

# The Path to Utility 3.0

**Alan Heymann**

Chief Marketing Officer, DC Water

President, Blue Drop

@alanheyman

Five Cities Plus

August 16, 20 17



# About DC Water



# About Blue Drop



# An extraordinary moment...

(for two reasons)





**FLINT WATER PLANT**

A low-angle shot of a large, white, spherical water tower. The top of the tower is a smooth, rounded cap with the words "FLINT WATER PLANT" written in bold, dark blue, sans-serif capital letters. Below the cap, the tower's structure is visible, consisting of several thick, white, cylindrical columns that support the upper section. These columns are interconnected by a network of thin, white, diagonal cross-bracing members, creating a complex, web-like internal structure. The background is a plain, light-colored sky.

Unless we get busy...



...we are all Flint.





# A Burgeoning Crisis? A Nationwide Assessment of the Geography of Water Affordability in the United States

OPEN ACCESS

Chatterjee M, Mac EA, Wase S (2017) A Burgeoning Crisis? A Nationwide Assessment of the

Large proportion of consumers could not afford water service at rate cost recovery levels. Given growing concern about affordability issues due to rising water rates, and a comparative lack of work on affordability in the developed world, as compared to the developing world, more work is needed in developed countries to understand the extent of this issue in terms of

per assesses EPA's 4.5% rule from this is water service in countries, customers the water rates continue in the future project affordable impact providers service. Unable via higher thresholds.

ability of have estimate not afford

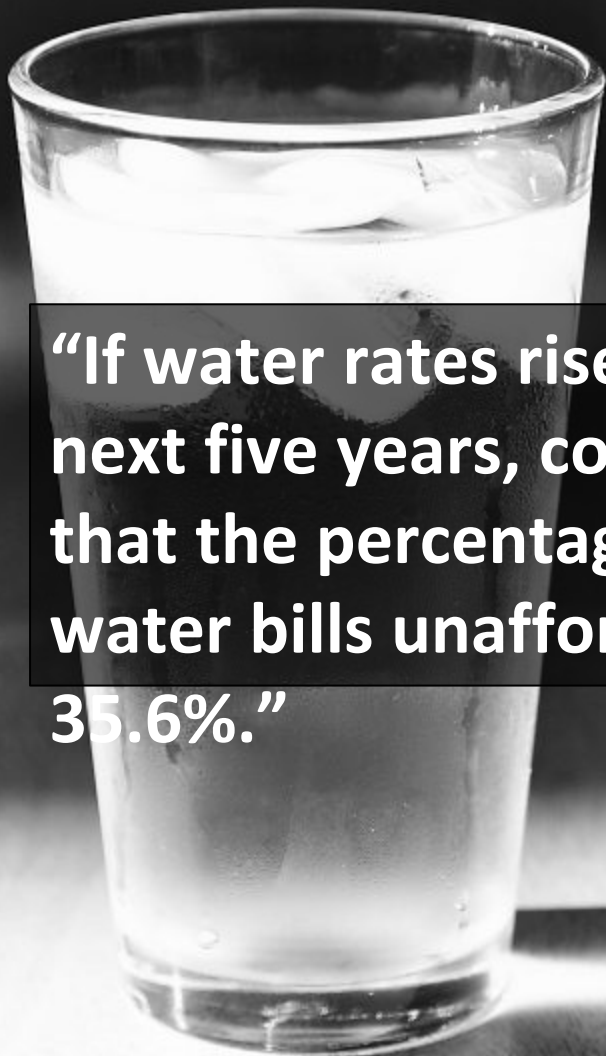


TOPICS > SCIENCE

## Affordable water may soon dry up, especially if you live here

PLOS ONE | DOI:10.1371/journal.pone.0160488 January 11, 2017

1 / 19



“If water rates rise at projected amounts over the next five years, conservative projections estimate that the percentage of U.S. households who will find water bills unaffordable could triple from 11.9% to 35.6%.”

**PLOS ONE**

RESEARCH ARTICLE

## A Burgeoning Crisis? A Nationwide Assessment of the Geography of Water Affordability in the United States

Elizabeth A. Mack<sup>1\*</sup>, Sarah Wrase<sup>2</sup>

**1** Department of Geography, Environment & Spatial Sciences, Michigan State University, East Lansing, Michigan, United States of America, **2** Department of Accounting & Information Systems, Eli Broad College of Business, Michigan State University, East Lansing, Michigan, United States of America

\* [emack@msu.edu](mailto:emack@msu.edu)

**Check for updates**

### Abstract

While basic access to clean water is critical, another important issue is the affordability of water access for people around the globe. Prior international work has highlighted that a significant portion of the population in low-income countries could not afford basic water services. However, there is a comparative lack of work on affordability in the developed world, so compared to the developing world, more work is needed in developed countries to understand the extent of this issue in terms of the number of households and persons impacted. To address this need, this paper assesses the affordability of water services for U.S. households. Using data from the U.S. Census Bureau's 4.5% sample of households, we estimate the percentage of U.S. households who will find water bills unaffordable under conservative projections for the next five years. Results from this paper highlight high-risk and at-risk households for water poverty or unaffordable water services. Many of these households are clustered in pockets of water hardship within counties, which may be important for future water policy and investment decisions. Results indicate that water bills will remain comparatively affordable for many U.S. households, but this trend will not continue in the future. If water rates rise at projected amounts over the next five years, conservative projections estimate that the percentage of U.S. households who will find water bills unaffordable could triple from 11.9% to 35.6%. This increase in unaffordable water bills could have fewer customers over which to spread the large fixed costs of water services. Unaffordable water bills also impact customers for whom water services are affordable via higher water rates to recover the costs of services that go unpaid by lower income households.

### Introduction

While basic access to clean water is critical, another important issue is the affordability of water access for people around the globe. In terms of water affordability, studies have estimated that approximately 60% of the population in low-income countries could not afford

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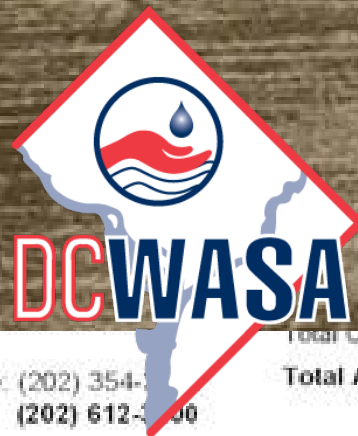
PLOS ONE | DOI:10.1371/journal.pone.0160488 January 11, 2017 1 / 19

# Water utility 1.0

("underground")



# Water utility 1.0



Customer Service / Servicio Al Cliente: (202) 354-3000  
Emergencies / Emergencia: (202) 612-3000

Total Current Bill \$34.50  
Total Amount Due - Please Pay by 11/01/10 \$147.01

Meter Number	Prior Read Date	Current Read Date	Number Of Days	Prior Read	Current Read	Usage (CCF)	Usage (Gallons)	Read Type
51941880	08/31/10	10/05/10	35	34	40	6	4,488	ACTUAL

# Water utility 1.0

## The Washington Post

### Experts Seek Answers On Tainted D.C. Water

Panel to Study Abrupt Rise of Lead Levels in City

*By David Nakamura and D'Vera Cohn*

Washington Post, Sunday, February 8, 2004; Page C01

A team of chemists, water-quality experts and engineers will gather in Washington this week in an attempt to answer a baffling question on a tight deadline: Why did lead levels in the tap water at thousands of city homes spike above federal safety limits?

### D.C. Water Worries Sellers, Buyers

Real Estate Industry Unsure What to Do About Lead Reports

*By Sandra Fleishman, Washington Post*

Saturday, February 14, 2004; Page F01

On Wednesday, at a news conference with the mayor and D.C. Council, WASA promised to send letters to owners of all 23,000 properties that the agency believes have lead service lines. If those homeowners have concerns about the water, they can call WASA for information about testing.

# Water utility 2.0

June 20 10 – “we’re here”



# Water utility 2.0

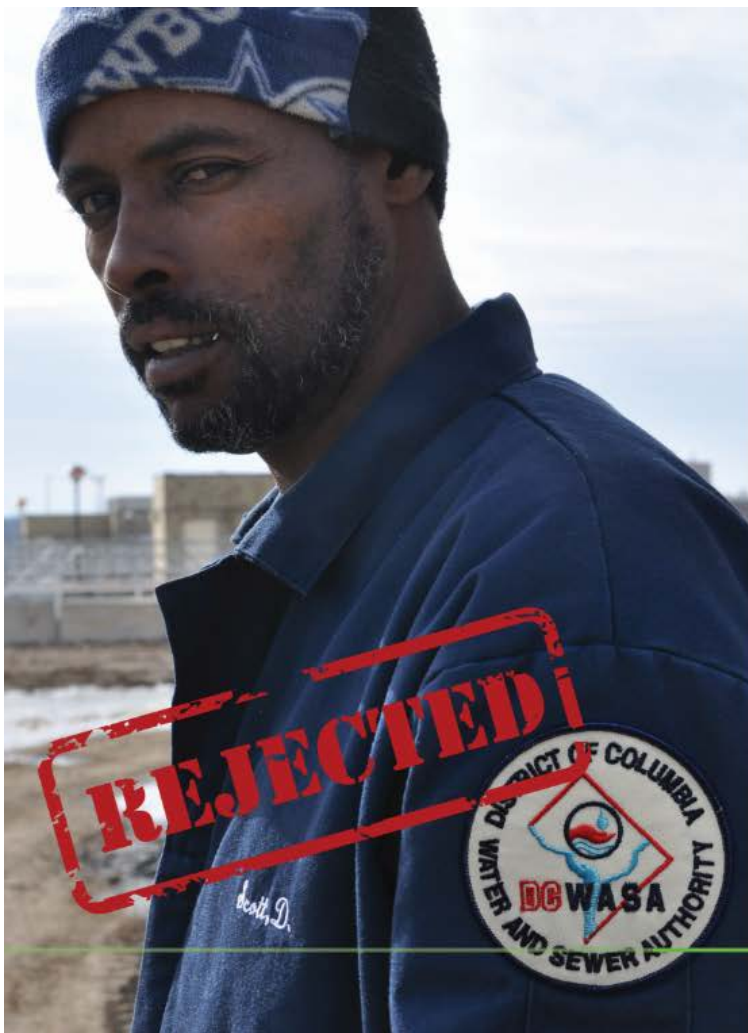


# Water utility 2.0





# Water utility 2.0



## YOU CAN STILL REPLACE YOUR OLD UNIFORM PATCHES

If you did not have your old patches replaced during the *Patch Replacement Program*, it's not too late.

Stop by the Office of Public Affairs to get new patches. We will provide you with as many patches as you need to replace the old ones. All you have to do is have them sewn on. To pick up patches, please contact Tamara Stevenson at x2204.



# Water utility 2.0



**FREE COLD TAP WATER**

dc  
water is life

**Water utility 2.0**

i♥dc i♥dc i♥dc i♥dc i♥dc

42A 20613

ISEMA  
AND SECURITY AND EMERGENCY MANAGEMENT  
DISTRICT OF COLUMBIA  
MOBILE COMMAND  
CENTER



# Water utility 2.0



# Water utility 2.0

 DC Water @dcwater · 23h  
Gig Alert: Looking for a comms pro to help get people to ditch bottled water. [bit.ly /DCWJob](https://bit.ly/DCWJob)



**111**  
WATER MAIN  
BREAKS SINCE  
DECEMBER

dc

**THANKS FOR THE BUSINESS**

THANKS FOR THE BUSINESS

# Water utility 2.0



# Water utility 2.0



# Water utility 2.0





# The Washington Post

## D.C. Water Worries Sellers, Buyers

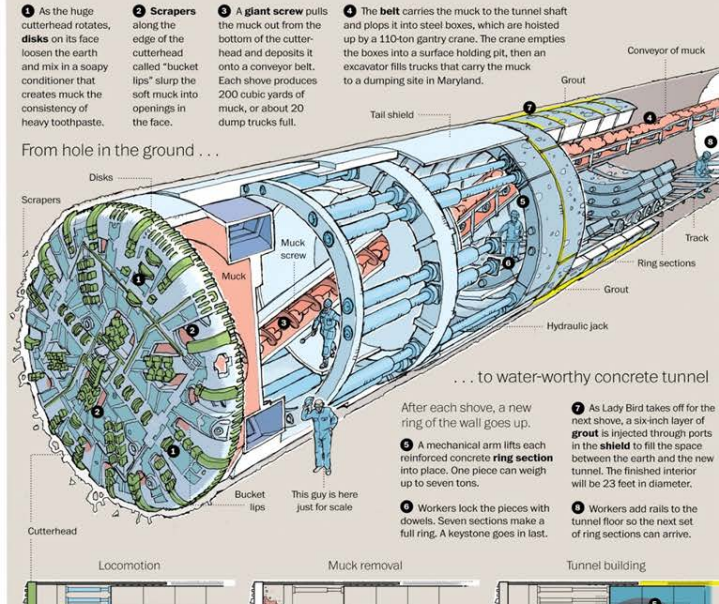
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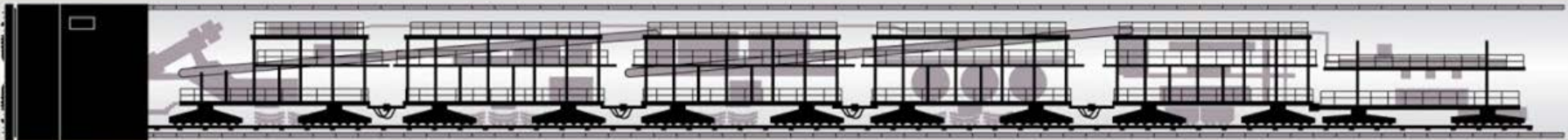
## Burrowing through soil

Lady Bird operated 24 hours a day for six days a week, progressing 50 to 60 feet per day in six-foot increments called "shoves."



## Scale of Lady Bird

**Length:** 442.9 feet long, including trailing gear    **Weight:** 1,325 tons    **Height:** 26 feet 4 inches    **Cost to build:** \$30 million



**Top speed:** 4 inches per minute

**How it got its name:** From the former first lady, an environmental activist

stormwater and sewage flow through the same pipes. About a billion gallons per year overflows directly into the Potomac and Anacostia rivers and Rock Creek. The 20-year D.C. Clean Rivers Project aims to greatly reduce that amount, starting with the overburdened Anacostia. Lady Bird's job is digging the first 4.5-mile section of the roughly 13-mile Anacostia River Tunnel System, which will feed into Blue Plains starting in 2018. More tunnel boring machines will get in on the act as well, beginning a second section this year.



# Okay, but why?



**PEPSI**

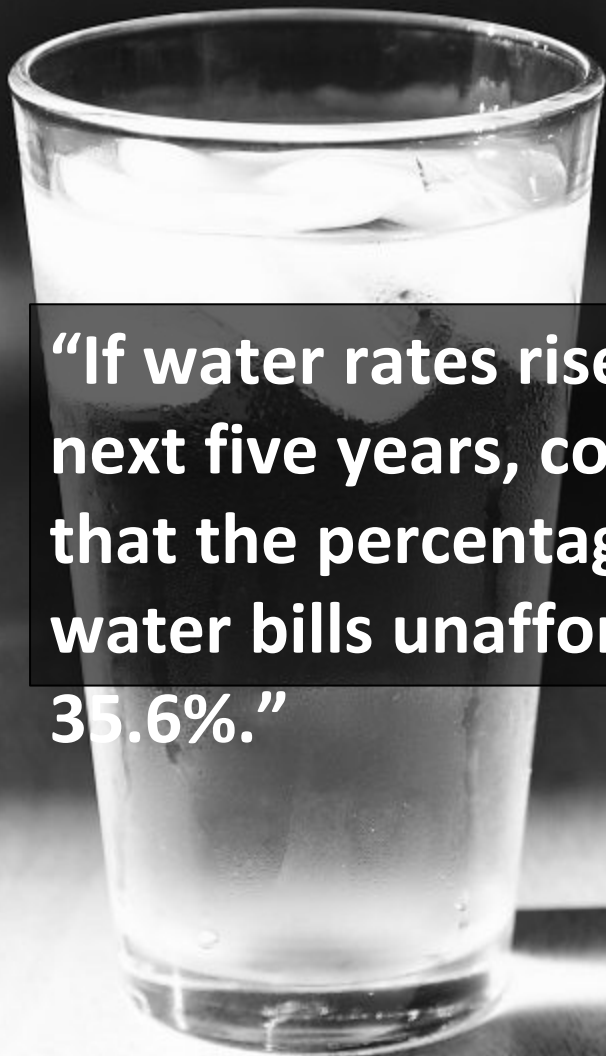
THANKS FOR CHOOSING PEPSI

A blue vending machine featuring the Pepsi logo at the top. The front panel has a grid of 12 beverage options, including various sizes of Pepsi, Diet Pepsi, and other flavored drinks. A central control panel includes a coin slot, a small display screen, and a large red, white, and blue Pepsi logo. Below the grid is a white dispensing slot. The bottom of the machine has the text "THANKS FOR CHOOSING PEPSI".

*Coca-Cola*

A Coca-Cola vending machine with a large, stylized white Coca-Cola logo on a red background. The machine features a grid of beverage options on the right side, including Coca-Cola, Diet Coke, and other flavors. A central control panel includes a coin slot, a small display screen, and a red "Energy" button. Below the grid is a black dispensing slot.





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# Water utility 2.0



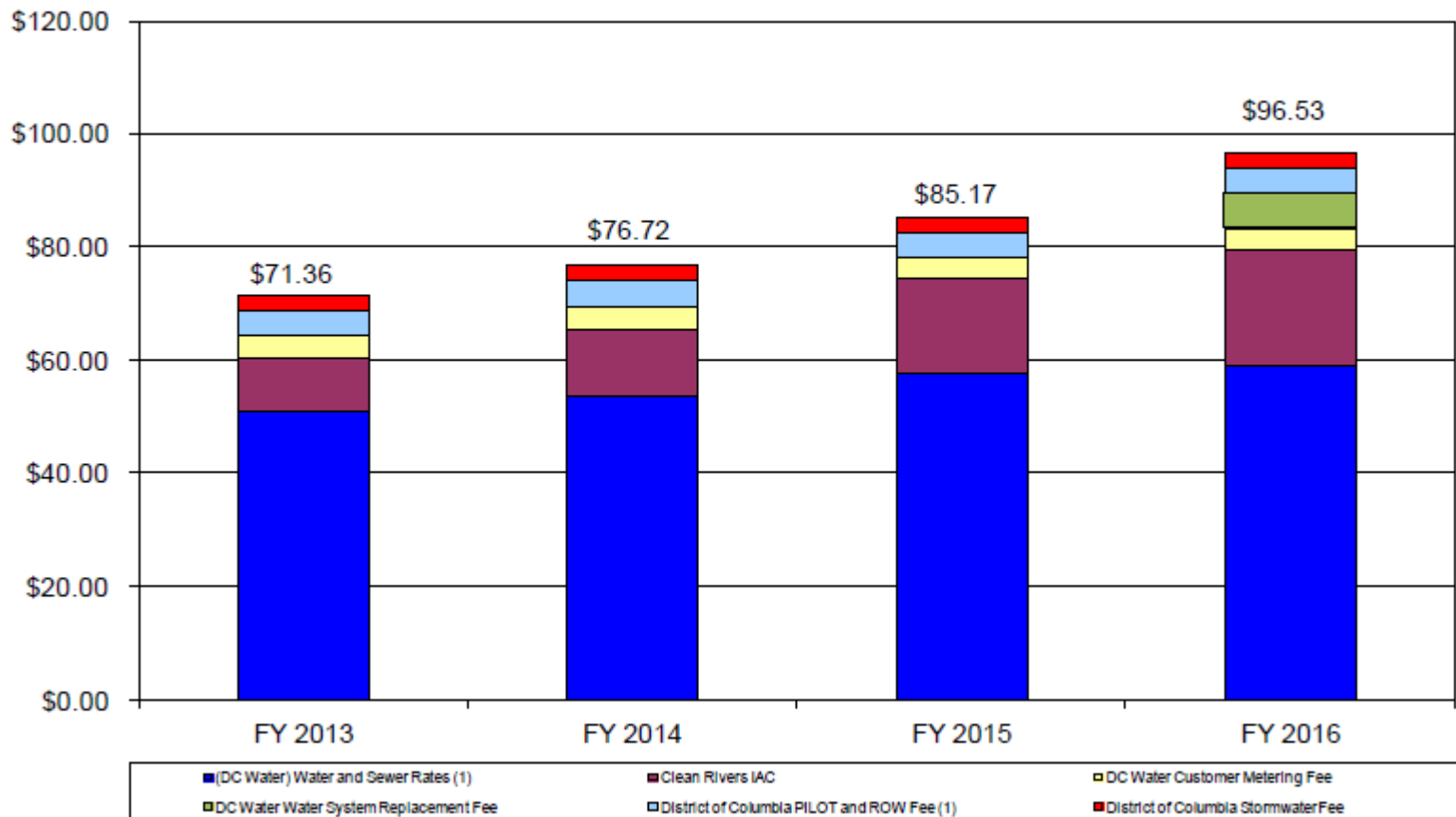
dc RESIDENTIAL RATES

	2011	2012	2013	2014
Single-Family Water Rates (Flat)	\$11	\$12	\$13	\$14
Single-Family Water Rates (Tiered)	\$12	\$13	\$14	\$15
Small Business Water Rates	\$15	\$16	\$17	\$18
Large Business Water Rates	\$20	\$21	\$22	\$23
City of Washington Water Rates	\$25	\$26	\$27	\$28
City of Washington Sewer Rates	\$10	\$11	\$12	\$13
City of Washington Water & Sewer Rates	\$35	\$37	\$39	\$41



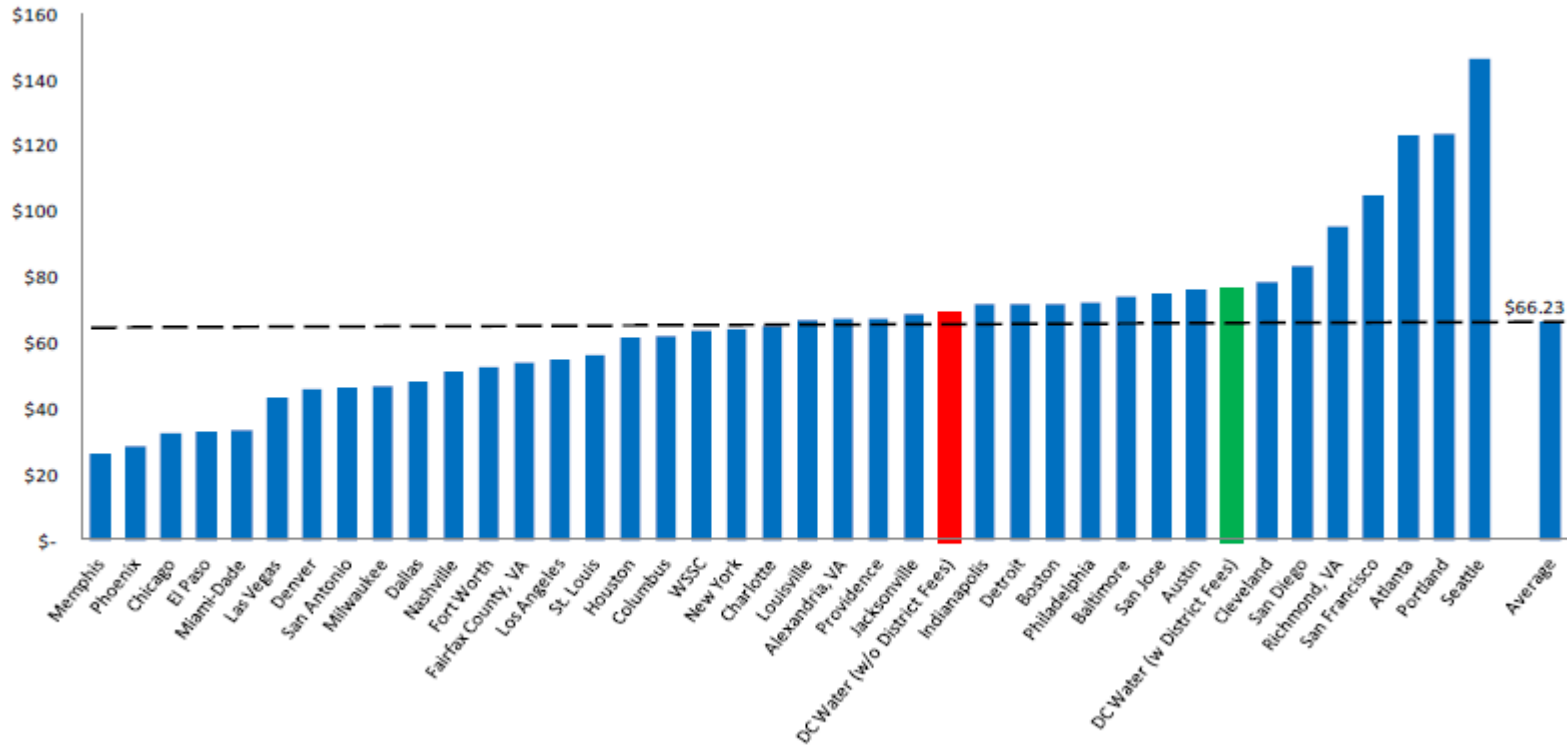
# Water utility 2.0

AVERAGE RESIDENTIAL CUSTOMER MONTHLY BILL  
FY 2013 – FY 2016



# Water utility 2.0

DC Water Retail Rates Compared to Other Large Utilities  
(Based on Rates in effect Fall 2014)





# Water utility 3.0

("sharing")



# Water utility 3.0

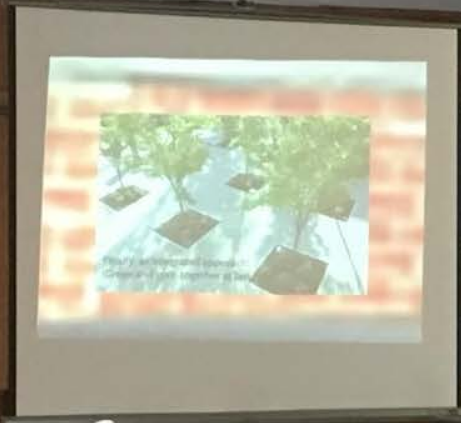


**Transforming a business model.**

**Waste disposal  
Resource recovery**



# Water utility 3.0



# Water utility 3.0



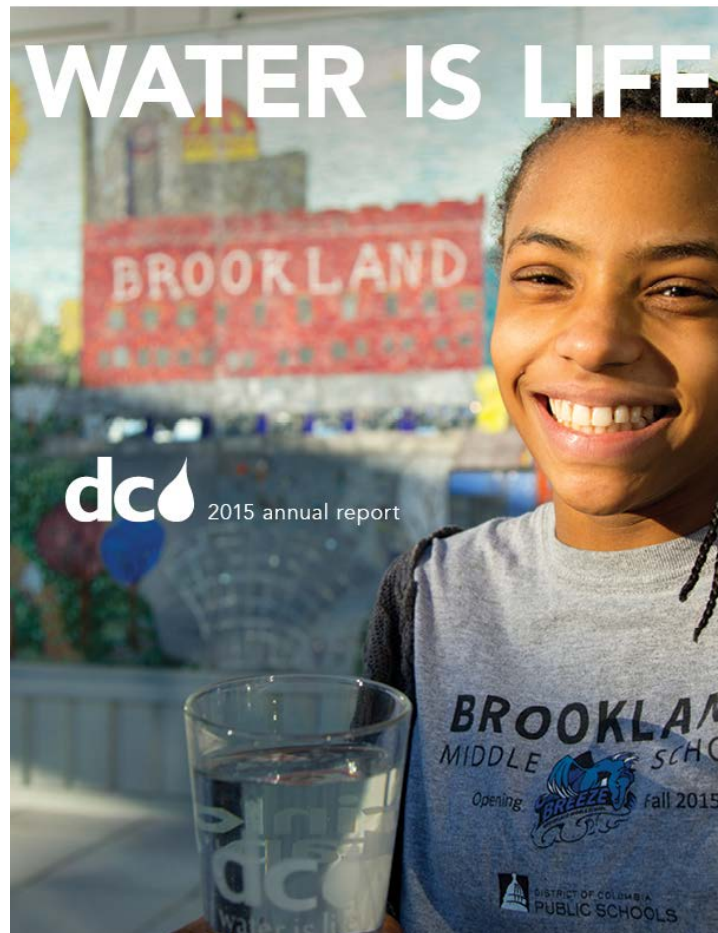
# What can you do?



# 1. Find what matters most to your customers.



## 2. Focus on that.





WHO

“My agency  
doesn’t do drinking

”





# 3. Talk about it better than anyone else.



# 4. Meet your customers where they are.



# 5. Be real.

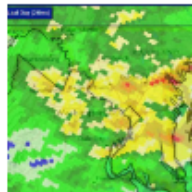


**DC Water** ✓  
@dcwater

Following



The new tunnel in [#BloomingdaleDC](#) stored 500k gallons of stormwater and sewage overnight. Working as designed for flood relief.



**Capital Weather Gang** ✓ @capitalweather

Waterlogged! DC area rain totals last 24 hours: widespread 2-4", isolated spots over 6 inches! wapo.st/2v6gcXX

9:11 AM - 29 Jul 2017

27 Retweets 95 Likes



## 6. Call us.



# Questions?

Alan Heymann

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President, Blue Drop

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