



# **Austin Water Affordability Metrics Report**



**August 2020**

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## Report Overview

Austin Water 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 Austin Water Affordability Benchmark Study was completed and provided to Council in December 2018 (FY 2019).

## Affordability Efforts

Austin Water (AW) continues its affordability efforts to ensure a reliable supply of high-quality drinking water and wastewater services that is affordable. Affordable water and wastewater services is a critical part of every customer's personal monthly budget and is an impactful piece of managing the rising cost of living in Austin. AW maintains focus on affordability efforts in several ways, as listed below.

- **Customer Assistance Programs:** AW provides for significant affordability for its most vulnerable low-income customers. These Customer Assistance Programs (CAP) provide reduced water and wastewater bills to over 12,000 customers to ensure they are provided the most affordable water as possible. These 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 CAP customers. This discount provides the average CAP customer a 45% discount as compared to regular Non-CAP bills.
  - CAP Bill Rate Reductions – Over the last few years, AW has been able to implement CAP customer rate reductions, providing more affordability. In FY2018, CAP customers saw a 11.4% average bill reduction. In FY2019, CAP customer rates were not changed. In FY2020, CAP customers saw an 8.3% bill reduction. For FY2021, CAP customers will see a 10.0% 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 temporarily reduced by 10% for water tiers 1-3 and wastewater tiers 1-2. Additionally, AW provided an additional \$5.0 million contribution to the City's Financial Support Plus 1 Program, which provides bill payment assistance to residential customers experiencing COVID-19 related economic hardship. These rates will be in effect through October 31, 2020. For FY2021, the CAP customer 10% rate reduction will be extended throughout the entire year, 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.
  - Arrearage Management Program – The arrearage management program benefits certain low-income residential customers who were behind on their utility bills in the past. This program is intended to help these customers pay down their previous utility debt balances.
  - Water Leak Repair Program – The water leak repair program benefits low-income residential customers make necessary plumbing and leak repairs, as they can apply for assistance thanks to a new partnership between Austin Water and Neighborhood Housing and Community Development of the City of Austin.
  - Wastewater Lateral Repair Grant Program – AW provides grant funding to the Neighborhood Housing and Community Development Department to administer a low-income grant program for 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.
- **Expense Management:** AW manages its expenses through annual strategic and budget planning. AW conducts a thorough budget development process which provides for detail 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 ensure overestimating budget costs.
  - **Capital Project Planning:** AW manages its Capital Improvement Projects (CIP) Program ensuring a process of thorough review, approval, and funding strategies. Improving affordability and infrastructure stability are components of the utility’s long-term strategic business plan that uses Effective Utility Management strategies to meet the challenges ahead.
  - **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 uses Capital Recovery Fee dollars for annual debt defeasance transactions, that reduce future debt service requirements. These defeasances have allowed for AW to manage and stabilize our debt costs. Debt refundings are the refinancing of debt, which are similar to the refinancing your home mortgage. With the refundings at reduced interest rates, the transaction results in debt service savings. AW’s debt management strategies for debt defeasances and debt refundings have yielded \$199.9 million in debt savings since 2016.

- **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. CRFs dollars derive 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 of the affordability efforts listed above have allowed AW to reduce and stabilize water and wastewater rates. In 2018, AW implemented a 4.8 percent rate reduction for all retail customers. After this rate reduction, AW was able to keep rates stable, or zero percent increase, for 2019, 2020, and proposed for the 2021 budget. In addition, AW’s Financial Forecast projects no rate increase in 2022.

This Affordability Metric Report provides updated results annually of the recommended affordability metrics from the Affordable Benchmark Study. In addition, Austin Water has included additional affordability metrics which provide supplementary results. The bill comparison metrics include 2020 updates to other Texas and national cities’ water and wastewater rates.

The metrics include the following:

### **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 (AR<sub>20</sub>)**

**Metric #5: Hours Minimum Wage**

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

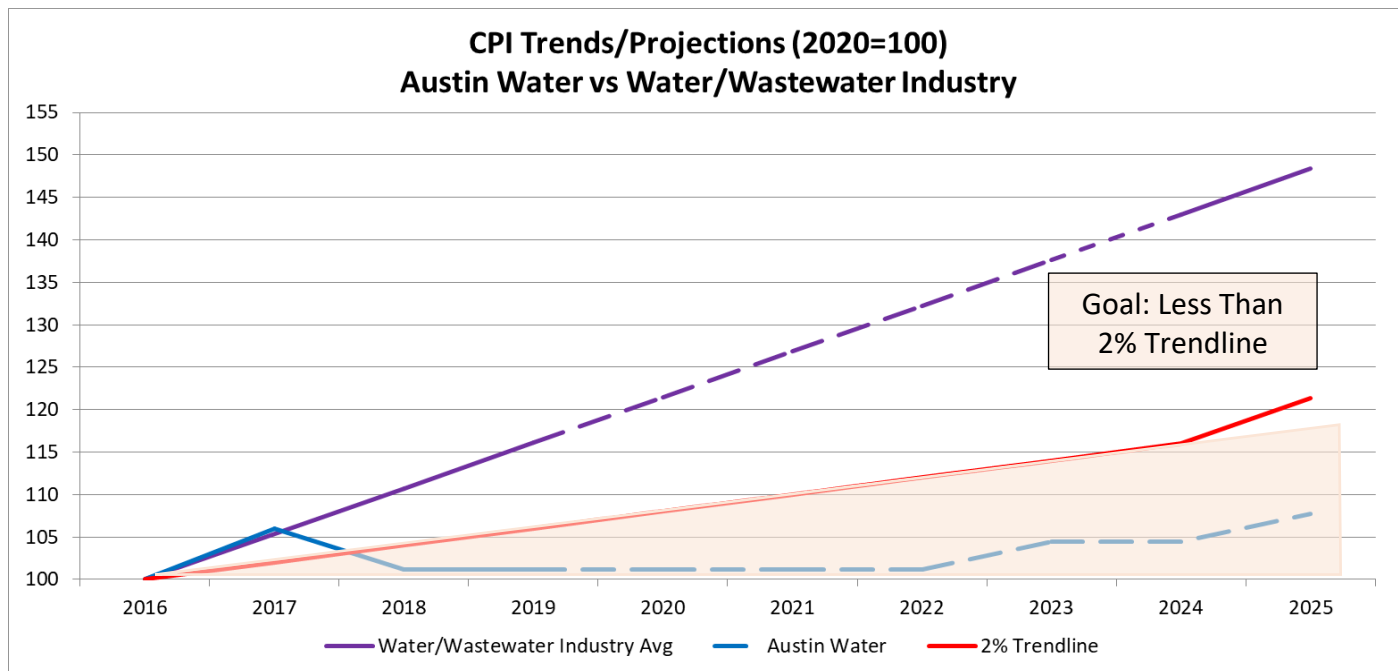
**Metric #7: Average Historical Annual Bill as % of Median Household Income**

**Metric #8: CAP Customer Historical Average Bill**

**Metric #9: High Volume Residential Bill Comparison**

## Metric #1: Historical Rate Index

This metric includes a comparison of the Austin Water (AW) historical rate increases, the water and wastewater industry cost index, and a reference 2% annual rate increase trendline. Each of these indices would be calculated using a base year of 2016. The goal for this benchmark would be for AW to remain under the 2% annual rate increase trendline. This goal to remain under 2% represents approximately 50% of the current water and wastewater industry index historical trend. This benchmark is consistent with the current Austin Energy benchmark of remaining below a 2% annual rate increase trend.



The graph above shows for 2016 and 2017, AW was trending along the water and wastewater industry index level and above the 2% annual rate increase trendline. This was due to the rate increases experienced during these years. However, beginning in the FY 2018 Approved Budget, AW submitted a 0% rate increase and subsequently Council approved an amendment to the budget in April 2018 to implement a mid-year 4.8% rate reduction. With this rate reduction in 2018, AW rates are below both the water and wastewater industry index and the 2% annual rate increase trendline. The graphic also provides for a projection of these indices through 2025. The water and wastewater industry index used a historical 15-year average increase to project through 2025. The AW projected rates through 2025 are based on AW's Financial Forecast completed in April 2020. This forecast assumed no rate increases for FY2021, FY2022, FY2024 and only a 3.0% and 3.3% increase in both FY2023 and FY2025, respectively. With AW proposing multiple years of no rate increases and only two years of rate increases near the 2% level, the projection of the cost trends for AW is currently below the 2% trendline. These results are consistent with those of the 2019 Affordability Benchmark Study which also showed AW below the 2% trendline. However, these results show an improvement in that rates are projected to remain flat through 2022.

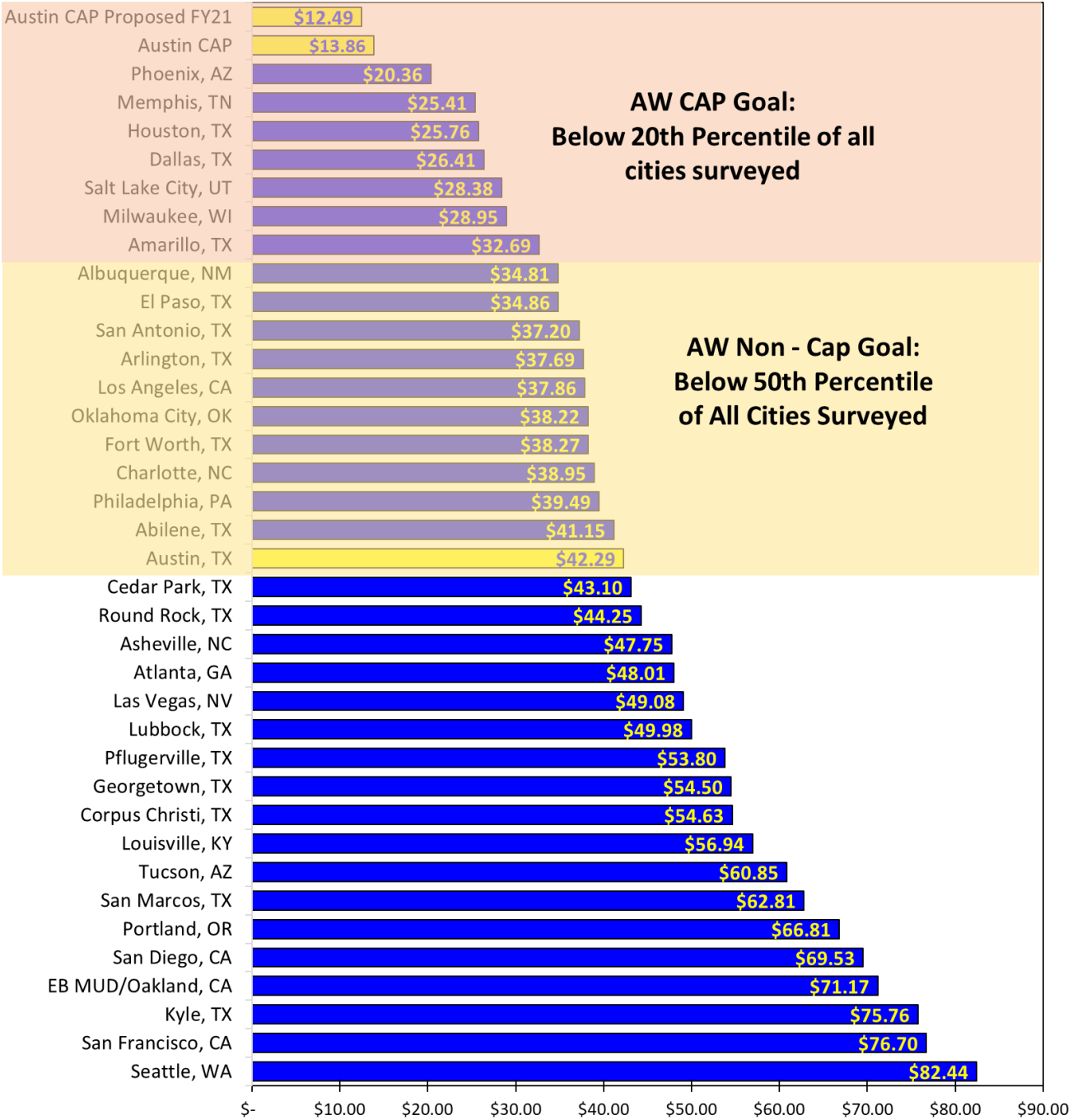
## **Metric #2: Residential Low Volume Bill Comparison**

This metric includes a low volume user bill comparison of Texas and national cities which uses combined water and wastewater bills 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. The Customer Assistance Program (CAP) customer bill at low volumes should be at affordable levels so the most vulnerable low-income customers have access to basic water services at affordable costs.

AW's goal of low-volume CAP residential customer bills being below the 20<sup>th</sup> percentile of all cities surveyed. Currently, AW's CAP residential low-volume bills ranked 1<sup>st</sup> out of all Texas and national cities surveyed. This is consistent with the 2018 and 2019 Affordability Benchmark Studies which had AW CAP customers the lowest of all cities surveyed. This is due to the significant fixed fee and volumetric bill discounts provided to our low-income CAP customers to keep their bills at affordable levels. As part of AW's FY 2020 Approved Budget, CAP customer average bills were reduced by \$4.00 per month which had moved CAP customer bills to the lowest of all cities surveyed. In addition, during FY 2020 AW reduced the CAP customer average bills by \$4.38 per month to provide an increased discount to water and wastewater volumetric charges as a response to the impacts of COVID-19. These reductions maintain CAP customers at the surveyed level and is proposed to continue through FY 2021.

For non-CAP residential customer bills, AW's goal is to reside in the bottom half of all Texas and national cities surveyed. Currently, AW is ranked 18<sup>th</sup> out of the 36 cities surveyed, which is exactly at the 50% level. This is consistent with the 2018 and 2019 Affordability Benchmark Studies, which had AW non-CAP customers ranked 18<sup>th</sup> out of the 36 cities surveyed. As AW's rates are projected not to increase until FY 2023, 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**

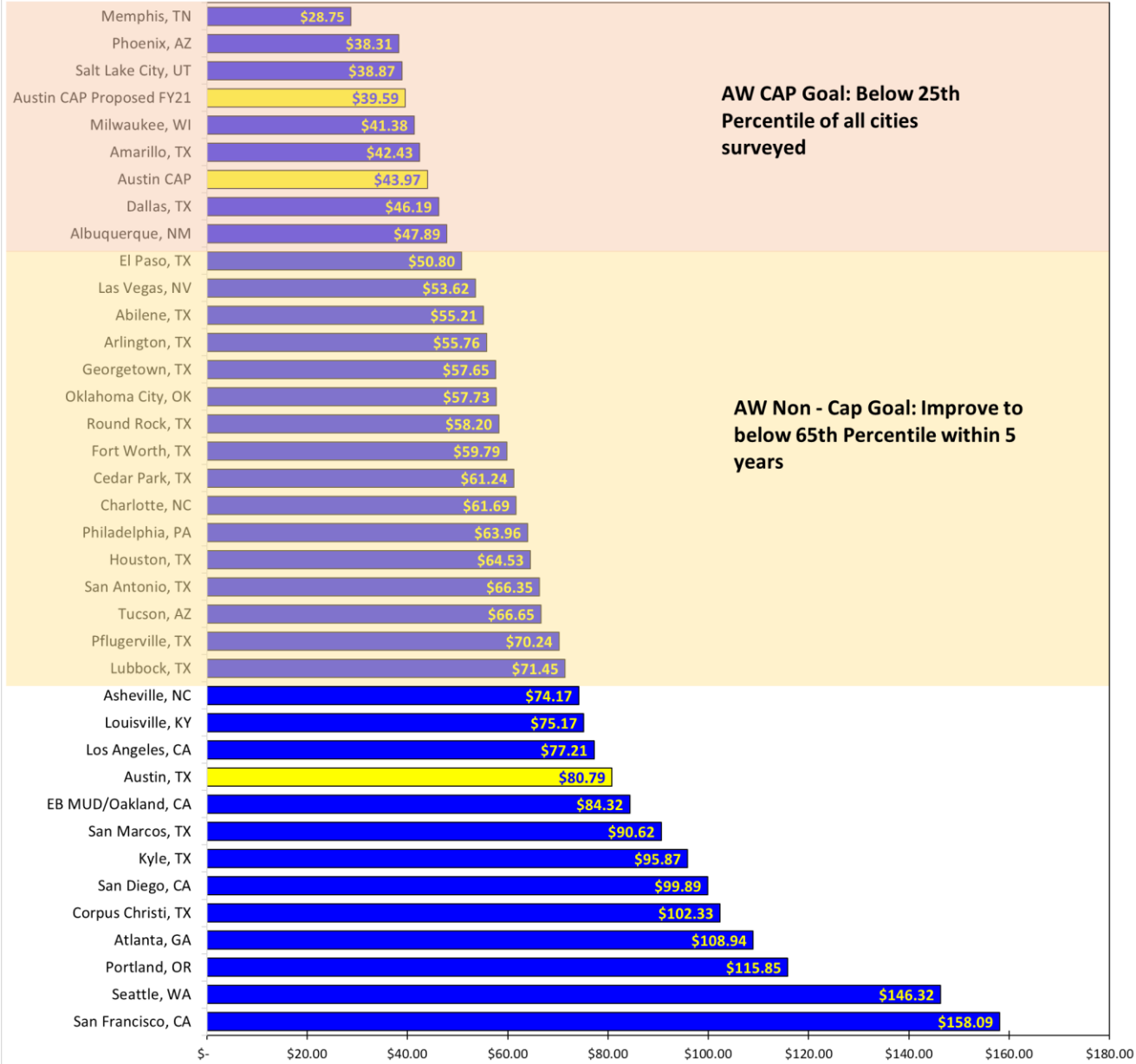
This metric includes a residential average customer bill comparison. This metric compares combined residential water and wastewater bills at the current AW average residential customer usage levels of 5,800 gallons of water consumption and 4,000 gallons of wastewater discharge per month. Approximately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

AW's goal for CAP residential average bills is at or below the 1<sup>st</sup> quartile, or lower 25%, of all Texas and national cities surveyed. Currently, AW's CAP bill is within this 1<sup>st</sup> quartile goal, ranking 6th out of 36 cities surveyed, at the 17% level. This is consistent with the results of the 2018 and 2019 Affordability Benchmark Studies. For FY 2021, AW will continue the reduced CAP customer average bills to provide an increased discount to water and wastewater volumetric charges. This will improve the AW CAP customer bills to being ranked 4<sup>th</sup> out of 36 cities surveyed. In comparison to 2018 and 2019, this ranking was 6<sup>th</sup> out of 36 cities surveyed.

For our non-CAP residential average bills, AW's goal is to improve to below the 65<sup>th</sup> percentile of all Texas and national cities surveyed over the next five years. Currently, AW's average residential bill is at the 75<sup>th</sup> percentile, ranking 27<sup>th</sup> out of 36 cities surveyed. This is consistent with the results of the 2018 and 2019 Affordability Benchmark Studies. Over the next five years, AW anticipates significant improvement within this benchmark given the projection of no rate increases over the next two years and with minimal rate increases after that.



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



## **Metric #4: Affordability Ratio (AR<sub>20</sub>)**

The Affordability Ratio 20 (AR<sub>20</sub>) is one of the two benchmarks advanced in an American Water Works Association (AWWA) publication article written by Professor Manuel P. Teodoro of Texas A&M University. The title of the article is: 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.

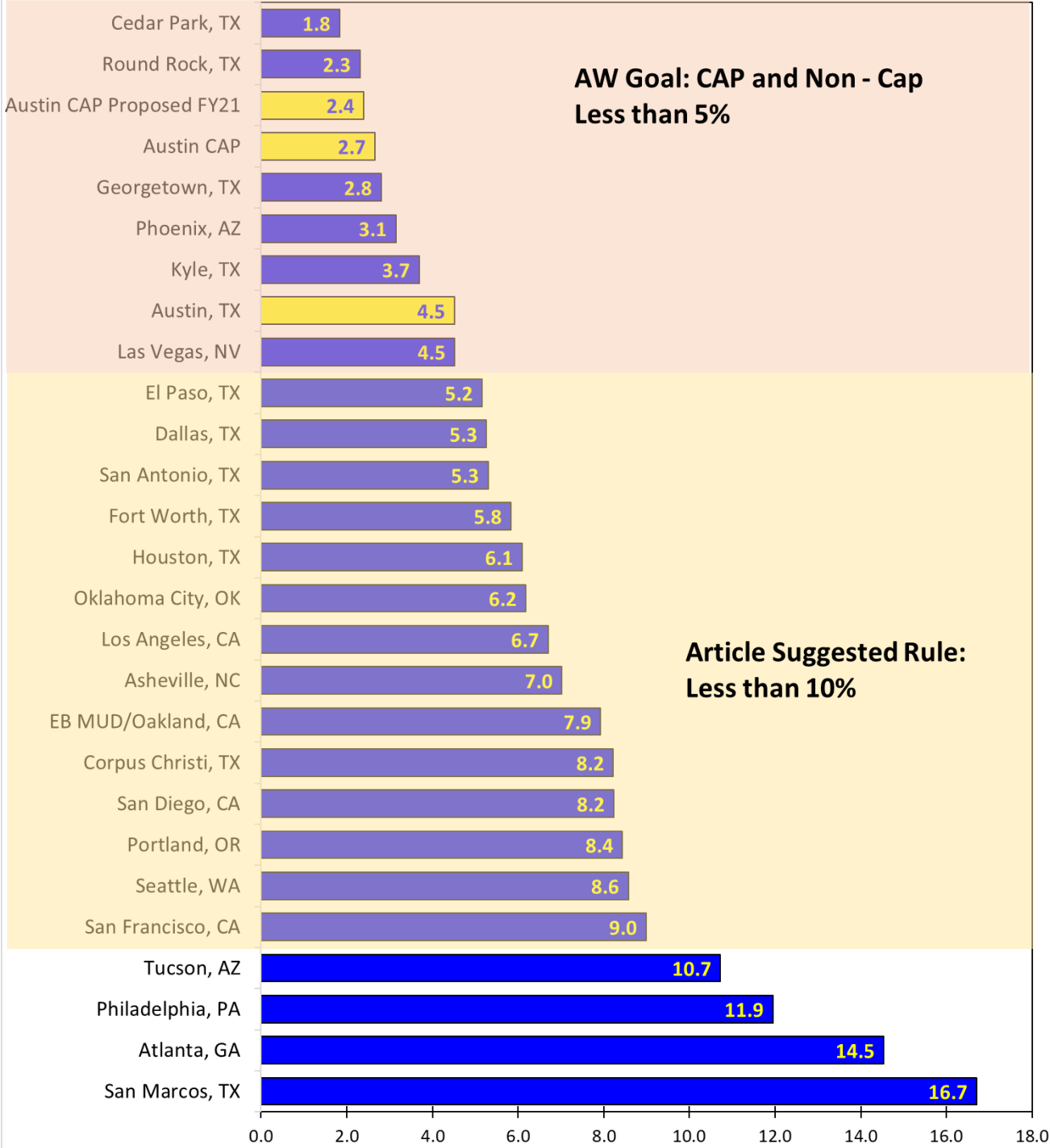
The AR<sub>20</sub> metric measures the ability of low-income customers to pay for basic water and wastewater services after paying for other essential costs such as food and housing. The focus is on low-income customers who are at the 20<sup>th</sup> percentile of household income, as opposed to looking at customers at the higher median household income. These low-income customers 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. This focus on lower volume needs is presumably more representative of the basic water needs of low-income customers. This benchmark is generally easy to update each year through calculation of bills at the current rates. The estimation of each city's essential costs, other than water and wastewater services, is difficult to update annually and requires the services of Dr. Manny Teodoro to provide data for the updates.

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 the AW CAP customers, the bill for basic water needs for low-income customers is only 2.7% of the remaining income after paying for other essential costs, and the lowest of any major Texas city surveyed. This is an improvement with the results of the 2018 and 2019 Affordability Benchmark Study where AW CAP customers were at 3.0%. For FY 2021, AW will propose a \$4.38 per month reduction to CAP customer average bills. This will move the CAP customer bills even lower to a 2.4% level and is the 3<sup>rd</sup> lowest of all cities surveyed.

For non-CAP customers, bills for basic water needs for low-income customers are only 4.5% of the remaining income after paying for other essential costs. This is an improvement from the 2018 and 2019 Affordability Benchmark Study where Austin was at 5.0%. This is below AW's goal of below 5.0% and well below the article recommended 10%. As Austin Water's rates are projected not to increase until FY2023 at the earliest, it is expected that the percentage of income needed by non-CAP customers to pay for basic water and wastewater services will continue to improve.

**Basic Water and Wastewater Services  
Affordability Ratio 20 (AR<sub>20</sub>)  
Existing Rates - (4,000 Gallons Consumption and 4,000 Gallons  
Flows)**



## **Metric #5: Hours Minimum Wage**

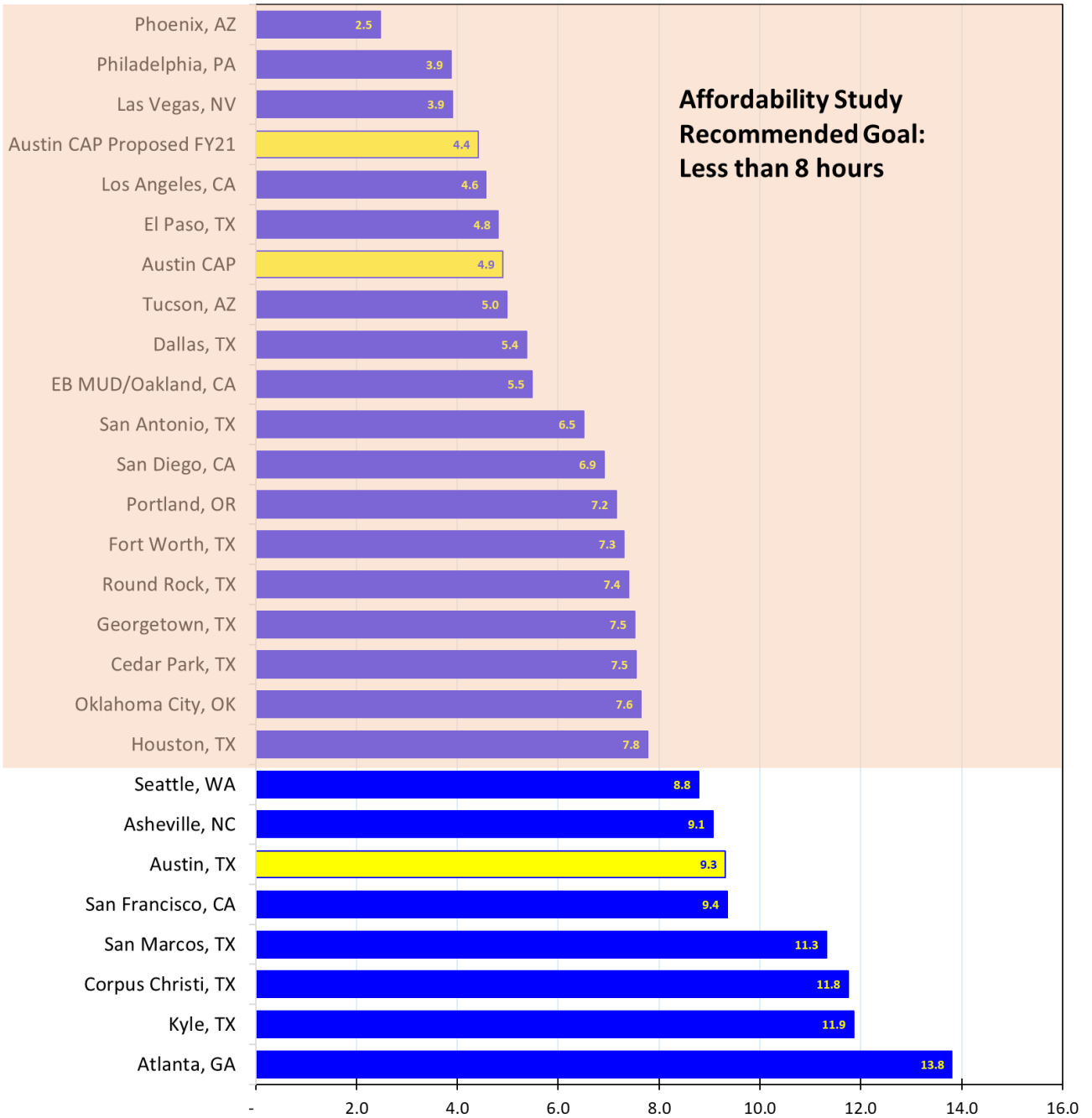
The Hours Minimum Wage (HM) is one of the two benchmarks advanced in an American Water Works Association (AWWA) publication of an article written by Professor Manuel P. Teodoro of Texas A&M University. The title of the article is: Measuring Household Affordability for Water and Sewer Utilities, Journal 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 HM simply takes a combined water and wastewater bill calculated with 4,000 gallons of water consumption and 4,000 gallons of wastewater flow monthly (to represent consumption for health and satiation) 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) in order to pay for the combined water and wastewater bill at 4,000 gallons. In his article, Professor Teodoro suggested a HM of less than 8 hours as an affordability rule-of-thumb. The intuition behind this threshold is that nobody should have to work for longer than one standard workday at minimum wage in order to afford their combined water and wastewater bill.

The Hours Minimum Wage 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 with Dr. Manny Teodoro who provided the data for the Hours Minimum Wage updates.

Austin Water's HM for a typical non-CAP residential bill for basic water and wastewater services is at 9.3 hours which is above the suggested 8-hour goal. This is consistent with the 2018 and 2019 Affordability Benchmark Study. Austin Water's CAP bill is at 4.9 hours, an improvement from 5.5 hours in 2019. For FY 2021, AW's proposed reduction for the CAP customer average bills will improve this metric to 4.4 hours and will become the 4th lowest ranking of 25 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

The average water and wastewater bill calculation uses the most recent 2018 MHI data with an inflation factor for each succeeding year to determine the 2020 annual water and wastewater costs to compare with each cities' median household income. DataUSA<sup>1</sup> is the source of the median household income for each of the cities from 2013 to 2018. AW has restated the 2013 to 2018 MHI using information from DataUSA, which is an easy to use platform that will display specific data for numerous cities.

The percentage of MHI benchmark is commonly used within the water industry, in part because it is relatively easy to calculate. 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.

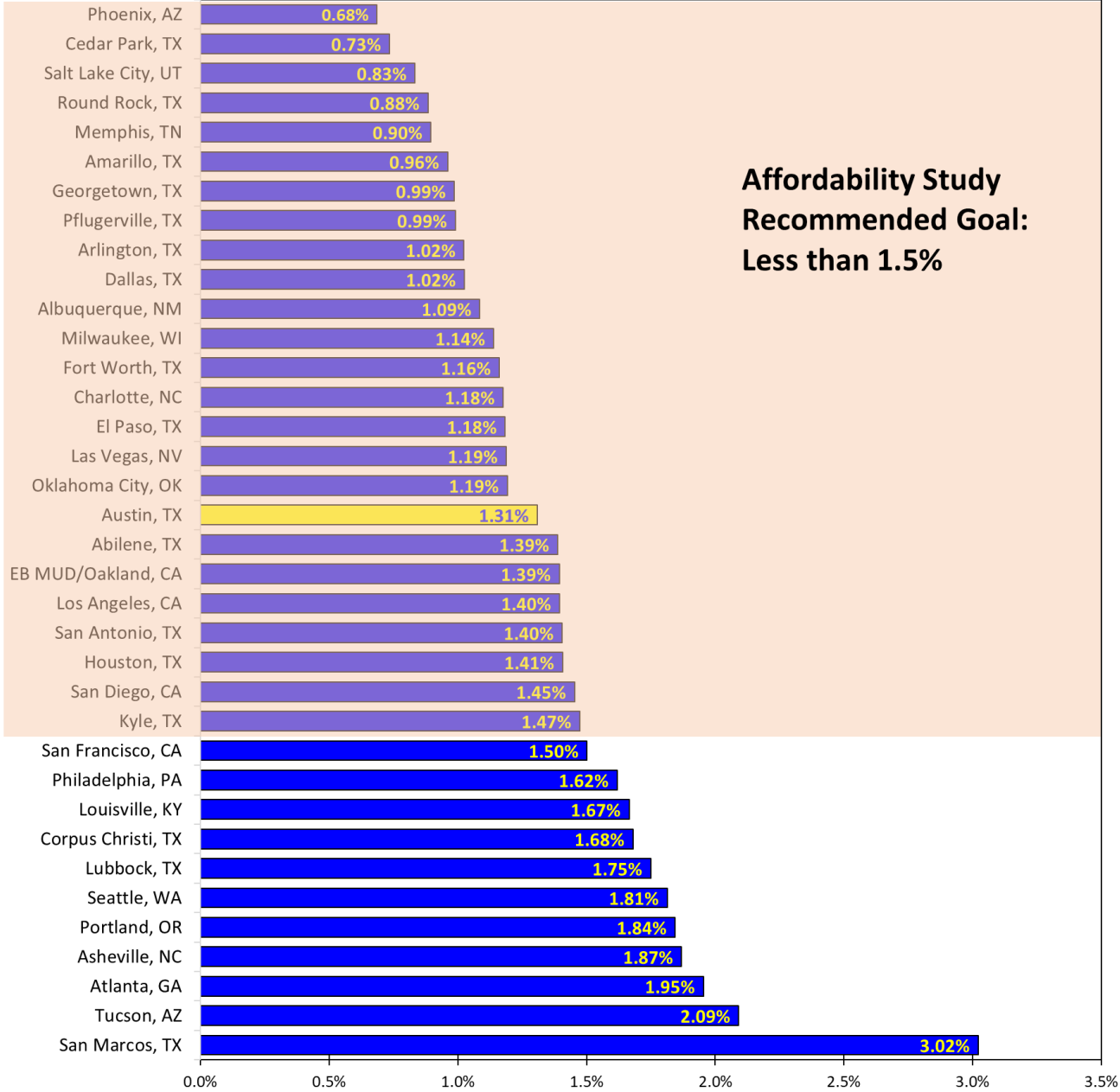
Austin Water currently has a Key Performance Indicator (KPI) included in the FY 2020 Approved Budget of total water and wastewater annual bills as a percentage of MHI with a goal of below 1.5%.

Austin Water residential average annual water and wastewater bills as a percentage of MHI are lower than most major Texas cities which includes Abilene, San Antonio, Houston, Kyle, Corpus Christi, Lubbock and San Marcos. For an average residential customer of Austin Water having a median household income, they would spend 1.31% of their annual income on water and wastewater bills. Austin Water average residential customer annual bills as a percent of MHI are ranked 18<sup>th</sup> out of the 36 Texas and national cities surveyed, which is an increase from the prior year. The 1.31% is an improvement from the previous affordability Benchmark Study. The increase in ranking is due to AW's affordability efforts and keeping rates at the same level for 2020 and estimated median household income increasing to higher levels.

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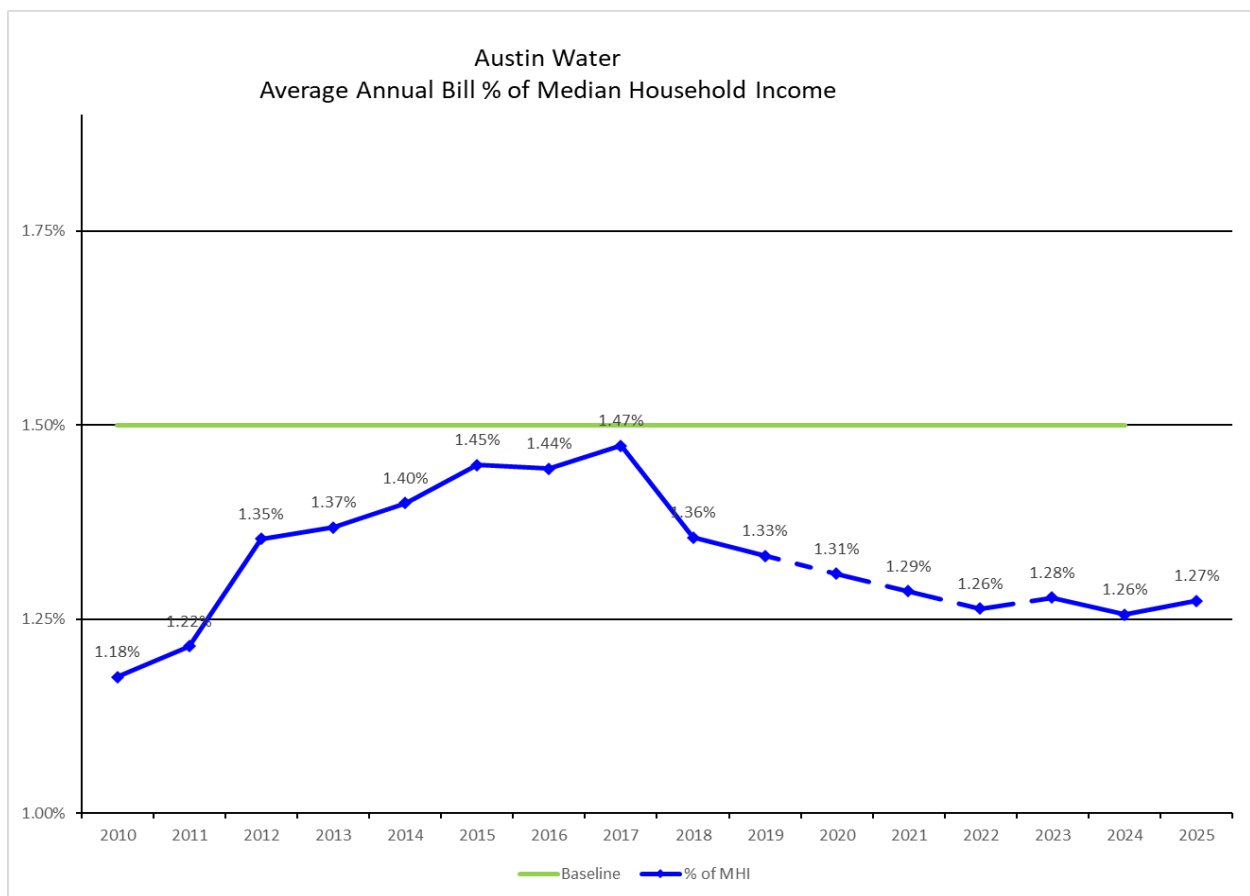
<sup>1</sup> <https://datausa.io/profile/geo/austin-tx/>

**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 Austin Water's average customer annual water and wastewater bills as a percent of MHI. Austin Water has set a goal that our average customer's annual water and wastewater bills represents less than 1.5% of the median household income. Austin Water forecasts that it will continue to achieve the 1.5% goal. Further, Austin Water forecasts a downward trend for this benchmark. This is due primarily to Austin Water projecting no rate increases in FY 2019, 2020, 2021, FY 2022 and FY 2024, with only minimal rate increases in FY 2023 and FY 2025. AW has restated the 2013 to 2018 MHI using information from DataUSA, which is an easy to use platform that will display specific data for Austin.



**Source:** DataUSA is the source of the median household income (MHI) data for each of the cities for 2013 to 2018[1]. Austin Water's MHI data has been restated from 2013 to 2018 using DataUSA. The 2010-2012 MHI is using data from the Census.



## **Metric #8: CAP Customer Historical Average Bill**

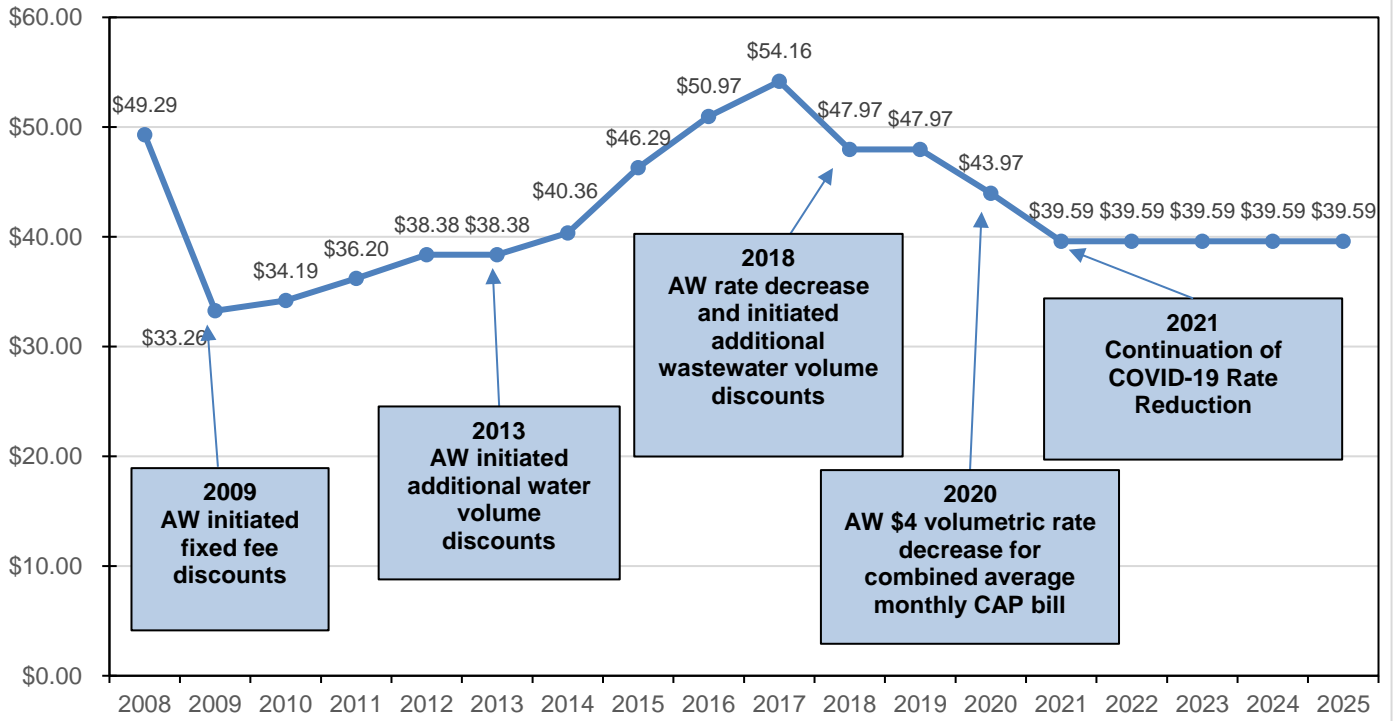
AW's rate structure reflects both Austin's environmental and social equity and values. The utility's Customer Assistance Program is an example of its commitment to social equity. In this metric, the historical CAP customer water and wastewater bills are presented. The CAP program was initiated in 2009.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

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

In 2013, AW provided additional discounts for not only CAP customers' fixed charges, but also a water volumetric rate discount. Then, in 2018, Austin Water provided an average 4.8% water and wastewater rate reduction for all retail customers including CAP, along with the addition of a new wastewater volumetric rate discount for CAP customers.

During the FY2020 budget, AW reduced the CAP water rates for tiers 1-3 and CAP wastewater rates for tiers 1 and 2 by 10% to assist individuals experiencing financial hardship due to the COVID-19 pandemic. These reductions are proposed to continue through FY2021. This reduction will continue the improvement as compared to the results of the 2019 Affordability Benchmark Study.

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



\*Fiscal years 2022-2025 rates are subject to change and are shown on graph for illustration purposes only.

## Metric #9: High Volume Residential Bill Comparison

This metric provides the high-volume residential bill comparison using 10,000 gallons water and 5,000 gallons wastewater discharge. Austin Water's residential rate structure is designed to provide higher costs for higher volume use. At these high-volume levels, Austin Water is less competitive with other cities than the average customer bill comparison results. At these high-volume levels, only one central Texas city, Kyle, is above Austin Water bills. The major Texas cities are all below Austin Water bills.

For our CAP customer residential bills at the high-volume levels, the goal is to be below the 50<sup>th</sup> percentile. Currently, AW's CAP customers are ranked 14<sup>th</sup> out of 36 cities surveyed, which is just below the 50% level. In FY 2021, they are proposed to move to 9<sup>th</sup> out of 36 cities surveyed. This is an improvement compared to the results of the 2019 Affordability Benchmark Study where the ranking was 17<sup>th</sup>. For the CAP customer bills at these high volumes, Austin Water CAP customers are higher than some major Texas cities, except Houston, Dallas, and Fort Worth. At these high-volume levels, the CAP residential bill is 49% of the non-CAP Austin Water customer bill. This represents a discount of 51% on bills for our most vulnerable low-income 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 CAP customers being the same as the rate for non-CAP residential customers.

For our non-CAP residential average bills, AW's goal is to be below the 75<sup>th</sup> percentile of all Texas and national cities surveyed over the next five years. Currently, Austin Water's average residential bill is just above the 75<sup>th</sup> percentile, ranking 29<sup>th</sup> out of 36 cities surveyed. This is consistent with the results of the 2018 and 2019 Affordability Benchmark Study. Over the next five years, Austin Water anticipates significant improvement within this benchmark given the projection of no rate increases over the next two years and with minimal rate increases after that.

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

