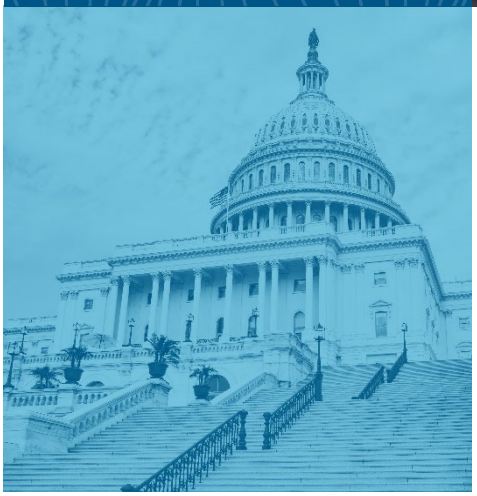


Low-Income Water Customer Assistance Program Assessment

Final Report: April 20, 2023

Prepared for:

American Water Works Association

Association of Metropolitan Water Agencies

National Association of Clean Water Agencies

National Association of Water Companies

Water Environment Federation

Prepared by:

Stacey Isaac Berahzer, IB Environmental*

Janet Clements, One Water Econ**

Zachary Green, Raftelis

John Mastracchio, Raftelis

Robert Raucher, Raucher LLC

Eric Rothstein, Galardi Rothstein Group, LLC

Manuel P. Teodoro, EJ Metrics, LLC

* Supported by Alanna Kinnebrew, Rita Moore, and Ke Jack Ding, IB Environmental

** Supported by Claire Sheridan, One Water Econ

Table of Contents

List of Tables

List of Figures

List of Appendices

List of Acronyms

AMWA	Association of Metropolitan Water Agencies
AWWA	American Water Works Association
CAA	Community Action Agency
CAP	Customer Assistance Program
CBO	Community-Based Organization
CBPP	Center on Budget and Policy Priorities
CDBG	Community Development Block Grant
CDP	Census Designated Place
EBT	Electronic Benefits Transfer
EITC	Earned Income Tax Credit
FPG	Federal Poverty Guidelines
FPL	Federal Poverty Level
HHS	Department of Health and Human Services
LIHEAP	Low-Income Household Heat and Energy Assistance Program
LIHWAP	Low-Income Household Water Assistance Program
LIWCAP	Low-Income Water Customer Assistance Program
MHI	Median Household Income
NACWA	National Association of Clean Water Agencies
NAWC	National Association of Water Companies
OCS	Office of Community Services
SDWIS	Safe Drinking Water Information System
SMI	State Median Income
SNAP	Supplemental Nutrition Assistance Program
SUA	Standard Utility Allowance
TANF	Temporary Assistance to Needy Families
TFP	Thrifty Food Plan
U.S.	United States
US Census	United States Census Bureau
USEPA	United States Environmental Protection Agency

USDA	United States Department of Agriculture
WEF	Water Environment Federation

Executive Summary

This Low-Income Water Customer Assistance Program (LIWCAP) Assessment Study was undertaken between late 2021 and early 2023 in response to several federal legislative initiatives to help customers afford essential water and wastewater services. These legislative measures were pathbreaking first steps toward establishing sustained federal funding for low-income water and wastewater bill assistance, yet statutory language offered limited detail on critical implementation issues.

This LIWCAP Assessment Study outlines five different potential administrative pathways for structuring a permanent federal low-income water assistance program and the relative advantages and disadvantages of these alternatives. The Study does not seek to identify a "winner" or a preference among the five potential pathways. Rather, it seeks to identify advantages and disadvantages of each approach and outline the tradeoffs among them that policymakers should consider when evaluating the establishment of a permanent low-income water assistance program. Though pathway tradeoffs and evaluation considerations were informed by Project Sponsor and stakeholder perspectives, the Study reflects the conclusions and assessments of the researchers who conducted the study alone.

While the ongoing Low Income Household Water Assistance Program (LIHWAP) administered by the U.S. Department of Health and Human Services (HHS) and the U.S. Environmental Protection Agency (USEPA) pilot programs authorized by the Infrastructure Investment and Jobs Act (IIJA)[1] of 2021 are important references, this study takes a holistic view to address fundamental questions related to the extent of household water burdens, how to most effectively and efficiently deliver sustained relief, and roles and responsibilities of low-income assistance providers and utilities.

The recent federal legislative initiatives reflect a fundamental dichotomy facing the water sector. Substantial investment and reinvestment in the nation's water, wastewater, and stormwater systems are required to renew, rehabilitate, and replace aging infrastructure, upgrade systems to meet evolving regulatory requirements, and address the challenges associated with changing climate and cyber threats. Yet, the sector must help ensure access and affordability of water services. Although the 2021 IIJA provides significant new funding for water systems, sustained local sources will be required to bridge the infrastructure funding gap. These drivers have already precipitated rate increases above general rates of inflation and income growth over the last decade or more. Though water services remain generally affordable for most customers and underpriced relative to their value and true cost in most of the United States, water affordability has become an acute challenge for many economically disadvantaged households. Federal, state, and local actors must collaborate to enable system investment while ensuring that households can afford life-essential water services. A federally funded low-income assistance program can be an important component of that collaboration.

An ideal federal water/wastewater bill assistance program would meet multiple goals. It would provide funds to utilities who would then apply those funds directly to accounts of every qualified household, in perfect proportion to need. It would be administered efficiently and impose minimal burdens on participating households. Unfortunately, no assistance program is ideal or perfect and thus limitations related to administrative costs, participant household burdens, and trust and communication (or lack thereof) between governments, utilities, and customers must be acknowledged.

Realities of the U.S. water sector complicate federal assistance program design. Utilities do not possess data on their customers' incomes, assets, or household characteristics. The small organizations that operate the overwhelming majority

[1] Also known as the Bipartisan Infrastructure Law or BIL

of the nation's utilities lack the organizational capacity required to manage assistance programs. Even large, urban and/or regional systems serving large populations generally have limited experience or connectivity with the low-income social service networks in their service areas. And, the water affordability challenge encompasses a dizzying set of symptoms including service disconnections, arrearages, penalty charges, hard-to-reach customers, and more.

A diverse and jumbled regulatory landscape further complicates assistance program design for the water sector. Publicly owned water utilities, which comprise the large majority of utilities, are generally not subject to economic regulation and operate under an array of state and local laws related to rate-setting and customer service practices. Investor-owned systems, which make up a relatively small percentage of water utilities, are, in most states, subject to state public utility commission regulation.

This Study, thus, is not an exercise in defining an ideal. Rather, it is grounded in and informed by the practical realities of federal low-income assistance program implementation, the diverse water services sector, and the complex local networks that deliver low-income assistance. Even the most well-established federal programs do not deliver assistance to important segments of eligible populations, and the national social safety net is, at best, a patchwork. The water services sector did not evolve to address poverty relief and is acutely challenged to do so. The number, diversity, and varying callings of community-based organizations that provide low-income assistance likewise present daunting administrative and coordination challenges.

This Study is also grounded in an affirmation that water affordability is an acute challenge. The number of water-burdened households in the U.S. ranges from an estimated 7.5 to 21.3 million, depending on how water burden is defined. Between $2.4 and $7.9 billion in annual water bill assistance would be required to eliminate these burdens for households that are direct or indirect customers of water utilities. These figures do not consider the substantial number of economically challenged households who face increasing costs of private well and/or septic systems.[2]

In this context, assistance program design involves balancing a set of difficult tradeoffs. For example, a new, stand-alone water-sector program would forego opportunities to piggyback on existing federal assistance programs and enrollment of participant populations—thereby missing ways to minimize administrative costs and amplify reach. Likewise, program benefits that are made available to hard-to-reach water-burdened households would likely result in some assistance funding not being applied directly to offset water bill payments. Program designs that tie federal dollars to specific utility accounts will ensure that funds flow to utilities but will likely involve higher administrative costs for utilities and greater administrative burdens—and lower participation—for needy customers. These tradeoffs can be exceptionally consequential where anticipated differences in program design can impact millions of water-burdened low-income households.

The Study team evaluated five alternative program administrative pathways by conducting largely qualitative research on federal, state, and local programs oriented to delivery of low-income assistance. Two options (SNAP[3] H2O and LIHWAP 2.0) contemplate adding a water bill assistance component to existing federal programs largely to leverage their established administrative and outreach structures. Three pathways contemplate a new water bill assistance program (LIWCAP) administered by USEPA in partnership with community-based organizations, water service utilities, or a combination thereof. Program designs and administrative pathways were gauged in terms of criteria including their likely reach (e.g., participation rates), administrative costs to federal and state agencies and utilities, and administrative burden required of customers to enroll and/or participate in the program. Pathway options were also evaluated in terms of extent of program

[2] Only 52% of HH under 150% of FPL have a direct customer relationship (i.e., receive bills) from their water services utilities.

[3] Referring to the existing federal Supplemental Nutrition Assistance Program (SNAP)

design flexibility, and the extent to which assistance would be available to hard-to-reach households or restricted to payment of water service provider bills. Evaluations referenced prior federal program precedents and extensive water sector experience. The ranking of program pathways ultimately depends on the relative importance assigned to various criteria. Notably, the Study team's evaluations did not weigh political considerations or how the composition and organization of the current Congress might inform the legislative prospects of these pathways.

Table ES-1 offers our summary of the major attributes of the alternative administrative pathways conceived for national delivery of water bill assistance. Table ES-1 identifies the federal agency that would be most likely to lead implementation under each pathway, then lists several program benefits and administrative attributes. A simple 1-to-5-star rating indicates the project team's assessment of the relative merits of each pathway with respect to each attribute; 5 stars indicates a strong advantage, and 1 star indicates a marked disadvantage with respect to a given attribute. Each attribute is stated in positive terms to ease interpretation.

In some instances, these attributes represent necessary tradeoffs. For example, a program that is highly flexible and can be adapted to local needs will result in a less equal distribution of benefits across customers, communities, and states. Similarly, a program that ensures benefits are restricted to water/wastewater accounts will mean higher administrative costs for utilities, less accessibility for utilities with low organizational capacity, and little or no benefits for hard-to-reach customers.

This table spotlights the tradeoffs involved in a federally funded low-income water assistance program. For example, SNAP-H2O is likely to yield the greatest participation with the lowest administrative costs and administrative burdens to enrolling customers but is relatively insensitive to local conditions and may not ensure that all funds reach water utility accounts. An EPA-administered LIWCAP program or refinement of the HHS-administered LIHWAP program would have lower participation and higher administrative costs but would ensure that federal funds are distributed directly to utilities.

Table ES-1. Major Attributes of the Alternative Administrative Pathways

Pathway	Existing Federal Program Expansion		New Federal Program at EPA: LIWCAP		
	LIHWAP 2.0	SNAP-H2O	via Utilities	via Community Organizations	Hybrid
Federal agency	HHS	USDA	USEPA	USEPA	USEPA
Benefits					
High participation	★★	★★★★★	★	★★	★★★
Low administrative burden on customers	★★★	★★★★★	★	★★	★★
Benefits for hard-to-reach customers	★	★★★★★	★★	★★	★★
Ensures application of funds to water/wastewater accounts	★★★★★	★★	★★★★★	★★★★★	★★★★★
Equal benefits across customers, communities, and states	★★★	★★★★★	★	★★	★★
Flexibility for local needs	★★	★	★★★	★★★★	★★★★★
Administration					
Low administrative cost for utilities	★★	★★★★★	★	★★★	★★
Accessible to small utilities with low organizational capacity	★★	★★★★★	★	★★	★★
Low administrative cost for federal/state agencies	★★	★★★★★	★★	★★	★

Ultimately, selection of a program administrative pathway and related program attributes is a matter of policymakers' weighting of each pathway's relative advantages and disadvantages. While leveraging the existing federal SNAP program could efficiently deliver assistance with high participation rates, payments of water bills are not necessarily assured without implementing EBT technology on a broad scale across water utilities. The HHS administered LIHWAP program has established a sound administrative foundation that assures application of funds to water/wastewater accounts yet incurs relatively higher administrative costs and involves a more burdensome application process for customers and utilities alike. Each of the LIWCAP options effectively contemplate a form of administratively burdensome and expensive re-start of the established LIHWAP program at USEPA which has a close relationship with water and wastewater utilities, yet no experience administering a national human service program (as HHS does).

A pathway alternative synthesis that draws from key attributes of different pathways could be constructed. For example, a greatly enhanced LIHWAP 2.0 could include significant new investment in outreach and technical assistance for utilities with limited administrative capacity (with attendant higher overall administrative cost). And any new federal program could include many of the advances outlined in the pathway alternative discussions offered in this Study, from using EBT cards to pay for water and wastewater bills, to new information technologies that ease administrative burdens of program participants and enhance program monitoring and reporting, to providing for substantive engagement with community organizations and stakeholders.

Given the inevitable tradeoffs, it is important for advocates and policymakers to understand that what qualifies as a preferred pathway will vary depending on what are considered to be the most important program criteria. If a primary objective is to ensure critical utility fiscal needs are met by guaranteeing funds directly reach utilities, then a policy pathway such as expanding the LIHWAP program or creating a new program at EPA is likely to be the best approach. A LIHWAP 2.0 or LIWCAP pathway would make sure that funds are directly applied to at-risk customer accounts for low-income residents and reduce the potential for accumulating account debt and/or service disruptions. Such a program design also would reduce rate burdens on paying utility customers whose rates would otherwise need to cover expenses associated with non-paying households and shutoffs.

If program reach, efficiency, equity, and practicability are deemed principal criteria, then supplementing SNAP and making water and wastewater services SNAP-eligible expenses is likely the best way to address these criteria. While important administrative measures would be required, SNAP's wide reach and established, relatively efficient administrative architecture are compelling attributes. The administrative costs to utilities for SNAP are far lower than for any other pathway. SNAP participation rates dwarf those of other federal programs, including the Low Income Household Energy Assistance Program (LIHEAP) and most successful utility or community programs. SNAP's long-standing status as part of the quintennial Farm Bill could result in more sustained low-income water bill assistance across legislative cycles, and it could facilitate consideration of complimentary legislative and utility measures to more directly address other (arguably more complex) water affordability concerns. SNAP-H2O's efficiency and simplicity are also compelling given the American water sector's fragmentation and limited administrative capacity, as well as the disjointed governmental response to poverty in the United States.

However, one of SNAP's signal features is that the program empowers participants to make their own spending decisions, and so SNAP-H2O participants might use their expanded benefits to pay for other SNAP-eligible expenses instead of their and water/wastewater bills. This feature of SNAP could help support hard-to-reach customers who do not pay bills directly to their utilities but could leave water/wastewater bills unpaid. Although EBT technology could restrict new SNAP funding to water bills, such restrictions would add administrative burdens and fail to help hard-to-reach households just like a LIHWAP-style program, thus negating one of SNAP-H2O's main advantages.

The above two examples just scratch the surface in terms of demonstrating how an emphasis on different program criteria can result in different preferred approaches and pathways to meet those criteria, and subsequent sections of this Study will explore these considerations and tradeoffs in more detail. It is also important to recognize that any new and permanent federal program specifically for water affordability will present a myriad of practical challenges whether embedded within an existing assistance program structure or developed as a new, separately administered program. It will add complexity to an already disjointed governmental response to poverty that is characterized by separate programs to address individual essential needs – housing, food, energy, health and now water – rather than holistically. It will require expensive additional and potentially redundant program design and administrative capacity-building. In this respect, the nascent yet evolving,

HHS-administered LIHWAP experience is instructive,[4] highlighting arguably the most important factor to consider in federal program design: the administrative capacity limitations that characterize most water services sector utilities.

With the exception of large metropolitan systems or consolidated regional and/or investor-owned utilities, water and wastewater organizational capacity generally is most limited where water affordability and assistance delivery challenges are most acute: rural, territorial, and tribal communities. These limitations impose perhaps the most fundamental tradeoff: assistance delivery efficiency and equity achieved by leveraging an existing program's infrastructure and simplicity, versus complex program tailoring to water sector attributes with attendant costs and household burdens. Coverage gaps, internal control challenges, and perverse incentives will also characterize any federal assistance program. For example, expansion of existing federal programs involves inheriting their coverage gaps amplified by key differences between the water and food, housing, and energy sectors.

However, these challenges are surmountable. A federal low-income water assistance program can make important contributions and, at a minimum, could help supplement the customer assistance programs that many water sector utilities have already implemented to help address affordability. A federal water assistance program cannot replace the responsibility of water utilities to address affordability issues to the extent that they can do so legally and practically, but rather would add another tool to a multi-faceted toolbox to help address affordability in the sector. We trust that the water sector recognizes the limitations of any federal response to water affordability challenges that are fundamentally driven by local circumstance, as well as its own responsibilities to monitor and report on related data.

Recent legislation (and therefore this Study) does not speak to many of the symptoms of water affordability challenges that are of acute concern, though not well documented. Beyond calling for the systematic collection of relevant data, the Study does not address how to deal with the incidence of service disconnections, imposition of penalty payments, or the extent of accumulated water-related debt (arrearages) among low-income households. The Study does not consider how problems of water access – requiring the extension of water infrastructure to unserved communities – may be addressed.[5] Similarly, the Study does not speak to the merit of further subsidization of the water sector to reduce overall costs for all water service customers.

[4] LIHWAP has made important strides in its short existence. Employing LIHEAP's basic design, this emergency program has established a network of vendor / utility relationships that had distributed 23 percent of the available bill assistance funding as of September 13, 2022. (HHS (Watts, Mary personal communication, September 13, 2022).

[5] A number of stakeholders who commented on drafts of this report noted – correctly – that issues of equity are also deeply intertwined with issues of water affordability and access to water for low-income households. This is especially true for households of color that, in many communities across the US, have disproportionally suffered from substandard water and wastewater service and high-water costs. This is an issue that deserves continued serious attention from national policymakers and water sector associations, although is ultimately beyond the scope of this Study to address – in part because any federal low-income water assistance program that explicitly uses race as part of its funding criteria would face significant legal hurdles. Insofar as racial minority communities also have a low-income problem, this Study has relevance.

1. Introduction & Background

1.1. Introduction

Federal legislation passed in response to the COVID-19 pandemic created, for the first time, two new federal programs to provide assistance[6] to low-income households facing challenges with water and wastewater costs. Most notably, the new Low-Income Household Water Assistance Program (LIHWAP) – administered by the federal Department of Health and Human Services (HHS) – was a first step to delivering federal funding for water affordability to households. (See textbox). Subsequently, the Infrastructure Investment and Jobs Act of 2021 established a new Rural and Low-Income Water Assistance Pilot Program, which would be administered by USEPA, to supplement and expand local-level efforts to help in-need households pay their drinking water and wastewater bills.[7] However, the statutory language of each of these programs included limited detail on critical implementation issues. This study addresses how a permanent new Low-Income Water Customer Assistance Program (LIWCAP), or existing program supplement could be structured and interact across federal programs and agencies.[8]

Proposed Budget of the U.S. Government FISCAL YEAR 2023

Supports Families Struggling with Home Energy and Water Bills. The Budget provides $4 billion, a $225 million increase from the 2021 enacted level, for the Low-Income Home Energy Assistance Program (LIHEAP). LIHEAP helps families access home energy and weatherization assistance, vital tools for protecting vulnerable families' health in response to extreme weather and climate change. As part of the Justice40 pilot, HHS plans to increase efforts to prevent energy shutoffs and increase support for households with young children and older people, and high energy burdens. Since the Low-Income Household Water Assistance Program (LIHWAP) expires at the end of 2023, the Budget proposes to expand LIHEAP to advance the goals of both LIHEAP and LIHWAP. Specifically, the Budget increases LIHEAP funding and gives States the option to use a portion of their LIHEAP funds to provide water bill assistance to low-income households.

Source:

[1] Administration for Children and Families, Office of Community Services. *LIHWAP DCL-2022-10 LIHWAP Data Dashboard Release FY2022,* 7 Apr. 2022. www.acf.hhs.gov/ocs/policy-guidance/lihwap-dcl-2022-10-lihwap-data-dashboard-release-fy2022.

Please see Text Box on Page 6-1 for Study Team comment on this legislative provision.

Drinking water and clean water utility leaders and their national associations have discussed the need for a federal low-income water assistance program for some time. Low-income households receive federal support for other essential human needs such as food, shelter, and heating and cooling costs, providing ample precedent for water assistance. However, it took a global pandemic and subsequent economic crash for concerns about water affordability to prompt an initial federal low-income water assistance program.

While the HHS program has been much appreciated within the water sector, it is a temporary program and it is unclear if Congress will create a permanent program. In response, a group of leading national water sector associations representing drinking water and wastewater utilities collaborated to sponsor this Study to investigate and evaluate alternative approaches for structuring and implementing a permanent federal low-income water assistance program.

The initial program administered by HHS, LIHWAP,[9] has leveraged the agency's long-standing Low Income Home Energy Assistance Program (LIHEAP). This program is particularly important for our evaluation because it effectively tests an existing federal program structure. Our research on the experiences with it has informed our conclusions and recommendations for the design of a permanent federal program. LIHWAP has also spotlighted important differences

[6] The Consolidated Appropriations Act of 2021 was signed into law in December 2020 and appropriated $638 million for a low-income water program.

[7] This new USEPA program had not received funding as of the close of fiscal year 2022.

[8] For purposes of this report, the term LIWCAP is used as a distinction to refer to a separate long-term federal assistance program that may evolve from or replace the recently established LIHWAP program implemented by the Department of Health and Human Services (HHS).

[9] Consolidated Appropriations Act of 2021, Sec 533.

between water and energy service delivery. Where the energy sector is composed of approximately 4,600 large utilities, drinking water and wastewater services are delivered by roughly 64,000 primarily publicly owned, locally rate-regulated, and often small utilities.

Our research also examined other federal, state, and local low-income assistance programs. The checkered federal program landscape poses critical policy and practical questions for defining how federal water affordability assistance should be structured. For example, is there an advantage to creating a dedicated program or would it be better to leverage existing programs? Should the administering federal agency prescribe application processes, eligibility criteria, and forms and levels of assistance, or should state and/or local agencies have discretion to tailor programs to suit their particular situations?

The answers to many of these questions depend on the fundamental goals and objectives for the program. If delivering assistance to the largest number of households struggling to pay for water services is primary, program design may be fundamentally different from a program intended to reduce the incidence of service disconnections. If federal funding is to help patch gaps in the social safety net, supplementing existing federal programs may be discordant. One thing is clear: a national response to water affordability is warranted. This Study offers ideas and principles to guide how a federal response to water affordability may be undertaken.

1.1.1. Project Purpose and Scope

The LIWCAP Assessment Study ("LAS" or "Study") was conceived as a mechanism to give thought to how to best harness legislative momentum to address water affordability challenges. The Study concept called for addressing five (5) interrelated issues (which is largely reflected in the report organization):

- LIHWAP program implementation to date;
- Annual funding / appropriation levels needed;
- Funding distribution methods and roles;
- Administrative requirements (including means testing); and
- Program monitoring and evaluation.

The agreed Study concept advanced a fundamental program goal by committing to develop "**recommendations to help the maximum amount of funds reach the maximum number of households in need**."[10] The Study team was agnostic as to which federal program or agency should administer the new federal funding or how funds reach water service utility customers or providers. However, options that involve supplementing (and potentially modifying) existing federal programs rather than establishment of a new federal program de facto designate the most likely responsible federal agency and funding distribution model.

The Study outlines how federal funding for water affordability could be realized and offers general guidance and conclusions on the respective roles and responsibilities of the administering federal agency, local assistance providers, and water service utilities. Beyond the Study scope are specific details on, for example, how technology applications could be used to simplify assistance application and eligibility screening processes, or what formats may best serve reporting of water service utility billing and service disconnection practices. The Study scope also sets aside the open question as to

[10] LIWCAP Assessment Study Concept distributed to potential Project Sponsors, November 2020.

whether water affordability may be enhanced by further subsidization of the water service sector through larger appropriations to fund infrastructure investments (that, in turn, could mitigate the continuing rise of service rates).[11]

1.1.2. Project Sponsors, Consulting Team, and Advisory Groups

The following Project Sponsors supported the Study, representatives of whom offered important advice and insight:

- American Water Works Association (AWWA)
- Association of Metropolitan Water Agencies (AMWA)
- National Association of Clean Water Agencies (NACWA)
- National Association of Water Companies (NAWC)
- Water Environment Federation (WEF)

These sponsors may have their own perspectives and advocacy imperatives, yet they collectively agreed that the Study should be conducted as an exercise without preconceived notions regarding program design, funding distribution models, or administrative attributes. As such, the final Study content, conclusions, and recommendations are entirely those of the Study consulting team composed of:[12]

- Stacey Isaac Berahzer, IB Environmental[13]
- Janet Clements, One Water Econ[14]
- Zachary Green, Raftelis
- John Mastracchio, Raftelis
- Robert Raucher, Raucher LLC
- Eric Rothstein, Galardi Rothstein Group, LLC
- Manuel P. Teodoro, EJ Metrics, LLC

The Study also benefitted from the advice and perspectives of a broad array of stakeholders.

1.2. A System Investment - Affordability Dichotomy

The water services sector faces an "affordability dichotomy". As consistently documented in USEPA infrastructure funding gap reports, investment and reinvestment in water, wastewater and stormwater systems lags well below what is required to effectively manage assets, upgrade systems to comply with evolving regulatory requirements, and meet other

---

[11] The recent IIJA represents a limited, one-time reversal of a decades long trend of effective withdrawal of federal support of the water services sector. See, for example:

- "The Economic Benefits of Investing in Water Infrastructure,", United States Water Alliance, Value of Water Campaign, Figure 3: Federal Contribution to Total Infrastructure Spending, and
- Water Infrastructure Funding Parity Report, prepared for the National Association of Clean Water Agencies July 21, 2022 https://www.nacwa.org/docs/default-source/resources---public/water-sector-funding-parity-whitepaper-final-(7-21-22).pdf?sfvrsn=63a5c461_2.

[12] Brief summaries of LIWCAP Assessment Study project consultant experience and qualifications are provided as Appendix A.

[13] Supported by Alanna Kinnebrew, Rita Moore and Ke Jack Ding, IB Environmental

[14] Supported by Claire Sheridan, One Water Econ

increasingly acute challenges (e.g., climate change adaptation). Notwithstanding the notable infusion of federal funding support delivered through the IIJA and ARPA legislation, local sources including primarily water service rate increases will be required to bridge the infrastructure funding gap. Water services generally remain priced below their value and true costs, but these rate increase requirements portend water affordability challenges, particularly for low-income households. The water sector faces the dual challenges of managing rate increases to finance needed system investments while not imposing undue burdens on the economically disadvantaged.

A federally funded low-income assistance program has the potential to play an important role in addressing this dichotomy by mitigating the impacts of rising water service costs for economically disadvantaged households directly. Low-income bill assistance is different from water sector support that, for example, conveys important subsidies in the form of low-interest loans and tax-exempt borrowing or infrastructure funding grants to utilities, in that it is specifically targeted to benefit low-income households.

1.3. Water Affordability in Context: An Evolving Landscape

Water and sanitation services are critically important for human health and development. The cost of providing these services is significant and utilities must raise sufficient revenue to provide these vital services. The array of related issues is daunting and includes but is not limited to:

- The alarming extent to which households are not connected to safe, reliable water and wastewater services, particularly in rural and tribal communities.[15]
- The incidence of households that are disconnected from water services for non-payment of outstanding water service account balances and/or that carry untenable water service-related debts.[16]
- The extent to which poor and leaking plumbing leads to water service billings for lost water.
- The compounding of water debts due to fees and charges related to late and unpaid bills, service disconnections, and other customer account management measures.
- The reluctance of some water utilities to implement necessary rate increases over fear of unaffordability of the higher rates to their low-income customers.

As with other poverty-related challenges, these issues are amplified by an array of legal, institutional, and practical barriers and constraints that often differ substantially from state to state, or utility system to utility system. These include:

[15] See, for example, Closing the Water Access Gap in the United States: A National Action Plan, Dig Deep and United States Water Alliance, (2019), that offered a rough estimate of over 1.4 million in the United States, another 250,000 in Puerto Rico, and 553,000 homeless people who may lack equitable access.
http://uswateralliance.org/sites/uswateralliance.org/files/publications/Closing%20the%20Water%20Access%20Gap%20in%20the%20United%20States_DIGITAL.pdf

[16] Currently, service disconnection and arrearage data are not required to be reported through water system permitting or financial reporting requirements. In 2018, Food and Water Watch published limited survey data in its America's Secret Water Crisis: National Shutoff Survey Reveals Water Affordability Emergency Affecting Millions.

- **State and local legal frameworks –** the legal landscape for water affordability policies is inconsistent across the country as highlighted in a 2017 study[17] on utility rate-funded CAPs. Different states have different, often ambiguous, statutes regarding distributions of public funds, customer classification and rate structures, and debt forgiveness and fee waivers.
- **Water rate-making protocols** - As noted in industry guidance,[18] water, wastewater and stormwater rate-setting practices involve consideration of the unique attributes of individual systems, differing pricing objectives, and greater or less allegiance to cost-of-service principles.
- **Billing practices, system reporting, and constraints** – Water utilities use specialized billing systems to generate bills, perform revenue accounting, and support customer services. These systems, along with customer service procedures, vary substantially across America's tens of thousands of utilities. In many cases, these systems also bill for other government services.

This patchwork of practices and barriers have prompted calls for water sector "reform" through additional federal legislative measures that would, for example, make permanent the service disconnection moratoria implemented by most states during the early phases of the (continuing) COVID-19 pandemic. Other measures, including debt forgiveness and income-based water service pricing, would initiate fundamental revisions in the social contract by which water services are rendered in the United States. Whereas the current utility service model involves the delivery of water services through enterprises (whether public or privately-owned) that recover costs by imposing rates and charges based on water service attributes (e.g., water usage, wastewater flows, stormwater run-off), potential reforms could modify this model incrementally to address water affordability challenges. While such reforms are worthy of additional consideration, they fall outside the scope of adopted federal legislation authorizing low-income water bill assistance.

At the same time, numerous water service providers, particularly larger urban and suburban systems, have also responded by implementing a variety of measures intended to address low-income water affordability in their service areas. These measures range from progressive rate designs structured to affordably price water usage levels associated with basic human health and sanitary needs, to utility-funded Customer Assistance Programs.[19] These utility-administered efforts, like their federal program counterparts, are characterized by limitations on available funding, varying participation levels, requirements placed on participants, and administrative costs.

---

[17] Berahzer, Stacey Isaac, et al. "Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities." Edited by Sarah Keefe, *UNC Environmental Finance Center*, 7 Oct. 2017, efc.sog.unc.edu/wp-content/uploads/sites/1172/2021/06/Nagivating-Pathways-to-Rate-Funded-CAPs.pdf.

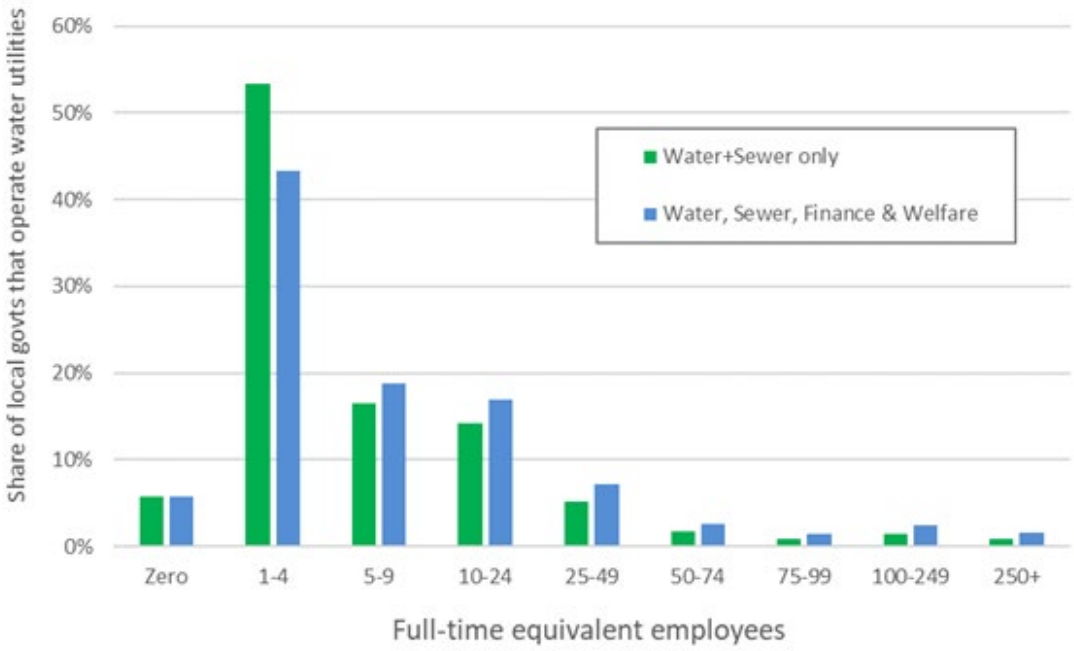
[18] See the American Water Works Association's, M1 Manual of Practice, Principles of Water Rates, fees and Related Charges, 7th edition, (2017); and the Water Environment Federation's, M27 Manual of Practice, Financing and Charges for Wastewater Systems, 4th edition, (2018), and User-fee Funded Stormwater Programs Special Publication (2013).

[19] See, for example:

- "Of Bills and Balance Sheets: The third pillar of affordability is Rate Design, Manny Teodoro, August 1, 2022, https://mannyteodoro.com;
- Drinking Water and Wastewater Utility Customer Assistance Programs, US EPA Water Infrastructure and Resiliency Finance Center, April 2016;
- Model Water Utility Affordability Programs, Bradford L., Blake, Gary A. Brown, and Eric Rothstein, Journal AWWA, 109:8, August 2017;
- Timmins, Christopher. 2002. "Does the Median Voter Consume Too Much Water? Analyzing the Redistributive Role of Residential Water Bills." National Tax Journal 55(4): 687–702.;
- Sorenson, Kathryn. 2019. "Water Management & Water Equity in Phoenix, Arizona." Meeting of the Minds. https://meetingoftheminds.mystagingwebsite.com/water-management-water-equity-in-phoenix-arizona-32010 (May 26, 2021).

The limited administrative capacity of the majority of U.S. water service providers is of profound importance in any assessment of a potential federal assistance program. The graph below shows utility and finance staffing levels for U.S. local governments (municipalities, counties, and special districts) that operate water and/or wastewater utilities:

Figure 1-1. U.S. Local Government Water and Wastewater Employment



Source: 2017 U.S. Census of Governments.

Nearly 60% of local governments that operate water/wastewater utilities employ fewer than five full-time equivalent (FTE) staff. Nearly half (49.0%) employ fewer than five FTE when finance and welfare staff positions are included in this count. Many tribal and territorial water systems have similarly constrained organizational capacity. Utilities with such limited administrative capacity will struggle to perform the various administrative tasks involved in delivering and reporting on customer assistance program benefits.

These water sector complexities raise important questions about the potential scope and reach of a federally funded low-income water assistance program. This study proceeded from the assumption that a federal water assistance program is not intended to initiate structural reform of the water sector (whether needed or not) nor to supplant evolving local and utility-based responses to water affordability. Rather, in line with the legislative text that established the existing HHS LIHWAP, the program is "to provide grants to States, Indian Tribes, and Tribal organizations to assist low-income households that pay a high proportion of household income for drinking water and wastewater (including stormwater) services..."[20] The LIWCAP Assessment Study is therefore focused on how to best deliver the assistance to be rendered within the current legal and institutional framework, while at the same time providing a variety of new and different options for improvement depending on policymakers' objectives and willingness to act.[21] The Study offers perspectives on

[20] (Sec. 30302 (a) Appropriation).

[21] While this Study has been written with certain political realities in mind such as current legislative directives, the existing congressional balance of power, and potential federal spending limitations - all of which may limit how big or broad a new program could be - the Study authors and water sector project sponsors acknowledge that other stakeholders may wish to consider new low-income programs without regard to potential political limitations. The Study authors and sponsors welcome such a dialogue and hope this document provides a starting point for discussions moving forward.

the magnitude of low-income water affordability needs, lessons learned from the nascent HHS administered LIHWAP program, and the relative advantages and disadvantages of alternative program administration pathways.

Recent legislation (and therefore the Study) does not speak to many of the symptoms of water affordability challenges that are of acute concern, though not well documented. Beyond calling for the systematic collection of relevant data, the Study does not address how to reduce the incidence of service disconnections or mitigate the extent of accumulated water-related debt (arrearages) among low-income households. The Study does not consider how problems of water access – requiring the extension of water infrastructure to unserved communities – may be addressed. Similarly, the Study does not speak to the merit of further subsidization of the water sector to reduce overall costs for all water service customers.

Accordingly, each of the program administrative pathways discussed conceive programs that would provide assistance to low-income households to cover ongoing water, wastewater, and stormwater costs. At this stage, they would not cover customer arrearages nor directly address service disconnections, at least in part due to limited utility administrative capacity and the diversity of related legal and institutional frameworks that characterize the water sector. These limitations reflect the harsh reality that any federal program will miss important segments of the income-eligible population in need of assistance – as noted in our reviews of federal poverty assistance program experience to date.

2. Program Evaluation Framework

2.1. Introduction

This Study provides an evaluation of options, or "pathways" for implementing a permanent, federally funded, low-income water customer assistance program. This includes examining the possibility of expanding or modifying existing programs, like LIHWAP or SNAP, as well as the possibility of creating an entirely new water assistance program at EPA. In developing its assessment, the Study team applied a suite of program goals, objectives, and evaluation criteria/performance metrics to gauge the relative merits of various LIWCAP design and administration options. This chapter reviews these program goals, objectives, and evaluation metrics used to assess various potential federal *program design* options, as well as alternative *pathways for implementing* a federal low-income water assistance program.

Water service affordability is an emerging and increasingly well-recognized challenge facing many lower- and fixed-income households across the United States. For numerous reasons, water-related services for potable supply, wastewater management, and stormwater control have been rising faster than incomes.[22] These water service expense increases are particularly challenging for households in the lower quartile of the income distribution.

Water services are essential for ensuring household-level and community-wide public health and well-being. Therefore, it is imperative that all households continue to receive, or acquire access to, adequate provision of water services.[23] This study examines options to provide household affordability relief through federal program options that are targeted to assist water bill payments for income-eligible households.

There are numerous possible pathways to address the water affordability challenge facing households. This study examines options for providing federal support for economically challenged households – either through mechanisms that provide monetary support directly to households in need, and/or that direct funds to water sector utilities or community-based organizations to help cover the water expense for households in need.

Note that other policy approaches (i.e., that do not directly address need at the household level) are available to help address utility cost attributes of the water affordability challenge. An example is the State Revolving Fund (SRF), and similar programs, under which USEPA provides funds for states to offer low-interest loans to water agencies to reduce the expense of necessary capital improvement projects. Direct fiscal assistance to water sector utilities to reduce utility revenue requirements may, in turn, help reduce household water bills. While there are some administrative simplicity and cost advantages to providing such additional fiscal support directly to water utilities, these options are not specifically designed to address low-income household water affordability challenges and are therefore not examined in this Study.

2.2. Study Goals and Objectives

The goal of this study is to provide an assessment of the comparative pros and cons of alternative options for providing federal assistance aimed at reducing the household affordability challenge. As noted above, our focus is on federally funded

[22] See, for example, Financial Survey: Executive Highlights, NACWA, August 2021.; 2021 Water and Wastewater Rate Survey, AWWA / Raftelis; and 2021 50 Largest Cities Water and Wastewater Report, Black & Veatch

[23] Correspondingly, it also is imperative that water sector utilities providing these services receive adequate funds to cover their capital and operating expenses.

program designs aimed specifically at addressing economic hardship imposed on low-income households facing rapidly escalating water service costs.

A disciplined assessment requires establishing (and then applying) a set of relevant criteria against which the alternative options can be evaluated. Evaluation criteria are intended to reflect the attributes that are considered desirable or essential for a federal program. The evaluation criteria applied for this Study are described in the following section, and focus on:

- Effectiveness – the extent to which the program assists low-income households with water affordability challenges;
- Efficiency – the timeliness and degree to which program funds provide relief to those in need, compared to the cost of administering the program; and
- Equity – the degree of fair and consistent treatment of households facing similar needs and circumstances.

In many instances, tradeoffs necessarily exist between program objectives. For example, prioritizing program efficiency (e.g., minimizing administrative costs) may limit an option's ability to advance equity or effectiveness objectives. Such tradeoffs are discussed in the next sections of the report.

2.3. Evaluation Criteria

There is well-established research literature regarding the design and evaluation of assistance programs for economically challenged households. Much of this base of knowledge is associated with efforts over past decades to design, evaluate, and improve public "welfare" programs, such as SNAP (the food stamp program) and the Earned Income Tax Credit (EITC). Insights on evaluation criteria from social welfare reform efforts apply to water-oriented assistance program administrative challenges.[24] Informed by this literature and experience, the Study team's evaluation criteria are described below, with additional discussion provided in Appendix B.

However, at least three major caveats accompany our evaluation:

- First, there is disconcertingly limited baseline data regarding many aspects of our national water affordability challenges.
- Second, concepts regarding federal program design and implementation are offered without benefit of extensive use of mechanisms to secure potential program participants' input or involve community organizations engaged in delivering low-income assistance.
- Third, the performance measures offered attempt to specify objective, measurable data elements to gauge program impact, yet additional measures related to community engagement (e.g., number of public input meetings, comments received, organizations engaged) may only quantify activity while many aspects of program success are fundamentally subjective.

Effectiveness: Does the program provide a meaningful level of economic relief to the target populations?

[24] Further, prior program experience suggests that practical federal fiscal realities need to be considered in the evaluation. Assessing the overall effectiveness of a federal LIWCAP may be informed by consideration of how much federal funding is likely to be available relative to the estimated total national need. A program with funding adequate to cover only a limited fraction of the total need may be targeted and evaluated differently than a larger, less budget-constrained version of a federal program.

A desired outcome of any low-income assistance program is that it provides meaningful economic relief to the target population – i.e., that it addresses a suitable portion of the national need for assistance given the federal fiscal support envisioned. Is the level of assistance provided per eligible household sufficient to provide meaningful relief from water-related economic hardship? And is a suitable percentage of the nation's economically challenged households benefiting from the program to indicate the problem is being reasonably addressed given federal fiscal realities?

Administrative Cost: Are the costs and resource requirements to properly administer the program a "reasonable" percentage of the total program budget?

Administrative cost refers to the personnel and resource costs associated with the government agencies (federal, state, local), and utilities, which set up and run the program. Administrative costs include disbursing and tracking funds, establishing and implementing eligibility requirements, assuring compliance with applicable funding rules and procedures, tracking overall performance, and on-going efforts to improve program performance.

Because of these practical administrative cost burdens, it can be advantageous to support or piggyback onto an existing assistance program, often managed by another trusted assistance provider (e.g., a program already set up and run by a public agency). If an implementing agency opts to set up its own new program, then some degree of administrative simplicity can be attained, and administrative cost reduced, by relying on easily verified eligibility determinations for other established assistance programs (such as LIHEAP or SNAP).

Note that our evaluation considers, to the extent practicable, the total administrative costs that may be incurred over all steps of the funding distribution path — not just those incurred at national, regional, or utility levels. It is important to recognize the relative advantages of program pathways that limit administrative complexity or leverage systems already in place.

Administrative Burden: Are the time, resources and effort imposed on eligible households reasonable relative to the benefits received?

Administrative burden refers to the time and resources required of eligible households to apply for and maintain assistance. Will households in need be aware of the opportunity to secure assistance, and will they be willing and able to work through the application process without undue expense, time, effort, or loss of privacy?

Questions with regard to household administrative burden include: Is it advantageous to piggy-back onto other programs that have well-defined eligibility criteria? Can customers in need readily apply for and gain access to the program? Where eligibility is based on other existing programs (e.g., SNAP), can the administrative burden on low-income households be minimized or possibly eliminated?

Another common approach is to have a community-based organization (CBO) administer various (or all) aspects of a government-established program. There are several examples from the water and energy sector (e.g., LIHEAP in many states) where CBOs perform recruitment, verification, enrollment, and other administrative activities for government—or utility—established low-income assistance programs. In addition, several strategies are available for reducing the administrative burden for low-income customers (i.e., making it easy to enroll).

Target Efficiency: Does the program effectively steer support to the intended recipients (and not others)?

Target efficiency is a measure of how well the program reaches its intended population. For example, does the program direct its resources to those truly in need, without unfairly creating gaps in coverage for others in need? Furthermore, does the program avoid supporting households or others who do not have a true need?

A prime example of a target-efficiency concern relates to the challenge of assisting those economically challenged populations that are renters and residents of single-metered multi-family buildings. If water rate relief in some form is provided to the landlord or property manager (e.g., through discounts, credits, or conservation assistance), how much of this support will reach the economically challenged households? Will building owners simply pocket the savings as additional profit? Or will lowering water costs relieve upward pressures on rental charges and help maintain the stock of affordable housing within the community (i.e., is the assistance provided to landlords effectively reaching the target population of renters that are economically disadvantaged households)? The team has considered how horizontal equity challenges (further defined below) – such as those arising for renters and others who are not direct customers of a water utility – may be managed.

Equity Considerations: Does the program treat households with similar economic challenges in a fair and equivalent manner, and differentiate fairly across households with different challenges?

Two "fairness"-oriented considerations are somewhat related to components of target efficiency – vertical and horizontal equity.[25] These are described below.

- **Horizontal Equity:** Are households or utilities with comparable needs receiving comparable benefits from the program?

  Horizontal equity reflects whether the program provides equivalent assistance to all households (or utilities) facing similar fiscal circumstances. For example, does it avoid or fill coverage gaps by helping those in need who may not be eligible for or may not have managed to enroll in other assistance programs? Does it support people who fall between the cracks of the existing fiscal assistance network?

  Horizontal equity is a concern for households (and the utilities serving them) facing fiscal challenges but who, for some reason, are either not eligible for assistance from other programs (e.g., because their income levels are just slightly above a fixed threshold), or who have not enrolled in other programs because of lack of awareness, limited mobility, language barriers, or other administrative burden factors. For this reason, horizontal equity considerations may suggest developing a unique, water-focused assistance program, rather than piggybacking on other programs that are leaving coverage gaps. This highlights a tradeoff between the criterion of striving for administrative simplicity versus aiming to improve horizontal equity for those households falling between the gaps characteristic of existing programs.

  Horizontal equity considerations also arise where a utility has well-developed CAPs for its economically challenged bill-paying customers, but none that support households facing comparable economic hardships who do not receive and pay a water bill (e.g., many renters, a large proportion of whom are in the lower income strata and who, ultimately, face water cost challenges, albeit through elevated rents). This disparity between how the

[25] As highlighted in the Executive Summary, a number of stakeholders who commented on drafts of this report noted – correctly – that issues of equity are also deeply intertwined with issues of water affordability and access to water for low-income households. This is especially true for households of color that, in many communities across the US, have disproportionally suffered from substandard water and wastewater service and high-water costs. This is an issue that deserves continued serious attention from national policymakers and water sector associations, although is ultimately beyond the scope of this Study to address – in part because any federal low-income water assistance program that explicitly uses race as part of its funding criteria would face significant legal hurdles.

program ultimately supports similar low-income households may be a key consideration for developing assistance targeted to renters and other "hard-to-reach" households. Horizontal inequities can also emerge where not all utilities offer CAPs or where utility CAPs provide significantly different benefits. Two low-income households with similar financial conditions may have very different experiences if they are customers of different utilities, one of which offers a generous CAP while the other does not.

- **Vertical Equity:** Are households (or utilities) with different needs and challenges receiving suitably different levels of fiscal benefit?

  Vertical equity addresses whether the program treats households (or utilities serving them) with different levels of economic distress in a manner that fairly provides greater assistance to those with the greatest needs. For water and wastewater assistance programs, this criterion applies to whether the level of assistance is calibrated in some fashion to the level of need, such as adjusted according to income level, household size, or other factors.

  Another vertical equity consideration is whether some households or utilities that do not have a true need nonetheless obtain assistance because eligibility requirements do not account for relevant factors (e.g., households with low reportable incomes but that have other assets or support, analogous to college students with parental funding).

Note that the criteria of horizontal and vertical equity do not directly address considerations of community-wide environmental justice (EJ). Communities with disproportionate shares of low-income and chronically unemployed or under-employed households, and/or people of color, Native Americans, or other ethnic minorities, may face severe problems associated with their water services. These challenges may extend beyond affordability to broader issues of water quality, public health and safety, and system reliability. Stark examples include Flint, Michigan, Jackson, Mississippi, and many Tribal communities. These important community-level challenges may not be well addressed by a federal household-level water affordability program, regardless of its design, due to restrictions prohibiting the targeting of federal assistance based on racial or ethnic considerations. Critical community-level EJ issues associated with water services need to be recognized and addressed, but they will need to be addressed through other mechanisms.

Resource Efficiency/Incentive Alignment: Does the program maintain or establish suitable incentives?

A final consideration is whether the program sends appropriate price signals to low-income customers and/or helps meet other related objectives. For example, does the program support price signals for water use efficiency and conservation? Does it incentivize timely bill payment and satisfy other municipal objectives (e.g., tax compliance)? Are proper price and other signals transmitted to those who may affect need, such as landlords?

2.4. Tradeoffs in Meeting Program Objectives

Inevitably, there are tradeoffs in how well a specific program design meets the stated objectives and associated evaluation criteria. For example, given the practical realities of federal budget limitations on how well funded a federal water assistance program can be relative to the estimated total annual needs (of between $2.4 and $7.9 billion as discussed in the next chapter), should the program aim to cover as many households in need as possible but offer relatively small amounts of monetary relief to each? Or should the program instead provide a larger and more meaningful amount of monetary relief but target a smaller number of households? This reflects a tradeoff between program effectiveness (providing meaningful levels of relief) and horizontal equity (treating similar households in similar fashion).

Another tradeoff pertains to whether renters or other "hard-to-reach" households that do not directly receive a water bill (i.e., they do not have their own customer account with their water utility but pay through rents) should receive benefits.

Horizontal equity considerations suggest these economically challenged households should be supported – such as through a supplement to the USDA-administered SNAP program. However, such support may come at the expense of utilities who may not receive revenues needed to cover their costs because the recipient households may apply their additional SNAP funds to other purchases such as food, medicine, and rent.

These and other key tradeoffs are evident from Table ES-1 (found in the Executive Summary) and are discussed in other portions of this report.

2.5. Performance Metrics

Specific metrics should be established to evaluate program performance following implementation. These performance metrics may then be used to identify program elements needing improvement and can guide potential program enhancements or revisions to attain better results.

Performance metrics provide a barometer of how well a program is functioning relative to the established goals and objectives. Performance metrics are typically linked to the evaluation criteria and objectives developed in the planning portion of the program development process. For example, if a stated objective when the program is being designed is to reach a meaningful portion of economically challenged households by the end of the first full year of program implementation, then a logical performance metric might be: “what percent of the identified target households have benefited from the program?”

If an assistance program's performance metrics reveal the program is not delivering up to the stakeholders' stated expectations, then the program administrators should consider how to modify relevant components of the assistance program so that it performs better in the future. The periodic use of clear performance metrics is a gateway to continuous improvement.

If performance persists below targeted levels, then the implementing agency may wish to curtail the program and consider replacing it with an alternative approach for assisting economically challenged households. Alternatively, if a program is succeeding at meeting its objectives, then having well defined performance metrics provides a valuable way of documenting success and, thereby help assure continued (or increased) fiscal support.

There are several considerations to take into account when defining performance metrics. Perhaps the two most fundamental considerations are:

Can the outcomes be measured empirically based on readily observed, objective information? Do the observable, countable outcomes reflect meaningful results, relative to the overall objectives of the program being evaluated? The second of these considerations may be most important. As a quote attributed to Albert Einstein's notes: "Analysts may confuse things that are countable with the things that count." With that concern duly noted, there is often value in performance metrics that are semi-quantitative or even qualitative, especially if they reflect meaningful outcomes that reflect the overall objectives of the program. The key is to try to effectively track and communicate what matters, and to do so in an objective and transparent manner.

LIHWAP Performance Metrics

The Health and Human Services Department's (HHS) Office of Community Services (OCS) has implemented a two-stage data collection process with both a quarterly and annual report. These reports help OCS monitor and report on program performance:

The quarterly and annual reports include performance indicators such as:

1. Program launched (number of states, territories, and tribes)
2. Household assistance type:
    - 2.1 Restoration of services
    - 2.2 Prevention of disconnection of services
    - 2.3 Reduction of current rate charges
3. Number of assisted households by poverty level
4. Number and types of households assisted
5. Average benefit amount provided to households
6. Performance measures related to targeting assistance to high water burden households:2
    - 6.1 Water Burden Targeting:
        - 6.1.1 Average Water Benefit - The average water benefit payment for all households.
        - 6.1.2 Pre-Water Burden - The average household water burden prior to receiving LIHWAP assistance.
        - 6.1.3 Post Water Burden - The average household water burden after LIHWAP assistance is received.
    - 6.2 Restoration of Home Water/Wastewater Service
    - 6.3 Prevention of Loss of Home Water/Wastewater Service
    - 6.4 Rate Reduction of Current Home Water/Wastewater Service

Sources:

[1] Administration for Children and Families, Office of Community Services. *LIHWAP DCL-2022-10 LIHWAP Data Dashboard Release FY2022,* 7 Apr. 2022. www.acf.hhs.gov/ocs/policy-guidance/lihwap-dcl-2022-10-lihwap-data-dashboard-release-fy2022.

[2] Department of Health and Human Services. *Assistance Listing 93.499 Low-Income Household Water Assistance Program*, Dec. 2021. www.cfo.gov/assets/files/addendum-2/HHS%2093.499%20%E2%80%93%20Low%20Income%20Household%20Water%20Assistance%20Program%2n.d.D2.pdf.

3. Water Affordability Needs Assessment

3.1. Historical Perspective

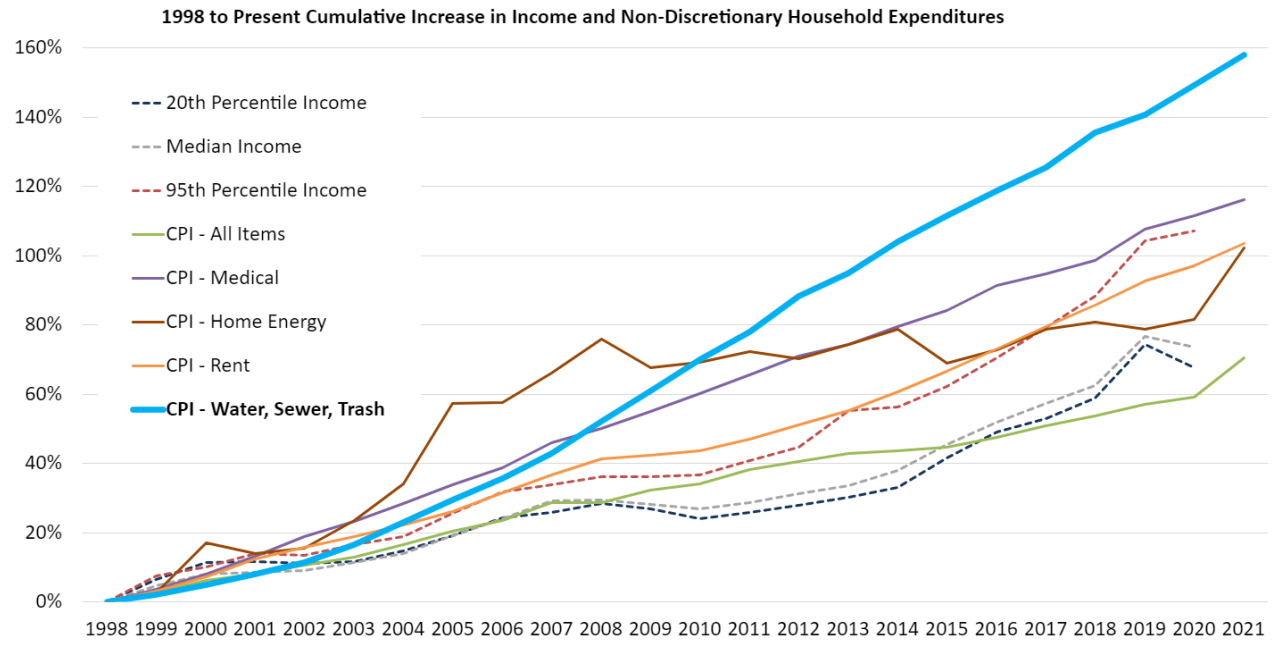
In the past, water and wastewater bills were a relatively small portion of the typical household budget, and until the HHS-administered LIHWAP program,[26] there had not been a federal water bill assistance program to help address household water affordability.[27] However, since at least the late 1990s, water and wastewater bills have increased at a greater pace relative to other essential needs and incomes (Figure 3-1). Since 1998, the U.S. Census' essential cost index reported water, wastewater, and trash costs increased nearly 160% while the 20th percentile of income has increased by less than 70%. A similar disparity is observed at the national median household income level. This disparity between water and wastewater cost increases and income growth has exacerbated household water affordability issues. Today water sector services occupy a larger share of household budgets than they have historically, and though water sector costs likely will remain at lower levels than certain other household essentials such as healthcare or energy, observed increases in costs confirm that they are no longer financially trivial for middle- and lower-income households, particularly given their criticality for life, health, and sanitation.

Figure 3-1 demonstrates that household water service costs have increased more rapidly than other sectors of the economy, as well as in relation to incomes, yet the analysis is not intended to suggest that prices are unreasonably elevated. Historical underpricing of water and wastewater services relative to its full cost and value suggests that more recent water service pricing is largely just beginning to recover the costs of service more accurately. At the same time, the criticality of water services to the health and well-being of all Americans portends the need to ensure that services are affordable.

[26] "Text - H.R.1319 - 117th Congress (2021-2022): American Rescue Plan Act of 2021." *Congress.gov*, Library of Congress, 11 March 2021, http://www.congress.gov/.

[27] The Environmental Protection Agency does provide significant funding and financing through the State Revolving Loan Fund programs, which include targeted grants and loan forgiveness for under-resourced communities. However, despite these programs, households remain burdened. Further, programs such as SRF are not household directed affordability programs as is our focus here.

Figure 3-1. Utility Service Prices vs. Other Essential Needs and Income



Source: Federal Reserve Economic Data. https://fred.stlouisfed.org, U.S. Census www.census.gov.

Estimating the magnitude of water affordability burden is dependent upon several key inputs and assumptions. In turn, preparing a federal program expense estimate is a function of a range of key factors and assumptions that include (but are not limited to) water burden targets desired by policy makers and anticipated program participation levels that are influenced by eligibility criteria, application processes, applicant support resources, and other factors.

The Study team estimated national water affordability need to be in the range of $2.4 billion to $7.9 billion annually, reflected in 2022 dollars per Table 3-1. The range in the estimate depends on the model assumptions applied. A description of the methodology and approach used to derive the need estimate is provided herein. The needs estimate exercise focuses on future affordability burdens and thereby does not address arrearages that may have already accrued due to historical affordability burdens.

Table 3-1: National Affordability Needs Modeling Results by Scenario

	National Water & Wastewater Service Affordability Need Estimates			
Scenario	#1	#2	#3	#4
Needs Estimate ($billions)	$2.4	$4.5	$7.4	$7.9

3.2. Methodology and Data Sources

The needs estimate relied upon combined water and wastewater bill information available from the participating consultants, academics, and industry associations, as well as federal databases on incomes and populations. Income data was obtained for over 27,000 Census Places to complete the assessment. Census Places include Incorporated Places and Census Designated Places (CDPs). Incorporated Places are legally incorporated under state law, have a legally defined boundary, and an active functioning governmental structure. Examples of Incorporated Places include cities, towns, and villages. CDPs are units of geography available through the U.S. Census and defined as statistical geographies representing closely settled, unincorporated communities that are locally recognized and identified by name.[28]

Bill assistance was considered to be needed for households whose cost of water sector services as a percentage of income exceeded established thresholds assumed for various income levels. The midpoint for each of the income ranges available from the U.S. Census bureau were used for each Census Place (or for each state for populations not in a Census Place). The following table shows the affordability thresholds used to determine the need for bill assistance at various income levels.[29]

Table 3-2. National Water and Wastewater Needs Assessment Income Ranges and Thresholds

	Cost of Water & Wastewater Service as % of Income			
Income Range	Threshold #1	Threshold #2	Threshold #3	Threshold #4
<$10,000	8%	4.5%	3%	2.0%
$10,000 - $14,999	7%	4.5%	3%	2.5%
$15,000 - $24,999	6%	4.5%	3%	3.0%
$25,000 - $34,999	5%	4.5%	3%	3.5%
$35,000 - $49,999	4%	4.5%	3%	4.0%
$50,000 - $74,999	3%	4.5%	3%	4.5%

We used these affordability thresholds to identify the need for bill assistance in each geography at multiple income levels based on the percentage of each geography living at that income level and local typical bills.

The difference between the threshold for affordable water sector services and the typical bill for each income range at each location was identified as the bill assistance need. Need was then aggregated across income ranges and geographies to identify the national need. In addition, the percentage of population in each state that pays a water and wastewater bill directly or indirectly through their rent (rather than being served by a well and/or septic system) was used to roughly adjust the estimated need in each state to the relevant bill paying population.[30]

The model analyzed affordability using a typical bill as a percentage of income approach for over 27,000 Census Places. A typical bill was defined as either 5 centum cubic feet (ccf) of water consumption or 4,000 gallons per month depending on the billing data source used for a given Census Place. Note that these volumes best approximate an average U.S. household

[28] "Census Designated Places." *United States Census Bureau,* 28 Mar. 2022, www.census.gov/programs-surveys/bas/information/cdp.html.

[29] A discussion of the development of these thresholds is included later in this section.

[30] Information on "pay bill directly", "included in rent", vs. "no water bill" was sourced from the US Census Public Use Microdata Sample (PUMS).

size of 2.6 people that consume 50 gallons per person per day, which is commonly considered as an essential usage amount that covers basic drinking water, cooking, and sanitation needs in the home. In each database that consumption amount was applied to both local water and wastewater rates to calculate bills. Data on typical bills were available for 639 locations, with state average bills applied for Census Places where data was not available on rates and for the balance of each state's population that did not fall within a Census Place. See Appendix I for an illustrative example of how the model calculations work to estimate national affordability need.

3.3. Critical Assumptions

Inherently, the analysis assumed that the cost to provide sufficient water to meet essential household needs in a given service area is similar across wide income ranges. Water service costs are assumed to be derived from usage parameters and not indexed to income.[31] For Threshold #1, need is based on a water cost claim on income of 3% for the range that includes national median household income and increases to 8% for the lowest income range from $0 to $10,000 per household per year. The higher thresholds at lower income levels reflect the arithmetic that lower income households will spend a greater share of their income on essential needs such as water and wastewater service (under typical pricing regimes). The estimate of need was also analyzed using other affordability thresholds that do not vary by income level (either 4.5% of income or 3% of income). These fixed threshold approaches increase the model's estimate of need and would direct a greater proportion of available assistance funding to the most economically vulnerable populations. Threshold #4 is derived by estimating needs under an assumption that the affordability threshold is lower ***in percentage terms*** for lower income households such that need is based on a water cost claim on income of 4.5% for the range that includes national median household income and decreases to 2% for the lowest income range from $0 to $10,000 per household per year. This progressive claim on income schema would deliver the greatest proportion of available assistance funding to the most economically vulnerable populations. Table 3-2 (above) details the income ranges and thresholds where need was estimated for each geography. Note that the threshold numbers in Table 3-2 correspond to the scenario numbers used in Table 3-1.

3.4. Preliminary Results

Estimates of need range from over $2.4 billion in the Threshold/Scenario #1 analysis to over $7.9 billion in the Threshold/Scenario #4 analysis. A 3% to 8% threshold that increases as income gets lower results in an estimated need of about $2.4 billion. A 4.5% threshold at all income levels, aligned to U.S. EPA Financial Capability Assessment metrics applied in selected regulatory contexts, would result in a water affordability burden estimate of $4.5 billion.[32] A 3% threshold at all income levels would mirror selected international affordability metrics[33] and result in a water burden of $7.4 billion. Finally, Threshold #4, would reduce the affordability threshold as incomes get lower from 4.5% at higher incomes to as low as 2% at the lowest income range, producing an estimated need of about $7.9 billion.

---

[31] Note that several utilities in the U.S. that have implemented alternative pricing schema that index water service costs by income for selected income-eligible customer groups yet the vast majority of water service pricing references account and billable volumes as billing determinants.

[32] The U.S. EPA 1997 Combined Sewer Overflow (CSO) Control Policy Financial Capability Assessment (FCA) Guidance includes an affordability high burden threshold for wastewater bills of 2% (or more) of median household income. Related drinking water metrics use 2.5% yielding a combined high burden affordability threshold of 4.5% that is a widely cited industry benchmark. Still, because these thresholds were developed for a very narrow regulatory purpose that was more concerned with macro-utility financial capability rather than household affordability, a range of alternatives are explored across four needs estimate models.

[33] https://www.undp.org/sites/g/files/zskgke326/files/migration/ly/HDR-2006-Beyond-scarcity-Power-poverty-and-the-global-water-crisis.pdf

The needs estimates generated from this model were compared to another national needs model developed by a team lead by Professor Joseph Cook at Washington State University (WSU). With user selected settings that are as close as possible to the model developed here, the WSU model suggests a larger affordability need ranging from nearly $7 billion to nearly $14 billion across a greater number of households (over 13 million to nearly 28 million households).

The Washington State University Needs Model

Estimated the need for water affordability assistance to range from $7 billion to $14 billion, which is higher than the needs estimate prepared by the authors of this LIWCAP study.

The WSU model is available as a public online tool that allows users to select their own parameters to develop estimates.[34] As a tool that functions initially at a county scale, this model is also laudable because the income data it relies on is likely statistically rigorous relative to smaller geographic scales that can suffer from larger error bounds. The WSU effort also includes some assumptions that may weaken its accuracy in other ways, such as a focus on utility rates from cities with populations over 100,000 people. Indeed, the model developed for this Study likely also skews to larger utilities due to their typically more accessible rate information. Important differences between the two models include the geographic scale and volume of data inputs used to calculate estimates. The model developed for this Study measured need for twice as many income levels per unit of geography (six income levels here vs. three for the WSU effort) and covered a geographic scale with nine times the resolution (27,000 Census Places vs. 3,000 counties for the WSU effort) and leveraged utility rate information from nearly twice as many locations (639 locations here vs. 385 for the WSU effort). The Study model used a federal data source (U.S. Census Public Use Microdata) to identify the share of households that pay a water bill in each state either directly or as part of their rent, whereas the WSU study includes those served by private wells or septic systems. Households served by private wells or septic systems indeed may have hardships affording these systems, making our estimates a bit more reflective of the potential scale of demand for a federal water bill assistance program, but also indicating that the total water affordability burden is even higher than our needs model would indicate. Finally, the WSU model acknowledges inclusion of a conservatively high 18.5% administrative cost addition, whereas the Study model is purely considering water burdens.[35] Administrative considerations are addressed in other sections of this report. The model results from the three closest WSU study user selected settings which are summarized in Table 3-2:

Table 3-3. WSU Water Affordability Needs Assessment Model Results

Description	**Scenario 1:** 80% of eligible participating, 4,500 gal, 25% of essential use covered + fixed charge, < 100% FPL	**Scenario 2:** 80% of eligible participating, 4,500 gal, 25% of essential use covered + fixed charge, < 138% FPL	**Scenario 3:** 80% of Eligible Participating, 4,500 gal, 25% of essential use covered + fixed charge, < 200% FPL
Total cost of program	$6,590,000,000	$8,740,000,000	$13,709,000,000
Total Number of Households Who Would Benefit	13,478,000	17,858,000	27,967,000

[34] "Calculator for Nationwide Customer Assistance Programs." *Water Assistance Programs*, College of Agricultural, Human, and Natural Resource Sciences, waterassistanceprograms.org/estimation.
[35] "Nationwide Estimate Documentation." *Water Assistance Programs*, College of Agricultural, Human, and Natural Resource Sciences, waterassistanceprograms.org/estimation.

3.5. Data Limitations and Policy Implications

The Threshold/Scenario #1 estimate that applies a threshold ranging from 3% to 8% depending on the income level is consistent with prior industry recommendations to Congress on affordability metrics.[36] An escalating affordability threshold interprets the historical 4.5% threshold drawn from USEPA Financial Capability Assessment guidance as a precedent that applies at median household income and implicitly recognizes that that same bill, would then represent a higher percentage of income as incomes decrease and a lower percentage at higher incomes. This threshold structure also recognizes that the costs of delivering services to meet essential needs do not change as household incomes decline. Notwithstanding the arithmetic, the coarse 1% increase in the threshold by income range scenario (Threshold/Scenario #1) still results in significantly lower bills for the lowest income customers and in that sense represents a moderately progressive policy option. If, however, there is a policy imperative to provide benefits based on relative income and to further subsidize costs for the most acutely vulnerable households, then the flat 4.5% or 3% thresholds at all income levels, or more progressive 4.5% down to 2% thresholds could be applied.

The LIWCAP Study Team "Needs" Model

The customer bill assistance needs estimate prepared by the LIWCAP Study Team totaled $5 billion considering a 4.5% cost as a % of income affordability threshold and a 10% administrative cost.

It is important to acknowledge certain data limitations that add a degree of uncertainty to the reported modeling estimates. Billing data is not available for all Census Places let alone for any national sub-geographic level that would facilitate water and wastewater bill affordability evaluation. The Study team gathered a significant amount of data across sources on bill levels for each state and Census Places but ultimately fell far short of a complete data set. It is possible that a national affordability program could help to draw attention to the paucity of water billing data that is available and perhaps serve as a vehicle for generating more information for programmatic refinement over time.

Further, the analysis did not consider household size. Larger households may experience higher water affordability burdens given their greater consumption levels. However, attempting to segment individual Census Places by both income and household size would significantly increase the complexity and statistical error of the modeling. For a national model, it was thought to be adequate for the desired model sensitivity to use an average household size in calculating bills. Nevertheless, a policy consideration for program benefits could certainly include household size as is the case for other programs such as LIHEAP and SNAP.

Additionally, the costs to forgive built up arrearages attributable to affordability challenges from prior billing periods are not quantifiable from federal data sources and therefore not included in needs modeling. They are also not instructive for a program intended to focus on alleviating ongoing affordability challenges. For the Study, it was assumed that arrearage forgiveness would be more appropriately handled through a one-time initiative, like that used for LIHWAP which focused on this very problem during an acute period. While some data on arrearages emerged during the Covid-19 pandemic, it did not necessarily speak to water debts that would reflect a typical year.

Finally, costs of living, including costs of essential needs other than water sector services, was not a direct part of this analysis. There is no census data source that would have allowed us to comprehensively measure essential costs of living with statistical rigor by Census Place and by income range for our modeling purposes. Despite these limitations, the Study model gives a reasonable estimate of the range of the water and wastewater assistance needed at a national level based on available data, particularly given its granular geographic, rate, and income resolution.

[36] https://www.awwa.org/Portals/0/AWWA/ETS/Resources/DevelopingNewFrameworkForAffordability.pdf?ver=2020-02-03-090519-813, page 3-14

In addition to addressing the bill assistance need itself, any funding for water assistance must include funding for administrative costs, including expenses to ensure that the program does not unduly burden the budgets of organizations engaged to implement the program. For SNAP such administrative costs are estimated at 7% nationally, for LIHEAP 9%, and for LIHWAP 15%. Using the 4.5% affordability threshold (Threshold/Scenario #2) a 10% administrative cost that is near the middle of this range would increase costs by about $450 million, yielding a total program size including bill assistance plus administrative costs of nearly $5 billion.

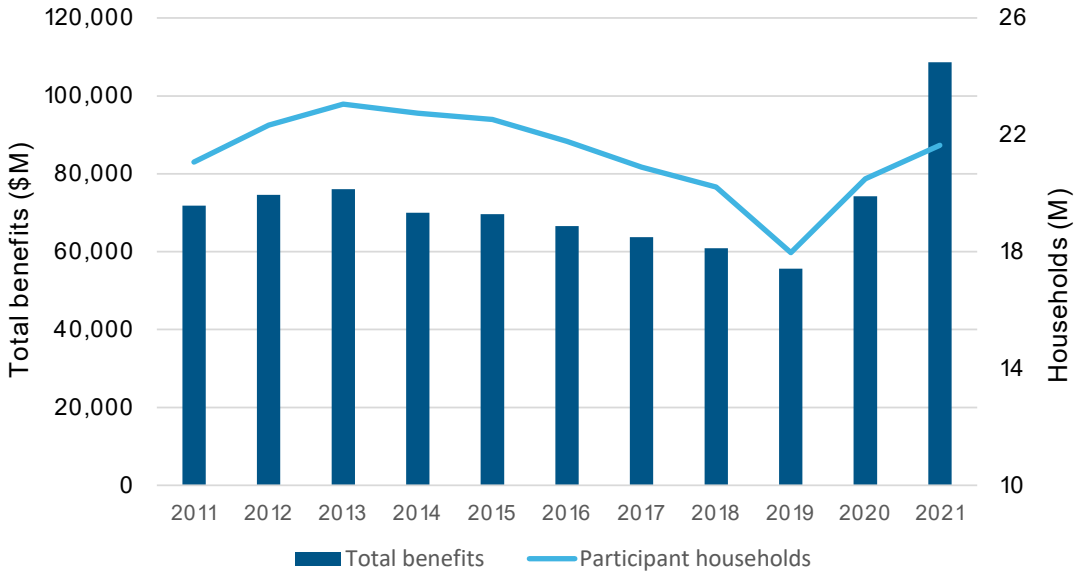
4. Federal Low-Income Assistance Program Precedents

The Study team reviewed several federal low-income assistance programs with the goal of identifying how a federal water assistance program could leverage existing infrastructure and processes and/or build on lessons learned. We focused our review on three programs: SNAP, LIHEAP, and the temporary LIHWAP. SNAP offers broad participation and reach across low-income households, while LIHEAP and LIHWAP both provide utility bill assistance. This section describes the structure and attributes of SNAP and LIHEAP; the following section describes the ongoing LIHWAP program, laying the foundation for our assessment of potential program pathways, which are detailed in Section 6.

4.1. Supplemental Nutrition Assistance Program (SNAP)

SNAP (formerly known as food stamps) provides nutrition assistance benefits to supplement the food budget of low-income households. Administered by the US Department of Agriculture (USDA), SNAP is the largest domestic nutrition assistance program. In FY2021, the program served close to 22 million households on average every month, providing more than $108 billion in benefits. Participation and funding have risen in recent years (due to the Covid-19 pandemic) after declining steadily from peak levels in 2013 (Figure 4-1).[37]

Figure 4-1. SNAP Benefits and Total Households Served, 2011-2021



Source: USDA 2022

Food stamps were introduced in the U.S. as early as 1939; however, the program was formally established through The Food Stamp Act of 1964 following a 3-year pilot program. SNAP is an entitlement program, meaning it is a right granted to

[37] Unless otherwise noted, data and information on SNAP came from USDA's website and/or the agency's publicly available reports on SNAP.

all U.S. citizens by federal law, pursuant to eligibility thresholds. This also means that the program is fully funded to cover the benefits of households who qualify and register for the program.[38] Though SNAP is an entitlement, it still receives funding annually through the congressional appropriations process, meaning benefit availability can be impacted by government shutdowns.[39]

4.1.1. Administration

Funding for SNAP is appropriated by the federal government and distributed to states and participating territories through the USDA. Federal funding covers the full cost of SNAP benefits, but USDA and state agencies share administrative costs, with each paying half. In FY2021, approximately 5% of federal SNAP funding was spent on state program administration; less than 1% was spent on administrative activities at the federal level.[40]

States have flexibility to adapt their organizational structure to administer SNAP and are encouraged to streamline program administration, remove barriers to enrollment, simplify reporting, and expand categorical eligibility, within federal guidelines.[41] Currently, 13 states delegate administration to counties. Every state relies on local government agencies (e.g., county welfare offices) or other local agencies/organizations to support outreach and enrollment efforts. Almost all states have integrated SNAP with Temporary Assistance to Needy Families (TANF) and/or Medicaid programs, allowing for joint application and enrollment processing.

Eligible individuals may apply in person at their local SNAP office or mail-in their application. Almost all states also offer online applications, and many are moving towards mobile technology for case management. Applicants must participate in an eligibility interview, which in many states can be conducted over the phone. Recertification requirements vary depending on the state and individual or household status. Per federal law, elderly or disabled households must recertify at least every 24 months and all other households must recertify at least every 12 months. Many states have adopted more frequent certification periods. SNAP households must notify their state agency of changes in household circumstances that affect their eligibility or SNAP benefit amount.

Monthly food benefits are distributed via an Electronic Benefits Transfer (EBT) card, which can be used like a debit card to purchase eligible food in authorized retail food stores and/or online retailers. Any remaining balance at the end of a month can be carried over into the following month. Retailers and online vendors must be approved through USDA to allow SNAP purchases. In most states, other benefits, such as TANF payments, are also distributed via EBT cards. While SNAP benefits may only be spent on eligible food items, many states allow recipients of other benefits to access such benefits via ATMs or by receiving cash back with a purchase.

Incidences of Bottled Water Purchases

A 2016 USDA study of foods purchased by SNAP households found that bottled water accounted for 1.2% of SNAP purchases (based on 2011 data), ranking 19th in terms of total spending across 27 SNAP categories. Applying that percentage to 2022 benefit levels would mean that SNAP households will spend $1.27 billion on bottled water in 2022.

Source: https://fns-prod.azureedge.us/sites/default/files/ops/SNAPFoodsTypicallyPurchased.pdf

[38] CBPP 2019 https://www.cbpp.org/research/food-assistance/the-supplemental-nutrition-assistance-program-includes-earnings-incentives

[39] NACO 2022 (an additional citation on page. 4-2, says NACO 2022 but should be 2023, must have been updated): www.naco.org/sites/default/files/documents/2023%20SNAP%20Policy%20Brief_2.pdf

[40] CBPP 2022 - https://www.cbpp.org/research/food-assistance/the-supplemental-nutrition-assistance-program-snap

[41] USDA State Options Report (2018 is latest): https://fns-prod.azureedge.us/sites/default/files/snap/14-State-Options.pdf

4.1.2. Funding Distribution to States, Territories, and Tribes

Each fiscal year, 75% of the total SNAP allocation is distributed across states based on SNAP participation levels. The remaining 25% is allocated according to SNAP participation increases in each state over the past year. SNAP operates in the 50 states, Washington D.C., Guam, and the Virgin Islands, but not in Puerto Rico, American Samoa, or the Commonwealth of the Northern Mariana Islands. These three territories instead receive capped block grants to provide nutrition assistance benefits.

Funding is not provided separately to tribal nations for administration, although tribal members may participate in SNAP pursuant to federal and state eligibility requirements. USDA reports that many tribal households do not participate in SNAP because they do not have easy access to SNAP offices or authorized food stores. Instead, many eligible households participate in USDA's Food Distribution Program on Indian Reservations (FDPIR), which provides food to income-eligible tribal households living on or near reservations. Under the program, USDA purchases and ships foods, selected from a list of available foods, to Indian Tribal Organizations (ITOs) or a state administering agency. These agencies store and distribute the foods, determine applicant eligibility, and provide nutrition education to recipients.

4.1.3. Eligibility

SNAP eligibility requirements are set at the federal level and are generally uniform across states. Under federal rules, households must meet all three of the following criteria to be eligible for SNAP:

- Gross monthly income must be at or below 130% of the federal poverty level (FPL). Households with a member who is 60 years or older or has a disability are not required to meet this limit.
- Net income (i.e., income after deductions for non-discretionary items such as housing and childcare) must be at or below 100% of the FPL. States have some flexibility to determine income deductions and exclusions.
- Assets or countable resources (e.g., cash or money in a bank account, and in some cases vehicles) must be less than or equal to $2,500 (or $3,750 for households with an elderly or disabled member) per 2022 guidelines (asset cap amounts are updated annually). States have the option to relax asset limits.

Individuals between the ages of 18 and 50 are limited to three months of SNAP benefits every three years unless they are working 20 hours per week or in a work training program (pregnant women and individuals unable to work are exempt from this requirement). States may suspend or modify this requirement with federal approval. By law, households that receive cash benefits from Supplemental Security Income (SSI), TANF, or General Assistance, are categorically eligible for SNAP.

4.1.4. Benefit Formulas and Amounts

Households receiving benefits are assumed to be able to spend 30% of their net income on food. Benefit amounts are tied to the cost of USDA's Thrifty Food Plan (TFP), a diet plan that provides adequate nutrition per the Dietary Guidelines for Americans. Household SNAP benefits are equal to the cost of the TFP less the household's expected contribution (i.e., 30% of net income).

USDA updated the TFP in 2021 to better reflect current dietary guidance. The resulting cost adjustment was the first time the purchasing power of the plan had changed since 1975, increasing the estimated expense of a nutritional cost-effective

diet by 21%.[42] In 2020, the average SNAP benefit amounted to $155 per person per month ($302 per household). This increased to $218 per person per month ($418 per household) in 2021.

4.1.5. Participation

Participation peaked in 2013, when over 47 million people on average every month were enrolled in SNAP. USDA reports that an average of 41 million people received SNAP benefits per month in 2021. Participation rates for SNAP are high compared to many other low-income assistance programs. In 2019, 82% of eligible individuals received SNAP benefits; however, only 74% of eligible working poor households (i.e., household where someone earns an income from a job) were actively enrolled.[43] Participation varies by state. In 2018, the last year for which the USDA published state participation data,[44] estimated participation ranged from 54% of eligible households in Wyoming to 100% of eligible households in Delaware, Oregon, and Illinois.

4.1.6. Performance Metrics and Program Evaluation

USDA annually publishes trends in participation rates, number of participating households (by household characteristics) and people receiving benefits, average benefit amounts, and program cost data through its website and annual state activity reports. It also regularly publishes a state options report that reflects various policy options that state agencies have adopted to target benefits to those most in need, streamline program administration and field operations, and coordinate SNAP activities with other programs.[45]

In addition, the USDA requires states to select a representative sample of SNAP cases each month (totaling approximately 50,000 cases nationally each year) and have independent state reviewers check the accuracy of the state's eligibility and benefit decisions. Based on these reviews, USDA annually releases state and national payment error rates, which are intended to measure how accurately states determine eligibility and benefit amounts. States are subject to fiscal penalties if their error rates are persistently above the national average.

4.1.7. Lessons Learned

SNAP is one of the largest low-income assistance programs in the U.S. The program's benefit formula, which calculates benefits based on income levels, results in vertical equity across the eligible low-income population (i.e., providing greater benefits to those most in need). SNAP participation rates are high, in part due to program longevity, significant benefit per household, and broad public awareness of the program. This built-in participation could reach a large number of households in need of water and/or wastewater bill assistance.

A criticism of the program is that the eligibility criteria are somewhat limiting. For example, SNAP limits benefits for adults ages 18 to 49 who do not have children living at home and/or are not disabled to three months within any three-year period unless they are working 20 hours per week or in a work training program. CBPP reports that this time limit

---

[42] *USDA Modernizes the Thrifty Food Plan, Updates SNAP Benefits*. 16 Aug. 2021, www.fns.usda.gov/news-item/usda-0179.21.

[43] "SNAP Participation Rates by State, All Eligible People." *Food and Nutrition Service U.S. Department of Agriculture*, www.fns.usda.gov/usamap/2019.

[44] Accessed at: https://www.mathematica.org/download-media?MediaItemId=%7B75651E87-A206-4521-9F08-E928FF60F01E%7D

[45] The latest state options report was published in 2018

disproportionately affects people of color.[46] The qualifying income for SNAP is also lower than some other assistance programs (e.g., see LIHEAP discussion below) and much lower than thresholds intended to measure a living wage.[47] The program's asset limits also prevent low-income households from saving and tend to cause more churn (participants exiting and reentering the program), which increases administrative costs.[48] As noted above, many eligible tribal members do not participate in the program.

The use of EBT cards is an effective way to transfer funds to recipients. The cards only allow for approved purchases and in addition to SNAP, are utilized for other welfare/assistance programs in many states (e.g., TANF payments). As such, EBT cards are programmed with an internal accounting system that allows for only a portion of benefits to be available for eligible SNAP purchases. This indicates that it would likely be possible to allocate a portion of benefits available on an individual's EBT card for payment towards a water or wastewater bill (at least for individuals who pay a bill directly to a water or wastewater utility).

At the same time, technological innovations are making it easier for vendors to register as qualified SNAP retailers. The Expanding SNAP Options Act of 2021 aimed to make the online redemption of SNAP benefits more widely available by requiring the implementation of online SNAP purchasing in every state and providing funding for an online redemption portal and a technical assistance center. Farmer's markets are now eligible to accept SNAP benefits through EBT cards. It stands to reason that many water and wastewater utilities could also relatively easily become SNAP approved vendors. Some smaller systems, or systems that do not currently accept credit or debit card payments, may struggle with this step.[49]

4.2. Low Income Home Energy Assistance Program (LIHEAP)

LIHEAP provides federal funding to assist low-income households with home energy bills, energy crises, weatherization, and energy-related home repairs. Since its inception in 1981, LIHEAP has been administered by HHS through block grants to states, tribes, territories, and Washington, D.C. (referred to as grantees). HHS provides two types of LIHEAP funding: regular funds (annual block grants) and emergency contingency funds. Emergency funds may be appropriated to one or more states at the discretion of the President or the Secretary of HHS.

For FY2022, $3.86 billion was allocated to the program, up from $3.71 billion in FY2021. Emergency funds have not been added to the program since 2011; however, supplemental funding has been provided in recent years through various Covid relief efforts.[50] LIHEAP funding has remained relatively flat over the past decade (decreasing in real terms); in addition, the number of households served by the program has significantly decreased (Figure 4-2).[51]

[46] CBPP 2021: https://www.cbpp.org/research/food-assistance/permanently-end-the-snap-cut-off-to-support-a-more-equitable-recovery

[47] Information accessed at: https://www.unitedforalice.org/

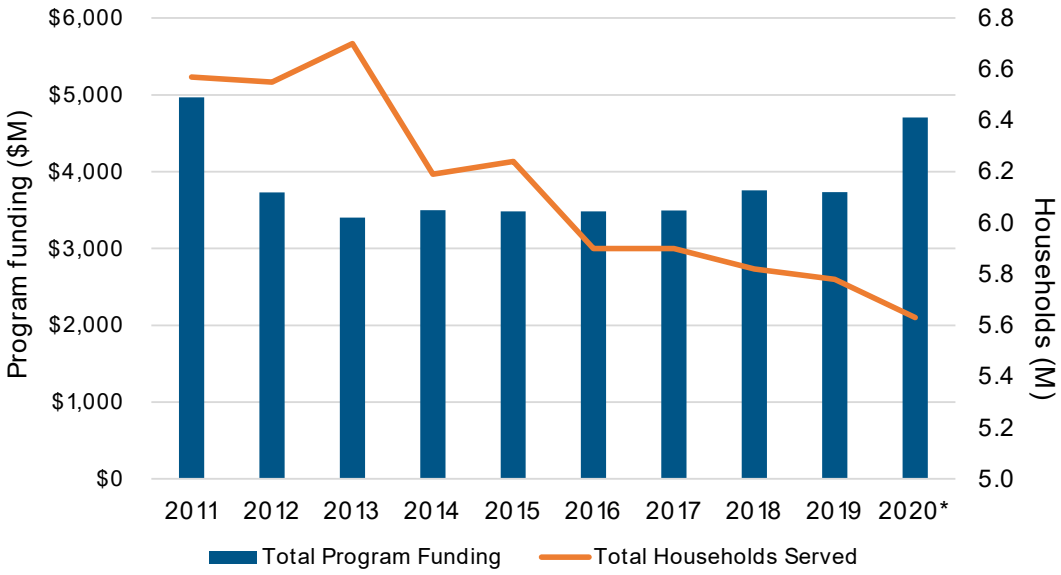
[48] Ratcliffe et al. 2016 - https://www.urban.org/sites/default/files/publication/82886/2000872-The-Unintended-Consequences-of-SNAP-Asset-Limits.pdf

[49] However, it is noteworthy that some systems, including small systems, have made arrangements to accept such payments at local grocery and/or large department stores like Walmart.

[50] For example, an additional $4.5 billion in supplemental funding for LIHEAP was released for FY2021 under the American Rescue Plan Act of 2021 and $900M in 2020 under the Coronavirus Aid, Relief, and Economic Security (CARES) Act. The $4.5 billion is not reported in the FY2021 total LIHEAP funding of $3.71 billion

[51] LIHEAP performance management website custom report tool did not report program funding for 2021. It did indicate that the number of households receiving benefits decreased to 5.2 million.

Figure 4-2. LIHEAP Program Funding and Total Households Served, 2011 – 2020



Source: LIHEAP Performance Measurement Web Site (https://liheappm.acf.hhs.gov).
**Note: 2020 includes supplemental funding provided through the CARES Act.*

4.2.1. Administration

Federal LIHEAP statutes offer very broad guidelines, leaving most programmatic decisions to states. States determine eligibility requirements, application/enrollment timelines, funding priorities, assistance amounts, and other key program design elements. This results in considerable heterogeneity among LIHEAP programs. Appendix C provides a comparison of LIHEAP programs across four states to demonstrate these differences.

Per the federal LIHEAP statute, grantees are only permitted to spend up to 10% of LIHEAP block grant funding for administrative purposes.[52] However, states and local governments can contribute non-federal funding to cover additional program administration costs. In all states, the same department administers LIHEAP heating, cooling, and crisis assistance programs; however, the weatherization component is often administered by another agency. In 30 states, LIHEAP heating, cooling, and crisis assistance are administered by the department that administers the state's welfare program (TANF). In other states, administering agencies include Departments of Commerce, Human Services, Development, Housing and Community Development, and the State Energy Office.

Many states delegate all or key components of program administration to local community action agencies (CAAs), other community non-profit organizations, and/or county welfare offices. In most states, local CAAs serve as the primary administrator for heating, cooling, and crisis assistance. In some states, administration is centralized at the state level. Local administrators and partners play different roles across states. Some conduct outreach, provide application assistance, and/or determine eligibility. In many states, local administrators also process LIHEAP benefit payments.

Households typically receive LIHEAP heating, cooling, and/or crisis relief benefits as a discount or payment on their energy bill. States or local administrating agencies make payments directly to energy utilities and/or other fuel providers

[52] Typically, outreach costs are not considered "administrative costs."

(collectively known as vendors) that provide LIHEAP assistance to their customers. This requires that vendors contract with the state or administering agency to receive payments. For households that utilize firewood or propane for heating, a predetermined benefit payment may be made to the customer directly. However, firewood and propane retailers can register as LIHEAP vendors.

4.2.2. Funding Distribution to States, Territories, and Tribes

Annual LIHEAP block grants are allocated to states based on two funding formulas. The “old” funding formula refers to the way in which funds were distributed under the original 1981 legislation, using a combination of residential energy expenditures, a measure of “coldness” (heating degree days), and household incomes. The resulting funding assigned a static percentage of funds to each state that did not change from one year to the next, favoring colder-weather states.

When LIHEAP was reauthorized in 1984, the allocation formula was changed to require the use of more recent population and energy data and reduce the emphasis on heating needs. The “new” formula provides a share of funds to each state based on the ratio of low-income household expenditures on home energy within the state to all expenditures of low-income households in the country. To mitigate dramatic decreases in funding from colder weather states, Congress introduced two hold-harmless provisions, including only applying the “new” formula to funding levels that exceed the total program funding in 1984 (in current year dollars) and other assurances (Perl 2019).

Tribes receive a share of state funding, which amounted to approximately 3% of total block grant funding in FY2022, while 0.5% of total funding is set aside for territories.

4.2.3. Eligibility

Under the LIHEAP statute, households with incomes up to 150% of the federal poverty level (FPL), or up to 60% of the state median income (whichever is greater) may be eligible for the program. States may adopt lower income limits, but the maximum income eligibility cannot be lower than 110% of the FPL. In addition to income, a small number of states also set eligibility requirements based on household asset levels. Asset requirements differ across states and can vary based on household size, whether the household is elderly, and/or asset type (e.g., cash, checking/savings accounts, 401ks, stocks and bonds).

Some grantees have different eligibility requirements for different program components and/or vary requirements by household type. For example, several have a higher income limit for weatherization or crisis assistance and/or for households with elderly or disabled members or young children. Renters are eligible for LIHEAP assistance. Bills are often not in the renters’ names, and, as discussed below, states have devised different ways to address this challenge. Finally, many grantees define a household as "categorically" eligible if at least one person in that household receives assistance under TANF, SNAP, SSI or means tested veteran's programs. Importantly, categorical eligibility does not mean that a household is automatically enrolled in LIHEAP. They still need to apply for the program but do not need to provide additional eligibility documentation. This can lower program administrative costs, as well as the administrative burden for participants.

4.2.4. Benefit Formulas and Amounts

LIHEAP statutes direct grantees to provide the highest level of assistance to households that have the lowest incomes and the highest energy costs or needs in relation to income, while accounting for household size. Grantees must also target benefits to households with members who are elderly, disabled and/or have young children because these households are defined as having a higher “energy need.”

Since grantees determine their own funding formulas, the average benefit per household varies greatly (see Appendix D for examples). Most grantees provide a percentage bill discount or flat rate benefit that varies, at a minimum, based on income, energy cost, and household size. Some also set their benefit levels based on energy burden, presence of vulnerable persons in the household, fuel type, dwelling type, individual bills, and/or climate region within the state. Many grantees consider their LIHEAP allocation for the year, prioritizing a higher dollar amount for fewer households or a lower average benefit to reach a higher proportion of eligible households. A handful of states set benefit amounts based on a percentage of income payment plan (PIPP), under which households are responsible for energy costs up to an established energy burden threshold.[53]

Most grantees set minimum and maximum benefit levels for recipients. State minimum assistance levels for heating and cooling range from $1 in several states to $620 for cooling in Alabama to $668 for heating in South Dakota. The highest maximum benefit is in Texas, allowing $12,300 for heating and cooling (separately). In 2020, the national average household benefit for heating and cooling was $429 and $439 per year, respectively. Average benefits for crisis prevention ranged from $194-$353 per household. If benefit payments exceed total bills, some states allow the benefit to be paid towards arrearages, while others require the vendor to process a return payment for any unused benefit.

Most states have separate benefit policies for renters, which may depend on whether the renter lives in subsidized housing and/or whether energy costs are included in their rent. Many states do not allow LIHEAP eligibility to subsidized housing residents whose energy costs are included in their rent. Some allow these households to participate if the tenants' rental costs are not a fixed low percentage of their income and/or are greater than 30% of their income. Most states allow renters in non-subsidized housing to receive benefits, and in some states, this includes renter households whose energy costs are included in their rent. In these cases, payments are made directly to the household (e.g., through EBT cards in some states) rather than credited to the landlord's utility account; benefits are typically provided as a flat rate discount/set amount based on average statewide or local energy costs. In several states, renters and/or residents of multi-family buildings receive a lower benefit.

4.2.5. Participation

Preliminary data from 2021 indicates a total of 5.2 million households were served by LIHEAP funds, representing approximately 15.6% of all income-eligible households. The LIHEAP FAQ page suggests that about 20% of households that are qualified for LIHEAP receive benefits due to the limited availability of funds.[54] Interviews with LIHEAP administrators from various states confirmed that the demand for assistance from eligible households far outweighs the funding available, and states routinely run out of funding during enrollment every year. In some states, benefits are issued on a first-come first-serve basis, until available funding is fully allocated. Many states prioritize vulnerable households, including seniors and/or households with young children or members with disabilities, through early enrollment periods. Most states undertake outreach activities that specifically target these populations.

4.2.6. Performance Metrics and Program Evaluation

Each year, HHS is supposed to publish a LIHEAP Report to Congress that provides information for the overall program and by grantee, related to the following:[55]

---

[53] The threshold varies from as little as 0% for households earning less than 75% of the FPL in Colorado to as much as 15% for total primary and secondary energy sources in Ohio.

[54] "LIHEAP FAQs for Consumers." *The Administration for Children and Families*, 19 Jan. 2016, www.acf.hhs.gov/ocs/faq/liheap-faqs-consumers#Q4.

[55] The report to Congress has not officially been published since 2014. However, the relevant data can be found on the LIHEAP Data Warehouse website. "Data Warehouse." *Administration for Children and Families - LIHEAP Performance Management*, liheappm.acf.hhs.gov/datawarehouse.

- Sources and uses of LIHEAP funding
- Number and income levels of households assisted with LIHEAP
- Amount, cost, and type of fuels used by LIHEAP eligible households
- Type of fuel used by various income groups
- Household LIHEAP benefit levels
- Participation rates and eligible populations
- LIHEAP offset of average heating costs
- Number of LIHEAP assisted households that include vulnerable members

In addition, states and Washington, D.C. are required to demonstrate how their plan for funding aligns with LIHEAP Performance Measures, and report on these metrics annually:[56]

- ***Benefit Targeting Index*** measures whether households with the highest energy needs are receiving the highest benefits. The index is calculated by comparing the mean LIHEAP benefit for a target group of recipients to the mean LIHEAP benefit for all recipient households. In 2020, this index for high burden households was 118. This means that grantees provided 18% higher benefits to those with the highest energy burden.
- ***Burden Reduction Targeting Index*** indicates whether the households with the highest energy burden are receiving larger percent bill reductions. It is calculated by comparing the percent reduction in the median individual energy burden for a target group of recipients to the percent reduction in the median energy burden for all recipients. In 2020, this index was 93 for high burden households. This means that the percent reduction in energy bills for households with the highest energy burdens was 7 points lower than for all LIHEAP recipients.
- ***Restoration of Home Energy Service*** metric reports the number of times households lost energy service and had it restored by LIHEAP. In 2020, 244,529 households who lost service due to bill payment issues had service restored because of LIHEAP.
- ***Prevention of Loss of Home Energy Service*** metric reports the number of times households would have lost energy service had they not received LIHEAP assistance. In 2020, 1,395,025 households were prevented from losing service due to bill payment issues because of LIHEAP.

The metrics and data described above are reported on LIHEAP's Performance Management website[57] and the LIHEAP Data Warehouse website.[58]

4.2.7. Lessons Learned

In conducting interviews and additional research on LIHEAP, the Study team identified several lessons learned with respect to program effectiveness and applicability to the water sector:

[56] For the first two measures, an index above 100 means the LIHEAP program is effectively reaching the target index at a higher rate than its representation in a low-income household population. The performance measures are developmental and do not currently have set targets.

[57] "LIHEAP Performance Management Website." *Administration for Children and Families - LIHEAP Performance Management*, https://liheappm.acf.hhs.gov/.

[58] "Data Warehouse." *Administration for Children and Families - LIHEAP Performance Management*, https://liheappm.acf.hhs.gov/datawarehouse.

- Allowing for administration by local agencies and/or community organizations creates more flexibility and reaches more households in need. Many local agencies have developed online portals for easy applications and have established relationships with local energy providers to be able to best administer benefits. Established connections within communities allow for increased efficiency in customer service and benefit delivery.
- Aligning eligibility requirements with other programs can increase participation by reducing the administrative burden for applicants. Categorical eligibility would likely increase enrollment.
- Allowing funds to be paid directly to customers gives flexibility when energy vendors choose not to receive LIHEAP payments from the state, and easily allows for participation from renters without power bills in their name. Some states have had success administering funds directly to customers' EBT cards.
- Establishing efficiency metrics and annual reporting allows states to understand how their program compares to others across the country and allows for mutual learning in best practices.
- Flexibility in design theoretically allows states to create programs that best suit their circumstances and low-income populations. LIHEAP program metrics and design encourage horizontal and vertical equity across low-income populations.
- Limited program funding drives the benefit structure and levels, as well as program participation.
- There are approximately 3,200 electric utilities and 1,400 natural gas utilities in the United States; this compares to close to 50,000 community water systems (excluding individual wastewater and/or stormwater utilities). Most single counties are served by one or two energy providers, making the logistics of processing payments of LIHEAP benefits directly to utilities manageable. The sheer number of community water systems, combined with the high percentage of systems with very limited capacity/resources impacts the practicality (or at least efficiency) of a LIHEAP program design for the water sector.

4.3. Summary of Relevant Federal Programs

Table 4-1 provides a summary and comparison of program attributes across the three federal program precedents reviewed by the Study team. A detailed description of the HHS LIHWAP program is provided in Section 5.

Table 4-3. Summary and Comparison of Relevant Federal Assistance Programs

	SNAP	LIHEAP	HHS LIHWAP
Description	Annual federal appropriations to USDA through Farm Bill, administered by states or counties to provide food benefits to low-income households. Entitlement program. Processes/requirements more standardized across states.	Federal block grant for heating, cooling, and weatherization assistance for low-income households. Administered by HHS, delegated to states. States have flexibility to administer/set program rules within federal guidelines.	Temporary federal block grant established in response to COVID-19 pandemic to assist low-income households with water bills. Administered by HHS, delegated to states. States have flexibility to administer/set program rules within federal guidelines.
Established	1939 (Formally established as entitlement program in 1964)	1980	2021
Federal Funding FY2021	$112.9B	$3.36B	$1.138 B
State Distribution / Allocation Formula	75% funding based on state-level participation 25% based on participation increases for the most recent year.	Ratio of low-income household heating/cooling expenditures in state to low-income household heating/cooling expenditures in U.S. Complicated formula to account for "old" method of distribution (hold harmless provisions).	Households earning < 150% FPL and paying >30% of income for housing.
Flow of funds to recipients	Payments made directly to households for eligible expenses through EBT a debit card.	Local service providers qualify participants; payments provided directly to energy providers and are credited to participant utility accounts or in some cases, funds provided directly to recipients (e.g., renters who do not receive bills).	Payments to enrolled water utilities and applied to enrolled household accounts.
Eligibility	130% FPL (gross income), 100% FPL (net income), and assets <$2,500; work requirements	Eligible income must fall between either 150% FPL or 60% state MI and 110% FPL (some states offer categorical exemption w/SNAP, TANF, SSI, etc.)	Most states base eligibility on 150% FPL or 60% SMI
Participation	82% of eligible households[3] 21.6 M households	15.6% of eligible households[1] 5.2 M households	N/A
Average Household Benefit ($/year, 2021)	$4,992	$429 (heating) - $439 (cooling)	N/A

5. Low Income Household Water Assistance Program (LIHWAP)

LIHWAP as currently authorized in federal legislation, is a temporary relief program created and funded during the COVID-19 pandemic to help low-income households pay their drinking water and wastewater bills. For this Study, the program was examined and evaluated as a potential model that could be expanded or modified for a permanent water assistance program. In December 2020, Congress appropriated $638 million of initial funding to HHS to create LIHWAP under the Consolidated Appropriations Act of 2021 (Public Law 116-260). Later, an additional $500 million was added under the American Rescue Plan Act of 2021 (Public Law 117-2). This funding assists households with the lowest incomes and paying a high proportion of that income for their drinking water and wastewater services. LIHWAP funds are used to reduce bills and arrearages for households. The funds are provided to the water system and not as money directly to residential water customers.

5.1. Administration and Reporting

The federal government allowed the grant recipients/grantees (i.e., states, territories, and tribes) some flexibility in how they design the program. A data dashboard provides information on how these entities designed their water assistance programs, highlighting the similarities and differences in program characteristics that the entities chose in setting-up their programs. They made these decisions based on local context, identified needs, resource allocations, existing programs, and priority areas within their administrative boundaries, among other factors. Specifically, grantees were given flexibility in designing aspects such as eligibility criteria and priorities. The dashboard also shows how these entities' programs progress each quarter.

As a part of LIHWAP administration, OCS[59] hosts and manages the LIHWAP Data Dashboard.[60] It uses an ARCGIS-Online-based interactive dashboard for reporting. The LIHWAP dashboard displays data for individual participating grant recipients. There are two sections. The first section focuses on program implementation and discusses how grant recipients initially prioritized funding and various eligibility requirements. The second section provides 'real-time' quarterly snapshots, reports, and trends of how states, tribes, and territories have been implementing their programs. It reports on each quarter since the program's start.

- The first quarter (or Q1 of LIHWAP) indicates data collected from September 1 to December 31, 2021
- The second quarter (or Q2 of LIHWAP) indicates data collected from January 1 to March 31, 2022
- The third quarter (or Q3 of LIHWAP) indicates data collected April 1, 2022, to June 30, 2022

The data released from LIHWAP will provide information on water and wastewater assistance needs for low-income households. It can help address questions such as "what is the average amount of assistance needed per customer?"

[59] United States, Congress, Office of Community Services. *LIHWAP DCL-2022-10 LIHWAP Data Dashboard Release FY2022*, 7 Apr. 2022. https://www.acf.hhs.gov/ocs/policy-guidance/lihwap-dcl-2022-10-lihwap-data-dashboard-release-fy2022.
[60] "LIHWAP Data Dashboard." *LIHWAP Data Dashboard*, The Administration for Children and Families (ACF), https://lihwap-hhs-acf.opendata.arcgis.com/.

The quarterly reports show the total unduplicated households,[61] assisted, what kind of assistance was provided, and the total number of water utilities that had entered into an agreement[62] to initiate the program. The states, tribes and territories categorized each household helped into one of the following:

- *Restoration of Services to households that have had their drinking water and/or wastewater services disconnected due to arrearages*
- *Prevention of Disconnection for households at risk of disconnection due to nonpayment*
- *Reduction of Rates charged to low-income households where possible to help ensure affordable household water services*
- *Other* examples include issuing credits; providing deposits to begin, maintain, or restore water or wastewater services; miscellaneous fees for connection, reconnection, or hookup of utility services; elderly and disabled priority service.

Appendix E provides more information about how the states and tribes chose to implement their plans for water assistance.

5.2. Funding Distribution to States, Territories, and Tribes

OCS, under HHS, is overseeing the implementation of LIHWAP. OCS developed an initial funding formula at the program's inception and identified the data needed to allocate funding to grant recipients. There are two factors for determining allocations, the first is the percentage of households with income equal to or less than 150% of the FPL, and the second is the percentage of households that spend more than 30% of monthly income on housing. OCS has been instructed to reserve up to 3% of the total amount appropriated for tribes and tribal organizations. Based on the initial allocation formula and the gaps that exist in identifying a level of need within these communities, OCS realized that some tribes would only receive less than $500 while bigger tribes could receive millions of dollars; therefore, a minimum award of $10,000 has been set for tribes (Figure 5-1). Eligible tribes receive from $10,000 to more than $6,000,000 of LIHWAP funding. States and tribes must fill out the Terms and Conditions and other required forms to receive funding. It is worth noting that the requirement of these documents may be one of the hurdles that prevent some of the eligible tribes from receiving LIHWAP funding.

While OCS began taking the necessary steps to set up LIHWAP, an additional $500 million was added under the American Rescue Plan Act of 2021 (Public Law 117-2). This additional funding raised the total LIHWAP appropriation to $1.13 billion, and on June 2, 2021, LIHWAP funding was released to the grant recipients with up to 15% of those funds reserved to pay for their administrative costs, while LIHWAP reserves 1.5% of the total funding for administrative costs at the department level (HHS). As of the third quarter of 2022), 45 states,[63] Washington D.C., all U.S. territories except Puerto Rico, and 70 Native American tribes and tribal organizations had launched their LIHWAP.

OCS continues to issue instructions, provide sample vendor agreements, conduct webinars, design performance management metrics, provide training and assistance, and issue detailed guidance to facilitate implementation. Specific guidelines that grantee programs have to follow include:

---

[61] Unduplicated Household Counts - Unduplicated counts mean that households are only counted once for each of the 4 specific data variables. Watts, Mary, et al. Preparation for LIHWAP Data Collection and Reporting. Administration for Children & Families December 7, 2021. https://www.acf.hhs.gov/sites/default/files/documents/ocs/tta_lihwap_qtrly_rpt_webinar_version_final-508c.pdf (webinar).

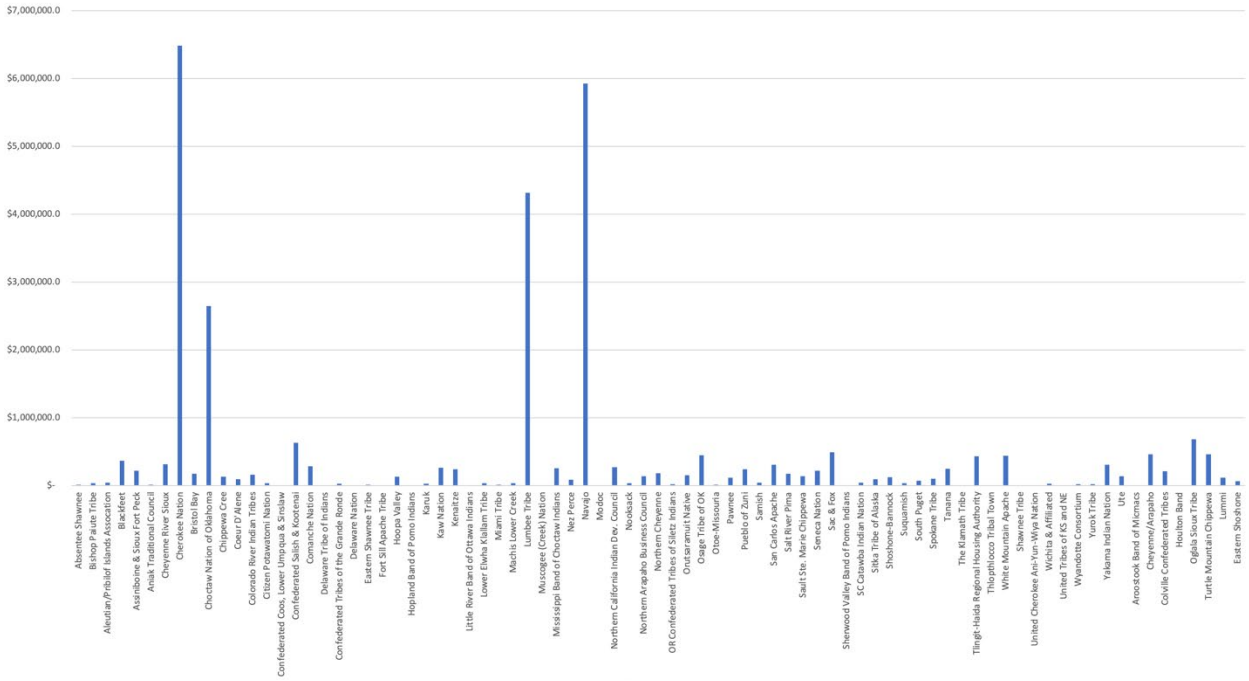
[62] Watts, Mary, et al. Preparation for LIHWAP Data Collection and Reporting. Administration for Children & Families December 7, 2021. https://www.acf.hhs.gov/sites/default/files/documents/ocs/tta_lihwap_qtrly_rpt_webinar_version_final-508c.pdf (webinar).

[63] Exceptions include Alaska, Nevada, Virginia, and New Hampshire – and North Dakota who declined participation

- Bill payments must be directly paid to water and wastewater service providers on behalf of the customers
- Payments must be made to prioritized groups
- Payments can cover fees associated with disconnection, arrearages, and reconnection, as well as late fees

In September 2021, the first states began accepting applications for LIHWAP benefits. For a more detailed version of the timeline of LIHWAP, please see Appendix E – LIHWAP Timeline.

Figure 5-1: Amount of Federal LIHWAP Funding Provided to Individual Tribes

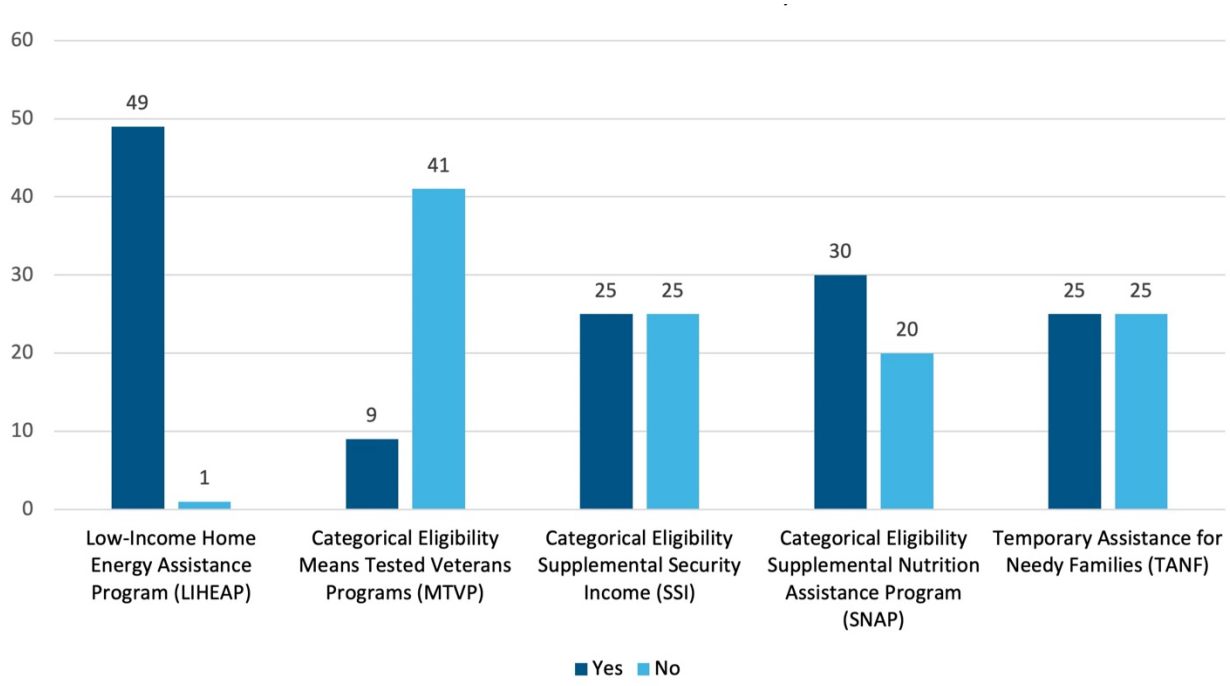


Data Source: Low Income Household Water Assistance Program Data Dashboard (https://lihwap-hhs-acf.opendata.arcgis.com/pages/quarterly-reports)
Data accessed: 10/14/2022

5.3. Eligibility

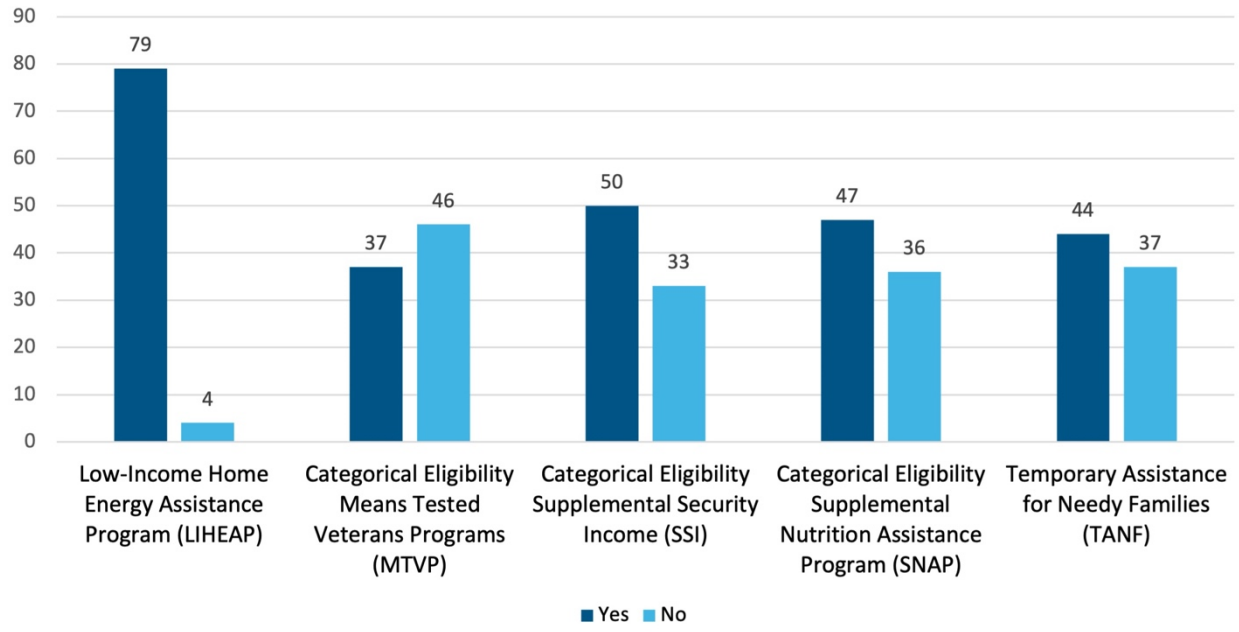
LIHWAP allows the grantees to have considerable input into how the program is designed. The states, tribes, and territories have to decide how to apply "categorical eligibility," through which a household would automatically pass the income eligibility test by meeting the requirements of another means-tested program. This process allows for easier identification of eligible households and administration of the LIHWAP. Forty-nine states and seventy-nine tribes chose Low Income Home Energy Assistance Program (LIHEAP) enrollment as granting categorical eligibility to LIHWAP. This may be due to the similarities in the program design and the administrating organizations, which in most cases, are the same offices that administer LIHEAP. Additionally, 60% of states chose enrollment in SNAP, 50% of the states chose TANF and SSI as a way in which a household automatically qualifies for LIHWAP, and 18% chose the Means-Tested Veterans Program as categorical eligibility for LIHWAP. Thirty-seven (37) tribes selected MTVP, 50 tribes selected SSI, 47 selected SNAP, and 44 selected TANF as categorical eligibilities for LIHWAP. A summary of the state and tribal selected categorical eligibility criteria is provided in Figures 5-2 and 5-3.

Figure 5-1. State LIHWAP Categorical Eligibility Requirements



Data Source: Low Income Household Water Assistance Program Data Dashboard (https://lihwap-hhs-acf.opendata.arcgis.com/pages/quarterly-reports)
Data accessed: 10/14/2022

Figure 5-3. Tribes LIHWAP Categorical Eligibility Requirements



Data Source: Low Income Household Water Assistance Program Data Dashboard (https://lihwap-hhs-acf.opendata.arcgis.com/pages/quarterly-reports)
Data accessed: 10/14/2022

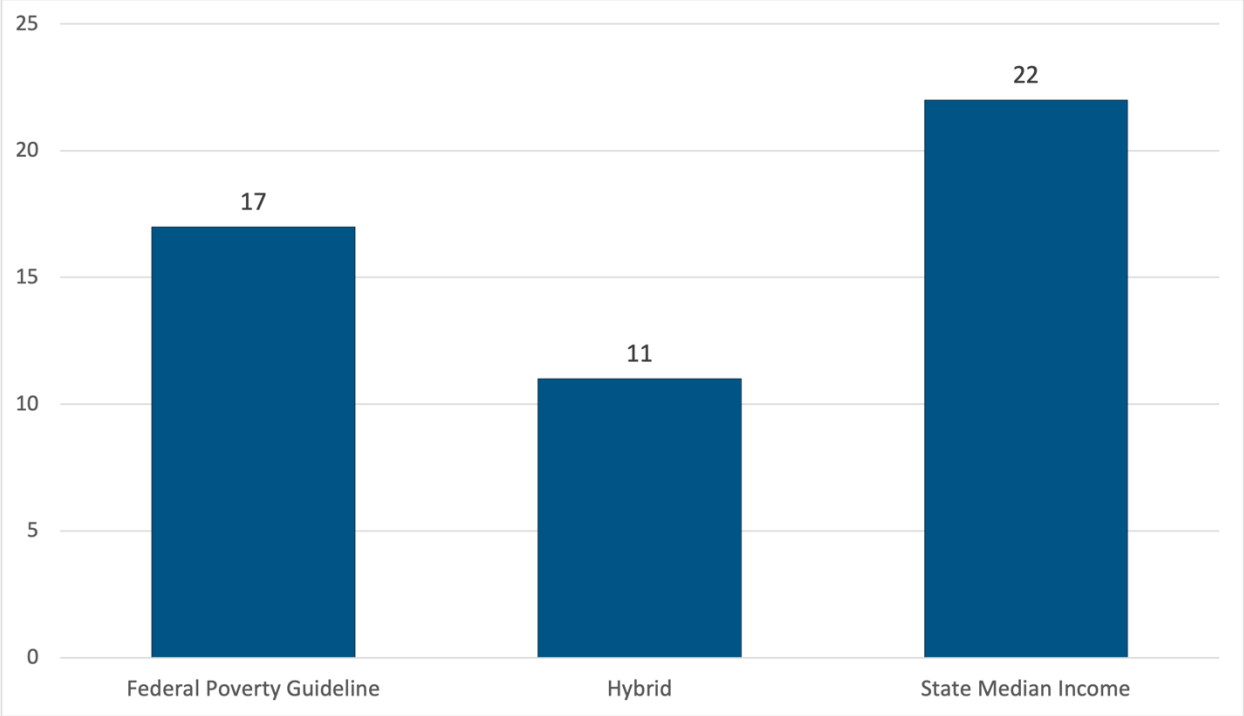
States can establish their income eligibility guidelines based on the Federal Poverty Guidelines (FPG), State Median Income (SMI), or a hybrid method where they could use FPG for specific households and the SMI for others. States vary in their decisions for income eligibility (Figure 5-4). 34% of states chose to rely on the FPG for income eligibility, of those, all except one chose a 150% threshold of the Federal Poverty Level. [64] Additionally, 44% of states used the SMI as their eligibility threshold, which provides that an eligible LIHWAP household could not exceed 60% of the SMI. The remaining 22% of states chose the hybrid model of both FPG and SMI. As for tribes, 35 tribes chose FPG, 43 tribes chose SMI, and one tribe chose the hybrid model for income eligibility.

There are 325 Native American reservations and 566 federally recognized tribes in the United States. According to the legislation, to expedite LIHWAP, HHS must rely on policies and procedures that are currently in place for programs such as LIHEAP. Therefore, the eligibility of LIHWAP was limited to the 155 tribes who signed up for LIHEAP by FY2020. In other words, 72.6% of federally recognized tribes were automatically excluded from LIHWAP at the outset of the program. As of Q3 of LIHWAP in 2022 (June 30th, 2022), there were 74 tribes accepting applications, and this represents about a 13.1% participation rate across federally recognized tribes.[65]

[64] Oklahoma chose 130%.

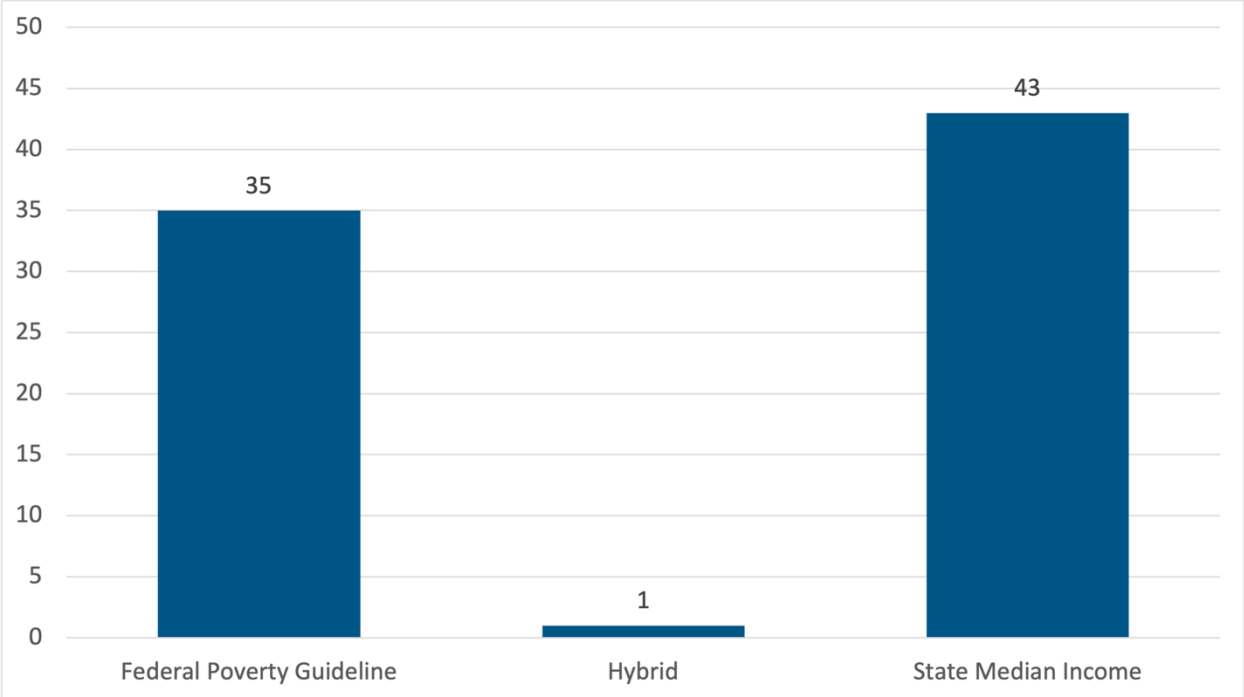
[65] Hammond, Rachel, et al. LIHWAP National Rural Water Utility Providers Meeting. Administration for Children & Families. July 21, 2022 https://www.youtube.com/watch?v=t9ifguVeOuE&ab_channel=usgovACF (webinar).

Figure 5-4a. State Income Eligibility Threshold for LIHWAP



Data Source: Low Income Household Water Assistance Program Data Dashboard (https://lihwap-hhs-acf.opendata.arcgis.com/pages/implementation-plans) Data accessed: 10/14/2022

Figure 5-4b. Tribe Income Eligibility Threshold for LIHWAP

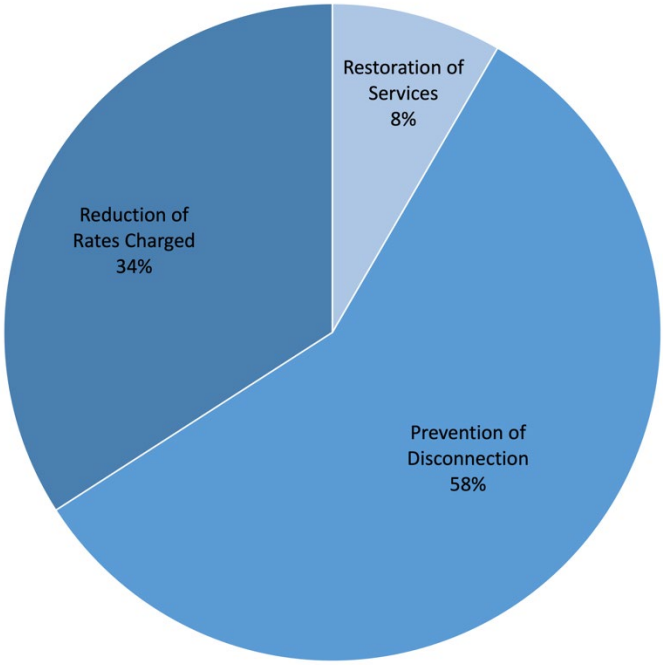


Data Source: Low Income Household Water Assistance Program Data Dashboard (https://lihwap-hhs-acf.opendata.arcgis.com/pages/implementation-plans) Data accessed: 10/14/2022

5.4. Participation by Quarter / Performance Metrics

During the first three quarters, around 303,900 households were served by LIHWAP, of which more than nine thousand households were from tribes. For the states, about 58% of the LIHWAP money spent on households went into the prevention of a disconnection, 34% of the money went to reducing customers' bills, and only 8% of the money went to restoring water services which were shut off (Figure 5-5). This may have been because some states-imposed water shut-off moratoriums during the COVID-19 public health crisis to reduce the spread of the virus[66].

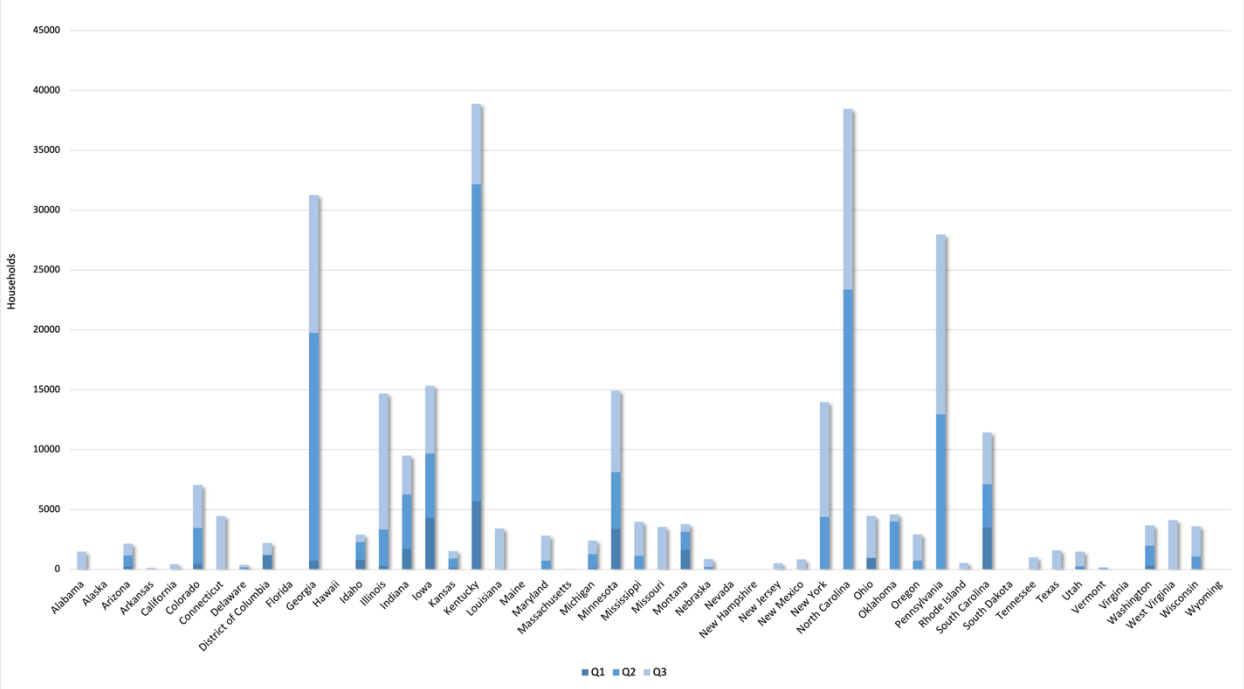
Figure 5-5. Categories of Assistance Provided by LIHWAP in States (September 1, 2021 to June 30, 2022)



Data Source: Low Income Household Water Assistance Program Data Dashboard (https://lihwap-hhs-acf.opendata.arcgis.com/pages/quarterly-reports)
Data accessed: 10/10/2022

[66] Zhang X, Warner ME, Grant M. Water Shutoff Moratoria Lowered COVID-19 Infection and Death Across U.S. States.

Figure 5-6. Total Number of Households Enrolled in LIHWAP from September 1, 2021 to June 30, 2022



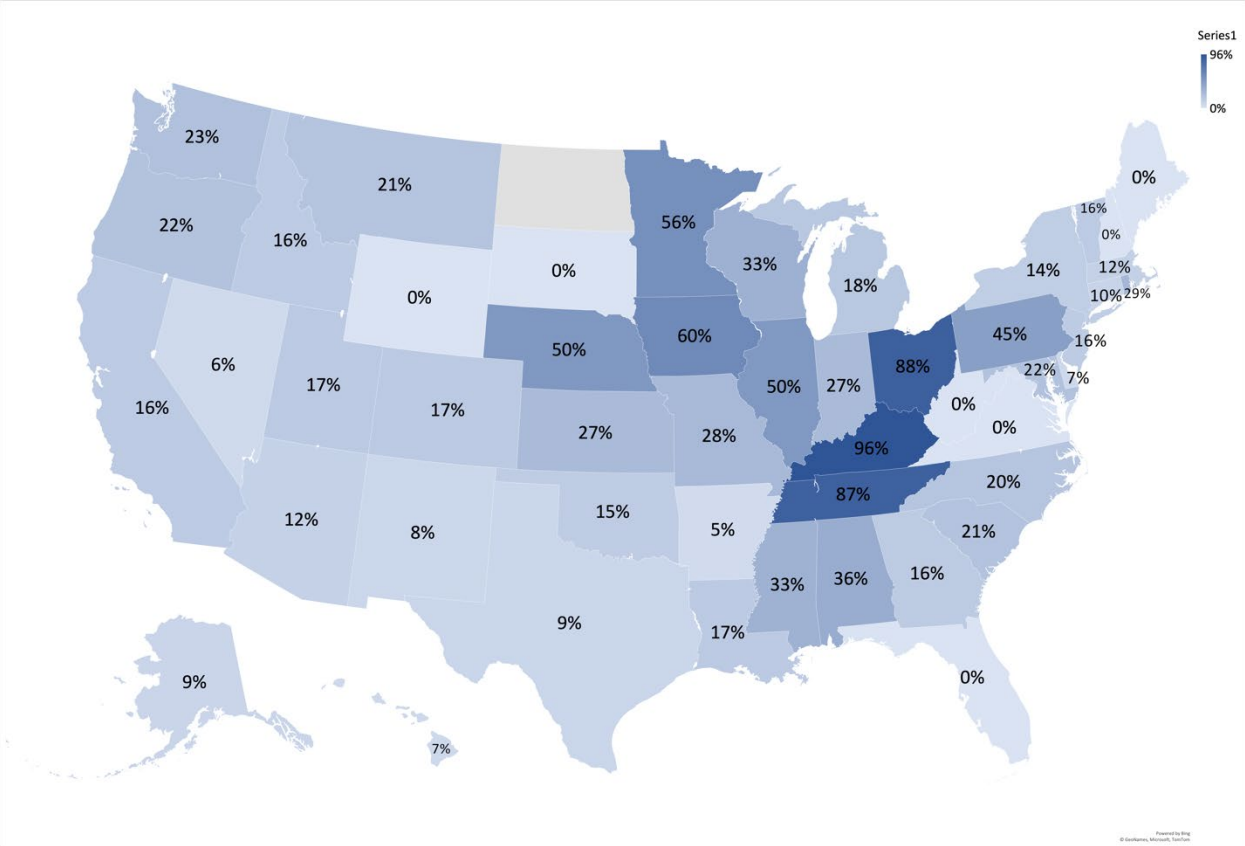
Data Source: Low Income Household Water Assistance Program Data Dashboard (https://lihwap-hhs-acf.opendata.arcgis.com/pages/quarterly-reports)
Data accessed: 10/10/2022

By July, 2022 almost all LIHWAP recipients had rolled out their programs and submitted Q1, Q2, or Q3 data to the platform dashboard. According to that data, states such as Kentucky, Georgia, and North Carolina had spent most of their funding and enrolled over 30,000 households each (Figure 5-6). At least for some states, this data is being reported to HHS by the Community Action Agencies that administer the program at the local level. Many utilities said that they had not been asked to provide this data to the state or HHS as of October 2022.

This data shows that most states[67] have agreed to participate in the program and that some customers are being helped in each state, but it does not allow a user of the dashboard to determine how this assistance is spread across the state. A successful program will probably involve a large percentage of the state's utilities participating. The map below (Figure 5-7) shows the percentage of utilities in each state that had signed an agreement but does not indicate if those utilities had assisted any customers as of the reporting date. Additionally, the information published only shows the number of utilities in an agreement but not the size of that utility.

[67] Except South Dakota

Figure 5-7. Percentage of Water Utilities Enrolled in LIHWAP (September 1, 2021 to June 30, 2022)



Data Source: Low Income Household Water Assistance Program Data Dashboard (https://lihwap-hhs-acf.opendata.arcgis.com/pages/quarterly-reports)
Data accessed: 10/10/2022

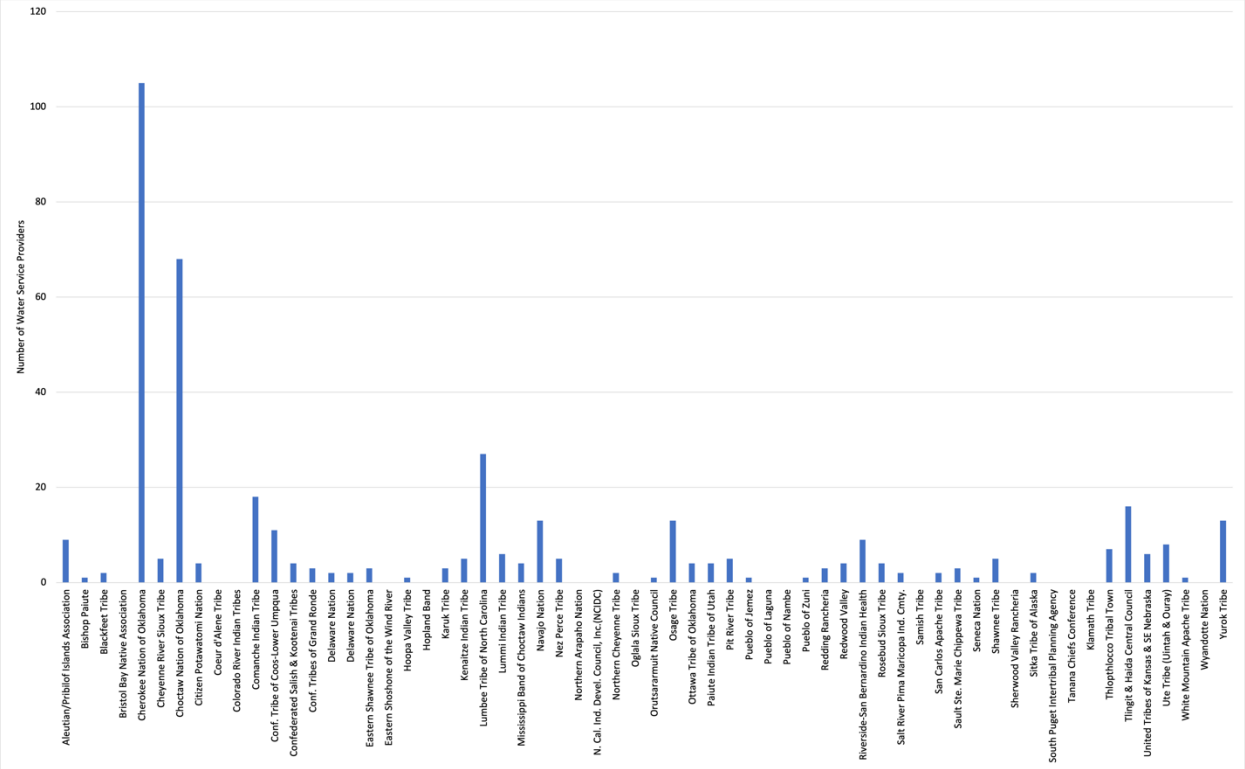
LIHWAP grantees must establish an agreement with water and wastewater service providers to distribute LIHWAP funds to low-income households.[68] The LIHWAP data dashboard shows information on how many utility providers have entered into an agreement with the states and tribes. States like Tennessee, Kentucky, and Ohio have entered into an agreement with over 85% of their state's utilities.

A small percentage of agreement rate for a state does not necessarily mean that the total population coverage of their LIHWAP is low. Some of the state LIHWAP have rolled out to large utilities that serve bigger populations first because bigger utilities tend to have more capacity and administrative power to fill out and submit their applications in time. Each state has many small utilities, but together, these small utilities only serve a small percentage of the population. Smaller systems may not have the administrative capacity to go through the application process as quickly as the larger systems. Therefore, even in the third quarter of LIHWAP, most of the states had less than 50% of the water utilities under agreement with the state LIHWAP administering agencies. Since the LIHWAP dashboard does not have the names of all of the utilities, the exact population coverage cannot be determined.

[68] "LIHWAP IM-2021-02 Vendor Agreement FY2021." *The Administration for Children and Families*, Office of Community Services, 21 July 2021, www.acf.hhs.gov/ocs/policy-guidance/lihwap-im-2021-02-vendor-agreement-fy2021.

As for tribes, the eligibility of LIHWAP is limited to the 155 tribes who had signed up for LIHEAP by FY2020 (effectively excluding 72.6% of federally recognized tribes at the program outset). Among the 155 eligible tribes, 70 tribes had launched their LIHWAP and helped more than 9,000 households. This represents a 45.2% sign-up rate for eligible tribes.[69] As of June 30th, 2022, 551 water services providers had entered into agreements with participating tribes. Some tribes may only have a few agreements while other tribes such as the Cherokee Nation of Alabama have more than 100 agreements with their water service providers.

Figure 5-8. Numbers of Water Service Provider Agreements in Tribes



Data Source: Low Income Household Water Assistance Program Data Dashboard (https://lihwap-hhs-acf.opendata.arcgis.com/pages/quarterly-reports)
Data accessed: 10/14/2022

5.5. Lessons Learned & Recommendations

The portion of funds set aside to administer an assistance program is very important for an effective and efficient program. LIHWAP grantee's ability to use up to 15% of the funds obligated to pay for administrative costs at the grantee level is relatively high compared to other assistance programs such as SNAP. While not all the grantees are using this maximum amount and acknowledging that the first year of a new program tends to cost more to administer than subsequent years, the portion for administration is relatively high suggesting opportunities to enhance efficiency prospectively.

[69] https://acf-hhs-gov.zoomgov.com/webinar/register/WN_0ErpfpnQRgy3yKey4TQ3cw

LIHWAP created an interactive "dashboard" which seems well received in the water sector (see Appendix F). An interactive and live dashboard with easy-to-understand visuals (e.g., charts, figures, maps, and tables) and downloadable data should be maintained as a standard part of any federal water assistance program. Enhancements to the dashboard may include being clear about whether the quarterly data, for example, are cumulative. A thorough data dictionary should be included to avoid confusion. For example, Q1, Q2, and Q3 mentioned in LIHWAP dashboard are not first, second, or third quarter of the year 2022, they are rather the first second, and third three-month periods since LIHWAP first launched. Users of the dashboard are also interested in whether the data is self-reported and by which entities: the Community Action Agencies (CAAs) versus the individual utilities. Data validation processes for this self-reported data are also important. One key area of interest for dashboard users is the distribution of funds to households in need, however, information on how much each water customer is receiving and the average amount of assistance to customers was not provided as of October 2022. As the inaugural federal water assistance program, LIHWAP offers a unique opportunity to collect data on water assistance needs on a national scale, making information on **how much** assistance the average customer receives of particular relevance for the water sector and other interested parties.

HHS and water utilities did not have historical ties or interact much prior to LIHWAP so implementation involved a steep learning curve. Terminology such as water "vendors" was unfamiliar to the water sector and precipitated miscommunications with water utilities at the launch of the program. HHS also had to invest time in learning how to reach water utilities to establish the first round of interactions. Utilities that are smaller, rural, tribal, or located in the U.S. territories tend to be the most difficult to reach, but even some large utilities did not hear about LIHWAP until late 2021. Some of these utilities reported first learning about the program from communications with third parties and not from HHS itself. Other terminology such as references to water "companies" were similarly misaligned with the water sector since the sector is heavily comprised of public and not-for-profit water utilities. These respective learning curves may have slowed program rollout and enrollment. However, HHS did learn quickly and was able to adapt LIHWAP to what the agency was learning about the water sector.

In terms of logistics, some local governmental units that operate water utilities still prefer "wet signatures," and the emphasis on electronic signatures in some states caused delays in utility-state agreements. On a wider scale, and somewhat devoid of simple solutions, having to exclude non-water related fees and charges on some bills is time-consuming and tedious. However, billing for other municipal services on one statement is fairly common practice among utilities. Thus, there is probably no substitute for an examination of the water bill of an enrolling customer.

Apart from these fees and charges for services like garbage, customers may not know how much they owe the water utility. Accepting a customer's guess without confirming with the actual bill may be one of the sources for discrepancies between what the CAA provides and what the customer owes. In conversations with a few utilities, one of the most difficult things about LIHWAP is when CAAs send more money to the utility to be applied to a customer's account than the customer owes at that point in time.

Related to tribes, to recap the earlier section, LIWCAP would be accessible to more tribes if it were not limited to only those that are currently participating in LIHEAP. This would be an important step toward having more tribes participate in a permanent assistance program. Many tribes are far away from field offices of federal assistance programs, and it has become one of many reasons why those tribes are not included in these federal programs. LIWCAP should also proactively reach out to tribes that are particularly remote to establish methods to deliver assistance.

Measuring the effectiveness of a LIWCAP is dependent on data. LIHWAP provides a good example of the challenges of the dearth of data. For better tracking, this Study notes the importance of including the PWSID[70] of the PWSs when the organizations or companies serving the tribes, counties, cities, or territories report to LIWCAP so as to ensure a seamless connection to the EPA's drinking water system database (i.e., SDWIS). The homogenization and standardization of terminology and definitions used across relevant federal agencies will reduce miscommunication, help combine forces, and therefore provide a stronger foundation for creating a permanent low income assistance program. This is especially important in terms of evaluating the performance of the program.

It should also be noted that people who are not directly paying water bills or maintaining water utility accounts – and are therefore not at risk of suffering a water service disconnection as a result of nonpayment – are ineligible for water bill relief through LIHWAP. Given that two of the core objectives of LIHWAP are to prevent water service disconnections and restore service to previously disconnected customers, this limitation may be appropriate. However, we also recognize that low-income individuals who live in rental housing or multifamily buildings, and who may pay for water indirectly as part of their rent, may need to pursue needed assistance through established state, local, and federal rental assistance programs.

As noted, the permanent LIWCAP program as conceived in this Study will not address customer arrearages in contrast to the emergency LIHWAP. The myriad of approaches that different state statutes take is one deterrent from addressing arrearages in a long-term national program. It was perhaps the emergency nature of LIHWAP that resulted in arrearages being centrally featured.

Unfortunately, while LIHWAP did include setting minimum and maximum amounts that a customer can receive for bill assistance, at least early phases of the program, did not focus on setting a limit on arrearage amounts that LIHWAP would pay. The initial LIHWAP design *template* offered states the option of paying arrearages but did not ask states to provide a maximum arrearage amount that would be covered. As a result, using the state of Georgia as an example, individual residential customers with arrearage amounts of over $30,000[71] applied to LIHWAP. The state made the decision not to cover that amount, but GA LIHWAP did cover arrearage amounts of about $20,000 for some individual customers in 2022. For FY2023, the state plans to cap the arrearage amount it will pay at $5,000 and work with the relevant utility to write off any balance owed to the account beyond this $5,000.[72] Not setting a reasonable limit on arrearages means that fewer people benefit from the assistance program. If a permanent LIWCAP were to address arrearages, procedures for negotiating with the local utility to accept assistance payments in a manner that is aligned to some level of arrearage forgiveness and writing off of remaining debt should be considered when there are large arrearage amounts for some customers.

A comprehensive process of interviewing utilities across the country was not possible given the time, budget and scope of this Study. But some anecdotal findings from LIHWAP provide insights into implementation complexities. For example, one Georgia utility saw bill payments in the amount of $200 - $300, and about $300 in arrearages per customer. Another utility in the same state saw an average customer payment of $405.44 from the Community Action Agency (CAA) at the end of March 2022. But by the end of August 2022, the amount had dropped to $346.60; with the average customer balance due

---

[70] "Column Name: PWSID." *EPA*, Environmental Protection Agency, https://enviro.epa.gov/enviro/EF_METADATA_HTML.sdwis_page?p_column_name=PWSID.

[71] Such high arrearage amounts may be due to some metro Atlanta utilities having some of the highest water, and more so wastewater, rates in the country. Some of these utilities had issues with meter installations etc. where bills were incorrect, and so no shutoffs occurred even for a couple of years pre-pandemic.

[72] Moore, Rita, and Stacey I Berahzer. "Has Your Utility Taken Advantage of the Temporary Funding to Help Low-Income Water Customers?" *IB Environmental*, IB Environmental, 15 Aug. 2022, https://www.ibenvironmental.com/blog/2022/8/10/has-your-utility-taken-advantage-of-the-temporary-funding-to-help-low-income-water-customers.

being $131.93. This difference in the amount that the utility received from the CAA on the customer's behalf versus the amount that the customer currently owes created some noteworthy headaches.

- With utilities receiving more than a customer owed at a specific point in time, if that customer closed their account, there was usually a credit on the account that was, in some cases, sent to the customer.
- CAAs, perhaps based on LIHEAP procedures, often sent the utility substantially more money than was currently owed on the customers' bill. The CAAs intended for it to be rolled over to a future bill. But, if the customer closed the account, this money showed up as a credit owed to the customer, and in some cases, the credit balance refund was indeed processed and sent to the customer. It is somewhat surprising that these credits were possible at all since the LIHWAP legislation specifically stated that no credit was due to the customer beyond what was owed. The normal process within a utility, or the parent-government of the utility, resulted in some water customers receiving a check for money that was part of LIHWAP. The authors are unclear as to how widespread this problem was; however, it is something worth guarding against with a federal low income assistance program.

The data about LIHWAP presented in this section and Appendix E are included to illustrate the types of information reported by HHS on a quarterly basis. This data can offer valuable insights in the current program's performance, and readers are encouraged to review HHS's LIHWAP Data Dashboard for the most up to date information.[73]

Recent data from LIHWAP Q4 includes new types of information when compared to the first couple of quarters. For instance, there is a new comprehensive breakdown of the total award distributed to states, territories, and tribes, with further details on the funding sources, such as the American Rescue Plan Act of 2021 and the Consolidated Appropriations Act of 2021. In addition, the Q4 data displays the total amount spent of the overall awards. As of Q4, approximately 419,000 households have been served, 13,000 water providers have signed agreements in the states, around 14,000 households have been served, and 620 water providers have entered into agreements in the tribes. These numbers highlight the progress made in the four-quarter rollout of the LIHWAP program.

[73] "Quarterly Reports." *LIHWAP Data Dashboard*, The Administration for Children and Families (ACF), https://lihwap-hhs-acf.opendata.arcgis.com/pages/quarterly-reports.

6. Program Administration Pathway Alternatives

The Study team analyzed five different pathways for a new, permanent water assistance program. Two pathway alternatives involve expanding existing federal programs:

- ***LIHWAP 2.0*** would refine, expand, and make permanent the existing LIHWAP program, perhaps combining its administration with LIHEAP's and extending its funding indefinitely.
- ***SNAP H20*** would expand SNAP—the existing federal food program administered by USDA—to allow SNAP participants to use their benefits to pay for water and wastewater bills.

Three more alternatives considered by the team would establish a new *Low-Income Water Customer Assistance Program* (LIWCAP) overseen by USEPA specifically for water and wastewater bill assistance:

- ***LIWCAP via Utilities*** would be funded through the USEPA and administrated directly by water and wastewater utilities.
- ***LIWCAP via Community Organizations*** would be funded through the USEPA and administrated by community organizations.
- ***LIWCAP Hybrid*** would be funded by the USEPA and administered by either utilities or community organizations, with state agencies determining specific administrative arrangements according to local conditions.

Supplemental LIHEAP Funding Not a Sustainable Water Affordability Pathway

As noted,* the 2023 Federal Budget provides a $225 million increase to the existing LIHEAP program budget and allows for this funding to be applied for water bill assistance. This is substantially different from extension and revision of the temporary LIHWAP program administered by HHS. Expanding LIHEAP to include water does not represent a viable pathway for delivery of low-income water bill assistance. The existing LIHEAP program is not structured for delivery of low-income water assistance. It is without adequate reach to water burdened households or established relations with water service providers to ensure funding is applied to pay water service bills. It largely sets aside federal low-income assistance program experience (as reviewed herein), perhaps most notably the benefits of the recently implemented LIHWAP program. This LIWCAP Assessment Study addresses viable administrative pathways for a permanent federal response to water affordability challenges in the U.S.

* See Text Box, page 1-1

This section describes each pathway's basic program design and administrative arrangements. It is important to emphasize *that these pathways are not fully fleshed-out program designs*; important details are necessarily undefined at this stage. Rather, the pathways represent broad avenues for potential development of a detailed program design.

Each pathway offers relative advantages and disadvantages. This section culminates in a summary of their respective merits and drawbacks.

6.1. LIHWAP 2.0

This pathway would refine, expand, and make permanent the existing LIHWAP program. A permanent LIHWAP 2.0 would leverage lessons learned and administrative processes established over the past two years of LIHWAP implementation. LIHWAP was fashioned after LIHEAP; maintaining administration of water/wastewater assistance through HHS, state agencies, and utility vendor agreements would retain LIHWAP 2.0's status alongside LIHEAP as a funding "package" and conduit for utility assistance.

6.1.1. Funding Channels

Funding for water/wastewater assistance would be secured through the annual congressional Labor, Health and Human Services, Education appropriations bill and channeled through HHS to state, tribal, and territorial agencies. States, tribes, and territories receive shares of annual appropriations according to a funding formula. LIHEAP's existing allocation formula distributes funds to states according to their respective residential heating and cooling costs. A similar formula could allocate LIHWAP 2.0 funding based on varying water and wastewater costs across states, tribes, and territories and/or prevalence of low-income households (see Section 7). Annual appropriations would be increased accordingly and specifically earmarked for providing assistance to low-income customers for paying their water/wastewater bills.[74]

As in the existing LIHWAP/LIHEAP programs, utilities must enter into vendor agreements with state agencies in order for benefits to reach qualifying customers. Funds would then flow directly from state LIHWAP administering agencies to utilities. Participating customers of utilities receive benefits in the form of discounts or bill payments. The precise amount of LIHWAP funding that would flow to water/ wastewater utilities could be set by congressional appropriation.

6.1.2. Administration

LIHWAP administration involves engagement with utilities ("vendors") and customers; details of administration vary from state to state.

6.1.2.1. Utility Participation

Each participating utility must enter a vendor agreement with its state's LIHWAP administrator and renew that agreement periodically. Participating utilities must agree to LIHWAP's administrative processes, record-keeping, and data reporting requirements in order to receive funds.

As the LIHWAP program's early development has shown, the fragmentation of the U.S. water sector presents serious challenges for application of LIHEAP's administrative model to water and wastewater utilities. As noted in the introduction to this report, there are approximately 3,200 electric utilities and 1,400 natural gas utilities in the United States; this compares to nearly 50,000 community water systems and perhaps 15,000 wastewater utilities. Most counties and metropolitan areas are served by only one or two energy providers. Securing and maintaining vendor agreements with these large, professionalized organizations is a relatively straightforward task for state agencies. The vastly larger numbers of community water systems present state agencies with significant costs and complexity. Beyond the sheer volume of paperwork required to establish and maintain vendor agreements, track participation data, and ensure compliance, the small water systems that compose the vast majority of the nation's water and wastewater utilities have very limited administrative capacity. Many tribal and territorial water systems have similarly constrained organizational capacity. Utilities with such limited administrative capacity will struggle to secure, maintain, and periodically renew vendor agreements. Reporting requirements associated with LIHWAP could dissuade many smaller utilities from ever entering or renewing vendor agreements.

LIHWAP's early administration demonstrates the difficulty of reaching these small systems with vendor agreements: through the program's second quarter (March 2022), fewer than 20% of the nation's water utilities had entered vendor agreements. Although detailed data is not available, it is likely that LIHWAP participation is concentrated among the large utilities that have the administrative capacity to manage the program's requirements. LIHWAP's record of tribal participation is simultaneously encouraging and sobering. On one hand, an impressive 328 tribal water community water

[74] Alternatively, the distribution of benefits to specific services (water, wastewater, electricity, gas) could be left to states agencies.

systems (out of 710) had established vendor agreements through the program's second quarter. On the other hand, delivery of benefits to customers has been highly skewed, with just two tribes (Choctaw Nation of Oklahoma and Lumbee Tribe of North Carolina) accounting for 59% of the roughly 5,000 participating households, and most tribes delivering benefits to fewer than 50 households each.

LIHWAP is thus a promising means of reaching low-income customers of large and medium-size utilities that have adequate administrative capacity. This pathway would leverage processes, knowledge, and relationships established through the LIHWAP development and rollout. However, the limited administrative capacity of small utilities stands as a serious barrier to LIHWAP's viability in much of the U.S. Utility-level administrative constraints would severely limit its overall effectiveness because affordability challenges are especially acute in many small utilities that lack economies of scale.

6.1.2.2. Customer Participation

Utilities would not recruit, qualify, enroll, or renew customers for LIHWAP 2.0. Rather, as in the existing program, states would employ a mix of local government welfare agencies and nonprofit community action agencies to publicize LIHWAP 2.0 and enroll customers in the program. As discussed in Sections 4 and 5, administrative procedures, required documentation, verification, and renewal procedures for participation vary considerably across states. Along with application forms, LIHEAP administrators typically require applicants to provide copies of recent utility bills, proof of income, proof of present address (e.g., lease, property tax bill, mortgage), Social Security numbers and/or birth certificates for household members, and proof of citizenship or legal residence. LIHWAP 2.O would retain these customer-level administrative processes. These administrative burdens are typical for existing federal income-qualified assistance programs.

In the long run, it is reasonable to anticipate that participation in LIHWAP would be similar to the existing LIHEAP program at around 16% on average. However, participation in the expanded water/wastewater program could be markedly higher or lower depending on the benefit amounts that customers stand to gain from participation.

Challenges of Proof of Income

Many assistance programs have requirements or eligibility thresholds based on income, but too often such programs fail to consider the barriers that requiring proof of income can present for applicants. The barriers may include:

- time consuming paperwork requirements
- privacy concerns
- lack of comfort with the process.

Rather than asking for physical evidence of income in the form of pay stubs or tax forms, some programs are employing strategies such as self-attestations (sometimes with penalties for evidence of fraud), or only requiring identifying information such as a Social Security Number that can be used to verify incomes from federal sources.

One example of this is the Biden Administration's recently released Student Debt Relief program application. For a water assistance program, it may be that utilities are best equipped to handle water account verification, while a federally lead effort could be preferable for income verification elements.

6.1.3. Eligibility

LIHWAP's eligibility requirements would likely be similar to LIHEAP's existing requirements, which vary from state to state, as discussed in Section 4. The only additional eligibility requirement for LIHWAP is that a customer's water/wastewater utility must have a vendor agreement with the state administering agency in order to receive benefits.

The existing LIHWAP program does not provide benefits to "hard-to-reach" customers who pay for their utilities through rent or who rely on private wells or septic systems. A refined and expanded LIHWAP 2.0 could allow for such benefits, following the LIHEAP model. States vary in the extent to which LIHEAP applies to "hard-to-reach" customers who pay for their utilities through rent. Some states provide full benefits to renters, others provide partial benefits to renters, and others provide benefits only to households that are responsible for their own utility bills. Private fuel haulers may register

as vendors under LIHEAP so that their customers who rely on propane or heating oil may use LIHEAP benefits to receive assistance. In a similar way, LIHWAP 2.0 could be adapted to provide benefits to customers who rely on private wells or septic systems. If structured flexibly (i.e., allowing customers to distribute benefits across various utility services or distributing benefits through EBT cards), then LIHWAP 2.0 could allow assistance benefits to flow to *hard-to-reach* customers. If LIHWAP remains restricted to paying for water/wastewater utility bills, then benefits would only reach customers who pay their own water/wastewater bills.

6.1.4. Monitoring and Reporting

In order to manage LIHWAP 2.0, water/wastewater utilities would need to adapt their systems to receive full or partial payments from state administering agencies. Utilities also would need to establish audit protocols to ensure that participating customers maintain eligibility and track any changes to accounts that might affect eligibility.

Since LIHWAP funds flow directly to utilities on behalf of customers, program reporting requirements for LIHWAP 2.0 will fall mainly to the local government and community action agencies that handle enrollment. However, each quarter participating utilities would be required to report quarterly average bills, payment rates, delinquencies, and arrearages for LIHWAP 2.0 participants. Utilities that participate in LIHWAP will have established some of these systems in the process of establishing that program.

6.1.5. Advantages

Advantages of LIHWAP 2.0 include:

- LIHWAP 2.0's allocation formula would channel federal funds to the states in proportion to their residential water/wastewater costs.
- LIHWAP 2.0 would leverage existing administrative processes, knowledge, and relationships established through the LIHWAP rollout and more than 40 years of LIHEAP administration.
- National minimum eligibility standards and administrative rules ensure a degree of equity across states, tribes, territories, and communities.
- If the program is structured flexibly so that recipients may allocate their benefits across multiple utility bills (e.g., water, wastewater, electricity, and gas) or so that benefits are distributed through EBT cards, then LIHWAP 2.0 could provide assistance to low-income *hard-to-reach* customers who pay for water/wastewater through rent or use of private wells and septic systems.
- If the program is structured more restrictively, LIHWAP 2.0 would ensure that benefits are targeted at water/wastewater costs specifically.

6.1.6. Limitations

LIHWAP 2.0 also carries some important limitations, including:

- Likely low participation, due to a combination of high administrative burdens on customers and relatively meager benefits as compared to other federal assistance program offerings
- High administrative cost and complexity will limit participation by many utilities, especially smaller utilities that have limited organizational capacity.

- If the program is structured restrictively, LIHWAP 2.0 benefits would not reach households that do not have water or wastewater utility accounts.
- National minimum eligibility standards and administrative rules limit flexibility to adapt program design to local conditions.
- If the program is structured flexibly, so that recipients may allocate their benefits across multiple utility bills (e.g., water, wastewater, electricity, and gas), or if benefits are distributed via EBT cards, then LIHWAP 2.0 may channel more funds to household expenses other than water/wastewater bills.[75]
- Apart from recent LIHWAP implementation efforts, HHS has very limited experience with and capacity for working with water and wastewater utilities.

6.2. SNAP H2O

This pathway would expand SNAP to include benefits to help low-income households pay for water and wastewater services.

6.2.1. Funding Channels

SNAP is authorized as part of the Farm Bill, which Congress typically renews every five years. The program receives funding through annual appropriations as part of the Agriculture, Rural Development and Food and Drug Administration appropriations bill. Under SNAP H2O, funding would be channeled through the USDA to relevant state and territorial agencies, following the program's existing funding distribution protocols.

As an entitlement program, all individuals who qualify and register for SNAP receive their full benefits. SNAP funds are allocated to states and participating territories based on current participation levels, as well as expected increases in participation over the next year.[76] Ideally, SNAP H2O would also be established as an entitlement program. However, if funding were limited (such as with the current LIHWAP program) funding could still be distributed through SNAP channels. Additional prioritization criteria would need to be established to target those households most in need of assistance.

Per current SNAP processes, funds would flow directly from state administering agencies (or in some states, from county administering agencies) to benefit recipients. Benefits would be distributed via EBT cards, which recipients could use to pay their water and/or wastewater bills. To receive payments from benefit recipients, water and wastewater utilities would need to register with the USDA as a certified EBT vendor and would need to modify their billing systems to accept EBT payments.

[75] A LIHWAP 2.0 structured in this manner could still improve low-income water/wastewater affordability even if participants use all of their benefits to pay for other things insofar as the benefits free up resources for water/wastewater bills and those bills are actually paid.

[76] If funding for LIWCAP was limited (e.g., provided through a block grant like LIHEAP), funds could still be distributed via the current SNAP infrastructure. However, the percentage of funding allocated to each state/territory could follow a different pattern. For example, if the limited LIWCAP funding targeted specific subpopulations (e.g., households with children, or with elderly or disabled members), allocations could be distributed based on the characteristics of the SNAP-participating population in each state.

6.2.2. Administration

SNAP H2O would follow state and local administrative procedures for SNAP. Once established, SNAP H2O would result in no (or very little) additional administrative burden for participants and low administrative costs for administrative agencies and utilities.

As discussed in Section 4, states have some flexibility to adapt their organizational structure and procedures for administering SNAP, pursuant to federal guidelines. States employ a mix of local government welfare agencies, community action agencies, and nonprofit organizations to conduct outreach, verify eligibility, and enroll customers. SNAP H2O would follow established processes for SNAP, with potential additional requirements depending on details of eligibility (discussed below).

EBT Basics: Accepting EBT Payments

- EBT (Electronic Benefit Transfer) is a payment system designed to allow its recipients access to assistance under SNAP, TANF, and other government-sponsored aid programs.
- EBT cards work like debit cards. When SNAP recipients pay for food, the amount of the sale is automatically subtracted from their SNAP EBT account and credited to the store's bank account. Internal accounting systems ensure that SNAP benefits are used for SNAP-approved purchases.
- To accept SNAP payments, retailers must apply for a permit from the USDA Food and Nutrition Service (FNS). The SNAP permit is free, and the application can be submitted online.
- To accept EBT payments, retailers must have equipment that can process EBT transactions. If the retailer accepts credit and debit card purchases, the same equipment can typically be used for EBT cards. Most SNAP-authorized retailers must pay for their own EBT equipment and/or lease it from third-party providers (TPP) that process EBT transactions.
- The USDA offers free equipment for small businesses that participate in SNAP, as well as to certain other vendors like farmer's markets, direct-marketing farms, and nonprofit food buying cooperatives. This could conceivably be extended to small water service providers.
- EBT processing fees are much lower than they are for traditional debit or credit card transactions. However, TPPs have the right to charge a "reasonable amount" for processing these transactions. Some providers process EBT transactions for free but most charge a small per-transaction fee (e.g., at least one large TPP charges $0.10 per transaction).
- Federal regulations prohibit SNAP retailers from charging a fee or requiring a minimum purchase amount for the redemption of EBT food benefits.
- Retailers must have electricity and a phone line to use EBT machines but have the option of using manual vouchers if this is not the case, or if they have very few SNAP customers. Manual vouchers are also used as a backup system if an EBT card or an EBT system is not working.
- Currently, most states are operating with online purchasing capabilities (rather than strictly in-person transactions); FNS is working with other states/territories interested in expanding online purchasing.

Sources:

Bankcard n.d. accessed at: https://zenti.com/blog/how-to-accept-ebt-payments/,

Kehl 2022, accessed at: https://zenti.com/blog/how-to-accept-ebt-payments/ ,

USDA 2022a accessed at https://fns-prod.azureedge.us/sites/default/files/resource-files/SNAP-EBT-TPP-Information.pdf:,

USDA 2022b accessed at: https://fns-prod.azureedge.us/sites/default/files/resource-files/SNAP-EBT-TPP-Information.pdf

VMS n.d., accessed at: https://www.getvms.com/ebtupdate/retailers-guide-to-ebt/

Utilities would have the option of registering as a qualified EBT vendor and would need to adapt their billing systems to accept EBT payments. This adaptation would be fairly straightforward and simple for utilities that already accept credit or debit payments; for those that do not, necessary equipment can be purchased at a low cost, although billing systems would need to be adapted to accept electronic payments (see text box for more on accepting EBT payments).

Qualifying SNAP participants could be automatically enrolled in SNAP H2O and/or could follow SNAP application procedures and documentation requirements. Depending on program rollout and additional eligibility criteria, current SNAP recipients

might need to apply for SNAP H2O or could start receiving benefits upon certification. It is reasonable to anticipate that participation in SNAP H2O would be similar to the existing SNAP program, which has a participation rate of 82% nationally.

6.2.3. Eligibility and Benefits

SNAP H2O's eligibility requirements would be identical to SNAP's existing requirements, which are relatively uniform across states (see Section 4).

The most efficient way to provide benefits would be to provide a fixed water/wastewater benefit per household, which could vary based on household size, household type (e.g., multi-family vs. single-family), income level, and potentially, other characteristics. Similar to SNAP, which assumes that households can spend 30% of their income on food, benefits could also be determined based on a percentage of income threshold.

Water/wastewater benefits under SNAP H2O could be structured with varying restrictions. For example, SNAP H2O could simply increase program benefits and give participants the option to pay for water/wastewater bills with their EBT cards. This flexible approach would give participants the freedom to manage their own household finances. In this way, SNAP H2O would offer an opportunity to provide assistance to low-income *hard-to-reach* customers who pay for their utilities through rent, as well as customers of small or under-resourced utilities who are not able to modify their systems to accept EBT payments. Hard-to-reach customers could be provided with a flat payment based on average local or state water and wastewater costs. LIHEAP provides precedent for providing flat rate benefits to hard-to-reach households via EBT cards.[77]

Alternatively, SNAP H2O could restrict the additional funds so that participants could use the added benefit only for water/wastewater bills. For households that pay a water/wastewater bill directly to a utility, benefit levels could be determined based on a percentage of household income, similar to how SNAP benefits are determined. Such a restriction would increase administrative burdens insofar as it would require participants to submit additional documentation on water and wastewater utility costs. This approach also would effectively exclude from the program customers of utilities that do not set up billing systems to accept EBT payments.

A hybrid approach could also restrict the additional funds only for households that have a water/wastewater bill in their name and whose utilities accept EBT cards. Flat rate benefit amounts could be provided to *hard-to-reach* households. This would require additional administrative effort.

It is worth noting that SNAP benefits are determined based on net income, which is calculated by subtracting shelter expenses (including utilities) and other standard deductions from gross income. Rather than requiring participating households to verify household utility costs, most states apply Standard Utility Allowances (SUAs), which are intended to reflect the average cost of utilities in the state or local area (although for water and wastewater, many are miscalculated, see WRF 2017). In most states, using SUAs is mandatory. In states with optional SUAs, a household can claim actual utility expenses but must provide documentation for all claimed costs. Because water and wastewater costs are currently allowed as a deduction in calculating net income for SNAP, SNAP H2O must be carefully designed to avoid unintentionally increasing an individual's net income for eligibility purposes (e.g., by no longer allowing them to claim water/wastewater utility costs as a deduction); this would reduce SNAP benefit amounts and make some participants ineligible for SNAP. This issue has come up within the context of LIHEAP – currently, many states have "heat and eat" programs that allow LIHEAP recipients to maximize their SUA under SNAP (I.e., continue to claim utility expenses as a deduction).

[77] Colorado employs this approach, for example.

6.2.4. Monitoring and Reporting

Since SNAP funds flow directly to individuals/households, program reporting requirements for SNAP H2O would fall mainly to the local government and community action agencies that handle enrollment. However, participating utilities would be required to report number and amount of EBT payments, and average bills, payment rates, and delinquencies for SNAP H2O participants.

6.2.5. Advantages

There are several advantages to SNAP H2O, including:

- SNAP H2O would leverage the brand value and public familiarity with a well-known, successful, and popular program.
- Very high participation in SNAP means that SNAP H2O would reach many low-income households. In addition, SNAP is widely available throughout the United States, including in rural areas. DeWitt et al. 2020 report that participation rates are higher in rural areas than in urban areas.[78]
- SNAP H2O can easily provide indirect assistance to low-income *hard-to-reach* customers who pay for their utilities through rent, as well as customers of small or under-resourced utilities who are not able to modify their systems to accept EBT payments. Hard-to-reach customers account for at least 30% of households earning less than 150% of the FPL, according to recent (2020) Census data.
- Once established, SNAP H2O would have very low administrative costs to utilities, state agencies, and the USDA as administrative procedures would follow those developed for SNAP.
- National eligibility standards and administrative rules ensure a degree of equity across states, tribes, territories, and communities.
- Many states use EBT cards for other assistance programs (e.g., TANF payments). As such, they are programmed with an internal accounting system that allows for only a portion of benefits to be available for SNAP. This EBT infrastructure would make it relatively easy to track SNAP H2O expenditures on water/wastewater bills. Under more restrictive eligibility requirements, EBT cards could limit SNAP H2O benefits to payments for water or wastewater bills.
- The program would not increase the administrative burden for eligible SNAP recipients, (unless benefits were provided only to water/wastewater customers who have a bill in their name and/or benefits were based on the amount that households currently pay for water, in which case applicants would need to provide documentation of household water/wastewater costs).
- USDA has significant experience working with rural communities and their water systems.
- As conceived, pathways would be provided to low-income households to cover ongoing water and wastewater costs. Under SNAP H2O, nothing would prevent utilities from accepting EBT payments to also be applied towards arrearages.

[78] DeWitt et al. 2020, accessed at: https://pubmed.ncbi.nlm.nih.gov/32825144/

- EBT processing fees are much lower than they are for traditional debit or credit card transactions; this can reduce overall costs for utilities that accept EBT payments and/or for customers who make payments via EBT. However, most merchant EBT providers charge a small per-transaction fee.

6.2.6. Limitations

There are also several limitations to SNAP H2O:

- SNAP eligibility criteria are somewhat limited (see Section 4), meaning there are many households in need of assistance who do not qualify for SNAP and therefore, would not qualify for SNAP H2O. At the same time, this would ensure that limited SNAP H20 funding would go to households most in need of assistance.
- The limited role of water utilities (i.e., accepting EBT payments) would make it difficult to track some utility-related performance metrics (e.g., reduction in shutoffs). Utilities would be able to track the number of payments received through EBT cards, as well as payment delinquencies and potentially shutoff data for SNAP H2O participants. However, it would be difficult to fully quantify the impact of the program based on utility data due to the large number of *hard-to-reach* households that could receive benefits.
- National eligibility standards and administrative rules limit flexibility to adapt program design to local conditions.
- Several territories, including Puerto Rico, American Samoa, and the Commonwealth of the Northern Mariana Islands do not participate in SNAP. These three territories instead receive capped block grants to provide nutrition assistance benefits. Separate processes may need to be established to reach qualifying households in these areas.
- USDA reports that many tribal households do not participate in SNAP because they do not have easy access to SNAP offices or authorized food stores (USDA 2022). Instead, many eligible households participate in USDA's Food Distribution Program on Indian Reservations (FDPIR), which provides food to income-eligible tribal households living on or near reservations. While SNAP provides assistance to a relatively high percentage of tribal households,[79] those participating in FDPIR would not be able to receive benefits for water and wastewater assistance via SNAP-issued EBT cards. Separate processes would need to be established to reach qualifying households in these areas.

6.3. LIWCAP Via Utilities

This pathway would create a new federal assistance program that would be funded through the USEPA but administered directly by individual water and wastewater utilities. USEPA would set program parameters, distribute funds, and track and evaluate program performance. However, program design and implementation would be left to utilities. Like the U.S. Department of Housing and Urban Development's Community Development Block Grant (CDBG) program, LIWCAP via utilities (LIWCAP-U) would maximize program flexibility so that utilities can tailor policies and strategies to meet their own communities' needs and priorities. In many cases, this pathway could involve expansion, extension, or refinement of existing utility-level programs. For other utilities, LIWCAP via utilities (LIWCAP-U) could provide funds to create new income-qualified assistance programs.

[79] NFBC 2018: https://seedsofnativehealth.org/wp-content/uploads/2017/09/Title-IV-Nutrition.pdf

6.3.1. Funding Channels

Funding would be secured through the annual congressional Interior and Environment appropriations bill and channeled through USEPA to utilities according to a funding formula. LIWAP-U funding could be distributed through state agencies or sent directly from USEPA to participating utilities (as in the CDBG program).

6.3.2. Administration

LIWCAP-U administration involves USEPA, utilities, and their customers.

6.3.2.1. USEPA Administration

USEPA administration would begin by establishing a formula to guide the allocation of federal funds to utilities. The funding formula could account for current and projected population, economic conditions, environmental characteristics, and other relevant factors. USEPA would establish LIWCAP-U objectives, rules, guidelines, reporting requirements, and evaluative standards. At their discretion, utilities could supplement their LIWCAP-U programs with other sources of revenue, including state/local taxes or rate revenue (to the extent allowed by state law).

6.3.2.2. Utility Participation and Administration

All water and wastewater utilities in the United States that serve residential customers and operate on a fee-for-service basis would be eligible to receive LIWCAP-U support, including investor-owned, tribal, and territorial utilities. Utilities seeking LIWCAP-U funding would apply to USEPA with detailed descriptions of their proposed assistance programs, including eligibility criteria, administrative processes, performance metrics, and audit procedures.

Each utility would design and implement its own LIWCAP-U program according to the priorities of its own management and governing authority, pursuant to federal guidelines. Beyond customary discount programs, LIWCAP-U could conceivably provide plumbing repairs and retrofits, turf replacements, and other water-related benefits to qualified customers. Utility LIWCAP-U plans would have to demonstrate consistency with USEPA objectives, rules, and guidelines. USEPA would approve, reject, or return LIWCAP-U proposals for revision. Approved utility programs would be subject to periodic review and renewal. Substantial changes to utilities' LIWCAP-U programs would be subject to approval by USEPA. Approved utilities would receive a share of LIWCAP-U funding according to the national funding formula.

Utilities operating LIWCAP-U would be entirely responsible for administering their own programs. That is, utilities would publicize their LIWCAP-U programs, review and qualify applicants, enroll participants, and periodically renew participants. Utilities also would set up their own appeals and audit processes. Utilities that already operate effective assistance programs could simply supplement or expand those programs with LIWCAP-U funds. Utilities could outsource these customer-facing functions to other local governments or community action agencies, subject to USEPA approval.

The fragmentation of the U.S. water sector and limited organizational capacity among its mid-size and small systems present serious barriers to LIWCAP-U for the vast majority of the nation's water and wastewater utilities. Not only would each utility participating have to develop and administer their own program, which introduces significant redundancy in program administration, but very few water utilities have staffing and administrative infrastructure to design and implement an income-qualified assistance program. As noted previously, LIHWAP's early administration demonstrates the challenges of implementing income-qualified assistance in small systems. Although detailed data is not available, it is likely that LIHWAP participation is concentrated among the large utilities that have sufficient administrative capacity to manage assistance programs. The majority of local government utilities employ fewer than five FTEs; for such communities,

LIWCAP-U's application, administration, and reporting requirements would be insurmountable barriers for many of these small systems.

LIWCAP-U is therefore best suited for large utilities that have the administrative capacity to manage an assistance program tailored to local needs. This pathway would leverage and reward utilities that have already established assistance programs by reducing redundancies and avoiding "reinventing the wheel."

6.3.2.3. Customer Participation

Under LIWCAP-U, utilities would recruit, qualify, enroll, and renew customers who seek benefits. Administrative procedures, required documentation, verification, and renewal procedures for participation will vary considerably across utilities (subject to USEPA rules). Some utilities may demand extensive documentation of income, employment, household composition, medical information, citizenship status, or more. At the other extreme, some utilities may simply allow customers to self-certify with little or no oversight or auditing. Therefore, administrative burdens are likely to vary considerably across utilities that run LIWCAP-U programs.

Participation in LIWCAP-U would probably vary considerably, depending on several aspects of program design and benefit levels. The limited available research on water/wastewater assistance programs suggests that participation would range from the single digits to perhaps as high as 60% in some municipalities; average participation of 15%-30% is a reasonable expectation.

6.3.3. Eligibility

LIWCAP-U eligibility guidelines would be set at two levels. USEPA would create broad minimum and maximum thresholds and set program objectives. Utilities would have considerable discretion to set their own eligibility rules to meet local needs and conditions (subject to state laws).

Most existing income-qualified water/wastewater assistance programs are limited to residential customers who are responsible for their own accounts. However, a few utilities have established programs aimed at renters and other *hard-to-reach* customers who pay for their utilities through rent or who rely on private wells or septic systems. Under LIWCAP-U, utilities could run traditional assistance programs or employ these emerging methods of assisting *hard-to-reach* customers.

6.3.4. Monitoring and Reporting

Since LIWCAP-U funds would flow directly to utilities, reporting requirements will fall entirely to the utilities that accept LIWCAP-U funds to support their assistance programs. As discussed later in this report, participating utilities would be required to submit quarterly or annual reports on bills, payment rates, delinquencies, arrearages, and program participation and benefit levels. Utilities that participate in LIHWAP will have established some of these systems in the process of establishing that program.

6.3.5. Advantages

Advantages of LIWCAP-U include:

- Great flexibility to design and implement assistance to suit local needs and conditions across a diverse country.
- Program flexibility well-suited to the unique needs of utilities in tribal and territorial communities.
- Leverages existing utility-level assistance programs and avoids redundancies.

- USEPA has deep experience with and knowledge of water and wastewater utilities.
- Direct USEPA-to-utilities administration eliminates state agencies from the implementation process, reducing red tape and administrative costs.
- LIWCAP-U's allocation formula would channel funds to communities in proportion to their residential water/wastewater costs and economic conditions.
- Potential to provide assistance to low-income *hard-to-reach* customers who pay for water/wastewater through rent or use of private wells and septic systems.
- Ensures that benefits are targeted at water/wastewater costs specifically.
- Diversity of program design, coupled with extensive data collection, would allow program analysis and evaluation to determine best (and worst) practices. Over time, utilities could converge on a set of the most effective designs and implementation methods.

6.3.6. Limitations

Limitations of the LIWCAP-U pathway include:

- Very high administrative costs and capacity needs would limit LIWCAP-U to large or resource-rich utilities. In this way, LIWCAP-U would likely fail to reach large eligible populations that are served by small systems where affordability challenges are most severe.
- Differences in program design, eligibility, and implementation processes would likely result in unequal access to the program and unequal benefits across communities.
- Benefits will only flow to *hard-to-reach* customers where utilities prioritize such program designs.
- USEPA has little experience with and capacity for administering or evaluating income-qualified household assistance programs.

6.4. LIWCAP Via Community Organizations

This pathway would create a new federal assistance program that would be funded through the USEPA but administered directly by community organizations via state agencies. USEPA would set program parameters, distribute funds, and track and evaluate program performance. However, program design and implementation would be left to state agencies. LIWCAP via community organizations (LIWCAP-C) would provide states with the flexibility to employ strategies that meet their populations' needs and priorities. By designing the program at the state level and administering it through community organizations, LIWCAP-C could help assistance reach customers of the small and medium-size utilities that lack the organizational capacity to administer a program. States would have wide latitude in designing their LIWCAP-C programs.

6.4.1. Funding Channels

Funding would be secured through the annual congressional Interior and Environment appropriations bill and channeled through USEPA to utilities according to a funding formula. LIWAP-C funding could be distributed to state agencies, which would, in turn, contract with the community organizations that enroll, qualify, and distribute benefits to LIWCAP-C participants.

6.4.2. Administration

LIWCAP-C administration involves USEPA, state agencies, community organizations and customers. The extent to which utilities are involved in administration will depend on how states design their LIWCAP-C programs. LIWCAP-C could involve extensive cooperation between community organizations and utilities; alternatively, utilities could have no role at all in LIWCAP-C, with community organizations handling customer-level administration from beginning to end.

6.4.2.1. USEPA Administration

USEPA administration would begin by establishing a formula to guide the allocation of federal funds to utilities. The funding formula could account for current and projected population, economic conditions, environmental characteristics, and other relevant factors. USEPA would establish LIWCAP-C objectives, rules, guidelines, reporting requirements, and evaluative standards. At their discretion, states could supplement their LIWCAP programs with other sources of revenue, including tax revenue.

6.4.2.2. State Agency Administration

Each state would design and implement its own LIWCAP-C program according to the priorities of its own management and governing authority. State agencies would submit their LIWCAP-C program designs to USEPA with detailed descriptions of their benefit levels, eligibility criteria, administrative processes, performance metrics, and audit procedures, among other details. LIWCAP-C plans would have to demonstrate consistency with USEPA objectives, rules, and guidelines. USEPA would approve, reject, or return LIWCAP-C proposals for revision. Approved LIWCAP-C programs would be subject to periodic review and renewal. Substantial changes to LIWCAP-C programs would be subject to approval by USEPA.

With program designs in place, states, tribes, and territories would enter contracts with community organizations in their jurisdictions to administer LIWCAP-C. These arrangements would vary from state to state. Since LIWCAP-C administration would involve private, nonprofit agencies, state agencies' administrative duties would include identifying appropriate community organizations, securing their agreement to administer LIWCAP-C, and developing systems to monitor implementation.

6.4.2.3. Community Organization Administration

Community organizations would recruit, qualify, enroll, and renew customers who seek benefits. The nature and extent of these tasks would depend on the program design adopted by each state. Community organizations would receive compensation for resources spent administering LIWCAP-C through service contracts negotiated with the state.

6.4.2.4. Customer Participation

Administrative procedures, required documentation, verification, and renewal procedures for participation will vary considerably across states (subject to USEPA rules). Some states may demand extensive documentation of income, employment, household composition, medical information, citizenship status, or more. At the other extreme, some states may simply allow customers to self-certify with little or no oversight or auditing. Therefore, administrative burdens are likely to vary considerably across LIWCAP-C programs.

Participation in LIWCAP-C also would probably vary considerably, depending on several aspects of program design and benefit levels. The limited available research on water/wastewater assistance programs suggests that participation would range from the single digits to perhaps as high as 60%; average participation of 15%-30% is perhaps a reasonable expectation.

6.4.3. Eligibility

LIWCAP-C eligibility guidelines would be set at two levels. USEPA would create broad minimum and maximum thresholds and set program objectives. States would have considerable discretion to set their own eligibility rules to align with state priorities. Under LIWCAP-C, states and their community organization partners could design programs to benefit utility customers and/or seek to extend benefits to *hard-to-reach* populations.

6.4.4. Monitoring and Reporting

Since LIWCAP-C funds would flow through state agencies to community organizations, reporting requirements will fall to community organizations that administer the program and the state agencies that oversee the LIWCAP-C contracts. States would be required to submit quarterly or annual reports on program participation and benefit levels.

6.4.5. Advantages

Advantages of LIWCAP-C include:

- Great flexibility to design and implement assistance to suit many conditions and preferences across a diverse country.
- Program flexibility well-suited to the unique needs of utilities in tribal and territorial communities.
- Leverages existing community organizations' experience and knowledge administering assistance programs.
- Potential to reach customers in smaller systems and/or rural areas where utilities lack the administrative capacity to administer assistance.
- Potentially very low administrative costs to utilities.
- LIWCAP-C's allocation formula would channel funds to states in proportion to their residential water/wastewater costs and economic conditions. State funding formulae could further refine targeting of funding.
- Potential to provide assistance to low-income *hard-to-reach* customers who pay for water/wastewater through rent or use of private wells and septic systems.
- Diversity of program design, coupled with extensive data collection, would allow program analysis and evaluation to determine best (and worst) practices. Over time, states and their community organization partners could converge on a set of the most effective designs and implementation methods.

6.4.6. Limitations

Limitations of the LIWCAP-C pathway include:

- Reliance on community organizations to administer LIWCAP-C could limit the program's reach in areas where no such organizations exist.
- High administrative costs for community organizations could make it difficult or impossible to secure widespread participation.
- Differences in program design, eligibility, and implementation processes would likely result in unequal access to the program and unequal benefits across states and communities.

- Depending on program design, LIWCAP-C could require extensive new administrative cooperation between utilities and community organizations.
- Benefits will only flow to *hard-to-reach* customers where states prioritize such program designs.
- USEPA has little experience with and capacity for administering or evaluating income-qualified household assistance programs.

6.5. LIWCAP Hybrid

This pathway would create a new federal assistance program that would be funded through the USEPA and administered by utilities and community organizations. In other words, this pathway is a combination of LIWCAP-U and LIWCAP-C. As with the other LIWCAP pathways, USEPA would set program parameters, distribute funds, and track and evaluate program performance.

Program design and implementation would be left to utilities and state agencies. As in LIWCAP-U, water/wastewater utilities that have the administrative capacity to manage an assistance program could create new LIWCAP programs tailored to local needs or use LIWCAP funds to supplement or expand existing programs. As in LIWCAP-C, state agencies would develop state-specific assistance programs to be administered through community organizations for customers of utilities that do not operate their own assistance programs.

In this way, LIWCAP-H offers the potential to maximize local flexibility in program design and administration for utilities that have sufficient capacity to run assistance programs, while maintaining the broader reach of a program administered through community organizations. States would have wide latitude in designing their LIWCAP-H programs to suit their states' needs.

6.5.1. Funding Channels

Funding would be secured through the annual congressional Interior and Environment appropriations bill and channeled through USEPA to states according to a funding formula. LIWCAP-H funds would flow first to state agencies, which would then channel funds to the utilities and community organizations that administer LIWCAP-H. These funds would take the form of block grants to utilities and periodic disbursements to contracted community organizations.

6.5.2. Administration

LIWCAP-H administration involves USEPA, state agencies, utilities, community organizations, and customers. The extent to which utilities are involved in administration will depend on whether they opt to develop their own LIWCAP programs. LIWCAP-H could involve extensive cooperation between community organizations and utilities; alternatively, utilities could have a limited role in LIWCAP-H, with community organizations handling customer-level administration from beginning to end.

6.5.2.1. USEPA Administration

USEPA administration would begin by establishing a formula to guide the allocation of federal funds to utilities and state-contracted community organizations. The funding formula could account for current and projected population, economic conditions, environmental characteristics, and other relevant factors. USEPA would establish LIWCAP-H objectives, rules, guidelines, reporting requirements, and evaluative standards. At their discretion, states and utilities could supplement their LIWCAP programs with other sources of revenue, including tax and/or rate revenue.

6.5.2.2. State Agency Administration

State agency administration under LIWCAP-H would involve two processes: one for utilities that operate LIWCAP assistance programs and another for programs operated by community organizations. For utilities that opt to run their own LIWCAP program, state administration would involve approving utility plans, periodic review/renewal of those plans, disbursing block grants, and collecting data. For community organization-administered program, each state would design and implement its own LIWCAP program according to the priorities of its own management and governing authority. State agencies would submit their LIWCAP-H program designs to USEPA with detailed descriptions of their benefit levels, eligibility criteria, administrative processes, performance metrics, and audit procedures, among other details. LIWCAP-H plans would have to demonstrate consistency with USEPA objectives, rules, and guidelines. USEPA would approve, reject, or return LIWCAP-H proposals for revision. Approved LIWCAP-H programs would be subject to periodic review and renewal, and substantial changes would be subject to approval by USEPA. Upon approval, states would receive a share of LIWCAP-H funding according to the national funding formula.

With program designs in place, states, tribes, and territories would enter contracts with community organizations in their jurisdictions to administer LIWCAP-H in communities whose utilities do not operate low-income assistance programs. These arrangements would vary from state to state. LIWCAP-H administration would involve local governments, public and investor-owned utilities, and private, nonprofit agencies. State agencies' administrative duties would include developing contracts, communications systems, monitoring processes, and audit protocols for each type of organization.

6.5.2.3. Utility Participation and Administration

All water and wastewater utilities in the United States that serve residential customers and operate on a fee-for-service basis would be eligible to develop its own LIWCAP-H program, including investor-owned, tribal, and territorial utilities. Utilities seeking LIWCAP-H funding would apply to their state agencies with detailed descriptions of their proposed assistance programs, including eligibility criteria, administrative processes, performance metrics, and audit procedures.

Utilities that opt to manage their own LIWCAP programs would design and implement those programs according to the priorities of their own management and governing authorities. Utility LIWCAP plans would have to demonstrate consistency with objectives, rules, and guidelines set by both USEPA and their state agencies. State agencies would approve, reject, or return these plans for revision. Approved utility programs would be subject to periodic review and renewal. Substantial changes to utilities' LIWCAP programs would be subject to approval by state agencies. Approved utilities would receive a share of LIWCAP-H funding according to their states' funding formulae.

Utilities operating LIWCAP-H programs would be entirely responsible for administering (and reporting on) their own programs. That is, utilities would publicize their LIWCAP programs, review and qualify applicants, enroll participants, and periodically renew participants. Utilities also would set up their own appeals and audit processes. Utilities that already operate effective assistance programs could simply supplement or expand those programs with LIWCAP-H funds. Utilities could outsource these customer-facing functions to other local governments or community action agencies, subject to state approval.

Due to administrative fragmentation of the U.S. water sector, we expect that relatively few utilities will opt to design and administer their own assistance programs. Larger and more resource-rich utilities are most likely to create or expand assistance programs under LIWCAP-H, since they are likely to have sufficient organizational capacity to administer such programs. For utilities that have the capacity and will to run assistance programs, LIWCAP-H offers an opportunity to manage an assistance program tailored to local needs, while still providing for customers whose utilities lack the capacity to manage assistance programs.

For utilities that do not run their own LIWCAP programs, administration would involve coordinating with the community organizations that administer the program under state contracts. The nature and extent of that coordination will depend on state program design.

6.5.2.4. Community Organization Administration

With program designs in place, states, tribes, and territories would enter contracts with community organizations in their jurisdictions to administer LIWCAP-H in communities where utilities do not administer their own programs. These arrangements would vary from state to state. Community organizations would recruit, qualify, enroll, and renew customers who seek benefits. The nature and extent of these tasks would depend on the program design adopted by each state. Community organizations would receive compensation for resources spent administering LIWCAP-H through service contracts negotiated with the state.

6.5.2.5. Customer Participation

Administrative procedures, required documentation, verification, and renewal procedures for participation will vary considerably across states and within states (subject to USEPA rules). Utilities or states may demand extensive documentation of income, employment, household composition, medical information, citizenship status, or more. At the other extreme, some utilities or states may simply allow customers to self-certify with little or no oversight or auditing. Therefore, administrative burdens are likely to vary considerably under LIWCAP-H. The added complexity of administering what amounts to parallel systems within each state may increase administrative burdens under LIWCAP-H (compared to LIWCAP-U or LIWCAP-C): with multiple programs potentially running within a state or metropolitan area with attendant complexity and confusion. Participation in LIWCAP-H would probably vary considerably, depending on several aspects of program design and benefit levels. The limited available research on water/wastewater assistance programs suggests that participation would range from the single digits to perhaps as high as 60%; average participation of 15%-30% is perhaps a reasonable expectation.

6.5.3. Eligibility

LIWCAP-H eligibility guidelines would be set at three levels. USEPA would create broad minimum and maximum thresholds and set program objectives. States would have considerable discretion to set their own eligibility rules to align with state priorities. Utilities that operate LIWCAP programs would have further discretion to design eligibility for local conditions. Under LIWCAP-H, states, utilities, and community organization partners could design programs to benefit utility customers only or seek to extend benefits to *hard-to-reach* populations.

6.5.4. Monitoring and Reporting

Since LIWCAP-H funds would flow through state agencies to utilities and community organizations, reporting requirements will involve all three types of organizations. Utilities and community organizations that administer LIWCAP-H would be required to submit quarterly or annual reports to state agencies. In turn, states would be required to submit quarterly or annual reports on program participation and benefit levels to USEPA.

6.5.5. Advantages

Advantages of LIWCAP-H include:

- Maximum flexibility to design and implement assistance to suit many conditions and preferences across a diverse country.

- Program flexibility well-suited to the unique needs of utilities in tribal and territorial communities.
- Leverages existing utility and community organizations experience and knowledge administering assistance programs.
- Potential to reach customers in smaller systems and/or rural areas where utilities lack the administrative capacity to administer assistance.
- Potentially very low administrative costs to utilities that opt not to administer their own assistance programs.
- LIWCAP-H's allocation formula would channel funds to states in proportion to their residential water/wastewater costs and economic conditions. State funding formulae could further refine targeting of funding.
- Potential to provide assistance to low-income *hard-to-reach* customers who pay for water/wastewater through rent or use of private wells and septic systems.
- Diversity of program design, coupled with extensive data collection, would allow program analysis and evaluation to determine best (and worst) practices. Over time, states, utilities, and community organizations could converge on a set of the most effective designs and implementation methods.

6.5.6. Limitations

Limitations of the LIWCAP-H pathway include:

- Multiple funding channels and administrative structures would require complicated management processes, with attendant higher administrative costs.
- Multiple, simultaneous but different programs operating in parallel within states could cause confusion for customers, utilities, and social services agencies.
- Reliance on community organizations to administer LIWCAP-H in much of the U.S. could limit the program's reach in areas where no such organizations exist.
- Securing community organization participation could be difficult or impossible in some areas.
- Differences in program design, eligibility, and implementation processes would likely result in unequal access to the program and unequal benefits across states and across communities within states.
- Depending on program design, LIWCAP-H could require extensive new administrative cooperation between utilities and community organizations.
- Benefits will only flow to *hard-to-reach* customers where states or utilities prioritize such program designs.
- USEPA has little experience with and capacity for administering or evaluating income-qualified household assistance programs.

6.6. Pathway Comparison

As discussed above, each pathway offers relative advantages and disadvantages; no program is perfect. The table below summarizes each pathway's main features and reports the Study team's assessment of each pathway's relative strengths with respect to various program attributes.

Table 6-1. Major Attributes of the Alternative Administrative Pathways

Pathway	Existing program expansion		New federal program: LIWCAP		
	LIHWAP 2.0	SNAP-H2O	via Utilities	via Community Organizations	Hybrid
Federal agency	HHS	USDA	USEPA	USEPA	USEPA
Benefits					
High participation	★★	★★★★★	★	★★	★★★
Low administrative burden on customers	★★★	★★★★★	★	★★	★★
Benefits for hard-to-reach customers	★	★★★★★	★★	★★	★★
Benefits restricted to water/sewer accounts	★★★★★	★★	★★★★★	★★★★★	★★★★★
Equal benefits across customers, communities, and states	★★★	★★★★★	★	★★	★★
Administration					
Low administrative cost for utilities	★★	★★★★★	★	★★★	★★
Accessible to small utilities with low organizational capacity	★★	★★★★★	★	★★	★★
Low administrative cost for federal/state agencies	★★	★★★★★	★★	★★	★
Flexibility for local needs	★★	★	★★★	★★★★	★★★★★

Benefit attributes

- **High participation.** The program is likely to enroll a large share of eligible participants nationwide.
- **Low administrative burden on customers.** The program will not require significant additional hassles or onerous processes for qualifying participants. Low-income customers will spend relatively little time learning about, applying for, demonstrating qualifications for, reapplying for, or negotiating over benefits.
- **Benefits for hard-to-reach customers.** The program will deliver benefits to income-qualified households who are not directly responsible for water and/or sewer bills, such as renters or people in multi-family residential units with shared water/sewer service.

- **Benefits restricted to water/sewer accounts.** The program will ensure that federal benefits meant to provide water/wastewater assistance ultimately reach utilities in ways that can be tied to specific water/wastewater accounts. Benefits are not spent on non-water/wastewater goods or services.
- **Equal benefits across customers, utilities, communities, and states.** The program will deliver approximately equal benefit levels to participants across the country, so that low-income households do not receive markedly different benefits in one state or community compared with another.

Administration

- **Low administrative cost for utilities.** The program will require minimal ongoing administrative expenses for utilities to manage publicity, enrollment, benefit delivery, auditing, and reporting.
- **Accessible to small utilities with low organizational capacity.** The program has low barriers to entry. That is, the program requires minimal investments by utilities in technology, processes, and personnel to connect customers with federal benefits.
- **Low administrative costs for federal/state agencies.** The program will require minimal on-going administrative expenses for federal/state agencies to manage their responsibilities for publicity, enrollment, auditing, program evaluation and reporting.
- **Flexibility for local needs.** Key aspects of the program can be easily adapted to local conditions and policy preferences. For example, local programs might provide higher or lower benefit levels, qualification thresholds, and greater or lesser basic water allowances.

Depending on the proposed pathway, the federal agency in charge of the program may be USDA (SNAP H2O), HHS (LIHWAP 2.0), or the USEPA (various LIWCAP alternatives). Under each pathway, the federal administrating agency will need to play a key role in developing program procedures and providing associated guidance and training to relevant state agencies and/or utilities (as applicable).

The federal administering agency will be responsible for financial management of the program (accounting, fund transfers, compliance monitoring), web site development and administration, and tracking program performance across states. Program staff will also need to develop and facilitate communications and reporting from state and/or other implementing organizations. Under SNAP H2O and LIHWAP 2.0, these processes will largely follow those of relevant programs. However, additional efforts will be needed to incorporate outcomes from a water-assistance program component. Under the various LIWCAP alternatives, new processes will need to be established.

As noted throughout this report, there are numerous options for how a federal low-income household water assistance program may be structured and administered. Each option offers several advantages; however, each option also has drawbacks or limitations. The table below provides an overview of the advantages and disadvantages associated with program characteristics that define options for the design and implementation of a federally administered water-oriented low-income household assistance program.[80]

[80] Note that what some view as an advantage, others may view as a disadvantage. For example, use of EBT cards for benefit distribution has several advantages: it is easy, efficient, well-understood and relatively easily implemented; however, some may express concern that that requiring utility adoption of EBT card technology is a barrier for utilities and, hence, a disadvantage.

Table 6-2. Programmatic Advantages and Disadvantages

PROGRAM CHARACTERISTIC	ADVANTAGES	DISADVANTAGES
Federal administration		
Environmental Protection Agency (EPA)	Institutionalized relationships and experience with water and wastewater utilities. Utilities are a central part of agency's mission and annual budget.	No institutional experience administering income-qualified assistance programs. High administrative costs.
Health and Human Services (HHS)	Long experience administering income qualified assistance programs, including utility assistance. Moderate administrative costs.	Little institutional experience working with water and wastewater utilities. Moderate administrative costs. Utility assistance is a very small part of the agency's mission and tiny fraction of its $1.6 trillion annual budget.
Department of Agriculture (USDA)	Institutionalized experience working with income-qualified assistance (SNAP) and small, rural water/wastewater utilities. Food assistance is central to the agency's $198 billion annual budget. Very low administrative costs.	Little institutional experience working with large, urban water and wastewater utilities.
Local administration		
Utility staff	Simpler management, with program administration woven seamlessly into utility finance and customer service functions. More secure personal information. Leverages existing systems and experience of larger utilities that currently run assistance programs.	High administrative cost. Many utilities have little experience with or capacity for managing income-qualified assistance programs, especially small utilities.
Community organizations	Greater experience with and capacity for administering income-qualified assistance. Lower administrative burden for participants as organizations that administer multiple programs may provide a "one-stop-shop" for low-income households. Community organizations may enjoy greater customer trust relative to utilities.	Coordination between utilities and community organizations can be difficult. Quality of administration depends on community organization's management. Customer personal information may be less secure.
Eligibility and benefits		
Uniform eligibility and benefits	Program participants receive equal benefits across the country. Simpler administration at federal and state levels. Less potential discrimination or administrative burdens applied due to state or local political conditions.	Eligibility and benefit levels are insensitive to differences in local preferences, utility prices and other essential costs of living.
Varying eligibility and benefits	States and utilities may tailor eligibility and benefits to reflect local preferences, utility prices, and other essential costs of living.	Economically and demographically similar households may receive very different benefit levels across states or communities. Costlier, more complicated federal and state

PROGRAM CHARACTERISTIC	ADVANTAGES	DISADVANTAGES
		administration. Greater potential for discrimination and differential administrative burdens.
Participants can use benefits only for water/wastewater bill	Ensures that federal funds flow to specific utility accounts.	No help for hard-to-reach customers who do not pay directly for a water/wastewater bill.
Participants may use benefits for goods other than water/wastewater bill	Helps hard-to-reach customers who do not pay directly for a water/wastewater bill. Empowers low-income households to make their own economic choices.	Some federal funds will not flow directly to utilities or specific utility accounts.
Benefit distribution		
Vendor agreements	Helps ensure that funds flow to water/wastewater utilities. Establishes protocols for utilities to report program information to state and federal agencies.	High administrative cost. Small utilities are unlikely to participate if vendor agreements are complicated or carry rigorous reporting requirements.
Benefit distribution through utilities	Ensures that federal funds flow to specific utility accounts.	High administrative cost for utilities. High administrative burden for program participants. More difficult for state and federal agencies to track and analyze benefit use.
Benefit distribution through Electronic Benefit Transfer (EBT) cards	Low administrative cost for utilities. Low administrative burden for participants. Reduces social stigma associated with receiving public assistance. Easy for state and federal agencies to track and analyze benefit use.	Requires coordinating with state agencies that administer EBT cards. Requires utilities to enable use of EBT transfers for bill payments.

SNAP-H2O: A Practical Pathway

If the goal of a federal assistance program is to make water and sewer service more affordable to the most customers of limited means, then that program must account for the practical realities of administration for governments, utilities, and the people who they seek to help. Although it is not an ideal program, administrative realities make SNAP-H2O an extremely practical pathway alternative in terms of effectiveness, administrative simplicity, efficiency, and demonstrated impact:

Reach. More than 41 million people participate in SNAP nationwide, roughly 13 percent of the U.S. population.[1] Of the nation's income-qualified assistance programs, only Medicaid reaches more people. Automatically extending water/sewer benefits to these recipients would put no additional administrative burden on program participants.

- **Low administrative costs.** EBT technology allows easy distribution and monitoring of benefits by state and federal agencies without extensive reporting by utilities. Utilities could participate by registering as approved vendors. Several payment processing
- companies offer EBT processing at a low flat rate or $0.10 per transaction. Utilities would not need to maintain sensitive private identity, income, health, or household information.
- **USDA administration.** The USDA has long-standing relationships with small and rural water and sewer utilities owing to its grant and technical assistance programs. Situating water/sewer billing assistance within USDA leverages those relationships and that reputation in communities that have some of the most severe affordability challenges.
- **Farm Bill funding.** SNAP-H2O would connect federal water/sewer bill assistance to the Farm Bill, a vast package of laws that Congress has passed roughly every five years since the 1930s. Along with food assistance, the Farm Bill includes agricultural subsidies, conservation programs, rural development grants, research, extension assistance, energy development, crop insurance, and more. Historically, the Farm Bill enjoys very strong bipartisan support, even when Congress is acutely divided (the 2018 Farm Bill passed 87-13 in the Senate, 392-20 in the House). Channeling water/sewer bill assistance through SNAP could give it a more durable political base and make it less vulnerable to swings in the partisan composition of Congress.
- **SNAP already provides more than a billion dollars in low-income water assistance annually.** Bottled water is an approved item for purchase under SNAP, and a 2016 USDA study found that roughly 1.2 percent of SNAP expenditures are for bottled water.[2] At that rate, USDA's estimated $106 billion in SNAP[3] benefits for 2022 implies that the *federal government will spend about $1.3 billion on low-income drinking water assistance this year*. Those funds will go to bottled water retailers and producers. Increasing SNAP funding and expanding the program's scope to include water/sewer bills could channel those funds to utilities instead.

7. Funding Distribution to Regions and States

The Study team examined potential methods for distributing program funds to states based on level of need and demand for water and wastewater bill assistance. First, we compared the distribution of funds to states, territories, and tribes across the three federal assistance programs: SNAP, LIHEAP, and LIHWAP to determine relevance for LIWCAP and applicability to the water sector. As detailed in Section 4 and 5, funds for these programs are allocated as follows:

- SNAP is distributed across states/participating territories based on current participation levels and expected increases in participation because it is an entitlement program.
- LIHEAP allocates funding to states based on two formulas. The "old" funding formula refers to the way in which funds were distributed under the original LIHEAP legislation, which was developed for heating assistance and favored cold weather states. The "new" formula distributes funds to states based on the ratio of low-income household expenditures on home energy within the state compared to all expenditures of low-income households on home energy within the U.S. To mitigate dramatic decreases in funding in states that benefitted from the old formula, the new formula is only applied to funding levels that exceed a certain amount. Tribes receive a share of state funding, while 0.5% of total funding is set aside for territories.
- Under LIHWAP, money is allocated across states and territories based on the percentage of the population earning less than 150% of the FPL and spending more than 30% of their income on housing. Analysis by the Study team found that the second criteria resulted in very little difference in the distribution of funds compared to the first (i.e., indicating that most households earning less than 150% of the FPL spend 30% or more of their income on housing).

The Study team first compared the percent distribution of federal funding across states under each of these programs (Figure 7-1). The blue columns show how funds are distributed under LIHWAP, which closely mirrors the distribution of the population below 150% of the FPL across states. The dark purple columns show the distribution of SNAP funds. For states where the columns are much higher (or lower) than that for LIHWAP, the SNAP participation rate (as a percentage of eligible households) is higher (or lower) relative to other states. The LIHEAP distribution, indicated by the green columns, is less reflective of household need for water and wastewater assistance due to the grandfathering in of the "old" funding formula that favors cold weather states.

As a next step, the Study team examined how the current LIHWAP distribution might change when accounting for household water and wastewater cost burden, rather than FPL income alone. To do this we applied the "new" LIHEAP distribution formula using household water costs instead of home energy costs. We obtained household water costs for low-income households (i.e., households earning less than 150% FPL) within each state from the U.S. Census Public Use Microdata (PUMs).[81] As shown in Figure 7-2, results of this analysis indicate that the funding distribution only changes for a handful of states when the "new" funding formula is applied to water costs. Specifically, only five states' distribution would change by more than 0.5% (WA, CA, NY, PA, and TX). These states would all receive more funding, indicating that low-income households pay more for water in these states relative to others.

As a final step, in Figure 7-3 we compared all of these state allocations to the data from our affordability needs model. The needs model is represented by the dotted black line. The needs model state distribution fits the data from other programs

[81] PUMs data reports household water costs for households that do not pay for water as part of their rent or are not self-supplied/have no charge for water. There are some inherent issues with this data, namely the Census question does not ask households for wastewater costs, although it is likely that many do. For this assessment, we assume this error is standard across states.

quite well indicating that water affordability needs and funding levels by state should have similar proportions to other existing federal programs. In fact, the median variance between the average of LIHEAP, SNAP, and LIHWAP funding distribution percentages by state and the estimated percentage distribution of need by state is 0.06% with an average difference of just 0.01%.

Figure 7-1. Funding Distribution to States Under LIHWAP, LIHEAP, and SNAP

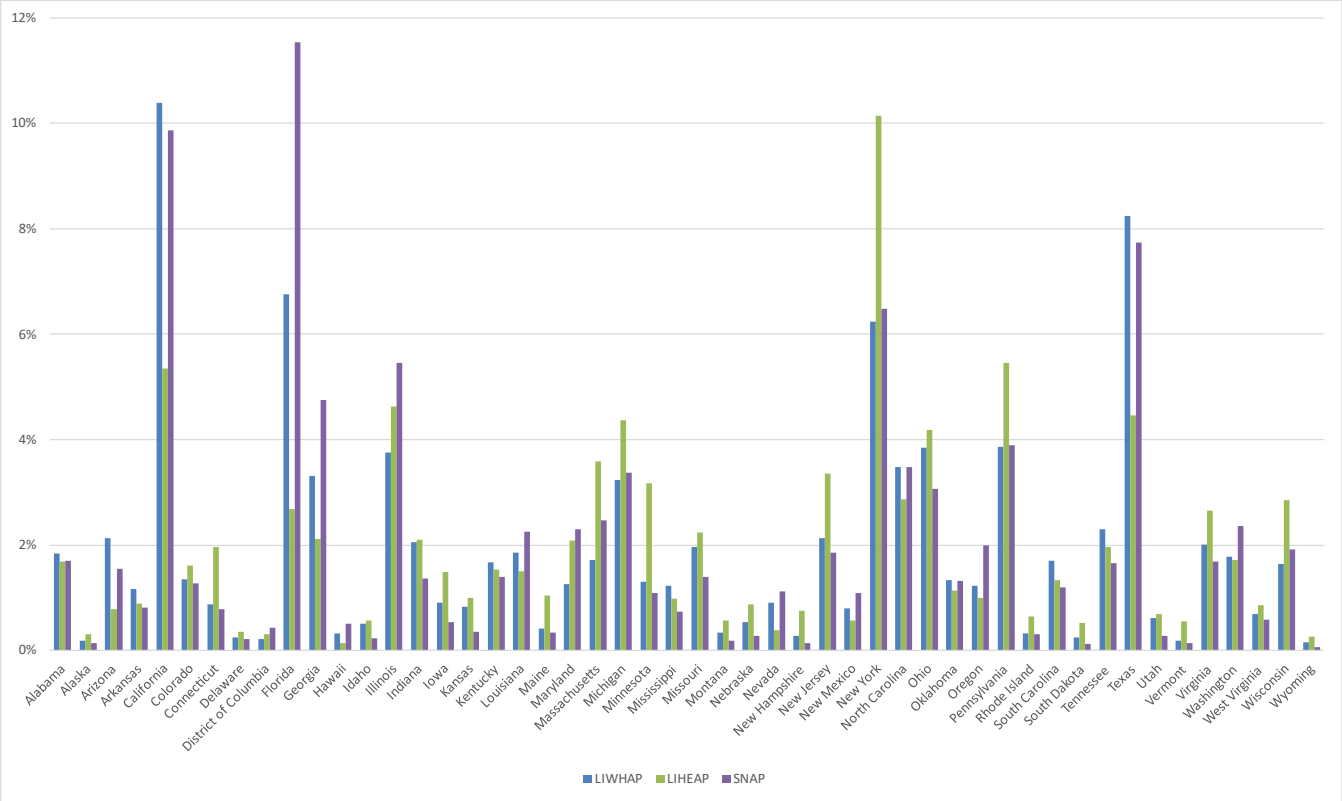


Figure 7-2. Funding Distribution to States Under LIHWAP vs. LIHEAP Distribution Model for Water

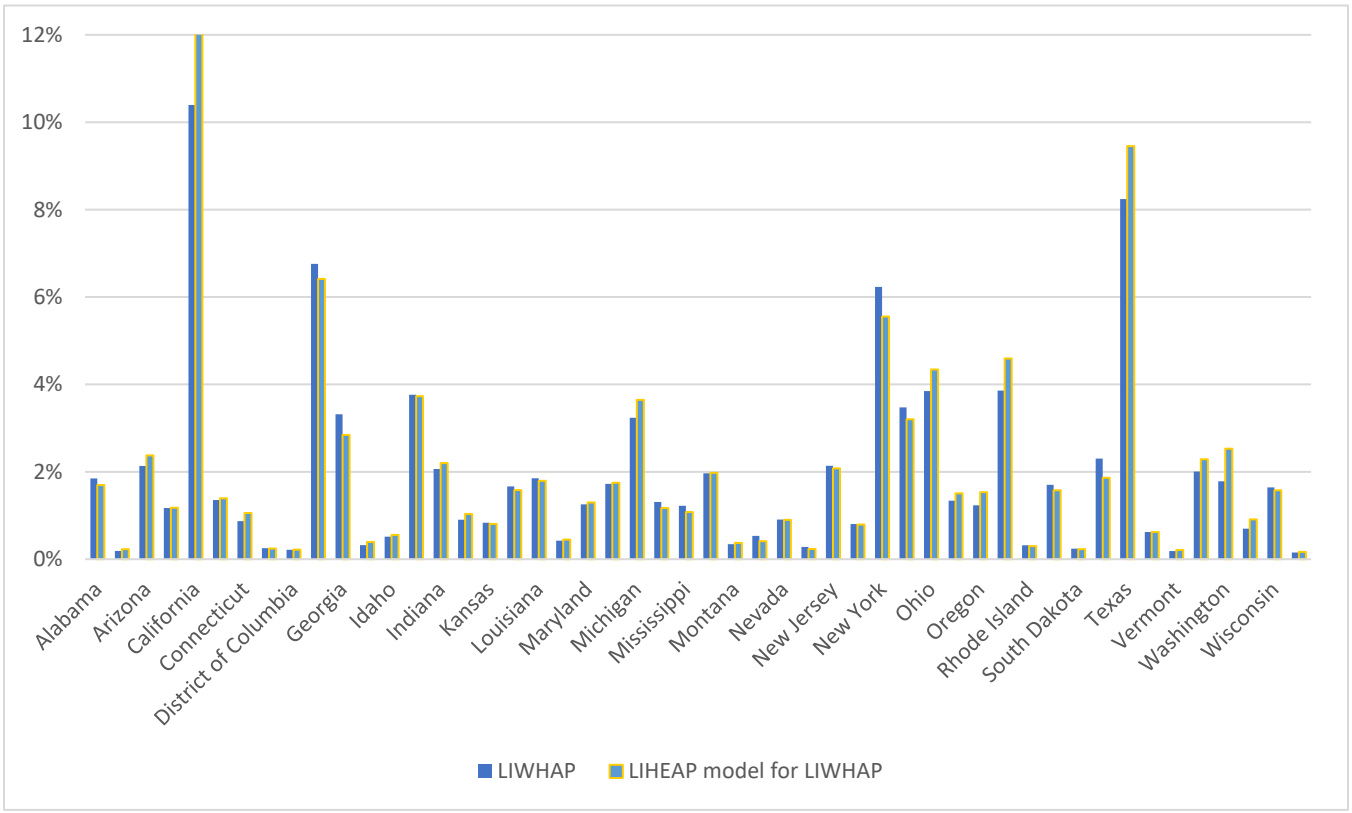
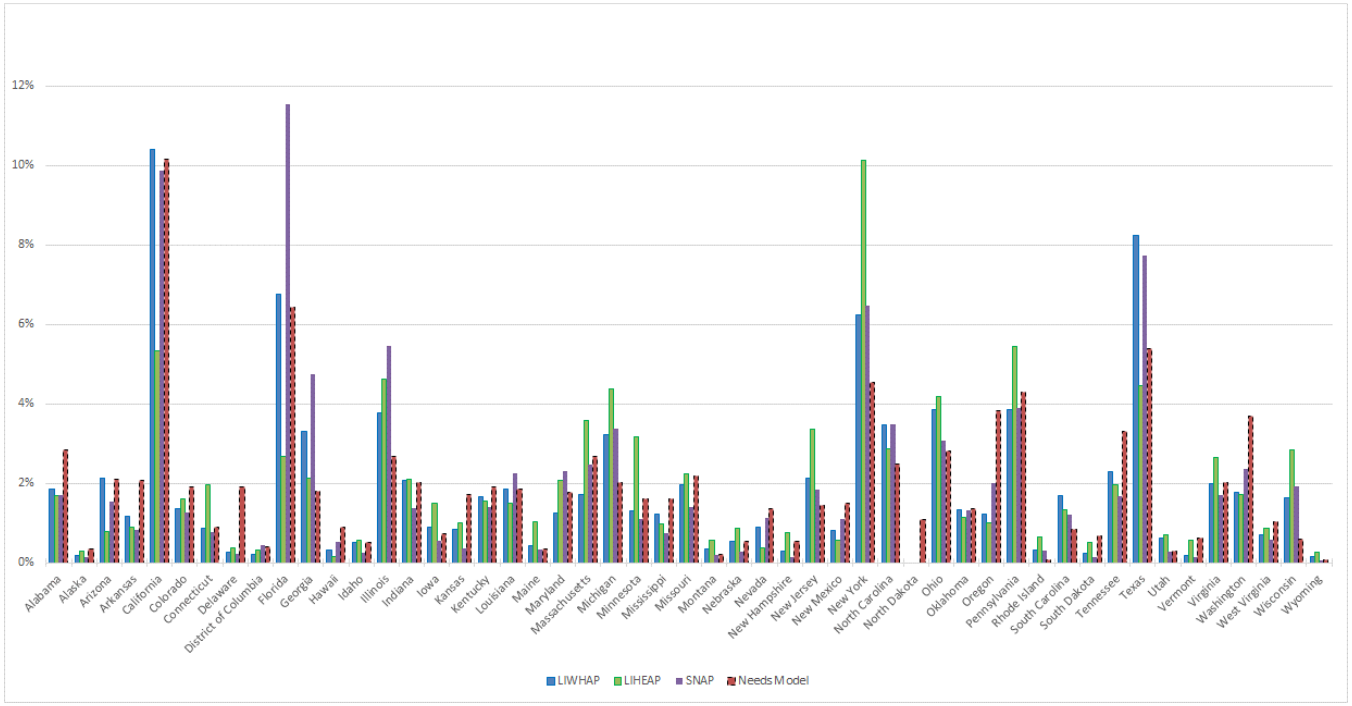


Figure 7-3. Funding Distribution to States Under Existing Programs v. Water Affordability Needs Model



As a guiding principle for evaluating options for distributing funds to states, territories, and tribes, the Study team focused on household need from the perspective of income and ongoing water/wastewater cost burden. We did not account for the percentage of households in each state that pay a water/wastewater bill through their rent, utility providers in each state, or total arrearages, consistent with our overall guiding framework for a LIWCAP program. Based on our assessment of funding patterns, the Study team concludes the following:

- Allocating funding based on the percentage of households earning less than 150% of the federal poverty level and paying more than 30% of their income for housing (i.e., the current LIHWAP model) serves as a reasonable proxy for relative need. However, as additional data on rates and household bills are collected through the program, a burden-based model will likely be more effective.
- If LIWCAP funding is limited and funding is prioritized to households with specific characteristics (e.g., households with children, or with elderly or disabled members), further analysis may be needed to determine how this changes impact funding by state.
- Further analysis will be needed to ensure that tribes and territories receive funding that is more responsive to needs than available through application of existing program models.
- If the SNAP H2O model is adopted and included as an entitlement program, the program could generally follow SNAP distribution patterns. However, if funding is limited, a different distribution pattern would likely be needed. This funding could still be channeled through the SNAP infrastructure.
- The distribution model used for LIHEAP model is not applicable to the water sector, largely due to the grandfathering in of the formula for heating assistance.

8. Outreach and Customer Application

8.1. Application Process

Establishing a new program presents an opportunity to build on existing program infrastructure and take advantage of new technologies to administer, perform outreach, and monitor said program. When households apply for benefits, technology can help minimize cognitive loads on families during already difficult times. Complicated application processes, difficult to navigate assistance resource websites, and lack of application transparency may make the program not worth the trouble for burdened households. Modeling intake forms on current SNAP, LIHWAP, or LIHEAP processes and procedures may minimize, or at least alleviate, these burdens. Program administrators can also continue looking for ways to simplify and expedite application processes to facilitate participation and allow for smooth transfers of funds.

Program administrators should have a dedicated customer-facing platform to host an online application and provide applicants with the opportunity to obtain paper applications prior to going to an office. This way, households can review the application and gather applicable documentation before they begin the process of applying. The dedicated online platform should have a mobile-accessible version so that those who can only reach it through their phones can easily access what is needed. In addition, information on eligibility criteria should be readily available. Some states have a SNAP eligibility calculator,[82] which functions as a simple questionnaire to assess potential benefits a household could receive.

Applicants for a low-income water assistance program should have the option to apply either online, mail-in, or in-person. For example, online applications allow individuals to apply for SNAP benefits at their convenience.[83] Applications should be available in all relevant languages in addition to English. Based upon specific program design, program administrators may require paperwork establishing identity, residency, income, and water burden.[84] Program offices should therefore ensure that intake staff are trained to help potential applicants with the forms and verifications needed and can answer questions and communicate unfamiliar terminologies.

After the application is submitted, states may choose to interview the potential recipient. This interview may take place over the phone or in-person. To the extent practicable, language translation and applicant support services should be available. Ideally, applicants have the flexibility to be interviewed by phone or other telecommunication software in addition to the in-person option if the state requires interviews.

For the LIHWAP program, each state had the flexibility to design their own application process. As a result, the application process varies from state to state, with some states effectively streamlining the process, and others creating extensive burdens on customers.

The following recent efforts, by way of example, suggest opportunities to streamline application processes for both program administrators and assistance recipients by using third-party vendors:

- **PromisePay (Promise)** is a technology platform that works with government agencies and utilities to help customers more flexibly pay off their debts and access aid programs. It allows individuals to connect to their

[82] "Am I Eligible for SNAP." *DTA Connect - Massachusetts Department of Transitional Assistance*, https://dtaconnect.eohhs.mass.gov/screening.

[83] "Snap Online: A Review of State Government Snap Websites." *Center on Budget and Policy Priorities*, 25 Oct. 2021, www.cbpp.org/research/food-assistance/snap-online-a-review-of-state-government-snap-websites.

[84] "Water burden" should be in the form of past bills and should not rely on the applying customer's memory or rough guess as to how much they owe the water utility.

utilities and assistance programs through an online platform which can be accessed through mobile applications, tablets, computers, or by calling customer service. This service is available in multiple languages (if using the "pro" version of the application). The most significant way it assists customers is through a payment plan. This payment flexibility, where large bills are divided into smaller installments, relieves some of the household burdens of paying utility bills all at once. But it has also been used to help distribute government relief funds to enrolled households. For example, in Virginia, the state government decided to partner with PromisePay to streamline the distribution of funds.

One of the benefits of using this type of new technology to help distribute funds is that it can have a broad reach. For example, Promise found that they have broader, more efficient outreach through text messaging, and these text messages are relatively easy to automate.

Promise Pay typically charges a fee as a small percentage of each transaction to the end users. The business model is slightly different when they work with local governments as the local government, not the end user, pays a subscription fee to the technology platform.

- **Civilla** is another private company that has worked with several government organizations to bring more human-centered and user-friendly features to public service provision. For example, they worked with the Michigan Department of Health and Human Services (MDHHS) to update their application for LIHEAP benefits. The previous application was over 40 pages long. The company was able to shorten it by about 80%. This shorter application yielded positive benefits for the community and the MDHHS. More applicants felt confident in their application, could apply in a shorter time, and 96% of the questions were completed upon submission. At the same time, MDHHS, saw application processing time cut in half, and 75% less staff time was spent correcting applicant errors.

8.2. Eligibility Criteria

Having states, territories, and tribes choose their own eligibility criteria allows them to tailor programs to their individual economic/social conditions. However, federal parameters can serve as a guide to keep these assistance programs relatively consistent among the states. The following section provides some criteria that can be used for program eligibility.

8.2.1. Income Eligibility

Income eligibility refers to the situation where a household qualifies for water assistance based on income. For creating the LIHWAP program, states[85] chose the following metrics for their income eligibility:

- 16 chose the Federal Poverty Guideline (FPG)
- 12 chose a hybrid of FPG and State Median Income (SMI)
- 22 chose SMI.

For context, currently, SNAP uses a threshold of at or below 130% of the FPL,[86] while LIHEAP's income eligibility is at or below 150% of the FPL or 60% of the SMI.[87] In a newer example, the Rural and Low-Income Water Assistance program authorized in the IIJA of 2021, though not funded, extends eligibility to households that qualify for an existing local water

[85] Includes states and the District of Columbia.

[86] "Snap Online: A Review of State Government Snap Websites." *Center on Budget and Policy Priorities*, 25 Oct. 2021, www.cbpp.org/research/food-assistance/snap-online-a-review-of-state-government-snap-websites.

[87] "Percent of Poverty Guidelines for LIHEAP Components." *The LIHEAP Clearinghouse*, https://liheapch.acf.hhs.gov/tables/POP.htm.

assistance program, that are located in service areas meeting their state's affordability criteria under the Safe Drinking Water Act, or which have incomes that do not exceed 150% of their state's poverty level, and 60% of their state's median income.

Utility-led customer assistance programs employ a range of these metrics, with some utilities electing to extend eligibility to customers beyond the 150% FPL threshold due to relatively high local costs of living and water burdens.

8.2.2. Categorical Eligibility

In considering a new water assistance program, categorical eligibility is a way to help reduce the administrative burden on customers during the application process. For LIHWAP, many grantees deem households already eligible for funding because they are enrolled in other means-tested programs like SNAP, LIHEAP, SSI, TANF, or MTVP. These households may avoid resubmitting additional eligibility documentation, significantly reducing applicant burden. Households may still need to "opt in" for consideration for other programs, such as LIHWAP, on their application to one of these programs.[88] It should be noted that even this action to "opt-in" has caused some complications for LIHWAP in some states. But, in essence, this categorical eligibility allows for the assistance programs to be braided together, making it easier for burdened households to apply, and reducing some of the programs' administrative costs. This study anticipates that a federal water assistance program can feature categorical eligibility of other programs such as SNAP, LIHEAP, etc. so that delivery of benefits to households can be streamlined.

8.3. Funding Prioritization Protocols

Based on national experience with other forms of poverty relief, it is very likely that appropriated federal funds to support a federal water bill assistance program will not be sufficient to address estimated household needs (as described in Section 3). As such, some mechanism is required to determine how limited federal funds are allocated across states, tribes, and territories and, ultimately, to eligible households and/or utilities that serve them. Basic options for allocating limited federal funds are described in Section 7. If states, tribes, and territories are the direct recipients of federal distributions, then they in turn will need to allocate federal funds to utilities, community-based organizations, and/or households. States may apply a needs-based (or other) approach to dispersing funds. Potential options are described below.

- ***Prioritizing according to need.*** A federal program distributing limited water bill assistance funds may develop and apply an allocation formula that is driven by estimated levels of comparative need presumably assessed and allocated on an entity-by-entity basis. A needs-based prioritization approach thus requires one or more clear metrics to assess comparative needs across the entities targeted by the federal program.

  As described in Section 4, LIHEAP is distributed across states based on an "old" and "new" allocation formula. The new formula provides funding to states based on the energy burden of low-income households. This is consistent with LIHEAP goals to provide assistance to low-income households that pay a high percentage of their income for home energy. Since LIHEAP funding is not enough to cover demand, some states prioritize funds to households with elderly or disabled members, households with children, and/or households with the highest energy burden. In some cases, the application window is opened earlier for these customers. Many states have developed outreach strategies to specifically target these populations. LIHEAP performance metrics track the distribution of funds to vulnerable populations.

[88] See Appendix H: SNAP document checklist for information on documentation required for SNAP participation.

In contrast, SNAP is an entitlement program, with federal funds distributed by USDA based on the number of participating households in each state, as well the expected increase in participating households (based on the previous year's increase). Thus, no prioritization is needed. However, if funding for a federal water assistance program was limited (e.g., provided through a block grant like LIHEAP), funds could still be distributed via the current SNAP infrastructure. However, the percentage of funding allocated to each state, territory, or tribe could follow a different pattern. For example, if the limited federal funding targeted specific subpopulations (e.g., households with children, or with elderly or disabled members), allocations could be distributed based on the characteristics of the SNAP-participating population in each state.

- ***First Come, First Served.*** The federal funding agency could expend funds in the order in which conforming state applications are made, until funds are fully allocated. Likewise, state agencies could redistribute their available funds on a first come, first served basis.

  This is a relatively simple yet potentially inequitable approach to allocating limited federal dollars. The advantage in securing federal funds will reside with those states and utilities with the capacity and desire to get in line quickly. For example, larger, more sophisticated utilities may have professional staff with the skills and time to complete and submit funding request applications in a timely manner, even though their utility's fiscal needs and customer base may have a lower level of *need* compared to many smaller and/or rural/tribal systems and customers in the state or territory.

- ***Allocating funds according to program components.*** For example, if an *Eliminating Shut-Offs* component is prioritized for funding, then the federal funding might be allocated across state/utility programs according to their prioritization of service disconnection relief.

  An advantage of this approach is that federal funds can get steered to aspects of the water affordability challenge(s) that are deemed the highest priority (e.g., ensuring households retain access to water and sanitation services). A disadvantage is that by partitioning the funding by designated priority, the administrative cost for all parties involved will be higher. Federal, state, community-based, and utility entities engaged will need to apply for, track, and dispense funds by designated priorities.

An overriding concern with any allocation approach is that limited federal funding will inevitably leave economic hardships unmet for many households in need.

Prioritizing according to need will help target limited federal funds to those with the greatest needs (insofar as the allocation formula reasonably reflects comparative need). However, a needs-based approach may require more administrative effort and cost for states as they will need to further document need (as opposed to referencing categorical eligibility) in applying for federal funds and will need to provide ex-post program performance documentation imposed on federal, state, and other funding agencies.

Prioritizing according to a first-come-first-served approach will reward those states, utilities, and/or other targeted recipient entities (e.g., community organizations) that have the will and ability to respond quickly to federal and state funding agency application requirements. However, it will leave economically disadvantaged households (and the utilities serving them) unsupported in those states (and/or utilities) that lack the ability or will to respond quickly. This outcome may be evident in how funds under the initial HHS LIHWAP have been allocated to states, and from states to utilities. Unfortunately, data from LIHWAP on this issue remains pending. However, anecdotal feedback from some states is that a redistribution of funds among regional CAAs is under consideration. This indicates that the funds provided by the state's allocation formula have not been distributed at the same rate within the CAAs.

Prioritizing and allocating federal water assistance funds across different program categories (e.g., a portion of federal funds set aside for water service shut off relief) will help steer funds to address high priority affordability challenges (e.g., ensuring continued household access to safe water and sanitation services). However, by dividing the funds by designated priorities, an additional level of administrative cost will be imposed on implementing entities (and may also increase administrative burden on households aiming to demonstrate their need and eligibility).

8.4. Program Outreach and Stakeholder Engagement

Regardless of which pathway is chosen or how it is structured, for a federal water assistance program to be successful, it is essential to launch an awareness campaign. Utilities that have developed local customer assistance programs have developed approaches and outreach materials targeted for their local communities. At the federal level, HHS has developed various resources for communities to leverage in administering the temporary LIHWAP. A permanent federal program can springboard from those efforts in various ways, and program marketing must be recognized as an essential expense to reach as many households as possible.

By studying how HHS has accomplished outreach for LIHWAP, several lessons are salient. First, a federal website with a straightforward web address is instrumental for marketing and information purposes - waterhelp.info is a relevant example. A social media toolkit should be readily available and downloadable by states, tribes, and territories as well as community organizations, and utilities. This kit should include images, flyers, door hanger templates, bill inserts, social media shareables, media outreach, and other documents that water utilities and CAAs can integrate with their customer communications and community outreach. A primary design document should also explain how water utilities and/or community organizations may customize the documents with their specific utility or community's information. For example, HHS has found that the best ways to reach households in need has been through bill inserts for families in arrearage and door hangers distributed in low-income areas. The relevant federal agency could also film beneficiary videos and commercials. These marketing efforts can then be used by individual utilities or community action agencies to further spread awareness.

Another critical component of a successful program is to help facilitate and foster the relationship between social service providers and local utilities. A key component of outreach would be partnerships between utilities and social service providers. Establishing effective channels of communication among these groups can improve efficiency and transparency. For example, utilities and social service providers could sign data-sharing agreements that enable information sharing related to which low-income households have accumulated untenable arrearages or are already enrolled in LIHEAP or SNAP. Social services providers (local program administrators) who use eligibility for LIHEAP or SNAP benefits can encourage those households to apply for water bill assistance.

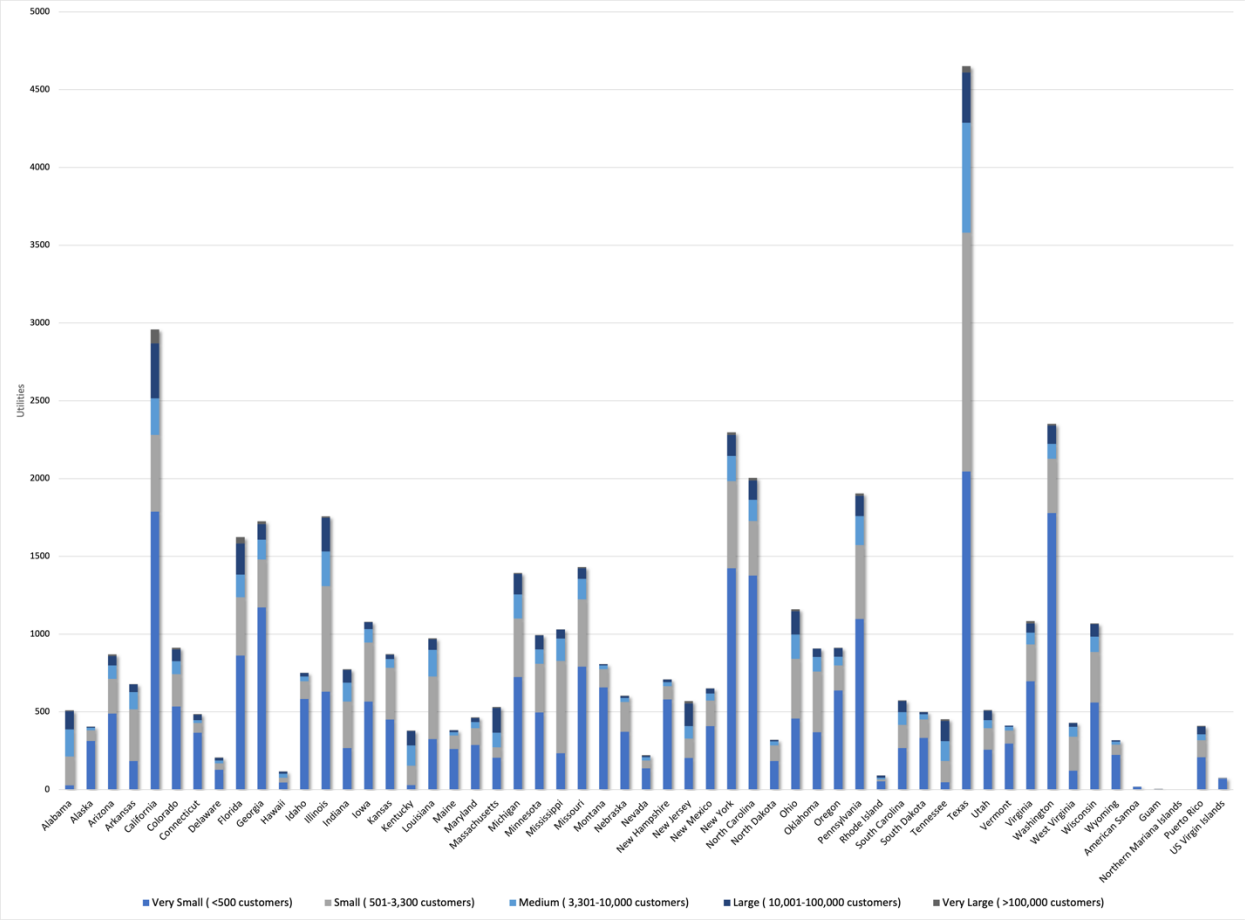
Utility customer service or call center staff at the utility will be the main interface with low-income customers. Proper training of these staff members on how to handle or direct the calls and, potentially, calculate the benefits, will be critical. This training challenge is exacerbated by the high turnover rates that many of these departments face. However, even with the turnover, this training component of marketing costs can be amortized over the first, perhaps, 1-5 years of the program. Overall, this role of the utility could be reduced through program approaches that leverage partnerships with community assistance agencies.

Another significant consideration in terms of outreach is to ensure mobile-friendly versions of program-related webpages. HHS discovered that their customers use the LIHWAP mobile website more than desktops. Therefore, applications need to be mobile-friendly so customers with limited desktop capabilities can enroll effortlessly in the program.

8.5. Benefit Distribution Mechanics

As suggested by the SNAP model, utility payment systems may be set up with technology that accepts EBT (electronic benefit transfer) or similar electronic forms of payment. The EBT technology is present in all communities because SNAP is an entitlement program that is used to purchase food at venues that are as large and well-resourced as major grocery corporations or as basic as a small independent grocer or farmers' market. Given the size and diversity of the water and wastewater utility sector, it is perhaps more closely aligned with the food vendor sector than the energy sector. EBT networks are maintained by each state and may have varying requirements for each vendor classification, but the supporting systems are often (relatively seamlessly) co-mingled with familiar existing credit card technology devices. EBT cards already have the ability to carry a range of federal benefits beyond SNAP such as Temporary Assistance for Needy Families (TANF) benefits, and these benefits can be restricted in different ways such that some may allow for cash to be taken out at ATM machines while others are restricted for direct payments for food items. This is a technology that exists and is expected to be flexible and viable for even the smallest utilities to allow for payment in person, over the phone, through the mail, or online as preferable for the customer.

Figure 8-1: The Number of Water Utilities in Each State by Size (i.e., Number of Customers Served)



Data Source: HHS - LIHWAP Water Vendor Landscape Analysis Data accessed: 11/02/22

8.6. Rural / Tribal Program Considerations

As indicated in the chart above, the majority of utilities in America range from very small, serving less than 500 customers, to medium-sized, serving between 3,301 to 10,000 customers.

Water service affordability challenges often are prominent in small community water systems, and especially in rural and tribal systems.

- Small water systems lack economies of scale resulting in drinking water and wastewater costs per household that are generally greater than in most larger utilities.[89]
- Small, rural, and tribal water systems typically serve relatively low-income communities, making their relatively high water-costs per household especially burdensome (although some more affluent communities also are served by very small water systems).[90]
- The small base of households and businesses served, along with limited administrative capacity of small and tribal utilities, means that there are limited if any opportunities for small utilities to develop ratepayer-funded customer assistance programs (CAP) on their own.

These factors–along with the prevalence of poverty in smaller, rural, and tribal communities–often result in relatively expensive water service costs for households. Accordingly, there is a rationale for having a targeted water affordability program that provides relatively simple access to fiscal support for programs of such water systems and their customers.

To some degree, it may be most cost-effective and administratively feasible to develop a program or funding distribution mechanism (e.g., a set-aside of a portion of federal funds) that ensures a suitable portion of federal monies find their way to small/rural/tribal systems and their customers. Indeed, it may be most administratively cost-effective to have allocated funds available to qualifying small water sector utilities themselves (rather than aiming to funnel funds to specific households they serve), enabling across-the-board rate relief for all served households. For example, such an approach may be pursued through an expanded and small-system-targeted federal grant program.

[89] Ding, Ke Jack, et al. "Where You Drink Water: An Assessment of the Tennessee, USA Public Water Supply." *Water*, vol. 14, no. 16, 2022, p. 2562., doi:10.3390/w14162562.

McDonald, Yolanda J., et al. "A Systematic Review of Geospatial Representation of United States Community Water Systems." *AWWA Water Science*, vol. 4, no. 1, 2022, doi:10.1002/aws2.1266.

[90] Berahzer, Stacey Isaac, et al. "Demonstrating Affordability Metrics in Relation to Rulemaking." *American Water Works Association*, AWWA, Mar. 2022, www.awwa.org/Portals/0/AWWA/ETS/Resources/37280%20Demonstrating%20Affordability%20Metrics_Berahzer%20et%20al.pdf?ver=2022-05-25-084716-990.

9. Utility Service Provider and Utility Sector Roles

Water and wastewater utilities will play an essential role in the implementation of any permanent federal low-income water assistance program to address water affordability if for no other reason than the sector delivers the life essential water services in question. While federally funded programs are structured to render assistance to economically disadvantaged households, in many respects it is the water services sector that will be the ultimate recipient of delivered funds.[91] In this context, the utility sector carries important responsibilities both in its service provider role and as a potential recipient of additional federal funds.[92]

Water sector utilities represent major economic investments in the communities they serve. Yet, implementation of federal low-income water assistance is challenged by gaps in relevant data on the nature and extent of water affordability problems and widely varying abilities of water sector utilities to modify customer service and billing practices. Permanent federal low-income assistance funding should be complemented by systematic collection, compilation, and reporting of critical data as well as efforts to ensure that income-eligible customers are able to learn about and access assistance benefits. Program implementation should include provision of tools and guidance to facilitate needed data collection, reporting and analysis. Federal program implementation may thereby be supported by water utility sector financial reporting and customer service policies and procedures that advance water affordability. Minimum water service provider reporting responsibilities may reasonably include the following items as this information should be readily gleaned from utility billing and/or work order systems:

- Reporting on acceptance of alternative forms of assistance payments (including the possibility of electronic benefit transfers) and on the amounts paid, numbers of accounts served, and related account status impacts;
- General reporting on bad debt expenses including number and amounts of accounts in arrears;
- Reporting on the incidence and term of service terminations (by account type, location, and time to service restoration, if available);
- Reporting on the placement of water service-related property liens (by account type, location, and incidence of foreclosure, if available);
- Reporting on miscellaneous fees and charges for customer account related services including late payment charges, service reconnection charges; and
- Reporting on water service debt forgiveness including number of accounts and amounts forgiven (by customer class and location, if available).

---

[91] This includes program pathways that directly provide low-income households with assistance in paying water services bills and even indirectly by providing assistance to "hard to reach" low-income households that are not account holders but whose ability to pay rents that include water service costs may be enhanced. https://www.waterrf.org/research/projects/customer-assistance-programs-multi-family-residential-and-other-hard-reach

[92] Though dwarfed by federal funding support of other major infrastructure sectors the water utility sector receives considerable subsidization through various federal programs, perhaps most notably the EPA's State Revolving Fund loan programs. Regarding the relative shares of federal funding support see, for example:

- "The Economic Benefits of Investing in Water Infrastructure,", United States Water Alliance, Value of Water Campaign, Figure 3: Federal Contribution to Total Infrastructure Spending, and
- Water Infrastructure Funding Parity Report, prepared for the National Association of Clean Water Agencies July 21, 2022 https://www.nacwa.org/docs/default-source/resources---public/water-sector-funding-parity-whitepaper-final-(7-21-22).pdf?sfvrsn=63a5c461_2

Additionally, the utility sector may reasonably be asked to actively participate with local and regional low-income assistance providers in community outreach and participant enrollment efforts. Whether or not the program features categorical eligibility and/or automatic enrollment (which are recommended), communication with low-income households will be essential for program success, particularly where water service bills can be substantially reduced through plumbing repairs or water efficiency measures. Water utility service providers may be expected to provide information on the availability of assistance, eligibility criteria and application requirements through established utility communication vehicles (e.g., bill stuffers, brochures, public service announcements, customer service center postings).

For those service providers that offer complimentary assistance programs, there may be significant opportunities to render more sustained impacts – and address latent participation rate and administrative expense concerns. Where federal program assistance may largely forestall immediate crises, utility and/or local community low-income assistance programs that, for example, provide plumbing repair assistance or arrearage forgiveness under payment plan terms can help avoid or break a common cycle of accumulating and compounding water service bill debt. The effectiveness of delivering new federal funding through grant supplements to water service providers with existing stand-alone utility customer assistance programs will depend on specific factors unique to that utility and community.

Service providers have crucial roles and responsibilities in ensuring streamlined delivery of water bill assistance and monitoring of federal program outcomes. For those utilities that recognize that federal funding levels are likely to be inadequate to address prevailing water affordability challenges within their communities, establishing partnerships to deliver federally funded assistance may provide a foundation for more comprehensive approaches tailored to individual communities' unique circumstance. These approaches may include:

- Water utility efficiency and leverage of available (subsidized) financing
- Progressive rate design
- Customer Assistance Programs (CAPs)
- Customer service protections

General Administrative Architecture

A secure website is necessary for effective program administration. Related to this website, the program should establish a geodatabase in which applications from the utilities would be safely and securely stored. Key information would include attributes such as:

7. Population served by the utility
8. Customer eligibility criteria
9. Minimum and maximum benefits allowed per customer
10. Estimated number of eligible customers
11. Geo-distribution and service area of the utilities
12. Type of services provided (drinking water, wastewater, and/or stormwater)
13. Date of customer application
14. Date assistance received by customer
15. Distributions of funds (amounts, timing, etc.)
    - 15.1 To administering agencies
    - 15.2 To implementing organizations
    - 15.3 To low-income benefit recipients
16. Program performance /evaluation data compilation, analysis, and reporting

Collecting this information will be an important first step in building a comprehensive and inclusive customer assistance program. These attributes would also be useful in program evaluation and could serve as a foundation for future expansion of assistance coverage.

Specific attributes are preferably defined in partnership with local low-income assistance providers and will inevitably be guided by local public policy considerations and state legal frameworks. More tactical considerations like utility billing system capabilities and local availability and adoption of technology applications may equally influence utility and local assistance offerings in the same way as these considerations impact federal program design.[93]

[93] A particularly vexing tactical issue arises when water and wastewater service billings are combined with other local government services, frustrating the ability to track water service-related payment delinquency and separately address water affordability (to say nothing of the potential for co-mingling of funds).

While water service utilities may do more than facilitate delivery of federally funded water service bill assistance to low-income households (that result in improved revenue collections), it is also important to recognize that federal funding for a low-income water customer assistance program does not imply an obligation to restructure water service pricing, restructure customer service practices, or write-down outstanding debt. These measures may warrant consideration by individual utilities, yet the particulars require careful navigation of local circumstances and freedom to act.

10. Program Monitoring & Reporting

The performance and success of a federal low-income assistance program should be tracked over time to ensure that it is meeting its objective of helping to address the affordability and water access challenges faced by low-income households. A successful program should be efficient and effective and should:

- Deliver appropriated assistance funds to utilities and/or eligible households.
- Provide timely distribution of funds to recipients.
- Distribute funds equitably.
- Encourage leveraging of other affordability measures (e.g., utility CAPs) along with federal funding to help address low-income affordability.
- Help minimize the use of adverse utility collection measures (e.g., collection fees charged to low-income households, water shutoffs and lien placements).
- Not be overly burdensome for recipients to access.
- Minimize the amount of federal funds used for program administration and maximize the amount of federal funds that benefit low-income households.

The ongoing performance of the program should be tracked considering these objectives to help ensure that the program objectives are being met. Examples of performance reporting metrics that could be tracked to monitor the performance of the program are provided in Table 10-1.

Table 10-1. Example Federal Water Assistance Program Performance Metrics

No.	Objective	Performance Measures
1.	Provide for delivery of appropriated assistance funds to utilities and/or eligible households	a. Number and percentage of eligible households receiving assistance b. Number and percentage of prior household assistance recipients applying multiple times c. Decreases of outstanding water and wastewater bill balances of eligible households. d. Estimated number and percentage of applicants not receiving assistance (by reason)
2.	Ensure timely delivery of assistance funds following determination of eligibility	a. Time (in days) to distribute federal funds to state/local agencies b. Average number of days from participant application to receipt of assistance funds c. Average times (in days) from distribution of federal funds to receipt of funds by recipient by process step d. Average number of days for appeals to be adjudicated
3.	Ensure equitable distribution of available assistance (vertical and horizontal equity)	a. Number and percentage of recipient households below various % of FPL thresholds (e.g., 100%, 150%, 200%) and average amounts received by income threshold b. Number and percent of recipients by service provider size c. Racial/ethnic variances in number and percent of recipients d. Number and percent of eligible recipients by state e. Existence of an appeals process regarding eligibility

No.	Objective	Performance Measures
4.	Leverage of federal funding	a. Amount and percent of LIWCAP funds to service providers that maintain other low-income assistance (e.g., CAPs, progressive rate forms, directed water use efficiency assistance) i. LIWCAP as a % of total assistance funding ii. Number and percent of LIWCAP recipient agencies with aligning assistance programs b. Number and percent of LIWCAP funds distributed to economically disadvantaged rural and tribal communities
5.	Minimization of adverse collection measures	a) Trend in the number of bill delinquencies by agencies receiving LIWCAP funding b) Trend/reduction in number of water service interruptions (and/or lien placements) by agencies receiving LIWCAP funding c) Trend in the amount and percentage of (late fees, reconnection fees), collection fees charged to low-income households
6.	Ensure that administrative burden of recipients is not overly burdensome	a) Availability of information about assistance b) Pages of forms required to apply for assistance c) Number of documents required to demonstrate eligibility d) Time required to gather documentation and complete eligibility forms e) Number and percentage of applying households by method of application (e.g., in-person, phone, online) f) Time between initial application and receipt of assistance I. (Average) number of visits to application office II. Average number of hours to successfully complete the application process g) Time required for recipient to complete the eligibility appeals process
7.	Limit federal budget required for program administration and reporting	a) Amount and percentage of program administrative costs relative to total program funding i. Estimated savings via inter-agency collaboration ii. Administrative cost per recipient
8.	Establish simple, effective program controls that balance eligibility and participation objectives	a) Estimated amount and percentage of program funds received by eligible utilities and/or households (by income strata) b) Estimated average amount of time (and cost) to administer program appeals (by reason) c) Number and percentage of fraudulent or mishandled applications
9.	Require program monitoring and performance reporting to assess program efficiency and effectiveness	a) Percentage of LIWCAP program performance metrics reported by LIWCAP recipient agencies

Other assistance programs, such as SNAP and LIHEAP, are required to prepare and submit to Congress periodic reports documenting the performance of these programs using a variety of performance metrics. For example, as described in Section 4, USDA publishes yearly trends in SNAP participation rates, number of participating households (by household characteristics) and people receiving benefits, average benefit amounts, and program cost data through its website and annual state activity reports. Similarly, HHS is required to publish a LIHEAP Report to Congress that provides information on

the overall program, including the number and income levels of households receiving LIHEAP assistance, and participation rates of eligible populations. As described in Section 4, states are also required to report on various additional metrics, including the benefit targeting index, the burden reduction target index, the restoration of home energy service metric, and the prevention of loss home energy service metric. Similar metrics and reporting should characterize the LIWCAP program.

It is envisioned that the new federal water assistance program will require quarterly and annual reports similar to other federal assistance programs. If the selected pathway alternative is a new SNAP H2O program, then this program can leverage existing reporting infrastructure, such as the website to host quarterly and annual reports. SNAP H2O, like LIHWAP, is in an advantageous position because it can immediately benefit from the various new technologies and launch with a more robust data-integrated website. Further, the new federal water assistance program could leverage the existing, interactive web-based program data dashboards that have been developed for SNAP and the current LIHWAP program (see Appendix G for an example).

Like the current LIHWAP website, the new federal water assistance program reporting database could host information regarding how each state has set up its program. On the LIHWAP website, states and tribes can submit requirements or benefit changes and this webpage is planned to be updated quarterly based on any new information provided. By doing this, anyone accessing the data platform can compare how the program has been set up in each state, tribe, or territory.

Additional reporting requirements from states and utilities should consider including the following:

- total household participation as a percentage of the estimated eligible population;
- total dollar amount of benefits issued;
- percentage change from the previous quarterly or national report;
- average amount of assistance given to households by state;
- total number households that had water restored because of the program; and
- other program performance program metrics as detailed in Table 10-1.

The total number of shutoffs prevented or reduced due to program funding may be a more difficult metric to report. Instead, utilities could submit reports on the total number of shutoffs per quarter in order to track the overall reductions on a quarterly and annual basis. If the assistance program pathway alternative selected contemplates utility or CAA administration, it is recommended that states also be required to maintain the total number of water service providers and/or CAAs enrolled in the program.

11. Conclusions and Recommendations

The Study team arrived at both general and administrative pathway-specific conclusions from its analysis of national data on water burdens facing low-income households, review of existing federal assistance programs, assessment of LIWCAP administrative alternatives, and evaluation of LIWCAP program design options. Based on our review, we have developed the following recommendations that are applicable regardless of which administrative pathway is selected.

11.1. General Conclusions and Analysis Results

We offer the following general conclusions and primary results from our evaluations and data analyses:

- Water service affordability is an emerging and increasingly well-recognized challenge facing many lower- and fixed-income households across the United States. For numerous reasons, water-related service costs for potable supply, wastewater management, and stormwater control have been rising faster than incomes. This disparity between cost increases and income growth has exacerbated the household water affordability issue.
- Water services are essential for ensuring household-level and community-wide public health and well-being. It is imperative that households continue to receive (or acquire access to) adequate provision of water services.
- The water sector faces an affordability dichotomy whereby it must increase funding to enable needed investment and reinvestment in critical infrastructure systems while at the same time not placing undue burdens on economically disadvantaged households, many of which are also in environmental justice communities. Though water services remain largely underpriced relative to their value and true cost, water affordability challenges have become increasingly acute for low-income households.
- The Study team estimated national water affordability need to be in the range of $2.4 billion to $7.9 billion annually, reflected in 2022 dollars. We estimate that the administrative cost for a permanent federal low-income water assistance program could be in the range of 10%, resulting in a total funding need of between $2.6 billion and $8.7 billion. Using a 4.5% affordability threshold, and a 10% administrative cost, a mid-range of the need is an estimated $5 billion per year.
- Numerous water service providers, particularly larger urban and suburban systems, have responded to the affordability challenge by implementing a variety of measures intended to address low-income water affordability in their service areas. These measures range from progressive rate designs structured to affordably price water usage levels associated with basic human health and sanitary needs, to shifting some utility costs away from usage-based rates to a charge based on property value, to utility-funded Customer Assistance Programs.
- At the same time, the majority of utilities across the nation are small entities and have limited administrative capacity to implement customer assistance programs or a national LIWCAP program at the local level. Nearly 60% of local governments that operate water/wastewater utilities employ fewer than five full-time equivalent (FTE) staff. Nearly half (49.0%) employ fewer than five FTE when finance and welfare staff positions are included in this count. Many tribal and territorial water systems have similarly constrained organizational capacity. Utilities with such limited administrative capacity will struggle to perform the various administrative tasks involved in delivering and reporting on delivery of customer assistance program benefits.
- Prioritizing funding distribution according to customer need will help target limited federal funds to those with the greatest needs. However, a needs-based approach may require more administrative effort and cost for utilities, local partners, and states as they will need to further document need (as opposed to referencing categorical eligibility) in applying for federally supplied funds. At the same time, more finely tuned targeting to households

raises the specter of increased administrative burdens for qualified customers, which will likely lead to lower participation rates.

11.2. Federal Assistance Program Review

Several low-income assistance programs were reviewed with the goal of identifying how a federal water assistance program could leverage existing processes and infrastructure.

- The SNAP program is a federal entitlement program that is administered in a relatively efficient manner by the USDA. The program's benefit formula, which is based on income levels, results in vertical equity across the eligible low-income population. Participation rates for SNAP are high (approximately 82% in 2021) compared to many other low-income assistance programs. SNAP distributes funds to recipients in an effective way via EBT cards.
- The LIHEAP program administered by HHS through block grants to states, tribes, territories, and Washington D.C. assists low-income households with home energy bills, energy crises, weatherization, and energy-related home repairs. Households typically receive LIHEAP benefits as a discount or payment on their energy bills, and contracting states or local administrating agencies make payments directly to energy utilities that provide LIHEAP assistance to their customers. Household eligibility is based on income and homeowners as well as renters are eligible for LIHEAP assistance. LIHEAP participation by eligible households is relatively low (15.6% in 2021) and likely reflective of the limited funding available per recipient under this program.
- LIHWAP, patterned like LIHEAP, is a temporary federal relief program administered by HHS that was created and funded during the COVID-19 pandemic to help low-income households pay their drinking water and wastewater bills.[94] LIHWAP funds are provided to water utilities and are used to reduce bills and arrearages for low-income households. Approximately 49% of the states, tribes, and territories chose LIHEAP enrollment as the basis for granting eligibility to LIHWAP. In addition, more than 50% of states chose enrollment in SNAP and Temporary Assistance for Needy Families (TANF) for granting eligibility. Federal funding for administration of the LIHWAP program is capped at 15%. Households living in rental housing or who are otherwise not direct customers of a water utility are not eligible to receive benefits under LIHWAP.
- The existing LIHWAP model of funding eligibility (i.e., households earning less than 150% of the FPL and paying more than 30% of their income on housing) serves as a reasonable proxy for relative customer need. However, LIHWAP funding is limited and as such, prioritization to households with specific characteristics (households with children, the elderly or disabled) is required.
- If the SNAP H2O funding eligibility model is used, the program could generally follow the SNAP distribution patterns as water assistance needs generally follow SNAP distribution patterns. However, if water assistance funding is limited, a different distribution pattern would likely be needed.
- The funding distribution model for LIHEAP is not applicable to the water sector, largely due to the grandfathering in of the formula for heating assistance. If an improved LIHWAP model were adopted, a different distribution pattern should be implemented.

[94] Congress has not provided any new funding for the current LIHWAP program since March 2021 and it is unclear if there will be any additional funding forthcoming unless a new, permanent program is authorized.

11.3. Administrative Pathway Alternatives

Five different pathways for a new, permanent water assistance program were conceived and evaluated based on the Study team's research on federal assistance program experience and its review and assessment of water sector characteristics.

a. LIHWAP 2.0 – An extension and refinement of the existing LIWHAP program, which is modeled after the long-standing LIHEAP.

b. SNAP H2O – An expansion of SNAP to allow participants to pay for water and wastewater bills.

c. LIWCAP via Utilities – A new program funded through USEPA and administered directly by water and wastewater utilities.

d. LIWCAP via Community Organizations – A new program funded through the USEPA and administered by community organizations.

e. LIWCAP Hybrid – A new program funded by the USEPA and administered by either utilities or community organizations according to local conditions.

Provided in the Table below is a summary of the relative advantages and limitations of the individual administrative pathway options.

Table 11-1. Administrative Pathway Alternative Evaluation Summary

Administrative Pathway Alternative Evaluation Summary	
Advantages	**Limitations**
LIWHAP 2.0	
• Leverages lessons learned through rollout of the emergency LIHWAP program. • Channels federal funds to states in proportion to residential water/wastewater costs. • Could use national minimum eligibility standards and administrative rules to ensure equity across states, tribes, territories, and communities. • Ensures that federal funds flow to specific water and wastewater utility customer accounts.	• Relatively low participation rates. • The administrative burden on participants varies from state to state, as each state developed its own application process. This burden could be lessened if certain enrollment parameters were standardized in a permanent program. • At 15%, LIHWAP has relatively high administrative costs. However, this percentage could be reduced now that the expense of creating the program is complete. • Complexity may limit participation by utilities, many of which have limited organizational capacity. • Unlikely to benefit hard-to-reach households who are not direct utility customers. • HHS has limited experience with, and capacity working with, water and wastewater utilities.

	Limited flexibility to adapt the program for local needs.
SNAP H20	
• Leverages familiarity with a well-known, longstanding program with a high participation rate. • Provides benefits for hard-to-reach households who do not directly pay a utility bill. • Low administrative costs to utilities, state agencies, and the USDA by leveraging existing processes and infrastructure. • Some flexibility in determining benefit levels but could use national minimum eligibility standards and administrative rules to ensure equity across states, tribes, territories, and communities. • Leverages use of EBT cards for efficient use of funds. • Would not increase the administrative burden on recipients. • USDA has significant experience working with rural communities.	• SNAP eligibility criteria are somewhat limited. • The limited role of utilities would make it difficult to track some utility-related program performance metrics. • Not all benefits would reach water or wastewater utilities directly, unless technology is implemented to restrict a portion of the funds on the EBT card to utilities. • National eligibility standards and administrative rules would limit flexibility to adapt program design to local conditions. • Several territories and tribal areas do not participate in SNAP, potentially limiting program participation. • USDA has no experience working with water utilities.
LIWCAP via Utilities	
• Flexibility to design and implement a program that suits local needs and conditions across a diverse country. • Could leverage existing utility-level assistance programs to avoid redundancies. • Potentially lower administrative burden and costs for utilities. • A program-specific allocation formula could channel funds to communities in proportion to local costs and economic conditions.	• Potential for relatively very high administrative costs. • Potential for very high administrative burdens. • Requires utility administrative capacity where smaller utilities may not have such capacity. • Differences in program design, eligibility and implementation at the utility level could result in unequal access to program benefits. • USEPA has little experience with administering income-qualified household assistance programs and USEPA capacity may be limited.

• Ensures that benefits are targeted at water and wastewater costs specifically. • USEPA has deep experience with and knowledge of water and wastewater utilities.	
LIWCAP via Community Organizations	
• Flexibility to design and implement a program that suits local needs and conditions across a diverse country. • Potential for very low administrative costs to utilities. • Could channel funds to communities in proportion to local costs and economic conditions. • Could ensure that benefits are targeted at water and wastewater costs specifically. • USEPA has deep experience with and knowledge of water and wastewater utilities.	• Potential for relatively very high administrative costs. • Requires community organization existence and capacity where such organizations may not exist in some locations. • Differences in program design, eligibility and implementation at the utility level could result in unequal access to program benefits. • Likely requires extensive new administration cooperation between utilities and community organizations. • USEPA has little experience with administering income-qualified household assistance programs and USEPA capacity may be limited.
LIWCAP Hybrid	
• Flexibility to design and implement a program that suits local needs and conditions across a diverse country. • Leverages existing utility and community organizations experience and knowledge administering assistance programs. • Could potentially have very low administrative costs to utilities that opt out of administering their own programs. • Has the potential to reach customers served by smaller utility systems and in rural areas where utilities lack the administrative capacity to administer assistance. • A program-specific allocation formula could channel funds to communities in proportion to local costs and economic conditions.	• Potentially complicated administrative infrastructure and management processes. • Potential for relatively very high administrative costs. • Requires community organization existence and capacity where such organizations may not exist in some locations. • Differences in program design, eligibility and implementation at the utility level could result in unequal access to program benefits. • Requires extensive new administration cooperation between utilities and community organizations.

• Could ensure that benefits are targeted at water and wastewater costs specifically.	• USEPA has little experience with administering income-qualified household assistance programs and USEPA capacity may be limited.

None of the five different pathways for a new, permanent water assistance program that were identified and evaluated will perform best across all evaluation criteria. The alternative pathways carry consequential tradeoffs, and so the preferred pathway will depend on the relative weighting of various program goals and objectives The tradeoffs involved in a federally funded low-income water assistance program suggest that, ultimately, a synthesis of the five pathways advanced here could be the best path forward.

11.4. Administrative Pathway Independent Recommendations:

Regardless of the particular administrative structure employed, the new federal program could and should work toward implementation of many of the advances outlined in the pathway alternative discussions offered in this Study – whether working toward ensuring that EBT cards may be used to pay for water and wastewater bills, to use of technology to ease administrative burdens of program participants and enhance program monitoring and reporting, to providing for deep and substantive engagement with community organizations and stakeholders. The Study team offers the following recommendations that should be features of any federal water bill assistance program design regardless of the selected pathway and funding distribution model.

- The program should take advantage of new technologies to administer, perform outreach, and monitor the program cost effectively. This includes simplifying and expediting the application process, providing both online and mail-in application options, and leveraging third party services that help address the administrative burden on recipients.
- For a low-income water assistance program to be successful, it is essential to launch an awareness campaign. Program marketing must be recognized as an essential expense. This will ensure more households are aware of the new water assistance program and can apply for assistance as needed. A federal website is instrumental for marketing and information purposes. This website should have a social media toolkit. This kit should include several images, flyers, door hanger templates, bill inserts, and other documents that water utilities can use to help with their social media outreach.
- Another critical component of a successful program is to help facilitate and foster the relationship between social service providers and local utilities. One basis for collaboration is through data-sharing agreements that exchange information related to which low-income households have accumulated untenable arrearages or are already enrolled in LIHEAP, SNAP or other low-income assistance programs.
- Another significant consideration in terms of outreach is to ensure mobile-friendly versions of program related webpages. HHS discovered that their customers use the LIHWAP mobile website more than desktops. Therefore, applications need to be mobile-friendly so customers with limited desktop capabilities can enroll effortlessly in the program.
- Utility payment systems should be set up with technology that accepts EBT (electronic benefit transfer) or similar electronic forms of payment. The EBT technology is present in all communities because SNAP is an assistance program that is used to purchase food at venues that are as large and well-resourced as major grocery

corporations or as basic as a small independent grocer or farmers' market. This is a technology that exists and is expected to be flexible and viable for even the smallest utilities to allow for payment in person, over the phone, through the mail, or online as preferable for the customer.

- Water, wastewater and stormwater utilities will play an essential role in the implementation of any federal funded program to address water affordability under any of the program options that were considered. Utilities may reasonably be asked to actively participate with local and regional low-income assistance providers in community outreach and participant enrollment efforts. In addition, a new federal water assistance program should be complemented by enhanced reporting efforts by water service utilities. These reporting responsibilities may reasonably include the following:
    - Reporting on acceptance of alternative forms of assistance payments (e.g., electronic benefit transfers) and on the amounts paid, numbers of accounts served, and related account status impacts.
    - General reporting on bad debt expenses including number and amounts of accounts in arrears.
    - Reporting on the incidence and term of service terminations (by account type, location, and time to service restoration, if available).
    - Reporting on the placement of water service-related property liens (by account type, location, and incidence of foreclosure, if available).
    - Reporting on miscellaneous fees and charges for customer account related services including late payment charges, service reconnection charges; and
    - Reporting on water service debt forgiveness including number of accounts and amounts forgiven (by customer class and location, if available).

The performance and success of a federal water bill assistance program should be tracked over time to ensure that it is meeting its objective of helping to address the affordability and water access challenges faced by low-income households. A successful program should be efficient and effective and should:

- Deliver appropriated assistance funds to utilities and/or eligible households;
- Provide timely distribution of funds to recipients;
- Distribute funds equitably;
- Encourage leveraging of other affordability measures (e.g., utility CAPs) along with federal funding to help address low-income affordability;
- Help minimize the use of adverse utility collection measures (e.g., collection fees charged to low-income households, water shutoffs and lien placements);
- Not be overly burdensome for recipients to access; and
- Minimize the amount of federal funds used for program administration and maximize the amount of federal funds that are distributed to low-income households.

The ongoing performance of the program should be tracked in line with these objectives to help ensure that the program objectives are being met.

Efficiencies realized through use of technology, interagency collaboration, and well-designed administrative procedures across federal, state, and local actors are important to maximize availability of funds for benefit delivery. Constructive and sustained outreach and engagement with under-resourced utilities and communities may help build participation rates and ensure that allocated benefit funding is delivered to households in need.

APPENDIX A:

LIWCAP Assessment Study Consultant Experience and Qualifications

Stacey Isaac Berahzer

CEO – IB Environmental

Stacey Isaac Berahzer, founder of IB Environmental, has spent more than 16 years in the environmental field, most of it immersed in water resource management as a senior project director with the Environmental Finance Center at the University of North Carolina in Chapel Hill.

As a passionate proponent of clean, affordable water who is deeply connected to work in the water industry, she's uniquely qualified to help funders, nonprofits, utility companies, and others overcome the constant challenges related to funding and managing these projects.

Stacey has worked on water policy at the national level with groups such as the American Water Works Association, on watershed management with the Chattooga Conservancy, and with a group of Georgia-based funding agencies who specialize in water management projects, among many others.

Stacey's passion for environmental work led her to earn a degree in Environmental Science from North Carolina Central University and a Master of Public Administration from The University of North Carolina at Chapel Hill. She is past chair of the board of directors for the Institute for Georgia Environmental Leadership and teaches in the Georgia Association of Water Professionals Leadership Academy.

Her areas of expertise include:

- Pricing and affordability of water services
- Stormwater and watershed management
- Background in Caribbean water issues
- Speaks Spanish

As a consultant, she is passionate about helping the people who work to make water clean, safe, and affordable by connecting them with the funding and support they need.

Education

MPA, Public Administration, University of North Carolina at Chapel Hill

BS, Environmental Science, North Carolina Central University

Janet Clements

Principal and Lead Economist – One Water Econ

Ms. Clements has more than 20 years of experience in water and natural resources economics and planning. She conducts benefit-cost, triple-bottom line (TBL), and economic impact analyses to evaluate the financial, social, and environmental implications of water-related policies and programs. Her areas of expertise include integrated water resource management, stormwater management, environmental markets, and affordability of water and wastewater services. Ms. Clements has extensive experience assessing affordability challenges at local and national levels and identifying potential solutions. She also works on climate vulnerability and adaptation planning in relation to water resources. Ms. Clements is an active member of the water community; she was recently appointed to U.S. EPA's Environmental Finance Advisory Board and has conducted several high-profile studies for national water sector organizations. Before attending graduate school, Ms. Clements was a

water and natural resources planner in a rural California county where she worked with government agencies, Native American tribes, and nonprofit organizations on watershed planning efforts.

Education

MS, Colorado State University, Agricultural and Resource Economics

BS with honors, The Ohio State University, Natural Resources

John Mastracchio, ASA, CFA

Executive Vice President – Raftelis

John is an Executive Vice President serving in a national role and leading the Northeastern practice of Raftelis. He has more than 27 years of experience as a financial and management consultant serving the utility, governmental, and private sectors. His extensive experience includes over 250 financial projects covering technical areas including valuation, financial planning and rate setting, capital financing, asset management, regionalization, litigation support, and transactional consulting, and spans several utility sectors including water, wastewater, electric, solid waste, and stormwater, along with consulting for federal and municipal general government, transportation, and ports.

John has earned the Chartered Financial Analyst (CFA) designation, is a Series 50 Municipal Advisor Representative, and is also a Licensed Professional Engineer. He is the Immediate Past Chair of the Finance, Accounting and Management Controls committee and a member of the Rates and Charges committee of the American Water Works Association (AWWA).

John has authored manuals of practice and utility industry papers on valuation, infrastructure investment, capital financing, financial management practices, and rate-setting, including AWWA's Manual of Practice M1, Principles of Water Rates, Fees, and Charges; Water Rates, Fees, and the Legal Environment; Manual of Practice M29, Water Capital Financing; and Financial Management for Water Utilities: Principles of Finance, Accounting, and Management Controls, along with the textbook The Effective Water Professional: Leadership, Communication, Management, Finance, and Governance, published by the Water Environment Federation (WEF).

Education

MBA, Finance, Cornell University

MS, Civil & Environmental Engineering, Clarkson University

BA, State University of New York, College at Geneseo

Zachary Green

Manager – Raftelis

Zach has an interdisciplinary background in water sector economics, environmental science, and public financial management, in both public and private settings. He is a frequent speaker at local, state, and national conferences, with a current focus on utility financial and strategic planning, cost-of-service and rate studies, cost-benefit analyses, shared service assessments, and affordability research. Zach's typical projects aim to achieve deep collective understanding through facilitated multi-stakeholder strategic decision-making processes supported by strong analytical foundations. He is a member of AWWA and WEF, a frequent conference session speaker and facilitator, and involved with several national and state association committees focused on water sector affordability, asset management, and finance.

Education

MPA, Maxwell School of Citizenship & Public Affairs at Syracuse University

Master of Professional Studies, SUNY College of Environmental Science and Forestry

BS, Applied Economics & Management, Cornell University

Robert Raucher

Principal Consultant for Water Economics and Planning – Raucher LLC

Robert Raucher (Raucher LLC) is a water sector economist with more than 40 years of experience in benefit-cost and triple bottom line analysis, affordability assessment and policy, risk management, and strategic planning. His expertise guides water utility decision-making and public policy development for public water supply, water reuse, water quality, stormwater, and wastewater management issues. Bob provides expert support on sustainability, affordability, climate change impacts and adaptive management, planning under large uncertainty, integrated water resource management, and related water sector planning. Dr. Raucher is an active member of the professional water supply, reuse, and wastewater community, serving on numerous expert panels and committees.

Eric Rothstein, CPA, MA

Principal – Galardi Rothstein Group, LLC

Eric has more than 30 years of experience in water, wastewater, and stormwater utility finance, tariff setting, and affordability program development. Notable projects include a national tariff study for the Government of Egypt (through a USAID contract) and utility consulting related to the two largest municipal bankruptcies in U.S. history (Jefferson County, Alabama and Detroit, Michigan).

Eric has helped design and implement progressive rate designs and utility Customer Assistance Programs for numerous utilities and provided financial capability assessment support for numerous communities engaged in negotiations with USEPA. Recent projects also include work for water sector associations on financial strategies to respond to COVID-19 pandemic financial impacts and on developing a new framework for household water affordability and financial capability assessments.

Eric has co-authored tariff-setting manuals of practice for AWWA and WEF, authored numerous articles and presentations, and continues to serve on technical practice and utility management committees for AWWA, WEF and NACWA.

Education

MA, Economics, University of California-Davis

AB, Economics & History, Ripon College, Ripon, WI

Manuel P. Teodoro

Principal - EJ Metrics

Manny Teodoro researches, teaches, and provides expertise on public policy and management, with emphases on environmental protection and utility finance. In more than 25 years of professional consulting he has helped organizations large and small with rigorous analysis of finance, economics, and governance. His research employs statistical analysis, financial modeling, scientific surveys, and mixed-method studies. Dr. Teodoro has emerged as a pioneer in water affordability and equity, developing advanced analytical methods for evaluating utility rates. Recent research efforts include analyses of utility environmental compliance, and regulatory enforcement. He published the first systematic study on executive leadership in water utilities and coauthored the first national analyses of racial, ethnic, and socioeconomic disparities in Safe Drinking Water Act and Clean Water Act compliance. He led three comprehensive national studies of water/sewer affordability since 2017. The analytical methods for evaluating affordability that Dr. Teodoro developed are now used by utilities across the U.S. and by the California Public Utilities Commission. He has held tenured appointments at Texas A&M University and Colgate University. In 2020 Dr. Teodoro joined the faculty of the Lafollette School of Public Affairs at the University of Wisconsin-Madison.

Alanna Kinnebrew

Project Manager – IB Environmental

Alanna is passionate about utilizing her scientific background in engineering to bridge the gap between science and policy in an effort to foster change for the next generation. As Project Manager at IB Environmental, Alanna has a true passion for improving the natural environment and addressing social issues related to climate change and environmental injustice.

Before stepping into her current role at IB Environmental, Alanna received her Master's in Energy and Environmental Policy at the University of Delaware in 2019. There she was able to conduct research on various topics focusing on renewable energy and climate change mitigation tactics. She graduated with a Bachelor of Science degree in Chemical Engineering in 2011 from Howard University. Alanna joined IB Environmental in 2020.

Education

MS, Energy and Environmental Policy, University of Delaware

BS, Chemical Engineering, Howard University

Rita Moore

Data Analyst – IB Environmental

Rita is very enthusiastic about the natural world and how we can best interact with it most sustainably. She loves to use data and analytics to help express and narrow down the different avenues to a more sustainable future. Rita began her academic journey at Emory University, where she studied Environmental Science focused on Sustainability. There she worked in a climate laboratory and with the Georgia Environmental Protection Division. After graduating, she moved to the mountains of Asheville, North Carolina. While there, she worked in the agriculture sector and even ran her permaculture-based farm. She moved back to Atlanta and decided to shift to a more data-focused role and began at IB Environmental in the spring of 2022.

Education

BS, Environmental Science, Emory University

Claire Sheridan

Senior Economist – One Water Econ

Claire Sheridan brings expertise in socioeconomic and geospatial analysis, statistical and financial modeling, and technical reporting to both national and local challenges facing the water sector. Ms. Sheridan conducts cost benefit and economic impact analysis in addition to concise technical research to support watershed management, utility planning, affordability of water services, resource valuation, and development of environmental markets. With a professional history rooted in public service and policy research, she brings a unique background and understanding to the challenges faced by local governments and municipal institutions. Prior to her career in the water sector, Ms. Sheridan worked for nonprofits across Central America and Southwestern U.S. supporting rural economic development.

Education

MS, Colorado State University, Agricultural and Resource Economics

BA, University of British Columbia, International Political Economics & Spanish

APPENDIX B:

Program Evaluation Framework

Low-Income Water Customer Assistance Program (LIWCAP) Assessment Study

PROGRAM EVALUATION FRAMEWORK

The LIWCAP Assessment Study is oriented toward the development of recommendations for implementation of a permanent, federally funded, low-income water customer assistance program. In developing study recommendations, the following LIWCAP program goals, objectives and performance metrics will be used to gauge the relative merits of LIWCAP design and administration options.

These performance measures are suggested with (at least) two major caveats. First, it must be acknowledged that there is disconcertingly limited baseline data regarding many aspects of our national water affordability challenges. For example, data on the incidence of service interruptions (e.g. number, duration, geographic distribution) is often not collected nor reported by utility service providers, or required by state regulatory agencies. Second, these performance measures, and to a larger extent concepts regarding federal program design and implementation, are offered without benefit of well-developed mechanisms to secure potential program participants' input or involve community organizations engaged in delivering low-income assistance. While the performance measures offered attempt to specify objective, measurable data elements to gauge program impact, additional measures related to community engagement (e.g., number of public input meetings, comments received, organizations engaged) may only quantify activity while many aspects of program success are fundamentally subjective.

LIWCAP Value Statement

Support state and local measures to address water access and affordability challenges faced by low-income households

LIWCAP Program Goals and Objectives

Target Efficiency:

1) Provide for delivery of appropriated assistance funds to eligible households
   a) Advance program participation measures to support universal and affordable water access
   b) Support estimation of assistance needs and prevailing gaps
2) Ensure timely delivery of assistance funds following determination of eligibility
3) Ensure equitable distribution of available assistance in terms of:
   a) Recipient eligibility: household incomes, ownership status (owners/renters)
   b) Horizontal equity / geographic distribution (state allocations, urban/rural) and household type (renter/owner, multifamily/single family households, as applicable)
   c) Vertical equity – deliver assistance proportionate to recipient needs
4) Leverage federal funding:
   a) Supplement state and local assistance programs and measures
   b) Complement other federal low-income assistance programs (e.g., LIHEAP, SNAP)
5) Support minimization of adverse collection measures – service interruptions, placement of liens

Assistance Recipient Requirements:

6) Ensure LIWCAP assistance application requirements facilitate access by low income households (by minimizing / eliminating burdensome process and paperwork)
   a) Establish readily available documentation requirements (using broadly available technology)
   b) Promote participation through collaboration with trusted community representatives / partners
7) Establish program appeals procedures that limit time, documentation requirements and expenses imposed on households

Program Administration:

8) Limit federal agency LIWCAP budget required for effective program administration and reporting
   a) Streamline related policies and procedures to limit program administrative costs
9) Establish simple, effective program controls that balance eligibility and participation objectives
10) Require program monitoring and performance reporting to assess program efficiency and effectiveness
   a) Support research on water access and affordability challenges and mitigation options

LIWCAP Program Performance Measures

Target Effectiveness and Equity		
No.	**Objective**	**Performance Measures**
1.	Provide for delivery of appropriated assistance funds to eligible households	a. Number and percentage of eligible households receiving meaningful assistance b. Number and percentage of prior household assistance recipients applying multiple times c. Estimated number and percentage of applicants not receiving assistance (by reason)
2.	Ensure timely delivery of assistance funds following determination of eligibility	a. Time (in days) to distribute federal funds to state/local agencies b. Average number of days from participant application to receipt of funds c. Average times (in days) from distribution of federal funds to receipt of funds by recipient by process step
3.	Ensure equitable distribution of available assistance (vertical and horizontal equity)	a. Number and percentage of recipient households below various % of FPL thresholds (e.g., 100%, 150%, 200%) and average amounts received by income threshold b. Number and percent of recipients by service provider size (based on SF/MF residential customer accounts) c. Racial/ethnic disparities in number and percent of recipients. d. Number and percent of eligible recipients by state
4.	Leverage of federal funding	a. Amount and percent of LIWCAP funds to service providers with existing affordability measures (e.g., CAPs, progressive rate forms, directed water use efficiency assistance) i. LIWCAP as a % of assistance funding

		ii. Number and percent of LIWCAP recipient agencies with aligning assistance programs b. Number and percent of LIWCAP funds distributed to economically disadvantaged rural and tribal communities (with populations below __,000)
5.	Support minimization of adverse collection measures	a) Trend in the number of bill delinquencies by agencies receiving LIWCAP funding b) Trend/reduction in number of water service interruptions (and/or lien placements) by agencies receiving LIWCAP funding c) Trend in the amount and percentage of (late fees, reconnection fees), collection fees charged to low-income households
Assistance Recipient Requirements (Administrative Burden for Recipients)		
6.	Ensure LIWCAP assistance application requirements facilitate access by low income households	a) Availability of information about assistance b) Pages of forms required to apply for assistance c) Number of documents required to demonstrate eligibility d) Time required to gather documentation and complete eligibility forms e) Number and percentage of applying households by method of application (e.g., in-person, phone, online) f) Time between initial application and receipt of assistance I. (Average) number of visits to application office II. Average number of hours to successfully complete the application process
7.	Establish program appeals procedures that limit time and expenses imposed on households	a) Number and percentage of households submitting appeals related to program (by outcome) b) Average number of days for appeals to be adjudicated
Program Administration/Administrative Costs for Providers (Federal, State and/or Local Governments, and Utilities)		
8.	Limit federal agency LIWCAP budget required for program administration and reporting	a) Amount and percentage of LIWCAP administrative costs relative to total program funding i. Estimated savings via inter-agency collaboration ii. Administrative cost per recipient
9.	Establish simple, effective program controls that balance eligibility and participation objectives	a) Estimated amount and percentage of program funds received by eligible households (by income strata) b) Estimated average amount of time (and cost) to administer program appeals (by reason) c) Number and percentage of fraudulent or mishandled applications.
10.	Require program monitoring and performance reporting to assess program efficiency and effectiveness	a) Percentage of LIWCAP program performance metrics reported by LIWCAP recipient agencies

APPENDIX C:

Comparison of LIHEAP Programs Across Four States

Table C-1. LIHEAP Program Comparison Across States

Program	Administration	Links with other subsidy programs	Renters	Within-State Allocation	Household Allocation	Funding	Other
Alabama LIHEAP	Local agencies administer & LIHEAP funds maintained entirely separately from other funding	Statewide intake database but eligibility/enrollment not linked to other benefit programs	After investigation by case worker, renters' names are added as a vendor in system and payments made to their name		Benefits based on household size, income, and fuel type		
California LIHEAP	Contract with 41 total local service providers that have county-defined service areas	None	Checks made payable directly to renters	County allocation based on population <125% FPL, heating/cooling degree days and energy costs (from utility rate survey)	Benefit matrix based on vulnerable populations prioritize poverty group, household size and fuel type	Contracts with LSPs require 100% of funding spent -- higher demand than funding available	For non-regulated energy, LSPs have relationships with local vendors (i.e., firewood)
Colorado Low Income Energy Assistance Program (LEAP)	State maintains centralized eligibility system, contracts with counties and nonprofits to do outreach and enrollment	Renters on SNAP receive LIHEAP payments to EBT card (~15% of all accounts); LIHEAP recipients automatically maximize SNAP benefits	Flat rate benefit paid directly to renters determined based on average home heating costs		Household benefit determined from prior years' heating costs; households with no heating history or renters receive flat rate based on fuel type and average heating costs	If benefit exceeds bill, benefit is applied to arrearages	Need = $500M but CO allocation = $60M
Connecticut Energy Assistance Program	Community action agencies (9) contracted	Categorical eligibility (SNAP, TANF, SSI) but separate application process; SNAP	Checks made payable directly to renters		Determined on categorical eligibility, and vulnerability (elderly, disabled,	If basic benefits exceed bill amounts,	Difficulty forming relationships with vendors due in part to

Program	Administration	Links with other subsidy programs	Renters	Within-State Allocation	Household Allocation	Funding	Other
	to make payments	recipients with heat included in rent receive lowest annual benefit			children); rental assistance benefit based only on poverty guidelines with different allocation	vendors must refund	bureaucracy of CT state gov
New Jersey Home Energy Assistance	Local Admin Agencies selected by request for proposal, reimbursed for payments	Households eligible for SNAP and PAAD automatically enrolled	Checks made payable directly to renters		Benefit based on HH size, income, fuel type and heating region		

APPENDIX D:

LIHEAP Average Benefit per Household by State

Table D-1: Average LIHEAP Benefits by State for 2019

"Fiscal Year"	Grantee	Total Households Served	Average Benefits per Household - Heating	Average Benefits per Household - Cooling	Average Benefits per Household - Winter Crisis	Average Benefits per Household - Year-Round Crisis	Average Benefits per Household - Summer Crisis	Average Benefits per Household - Other Crisis
2019*	Alabama	78,584	$340	$339	$343	$0	$319	$0
2019*	Alaska	5,913	$1,168	$0	$0	$0	$0	$0
2019*	Arizona	29,489	$459	$463	$0	$427	$0	$0
2019*	Arkansas	70,837	$133	$125	$229	$0	$186	$0
2019*	California	223,131	$329	$315	$0	$541	$0	$2,262
2019*	Colorado	68,204	$463	$0	$382	$0	$0	$1,800
2019*	Connecticut	81,456	$558	$0	$528	$0	$0	$491
2019*	Delaware	10,904	$441	$250	$0	$458	$0	$0
2019*	District of Columbia	10,435	$772	$818	$0	$474	$0	$11,434
2019*	Florida	123,590	$472	$472	$588	$0	$401	$385
2019*	Georgia	161,012	$347	$398	$346	$0	$0	$0
2019*	Hawaii	8,648	$705	$0	$0	$509	$0	$0
2019*	Idaho	34,015	$366	$0	$0	$127	$0	$1,679
2019*	Illinois	236,371	$531	$0	$451	$0	$0	$2,437
2019*	Indiana	112,567	$477	$0	$132	$0	$157	$567
2019*	Iowa	82,644	$456	$0	$0	$270	$0	$1,602
2019*	Kansas	33,382	$599	$0	$599	$0	$0	$0

"Fiscal Year"	Grantee	Total Households Served	Average Benefits per Household - Heating	Average Benefits per Household - Cooling	Average Benefits per Household - Winter Crisis	Average Benefits per Household - Year-Round Crisis	Average Benefits per Household - Summer Crisis	Average Benefits per Household - Other Crisis
2019*	Kentucky	111,151	$150	$0	$400	$0	$0	$0
2019*	Louisiana	72,035	$387	$372	$0	$250	$0	$0
2019*	Maine	31,123	$888	$0	$336	$0	$0	$297
2019*	Maryland	96,322	$666	$598	$0	$248	$0	$5,955
2019*	Massachusetts	155,792	$919	$0	$0	$0	$0	$0
2019*	Michigan	369,270	$160	$0	$0	$879	$0	$0
2019*	Minnesota	125,840	$541	$0	$449	$0	$0	$1,408
2019*	Mississippi	40,990	$461	$454	$0	$417	$0	$0
2019*	Missouri	114,639	$286	$0	$646	$0	$266	$259
2019*	Montana	18,647	$521	$0	$0	$2,520	$0	$2,134
2019*	Nebraska	38,507	$491	$705	$0	$266	$0	$203
2019*	Nevada	24,501	$520	$0	$0	$334	$0	$307
2019*	New Hampshire	29,989	$889	$0	$994	$0	$0	$0
2019*	New Jersey	235,503	$372	$200	$490	$0	$0	$991
2019*	New Mexico	67,914	$306	$287	$0	$296	$0	$0
2019*	New York	1,053,204	$454	$694	$497	$0	$0	$2,154
2019*	North Carolina	183,680	$254	$0	$0	$320	$0	$0
2019*	North Dakota	13,119	$944	$0	$0	$243	$0	$2,229
2019*	Ohio	268,198	$285	$0	$303	$0	$205	$544

"Fiscal Year"	Grantee	Total Households Served	Average Benefits per Household - Heating	Average Benefits per Household - Cooling	Average Benefits per Household - Winter Crisis	Average Benefits per Household - Year-Round Crisis	Average Benefits per Household - Summer Crisis	Average Benefits per Household - Other Crisis
2019*	Oklahoma	106,088	$305	$315	$0	$395	$0	$0
2019*	Oregon	57,392	$345	$360	$0	$390	$0	$2,590
2019*	Pennsylvania	329,243	$276	$0	$389	$0	$0	$2,896
2019*	Rhode Island	29,756	$503	$0	$305	$0	$0	$1,666
2019*	South Carolina	44,771	$708	$536	$0	$808	$0	$1,260
2019*	South Dakota	21,823	$739	$0	$422	$0	$0	$1,714
2019*	Tennessee	114,329	$450	$450	$0	$450	$0	$0
2019*	Texas	149,352	$199	$714	$0	$650	$0	$0
2019*	Utah	28,554	$513	$0	$0	$509	$0	$1,061
2019*	Vermont	28,192	$452	$0	$441	$0	$0	$1,566
2019*	Virginia	130,193	$449	$267	$394	$0	$0	$725
2019*	Washington	67,423	$503	$0	$500	$0	$0	$1,667
2019*	West Virginia	48,786	$267	$0	$331	$0	$0	$5,000
2019*	Wisconsin	195,986	$367	$0	$0	$281	$0	$11,991
2019*	Wyoming	8,132	$653	$0	$305	$0	$0	$2,600

Source: LIHEAP Performance Measurement Web Site (https://liheappm.acf.hhs.gov)

Table D-2: Average LIHEAP Benefits by State for 2020

"Fiscal Year"	Grantee	Total Households Served	Average Benefits per Household - Heating	Average Benefits per Household - Cooling	Average Benefits per Household - Winter Crisis	Average Benefits per Household - Year-Round Crisis	Average Benefits per Household - Summer Crisis	Average Benefits per Household - Other Crisis
2020*	Alabama	69,650	$338	$358	$381	$0	$347	$0
2020*	Alaska	5,675	$1,054	$0	$1,363	$0	$0	$0
2020*	Arizona	23,669	$675	$773	$0	$758	$0	$0
2020*	Arkansas	66,642	$131	$238	$355	$0	$483	$0
2020*	California	168,213	$340	$322	$0	$577	$0	$2,554
2020*	Colorado	76,632	$666	$0	$700	$0	$0	$1,946
2020*	Connecticut	75,260	$694	$0	$488	$0	$0	$408
2020*	Delaware	11,206	$488	$618	$0	$618	$0	$201
2020*	District of Columbia	9,564	$785	$548	$0	$497	$0	$2,830
2020*	Florida	103,477	$456	$495	$338	$0	$323	$40
2020*	Georgia	167,430	$397	$399	$395	$0	$0	$0
2020*	Hawaii	8,567	$770	$0	$0	$557	$0	$0
2020*	Idaho	32,183	$565	$0	$0	$334	$0	$423
2020*	Illinois	268,765	$550	$0	$502	$0	$0	$2,474
2020*	Indiana	115,047	$475	$0	$232	$0	$0	$3,295
2020*	Iowa	82,274	$459	$0	$0	$1,229	$0	$0
2020*	Kansas	34,464	$801	$0	$801	$0	$0	$0
2020*	Kentucky	129,790	$0	$168	$194	$0	$260	$0

"Fiscal Year"	Grantee	Total Households Served	Average Benefits per Household - Heating	Average Benefits per Household - Cooling	Average Benefits per Household - Winter Crisis	Average Benefits per Household - Year-Round Crisis	Average Benefits per Household - Summer Crisis	Average Benefits per Household - Other Crisis
2020*	Louisiana	68,512	$375	$363	$0	$260	$0	$0
2020*	Maine	32,956	$848	$0	$308	$0	$0	$311
2020*	Maryland	88,639	$652	$590	$0	$248	$0	$6,927
2020*	Massachusetts	146,234	$884	$0	$0	$0	$0	$0
2020*	Michigan	341,307	$186	$0	$0	$548	$0	$0
2020*	Minnesota	117,283	$503	$0	$574	$0	$0	$1,622
2020*	Mississippi	39,435	$554	$550	$0	$433	$0	$0
2020*	Missouri	108,591	$285	$0	$769	$0	$482	$418
2020*	Montana	18,447	$747	$0	$0	$1,979	$0	$2,017
2020*	Nebraska	37,533	$483	$716	$0	$285	$0	$230
2020*	Nevada	26,054	$461	$0	$0	$342	$0	$351
2020*	New Hampshire	28,727	$857	$0	$0	$0	$0	$0
2020*	New Jersey	219,755	$310	$200	$495	$0	$0	$0
2020*	New Mexico	70,157	$302	$283	$0	$296	$0	$0
2020*	New York	1,035,850	$466	$723	$458	$0	$0	$2,330
2020*	North Carolina	162,264	$368	$0	$0	$363	$0	$0
2020*	North Dakota	12,575	$877	$0	$0	$418	$0	$1,462
2020*	Ohio	271,526	$316	$0	$311	$0	$290	$232
2020*	Oklahoma	109,547	$248	$303	$0	$496	$0	$0

"Fiscal Year"	Grantee	Total Households Served	Average Benefits per Household - Heating	Average Benefits per Household - Cooling	Average Benefits per Household - Winter Crisis	Average Benefits per Household - Year-Round Crisis	Average Benefits per Household - Summer Crisis	Average Benefits per Household - Other Crisis
2020*	Oregon	52,508	$414	$380	$0	$469	$0	$2,678
2020*	Pennsylvania	323,101	$284	$0	$373	$0	$0	$5,968
2020*	Rhode Island	27,690	$522	$100	$265	$0	$0	$4,092
2020*	South Carolina	43,957	$674	$600	$0	$779	$0	$529
2020*	South Dakota	21,081	$840	$0	$0	$546	$0	$1,784
2020*	Tennessee	110,696	$450	$494	$0	$529	$0	$0
2020*	Texas	142,609	$215	$1,099	$0	$1,348	$0	$0
2020*	Utah	32,592	$537	$0	$0	$616	$0	$2,217
2020*	Vermont	27,520	$510	$0	$408	$0	$0	$1,750
2020*	Virginia	122,558	$456	$314	$337	$0	$0	$684
2020*	Washington	77,664	$438	$0	$0	$0	$0	$886
2020*	West Virginia	49,272	$309	$0	$100	$0	$0	$5,808
2020*	Wisconsin	207,024	$349	$0	$0	$313	$0	$4,175
2020*	Wyoming	8,320	$653	$0	$429	$0	$0	$1,624

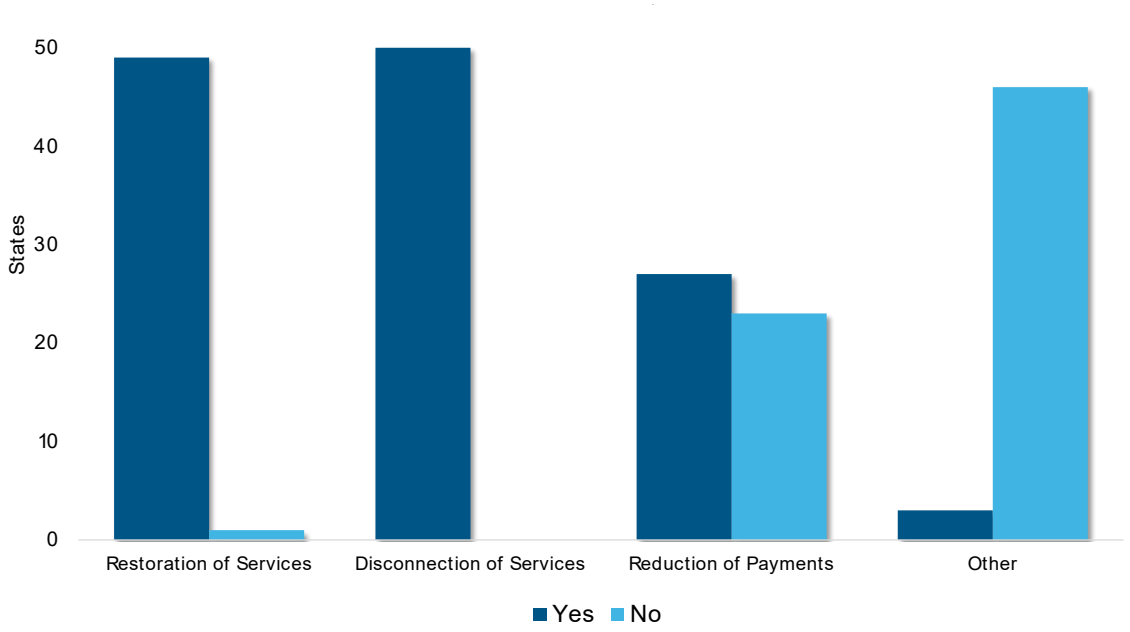
Source: LIHEAP Performance Measurement Web Site (https://liheappm.acf.hhs.gov)

APPENDIX E:

A Closer Look at the Roll Out of LIHWAP & its Reporting

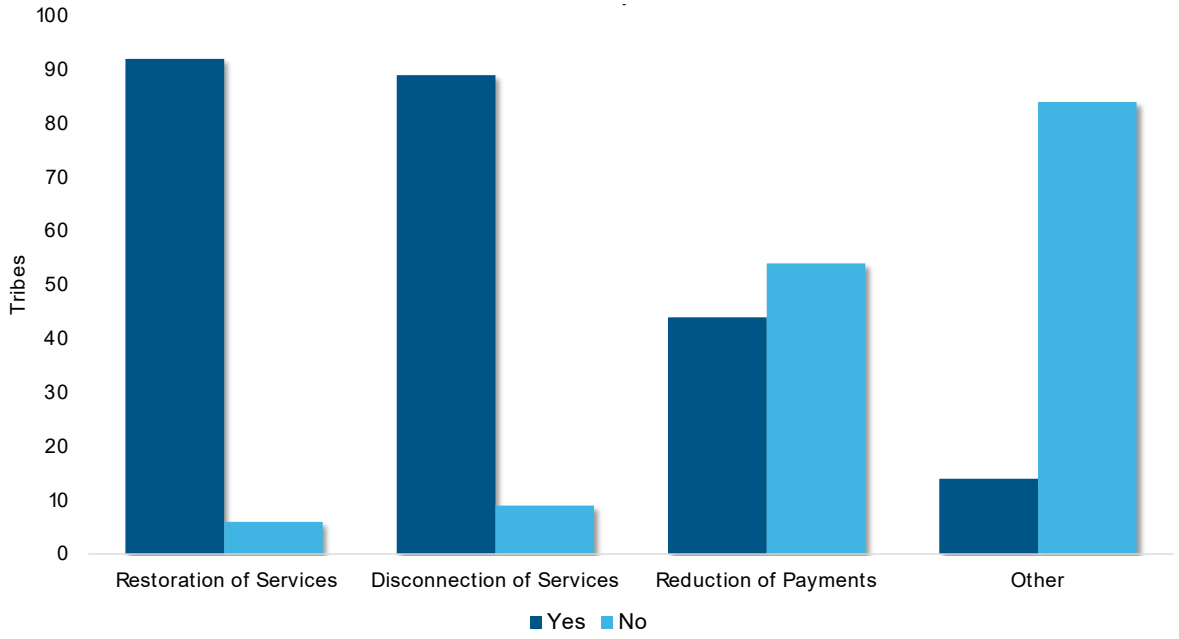
The rollout of LIHWAP was staggered as states eased into implementing the program. The LIHWAP Data Dashboard looks at what individual states chose as they designed this temporary program, giving additional insight as to what a permanent program such as LIWCAP could look like.

Figure E-1: State LIHWAP Operational Priorities



Data Source: Low Income Household Water Assistance Program Data Dashboard (https://lihwap-hhs-acf.opendata.arcgis.com/pages/implementation-plans)
Data accessed: 03/26/2022

Figure E-2: Tribal LIHWAP Operational Priorities



Data Source: Low Income Household Water Assistance Program Data Dashboard (https://lihwap-hhs-acf.opendata.arcgis.com/pages/implementation-plans)
Data accessed: 07/20/2022

Before implementing the LIHWAP program, states had to decide their operational priorities in appropriating funds for households facing water affordability issues. The legislation identifies three main priorities for water utility assistance—listed below—some grant recipients identified additional operational priorities which were grouped in the 'other' category (Figures E-1 and E-2):[95]

- ***Restoration of Services*** to households that have had their drinking water and/or wastewater services disconnected due to arrearages.
- ***Prevention of Disconnection*** for households at risk of disconnection due to nonpayment.
- ***Reduction of Rates*** charged to low-income households where possible to help ensure affordable household water services.
- ***Other***
    - Authorize prospective water services payments (credits) in three-month increments.
    - A deposit required by the utility provider to begin, maintain, or restore water and/or wastewater services. Fees for connection, reconnection, or hookup of utility services.
    - The State [Mississippi] will provide other services as needed to these households such as CSBG, Weatherization, transportation, Head Start, and make referrals to other state programs such as SNAP and TANF.
    - Applicants who are elderly or disabled can apply early.

[95] "Glossary." *LIHWAP Data Dashboard*, The Administration for Children and Families (ACF), https://lihwap-hhs-acf.opendata.arcgis.com/pages/glossary.

- DHS will reach out to Private Water Haulers to engage their participation in providing Water for Cisterns. Although the Virgin Islands population obtains water from the Water and Power Authority (WAPA) via the potable water system, a large percentage of the population depend on their cisterns for water.

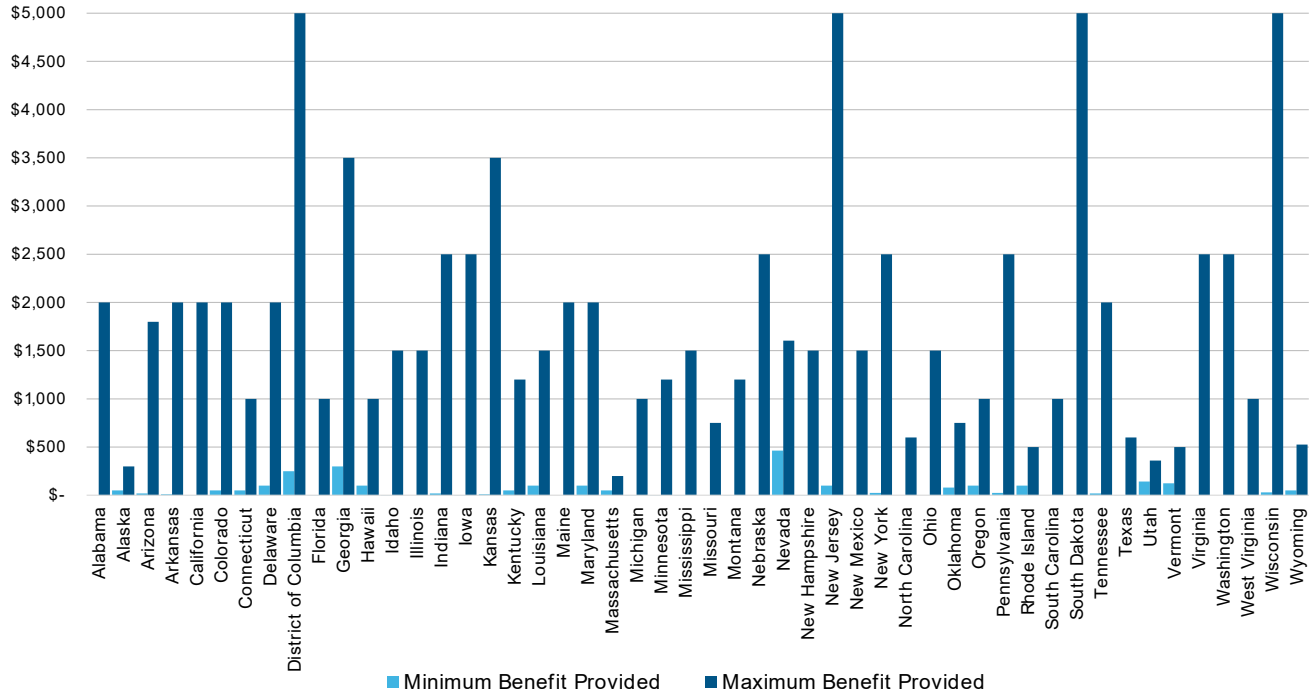
  * For the City of Chicago, the city's moratorium on shutoffs[96] will continue indefinitely and so the priority is to reduce arrearages for Chicago residents or provide deposits for customers who have previously been disconnected but have moved and are trying to regain services, as well as for those customers who have been disconnected for a long period of time and no longer have service with a water/wastewater utility.

Most states/territories and tribes were in favor of all three priorities. All states/territories chose to prioritize households that have a pending disconnection, while some tribes did not choose this option. Most participants chose to prioritize the restoration of services for households with an existing disconnection.

For states/territories, about 54% of participants chose to prioritize households that seek assistance with their current bills and are not behind on their payments. In other words, the first priority was to aid those households that need immediate help, and a secondary priority was to help those who are paying a high percentage of their household income to the water utility which may cause other implications due to this higher household burden.

[96] "City Council Passes Ordinance Promoting Water Access, Affordability, and Data Reporting Transparency." *City of Chicago: City Council Passes Ordinance Promoting Water Access, Affordability, And Data Reporting Transparency*, 20 July 2022, www.chicago.gov/city/en/depts/mayor/press_room/press_releases/2022/july/PassesOrdinanceWaterAccessAffordabilityTransparency.html#:~:text=The%20ordinance%20codifies%20the%20end,this%20ordinance%20codifies%20that%20moratorium.

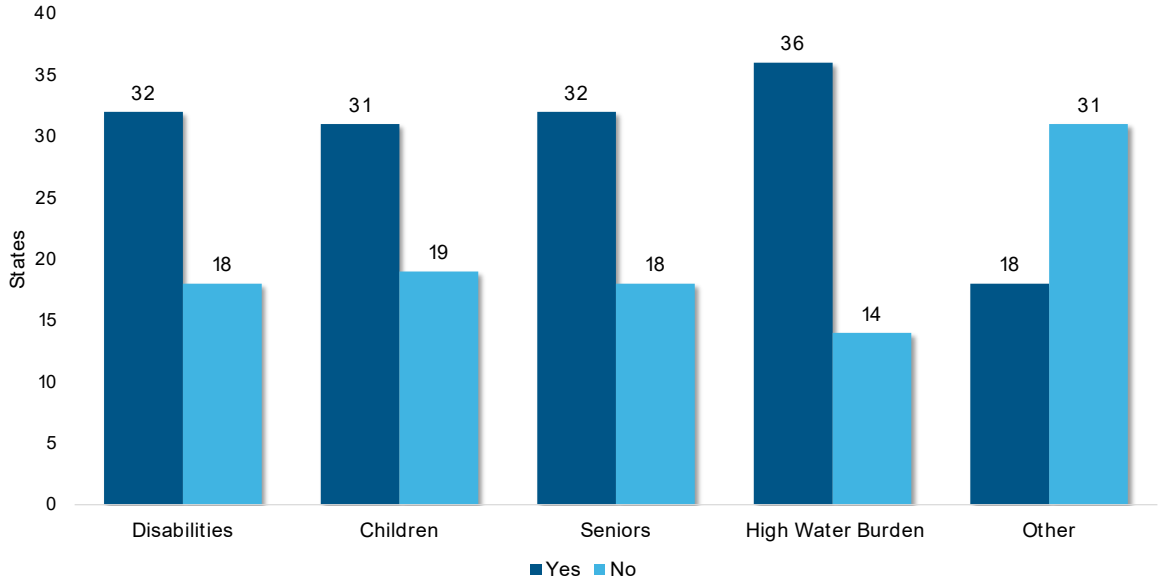
Figure E-3: Minimum and Maximum State Benefits Provided



Data Source: Low Income Household Water Assistance Program Data Dashboard (https://lihwap-hhs-acf.opendata.arcgis.com/pages/implementation-plans)
Data accessed: 03/26/2022

In establishing the LIHWAP program, the grantees had to choose a minimum and a maximum benefit provided for each eligible household. The median minimum benefit provided across all states was $15, and the median maximum benefit provided was $5,000. Minimum and maximum benefit levels by state are summarized in Figure E-3. By choosing a lower maximum benefit provided, states allowed for the LIHWAP funding to assist a greater number of households.

Figure E-4: LIHWAP State Summary of Targeted Groups

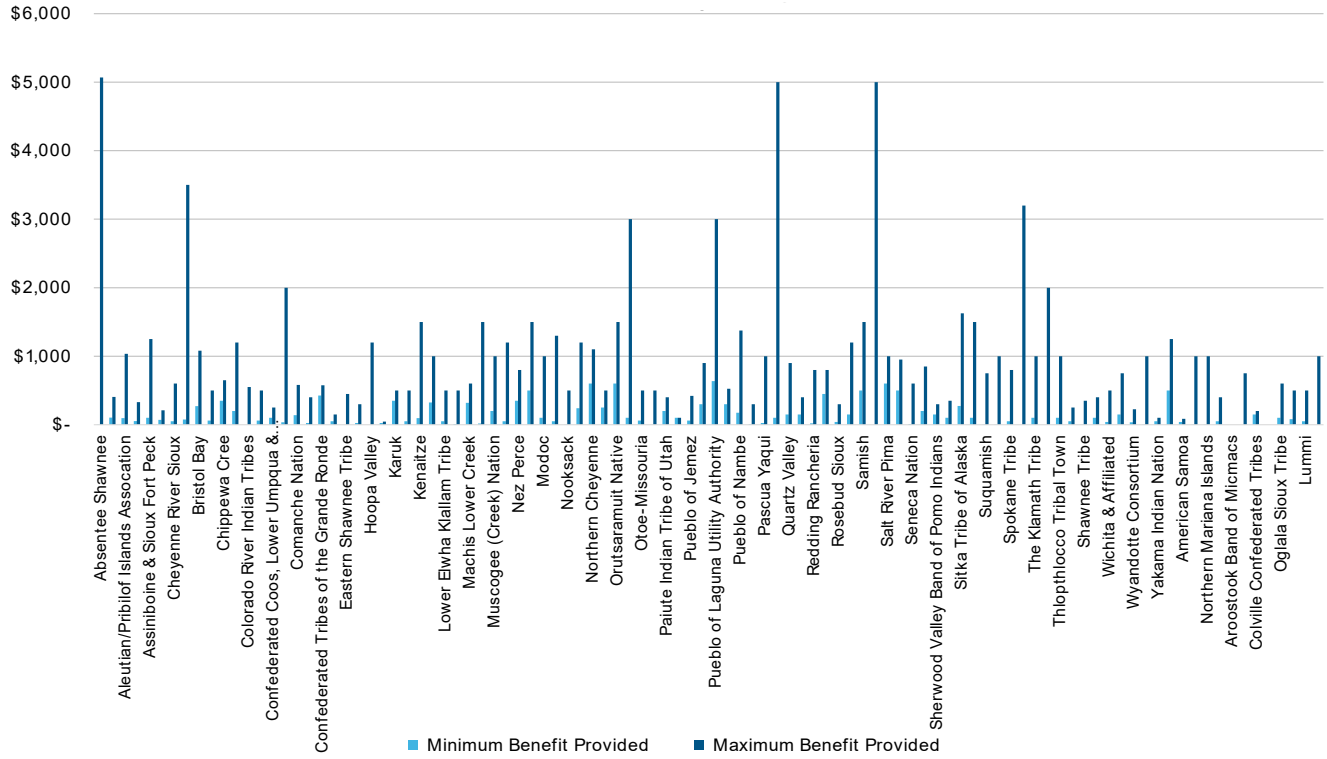


Data Source: Low Income Household Water Assistance Program Data Dashboard (https://lihwap-hhs-acf.opendata.arcgis.com/pages/implementation-plans)
Data accessed: 03/26/2022

State grant recipients were also asked to prioritize water assistance for vulnerable populations in terms of benefit amounts, early application periods, and other categories. The majority of states chose to target groups with disabilities, children, seniors, and a high-water burden, as highlighted in Figure E-4. The high-water burden is calculated by the proportion of total household income spent on a water utility bill during a specific timeframe. In addition to these targeted groups, 18 states chose to add an *Other* category, and of those, 14 chose to prioritize households with a current or imminent risk of water disconnection. Here again, states are prioritizing the imminent risk of water disconnection, a theme seen echoed in the operational priorities as well.

11.5. LIHWAP Reporting on Tribes, and Potential Improvements for LIWCAP

Figure E-5: Minimum and Maximum Tribal Benefits by Tribes in LIHWAP Program



Data Source: Low Income Household Water Assistance Program Data Dashboard (https://lihwap-hhs-acf.opendata.arcgis.com/pages/implementation_plans)
Data accessed: 08/12/2022

This Study found differences in the number of participating tribes between the Q2 data from the LIHWAP dashboard[97] and that number stated in the LIHWAP National Rural Water Utility Providers Meeting held on July 21, 2022. Only 60 tribes were listed on HHS's LIHWAP dashboard, and the participation rate was 39.4% for all eligible tribes and 11.0% for all federally recognized tribes.

Table E-1: Summary Statistics of Tribal Water Systems and Water Service Providers (Q2)

Water service providers in LIHWAP	Community water systems (CWSs)[98] owned by tribes signed up for LIHWAP*	Total number of public water systems (PWSs)[99] owned by tribes signed up for LIHWAP*	Total number of tribal community water systems	Total number of tribal public water systems
309	197	226	708	950

[97] https://lihwap-hhs-acf.opendata.arcgis.com/pages/quarterly-reports

[98] CWSs, as opposed to the other two types of PWSs (transient non-community and non-transient non-community water systems), are water systems which provide water to the same population year-round (https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-information-system-sdwis-federal-reporting).

[99] PWSs cover three type of water systems, community water systems, transient non-community systems, and non-transient-non-community systems (https://www.epa.gov/ground-water-and-drinking-water/safe-drinking-water-information-system-sdwis-federal-reporting).

*Figures calculated as part of this study.

Another concern is the potential disconnect and error caused by different terminologies and nomenclatures used by HHS and USEPA. Specifically, HHS uses the term *water service providers* as opposed to *public water systems* used more commonly by USEPA. USEPA is the designated federal agency that regulates drinking water service provided by more than 140,000 public water systems (PWSs), and nearly 50,000 of these PWSs are community water systems (CWSs). These CWSs supply drinking water to more than 94% of the U.S. population year-round.[100] HHS defines water service provider as *"an organization or company that operates public water and/or wastewater systems to provide water and wastewater services to households."* Water service providers, as defined by HHS, include both drinking water and wastewater, or even stormwater in some cases.

We paid specific attention to tribes as they have been overlooked historically, and many tribal water service providers are in remote locations and lack necessary resources. The Study cross-compared the LIHWAP database and the USEPA's Safe Drinking Water Information System (SDWIS) database and assigned CWSs and PWSs with area types listed as "tribal" to the 60 tribes listed in LIHWAP's dashboard in Q2.[101] It is worth noting that LIHWAP did not make publicly available the list of water service providers for any states, territories, or tribes. Also, the water service providers' information was provided by the utilities themselves.[102] Subsequently, the Study found two major discrepancies across the LIHWAP and SDWIS database (Figure E-6):

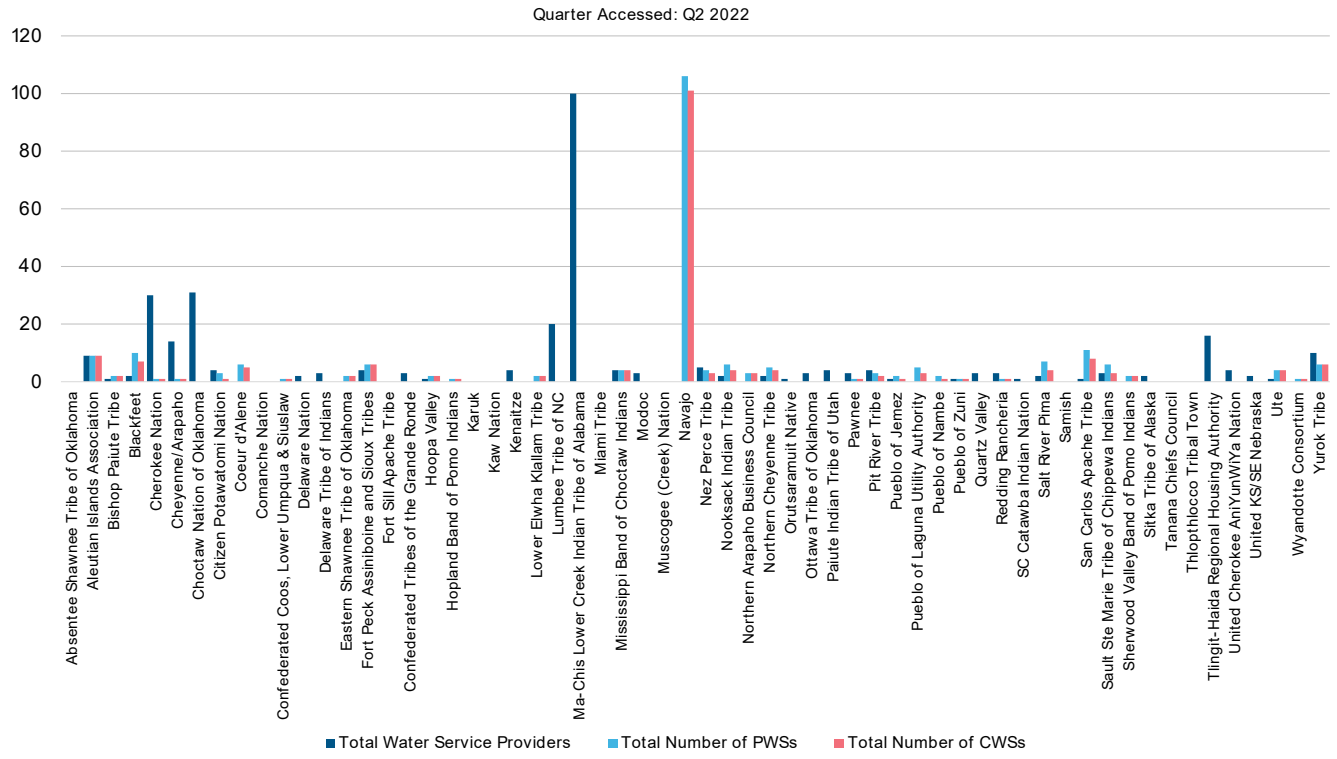
- **Type 1.** There are tribes reporting multiple local water service providers to LIHWAP, but none or few PWSs can be found in the SDWIS database. There are 25 type 1 discrepancies found in the 60 tribes enrolled in the LIHWAP program.
- **Type 2.** There are more PWSs or CWSs in a tribe but none or few were reported to the LIHWAP database. There are 22 type 2 discrepancies found in 60 tribes enrolled in the LIHWAP program.

[100] Y.J. McDonald, K.M. Anderson, M.D. Caballero, K.J. Ding, D.H. Fisher, C.P. Morkel, E.L. Hill, A systematic review of geospatial representation of United States community water systems, AWWA Water Sci. 4 (2022).

[101] Area type is to identify where the facility is located of a public water system (USEPA, 2022).

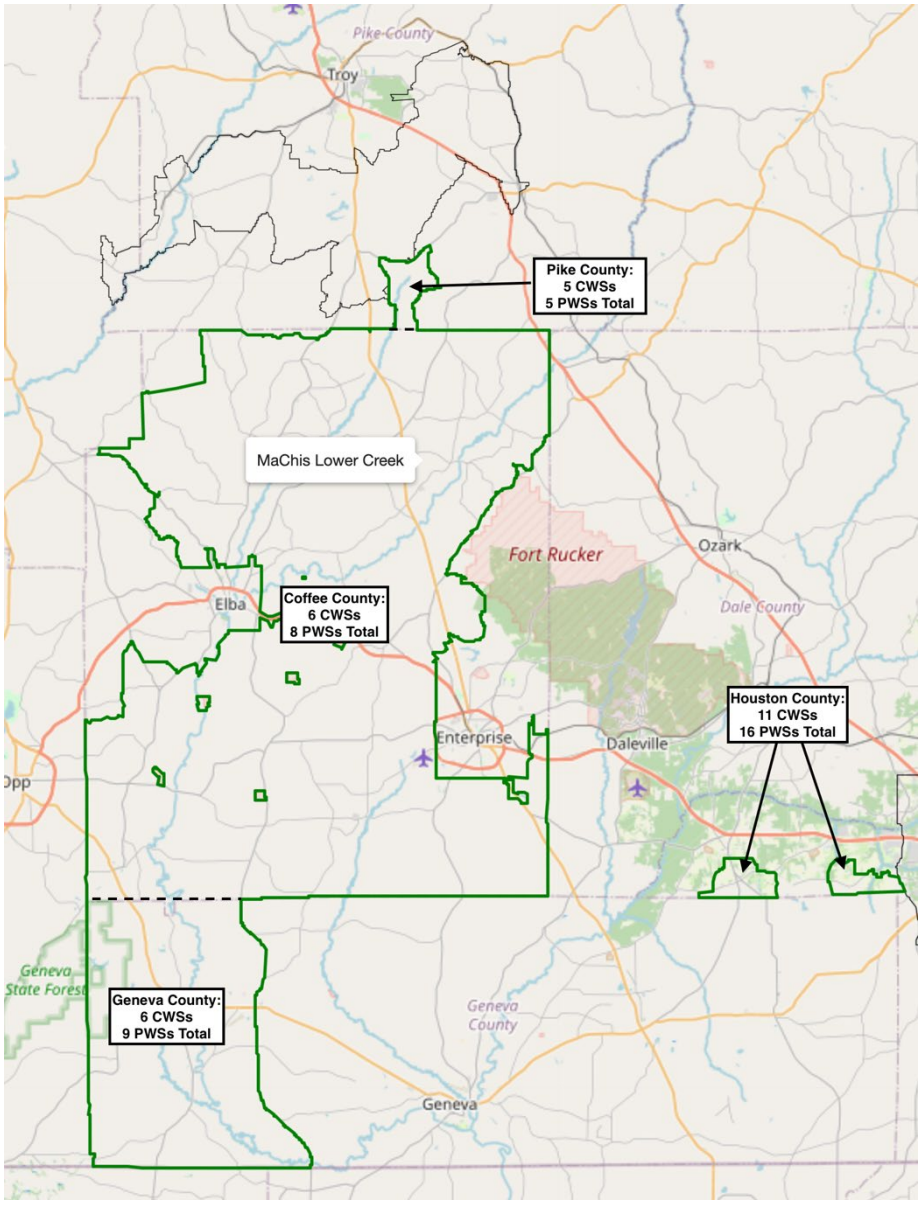
[102] The tribes self-reported the water service provider information to HHS via the application and questionnaires created by HHS. The LIHWAP program administrating offices did not do an extensive quality-check on this data so errors may occur during the self-reporting process.

Figure E-6: Discrepancies "Local Water Providers" in LIHWAP vs. Public Water Systems in SDWIS



The Study provides an example of each of the two types of aforementioned discrepancies. For a type 1 discrepancy, the Ma-Chis Lower Creek Indian Tribe of Alabama (Ma-Chis) is demonstrative. Ma-Chis reported 100 local water service providers to LIHWAP, but zero public water systems can be found in the SDWIS database. The geographic boundary of the Ma-Chis Native American Reservation mainly covers four counties–Pike, Coffee, Geneva, and Houston counties–in the state of Alabama (Figure E-7). In SDWIS, there are a total of 38 PWSs (28 of 38 are CWSs) in the four counties mentioned above, which is much less than 100 water service providers reported by LIHWAP.

Figure E-7: Ma-Chis Native American Reservation and Public Water Systems Within the Reservation Boundary



For the type 2 discrepancy, the Blackfeet Tribe of the Blackfeet Indian Reservation of Montana (Blackfeet hereafter) was selected for demonstration. On the LIHWAP dashboard, Blackfeet has two local service providers, but in the SDWIS database, there are seven CWSs, and 10 PWSs in total located in Blackfeet (Figure E-8). We do note that the SDWIS database has its own limitations. For example, there are three systems in Blackfeet tribes that do not have a name, PWS type, and population. Starr school water system is likely to be misclassified as a community water system, while it should be classified as a non-transient non-community water system.

Figure E-8: Public Water Systems of Blackfeet in SDWIS (as of Q2, 2022)

PWS_ID	PWS_Name	PWS_Type	Population	Tribal_Description
083090009	HEART BUTTE SCHOOL	Community water system	250	Blackfeet Tribe of the Blackfeet Indian Reservation
083090004	BEDROCKBABB WATER SYSTEM	Community water system	645	Blackfeet Tribe of the Blackfeet Indian Reservation
083090003	BLACKFOOT WATER SYSTEM	Community water system	56	Blackfeet Tribe of the Blackfeet Indian Reservation
083090005	HEART BUTTE WATER SYSTEM	Community water system	400	Blackfeet Tribe of the Blackfeet Indian Reservation
083090007	STARR SCHOOL WATER SYSTEM	Community water system	250	Blackfeet Tribe of the Blackfeet Indian Reservation
083090008	SEVILLE WATER SYSTEM	Community water system	300	Blackfeet Tribe of the Blackfeet Indian Reservation
083090090	TWO MEDICINE WATER	Community water system	1884	Blackfeet Tribe of the Blackfeet Indian Reservation
083090010	*NA*	*NA*	*NA*	Blackfeet Tribe of the Blackfeet Indian Reservation
083090094	*NA*	*NA*	*NA*	Blackfeet Tribe of the Blackfeet Indian Reservation
083090316	*NA*	*NA*	*NA*	Blackfeet Tribe of the Blackfeet Indian Reservation

Data accessed on August 2022 from Quarter 2, 2022 SDWIS database.

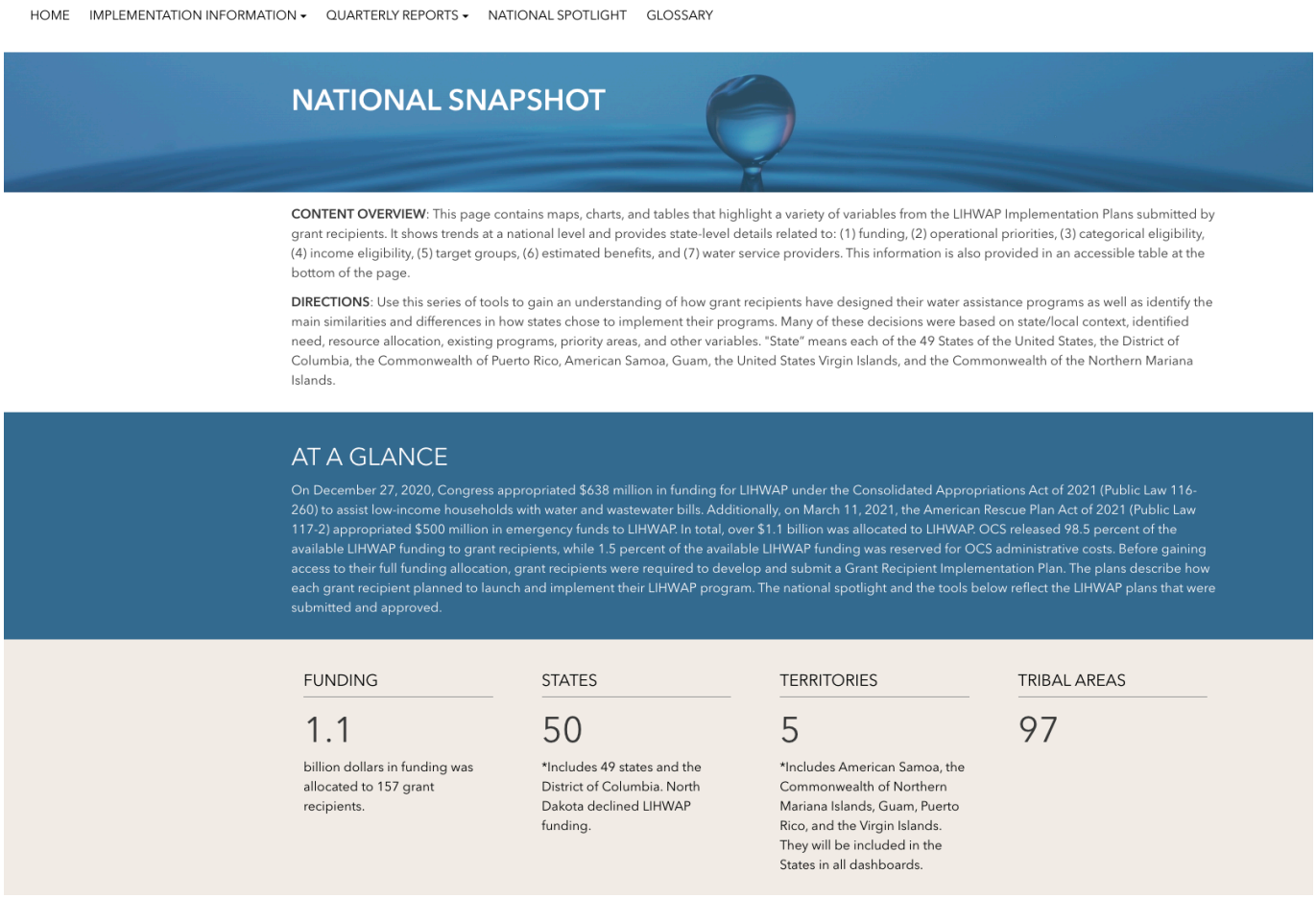
In general, most of the counts of water service providers for the 60 tribes do not match up with public water systems for those tribes in the SDWIS database.

APPENDIX F:

Dashboard of the Current LIHWAP Program

The following screenshots were obtained from https://lihwap-hhs-acf.opendata.arcgis.com/

Figure F-1: National Snapshot of the LIHWAP Implementation Plan



Data accessed on February 3, 2023 LIHWAP Database (https://lihwap-hhs-acf.opendata.arcgis.com/pages/national-snapshot#nstop)

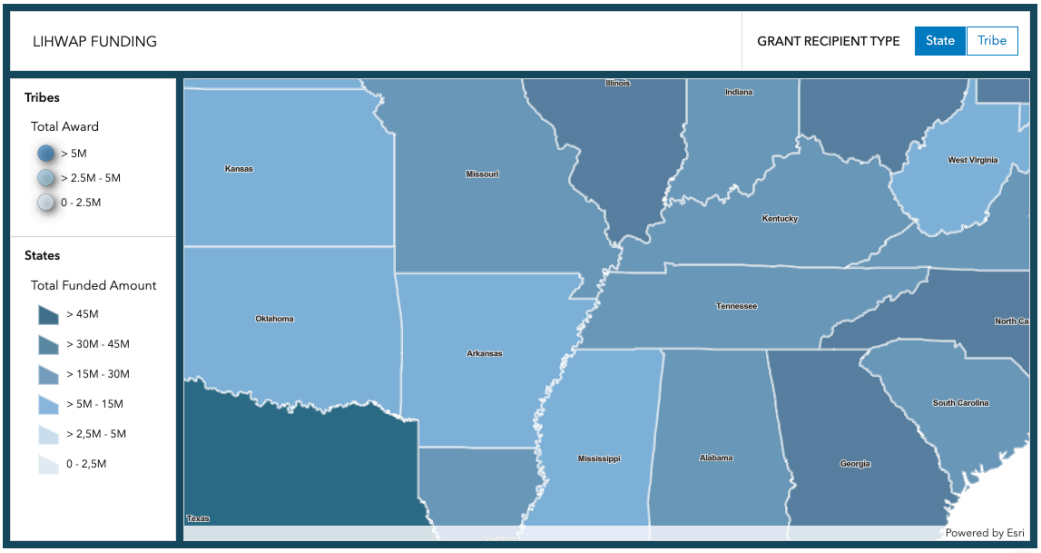
Figure F-2: National Implementation Plan – Funding Map and Interactive Table

1. FUNDING

The legislation notes that grant funds must be allotted to states, territories, and tribes based on: **1)** the percentage of households in the state, or under the jurisdiction of the Indian tribe, with income equal to or less than 150 percent of the federal poverty line; **2)** the percentage of such households in the state, or under the jurisdiction of the Indian tribe, that spend more than 30 percent of their monthly income on housing; and **3)** up to three percent of the appropriation must be directed to tribes and tribal organizations. The map below shows the total funding amount to each grant recipient based on the funding formula.

MAP SERIES 1 - FUNDING

Directions: Select a grant recipient type at the top of the map below to toggle between state and tribal grant recipients. Click a grant recipient to see funding information for that recipient. A pop-up with information about funding will appear for the grant recipient you selected.



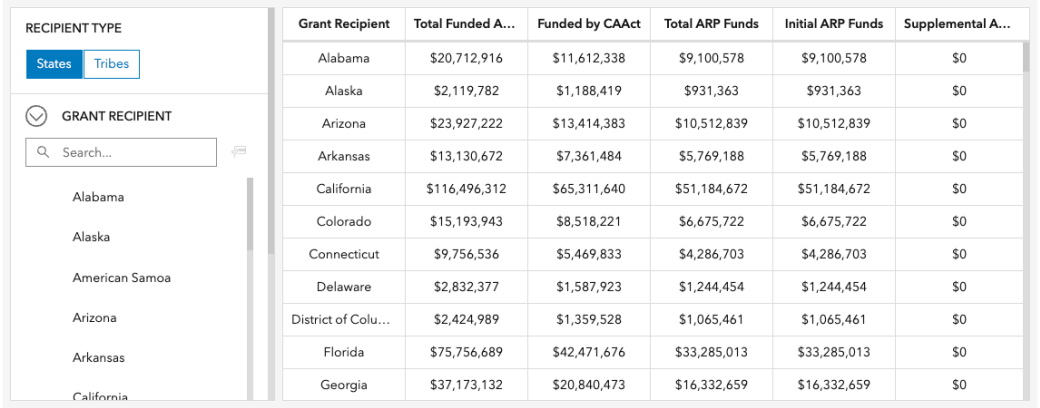
Share this card

Notes: The colors on the map above correspond to the amount of funding each grant recipient received. **Darker Blue** = Higher Values; **Lighter Blue** = Lower Values; **Grey** = North Dakota did not participate.

CAAct = Consolidated Appropriations Act; ARP = American Rescue Plan.

INTERACTIVE TABLE 1 - FUNDING

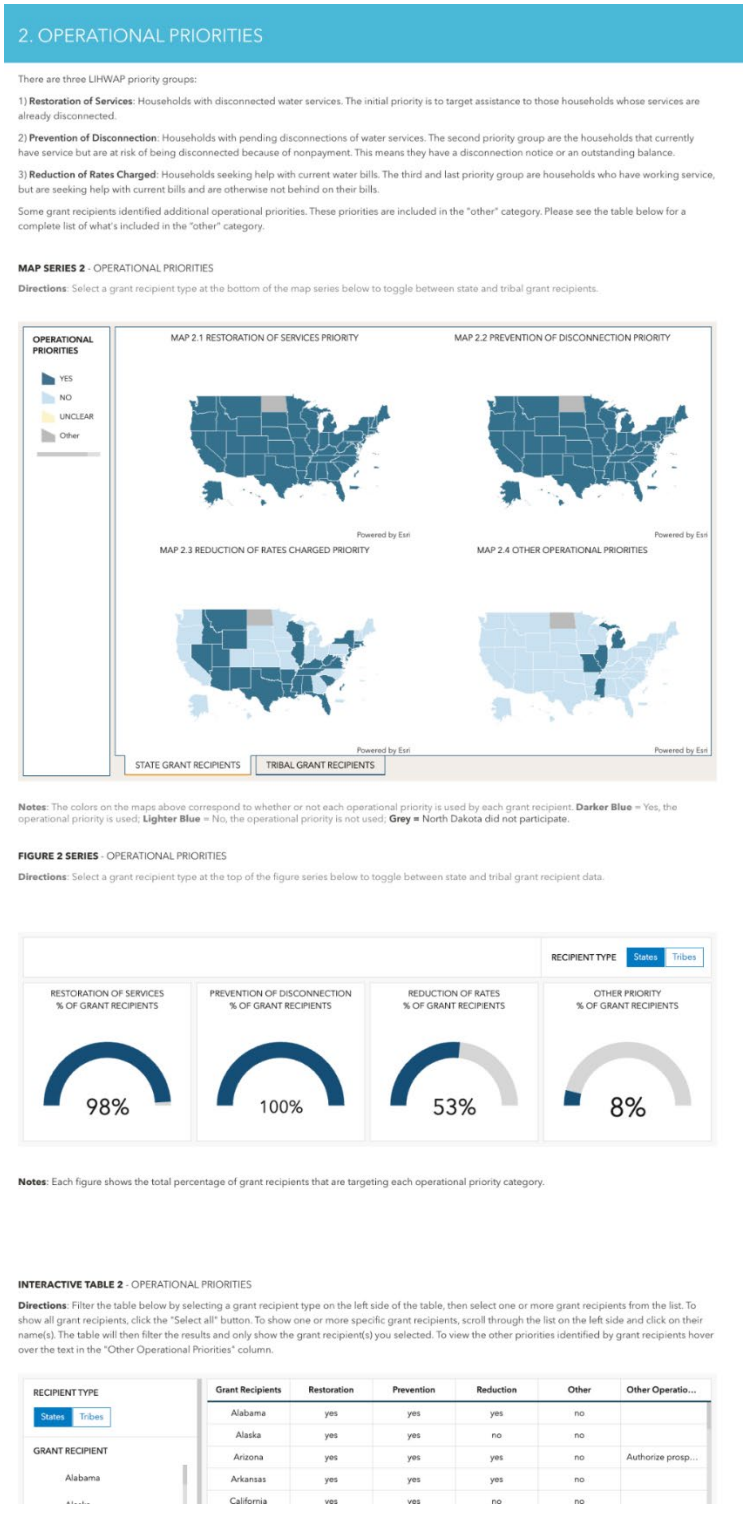
Directions: Filter the table below by selecting a grant recipient type on the left side of the table, then select one or more grant recipients from the list. To show all grant recipients, click the "Select all" button. To show one or more specific grant recipients, scroll through the list on the left side of the table and click on their name(s). The table will then filter the results and only show the grant recipient(s) you selected.



Grant Recipient	Total Funded A...	Funded by CAAct	Total ARP Funds	Initial ARP Funds	Supplemental A...
Alabama	$20,712,916	$11,612,338	$9,100,578	$9,100,578	$0
Alaska	$2,119,782	$1,188,419	$931,363	$931,363	$0
Arizona	$23,927,222	$13,414,383	$10,512,839	$10,512,839	$0
Arkansas	$13,130,672	$7,361,484	$5,769,188	$5,769,188	$0
California	$116,496,312	$65,311,640	$51,184,672	$51,184,672	$0
Colorado	$15,193,943	$8,518,221	$6,675,722	$6,675,722	$0
Connecticut	$9,756,536	$5,469,833	$4,286,703	$4,286,703	$0
Delaware	$2,832,377	$1,587,923	$1,244,454	$1,244,454	$0
District of Colu...	$2,424,989	$1,359,528	$1,065,461	$1,065,461	$0
Florida	$75,756,689	$42,471,676	$33,285,013	$33,285,013	$0
Georgia	$37,173,132	$20,840,473	$16,332,659	$16,332,659	$0

Data accessed on February 3, 2023 LIHWAP Database (https://lihwap-hhs-acf.opendata.arcgis.com/pages/national-snapshot#nstop)

Figure F-3: National Implementation Plan - Operational Priorities Map, Figure, and Table



2. OPERATIONAL PRIORITIES

There are three LIHWAP priority groups:

1) **Restoration of Services**: Households with disconnected water services. The initial priority is to target assistance to those households whose services are already disconnected.

2) **Prevention of Disconnection**: Households with pending disconnections of water services. The second priority group are the households that currently have service but are at risk of being disconnected because of nonpayment. This means they have a disconnection notice or an outstanding balance.

3) **Reduction of Rates Charged**: Households seeking help with current water bills. The third and last priority group are households who have working service, but are seeking help with current bills and are otherwise not behind on their bills.

Some grant recipients identified additional operational priorities. These priorities are included in the "other" category. Please see the table below for a complete list of what's included in the "other" category.

MAP SERIES 2 - OPERATIONAL PRIORITIES

Directions: Select a grant recipient type at the bottom of the map series below to toggle between state and tribal grant recipients.

OPERATIONAL PRIORITIES
YES
NO
UNCLEAR
Other

MAP 2.1 RESTORATION OF SERVICES PRIORITY

MAP 2.2 PREVENTION OF DISCONNECTION PRIORITY

MAP 2.3 REDUCTION OF RATES CHARGED PRIORITY

MAP 2.4 OTHER OPERATIONAL PRIORITIES

Powered by Esri

STATE GRANT RECIPIENTS | TRIBAL GRANT RECIPIENTS

Notes: The colors on the maps above correspond to whether or not each operational priority is used by each grant recipient. **Darker Blue** = Yes, the operational priority is used; **Lighter Blue** = No, the operational priority is not used; **Grey** = North Dakota did not participate.

FIGURE 2 SERIES - OPERATIONAL PRIORITIES

Directions: Select a grant recipient type at the top of the figure series below to toggle between state and tribal grant recipient data.

RECIPIENT TYPE States Tribes

RESTORATION OF SERVICES % OF GRANT RECIPIENTS — 98%

PREVENTION OF DISCONNECTION % OF GRANT RECIPIENTS — 100%

REDUCTION OF RATES % OF GRANT RECIPIENTS — 53%

OTHER PRIORITY % OF GRANT RECIPIENTS — 8%

Notes: Each figure shows the total percentage of grant recipients that are targeting each operational priority category.

INTERACTIVE TABLE 2 - OPERATIONAL PRIORITIES

Directions: Filter the table below by selecting a grant recipient type on the left side of the table, then select one or more grant recipients from the list. To show all grant recipients, click the "Select all" button. To show one or more specific grant recipients, scroll through the list on the left side and click on their name(s). The table will then filter the results and only show the grant recipient(s) you selected. To view the other priorities identified by grant recipients hover over the text in the "Other Operational Priorities" column.

RECIPIENT TYPE States Tribes

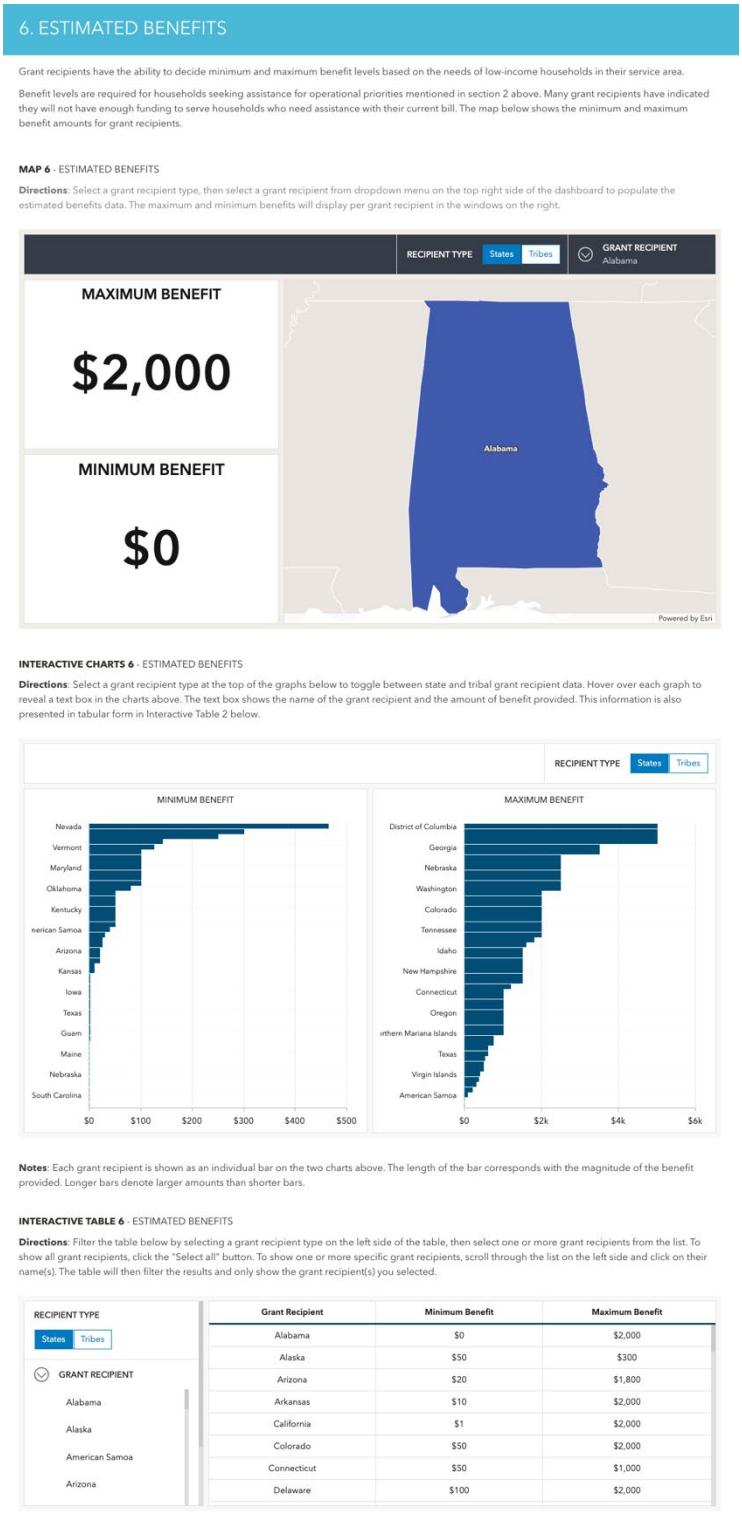
GRANT RECIPIENT

Alabama

Grant Recipients	Restoration	Prevention	Reduction	Other	Other Operatio...
Alabama	yes	yes	yes	no	
Alaska	yes	yes	no	no	
Arizona	yes	yes	yes	no	Authorize prosp...
Arkansas	yes	yes	yes	no	
California	yes	yes	no	no	

Data accessed on February 3, 2023 LIHWAP Database (https://lihwap-hhs-acf.opendata.arcgis.com/pages/national-snapshot#priorities)

Figure F-4 National Implementation Plan - Estimated Benefits Map, Chart, and Table



6. ESTIMATED BENEFITS

Grant recipients have the ability to decide minimum and maximum benefit levels based on the needs of low-income households in their service area.

Benefit levels are required for households seeking assistance for operational priorities mentioned in section 2 above. Many grant recipients have indicated they will not have enough funding to serve households who need assistance with their current bill. The map below shows the minimum and maximum benefit amounts for grant recipients.

MAP 6 - ESTIMATED BENEFITS

Directions: Select a grant recipient type, then select a grant recipient from dropdown menu on the top right side of the dashboard to populate the estimated benefits data. The maximum and minimum benefits will display per grant recipient in the windows on the right.

RECIPIENT TYPE States Tribes

GRANT RECIPIENT Alabama

MAXIMUM BENEFIT

$2,000

MINIMUM BENEFIT

$0

Alabama

Powered by Esri

INTERACTIVE CHARTS 6 - ESTIMATED BENEFITS

Directions: Select a grant recipient type at the top of the graphs below to toggle between state and tribal grant recipient data. Hover over each graph to reveal a text box in the charts above. The text box shows the name of the grant recipient and the amount of benefit provided. This information is also presented in tabular form in Interactive Table 2 below.

RECIPIENT TYPE States Tribes

MINIMUM BENEFIT

Nevada
Vermont
Maryland
Oklahoma
Kentucky
nerican Samoa
Arizona
Kansas
Iowa
Texas
Guam
Maine
Nebraska
South Carolina

$0 $100 $200 $300 $400 $500

MAXIMUM BENEFIT

District of Columbia
Georgia
Nebraska
Washington
Colorado
Tennessee
Idaho
New Hampshire
Connecticut
Oregon
rthern Mariana Islands
Texas
Virgin Islands
American Samoa

$0 $2k $4k $6k

Notes: Each grant recipient is shown as an individual bar on the two charts above. The length of the bar corresponds with the magnitude of the benefit provided. Longer bars denote larger amounts than shorter bars.

INTERACTIVE TABLE 6 - ESTIMATED BENEFITS

Directions: Filter the table below by selecting a grant recipient type on the left side of the table, then select one or more grant recipients from the list. To show all grant recipients, click the "Select all" button. To show one or more specific grant recipients, scroll through the list on the left side and click on their name(s). The table will then filter the results and only show the grant recipient(s) you selected.

RECIPIENT TYPE

States Tribes

GRANT RECIPIENT

Alabama
Alaska
American Samoa
Arizona

Grant Recipient	Minimum Benefit	Maximum Benefit
Alabama	$0	$2,000
Alaska	$50	$300
Arizona	$20	$1,800
Arkansas	$10	$2,000
California	$1	$2,000
Colorado	$50	$2,000
Connecticut	$50	$1,000
Delaware	$100	$2,000

Data accessed on February 3, 2023 LIHWAP Database (https://lihwap-hhs-acf.opendata.arcgis.com/pages/national-snapshot#benefits)

Figure F-5 National Implementation - Water Service Providers and Public Water Systems

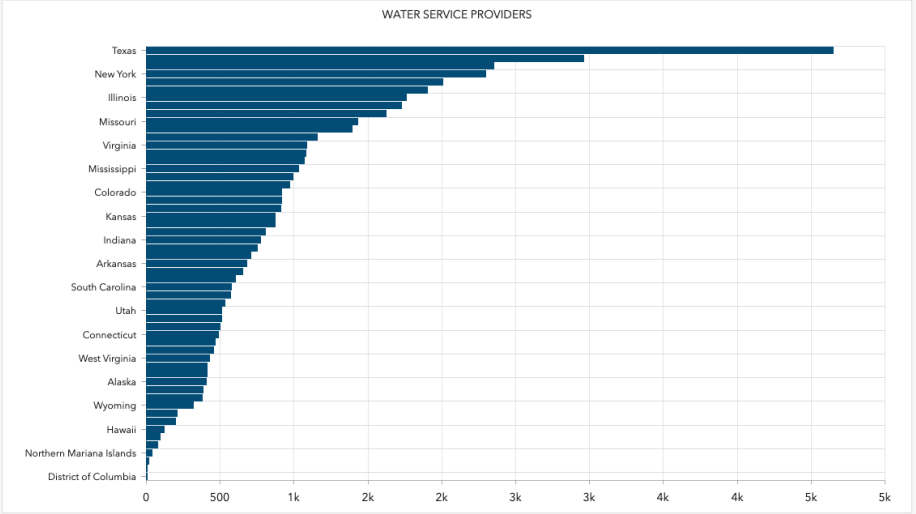
7. WATER SERVICE PROVIDERS AND PUBLIC WATER SYSTEMS

A water service provider is an organization or company that operates public water and/or wastewater systems to provide water and wastewater services to households. Grant recipients have discretion in defining **public water systems** (within reasonable interpretation). In general, public water systems provide water for human consumption through pipes or other constructed conveyances. Water service providers are critical to the successful implementation of LIHWAP. Grant recipients are required to negotiate agreements with the water service providers and make payments to the providers on behalf of LIHWAP beneficiaries. OCS recommends developing written agreements or contracts with water service providers for the protection of all parties. Below is the estimated number of water service providers in each state and territory based on data collected by the U.S. Environmental Protection Agency and other sources.

TOTAL	MINIMUM	MAXIMUM	MEDIAN
48,494	4	4,651	763
WATER SERVICE PROVIDERS ACROSS THE U.S.	WATER SERVICE PROVIDERS WITHIN A STATE	WATER SERVICE PROVIDERS WITHIN A STATE	WATER SERVICE PROVIDERS WITHIN A STATE

INTERACTIVE CHART 7 - WATER SERVICE PROVIDERS

Directions: Hover over each line on the graph to reveal a text box. The text box shows the name of the grant recipient and the number of water utility providers in each grant recipient's state. This information is also presented in tabular form in interactive table 7 below.



Notes: Each grant recipient is shown as an individual bar on the chart above. The length of the bar corresponds with the magnitude of the number of water service providers. Longer bars denote larger amounts than shorter bars.

INTERACTIVE TABLE 7 - WATER SERVICE PROVIDERS

Directions: Select one or more grant recipients from the list. To show all grant recipients, click the "Select all" button. To show one or more specific grant recipients, scroll through the list on the left side and click on their name(s). The table will then filter the results and only show the grant recipient(s) you selected.

GRANT RECIPIENT

Alabama
Alaska
American Samoa
Arizona
Arkansas
California

Grant Recipients	Water Service Providers
Alabama	510
Alaska	406
American Samoa	18
Arizona	870
Arkansas	679
California	2958
Colorado	913
Connecticut	487

Data accessed on February 3, 2023 LIHWAP Database (https://lihwap-hhs-acf.opendata.arcgis.com/pages/national-snapshot#vendors)

Figure F-6 National Implementation – Accessible Version

8. ACCESSIBLE VERSION

The data used to create all of the maps above is displayed below in a table. All grant recipients are included in the accessible table below, scroll down for tribal data. Click on the down and up arrows next to each variable name to sort by that column.

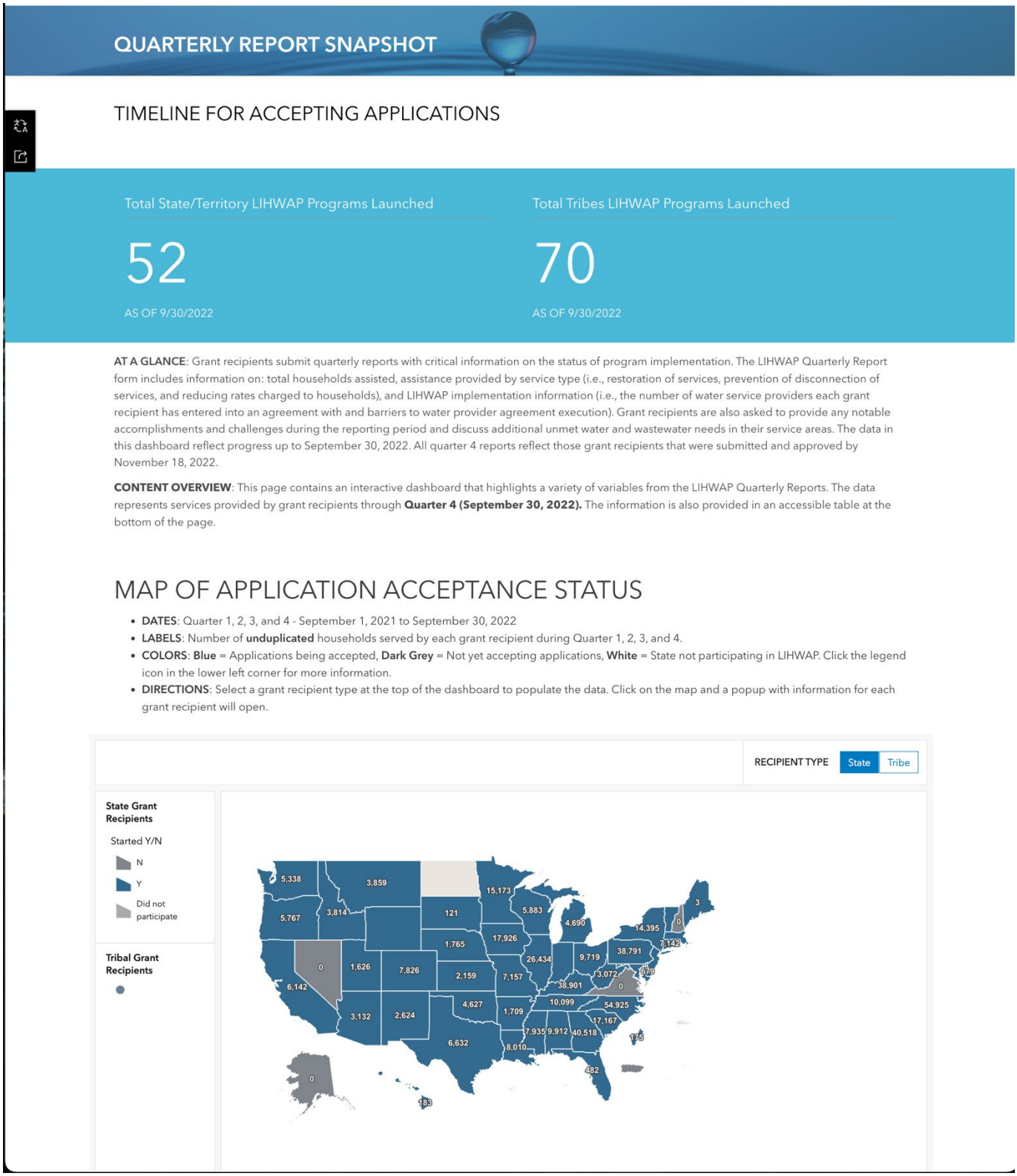
ACCESSIBLE TABLE LIHWAP IMPLEMENTATION PLANS

GRANT RECIPIENT	TYPE	TOTAL AMOUNT ...	FUNDED BY ARP	FUNDED BY CAA	RESTORATION
Alabama	State	20,712,916	9,100,578	11,612,338	yes
Alaska	State	2,119,782	931,363	1,188,419	yes
Arizona	State	23,927,222	10,512,839	13,414,383	yes
Arkansas	State	13,130,672	5,769,188	7,361,484	yes
California	State	116,496,312	51,184,672	65,311,640	yes
Colorado	State	15,193,943	6,675,722	8,518,221	yes
Connecticut	State	9,756,536	4,286,703	5,469,833	yes
Delaware	State	2,832,377	1,244,454	1,587,923	yes
District of Columbia	State	2,424,989	1,065,461	1,359,528	no
Florida	State	75,756,689	33,285,013	42,471,676	yes
Georgia	State	37,173,132	16,332,659	20,840,473	yes
Hawaii	State	3,610,997	1,586,554	2,024,443	yes

BACK TO TOP

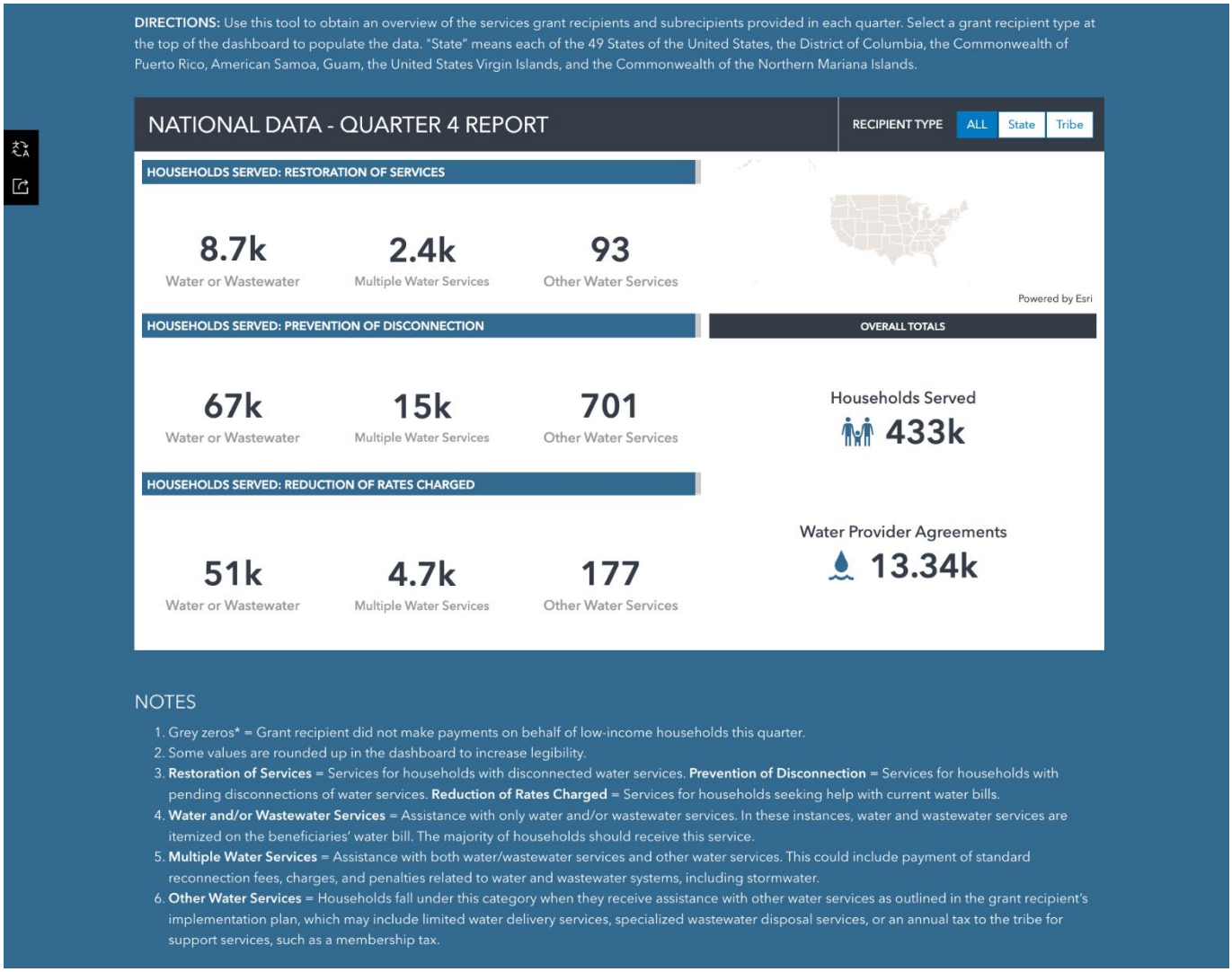
Data accessed on February 3, 2023 LIHWAP Database (https://lihwap-hhs-acf.opendata.arcgis.com/pages/national-snapshot#nstop)

Figure F-7 – Quarterly Report Snapshot – Overview with Applicant Acceptance Status Map



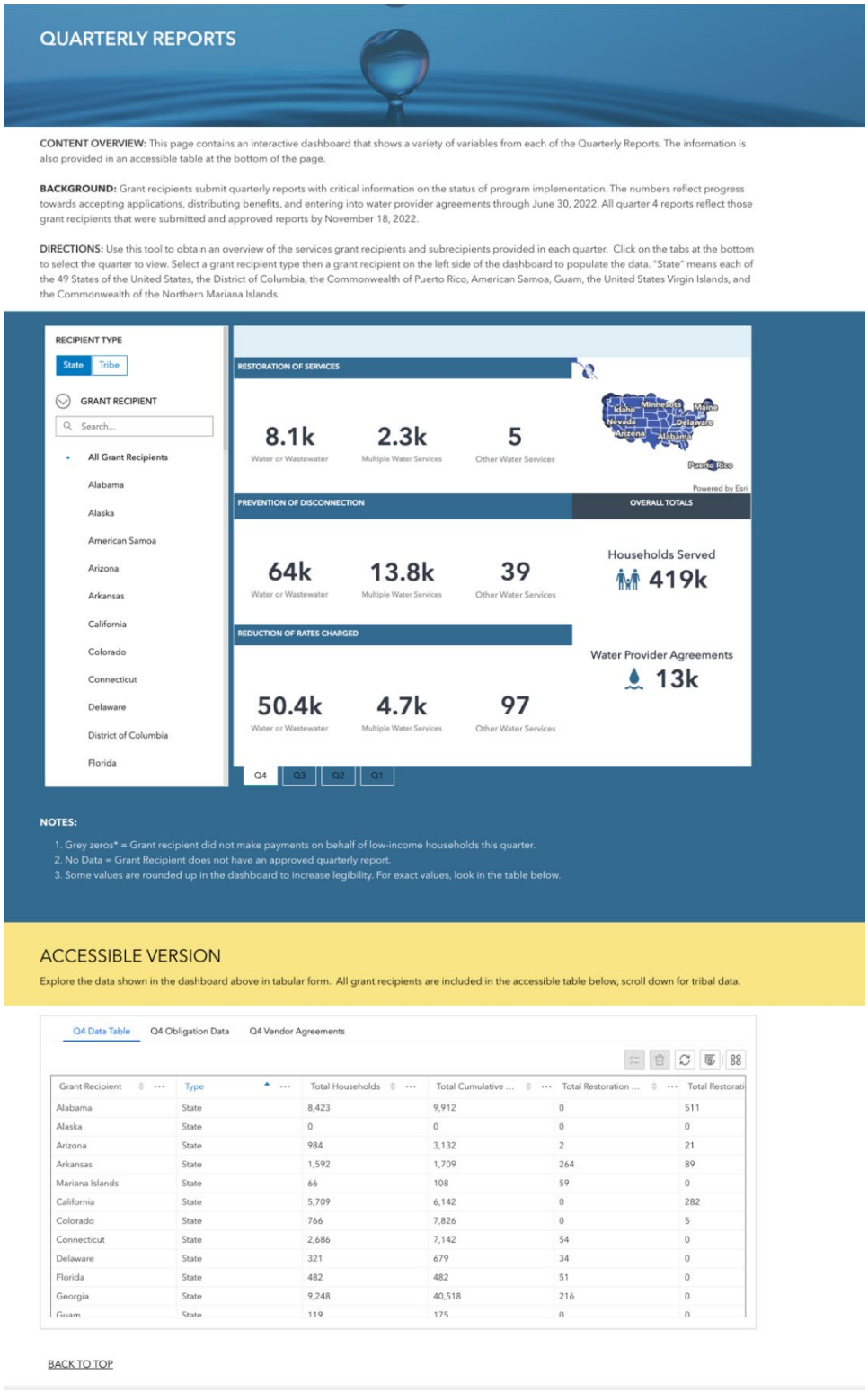
Data accessed on February 3, 2023 LIHWAP Database (https://lihwap-hhs-acf.opendata.arcgis.com/pages/quarterly-snapshot)

Figure F-8 – Quarterly Snapshot – National Data Table



Data accessed on February 3, 2023 LIHWAP Database (https://lihwap-hhs-acf.opendata.arcgis.com/pages/quarterly-snapshot)

Figure F-9 – Quarterly Report – Interactive and accessible dashboards



Data accessed on February 3, 2023 LIHWAP Database (https://lihwap-hhs-acf.opendata.arcgis.com/pages/quarterly-snapshot)

APPENDIX G:

SNAP Document Checklist and Documentation
Required for SNAP Participation

The checklist is found here – https://www.nrpa.org/siteassets/research/snap-enrollment-documentation-checklist-fillable.pdf this is just a screenshot since it is a PDF

SNAP Enrollment Documentation Checklist

The Supplemental Nutrition Assistance Program (SNAP, formerly called Food Stamps) helps approximately 42 million people across the United States receive financial help in buying food. If you want to know if you are eligible for this program, ask your park and recreation staff here at [ ] for the information sheet titled, "SNAP Eligibility Checklist for Families." If you already know you may be eligible and want to enroll in this program, review the information below so you know what documents to bring with you when you apply for SNAP at [ ]. If you have any questions along the way, let us know, we are happy to help you in any way we can!

In order to apply for SNAP, you have to provide proof of eligibility by showing the social worker the types of documents below:[1,2]

- Proof of your identity and age (driver's license, photo ID card, passport, adoption records, shot records, Naturalization Certificate, or birth certificate).
- Proof of identity for your infant (birth certificate, crib card, or discharge paperwork).
- Proof of citizenship and immigration status (birth certificate, military records, U.S. Passport, Naturalization Certificate, permanent resident card/Green card).
- Proof of Social Security Number (Social Security Card, photo ID with birthdate so social worker can look up your Social Security Number).
- Proof of residency including amount paid for housing (current rent receipt or lease, letter from landlord verifying residence, mortgage book).
- Proof of resources on hand (bank statements for all checking and savings accounts in applicant's name, stock/bond certificates, recreational/vacation properties, boats, mobile homes that are not used for everyday living or transportation or to earn an income).
- Proof of all sources of income for everyone living in the household (ex. pay stubs for the last 30 days, unemployment letter, court order [or letter from Family Court] verifying amount of child support, income tax return for self-employed persons only, social security, disability, pension).
- Proof of utility bills (water, sewer, electricity, if not included in rent) and other expenses (landline phone, mobile phone bills, homeowners insurance bill)
- Proof of child care expenses.
- If over 60, copy of medical receipts/expenses (paid and unpaid bills for: medical, dental, and mental healthcare; home healthcare aide or attendant, prescriptions, glasses; dentures, hearing aides; prosthetics; service animals; health insurance and Medicare premiums; and/or medical transportation [if living in rural area]) that are greater than $35, not covered by insurance.

SNAP during COVID-19[3]

The Families First Coronavirus Response Act has created some changes in the SNAP program. While not all states are implementing some of the new opportunities, the act does allow the program to provide benefit supplements (emergency supplementary benefits for up to two months) during the pandemic to deliver more food assistance to struggling families, making it easier for families to continue participating in SNAP. The act has temporarily suspended SNAP's three-month time limit on benefits for unemployed adults under age 50 without children in their home. Check with your state's program administration to see if it is implementing any of the new COVID-19 changes to SNAP.

Items not considered in the SNAP application include: cable bills, car payments, loan repayments, credit card payments.[1]

References

[1]ncoa.org/wp-content/uploads/SNAP-Documents-Required-TN.pdf

[2]missoulafoodbank.org/wp-content/uploads/2016/02/SNAP-FAQ.pdf

[3]cbpp.org/research/food-assistance/most-states-are-easing-snap-participation-rules-and-providing-added

APPENDIX H:

Example Calculation from the National Affordability Needs Model

Appendix H – Needs Model Calculation Example

Summary of Methodology

The following is a brief description of the employed methodology with an example of the calculation procedures used to prepare the needs assessment estimates.

A range of data sets and granular location-specific calculations (where available) were used to develop the four needs estimates discussed in the Report. The four needs estimates are defined by the affordability thresholds applied in each scenario. These thresholds are percentages that establish support needs for billed dollars that are above each percentage. The percentages are calculated as local bills as a percentage of local incomes. The scenarios include:

- Threshold #1 – A percentage threshold that increases from 3% to 8% in 1% increments for each successively lower income level.
- Threshold #2 – 4.5% at all income levels.
- Threshold #3 – 3% at all income levels.
- Threshold #4 - A percentage threshold that declines from 4.5% to 2% in 1% increments for each successively lower income level.

The models geographic scale includes approximately 27,000 U.S. Census Places from the 2019 Census, which also provides information of the percentage of each population that falls within a set of income ranges reported in the U.S. Census. The mid-point of each income range was used for calculating bills as a percentage of income.

Information on water and sewer bills was gathered for 639 locations with state average bills applied for Census Places where data was not available on rates as well as for the balance of each state's population that did not fall within a Census Place. Data on rates and bills at typical essential usage consumption levels was sourced from a nationally representative academic survey conducted for research at the University of Wisconsin and led by Study Team member Manuel P. Teodoro, as well as information from the annual AWWA Rate Survey, and proprietary archives of public rate information available to Study Team members.

Below is an example calculation for a single U.S. Census Place using Threshold #4. These calculations were conducted for approximately 27,000 locations and aggregated to estimate the national affordability need for each threshold scenario.

Step 1 – Data Inputs:

- Scenario = Threshold #4
- Geography = Anywhere City, USA State. This is just one selected Census Place used here for the illustration of the needs calculation. In the actual calculations, each of the 27,000 places were calculated and then aggregated.
- Typical Monthly Water Bill at Essential Usage (Assumed Family of 2.6[103] People (US Average Household Size) Using 50 Gallons per Person per Day) = $25
- Typical Monthly Sewer Bill at Essential Usage = $40[104]
- Typical Monthly Total Bill at Essential Usage = $65[2]
- Typical Annual Total Bill at Essential Usage = $65 X 12 = $780[2]

[103] While this assumption is an admitted simplification and does mask affordability need for large households in our needs assessment, it also will tend to overstate the bill for 1 and 2 person households. It is noteworthy that there are more 1 and 2 person households combined than all other larger household sizes combined. Source: https://www.statista.com/statistics/242189/disitribution-of-households-in-the-us-by-household-size/

[104] Note again that were data at the Census Place level not available for "Anywhere City, USA State", then a state average bill based on available data would be applied here.

- Total Number of Households for the selected Census Place = 6,000
- % and # of Households by Income Range Mid-Point:
  - Less than $10,000, Mid-point = $5,000, % and # of Households = 11%, 660 Households
  - $10,000 to $14,999, Mid-point = $12,500, % and # of Households = 9%, 540 Households
  - $15,000 to $24,999, Mid-point = $20,000, % and # of Households = 14%, 840 Households
  - $25,000 to $34,999, Mid-point = $30,000, % and # of Households = 13%, 780 Households
  - $35,000 to $49,999, Mid-point = $42,500, % and # of Households = 11%, 660 Households
  - $50,000 to $74,999, Mid-point = $62,500, % and # of Households = 17%, 1,020 Households (contains median national income)
  - $75,000+, 25%, 1,500 Households (Income ranges starting above $75,000 were not included in the analysis)[105]

Step 2 – Calculate the Bill as a Percentage of Income Range Mid-Point (in parentheses the applied threshold for Threshold #4 scenario is identified)

- @ $5,000 = $780 / $5,000 = 15.60% > (2.0%) = Need IS identified
- @ $12,500 = 6.24% > (2.5%) = Need IS identified
- @ $20,000 = 3.90% > (3.0%) = Need IS identified
- @ $30,000 = 2.60% < (3.5%) = Need NOT identified
- @ $42,500 = 1.84% < (4.0%) = Need NOT identified
- @ $62,500 = 1.25% < (4.5%) = Need NOT identified

Step 3 – Isolate the Magnitude of the Need @ Each Income Range Mid-Point Across all Households

- @ $5,000 = 15.60% - 2.0% = 13.60% X $5,000 = $680.00 X 660 = $448,800
- @ $12,500 = 6.24% - 2.5% = 3.74% X $12,500 = $467.50 X 540 = $252,450
- @ $20,000 = 3.90% - 3.0% = 0.90% X $20,000 = $180.00 X 840 = $151,200

Step 4 – Total Anywhere City, USA State Unadjusted Affordability Need = Sum of Step 3 = $852,450

Step 5 – Total "Anywhere City, USA State" Adjusted Affordability Need

- Illustration of the Cost of the Need for one Census Place based on the percentage of state households reporting water costs paid directly or included in rent (excludes households indicating they are not charged for water) for "USA State":
  = 85% X $852,450 = **$724,583**

[105] While some Census Places may have a median income that is above the national income, more than twice as many have incomes below national income.