



## SUSTAINABLE WATER PRICING: BEWARE OF THE BAR CHART!

By Jeffery Hughes, UNC School of Government

Water and wastewater utilities are many things: essential public health service organizations, community and economic development partners, and environmental protection entities. But water and wastewater utilities are also businesses, in that they have expenses, generate revenues, and sell products to customers. A financially unhealthy utility often runs into problems meeting its primary public health and economic development goals.

Just as with any business, there are financial indicators and metrics that can help managers and owners assess an enterprise's health and help guide their financial decision-making. Some of these metrics are very similar to the metrics that Fortune 500 companies pay attention to, such as debt ratios, operating ratios, net income, etc.

Unfortunately, one water financial metric often seems to rise above all the others during critical financial policy discussions. This metric is the price a family pays for a set amount of water (typically 5,000 to 6,000 gallons per month), and the policy discussion relates to the decision about whether to adjust

that rate. The rate adjustment decision in many areas certainly includes other indicators, and in some cases, utilities employ financial professionals to make pricing decisions that are based much more on costs than existing prices. However, even the most financially savvy utility can succumb to the pressures that arise when its price is compared head-to-head against neighboring utilities.

As monopolies, utilities should expect that the public scrutinizes their prices. Hence, utilities should be sensitive to the impact prices have on customers, although oversimplifying what price can tell you about your utility's financial health is dangerous. Unintentionally, utilities may adversely impact their customers by maintaining artificially low rates that do not allow for needed infrastructure, than if they raised rates. Many of our biggest water crises, such as what occurred in Flint, Michigan, can be traced to decisions that put low costs and low prices ahead of service quality.

So how should a utility consider price when evaluating its finances? The default for many utilities is to develop a simple table or graphic, such as in

**Figure 1** that shows how rates compare for utilities in a specific region.

The Environmental Finance Center (EFC) (<http://www.efc.sog.unc.edu/>) at the UNC School of Government promotes financial benchmarking and the analysis of financial indicators as important business practices, but also recognizes the dangers of making decisions based on incomplete or oversimplified information. In an ideal world, every utility would work with its customers (and regulators) to determine the optimum service quality target and then set rates to generate exactly what is needed to meet that target in a financially efficient manner. Most utilities do not operate in that ideal world, and pricing comparisons will continue to be a part of rate analysis. This is why the EFC has developed and promoted financial analysis tools that are an alternative to the old pricing bar chart. The EFC has been providing local communities and others interested in environmental management with information related to the financial health of water and wastewater programs across the state of North Carolina and in numerous

other states as well. The EFC works with a number of partners, including state agencies, professional associations, and utilities, to collect, benchmark, and update information each year.

### FINANCIAL SUSTAINABILITY AND RATES DASHBOARDS

Over the past 15 years, the EFC has led efforts to make financial information more accessible and useful to decision-makers in North Carolina and beyond. The EFC has developed water and wastewater rates dashboards for 14 states and for Canada ([www.efc.sog.unc.edu/project/utility-financial-sustainability-and-rates-dashboards](http://www.efc.sog.unc.edu/project/utility-financial-sustainability-and-rates-dashboards)). Based on feedback from local and state leaders across the country, the EFC has developed a comprehensive information system that includes data the EFC collects directly, as well as public data from a large number of state and federal agencies. The EFC's Financial Sustainability and Rates Dashboards share key utility

financial data through free, easy-to-use, interactive, online, visual dashboards. (See **Figures 2** and **3**.)

The rates dashboards allow communities to see up-to-date information on fiscal health, user fees, and community demographics. Each year, the North Carolina dashboard is accessed by hundreds of communities for a variety of purposes, including analyzing financial performance and communicating with citizens and governing boards. Organizations that support utilities through technical advising, funding, and regulatory oversight also rely on the dashboards to inform assistance efforts.

Many utility managers report that the Financial Sustainability and Rates Dashboards have become essential tools that are critical to developing sustainable financial systems. As one water utility manager in North Carolina stated, "With the information provided, our board realized exactly where we stood and why we were prohibited from

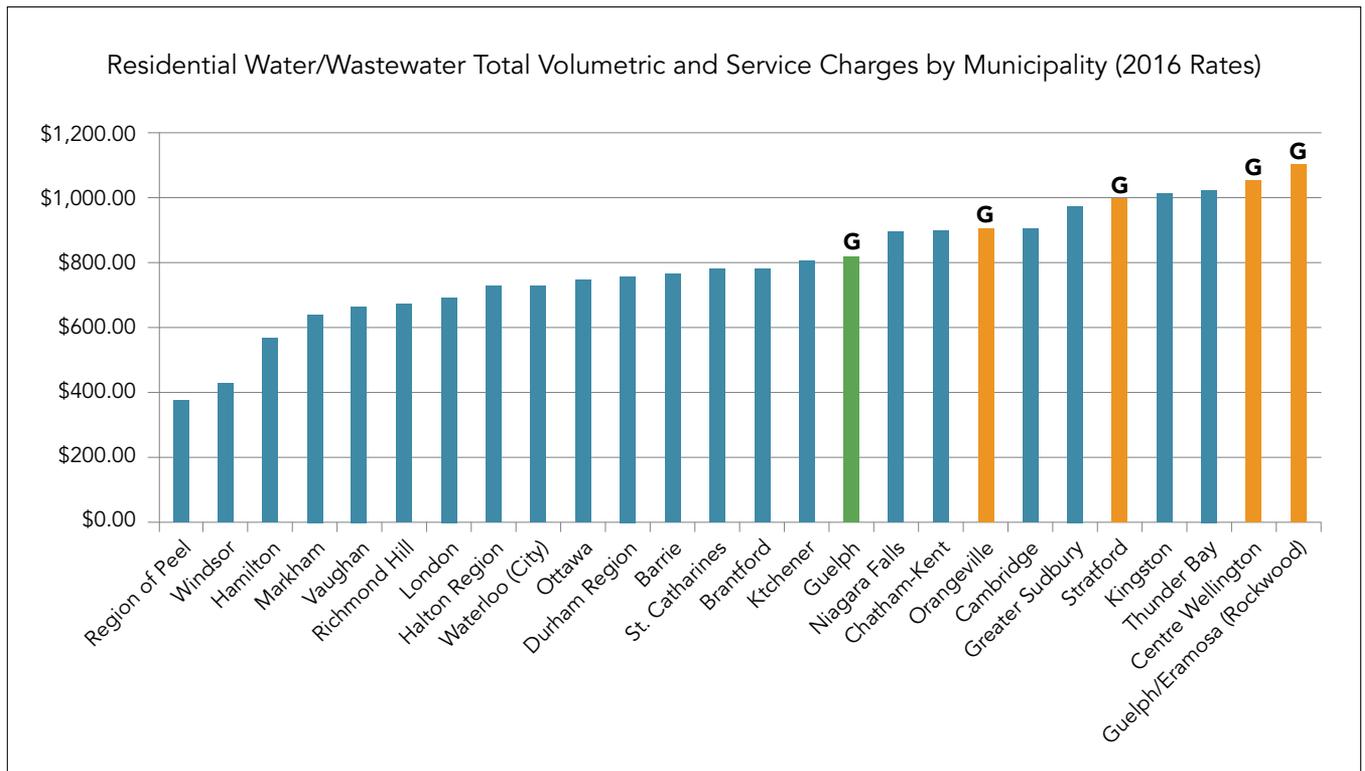
making infrastructure strides. This tool has helped us adopt a rate structure that is fair, and provides for system upgrades such as radio-read meters, strategic pump station repair, etc."

### PROVIDING EDUCATIONAL OPPORTUNITIES

The Financial Sustainability and Rates Dashboards also provide an exceptional opportunity for research, teaching, and educational programs. The EFC has engaged dozens of university students from a variety of disciplines to help collect data and build the dashboards. This program provides students with opportunities to work with state and local leaders on issues important to utility management and to test out new information-sharing platforms. Through these efforts, the EFC has also created a research database on utility finance that is 'mined' by researchers from UNC and other institutions to produce periodic white papers on key finance topics.

**FIGURE 1**

Rates Comparison Bar Chart. Charts like the one below are able to show only part of a utility's financial situation, yet may drive decisions with far-reaching financial implications.



### NORTH CAROLINA 2016 WATER AND WASTEWATER RATES DASHBOARD BY THE NUMBERS:

- Number of utilities included in dashboard: 418
- Number of North Carolinians served by utilities in dashboard: 8 million
- Unique page views last year (2016): 5,133
- 80% of users agree that the dashboard provided information that helped form or influence decisions or practices at their organization
- Approximate number of data points accessible using dashboard interface: 100,000+
- Number of students involved in developing dashboards over the last 12 years: 20

To access the North Carolina Dashboard or a host of other financial analysis tools, visit the EFC's website at [www.efc.sog.unc.edu](http://www.efc.sog.unc.edu).

### ABOUT THE AUTHOR

**Jeff Hughes** is a faculty member at the School of Government and the director of the Environmental Finance Center at the University of North Carolina. He provides research, educational programs, and advising services to local governments, private companies, utilities, and state and federal agencies. Jeff has extensive experience as a researcher, policy analyst, consultant, and practitioner. His current research focus areas include alternative project delivery models, capital finance, and rate setting. Jeff is a member of the American Water Works Association and the Council of Infrastructure Financing Authorities. He serves on the Finance Committee for the Water Research Foundation and the EPA Environmental Financial Advisory Board. He received a master's degree from the University of North Carolina and a bachelor's degree from Duke. [NC](#)

FIGURE 2

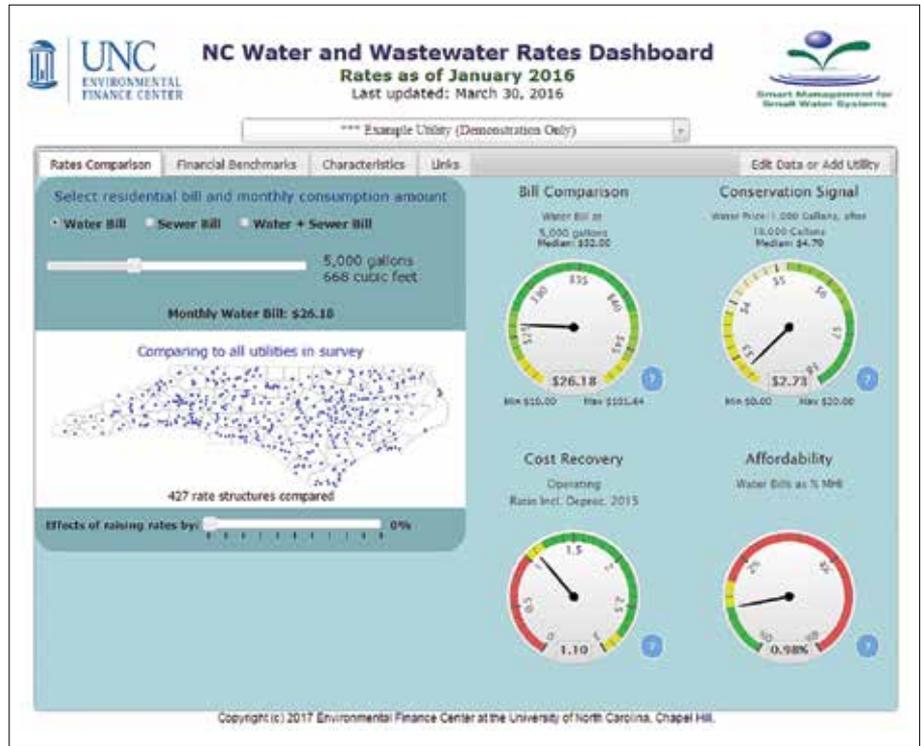


FIGURE 3

