

2018

Georgia Water and
Wastewater Rates
Report



SCHOOL OF GOVERNMENT
Environmental Finance Center



Georgia Environmental
Finance Authority

ABOUT THIS REPORT

This report is just one resource in a series on Georgia water and wastewater rates, funded by the Georgia Environmental Finance Authority (GEFA), and compiled by the Environmental Finance Center at the University of North Carolina at Chapel Hill (EFC).

In addition to this report, there is an accompanying set of **tables** and standardized water and wastewater **rate sheets** for each participating utility. In an online, **interactive Rates Dashboard**, users can compare utilities against various attributes such as geographic location, system characteristics, and customer demographics, as well as financial indicators and benchmarks.

CONTRIBUTORS TO THE REPORT

The Environmental Finance Center at UNC Chapel Hill:

Annalee Harkins, *Data Specialist & Project Manager*, **Austin Thompson**, *Project Director*, **Andrea Kopaskie**, *Rates Specialist*, **Neil Sullivan**, *Rates Specialist*, **Helen Drotor**, *Rates Specialist*, **Ashely Bleggi**, *Rates Specialist*, **Claudia Flores**, *Project Coordinator*, **Samantha Haughton**, *Student Data Analyst*, **Elizabeth Kendrick**, *Student Data Analyst*



INTRODUCTION

Between June and October 2018, the EFC and GEFA conducted a survey of 539 rate-charging water and wastewater utilities in Georgia. A total of **517 utilities** participated by providing their rate schedules to the EFC, yielding a **97%** participation rate—the highest in the survey’s 11 years.

The combined service population of these utilities accounts for **99%** of all Georgians served by community water systems. Utilities from all **159 counties** in the state are represented in the survey group.

Water and wastewater rate setting is one of local government’s most important environmental and public health responsibilities. This report aims to provide utility professionals and public officials with an up-to-date, detailed survey of current statewide rate structures and trends, and thus assist in the protection of public health, improvement of economic development, and promotion of sustainability in Georgia.

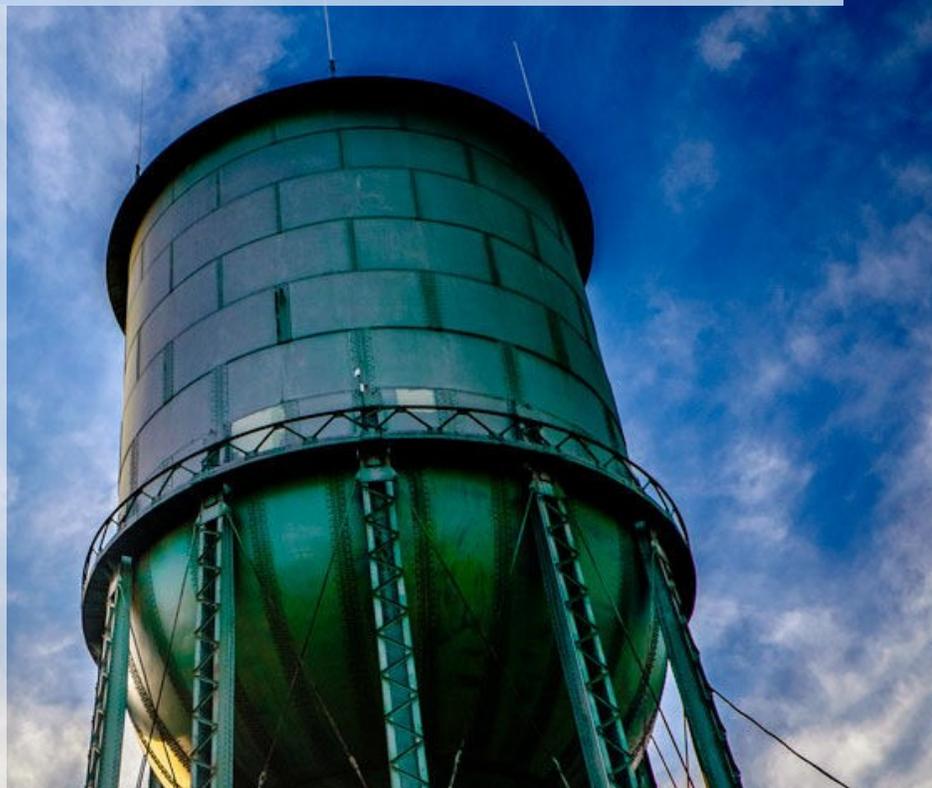
Water and wastewater rates ultimately determine how much revenue a community has to maintain vital infrastructure.

UTILITIES IN THE SURVEY

 **152** utilities serving
WATER ONLY

 **6** utilities serving
WASTEWATER ONLY

 **359** utilities serving
WATER AND WASTEWATER



81%
MUNICIPALITY

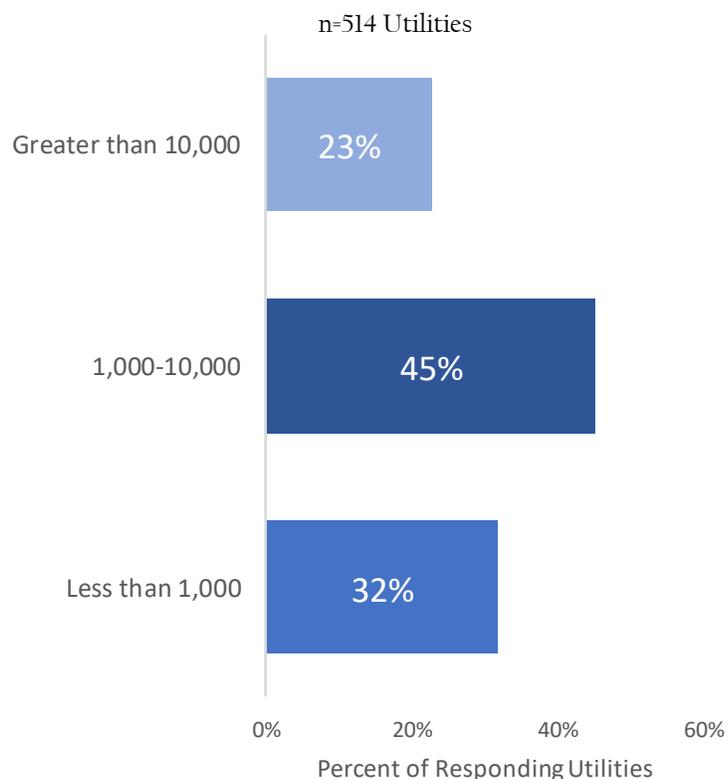
7%
COUNTY/DISTRICT

9%
AUTHORITY

3%
OTHER*

*includes for-profits and consolidated governments

Distribution of Responding Utilities
by Service Population



WHAT DO RATE STRUCTURES LOOK LIKE?

BASE CHARGES

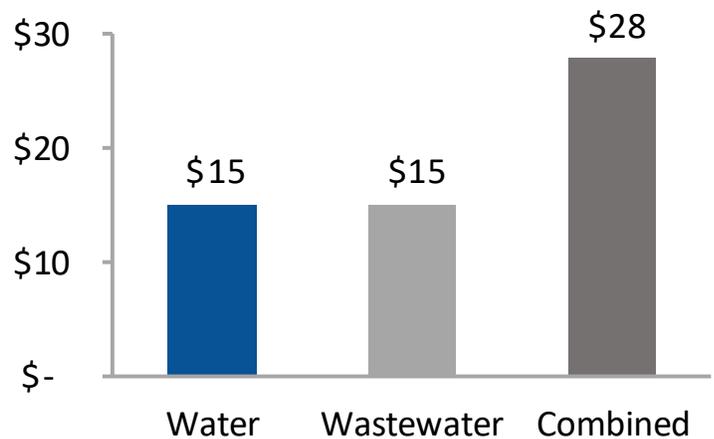
Considerable variation exists in how utilities model rate structures, but almost all use a combination of base charges and volumetric charges to determine billing for their services.

Base charges do not vary from month to month, regardless of consumption. These charges can be a constant, universal amount for all customers, or vary based on customer class (e.g. residential vs. commercial) or meter size. Base charges sometimes feature a consumption allowance, an included amount of usage that the customer is not separately charged for.

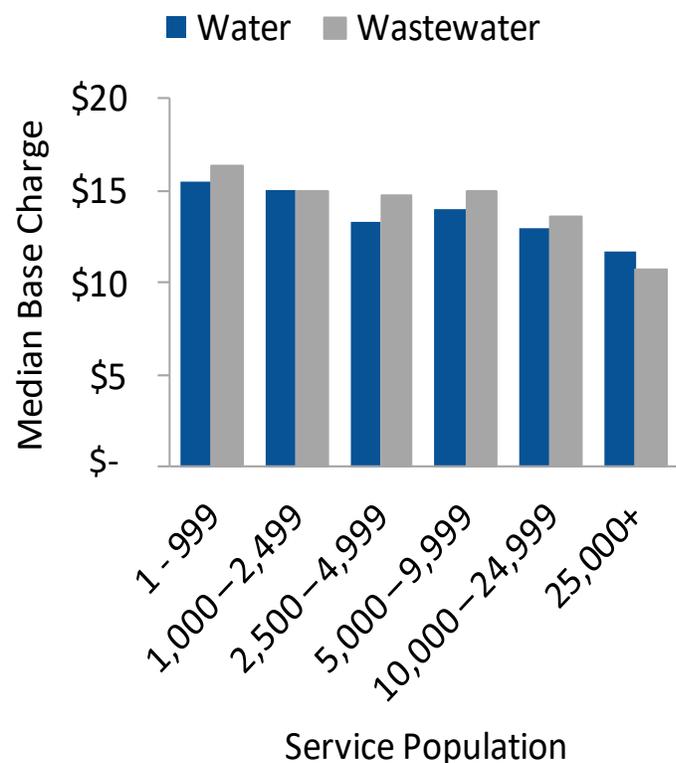
In the 2018 survey, there was **no difference** between the median monthly base charges for water and wastewater service.

64% of water rate structures with base charges included a consumption allowance. Standardized to monthly billing, the median consumption allowance included with the base charge was 2,000 gallons or 267 cubic feet.

Median Monthly Base Charge Amounts



As seen in the graph below, **larger** water utilities tend to have **lower** base charges than smaller utilities, likely because they are able to spread **fixed costs** across a greater customer base.



WHAT DO RATE STRUCTURES LOOK LIKE?

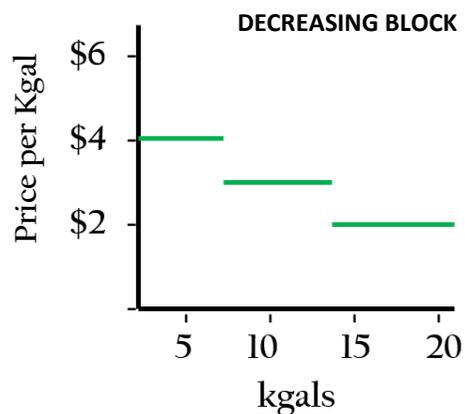
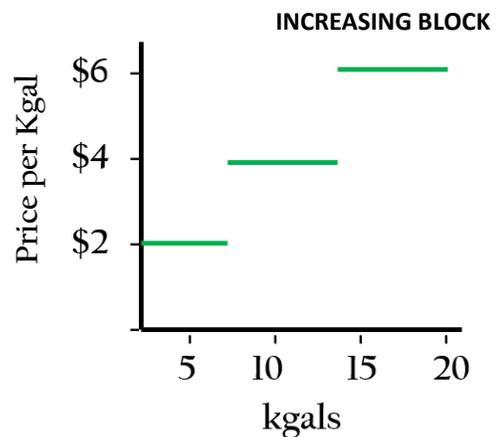
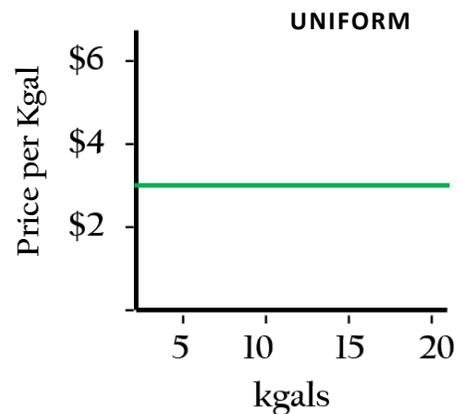
VOLUMETRIC CHARGES

Volumetric (variable) charges are based on the volume used after exceeding the consumption allowance included with the base charge (if any). Three common rate structures are uniform, increasing block, and decreasing block.

With a **uniform rate** structure, the rate does not change as the customer consumes more.

In an **increasing block rate** structure, the rate increases as the customer uses more. This structure is often employed by utilities that want to encourage conservation by making higher volumes of consumption more expensive.

The rate per unit decreases with greater consumption in a **decreasing block rate** structure. This type of rate structure may be used to encourage economic development by high-volume users such as commercial businesses.



WHAT IS THE MOST COMMON VOLUMETRIC RATE STRUCTURE?

The majority of residential water rate structures in Georgia use an **increasing block rate** (47%) and residential wastewater rate structures use a **uniform rate** (51%) to charge for volume.

WHAT ARE UTILITIES CHARGING?

Georgia's Median Bills

Residential (5,000 GALS)

Commercial (50,000 GALS)

WATER

\$27.00

MONTH

\$324.00

YEAR



\$197.50

MONTH

\$2,370.00

YEAR

\$30.55

MONTH

\$366.60

YEAR



\$239.53

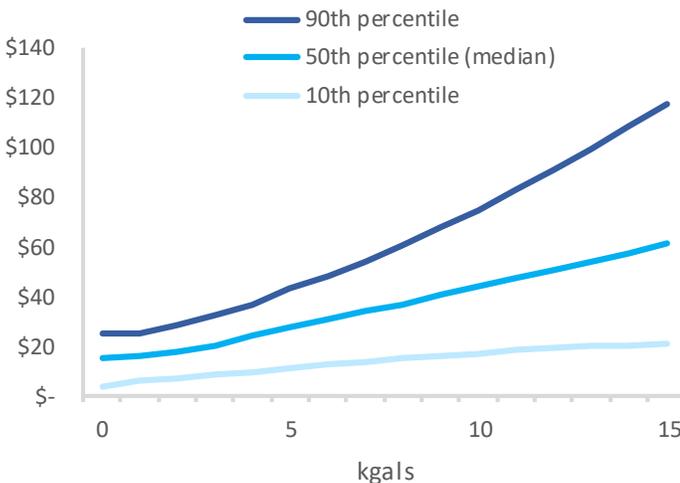
MONTH

\$2,874.36

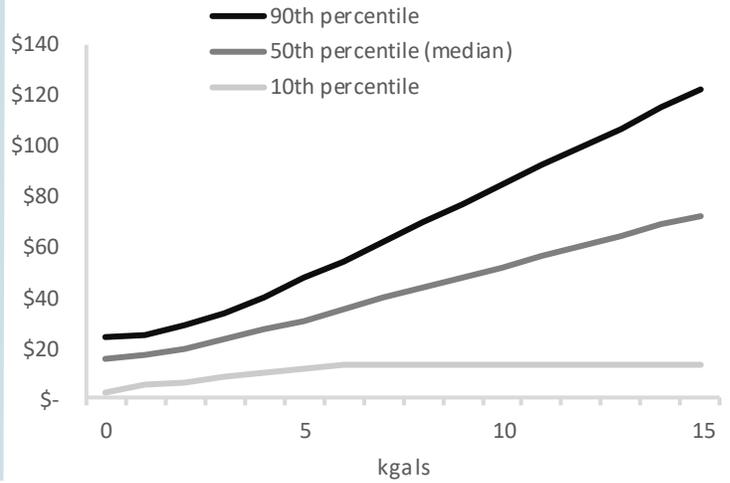
YEAR

WASTEWATER

Spread of Middle 80% of Water Bills



Spread of Middle 80% of Wastewater Bills



RANGE OF BILLS

As volume increases, median wastewater bills tends to rise at a **greater rate** than the median water bill. Wastewater bills are **7-20% higher** than water bills.

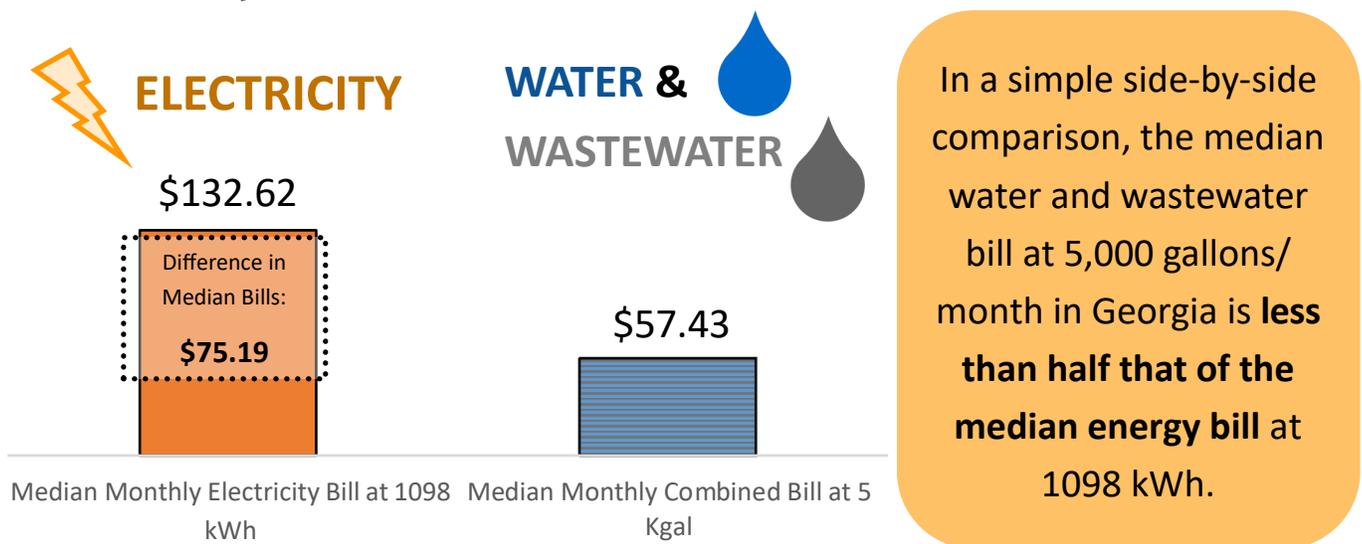
While reporting the median bill is helpful for understanding the “big picture” for water and wastewater bills, it does not show the total distribution of bills, including the lowest and highest costs at different consumption levels. The graphs above show the range of the middle 80% of bills (from the 10th percentile to the 90th percentile) for 0 to 15 kgals.

HOW DO ELECTRICITY PRICES COMPARE?

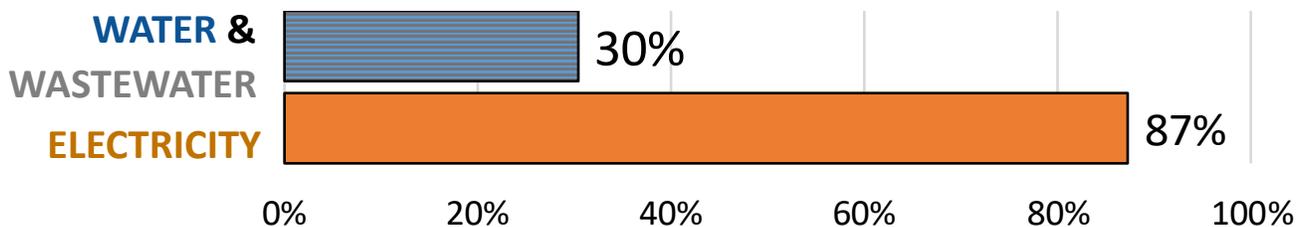
Beginning in 2017, GEFA and the EFC began adding electricity prices to the Water and Wastewater Rates Dashboard to allow rates to be compared side-by-side.

The electricity data was provided by the Georgia Public Service Commission 2018 Residential Energy Rate Survey, and is an average monthly bill based on both winter and summer rates at 1098 kWh. Each water and/or wastewater utility was mapped to the associated energy provider to compare rates. The following graphs show the results of this comparison.

Median Monthly Electricity Bill at 1098 kWh Compared to Median Monthly Combined Bill at 5,000 Gallons for 370 Rate Structures



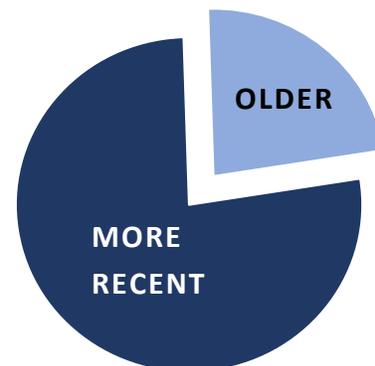
Percent of 338 Rate Structures that Reflected **Electricity Bill Increases** and **Combined Bill Increases** from 2017-2018



At 1098 kWh, most Georgians experienced an increase in **electricity bills** from 2017-2018.

WHEN WERE RATES LAST CHANGED?

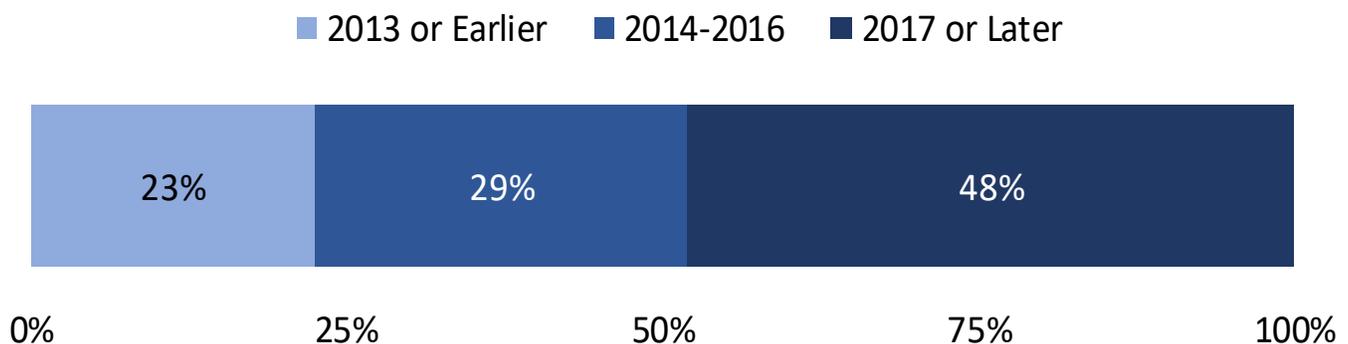
- The **MAJORITY** of utilities have updated rates since **AT LEAST 2014**.
- About **1 IN 4** utilities have not updated rates since **2013** or earlier.



Most utilities in Georgia are actively evaluating and modifying their rate structures every one to two years. The EFC recommends that utilities review their rates **at least every two years**, at the minimum, to keep in pace with inflation. An annual or biennial review gives utilities the opportunity to evaluate if their current rates are high enough to cover the necessary operating expenses and depreciation, not to mention savings goals for capital planning, emergencies, or other funds.

Utilities that modestly raise rates at more frequent intervals accumulate more revenue over time than those that implement less frequent, but more drastic rate increases. Customers are also less likely to balk at more gradual, periodic rate increases than a one-time price hike.

The calendar year when sampled rate structures were first put into effect is shown below for 445 rate structures*.



*The year that rates became effective is known for 445 out of the 548 rate structures in the survey.

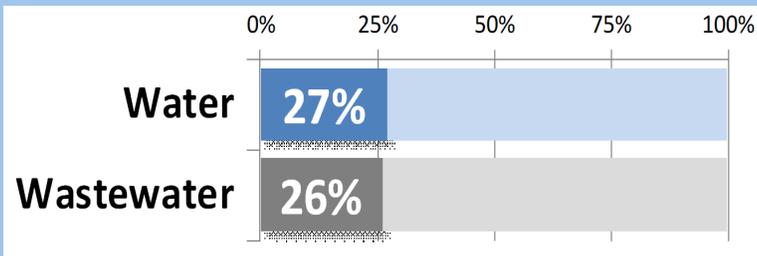
HOW HAVE RATES CHANGED OVER TIME?

As the cost of providing service rises, so should rates. Providing water and wastewater service is costly and infrastructure-intensive. Regular, predictable rate increases are common and recommended. The Georgia Water and Wastewater Rates Dashboard has been an ongoing partnership between GEFA and the EFC since 2007. As a result, years of rates data have been collected and are available to analyze trends and changes.

The graphs below reflect changes in residential rates over the last year and from 2009-2018, respectively. Each graph reflects data from a cohort. The first graph represents only rate structures present in both 2017 & 2018, and the second graph represents only those water rate structures with rates data for the entire period of 2008-2018.

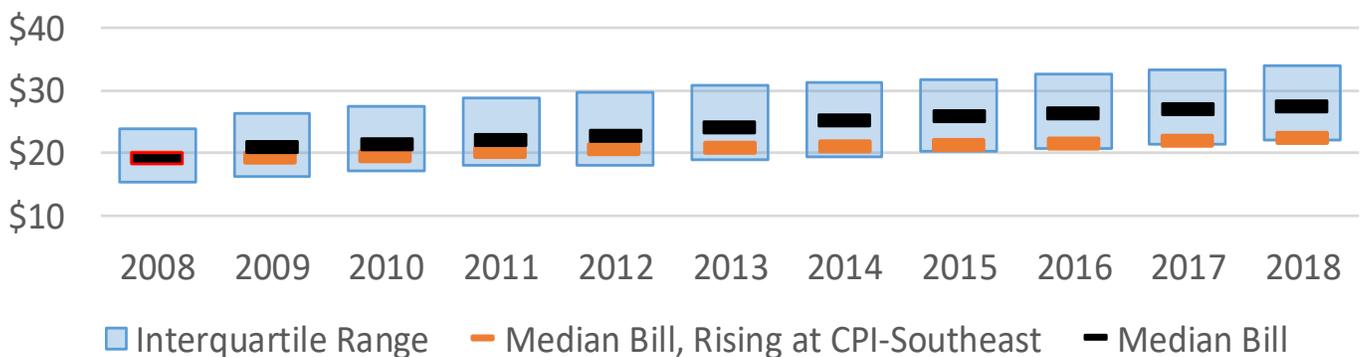
Percent of Rate Structures that Increased Residential Rates from 2017-2018

Water N=485 Rate Structures
Wastewater N=344 Rate Structures



To assess how trends in bills have changed compared to inflation, 2008 billing data was normalized to the Consumer Price Index for the Southeast region, from the Bureau of Labor Statistics. The **orange line** represents the median bill rising only at CPI, while the **black line** represents the median bill from surveyed utilities over time.

Trends in Monthly Water Bills at 5,000 Gallons per Month, Relative to CPI-Southeast for 265 Water Rate Structures in GA, 2008-2018



DO PRICES REFLECT THE TRUE COST OF SERVICE?

Utilities sometimes fall into the trap of pricing services based on what their customers have always paid, rather than focusing on the bottom line of the balance sheet. This year, **375 municipally-owned utilities** out of the total 517 (73%) provided their most recent annual financial reports to the survey. While statewide conclusions cannot be drawn from this limited dataset, there are some notable trends. First, some essential definitions:

WHAT IS OPERATING RATIO?

Operating ratio, also known as cost recovery ratio, is a financial benchmark that determines if an entity is operating at a loss, gain, or breaking even. The ratio is simply the division of operating revenues by operating expenses, which can include or exclude depreciation. A utility's operating ratio must be *at least 1.0* to break even.

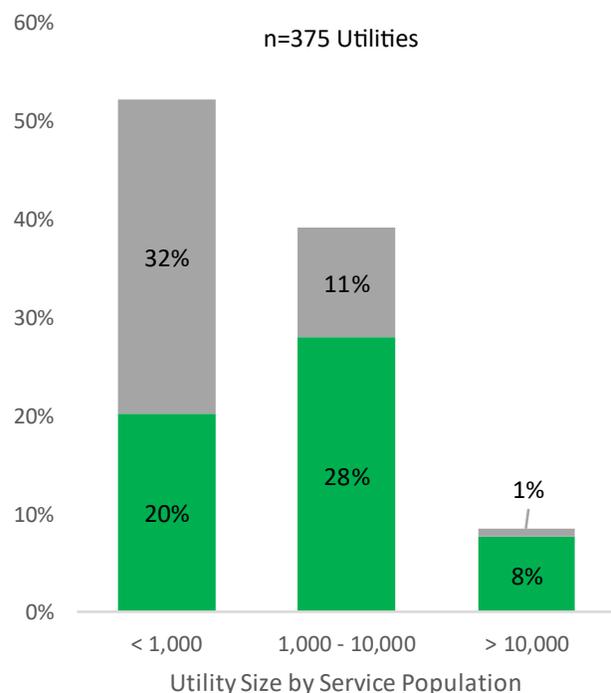
Of the 375 utilities with financial data in the 2018 survey, **210 (56%)** reported **operating ratios (including depreciation) greater than or equal to 1.0.**

WHY INCLUDE DEPRECIATION?

Whenever possible, depreciation should be included in operating expenses to account for the inevitable cost of replacing equipment and infrastructure at the end of its expected useful life. Depreciation allows costs to be figuratively parceled out over time, avoiding a sudden, enormous expense when the time comes to replace assets. Consider the differences in the graphs below with and without depreciation factored into operating expenses.

- Operating expenses < Operating revenues
- Operating expenses > Operating revenues

Proportion of Utilities with Operating Ratio Greater Than or Equal to 1, including Depreciation



DO PRICES REFLECT THE TRUE COST OF SERVICE?

With **depreciation included**, 210 of the 375 (56%) utilities generated enough revenue to cover operating expenses. 162 out of 165 of the utilities with an operating ratio of less than 1.0 serve fewer than 10,000 people.

All utilities face the issue of generating sufficient revenue to pay for the high fixed costs of providing safe and reliable services. However, smaller utilities must do so with a smaller customer base to spread those high fixed costs out over.

In addition to utility size, other factors can be correlated to financial sustainability. Improved cost recovery and higher monthly bills are sometimes linked. The figure below shows the distribution of utilities' bills based on their operating ratios. **Of those utilities with operating ratios of 1.0 or greater, 83% have combined bills (5K gallons/month) of \$50 or more.**

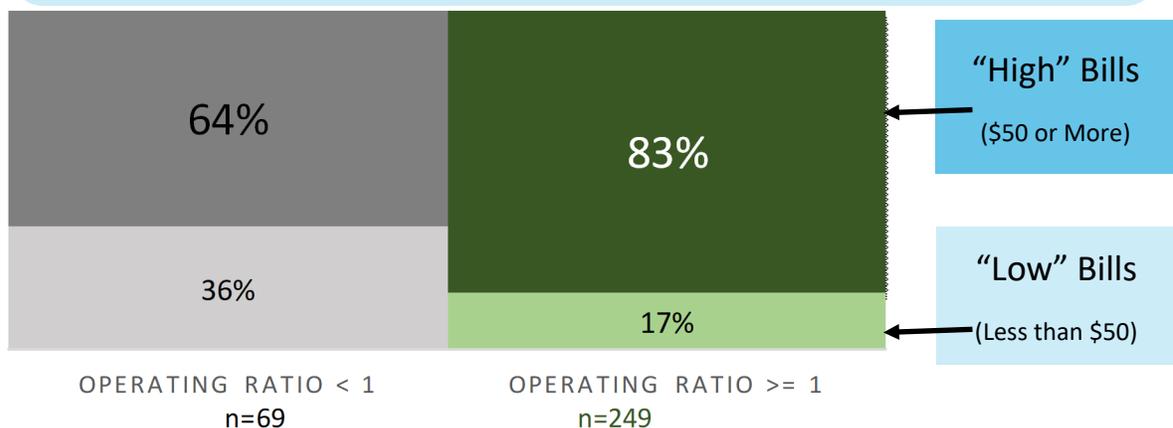
WHAT IS CONSIDERED HEALTHY?

The Cost Recovery dial on the **Rates Dashboard** uses red, yellow, and green bands to give the viewer a simplified idea of the health of the utility's operating ratio at a glance.



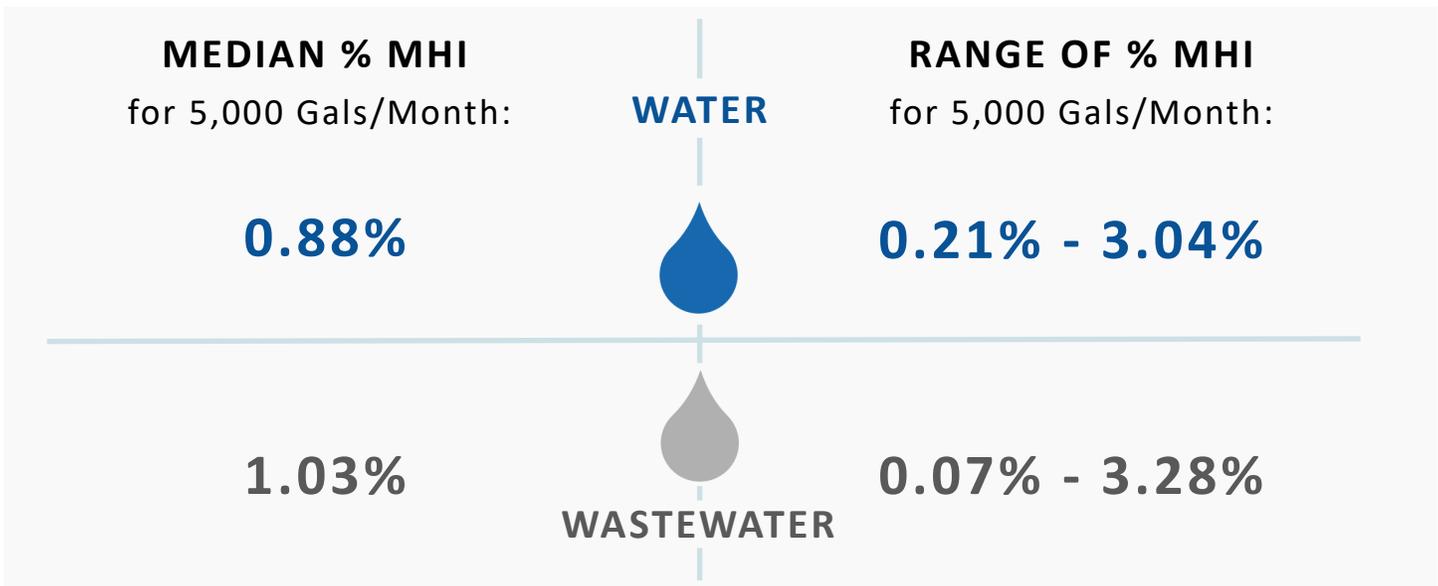
While it is clear that being “in the red” is not a good position to be in, there is no universal standard for what constitutes a healthy operating ratio beyond 1.0.

Proportion of Utilities with High (\$50 or More) or Low (<\$50) Combined Bills, Based on Operating Ratio (Including Depreciation)
n=318 Utilities

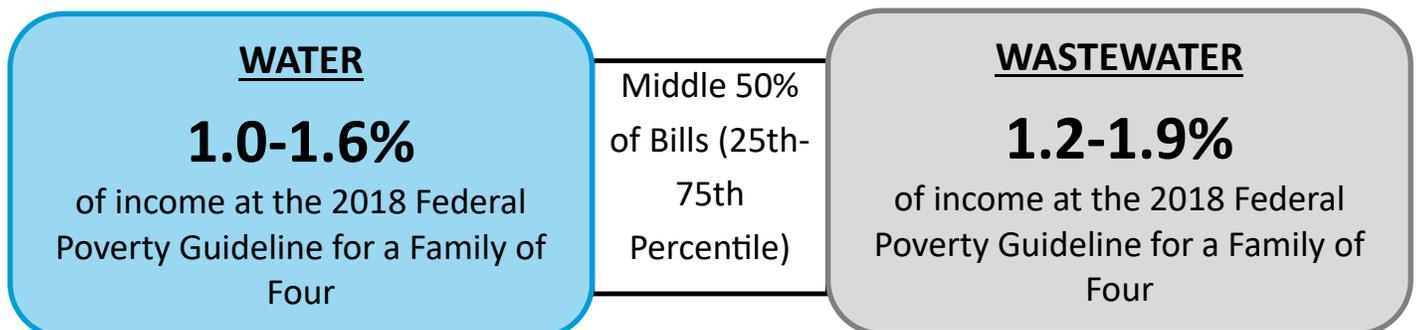


HOW AFFORDABLE ARE RESIDENTIAL BILLS?

Assessing rate affordability remains a challenge because there is no one, truly universal measure of affordability. The most commonly used indicator, **Percent Median Household Income (% MHI)**, calculates how a year's worth of water and wastewater bills, in this case 5,000 gallons/month, compares to the MHI of the community served by the utility. MHI is provided by the most recent 5-year estimates of the US Census Bureau's American Community Survey.



As all communities have a range of income brackets, it is important to keep in mind that what may seem like a small percentage of the community's MHI can have a proportionally larger impact on lower-income populations. A growing concern for utilities is how rising rates will affect the lowest income customers. This includes **households making less than or equal to the federal poverty guideline for a family of four (\$25,100 in 2018)**, according to the US Department of Health and Human Services.



For a more in-depth look at the affordability of water and wastewater services in a community, the EFC offers the free, Excel-based [Residential Rates Affordability Assessment Tool](#), available to download online.

FURTHER RESOURCES

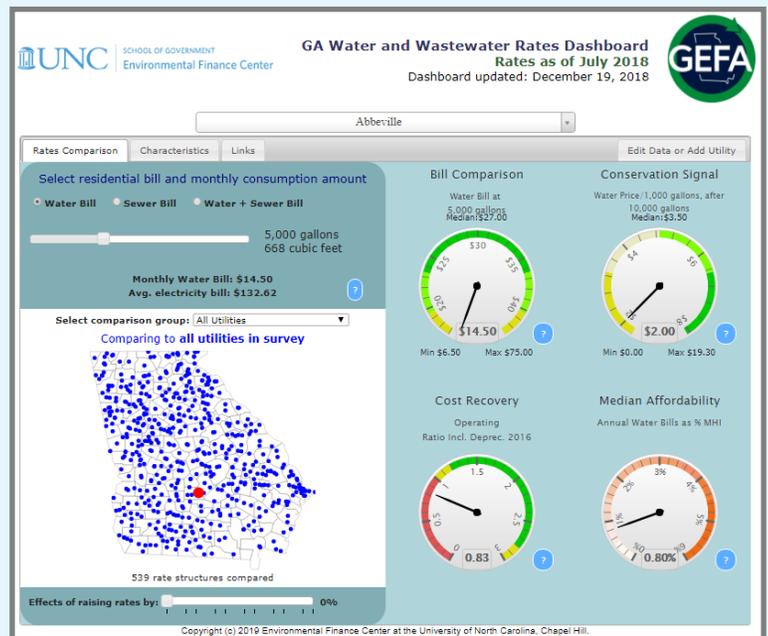
All of the following free resources are available at: <https://unc.live/2FsNeXQ>

⇒ **2018 Water and Wastewater Rates Dashboard**

⇒ Downloadable **tables of rates** and rate structures for residential, commercial, and irrigation customer classes for water and wastewater

⇒ Standardized copies of **rate sheets** for all utilities in the survey

⇒ **2016 Stormwater Fees Dashboard**



QUESTIONS? FEEDBACK?



Amanda Carroll
acarroll@gefa.ga.gov
(404) 584-1053



Annalee Harkins
aharkins@unc.edu
(919) 843-4958

ACKNOWLEDGEMENTS



The Environmental Finance Center would like to extend thanks to the Georgia Environmental Finance Authority, all of the water and wastewater systems that participated in this year's survey, and our survey partners:

