

Moving Inefficient Customers

Traditional Conservation Programs paired with
Data-Driven Community-Based Social Marketing



*Austin Krcmarik, Water Resource Planner,
Water Efficiency and Reuse, Denver Water*

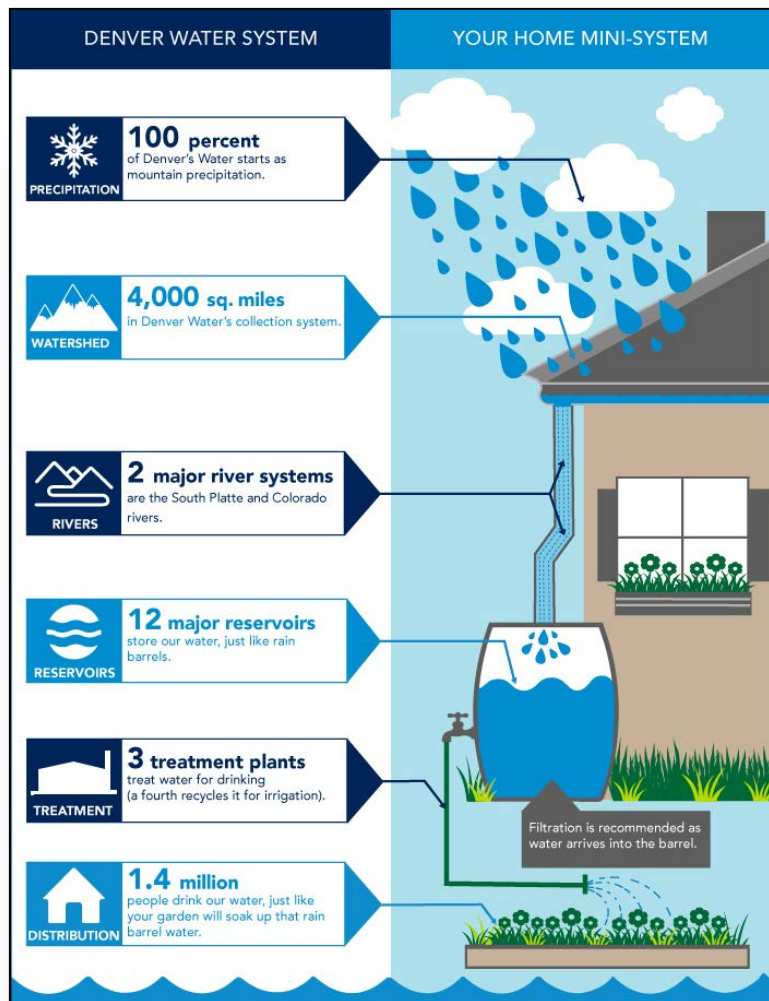


Learning Objectives

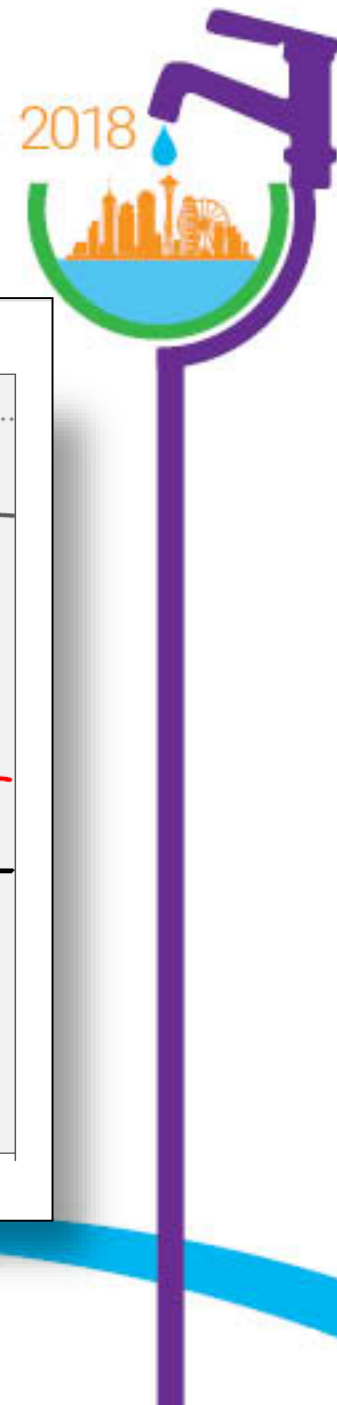
- Improving existing programs through targeted messaging
- Community Based Social Marketing
- Transition from Conservation to Efficiency



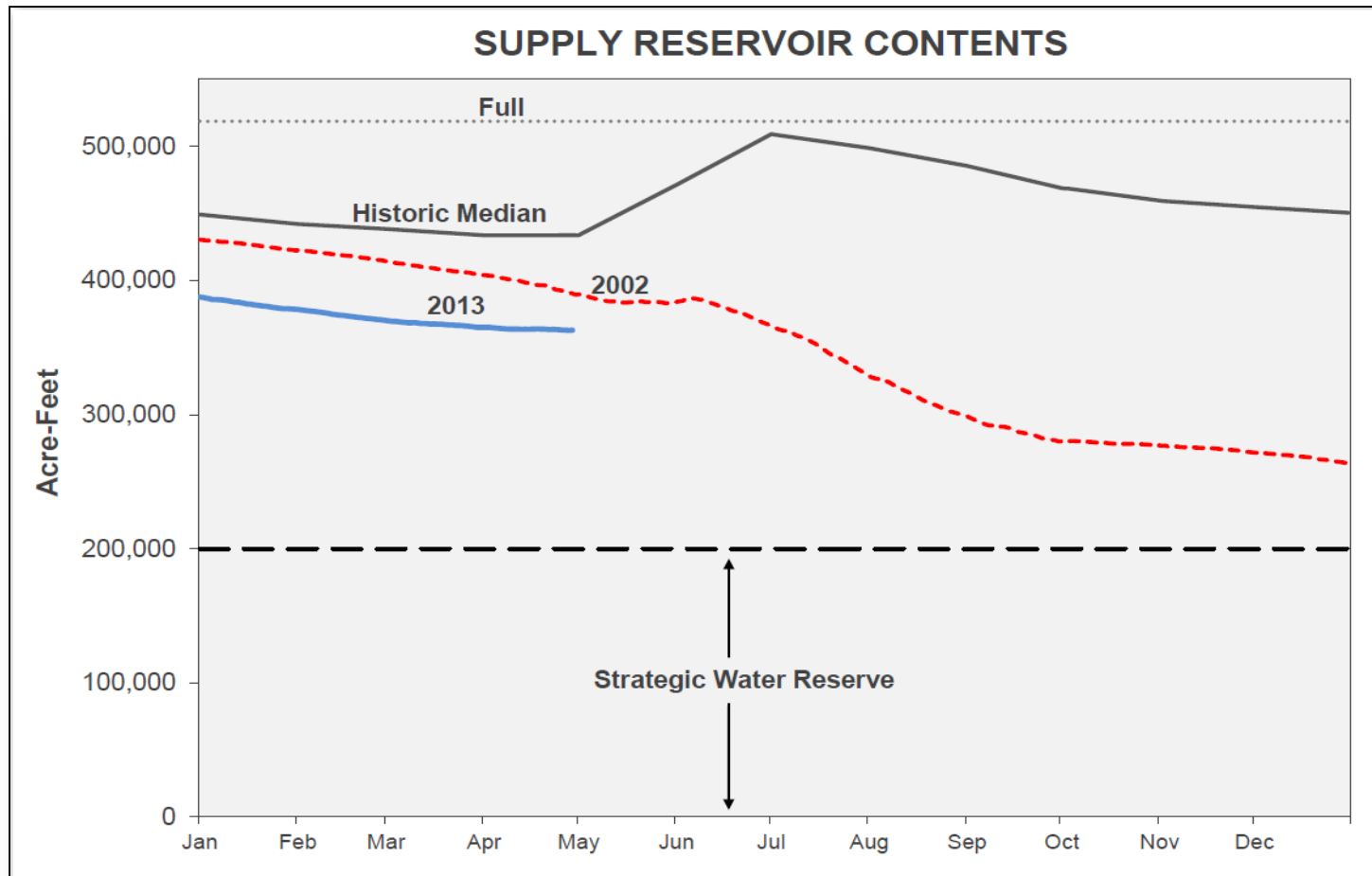
Who is Denver Water



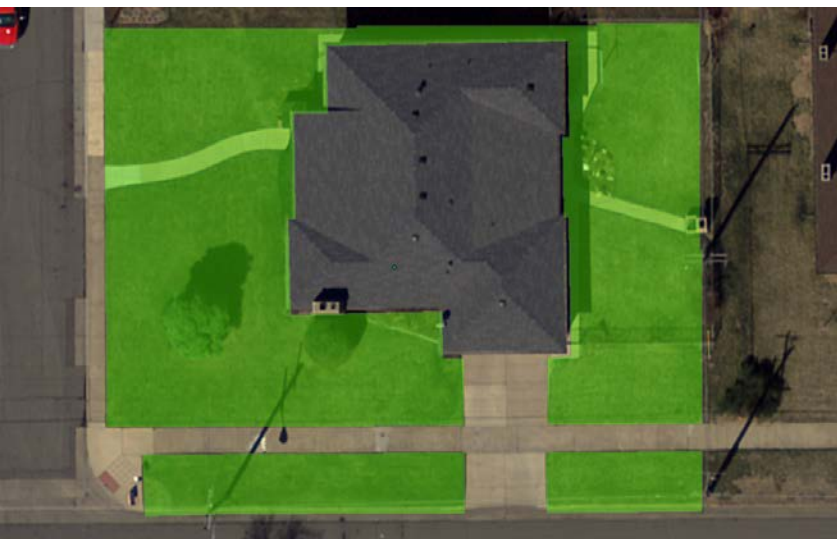
- Different than City and County of Denver
- Primarily potable water treatment and distribution
- We serve ~25% of Colorado's population using 2% of the water resources
- Currently serve 1.4 million people
- 2017 gpcd ~125



Why the Single Family Letter Started



2013 Targeted Letter Campaign



- Sent monthly to 4000 customers that used 25+ GPSF in 2012
- The target budget was based on 12 GPSF of pervious area
 - 18 GPSF for irrigated area
 - What typical turf grass needs during the irrigation season (golf course quality)
- Budget only for outdoor water usage so consumption was slightly different than what is on customer bill



2013 Targeted Letter Campaign

DENVER WATER

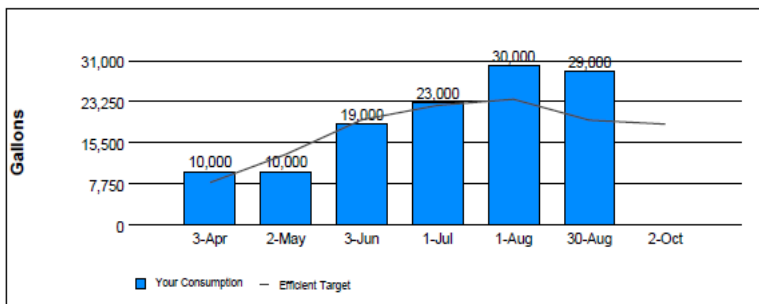
1600 W. 12th Avenue, Denver, CO 80204-3412
Phone 303-893-2444, www.denverwater.org

August 30, 2013

JAKES, LONG
1234 COLORADO BLVD
DENVER, CO 80303

Dear Customer:

Our 2012 data shows water use at this property was at least 40 percent more than the landscape required - a major concern during the drought. The chart below summarizes your actual use for 2013, noted by the blue bars, and compares it to an efficient target for your property, noted by the black line. If you are at or below the efficient target line please continue using water efficiently.



How does Denver Water determine a consumption target for your property?

To calculate the efficient target, we use Geographic Information Systems (GIS) to measure irrigable area on your property and combine that with the irrigation requirements of Kentucky bluegrass. We then add that amount to your indoor consumption, which is measured in the winter when people don't irrigate.

How does Denver Water determine a consumption target for your property?

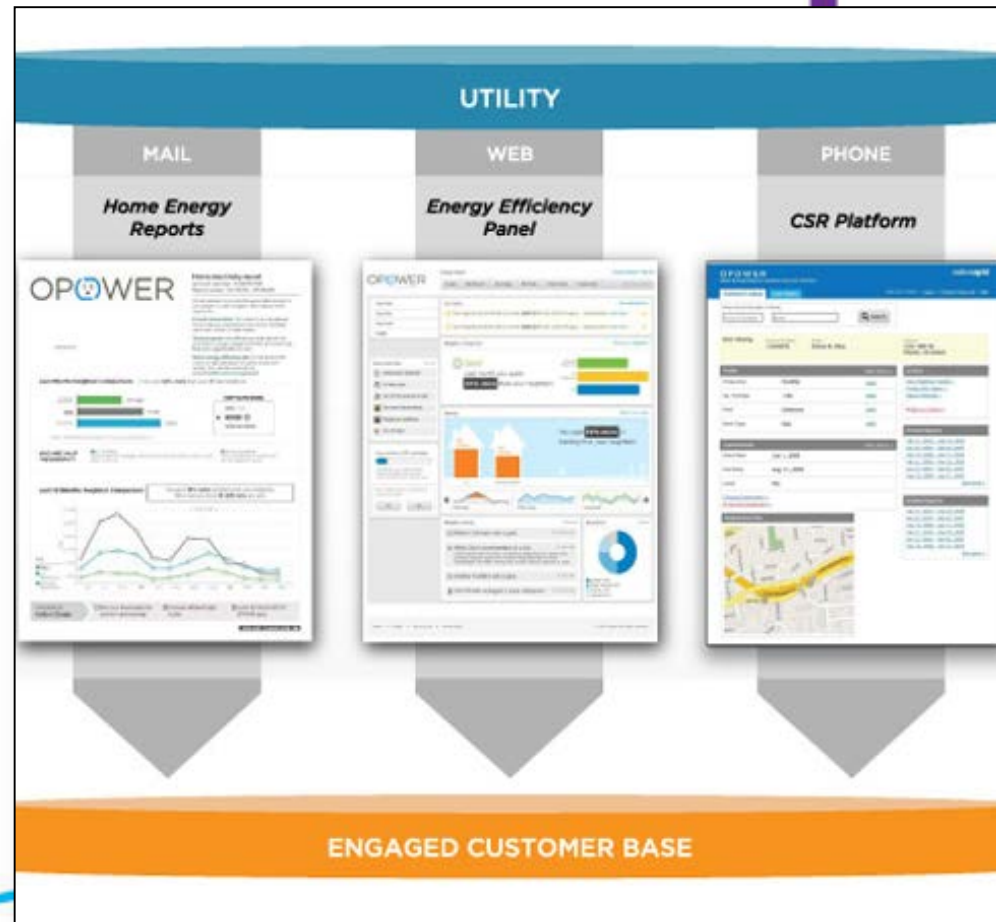
Key Lessons Learned

- Customers confused why they were getting letters based on previous year
- Wording was a too harsh
 - 25 customers opted out
- Average savings was 2.8% compared to control group
- Savings from opt out customers was 8.5% compared to control group
- Cost / ac-ft: \$396
- Ac-ft Saved: 51



2014-2015 Pilot of Efficiency Letter


- Cost / ac-ft – one of our cheapest programs
- Communicating what customers what the need to be efficient
- Use social norming to gain increased water efficiency
- New layout modeled on common practices in the energy bills





2014-2015 Pilot of Efficiency Letter

- Still only concerned with irrigation season water use
- Sent to every single family residential household in 3 of the 20 Denver Water billing cycles
 - More generalized language
 - Pilot size increased from 4000 customers to 13000 customers



DENVER WATER
1600 West 12th Avenue
Denver, Colorado 80204-3412
303-893-2444

August 26, 2014

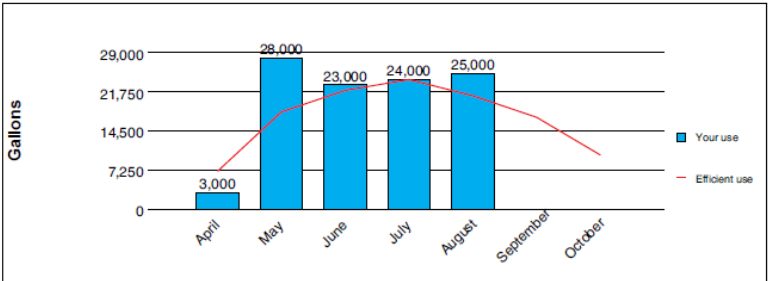
97 1 AV 0.381
*****AUTO**SCH 5-DIGIT 80111 047889 99 1
LONG JAKES
1234 COLORADO BLVD
DENVER, CO 80303

Dear Customer:

Ever wonder how your water consumption ranks next to other similar-sized properties? Denver Water is committed to helping customers conserve by educating them on how to use water efficiently. Below are charts that show how much your property uses compared with industry-accepted efficient use patterns and also properties with similar sized yards and winter use.

Your consumption compared with efficient use

Our records indicate that you have 8,253 square feet of irrigable area and use about 3,000 gallons of water indoors a month. Based on this information we estimate that you used 4,000 gallons more than we consider efficient last month. This may be from over-watering, leaks or other circumstances. Look on the back of this page for tips to reduce waste.



Month	Your use (Gallons)	Efficient use (Gallons)
April	3,000	3,000
May	28,000	~18,000
June	23,000	~18,000
July	24,000	~18,000
August	25,000	~18,000
September	~18,000	~18,000
October	~18,000	~18,000

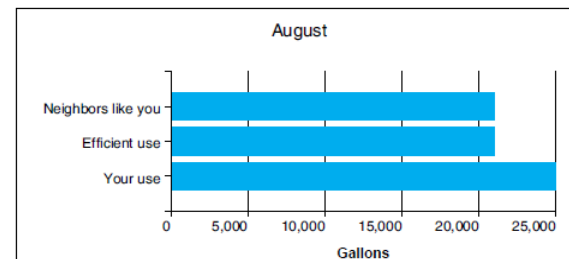
How do you compare with neighbors who have similar-sized yards and indoor water use patterns?

For this comparison, we looked at the median consumption of homes that have 8,000 to 9,999 square feet of irrigable area and use 3,000 to 4,999 gallons per month indoors. There are 62 homes in your area that have similar characteristics.



2014-2015 Pilot of Efficiency Letter

- Added a customers like you feature
 - Grouped customers based on indoor usage and outdoor characteristics
 - More complex than the original letter
- Continued to test against demographically similar control groups



How does Denver Water determine efficient use for your property?

To calculate the maximum irrigation requirement, we use GIS to measure irrigable areas of your property. Then we combine that data with the irrigation requirements of Kentucky bluegrass, which requires more water than most trees and shrubs. Indoor use throughout the year is based on winter use at the property.

Help eliminate outdoor water waste by following Denver Water's watering rules:

1. Never water between 10 a.m. and 6 p.m., and never more than three days a week.
2. If it rains, skip a day, and always remember to turn off your sprinklers during rain and wind.
3. Adjust irrigation run times monthly according to landscape requirements and weather changes. Visit www.denverwater.org/lawn for more information about watering times.
4. Request a free water audit of your irrigation system by visiting www.denverwater.org/audits.

We can help you save water -- and money on your bill -- with rebates and conservation audits. Visit www.denverwater.org/conservation for more information on ways to reduce your use.

Sincerely,

Denver Water Customer Care
303.893.2444



2014-2015 Pilot of Efficiency Letter

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Outdoor_Group	Description
1	1,000-3,999 sq ft
2	4,000-5,999 sq ft
3	6,000-7,999 sq ft
4	8,000-9,999 sq ft
5	10,000-14,999 sq ft
6	15,000-19,999 sq ft
7	20,000-24,999 sq ft
8	25,000-29,999 sq ft
9	30,000-43,999 sq ft

Winter_Cons_Group	Description
A	0, 1, 2, 3 kgal
B	4, 5, 6 kgal
C	7 kgal and greater

Indoor/Winter Use groups will be calculated based on...

Values greater than 7 should be converted to...

example is in group A 4



2014-2015 Pilot of Efficiency Letter

Results

- Cost of mailing letters increased
 - Cost / ac-ft \$824
 - Ac-ft saved: 69
- Fewer calls compared to the initial letter (softening the language worked)
- Customer survey of inefficient users:
 - Willing to reduce water
 - They want more information than what bill provides



2016 Pilot Expansion



DENVER WATER
1600 West 12th Ave
Denver, CO 80204-3412
303-893-2444

August 16, 2016

5667 1 AV 0 373
*****AUTO**5-DIGIT 80207 067662 5671 23
005667
LONG JAKES
1234 COLORADO BLVD
DENVER, CO 80303

Outdoor Water Use Report

Denver Water is committed to helping you be efficient with your outdoor water use. We hope this report empowers you to take action and use water wisely this summer.

If you have questions about this report please call 303-893-2444 to talk to a Customer Care specialist. For wise water-use tips visit denverwater.org/conservation.

This month you used **2,000 gallons** more than your monthly efficient use target. Look on the back of this report for tips to improve your water use efficiency.

Month	Your use	Efficient use target
April	3,000	~4,000
May	5,000	~8,000
June	19,000	~12,000
July	16,000	~14,000
August	15,000	~13,000
September	~10,000	~10,000
October	~10,000	~10,000

By staying under the efficient use target each month you will use 12 gallons per irrigated square foot annually, which is considered efficient in the Denver area.

The monthly target for your home is based on a measurement of 3,428 square feet.

August

There are 450 neighbors like you with similar-sized yards and indoor water use patterns.

- Close to 20,000 customers receiving an efficiency report May-October

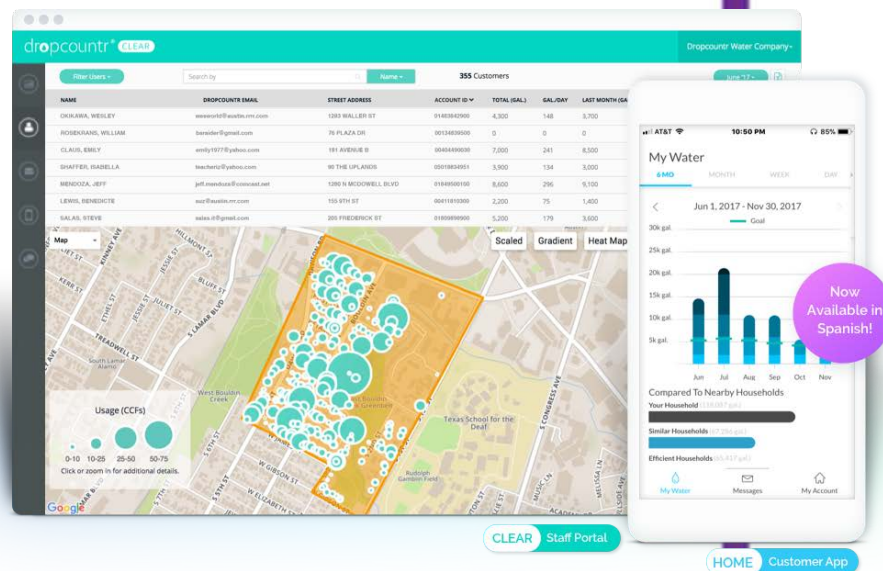
Results

- Cost per ac-ft: \$793
- Ac-ft saved: 112
- Compared to control group the Pilot areas saved 4%
- Water Conservation Plan update starts
 - All conservation spending must have metrics of \$/ac-ft
 - Communicating efficient use is foundational

2017 Dropcountr Digital Platform



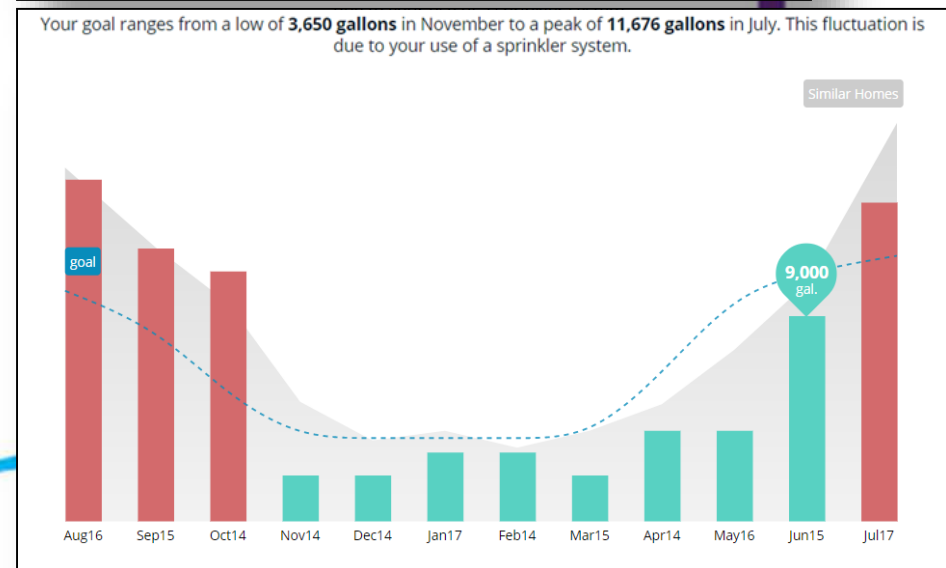
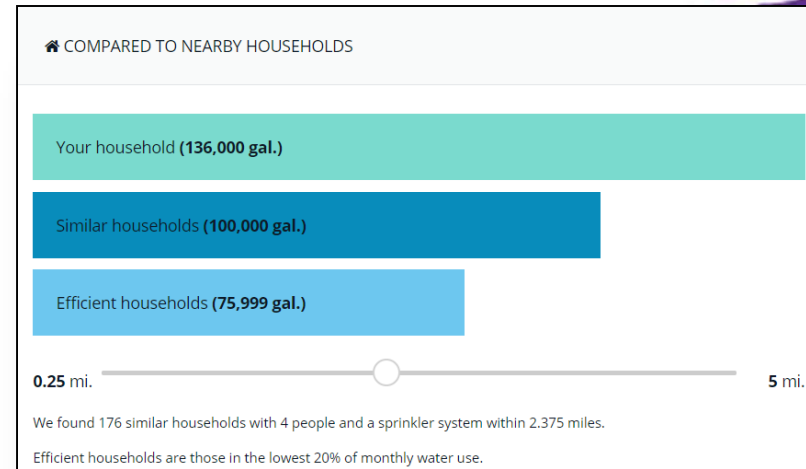
- Continue to look for new ways to engage customers
 - App and online portal
- Offer the app to 20,000 customers that received the letter in 2016
 - Opt in instead of reoccurring communication to everyone
- Initial offering to 10,721 customers with email on file with Denver Water
- Several email blasts before sending paper offering





2017 Dropcountr Digital Platform

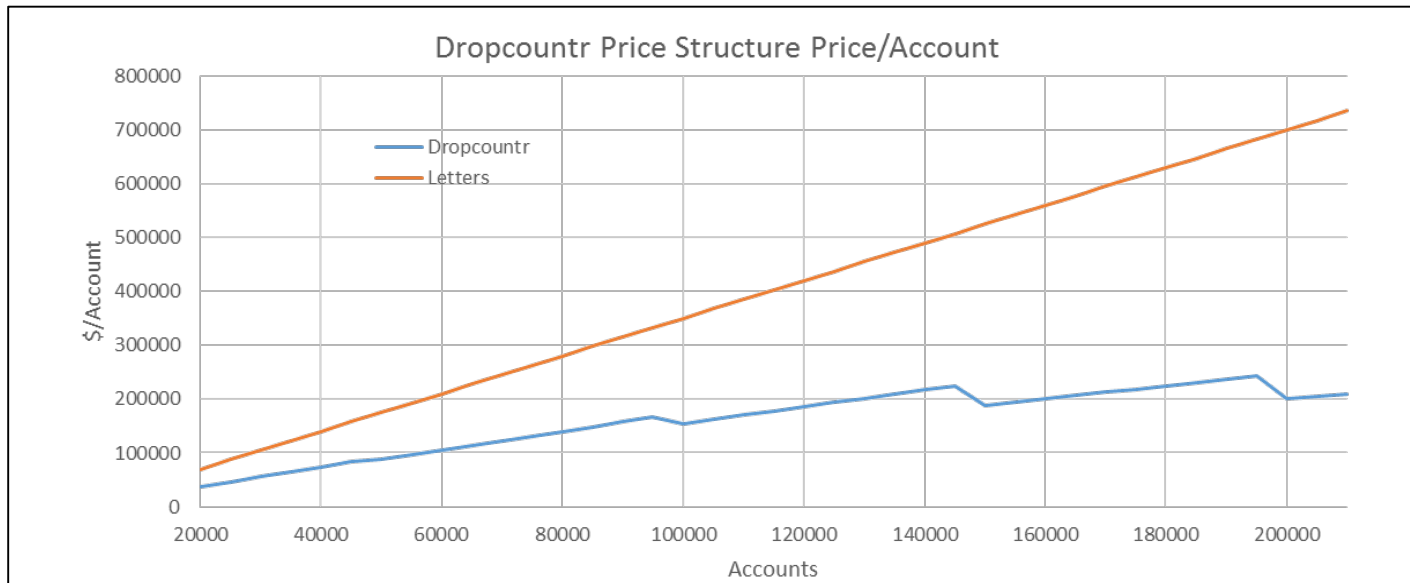
- Compares household usage to neighbors like them based on geographical area
- Customizable with data from the utility and end user
 - Number of people in household
 - Water using appliance in house
 - Evapotranspiration Data
 - Irrigable area vs pervious area
 - Indoor benchmark of efficient water use
- More analytics for utility to see who is engaging with the product and what their user profile is like
- 3rd Party data validation



2017 Dropcountr Digital Platform



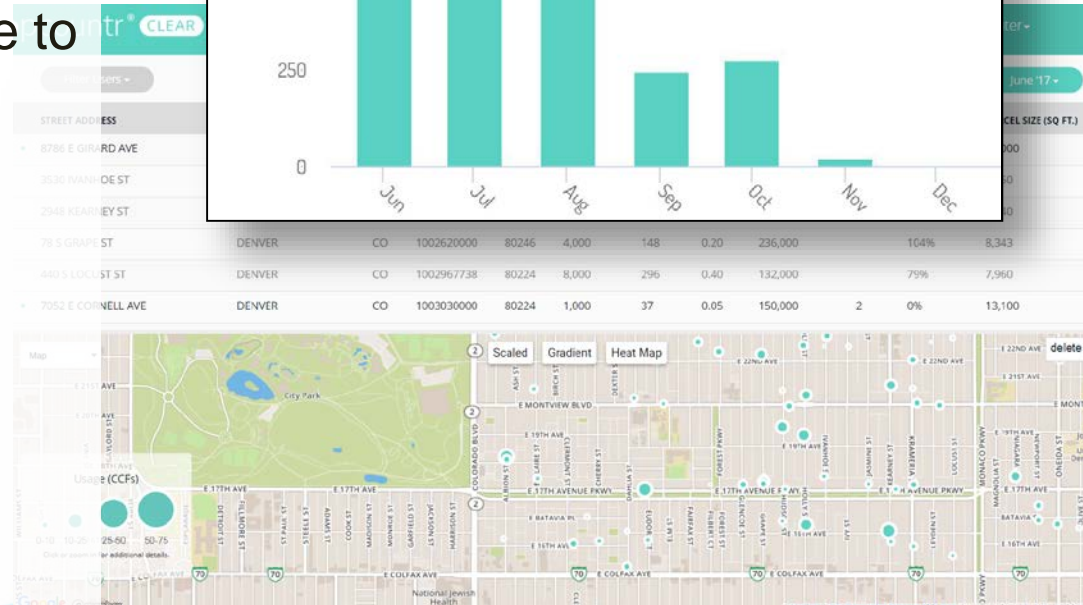
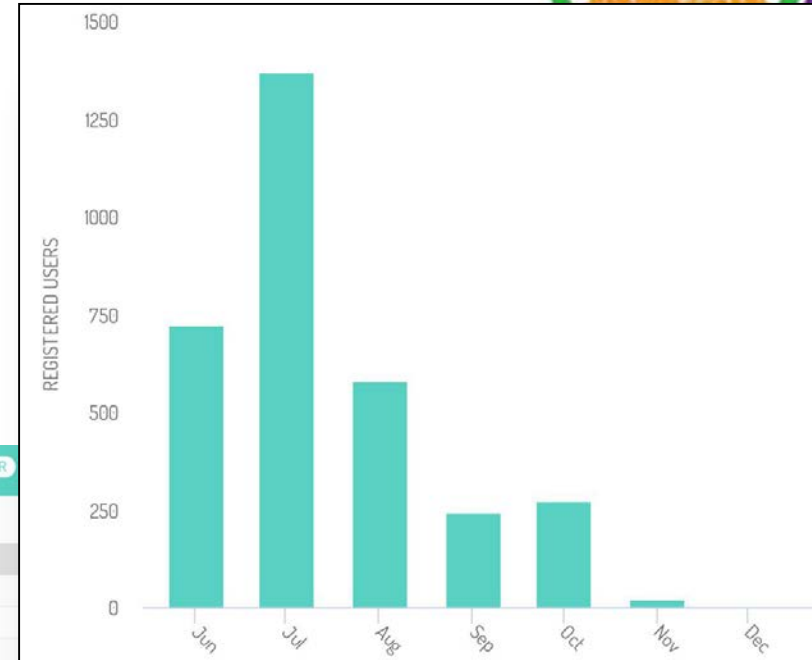
- Easily scalable
 - Just as easy to do 2,000 accounts at 200,000 accounts
 - More cost effective than paper letters
 - Analytics for utility to see who is participating and what their user profile is like
- Target customers
 - Geographic area
 - Through other efficiency metrics





2017 Dropcountr Digital Platform

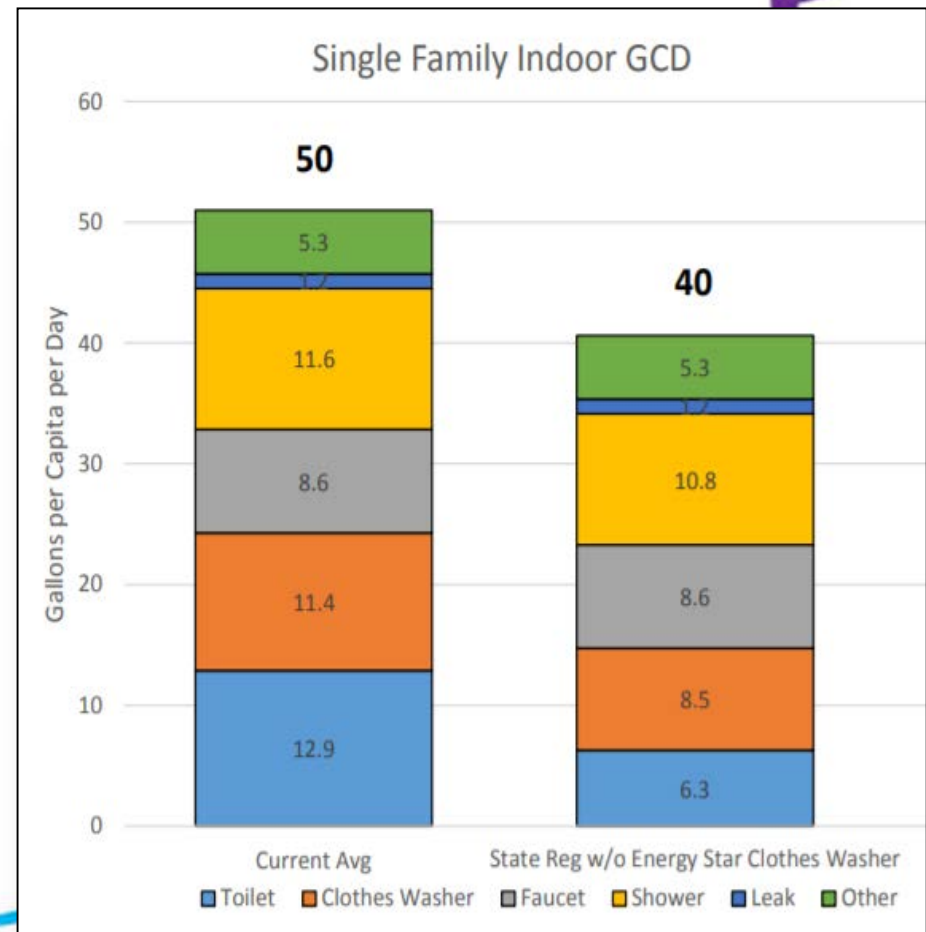
- 3196 customers signed up (2087 within 1st month)
 - 57% review monthly efficiency report
 - More than 2x government open rate
- After email blast a paper engagement letter was sent to 17413 customers
- Only 148 signups attributable to paper letters sent
 - dropcountr email vs DW email
 - Paper engagement is a waste of money
- Customers enrolled in dropcountr saved 7.5% on average
- Ac-ft savings: 152 (need to verify through DW analysis)
- Cost per ac-ft ~\$450





2017 Denver Water Efficiency Plan

- Denver Water Conservation Plan fully rewritten
- Stakeholder group recommends transition from conservation to efficiency
 - Each customer type based on benchmark for efficient use
 - Target “conservation” programs to inefficient customers
- Communicating efficient use is foundational to all existing conservation programs and a transition water efficiency





2017 Denver Water Efficiency Plan

Tactic / Program	5 Year Cost	5 Year AF Savings	\$/AF
Communicate Efficient Use	\$ 192,960	720	\$ 268
Informational Water Budget	\$ 296,820	510	\$ 582
SDC Efficiency Credit for New Construction	\$ 535,920	385	\$ 1,392
Water Budget Based Rates	\$ 404,175	255	\$ 1,585
Denver Parks IGA	\$ 372,750	42	\$ 8,875
SFR High Bill Audits	\$ 476,300	275	\$ 1,732
SFR Indoor Rebates	\$ 1,200,000	300	\$ 4,000
MFR Outdoor Rebates	\$ 42,805	35	\$ 1,223
MFR Indoor Audits	\$ 276,480	135	\$ 2,048
MFR Indoor Rebates	\$ 155,465	59	\$ 2,635
Watersense Challenge	\$ 1,285,697	427	\$ 3,011
CII Rebates	\$ 226,905	105	\$ 2,161
Garden in a Box	\$ 360,494	30	\$ 12,016
SFR Outdoor Rebates	\$ 440,387	62	\$ 7,103
Low Income Retrofits	\$ 539,400	58	\$ 9,300
TOTAL / AVERAGE	\$ 6,806,558	3,398	\$ 2,003

2018 Digital Communication



100 YEARS
1918 — 2018

WATER EFFICIENCY

Your usage this month is high.

Denver Water is committed to helping you be efficient with your water use. We hope the attached report empowers you to take action and use water wisely. If you have questions about this report please call 303-893-2444 to talk to a Customer Care specialist.

<p>Residential Rebates</p> <p style="font-size: x-small;">We want to help you improve your property - and save water - by picking up part of the tab for higher-efficiency model.</p> <div style="background-color: #e0f0ff; padding: 5px; font-size: x-small; width: 80%; margin: 0 auto;">Rebates</div>	<p>Quick tips to save water indoors</p> <p style="font-size: x-small;">The hoses are rolled up and the sprinklers are turned off, which makes for a good time to shift our focus to using water efficiently indoors.</p> <div style="background-color: #e0f0ff; padding: 5px; font-size: x-small; width: 80%; margin: 0 auto;">Quick Tips</div>	<p>Nip the drip in your house</p> <p style="font-size: x-small;">Household leaks can waste more than 1 trillion gallons annually nationwide, which is why Denver Water is participating...</p> <div style="background-color: #e0f0ff; padding: 5px; font-size: x-small; width: 80%; margin: 0 auto;">Nip The Drip</div>
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Want to change how you receive these emails?
You can [update your preferences](#) or [unsubscribe from this list](#).

- Bringing digital communication in-house lowers cost to \$268 per ac-ft
- This is foundational to all other efficiency programs
- Send a monthly email indicating efficient or inefficient
 - Target communication based on efficiency rating
 - Attached efficiency report that compares individual to average user and efficient
- Will first be sent to customers who signed up for dropcounter
- Ability to monitor acceptance rate and email click through

2018 Digital Communication



DENVER WATER

1600 West 12th Ave
Denver, CO 80204-3412
303-893-2444

August 16, 2016

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*****AUTO**5-DIGIT 80207 067662 5671 23
005667

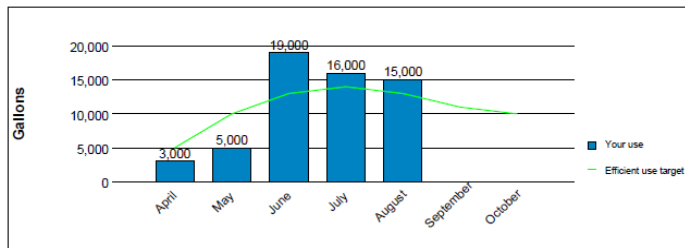
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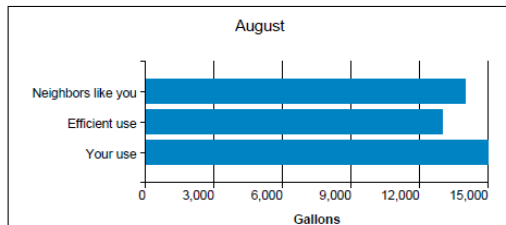
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Recap

- The Single Family Efficiency letters work!
- For other programs to be effective we need this to work at a large scale
- Denver Water needs a customer relations platform that offers:
 - An Online Portal / App that communicates efficient use
 - Targeted email campaigns based on efficiency metrics
 - Ability to convey more real time data (AMI)

