



Survey and Dashboard of New Hampshire Water and Wastewater Rates

November 13, 2018

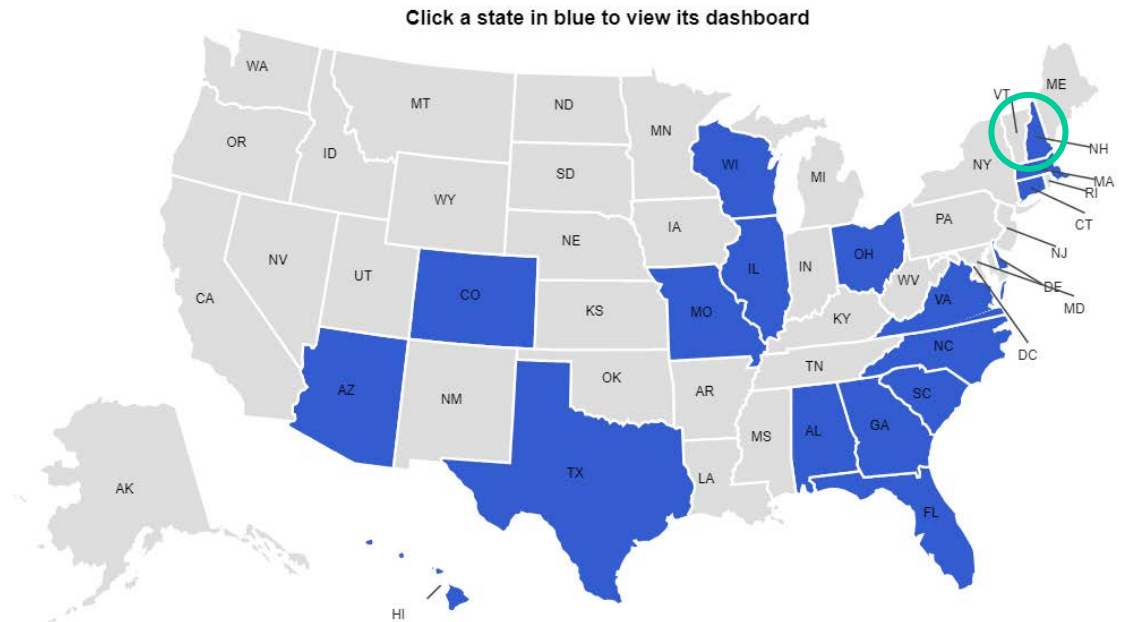
www.efcnetwork.org

Presenter



Annalee Harkins

Data Specialist and Project Manager
EFC at UNC Chapel Hill





Webinar Objectives

- Learn about the Water and Wastewater Survey
- Become familiar with the features and benefits of the New Hampshire Water and Wastewater Rates Dashboard
- Learn how to compare one system's rates with others

Survey Partners: NH DES and Tighe & Bond



STATE WATER AND SEWER RATE SURVEYS 1997-2017 | Massachusetts & Connecticut

2015 Water Rate Survey



New Hampshire

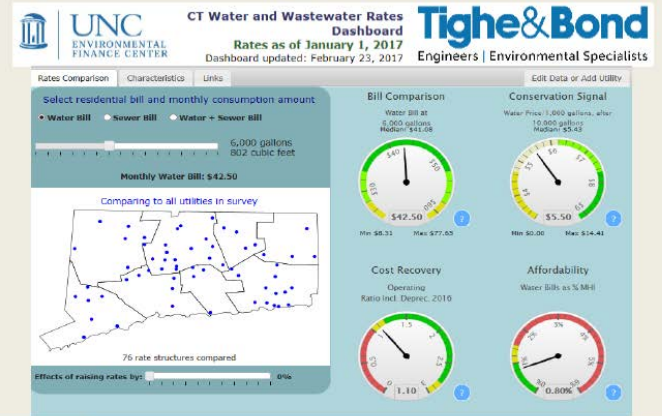
Issue 8/15/2015

NH Average Annual Water Rate



INTRODUCTION: The Drinking Water and Groundwater Bureau of NHDDES has provided key information about water rates and fees for New Hampshire water systems for the past two decades. The information is very important to the industry and various stakeholders and is also used in the Drinking Water State Revolving Fund loan program for determining project ranking and subsidy levels for disadvantaged communities.

Prior to 2012, NHDDES utilized the design standard usage of 100,375 gal/yr during configuration of the state average. In 2012 New Hampshire began to use the volumetric figures that are prepared and published by the USGS along with the Census data of the state-wide average number of people per household to develop the consumption data used to calculate the state annual water average rate. Although the volumetric figures are more of an accurate representation, it causes more of a fluctuation on the graph above.



PROJECT HIGHLIGHTS

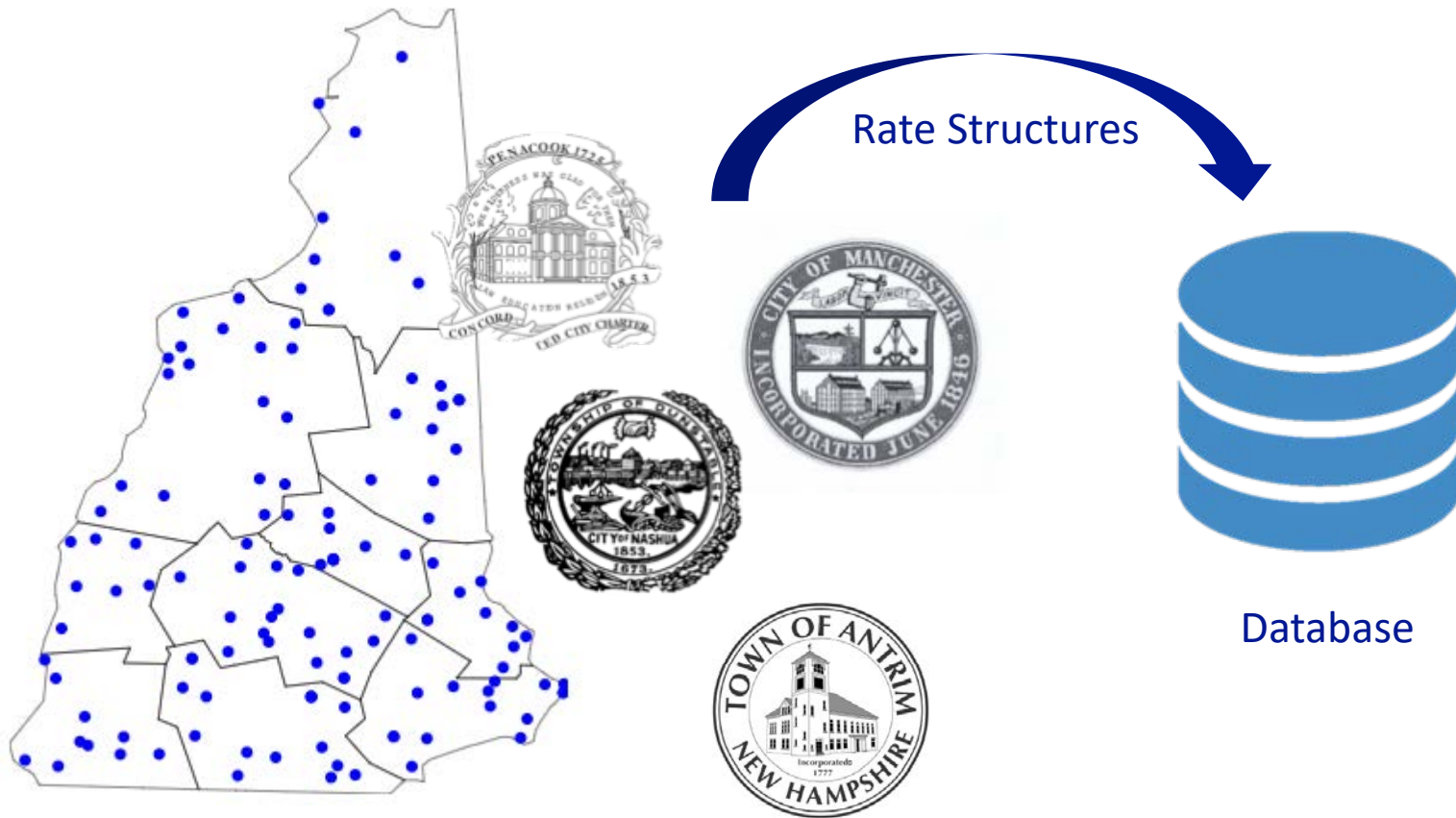
18 Water & Sewer Surveys Completed Over 20 Year Span

Most Recent Surveys Include Customized Rates Dashboards

Description

Since 1997 Tighe & Bond has completed 18 state-wide water and sewer rate surveys of public and private utilities in Massachusetts and Connecticut. The surveys are regarded by many as the best source of water and sewer rate information available for MA and CT. Results are published for each survey containing information on rates, billing cycles, population served, date of last rate change, and more. Data obtained calculates a typical homeowner's costs, aiding in side by side community/system comparisons.

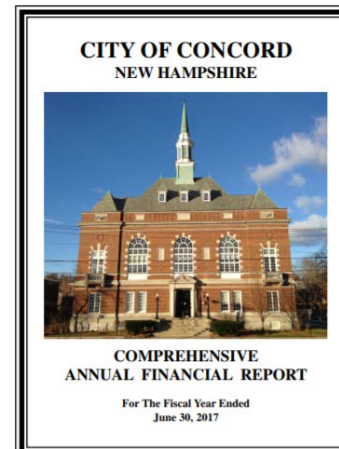
Rates Data Collection



Additional Data Sources



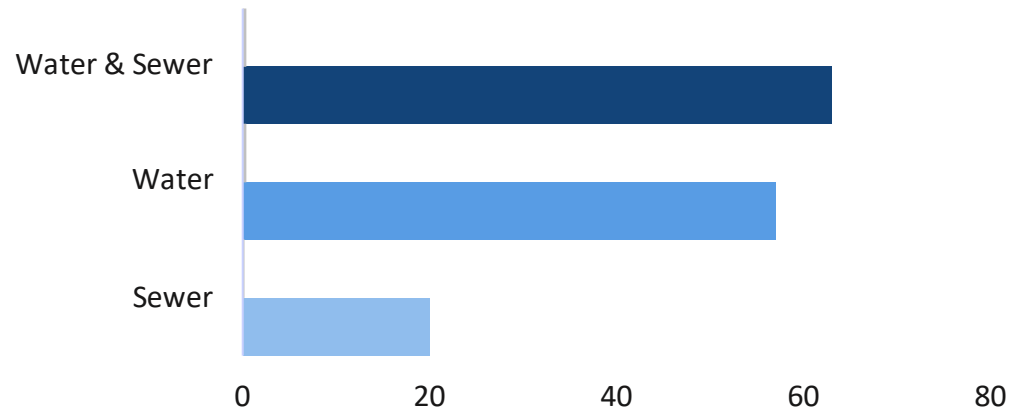
United States™
Census
Bureau



Local CAFRs

Who is in the Survey Group?

- 140 utilities serving ~760,000 water customers
 - 103 Municipalities
 - 19 Districts
 - 18 For-profit
- Majority providing both water and sewer services
- Serving 87% of people served by Community Water Systems in the State

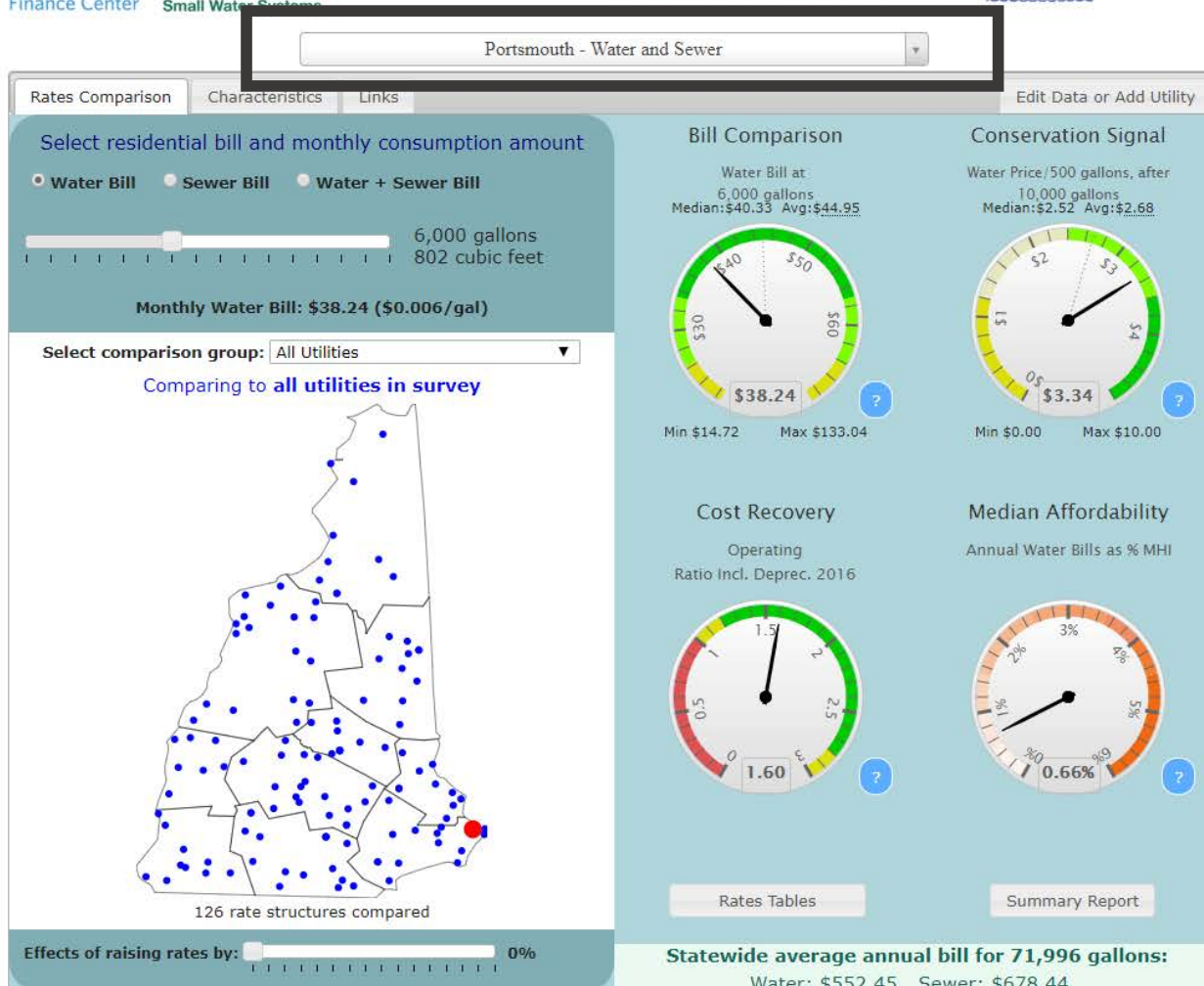


Anatomy of the Dashboard



NH Water and Wastewater Rates Dashboard

Rates as of January 1, 2018
Last updated: October 31, 2018

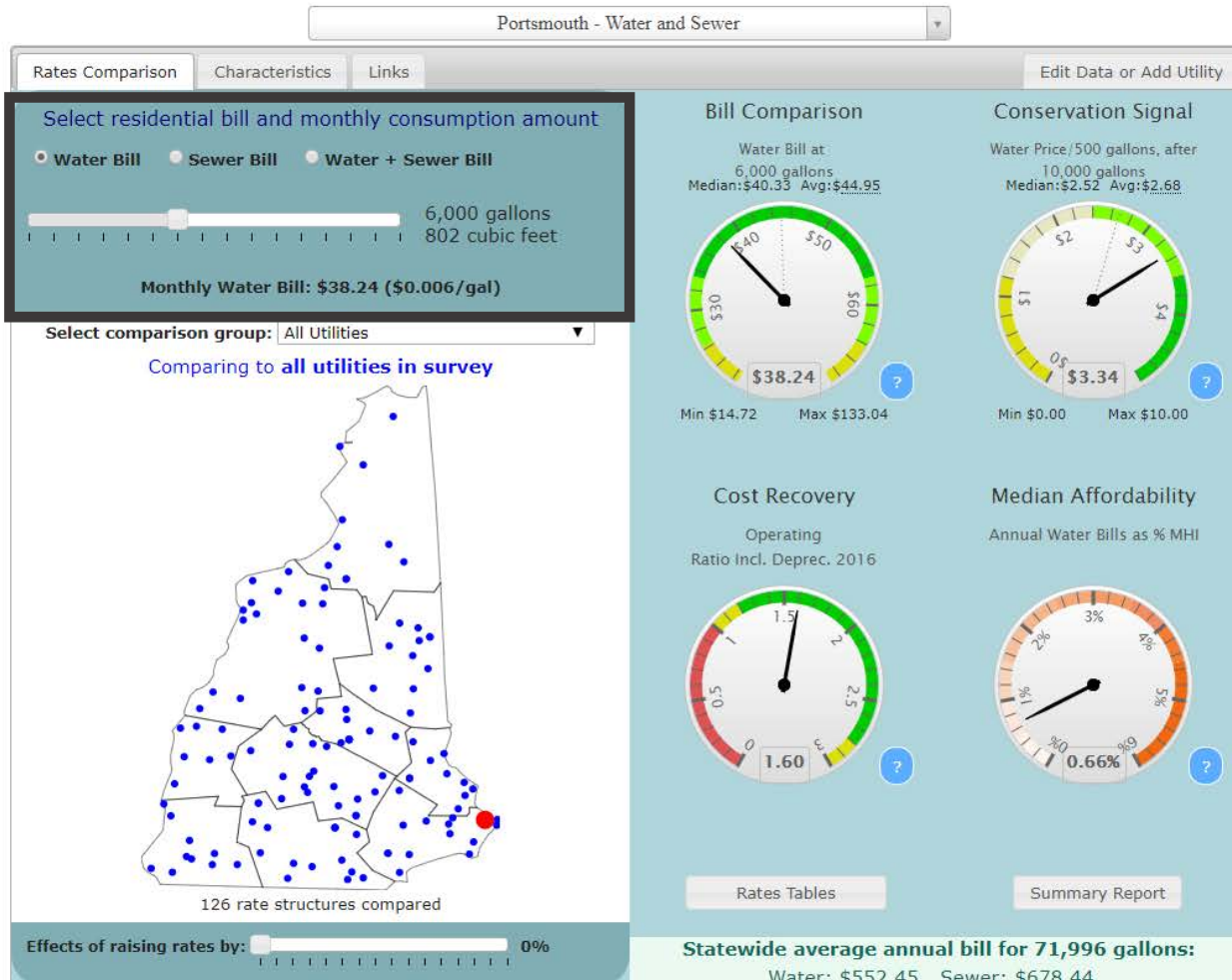


Anatomy of the Dashboard



NH Water and Wastewater Rates Dashboard

Rates as of January 1, 2018
Last updated: October 31, 2018

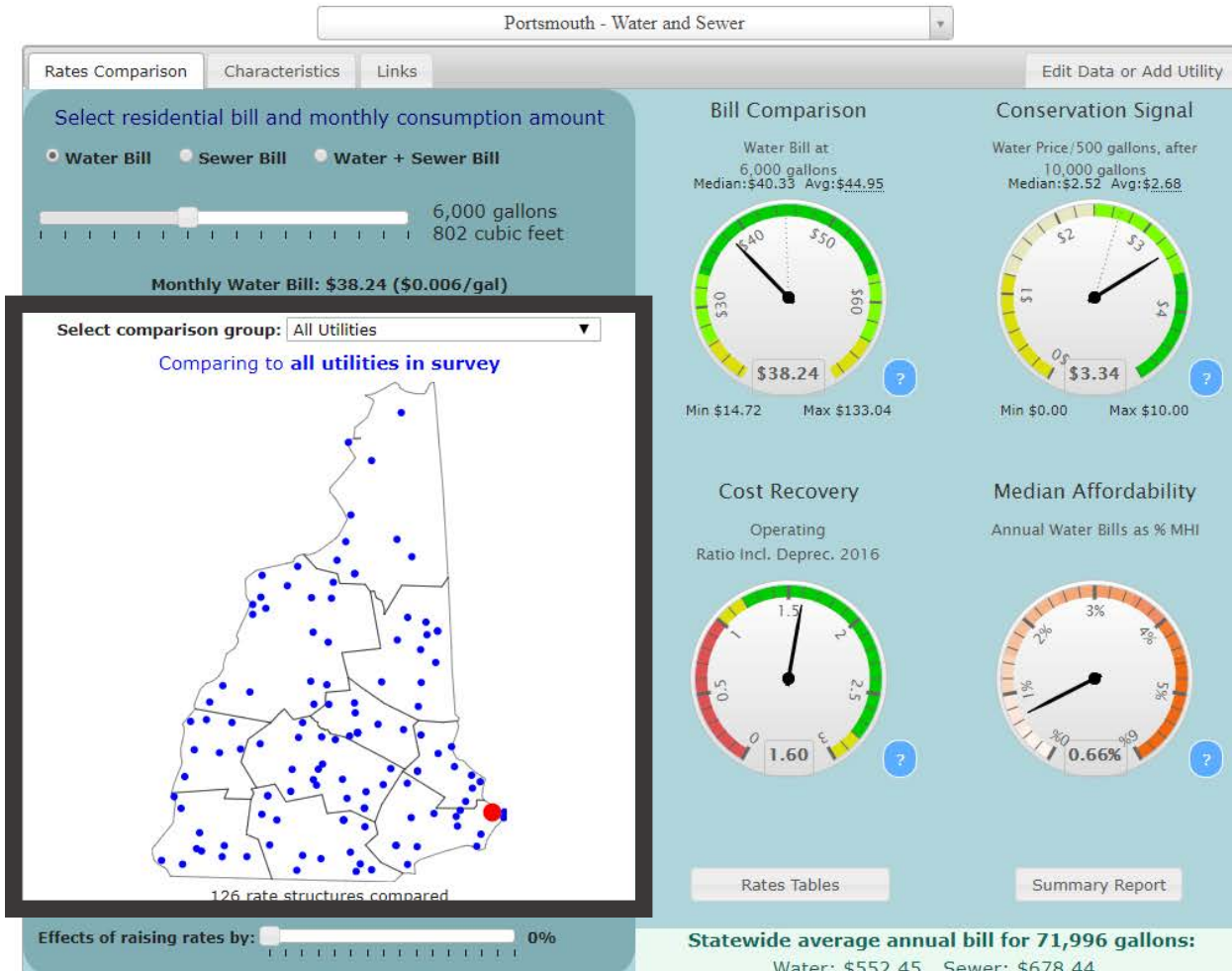


Anatomy of the Dashboard



NH Water and Wastewater Rates Dashboard

Rates as of January 1, 2018
Last updated: October 31, 2018

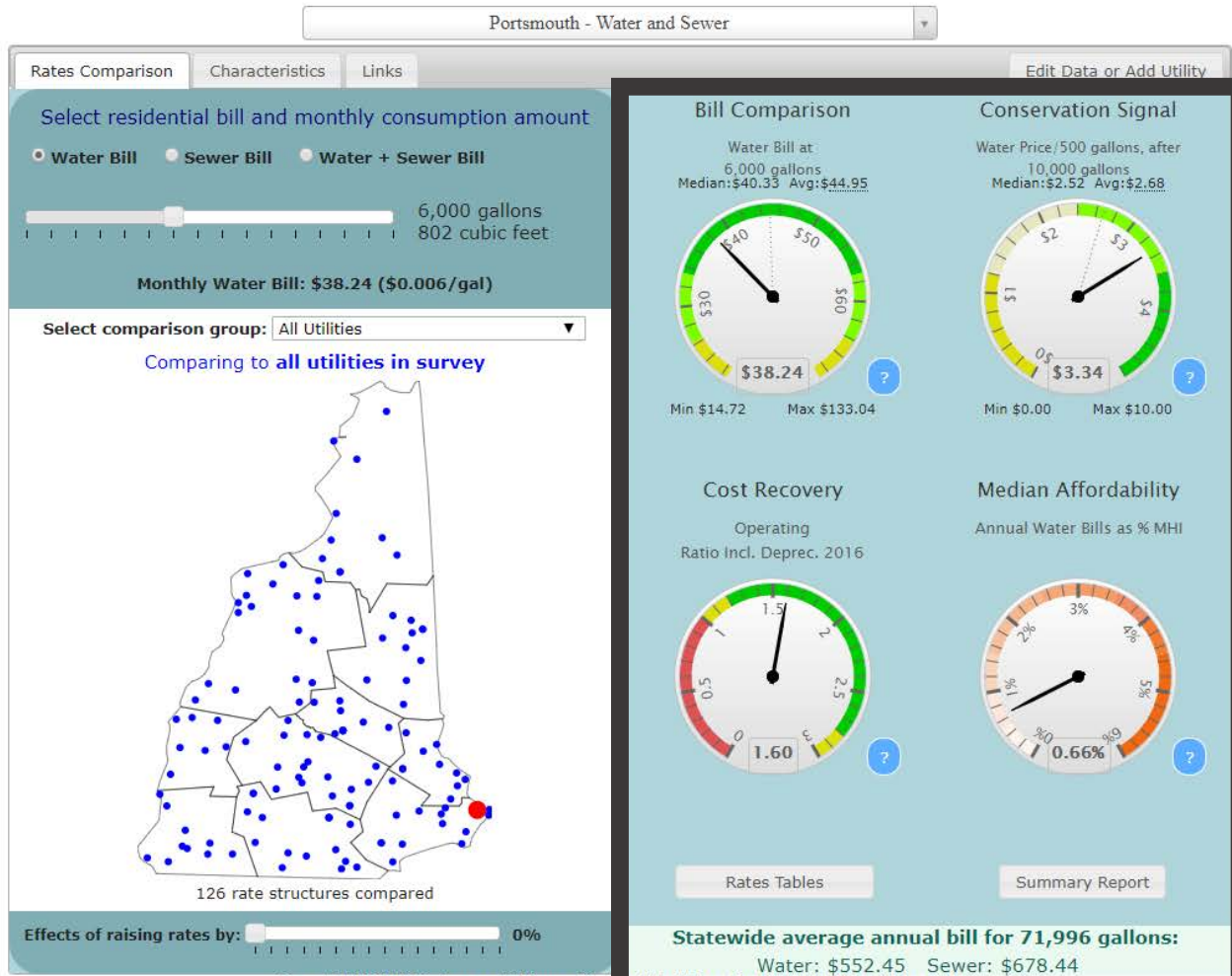


Anatomy of the Dashboard



NH Water and Wastewater Rates Dashboard

Rates as of January 1, 2018
Last updated: October 31, 2018

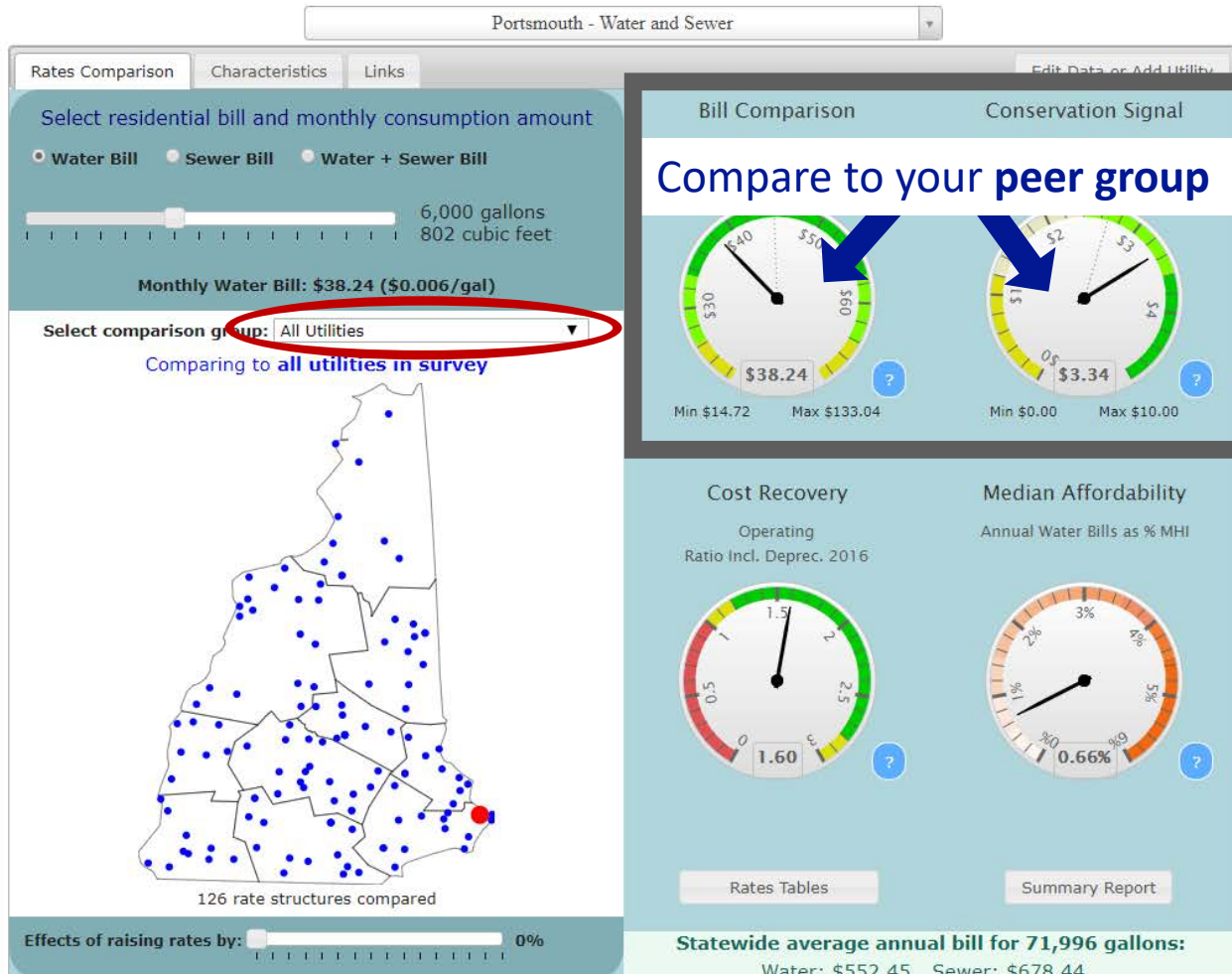


Anatomy of the Dashboard



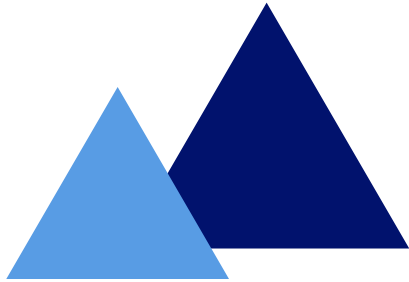
NH Water and Wastewater Rates Dashboard

Rates as of January 1, 2018
Last updated: October 31, 2018

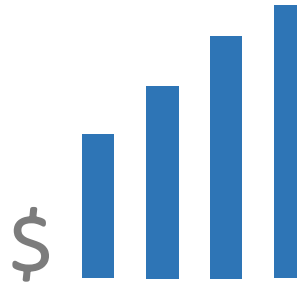




Compare Your Rates to Rates of Systems that have Similar ...



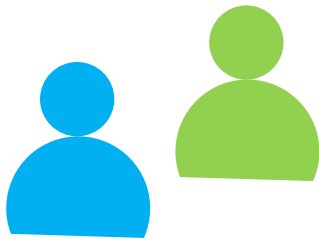
Size



Rate Structure



Location



Demographics



Type



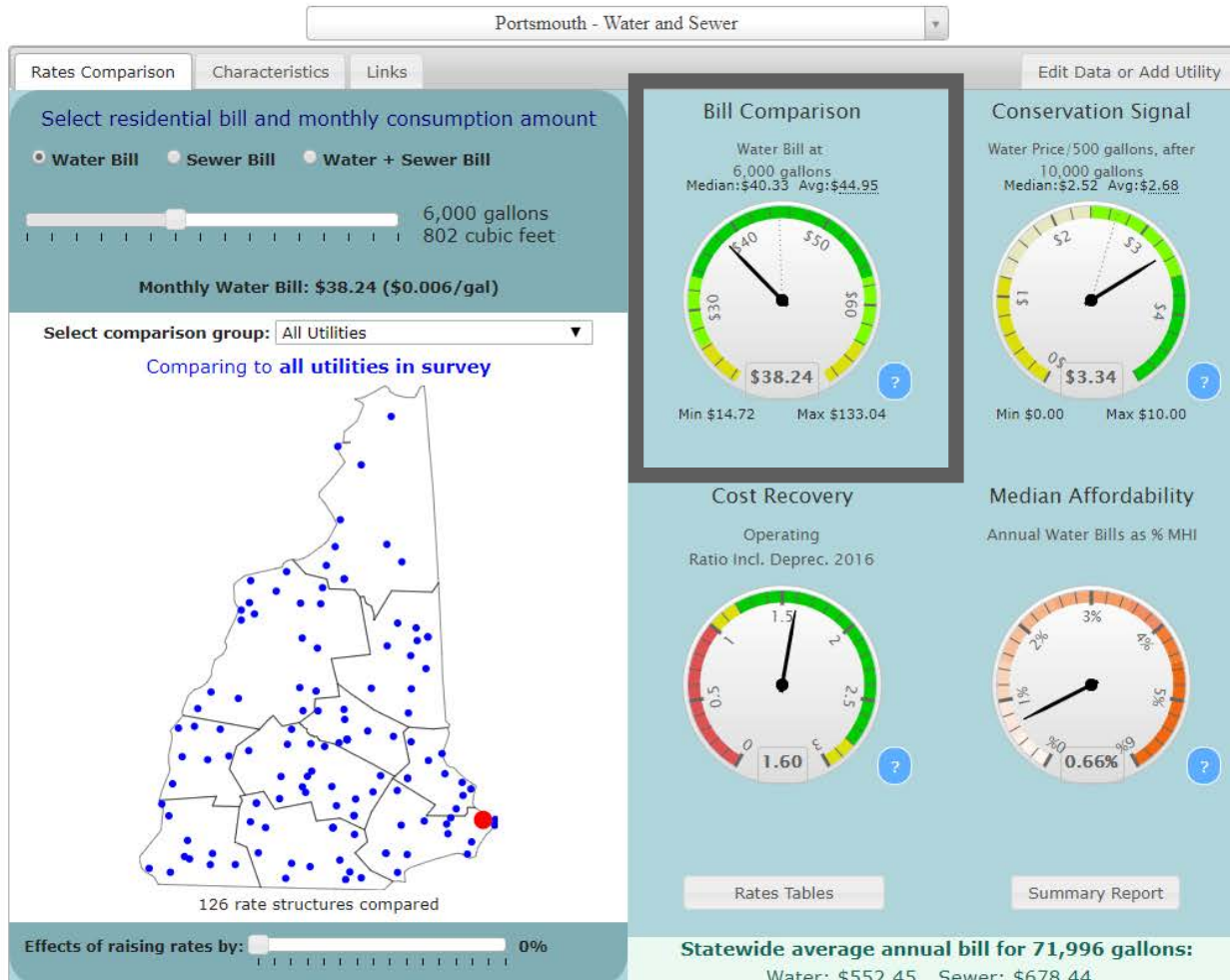
Financials

Anatomy of the Dashboard



NH Water and Wastewater Rates Dashboard

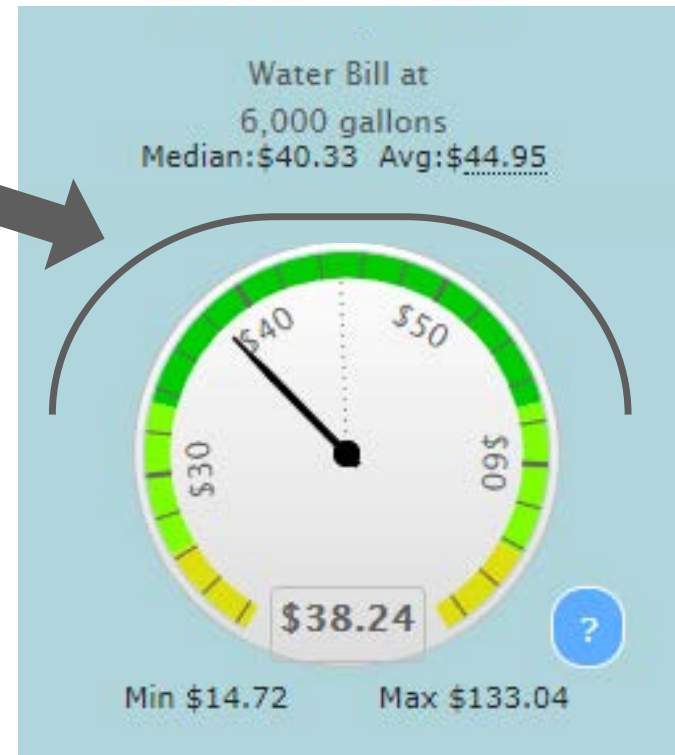
Rates as of January 1, 2018
Last updated: October 31, 2018



Dial: Bill Comparison

Darkest green band = middle 50% of utilities

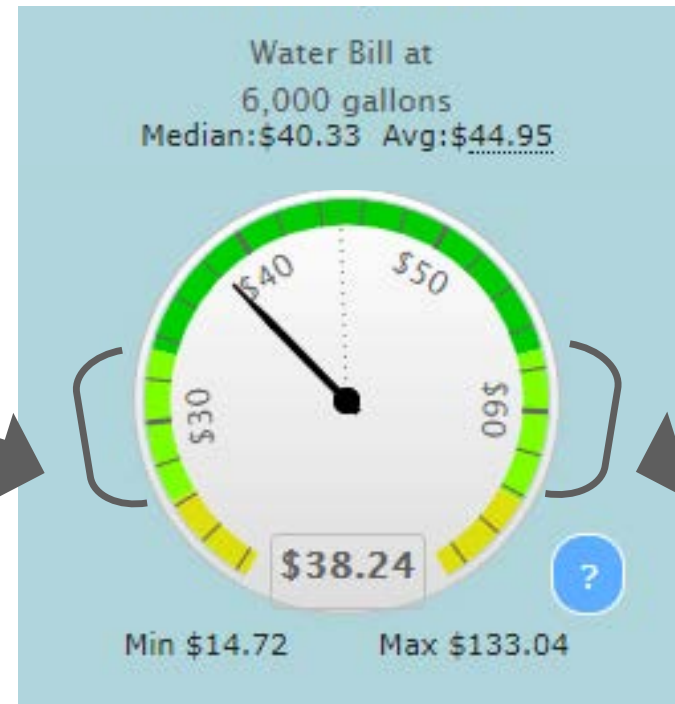
Half of all utilities
in your peer group have
bills that fall within this
range



Dial: Bill Comparison

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

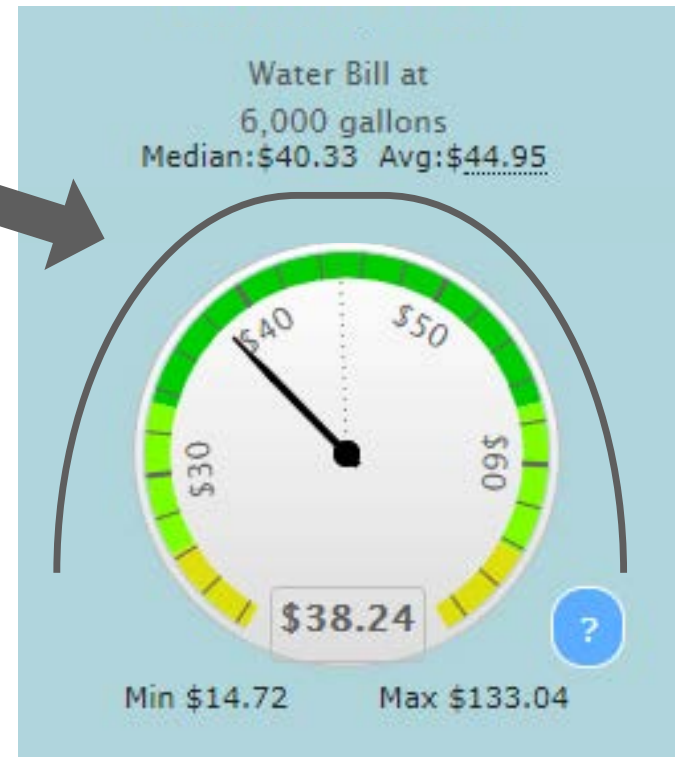
15% of utilities
in your peer group have
bills **lower** than the
middle 50%,
15% have bills **higher**
than the middle 50%



Dial: Bill Comparison

Both greens combined = 80% of utilities

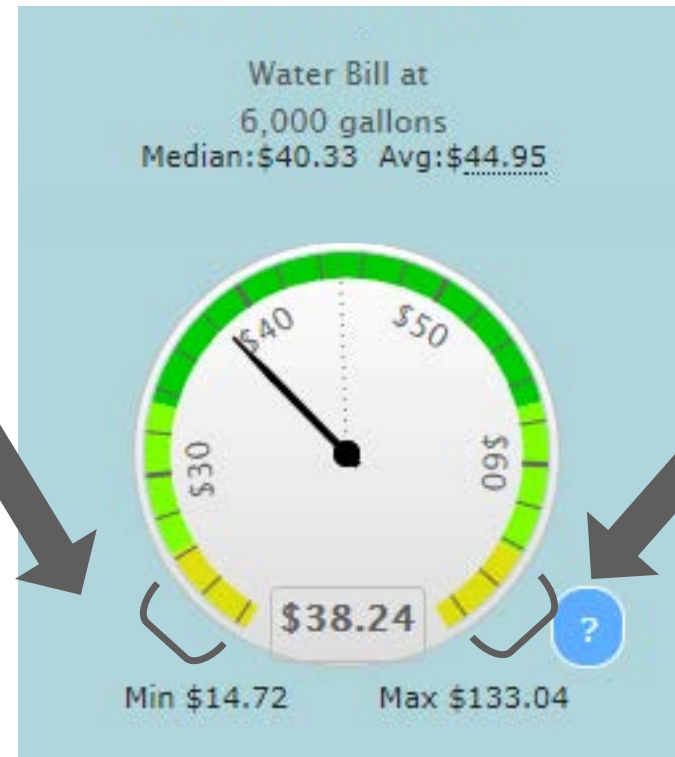
The majority of all utilities in your peer group have bills that fall within the range of the green bands



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



NH Water and Wastewater Rates Dashboard

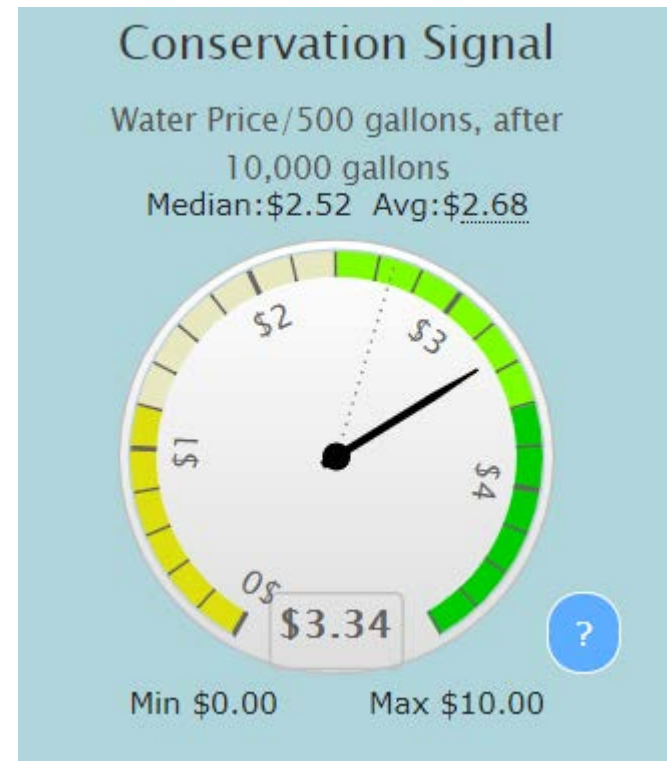
Rates as of January 1, 2018
Last updated: October 31, 2018



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

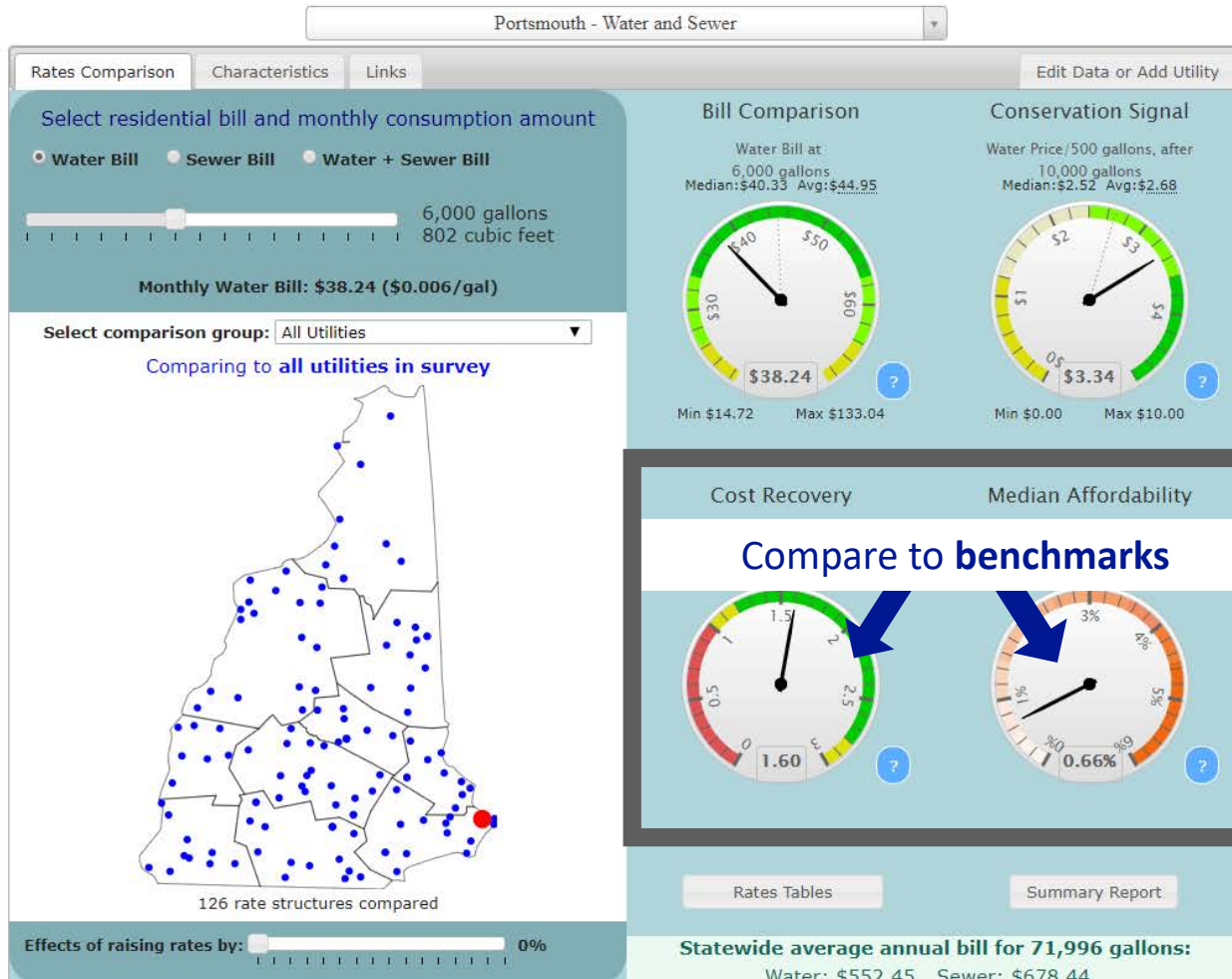


Anatomy of the Dashboard



NH Water and Wastewater Rates Dashboard

Rates as of January 1, 2018
Last updated: October 31, 2018

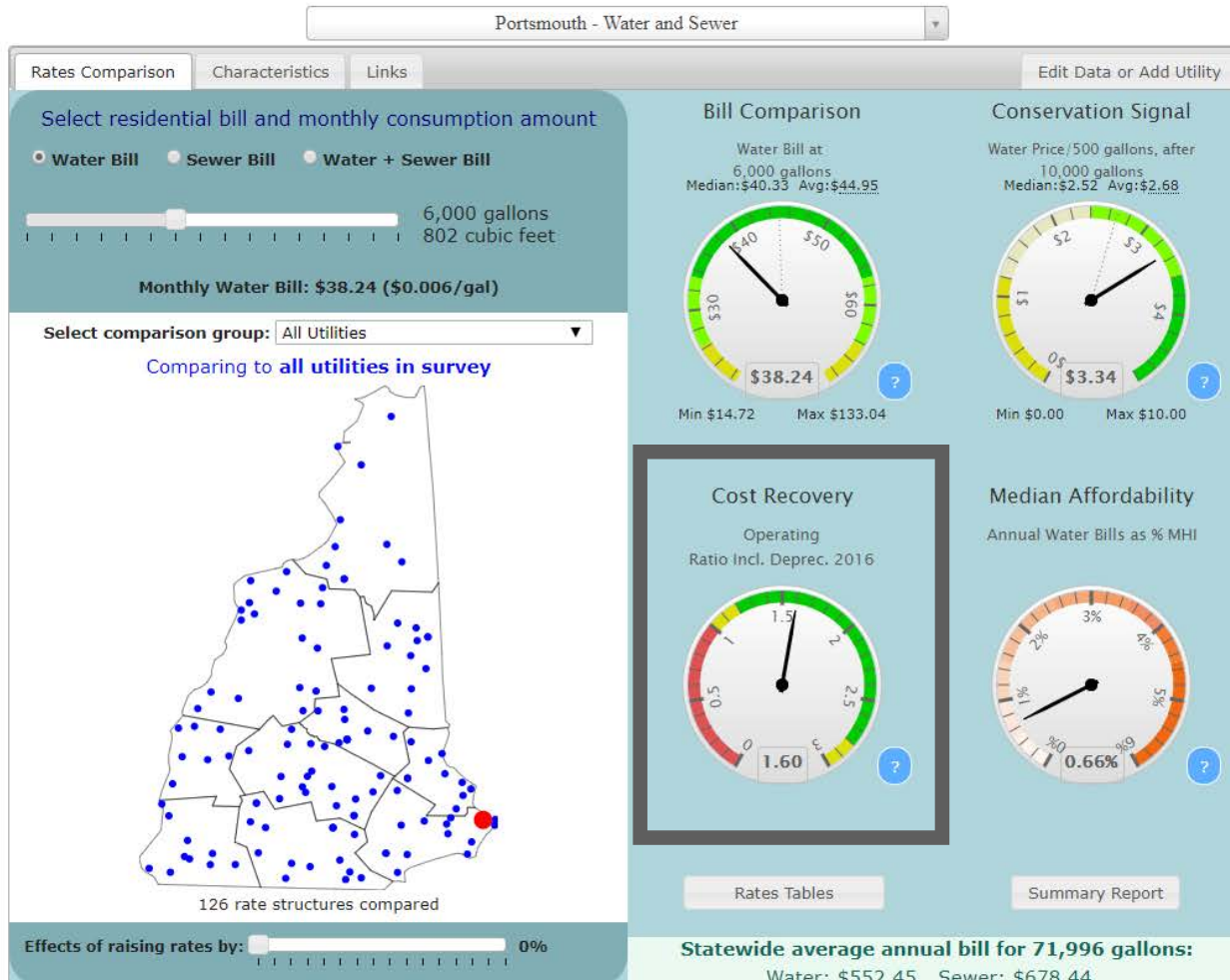


Anatomy of the Dashboard



NH Water and Wastewater Rates Dashboard

Rates as of January 1, 2018
Last updated: October 31, 2018



Dial: Cost Recovery

Red = costs exceed revenues; a concern for financial sustainability

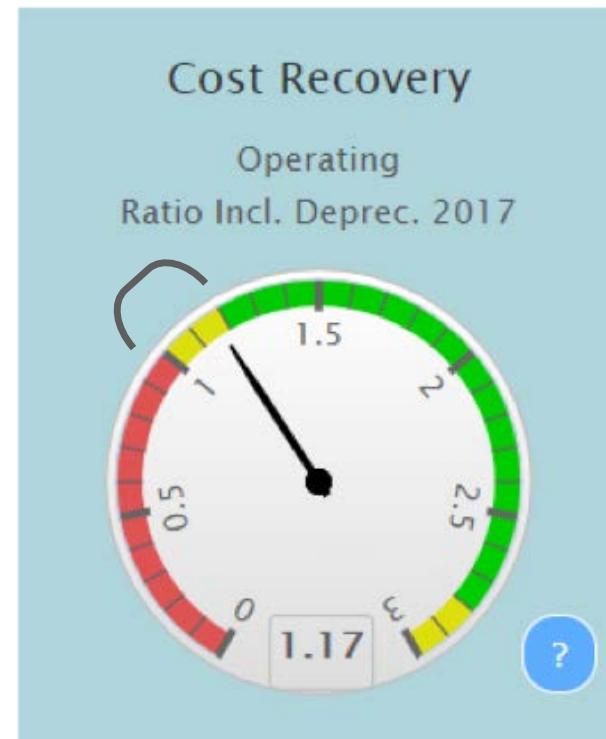
Operating revenues
Operating expenses
(including depreciation)



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)



NH Water and Wastewater Rates Dashboard

Rates as of January 1, 2018

Last updated: October 31, 2018

Portsmouth - Water and Sewer

Rates Comparison

Characteristics

Links

Edit Data or Add Utility

Select residential bill and monthly consumption amount

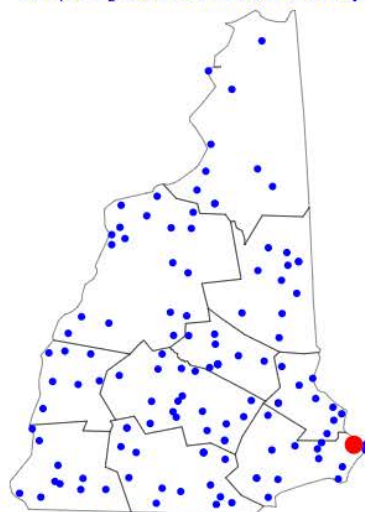
☒ Water Bill ☐ Sewer Bill ☐ Water + Sewer Bill

6,000 gallons
802 cubic feet

Monthly Water Bill: \$38.24 (\$0.006/gal)

Select comparison group: All Utilities

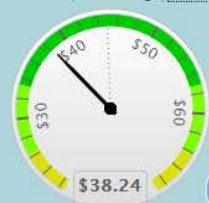
Comparing to all utilities in survey



Effects of raising rates by: 0%

Bill Comparison

Water Bill at:
6,000 gallons
Median: \$40.33 Avg: \$44.95



Conservation Signal

Water Price/500 gallons, after
10,000 gallons
Median: \$2.52 Avg: \$2.68



Cost Recovery

Operating
Ratio Incl. Deprec. 2016



Median Affordability

Annual Water Bills as % MHI



Rates Tables

Summary Report

Statewide average annual bill for 71,996 gallons:

Water: \$552.45 Sewer: \$678.44



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





Rates ComparisonCharacteristicsLinksEdit Data or Add Utility

Select residential bill and monthly consumption amount

Water BillSewer BillWater + Sewer Bill

Water

Select co

Bill Comparison

Water Bill at

Conservation Signal

Water Price/500 gallons, after

g:\$2.68

3

4

?

?

as % MHI

Affordability

Annual Bill (Monthly Bill times 12 Months Per Year)

=

Annual Median Household Income

This dial shows what a household making the median level of income in Belmont town would spend annually, as a percent of their income, on Water using 6,000 gallons per month. Half of the households in the community would be spending a greater portion of their income for these bills.

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

Raw Data

Annual Bills \$1,091.88

Annual MHI \$60,938

126 rate structures compared

Effects of raising rates by: 0%

Rates tablesSummary Report

Statewide average annual bill for 71,996 gallons:
Water: \$552.45 Sewer: \$678.44

NH Water and Wastewater Rates Dashboard

Rates as of January 1, 2018

Last updated: October 31, 2018

Portsmouth - Water and Sewer

Rates Comparison

Characteristics

Links

Edit Data or Add Utility

Utility Owner

Ownership type	Municipality
Primary County	Rockingham County
Primary service area	Portsmouth City
Date Rates Effective	07/01/2017

☒ Water ☐ Sewer ☐ Water + Sewer

Select comparison group: All Utilities

	Portsmouth City	Median for all utilities in survey	Statewide Stats
Number of Systems	1	126	146
Est. Number of Connections	7,200	598	
Est. Service Population	33,000	1,688	
Operating Revenue	\$9,225,357	\$1,515,887	
Operating Expense	\$5,754,287	\$1,406,218	
Average Household Size	1.78	2.15	2.19
Median Household Income	\$69,664	\$60,938	\$68,485
Poverty Rate	6.13%	8.47%	8.53%



SCHOOL OF
GOVERNMENT
Environmental
Finance Center



Smart Management for
Small Water Systems

NH Water and Wastewater Rates Dashboard

Rates as of January 1, 2018

Last updated: October 31, 2018



NEW HAMPSHIRE
DEPARTMENT OF
Environmental
Services



Portsmouth - Water and Sewer

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 and wastewater 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 New Hampshire Water and Wastewater Rates Dashboard and Survey were created by the Environmental Finance Center at the University of North Carolina at Chapel Hill, with assistance from survey partner Tighe & Bond, Inc. Funding was provided by the New Hampshire Department of Environmental Services (NH DES) and a cooperative agreement with the US EPA. This Dashboard is part of the larger Smart Management for Small Systems nationwide project of the Environmental Finance Center Network. See the links below for more information on additional partners. The Rates Dashboard is updated periodically to provide the most accurate data for decision-making and analysis. Additional free resources for water and wastewater utilities are provided below.

Resources for New Hampshire

NH DES Water Division

NH Municipal Association

Granite State Rural Water Association

Tighe & Bond

RCAP Solutions

Email Feedback or Comments

Additional Tools and Resources

Direct Assistance for Small Systems

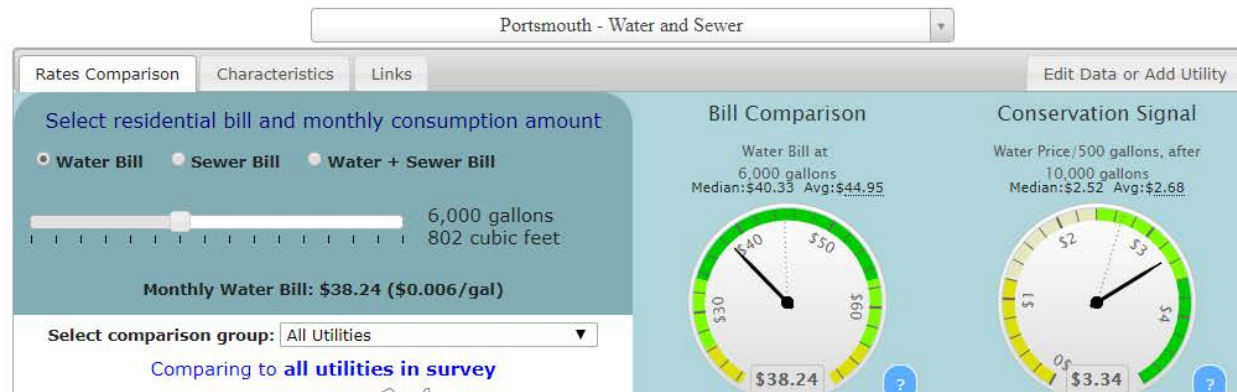
Water & Wastewater Rates Analysis Model

Financial Health Checkup for Water Utilities

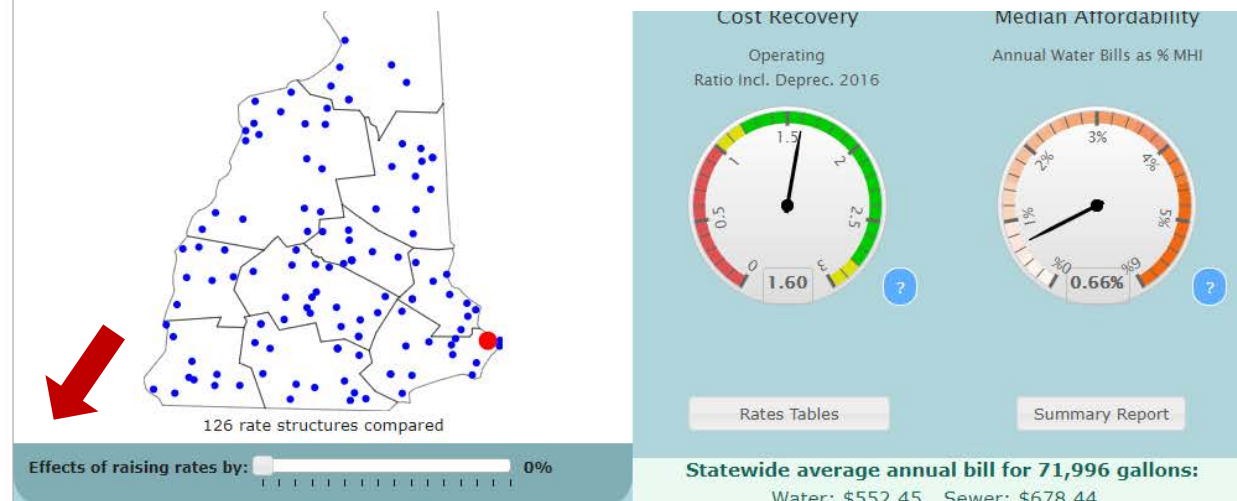
Plan to Pay: Fund Your Capital Improvement Plan

Residential Rates Affordability Assessment

EPA Water Finance Clearinghouse



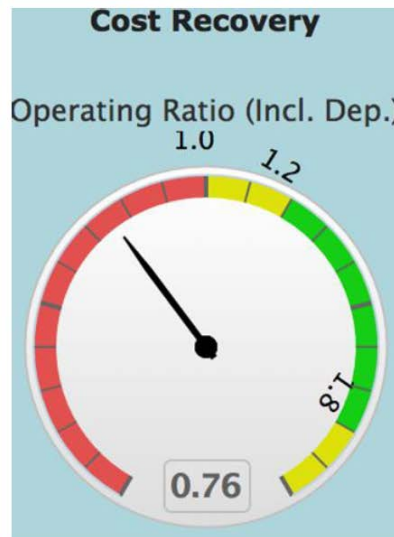
Let's take a live look at additional features...



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



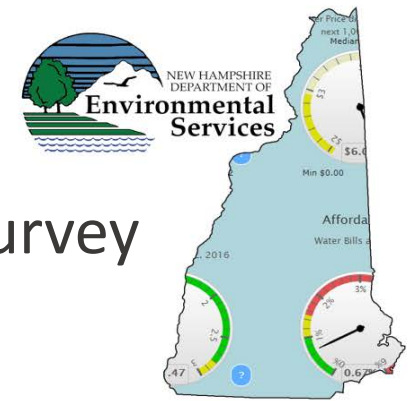
The proposal before the Board of Commissioners includes demolition, design, and reconstruction of many pieces of equipment that have contributed to these costly expenditures in their old age. The town's enterprise fund has incurred an operating loss ranging from approximately \$130,000 to \$350,000 since FY 2010. The operating loss for the year ended June 30, 2016 was \$278,955. Said differently, operating revenues only covered 76% of expenditures. In general, operating revenues should meet or exceed operating expenditures to accommodate future capital investments.

Audited data for FY 2016

Operating Revenues	\$862,108
Operating Expenses	\$1,141,063

- When explaining rates to customers
- For private systems, as part of your PUC rate case

Additional Resources



- Standardized rate sheets for all utilities in survey
- Tables of rate structures and computed bills for residential, commercial, irrigation, and industrial rates
- Tables of residential tap and impact fees
- Upcoming summary report

All available at:

<https://efc.sog.unc.edu/project/new-hampshire-water-and-wastewater-rates-survey-and-dashboard>

Questions? Feedback?

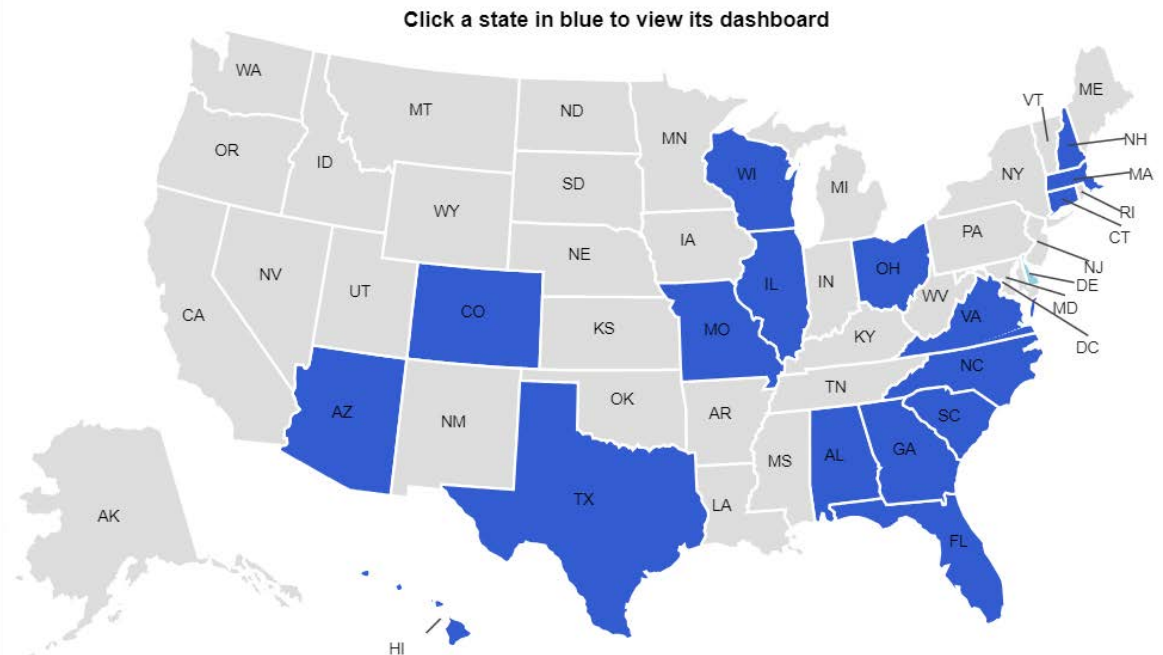


Annalee Harkins

Data Specialist and
Project Manager

aharkins@sog.unc.edu

919-843-4958



All Dashboard States