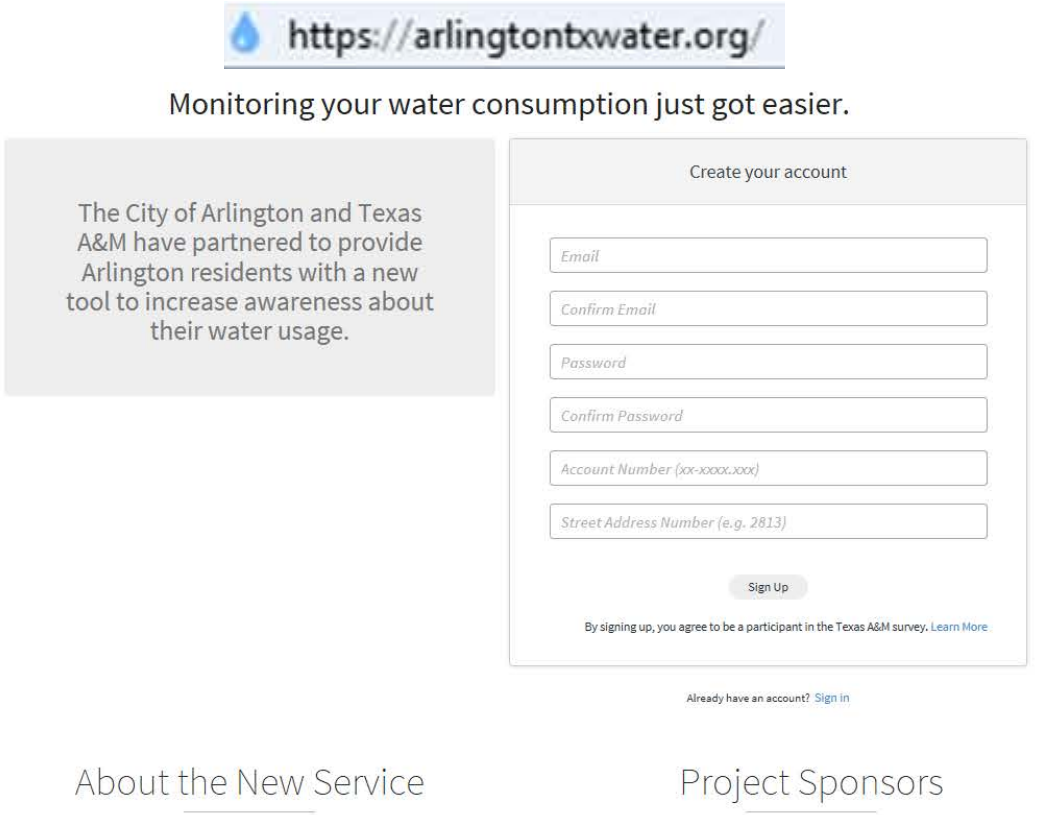


Customer Web Service

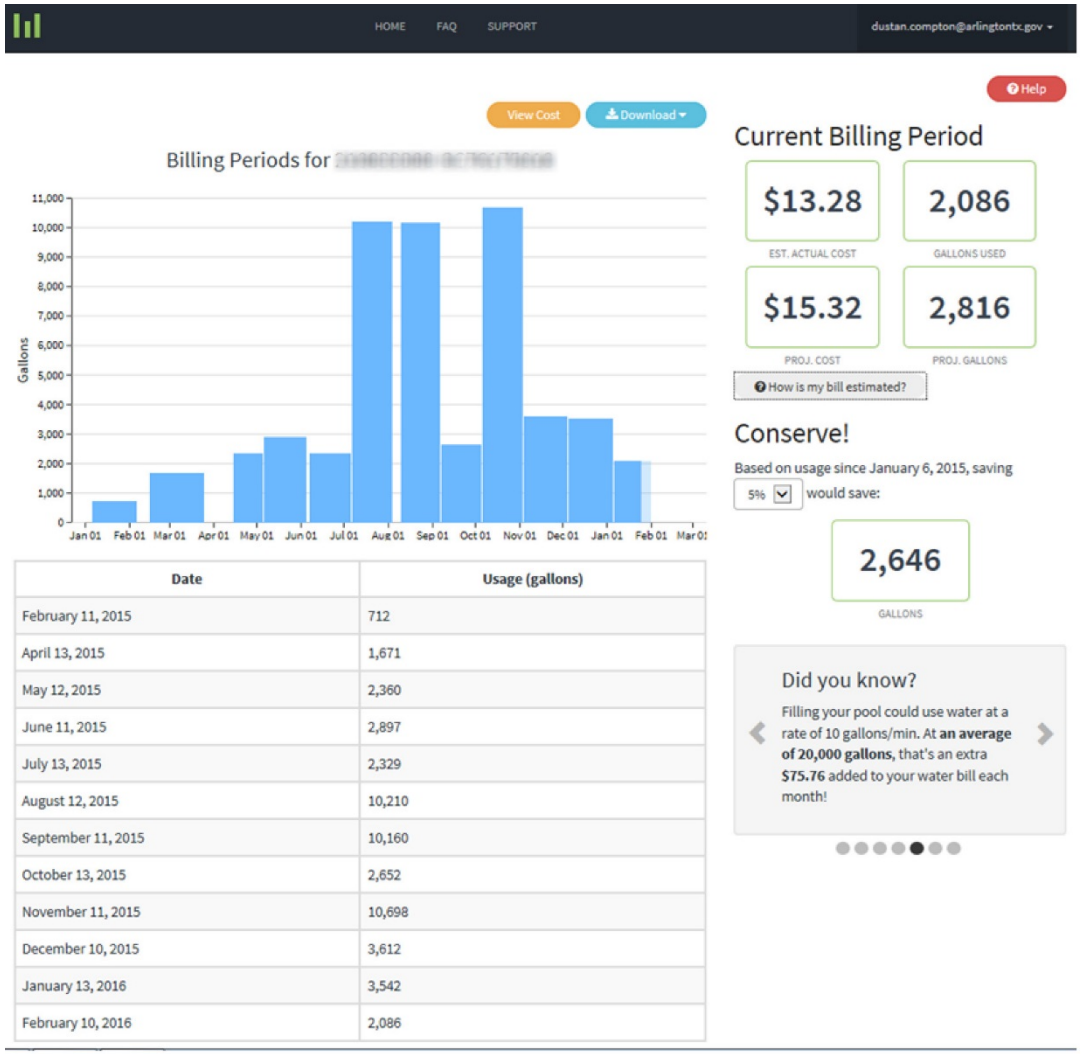
- AMI goals for customer service
  - Customer education
  - Time of use data
  - On-line visibility
- Approached by Texas A&M AgriLife Research Extension/Texas Water Resources Institute for research project:
  - Achieving household water-use efficiency using advanced metering infrastructure
    - Develop database and web portal
    - Track and evaluate data
    - Conduct education and outreach
    - Expand research to validate results

Customer Web Service

- Prior customer use of AMI data
  - Individual print if available
- Development and promotion of new web service
  - Targeted bill insert
  - Targeted emails
  - Targeted “online bill pay account” message
  - Customer service calls
  - 1,190 users to date

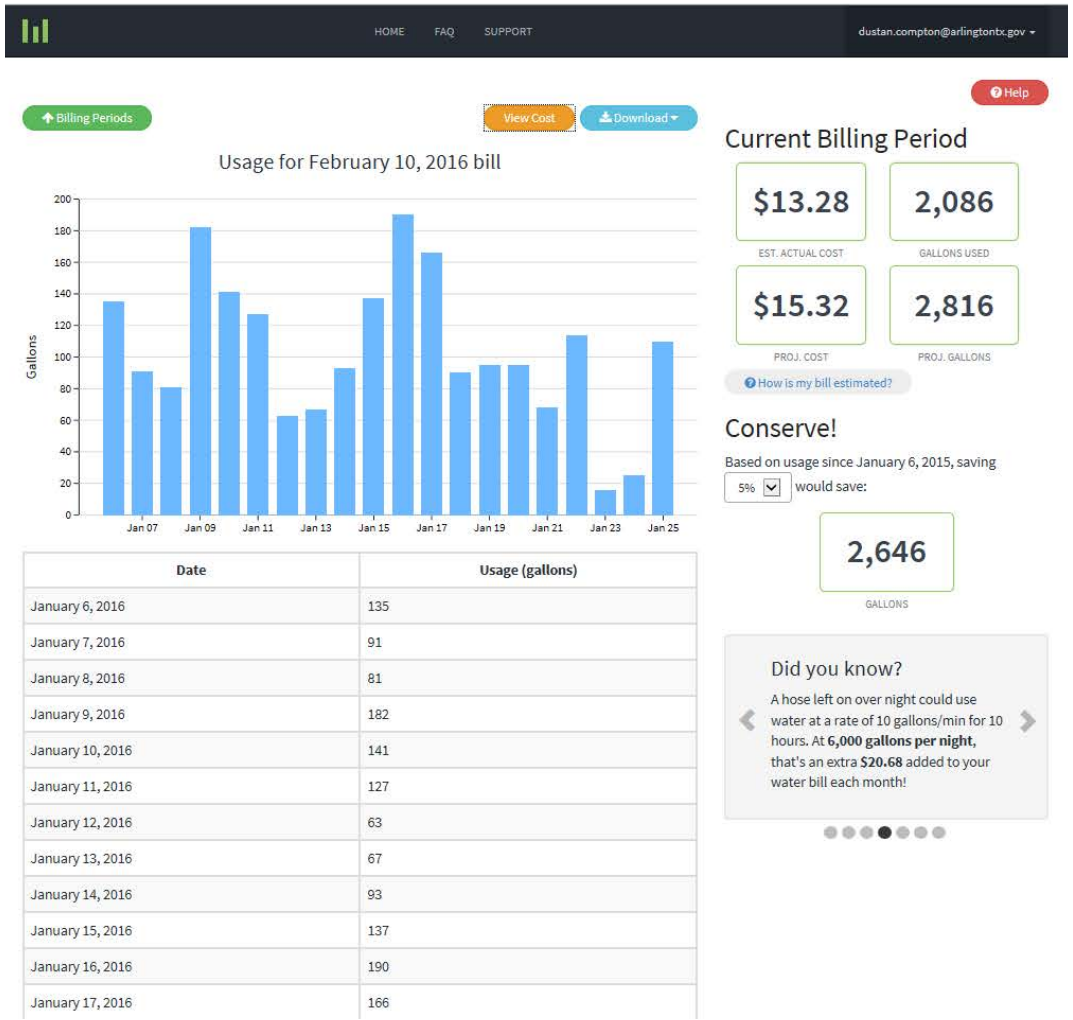


Customer Web Service

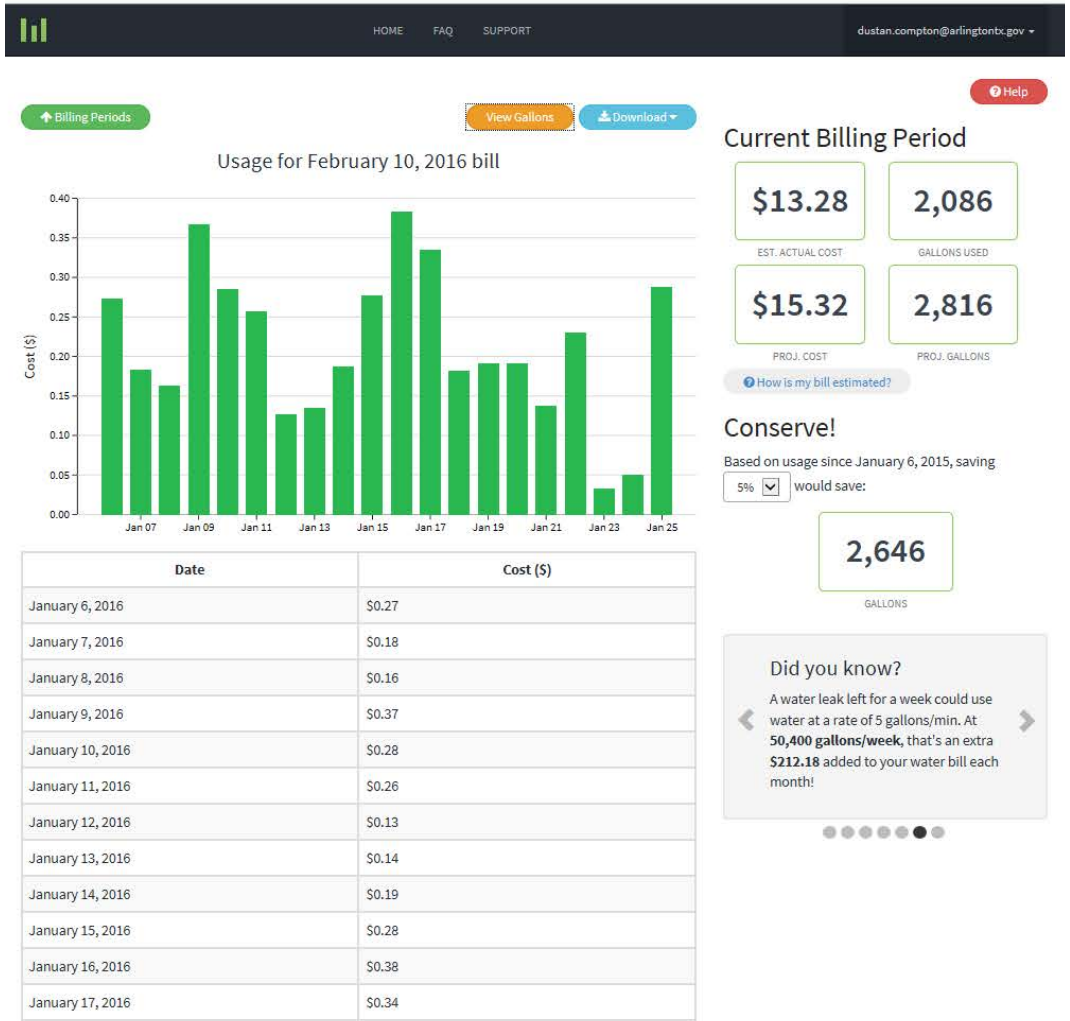


Date	Usage (gallons)
February 11, 2015	712
April 13, 2015	1,671
May 12, 2015	2,360
June 11, 2015	2,897
July 13, 2015	2,329
August 12, 2015	10,210
September 11, 2015	10,160
October 13, 2015	2,652
November 11, 2015	10,698
December 10, 2015	3,612
January 13, 2016	3,542
February 10, 2016	2,086

Customer Web Service

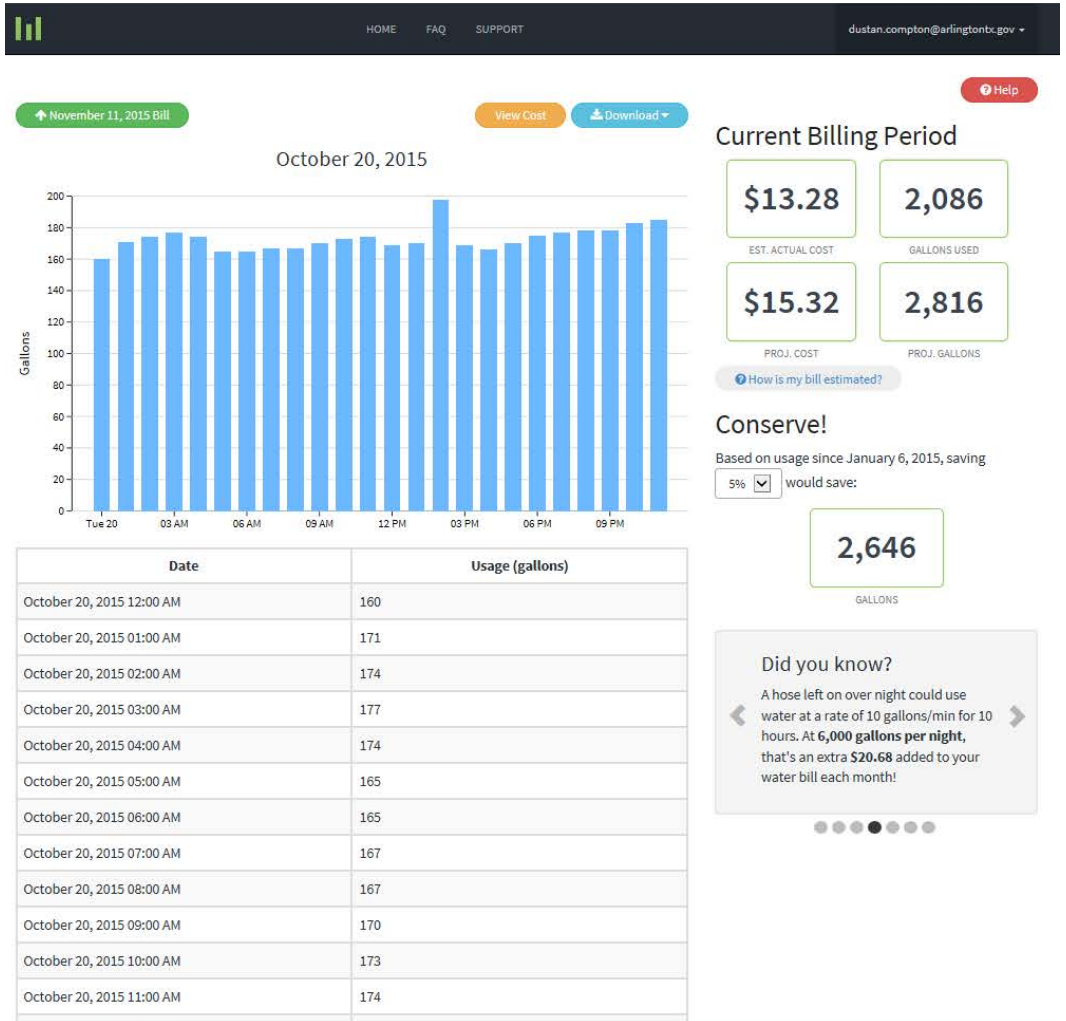


Date	Usage (gallons)
January 6, 2016	135
January 7, 2016	91
January 8, 2016	81
January 9, 2016	182
January 10, 2016	141
January 11, 2016	127
January 12, 2016	63
January 13, 2016	67
January 14, 2016	93
January 15, 2016	137
January 16, 2016	190
January 17, 2016	166

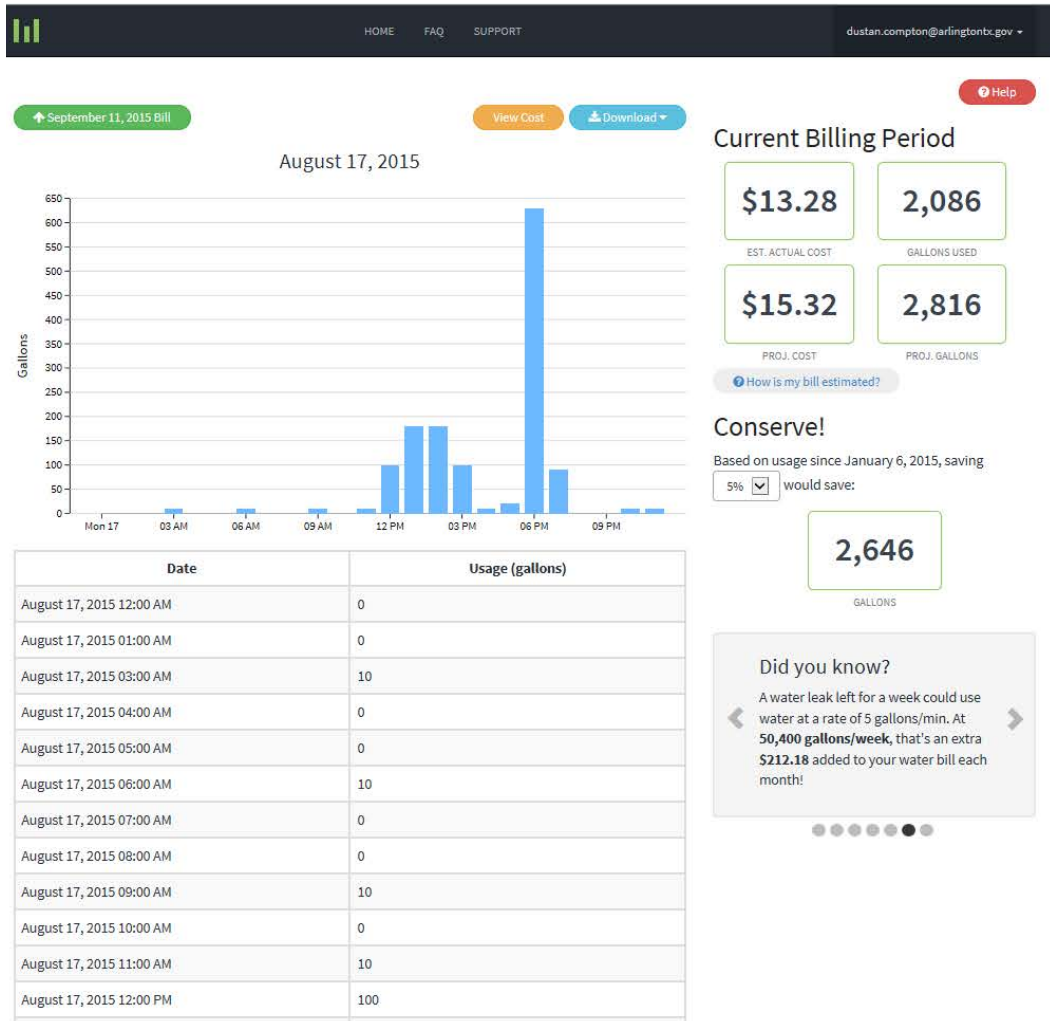


Date	Cost ($)
January 6, 2016	$0.27
January 7, 2016	$0.18
January 8, 2016	$0.16
January 9, 2016	$0.37
January 10, 2016	$0.28
January 11, 2016	$0.26
January 12, 2016	$0.13
January 13, 2016	$0.14
January 14, 2016	$0.19
January 15, 2016	$0.28
January 16, 2016	$0.38
January 17, 2016	$0.34

Customer Web Service



Date	Usage (gallons)
October 20, 2015 12:00 AM	160
October 20, 2015 01:00 AM	171
October 20, 2015 02:00 AM	174
October 20, 2015 03:00 AM	177
October 20, 2015 04:00 AM	174
October 20, 2015 05:00 AM	165
October 20, 2015 06:00 AM	165
October 20, 2015 07:00 AM	167
October 20, 2015 08:00 AM	167
October 20, 2015 09:00 AM	170
October 20, 2015 10:00 AM	173
October 20, 2015 11:00 AM	174



Date	Usage (gallons)
August 17, 2015 12:00 AM	0
August 17, 2015 01:00 AM	0
August 17, 2015 03:00 AM	10
August 17, 2015 04:00 AM	0
August 17, 2015 05:00 AM	0
August 17, 2015 06:00 AM	10
August 17, 2015 07:00 AM	0
August 17, 2015 08:00 AM	0
August 17, 2015 09:00 AM	10
August 17, 2015 10:00 AM	0
August 17, 2015 11:00 AM	10
August 17, 2015 12:00 PM	100

Research Latest

- Still on-going
- Preliminary results of web service users:
  - ~8% less water used in winter
  - ~17% less water used in summer
- Research contact:

T. Allen Berthold, Ph.D., Research Scientist

Texas Water Resources Institute

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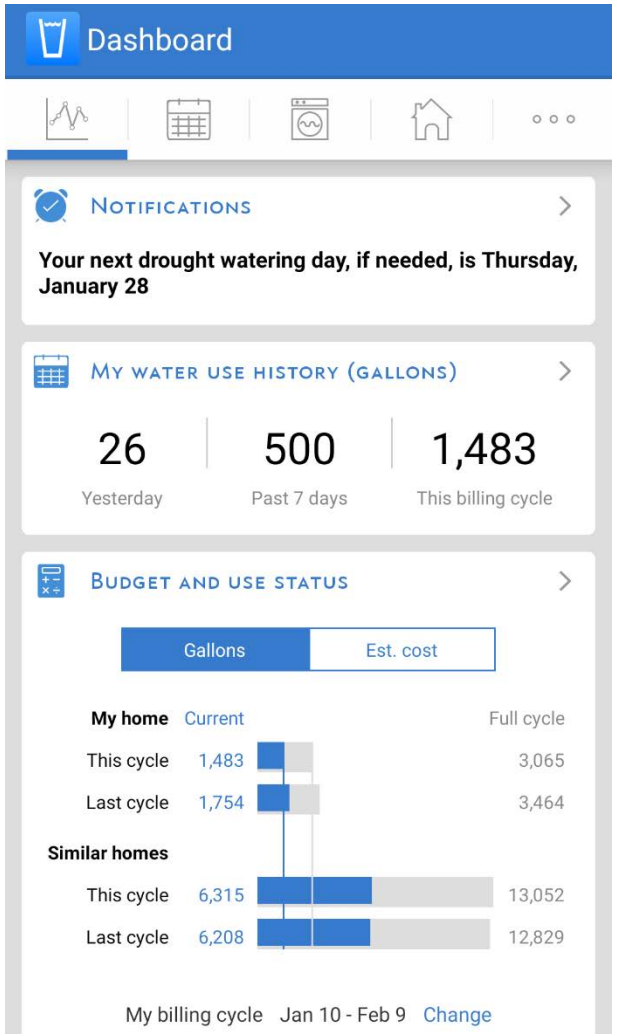
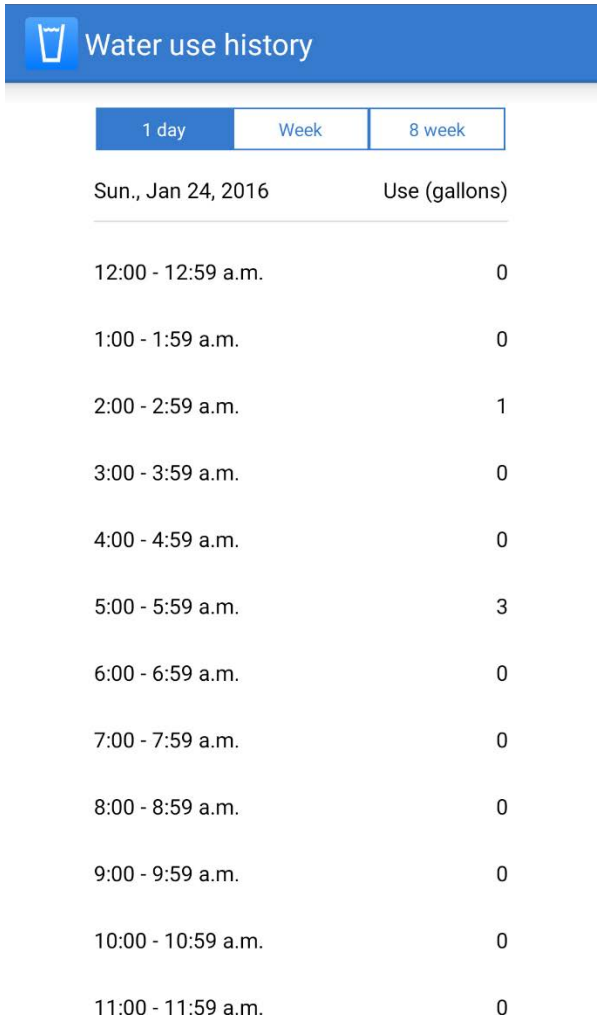
Texas Water Resources Institute
make every drop count

Mobile App

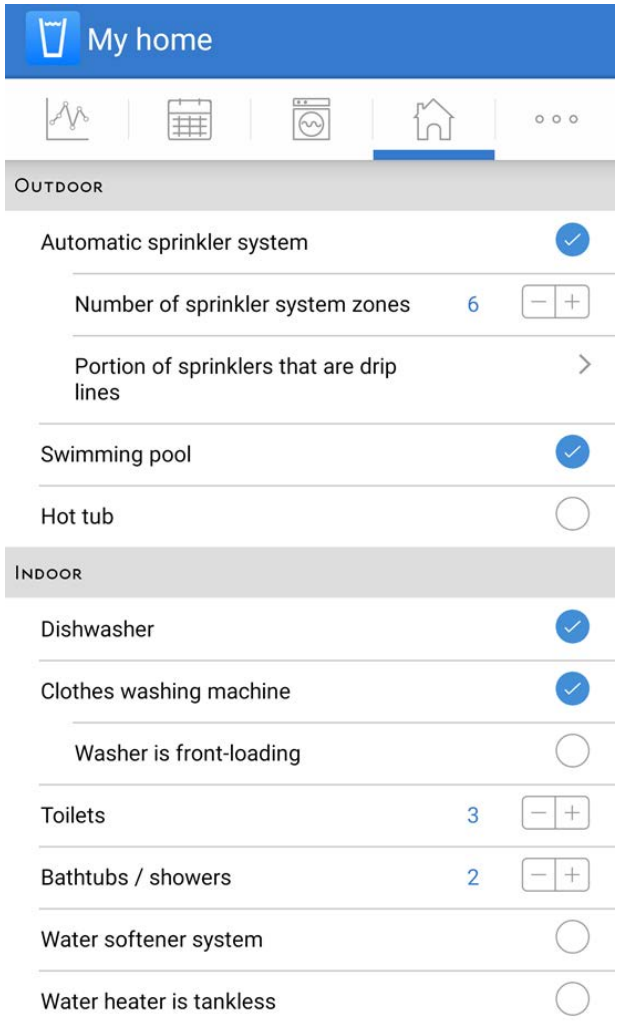
- Pecan Street, Inc.
  - University of Texas-based nonprofit research institute founded by UT's Cockrell School of Engineering
  - Research
  - Energy sector tools
  - Water app development

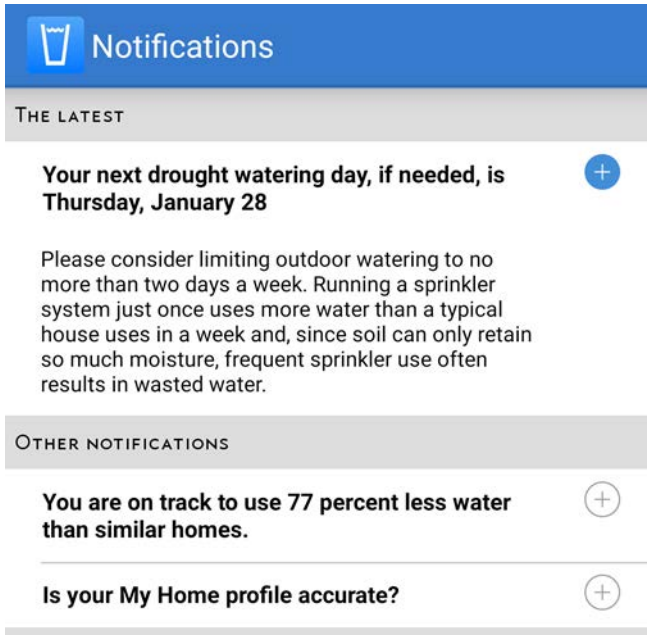
Mobile App


Dashboard
NOTIFICATIONS
Your next drought watering day, if needed, is Thursday, January 28
MY WATER USE HISTORY (GALLONS)
26
Yesterday
500
Past 7 days
1,483
This billing cycle
BUDGET AND USE STATUS
Gallons
Est. cost
My home
Current
Full cycle
This cycle
1,483
3,065
Last cycle
1,754
3,464
Similar homes
This cycle
6,315
13,052
Last cycle
6,208
12,829
My billing cycle
Jan 10 - Feb 9
Change


Water use history
1 day
Week
8 week
Sun., Jan 24, 2016
Use (gallons)
12:00 - 12:59 a.m. 0
1:00 - 1:59 a.m. 0
2:00 - 2:59 a.m. 1
3:00 - 3:59 a.m. 0
4:00 - 4:59 a.m. 0
5:00 - 5:59 a.m. 3
6:00 - 6:59 a.m. 0
7:00 - 7:59 a.m. 0
8:00 - 8:59 a.m. 0
9:00 - 9:59 a.m. 0
10:00 - 10:59 a.m. 0
11:00 - 11:59 a.m. 0

Mobile App


My home
Outdoor
Automatic sprinkler system
Number of sprinkler system zones 6
Portion of sprinklers that are drip lines
Swimming pool
Hot tub
Indoor
Dishwasher
Clothes washing machine
Washer is front-loading
Toilets 3
Bathtubs / showers 2
Water softener system
Water heater is tankless


Notifications
The latest
Your next drought watering day, if needed, is Thursday, January 28
Please consider limiting outdoor watering to no more than two days a week. Running a sprinkler system just once uses more water than a typical house uses in a week and, since soil can only retain so much moisture, frequent sprinkler use often results in wasted water.
Other notifications
You are on track to use 77 percent less water than similar homes.
Is your My Home profile accurate?

Research Latest

- In Arlington, app currently in trial/testing phase
- Promotional push after next update
- Other cities, MUD's/WCID's welcome to participate – *no cost and no new utility equipment required*
- Research contact:

Brewster McCracken, President and CEO

Pecan Street Inc.

(512) 782-9213 bmccracken@pecanstreet.org

PECAN STREET

Sharing AMI Data with Customers: An Arlington Experience

Dustan Compton, Regional Conservation Program Manager

Tarrant Regional Water District

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