

The following water affordability study
was utilized in creating the new
Detroit Water & Sewerage Department
(DWSD) Lifeline Plan.

The Detroit analysis begins on the 52nd
page of the report (published as page 26).

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WATER AFFORDABILITY STUDY SURVEY OF PROGRAMS – IN-DEPTH ANALYSIS

Summary Report

Prepared For:

Office of the People’s Counsel (OPC) of the District of Columbia
Washington, DC

Grace D. Soderberg
OPC Project Manager

Prepared By:

APPRISE Incorporated
32 Nassau Street, Suite 200
Princeton, NJ 08542
(609) 252-8008

David Carroll
Project Manager

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Acronyms

ACE	Atlantic City Electric
AEP	American Electric Power
AHA	Affordable Housing Alliance
ARA	Arrearage Retirement Assistance
BCS	Bureau of Consumer Services
BPU	Board of Public Utilities
CAEA	Clean and Affordable Energy Act
CAP	Customer Assistance Program
CARES	Customer Assistance Referral and Evaluation Program
CARES	Coronavirus Aid, Relief, and Economic Security
CBO	Community Based Organization
CDBG	Community Development Block Grant
CEDA	Community and Economic Development Association
CG	Columbia Gas
CHAMP	ComEd Helps Activated/Veteran Military Personnel
CRP	Customer Responsibility Program
CS	Community Service Division
CSR	Customer Service Representative
DC	District of Columbia
DCA	Department of Community Affairs
DCPSC	District of Columbia Public Service Commission
DEF	Dollar Energy Fund
DHCR	Division of Housing and Community Resources

DHFS	Department of Healthcare and Family Services
DHS	Department of Human Services
DOEE	Department of Energy & Environment
DP&L	Dayton Power and Light
EATF	Energy Assistance Trust Fund
EDC	Electric Distribution Company
EDEC	Electric Discount and Energy Competition Act
ERMA	Emergency Rent and Mortgage Assistance
EUSP	Electric Universal Savings Program
FPG	Federal Poverty Guideline
GWUL	Greater Washington Urban League
HEAL	Hospital-Based Energy Assistance and Long-Term Health
HEAP	Home Energy Assistance Program
HEARTWAP	Heating System Repair and Replacement Program
HUD	Housing and Urban Development
HWAP	Home Weatherization Assistance Program
IHWAP	Illinois Home Weatherization Assistance Program
LIHEAP	Low Income Home Energy Assistance Program
LIPP	Low-Income Energy Efficiency Program
LIURP	Low-Income Usage Reduction Program
LMI	Low- to Moderate-Income
MAA	Medical Assistance to the Aged
MAO	Medical Assistance Only
MEA	Maryland Energy Administration

MEAP	Maryland Energy Assistance Program
MDPSC	Maryland Public Service Commission
NGDC	Natural Gas Distribution Company
ODSA	Ohio Development Services Agency
OHEP	Office of Home Energy Programs
OPAE	Ohio Partners for Affordable Energy
OPC	Office of the People’s Counsel
OT	OnTrack
PAAD	Pharmaceutical Assistance to the Aged and Disabled
PAGE	Payment Assistance for Gas and Electric
PCAP	Pennsylvania Customer Assistance Program
PEPCO	The Potomac Electric Power Company
PGW	Philadelphia Gas Works
PIPP	Percent of Income Payment Plan
PPA	Power purchase Agreement
PUC	Public Utility Commission
PUCO	Public Utilities Commission of Ohio
RA	Reconnection Assistance
RAD	Residential Aid Discount
RAFT	Residential Assistance for Families in Transition
REDF	Renewable Development Energy Fund
RES	Residential Essential Service
RGGI	Regional Greenhouse Gas Initiative
RSHF	Residential Special Hardship Fund

SEIF	Strategic Energy investment Fund
SEU	Sustainable Energy Utility
SLEAF	Supplemental Low-Income Energy Assistance Fund
SNAP	Supplemental Nutritional Assistance program
UDP	Utility Discount Program
UESF	Utility Emergency Service Fund
USF	Universal Service Fund
USP	Universal Service Programs
USPP	Universal Service Protection Program
WAFF	Washington Area Fuel Fund
WAP	Weatherization Assistance Program
WGL	Washington Gas and Light
WRAP	Winter Relief Assistance Program

EXECUTIVE SUMMARY

The Office of the People's Counsel (OPC) is an independent agency of the District of Columbia (DC) government. By law, it is the advocate for consumers of natural gas, electric, water, and telephone services in the District.¹ As of April 11, 2019, with the passage of the DC Water Consumer Protection Amendment Act of 2018, OPC is the statutory representative and consumer advocate for District of Columbia consumers and ratepayers who use services and goods provided by DC Water. The OPC is concerned that households across all income levels in DC struggle with energy and water affordability issues. The OPC is committed to fulfilling its mandate to ensure that DC residents have access to high quality utility services that are safe, reliable, universally affordable, and environmentally sustainable, and therefore seeks solutions that enable equitable access to energy and water.² The purpose of the Water Affordability Study is to inform and advise the OPC on matters affecting water affordability, particularly for DC's low- to moderate-income (LMI) households. The purpose of this Supplemental Water Affordability Study is to examine those same issues with respect to water affordability. This report furnishes detailed information about the design, funding, participation, and underlying need for water assistance programs offered to low- and moderate-income households in the District of Columbia and seven comparison jurisdictions to assist the OPC consider policies and programs to increase water affordability. [Note: It is important to understand that all of the information available to the project team for this study represents the conditions prior to the economic, social, and environmental changes that have occurred as a result of the COVID-19 pandemic. In addition, Congress recently passed legislation that provided funding for a national water assistance program. That also is likely to change the water program assistance landscape in the District and the comparison jurisdictions.]

Study Procedures and Work Products

This study collected and analyzed four types of information for the District of Columbia and the seven comparison jurisdictions (*Atlanta; California; Detroit; Philadelphia; Portland; Raleigh; and Seattle*) related to their LMI water assistance programs – population characteristics, water affordability, program design, and program performance.

- Population Characteristics – The project team developed estimate of the share of LMI households that pay a water bill directly to the water company using American Community Survey (ACS) data and other available information.
- Water Affordability – The study also used ACS data to estimate the water bills and water burden faced by LMI households.

¹ This text was copied directly from the Office of People's Counsel website on September 23, 2019.

² This is text from the Request for Proposal #OPCI-RFP-2019-4 issued by the OPC on January 10, 2019.

- Program Design – The project team collected information on the program design parameters for the District and each of the comparison jurisdictions.
- Program Impacts – The study used the combined set of information to estimate the program participation rate in each jurisdiction and the impact of assistance on net water burdens for LMI households.

This report furnishes detailed information about the LMI programs implemented in the District of Columbia and in each of the comparison jurisdiction.

This Survey of Programs is one of two reports comprising the Water Affordability Study. The other report is the Population Characterization Report that furnishes detailed information about the income, demographics, water burden, and shelter burden for DC’s Direct Water Payment LMI households.

District of Columbia Water Assistance Program

The District of Columbia is unique in that the majority of households live in multifamily buildings, while in most other jurisdictions, the majority of households live in single-family homes. That has one important outcome relative to water affordability. While most households living in single-family homes pay a water bill directly to the water utility, most households living in multifamily buildings have their water bill included in their rent. Table 1 shows how this affects the share of water payment households that are low- and moderate-income.³

Table 1 – Water Payment Characteristics by Program Eligibility Group

Statistics	SNAP Eligible	NonSNAP Low-Income	Moderate Income	Median Income	Non-LMI Housholds	All Households
Percent of Households	17%	11%	12%	14%	46%	100%
Households	48,351	29,958	33,925	40,419	128,668	281,321
Water Bill Percent	20%	27%	31%	41%	55%	41%
Number with Water Bill	9,712	8,195	10,669	16,657	70,314	115,547
Percent of HHs with Bill	8%	7%	9%	14%	61%	100%

Source: American Community Survey (2014-2018) / All Households

The first row in the table shows the share of households that are in each of the Program Eligibility Groups.⁴ Over 50 percent of households are characterized as low-income, moderate-income, or

³ DC Water has been authorized to implement a new Multifamily Assistance Program. Among the comparison jurisdictions, only Seattle has a program that serves households with water included in their rent. For that reason, this report will focus on assistance programs that serve low-income households that pay direct for their water.

⁴ Program Eligibility Groups: SNAP Eligible are households with incomes at or below 130% of the HHS Poverty Income Guideline (PIG); Non-SNAP Low Income are households with income above 130% of HHS PIG but at or below 60% of State Median Income (SMI); Moderate Income are households with income above 60% of SMI but at

median income. However, among the SNAP Eligible households, for example, only 20 percent report paying a water bill directly to DC Water; only 9,712 of the 48,351 SNAP Eligible households pay a water bill. The last row in the table shows that SNAP Eligible households only represent eight percent of District households that have a water bill. Overall, LMI households are 54 percent of the District population, but are only 39 percent of the households that pay a water bill.

Our research shows that LMI households that pay a water bill directly to DC Water face substantial water burdens. Table 2 shows that the lowest income households pay some of the highest water bills. As a result, the average water burden for both SNAP Eligible Households and Non-SNAP Low-Income households is considered to be “severely unaffordable” (i.e., greater than 3% of income). The average water burden for Moderate-Income and Median-Income households is considered “affordable” (i.e., less than 1.8% of income). However, because there is variation of income and water bills within those populations, it is likely that some households in those groups also have “unaffordable” water bills.

Table 2 – Water Burden for Households that Pay Directly for Water by Program Eligibility Group

Program Eligibility Group	Mean Water Expenditures	Mean Income	Mean Water Burden
SNAP Eligible	\$1,080	\$11,142	9.7%
Non-SNAP Low-Income	\$1,290	\$33,041	3.9%
Moderate Income	\$1,060	\$50,246	2.1%
Median Income	\$1,095	\$80,574	1.4%
Non-LMI Households	\$1,137	\$248,767	0.5%
All Households	\$1,130	\$170,917	0.7%

Source: American Community Survey (2014-2018) / Water expenditures normalized values reported by DC Water

The water assistance programs in the District are designed in the following way.

- The programs were established by statute. That is a best practice in that it ensures that the programs are not subject to annual regulatory procedures.⁵ [Note: The implementation of the programs is determined by regulatory action.]
- In 2020, \$2.7 million in benefits were provided, which were funded by a combination of funds from DC Water and from the DC government.⁶

or below 80% of the HUD Area Median Income (AMI) standard; Median Income are households with income above 80% of AMI but at or below 100% of AMI.

⁵ DC Code § 34-2202.16b.(b)(1-5) mandates a financial assistance program to help households up to 100% of area median income pay imperious area charges. DC Code § 34-2202.16(b-1) and (d-4) mandate programs to abate the effect of rate increases on low-income households. The form of those programs (how to determine eligibility, what benefits are provided, etc.) is a regulatory matter.

⁶ “DC Water extends financial assistance programs through fiscal year 2020”. <https://www.dewater.com/whats-going-on/news/dc-water-extends-financial-assistance-programs-through-fiscal-year-2020>

- The program is administered by the Department of Energy and The Environment (DOEE) which also administers the energy assistance programs. That is a best practice because it uses existing outreach and intake infrastructure and allows low-income households to apply for energy assistance and water assistance programs at the same time.
- The program serves low-income, moderate-income, and median-income households. It targets the highest benefits to the low-income households. These are best practices in that they ensure that it devotes the greatest level of resources to the households with the greatest need, but it also recognizes the needs of households that are slightly above the low-income threshold.

The water assistance programs serve over 20 percent of SNAP Eligible households, over 10 percent of Non-SNAP Low-Income households, and about 1 percent of Moderate-Income and Median-Income households.

Table 3 shows the impact of the water assistance programs on the participating households. The “Gross Water Burden” is defined as the total water bill divided by income. For non-participant SNAP Eligible households, the water bill is over \$1,000 which represents almost 10 percent of household income. However, the average benefit to those households is estimated to be about \$810 which reduces the average net water bill to about \$270 and reduces the burden to a net value of 2.4 percent of income. That amount still is “unaffordable” based on the threshold of 1.8 percent of income. However, it is much closer to affordability than prior to receipt of assistance. Table 3 also shows that the mean net burden for all other program participants is less than 1.8 percent of income and is considered to be “affordable.”

Table 3 – Gross and Net Water Burden by Program Eligibility Group

Program Eligibility Group	Mean Gross Water Bill	Mean Income	Mean Burden	Mean Benefit	Mean Net Water Bill	Mean Net Burden
SNAP Eligible	\$1,080	\$11,142	9.7%	\$810	\$270	2.4%
Non-SNAP LI	\$1,290	\$33,041	3.9%	\$968	\$322	1.0%
Moderate (CAP2)	\$1,060	\$50,246	2.1%	\$530	\$530	1.1%
Median (CAP3)	\$1,095	\$80,574	1.4%	\$164	\$931	1.2%

Source: American Community Survey (2013-2017) / All LMI or Median Income Households with a water bill. Income categories defined in footnote 5 of the Executive Summary.

The basic finding is that the District water assistance programs meet the needs of those households that participate in the program. However, it might be beneficial for the program to serve additional households.

<https://www.dewater.com/sites/default/files/documents/Public%20Hearing%20DC%20CARES%20January%2013%202021-%20website%20version.pdf>

Comparing the District of Columbia Program with Other Jurisdictions

This report shows how the District of Columbia water assistance programs compare to those of other jurisdictions in terms of the population served and the impact of the programs on water affordability. The other jurisdictions included in the analysis are Atlanta, GA; Cal Water; Detroit, MI; Philadelphia, PA; Portland, OR; Raleigh, NC, and Seattle, WA. Each of those jurisdictions has implemented low-income water assistance programs that are designed to help make water bills affordable for low-income households.

One important factor in considering the design of water assistance programs is the share of water customers who pay a water bill directly to the company and are income-eligible for the assistance programs. Table 4 shows that the District of Columbia has the lowest percentage of households that pay for their water directly to the water utility. Only 41 percent of District households pay a water bill directly. In the comparison jurisdictions, two-thirds of the households or more pay a water bill directly.

Table 4 - Percent of Households that are Direct Payment by Eligibility Group and Jurisdiction

Jurisdiction	SNAP Eligible	NonSNAP Low-Income	Moderate Income	Non-LMI Households	All Households
District of Columbia	20%	27%	31%	55%	41%
Atlanta, GA	51%	57%	65%	76%	68%
Cal Water	51%	59%	65%	79%	70%
Detroit, MI	56%	69%	74%	78%	67%
Philadelphia, PA	54%	65%	67%	74%	66%
Portland, OR	41%	53%	58%	77%	66%
Raleigh, NC	65%	65%	77%	87%	81%
Seattle, WA	43%	48%	53%	74%	65%

Source: American Community Survey (2014-2018) / All Households.

Table 5 furnishes information on the distribution of water payment customers by Program Eligibility Group for the District and the comparison jurisdictions. The table shows that the jurisdictions are quite different in terms of the share of households that would be income eligible for programs. In most jurisdictions, the water assistance programs are available to low-income households (i.e., SNAP Eligible and NonSNAP Low-Income). In the District, about 15 percent of Direct Water Payment households are considered to be low-income, while in Detroit almost one-half of Direct Water Payment households are low-income. Atlanta, Portland, Raleigh, and Seattle all are similar to the District in that less than 20 percent of Direct Water Payment households are low-income.

Table 5 - Percent of Direct Payment Households by Eligibility Group and Jurisdiction

Jurisdiction	SNAP Eligible	NonSNAP Low-Income	Moderate Income	Non-LMI Households	All Households
District of Columbia	8%	7%	9%	76%	100%
Atlanta, GA	14%	5%	15%	66%	100%
Cal Water	13%	9%	13%	66%	100%
Detroit, MI	33%	16%	15%	36%	100%
Philadelphia, PA	24%	15%	18%	43%	100%
Portland, OR	10%	6%	16%	68%	100%
Raleigh, NC	10%	4%	20%	66%	100%
Seattle, WA	8%	6%	15%	72%	100%

Source: American Community Survey (2014-2018) / All Households.

For purposes of this study, APPRISE has defined water affordability in the following way:

- Affordable Water Burden – HUD defines an “affordable” shelter burden as being less than or equal to 30 percent of income. Since, on average, water expenditures represent about six percent of shelter costs, a water burden of 1.8 percent or less would contribute to a household having an “affordable” shelter burden. [Note: 6% of 30% is 1.8%]
- Unaffordable Water Burden – By extension, a water burden of more than 1.8 percent of income would contribute to having an “unaffordable” shelter burden. As such, a water burden of 1.8 percent or higher is defined as “unaffordable” for purposes of this study.
- Severe Water Burden – HUD defines a “severe” shelter burden as being shelter costs that exceed 50 percent of income. By extension, a water burden of 3.0 percent or more (6% of 50%) would contribute to having a “severe” shelter burden. As such, a water burden of 3.0 percent or higher is defined as “severe” for purpose of this study.

Table 6 furnishes information on how the average water burden varies by Program Eligibility Group for the District and the comparison jurisdictions. For all jurisdictions, SNAP Eligible households have a “severe” water burden (i.e., burden greater than 3% of income). For all jurisdictions, the water burden for Non-SNAP Low-Income households is “unaffordable” (i.e., burden greater than 1.8% of income) and for some jurisdictions like the District, it is “severe.” In most jurisdictions, the average burden for Moderate-Income households is close to the “affordable” burden target. In some jurisdictions (e.g., Seattle) the average burden is just above the severity target and in others (e.g., Philadelphia) the average burden is just below the affordability target.

Table 6 – Average Water Burden by Program Eligibility Group and Jurisdiction

Jurisdiction	SNAP Eligible	NonSNAP Low-Income	Moderate Income	Non-LMI Households	All Households
District of Columbia	9.7%	3.9%	2.1%	0.5%	0.7%
Atlanta, GA	9.1%	4.2%	2.7%	.7%	0.9%
Cal Water	4.0%	2.1%	1.3%	0.5%	0.6%
Detroit, MI	7.2%	3.0%	2.2%	1.0%	1.9%
Philadelphia, PA	6.4%	2.6%	1.7%	.6%	1.1%
Portland, OR	9.8%	5.2%	3.4%	1.1%	1.4%
Raleigh, NC	3.7%	1.8%	1.2%	0.4%	0.5%
Seattle, WA	13.2%	5.3%	3.3%	1.0%	1.3%

Source: American Community Survey (2014-2018) / All Households [Note: Water bill estimates were updated using reported average water bills for the District, Atlanta, Philadelphia, Portland, and Seattle.]

The District and all of the jurisdictions included in this study have water assistance programs. However, the program design parameters, funding levels, and benefits are quite different. The following design parameters were examined for the District and the comparison jurisdictions.

- **Regulatory Framework** – In some of the comparison states, water utilities are explicitly forbidden from implementing payment assistance programs, while in other jurisdictions they are required to do so. For each jurisdiction, the study examined whether the authority for the program is statutory, regulatory, or voluntary.⁷
- **Program Funding Source** – The study examined whether the program funding was from ratepayers, taxpayers, or other sources.

⁷ Information derived from “Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities” from the UNC Environmental Finance Center. In Maryland, commission regulated utilities cannot have customer assistance programs. In Ohio, commission regulated utilities may face legal challenges because they cannot charge two customers different prices for “doing a like and contemporaneous service under substantially the same circumstances and conditions.” In Illinois, commission regulated utilities may face challenges for establishing CAPS because they are forbidden by state law from “making or granting, with respect to rates or charges, any preference or advantage to any corporation or person, or from subjecting any corporation or person to any prejudice or disadvantage.”

Paragraph VIII of the Georgia State Constitution states ... “Except as otherwise provided in the Constitution, (1) the General Assembly shall not have the power to grant any donation or gratuity or to forgive any debt or obligation owing to the public” For this reason, for Care and Conserve to be established in Georgia, a case had to be made that it could save on total costs, such as in arrearage collection and disconnections.

Similarly, in North Carolina, cost of service rate setting statutes might open up CAPs to legal challenges, so UCAP in Raleigh was justified as it reduced the cost of collections and the costs associated with disconnections.

- Program Management – The study examined which organizations were responsible for program administration, outreach, and intake. Programs are managed by the water company, by a government agency, by a nonprofit, or some combination.
- Program Eligibility – Most of the water assistance programs target low-income households. However, the study found that some programs offer benefits to moderate-income households as well.
- Water in Rent – The Seattle program was the only one that delivered benefits to low-income households who paid for water as part of their rent.

Table 7 shows how the District and each of the comparison jurisdictions design and implemented their programs. The District’s program design parameters are similar to those in most other jurisdictions.

Table 7 – Program Design Parameters by Jurisdiction

Jurisdiction	Regulatory Framework	Funding Source	Program Management	Program Eligibility	Water in Rent
District of Columbia	Statutory	Ratepayer and Taxpayer	Government Agency	Low and Moderate	No
Atlanta, GA	Voluntary	Taxpayer	Water Department	Low Income	No
Cal Water	Regulatory	Ratepayer	Water Company	Low Income	No
Detroit, MI	Statutory	Ratepayer	Water Department	Low Income	No
Philadelphia, PA	Statutory	Ratepayer	Water Department	Low and Moderate	No
Portland, OR	Statutory	Ratepayer	Combination	Low Income	No
Raleigh, NC	Voluntary	Taxpayer	Government Agency	SNAP Eligible	No
Seattle, WA	Statutory	Ratepayer	Combination	Low Income	Yes

Sources: APPRISE research using a number of different data sources as referenced in the body of the report. “DC Water extends financial assistance programs through fiscal year 2020”. <https://www.dewater.com/whats-going-on/news/dc-water-extends-financial-assistance-programs-through-fiscal-year-2020>. Atlanta Journal Constitution. 2019. Grants worth \$2M to help Atlanta residents get free plumbing repairs. California Public Utilities Commission Water Division. 2017. “Summary of Water Low-Income Programs for the Emerging Trends Committee”. GLWA. 2018. Comprehensive Annual Financial Report. City of Philadelphia Department of Revenue. 2020. "Annual Report to the mayor on the Tiered Assistance Program (TAP). <https://www.portlandoregon.gov/water/article/689542>. UNC Environmental Finance Center. 2017. Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities. <https://www.seattle.gov/humanservices/services-and-programs/supporting-affordability-and-livability/utility-discount-program>

Table 8 furnishes information on the funding levels for the assistance programs administered by the District and the comparison jurisdictions. For all jurisdictions, the funding per low-income households is calculated by dividing the total funding by the number of low-income households. Using that statistic, the District has one of the highest funding levels per low-income household. Only Portland and Seattle make more funding available per low-income household.

Table 8 – Funding, Low-Income Households, and Funding per Household by Jurisdiction

Jurisdiction	Total Funding (\$ millions)	Low-Income Households	Funding per Low-Income
District of Columbia	\$2.7*	17,907	\$150
Atlanta, GA	\$1.6**	34,609	\$46
Cal Water	\$9.0	88,524	\$102
Detroit, MI	\$4.5**	82,327	\$55
Philadelphia, PA	\$4.9 / \$20.0	151,532	\$32 / \$132
Portland, OR	\$5.9	27,228	\$217
Raleigh, NC	\$0.2 / \$5.0	18,989	\$11 / \$263
Seattle, WA	\$23.2***	28,605	\$812

Sources: Number of Low-Income Household: American Community Survey (2014-2018) / All Households; *Includes funding for moderate- and median-income households / ** Includes funding for assistance programs and water equipment repairs / *** Includes funding for households with water included in rent / Funding: <https://www.dwater.com/sites/default/files/documents/Public%20Hearing%20DC%20CARES%20January%2013%202021-%20website%20version.pdf>. Atlanta City Council City Utilities Committee. 2019. Department Quarterly Report. FY2019 – 3rd Quarter (Jan – Mar). California Public Utilities Commission Water Division. 2017. “Summary of Water Low-Income Programs for the Emerging Trends Committee”. GLWA. 2018. Comprehensive Annual Financial Report. City of Philadelphia Department of Revenue. 2020. "Annual Report to the mayor on the Tiered Assistance Program (TAP). Bradford Blake, Gary Brown, and Eric Rothstein. 2017. Model Water Utility Affordability Programs. UNC Environmental Finance Center. 2017. Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities. Area Agency on Aging for Seattle and King County. 2017. “Seattle is Changing the Utility Discount Program to Increase Access.

The amount of funding available has a direct impact on the share of low-income households that are able to participate in the assistance programs. Table 9 furnishes information on the number of low-income direct payment customers, the number of program participants, and the program participation rate for the District and each of the comparison jurisdictions. The participation rates vary widely, from about 1 percent of Atlanta low-income direct payment households to more than 90 percent of Cal Water’s low-income customers. The District water assistance program serve about one in six low-income households that directly pay a water bill which compares favorably to the programs in most other jurisdictions.

Table 9 – Water Assistance Program Participation Rates by Jurisdiction

Jurisdiction	Eligible Low-Income Customers	Low-income Program Participants	Participation Rate
District of Columbia	17,907	3,142	18%
Atlanta, GA	34,609	450	1%
Cal Water	88,524	81,804	92%
Detroit, MI	82,327	5,500	7%
Philadelphia, PA	151,532	13,395	9%
Portland, OR	27,228	7,000	26%
Raleigh, NC	18,989	895	7%
Seattle, WA	28,605	32,800	At least 55%

Sources: Number of Low-Income Households from American Community Survey (2014-2018) / All Households; Program Participants from various publications and reports referenced in the body of the report.

Table 10 shows the impact of the water assistance programs for SNAP Eligible program participants. In all jurisdictions, these households have gross water burdens that are much higher than the “severe” affordability threshold. For most jurisdictions, the water assistance benefits are able to reduce the average net water burden, but not to a level that is below the “affordability” threshold. The benefits for the District and Raleigh reduce net water burden to around 2 percent of income. But, even after receiving benefits, the net water burden in many other jurisdictions still is above 3 percent of income.

Table 10 – Net Water Burden for SNAP Eligible Participants by Jurisdiction

Jurisdiction	Mean Water Bill	Gross Water Burden	Mean Benefit	Net Water Bill	Net Water Burden
District of Columbia	\$1,080	9.7%	\$810	\$270	2.4%
Atlanta, GA	\$1,095	9.1%	\$559	\$536	4.5%
Cal Water	\$672	4.0%	\$122	\$550	3.3%
Detroit, MI	\$941	7.2%	\$300	\$641	4.9%
Philadelphia, PA	\$849	8.6%	\$651	\$198	4.0%
Portland, OR	\$1,251	12.2%	\$431	\$820	8.0%
Raleigh, NC	\$532	3.7%	\$240	\$292	2.0%
Seattle, WA	\$1,466	13.2%	\$733	\$733	6.6%

Sources: Number of Low-Income Households from American Community Survey (2014-2018) / All Households. Other data from various publications and reports as referenced in the body of the report.

For Philadelphia, we have reported mean gross bills and burdens, benefits, and net bills and burdens for TAP participants below 100% of the Federal Poverty guideline as comparable to SNAP Eligible households in other jurisdictions. For Portland, we have reported mean gross bills and

burdens, benefits, and net bills and burdens for Financial Assistance participants below 30% of Portland Area Median Income as comparable to SNAP Eligible households. These decisions were based on cutoffs for benefit-tiers in Portland and Philadelphia.

Table 11 shows the impact of the water assistance programs for program participants that are Non-SNAP Low-Income. For these households, the water assistance programs are more successful at making the net water bill affordable. After receipt of assistance, average water burdens are below the “severe” cutoff of 3 percent of income in every jurisdiction but Portland, and average water burdens are no greater than 1.8 percent of income in The District, Raleigh, and the Cal Water service area.

Table 11 – Net Water Burden for Non-SNAP Low-Income Participants by Jurisdiction

Jurisdiction	Mean Water Bill	Gross Water Burden	Mean Benefit	Net Water Bill	Net Water Burden
District of Columbia	\$1,039	3.1%	\$800	\$239	0.7%
Atlanta, GA	\$1,045	4.2%	\$559	\$486	1.9%
Cal Water	\$720	2.1%	\$122	\$598	1.7%
Detroit, MI	\$899	3.0%	\$300	\$599	2.0%
Philadelphia, PA	\$808	3.5%	\$327	\$481	2.9%
Portland, OR	\$1,377	4.6%	\$269	\$1,108	3.7%
Raleigh, NC	\$486	1.8%	\$0	\$486	1.8%
Seattle, WA	\$1,618	5.3%	\$809	\$809	2.7%

Source: Number of Low-Income Households from American Community Survey (2014-2018) / All Households. Other data from various publications and reports as referenced in the body of the report.

For Philadelphia, we have reported mean gross bills and burdens, benefits, and net bills and burdens for TAP participants above 100% of the Federal Poverty guideline but below 150% as comparable to Non-SNAP Low-Income households in other jurisdictions. For Portland, we have reported mean gross bills and burdens, benefits, and net bills and burdens for Financial Assistance participants above 30% of Portland Area Median Income but below 60%. These decisions were based on cutoffs for benefit-tiers in Portland and Philadelphia.

Tables 10 and 11 both show that the District water assistance programs are relatively effective at making water bills affordable for program participants, particularly compared to the outcomes in other jurisdictions.

Summary of Findings and Recommendations

This study demonstrates that there are some important differences between water payment patterns in the District when compared to other jurisdictions. These differences are mainly a function of the fact that such a large share of District households live in multifamily buildings.

However, in terms of LMI households that pay for their water directly, the portfolio of water assistance programs funded by the District of Columbia deliver substantial benefits to low-income households and compare favorably to the program portfolios in other jurisdictions. The major findings include:

- **Water Expenditures and Burden** – The average water bills in the District are relatively high when compared to other jurisdictions. High bills combined with the low average income result in low-income households in the District having one of the higher water burdens among the jurisdictions studied. SNAP Eligible and Non-SNAP Low Income households both have water burdens that exceed the “severe” affordability target.
- **Program Outreach and Administration** – The District has assigned DOEE the responsibility for the CAP program administration, outreach, and intake.⁸ Because DOEE already has program management procedures in place for the energy assistance programs, it is likely that program administration costs are reduced. But the most important reason for this coordination is that it allows low-income households to apply for the water assistance programs at the same time that they apply for the energy assistance programs. However, even though the primary program responsibility is with DOEE, both DC Water and OPC are conducting program outreach activities to ensure that all households who are facing water affordability problems are informed of the program opportunities.
- **Funding and Participation Statistics** – The District makes an investment in low-income energy assistance programs that is higher than most of the other jurisdictions; only Portland and Seattle invest more in total funding per low-income household. The District also has a relatively high program participation rate.
- **Program Impacts** – The District program has been one of the most successful in reducing water burden to an affordable level for program participants. On average SNAP Eligible households have their burden reduced from almost 10 percent of income to about 2 percent of income. Non-SNAP CAP program participants have a net water burden of less than 1 percent of income after receipt of assistance. There have been efforts by DC Water and the district government to respond to the impacts of COVID-19.
- **New Programs** – In response to the economic impacts of COVID-19, DC Water has implemented two new programs that increase the impact on water affordability for income-eligible households. The DC Water CARES: Emergency Relief program assists income-eligible residential customers who have fallen behind on their bills during the COVID-19 pandemic. The DC Water CARES: Multifamily Assistance Program furnishes discounts to building owners that they will pass on to income-eligible tenants.

⁸ Note: DC Water is implementing the DC Water CARES: Multifamily Assistance Program.

The only type of program that has been implemented in other jurisdictions that has not been implemented in the District is an arrearage forgiveness program like the one that is available in Philadelphia. The new DC Water CARES Emergency Relief program reduces the need for an arrearage forgiveness program in the short run. However, if that program is only temporary, it would be useful for DC Water to consider implementing a longer-term arrearage forgiveness program. Programs of that type are effective for low-income households who build up an arrearage before they enroll in the CAP program. While participation in the CAP program will make their current water bills affordable, it does not resolve the outstanding amounts that the household owes. Having a program that grants arrearage forgiveness in exchange for making regular payments has shown to be an effective approach to the elimination of past due arrears for some energy and water programs.

The following recommendations identify how the District can maintain its current level of program performance and could potentially improve its portfolio of energy assistance programs.

- **Investment Levels** – The District’s investment in the CAP programs has resulted in, on average, affordable net energy bills (i.e., net energy bills of less than 1.8% of income) for non-SNAP income-eligible participants, and net energy bills that approach the affordability target for SNAP-eligible participants. By maintaining these levels of investment, the program can expect to continue to serve current program participants in this way. However, additional funding would be needed to make net energy bills affordable for SNAP-eligible participants, or to increase the participation rate above the current levels.
- **Increasing Participation Rates** – The District is currently serving about one in six low-income households that pay a water bill with the water assistance programs. It would be important to study how nonparticipating households are able to pay their water bills when it appears that the water burdens are relatively high for low-income households.
- **Moderate-Income Households** – The water assistance programs make benefits available to some moderate-income households. The District is one of the few jurisdictions that makes those benefits available. While the participation rates are very low, these programs are a good starting point for working with moderate income households.
- **Water in Rent Households** – Only about 20 percent of SNAP Eligible households in the District pay a water bill; the rest of the households have their water bills included in their rent. It would be valuable to study how water bills for those multifamily buildings affect shelter burden for low- to moderate-income households and consider whether the new DC Water CARES: Multifamily Assistance program is adequate to reduce water bills for multifamily buildings occupied by low- to moderate-income households.
- **Arrearage Forgiveness Programs** – The programs for moderate-income households are designed to deliver assistance to those households that are having bill payment programs.

However, there is no formal arrearage forgiveness program of the type implemented in Philadelphia. That option should be considered.

Based on the comparative analysis discussed in Tables 4 thru 11, it was evident that the District water assistance programs compare favorably to those in the other states examined in this study. However, there always are ways to improve programs and ensure that low- and moderate-income households have affordable water bills.

1.0 INTRODUCTION

The Office of the People's Counsel (OPC) is an independent agency of the District of Columbia (DC) government. By law, it is the advocate for consumers of natural gas, electric, and telephone services in the District. District of Columbia law designates the Office as a party to all utility-related proceedings before the Public Service Commission. The Office also represents the interests of District ratepayers before federal regulatory agencies.⁹ As of April 11, 2019, with the passage of the DC Water Consumer Protection Amendment Act of 2018, OPC is the statutory representative and consumer advocate for District of Columbia consumers and ratepayers who use services and goods provided by DC Water.

The OPC is concerned that households across all income levels in DC struggle with energy affordability issues. The OPC is committed to fulfilling its mandate to ensure that DC residents have access to high quality utility services that are safe, reliable, universally affordable, and environmentally sustainable, and therefore seeks solutions that enable equitable access to energy.¹⁰ To address those concerns, the OPC contracted with APPRISE to conduct an Energy Affordability Study to inform and advise the OPC on matters affecting energy affordability, particularly for DC's low- to moderate-income (LMI) households.

The Energy Affordability Study consists of three complementary research tasks.

- Population Characterization Report – The population report furnishes detailed information about income, demographics, energy burden, and shelter burden for DC's LMI households.
- Program Participant Report – The participant report examines how successful existing low-income programs are in making energy affordable for low-income households.
- Lessons from State Energy Assistance Programs – The report reviews energy assistance programs in other states to identify alternative approaches for the OPC to consider.

Together these reports will help the OPC to develop a better understanding of energy affordability for LMI households and to consider ways to better fulfill their mandate.

The OPC expanded the scope of the contract with APPRISE to include research on water affordability issues. The Water Affordability Study mirrors the Energy Affordability Study in that it consists of two complementary research tasks consisting of this report on the Lessons Learned from Water Customer Assistance Programs in other jurisdictions and a Population Characterization Report that furnishes information on LMI households that pay a water bill directly to DC Water.

⁹ This text was copied directly from the Office of People's Counsel website on 9-23-2019.

¹⁰ This is text from the Request for Proposal #OPCI-RFP-2019-4 issued by the OPC on January 10, 2019.

The original design of the study was to incorporate the analysis of the Lessons from State Water Assistance Programs into the study of Energy Assistance Programs in other states. However, when the project team attempted to extend the research on Energy Assistance Programs in other states to include Water Assistance Programs in those same states, we uncovered two important findings. First, none of the states included in the Survey of Energy Assistance Programs had statewide Water Assistance Programs.¹¹ Second, in many jurisdictions, water suppliers are forbidden by state law from implementing Water Assistance Programs.¹² In response to those findings, the project team changed the focus of the study to identify local jurisdictions that were able to find ways to implement Water Assistance Programs.

The Consolidated Appropriations Act passed by Congress in December 2020 included funding for water assistance programs. Additional funding was allocated to water assistance in the American Rescue Plan Act that was passed in March 2021. The combined funding amount was over \$1.1 billion. The Office of Community services in the Department of Health and Human Services was assigned the responsibility for administering the program. As of the date of this report, the fund allocation for each state was announced by OCS. However, each state must submit a state plan to be able to access the funding. It is likely that the number and types of water assistance programs will be changed in important ways as a result of this new source of funding.

1.1 Analytic Framework

This report furnishes three types of information for the Water Assistance programs implemented by the District of Columbia and the comparison jurisdictions.

- Population Characteristics – One factor that affects the design of Water Assistance programs is that many low- and moderate-income households do not pay a water bill directly to the water company or utility. The report shows what share of LMI households pay a water bill directly and what types of housing units those households occupy.
- Water Assistance Funding – The report presents information on the total amount of funding for water assistance along with statistics that show the amount of funding available per low- and moderate-income household.

¹¹ Information developed from “Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities” from the UNC Environmental Finance Center.

¹² Information developed from “Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities” from the UNC Environmental Finance Center. Strong bans apply to all utilities in Arkansas, non-commission regulated utilities in California, commission regulated utilities in Colorado, commission regulated utilities in Maryland, and non-commission regulated utilities in Mississippi by current interpretations of state laws. Other states have language in state laws which could raise challenges to setting up programs.

- Program Design – The report shows how the water assistance program is implemented, including the types of households that it serves and the outreach and intake procedures.

One of the main interests of the OPC is to understand the different ways that these programs are designed. The following information has been collected for the District of Columbia and for each comparison jurisdiction.

- Regulatory Framework – We document the legal and/or regulatory framework for each program to help understand its policy objectives.
- Sources and Amount of Funding – The report furnishes detailed information on who pays for the assistance program and how much is made available for benefits.
- Program Administration – The report identifies the organization that administers each program. Programs can be administered by the company/utility, by local government, or by nonprofit organizations.
- Program Outreach and Intake – The report documents whether program outreach and intake are handled by the company/utility, the local government, or community-based organizations.
- Income and Program Eligibility – The report documents the income guidelines for each program and any other program eligibility requirements to assess the impact that the program can have on energy affordability.

There is no one way to design an LMI water assistance program. Policymakers in each jurisdiction need to identify their policy objectives and then can consider which program design components appear to be most consistent with those objectives. This report is designed to assist the DC OPC with that process.

1.2 Methodology

The purpose of this study is to furnish OPC with information on how the District of Columbia compares to other jurisdictions, both in terms of the amount funds dedicated to water assistance and the procedures for helping to make water bills affordable to low-income households. Since relatively few jurisdictions have implemented water assistance programs, we consulted a number of sources¹³ to identify jurisdictions that had water assistance programs. We selected programs that appeared to have been in place for a number of years and, in most cases, focused on programs that were implemented in major cities.

¹³ UNC Environmental Finance Center. 2017. Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities. Blake, Brown & Rothstein. 2017. Model Water Utility Affordability Programs. While not included in these reports, APPRISE was aware of the Philadelphia Water Assistance Programs because of other work we have done in that jurisdiction.

The following jurisdictions were included in the study.

- Atlanta, GA – The Care and Conserve and Senior Discount programs implemented by the City of Atlanta Department of Watershed Management.
- California – The Low-Income Ratepayer Assistance program implemented by California Water Service (Cal Water) the largest private water company in the state.
- Detroit, MI – The Water Residential Assistance Program implemented by the Detroit Water and Sewerage Department.
- Philadelphia, PA – The Tiered Assistance Program implemented by the Philadelphia Water Department.
- Portland, OR – The Financial Assistance Program implemented by the Portland Water Bureau which is a public utility.
- Raleigh, NC – The Customer Assistance Program implemented by the City of Raleigh Public Utilities Department.
- Seattle, WA – The Utility Discount Program implemented by Seattle Public Utilities.

The following procedures were used to develop the information contained in this report.

- American Community Survey – APPRISE staff collected information on the demographics, household types, incomes, and water bills of the populations who receive water service from the utilities identified for study from the American Community Survey (2013-2018).
- APPRISE staff consulted two recent reports for information on the design and operation of the water assistance programs studied. *Navigating Legal Pathways to Rate-Funded Customer Assistance Programs*, a report from the UNC environmental Finance Center on how local rate-funded water assistance programs in the United States operate, provided information on:
 - The Care and Conserve Program provided by the Atlanta Department of Watershed Management
 - The Low-Income Residential Assistance (LIRA) program provided by California Water Service
 - The Water Residential Assistance Program (WRAP) provided by the Great Lakes Water Authority (GLWA) in Detroit.
 - The Financial Assistance Program and the Emergency Discount Program provided by the Portland Water Bureau

- The Utility Customer Assistance Program (UCAP) is provided by the City of Raleigh Public Utilities Department (CORPUD)
- The Utility Discount Program (UDP) provided by Seattle Public Utilities (SPU).

“Model Water Utility Affordability Programs” provided information on WRAP and the Financial Assistance Program.

- Internet Research – Many of the states included in this study have published reports on the design and operation of their low-income energy assistance programs. APPRISE staff conducted searches of the websites of the state LIHEAP offices and the state Public Service Commissions to identify both annual program reports and any research and evaluation studies conducted on those programs.

Through these efforts, the project team was able to obtain most of the targeted information for most of the selected programs. However, in some cases, we were unable to obtain the requested information. When that happened, we note that the missing information could not be retrieved.

1.3 Organization of the Report

This report consists of ten sections, including:

- Introduction
- District of Columbia Water Assistance Programs
- Atlanta Water Assistance Programs
- California Water Assistance Programs
- Detroit Water Assistance Programs
- Philadelphia Water Assistance Programs
- Portland Water Assistance Programs
- Raleigh Water Assistance Programs
- Seattle Water Assistance Program
- Findings and Recommendations

Each of the programs in other jurisdictions offer some useful ideas to the DC OPC. However, it is important to note that the current portfolio of programs in the District of Columbia compare favorably to the program portfolios in other jurisdictions. Based on this analysis, it may be appropriate to consider incremental changes to the existing set of programs rather than a complete re-design of the entire portfolio.

2.0 DISTRICT OF COLUMBIA WATER ASSISTANCE PROGRAMS

This section of the report furnishes information on the water assistance programs available to low- and moderate-income (LMI) households in the District. The first part examines the bill payment patterns and water expenditure burden for LMI households. The second part documents program design, funding, and participation. The third part summarizes the findings.

2.1 Population Characterization

Table 2.1 shows the distribution of LMI households in the District of Columbia by Program Eligibility group.¹⁴ About 17 percent of households are SNAP Eligible and 11 percent are not eligible for SNAP but are considered to be low income. These households are the primary target for the water assistance program. However, the District also makes assistance available to moderate- and median-income households. These are 12 percent and 14 percent of the District population, respectively. About 46 percent of District households are not in one of these groups.

Table 2.1 – District of Columbia Households by Program Eligibility Group

Program Eligibility Group	Number of Households	Percent of Households	Average Income
SNAP Eligible	48,351	17%	\$10,220
Non-SNAP Low-Income	29,958	11%	\$30,472
Moderate Income	33,925	12%	\$47,726
Median Income	40,419	14%	\$77,051
Non-LMI Households	128,668	46%	\$218,295
All Households	281,321	100%	\$121,669

Source: American Community Survey (2014-2018). Income categories defined in footnote 5 of the Executive Summary.

¹⁴ Households with income at or below 130% of the HHS Poverty Income Guideline are labeled as SNAP Eligible. Households with income greater than 130% of Poverty but at or below 60% of State Median Income are labeled Non-SNAP Low Income. Households with income greater than 60% of SMI but at or below 80% of Area Median Income are labelled Moderate Income. Households with income greater than 80% of AMI and less than 100% of AMI are labeled Median Income. Households with income greater than 100% of AMI are labeled Non-LMI.

Table 2.2 shows that about 41 percent of all households pay directly for a water bill. However, the percent that pays directly varies significantly by income group. About one-fifth of SNAP Eligible households pay directly for a water bill, compared to more than one-half (54%) of Non-LMI households.

Table 2.2 - Percent of Households by Water Payment Status and Program Eligibility Group

Water Payment Status	SNAP Eligible	NonSNAP Low-Income	Moderate Income	Median Income	Non-LMI Housholds	All Households
Pay Directly	20%	27%	31%	41%	55%	41%
Included In Rent	56%	49%	53%	47%	40%	46%
No Charges	24%	23%	16%	12%	5%	13%
All Households	100%	100%	100%	100%	100%	100%

Source: American Community Survey (2014-2018) / All Households / Categories defined in FN 5 of the Executive Summary.

The primary factor associated with water bill payment is housing unit type. Table 2.3 shows that, even for LMI households, over 90 percent of households in single family homes and about 75 percent of households in single family attached homes pay a water bill directly. Less than 10 percent of LMI households in multifamily buildings pay a water bill directly to the water company. The relationship between housing unit type and income helps to explain the lower rate of water bill payment for LMI households.

Table 2.3 - Percent of LMI Households by Water Payment Status and Housing Unit Type

Water Payment Status	Household Unit Type			
	Single Family Detached	Single Family Attached	Small Multifamily (2-4 Units)	Large Multifamiyy (5+ Units)
Pay Directly	92%	77%	7%	6%
Include In Rent	6%	16%	59%	69%
No Charges	3%	7%	34%	26%
All LMI Households	100%	100%	100%	100%

Source: American Community Survey (2014-2018) / All LMI Households

Table 2.4 shows the distribution of households that pay a water bill directly to DC Water by Program Eligibility group. Comparing Table 2.4 to Table 2.1 shows that while 17 percent of all households in the District are SNAP Eligible, only about 8 percent of the households that pay a water bill are SNAP Eligible. About 46 percent of households in the District are low- and moderate-income. But they only represent 39 percent of households that pay a water bill.

Table 2.4 – District of Columbia Households that Pay Directly for Water by Program Eligibility Group

Program Eligibility Group	Number of Households	Percent of Households	Average Income
SNAP Eligible	9,712	8%	\$11,142
Non-SNAP Low-Income	8,195	7%	\$33,041
Moderate Income	10,669	9%	\$50,246
Median Income	16,657	14%	\$80,574
Non-LMI Households	70,314	61%	\$248,767
All Households	115,547	100%	\$170,917

Source: American Community Survey (2014-2018). Categories defined in FN 5 of the Executive Summary.

Table 2.5 shows the average water expenditure burden for LMI households that pay a water bill directly to DC Water by Program Eligibility group. It shows that among these households, SNAP Eligible and Non-SNAP Low-Income households face a “severe” water burden (i.e., greater than 3% of income). Moderate income households had a water burden that is considered to be “unaffordable” (i.e., greater than 1.8% of income). Median income households and non-LMI households all have an average water burden that is considered to be “affordable” (i.e., less than 1.8% of income). [Note: The ACS respondent-reported data on water expenditures is not consistent with the average water bills observed by DC Water. For purposes of this analysis, the ACS self-reports were normalized to the reported average annual water bill from DC Water.]

Table 2.5 – Water Burden for Households that Pay Directly for Water by Program Eligibility Group

Program Eligibility Group	Mean Water Expenditures	Mean Income	Mean Water Burden
SNAP Eligible	\$1,080	\$11,142	9.7%
Non-SNAP Low-Income	\$1,290	\$33,041	3.9%
Moderate Income	\$1,060	\$50,246	2.1%
Median Income	\$1,095	\$80,574	1.4%
Non-LMI Households	\$1,137	\$248,767	0.5%
All Households	\$1,130	\$170,917	0.7%

Source: American Community Survey (2014-2018). Income categories defined in footnote 5 of the Executive Summary.

2.2 Program Design, Funding, and Participation

Water services in the District of Columbia are provided by the DC Water and Sewer Authority (DC Water). It is operated as an independent authority of the District government and serves more than 600,000 residents. The District offers the Customer Assistance Program (CAP) for households who pay a water bill directly to DC Water.¹⁵ The program includes the Clean Rivers Impervious Area Charge (CRIAC) Residential Relief Program and is divided into three sections: Customer Assistance Program (CAP), Customer Assistance Program II (CAP2), and Customer Assistance Program III (CAP3).

The Customer Assistance Program has the following characteristics:

- Regulatory Framework – DC Water is required to provide low-income assistance by D.C. Code § 34-2202.16(b-1) (1)-(2), which mandates the authority provide an assistance program to mitigate the impact on low-income residents of any increases in rates or fees.¹⁶ The program was expanded in 2019 to assist moderate income residents, adding CAP2 and CAP3. The exact structure of the current CAP program is determined in Title 21, § 4102 of the DC municipal regulations.
 - In 2010, DC introduced the CRIAC. CRIAC pays for sewers and conservation efforts through a tax on impervious coverage area. This consists of ground-covering structures impenetrable to stormwater, such as roofed space and parking lots. The tax on impervious area is designed to tax proportionately to demand on sewer capacity.
- Sources and Amount of Funding – CAP is funded by a combination of rates paid to DC Water and funds provided by the DC municipal government. Ratepayer funds support CAP and part of CAP2, while municipal funds support CAP3 and the remainder of CAP2. Approximately \$2.7 million in rate and fee relief was provided to residential customers through the CAP program the 2020 program year.¹⁷

¹⁵ DC Water has recently expanded the number of water payment assistance programs. The DC Water CARES: Emergency Relief program furnishes supplemental assistance to income-eligible residential customers who have fallen behind on their bills during the COVID-19 public health emergency. The DC Water CARES: Multifamily Assistance Program is designed to assist income-eligible households who live in multifamily buildings and have their water charges included in rent. DC Water also has committed to offer extended payment plans during the COVID-19 pandemic.

¹⁶ UNC Environmental Finance Center. 2017. *Navigating Legal Pathways to Rate-Funded Customer Assistance Programs*.

¹⁷ “DC Water extends financial assistance programs through fiscal year 2020”. <https://www.dewater.com/whats-going-on/news/dc-water-extends-financial-assistance-programs-through-fiscal-year-2020>
<https://www.dewater.com/sites/default/files/documents/Public%20Hearing%20DC%20CARES%20January%2013%202021-%20website%20version.pdf>

- Program Administration – CAP is administered by the District’s Department of Energy and Environment (DOEE).
- Program Outreach and Intake – Households may apply for CAP online at the DOEE website or by mail and email to the DC DOEE. DC Water and DOEE perform outreach for CAP. Customer service at DC Water refers households to CAP and provides information about CAP assistance in mailers.
- Income and Program Eligibility – Eligibility for the customer assistance program is tiered. Customers in CAP are the lowest income and receive the highest of benefits, while those in CAP3 are higher income and receive lower benefits, and those in CAP2 are between. Households must also be responsible for paying a DC Water bill to participate in CAP.¹⁸
 - Eligibility for CAP is tied to LIHEAP. Households must have incomes below 60% of the DC median income to qualify for CAP. Households who have qualified for LIHEAP are automatically eligible for CAP.¹⁹ A household of four must have an annual income less than or equal to \$72,260 to qualify. Households eligible for CAP1 are not eligible for CAP2 or CAP3.
 - Eligibility for CAP2 is capped at 80% of DC modified area median income. A household of 4 must have an income less than or equal to \$100,800 to qualify. Households eligible for CAP2 are not eligible for CAP3.
 - Eligibility for CAP3 is capped at 100% of DC modified area median income. Households must have an income at or below \$126,000 to qualify.
- Program Benefits – Households are provided different benefits depending on their tier. In addition, The DC government has authorized emergency water benefits administered through CAP during the COVID-19 public health emergency. These benefits are funded through the municipal CRIAC funds that support CAP2 and CAP3.²⁰
 - CAP – Households in CAP receive an exemption from water service charges, sewer service charges, payment-in-lieu of taxes fees and right-of-way fees on the first 400 cubic feet of water used each month, as well as a 50% reduction on the monthly CRIAC and a Water Service Replacement Fee waiver. On average, these discounts, exemptions, and waivers total approximately \$861 annually.

¹⁸ DC Department of Energy and Environment. 2020. Clean Rivers Impervious Area Charge Residential Relief Program. <https://doee.dc.gov/service/clean-rivers-impervious-area-charge-residential-relief-program>

¹⁹ UNC Environmental Finance Center. 2017. *Navigating Legal Pathway to Rate-Funded Customer Assistance Programs*.

²⁰ DC Water. 2020. “Customer Assistance Programs”. [https://www.dewater.com/customer-assistance#:~:text=Customer%20Assistance%20Program%20\(CAP\)%20provides,is%20approximately%20%2477%20a%20month.](https://www.dewater.com/customer-assistance#:~:text=Customer%20Assistance%20Program%20(CAP)%20provides,is%20approximately%20%2477%20a%20month.)

- CAP2 – Households in CAP2 receive an exemption on water service charges and sewer service charges on the first 300 cubic feet of water used each month as well as a 50% reduction on the monthly CRIAC. On average, these discounts and exemptions total approximately \$530 annually.
- CAP3 – Households in CAP3 receive a 75% discount on the monthly CRIAC, which provides an average discount of approximately \$164 annually.
- Emergency relief – Households who apply for CAP in 2020 may receive a one-time benefit of up to \$2,000 if they are unable to fully pay their outstanding water bills. This benefit will be provided until 105 days after the end of the COVID-19 public health emergency.
- Participation – In 2019, 3,416 households participated in CAP. No households participated in multiple tiers of the program.
 - CAP – 3,274 households participated in CAP.
 - CAP2 – 116 households participated in CAP2.
 - CAP3 – 26 households participated in CAP3.

Table 2.6 shows the estimated participation rate for the CAP1, CAP2 and CAP3 programs. About 22 percent of the SNAP Eligible households received water assistance in 2019, along with about 12 percent of the Non-SNAP Low-Income households. Only about 1.1 percent of the CAP2 Eligible households received assistance and 0.2 percent of the CAP3 Eligible received assistance.

Table 2.6 – Water Assistance Program Participation by Program Eligibility Group

Program Eligibility Group	Number of Program Eligible Households with Water Bills	Number of Program Participant Households	Participation Rate
SNAP Eligible	9,712	2,126	21.9%
Non-SNAP Low-Income	8,195	1,016	12.45
Moderate Income (CAP 2 Eligible)	10,669	191	1.1%
Median Income (CAP 3 Eligible)	16,657	49	0.2%
All LMI Households	45,233	3,382	7.5%

Source: American Community Survey (2014-2018) / All LMI or Median Income Households with a water bill. Income categories defined in footnote 5 of the Executive Summary.

Table 2.7 shows the estimated impact of the water assistance on the water expenditure burden for participating households. While the different income groups have very different mean water burdens prior to receiving assistance, the CAP benefits reduce the average net water burden for all groups to between 1.0 and 2.4 percent of income.

Table 2.7 – Gross and Net Water Burden by Program Eligibility Group

Program Eligibility Group	Mean Gross Water Bill	Mean Income	Mean Burden	Mean Benefit	Mean Net Water Bill	Mean Net Burden
SNAP Eligible	\$1,080	\$11,142	9.7%	\$810	\$270	2.4%
Non-SNAP LI	\$1,290	\$33,041	3.9%	\$968	\$322	1.0%
Moderate (CAP2)	\$1,060	\$50,246	2.1%	\$530	\$530	1.1%
Median (CAP3)	\$1,095	\$80,574	1.4%	\$164	\$931	1.2%

Source: American Community Survey (2014-2018) / All LMI or Median Income Households with a water bill. Income categories defined in footnote 5 of the Executive Summary.

2.3 Summary of Findings

This analysis furnishes information on DC Direct Water Payment LMI households and documents how the CAP programs help to reduce water burden. Important population statistics include:

- **Households with Water Bills** – A little over 40 percent of DC households pay a water bill directly to DC Water.²¹
- **Factors Related to Water Bill Payment** – The lowest income households and households in multifamily buildings are least likely to pay a water bill directly to DC Water. Less than 20 percent of SNAP Eligible households pay a water bill compared to 54 percent of non-LMI households. More than 90 percent of single-family home households pay a water bill compared to less than 10 percent of households that live in multifamily buildings.
- **Water Burden** – Water bills do not vary much by income; the lowest income households report having water bills as large as higher income households. Water burden is about 0.5 percent of income for the average household in the District. Water burden is 9.7 percent for SNAP Eligible households and 3.9 percent for Non-SNAP Low-Income households. A water burden of 3.0 percent or more is considered to be a “severe” water burden.
- **Net Water Burden** – On average, the water assistance programs reduce the water burden for program participants to an affordable level (i.e., a water burden of less than 3 percent of income). The CAP program pays about 75 percent of the water bill for participating low-income households. The CAP2 program pays about 50 percent of the water bill for

²¹ UNC Environmental Finance Center. 2017. *Navigating Legal Pathways to Rate-Funded Customer Assistance Programs*.

participating moderate-income households. The CAP3 program pays about 15 percent of the water bill for median-income households.

Important program information includes:

- **Regulatory Framework** – The water assistance programs were authorized by statute with the goal of mitigating the impact on low-income residents of increases in rates or fees. The implementation of the programs is outlined in municipal regulations.
- **Program Funding** – The water assistance programs are funded by a combination of DC Water ratepayer funds and District of Columbia taxpayer funds.
- **Program Management** – DOEE is responsible for program administration, outreach, and intake. Other partners, including DC water, participate in program outreach.
- **Program Impact** – The CAP programs serve about 8 percent of income-eligible households and more than 20 percent of SNAP Eligible households. The benefit programs significantly reduce the water burden of participating households.

The District of Columbia CAP programs serve about 7.5 percent of income-eligible households and, on average, ensure that they net water burden for participating households is less than 3 percent of income.

3.0 ATLANTA WATER ASSISTANCE PROGRAMS

This section of the report furnishes information on the water assistance programs available to low- and moderate-income households in Atlanta, GA. The first part examines the bill payment patterns and water expenditure burden for LMI households. The second part documents program design, funding, and participation. The third part summarizes the findings.

3.1 Population Characterization

Table 3.1 shows the distribution of households in the Atlanta Department of Watershed Management (DWM) water service area by Program Eligibility group.²² About 18 percent of households are SNAP Eligible, 6 percent are not income-eligible for SNAP but are considered to be low income, and about 15 percent are moderate income.

Table 3.1 – Atlanta DWM Households by Program Eligibility Group

Program Eligibility Group	Number of Households	Percent of Households	Average Income
SNAP Eligible	48,765	18%	\$11,318
Non-SNAP Low-Income	16,845	6%	\$23,991
Moderate Income	40,947	15%	\$36,631
Non-LMI Households	159,470	60%	\$149,850
All Households	266,027	100%	\$99,059

Source: American Community Survey (2014-2018) / All Households

Table 3.2 shows the share of Atlanta households that pay directly for their water usage by Program Eligibility Group. About 68 percent of all households pay a water bill. However, the percent that pays directly varies by income group. About three-fourths of Non-LMI households pay a water bill directly, compared to only about one-half of SNAP Eligible households.

Table 3.2 - Percent of Households by Water Payment Status and Program Eligibility Group

Water Payment Status	SNAP Eligible	NonSNAP Low-Income	Moderate Income	Non-LMI Housholds	All Households
Pay Directly	51%	57%	65%	76%	68%
Included In Rent	38%	33%	28%	21%	26%
No Charges	11%	10%	7%	3%	5%
All Households	100%	100%	100%	100%	100%

Source: American Community Survey (2014-2018) / All Households

²² Income at or below 130% of the HHS Poverty Income Guideline = SNAP Eligible. Income greater than 130% of Poverty but at or below 60% of SMI = Non-SNAP Low Income. Income greater than 60% of SMI but at or below 80% of AMI are labelled Moderate Income. Income greater than 80% of AMI = Non-LMI.

The primary factor associated with water bill payment is housing unit type. Table 3.3 shows that, even for LMI households, more than 90 percent of households in single family homes and about 60 percent of households in single family attached homes pay a water bill directly. Only 37 percent of LMI households in large multifamily buildings pay a water bill directly to the water company. The relationship between housing unit type and income helps to explain the lower rate of water bill payment for LMI households.

Table 3.3 - Percent of LMI Households by Water Payment Status and Housing Unit Type

Water Payment Status	Household Unit Type			
	Single Family Detached	Single Family Attached	Small Multifamily (2-4 Units)	Large Multifamily (5+ Units)
Pay Directly	91%	60%	38%	37%
Include In Rent	5%	32%	48%	50%
No Charges	3%	8%	14%	12%
All LMI Households	100%	100%	100%	100%

Source: American Community Survey (2014-2018) / All LMI Households

Table 3.4 shows the distribution of households that pay a water bill directly in the Atlanta DWM area by Program Eligibility group. Comparing Table 3.4 to Table 3.1 shows that while 18 percent of all households in the service area are SNAP Eligible, only about 14 percent of the households that pay a water bill are SNAP Eligible. About 40 percent of in the service area are low- and moderate-income. But they only represent 34 percent of households that pay a water bill.

Table 3.4 – Atlanta Households that Pay Directly for Water by Program Eligibility Group

Program Eligibility Group	Number of Households	Percent of Households	Average Income
SNAP Eligible	25,002	14%	\$12,031
Non-SNAP Low-Income	9,607	5%	\$24,951
Moderate Income	26,779	15%	\$37,965
Non-LMI Households	120,697	66%	\$159,945
All Households	182,085	100%	\$114,573

Source: American Community Survey (2014-2018) / All Households with a water bill

Table 3.5 shows the average water expenditure burden for low- and moderate-income households that pay a water bill directly by Program Eligibility group. It shows that SNAP-Eligible households and Non-SNAP Low-Income households in the DWM service area face a, “severe” water burden. Moderate Income households face a burden which is above the, “affordable” target but below the, “severe” target, while Non-LMI households have an affordable water burden. [Note: The ACS respondent-reported data on water expenditures is not consistent with the typical water bills observed by Atlanta DWM. For purposes of this analysis, the ACS self-reports were normalized to estimated median Atlanta water bills based on DWM rate structures and typical water consumption.]

Table 3.5 – Water Burden for Households that Pay Directly for Water by Program Eligibility Group

Program Eligibility Group	Mean Water Expenditures	Mean Income	Mean Water Burden
SNAP Eligible	\$1,095	\$12,031	9.1%
Non-SNAP Low-Income	\$1,045	\$24,951	4.2%
Moderate Income	\$1,015	\$37,965	2.7%
Non-LMI Households	\$1,085	\$159,945	0.7%
All Households	\$1,074	\$114,573	0.9%

Source: American Community Survey (2014-2018) / All Households with a water bill

3.2 Program Design, Funding, and Participation

Water in Atlanta is provided by the City of Atlanta department of Watershed Management (DWM), which provides services to approximately 712,000 people with 89,000 active accounts. The DWM runs the Care and Conserve program, a customer assistance program (CAP) which provides assistance to low-income customers in the city of Atlanta.²³

The Care and Conserve program has the following characteristics:

- Regulatory Framework – The Gratuities Clause of the state constitution of Georgia places limits on the ability to fund low-income CAPs, as it forbids the general assembly from using tax dollars to donate or offer a gratuity to, or forgive the debt of, any private entity or individual, and the Georgia Supreme Court has ruled that this clause extends to local governments. However, the city code was amended in 2013 to allow the funding of Care and Conserve from water and wastewater revenue, on the grounds that the Care and Conserve program helps retain customers. The Atlanta City Code also establishes the city’s authority to appropriate money derived from taxation for charitable purposes.²⁴

²³ UNC Environmental Finance Center. 2017. Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities

²⁴ Ibid.

- Sources and Amount of Funding – Care and Conserve is funded by donations from customers and corporations as well as grants set aside by the city of Atlanta. The City provided \$2.15 million in grants for plumbing repair in 2019.²⁵ In general, approximately \$1.6 million in assistance programming is provided annually, which includes plumbing repair assistance and bill payment assistance.
- Program Administration – The program is administered directly by the DWM. Plumbing repair is provided by non-profits who are funded with grants by the DWM.
- Program Outreach and Intake – Applications are accepted online at the City of Atlanta Department of Watershed Management website.
- Income and Program Eligibility – Customers must inhabit a property with an active account, have gone through six billing cycles and have a past due amount of \$300, and have an income below 200% of the federal poverty line plus \$500.²⁶
- Program Benefits – Care and Conserve provides bill assistance and plumbing repairs to eligible customers. Bill assistance is provided in two forms: leak vouchers of up to \$3,000, and temporary bill payment assistance of up to \$1,000.²⁷ Plumbing repairs can be up to \$1500 for households without sewer line replacement and \$2500 for households with sewer line replacement.²⁸ In the first three quarters of 2019, average bill payment assistance provided was \$559.
- Participation – Care and Conserve committed non-profits to provide benefits to at least 450 low-income customers in 2019.²⁹

Atlanta Seniors receive a 30% discount on their utility bills

- Sources and Amount of Funding – The discount is a cross-subsidy from other ratepayers to seniors. Around \$1 million in discounts are provided annually.³⁰
- Program Administration – The senior discount is administered by the DWM itself.
- Program Outreach and Intake – Applications are taken by mail by the DWM Customer Service Division. They are also available in person at Fulton County Senior Citizen

²⁵ Atlanta Journal Constitution. 2019. Grants worth \$2M to help Atlanta residents get free plumbing repairs.

²⁶ Ibid.

²⁷ Ibid.

²⁸ Southface. 2019. Care and Conserve Plumbing Repair Program.

²⁹ Atlanta City Council City Utilities Committee. 2019. Department Quarterly Report. FY2019 – 3rd Quarter (Jan – Mar).

³⁰ American Water Works Association. 2017. City of Atlanta Department of Watershed Management Affordability Programs.

Facilities, City of Atlanta recreation facilities and the Customer Service Office in Atlanta City Hall.³¹

- Income and Program Eligibility – All Atlanta seniors with incomes below \$25,000 who have bills in their names are eligible.
- Program Benefits – Seniors receive a 30% discount on their bills.

Table 3.6 shows the estimated participation rate for the Care and Conserve program. About 1.3% of low-income Atlanta Department of Watershed Management service area households participated in the program. Care and Conserve has a low participation rate relative to other water assistance programs studied.

Table 3.6 – Water Assistance Program Participation by Program Eligibility Group

Program Eligibility Group	Number of Households with Water Bills	Number of Program Participants	Participation Rate
SNAP Eligible	34,609	~450	~1.3%
Non-SNAP Low-Income			
Moderate Income	26,779	~0	~0%

Source: American Community Survey (2014-2018) / All LMI Households with a water bill

Table 3.7 shows the estimated impact of the water assistance on the water expenditure burden for participating households. For Care and Conserve participating households, the benefit is estimated to reduce the average water bill by \$559 on average. The basic benefit reduces the burden for SNAP eligible households from an average of 9.1 percent of income to an average of 4.5 percent of income. For Non-SNAP Low Income households, the average net water burden is estimated to be about 1.9 percent. On average, the Care and Conserve program does not give participating customers an “affordable” net water burden (i.e., less than 1.8% of income) and leaves SNAP eligible customers a “severe” burden (i.e., greater than 3% of income). Moderate Income households are not eligible to receive Care and Conserve benefits. However, on average, they pay about 1.7 percent of income for water service.

Table 3.7 – Gross and Net Water Burden by Program Eligibility Group

Program Eligibility Group	Mean Gross Water Bill	Mean Income	Mean Burden	Mean Benefit	Mean Net Water Bill	Mean Net Burden
SNAP Eligible	\$1,095	\$12,031	9.1%	\$559	\$536	4.5%
Non-SNAP LI	\$1,045	\$24,951	4.2%	\$559	\$486	1.9%
Moderate	\$1,015	\$37,965	2.7%	\$0	\$1,015	2.7%

Source: American Community Survey (2014-2018) / All LMI Households with a water bill

³¹ Retrieved: <https://www.atlantawatershed.org/get-a-senior-citizen-discount/>

3.3 Summary of Findings

This analysis furnishes information on Direct Water Payment LMI households in Atlanta and documents how the water assistance programs help households to reduce their water burden. Important population statistics include:

- Households with Water Bills – About two-thirds of Atlanta households pay a water bill directly to the Atlanta DWM.³²
- Factors Related to Water Bill Payment – The lowest income households and households in multifamily buildings are least likely to pay a water bill directly to Atlanta DWM. About one-half of SNAP Eligible households pay a water bill compared about three-fourths of non-LMI households. More than 90 percent of single-family home households pay a water bill compared to about 40 percent of households that live in multifamily buildings.
- Water Burden – Water bills do not vary much by income; the lowest income households report having water bills as large as higher income households. Water burden is about 0.9 percent of income for the average household in Atlanta. Water burden is 9.1 percent for SNAP Eligible households and 4.2 percent for Non-SNAP Low-Income households.

Important program information includes:

- Regulatory Framework – The Georgia state constitution prevents the Atlanta DWM from using state tax funds for the water assistance program. However, Atlanta city code explicitly allows the programs to be implemented.
- Program Funding – The water assistance programs are funded by a combination of donations and grants from the city.
- Program Management – The Atlanta DWM is responsible for program administration, outreach, and intake.
- Program Impact – The water assistance programs serve a little over one percent of low-income households. On average, households that participate in the assistance programs have a net water burden of about half of what they would have in the absence of the program.

The Atlanta DWM assistance programs serve a small number of low-income households, but, on average, deliver significant benefits to those households.

³² UNC Environmental Finance Center. 2017. *Navigating Legal Pathways to Rate-Funded Customer Assistance Programs*.

4.0 CALIFORNIA WATER ASSISTANCE PROGRAMS

This section of the report furnishes information on the water assistance programs available to low- and moderate-income households in California from Cal Water. The first part examines the bill payment patterns and water expenditure burden for LMI households. The second part documents program design, funding, and participation. The third part summarized the findings.

4.1 Population Characterization

Table 4.1 shows the distribution of households in the California Water service area by Program Eligibility group.³³ About 17 percent of households are SNAP Eligible, 10 percent are not income-eligible for SNAP but are low income, and about 14 percent are moderate income.

Table 4.1 – Cal Water Households by Program Eligibility Group

Program Eligibility Group	Number of Households	Percent of Households	Average Income
SNAP Eligible	102,732	17%	\$15,571
Non-SNAP Low-Income	61,403	10%	\$32,921
Moderate Income	79,794	14%	\$56,974
Non-LMI Households	344,907	59%	\$161,909
All Households	588,836	100%	\$108,707

Source: American Community Survey (2014-2018) / All Households

Table 4.2 shows the share of Cal Water Service Area households that pay directly for their water usage by Program Eligibility Group. About 70 percent of households pay a water bill. Almost 80 percent of Non-LMI households pay a water bill, compared to one-half of SNAP Eligible.

Table 4.2 - Percent of Households by Water Payment Status and Program Eligibility Group

Water Payment Status	SNAP Eligible	NonSNAP Low-Income	Moderate Income	Non-LMI Households	All Households
Pay Directly	51%	59%	65%	79%	70%
Included In Rent	33%	29%	28%	16%	22%
No Charges	16%	12%	7%	5%	8%
All Households	100%	100%	100%	100%	100%

Source: American Community Survey (2014-2018) / All Households

The primary factor associated with water bill payment is housing unit type. Table 4.3 shows that, even for LMI households, almost 90 percent of households in single family homes and slightly

³³ Households with income at or below 130% of the HHS Poverty Income Guideline are SNAP Eligible. Households with income greater than 130% of Poverty but at or below 60% of State Median Income are Non-SNAP Low Income. Households with income greater than 60% of SMI but at or below 80% of Area Median Income are Moderate Income. Households with income greater than 80% of AMI are Non-LMI.

more than one-half of households in single family attached homes and mobile homes pay a water bill directly (55 percent and 51 percent, respectively). Less than 15 percent of LMI households in large multifamily buildings pay a water bill directly to the water company. The relationship between housing unit type and income explains the water payment rate for LMI households.

Table 4.3 - Percent of LMI Households by Water Payment Status and Housing Unit Type

Water Payment Status	Household Unit Type				
	Single Family Detached	Single Family Attached	Small Multifamily (2-4 Units)	Large Multifamily (5+ Units)	Mobile Home
Pay Directly	88%	55%	20%	14%	51%
Include In Rent	7%	36%	56%	63%	35%
No Charges	5%	8%	24%	22%	14%
All LMI Households	100%	100%	100%	100%	100%

Source: American Community Survey (2014-2018) / All LMI Households

Table 4.4 shows the distribution of households that pay a water bill directly in the Cal Water area by Program Eligibility group [NOTE: Not all of these households pay to Cal Water. There are other water providers in the Cal Water area]. Comparing Table 4.4 to Table 4.1 shows that about 41 percent of households in the service area are low- and moderate-income. But they only represent 34 percent of households that pay a water bill.

Table 4.4 – Cal Water Area Households that Pay Directly for Water by Program Eligibility Group

Program Eligibility Group	Number of Households	Percent of Households	Average Income
SNAP Eligible	52,362	13%	\$16,668
Non-SNAP Low-Income	36,162	9%	\$34,706
Moderate Income	51,912	13%	\$58,967
Non-LMI Households	270,952	66%	\$171,048
All Households	411,388	100%	\$125,270

Source: American Community Survey (2014-2018) / All Households with a water bill

Table 4.5 shows the average water expenditure burden for low- and moderate-income households that pay a water bill directly by Program Eligibility group. It shows that SNAP-Eligible households face a “severe” water burden and Non-SNAP Low-income households have an “unaffordable” water burden. Moderate Income households have, on average, an “affordable” water burden.

Table 4.5 – Water Burden for Households that Pay Directly for Water by Program Eligibility Group

Program Eligibility Group	Mean Water Expenditures	Mean Income	Mean Water Burden
SNAP Eligible	\$672	\$16,668	4.0%
Non-SNAP Low-Income	\$720	\$34,706	2.1%
Moderate Income	\$760	\$58,967	1.3%
Non-LMI Households	\$780	\$171,048	.5%
All Households	\$759	\$125,270	.6%

Source: American Community Survey (2014-2018) / All Households with a water bill

4.2 Program Design, Funding, and Participation

California Water Service (Cal Water) is the largest private water company in California and provides water to 500,000 customers in 23 districts throughout the state. The utility is regulated by the California Public Utilities Commission (California PUC), which reviews and approves the company’s rates and rate-supported programs. Cal Water runs Low-Income Ratepayer Assistance (LIRA) as its CAP.

The Low-Income Ratepayer Assistance program has the following characteristics:

- **Regulatory Framework** – The California state Constitution includes provisions which have been interpreted as constraining the creation of government-owned and ratepayer funded CAPs. Particularly, Article XIIIID, added by Proposition 218 in 1996, requires that revenues derived from property related fees not exceed the proportional cost of service attributable to the property.³⁴ This prohibits government-owned utilities from providing cross-subsidies between ratepayers. However, the California Public Utilities Commission actively encourages the creation of CAPs. California Public Utility Code 739.8 authorizes commission regulated utilities to create low-income CAPS.³⁵ Prior to implementing such CAPs, utilities must obtain approval from the commission to change rates.
- **Sources and Amount of Funding** – LIRA is funded through a California PUC approved surcharge or tariff paid by all of Cal Water’s customers who are not enrolled in LIRA. In 2019, Cal Water provided more than \$9 million in discounts through LIRA.

³⁴ California State Constitution. 1996. Article XIIIID, section 6.

³⁵ California Code, Public Utilities Code - PUC § 739.8

- Program Administration – LIRA is administered directly by Cal Water.
- Program Outreach and Intake – Applications are accepted electronically at the Cal Water website or by mail. Customers may also bring the application to local customer centers.
- Income and Program Eligibility – To be eligible, a customer must inhabit a property with a Cal Water bill in their name, and have an income below 200% of the poverty line, except that single person households may have incomes up to 200% of the poverty line for a two person household and still be eligible. Note that households are allowed to “self-certify” that their income is below the specified thresholds.
- Program Benefits – Eligible customers will receive a monthly LIRA credit equal to 50% of the service charge for a 5/8” x 3/4” meter in their district. The maximum monthly credit is \$48.¹⁵ In 2017, more than \$10 million in LIRA benefits were provided to LIRA’s 81,804 customers, meaning that benefits were at least \$122 on average.
- Participation – In 2017, 81,804 Cal Water customers, 18% of the total number of residential customers, were enrolled in LIRA.³⁶

Table 4.6 shows the estimated participation rate for the LIRA program. LIRA is targeted toward Low-Income households, and about 92 percent of Low-Income households in the Cal Water service area received LIRA assistance in 2017. LIRA has a very high participation rate relative to other water assistance programs studied. The high participation rate might result from the “self-certification” procedures used by the program.

Table 4.6 – Water Assistance Program Participation by Program Eligibility Group

Program Eligibility Group	Number of Households with Water Bills	Number of Program Participants	Participation Rate
SNAP Eligible	88,524	81,804	92%
Non-SNAP Low-Income			
Moderate Income	51,912	0	0%
LMI Households	140,436	81,804	58%

Source: American Community Survey (2014-2018) / All LMI Households with a water bill

³⁶ California Public Utilities Commission Water Division. 2017. “Summary of Water Low-Income Programs for the Emerging Trends Committee”.
https://www.cpuc.ca.gov/uploadedFiles/CPUC_Public_Website/Test_Calendar/Water%20Low%20Income%20Programs.pdf

Table 4.7 shows the estimated impact of the water assistance on the water expenditure burden for participating households. For LIRA households, the benefit is estimated to reduce the average water bill by \$122 at a minimum. The basic benefit reduces the burden for SNAP eligible households from an average of 4.0 percent of income to an average of 3.3 percent of income. For Non-SNAP Low Income households, the average net water burden is estimated to be about 1.7 percent. Moderate Income households are not eligible to receive LIRA benefits. However, on average, they pay about 1.3 percent of income for water service.

Table 4.7 – Gross and Net Water Burden by Program Eligibility Group

Program Eligibility Group	Mean Gross Water Bill	Mean Income	Mean Burden	Mean Benefit	Mean Net Water Bill	Mean Net Burden
SNAP Eligible	\$672	\$16,668	4.0%	\$122	\$550	3.3%
Non-SNAP LI	\$720	\$34,706	2.1%	\$122	\$598	1.7%
Moderate	\$760	\$58,967	1.3%	\$0	\$760	1.3%

Source: American Community Survey (2014-2018) / All LMI Households with a water bill

4.3 Summary of Findings

This analysis furnishes information on the Cal Water Direct Water Payment LMI households and documents how the water assistance programs help households to reduce their water burden.

Important population statistics include:

- **Households with Water Bills** – About 70 percent of Cal Water area households pay a water bill directly to Cal Water.³⁷
- **Factors Related to Water Bill Payment** – The lowest income households and households in multifamily buildings are least likely to pay a water bill directly to Cal Water. About one-half of SNAP Eligible households pay a water bill compared almost 80 percent of non-LMI households. More than 80 percent of single-family home households pay a water bill compared to less than 20 percent of households that live in multifamily buildings.
- **Water Burden** – Water bills do not vary much by income; the lowest income households report having water bills are almost as large as higher income households. Water burden is about 0.6 percent of income for the average Cal Water household. Water burden is 4.0 percent for SNAP Eligible households and 2.1 percent for Non-SNAP Low-Income households. A water burden of 3.0 percent or more is considered to be a “severe” water burden and a water burden of more than 1.8 percent of income is considered to be “unaffordable.”

³⁷ UNC Environmental Finance Center. 2017. *Navigating Legal Pathways to Rate-Funded Customer Assistance Programs*.

Important program information includes:

- Regulatory Framework – The CPUC encourages regulated water utilities to develop water assistance programs and to submit them to the CPUC for regulatory approval.
- Program Funding – The water assistance programs are funded by rate surcharges.
- Program Management – Cal Water is responsible for program administration, outreach, and intake.
- Program Impact – The Cal Water assistance programs are estimated to serve more than 80 percent of the income-eligible customers. It is important to note that water customers are allowed to “self-certify” eligibility. However, the programs deliver a relatively small benefit to participating customers.

The Cal Water assistance programs serve a large number of low-income households, but, on average, deliver small benefits to those households.

5.0 DETROIT WATER ASSISTANCE PROGRAMS

This section of the report furnishes information on the water assistance programs available to low- and moderate-income households in Detroit, MI. The first part examines the bill payment patterns and water expenditure burden for LMI households. The second part documents program design, funding, and participation. The third part summarizes the findings.

5.1 Population Characterization

Table 5.1 shows the distribution of households in Detroit by Program Eligibility group.³⁸ About 40 percent of households are SNAP Eligible, 15 percent are not income-eligible for SNAP but are considered to be low income, and about 14 percent are moderate income.

Table 5.1 – Detroit Households by Program Eligibility Group

Program Eligibility Group	Number of Households	Percent of Households	Average Income
SNAP Eligible	100,223	40%	\$11,549
Non-SNAP Low-Income	38,320	15%	\$28,652
Moderate Income	36,632	14%	\$37,127
Non-LMI Households	78,116	31%	\$88,622
All Households	252,291	100%	\$41,623

Source: American Community Survey (2014-2018)/ All Households

Table 5.2 shows the share of Detroit households that pay for their water usage by Program Eligibility Group. About two-thirds of all households pay a water bill. About 80 percent of Non-LMI households pay a water bill directly, compared to only about one-half of SNAP Eligible.

Table 5.2 - Percent of Households by Water Payment Status and Program Eligibility Group

Water Payment Status	SNAP Eligible	NonSNAP Low-Income	Moderate Income	Non-LMI Housholds	All Households
Pay Directly	56%	69%	74%	78%	67%
Included In Rent	35%	25%	19%	18%	26%
No Charges	9%	6%	7%	4%	7%
All Households	100%	100%	100%	100%	100%

Source: American Community Survey (2014-2018) / All Households

³⁸ Households with income at or below 130% of the HHS Poverty Income Guideline are labeled as SNAP Eligible. Households with income greater than 130% of Poverty but at or below 60% of State Median Income are labeled Non-SNAP Low Income. Households with income greater than 60% of SMI but at or below 80% of Area Median Income are labelled Moderate Income. Households with income greater than 80% of AMI are labeled Non-LMI.

The primary factor associated with water bill payment is housing unit type. Table 5.3 shows that, even for LMI households, almost 90 percent of households in single family homes and about 45 percent of households in single family attached homes pay a water bill directly. Less than five percent of LMI households in large multifamily buildings pay a water bill directly to the water company. The relationship between housing unit type and income helps to explain the lower rate of water bill payment for LMI households.

Table 5.3 - Percent of LMI Households by Water Payment Status and Housing Unit Type

Water Payment Status	Household Unit Type			
	Single Family Detached	Single Family Attached	Small Multifamily (2-4 Units)	Large Multifamily (5+ Units)
Pay Directly	88%	45%	32%	3%
Include In Rent	9%	45%	54%	78%
No Charges	3%	10%	15%	19%
All LMI Households	100%	100%	100%	100%

Source: American Community Survey (2014-2018) / All LMI Households

Table 5.4 shows the distribution of households that pay a water bill directly to the Detroit Water and Sewerage Department (DWSD) by Program Eligibility group. Comparing Table 5.4 to Table 5.1 shows that while 40 percent of all households in Detroit are SNAP Eligible, only about 33 percent of the households that pay a water bill are SNAP Eligible. About 69 percent of in Detroit are low- and moderate-income. But they only represent 64 percent of households that pay a water bill.

Table 5.4 – Detroit Households that Pay Directly for Water by Program Eligibility Group

Program Eligibility Group	Number of Households	Percent of Households	Average Income
SNAP Eligible	55,883	33%	\$12,988
Non-SNAP Low-Income	26,444	16%	\$30,263
Moderate Income	26,192	15%	\$38,281
Non-LMI Households	60,658	36%	\$88,237
All Households	169,177	100%	\$46,585

Source: American Community Survey (2014-2018) / All Households with a water bill.

Table 5.5 shows the average water expenditure burden for low- and moderate-income Detroit households that pay a water bill directly by Program Eligibility group. It shows that among these households, SNAP Eligible and Non-SNAP Low-Income households face a “severe” water burden. Moderate-Income households have an “unaffordable” water burden. Non-LMI Households have a water burden that is considered to be “affordable.” The average household in Detroit faces a burden that is “unaffordable” (i.e., greater than 1.8% of income).

Table 5.5 – Water Burden for Households that Pay Directly for Water by Program Eligibility Group

Program Eligibility Group	Mean Water Expenditures	Mean Income	Mean Water Burden
SNAP Eligible	\$941	\$12,988	7.2%
Non-SNAP Low-Income	\$899	\$30,263	3.0%
Moderate Income	\$850	\$38,281	2.2%
Non-LMI Households	\$866	\$88,237	1.0%
All Households	\$894	\$46,585	1.9%

Source: American Community Survey (2014-2018)

5.2 Program Design, Funding, and Participation

Water and Wastewater services in Detroit are provided by the DWSD and in surrounding areas by the Great Lakes Water Authority, leasing its facilities from the DWSD. The DWSD provides services to approximately 680,000 people. These utilities operate the Water Residential Assistance Program (WRAP), which provides water assistance to GLWA service area customers.

The WRAP program has the following characteristics:

- Regulatory Framework – The Michigan constitution includes the Headlee Amendment, which, along with state supreme court precedent, prohibits local governments from increasing taxes without voter approval and puts in place a restrictive legal framework for public utilities funding social programs.³⁹
- Sources and Amount of Funding – GLWA sets aside .5% of base budgeted system-wide operating revenues for WRAP. For the year ending in June 2018, this amounted to \$4.5 million. This includes funding for bill assistance, consumption audits, plumbing repairs and replacement, and conservation education.⁴⁰
- Program Administration – WRAP is administered in Detroit by the Wayne Metropolitan Community Action Agency, under direction from the Great Lakes Water Authority.⁴¹

³⁹ UNC Environmental Finance Center. 2017. Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities

⁴⁰ GLWA. 2018. Comprehensive Annual Financial Report.

⁴¹ Retrieved: <https://www.waynemetro.org/wrap/>

- Program Outreach and Intake – Applications are accepted online or by phone at the Wayne Metropolitan Community Action Agency in Detroit.⁴²
- Income and Program Eligibility – Households must be responsible for a water bill on a property which they inhabit, must have some income, and must be below 200% of the Federal Poverty Level.⁴³ The majority of Detroit households have income less than this threshold. City of Detroit customers must agree to install a new meter.
- Program Benefits – WRAP customers have a one-year freeze on arrearages, the program offers a \$25 monthly discount. In the first month of enrollment, participants may receive a credit of up to \$350 applied toward past due bills amount and an additional credit of up to \$350 after 12 consecutive months enrollment, for a total of \$700 over the course of the course of the year. The program lasts up to two years. In the second year, the \$25 monthly discount continues, and up to \$700 is available in further credit toward past due bills.⁴⁴ Customers currently enrolled in WRAP or in compliance with a payment plan will not have their water service disconnected. Also, WRAP provides conservation audits and up to \$1500 in repairs for customers above 120% of average usage.
- Participation – WRAP served approximately 5,500 low-income customers in 2017

Table 5.6 shows the estimated participation rate for the WRAP program. About 6.6% of low-income Detroit households received WRAP assistance in 2017. Moderate income households are not eligible for WRAP bill-payment assistance. Some WRAP participants are SNAP-Eligible while others are Non-SNAP Low-Income households.

Table 5.6 – Water Assistance Program Participation by Program Eligibility Group

Program Eligibility Group	Number of Households with Water Bills	Number of Program Participants	Participation Rate
SNAP Eligible	82,327	5,500	6.6%
Non-SNAP Low-Income			
Moderate Income	26,192	0	0%

Source: American Community Survey (2014-2018) / All LMI Households with a water bill.

⁴² Ibid.

⁴³ Ibid.

⁴⁴ Ibid.

Table 5.7 shows the estimated impact of the water assistance on the water expenditure burden for participating households. For WRAP households, the benefit is estimated to reduce the average water bill by \$300, and also provides up to \$700 in arrearage forgiveness. The basic benefit reduces the burden for SNAP eligible households from an average of 7.2 percent of income to an average of 4.9 percent of income. Both the gross water burden and the net water burden present a “severe” affordability problem for SNAP Eligible households. For Non-SNAP Low Income households, the average net water burden is estimated to be reduced from 3.0 percent of income (“severe”) to about 2.0 percent of income (still “unaffordable.”) Moderate Income households are not eligible to receive WRAP benefits. However, on average, they pay about 2.2 percent of income for water service.

Table 5.7 – Gross and Net Water Burden by Program Eligibility Group

Program Eligibility Group	Mean Gross Water Bill	Mean Income	Mean Burden	Mean Benefit	Mean Net Water Bill	Mean Net Burden
SNAP Eligible	\$941	\$12,988	7.2%	\$300	\$641	4.9%
Non-SNAP LI	\$899	\$30,263	3.0%	\$300	\$599	2.0%
Moderate	\$850	\$38,281	2.2%	\$0	\$850	2.2%

Source: American Community Survey (2014-2018) / All LMI Households with a water bill.

5.3 Summary of Findings

This analysis furnishes information on Direct Water Payment LMI households in Detroit and documents how the water assistance programs help households to reduce their water burden.

Important population statistics include:

- Households with Water Bills – About two-thirds of Detroit households pay a water bill directly to the DWSD.⁴⁵
- Factors Related to Water Bill Payment – The lowest income households and households in multifamily buildings are least likely to pay a water bill directly to the DWSD. About one-half of SNAP Eligible households pay a water bill compared almost 80 percent of non-LMI households. Almost 90 percent of single-family home households pay a water bill compared to less than five percent of households that live in multifamily buildings.
- Water Burden – Water bills are highest for the lowest income households. Water burden is about 1.9 percent of income for the average DWSD customer. Water burden is 7.2 percent for SNAP Eligible households and 3.0 percent for Non-SNAP Low-Income households. A water burden of 3.0 percent or more is considered to be a “severe” water

⁴⁵ UNC Environmental Finance Center. 2017. *Navigating Legal Pathways to Rate-Funded Customer Assistance Programs*.

burden and a water burden of more than 1.8 percent of income is considered to be “unaffordable.”

Important program information includes:

- Regulatory Framework and Funding – The Michigan constitution limits the ability of public utilities to fund social programs. However, the DWSD sets aside .5% of its operating revenues for the WRAP program.
- Program Management – The Wayne County Community Action Agency is responsible for program administration, outreach, and intake.
- Program Impact – The WRAP program is estimated to serve about seven percent of the income-eligible customers. The program delivers a benefit that pays about one-third of the average customer’s water bill. However, the program does not reduce the bills to an “affordable” burden.

The DWSD WRAP program serves a relatively small number of low-income customers and delivers a modest benefit to those households.

6.0 PHILADELPHIA WATER ASSISTANCE PROGRAMS

This section of the report furnishes information on the water assistance programs available to low- and moderate-income households in Philadelphia, PA. The first part examines the bill payment patterns and water expenditure burden for LMI households. The second part documents program design, funding, and participation. The third part summarizes findings.

6.1 Population Characterization

Table 6.1 shows the distribution of households in Philadelphia by Program Eligibility group.⁴⁶ About 29 percent of households are SNAP Eligible, 15 percent are not income-eligible for SNAP but are considered to be low income, and about 17 percent are moderate income.

Table 6.1 – Philadelphia Households by Program Eligibility Group

Program Eligibility Group	Number of Households	Percent of Households	Average Income
SNAP Eligible	170,478	29%	\$11,277
Non-SNAP Low-Income	91,158	15%	\$29,829
Moderate Income	103,750	17%	\$44,891
Non-LMI Households	229,394	39%	\$125,843
All Households	594,780	100%	\$64,169

Source: American Community Survey (2014-2018) / All Households

Table 6.2 shows the share of Philadelphia households that pay directly for their water usage by Program Eligibility Group. About 66 percent of all households pay a water bill. However, the percent that pays directly varies by income group. Almost 75 percent of Non-LMI households pay a water bill directly, compared to about one-half (54 percent) of SNAP Eligible households.

Table 6.2 - Percent of Households by Water Payment Status and Program Eligibility Group

Water Payment Status	SNAP Eligible	NonSNAP Low-Income	Moderate Income	Non-LMI Housholds	All Households
Pay Directly	54%	65%	67%	74%	66%
Included In Rent	36%	27%	26%	21%	27%
No Charges	10%	8%	7%	5%	7%
All Households	100%	100%	100%	100%	100%

Source: American Community Survey (2014-2018) / All Households

⁴⁶ Households with income at or below 130% of the HHS Poverty Income Guideline are labeled as SNAP Eligible. Households with income greater than 130% of Poverty but at or below 60% of State Median Income are labeled Non-SNAP Low Income. Households with income greater than 60% of SMI but at or below 80% of Area Median Income are labelled Moderate Income. Households with income greater than 80% of AMI are labeled Non-LMI.

The primary factor associated with water bill payment is housing unit type. Table 6.3 shows that, even for LMI households, more than 80 percent of households in single family homes and single family attached homes pay a water bill directly (83 percent and 84 percent, respectively). In contrast, about 10 percent of LMI households in large multifamily buildings pay a water bill directly. The relationship between housing unit type and income helps to explain the lower rate of water bill payment for LMI households.

Table 6.3 - Percent of LMI Households by Water Payment Status and Housing Unit Type

Water Payment Status	Household Unit Type			
	Single Family Detached	Single Family Attached	Small Multifamily (2-4 Units)	Large Multifamily (5+ Units)
Pay Directly	83%	84%	23%	10%
Include In Rent	7%	13%	60%	71%
No Charges	10%	4%	17%	19%
All LMI Households	100%	100%	100%	100%

Source: American Community Survey (2014-2018) / All LMI Households

Table 6.4 shows the distribution of households that pay a water bill directly in Philadelphia by Program Eligibility group. Comparing Table 6.4 to Table 6.1 shows that while 29 percent of all households in Philadelphia are SNAP Eligible, only about 24 percent of the households that pay a water bill are SNAP Eligible. About 61 percent of in Philadelphia are low- and moderate-income. But they only represent 57 percent of households that pay a water bill.

Table 6.4 – Philadelphia Households that Pay Directly for Water by Program Eligibility Group

Program Eligibility Group	Number of Households	Percent of Households	Average Income
SNAP Eligible	92,092	24%	\$12,995
Non-SNAP Low-Income	59,440	15%	\$31,342
Moderate Income	69,343	18%	\$46,307
Non-LMI Households	169,932	43%	\$127,748
All Households	390,807	100%	\$71,594

Source: American Community Survey (2014-2018) / All Households with a water bill

Table 6.5 shows the average water expenditure burden for low- and moderate-income households that pay a water bill directly by Program Eligibility group. It shows that SNAP-Eligible households in Philadelphia face a “severe” water burden, while Non-SNAP Low-Income households have an “unaffordable” burden. Moderate Income and Non-LMI households have, on average, an “affordable” water burden. [Note: The ACS respondent-reported data on water expenditures is not consistent with the typical water bills observed by Philadelphia Water. For purposes of this analysis, the ACS self-reports were normalized to estimated median Philadelphia water bills based on Philadelphia Water rate structures and typical water consumption.]

Table 6.5 – Water Burden for Households that Pay Directly for Water by Program Eligibility Group

Program Eligibility Group	Mean Water Expenditures	Mean Income	Mean Water Burden
SNAP Eligible	\$830	\$12,995	6.4%
Non-SNAP Low-Income	\$830	\$31,342	2.6%
Moderate Income	\$803	\$46,307	1.7%
Non-LMI Households	\$798	\$127,748	0.6%
All Households	\$811	\$71,594	1.1%

Source: American Community Survey (2014-2018) / All Households with a water bill

6.2 Program Design, Funding, and Participation

Water services in and around Philadelphia are provided by the Philadelphia Water Department (PWD), an urban public utility that serves roughly 1.7 million people, most of them in the city-county of Philadelphia itself but also some in surrounding Bucks, Montgomery, and Delaware Counties. The Philadelphia Water Department offers the Tiered Assistance Program (TAP) to help low-income households pay their water bills.

The Philadelphia Tiered Assistance Program has the following characteristics:

- **Regulatory Framework** – The PWD is a department of the municipal government of Philadelphia. In 2017, the city government created the TAP program as mandated by Council Bill 140607-AA, which was signed in December of 2015. Regulations determining the structure of the program are in Sections 206.0 through 206.10 of the Philadelphia Water Department Regulations.
- **Sources and Amount of Funding** – The program is funded out of regular rate payments. Rates in Philadelphia are set by the Philadelphia Water, Sewer, and Stormwater Rate Board. In total, current TAP enrolled accounts have pre-TAP debts worth \$39.7 million⁴⁷, which will be forgiven if households sustain membership in the program. Since this debt

⁴⁷ City of Philadelphia Department of Revenue. 2020. "Annual Report to the mayor on the Tiered Assistance Program (TAP)."

is forgiven over a period of two years, it is not yet known how many households will remain on the program for the full period, and most of the lost revenue from TAP is in forgiven debt, annual expenses of the program are likely to be around \$20 million, but may be lower.

- Program Administration – The Tiered Assistance Program is administered jointly by the Philadelphia Water Department and the Water Revenue Bureau of the Philadelphia Department of Revenue.
- Program Outreach and Intake – Applications for TAP are joint with all other water assistance programs in Philadelphia, including the Senior Citizen Discount. Applications are accepted in person, by mail, or online by the Philadelphia Water Department. In person appointments are available at the locations of many community organizations and municipal government offices throughout the city, but availability for in-person meetings is limited during the COVID-19 pandemic. Outreach is performed by the Philadelphia Water Department and the Water Revenue Bureau of the Department of Revenue, which have performed mailing campaigns to encourage senior citizens already enrolled in the Senior Citizen Discount to apply for TAP. The PWD and WRB also conduct outreach in-person at Utility Fairs. Outreach for Philadelphia water assistance is also performed by community organizations in Philadelphia, including those that provide in-person application intake.
- Income and Program Eligibility – Households below 150% of the federal poverty line are eligible to have their water bill payment fixed between 2 and 3% of their household income, where that percentage is dependent on income as outlined below. Households above 150% of the poverty may be eligible to have their water bill fixed at 4% of household income if they demonstrate special hardship. Special hardship may include an increase in household size, loss of a job, serious illness, death of a wage earner, domestic violence, or other factors. 98% of accounts enrolled in TAP in 2019 were below 150% of the federal poverty line.⁴⁸
- Program Benefits – Households on the program have their monthly water bills capped at a certain percentage of household income, with that percentage dependent on their poverty level. Any amount billed beyond that is forgiven. Also, households on TAP receive forgiveness for pre-TAP arrearages. If a customer makes 24 complete monthly payments while on TAP, their Pre-TAP debt is forgiven. If a household's income changes such that they become ineligible for TAP before they have been on the program for 24 months, then 1/24 of their pre-TAP debt is forgiven for every month that they were on the

⁴⁸ Ibid

program. If a household is on the program and fails to make a complete payment before 24 monthly payments are made, then no arrearage forgiveness is granted and the household is removed from TAP.

- For households at or below 50% of the poverty line, monthly water bills are capped at 2% of income. Bills must be at least \$12.00.
 - For households with incomes above 50% and below or equal to 100% of the poverty line, bills are capped at 2.5% of income.
 - For households with incomes above 100% and below or equal to 150% of the poverty line, bills are capped at 3% of income.
 - Households with incomes above 150% of the poverty line may still qualify for TAP, with their bill capped at 4% of income. Most TAP participating households with incomes above the cutoff have incomes equal to or below 250% of the poverty line.⁴⁹
- Participation – As of the end of 2019, there were 15,258 active accounts in TAP. 13,701 accounts enrolled during 2019 while other households in TAP at the end of the year had already been previously enrolled. 9,650 TAP applicants were placed in programs other than TAP throughout 2019, and more than 23,000 households applied for the program.⁵⁰
 - Payment Agreements – Residential and commercial water customers in Philadelphia can enter payment agreements if they are unable to pay their water bill on time and in full. To enter an agreement, households must make a down payment of 25% of their arrearage, though this may be partially waived for customers below 250% of the poverty line and other customers identified as facing special hardship. The benefit to a household of a payment agreement is that no new penalties accrue on a household's existing debt during the agreement. To stay on the program, customers must pay the remainder of their pre-existing arrearage in equal monthly installments over a period of up to 18 months, with exact length depending on the terms of the agreement. For households below 150% of the poverty line, the payment period may be longer than 18 months. As of the end of 2019, there were 7,854 active residential payment agreements on Philadelphia Water Accounts.

The Philadelphia Water Department also offers a Senior Citizen discount to qualified senior households.

⁴⁹ Ibid.

⁵⁰ Ibid.

The Philadelphia Senior Citizen Discount has the following characteristics:

- Regulatory Framework – The regulations regarding the Senior Citizen Discount are outlined in section 5.2 of the rates and charges regulations of the Philadelphia Water Department, as determined by the Philadelphia Water, Sewer and Storm Water Rate Board.
- Sources and Amount of Funding – The Senior Citizen Discount is funded by the Department of Revenue out of rates paid on water in Philadelphia.
- Program Administration – The Senior Citizen Discount is provided by the Philadelphia Water Department and is administered by the Water Revenue Bureau of the Department of Revenue.
- Program Outreach and Intake – The application for the Senior Citizen discount is joint with the application for all other Philadelphia water assistance programs. Applications are taken by mail, online, or in person. Outreach for all Philadelphia water assistance is performed by the Philadelphia Water Department and community organizations in Philadelphia, including those that provide in-person application intake.
- Income and Program Eligibility – To be eligible for the senior citizen discount, households must have at least one member at least 65 years old, have a water and sewer bill in their name at their place of residence, and have an annual household income of \$32,000 or less.⁵¹
- Program Benefits – Households enrolled in the program receive a 25% discount on their total water and sewer bill.
- Participation – As of the end of 2019, there were 26,459 accounts actively enrolled in the senior citizen discount program.⁵²

Table 6.6 shows the estimated participation rate for the TAP program by TAP eligibility group. Households with incomes no more than 50% of the poverty line are in tier one. Households with incomes above 50% and no more than 100% of the poverty line are in tier two. Households with incomes more than 100% of the poverty line and no greater than 150% are in tier three, and households with incomes above 150% of poverty are only eligible for TAP in special circumstances. In table 6.6, households in tiers one and two have been combined for comparison

⁵¹ Philadelphia City Government. 2020. "Senior Citizen Water Bill Discount".

<https://www.phila.gov/services/payments-assistance-taxes/senior-citizen-discounts/senior-citizen-water-bill-discount/>

⁵² City of Philadelphia Department of Revenue. 2020. "Annual Report to the mayor on the Tiered Assistance Program (TAP).

with CAP1. Table 6.6 *only* includes as participants households that began enrollment in 2019. That includes 13,701 out of 15,258 active users as of the end of 2019, which is 90% of then active accounts. The participation rate is 14 percent for tier one and tier two eligible households, and 10.2 percent for tier three eligible households. Less than one in two-hundred moderate income households and around one in one thousand households above moderate income participate in TAP. Most of these households are not eligible for TAP.

Table 6.6 – Water Assistance Program Participation by Program Eligibility Group

Program Eligibility Group	Number of Households with Water Bills	Number of Program Participants	Participation Rate
Tier 1 & 2. (Income up to 100% of poverty)	67,569	9,452	14.0%
Tier 3 (101%-150% of poverty)	38,656	3,943	10.2%
Moderate Income (151-250% of poverty)	67,613	253	.4%
Above Moderate Income (>250% of poverty)	47,037	53	.1%

Source: American Community Survey (2014-2018) / All Households with a water bill.

Table 6.7 shows the estimated impact of the water assistance on the water expenditure burden for participating households. For TAP tier one and two households, the benefit is estimated to reduce the average water bill by \$651. The basic benefit reduces the burden for tier one and two eligible households from an average of 8.6 percent of income (“severe”) to an average of 2.0 percent of income (i.e., close to the “affordable” limit of 1.8% of income). For tier three households, the average net water burden is estimated to be about 2.1 percent. Moderate Income households that participate would pay about 1.7 percent of income for water service, and households above moderate income would pay 1.3%.

Table 6.7 – Gross and Net Water Burden by Program Eligibility Group

Program Eligibility Group	Mean Gross Water Bill	Mean Income	Mean Burden	Mean Benefit	Mean Net Water Bill	Mean Net Burden
Tier 1 & 2	\$849	\$9,847	8.6%	\$651	\$198	2.0%
Tier 3	\$808	\$23,242	3.5%	\$327	\$481	2.1%
Moderate Income	\$843	\$37,550	2.2%	\$219	\$624	1.7%
Above Moderate Income	\$790	\$46,094	1.7%	\$183	\$607	1.3%

Source: American Community Survey (2014-2018) / All Households with a water bill. Mean benefit is estimated by simulating for each household what water bill that household would have if enrolled in TAP, based on its income and actual bill.

6.3 Summary of Findings

This analysis furnishes information on Direct Water Payment LMI households in Philadelphia and documents how the water assistance programs help households to reduce their water burden. Important population statistics include:

- Households with Water Bills – About two-thirds of Philadelphia households pay a water bill directly to the DWSD.⁵³
- Factors Related to Water Bill Payment – The lowest income households and households in multifamily buildings are least likely to pay a water bill directly to PWD. About one-half of SNAP Eligible households pay a water bill compared almost three-fourths of non-LMI households. Over 80 percent of single-family home households pay a water bill compared to 10 percent of households that live in multifamily buildings.
- Water Burden – Water bills are highest for the lowest income households. Water burden is about 1.1 percent of income for the average PWD customer. Water burden is 6.4 percent for SNAP Eligible households and 2.6 percent for Non-SNAP Low-Income households. A burden of 3.0 percent or more is considered to be a “severe” water burden and a burden of more than 1.8 percent of income is considered to be “unaffordable.”

Important program information includes:

- Regulatory Framework and Funding – The Philadelphia city government created the water assistance program by statute and implemented it through Water Department regulations. There is some uncertainty about the total funding for the program. The arrearage forgiveness program only grants forgiveness if the program participants successfully complete their payment agreement.
- Program Management – The Philadelphia Water Department is responsible for program administration, outreach, and intake.
- Program Impact – The TAP program is estimated to serve about 10 percent of low-income customers, but less than one percent of moderate-income customers. The program delivers a benefit that, on average, reduces the water burden for program participants to about 2 percent of income. Since a water burden of 1.8 percent of income is considered “affordable,” the program helps the average customer to have an “affordable” water bill.

The PWD TAP program serves a modest number of low-income customers and delivers a substantial benefit to those households.

⁵³ UNC Environmental Finance Center. 2017. *Navigating Legal Pathways to Rate-Funded Customer Assistance Programs*.

7.0 PORTLAND WATER ASSISTANCE PROGRAMS

This section of the report furnishes information on the water assistance programs available to low- and moderate-income households in Portland, OR. The first part examines the bill payment patterns and water expenditure burden for LMI households. The second part documents program design, funding, and participation. The third part summarizes findings.

7.1 Population Characterization

Table 7.1 shows the distribution of households in Portland by Program Eligibility group.⁵⁴ About 16 percent of households are SNAP Eligible, seven percent are not income-eligible for SNAP but are considered to be low income, and about 18 percent are moderate income.

Table 7.1 – Portland Households by Program Eligibility Group

Program Eligibility Group	Number of Households	Percent of Households	Average Income
SNAP Eligible	42,280	16%	\$12,195
Non-SNAP Low-Income	18,448	7%	\$25,839
Moderate Income	47,141	18%	\$40,384
Non-LMI Households	155,660	59%	\$137,434
All Households	263,529	100%	\$92,168

Source: American Community Survey (2014-2018) / All Households

Table 7.2 shows the share of Portland households that pay directly for their water usage by Program Eligibility Group. About 66 percent of all households pay a water bill. However, the percent that pays directly varies by income group. Over three-fourths (77%) of Non-LMI households pay a water bill directly, compared to about 41 percent of SNAP Eligible households.

Table 7.2 - Percent of Households by Water Payment Status and Program Eligibility Group

Water Payment Status	SNAP Eligible	NonSNAP Low-Income	Moderate Income	Non-LMI Housholds	All Households
Pay Directly	41%	53%	58%	77%	66%
Included In Rent	48%	38%	36%	20%	29%
No Charges	11%	9%	6%	3%	5%
All Households	100%	100%	100%	100%	100%

Source: American Community Survey (2014-2018) / All Households

⁵⁴ Households with income at or below 130% of the HHS Poverty Income Guideline are labeled as SNAP Eligible. Households with income greater than 130% of Poverty but at or below 60% of State Median Income are labeled Non-SNAP Low Income. Households with income greater than 60% of SMI but at or below 80% of Area Median Income are labelled Moderate Income. Households with income greater than 80% of AMI are labeled Non-LMI.

The primary factor associated with water bill payment is housing unit type. Table 7.3 shows that, even for LMI households, more than 90 percent of households in single family homes and one-half of households in single family attached homes pay a water bill directly. In contrast, about one-fifth (21 percent) of LMI households in large multifamily buildings pay a water bill directly. The relationship between housing unit type and income helps to explain the lower rate of water bill payment for LMI households.

Table 7.3 - Percent of LMI Households by Water Payment Status and Housing Unit Type

Water Payment Status	Household Unit Type			
	Single Family Detached	Single Family Attached	Small Multifamily (2-4 Units)	Large Multifamily (5+ Units)
Pay Directly	93%	50%	22%	21%
Include In Rent	4%	44%	67%	66%
No Charges	3%	6%	11%	11%
All LMI Households	100%	100%	100%	100%

Source: American Community Survey (2014-2018) / All LMI Households

Table 7.4 shows the distribution of households that pay a water bill directly in Portland by Program Eligibility group. Comparing Table 7.4 to Table 7.1 shows that while 16 percent of all households in Portland are SNAP Eligible, only about 10 percent of the households that pay a water bill are SNAP Eligible. About 41 percent of in Portland are low- and moderate-income. But they only represent 31 percent of households that pay a water bill.

Table 7.4 – Portland Households that Pay Directly for Water by Program Eligibility Group

Program Eligibility Group	Number of Households	Percent of Households	Average Income
SNAP Eligible	17,404	10%	\$13,568
Non-SNAP Low-Income	9,824	6%	\$26,973
Moderate Income	27,321	16%	\$42,276
Non-LMI Households	119,724	69%	\$144,756
All Households	174,273	100%	\$108,949

Source: American Community Survey (2014-2018) / All Households with a water bill

Table 7.5 shows the average water expenditure burden for low- and moderate-income households that pay a water bill directly by Program Eligibility group. It shows that SNAP-Eligible, Non-SNAP Low-income, and moderate-income households face a “severe” water burden. Non-LMI households have an affordable water burden. [Note: The ACS respondent-reported data on water expenditures is not consistent with the average water bills observed by the Portland Water Bureau. For purposes of this analysis, the ACS self-reports were normalized to estimated median Portland water bills based on Portland Water Bureau rate structures and typical water consumption.]

Table 7.5 – Water Burden for Households that Pay Directly for Water by Program Eligibility Group

Program Eligibility Group	Mean Water Expenditures	Mean Income	Mean Water Burden
SNAP Eligible	\$1,329	\$13,568	9.8%
Non-SNAP Low-Income	\$1,404	\$26,973	5.2%
Moderate Income	\$1,440	\$42,276	3.4%
Non-LMI Households	\$1,609	\$144,756	1.1%
All Households	\$1,543	\$108,949	1.4%

Source: American Community Survey (2014-2018) / All Households with a water bill

7.2 Program Design, Funding, and Participation

Water services in Portland are provided by the Portland Water Bureau (PWB), an urban public utility that serves roughly 597,000 customers in 164,500 residential households. The Portland Water Bureau offers the Financial Assistance program as its CAP. It also provides the Utility Safety Net program for temporary emergencies. The Portland Financial Assistance program and the Utility Safety Net program have the following characteristics:

- Regulatory Framework – The City of Portland operates the Portland Utility Board (PUB), a citizen oversight body responsible for overseeing PWB’s rate setting for water services. The PUB advises the Portland City Council in determining the discounted amounts for the bill discount financial assistance program each fiscal year.⁵⁵ The Utility Safety Net Assistance Program was authorized by the Portland City Council in 2007 as Emergency Ordinance No. 181052.⁵⁶
- Sources and Amount of Funding – The City of Portland funds the assistance program through the city’s general utility rate revenues. The projected cost for all financial assistance programs for the 2017-2018 year was \$5,934,612, approximately 1.02% of

⁵⁵ UNC Environmental Finance Center. 2017. Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities

⁵⁶

projected combined revenues for the PWB and Bureau of Environmental Services (BES).⁵⁷ Projected spending by program was as follows:

- Bill Discounts - \$4,866,612, 82% of assistance spending.
 - Crisis Vouchers – 750,000, 13% of assistance spending.
 - Safety Net – \$100,000, 2% of assistance spending.
 - Fixture Repair – \$75,000, 1% of assistance spending.
 - Administration – \$143,000 2% of assistance spending.
- Program Administration – The Financial Assistance program is jointly administered by PWB and the city of Portland Bureau of Environmental Services, while the Utility Safety net Program is administered by the Portland Water Bureau.
 - Program Outreach and Intake – Applications for the Financial Assistance program are accepted online at the PWB website, by phone, or in person at local Community Service Centers. Applications for the Utility Safety Net program are by phone to the PWB Financial Assistance Group.⁵⁸ PWB customers may be auto enrolled if they are receiving other benefits.
 - Income and Program Eligibility – Eligibility for the Financial Assistance program is tiered. Households must have incomes less than or equal to 60% of the Portland area median for their family size to be eligible for tier one rate discounts and must be less than or equal to 30% of the Portland area median to be eligible for tier two discount. Eligibility rules for the Utility Safety net program are more flexible, but households must have experienced a significant temporary change in household income or other sudden expense, such as extraordinary medical expenses. For both programs, households must have single-family residential water accounts in the applicant’s name. However, tenants in multi-family dwellings may receive assistance vouchers if they are at risk of eviction.⁵⁹
 - Program Benefits – Benefits for the Financial Assistance Program consist of bill discounts, crisis vouchers, and fixture repairs. Tier one customers receive a discount of \$67.30 on the water portion of their bill and \$113.33 on the sewer management charges quarterly, for a total of \$180.63 on each 90-day bill, or \$722.52 annually. Sewage only accounts may receive discounts of \$100.80 on each 60-day bill, or 604.80 annually. Tier two customers receive greater discounts of \$107.70 and \$181.32 on the water and sewer portions of their bills, respectively. This totals \$289.02 quarterly, or \$1156.08 annually. Tier two sewer only accounts may receive \$161.48 per 60-day bill, or \$968.88 annually. The Financial Assistance program also furnishes funds to enrollees of up to \$2,800 per household per year to fix leaking plumbing. Crisis assistance vouchers are up to \$500

⁵⁷ Bradford Blake, Gary Brown, and Eric Rothstein. 2017. Model Water Utility Affordability Programs.

⁵⁸ Retrieved: <https://www.portlandoregon.gov/water/article/565244>

⁵⁹ <https://www.portlandoregon.gov/water/article/689542>

annually, as are vouchers for tenants in multifamily buildings at risk of eviction. The Safety Net program provides a reversal of penalty fees from the previous three months, deferred water shutoff, interest free payment plans, an initial credit of \$50, and an additional credit of up to \$300 at the end of enrollment. Also, customers who are unable to pay their bill when due may request interest and penalty write-offs once annually. This is not limited to low-income customers but is primarily used by them.

- Participation –The PWB system provided financial assistance to about 7,000 low-income customers in Portland in 2017.⁶⁰ Around 60 receive fixture repair assistance annually.

Table 7.6 shows the estimated participation rate for the Portland Financial Assistance (PFA) program. Only Low-Income households are eligible for PFA. About 26% of Low-Income households in Portland received PFA assistance in 2017.

Table 7.6 – Water Assistance Program Participation by Program Eligibility Group

Program Eligibility Group	Number of Households with Water Bills	Number of Program Participants	Participation Rate
SNAP Eligible	27,228	7,000	26%
Non-SNAP Low-Income			
Moderate Income	27,321	0	0%

Source: American Community Survey (2014-2018) / All LMI Households with a water bill

Table 7.7 shows the estimated impact of the water assistance on the water expenditure burden for participating households. Tier 2 households are those with incomes no higher than 30% of AMI, while Tier 1 households have incomes higher than 30% of AMI but no higher than 60% of AMI. For Tier 2 households the benefit reduces the average water bill by \$431 and the burden from 12.2 percent to of 8.0 percent. For Tier 1 Eligible households, benefits are \$269, and the average net water burden is estimated to be 3.7 percent. Moderate Income households are not eligible to receive PFA benefits. On average they pay about 3.4 percent income for water service., Low-Income and Moderate-Income households in Portland have “severe” net water burdens.

Table 7.7 – Gross and Net Water Burden by Program Eligibility Group

Program Eligibility Group	Mean Gross Water Bill	Mean Income	Mean Burden	Mean Benefit	Mean Net Water Bill	Mean Net Burden
Tier Two Eligible	\$1,251	\$10,260	12.2%	\$431	\$820	8.0%
Tier One Eligible	\$1,377	\$30,213	4.6%	\$269	\$1,108	3.7%
Moderate	\$1,440	\$42,276	3.4%	\$0	\$1,440	3.4%

Source: American Community Survey (2014-2018) / All LMI Households with a water bill

⁶⁰ UNC Environmental Finance Center. 2017. Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities

7.3 Summary of Findings

This analysis furnishes information on Direct Water Payment LMI households in Portland and documents how the water assistance programs help households to reduce their water burden. Important population statistics include:

- Households with Water Bills – About two-thirds of Portland households pay a water bill directly to the PWB.⁶¹
- Factors Related to Water Bill Payment – The lowest income households and households in multifamily buildings are least likely to pay a water bill directly to PWB. About 40 percent of SNAP Eligible households pay a water bill compared almost three-fourths of non-LMI households. Over 90 percent of single-family home households pay a water bill compared to 20 percent of households that live in multifamily buildings.
- Water Burden – The lowest income households have a smaller water bill than higher income households but have a higher water burden. Water burden is about 1.4 percent of income for the average PWB customer, but it is 9.8 percent for SNAP Eligible households and 5.2 percent for Non-SNAP Low-Income households. A water burden of 3.0 percent or more is considered to be a “severe” water burden and a water burden of more than 1.8 percent of income is considered to be “unaffordable.”

Important program information includes:

- Regulatory Framework and Funding – The Portland city government created the water assistance program by statute. The program includes bill discounts, crisis payments, safety net payments, and fixture repair.
- Program Management – The Water Bureau is responsible for program administration, outreach, and intake along with the Bureau of Environmental Services.
- Program Impact – The assistance programs are estimated to serve more than 25 percent of low-income customers. The program delivers a benefit that, on average, reduces the water burden for SNAP Eligible households by as much as 50 percent. However, the net water burdens for tier one and tier two participating households still are still over 3 percent of income.

The PWB Financial Assistance program serves a substantial number of low-income customers and delivers a substantial benefit to those households.

⁶¹ UNC Environmental Finance Center. 2017. *Navigating Legal Pathways to Rate-Funded Customer Assistance Programs*.

8.0 RALEIGH WATER ASSISTANCE PROGRAMS

This section of the report furnishes information on the water assistance programs available to low- and moderate-income households in Raleigh, NC. The first part examines the bill payment patterns and water expenditure burden for LMI households. The second part documents program design, funding, and participation. The third part summarizes findings.

8.1 Population Characterization

The municipalities that participate in the City of Raleigh Public Utilities Department Service Area (CORPUD) Utility Customer Assistance Program (UCAP) include Raleigh, Garner, and Rolesville participate in the program. Table 8.1 shows the distribution of households in Raleigh, Garner, and Rolesville by Program Eligibility group.⁶²

Table 8.1 – Raleigh Households by Program Eligibility Group

Program Eligibility Group	Number of Households	Percent of Households	Average Income
SNAP Eligible	20,314	13%	\$13,690
Non-SNAP Low-Income	8,788	5%	\$26,118
Moderate Income	33,515	21%	\$39,861
Non-LMI Households	98,998	61%	\$145,272
All Households	161,615	100%	\$100,394

Source: American Community Survey (2014-2018) / All Households

Table 8.2 shows the share of UCAP area households that pay directly for their water usage by Program Eligibility Group. About 81 percent of all households pay a water bill. Almost 90 percent of Non-LMI households pay a water bill directly, compared to two-thirds of SNAP Eligible.

Table 8.2 - Percent of Households by Water Payment Status and Program Eligibility Group

Water Payment Status	SNAP Eligible	Non-SNAP Low-Income	Moderate Income	Non-LMI Households	All Households
Pay Directly	65%	65%	77%	87%	81%
Included In Rent	27%	28%	18%	8%	14%
No Charges	8%	7%	4%	5%	5%
All Households	100%	100%	100%	100%	100%

Source: American Community Survey (2014-2018) / All Households

⁶² Households with income at or below 130% of the HHS Poverty Income Guideline are labeled as SNAP Eligible. Households with income greater than 130% of Poverty but at or below 60% of State Median Income are labeled Non-SNAP Low Income. Households with income greater than 60% of SMI but at or below 80% of Area Median Income are labelled Moderate Income. Households with income greater than 80% of AMI are labeled Non-LMI.

The primary factor associated with water bill payment is housing unit type. Table 8.3 shows that, even for LMI households, almost 90 percent of households in single family homes pay a water bill directly. Only about 60 percent of LMI households in large multifamily buildings pay a water bill directly to the water company. The relationship between housing unit type and income helps to explain the lower rate of water bill payment for LMI households.

Table 8.3 - Percent of LMI Households by Water Payment Status and Housing Unit Type

Water Payment Status	Household Unit Type				
	Single Family Detached	Single Family Attached	Small Multifamily (2-4 Units)	Large Multifamily (5+ Units)	Mobile Home
Pay Directly	88%	85%	73%	58%	58%
Include In Rent	3%	11%	22%	38%	18%
No Charges	9%	4%	5%	4%	24%
All LMI Households	100%	100%	100%	100%	100%

Source: American Community Survey (2014-2018) / All LMI Households

Table 8.4 shows the distribution of households that pay a water bill directly in the UCAP service area by Program Eligibility group. Comparing Table 8.4 to Table 8.1 shows that almost 40 percent of households in the service area are low- and moderate-income. But they only represent 34 percent of households that pay a water bill.

Table 8.4 – Raleigh Households that Pay Directly for Water by Program Eligibility Group

Program Eligibility Group	Number of Households	Percent of Households	Average Income
SNAP Eligible	13,283	10%	\$14,538
Non-SNAP Low-Income	5,706	4%	\$26,747
Moderate Income	25,951	20%	\$40,229
Non-LMI Households	86,146	66%	\$147,497
All Households	131,086	100%	\$107,532

Source: American Community Survey (2014-2018) / All Households with a water bill

Table 8.5 shows the average water expenditure burden for low- and moderate-income households that pay a water bill directly by Program Eligibility group. It shows that SNAP-Eligible the UCAP service area face a “severe” water burden, while Non-SNAP Low-Income households have a burden that is, on average, at the “affordable” threshold. Moderate Income households and Non-LMI households have an affordable water burden.

Table 8.5 – Water Burden for Households that Pay Directly for Water by Program Eligibility Group

Program Eligibility Group	Mean Water Expenditures	Mean Income	Mean Water Burden
SNAP Eligible	\$532	\$14,538	3.7%
Non-SNAP Low-Income	\$486	\$26,747	1.8%
Moderate Income	\$494	\$40,229	1.2%
Non-LMI Households	\$577	\$147,497	0.4%
All Households	\$552	\$107,532	0.5%

Source: American Community Survey (2014-2018) / All Households with a water bill

8.2 Program Design, Funding, and Participation

Water in Raleigh, North Carolina is provided by the City of Raleigh Public Utilities Department. The Utility provides service to approximately 550,000 individuals. CORPUD operates the Utility Customer Assistance Program in the cities of Raleigh and neighboring Garner and Rolesville, which also receive water through CORPUD.

The Utility Customer Assistance Program has the following characteristics:

- Regulatory Framework – Government-owned utilities in North Carolina do not have express authority to establish low-income CAPs from rate revenues, and they have been interpreted as being forbidden by, “cost-of-service” rate setting statutory provisions, which limit direct cross subsidization. However, in 2016, the Raleigh City Council authorized CORPUD to adopt a CAP.⁶³ To avoid defying cost of service rate setting provisions, UCAP is not funded through rate revenues.
- Sources and Amount of Funding – UCAP had a budget of \$215,000 in 2017 from general government revenues in Raleigh and Garner, before Rolesville joined.⁶⁴
- Program Administration – The program is administered jointly by CORPUD and Wake County Human Services, which processes applications and screens for eligibility.

⁶³ UNC Environmental Finance Center. 2017. Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities

⁶⁴ Ibid

- Program Outreach and Intake – Intake is through Wake County Human Services.⁶⁵ Applications can be completed online or submitted through fax, mail, and email.
- Income and Program Eligibility – Households must have past-due bills on their accounts, be in jeopardy of disconnection, and have incomes below 130% of the federal poverty guideline.⁶⁶
- Program Benefits – UCAP provides up to \$240 per year in one-time assistance. Participants must have a utility account, to which funds will be applied directly.⁶⁷
- Participation – Raleigh and Garner prepared funds to assist up to 895 customers in the first year of operation (2017) before Rolesville joined the program.⁶⁸

WakeHELPS – Wake County, which includes Raleigh, Garner, and Rolesville, created a new utility assistance program in response to COVID-19, WakeHELPS.

- Regulatory Framework – WakeHELPS was funded by CARES monies allocated by the Wake County board of Commissioners.
- Source and Amount of Funding – \$5 million has been allocated to WakeHELPS, however it is unknown how much will be spent on water bill assistance.⁶⁹
- Program Administration – WakeHELPS is administered by Wake County Human Services.
- Program Outreach and Intake – Applications are accepted by mail, email, and in person.
- Income and Program Eligibility – To qualify, households must have unpaid utility bills, be able to demonstrate they suffer financially due to COVID-19 and have incomes within the low-moderate 2020 HUD income limits for the Wake County region. For a household of four, the cutoff is \$56,460.⁷⁰
- Program Benefits – Participating households receive up to \$500 toward their utility bills.
- Participation – It is estimated 10,000 households will receive assistance. It is unknown how many will have overdue water bills, as opposed to arrearages toward other utilities.

⁶⁵ Retrieved: <https://raleighnc.gov/services/water-and-sewer/assistance-program-water-and-sewer-utility-customers>

⁶⁶ UNC Environmental Finance Center. 2017. Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities

⁶⁷ Ibid.

⁶⁸ Ibid.

⁶⁹ Retrieved: <https://covid19.wakegov.com/wakehelps/>

⁷⁰ Ibid.

Table 8.6 shows the estimated participation rate for the Utility Customer Assistance Program. Only SNAP Eligible households are eligible for UCAP, and about 6.7% of SNAP-Eligible households in the Raleigh service area received UCAP assistance in 2017.

Table 8.6 – Water Assistance Program Participation by Program Eligibility Group

Program Eligibility Group	Number of Households with Water Bills	Number of Program Participants	Participation Rate
SNAP Eligible	13,283	895	6.7%
Non-SNAP Low-Income	5,706	0	0%
Moderate Income	25,951	0	0%

Source: American Community Survey (2014-2018) / All LMI Households with a water bill.

Table 8.7 shows the estimated impact of the water assistance on burden for participating households. For UCAP participating households, the benefit reduces the average water bill by about 45 percent. That reduces the burden for SNAP eligible households from 3.7 percent of income - a “severe” burden - to 2.0 percent of income, which is “unaffordable” but not “severe”. Non-SNAP Low-Income households and Moderate-Income Households are not eligible for UCAP. Non-SNAP Low-Income households have an average water burden of 1.8%, while Moderate-Income households have an average burden of 1.2%.

Table 8.7 – Gross and Net Water Burden by Program Eligibility Group

Program Eligibility Group	Mean Gross Water Bill	Mean Income	Mean Burden	Mean Benefit	Mean Net Water Bill	Mean Net Burden
SNAP Eligible	\$532	\$14,538	3.7%	\$240	\$292	2.0%
Non-SNAP LI	\$486	\$26,747	1.8%	\$0	\$486	1.8%
Moderate	\$494	\$40,229	1.2%	\$0	\$494	1.2%

Source: American Community Survey (2014-2018) / All LMI Households with a water bill.

8.3 Summary of Findings

This analysis furnishes information on Direct Water Payment LMI households in Raleigh and documents how the water assistance programs help households to reduce their water burden. Important population statistics include:

- Households with Water Bills – Over 80 percent of Raleigh households pay a water bill directly to the UCAP.⁷¹
- Factors Related to Water Bill Payment – The lowest income households and households in multifamily buildings are least likely to pay a water bill directly to CORPUD. About two-

⁷¹ UNC Environmental Finance Center. 2017. *Navigating Legal Pathways to Rate-Funded Customer Assistance Programs*.

thirds of SNAP Eligible households pay a water bill compared almost 90 percent of non-LMI households. Almost 90 percent of single-family home households pay a water bill compared to about 60 percent of households that live in multifamily buildings.

- Water Burden – Water bills are highest for the lowest income households and the highest income households. Water burden is about 0.5 percent of income for the average UCAP area customer. Water burden is 3.7 percent for SNAP Eligible households and 1.8 percent for Non-SNAP Low-Income households. A water burden of 3.0 percent or more is considered to be a “severe” water burden and a water burden of more than 1.8 percent of income is considered to be “unaffordable.”

Important program information includes:

- Regulatory Framework and Funding – North Carolina utilities are forbidden from using funding from rates for low-income assistance programs. The funding for the water assistance programs is furnished from general government revenue.
- Program Management – The CORPUD and Wake County Public Services jointly administer the program, and Wake County Public Services is responsible for outreach and intake.
- Program Impact – The water assistance program is estimated to serve about seven percent of SNAP Eligible households. It does not serve other low- or moderate-income households. The program delivers a benefit that reduces the water burden for program participants from almost 4 percent of income to about 2 percent of income. water bill.

The Raleigh water assistance program serves a small number of low-income customers and delivers a modest benefit to those households

9.0 SEATTLE WATER ASSISTANCE PROGRAMS

This section of the report furnishes information on the water assistance programs available to low- and moderate-income households in Seattle, WA. The first part examines the bill payment patterns and water expenditure burden for LMI households. The second part documents program design, funding, and participation. The third part furnishes a summary of findings.

9.1 Population Characterization

Table 9.1 shows the distribution of households in Seattle by Program Eligibility group.⁷² About 12 percent of households are SNAP Eligible, 8 percent are not income-eligible for SNAP but are considered to be low income, and about 18 percent are moderate income.

Table 9.1 – Seattle Households by Program Eligibility Group

Program Eligibility Group	Number of Households	Percent of Households	Average Income
SNAP Eligible	37,922	12%	\$10,697
Non-SNAP Low-Income	26,025	8%	\$27,781
Moderate Income	57,582	18%	\$47,528
Non-LMI Households	201,880	62%	\$171,867
All Households	323,409	100%	\$119,236

Source: American Community Survey (2014-2018) / All Households

Table 9.2 shows the share of Seattle households that pay directly for their water usage by Program Eligibility Group. About 65 percent of all households pay a water bill. However, the percent that pays directly varies by income group. Almost 75 percent of Non-LMI households pay a water bill directly, compared to less than one-half (43 percent) of SNAP Eligible households.

Table 9.2 - Percent of Households by Water Payment Status and Program Eligibility Group

Water Payment Status	SNAP Eligible	NonSNAP Low-Income	Moderate Income	Non-LMI Housholds	All Households
Pay Directly	43%	48%	53%	74%	65%
Included In Rent	48%	46%	42%	24%	32%
No Charges	9%	6%	5%	2%	4%
All Households	100%	100%	100%	100%	100%

Source: American Community Survey (2014-2018) / All Households

⁷² Households with income at or below 130% of the HHS Poverty Income Guideline are labeled as SNAP Eligible. Households with income greater than 130% of Poverty but at or below 60% of State Median Income are labeled Non-SNAP Low Income. Households with income greater than 60% of SMI but at or below 80% of Area Median Income are labelled Moderate Income. Households with income greater than 80% of AMI are labeled Non-LMI.

The primary factor associated with water bill payment is housing unit type. Table 9.3 shows that, even for LMI households, more than 90 percent of households in single family homes and two-thirds of households in single family attached homes pay a water bill directly. In contrast, about 30 percent of LMI households in large multifamily buildings pay a water bill directly. The relationship between housing unit type and income helps to explain the lower rate of water bill payment for LMI households.

Table 9.3 - Percent of LMI Households by Water Payment Status and Housing Unit Type

Water Payment Status	Household Unit Type			
	Single Family Detached	Single Family Attached	Small Multifamily (2-4 Units)	Large Multifamily (5+ Units)
Pay Directly	92%	67%	35%	30%
Include In Rent	7%	30%	58%	62%
No Charges	1%	3%	7%	8%
All LMI Households	100%	100%	100%	100%

Source: American Community Survey (2014-2018) / All LMI Households

Table 9.4 shows the distribution of households that pay a water bill directly in Seattle by Program Eligibility group. Comparing Table 9.4 to Table 9.1 shows that while 38 percent of households in Seattle are low- and moderate-income, they only represent 28 percent of households that pay a water bill.

Table 9.4 – Seattle Households that Pay Directly for Water by Program Eligibility Group

Program Eligibility Group	Number of Households	Percent of Households	Average Income
SNAP Eligible	16,195	8%	\$11,122
Non-SNAP Low-Income	12,410	6%	\$30,525
Moderate Income	30,751	15%	\$49,125
Non-LMI Households	149,932	72%	\$183,278
All Households	209,288	100%	141,188

Source: American Community Survey (2014-2018) / All Households with a water bill

Table 9.5 shows the average water expenditure burden for low- and moderate-income households that pay a water bill directly by Program Eligibility group. It shows that SNAP-Eligible, Non-SNAP Low-income, and Moderate-Income households in Seattle face a “severe” water burden, while Non-LMI households have an affordable water burden. [Note: The ACS respondent-reported data on water expenditures is not consistent with the average water bills observed by Seattle Public Utilities. For purposes of this analysis, the ACS self-reports were normalized to estimated typical Seattle water bills based on Seattle rate structures and typical water consumption.]

Table 9.5 – Water Burden for Households that Pay Directly for Water by Program Eligibility Group

Program Eligibility Group	Mean Water Expenditures	Mean Income	Mean Water Burden
SNAP Eligible	\$1,466	\$11,122	13.2%
Non-SNAP Low-Income	\$1,618	\$30,525	5.3%
Moderate Income	\$1,604	\$49,125	3.3%
Non-LMI Households	\$1,879	\$183,278	1.0%
All Households	\$1,790	141,188	1.3%

Source: American Community Survey (2014-2018) / All Households with a water bill

9.2 Program Design, Funding, and Participation

Water in Seattle is provided by Seattle Public Utilities (SPU) which provides water and wastewater to approximately 700,000 people. SPU and Seattle City Light jointly administer the Utility Discount Program as their CAP.

The Utility Discount Program has the following characteristics:

- Regulatory Framework – Local government-owned utilities in the state of Washington are expressly granted permission to implement low-income and elderly low-income discounts in the statutory code.⁷³
- Sources and Amount of Funding – The UDP is a cross-subsidy from customers not in the program to customers enrolled in it. In 2017, with 32,800 customers and an average monthly SPU discount of \$59 (\$708 annually), a total of \$23.2 million was discounted from SPU bills.⁷⁴

⁷³ UNC Environmental Finance Center. 2017. Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities

⁷⁴ Area Agency on Aging for Seattle and King County. 2017. “Seattle is Changing the Utility Discount Program to Increase Access.

- Program Administration – The program is administered jointly by Seattle City Light, the SPU, and the Seattle Human Services Department, which performs outreach and processes applications with administrative funding provided by the SPU and City Light.
- Program Outreach and Intake – Applications are accepted online by the SPU and Seattle City Light. Customers may also be auto enrolled if they are in Seattle Housing Authority housing.⁷⁵ Processing of applications is performed by the Seattle Human Services department.⁷⁶
- Income and Program Eligibility – Households must be below 70% of state median income for their household size and must have a City Light bill or SPU bill in their name for their residence.⁷⁷
- Program Benefits – Enrolled households receive a 60% discount on their City Light bill and a 50% discount on their SPU bill. If enrollees are tenants who do not have a water bill, then households receive an additional credit to their electricity bill instead of a discount. The size of this credit is determined by the type of dwelling: single-family, duplex, or multi-family.⁷⁸ Single-family and Duplex households receive a monthly credit of \$22.85, while multifamily households receive a credit of \$12.50.
- Participation – As of 2017, 32,800 households were enrolled in UDP in Seattle.⁷⁹ In 2014, the Human Services Department was charged with increasing enrollment from 14,000 to a goal number of 34,000 households.
- Emergency Assistance program – Seattle Public Utilities also offers an emergency assistance program to households below 80% of state median income. Customers must have an SPU or City Light account in their name, must live in a single-family residence, and may only receive assistance one time annually. Benefits may be up to \$448.⁸⁰

⁷⁵ Retrieved: <https://www.seattle.gov/light/assistance/autoEnroll.asp>

⁷⁶ Seattle Human Services Department. 2020. Adopted budget.

⁷⁷ Retrieved: <https://www.seattle.gov/humanservices/services-and-programs/supporting-affordability-and-livability/utility-discount-program>

⁷⁸ UNC Environmental Finance Center. 2017. Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities

⁷⁹ Area Agency on Aging for Seattle and King County. 2017. “Seattle is Changing the Utility Discount Program to Increase Access”.

⁸⁰ Retrieved: <https://www.seattle.gov/utilities/your-services/discounts-and-incentives/emergency-assistance-program#:~:text=If%20you%20meet%20all%20of,for%20online%20or%20by%20phone.>

Table 9.6 shows the estimated participation rate for the Utility Discount Program. UDP is targeted toward Low-Income and Moderate-Income households with a water bill. Though the program provides assistance to households with their water bill included in rent, these households receive a reduced benefit. The participation rate in UDP is 55%. However, it is likely the participation rate among water bill paying households is higher than 55%, but it is lower than 97%.

Table 9.6 – Water Assistance Program Participation by Program Eligibility Group

Program Eligibility Group	Number of Households with Bills	Number of Program Participants	Participation Rate
UDP Eligible (Have a Water or Electric bill)	62,691	32,800	55%
UDP Eligible and Pay a Water Bill	33,717	Less than 32,800	Less than 97%

Source: American Community Survey (2014-2018) / All UDP Income-Eligible Households with a water or electric bill.

Table 9.7 shows the estimated impact of the water assistance on the water expenditure burden for participating households with water bills. UDP reduces the water bill of participating households by 50%. The basic benefit reduces the burden for SNAP eligible households from an average of 13.2 percent of income to an average of 6.6 percent of income, a “severe” burden. For Non-SNAP Low Income households, the average net water burden is estimated to be about 2.7 percent and participating moderate Income households have an estimated net water burden of 2.2 percent of income. Both are below the “severe” cutoff but above the “affordable” cutoff. [Note: Moderate income is defined as an income below 70% of SMI, not as below 80% of AMI].

Table 9.7 – Gross and Net Water Burden by Program Eligibility Group

Program Eligibility Group	Mean Gross Water Bill	Mean Income	Mean Burden	Mean Benefit	Mean Net Water Bill	Mean Net Burden
SNAP Eligible	\$1,466	\$11,122	13.2%	\$733	\$733	6.6%
Non-SNAP LI	\$1,618	\$30,525	5.3%	\$809	\$809	2.7%
Moderate (UDP Eligible)	\$1,767	\$40,341	4.4%	\$883	\$883	2.2%

Source: American Community Survey (2014-2018) / All LMI Households with a water bill that are UDP Income-Eligible. Here, we have assumed that the mean gross water bill of UDP participating households are the same as the mean bill of UDP Non-Participants. The inconsistency between average benefits by Income Group of \$733 and higher estimated using ACS data and the average annual benefit of \$708 reported by the program are likely inconsistent for this reason.

9.3 Summary of Findings

This analysis furnishes information on Direct Water Payment LMI households in Seattle and documents how the water assistance programs help households to reduce their water burden.

Important population statistics include:

- Households with Water Bills – About two-thirds of Seattle households pay a water bill directly to SPU.⁸¹
- Factors Related to Water Bill Payment – The lowest income households and households in multifamily buildings are least likely to pay a water bill directly to PWD. About 40 percent of SNAP Eligible households pay a water bill compared almost three-fourths of non-LMI households. Over 90 percent of single-family home households pay a water bill compared to about one-third of households that live in multifamily buildings.
- Water Burden – Water bills are lowest for the lowest income households. Water burden is about 1.3 percent of income for the average SPU water customer. Water burden is 13.2 percent for SNAP Eligible households and 9.3 percent for Non-SNAP Low-Income households. A water burden of 3.0 percent or more is considered to be a “severe” water burden and a water burden of more than 1.8 percent of income is considered to be “unaffordable.”

Important program information includes:

- Regulatory Framework and Funding – The Seattle city government created the water assistance program by statute.
- Program Management – Seattle City Light (the electric utility), Seattle Public Utilities, and the Seattle Human Services Department jointly administer the program. Seattle City Light and SPU are responsible for outreach and intake.
- Program Impact – Since the program serves both Direct Water Payment customers and low-income customers with an electric bill, it is difficult to report the share of Direct Water Payment customers served by the program. Overall, the program serves more than one-half of the low-income households that are eligible. The program delivers a benefit that, on average, reduces the water burden for Direct Payment program participants by about 50 percent of the bill. That means that it reduces the water burden for SNAP Eligible households from 13.2 percent of income to 6.6 percent of income, while it reduces the water burden for Moderate-Income households from 4.4 percent of income to 2.2 percent of income. It is important to note that the program leaves SNAP Eligible households with a “severe” water burden but reduces the water burden for Moderate-Income households from “severe” to “unaffordable.”

The SPU UDP serves a large number of low-income customers and delivers a substantial benefit to those households.

⁸¹ UNC Environmental Finance Center. 2017. *Navigating Legal Pathways to Rate-Funded Customer Assistance Programs*.

10.0 SUMMARY OF FINDINGS AND RECOMMENDATIONS

This section of the report shows how the District of Columbia water assistance programs compare to those of other jurisdictions in terms of the population served and the impact of the programs on water affordability. The comparisons include:

- Water Payment – How the District compares to the other jurisdictions in terms of the households that pay directly for their water service
- Water Burden – The differences in water burden by income group between the District households and those in the comparison jurisdictions.
- Program Funding – How the sources and funding amounts per income-eligible household compare between the District and the comparison jurisdictions.
- Program Design – The differences in the households targeted by the assistance programs in the District and the comparison jurisdictions.
- Program Impacts – How the assistance program impact water affordability, both in terms of the share of income-eligible households served and the reduction in water burden.

The analysis shows that there are significant differences among the water programs included in the study. The District programs, as well as those in a few other jurisdictions, serve a large number of households with substantial benefits. However, in some of the comparison jurisdictions, the assistance is much more limited.

10.1 Water Payment Patterns

One important factor in considering the design of water assistance programs is the share of water customers who pay a water bill directly to the company and are income-eligible for the assistance programs. Table 10.1 shows that the District of Columbia has the lowest percentage of households that pay for their water directly to the water utility. Only 41 percent of District households pay a water bill directly. In the comparison jurisdictions, two-thirds of the households or more pay a water bill directly. The payment percentage is particularly low for SNAP Eligible households in the District. Only 19 percent of those households in the District pay a water bill directly, compared to 40 percent or more in the comparison jurisdictions.

In all jurisdictions, the most important factor related to water bill payment was the housing unit type. In most jurisdictions, close to 90 percent of households that live in single-family homes pay their water bill directly, while it is common for less than 10 percent of households that live in multifamily buildings to pay directly. In the District, the majority of households live in multifamily buildings while in the other jurisdictions, the majority of households live in single-family homes. That factor explains why a smaller percentage of District households pay a water bill directly than in the comparison jurisdictions.

Table 10.1 - Percent of Households that are Direct Payment by Eligibility Group and Jurisdiction

Jurisdiction	SNAP Eligible	NonSNAP Low-Income	Moderate Income	Non-LMI Housholds	All Households
District of Columbia	20%	27%	31%	55%	41%
Atlanta, GA	51%	57%	65%	76%	68%
Cal Water	51%	59%	65%	79%	70%
Detroit, MI	56%	69%	74%	78%	67%
Philadelphia, PA	54%	65%	67%	74%	66%
Portland, OR	41%	53%	58%	77%	66%
Raleigh, NC	65%	65%	77%	87%	81%
Seattle, WA	43%	48%	53%	74%	65%

Source: American Community Survey (2014-2018) / All Households

Table 10.2 furnishes information on the distribution of water payment customers by Program Eligibility Group for the District and the comparison jurisdictions. The table shows that the jurisdictions are quite different in terms of the share of households that would be income eligible for programs. In most jurisdictions, the water assistance programs are available to low-income households (i.e., SNAP Eligible and Non-SNAP Low-Income). In the District, about 15 percent of households are considered to be low-income, while in Detroit almost one-half of Direct Water Payment households are low-income. Atlanta, Portland, Raleigh, and Seattle all are similar to the District in that less than 20 percent of Direct Water Payment households are low-income.

Table 10.2 - Percent of Direct Payment Households by Eligibility Group and Jurisdiction

Jurisdiction	SNAP Eligible	NonSNAP Low-Income	Moderate Income	Non-LMI Housholds	All Households
District of Columbia	8%	7%	9%	76%	100%
Atlanta, GA	14%	5%	15%	66%	100%
Cal Water	13%	9%	13%	66%	100%
Detroit, MI	33%	16%	15%	36%	100%
Philadelphia, PA	24%	15%	18%	43%	100%
Portland, OR	10%	6%	16%	68%	100%
Raleigh, NC	10%	4%	20%	66%	100%
Seattle, WA	8%	6%	15%	72%	100%

Source: American Community Survey (2014-2018) / All Households

10.2 Water Expenditures and Burdens

For purposes of this study, APPRISE has defined water affordability in the following way:

- **Affordable Water Burden** – HUD defines an “affordable” shelter burden as being less than or equal to 30 percent of income. Since, on average, water expenditures represent about six percent of shelter costs, a water burden of 1.8 percent or less would contribute to a household having an “affordable” shelter burden. [Note: 6% of 30% is 1.8%]
- **Unaffordable Water Burden** – By extension, a water burden of more than 1.8 percent of income would contribute to having an “unaffordable” shelter burden. As such, a water burden of 1.8 percent or higher is defined as “unaffordable” for purposes of this study.
- **Severe Water Burden** – HUD defines a “severe” shelter burden as being shelter costs that exceed 50 percent of income. By extension, a water burden of 3.0 percent or more (6% of 50%) would contribute to having a “severe” shelter burden. As such, a water burden of 3.0 percent or higher is defined as “severe” for purpose of this study.

Table 10.3 furnishes information on the average water bills, income, and water burden for the District and the comparison jurisdictions. The table shows that there is considerable variation in the average water bills reported by the households in the comparison jurisdictions, from \$552 in Raleigh, NC to \$1,790 in Seattle. For most jurisdictions, the average water burden is less than 1 percent of income and would be considered to be “affordable.” The exception is Detroit where the average household income is lower than in the other jurisdictions.

Table 10.3 – Average Water Expenditures, Income, and Burden by Jurisdiction

Jurisdiction	Average Water Bills	Average Income	Average Water Burden
District of Columbia	\$1,130	\$170,917	0.7%
Atlanta, GA	\$1,074	\$114,573	0.9%
Cal Water	\$759	\$125,270	0.6%
Detroit, MI	\$894	\$46,585	1.9%
Philadelphia, PA	\$811	\$71,594	1.1%
Portland, OR	\$1,543	\$108,949	1.4%
Raleigh, NC	\$552	\$107,532	0.5%
Seattle, WA	\$1,790	\$141,188	1.3%

Source: American Community Survey (2014-2018) / All Households

Table 10.4 furnishes information on how the average water burden varies by Program Eligibility Group for the District and the comparison jurisdictions. For all jurisdictions, SNAP Eligible households have a “severe” water burden (i.e., burden greater than 3% of income). For most jurisdictions, the water burden for Non-SNAP Low-Income households is “unaffordable” (i.e., burden greater than 1.8% of income) and for some jurisdictions like the District, it is “severe.” In all jurisdictions, the average burden for Moderate-Income households is close to the “affordable” burden target. In some jurisdictions (e.g., Seattle) the average burden is just above the severity target and in others (e.g., Philadelphia) the average burden is just below the affordability target.

Table 10.4 – Average Water Burden by Program Eligibility Group and Jurisdiction

Jurisdiction	SNAP Eligible	NonSNAP Low-Income	Moderate Income	Non-LMI Housholds	All Households
District of Columbia	9.7%	3.9%	2.1%	0.5%	0.7%
Atlanta, GA	9.1%	4.2%	2.7%	.7%	.9%
Cal Water	4.0%	2.1%	1.3%	0.5%	0.6%
Detroit, MI	7.2%	3.0%	2.2%	1.0%	1.9%
Philadelphia, PA	6.4%	2.6%	1.7%	.6%	1.1%
Portland, OR	9.8%	5.2%	3.4%	1.1%	1.4%
Raleigh, NC	3.7%	1.8%	1.2%	0.4%	0.5%
Seattle, WA	13.2%	5.3%	3.3%	1.0%	1.3%

Source: American Community Survey (2014-2018) / All Households

Based on the statistics in Table 10.4, it is clear that water assistance programs would be needed in all jurisdictions if low-income households are to have “affordable” water bills.

10.3 Water Program Design, Funding, and Impacts

The District and all of the jurisdictions included in this study have water assistance programs. However, the program design parameters, funding levels, and benefits are quite different.

The following program design parameters were examined for the District and each of the comparison jurisdictions.

- **Regulatory Framework** – In some states, water utilities are explicitly forbidden from implementing payment assistance programs, while in other jurisdictions they are required to do so. For each jurisdiction, the study examined whether the authority for the program is statutory, regulatory, or voluntary.
- **Program Funding Source** – The source of program funding often is specified by the regulatory framework. However, in a number of the jurisdictions, a combination of

funding sources was used. The study examined whether the program funding was from ratepayers, taxpayers, or other sources.

- Program Management – The study examined which organizations were responsible for program administration, outreach, and intake. Programs are managed by the water company, by a government agency other than the Water Department, by a nonprofit, or some combination of those organizations.
- Program Eligibility – Most of the water assistance programs target low-income households. However, the study found that some programs offer benefits to moderate-income households as well.
- Water in Rent – The Seattle program was the only one that delivered benefits to low-income households who paid for water as part of their rent.

Table 10.5 shows how the District and each of the comparison jurisdictions design and implemented their programs. The District’s program design parameters are similar to those in most other jurisdictions.

Table 10.5 – Program Design Parameters by Jurisdiction

Jurisdiction	Regulatory Framework	Funding Source	Program Management	Program Eligibility	Water in Rent
District of Columbia	Statutory	Ratepayer and Taxpayer	Government Agency	Low and Moderate	No
Atlanta, GA	Voluntary	Taxpayer	Water Department	Low Income	No
Cal Water	Regulatory	Ratepayer	Water Company	Low Income	No
Detroit, MI	Statutory	Ratepayer	Water Department	Low Income	No
Philadelphia, PA	Statutory	Ratepayer	Water Department	Low and Moderate	No
Portland, OR	Statutory	Ratepayer	Combination	Low Income	No
Raleigh, NC	Voluntary	Taxpayer	Government Agency	SNAP Eligible	No
Seattle, WA	Statutory	Ratepayer	Combination	Low Income	Yes

Source: American Community Survey (2014-2018) / All Households. Government agencies defined not to include municipal water departments.

Table 10.6 furnishes information on the funding levels for the assistance programs administered by the District and the comparison jurisdictions. For all jurisdictions, the funding per low-income households is calculated by dividing the total funding by the number of low-income households. Using that statistic, the District has one of the highest funding levels per low-income household. Only Portland and Seattle make more funding available per low-income household.

Table 10.6 – Funding, Low-Income Households, and Funding per Household by Jurisdiction

Jurisdiction	Total Funding (\$ millions)	Low-Income Households	Funding per Low-Income
District of Columbia	\$2.7*	17,907	\$150
Atlanta, GA	\$1.6**	34,609	\$46
Cal Water	\$9.0	88,524	\$102
Detroit, MI	\$4.5**	82,327	\$55
Philadelphia, PA	\$4.9 / \$20.0	151,532	\$32 / \$132
Portland, OR	\$5.9	27,228	\$217
Raleigh, NC	\$0.2 / \$5.0	18,989	\$11 / \$263
Seattle, WA	\$23.2***	28,605	\$811

Source: American Community Survey (2014-2018) / All Households *Includes funding for moderate- and median-income households. **Includes both bill assistance and water equipment repairs. *** Serves households with water included in rent.

It is important to note that there are subtle differences in the way that the programs are implemented that makes these comparisons to be not completely comparable.

- Moderate Income – For example, the District program serves some moderate-income and median-income households with its funds. As such, not all of the funding is available to low-income households.
- Equipment Repairs – In some other jurisdictions, the funding is available for both bill payment assistance and water equipment repairs.
- Arrearage Forgiveness – The Philadelphia program makes about \$4.9 million in direct discounts available to program participants. That is only about \$32 per low-income household. However, the program also has access to about \$20 million for arrearage forgiveness that will be expended if program participants successfully complete their payment agreement.
- Water in Rent – The Seattle program serves both households that pay water bills directly to the company and those that have their water bills included in the rent but pay an electric bill.

- CARES Act Funding – In Raleigh, Wake County has decided to make \$5.0 million of their CARES Act funding available to pay utility bills. It is not clear how much of that will be allocated to water bill payment assistance.

However, even accounting for all of those differences in program funding designs, one can see that the District program furnishes relatively high funding per income -eligible when compared to the other jurisdictions. Only Portland, Oregon and Seattle, Washington appear to furnish more funding per low-income household than the District.

The amount of funding available has a direct impact on the share of low-income households that are able to participate in the assistance programs. Table 10.7 furnishes information on the number of low-income direct payment customers, the number of program participants, and the program participation rate for the District and each of the comparison jurisdictions. The participation rates vary widely, from about 1 percent of Atlanta low-income direct payment households to more than 90 percent of Cal Water’s low-income customers. Those differences directly relate to the program design procedures discussed above. For example, Cal Water has implemented a discount program that allows customers to self-certify as low-income. The number of households served by the program is close to the total number of low-income households in the jurisdiction that reported to the ACS that they paid a water bill. At the other end of the spectrum, the Atlanta program furnishes relatively large benefits (see Table 10.7) to a relatively small number of households. The District water assistance program serve about one in six low-income households that directly pay a water bill which compares favorably to the programs in most other jurisdictions. {Note that it is not possible to develop a comparable estimate of the Seattle program because the reported number of program participants is greater than the number of low-income households with a water bill since the program allows households with water payment in rent to participate in the program.]

Table 10.7 – Water Assistance Program Participation Rates by Jurisdiction

Jurisdiction	Program Eligible Low-Income Customers	Low-income Program Participants	Participation Rate
District of Columbia	17,907	3,142	18%
Atlanta, GA	34,609	450	1%
Cal Water	88,524	81,804	92%
Detroit, MI	82,327	5,500	7%
Philadelphia, PA	151,532	13,395	9%
Portland, OR	27,228	7,000	26%
Raleigh, NC	18,989	895	7%
Seattle, WA	28,605	32,800	At least 55%

Source: American Community Survey (2014-2018) / All Households

Table 10.8 shows the impact of the water assistance programs for program participants that are SNAP Eligible. As noted previously, in the District and all of the comparison jurisdictions, the average water burden prior to receipt of assistance is above the 3.0 percent of income target and indicates that the water bills are “severely unaffordable.” The water assistance programs in Raleigh and the District furnish benefits that are sufficient to make the average net water burden not “severe.” However, even though the households receive substantial benefits in the other jurisdictions, the net water burden still is “severely unaffordable” after receipt of assistance. The benefits leave water burdens “severe” given the relatively low-income of the SNAP Eligible households.

Table 10.8 – Net Water Burden for SNAP Eligible Participants by Jurisdiction

Jurisdiction	Mean Water Bill	Gross Water Burden	Mean Benefit	Net Water Bill	Net Water Burden
District of Columbia	\$1,080	9.7%	\$810	\$270	2.4%
Atlanta, GA	\$1,095	9.1%	\$559	\$536	4.5%
Cal Water	\$672	4.0%	\$122	\$550	3.3%
Detroit, MI	\$941	7.2%	\$300	\$641	4.9%
Philadelphia, PA	\$849	8.6%	\$651	\$198	4.0%
Portland, OR	\$1,251	12.2%	\$431	\$820	8.0%
Raleigh, NC	\$532	3.7%	\$240	\$292	2.0%
Seattle, WA	\$1,466	13.2%	\$733	\$733	6.6%

Source: American Community Survey (2014-2018) / All Households.

Note that for Philadelphia, we have reported mean gross bills and burdens, benefits, and net bills and burdens for TAP participants below 100% of the Federal Poverty guideline as comparable to SNAP Eligible households in other jurisdictions. For Portland, we have reported mean gross bills and burdens, benefits, and net bills and burdens for Financial Assistance participants below 30% of Portland Area Median Income as comparable to SNAP Eligible households. These decisions were based on cutoffs for benefit-tiers in Portland and Philadelphia.

Table 10.9 shows the impact of the water assistance programs for program participants that are Non-SNAP Low-Income. For these households, the water assistance programs are more successful at making the net water bill affordable. After receipt of assistance, average water burdens are below the “severe” cutoff of 3 percent of income in every jurisdiction but Portland, and average water burdens are no greater than 1.8 percent of income in The District, Raleigh, and the Cal Water service area.

Table 10.9 – Net Water Burden for Non-SNAP Low-Income Participants by Jurisdiction

Jurisdiction	Mean Water Bill	Gross Water Burden	Mean Benefit	Net Water Bill	Net Water Burden
District of Columbia	\$1,039	3.1%	\$800	\$239	0.7%
Atlanta, GA	\$1,045	4.2%	\$559	\$486	1.9%
Cal Water	\$720	2.1%	\$122	\$598	1.7%
Detroit, MI	\$899	3.0%	\$300	\$599	2.0%
Philadelphia, PA	\$808	3.5%	\$327	\$481	2.9%
Portland, OR	\$1,377	4.6%	\$269	\$1,108	3.7%
Raleigh, NC	\$486	1.8%	\$0	\$486	1.8%
Seattle, WA	\$1,618	5.3%	\$809	\$809	2.7%

Source: American Community Survey (2014-2018) / All Households

Note that for Philadelphia, we have reported mean gross bills and burdens, benefits, and net bills and burdens for TAP participants above 100% of the Federal Poverty guideline but below 150% as comparable to Non-SNAP Low-Income households in other jurisdictions. For Portland, we have reported mean gross bills and burdens, benefits, and net bills and burdens for Financial Assistance participants above 30% of Portland Area Median Income but below 60%. These decisions were based on cutoffs for benefit-tiers in Portland and Philadelphia.

Tables 10.7 and 10.8 both show that the District water assistance programs are relatively effective at making water bills affordable for program participants, particularly compared to the outcomes in other jurisdictions.

10.4 Summary of Findings

This study demonstrates that there are some important differences between water payment patterns in the District when compared to other jurisdictions. These differences are mainly a function of the fact that such a large share of District households live in multifamily buildings. However, in terms of LMI households that pay for their water directly, the portfolio of water assistance programs funded by the District of Columbia deliver substantial benefits to low-income households and compare favorably to the program portfolios in other jurisdictions. The major findings include:

- **Direct Payment of Water Bills** – Because the District has such a large share of its population living in multifamily buildings, only 41 percent of all households pay a water bill directly to DC Water, compared to two-thirds or more of the households in other jurisdictions. Only about one in five SNAP Eligible households pays a water bill directly.
- **Water Expenditures and Burden** – The average water bills in the District are relatively high when compared to other jurisdictions. High bills combined with the low average income

result in low-income households in the District having one of the higher water burdens among the jurisdictions studied. SNAP Eligible and Non-SNAP Low Income households both have water burdens that exceed the “severe” affordability target.

- Program Outreach and Administration – The District has assigned DOEE the responsibility for program administration, outreach, and intake. Because DOEE already has program management procedures in place for the energy assistance programs, it is likely that program administration costs are reduced. But the most important reason for this coordination is that it allows low-income households to apply for the water assistance programs at the same time that they apply for the energy assistance programs.
- Funding and Participation Statistics – The District makes an investment in low-income energy assistance programs that is higher than most of the other jurisdictions; only Portland and Seattle invest more in total funding per low-income household. The District also has a relatively high program participation rate. Portland and Seattle are the only jurisdictions that offer a substantial benefit that have a higher participation rate. Cal Water serves a much larger share of their low-income households with their program but offers relatively small benefits to most of the program participants.
- Program Impacts – The District program is one of the most successful in reducing water burden to an affordable level for program participants. On average SNAP Eligible households have their water burden reduced from almost 10 percent of income to about 2 percent of income. Non-SNAP CAP program participants have a net water burden of less than 1 percent of income after receipt of assistance.
- New Programs – DC Water has implemented two new programs that increase the impact on water affordability for income-eligible households. The DC Water CARES: Emergency Relief program assists income-eligible residential customers who have fallen behind on their bills during the COVID-19 pandemic. The DC Water CARES; Multifamily Assistance Program furnishes discounts to building owners that they will pass on to income-eligible tenants.

The only type of program that has been implemented in other jurisdictions that has not been implemented in the District is an arrearage forgiveness program like the one that is available in Philadelphia. The new DC Water CARES: Emergency Relief program reduces the need for an arrearage forgiveness program in the short run. However, if that program is only temporary, it would be useful for DC Water to consider implementing a longer-term arrearage forgiveness program. Programs of that type are effective for low-income households who build up an arrearage before the enroll in the CAP program. While participation in the CAP program will make their current water bills affordable, it does not resolve the outstanding amounts that the household owes. Having a program that grants arrearage forgiveness in exchange for making

regular programs has shown to be an effective approach to the elimination of past due arrears for some energy and water programs.

10.5 Recommendations

The following recommendations identify how the District can maintain its current level of program performance and could potentially improve its portfolio of energy assistance programs.

- The District's investment in the CAP programs has resulted in, on average, affordable net energy bills (i.e., net energy bills of less than 1.8% of income) for non-SNAP income-eligible participants, and net energy bills that approach the affordability target for SNAP-eligible participants. By maintaining these levels of investment, the program can expect to continue to serve current program participants in this way. However, additional funding would be needed to make net energy bills affordable for SNAP-eligible participants, or to increase the participation rate above the current levels.
- Increasing Participation Rates – The District is currently serving about one in six low-income households that pay a water bill with the water assistance programs. It would be important to continue to study how nonparticipating households are able to pay their water bills when it appears that the water burdens are relatively high for low-income households.
- Moderate-Income Households – The water assistance programs make benefits available to some moderate-income households. The District is one of the few jurisdictions that makes those benefits available. While the participation rates are very low, these programs are a good starting point for working with moderate income households to ensure that they have affordable water bills.
- Water in Rent Households – Only about 20 percent of SNAP Eligible households in the District pay a water bill; the rest of the households have their water bills included in their rent. It would be valuable to study how water bills for those multifamily buildings affect shelter burden for low-income households and consider whether assistance is needed to reduce water bills for multifamily buildings occupied by low-income households.
- Arrearage Forgiveness Programs – The programs for moderate-income households are designed to deliver assistance to those households that are having bill payment programs. However, there is no formal arrearage forgiveness program of the type implemented in Philadelphia. That option should be considered.

The bottom line is that the District water assistance programs compare favorably to those in the other states examined in this study. However, there always are ways to improve programs and ensure that low- and moderate-income households have affordable water bills.