

Affordability Updates and Options

Hawai'i Water Works Association Annual Meeting

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SCHOOL OF GOVERNMENT
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Dedicated to enhancing the ability of governments and other organizations to provide environmental programs and services in fair, effective, and financially sustainable ways through:

- Applied Research
- Teaching and Outreach
- Program Design and Evaluation



How you pay for it matters

Sheffield focuses on laws to secure jobs, affordable water for Detroiters

JUNE 5, 2019
BY WFM STAFF

Water sector groups propose new affordability metric

Water Bill Affordability Legislation Heads To Baltimore City Council



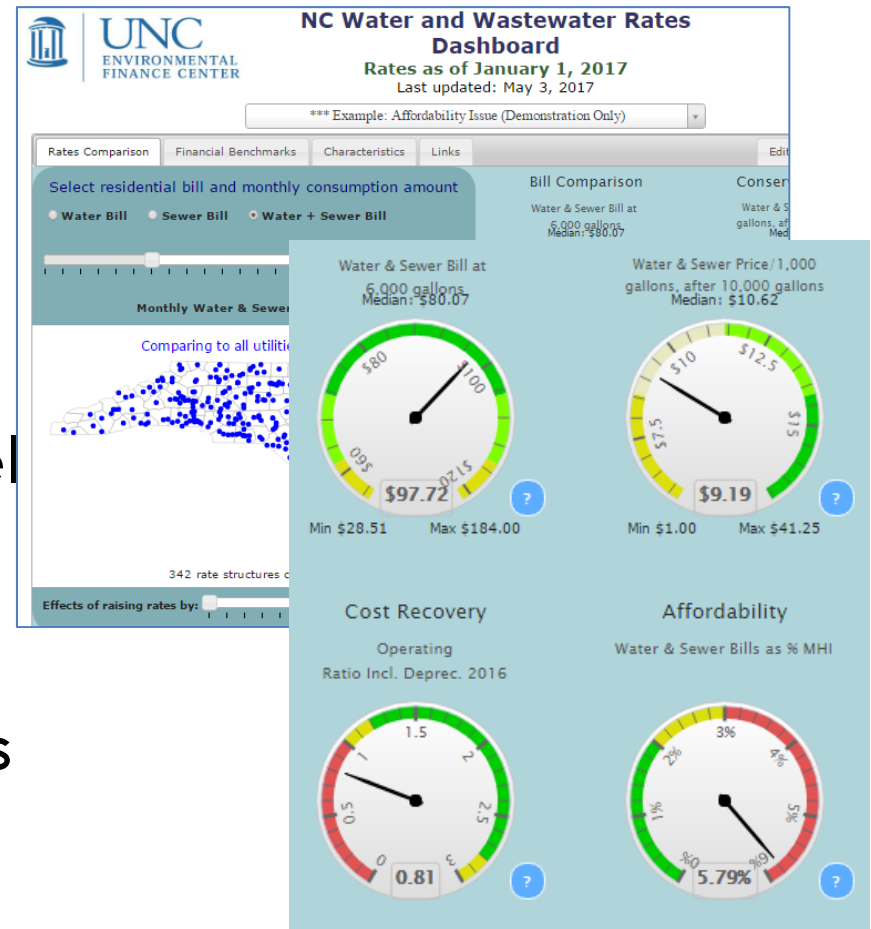
89.3 WFPL News Louisville

Water Is Unaffordable For Nearly Half Of Martin County, Ky. Residents, Report Finds



Some of the many “newish” barriers to universal affordability

- Increasing infrastructure/revenue needs
- Household incomes for many stagnant or falling
- Lack of national or state level assistance programs
- Challenges to funding local customer assistance programs



What question are you working on?

- *Is the financial capability of a water utility so distressed that they require special treatment (EPA)?*
- *How do you allocate scarce public infrastructure funding among different utilities? (Funding agencies)*
- *How do you decide what families are so distressed that they are allowed to pay less than others for water services (utilities)?*



Current Policy Debates

- Lumping or splitting?
 - Water, wastewater, stormwater, other essential services.....
- How do you Measure?
 - Metrics and Thresholds
- What level should it be addressed at?
 - Community, utility, household?
- What entity should lead?
 - Federal, State, utility, local government, Non-profit
- Who should pay?
 - Federal, state, local government tax payers
 - Utility customers
 - Bottled water drinkers?



Affordability in the Water Industry

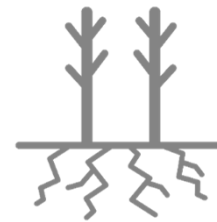
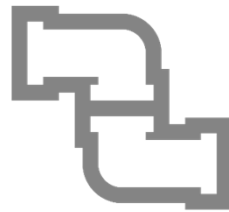
Affordability in the water industry can be visualized in three groups:

1. The financial capability for the water system to meet regulatory requirements
2. The financial requirements need for a water system to qualify for funding assistance
3. **And the ability of a customer or household to pay their water bill**



The Cause of Rising Water Rates

Aging infrastructure, current and new regulations, increasing frequency in drought years, and a utility's financial health, all contribute to increasing water rates. This can cause great hardship on communities, particularly those in states with high poverty rates.



Map of the United States showing the distribution of wastewater services by state. States are color-coded: dark blue for states with the highest percentage of wastewater services, medium blue for states with a moderate percentage, and light blue for states with the lowest percentage. A legend in the bottom right corner shows a dark blue rectangle labeled 'Puerto Rico'.

- Greater than \$860
- Between \$705 and \$860
- Between \$595 and \$705
- \$595 or smaller
- N/A

- Greater than 17.50%
- Between 15.25% and 17.50%
- Between 12.25% and 15.25%
- Less than 12.25%

Who is Affected by Increasing Water Rates?

Increasing water rates not only affects the customer, but your water utility's overall financial health.



How do you know if your utility has an affordability problem?

System Name (Population Served)	Annualized Cost for 18 CCF
Five Most Expensive Systems	
1. CA Water Service Co.—Lake Hughes (711)	\$2,244
2. CA Water Service Co.—Leona Valley (1296)	\$1,834
3. LA County Water Works Dist. #21—Kagel Canyon (991)	\$1,658
4. Park Water Company—Bellflower/Norwalk (67,200)	\$1,539
5. Park Water Company—Lynnwood/Compton (45,400)	\$1,502
Five Least Expensive Systems	
1. Maywood Mutual Water Co. #1 (5,500)	\$145
2. Pico Rivera Municipal Water Co. (39,000)	\$192
3. Lomita Municipal Water (20,256)	\$235
4. City of Industry Waterworks System (7,000)	\$278
5. LA County Waterworks Dist. #40—Antelope Valley (9,822)	\$282

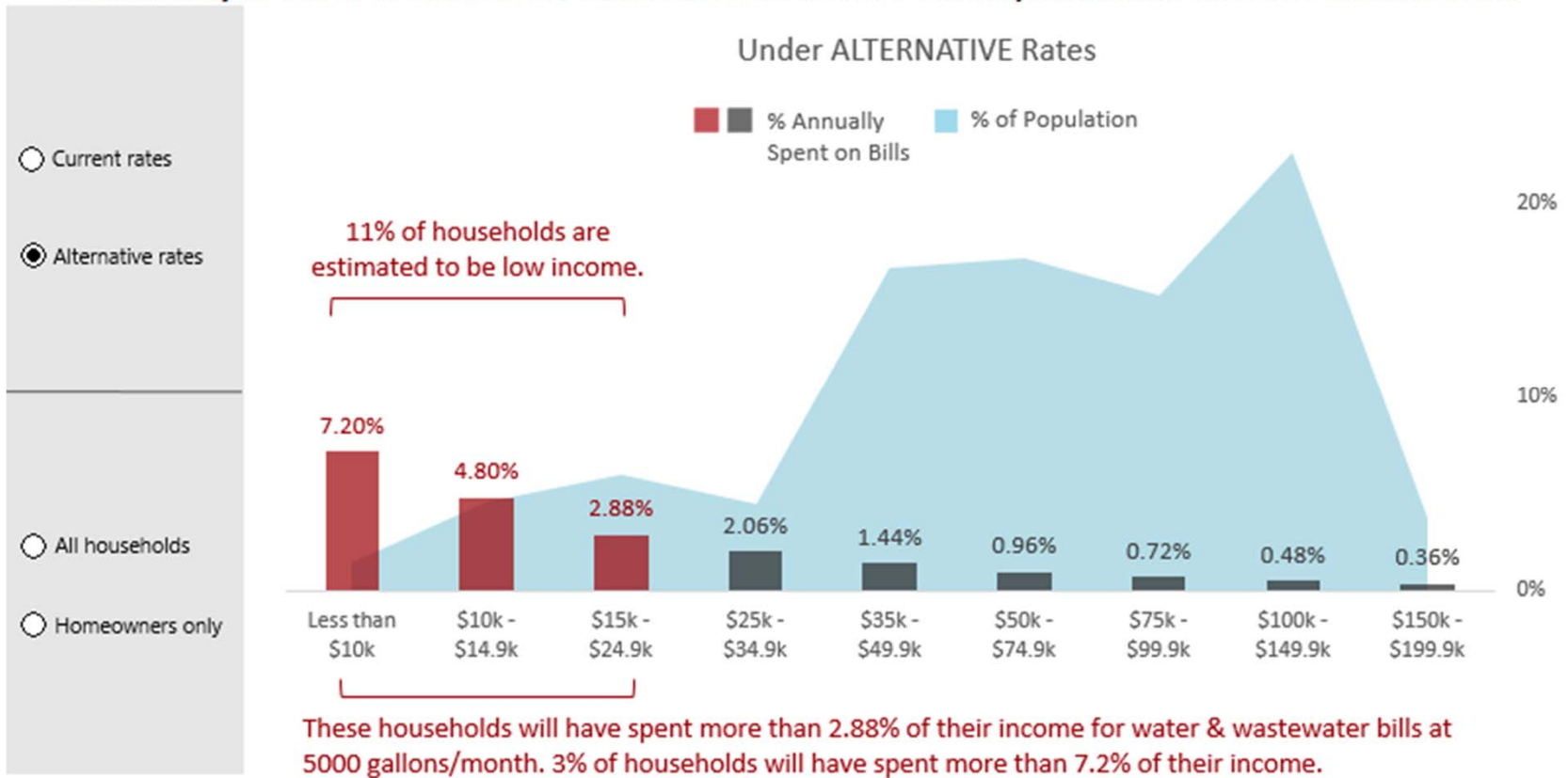
Source: Greg Pierce, UCLA. "Ensuring Drinking Water Affordability: Challenges and Opportunities in Current Policy Making at Local, State and National Levels." Water and Health Conference 2017. 17 Oct. 2017.

Determining if your utility has an affordability problem can be hard to assess. Simply comparing different utilities water rates is not helpful. This is due to the variability in water rates amongst utilities. A snapshot of Los Angeles County illustrates this variability.



EFC Affordability Assessment Tool

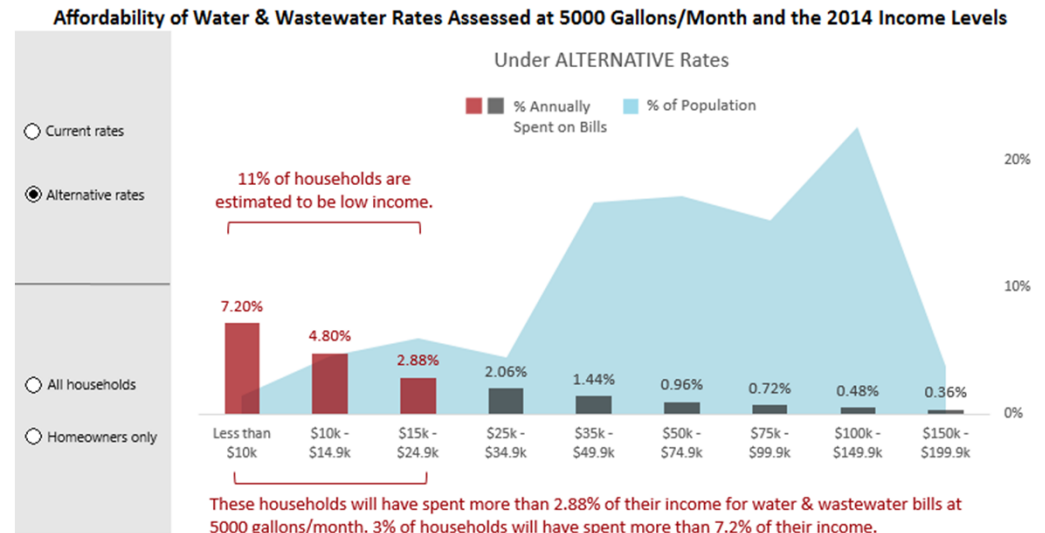
Affordability of Water & Wastewater Rates Assessed at 5000 Gallons/Month and the 2014 Income Levels



EFC Affordability Assessment Tool

What data do you need?

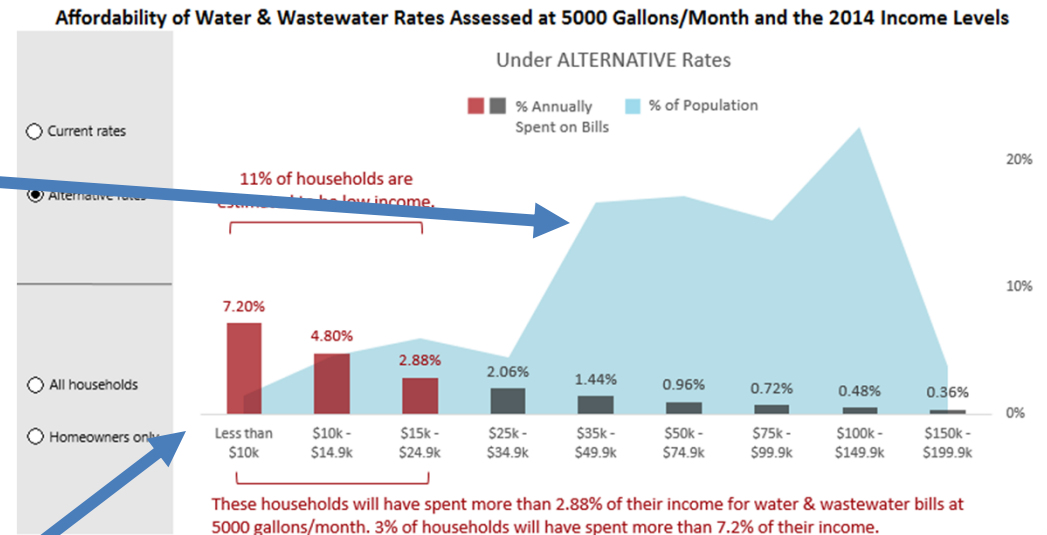
- The tool uses a combination of utility-level rates data and US Census data
- Input “income bucket” data for the community
- Input rates at a given usage



EFC Affordability Assessment Tool

What does the output look like?

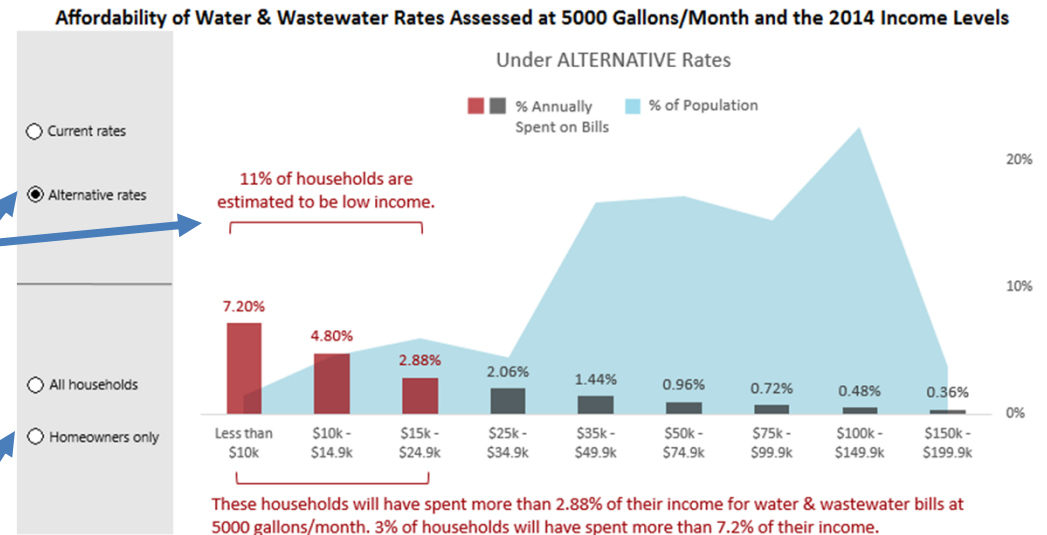
- The tool will show the proportion of your community in each bucket
- Will show the percent of annual income spent on water, wastewater, or water and wastewater for each bucket



EFC Affordability Assessment Tool

What does the output look like?

- The tool will show the percent of households estimated to be low income
- Can also be used to show the effect of new rates
- Can show the information for all households or just homeowners



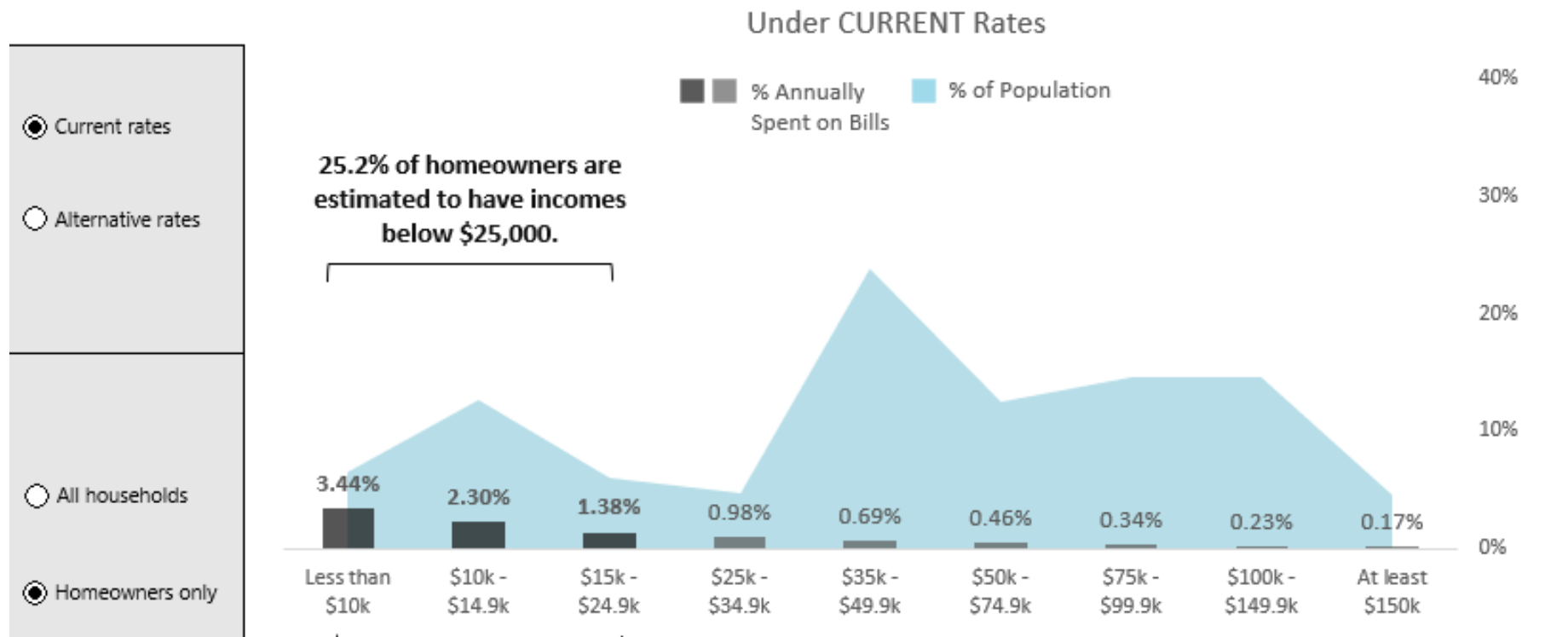
Challenges in Metrics

While these tools and methods can be helpful and informative in determining if an affordability problem exists in your utility or community, there are always challenges in determining what are/is the best metric(s) to use.



Halls, TN

Affordability of Water Rates Assessed at 4000 Gallons/Month and the 2017 Income Levels



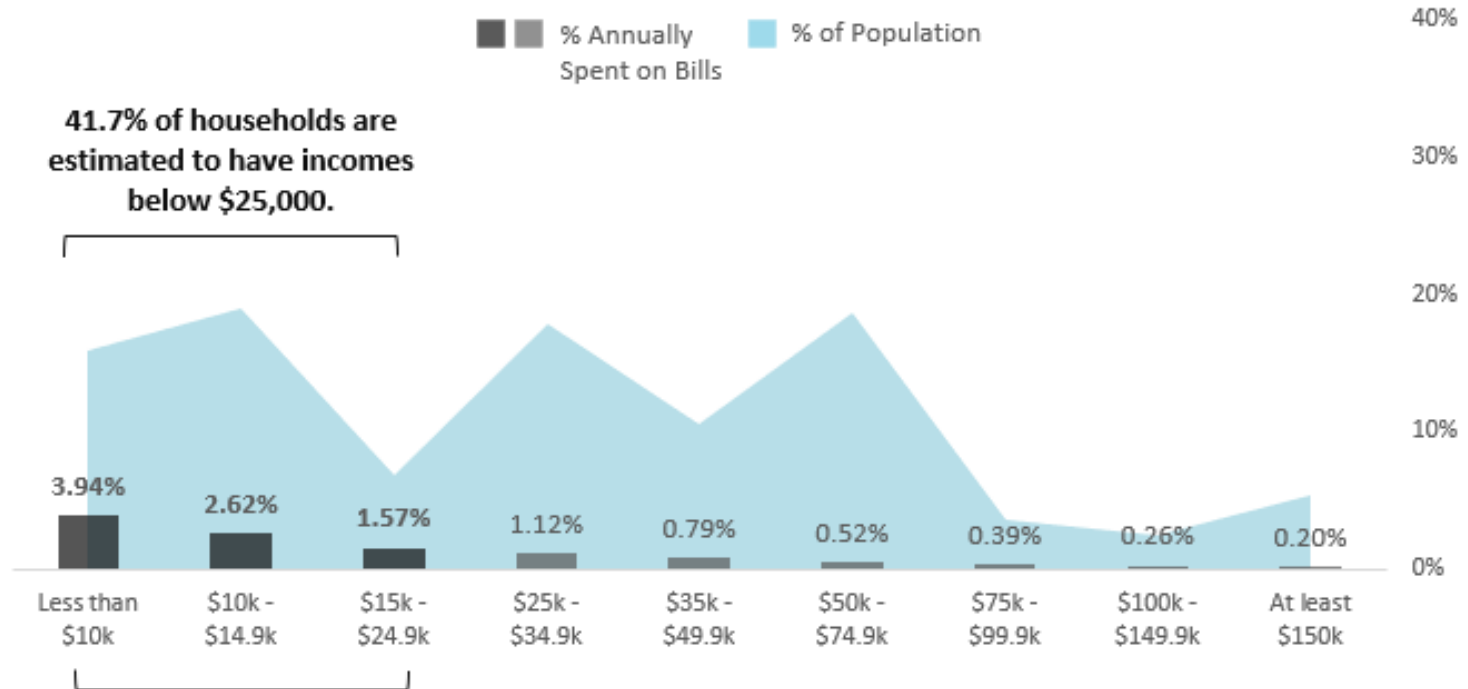
Pavo, GA

Affordability of Water Rates Assessed at 4200 Gallons/Month and the 2016 Income Levels

Under CURRENT Rates

■ % Annually Spent on Bills ■ % of Population

41.7% of households are estimated to have incomes below \$25,000.



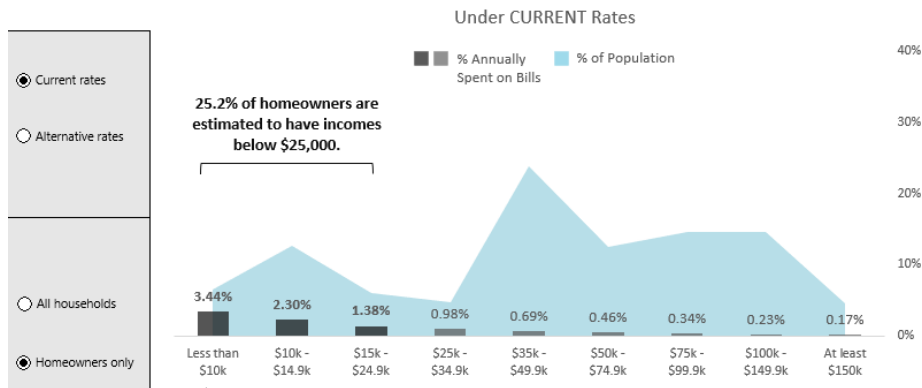
☒ Current rates

☐ Alternative rates

☒ All households

☐ Homeowners only

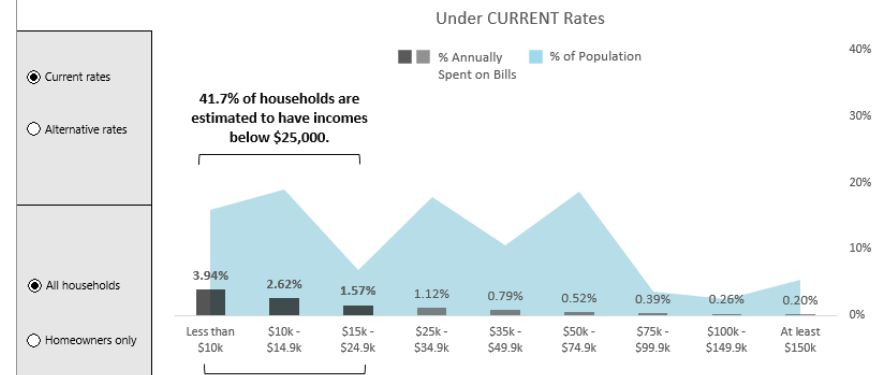
Affordability of Water Rates Assessed at 4000 Gallons/Month and the 2017 Income Levels



The MHI is not a good indicator of the wealth in this community.

The MHI is not a good indicator in this community, because almost half of the population is below 25k.

Affordability of Water Rates Assessed at 4200 Gallons/Month and the 2016 Income Levels



Addressing Affordability Challenges

So you have an affordability problem...



How can
you help
your
customers?



Types of Customer Assistance Programs

- Bill Discount
- Lifeline Rate
- Temporary Assistance
- Flexible Terms
- Water Efficiency



How you pay for it matters...

Generally, customer assistance programs (CAPs) are funded by volunteer contributions. However, at times, the funds collected from these contributions are not enough to run a robust customer assistance program.

What about rate revenue??



Navigating Legal Pathways to Rate-Funded Customer Assistance Programs

Navigating Legal Pathways to Rate-Funded Customer Assistance Programs:

A guide for Water and Wastewater Utilities

2017

Alabama

Water and wastewater utilities in Alabama fall under several rate setting regulatory systems.

Commission-Regulated Utilities

The [Alabama Public Service Commission](#) (APSC) regulates private water and wastewater companies in Alabama.²¹ Under [Ala. Code § 37-1-34](#), the APSC does not have the authority to regulate government-owned utilities. Furthermore, per [Ala. Code § 37-4-2.1](#), utilities serving less than 1,000 customers and purchasing water from a noncommission-regulated utility²² can choose to be exempt from APSC regulation and instead fall under that utility's municipal authority.

[Ala. Code § 37-1-81](#) states that commission-regulated utilities need to file rate schedules with the APSC before changing rates. In addition, [Ala. Code § 37-1-80](#) states that commission-regulated utilities must charge "reasonable and just" rates. Alabama follows the "rate base theory" when determining what is just and reasonable, with the rate base (to determine the fair rate of return) being "the valuation placed on the utility property."²³ [Ala. Code § 37-1-124](#) considers rates set by the APSC to be *prima facie* just and reasonable.²⁴ Furthermore, when the APSC finds rates to be unjust and unreasonable, [Ala. Code § 37-1-97](#) gives it the power to adjust them to be just and reasonable.

Thus, commission-regulated utilities would likely need specific approval, in the form of an APSC order, to charge rates to be used to fund a low-income customer assistance program (CAP).

Noncommission-Regulated Utilities

Municipalities, including cities and towns, have the right to operate and maintain rates for water utilities.²⁵ They are not subject to APSC regulation and thus can set their own water and wastewater rates.²⁶ For wastewater rates, under [Ala. Code § 11-50-121](#), "all such charges shall be uniform for the same type, class, and amount of use or service by or from the sewer system." This code also lists factors that can be used to set rates, but does not mention socio-economic factors.²⁷

Commission-regulated utilities

Noncommission-regulated utilities

State Population (2016): 4,863,300

Median Annual Household Income (2015): \$43,623

Poverty Rate (2015): 18.8%

Typical Annual Household Water and Wastewater Expenditures (2016): \$775

Alabama has 516 community water systems (CWS), of which 17 are privately-owned and 406 serve populations of 10,000 or fewer people. Alabama has 291 publicly owned treatment works facilities (POTWs), of which 204 treat 1 MGD or less. 58,937 people are served by privately-owned CWS; 5,548,854 are served by government-owned CWS; and 2,420,993 are served by POTWs.

Estimated Long-Term Water and Wastewater Infrastructure Needs: \$11.0 billion

Sources: U.S. Census Bureau 2016 Population Estimate & 2011-2015 American Community Survey 5-Year Estimates, 2016 EPC Rates Survey, U.S. Environmental Protection Agency's 2016 Safe Drinking Water Information System, 2011 Drinking Water Infrastructure Needs Survey & 2012 Clean Watersheds Needs Survey. See Appendix I for more details.

Based on the limits laid out above, noncommission-regulated water utilities appear to have very broad rate-setting authority that could be used to implement low-income CAPs funded by rate revenues. On the other hand, because of the aforementioned specific statutory limitation, wastewater utilities might face legal challenges if using rate revenues to fund low-income CAPs, but such programs would face fewer obstacles than programs using income-indexed rates or discounts.

Why is the Focus on Rate Revenue?

- Limited and unpredictable nature of volunteer contributions
- Consistent and robust form of revenue to fund customer assistance programs
- Offers opportunity to build in low income protection into cost of service
- Success of existing customer assistance programs
- Widest variation in assistance options



What's in the Report?

- State summaries that provide an analysis of principle legal barriers and opportunities to establishing a customer assistance program for water and wastewater utilities in each of the 50 states, as well as the District of Columbia and several other territories
- Utility level case studies to show how some programs have been established within existing legal frameworks
- Potential models from other sectors, as well as other countries



Note: This is an excerpt from a larger report, "Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities." To access the whole report, go to <https://efc.sog.unc.edu/pathways-to-rate-funded-customer-assistance>.

Hawaii

Water and wastewater utilities in Hawaii fall under several rate setting regulatory systems.

Commission-Regulated Utilities

The [Hawaii Public Utility Commission](#) (Hawaii PUC) regulates private water and wastewater companies in Hawaii.⁹⁸ The Hawaii PUC does not regulate government-owned water and wastewater utilities.

Under [Hawaii Rev. Stat. § 269-16](#), all commission-regulated rates shall be *just and reasonable* and shall be filed with the Hawaii PUC. Further, a commission-regulated utility's rates must not be departed from except on prior approval of the commission.⁹⁹

Additionally, if a commission-regulated utility wants to implement a rate increase, a hearing may be held where the utility may present testimony to the commission concerning the increase. The commission may then fix the rates to be *just and reasonable*, and "may

Commission-regulated utilities

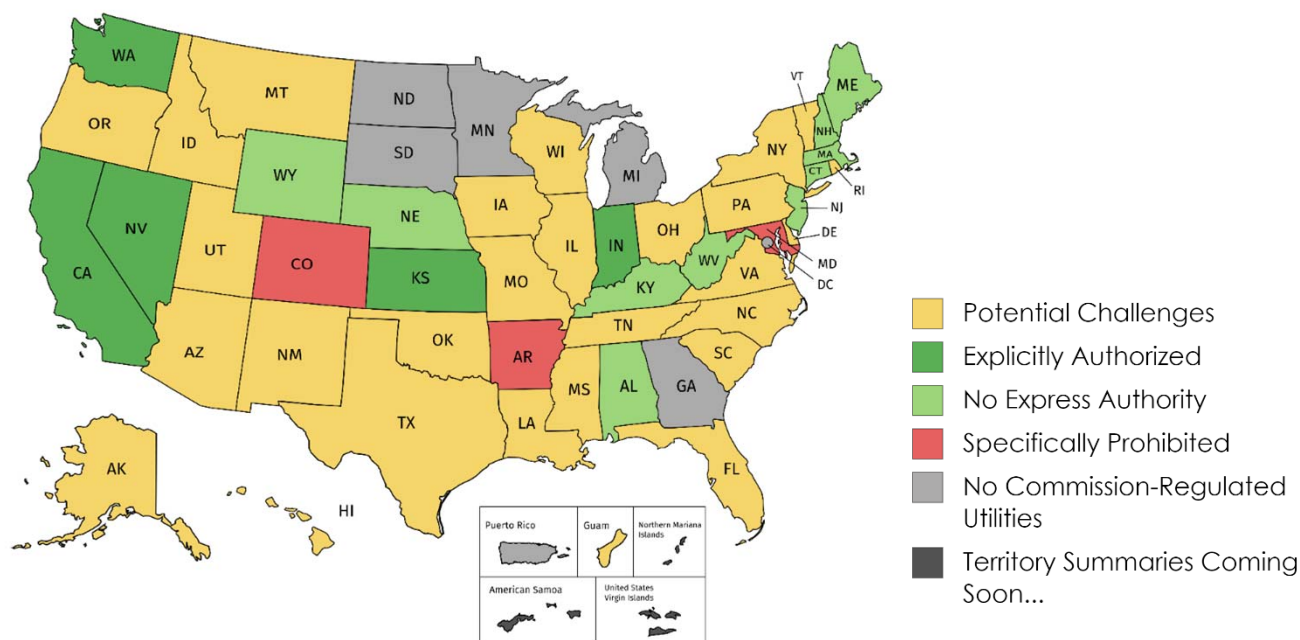


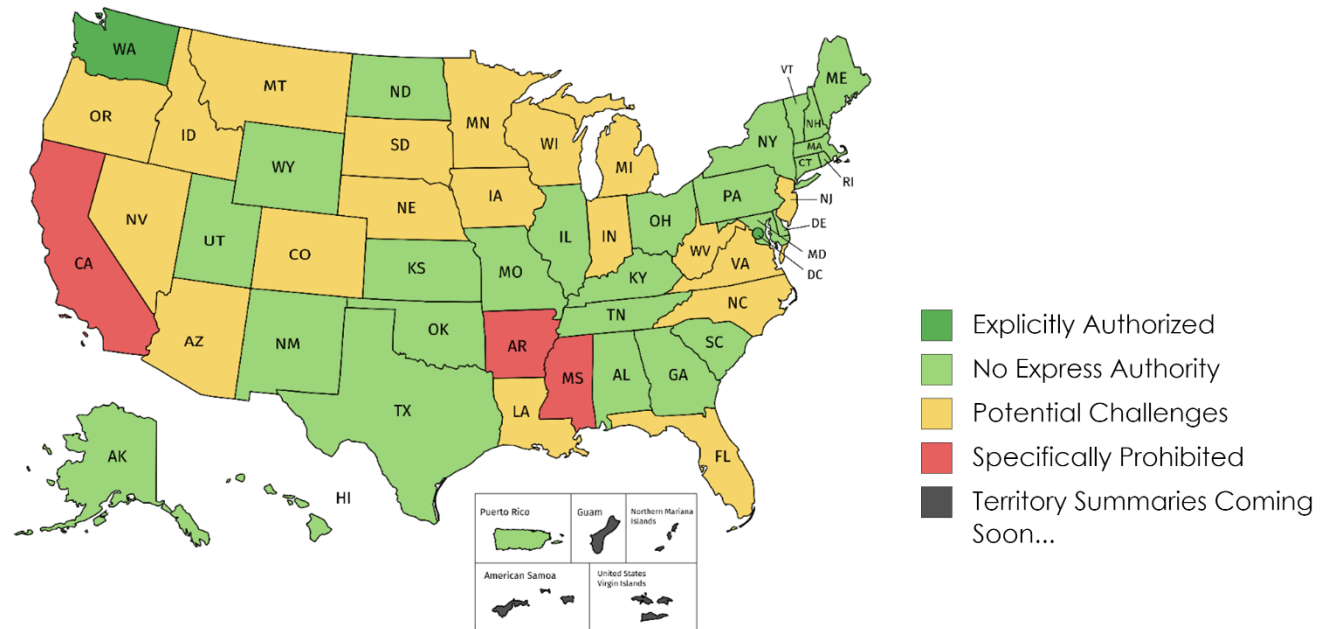
Noncommission-regulated utilities



State Population (2016):	1,428,557
Median Annual Household Income (2015):	\$69,515
Poverty Rate (2015):	11.2%
Typical Annual Household Water and Wastewater Expenditures (2015):	\$1,668
Hawaii has 117 community water systems (CWS), of which 45 are privately owned and 100 serve populations of 10,000 or fewer people.	
Hawaii has 22 publicly owned treatment works facilities (POTWs), of which 11 treat 1 MGD or less.	
57,105 people are served by privately owned CWS; 1,436,450 are served by government-owned CWS; and 826,376 are served by POTWs.	

Commission-Regulated Utilities: Ability to Implement CAPs Funded by Ratepayers Revenues, by State and Territory





Addressing Affordability at State Level

State Revolving Fund Programs: Loan Terms and Principal Forgiveness

The State Revolving Funds (SRF) were created as a federal and state partnership to help water and wastewater systems finance infrastructure projects with low-interest loans to protect public health and comply with regulations. While requirements can vary between the Drinking Water and Clean Water SRFs, both programs have the flexibility to offer favorable terms – such as lower interest rates and extended loan terms—and additional subsidization in the form of principal forgiveness, negative interest rates, or grants. States are often required to offer a certain percentage of their capitalization grant as additional subsidization. Each state can establish criteria to determine which communities receive these types of financial assistance. The SRF programs have different rules on how to allocate additional subsidization. For drinking water, states can create their own criteria or use their existing criteria that constitutes disadvantaged communities. For clean water, states can use specific metrics such as population, income, and unemployment to identify these communities. However, states may also provide additional subsidization to projects that encourage sustainability or to non-disadvantaged communities that have residential ratepayers who would experience hardship from the municipality taking on a loan.



Targeting the Right Communities

With current and future water challenges, many communities need financial assistance; therefore, access to better terms and/or principal forgiveness allows communities to advance projects that might not have otherwise been possible. Carefully examining and modifying eligibility criteria allows a state to allocate funds where they are most needed and target communities who will not quite meet the new criteria to receive principal forgiveness—for example, with favorable loan terms.

Projects and Research

The EFC has worked with the Georgia Environmental Finance Authority to redevelop their principal forgiveness eligibility criteria for their SRF programs. Using data from the state's water rates dashboard and the Census Bureau's American Community Survey, the EFC created a toolkit to assist program managers/directors to better understand different financial challenges facing communities and to better target principal forgiveness funds. The EFC is compiling current methods and metrics used by states in different EPA regions as a resource for small communities seeking this assistance and states interested in learning from their peers. Our research will guide future state projects and development of toolkits.

State-Focused Toolkit

The EFC works with individual states to create a customized toolkit that can include a(n):

- Personalized Excel Tool
- Evaluation of Current Methodology and Policy
- New Methodology/Scenario Building
- Comparison Analysis of Current vs. New Methodology
- Rates Dashboard
- EPA Region Analysis
- Toolkit Workshop

Summary of Research



Scenarios

Scenarios of Methods Used to Determine Principal Forgiveness Eligibility- Region 4, 9, and 10

1	2	3	4	5
<ul style="list-style-type: none">Systems are ranked and placed on the Project Priority List to determine whether or not they will receive State Revolving Funds. For principal forgiveness, separate criteria are used to determine whether an applicant is eligible. Thus, if an applicant is determined eligible for principal forgiveness funds and has a high Project Priority List score, then the applicant is likely to receive assistance.	<ul style="list-style-type: none">There are no separate criteria used to determine principal forgiveness eligibility because it is integrated in the criteria used to determine the Project Priority List score. Therefore, the higher the Project Priority List score is, the more likely the applicant will receive principal forgiveness.	<ul style="list-style-type: none">The Project Priority List ranks applicants based on criteria that includes points for affordability, and separate criteria are used to determine whether an applicant is eligible for principal forgiveness. Including additional points in the Project Priority List criteria can increase the chances of an applicant receiving principal forgiveness.	<ul style="list-style-type: none">The state tries to use other methods, such as lower interest rates and extended loan terms, to alleviate the financial burden of taking on a State Revolving Fund loan before giving out principal forgiveness. This further prioritizes applicants who are eligible and can receive principal forgiveness.	<ul style="list-style-type: none">Depending on project type, systems are ranked and placed on the Project Priority List, with certain projects prioritized over others. Then, any criteria from scenarios 1-4 is used to determine principal forgiveness eligibility.
AK	~HI	GA	~ID	OR



Common Metrics

- **Region 4**
 - MHI
 - Population Change
 - Water Rates
 - Number of Connections, Poverty Rate, Total Appraised Value of Property
- **Region 9 and 10**
 - MHI
 - Water Rates
 - Population
 - Debt
 - Colonia Area, Poverty Level, Type of Project, O&M, Consolidation



Questions?



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