



# **Water Service Rates, Bill Burdens, and Financial Sustainability**

**Affordability Study and System Assessment**

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# Presentation Outline:

1. Water Service Rates
2. Water Bill Burdens
3. Financial Sustainability
4. Next Steps



Key Messages:

- Rates must recover costs of service
- PWWSB's rates are burdensome yet inadequate
- PWWSB's crisis and rates demand immediate and long-term actions
- Crisis resolution and sustainability will require fundamental change over the next generation

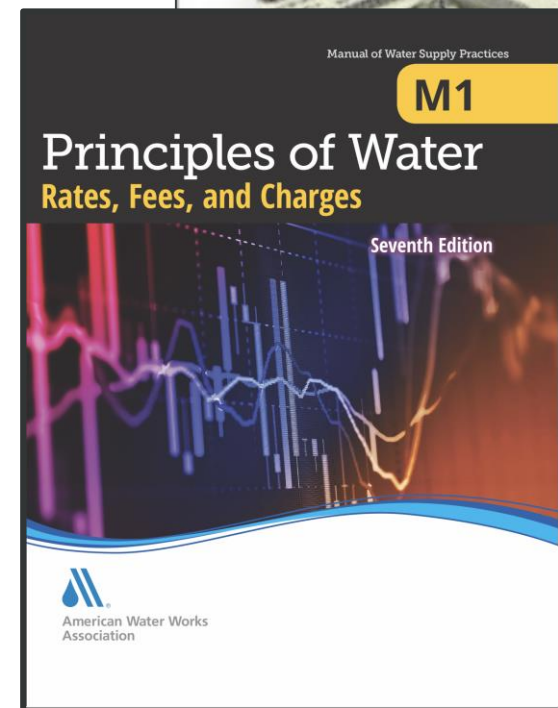
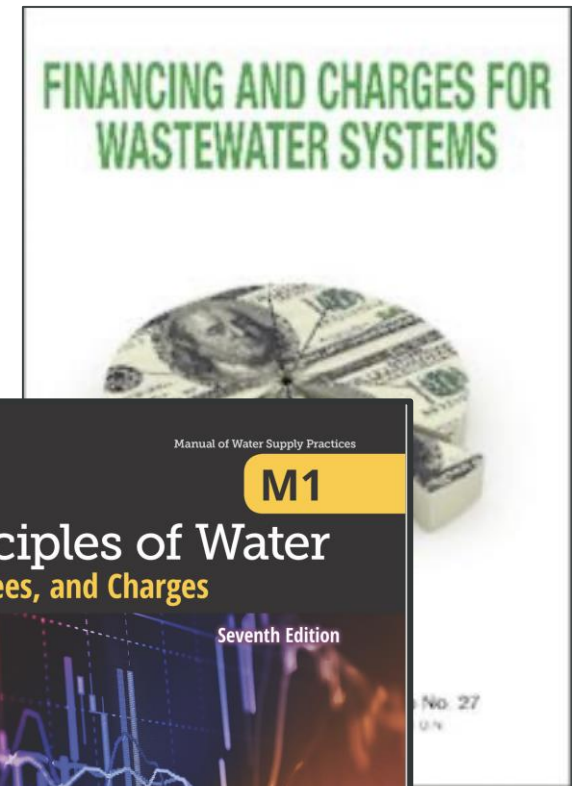
Water Service Rates, Bill Burdens, and Financial Sustainability

# Water Service Rates

## Water Service Rates

# Principles and Practices

- Ratemaking objectives
  - Full cost recovery
  - Revenue / rate stability
  - Promote efficiencies
  - Simplicity / understandability
  - Legal defensibility
    - Just, reasonable, non-discriminatory



## Water Service Rates

# Water Costs

- Source of supply
- Pumping
- Treatment
- Transmission
- Distribution
- Metering
- Billing / Customer Service
- Administration / General

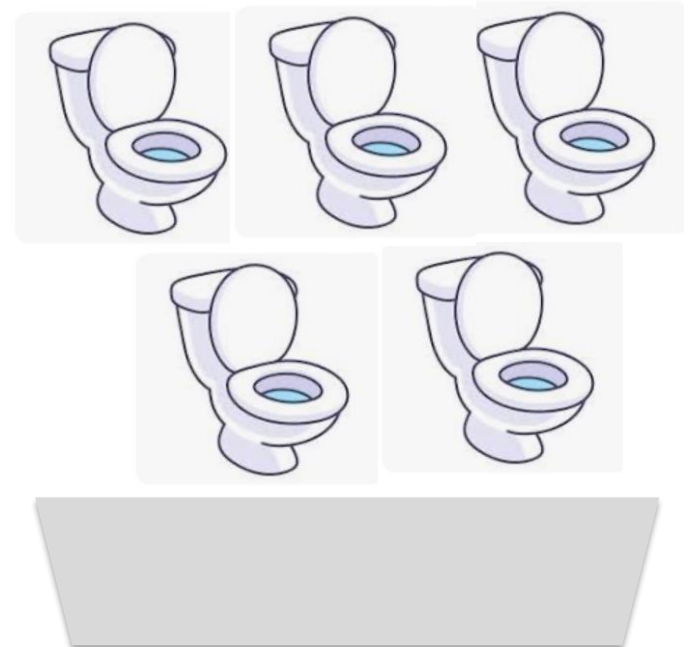


## Water Service Rates

# Wastewater Costs

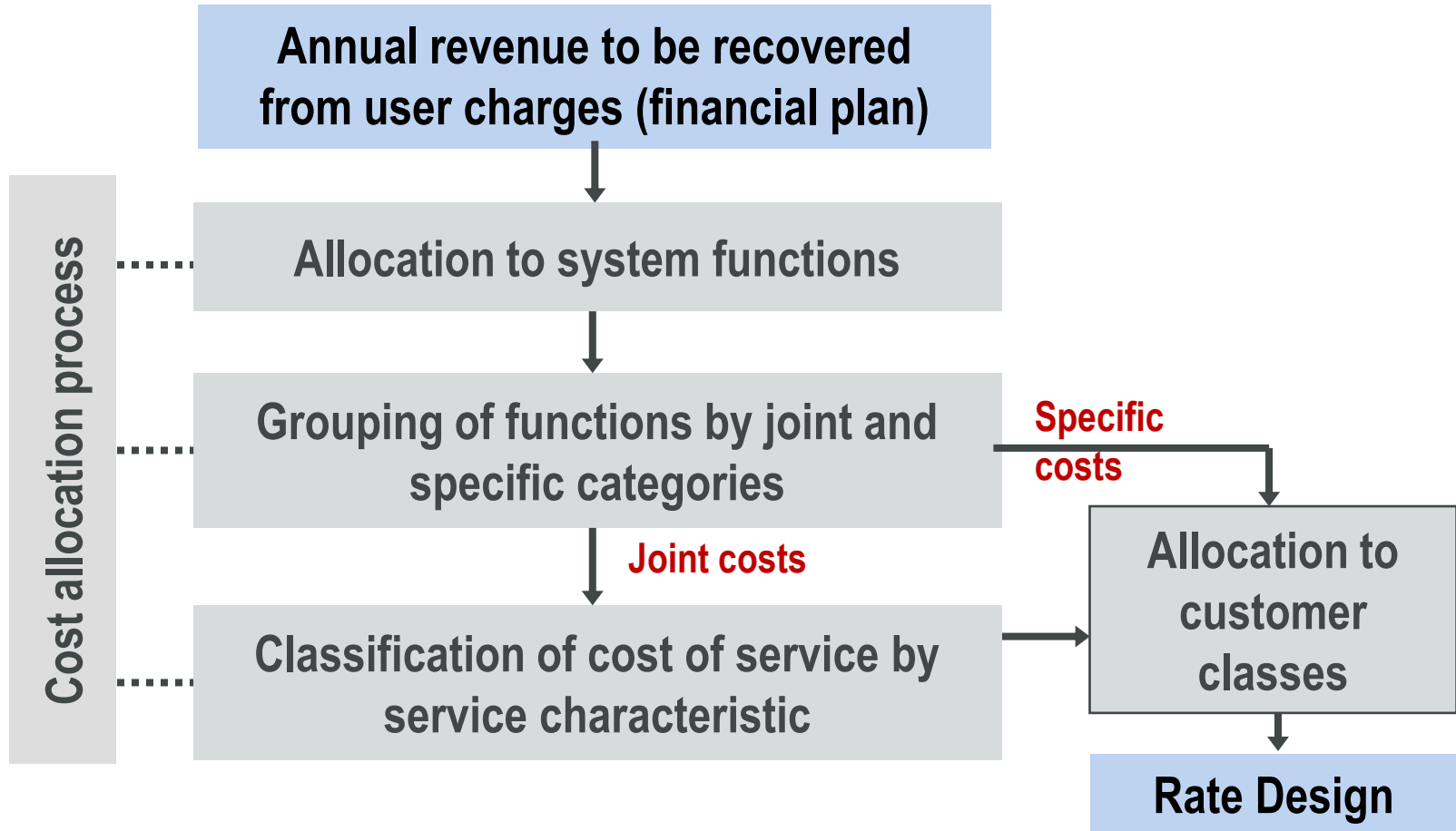
- Collection
  - Lift stations
- Transmission
- Treatment
- Biosolids Management
- Billing / Customer Service
- Administration / General

### Utility Functions



- O&M expenses
- Capital Expenses:
  - PAYGO / Debt
- Other Expenses / Reserves

# Cost of Service Analysis



# PWWSB Financial Plan Challenges

Financial Plan Attributes	PWWSB Challenges
Full cost recovery	<ul style="list-style-type: none"><li>• Acute overall rate revenue inadequacy</li><li>• Collections issues</li><li>• Federal / state grants intermittent – not sustained</li></ul>
Operating inefficiencies	<ul style="list-style-type: none"><li>• Water losses</li><li>• Absence of scale economies</li></ul>
Capital financing	<ul style="list-style-type: none"><li>• External – no sustained investment / reinvestment funds</li><li>• No access to capital markets</li></ul>
Legal defensibility	<ul style="list-style-type: none"><li>• Default / Receivership</li></ul>



## Water Service Rates

# PWWSB Rate Design Options

- Water and Wastewater Service Rate Design
  - Base / customer charges
  - Quantity allowance
  - Volumetric rates
- Customer Assistance Program
  - Limited potential for utility revenue funding
  - Limited internal PWWSB administrative capacity
  - Philanthropic initiatives
    - Example: The Human Utility

**Prichard Water Works & Sewer Board**  
Schedule of Rates  
Effective November 1, 2023

Meter Size	Consumption	Per	Fees & Charges Effective Date Nov. 1, 2023		Comments
			Water	Sewer	
3/4"	2,000	gallons	\$ 31.24	\$ 31.24	
1"	3,500	gallons	\$ 70.28	\$ 70.28	
1 1/2"	4,000	gallons	\$ 70.28	\$ 70.28	
2"	4,000	gallons	\$ 85.91	\$ 85.91	
3"	8,000	gallons	\$ 214.72	\$ 214.72	
4"	22,800	gallons	\$ 429.43	\$ 429.43	
6"	54,200	gallons	\$ 566.04	\$ 566.04	
8"	74,200	gallons	\$ 1,428.74	\$ 1,428.74	
			\$ 2,146.96	\$ 2,146.96	*Commercial

**Water Cost Per Thousand Gallons**  
Above Minimum Consumption for Meter Site

**Fire Hydrants Owned & Maintained by the Board:**  
Plus \$ 6.80 per thousand gallons

**Private Fire Protection (facilities owned by the customer):**  
Monthly \$ 39.03 \$ 468.41 per annum

**Trailer Courts and Multiply Units:**  
No less than the minimum of \$ 39.03 \$ 468.41 per annum

**Automatic Sprinkler System:**  
Minimum charge of Water \$ 31.24 per unit + tax

**Sewer Rate:**  
Above Minimum Consumption for Meter Site \$ 31.24 per month + tax or 1.95 per head per annum plus tax (whichever is greater)

Plus \$ 8.23 per thousand gallons

Water Service Rates, Bill Burdens, and Financial Sustainability

# Bill Burdens

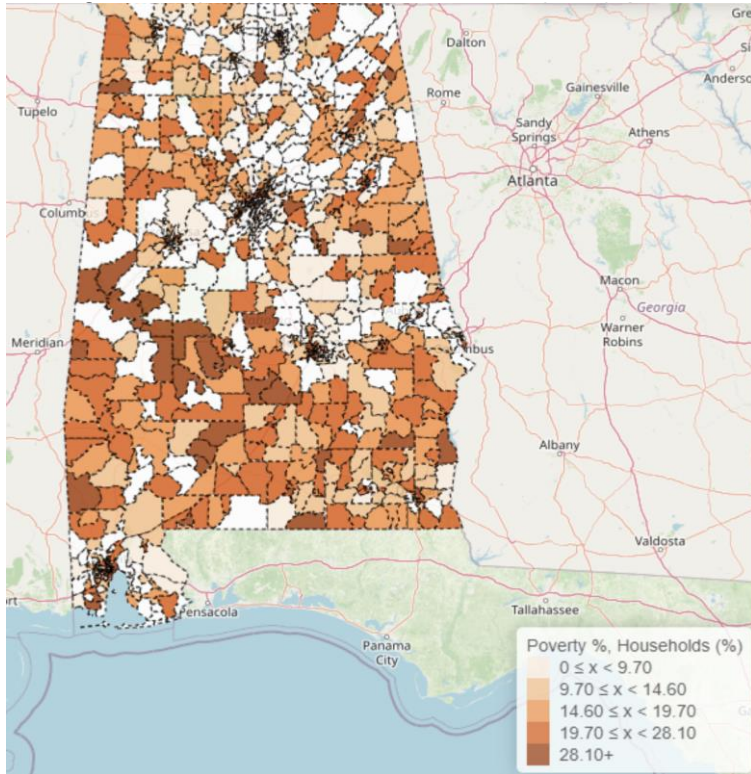
## Bill Burdens

# Context: Water Bill Affordability Measurement

- Residential Indicator
  - Bill (or calculated Cost Per Household) as % of Median Household Income
- Lowest Quintile Residential Indicator
  - Bill (or calculated CPH) as % of Lowest Quintile Income
- Hours at Minimum Wage
  - Basic water and sewer costs converted to hours at min. wage
- Comparisons to Other Communities

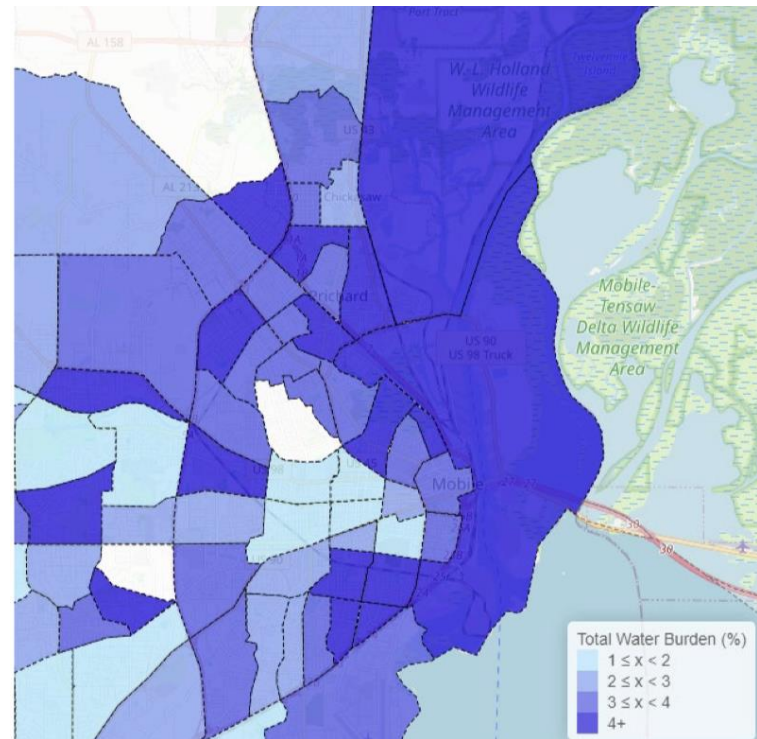
## Bill Burdens

# PWWSB Context: A Pocket of Poverty



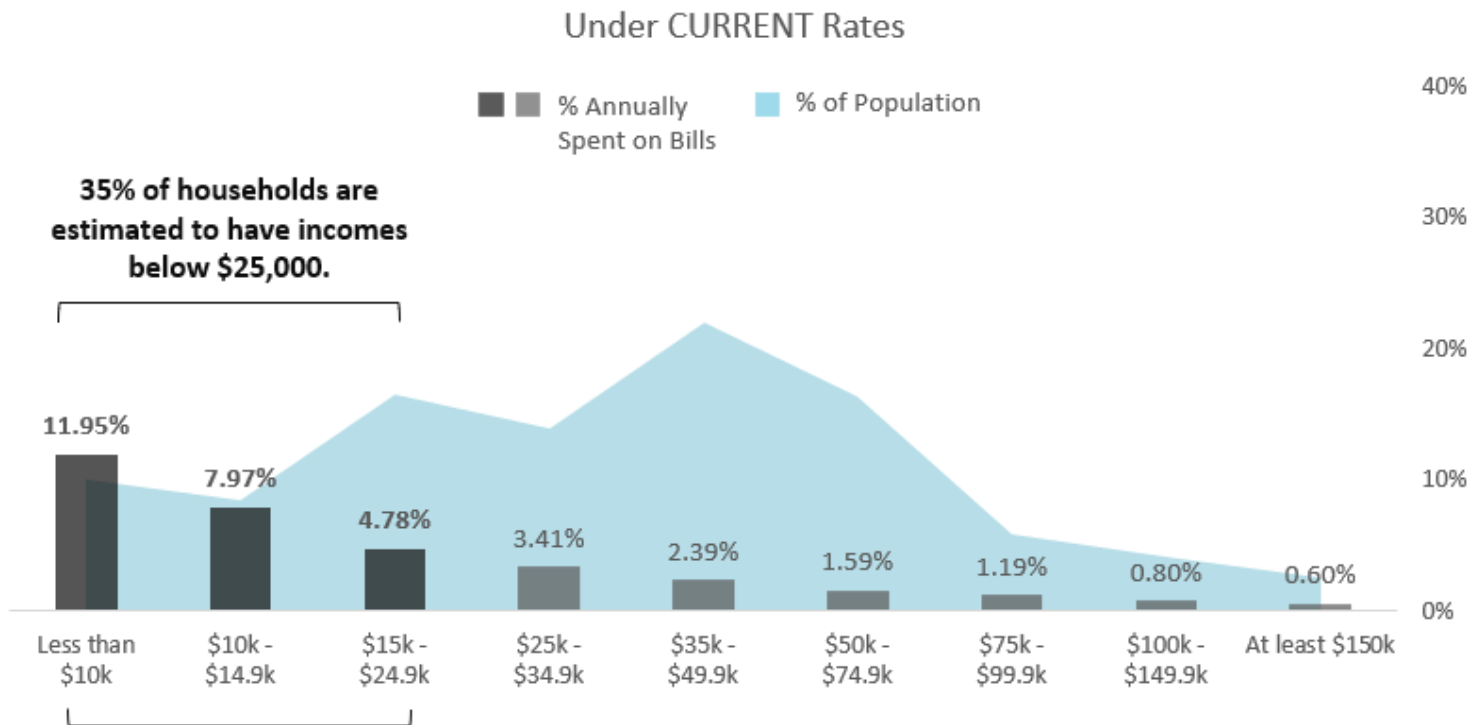
16.2 % of Households in Poverty in AL (2022)

Water Burden, Prichard & Chickasaw AL -  
Current Total Bill (\$99.56)



# PWWSB Water Bill Burden Distributions

Prichard: All Households - Affordability of Water & Wastewater Rates Assessed at 4,500 Gallons/Month & the 2022 Income Levels – **at CURRENT Rates**

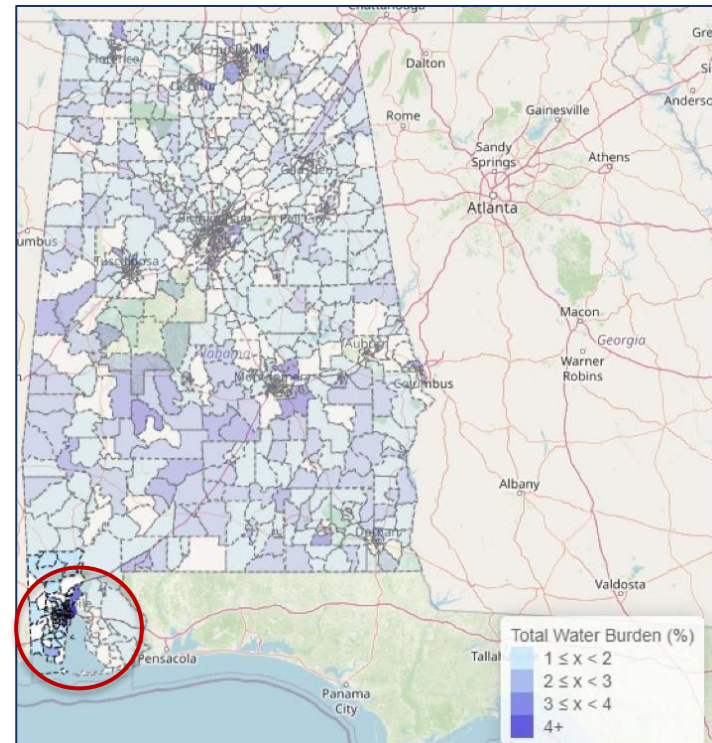
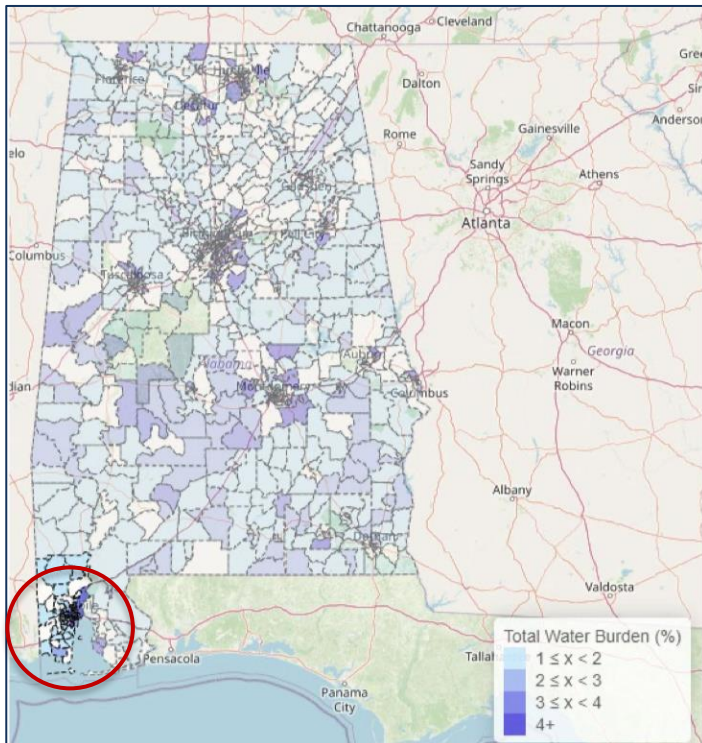


## Bill Burdens

# PWWSB's Relative Water Bill Burden

Water Burden, Typical Water Bill -  
Alabama - Current Total Bill (**\$70.00**)

Water Burden, Typical Water Bill - AL -  
Total Bill **Increased by 20% (\$84.00)**



PWWSB rates/ bills substantially higher than “typical” AL system, burden is pronounced due to income levels



## Bill Burdens

# Estimates and Comparisons

UNC EFC -- AL Water and Wastewater Rates Dashboard indicates median combined water and sewer bill for 4,500 gallons was \$64.07 across Alabama as of July 2023.



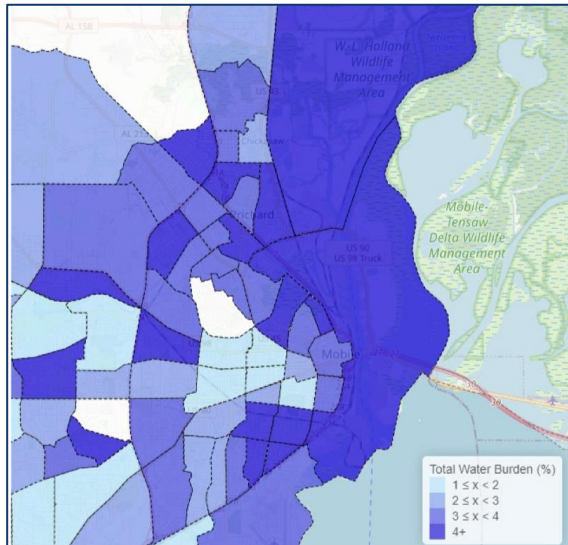
Annual Bill Comparison Summary									
Volume of water for typical residential bill (per month)								4,500 gallons	
3/4 Inch Meter, Rate Increases applied uniformly to all billing determinants									
	PWWSB				MAWSS			BWWSB-JEFFCO	Atlanta
	Current Bill	Rate/ Bill Increases			Current Bill	Rate/ Bill Increases		Current Bills	
		10%	20%	40%		10%	20%		
Water	\$572.88	\$630.17	\$687.46	\$802.03	\$264.54	\$290.99	\$317.45	\$705.84	\$363.84
Wastewater	\$621.78	\$683.96	\$746.14	\$870.49	\$597.24	\$656.96	\$716.69	\$1,021.20	\$920.40
Total	\$1,194.66	\$1,314.13	\$1,433.60	\$1,672.52	\$861.78	\$947.95	\$1,034.14	\$1,727.04	\$1,284.24

- Yet, state and regional examples of similarly high rates in large systems (with pockets of poverty within service areas)

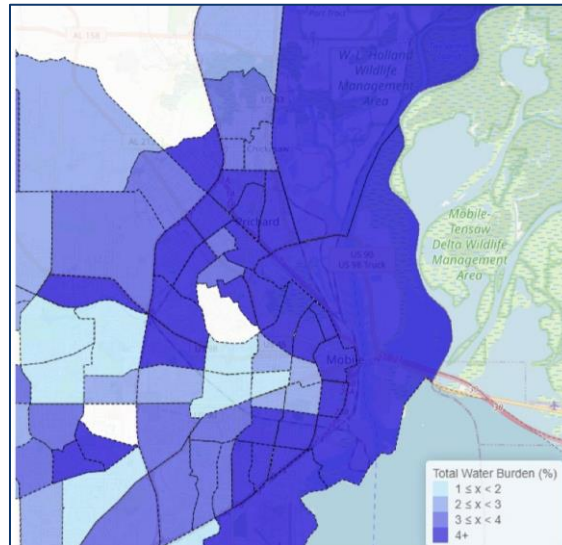
## Bill Burdens

# PWWSB Bill Burdens with Rate Increases

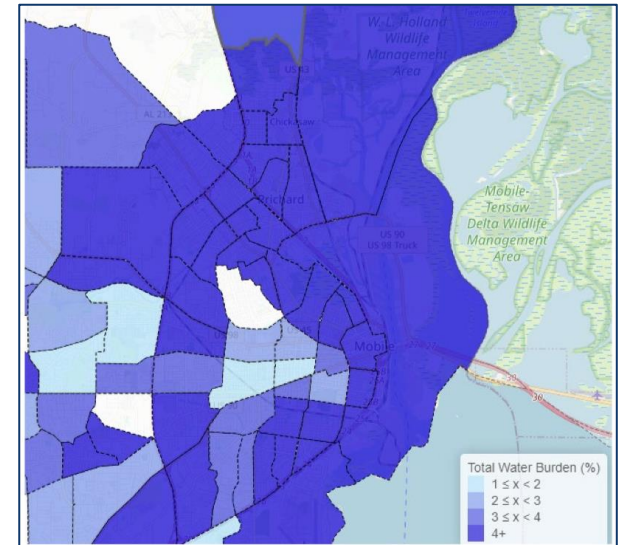
Water & Sewer Bill Increased  
by 10% (\$109.52)



Water & Sewer Bill Increased  
by 20% (\$119.47)



Water & Sewer Bill Increased by  
40% (\$139.8)



- Potential rate increases have marginal impact on already difficult bill burden levels, and not unprecedented in state, regional and national context



# Financial Sustainability

## Customer Assistance Program Funding

- External Sources
  - Utility customers (e.g., Bill Round-up)
  - Philanthropic organizations
    - Community organizations
    - Technology applications
- Utility Revenues
  - AWWA Policy Statement (Oct. 24, 2018)
    - “Low-income customer assistance can take many different forms that should be designed and implemented to meet the unique challenges of individual communities and may be considered as an appropriate component of system revenue requirements.”



## Financial Sustainability

# Customer Assistance Program Design

- Eligibility criteria
  - Income screening vs categorical
- Forms of Assistance
  - Bill assistance
    - Regular or one-time (for emergency / hardship)
  - Delinquency management
    - see next slide
  - Plumbing assistance
  - Education



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# Financial Sustainability

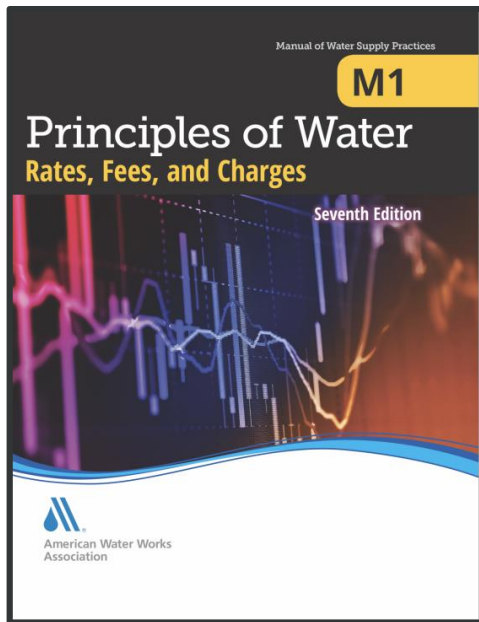
## Financial Sustainability

# Industry Guidance

- AWWA / WEF
  - Ratemaking Manuals of Practice, Affordability Policy
- AWWA/APWA/AMWA/NACWA/NAWC/WEF
  - Effective Utility Management Primer
- EPA's Environmental Finance Advisory Board
  - Financing Strategies to Promote System Regionalization

## Financial Sustainability

# AWWA / WEF Manuals of Practice

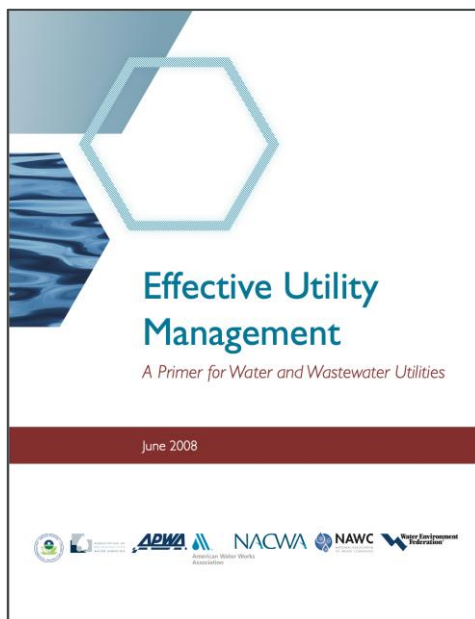


### Section II: Revenue Requirements

The determination and establishment of a utility's revenue requirements is the basis for setting the overall level of the utility's rates, while providing the utility with adequate and sustainable funding levels for both operating and capital costs.

## Financial Sustainability

# Effective Utility Management



### Financial Viability

Understands the full life-cycle cost of the utility and establishes and maintains an effective balance between long-term debt, asset values, operations and maintenance expenditures, and operating revenues. Establishes predictable rates—consistent with community expectations and acceptability—adequate to recover costs, provide for reserves, maintain support from bond rating agencies, and plan and invest for future needs

## Financial Sustainability

# Regionalization - Consolidation



**Industry structure** – The sector is characterized by many smaller utilities with too few customers to safely and cost-effectively deliver services in compliance with applicable regulations.

**Utility resistance** – Voluntary acceptance and pursuit of structural options that may advance sector restructuring is limited, often despite evidence of potential cost savings, service improvements, improved capacity utilization and other benefits. **This resistance may derive from vested interests, use of utility enterprise funds to subsidize other governmental services or simply a predilection for local control.**

## Financial Sustainability

# Industry Examples: Crisis Resolution

- Detroit (and Flint), MI
- Jefferson County, AL
- Jackson, MS
- New Orleans, LA



## Financial Sustainability

# City of Detroit

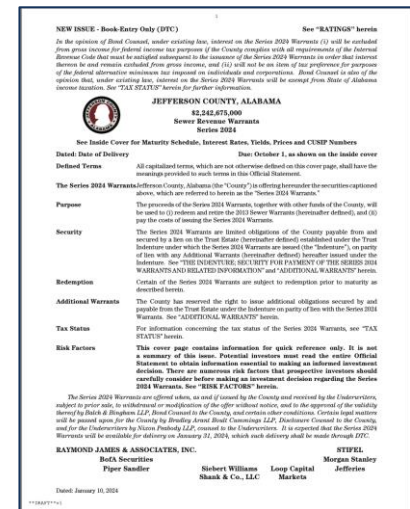
- Population decline: 1.8 M in 1950 to 0.7 M in 2013
  - 38% below poverty
- Largest municipal bankruptcy in U.S. history – superseding Jefferson County
  - \$5.2B of DWSD debt impaired in conjunction with impairment of City of Detroit G.O. debt
- Mediation in April 2014 for creation of new regional authority (GLWA)
- **Flint Water Crisis** occurred after Flint exited regional system at least in part to wrest control of system.



# Financial Sustainability

## Jefferson County, AL

- Cumulative rate increase of 76.4 percent over the 10-year reporting period, FY 2013 to FY 2022.
  - The County plans to continue to impose 3.49 percent annual increases over the forecast period.
- Operational and capital project delivery improvements have been implemented.
  - Constrained operating expenses to align with projections included in the 2013 Sewer Warrants offering documents.
- Implemented a capital improvement program that reflects sound engineering and asset management principles.
- The County has established a ten-year track record of sound System management following entry of the bankruptcy Plan of Adjustment.



## Financial Sustainability

# Options / Constraints for PWWSB

- Revenue growth – enhancement
  - Limited potential for meaningful customer expansion
  - Rate increases will further strain affordability
- Operating expense reduction
  - Investment required to address inefficiencies
  - Effectively no economies of scale available
- Capital improvement project funding
  - Limits of available grants / external resources
  - No access to capital markets (default)
- Regionalization / consolidation
  - Utility / stakeholder resistance
  - Substantial system reinvestment requirements

Draft  
Master Plan  
Considerations

Water Service Rates, Bill Burdens, and Financial Sustainability

# Next Steps

# Addressing Constraints

- Water affordability
  - Investigate rate design options
  - Customer Assistance Program
    - External funding sources, options
- Support application for federal and state grant funding
  - Capital project investment / reinvestment
- Support institutional structuring evaluation
  - Further water bill burden analyses under different options

## Key Messages

- Rates must recover costs of service
- PWWSB's rates are burdensome yet inadequate
- PWWSB's crisis and rates demand immediate and long-term actions
- Crisis resolution and sustainability will require fundamental change over next generation

## Next Steps

# Stakeholder Engagement

- Advisory Council
- Community Organizations
  - Potential CAP implementation partners
- PWWSB Staff
  - Executive team
  - Customer service personnel
- PWWSB Board
- Alabama Dept of Environmental Management
- Circuit Court

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# Additional Slides / Charts

# PWWSB Water Bill Burden Distributions

Low-income Households

Income Bracket (All Households)	% of Service Population in 2022 <sup>a</sup>	% of Service Population in 2022 (excluding renters) <sup>b</sup>	Min % HH income spent at CURRENT rate <sup>c</sup>	Minimum % HH income spent at 40% rate increase <sup>c</sup>
Less than \$10,000	10.0%	5.9%	5.67%	16.73%
\$10,000 to \$14,999	8.5%	7.6%	3.78%	11.15%
\$15,000 to \$24,999	16.5%	13.8%	2.27%	6.69%
\$25,000 to \$34,999	14.0%	12.6%	1.62%	4.78%
\$35,000 to \$49,999	22.0%	22.9%	1.13%	3.35%
\$50,000 to \$74,999	16.4%	17.9%	0.76%	2.23%
\$75,000 to \$99,999	5.9%	8.1%	0.57%	1.67%
\$100,000 to \$149,999	4.1%	6.7%	0.38%	1.12%
\$150,000 or more	2.5%	4.4%	0.28%	0.84%

a - Assuming service population's income distribution mirrors that of all households in the City of Prichard

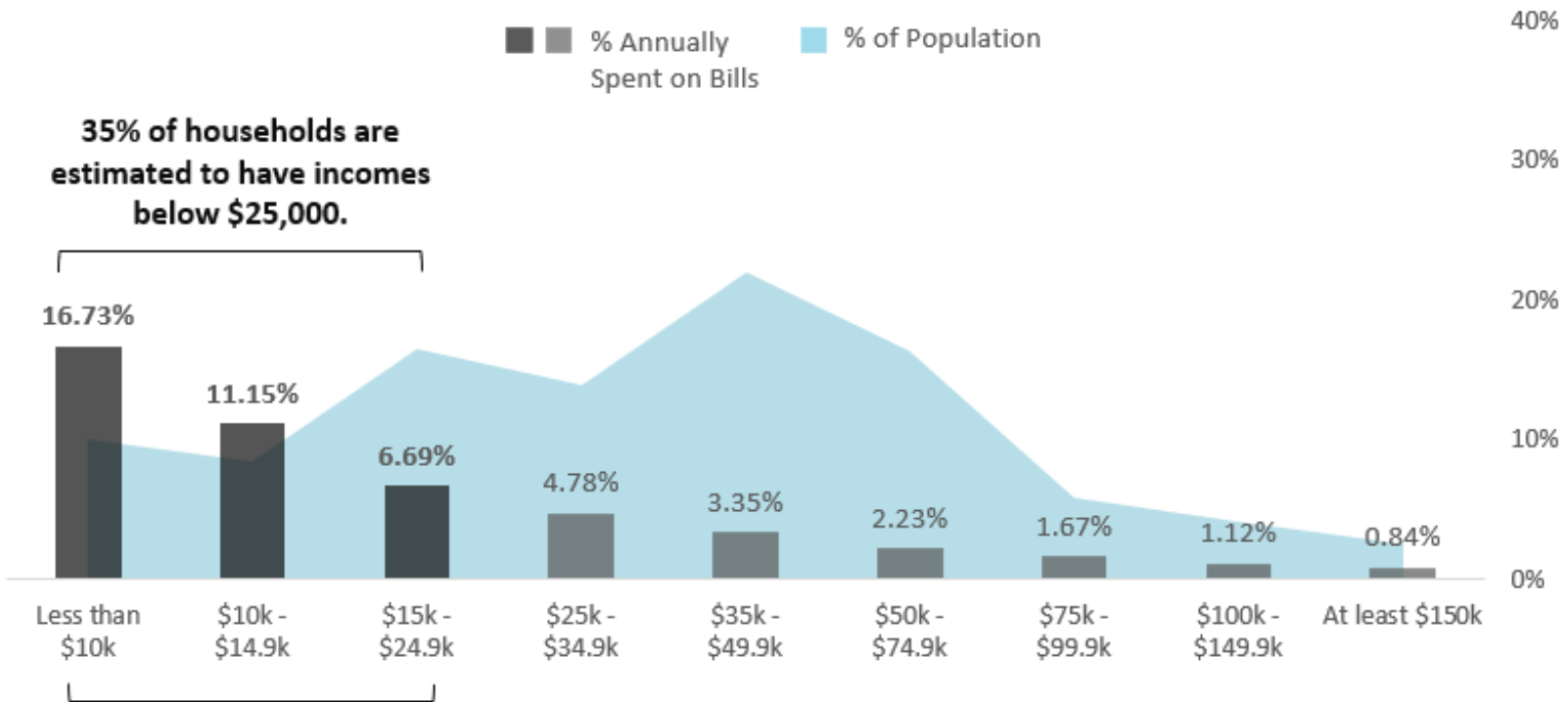
b - Assuming service population's homeowners' income distribution mirrors that of all owner-occupied households in City of Prichard

c - Water and wastewater bills at current rate and 4,500 gallons/month



# PWWSB Water Bill Burden Distributions

Prichard: All Households - Affordability of Water & Wastewater Rates Assessed at 4,500 Gallons/Month & the 2022 Income Levels – at 40% Rate Increase



## Range of Percent of Household Incomes Spent on Water & Wastewater

Percent of household income spent on bills	Minimum percent of Households at CURRENT Rate <sup>a</sup>	Minimum percent of Households at 40% Increase <sup>a</sup>
2%	71.0%	87.4%
3%	49.0%	71.0%
4%	35.0%	49.0%
5%	18.5%	35.0%
10%	10.0%	18.5%

*a - Assumes the income distribution of Prichard is the same as the income distribution of the utility service area*

# Key Socioeconomic Indicators

	<b>Prichard in 2022</b>	<b>Alabama in 2022</b>	<b>United States in 2022</b>
<b>Median Household Income</b>	\$36,110	\$59,674	\$74,755
<b>% Unemployment</b>	4.8%	4.3%	2.7%
<b>% Not in the labor force</b>	53.9%	41.4%	36.5%
<b>% of all people with income below poverty</b>	31.6%	16.2%	12.6%
<b>% with Social Security income</b>	45.0%	35.1%	31.1%
<b>% with Supplemental Security income</b>	9.0%	5.3%	5.1%
<b>% with cash public assistance income</b>	1.1%	1.6%	2.5%
<b>% with Food Stamp/SNAP benefits</b>	31.8%	14.1%	12.4%

Source: U.S. Census Bureau's American Community Survey, DP03: Selected Economic Characteristics table