



Water and Sewer Affordability in 10 US Cities



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Background

Water and sewer rates have risen faster than inflation in the last 20 years. At-risk households with low incomes, elderly or disabled ratepayers, or sudden losses of income may struggle with **water and sewer affordability**, or the ability to pay for monthly water and sewer costs. Many utilities have implemented **customer assistance programs (CAPs)** to assist these customers. To date, no national standards exist to measure the effectiveness of CAPs or the potential impact of CAPs on utility finances.

Objectives

1. Establish water, sewer, and combined rate trends
2. Assess the affordability of water, sewer, and combined rates in 2010
3. Determine the impact of existing CAPs on utilities with one or more programs
4. Determine the potential impact of CAPs on utilities with no programs

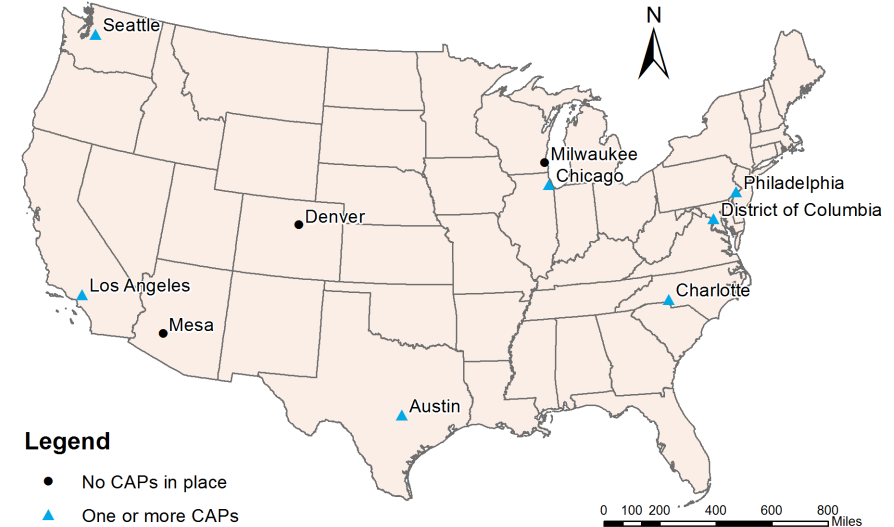
Defining Affordability

This project uses UN Development Programme Guidelines to measure affordability. These guidelines suggest that water, sewer, and combined expenses should not exceed certain percentages of any household's income: 3% or less for water, 2% or less for sewer, and 5% or less for combined rates. While the EPA does have affordability requirements for water utilities, they are not meant to measure continuous water and sewer affordability for all rate payers.

Study Cities

This project uses the following study cities:

- Austin
- Charlotte
- Chicago
- Denver
- Los Angeles
- Mesa
- Milwaukee
- Philadelphia
- Seattle
- Washington D.C.



CAPs by City

City	Number of Programs	Emergency Funding	Fixture Replacement	Low Income Discount	Modified Billing	Senior/Disability Discount
Austin	4	●	○	●	●	●
Charlotte	1	●	○	○	○	○
Chicago	2	○	○	○	●	●
Los Angeles	3	●	○	●	○	●
Philadelphia	5	●	●	●	●	●
Seattle	3	●	●	●	○	○
Washington	3	●	○	●	●	○

● Yes ○ No

Methods

Objective	Method	Data Source
Track rates over time	Find trends in water, sewer, and combined rates over time	2001-16 Black and Veatch
Assess affordability	Use rates to calculate an acceptable minimum income based on UN guidelines	2001-16 Black and Veatch, 2010 Census and ACS, USGS
Determine existing CAP impact	Gather qualification criterion and calculate how many households qualify	Utilities, 2010 Census and ACS
Determine proposed CAP impact	Create hypothetical qualification criteria and calculate how many households qualify	Utilities, 2010 Census and ACS

Results

- Water and sewer rates rose steadily from 2001 to 2016
- Variability in water and sewer rates increased over time
- A range of 7% to 44% of households were found to be below the guideline-based income for their respective cities
- Low income CAP qualifications can be inclusive of many households but enrollment of up to 42% of households is not realistic
- Basic CAP analysis can be performed using widely available Census data
- Utilities without CAPs can use these methods to identify at-risk customers and perform basic feasibility analyses

Future Work

- Track when CAPs were implemented and compare to affordability
- Determine enrollment in CAPs over time
- Perform affordability and CAP analysis for more cities
- Examine CAPs or informal arrangements in rural and suburban areas

Results

