

Water Access and Affordability, Particularly in the time of COVID-19

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Weatherization Leveraged Partnerships Project

Funded by the Department of Energy to offer training and assistance to WAP subgrantees and their associations in designing private partnerships and programs that leverage the WAP.

The Affordability of Water and Wastewater Service In Twelve U.S. Cities: A Study for The Guardian

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The increasing mismatch between water bills and ability-to-pay is of concern from a social perspective.

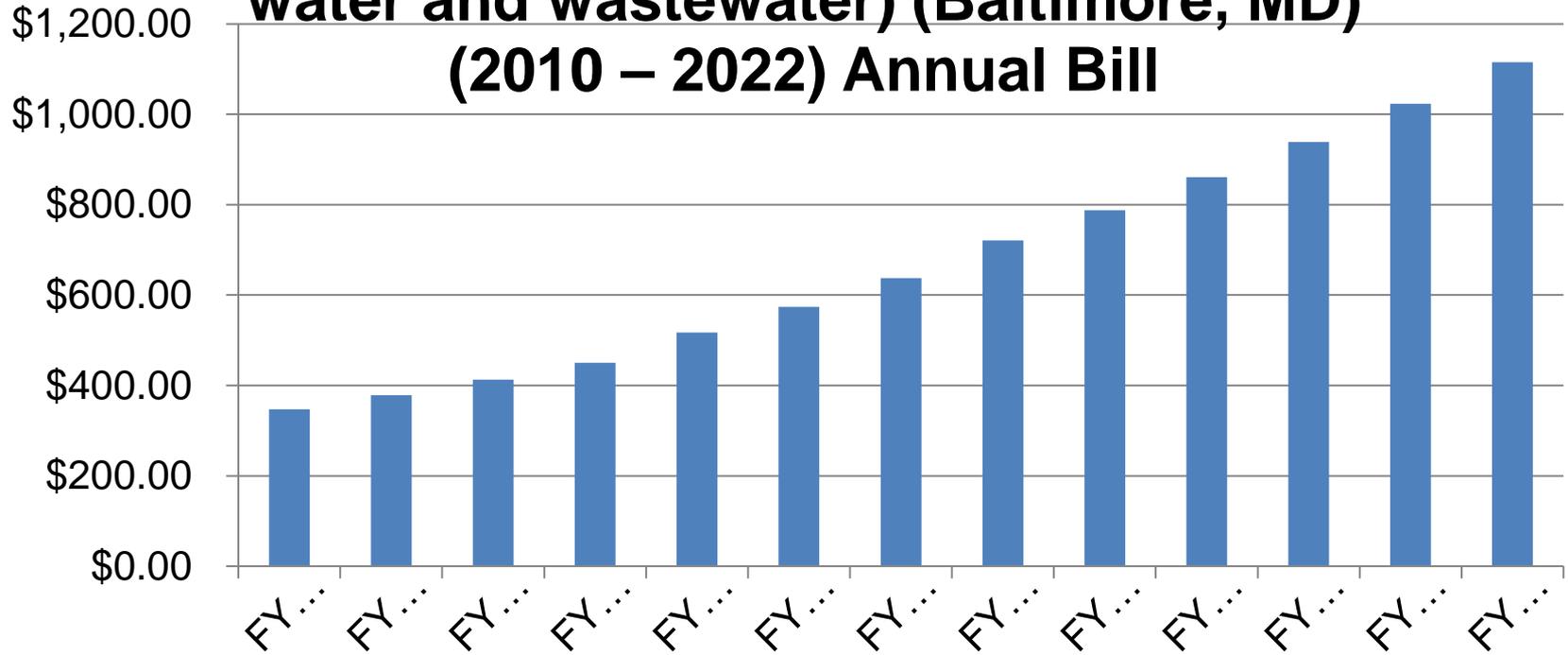
- A dramatic increase in the number of households having service disconnected for nonpayment (Detroit).
- Just like mortgage foreclosures, water shutoffs frequently result in abandonment of the housing structure.



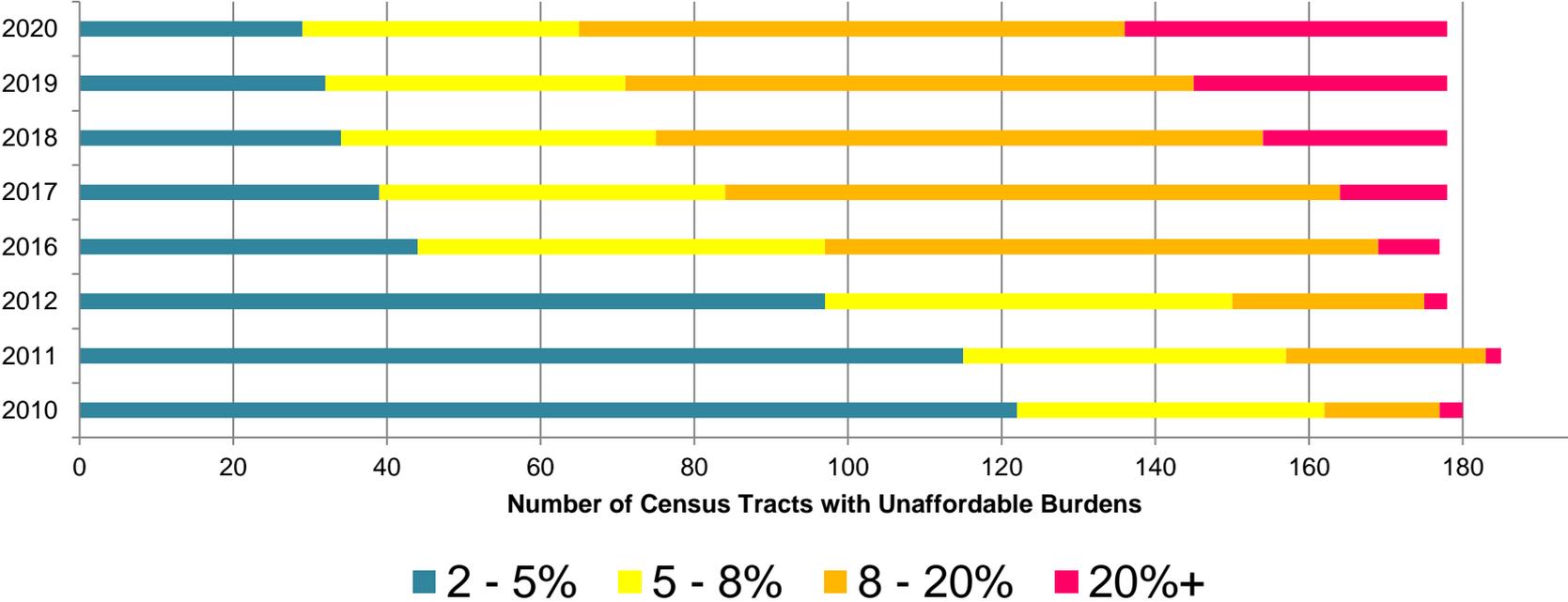
Baltimore Water: Paying (?) for Clean-up: Motivation

- Issue: City of Baltimore entered into “consent decree” with EPA for environmental compliance.” Requires investment upwards of \$3 billion by 2030.
 - Given lack of federal dollars, ratepayers must pay.
 - If people cannot afford the bills, how does Baltimore collect sufficient dollars?

Past, Current and Projected Bills (combined water and wastewater) (Baltimore, MD) (2010 – 2022) Annual Bill



Baltimore Water: Paying (?) for Clean-up



Impact of Utility Bill affordability (New Jersey)

Distribution of Bill Payment Coverage Ratio by Net Energy Burden (New Jersey Universal Service Fund (USF))				
Net Energy Burden	Bill Payment Coverage Ratio			
	<50%	50% - <90%	90% - <100%	100% or more
Less than 2%	0.0%	2.7%	5.3%	92.0%
2% - 3%	0.0%	6.0%	11.5%	82.5%
3% - 4%	0.0%	10.0%	13.2%	76.9%
4% - 6%	0.0%	11.6%	16.6%	71.6%
6% - 8%	0.4%	16.6%	17.4%	65.5%
Over 8%	1.0%	25.6%	16.1%	57.4%

2019 rate proceeding before the Rhode Island Public Utilities Commission (“RIPUC”) involving the Narragansett Bay Commission (“NBC”).

- Rhode Island State Treasurer Seth Magaziner expressed concern about the impact that NBC borrowing to fulfill environmental compliance obligations would have on affordability.
- “I believe it is clear that the General Assembly intended the PFMB and our Office to not just be passive observers on these matters, but to weigh in when we have **concerns about the affordability of existing or planned public debt.**”
- “According to NBC’s Fiscal Year 2019 budget, total outstanding debt as of June 30, 2018 was more than \$594 million. Additionally, the NBC’s capital improvement plan calls for **nearly \$300 million of additional borrowing** between now and Fiscal Year 2024, primarily to support phase three of the Combined Sewer Overflow (“CSO”) program.”
- “. . .the level of existing and planned borrowing has caused us to reach a point where a serious discussion must be had about the affordability of this debt to ratepayers.”



Bill Burdens

Bill as a percentage of income.

Income = \$5,000

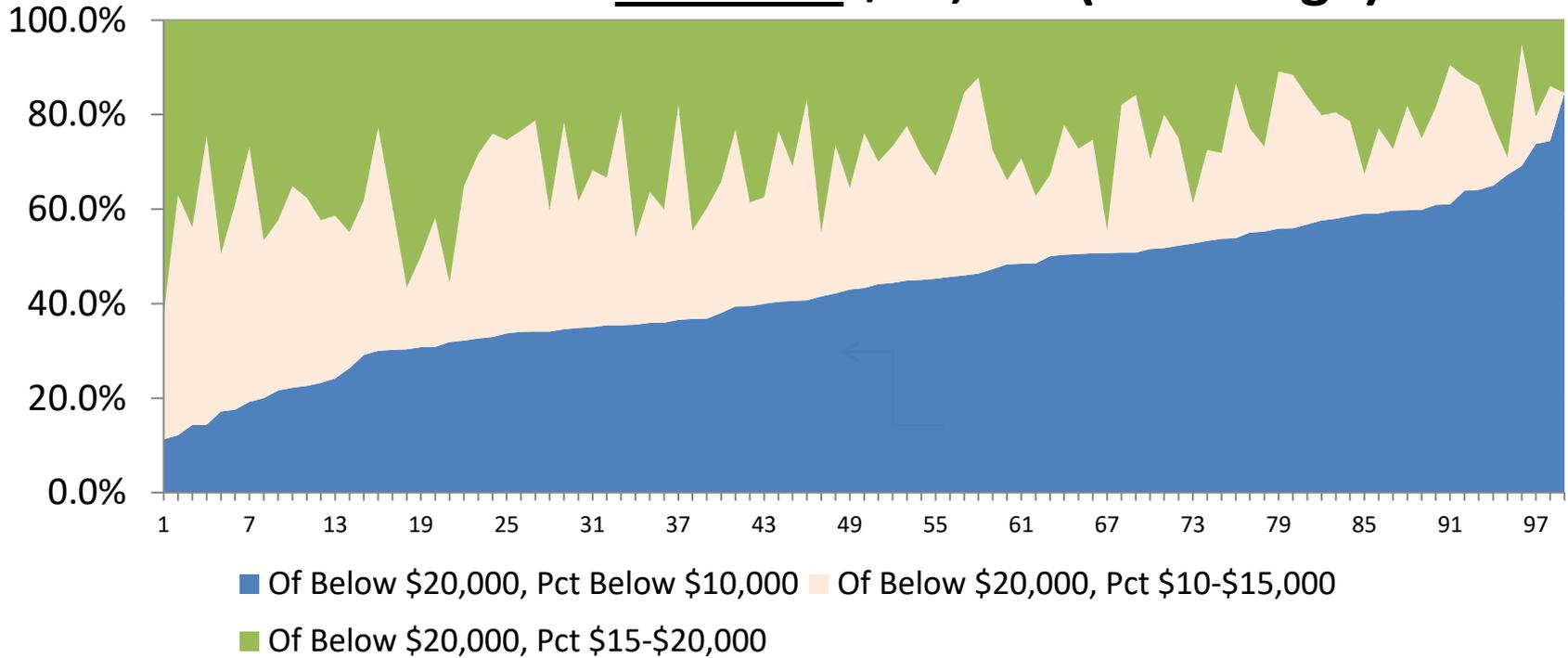
Water bill = \$1,000

Bill burden = 20%

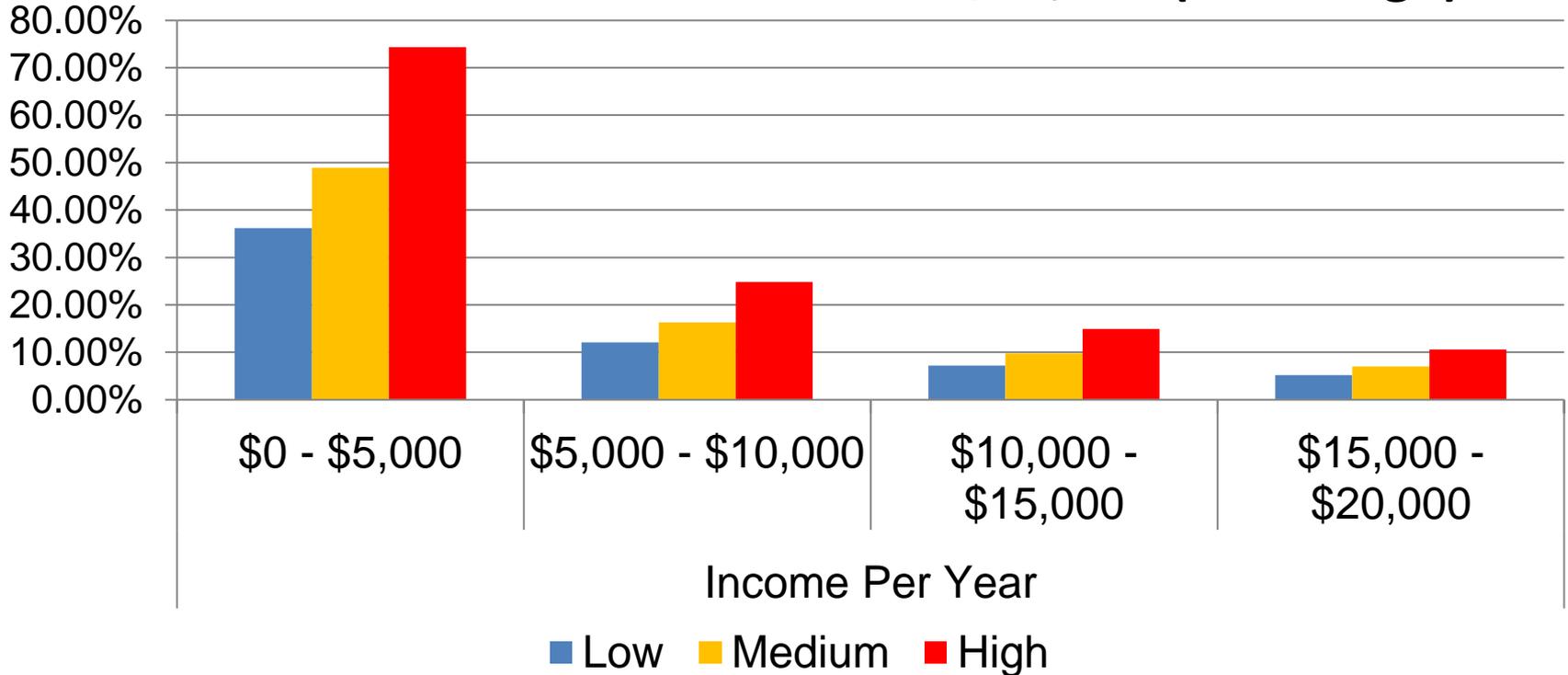
(1,000 / 5,000 = 0.20).



Redefining who is 'poor': Using the "top" Distribution of Income of Households with Income at or Below \$20,000 (Pittsburgh)



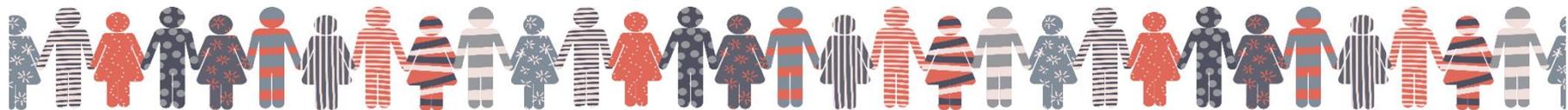
Current Water Burdens at Low to High Consumption Levels and Distribution of Income Below \$20,000 (Pittsburgh)



The Guardian Study

12 cities selected: Diversity of geographic regions of the country, population sizes and Poverty penetrations.

- Austin
- Charlotte
- Cleveland
- Fresno
- Indianapolis
- New Orleans
- Philadelphia
- San Diego
- San Jose
- Santa Fe
- Seattle
- Tucson



Geographic unit of analysis used:

- Census Tracts
- Census Tract data was obtained for each city through the American Community Survey (“ACS”)
- For each Census Tract, an income level equal to 100% of the Federal Poverty Level was calculated taking into account the average household size for the Census Tract.



For each Census Tract, income used:

At six income ranges, determined as a ratio of income to Federal Poverty Level:

- less than 50% of Poverty
- 50% – 99% of Poverty
- 100% to 124% of Poverty
- 125% to 149% of Poverty
- 150% to 184% of Poverty
- 185% to 199% of Poverty.



Affordable water burden (bills as percent of income)

Affordable Burdens by Ratio of Income to Federal Poverty Level

0-49% FPL	3.0%
50-99% FPL	3.5%
100-124% FPL	4.0%
125-149% FPL	4.0%
150-184% FPL	4.5%
185-200% FPL	4.5%



Part 1. The *Breadth* of Unaffordability
(How many people are facing unaffordability?)

Percentage of Population Below 200% of Poverty
Living in Census Tracts with Unaffordable Bills (2018)

City	Percent	Rank
New Orleans (LA)	78.70%	1
Cleveland (OH)	74.41%	2
Santa Fe (NM)	71.01%	3
San Diego (CA)	61.76%	4
Austin (TX)	60.25%	5
Philadelphia (PA)	54.40%	6
Seattle (WA)	53.93%	7
Tucson (AZ)	45.74%	8
San Jose (CA)	41.98%	9
Indianapolis (IN)	41.65%	10
Fresno (CA)	25.80%	11
Charlotte (NC)	22.24%	12



Percentage of Total Population
Living in Census Tracts with Unaffordable Bills (2018)

City	Percent	Rank
Cleveland (OH)	44.84%	1
New Orleans (LA)	35.79%	2
Philadelphia (PA)	25.58%	3
Santa Fe (NM)	24.43%	4
Tucson (AZ)	22.13%	5
San Diego (CA)	18.88%	6
Austin (TX)	18.68%	7
Indianapolis (IN)	17.61%	8
Fresno (CA)	12.86%	9
Seattle (WA)	12.67%	10
San Jose (CA)	9.91%	11
Charlotte (NC)	7.4%	12



Part 2. The *Depth* of Unaffordability
(How unaffordable are bills?)

Enter your own deck/slides here

Ranges of Water Burden Measured for Twelve U.S. Cities

0 - <2% of income

2 - <3% of income

3 - <4% of income

4 - <7% of income

7 - <9% of income

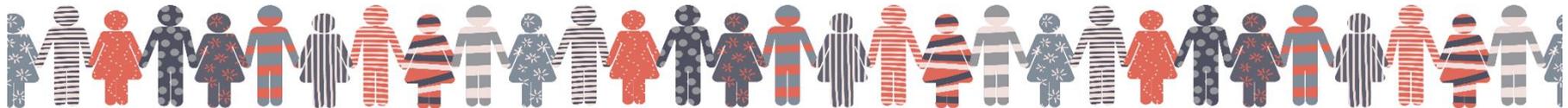
9 - <12% of income

12% of income or more



**Table 6. Percentage of Population Living In Census Tracts with Differing Water Burdens
Twelve U.S. Cities (2018)**

City	Percent of Low-Income Population in Census Tracts with Unaffordable Burden	Percent of Low-Income Population by Water Burden		
		>12%	>9%	>7%
Austin (TX)	60.25%	15%	23%	29%
Charlotte (NC)	22.24%	0%	0%	0%
Cleveland (OH)	74.41%	25%	28%	47%
Fresno (CA)	25.80%	0%	0%	0%
Indianapolis (IN)	41.65%	0%	0%	0%
New Orleans (LA)	78.70%	28%	33%	55%
Philadelphia (PA)	54.46%	0%	0%	24%
San Diego (CA)	61.76%	14%	22%	35%
San Jose (CA)	41.98%	0%	13%	20%
Santa Fe (NM)	71.01%	18%	21%	42%
Seattle (WA)	53.93%	0%	22%	26%
Tucson (AZ)	45.74%	0%	0%	14%



Distribution of Population < 200% Poverty with Water Burdens between 4% and 7% for Selected Poverty Ranges and Selected Cities

	Ratio of Income to Federal Poverty Guidelines				
	50 – 99%	100 – 124%	125 – 149%	150 – 184%	185 – 199%
Affordable burden	3.5%	4.0%	4.0%	4.5%	4.5%
Austin	0%	57.9%	100%	92.7%	42.1%
San Diego	0.8%	70.2%	98.2%	75.3%	41.1%
Seattle	17.0%	99.9%	80.2%	9.9%	0%



Doing it yourself: The data

- Public data: By Census Tract / Zip Code
 - Census data: Average household size
 - Census data: Distribution of income by FPL
- Utility data
 - Bills by year
 - Average revenue by year

Don't try to overdo it!



Possible audiences:

Local decisionmakers

- City Council is local legislature (Philly, Baltimore)
- Local water department / water utility

Local coalition-making

- “Traditional” advocacy partners (housing, faith community, labor)
- Baltimore: Municipal agencies (aging, housing, social services)
- Non-traditional municipal agencies (schools, family services)



Possible proposals:

Inadequate responses:

- Crisis intervention (Detroit)
- Water conservation
- Financial counseling

Necessary responses:

- Burden-based bill assistance (PIP is best, but not only program).
- Special assistance for Extreme Poverty



Continuing the Learning

- For full report for The Guardian: <https://www.consumerreports.org/personal-finance/millions-of-americans-cant-afford-water-as-bills-rise-80-percent-in-a-decade/>
- For more information: The Source: US Households Under Pressure from Rising Water Bills (August 2017) (<https://www.thesourcemagazine.org/us-households-pressure-rising-water-bills/>)
- Georgetown Law Human Rights Institute (April 2013). Tapped Out: Threats to the Human Right to Water in the Urban United States, <https://www.law.georgetown.edu/human-rights-institute/wp-content/uploads/sites/7/2017/07/Tapped-Out.pdf>



For more information:
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Appendix: Summary of Data



Breadth of Unaffordability: Summary #1

The data in this section demonstrates why cities that currently have affordable bills may still have cause for concern. This section re-focusses attention in two different ways. First, rather than tracking affordability by the number of geographic areas (Census Tracts), it examines the size of the population who live in Census Tracts with unaffordable water burdens.

When a Census Tract is found to have an unaffordable water bill at a specific income (defined by the ratio of income to Poverty Level) for a specific year, the population at that income range in that Census Tract is said to live in a neighborhood with water bills that, on average, are unaffordable at that income range.



Breadth of Unaffordability: Summary #2

- Water bills were nearly universally unaffordable in the lowest income ranges in 2018. In eleven of the twelve cities, 100% of the population with incomes below 50% of Poverty lived in Census Tracts with unaffordable water bills (with the twelfth city, Fresno, reaching 99.9%).
- There is a substantial reduction in the percentage of population living with unaffordable water when income moves into the third highest Poverty bracket (100% to 124% of Poverty). In five cities (Charlotte, Fresno, Indianapolis, Philadelphia, Tucson), 0% of the population in this income bracket lived with unaffordable water bills.



Breadth of Unaffordability: Summary #3

- In the next income bracket, 125% to 149% of Poverty, five cities had substantial populations living in Census Tracts with unaffordable water bills for this income range. In New Orleans (95.86%) and Santa Fe (88.24%), the penetration of people at this income range living in Census Tracts with unaffordable bills approached 100%, while in Austin (15.98%), Cleveland (33.96%), and San Diego (29.85%), the penetrations of people at this income range living in areas with unaffordable bills were substantial, but not close to being universal. In the remaining seven cities, the penetration of population living in Census Tracts with unaffordable water bills at incomes from 125% to 149% of Poverty was 0%.



Depth of Unaffordability: Summary #1

Water bills were nearly universally unaffordable in the lowest income ranges in 2018. In eleven of the twelve cities, 100% of the population below 50% of Poverty lived in Census Tracts with unaffordable water bills (with the twelfth city, Fresno, reaching 99.9%).

In the next income bracket (50% to 99% of Poverty), 100% of the population in this income range lived in Census Tracts with unaffordable water bills in seven cities. In addition, in three more cities, the penetration of unaffordable bills approached, but did not reach, 100% (Indianapolis: 76.75%; Philadelphia: 98.35%; Tucson: 86.64%).



Depth of Unaffordability: Summary #2

There is a substantial reduction in the percentage of population living with unaffordable water when income moves into the third highest Poverty bracket (100% to 124% of Poverty). In five cities (Charlotte, Fresno, Indianapolis, Philadelphia, Tucson), 0% of the population in this income bracket lived with unaffordable water bills, while in two more cities, the penetration of unaffordability was quite low for this income range (San Jose: 0.26%; Seattle: 5.97%).

New Orleans and Cleveland share the top two spots in percentage of low-income population, and percentage of total population, living in Census Tracts with unaffordable water bills on both rankings. Santa Fe is third for percentage of population below 200% of Poverty living in Census Tracts with unaffordable bills, and fourth in the percentage of total population. On the other end of the spectrum, Charlotte, San Jose and Fresno are all in the lowest four for both the percentage of population below 200% of Poverty living in Census Tracts with unaffordable bills and the percentage of total population living in Census Tracts with unaffordable bills.



Depth of Unaffordability: Summary #3

For the three cities with the highest penetrations (New Orleans, Cleveland, Santa Fe), between roughly 70% and 80% of the city population with income below 200% of Poverty lived in Census Tracts with unaffordable bills. For the four cities with the highest penetration of total population (Cleveland, New Orleans, Philadelphia, Santa Fe), between roughly 25% and 45% of the total population lives in Census Tracts with unaffordable water bills.

All in all, seven cities had more than half of their low-income populations (i.e., income at or below 200% of Poverty) living in Census Tracts with unaffordable water bills in 2018, while only one city (Charlotte) had fewer than one-in-four living in such areas.



Depth of Unaffordability: Summary

#4: It is difficult to argue with a conclusion that New Orleans is in the worst shape of the twelve cities studied. New Orleans has the highest percentage of low-income population living in Census Tracts with unaffordable burdens (78.70%), and the highest percentage of low-income population living with the highest water burdens (28% greater than 12% burden).

It is also to argue that there is not a “top tier” of three cities with water affordability problems. Closely following New Orleans is Cleveland, with 74.41% of its total low-income population living in Census Tracts with unaffordable burdens, and 25% of its low-income population living in areas with an average burden of 12% or more. Santa Fe also has both a high percentage of low-income population living in areas with unaffordable burdens (71.01%) and a high percentage of low-income population living with extraordinarily high water burdens (18%).



Depth of Unaffordability: Summary #5

There appears to be a clearly evident second tier of cities with unaffordability problems as well. In Austin, 60.25% of the city's population faces unaffordable water burdens, with 15% of its low-income population living in areas with an average water burden of 12% of income or more. Similarly, San Diego has an almost identical percentage of low-income customers living in areas with unaffordable burdens (61.76%), and a nearly identical percentage of low-income customers (15%) living in Census Tracts with an average water burden of 12% or more.



What the Partnership can do for you

- Facilitate connections to experienced peers
- Assist in data collection and messaging
- Applicable Resources, Tools, and Templates
 - [Utility Debt in the Pandemic: How to Change Shutoff and Collection Policy](#)
 - [Joint Report with NASCSP on WAP Funding](#)
 - [Leveraging Your WAP: Why and How](#)
- Upcoming Trainings and Webinars
 - [Weatherization Day Kickoff Webinar – September 9 at 3pmET](#)
 - [Water and Energy Programs amidst COVID-19: Spotlight on Arizona -- September 15 at 2pm ET](#)

Be in touch!

- About any challenges so we can find and share relevant resources and make connections to peers
- About successes so we can share as promising practices with others

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Questions?
and
session survey link