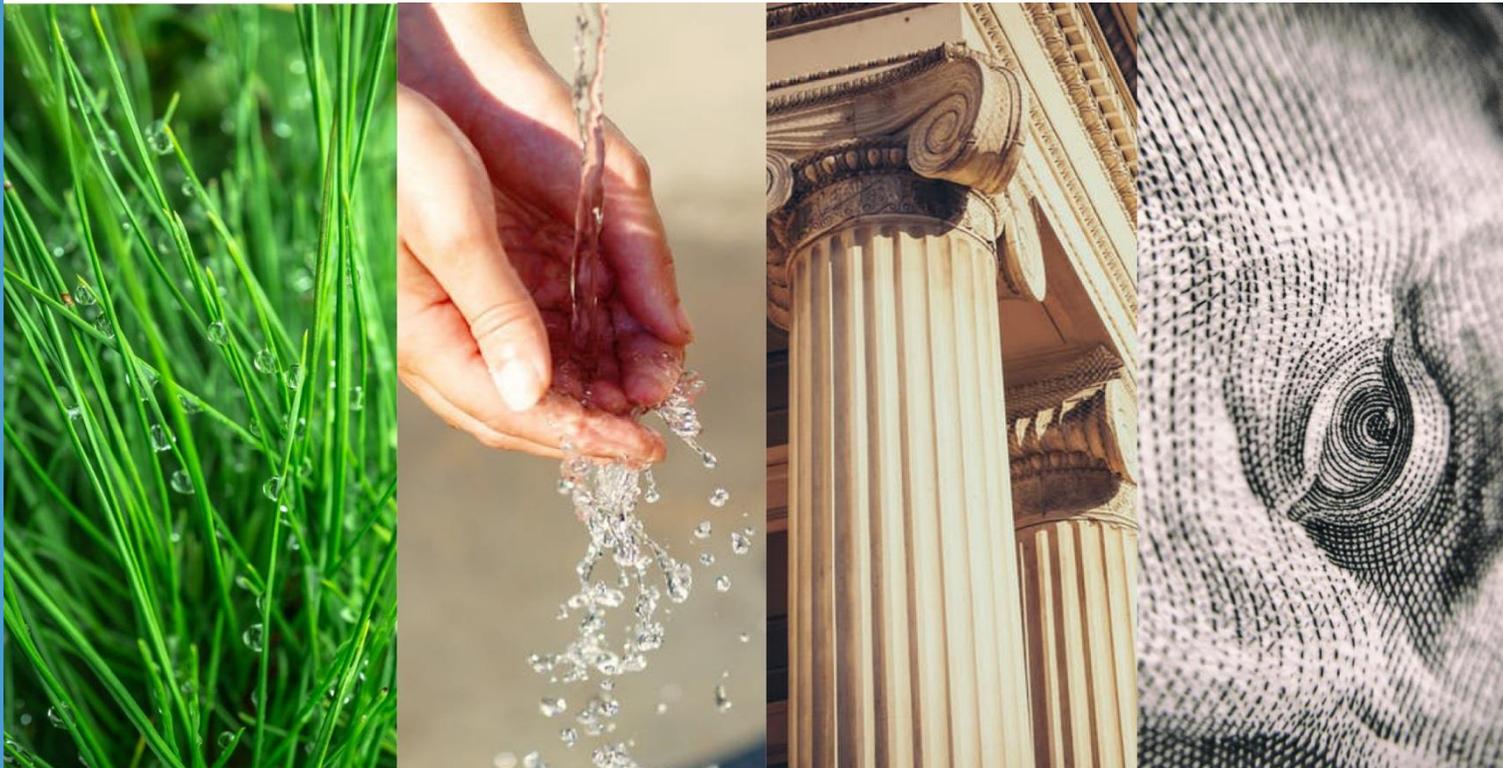


Affordability and Principal Forgiveness in the State Revolving Fund Programs of the Environmental Protection Agency Region 4 States:

A Paper Prepared for the Georgia
Environmental Finance Authority



MAY 2018



SCHOOL OF GOVERNMENT

Environmental Finance Center

About the Environmental Finance Center

The Environmental Finance Center at the University of North Carolina at Chapel Hill is part of a network of university-based centers that work on environmental issues, including water resources, solid waste management, energy, and land conservation. The EFC at UNC partners with organizations across the United States to assist communities, provide training and policy analysis services, and disseminate tools and research on a variety of environmental finance and policy topics.

The Environmental Finance Center at the University of North Carolina, Chapel Hill is dedicated to enhancing the ability of governments to provide environmental programs and services in fair, effective, and financially sustainable ways.

Authors:

Stacey Isaac Berahzer, *Senior Project Director*

Claudia Flores, *Project Coordinator*

Jeff Hughes, *Director*



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GOVERNMENT

Environmental
Finance Center

School of Government
Knapp-Sanders Building, CB# 3330
Chapel Hill, NC 27599-3330
<http://efc.sog.unc.edu>

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Introduction

States have the ability to provide financial assistance to low-income communities within the federal guidelines of the State Revolving Fund (SRF) programs for both Drinking Water (DW) and Clean Water (CW). In the DW SRF program, the choice by the state to provide this type of assistance to state-defined “disadvantaged communities” has long been an optional element of the loan program. Changes to the Clean Water Act in 2014 also added elements of affordability to how the CW SRF is managed and implemented.¹ With rising water and wastewater rates, as well as newer water-related fees such as stormwater utility fees, various aspects of “affordability” have emerged as major concerns.

Affordability of water can be measured in many ways for different purposes. The United States Environmental Protection Agency (EPA) and state regulatory bodies have methods of measuring affordability and utility financial capability as part of regulatory compliance. Local utilities measure their customer affordability to better understand the challenges different customers face, and whether or not the utility should develop programs to address those challenges. Funding agencies, such as GEFA, seek to measure affordability in order to distribute their limited principal forgiveness or lower interest rate abilities to the neediest communities and to understand the degree to which affordability could impact loan repayment. There is no single correct way to measure affordability. The metrics that are used and the thresholds that are set to assess affordability and/or provide assistance should be tailored to the situation and policy question being addressed.

Recent Resources on Affordability

Given the rising concern over affordability, there have been several recent tools and publications to help address the issue. This section highlights some of these resources based on the target audience of the resource.

Targeted Mainly to Local Utilities

[Compendium of Drinking Water and Wastewater Customer Assistance Programs: A Guide for Water and Wastewater Utilities](#): Created by EPA’s Water Infrastructure and Resiliency Finance Center, this compendium of Drinking Water and Wastewater Customer Assistance Programs describes the benefits, implementation, and examples of customer assistance programs (CAPs) throughout the country. These examples show the short-term or long-term reductions through bill discounts, flexible terms, lifeline rates, temporary assistance, and water efficiency initiatives.

[Water and Wastewater Residential Rates Affordability Assessment Tool](#): This Excel tool, created by the EFC at UNC, guides a utility on how to obtain a range of US Census data on its community in order to

¹ For the CW SRF, Water Resources Reform and Development Act of 2014 mentions that the criteria for “additional subsidization” may “be based on income and unemployment data, population trends, and other data determined relevant by the State.”

assess the relative affordability of its water and wastewater rates on its residential customers using multiple metrics. This provides the utility with more information and a more comprehensive understanding of the affordability of its rates than one based solely on percent MHI. Affordability is assessed for the average customer, low-income customers, and a full range of households based on their various income levels, including criteria for both “all households” and “only homeowners” options. The tool also allows a utility to compare two rate structures side-by-side, enabling the utility to assess the affordability of its current rates alongside alternative rates. The tool is designed to be used by individual utilities or by people who are advising utilities. Data input should take only a few minutes.

Targeted Mainly to Local Utilities, as well as State Regulatory Commissions

[Navigating Legal Pathways to Rate-Funded Customer Assistance Programs](#): Written by the EFC at UNC and Corona Environmental Consulting, this report summarizes the principal legal barriers and opportunities to establishing an assistance program for low-income water and wastewater utilities in each of the 50 states, Puerto Rico, and the District of Columbia. Several case studies at the utility level highlight how CAPs are funded in light of the relevant state regulations. The project also includes potential model programs from other utility sectors, as well as potential model programs internationally.

Targeted Mainly to the Federal Government

[Developing a New Framework for Community Affordability of Clean Water Services](#): In 2016, the Senate Appropriations Committee directed EPA to contract with the National Association of Public Administrators to do a study to create a definition of community affordability of clean water. The 233-page document provides detailed recommendations related to how EPA measures affordability for regulatory purposes.²

While these different resources have some tangential relevance to an agency such as GEFA, the rest of this report focuses on how the seven other SRF programs in EPA’s Region 4 (Alabama, Florida, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee) specifically approach the issue of distributing principal forgiveness on the basis of community-level affordability criteria.

Earlier Resources Targeted to Funding Agencies

The March 2005 report by Berahzer, entitled “Defining Affordability: Targeting Federal Funds to Improve Water Quality to “Disadvantaged Communities” in North Carolina³,” looked at the criteria used by all 30 states that were then exercising the “disadvantaged communities” (DC) option of the DW SRF. At that time, only four of the other seven states in EPA’s region 4 (Florida, Georgia, Kentucky, and South Carolina) had DC programs. The paper states that, while Median Household Income (MHI) was a widely used indicator of affordability it “has been especially criticized for masking the isolated pockets of poverty within a given area by assuming that the distribution of household incomes below the MHI is the same everywhere.” Based on the national research, the author proposes a **sliding scale** as seen in Table 1 in

² National Academy of Public Administration. 2017. *Developing a New Framework for Community Affordability of Clean Water Services*. Washington, DC: National Academy of Public Administration. https://www.napawash.org/uploads/Academy_Studies/NAPA_EPA_FINAL_REPORT_110117.pdf. Date accessed February 15, 2017

³ Berahzer, S. 2005. *Defining Affordability: Targeting Federal Funds to Improve Water Quality to “Disadvantaged Communities” in North Carolina*. Chapel Hill, NC: University of North Carolina at Chapel Hill. <https://efc.sog.unc.edu/resource/defining-affordability-targeting-federal-funds-improve-water-quality-disadvantaged>. Date accessed May 2018.

establishing affordability criteria for a DC program, explaining that the reasoning for using a sliding scale is “to build a progressive element into the program.”

Table 1

Mean Household Income Level (per year)	Portion Mean ⁴ Income Spent on Drinking Water (per year) ⁵
<\$20,000	1%
\$20,000 - \$30,000	1.2%
>\$30,000	1.4%

The underlying principle is that a household with a higher income can afford to pay a larger percentage of income on drinking water. Another conclusion of that paper was that, in order to protect the longevity of the SRF program, a state should set a maximum amount of finances that the state will apply to a single public water system.

Another paper by Chris Heaney looked specifically at Region 4 states. In the “Comparison of Drinking Water State Revolving Fund (DWSRF) Programs and other Federal Assistance to Disadvantaged Communities in EPA Region 4” paper, the author collected and analyzed information on SRF programs with a special focus on how states in EPA Region 4 had chosen to implement DC programs. In addition to the SRF programs in Region 4, the paper also summarized and explored the assistance available to disadvantaged communities in EPA Region 4 through the Department of Housing and Urban Development (HUD) State administered Community Development Block Grant (CDBG) program, and the United States Department of Agriculture (USDA) Rural Utilities Service (RUS) program. One observation from this paper was that for the DW SRF Georgia and South Carolina looked at bills at the 6,000 gallon per month level, while Kentucky considered the 4,000 gallons per month to be more relevant.⁶

How are Region 4 SRF Programs Addressing Affordability in 2018?

At GEFA’s request, EFC at UNC staff studied how the other seven states in Region 4 are determining eligibility criteria for providing financial assistance to low-income communities applying to both the DW and CW SRF programs. We first downloaded the latest version of the Intended Use Plan (IUP) for each state. After reviewing the IUPs, we had a phone conversation with staff from each state’s program. Appendix A is a table with the contact information for each of the people we interviewed. The interviews each included a few basic questions on types of financial assistance and the eligibility criteria for this assistance. We also used these conversations to get clarification on specific questions on their individual IUPs. From these conversations, we learned that other states, such as North Carolina and Kentucky, are also actively working on reviewing and possibly changing their eligibility criteria in this arena. As a result, in addition to the information provided here, GEFA should consider continuing to consult with these states

⁴ U.S. EPA – Office of Water. “Information for States on Developing Affordability Criteria for Drinking Water.” EPA 816-R-98-0002. February 1998. pg. 13

⁵ Based on this table, if a community with a mean household income level of \$10,000 per year would spend more than \$100 per year on water costs, then this community should qualify for the DC program. A community with a mean income of \$35,000 would need to spend over \$490 per year on water costs in order to qualify for the program.

⁶ Heaney, C. 2005. Comparison of Drinking Water State Revolving Fund (DWSRF) Programs and other Federal Assistance to Disadvantaged Communities in EPA Region 4. Chapel Hill, NC: The Environmental Finance Center at the University of North Carolina at Chapel Hill. <https://efc.sog.unc.edu/resource/comparison-drinking-water-state-revolving-fund-programs-and-other-federal-assistance>. Date accessed May 2018.

over the next couple of years to see what changes they may have implemented. Contact information is included in Appendix A.

Overall, SRF program staff shared the concern over balancing providing subsidization to low-income communities with ensuring the longevity of the revolving fund programs. One way that some southeastern states are striking this balance is by setting a maximum amount of principal forgiveness that any one project can receive. For example, Alabama and Mississippi have a maximum of \$500,000 of principal forgiveness that can be applied to an individual project.

Types of Assistance Offered to Low-Income or Disadvantaged Communities for Drinking Water (DW) and Clean Water (CW) State Revolving Fund Programs in Region 4

There are various types of financial benefits that a funding program can offer to communities:

- Extended loan terms
- Lower interest rates (from standard loans)
- Principal forgiveness/negative interest rates

The map below (Figure 1) shows the types of assistance that are currently being offered to SRF applicants who meet the eligibility criteria in the seven states.

Figure 1: Types of Assistance Offered to Low-Income or Disadvantaged Communities in EPA Region 4 for Drinking Water

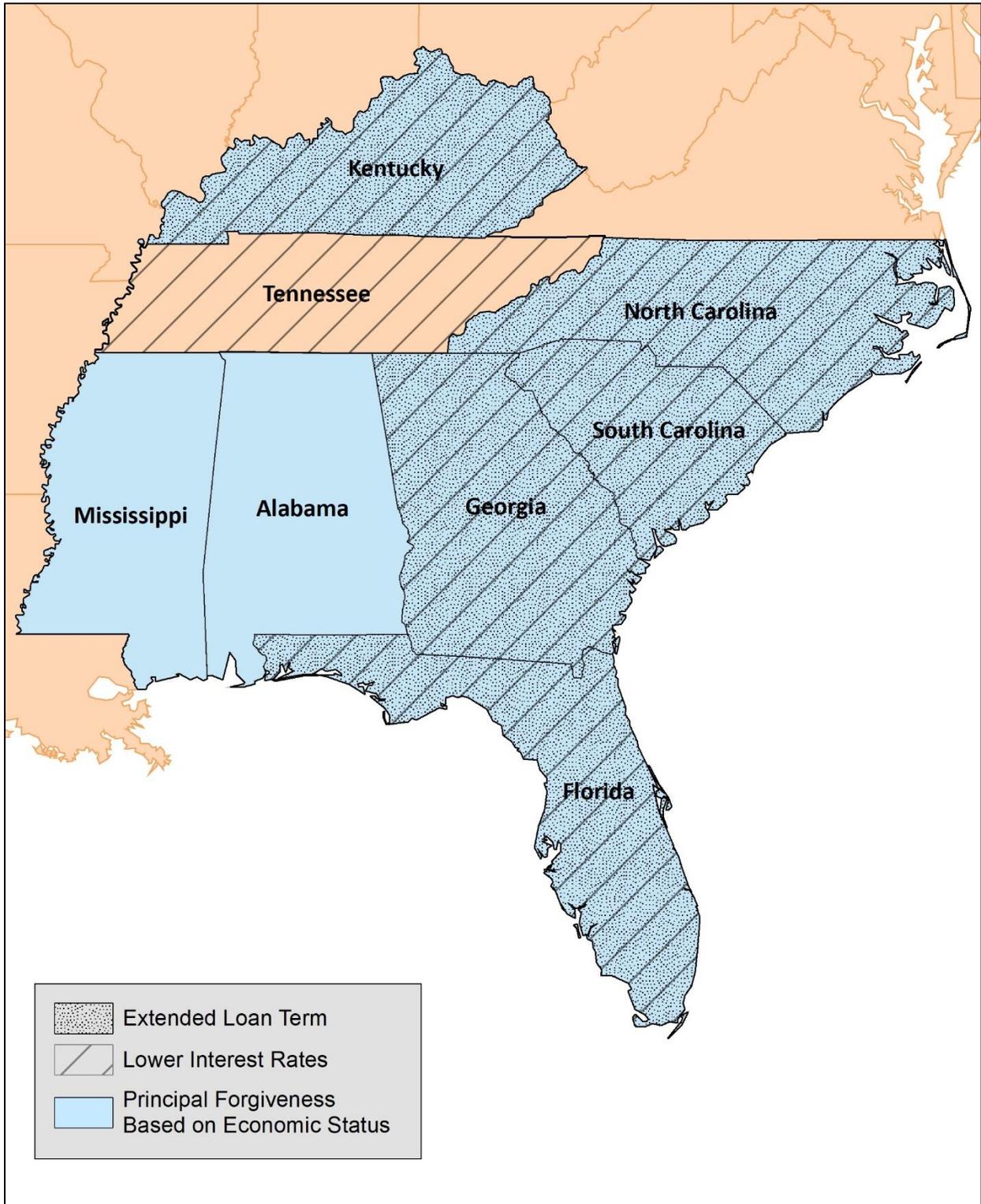


Figure 2: Types of Assistance Offered to Low-Income or Disadvantaged Communities in EPA Region 4 for Clean Water

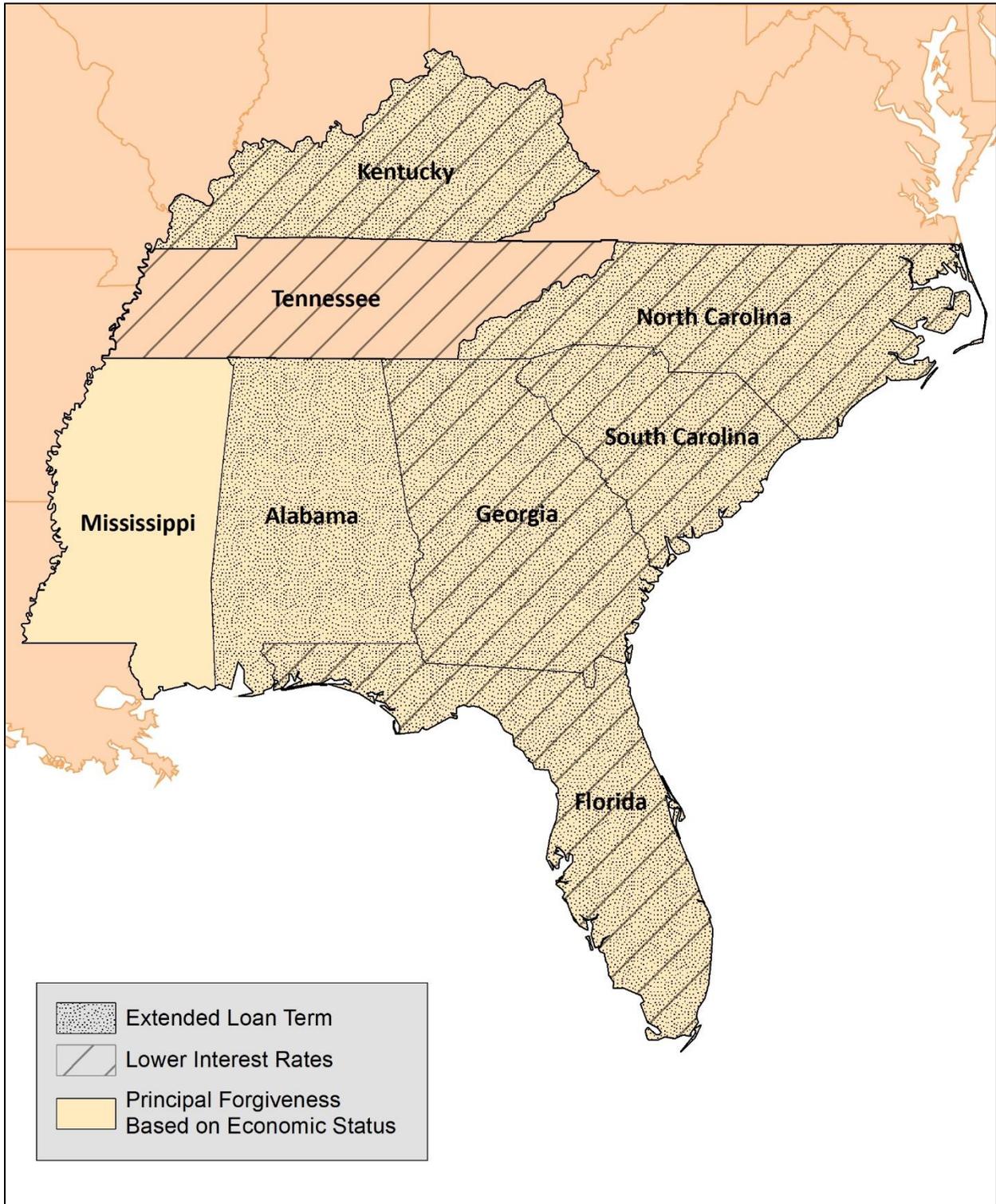


Table 2: Assistance Offered to Low-Income or Disadvantaged Communities for Drinking Water (DW) and Clean Water (CW)

State	State Revolving Fund	Principal Forgiveness based on Economic Status	Extended Loan Term ⁷	Lower Interest on Loan	Available Points in Total Score of Priority List ⁸ (Dependent)
Alabama	DW				+ ⁹
	CW				
Florida	DW			—	+ ⁹
	CW			—	+ ⁹
Georgia	DW			—	+
	CW			—	+
Kentucky	DW			—	+
	CW			—	+
Mississippi	DW				+ ¹⁰
	CW				+ ¹¹
North Carolina	DW			—	+
	CW			—	+
South Carolina ¹²	DW			—	+
	CW			—	
Tennessee ¹³	DW			—	+ ¹⁴
	CW			—	+ ¹⁴

⁷ For each state, the extended loan term cannot exceed design/useful life of project.

⁸ In each state's priority ranking process, points are assign for different categories or criteria (e.g. water quality, public health risks, and project benefits). If points in the state's priority ranking process were given for affordability or low-income communities, then a mark was made in the table above.

⁹ Systems most in need on a per household affordability basis are given priority.

Florida: Also offers bonus points to systems in disadvantaged areas.

¹⁰ Assigns an affordability factor no less than 1.0 and no greater than 1.5.

¹¹ To insure that the “small/low income communities” have a dedicated source of loan funds and will not have to compete with larger/higher income communities for funding, the Department is setting aside \$2.1 million in available funds for qualifying projects in small/low income communities.

¹² South Carolina uses severity of problem, size of community, and the financial status or the finances of a community/system to determine principal forgiveness.

¹³ Tennessee provides principal forgiveness first to projects that are ready to proceed, then to populations less than 10,000.

¹⁴ Uses affordability criteria to prioritize projects that have the same number of points based on project need.

As Table 2 shows, all of the states in Region 4, besides Tennessee, offer principal forgiveness as a way to assist low-income SRF borrowers.

Tennessee is a bit of an anomaly for a couple of reasons. Tennessee only provides their assistance to small communities that serve 10,000 or less in population. Once an applicant meets that criteria, then affordability criteria are applied. In other words, applicants with a service population of more than 10,000 are never eligible for this assistance. Also, the form of assistance to the affordability-eligible communities **only** involves a lowered interest rate. Principal forgiveness is not offered based on affordability criteria in Tennessee.

As a result, some may argue that Tennessee does not have a disadvantaged community program as outlined in Section 1452 of the SDWA 1996. TN does offer below market interest rates on DWSRF loans to communities and Public Water Systems (PWS) serving under 10,000 people. From the state's perspective, its 2017 DW SRF IUP states that "Tennessee's DWSRF Loan Program may set aside funds for disadvantaged communities with the Ability to Pay of less than 50%."

Tennessee does offer subsidization in the form of principal forgiveness. However, it is not clear how they make the decisions on distribution. Unlike the other states in the region, Tennessee's IUP did not include the amount of principal forgiveness provided to its different borrowers. Apparently, this information is only reported directly to EPA biennially, and included in the actual loan agreement. In the interview, staff mentioned the principal forgiveness is offered on a "first come, first served" or "readiness to proceed" basis. Tennessee also aims to ensure that some of these recipients are communities with populations less than 10,000.

Metrics Used by States to Determine Eligibility for Low-Income Assistance

Figure 3: Variables Used in Each State in EPA Region 4 to Determine Principal Forgiveness for Drinking Water

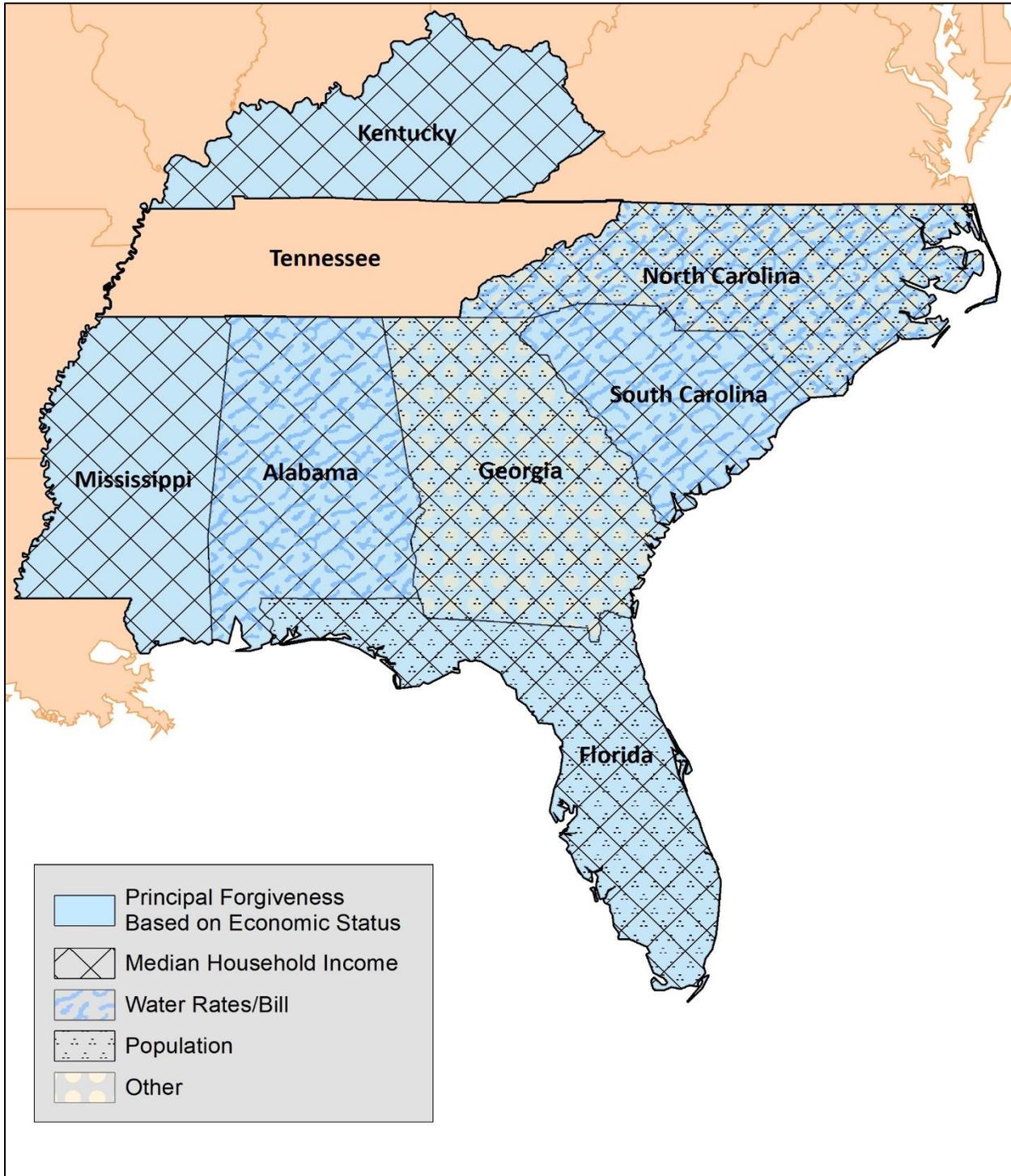


Table 3: Variables Used in each State in EPA Region 4 to Determine Principal Forgiveness for Drinking Water

State	State Revolving Fund	Principal Forgiveness (PF) based on Economic Status	Variable(s) Used Amongst all States ¹⁵ to Determine PF	Other Variables Used in each State to Determine PF
Alabama	DW		Median Household Income	Average Annual Water Bill
Florida				Population of Service Area
Georgia				Unemployment Rate, Population Change
Kentucky				
Mississippi				
North Carolina ¹⁶				Number of Connections, Utility Rates, Poverty Rate, Population Change, Unemployment, Total Appraised Value of Property
South Carolina				Finances of a System ¹⁷
Tennessee ¹⁸				Projects that are Ready to Proceed, Population of Service Area

¹⁵ Except Tennessee.

¹⁶ Number of connections has to be less than 20,000. Utility Rates (based on 5,000 gallons per month) need to be greater than state median. Needs to have at least three of the five Local Government Unit economic indicators.

¹⁷ South Carolina uses a variety of variables related to the financial status of a system to determine principal forgiveness, such as finances, debt, and socioeconomic status.

¹⁸ Tennessee provides principal forgiveness first to projects that are ready to proceed, then to populations less than 10,000.

Table 4: Variables Used in each State in EPA Region 4 to Determine Principal Forgiveness for Clean Water

State	State Revolving Fund	Principal Forgiveness (PF) based on Economic Status	Variable(s) Used Amongst all States ¹⁹ to Determine PF	Other Variables Used in each State to Determine PF
Alabama ²⁰	CW		<i>No common variable was found</i> ²¹	Poverty Rate, Unemployment Rate, Population Change of State
Florida				Population of Service Area, Per Capita Annual Income
Georgia				MHI, Unemployment Rate, Population Change
Kentucky				MHI
Mississippi				MHI, Population, Population Change, Unemployment Rate, Economically Distressed Area
North Carolina ²²				Number of Connections, Utility Rates, Population Change, Poverty Rate, MHI, Unemployment, Total Appraised Value of Property
South Carolina				Finances of a System ²³
Tennessee ²⁴				Projects that are Ready to Proceed, Population of Service Area

¹⁹ Except Tennessee

²⁰ Poverty Rate Value is of county and state; Unemployment Rate Value is of county and state. Alabama also tries to give principal forgiveness to projects with green infrastructure.

²¹ Second most common variable was population.

²² Number of Connections has to be less than 20,000. Utility Rates (5,000 Gallons) need to be greater than state median. Needs to have at least three of the five Local Government Unit economic indicators.

²³ South Carolina uses a variety of variables related to the financial status of a system to determine principal forgiveness, such as finances, debt, and socioeconomic status. This includes MHI.

²⁴ Tennessee provides principal forgiveness first to projects that are ready to proceed, then to populations less than 10,000.

Table 3 and Table 4 show the metrics and thresholds the different states use in order to determine which applicants are eligible to receive the financial assistance. In terms of data sources, Tennessee mentioned using population data compiled by the Tennessee Municipal League. North Carolina has access to financial data from the Local Government Commission in that state. Also, the states of Florida, Tennessee, and North Carolina each worked with a university to develop the equation that is used to determine eligibility.

In theory, there are three potential ways that project scoring/prioritization and affordability criteria can interact in offering subsidization:

1. Projects are scored/prioritized first, then the affordability criteria are applied to this list (for example: Alabama CW)
2. The reverse of option 1 where affordability criteria are applied first, then the projects are scored/prioritized (for example: Mississippi CW)
3. An integrated process where affordability criteria are awarded a certain number of points; then projects are scored/prioritized (for example, Florida)

The project scoring/prioritization process is more important in states like Florida where the money requested outstrips the funds available from the SRF program. Alabama, on the other hand, currently has the money available to meet the needs of all the viable loan requests in that state.

Weighted Criteria

When there are multiple criteria for assessing affordability, some of those criteria may be more relevant than others. A good way to reflect this is to weight the criteria differently. For example, Georgia currently offers up to eight points each for income and unemployment, but only up to two points for population change. North Carolina has a similar process²⁵. The 2014 changes to the Clean Water Act instructed states to use income, unemployment data, and population trends to determine affordability in the CW SRF program. “However, the statute does not prescribe the weight that must be given to each type of criteria. States have the flexibility to determine which of the required criteria are most relevant to their CWSRF programs and may structure their program’s criteria accordingly.”²⁶

One of the main features in the Excel tool prepared for GEFA is the ability to adjust the weighting of the different criteria to see how that affects the list of eligible applicants.

The tool uses American Community Survey data to sort each community in the state into different quartiles for each metric. Different point values can be awarded for different quartiles.²⁷ For example, applicants with an MHI in the lowest quartile in the state could receive four points, while applicants with an MHI in the highest quartile in the state could receive one point. This also means that the impact of excluding certain income metrics can be analyzed, by assigning a value of zero to every quartile. Even after the scoring system is selected, in future years this functionality will still be useful to GEFA as it will allow the staff to see the impact of adjusting their scoring system.

²⁵ North Carolina Drinking Water State Revolving Fund Intended Use Plan Fiscal Year 2018. *See Page D-3.*

²⁶ Environmental Protection Agency. 2015. Initial Interpretive Guidance for Certain Amendments in the Water Resources and Development Act to Titles I, II, V and VI of the Federal Pollution Control Act. Washington DC. Environmental Protection Agency <https://www.epa.gov/cwsrf/water-resources-reform-and-development-act-wrrda-guidance-clean-water-state-revolving-fund>. Date accessed May 01, 2018

²⁷ As the tool is currently designed, the population change metric does not utilize this quartile method. Instead, points are assigned based on a static range. For example, all communities with a population change of between negative 0.01 percent and negative 1.00 percent will receive a certain point value.

Thus, the tool is intended to help serve two purposes. In the short term, the ability to change the weights of different variables will help GEFA create a scoring system that best captures the affordability challenges in Georgia. In the long term, the tool will help GEFA's staff both quickly calculate affordability scores for communities, and see the impact of adjusting the scoring system if the need arises.

Level of Assistance

Currently, in some states, the lower the income, the greater the assistance. For example, Mississippi's DW program uses the following tiered structure for deciding the level of principal forgiveness to give to a specific community:

90% < LR MHI < 100% - 15% Principal Forgiveness

80% < LR MHI < 90% - 25% Principal Forgiveness

70% < LR MHI < 80% - 35% Principal Forgiveness

LR MHI < 70% - 45% Principal Forgiveness

As discussed earlier in the paper, this tiered approach has the advantage of giving the most assistance to the most economically distressed communities.

The Role of Consolidation in Assessing Affordability

Several of the interviewees mentioned that there was a lot of overlap between the economically distressed communities in their states and the small water systems. In the case of Tennessee, this was the main reason cited for not offering the lower disadvantaged interest rate to large water systems. The fact is, many small systems are low-income. States tend to encourage small non-viable systems to consolidate.

Many states (for example, Mississippi, South Carolina, and North Carolina) offer some sort of incentive to a system that is "acquiring" (rescuing) a non-viable system. The acquired system is usually a low-income one—if it had the financial capacity, it would make the infrastructure and technical changes necessary to meet regulations. As a result, states that offer some incentive for consolidation are in some ways addressing affordability concerns. When a lower interest rate is offered in South Carolina's "takeover" interest rate, the affordability of the acquired system is what is considered. In North Carolina, it is the "rescued" system that has to meet three of the five Local Government Unit (LGU) affordability criteria (e.g. unemployment, poverty rate, etc.)

APPENDIX A

Phone Interviews with State Revolving Fund Programs in EPA Region 4

State	State Revolving Fund	Interviewee(s)	Contact Number	E-mail	Date of Interview
Alabama	DW	Kris Berry	334.271.7951	kberry@adem.alabama.gov	7-May-18
	CW				
Florida	DW	Shanin SpeasFrost	850.245.2991	shanin.speasfrost@dep.state.fl.us	7-May-18
	CW	Timothy Banks	850.245.2969	timothy.banks@dep.state.fl.us	
Kentucky	DW	Donna McNeil	502.892.3496	donna.mcneil@ky.gov	4-May-18
	CW				
Mississippi	DW	Jonathan Chaney Harry Gong Desmone Black	601.576.7518	jonathan.chaney@msdh.ms.gov harry.gong@msdh.ms.gov desmone.black@msdh.ms.gov	2-May-18
	CW	Tony Caldwell	601.961.5618	tony_caldwell@deq.state.ms.us	
North Carolina	DW	Seth Robertson Vincent Tomaino	919.707.9175	seth.robertson@ncdenr.gov vincent.tomaino@ncdenr.gov	8-May-18
	CW				
South Carolina	DW	Chuck Gorman Lynne LaSalle Trish Comp	803.898.3993	gormancm@dhec.sc.gov lynne.lasalle@dhec.sc.gov tcomp@ria.sc.gov	2-May-18 and 13-May-18
	CW				
Tennessee	DW	Felicia Freeman	615.253.5134	felicia.d.freeman@tn.gov	8-May-18
	CW				

APPENDIX B

State Revolving Fund Programs Equations²⁸

State	State Revolving Fund	Equation is Used For	Equation	Definition of Variables	What this Determines
Alabama	DW	Principal Forgiveness Eligibility and Priority	% = Average Annual Water Bill/MHI	MHI = Median Household Income	"The Department expects to allocate principal forgiveness exclusively to projects in communities determined to be disadvantaged with the highest ratio of annual average water bill to median household income."
	CW		AM= Poverty Rate Value + Unemployment Rate + Population	<p>AM= Affordability Measure</p> <p>Poverty Rate Value= Poverty rate of the county served by the project minus the statewide poverty rate</p> <p>Unemployment Rate= Unemployment rate of the county minus the statewide unemployment rate</p> <p>Population= If the statewide population has increased over the two most recent 10-year census estimates, the population trend value shall be 1; if it has decreased the population value shall be 2</p>	"The Department will provide additional subsidy in rank order to projects as determined by the Affordability Measure for Alabama. Projects with an Affordability Measure of more than 10.0 are considered unaffordable according to the criteria."

²⁸ For the purpose of this report, only selected equations related to affordability are highlighted. For more equations, please see each state's Intended Use Plan.

Florida	DW	Principal Forgiveness	$PF\% = 1760/9 - 160 \times (MHI/SMHI) - 7/4500 \times P$	PF = Principal Forgiveness MHI = Median Household Income SMHI = State of Florida MHI P = Population of the service area	Used to determine the percentage of principal forgiveness, which will be greater than or equal to 20 percent but less than or equal to 90 percent.
		Interest Rate	$i = \%MR(MR)$ $\%MR = 40(MHI/SMHI) + 15$	i = Interest Rate MR = Market Rate MHI = Median Household Income of the public water system's service area SMHI = State of Florida MHI	Used to determine the interest rate value for the drinking water state revolving fund program.
	CW	Financing /Interest Rate	$FR = MR - 4 + (4/(1+(100/AI)^3)) - 1/\text{Log}(P)$	FR = Financing Rate MR = Market Rate AI =Affordability Index P = Population served or to be served by the sponsor	Used to determine the financing/interest rate value for the clean water state revolving fund program.
Kentucky	DW and CW	<i>No equations provided</i>			
Mississippi	DW	Affordability Factor	$AB/CP = (\text{Affordability Factor}) \times (\text{Benefit/Cost Points})$	AB = Adjusted Benefit CP = Cost Points Affordability Factor = Median Household Income of State and affected community (The affordability factor used in the calculation will be no less than 1.0 and no greater than 1.5) Benefit/Cost Points = See below	"An affordability factor will be assigned to each project to reflect the relative needs of applicants on a per household basis." The factor is included in the priority ranking criteria process.

Mississippi	CW	Benefit and Cost Factor	<p><i>Benefit/Cost Points =</i> Number of benefiting connections/ Total eligible cost of improvements</p> <p>Benefiting Connections= The sum of individual connections currently experiencing deficiencies that will be corrected by the improvement; and include only existing residences, businesses, and public buildings (Number is provided by applicant) Total eligible cost of Improvements= Cost is in millions of dollars</p>	The factor is included in the affordability factor and overall priority ranking criteria process.
Mississippi	CW	<i>No equations provided</i>		
North Carolina	DW and CW	<i>No equations provided</i>		
South Carolina	DW and CW	<i>No equations provided</i>		
Tennessee	DW and CW	Ability to Pay Index	<p><i>The University of Tennessee Center for Business and Economic Research creates a formula for the Department and updates this every five year. Tennessee Department of Environment and Conservation could not provide the formula used.</i></p>	<p><i>The allocation formula uses a broad definition of fiscal capacity that income, unemployment data, and population trends. It also includes per capita property tax base and per capita sales.</i></p>