

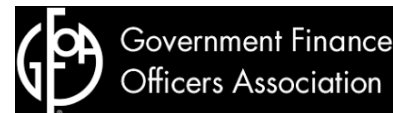


Smart Management for
Small Water Systems

Water Rates Dashboard for Delaware and Surrounding States

October 25, 2018

www.efcnetwork.org

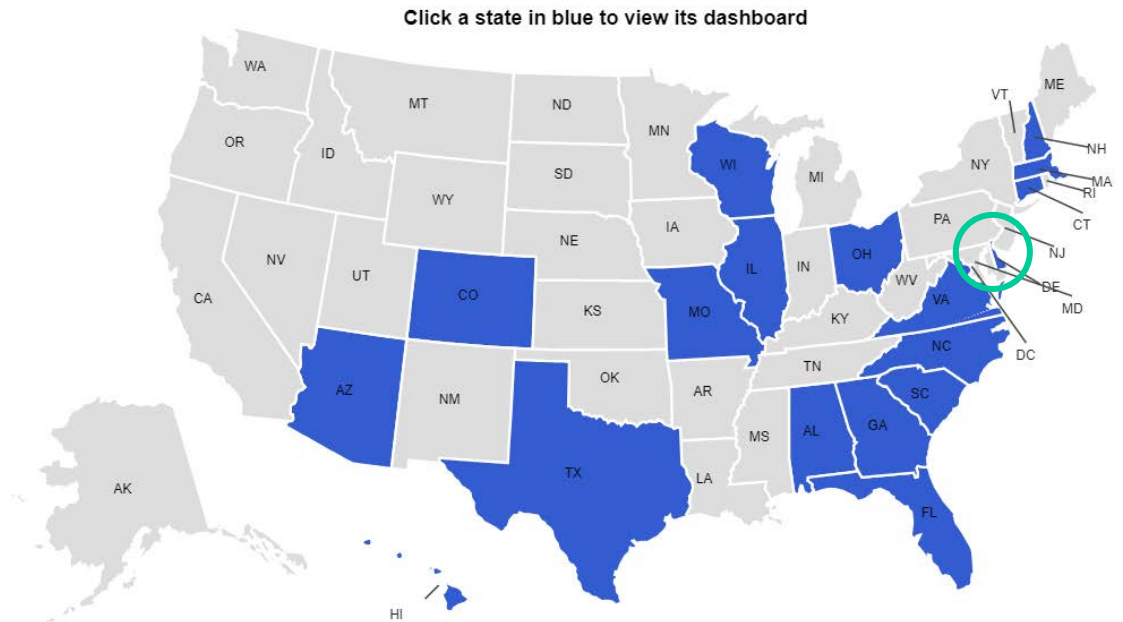


This program is made possible under a cooperative agreement with the U.S. EPA.



Annalee Harkins

Data Specialist and Project Manager
EFC at UNC Chapel Hill





Webinar Objectives

- Become familiar with the features and benefits of the Delaware and Surrounding States Water Rates Dashboard
- Learn how to compare one water system's rates with those of other systems

Survey Partner: University of Delaware Water Resources Center



Water Resources Center

College of Arts and Sciences

Institute for Public Administration, School of Public Policy and Administration,

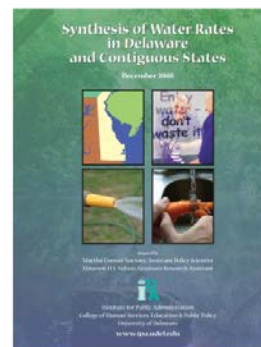
About DWRC NIWR WRA Public Service Research Education GIS Publications

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Synthesis of Water Rates in Delaware and Contiguous States

The University of Delaware's Water Resources Agency in the Institute for Public Administration, conducted an inventory of residential water rates for public- and investor-owned water utilities within Delaware and its adjoining states—Maryland, New Jersey, and Pennsylvania. The draft 2014 report is an update of water-rate surveys prepared in 1996, 2000, 2004, 2008, 2011, 2012, and 2013.

The purpose of this inventory is to summarize and compare residential water rates for Delaware and the surrounding states based on a compilation of water-rate data from water purveyors collected via telephone, e-mail, fax, and websites. The data are presented graphically to provide a comparison of the water rates in the Delaware Valley region and illustrate the change in water rates over time. The authors intend the reports and data to be used by water providers; federal, state, and local water agencies; and the public.



Related Resources

- » Water Rates in Delaware and Surrounding States, Draft Report 2017
- » Water Rates in Delaware and Surrounding States (2015)
- » Water Rates in Delaware and Surrounding States, Draft (2014)
- » Water Rates in Delaware and Surrounding States, Draft (2013)
- » Water Rates in Delaware and Surrounding States, Final Draft (2012)
- » Water Rates in Delaware and Surrounding States, Final Draft (2011)
- » Synthesis of Water Rates in Delaware and Contiguous States (2008)
- » Newark Water Rates (2008)
- » Synthesis of Water Rates in Delaware and Contiguous States (2004)
- » Economic Synthesis of Water Rates in Delaware and Surrounding River Basins (2000)

Water Rates in Delaware and Surrounding States, Draft Report 2017

Additional Data Sources



United States™
Census
Bureau

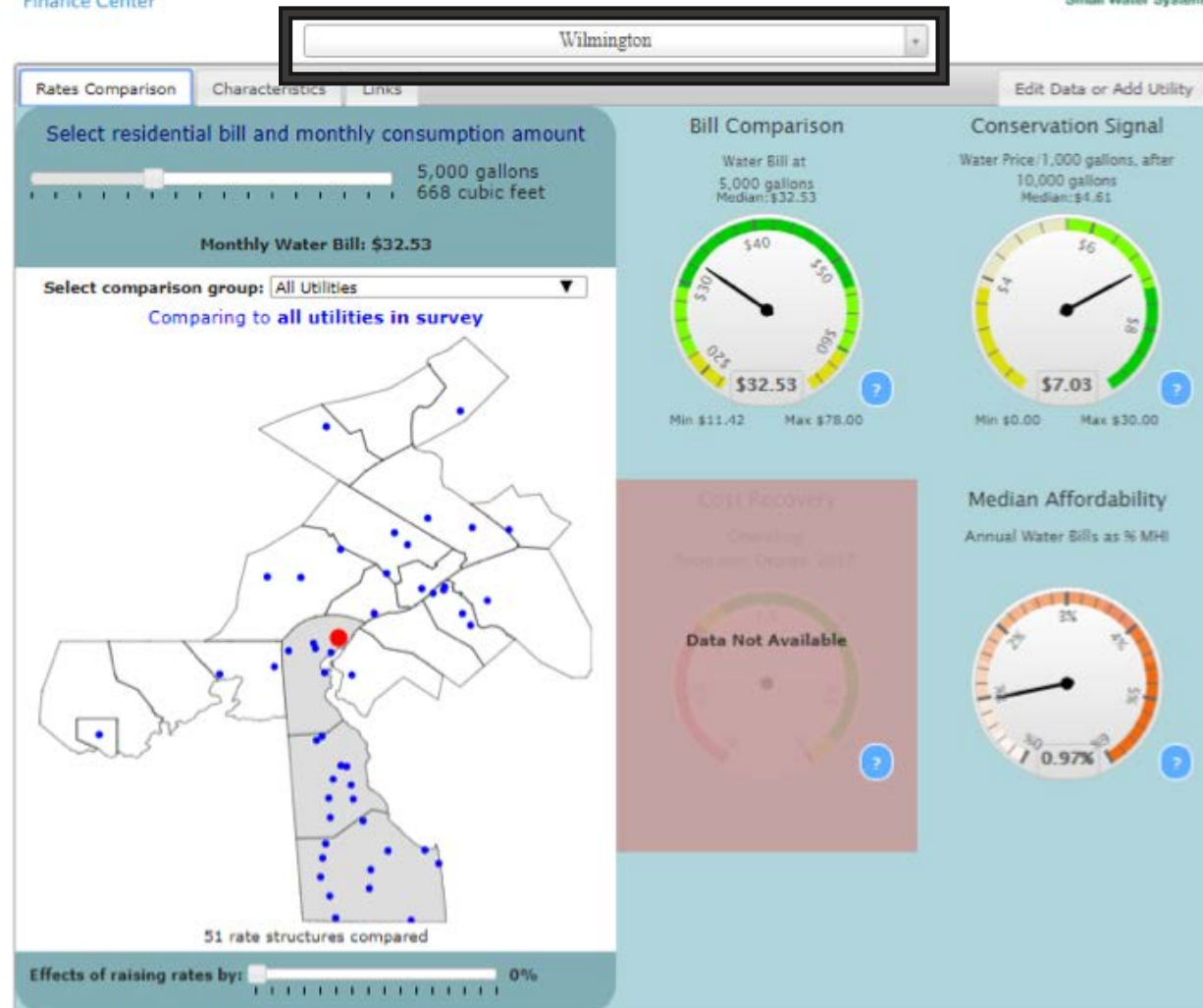




Who is in the Survey Group?

- 50 utilities across Delaware, Maryland, Pennsylvania, New Jersey serving ~4.5 million people
 - 35 Municipalities
 - 3 Counties or Districts
 - 6 Authorities
 - 6 For-profit
- 51 total rate structures represented:
 - Delaware: 27
 - Maryland: 3
 - New Jersey: 9
 - Pennsylvania: 12

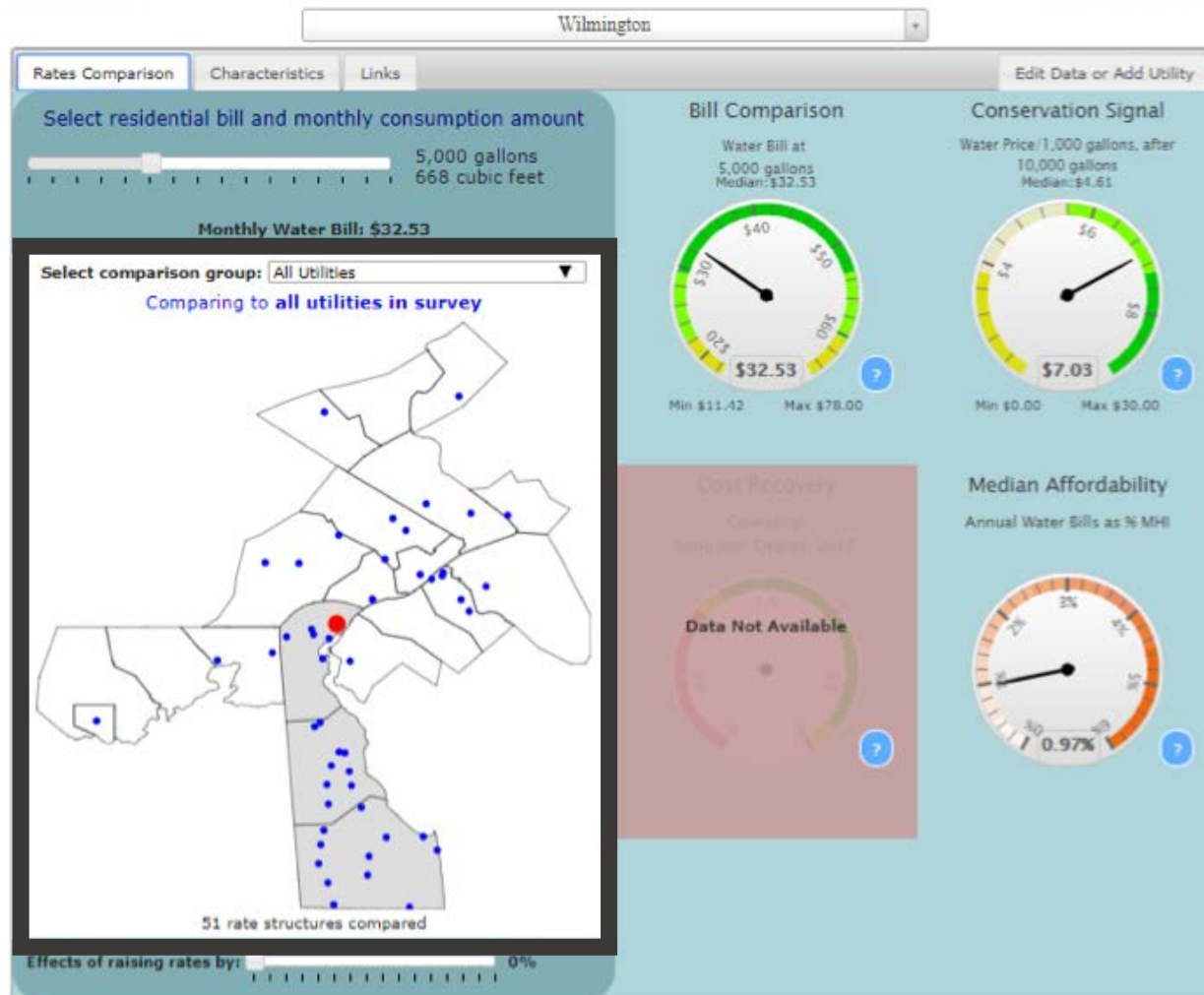
Anatomy of the Dashboard



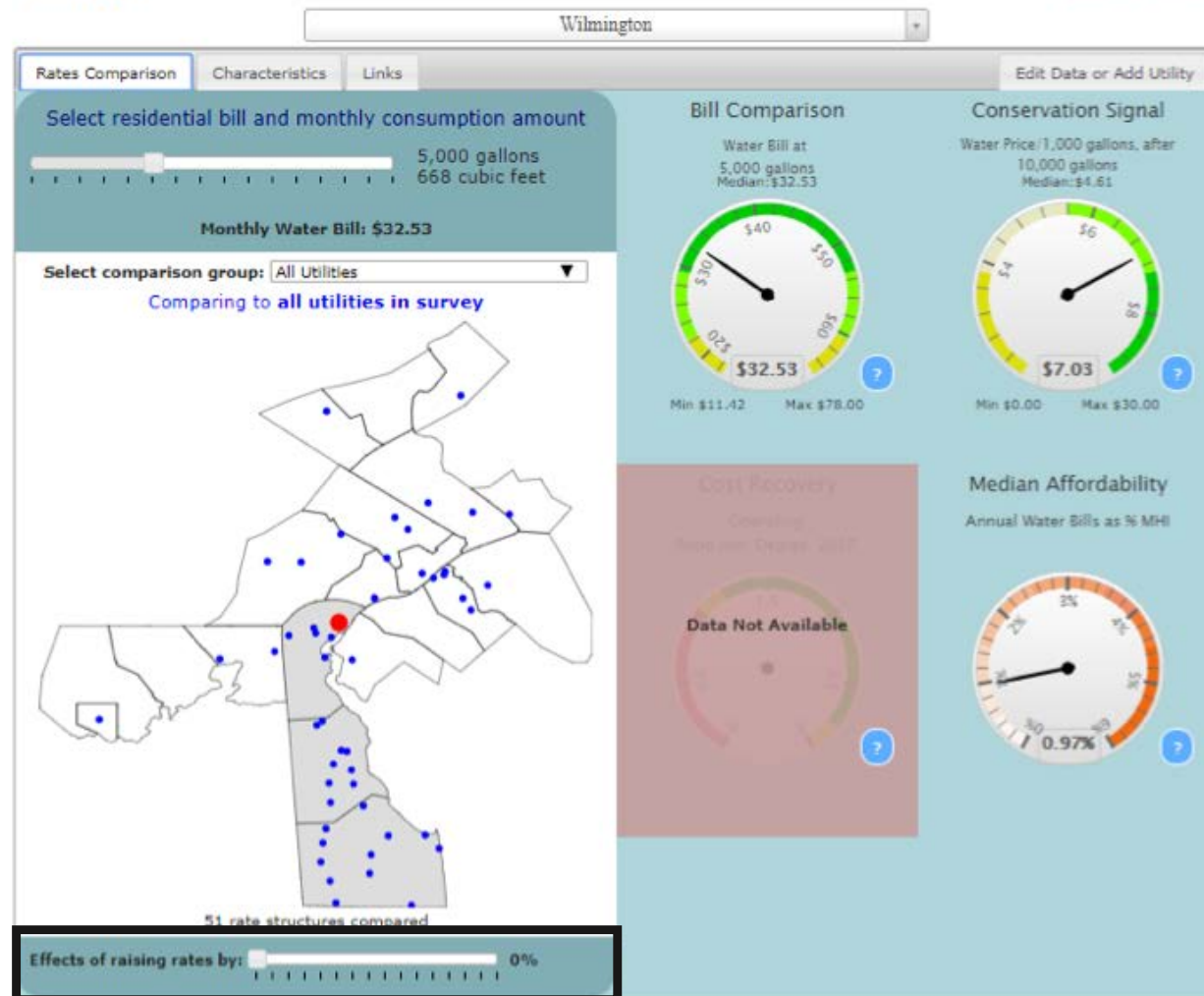
Anatomy of the Dashboard



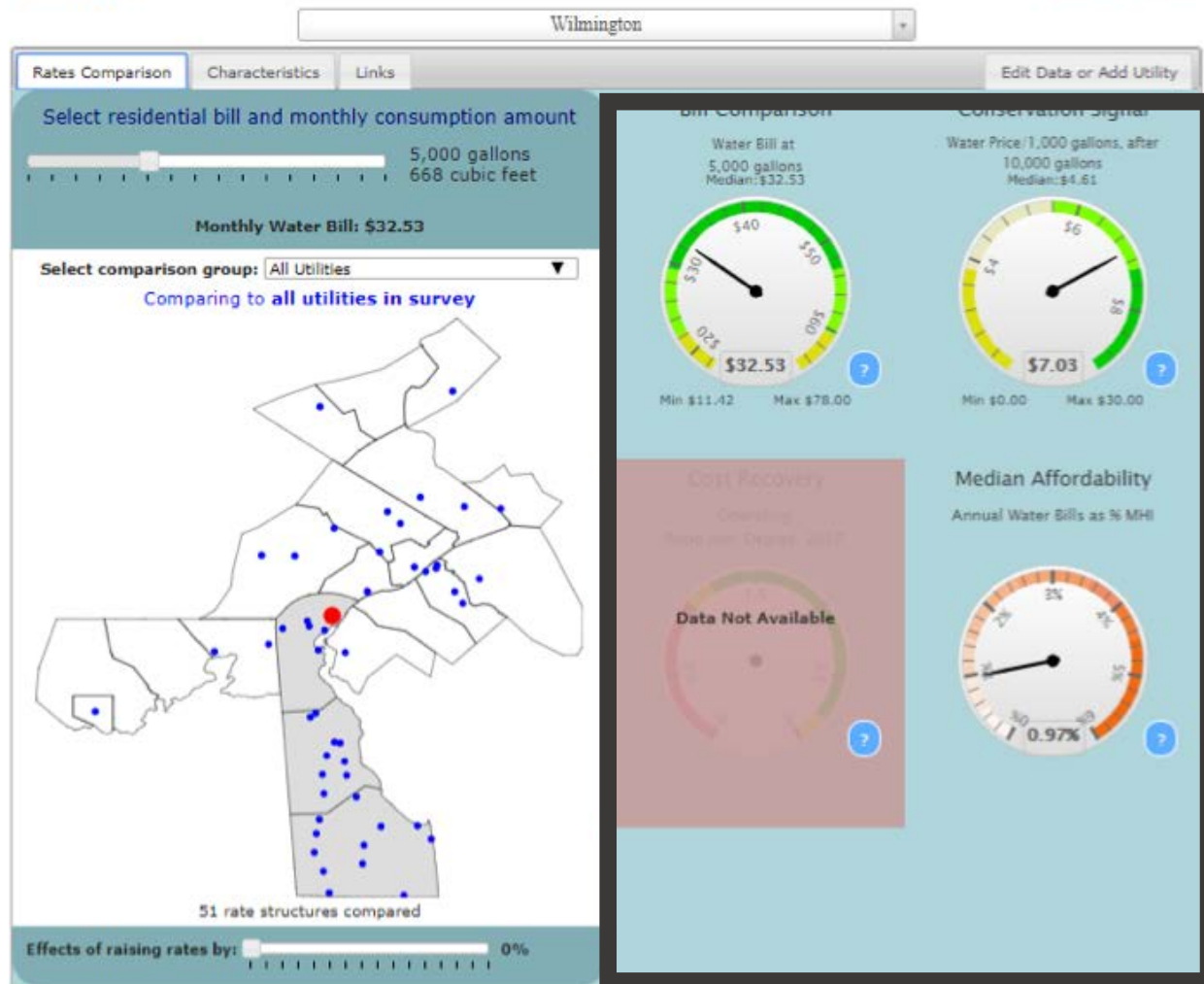
Anatomy of the Dashboard



Anatomy of the Dashboard



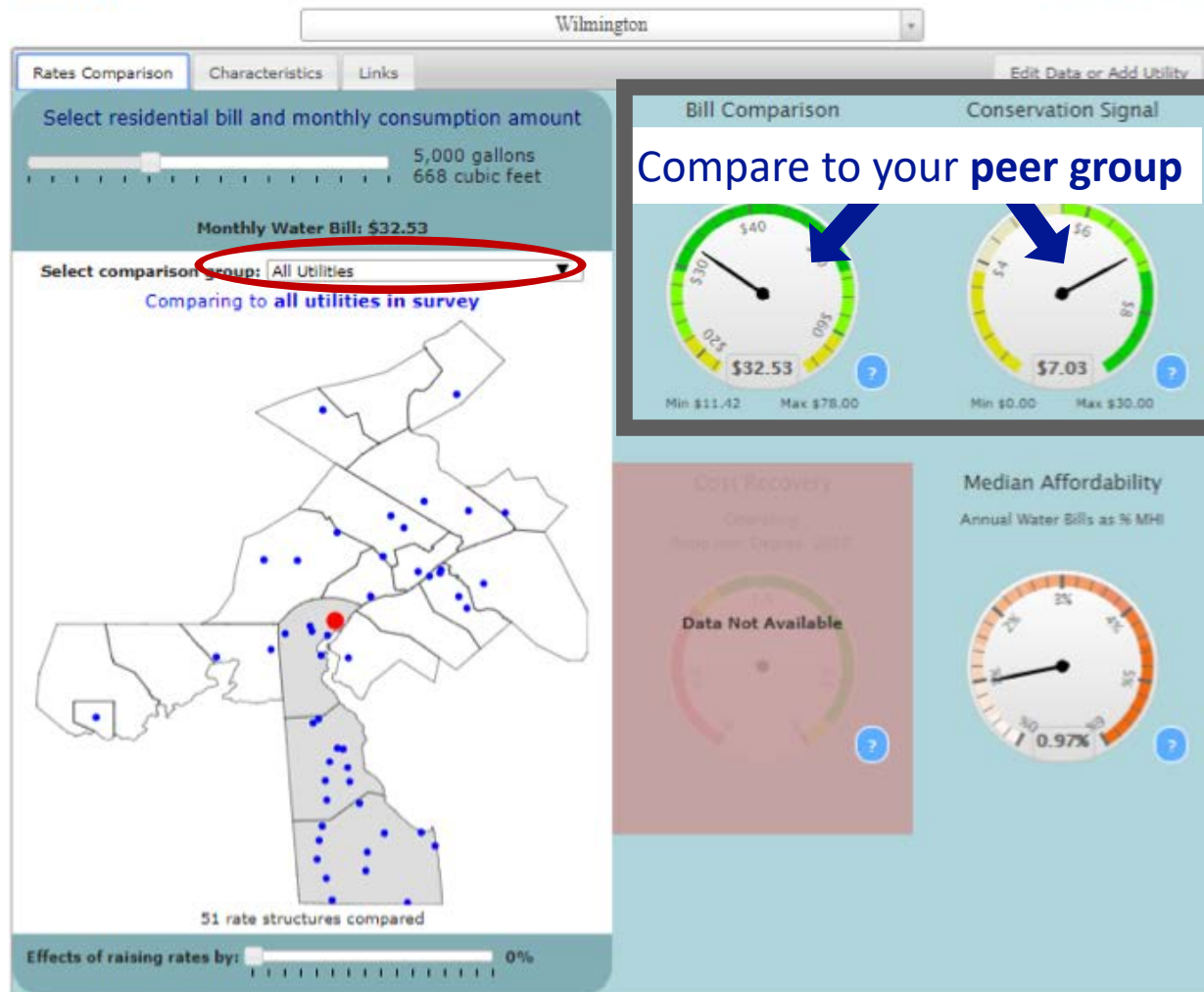
Anatomy of the Dashboard



Anatomy of the Dashboard

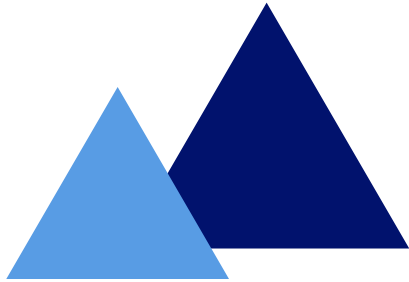


Delaware and Surrounding States Water Rates Dashboard
Rates as of April 2017
Last updated: October 15, 2018

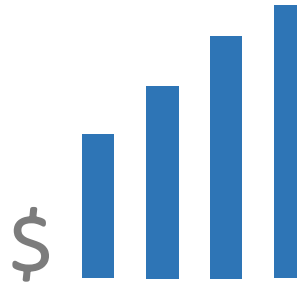




Compare Your Rates to Rates of Systems that have Similar ...



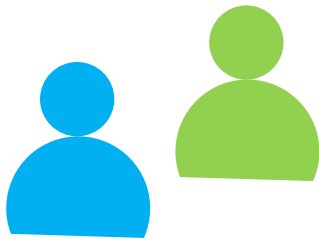
Size



Rate Structure



Location



Demographics



Type



Financials

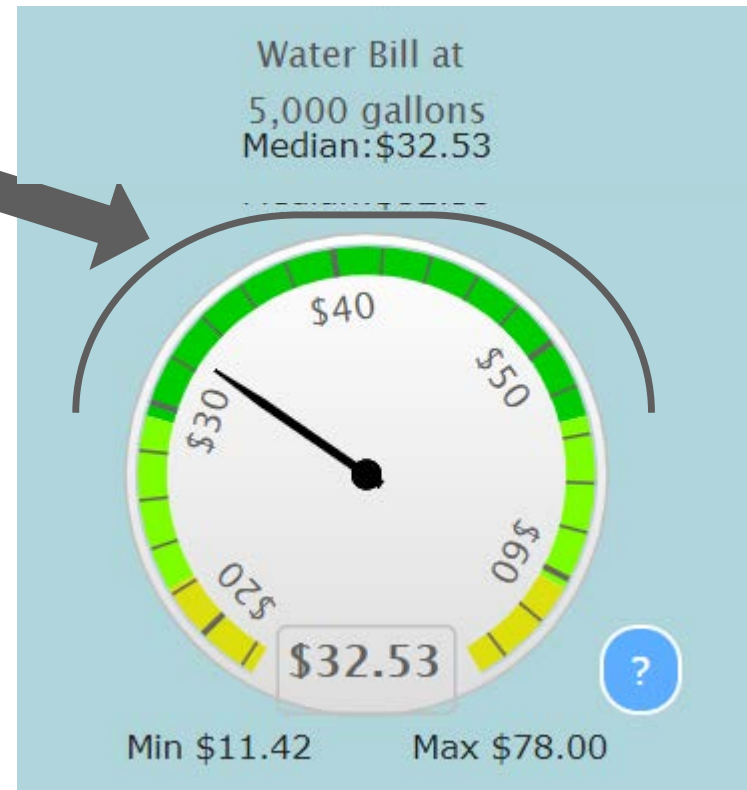
Anatomy of the Dashboard



Dial: Bill Comparison

Darkest green band = middle 50% of utilities

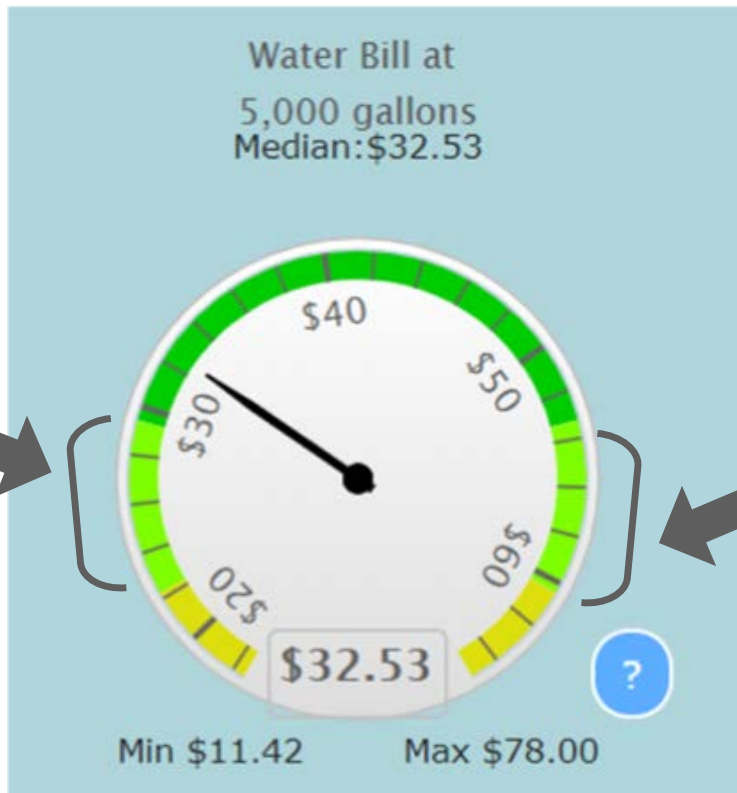
Half of all utilities
in your peer group have
bills that fall within this
range



Dial: Bill Comparison

Light green bands = the 15% below and above the middle 50%

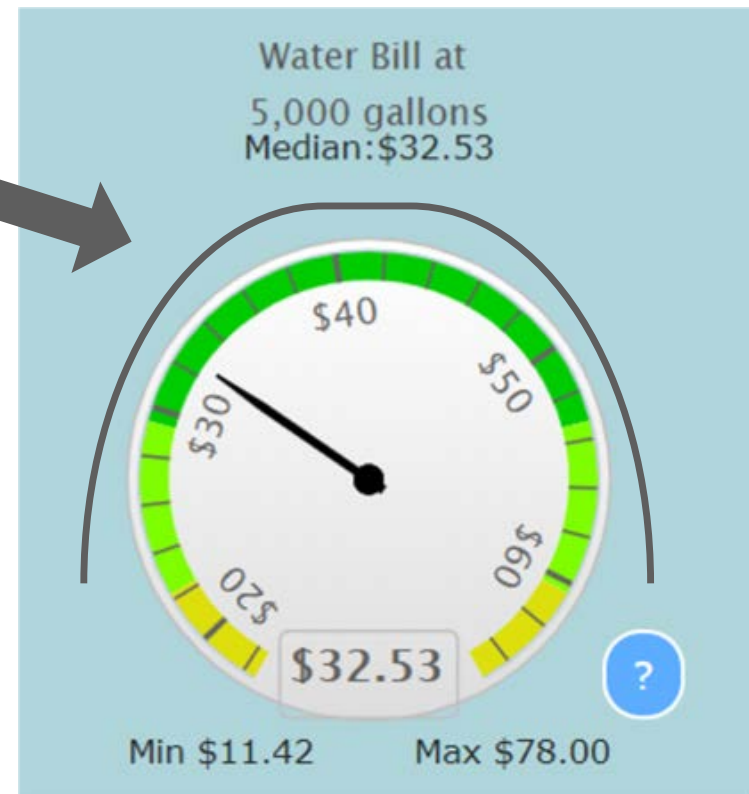
15% of utilities
in your peer group have
bills **lower** than the
middle 50%,
15% have bills **higher**
than the middle 50%



Dial: Bill Comparison

Both greens combined = 80% of utilities

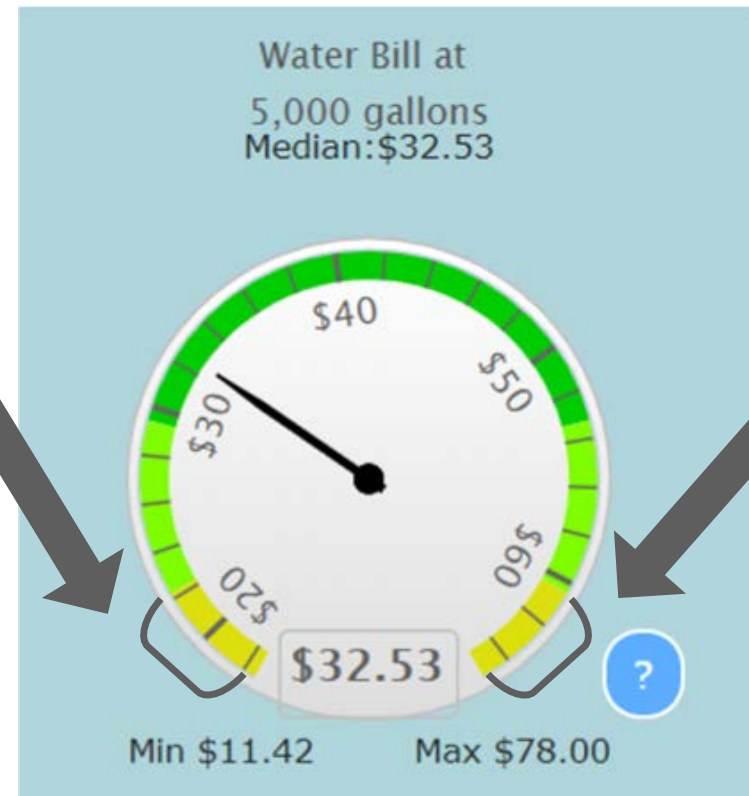
The majority of all utilities in your peer group have bills that fall within the range of the green bands



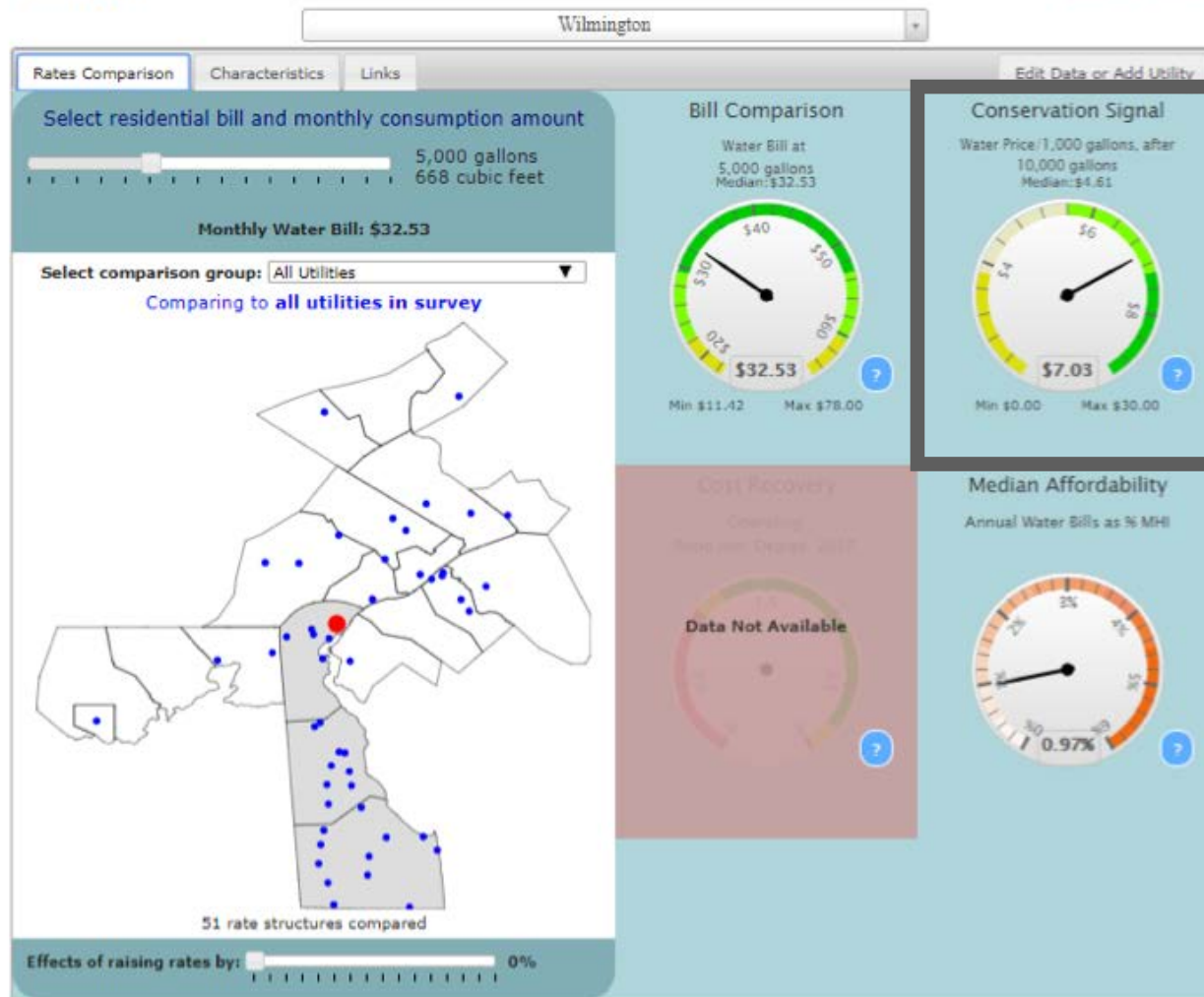
Dial: Bill Comparison

Yellow = the lowest and highest 10% of utilities

10% of utilities
in your peer group have
bills **lower** than 90% of
other utilities,
10% have bills **higher**
than 90% of utilities



Anatomy of the Dashboard



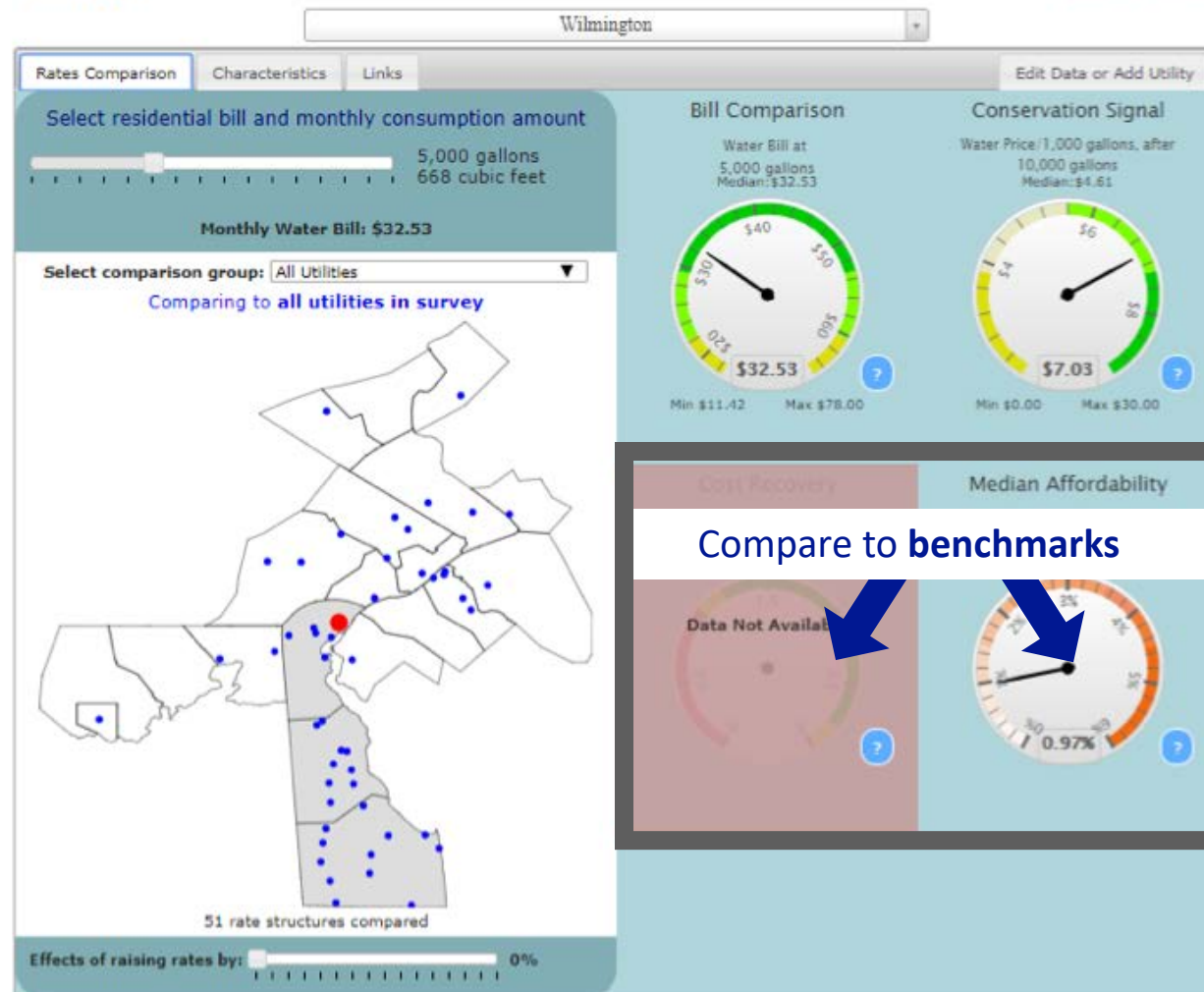
Dial: Conservation Signal

Colored bands = quartiles

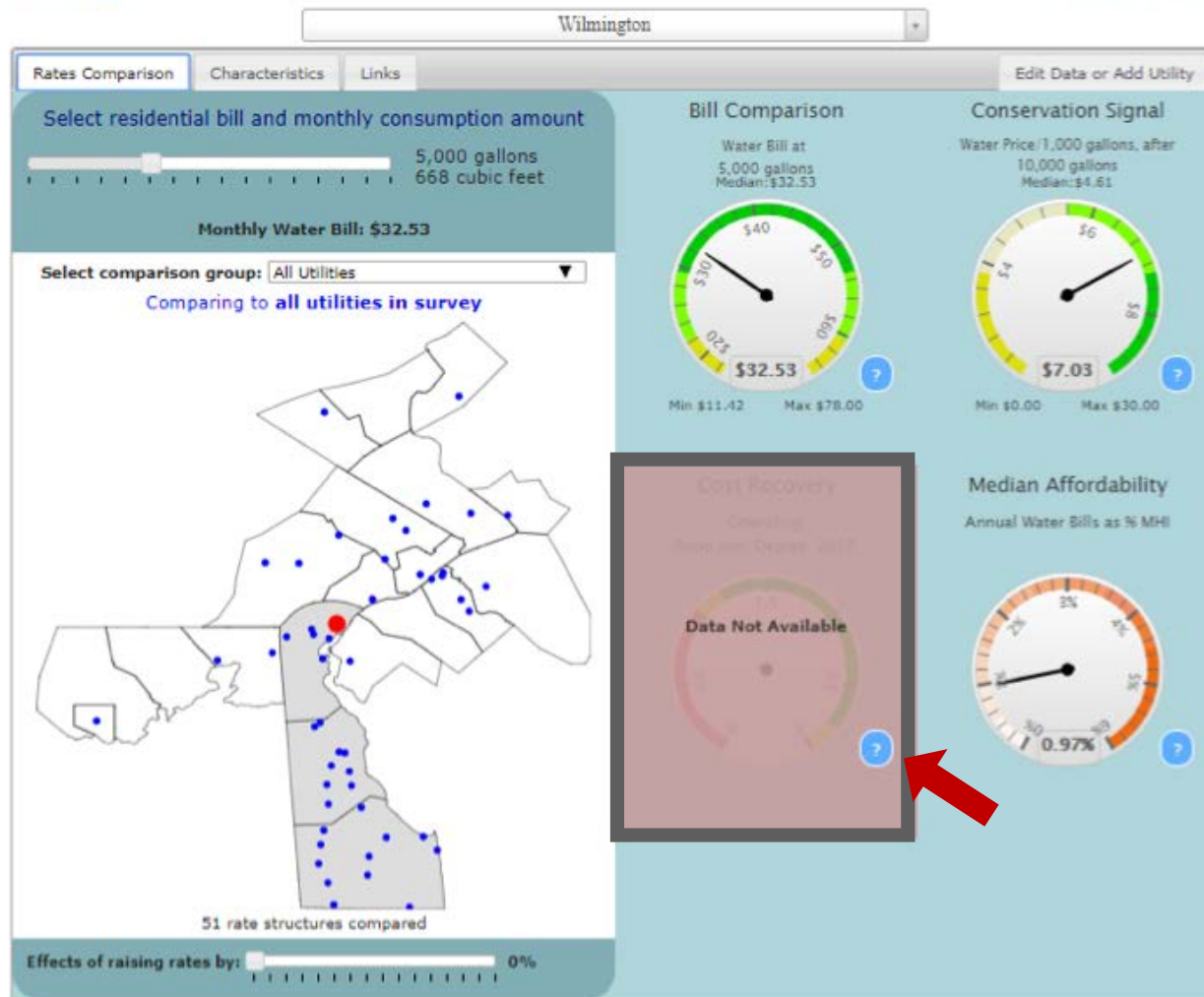
In this example, the marginal price of 1,000 gallons is in the 75th percentile among its peer group, promoting a moderately strong conservation signal



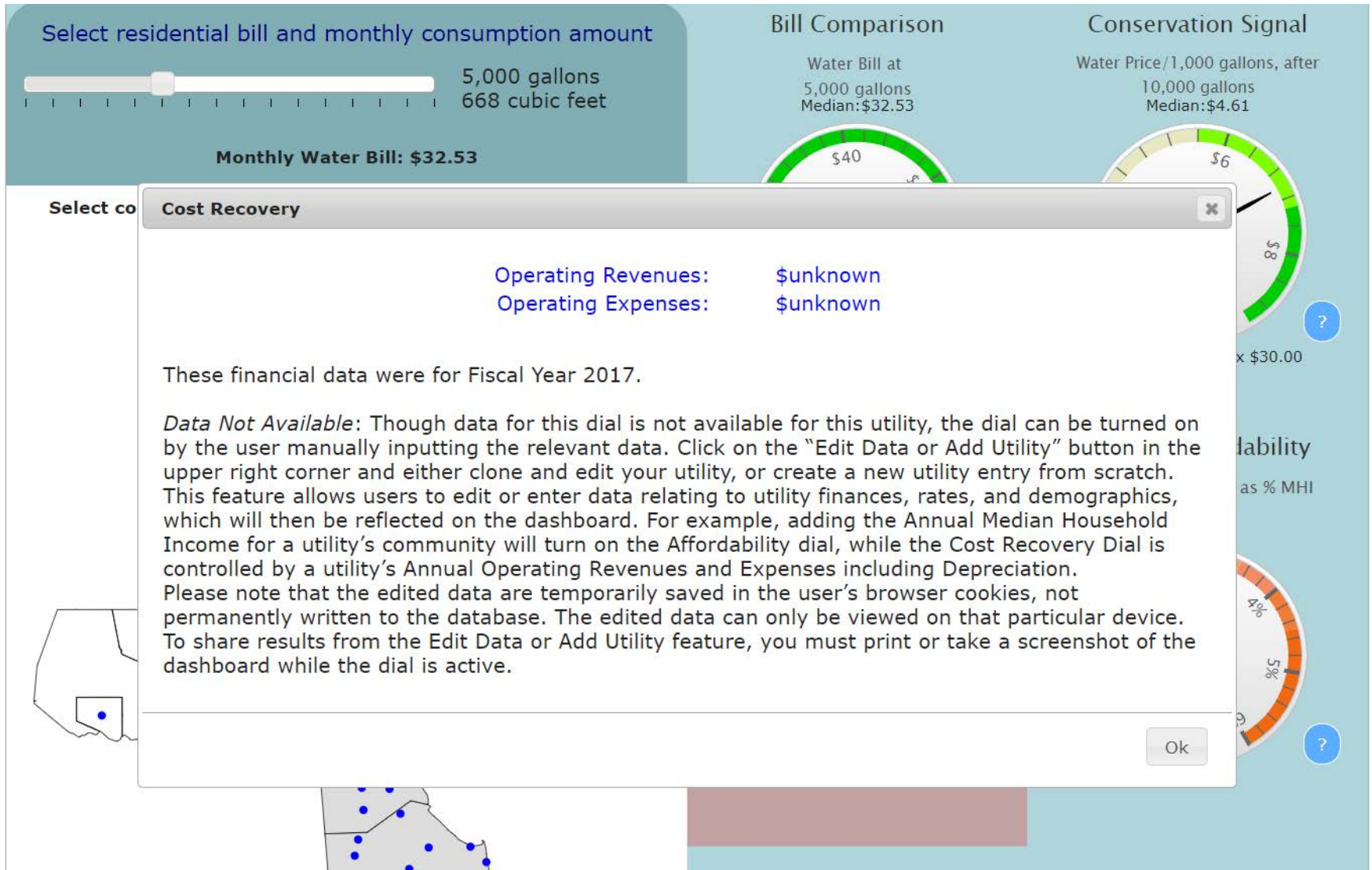
Anatomy of the Dashboard



Anatomy of the Dashboard



Anatomy of the Dashboard



Dial: Cost Recovery

Red = costs exceed revenues; a concern for financial sustainability

Operating revenues
Operating expenses
(including depreciation)



Dial: Cost Recovery

Yellow = revenues are sufficient to cover costs, but could be problematic in long-term

Operating revenues
Operating expenses
(including depreciation)



Dial: Cost Recovery

Green = revenues are likely enough to pay for day to day costs as well as long-term goals

Operating revenues
Operating expenses
(including depreciation)



Dial: Cost Recovery

Yellow = revenues may be “too” good

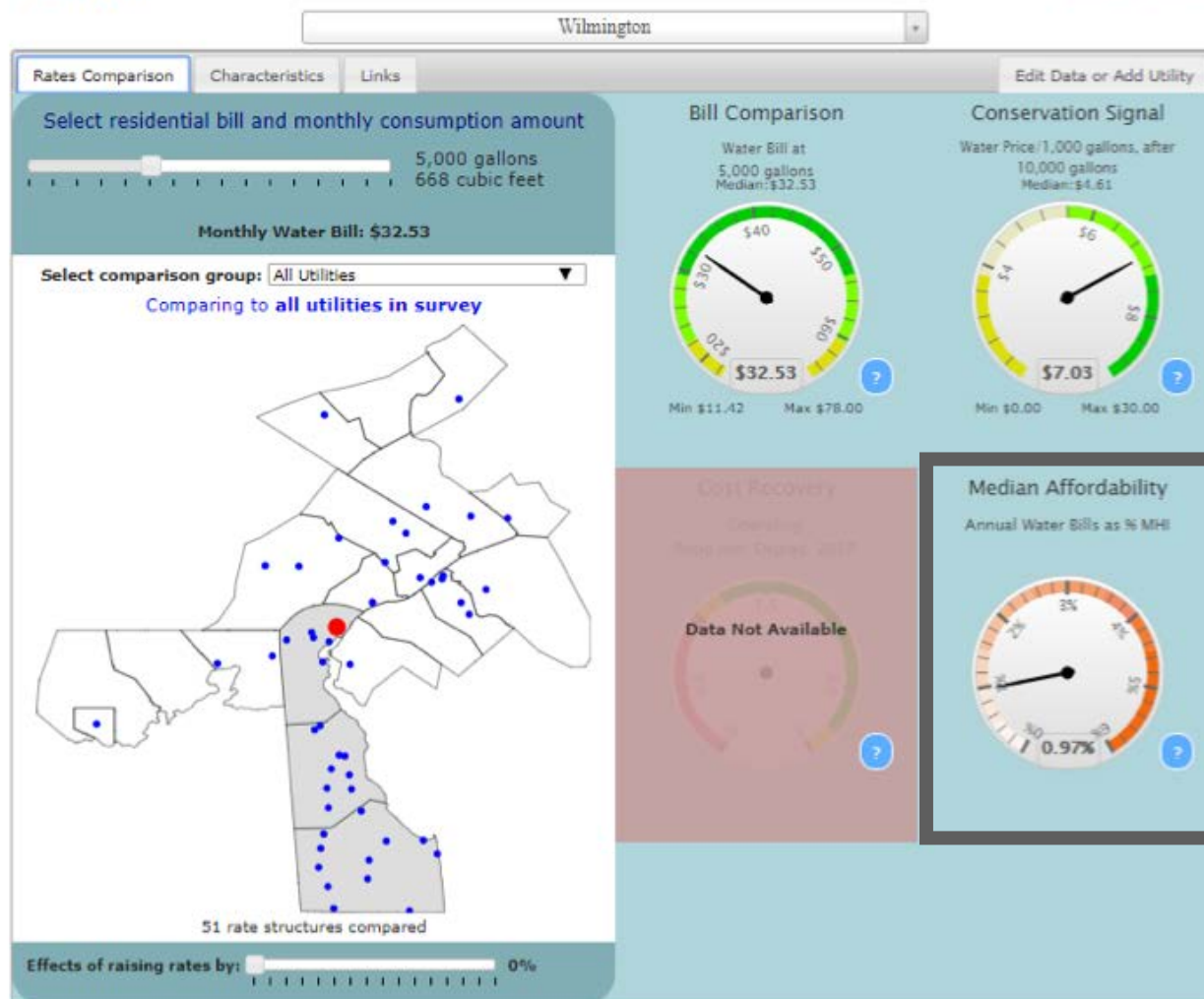
Operating revenues
Operating expenses
(including depreciation)





Delaware and Surrounding States Water Rates Dashboard

Rates as of April 2017
Last updated: October 15, 2018

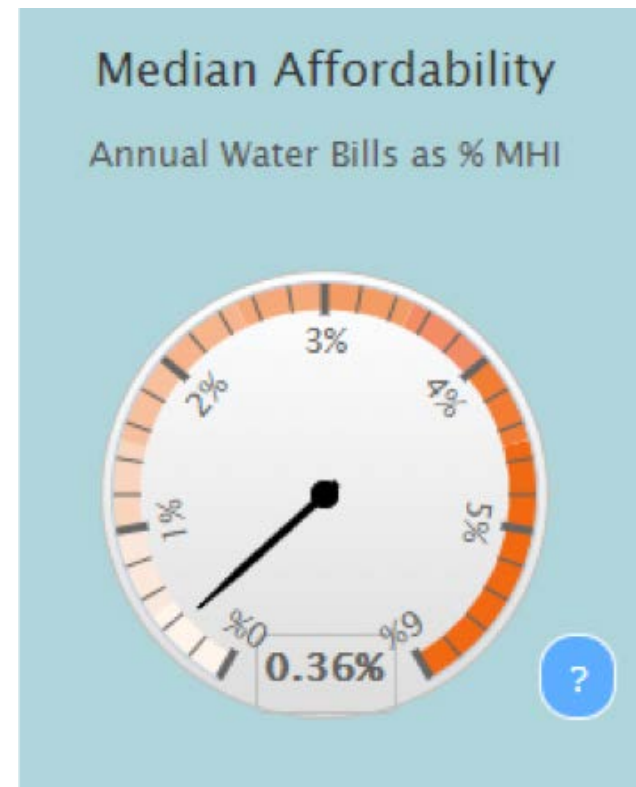




Dial: Median Affordability

Darker shades of orange indicate a higher percentage of MHI spent annually on bills

The percentage of median household income (MHI) spent annually on water and wastewater bills





Select residential bill and monthly consumption amount

Bill Comparison

Conservation Signal

5,000 gallons

Water Bill at
5,000 gallons

Water Price/1,000 gallons, after
10,000 gallons

Affordability

$$\text{Affordability} = \frac{\text{Annual Bill (Monthly Bill times 12 Months Per Year)}}{\text{Annual Median Household Income}}$$

This dial shows what a household making the median level of income in Wilmington city would spend annually, as a percent of their income, on Water using 5,000 gallons per month. Half of the households in the community would be spending a greater portion of their income for these bills.

Raw Data

Annual Bills \$390.36
Annual MHI \$40,065

The median affordability metric is often referred to as "percent Median Household Income (MHI)." It is only one of many metrics that can be used to assess affordability. There is no universally accepted definition of what "affordable rates" means and other factors such as poverty rate, income distribution, and fixed income will influence the affordability of rates in a community. The color spectrum reflects that this metric is on a continuum, without any single threshold that dictates what is affordable or unaffordable. The MHI data are derived from the U.S. Census Bureau's 5-year American Community Survey estimates for 2012 - 2016 MHI (in 2016 dollars).

For a more comprehensive look at affordability in your community using multiple metrics, use our

[Residential Rates Affordability Assessment Tool](#)

For more information about percent MHI, including considerations about its assumptions,

[read this blog post about Percent MHI Indicator](#)

Ok



x \$30.00

ability
as % MHI





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GOVERNMENT
Environmental
Finance Center

Delaware and Surrounding States Water Rates Dashboard

Rates as of April 2017

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Smart Management for
Small Water Systems



Wilmington

Rates Comparison

Characteristics

Links

Edit Data or Add Utility

Utility Owner

Ownership type	Municipality
Primary County	New Castle County
Primary service area	Wilmington city
Date Rates Effective	unknown

Select comparison group: All Utilities ▼

	Wilmington city	Median for all utilities in survey	Statewide Stats
Number of Systems	1	51	51
Est. Number of Connections	39,000	3,787	
Est. Service Population	107,976	9,900	
Average Household Size	2.42	2.57	2.61
Median Household Income	\$40,065	\$54,218	\$61,017
Poverty Rate	26.08%	12.19%	12.04%

Delaware and Surrounding States Water Rates Dashboard

Rates as of April 2017

Last updated: October 15, 2018



Wilmington

Rates Comparison

Characteristics

Links

Edit Data or Add Utility

This Rates Dashboard is designed to assist utility managers, finance directors, Board members, local officials, reporters, and customers to compare their utility's residential water rates against multiple factors, including system characteristics, customer base demographics, and geography. Users can manually/temporarily input financial data using the Edit Data or Add Utility button to turn on the Cost Recovery dial (on the user's local machine only – this is cookie based).

The Delaware and Surrounding States Water Rates Dashboard was constructed as part of Smart Management for Small Water Systems, a nationwide project of the Environmental Finance Center Network (EFCN) that provides a variety of free resources to systems serving 10,000 people or fewer. Survey data were collected by the University of Delaware's Water Resources Center. The Environmental Finance Center at the University of North Carolina at Chapel Hill created the Dashboard with funding provided by a cooperative agreement with the US EPA. Additional free resources for water and wastewater utilities are provided below.

Resources for Delaware

Delaware Water Resources Center

Direct Assistance for Small Systems

Drinking Water State Revolving Fund

DE League of Local Governments

DE Division of Water

Email Feedback or Comments

Additional Tools and Resources

Water & Wastewater Rates Analysis Model

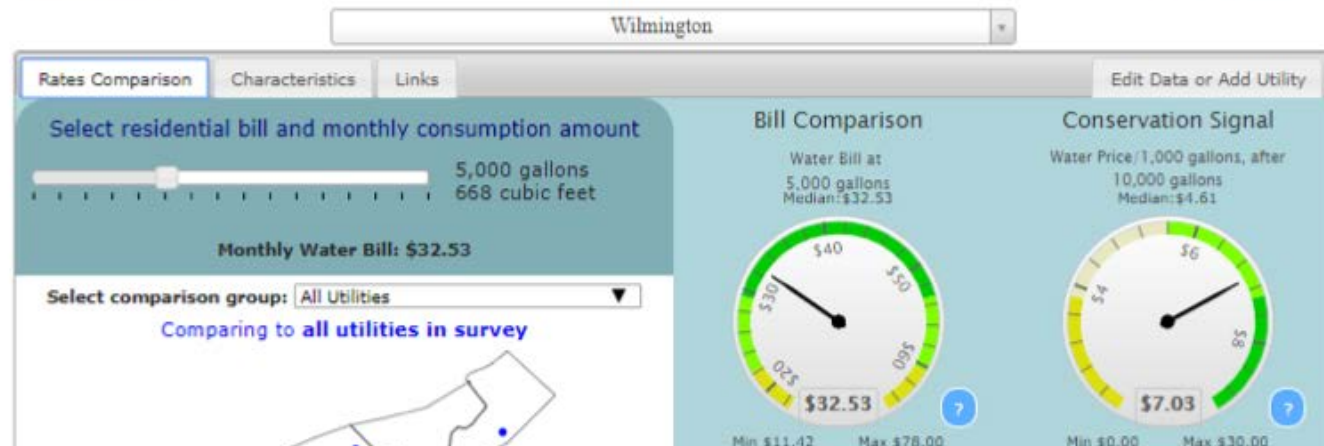
Financial Health Checkup for Water Utilities

Plan to Pay: Fund Your Capital Improvement Plan

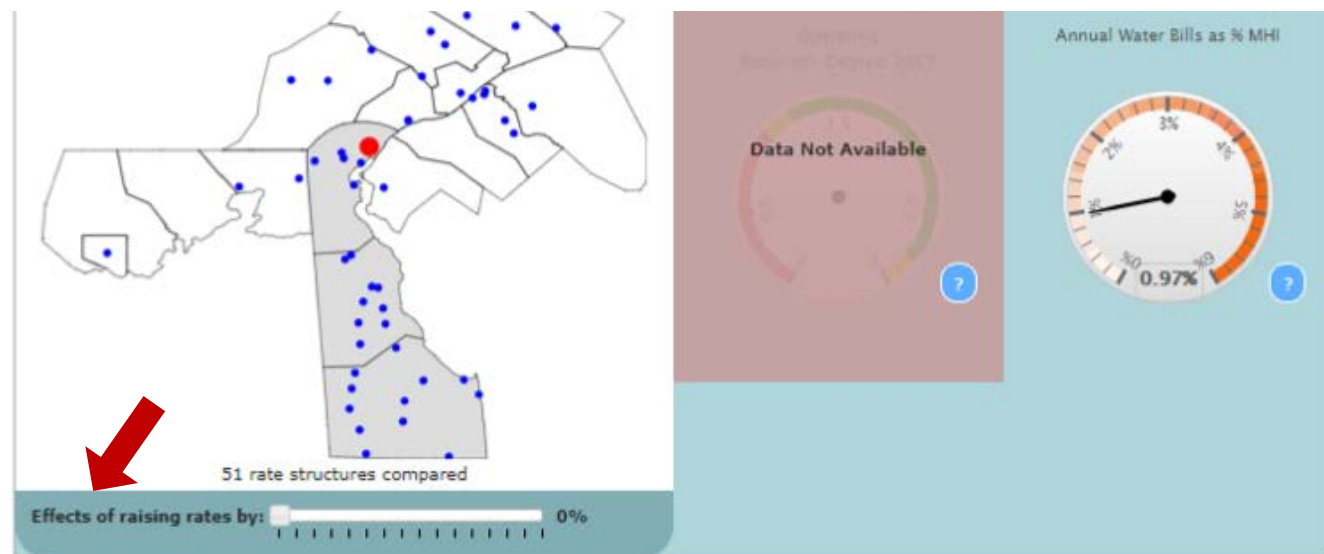
Residential Rates Affordability Assessment

EPA Water Finance Clearinghouse

Environmental Finance Blog



Let's take a live look at additional features...





When To Use This Tool

- As part of your annual rate review
- When presenting to boards or other decision makers on the need to change rates
- When explaining rates to customers
- For private systems, as part of your PUC rate case

Questions? Feedback?

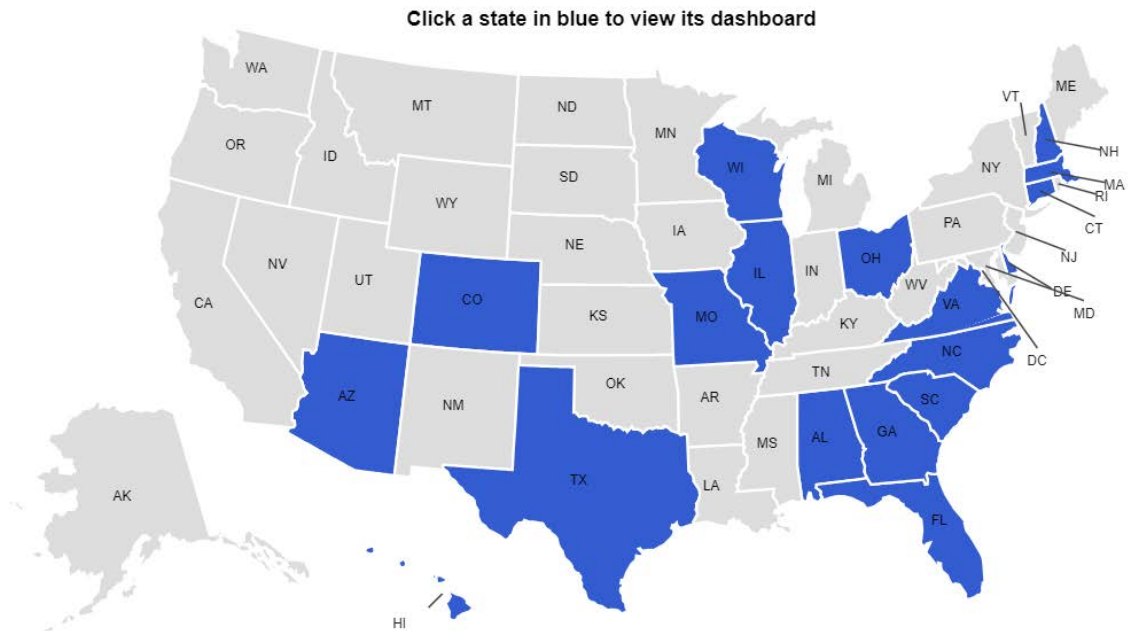


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All Dashboard States