



Affordability Metrics Report



May 2022

Austin Water Affordability Metrics Report May 2022

Report Overview

Austin Water (AW) initiated the Austin Water Affordability Benchmark Study in response to City Council Resolution No. 20180201-068, which directed the City Manager to provide information on internal affordability benchmarks, conduct a comprehensive affordability study and make recommendations on affordability metrics to track and communicate. The initial Austin Water Affordability Benchmark Study was completed and provided to Council in December 2018 (FY2019).

Affordability Efforts

Maintaining affordable water and wastewater service is a critical component of managing the rising cost of living in Austin. AW focuses on affordability efforts in several ways, as listed below.

- **Customer Assistance Programs:** Customer Assistance Programs (CAP) provide reduced water and wastewater bills to over 14,000 low-income, vulnerable residential customers. A new CAP initiative was implemented in FY2021 and currently provides bill credits to over 18,000 multifamily customers who are billed for water and wastewater services through a master meter. CAP programs include:
 - Water & Wastewater Service Customer Charge Waiver, Tiered Fixed Charge Waiver, and Volumetric Rate “CAP Bill” Discounts – AW provides waivers for all fixed fees and water and wastewater volume rate discounts for eligible residential CAP customers. This discount currently provides the average residential CAP customer a 51% discount as compared to regular Non-CAP residential bills.
 - Residential CAP Bill Rate Reductions – Over the last few years, AW has been able to implement residential CAP customer rate reductions. In FY2018, CAP customers saw an 11.4% average bill reduction. In FY2019, residential CAP customer rates were unchanged and in FY2020, CAP customers saw an 8.3% average bill reduction.
 - COVID-19 Bill Relief – In April 2020, the City Council approved COVID-19 Bill Relief for residential water and wastewater customers. Volume rates were reduced by 10% for water tiers 1-3 and wastewater tiers 1-2 for residential CAP and Non-CAP customers. This rate reduction continued throughout FY2020 for residential Non-CAP customers and extended through FY2022 for residential CAP customers, providing extended bill relief for our most vulnerable customers.

- Financial Support Plus 1 Program – The financial support plus 1 program provides emergency financial help for residential customers that are having temporary difficulty paying utility bills. AW provided a \$5.0 million contribution in FY2020 and another \$5.0 million in FY2021 to the City’s Financial Support Plus 1 Program, for those residential customers experiencing COVID-19 related economic hardship.
 - Arrearage Management Program – The arrearage management program benefits certain low-income residential customers to help these customers pay down their previous utility debt balances.
 - Water Leak Repair Program – The water leak repair program helps low-income residential customers make necessary plumbing and leak repairs through a new partnership between Austin Water and Neighborhood Housing and Planning Department of the City of Austin.
 - Wastewater Lateral Repair Grant Program – AW provides grant funding to the Neighborhood Housing and Planning Department to administer a low-income grant program for residential customers experiencing failures in the wastewater lateral lines connecting their home to AW’s wastewater system. These repairs can be costly for the low-income homeowner and this program provides grants to pay for these repairs.
 - Home Emergency Repair Program – AW agreed to provide up to \$1.0 million in FY2021 to provide funding to the Neighborhood Housing and Planning Department to fund plumbing repairs directly related to damages caused by 2021 Winter Storm Uri for low-income residential customers.
- **Expense Management:** AW manages its expenses through annual strategic and budget planning. AW conducts a thorough budget development process that includes a detailed line item budget analysis, several layers of management review and final approval by the Executive Team and Director. The Executive Team comprehensively reviews additional staffing requests to limit cost impacts. AW uses conservative assumptions to estimate budget costs.
 - **Capital Project Planning:** AW manages its Capital Improvement Projects (CIP) Program to maintain affordable rates while making investments in infrastructure stability to meet long-term business needs. AW’s CIP Program management includes a comprehensive process that encompasses several layers of reviews and approvals.
 - **Debt Management Strategies:** AW focuses on debt management to reduce debt service costs associated with financing our CIP projects.
 - Financing Strategies – AW strategically reviews the CIP Program for potential Texas Water Development Board (TWDB) Low-Interest Loan funding. Since 2016, AW has been approved for \$266.6 million in TWDB low-interest loans to fund 9 major infrastructure projects. These low-interest loans will help AW make much needed improvements to its infrastructure at a tremendous cost savings for the utility and its customers.

- **Debt Defeasances and Refundings** – Since 2016, AW has used Capital Recovery Fee dollars for annual debt defeasance transactions to reduce future debt service requirements. A debt defeasance is a financing tool by which available cash is used to pay off outstanding debt early. These defeasances have allowed AW to manage and stabilize debt costs. In addition, AW has refunded or refinanced existing debt at lower interest rates to reduce interest costs for specific bond issues. AW’s debt management strategies for debt defeasances and debt refundings are expected to yield \$607 million in debt savings from FY2016 to FY2027.

- **Development Strategies:** In FY2014, Austin City Council approved AW to collect capital recovery fees (CRF) also known as Impact Fees, up to the maximum allowable amount. CRF dollars derived from a one-time charge to new developments to pay their fair share for water and wastewater infrastructure needed to provide new service. This Council approval allowed for a significant increase in CRF collections, which are essential for reducing AW’s debt service requirements through annual debt defeasance transactions.

- **Rate Reductions and Stabilization:** All affordability efforts listed above have allowed AW to reduce and stabilize water and wastewater rates. In FY2018, AW implemented a 4.8 percent rate reduction for all retail customers. Following the FY2018 rate reduction, AW maintained stable rates with no rate increases from FY2019 to FY2022. In addition, AW’s proposed budget includes no rate increase for FY2023.

This Affordability Metrics Report provides updated affordability metrics from the FY2019 Affordable Benchmark Study with additional affordability and bill comparison metrics.

Index of Affordability Metrics

Metric #1: Historical Rate Index

Metric #2: Residential Low Volume Bill Comparison*

Metric #3: Residential Average Customer Bill Comparison*

Metric #4: Affordability Ratio (AR₂₀) *

Metric #5: Hours Minimum Wage*

Metric #6: Average Annual Bill as % of Median Household Income*

Metric #7: Average Historical Annual Bill as % of Median Household Income*

Metric #8: Residential CAP Customer Historical Average Bill*

Metric #9: High Volume Residential Bill Comparison*

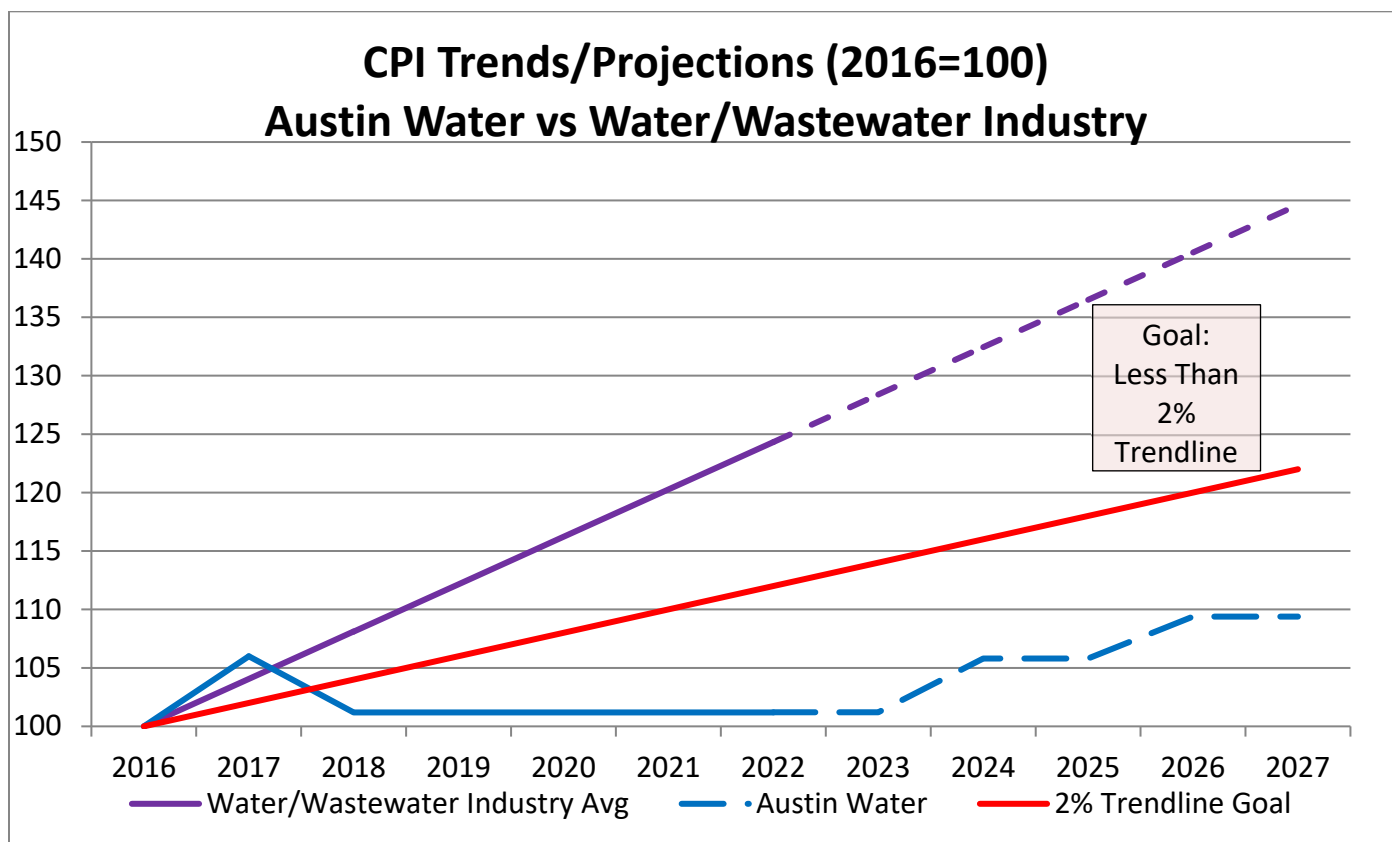
*Austin Water's water and wastewater rates used for these metrics include Water Reserve Fund Surcharge and Community Benefit Fund Surcharge. All other cities are based on rates provided or located based on their respective websites.

Metric #1: Historical Rate Index

This metric includes a comparison of AW historical rate increases, the water and wastewater industry cost index, and a reference 2% annual rate increase trendline. Each of these indices are calculated using a base year of 2016. The goal for this benchmark is for AW to remain under the 2% annual rate increase trendline. This goal represents approximately 50% of the current water and wastewater industry index historical trend of 4.1% since 2011.

The graph below shows that in FY2016 and FY2017, AW was trending along the water and wastewater industry index level and above the 2% annual rate increase trendline. However, beginning in the FY2018 Approved Budget, AW submitted a 0% rate increase. Subsequently, Council approved an amendment to the budget in April 2018 to implement a mid-year 4.8% rate reduction. Since the FY2018 rate reduction, AW rates are below both the water and wastewater industry index and the 2% annual rate increase trendline. The graph also provides a projection of these indices through 2027. The water and wastewater industry index used a historical 15-year average increase to project through 2027, while AW projected rates through 2027 are based on AW's Financial Forecast that assumed no rate increases for FY2023, FY2025, and FY2027 with only a projected 4.6% and 3.6% rate increase in FY2024 and FY2026, respectively.

AW projected FY2023 through FY2027 to include multiple years of no rate increases and only two years of rate increases that remain below the 2% trendline. The FY2022 projected cost trend for AW is below the 2% trendline. These results are consistent with those of the 2021 Affordability Metrics Report.



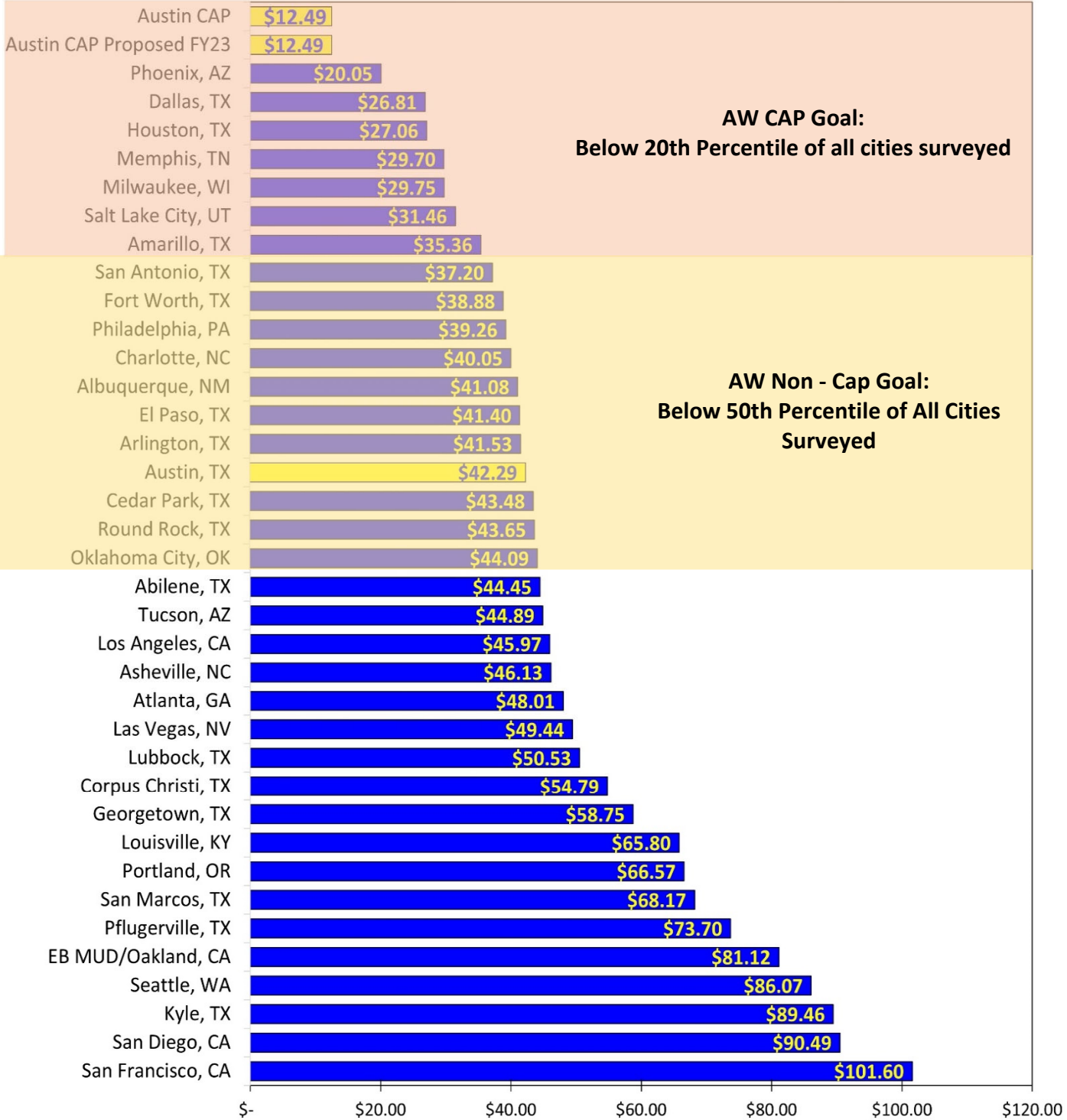
Metric #2: Residential Low Volume Bill Comparison

This metric provides a low volume user bill comparison of Texas and national cities based on customers using 3,000 gallons of water and 2,000 gallons of wastewater. The comparison of low volume bills is consistent with AW's rate structure goals to promote water conservation and provide affordable basic water services to our customers.

AW has identified a target of low-volume residential CAP customer bills being below the 20th percentile of all cities surveyed. Currently, AW's CAP residential low-volume bills ranked 1st out of all Texas and national cities surveyed. This is consistent with the 2018, 2019, 2020, and 2021 Affordability Metrics Report which had AW residential CAP customers the lowest of all cities surveyed. This is due to the waiver of fixed fees and significant volumetric bill discounts provided to our low-income residential CAP customers to keep their bills at affordable levels. In FY2020, AW reduced residential CAP customer average bills and extended that reduction into FY2022 to provide an increased discount to water and wastewater volumetric charges as a response to the impacts of COVID-19.

For residential Non-CAP customer bills, AW's goal is to place in the bottom half of all Texas and national cities surveyed. Currently, AW is ranked 15th out of the 36 cities surveyed, which is slightly below the 50% level. This is one rank higher than the 2021 Affordability Metrics Report, which had AW residential non-CAP customers ranked 17th out of the 36 cities surveyed. As AW's rates are projected not to increase until FY2024, and it is expected that our ranking within this benchmark will begin to improve.

**AVERAGE MONTHLY BILL COMPARISON - COMBINED
RESIDENTIAL CLASS
Existing Rates - (3,000 Gallons Consumption and 2,000 Flows)**



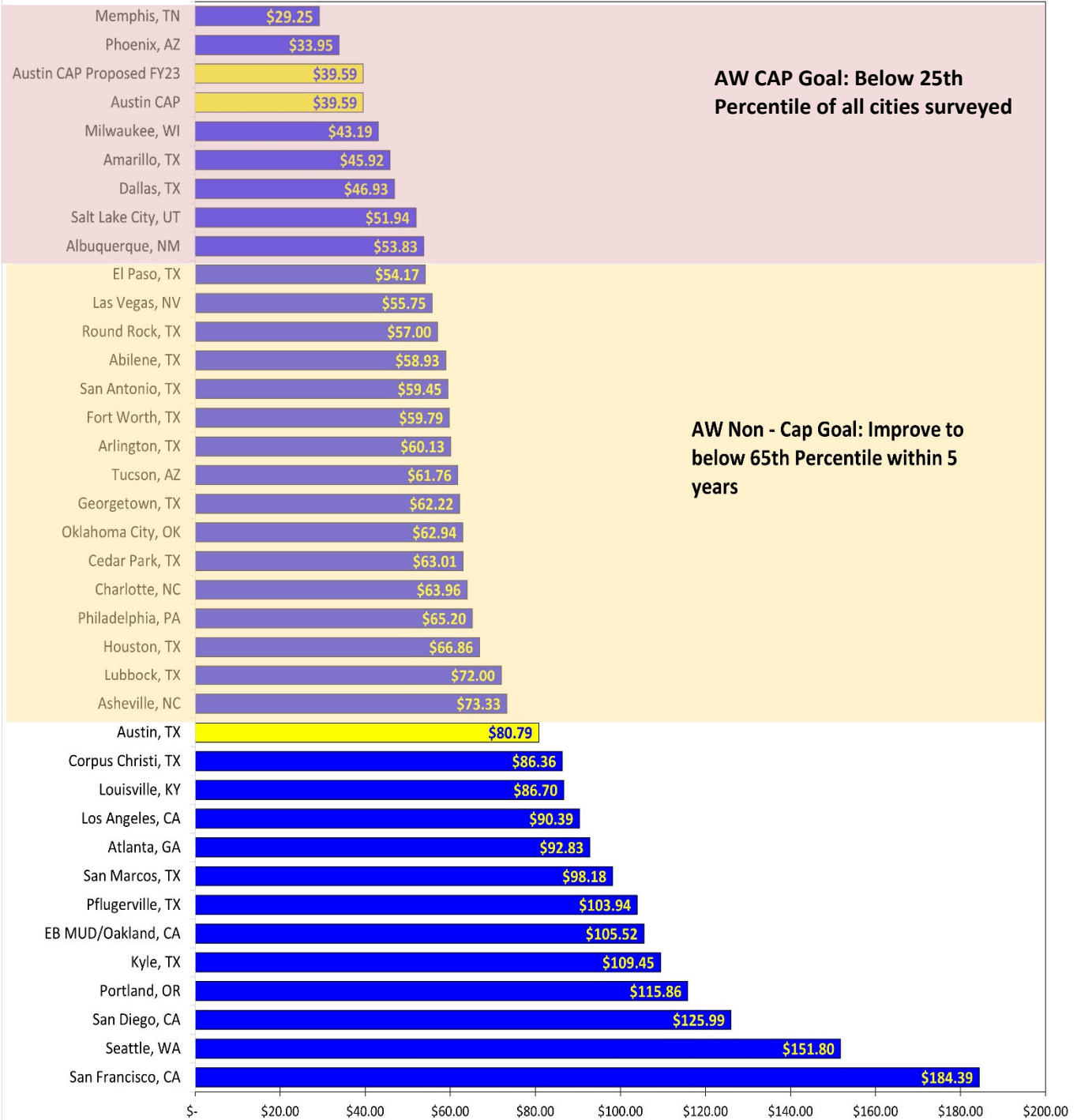
Metric #3: Residential Average Customer Bill Comparison

This metric includes a residential customer bill comparison at the current AW average usage levels of 5,800 gallons of water consumption and 4,000 gallons of wastewater discharge per month. Approximately 65% of AW's customers have bills that are at these levels of usage or below, which is consistent with AW's rate structure goals to promote aggressive water conservation by our customers. The graph also shows the AW's residential CAP customer bill, which highlights the affordability of water services for AW's most vulnerable low-income customers.

AW's goal for residential CAP average bills is at or below the 1st quartile of all Texas and national cities surveyed. Currently, AW's residential CAP bill is achieving this target, ranking 3rd out of 36 cities surveyed. This is the same ranking as compared with the results of the 2021 Affordability Metrics Report.

For our residential non-CAP average bills, AW's goal is to improve to below the 65th percentile of all Texas and national cities surveyed over the next five years. Currently, AW's average residential bill is at the 75th percentile, ranking 24th out of 36 cities surveyed. This is an improvement of two rankings higher than the 2021 Affordability Metrics Report. Over the next five years, AW anticipates improvement within this benchmark given the projection of no rate increases over the next year and with minimal rate increases in FY2024 and FY2026.

**AVERAGE MONTHLY BILL COMPARISON - COMBINED
RESIDENTIAL CLASS
Existing Rates - (5,800 Gallons Consumption and 4,000 Flows)**



Metric #4: Affordability Ratio (AR₂₀)

The Affordability Ratio 20 (AR₂₀) is one of the two benchmarks advanced in an American Water Works Association (AWWA) publication article written by Professor Manuel P. Teodoro. (Measuring Household Affordability for Water and Sewer Utilities, Journal AWWA, January 2018) The article provides a rationale for measuring the affordability of water and wastewater costs based on the impact on low-income households.

The AR₂₀ metric measures the ability of low-income customers to pay for basic water and wastewater services after paying for other essential costs such as food and housing. The focus is on low-income customers who are at the 20th percentile of household income, who represent the most vulnerable households in which affordability of water and wastewater services is critical. The level of household water and wastewater use for this benchmark is for basic health and sanitation needs, represented by 4,000 gallons of water consumption and 4,000 gallons of wastewater discharge per month. The estimation of each city's essential costs, other than water and wastewater services, is difficult to update annually and requires the services of Professor Teodoro to provide data for the updates.

The data analysis provided by Professor Teodoro used several price assumptions. The monthly water and wastewater prices are calculated using rates in effect as of January 2022, at an assumed volume of 4,000 gallons for water and for wastewater. For utilities with seasonal pricing structures, the highest seasonal prices were applied for purposes of evaluating affordability. For utilities with multiple zone pricing structures, the highest zone prices are applied for purposes of evaluating affordability. All prices associated with water consumption are included (e.g., conservation, fire, or supply surcharges, regional pass-throughs, etc.) However, municipal taxes and charges for other services that are billed with water and wastewater are not included (e.g., Stormwater, solid waste). Assistance and discount programs are not included in the calculations.

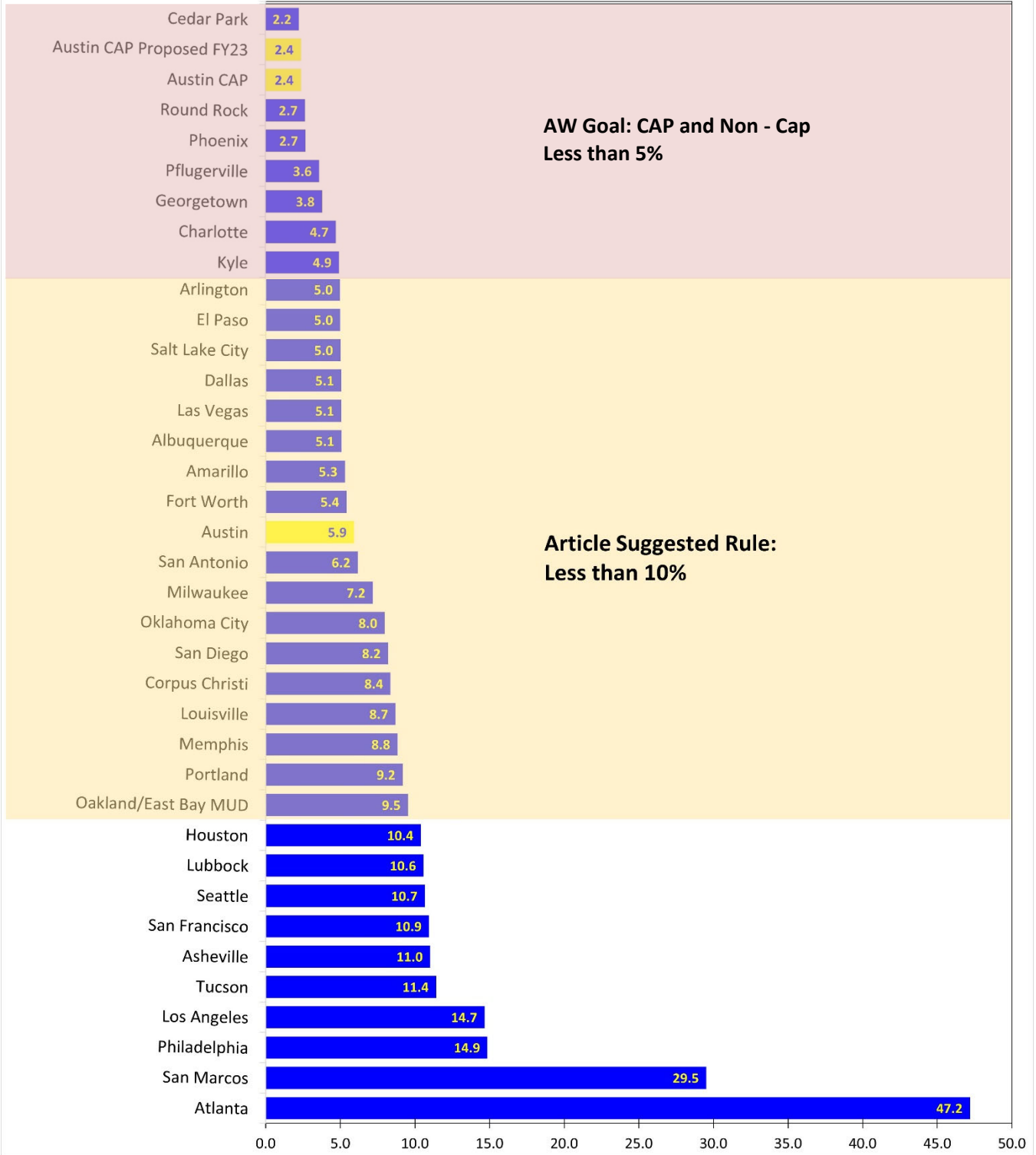
Professor Teodoro has suggested a rule of thumb of less than 10% of remaining income, after paying for other essential costs, would be needed to pay for basic water and wastewater services. AW's goal is set at an even more affordable 5% goal for average residential CAP and Non-CAP customers.

Currently, for AW residential CAP customers, the bill for basic water needs for low-income customers is 2.4% of remaining income after paying for other essential costs, and the lowest of any major Texas city surveyed. The results are expected to continue for FY2023 at 2.4% and the 2nd lowest of all cities surveyed, which is the same ranking from the 2021 Affordability Metrics Report.

For residential Non-CAP customers, bills for basic water needs are estimated at 5.9% of the remaining income after paying for other essential costs, which is a slight increase of 0.2% from 2021 and above AW's goal of 5.0%, but well below the article recommended 10%. The 2018,

2019, and 2020 Affordability Metrics Report showed Austin was at or below 5.0%. According to Professor Teodoro, “The significant increase in the AR₂₀ value is driven mainly by a sharp increase in non-water/sewer essential expenditures. The costs of living in Austin apparently is increasing very rapidly – especially for low-income households.”

**Basic Water and Wastewater Services
Affordability Ratio 20 (AR₂₀)
Existing Rates - (4,000 Gallons Consumption and 4,000 Gallons Flows)**



Metric #5: Hours Minimum Wage

The Hours Minimum Wage (HM) is another benchmark advanced in American Water Works Association (AWWA) article written by Professor Manuel P. Teodoro.

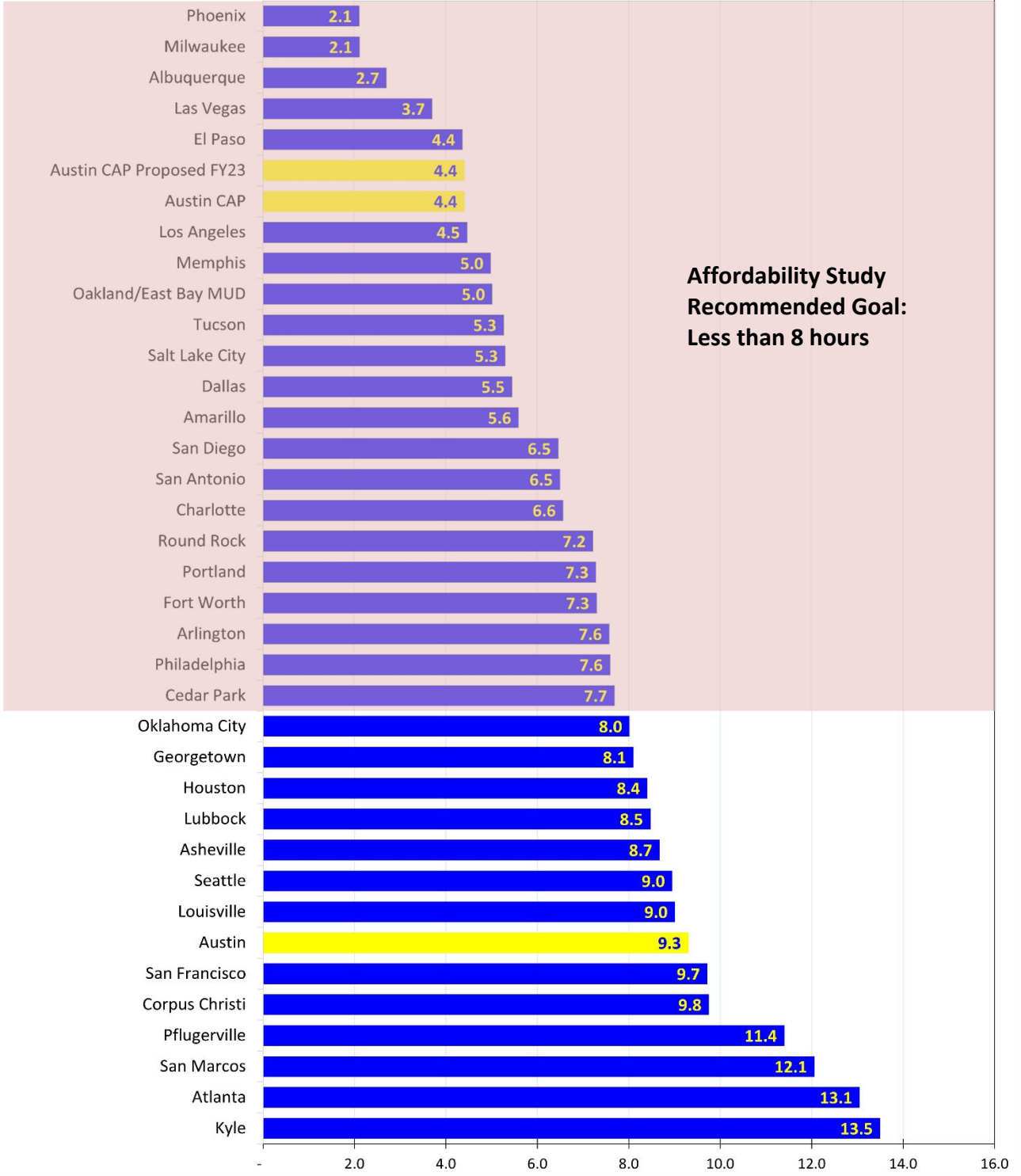
The HM takes a combined water and wastewater bill calculated with 4,000 gallons of water consumption and 4,000 gallons of wastewater flow monthly for each utility and divides it by the minimum wage per hour in each community. This indicates how many hours a person must work at minimum wage (ignoring taxes) to pay for the combined water and wastewater bill. Professor Teodoro suggested a standard HM value of no more than 8.0, for a four-person household's basic monthly water and sewer bill, should require no more than 8 hours of labor at minimum wage.

The HM benchmark is generally easy to calculate given the availability of information on minimum wage and the ease of calculating bills for basic service. However, this benchmark is not widely used in the industry. Additionally, the minimum wage has historically remained relatively constant over longer periods of time, making the results of this benchmark likely to trend higher as bills rise. AW contracted Professor Teodoro to provide the data for the HM.

The data analysis provided by Professor Teodoro used several price assumptions. The monthly water and wastewater prices are calculated using rates in effect as of January 2022, at an assumed volume of 4,000 gallons for water and for wastewater. Utilities with seasonal pricing schemes, the highest seasonal prices were applied for purposes of evaluating affordability. For utilities with multiple zone pricing schemes, the highest zone prices are applied for purposes of evaluating affordability. All prices associated with water consumption are included (e.g., conservation, fire, or supply surcharges, regional pass-throughs, etc.) However, municipal taxes and charges for other services that are billed with water and wastewater are not included (e.g., Stormwater, solid waste). Assistance and discount programs are not included in the calculations.

Austin Water's HM for a typical residential Non-CAP customer bill for basic water and wastewater services is at 9.3 hours, which is slightly above the suggested 8-hour goal. This is consistent with the 2018, 2019, 2020, and 2021 Affordability Metrics Report. Austin Water's current residential CAP bill is at 4.4 hours, the same as in 2021. For FY2022, AW's residential CAP customer average bills is expected to remain at 4.4 hours and the 6th lowest ranking of 36 cities surveyed.

**Hours Minimum Wage to Pay for Basic
Water and Wastewater Services
Existing Rates - (4,000 Gallons Consumption and 4,000 Flows)**



Metric #6: Average Annual Bill as % of Median Household Income (MHI)

This benchmark metric uses the most recent 2020 MHI data with an inflation factor for each succeeding year to determine the 2022 annual water and wastewater costs as compared with MHI for other cities. DataUSA¹ is the source of the median household income for each of the cities from 2013 to 2018. The American Community Survey is the source for both DataUSA and Census Reporter.

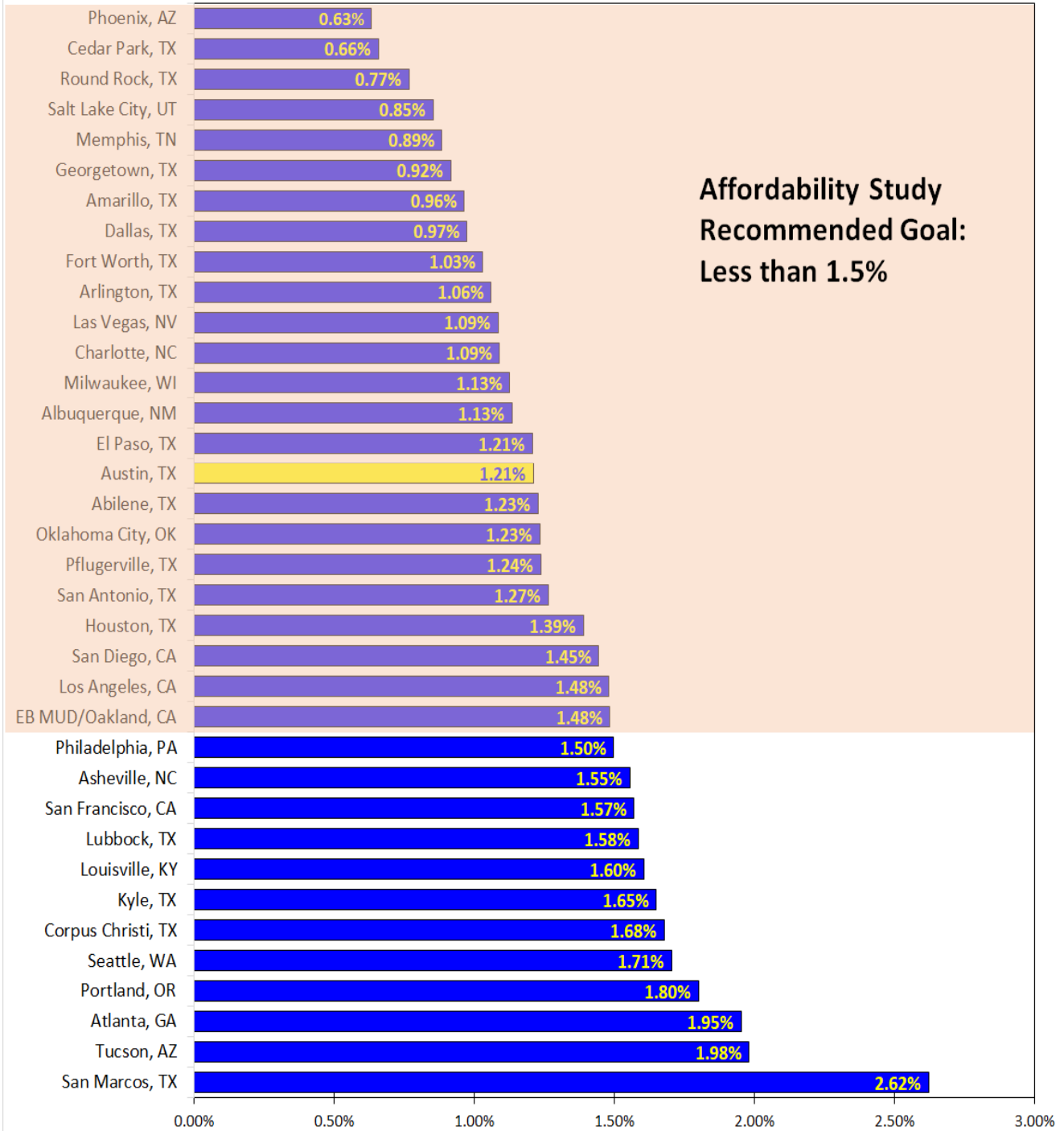
The percentage of MHI benchmark is commonly used within the water industry. However, there are concerns over the use of this benchmark and how well it measures affordability. First, there are issues with the arbitrary nature of setting standards or goals. An often-used standard has been 2.0% or 2.5% of MHI based on US EPA guidelines to determine a community's ability to pay for capital projects. The use of this benchmark assumes that if a water or wastewater bill is below the 2.0% standard, then it is "affordable", and if the bill is above the standard, it is "unaffordable". There are some utilities that use the standard 2.0% for water and then add another 2% for wastewater, for a combined 4.0%. Second, there are concerns with how income varies within different cities. There can be significant differences between high and low-income households that are obscured by the reliance on MHI. This may cause reliance on MHI to be a poor indicator of affordability, especially for low-income households.

AW currently has a goal for total water and wastewater residential annual bills as a percentage of MHI of below 1.5%.

The average AW residential annual water and wastewater bills as a percentage of MHI are lower than several Texas cities which includes Abilene, Corpus Christi, Kyle, Houston, Lubbock, Pflugerville, San Antonio, and San Marcos. For an average AW residential customer having a median household income, 1.21% of their annual income would be required to pay on water and wastewater bills. AW average residential customer's annual bills as a percent of MHI are ranked 16th out of the 36 Texas and national cities surveyed, which is an increase in one ranking from the 2021 Affordability Metrics Report. The increase in ranking is due to AW's affordability efforts, keeping rates at the same level for FY2022, and increasing median household income.

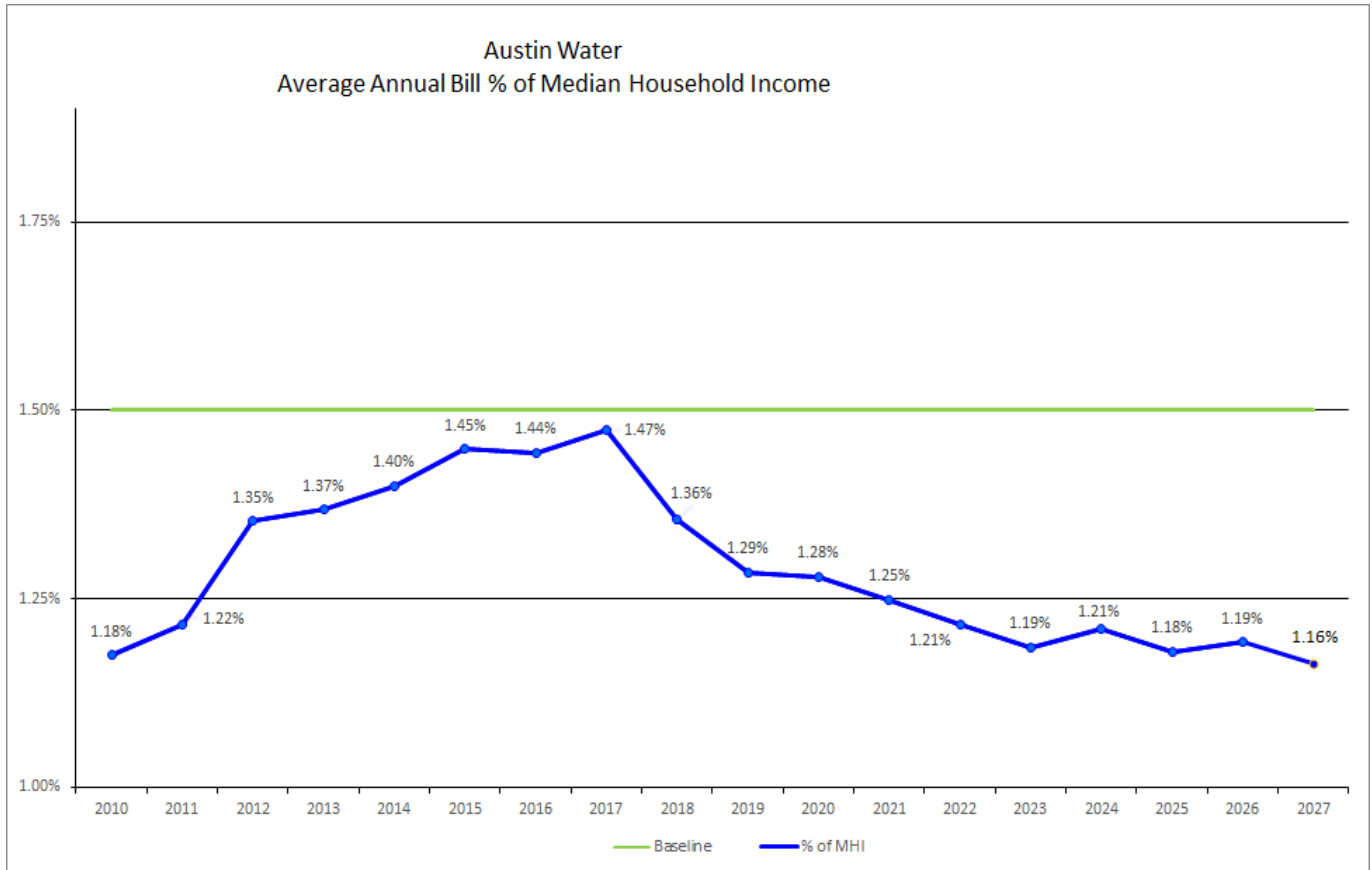
¹ <https://datausa.io/profile/geo/austin-tx/>

**Water and Wastewater Bill as a Percent of Median Household Income
RESIDENTIAL CLASS
(Austin Average Consumption and Flows)**



Metric #7: Average Historical Annual Bill as % of Median Household Income

This metric provides a historical look at AW's average customer annual water and wastewater bills as a percent of MHI. AW has set a goal for bills to be less than 1.5% of the median household income. AW forecasts that it will continue to achieve the 1.5% goal forecasts a downward trend for this benchmark. This is due primarily to no rate increases in FY2019 through FY2022 and no projected rate increases in FY2023, FY2025, and FY2027, with minimal rate increases projected in FY2024 and FY2026.



MHI Data Source: American Community Survey

Metric #8: Residential CAP Customer Historical Average Bill

AW's rate structure reflects both Austin's environmental and social equity values. The utility's residential Customer Assistance Program (CAP), initiated in 2009, is an example of its commitment to social equity. In this metric, the historical residential CAP customer water and wastewater bills are presented. The chart reflects enhancements in the residential CAP program over the years.

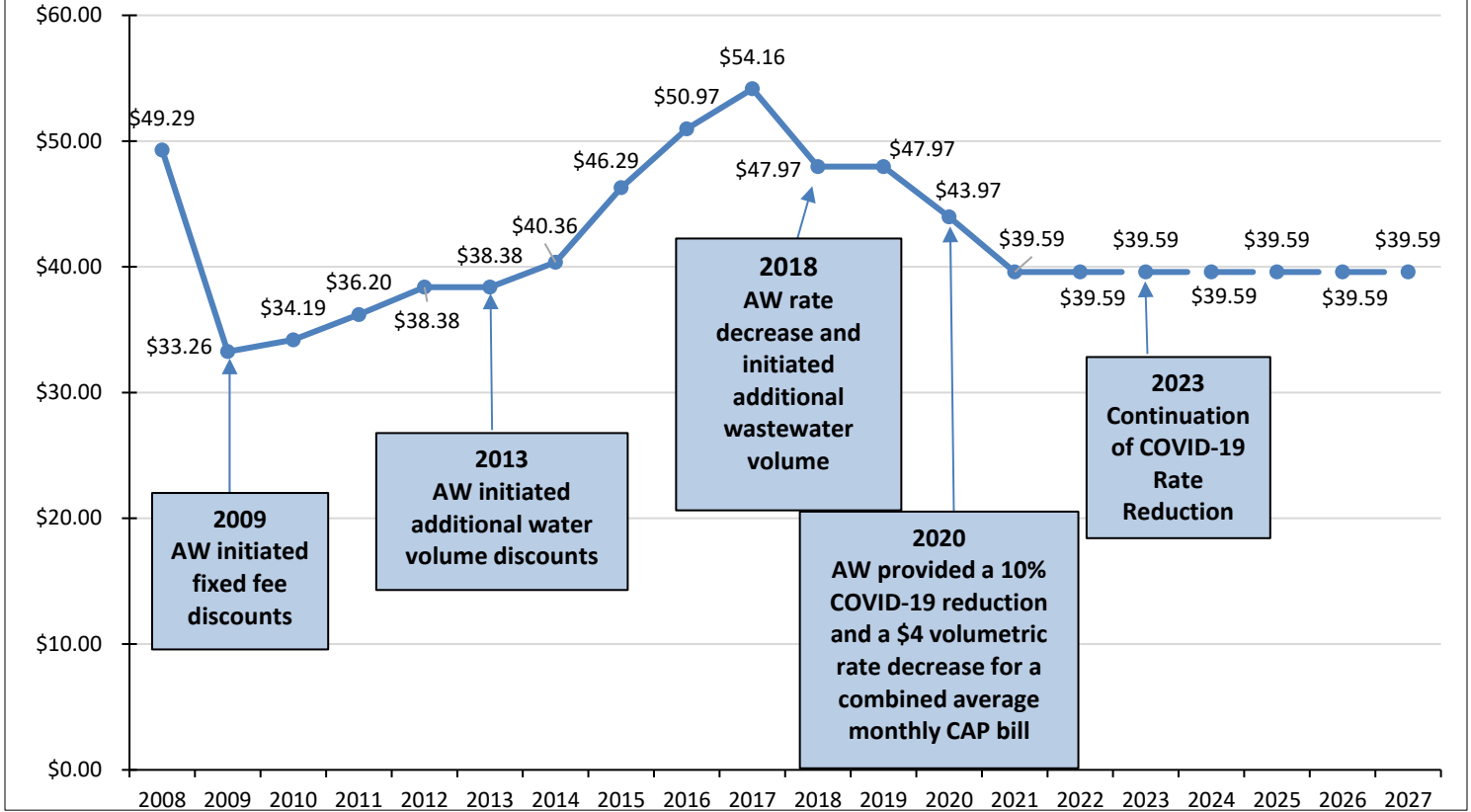
For example, at the beginning of the program, AW provided residential CAP customers a waiver of their fixed charges. This provided an average 43% discount on their bills. Currently, the average bill discount for residential CAP is 51%.

In 2013, AW provided additional discounts for not only residential CAP customers' fixed charges, but also a water volumetric rate discount. Then, in FY2018, Austin Water provided an average 4.8% water and wastewater rate reduction for all retail customers including residential CAP, along with the addition of a new wastewater volumetric rate discount for residential CAP customers. CAP customers saw an 11.4% average bill reduction.

AW increased support for the CAP customers in FY2020 by reducing the volumetric water and wastewater rates which resulted in an additional \$4.00 or 8.3% decrease for the combined average monthly CAP bill.

During the FY2022 budget, AW continued the reduced residential CAP water rates from April 2020 for tiers 1-3 and residential CAP wastewater rates for tiers 1 and 2 to continue assisting individuals experiencing financial hardship due to the COVID-19 pandemic. These reductions are proposed to continue through FY2023, which will continue to improve the benchmark.

Residential CAP Customer Historical Water and Wastewater Bills (5,800 Gals. Water and 4,000 Gals. Wastewater)



*Fiscal years 2023-2027 rates are subject to change and are shown on graph for illustration purposes only. Minimal rate increases in FY2024 and FY2026 are not reflected in the graph.

Metric #9: High Volume Residential Bill Comparison

This metric provides a high-volume residential bill comparison using 10,000 gallons water and 5,000 gallons wastewater discharge. AW's residential rate structure is designed to provide higher rates for higher volume use to provide a conservation incentive. At these high-volume levels, AW is less competitive with other cities than the average customer bill comparison results. At these high-volume levels, only three central Texas cities; Kyle, Pflugerville, and San Marcos are above AW bills.

For residential CAP customer bills at the high-volume levels, AW's goal is to be below the 50th percentile. Currently, AW's residential CAP customers are ranked 10th out of 36 cities surveyed, which is below the 50% level. This is a decline in ranking compared to the results of the 2021 Affordability Metrics Report where AW residential CAP ranked 7th. For residential CAP customer bills at these high volumes, AW bills are lower than most Texas cities, except Amarillo. At these high-volume levels, the current CAP average residential bill is 49% of the non-CAP Austin Water customer bill. This represents a current discount of 51% on bills for the most vulnerable low-income residential CAP customers using these higher volumes. The discount provided is a waiver of all fixed fees and a discounted volumetric rate per 1,000 gallons for blocks 1 through 4, with only the block 5 rate for residential CAP customers being the same as the rate for non-CAP residential customers. In preparing the 2022 Affordability Metric Report a miscalculation for residential CAP was identified and corrected for this metric. This resulted in a \$7.24 decrease from the 2021 Affordability Metric Report.

For residential non-CAP average bills, AW's goal is to be below the 75th percentile of all Texas and national cities surveyed over the next five years. Currently, AW's average residential bill is slightly below the 75th percentile, ranking 26th out of 36 cities surveyed. This is an improvement in ranking from last year's report. Over the next five years, AW anticipates continued improvement within this benchmark given the projection of no rate increases in FY2023, FY2025, and FY2027 with minimal rate increases projected in FY2024 and FY2026.

**AVERAGE MONTHLY BILL COMPARISON - COMBINED
RESIDENTIAL CLASS
Existing Rates - (10,000 Gallons Consumption and 5,000 Flows)**

