



An Assessment of
Water Affordability & Conservation Potential

City of Santa Barbara

CALIFORNIA



Alliance
for Water
Efficiency

PROMOTING
THE EFFICIENT
& SUSTAINABLE
USE OF WATER

April 2024

About the Project

Alliance for Water Efficiency

The Alliance for Water Efficiency (AWE) is a nonprofit dedicated to the efficient and sustainable use of water across North America. Based in Chicago, IL, AWE advocates for water efficient products and programs, and provides information and assistance on water conservation efforts. AWE works with more than 500 member organizations, providing benefit to water utilities, business and industry, government agencies, environmental and energy advocates, universities, and consumers.

Chicago, IL 60606 | a4we.org | contact@a4we.org

AWE Staff

Liesel Hans, PhD | *Director of Programs*

Amanda Christophe | *Project Coordinator*

Andrew D. Morris, JD | *Senior Manager of Policy & Programs*

Funding

The Alliance for Water Efficiency would like to thank City of Santa Barbara Public Works Department for providing funding that made this assessment possible and for providing information and data used throughout the assessment.

City of Santa Barbara Public Works Partners

The Alliance for Water Efficiency would like to thank the City of Santa Barbara, CA for providing funding that made this assessment possible and for providing information, collaboration, data, and insights used throughout the assessment.

Suggested Citation

Alliance for Water Efficiency (2024) *An Assessment of Water Affordability and Conservation Potential in the City of Santa Barbara, California*. Chicago, IL: Alliance for Water Efficiency.



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ACRONYM LIST

AMI	Advanced Metering Infrastructure
AWE	Alliance for Water Efficiency
DAC	Disadvantaged Community
HBI	Household Burden Indicator
HCF	Hundred Cubic Feet
IM	Individually Metered
LIHWAP	Low Income Household Water Assistance Program
LQI	Lowest Quintile of Income (20th percentile of Income)
MFR	Multi-Family Residential
MM	Master Metered
PPI	Poverty Prevalence Indicator
SDAC	Severely Disadvantaged Community
SFR	Single-Family Residential
UUT	Utility Users Tax

Executive Summary

The Alliance for Water Efficiency (AWE) envisions a future with reliable, affordable, and equitable water resources, healthy ecosystems, and vibrant, economically strong communities. When water service is unaffordable, it undermines this future. Affordability is a growing concern as water and sewer rates rise to account for increasing costs due to aging infrastructure, extreme weather events, climate change, regulations, and inflation, to name a few. Investing in water conservation and efficiency is one strategy that can help keep water and sewer bills affordable.

The Full Report is a comprehensive water and wastewater affordability assessment of the City of Santa Barbara, California.

Statewide assessments of affordability only look at cities as a whole and suggest no water affordability concerns in the City of Santa Barbara, however, a city is more than a single data point. This study leveraged Census data along with monthly household-level water consumption and water and wastewater billing data to reveal impacts to the lowest income households and variation in affordability issues across different areas of the City. The study included:

-
- An assessment of water affordability,
 - Community outreach and engagement to hear from the lived experiences of residents,
 - Documentation of the City's current programs and policies,
 - Example affordability and assistance programs across California communities, and
 - Strategies to mitigate water affordability challenges.

The results indicate moderate increases to utility bills over time, and water affordability challenges tend to be concentrated in a handful of Census tracts with specific demographic characteristics. This data can help the City thoughtfully design and implement efforts to help address affordability challenges. The study demonstrates that bill assistance programs and water conservation strategies can help with affordability by lowering bills by 10-33% and 7-15%, respectively.

Water Affordability Assessment

For more detail, see Sections 1 & 2 of the Report.

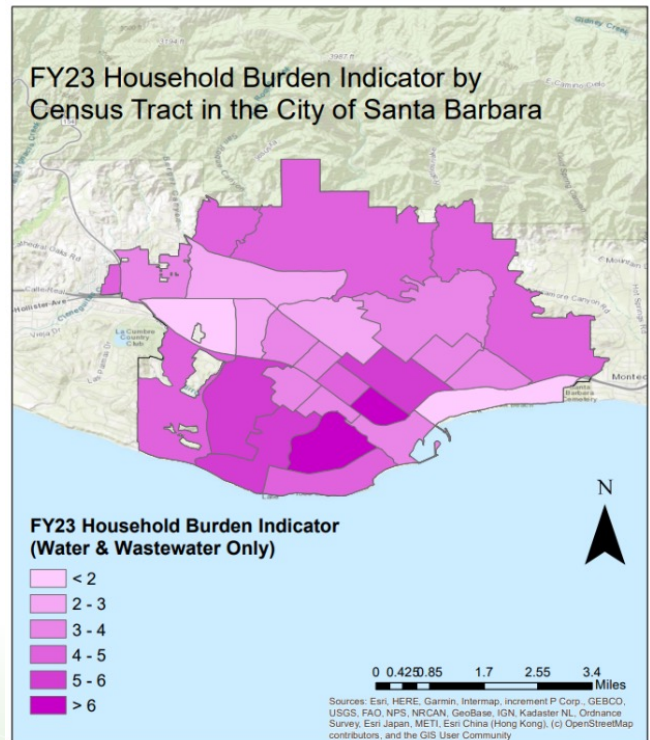
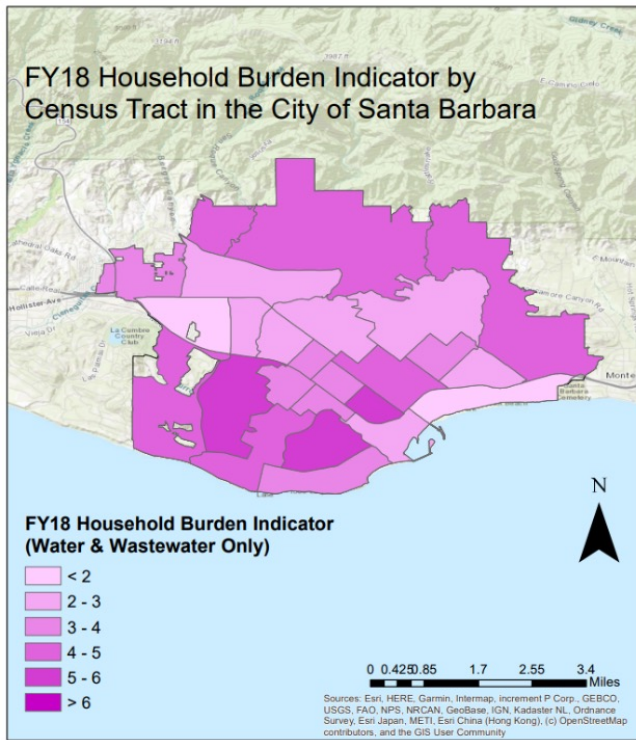
What is the Household Burden Indicator (HBI)?

Annual water and wastewater bills as a percentile of household income for a given Census tract.

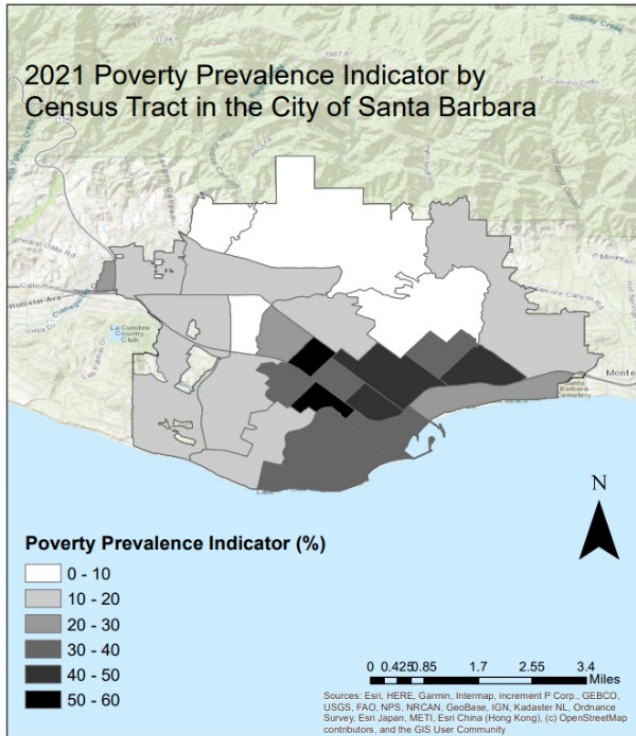
A metric to show how bills impact the lowest-income households. This lens focuses on the most vulnerable households, rather than a median or average household.

Key Takeaways:

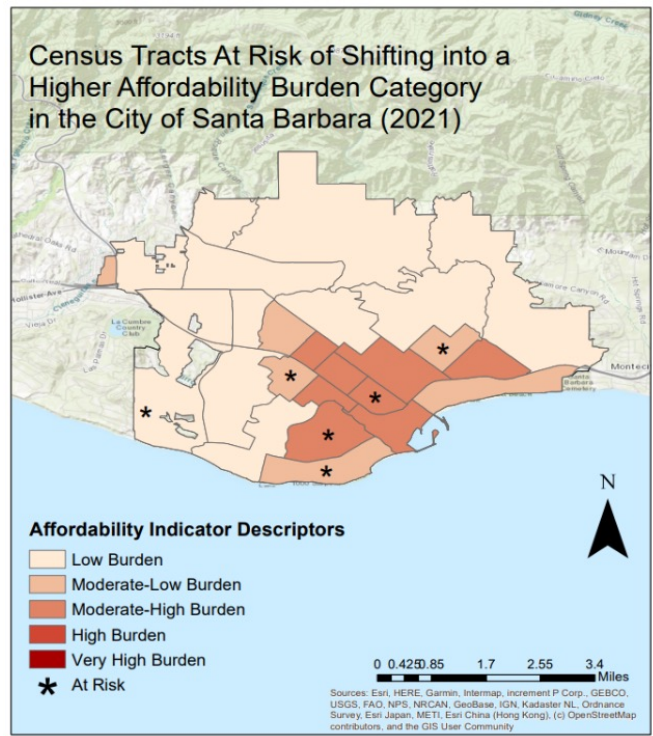
- Historically, the City's modest and incremental rate increases year-to-year have helped keep increases to water and wastewater bills small over time, which is helpful for low- and fixed-income residents.
- HBI increases have been moderate and incremental from FY18 to FY23 (see maps below).
- Households earning at the 20th percentile of income are spending an average of about 4% of their annual income on water and wastewater bills. Some areas of the community spend about 7%, **reflecting variation in water use and incomes across the community.**



Poverty Prevalence Indicator & Affordability Descriptors



This map shows the Poverty Prevalence Indicator (PPI), the percentage of households at or below 200% of the Federal Poverty Level and reveals that some areas of the community have over half of households experiencing poverty. **This highlights the role that household income plays in the variation in the HBIs across tracts.**



This map shows affordability descriptors based on a Census tract’s HBI and PPI level. Most tracts fall into the “Low Burden” level, and the map reveals where the higher burden is concentrated in the community. **The asterisks indicate tracts that are on the edge of moving into a higher burden category. In particular, the City could focus outreach and education to the tracts at risk of moving into the High Burden level.**

Community Outreach and Engagement

For more detail, see Sections 1 & 2 of the Report.

Setting the stage:

- ✔ The Water Affordability Community Outreach and Engagement Plan utilized community values developed from the Water Vision Santa Barbara Initiative conducted as part of the City's Enhanced Urban Water Management Plan development in 2020.

Engagement Opportunities:

- ✔ Water Affordability Community Workshop
- ✔ Online Water Affordability Survey
- ✔ Individual Phone Conversations
- ✔ Feedback on Draft Report
- ✔ Sharing Findings and Recommendations to Community

Themes we heard throughout the community engagement efforts:

1. Water affordability is one piece of the larger cost of living challenge faced by residents.	2. Water supply challenges stemming from drought, population growth, and future climate conditions are a concern.	3. Improving residential access to and understanding of water bills, water use, and City resources is a solution to improve water affordability.	4. Water bills seem high despite efforts to conserve, and don't feel reflective of individual household use.
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As of the completion of this report, the City is actively updating its water and wastewater cost of service studies. While still in progress, early analysis indicates significantly greater revenue requirements for the next four fiscal years than previously estimated. It has not yet been determined how the revenue requirements will translate into rates changes for specific customer classes and rate components. Adopting and enhancing strategies to help households struggling to regularly pay water and wastewater bills will be even more important moving forward.

Strategies to Mitigate Water Affordability Challenges

For more detail, see Sections 4-7 of the Report. These recommendations are in the order they appear in the document, and do not reflect any prioritization. Dive into the full report for more information about and supporting analysis for each recommendation.

RECOMMENDATIONS for the City's Rate Structure:

Recommendation 1: Explore maintaining relatively low fixed charges for residential customers.

Recommendation 2: Explore consumption-based fixed charges.

Recommendation 3: Explore alternative options to make the multi-family rates more closely mirror single-family rates.

Recommendation 4: Evaluate the cost of service for residential customers that drive peak demands; consider a fourth tier if needed based on review of consumption data.

Recommendation B-1: Evaluate and adjust the volumetric pricing based on the cost to serve the gravity-fed portion of Santa Barbara's system compared to the various pressure zones, which require more extensive pumping.

Recommendation B-2: Evaluate how dwelling unit density affects the cost of service and consider whether rate design changes could be made to account for density-related differences.

RECOMMENDATIONS for the City's Water Conservation Programs:

Recommendation 5: Assess historical participation in water conservation programs by census tract.

Recommendation 6: Explore strategies to expand and improve accessibility of current water conservation programs.

Recommendation 7: Implement an indoor water efficiency focused program and explore alternative program models to maximize access across all types of customers.

Recommendation 8: Leverage the average water use data presented in the Water Use & Affordability Analysis section to help identify low-income or otherwise vulnerable households that may be using water inefficiently.

Recommendation 9: Ensure communications and marketing strategies for the Advanced Metering Infrastructure and WaterSmart portal are specifically designed to reach account holders in low-income and multi-family settings.

Recommendation 10: Leverage the Advanced Metering Infrastructure hourly data and WaterSmart portal communication platform to help target water conservation tips, programs, and customer assistance programs to those who are using water inefficiently and if done proactively, can help avoid high bills.

RECOMMENDATIONS for the City's Customer Assistance Programs:

Recommendation 11: Explore opportunities to improve the clarity and accessibility of water bills, including using easy-to-understand units and language.

Recommendation 12: Explore a regular communications campaign designed to inform renters about how water and wastewater bills are calculated, the ways they might be billed for services, what programs and resources are available to them, and where to turn for support.

Recommendation 13: Explore customer assistance programs to improve and/or expand support to low-income households. This effort should also assess the process for customer participation and aim to make it as easy and accessible as possible.

Recommendation 14: Explore partnerships with existing efforts addressing a broader range of affordability challenges.

Recommendation 15: Exploring use of text-messaging and emails to reach customers at risk of their water being shut-off.

A full list of the recommendations and a summary of the City's smart practices can be found in Section 7 of the full Report.

1. Introduction

The Alliance for Water Efficiency (AWE) envisions a future with reliable, affordable, and equitable water resources, healthy ecosystems, and vibrant, economically strong communities.



When water services are unaffordable, it undermines this future. Affordability is a growing concern as water and wastewater rates rise to account for the increasing costs due to aging infrastructure, extreme weather events, climate change, regulations, and inflation, to name a few. Investing in water conservation and efficiency is one strategy that can help keep water and wastewater bills affordable.

As part of AWE's mission to promote the efficient and sustainable use of water, AWE is conducting research to better understand how water conservation and efficiency can help lower water bills for low-income customers. Most recently, AWE released in May 2023: *An Assessment of Water Affordability and Conservation Potential in Houston, Texas*. This City of Houston case study demonstrates that water and wastewater services are a financial burden for many customers and that there is a large potential for water conservation to save water and provide meaningful bill reductions for customers.

Further, investing in strategies that achieve sustained water use reductions can help a utility avoid, delay, or downsize expensive capital investments in new supplies, infrastructure, and facilities. Water conservation and efficiency strategies are also often more cost-effective than supply-side strategies. AWE conducted a series of studies showing that utilities avoided significant expenses and kept customer water bills lower by investing in water efficiency and conservation.

AWE is pleased to continue its ongoing research related to affordability in partnership with the City of Santa Barbara (City) with the release of *An Assessment of Water Affordability and Conservation Potential in the City of Santa Barbara, California*. This assessment is unique from past AWE affordability assessments in that it includes analysis of multi-family residents and includes a community engagement effort. AWE continues to explore the variety of ways that households can lower water consumption and reduce costs, such as changing water using habits, installing more efficient fixtures and appliances, and reducing outdoor water use, among other water saving strategies. Water affordability is far from a one dimensional or single-faceted issue. Opportunities and optimal strategies will vary from community to community.

The City and AWE recognizes that residents are the experts of their own lived experiences in using and accessing water resources. The City embodies this lens by prioritizing a community-centric approach in its programming and its commitment to building an equitable public engagement process. Through the development of this assessment, AWE had the opportunity to engage directly with residents and local community leaders to understand the community's perspective on what water affordability challenges they believe are most prevalent in the City of Santa Barbara as well as what kind of solutions are in line with community values and needs. The feedback and information collected served to shape and inform AWE's recommendations in this assessment.

1.1 About the City of Santa Barbara

THE CITY OF SANTA BARBARA is located on the central coast of California, between the Santa Ynez Mountains and the Pacific Ocean. Spanning 21 square miles, it is home to approximately 88,000 residents as of 2022. It has a temperate Mediterranean style climate, with cool, wet winters and mild, dry summers. Temperatures only rarely fall below freezing in winter. Water demands tend to peak late summer and early fall. The area receives an average rainfall of about 14.7 inches per year, largely during the winter.



Population in the water service area in 2020 was about 96,000, according to the City's most recent Enhanced Urban Water Management Plan.¹ The City provides water and wastewater services to residents and businesses of the City as well as residents of Mission Canyon, which is an unincorporated area within the County of Santa Barbara. The City estimates that the population in the service area will grow to around 110,000 people by the year 2050. The City is also a popular vacation and tourist destination, often dubbed as "The American Riviera." Further, many people who commute to work in the City and use water while working, live in surrounding communities outside of the City's water service area and are not counted within the service area population. Total water use is about two-thirds residential water use and about one-third commercial, institutional, industrial, municipal, and dedicated landscape irrigation uses.

Water and wastewater bills are not the only factor that could contribute to community unaffordability; the City of Santa Barbara is generally an expensive place to live. According to the Economic Research Institute, the cost of living in the City is 65 percent higher than the national average and ranks 49th out of the 448 California cities in their database.² Based on the City's recently updated Housing Element, which is the City's plan centered on housing needs in the community, the median rent for a two-bedroom apartment was \$3,475 as of 2022, up 28 percent from April 2021.³ Census data reveals that average rent per individual is \$2,300 per month and that an estimated 44 percent of renter-occupied households are paying 35 percent or more of their annual income on rent.⁴ Households further may pay for energy bills, groceries, health care, childcare, transportation and other essential expenses. As all costs of living continue to increase, it is critical that all strategies to help households improve their economic stability be explored.

1.2 Related Efforts in the City of Santa Barbara

The City has a strong history of environmental stewardship and sustainability. The City is focused on many issues that affect quality of life for its residents and the overall resiliency of their community, including issues that directly or indirectly affect the affordability of water and service. Here are some recent related efforts:

Water Conservation Strategic Plan

In 2020, the City launched its Water Conservation Strategic Plan to project long range demands, identify attainable conservation goals, develop strategies, and to identify and prioritize conservation measures. The plan seeks to save an estimated 2,615 acre-feet per year of water in 2050 by combining new initiatives with existing programs in the City.⁷

2020 Enhanced Urban Water Management Plan

The City of Santa Barbara's water resources are vulnerable to significant supply shifts due to hydrologic, environmental, and political conditions. The Enhanced Urban Water Management Plan identifies challenges to future supply reliability, considers the actions necessary to mitigate the impacts of

said challenges, and offers preferred strategies to "optimize reliable water supplies and support water affordability." The supply planning effort involved a robust stakeholder and public engagement process, known as "Water Vision Santa Barbara," which helps inform the policy recommendations for the City's current and future water supply decisions.⁵ It was this effort that identified affordable water was a key priority for the community, as shown below in The 5 Pillars visual from the plan.

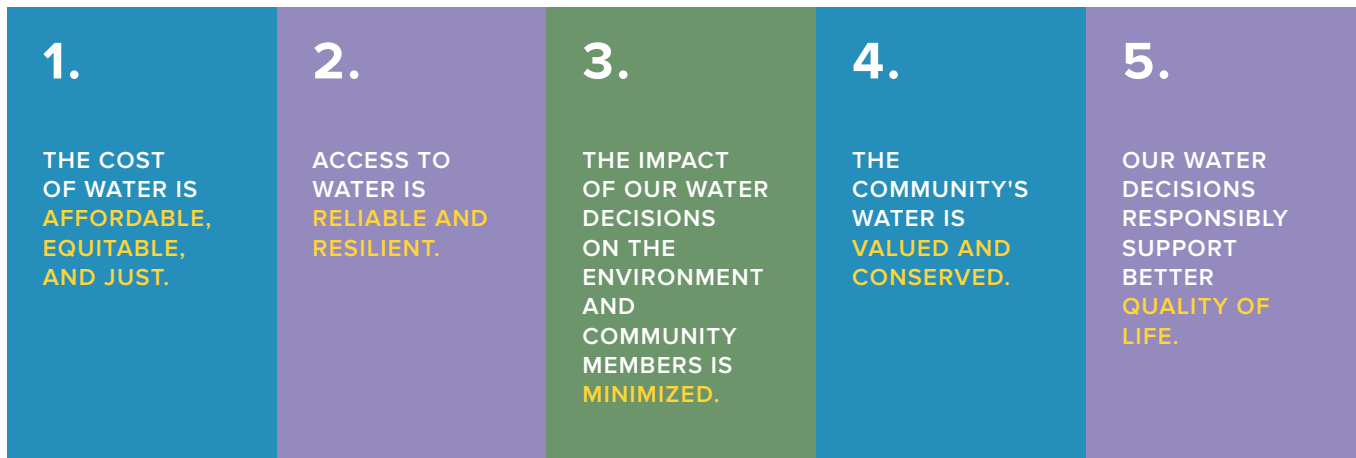
Climate Action Plan

In 2024, the City plans to update its 2012 Climate Action Plan to set new emission reduction targets for the City. The update is under the City's "Together to Zero" Campaign, spearheading the City's goal to reach carbon neutrality by 2035 and increase community resilience to climate change.⁶

The 5 Pillars

Informing Water Vision Santa Barbara

The City aims to give equal consideration to all 5 Pillars in informing Santa Barbara's future water supply and water management plan.



2024 Water & Wastewater Rate Studies

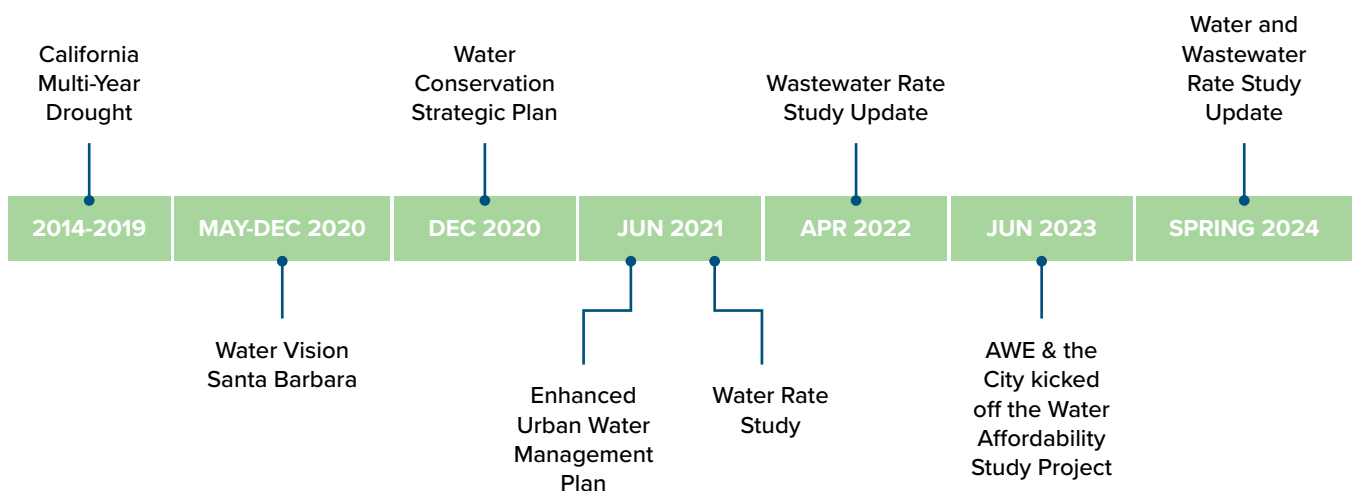
In 2024, the City will update its Water and Wastewater Rate Studies, last conducted in 2021 and 2022, respectively. The rate studies will review the City's operating and capital costs to propose equitable and proportional water and wastewater rates that fund the annual cost of the City's water and wastewater systems and comply with Proposition 218. In this Report, AWE will provide recommendations relating to water affordability to consider for the current and future iterations of rate studies. However, this assessment was conducted independently of the cost-of-service analysis and related rate studies, and as a result any recommendations in this assessment that the City chooses to consider further should be fully evaluated with the City's staff, rate consultant, and legal counsel to ensure they are compatible with the City's cost of service, rate structure, and Proposition 218. While the recommendations in this assessment have been developed by AWE based on what has worked to address affordability challenges at other water and wastewater utilities, including in California, this assessment does not, and is not intended to, address these issues in a definitive fashion based on the specifics of the City's cost of service and rate structure.

One Water Santa Barbara Initiative

The City is implementing a One Water initiative to create an integrated approach to water management, resulting in a framework where all water resources are considered in coordination with other City planning efforts and goals. This initiative includes principles to increase coordination and awareness of water resources within City departments and stakeholders; implement fiscally responsible and equitable projects that provide multiple benefits; increase climate resilience; and enhance community awareness and advocacy for sustainable water use. This assessment contributes to this effort.

Figure A

Timeline of Recent Related Efforts in the City of Santa Barbara



1.3 Introduction to the Water Affordability Assessment Approach

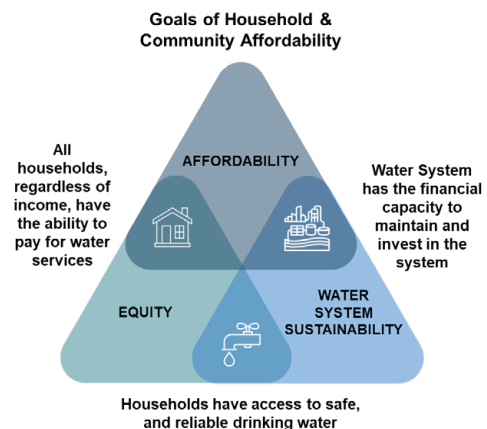
There are different scales of water affordability.⁸ This assessment is focused on understanding the household-level affordability of water and wastewater services for residential households, including both single-family and multi-family residences in the City of Santa Barbara’s water and wastewater service area.

The other two common lenses of water affordability are the community and water system levels. The community level considers a community as a whole and their collective ability to pay for water services to financially support a resilient water system. While a community collectively may appear to adequately meet this definition, it ignores the portions of the population that may struggle with household-level affordability. The water system lens looks at the system’s financial capacity to meet current and future operations and infrastructure needs to deliver safe drinking water. The water system lens is the historical lens that has been used at the federal level to explore if a water system has the ability to bear the cost of regulations or other mandates associated with things like compliance with the Clean Water Act.

Affordability of drinking water services is important to assess because issues surrounding equity and water system sustainability overlap with numerous aspects of addressing affordability challenges and ensuring that all have safe drinking water. This is ultimately a balancing act.

This assessment includes:

- _____ A review of affordability metrics in California.
- _____ An assessment of water affordability at the census tract level using residential customer water consumption and billing data.
- _____ A review of the City’s affordability efforts.
- _____ A review of example affordability and assistance programs in California.
- _____ An estimate of how water conservation strategies can mitigate water affordability.
- _____ A summary of input gathered from community engagement.
- _____ Recommendations throughout for the City to consider as potential ways to improve water and wastewater service affordability for residents.



Water Affordability in California

California has demonstrated commitment to the human right to water through Assembly Bill 685, in which the state statutorily recognizes that “every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.” Additional legislation has been passed to support the affordability aspect of this right to water. Access to clean and safe drinking water is often dependent on factors such as income, race and ethnicity, religion, age, housing type, and more. Socially vulnerable populations are also more likely to experience degrading water quality and water scarcity, all of which are likely to worsen with a changing climate, population growth, and growing water demands.⁹

There are two statewide efforts in California to analyze the affordability of water and wastewater service, by the California State Water Resources Control Board and by the California Public Utilities Commission. These analyses looked at many water and wastewater utilities across the state, and based on citywide averages, they found that there are relatively little or no affordability concerns for water and wastewater service for the City of Santa Barbara, when viewed *as a whole*. These statewide analyses are discussed in more detail in Appendix C.

A community is more than its average residents’ experience, and this assessment performed by AWE provides a deeper and more nuanced look at affordability in two ways when compared to the statewide analyses:

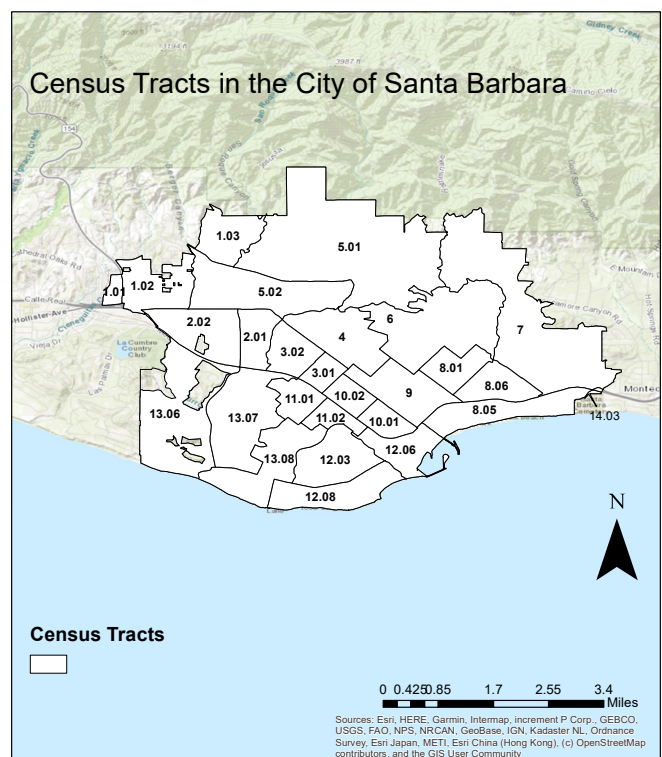
First, this assessment uses the latest affordability metrics, which focus on affordability for the lowest quintile of customers based on household income rather than the median household income, which is used in one of the statewide analyses. Analysis based on median household incomes can mask the impact of water and wastewater bills on more vulnerable and low-income households.

Second, this assessment evaluates affordability on the Census tract level rather than the City as a whole. For these reasons, this assessment will help the City consider the affordability impacts to low-income or otherwise vulnerable customers in specific neighborhoods and Census tracts, and assist the City in improving its rate assistance, processes, and conservation programs where appropriate.

This analysis employs a variety of publicly available data at the Census tract level. Census tracts are small and relatively unchanging statistical subdivisions of a county. Tracts have an average of 4,000 residents. Figure 1 provides a base map of the 26 Census tracts used in this assessment.

Figure 1

Map of Census Tracts used in the Assessment



2. Water Use & Affordability Analysis

In order to make progress, it is critical to first conduct an existing conditions assessment. This includes understanding current water use patterns and water affordability across the community, as well as other socio-demographic data. This is the first step to then explore what strategies might make the most sense to improve water affordability in the community.

2.1 Data and Methods

The City provided monthly water consumption and water, wastewater, and trash billing data for all residential accounts for fiscal years 2018 through 2023. The City's fiscal year is July 1 through June 30 and is named based on the year in which it ends. For example, fiscal year 2018, which spans July 1, 2017 through June 30, 2018, will be referred to as "FY18". Some very limited data cleaning steps were taken before utilizing the data for the study, including eliminating customers where Census data was not available and eliminating two Census tracts where there were less than 20 customers.

The City provides a single bill for up to three services: water, wastewater, and solid waste. While solid waste services are not related to water affordability, an analysis on total utility bill costs was included, and results can be found in Appendix E.

The City has three types of residential metering arrangements:

SFR, Single-family residential: 1 meter per dwelling unit.

MFR-IM, Multi-family residential individually metered: 1 meter per dwelling unit.

MFR-MM, Multi-family residential master meter: 1 meter for multiple dwelling units.

For the purposes of the water use and affordability analysis, water use and water and wastewater bills are broken down by dwelling unit. For the cases where a single master meter serves multiple dwelling units (MFR-MM), the totals are divided by the number of dwelling units. In these cases, it is impossible to know exactly how much water each multi-family dwelling unit is using based on this dataset, so the average is the best available estimation.

Water use is measured in units of one hundred cubic feet (HCF), which is equivalent to 748 gallons. The rate structure is discussed in more detail in Section 4.1 of this assessment and complete information about the water and wastewater service rates used in this study can be found in Appendix A.

In the City, some properties' outdoor water use is metered separately with a dedicated irrigation meter. In the residential sector, there are both single-family and multi-family properties that have dedicated irrigation meters, but not all. The majority of accounts do not have separate dedicated irrigation meters, and instead the irrigation is metered through a meter that also serves indoor uses, also known as a mixed-use meter. To the extent feasible, irrigation water use and bills were grouped together with their associated residential use so that the analysis reflects all water use and bills, rather than total water use for some customers and only indoor water use for other customers.

Summary of Water Use and Billing Data

Table 1 below summarizes the data used in the water use and water affordability analysis averaged across the six fiscal years broken down by the three types of residential metering outlined above. While the total number of customer counts fluctuate throughout and across years, the approximate customer and dwelling unit counts are:

Single-Family Residential (SFR):
16,000 accounts and dwelling units

Multi-Family Residential, Individually Metered (MFR-IM):
3,100 accounts and dwelling units

Multi-Family Residential, Master Metered (MFR-MM):
3,300 accounts and 17,000 dwelling units

Table 1

Summary of Water Use and Billing Data

Customer Category	Fiscal Year	Average Annual Water Use per Dwelling Unit (HCF)	Average Annual Water and Wastewater Bill per Dwelling Unit	Average Monthly Water Use per Dwelling Unit (HCF)	Average Monthly Water and Wastewater Bill per Dwelling Unit
Single-Family Residential	FY18	106.7	\$2,056	8.9	\$171
	FY19	97.2	\$1,958	8.1	\$163
	FY20	104.3	\$2,035	8.7	\$170
	FY21	117.6	\$2,334	9.8	\$195
	FY22	110.5	\$2,333	9.2	\$194
	FY23	95.3	\$2,187	8	\$182
Multi-Family Residential, Individually Metered	FY18	51.1	\$1,084	4.3	\$90
	FY19	51.9	\$1,145	4.3	\$95
	FY20	51.5	\$1,166	4.3	\$97
	FY21	56.5	\$1,246	4.7	\$104
	FY22	54.5	\$1,274	4.5	\$106
	FY23	50.5	\$1,282	4.2	\$107
Multi-Family Residential, Master Metered	FY18	50.3	\$834	4.2	\$70
	FY19	49.8	\$854	4.1	\$71
	FY20	50.7	\$881	4.2	\$73
	FY21	55.2	\$972	4.6	\$81
	FY22	52.4	\$960	4.4	\$80
	FY23	49.7	\$984	4.1	\$82

*Bills have been rounded to the nearest dollar. • 1 HCF = 748 gallons

The following Figures 2 and 3 illustrate the average annual water and wastewater bill per dwelling unit by Census tract for FY18, the earliest year of data provided, and FY23, the last year of data provided. The darker the color, the higher the water use and higher the average combined water and wastewater bills. As the next section of income data will reveal, it is unsurprising that the higher bills tend to be in the higher-income areas of the City, with greater incidence of owner-occupied, larger, single-family homes. There are modest differences between the two maps, showing that the City has implemented modest rate increases over this time period.

Figure 2

Map of FY18 Average Annual Water and Wastewater Bills by Census Tract

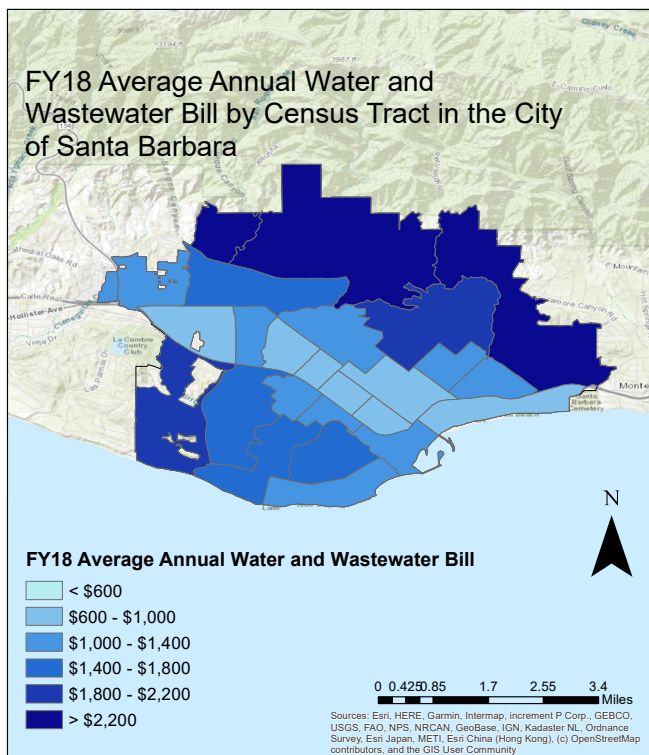
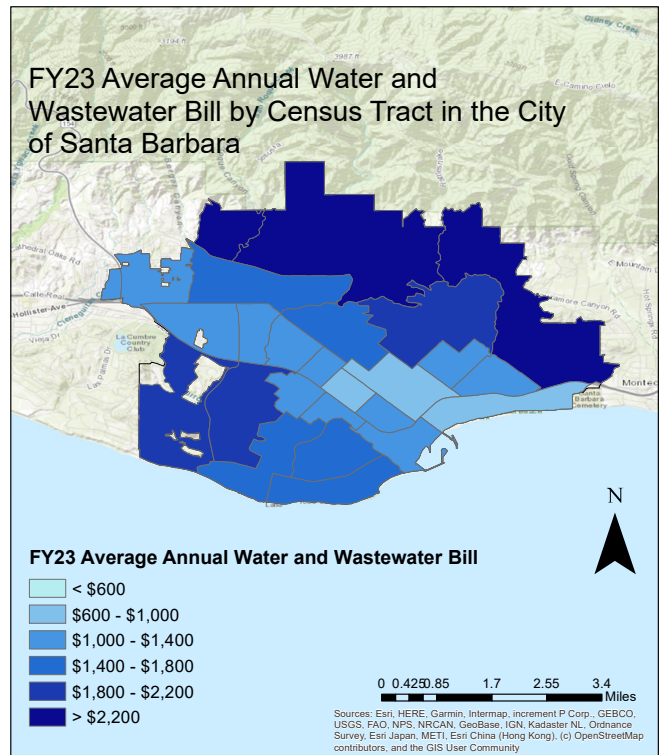


Figure 3

Map of FY23 Average Annual Water and Wastewater Bills by Census Tract



This project included a variety of efforts to engage the community, which will be discussed later in the report. While the increases have been incremental, the feedback from the community is that many are still very aware that rates continue to rise each year, and for some feel quite large compared to 8-10 years ago. Several respondents noted that they feel the cost of water is rising faster than wages, inflation or other utilities.

Income Data

The other critical data for this assessment is income data. Historically, affordability metrics have focused on an average or median household income, which masks the experiences of lower income households who are more likely to struggle with cost-of-living expenses. Figure 4 displays the upper boundary of the lowest quintile of income (LQI) by Census Tract, also referred to as the 20th percentile of income. Income data for each Census tract is from the 2021 American Community Survey, which is a survey that provides information about populations and communities on a more frequent basis than the decennial Census.¹⁰ In this map, the darker the color, the higher the LQI. This map shows how dramatically the 20th percentile of income varies across the community, with some tracts having 20 percent of its households earning between \$15,000 and \$30,000 or less. In other tracts, the upper boundary of the LQI is over \$60,000. The median LQI across the 26 Census tracts is approximately \$43,000.

Figure 5 further charts the LQI, median household income, and mean household incomes by Census tract.

Figure 4

Lowest Quintile of Income (LQI) by Census Tract (2021)

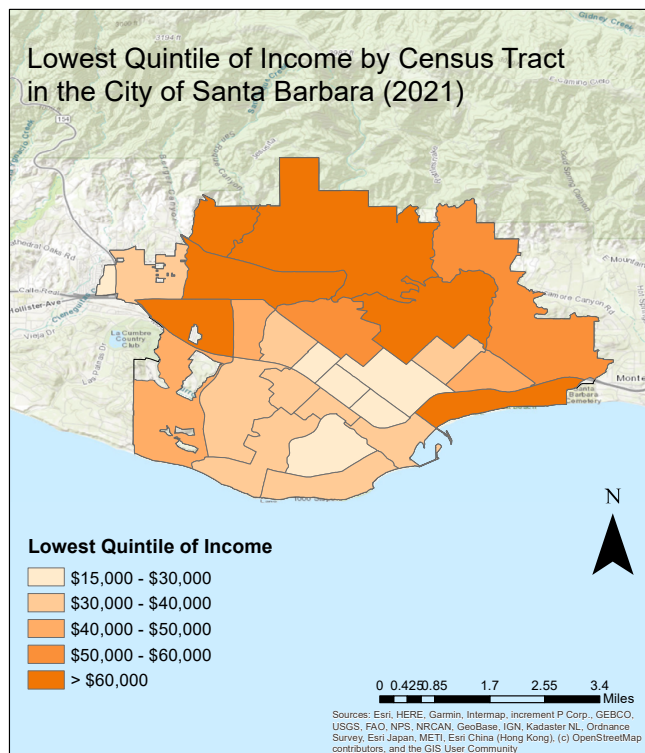
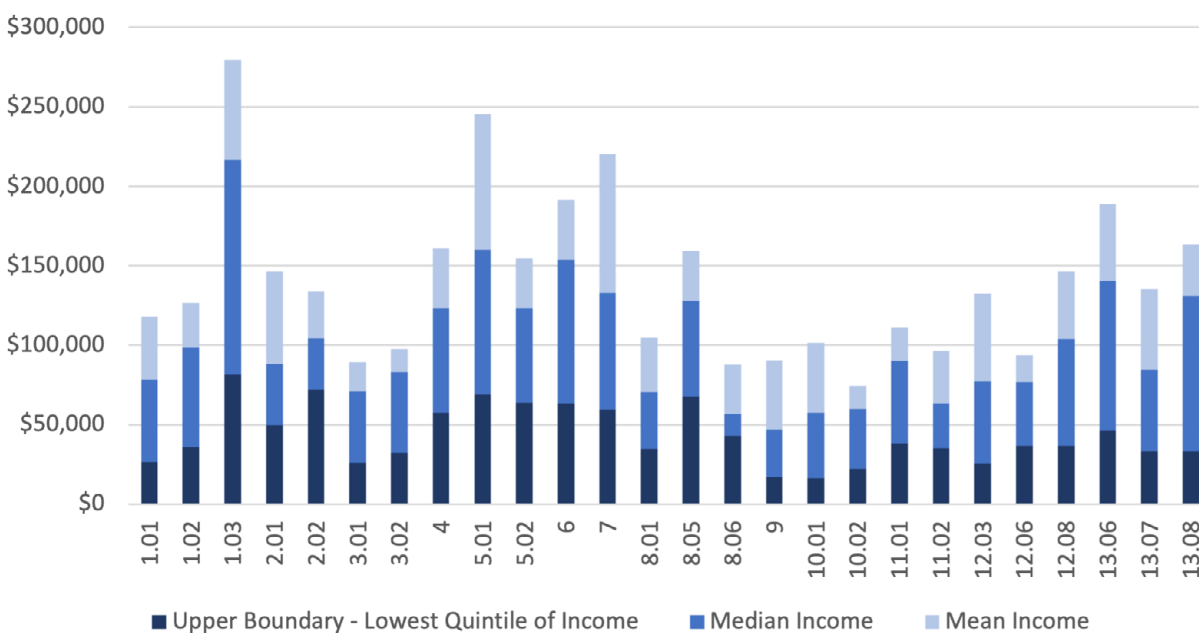


Figure 5

2021 Income Levels by Census Tract: LQI, Median and Mean



2.2 Water Use and Low-Income Households

In lower income Census tracts, average water use per dwelling unit tends to be lower. This is likely a function of a higher proportion of multi-family dwelling units and generally smaller homes with less irrigated outdoor spaces. Table 2 below shows the results of testing the difference in annual water use between households in Census tracts where the lowest quintile income level is greater than or less than \$43,000, which is the median of all the lowest quintile income levels across the Census tracts. The results show that dwelling units in the lower income Census tracts use an average of one-third less water than higher income tracts. All differences are statistically significant, $p=0.001$.

Table 2

Comparing Average Annual Water Use: Low vs. High Income Census Tracts

Comparing “High” vs. “Low” income Census Tracts	Average annual water use per dwelling unit (rounded to nearest HCF)					
	FY18	FY19	FY20	FY21	FY22	FY23
Census tracts where the Lowest Quintile of Income is greater than \$43,000 per year	112	101	108	124	116	98
Census tracts where the Lowest Quintile of Income is equal to or less than \$43,000 per year	75	72	76	82	78	71
Difference	37	29	32	42	38	27
Percent Lower	33%	29%	30%	34%	33%	28%

Leveraging the individually metered data from both single-family and multi-family residences, Table 3 below shows the results of testing the difference in average annual water use per individually-metered dwelling unit between the single-family and multi-family setting. The results show that multifamily household water use is typically 50 percent lower, on average, than single-family. All differences are statistically significant, $p=0.001$.

Table 3

Comparing Average Annual Water Use: Single-family vs. Multi-family Individually Metered Accounts

Comparing single-family vs. multi-family individually metered dwelling units.	Average annual water use per dwelling unit (rounded to nearest HCF)					
	FY18	FY19	FY20	FY21	FY22	FY23
Single-family	106	97	104	118	110	95
Multi-family	53	52	53	59	55	52
Difference	53	45	51	59	55	43
Percent Lower	50%	46%	49%	50%	50%	45%



The City could leverage this analysis to help identify households that appear to be using more water than these averages and offer targeted tips, assistance, and conservation programs.

2.3 Water Affordability Assessment

Now that there is a foundational understanding of water use, water and wastewater bills, and income across the City, these data can be brought together to assess water affordability. Water affordability for low-income households is assessed using a modified version of the indicators developed by Raucher, et al. in the 2019 report, *Developing a New Framework for Household Affordability and Financial Capability Assessment in the Water Sector*.

Three metrics are calculated for the City's 26 Census tracts in this assessment:

Household Burden Indicator (HBI): Quantitative estimate of the percentage of household income spent on water and wastewater bills for households at the 20th percentile of income in a Census tract.

Poverty Prevalence Indicator (PPI): Quantitative estimate of the percentage of households at or below 200% of the Federal Poverty Level in a Census tract.

Affordability Descriptor: Qualitative Category based on a combination of the HBI and PPI to contextualize water affordability for low-income households.

Household Burden Indicator

Historically, affordability has been measured based on a median level of household income, which masks the impacts utility bills have on the most vulnerable households in a community. The updated Household Burden Indicator (HBI) described by Raucher, et al., 2019 is a metric that provides insight into water affordability for lower-income households. This helps water providers understand how rates and bills affect the most vulnerable households, rather than a median or average household. Raucher et al. defines HBI as the basic water service costs as a percent of the 20th percentile household income (i.e., the lowest 20% of households based on household income). Basic water service is often approximated as a certain number of gallons per person per day (generally 50 gallons per person per day) as a proxy for indoor or essential water use.

For this analysis the HBI formula was modified to use an average annual combined water and wastewater bill derived from actual household-level monthly billing data. This is an improvement on the original methodology because it uses data specific to each Census tract rather than a general approximation for the entire community.

The upper boundary of the lowest quintile income (LQI) was obtained for each census tract from the Household Income Quintile Upper Limits table from United States Census Bureau 2021 American Community Survey 5-Year Estimates, as shown previously in Figure 4. The HBI formula used specifically for this assessment is defined below. Each census tract had its own unique average water and wastewater bill calculated from the City's water consumption data, and rates for each fiscal year, and a unique value for the upper boundary of the lowest income quintile.

1. Monthly Water Bill = Water Fixed Charge + Volumetric Water Charge

Fixed Charge: The water service charge for an account's specific meter size.

Volumetric Charge: Calculated based on the account's monthly water use (in HCF = 748 gallons) and the rate structure in effect.

2. Monthly Wastewater Bill = Wastewater Fixed Charge + Volumetric Wastewater Charge

Fixed Charge: The wastewater service charge for an account based on dwelling units.

Volumetric Charge: Calculated based on the account's monthly water use (in HCF) and the rate structure in effect for the given year.

3. Monthly Water and Wastewater Bill = Monthly Water Bill + Monthly Wastewater Bill

4. Annual Combined Water and Wastewater Bill = Sum of all Monthly Water Bills + Monthly Wastewater Bills

Next, the average annual water and wastewater bill was calculated for each census tract. These values were used to calculate the Household Burden Indicator.

$$HBI = \frac{\text{Average Annual Total Household Water and Wastewater Bill}}{\text{Upper Boundary of the Lowest Quintile Income}}$$

Figure 6 and Table 4 present the minimum, median and maximum HBI across all Census tracts, and reveal that the Household Burden Indicator (HBI) increases over time with a slight downturn in FY23 reflecting an abnormally wet spring which notably reduced outdoor water demands compared to typical years. Rate increases over time have been moderate and incremental, thus there are no major jumps in HBI from year to year.

Figure 6

Household Burden Indicator Results by Fiscal Year

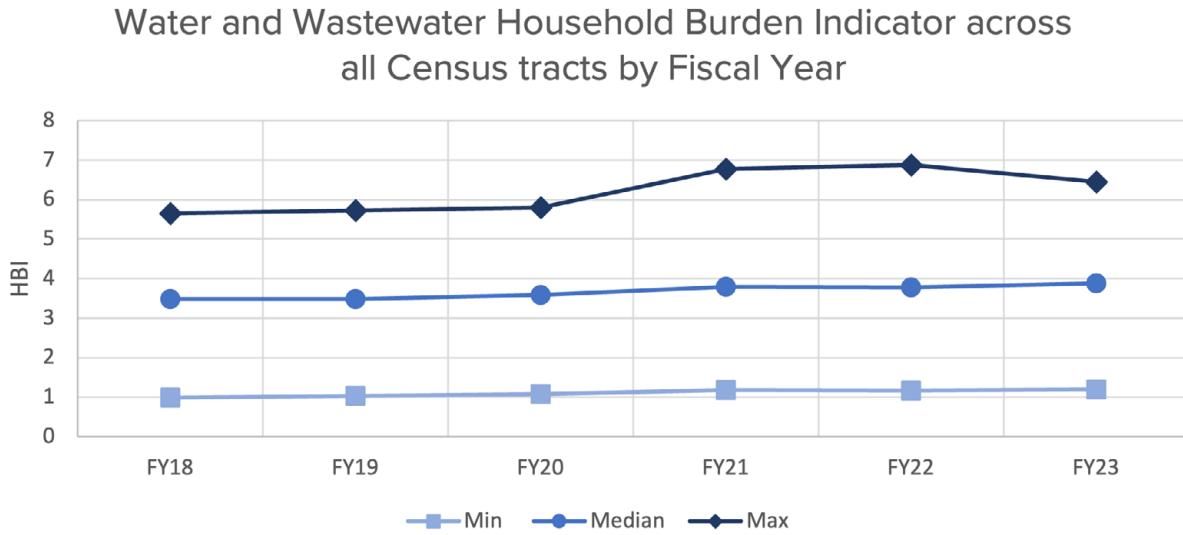


Table 4

Minimum, Median, and Maximum HBI across Study Census tracts by Fiscal Year

	FY18	FY19	FY20	FY21	FY22	FY23
Max	5.7	5.7	5.8	6.8	6.9	6.5
Median	3.5	3.5	3.6	3.8	3.8	3.9
Min	1.0	1.0	1.1	1.2	1.2	1.2

Figures 7 and 8 show the HBI results in map format for the earliest year of data, FY18 and the most recent year of data, FY23. Darker colors indicate a higher HBI. The differences between the two maps, which span six years, are modest, reflecting again that the City has slowly and incrementally adopted rate increases.

The HBI varies across the Census tracts, reflecting both variation in the lowest quintile of income and variation in household water and wastewater bills. There is not a direct correlation between annual bills and the HBI, nor the LQI and the HBI.

Some tracts have an HBI of about 1 which means that even households with incomes at the lowest quintile (the 20th percentile) of income in that Census tract spend only 1 percent or less of their annual income on water and wastewater bills. This is largely a function of very high-income Census tracts where even the 20th percentile level of income is still relatively high. Other parts of the community have higher HBI levels, near 7, which indicates households earning at the 20th percentile of income in the Census tract are spending nearly 7 percent of their annual incomes on water and wastewater bills.

Figure 7

Map of FY18 HBI by Census Tract

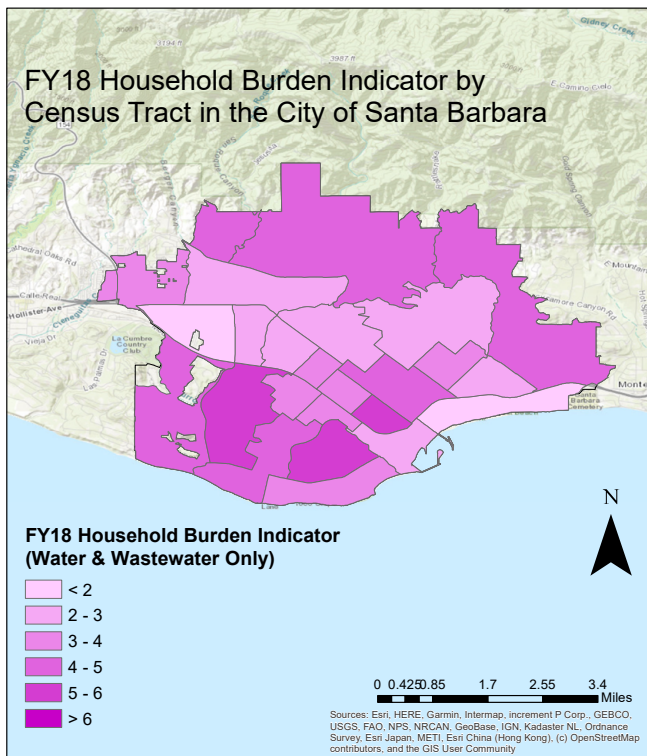
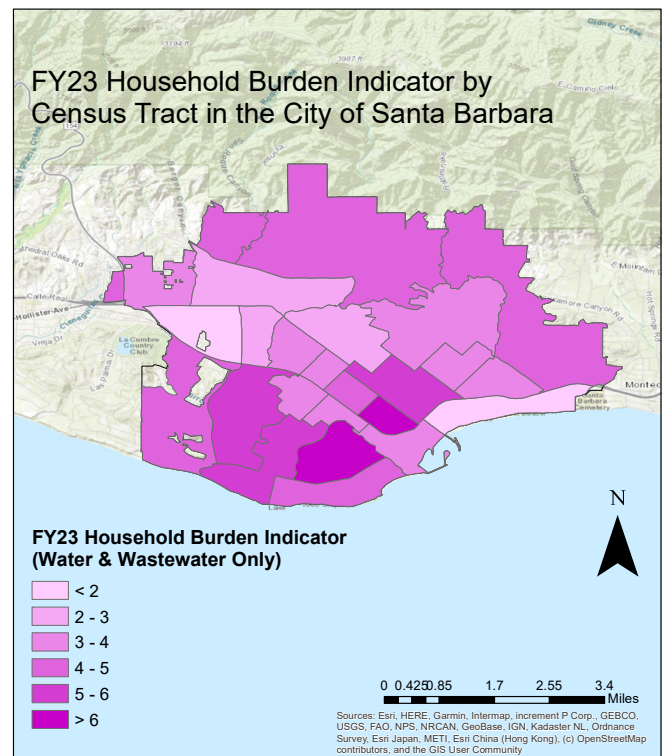


Figure 8

Map of FY23 HBI by Census Tract



Poverty Prevalence Indicator

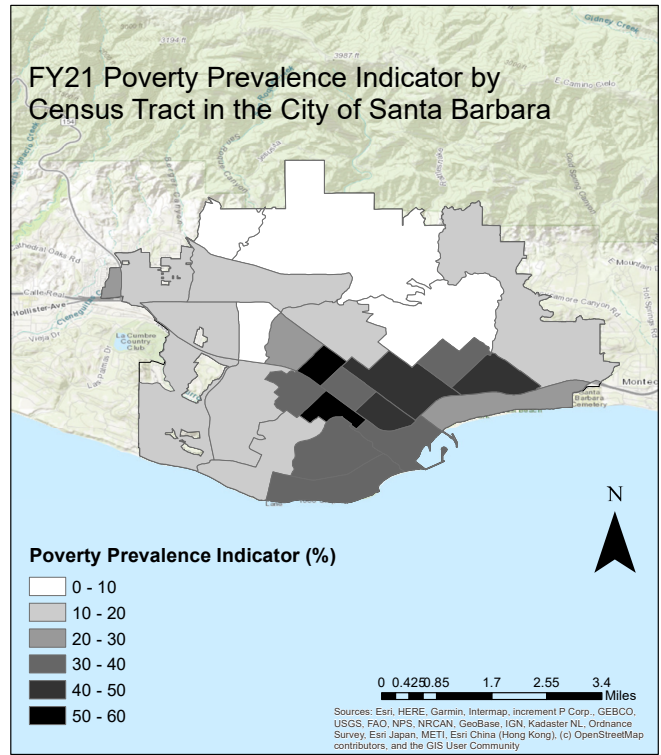
The second metric proposed by the Raucher report is the Poverty Prevalence Indicator (PPI), which is a measure of poverty within a given geography. This indicator is a measure of the percentage of households below 200% of the Federal Poverty Level. The PPI as described by Raucher, et al., 2019 is calculated with publicly available data from the U.S. Census Bureau using the formula below:

$$PPI = \frac{\text{Population Below 200\% of Federal Poverty Level}}{\text{Population for Whom Poverty Status is Determined}}$$

Figure 9 presents the poverty prevalence indicator (PPI), which is a snapshot in time and is only based on data from the 2021 American Community Survey 2021 data. This map reveals that some areas of the community have very few households experiencing poverty, and yet others have over half of households experiencing poverty. This highlights the role that household income plays in the variation in the HBIs across Census tracts.

Figure 9

Map of Poverty Prevalence Indicator (2021)



200% of Federal Poverty Level

Household Size	200% of Federal Poverty Level, Annual Income Threshold, 2021
1	\$25,760
2	\$34,840
3	\$43,920
4	\$53,000
5	\$62,080
6	\$71,160
7	\$80,240
8	\$89,320

Affordability Descriptor

In addition to the HBI and PPI, the Raucher, et al., 2019 report includes a way of combining the quantitative levels of HBI and PPI to generate qualitative descriptors. These affordability descriptors place quantitative data into qualitative terms that are easy to understand and communicate. There are five descriptor categories based on combinations of HBI and PPI, shown in Table 5.

Table 5

Qualitative Descriptors of Household Affordability

HBI: Water Costs as a Percent of Income at LQI	PPI: Percent of Households Below 200% of FPL		
	≥ 35%	20-35%	< 20%
≥ 10%	Very High Burden	High Burden	Moderate-High Burden
7-10%	High Burden	Moderate-High Burden	Moderate-Low Burden
< 7%	Moderate-High Burden	Moderate-Low Burden	Low Burden

The map in Figure 10 shows how each Census tract fares when combining the HBI and PPI into the affordability descriptors. This shows that most Census tracts fall into the “Low Burden” category and no Census tracts currently are in either of the two highest categories. The asterisks indicate Census tracts that are on the edge of moving into a higher burden category, if their poverty prevalence and/or their HBI increases slightly. This data is also presented in Table 6 (on the following page).

Figure 10

Map of Affordability Burden Descriptors by Census Tract

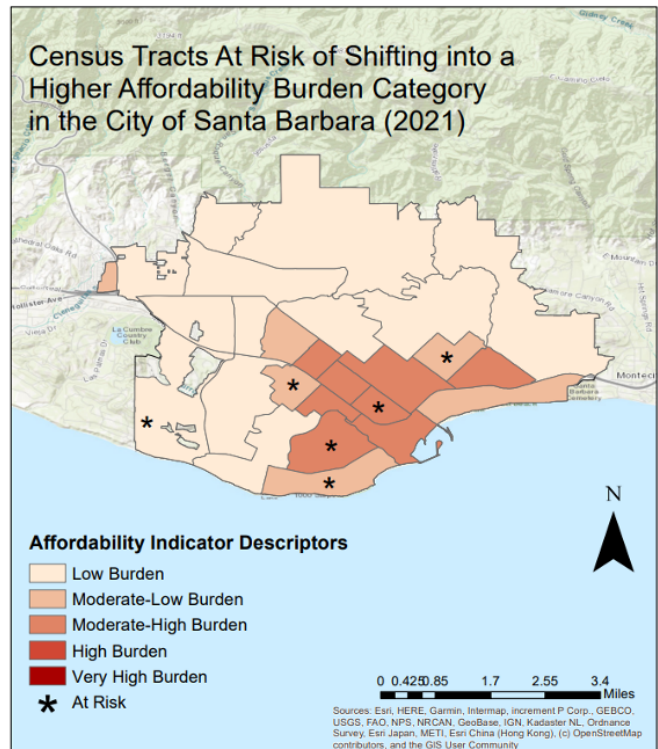


Table 6

PPI, HBI, Affordability Descriptor, and Risk of Increasing Burden

Census Tract	PPI	FY23 HBI	Affordability Burden Descriptor	On Edge of Next Affordability Burden Descriptor?
1.01	22%	4.5	Moderate-Low Burden	
1.02	17%	3.5	Low Burden	
1.03	8%	4.1	Low Burden	
2.01	10%	2.7	Low Burden	
2.02	12%	1.5	Low Burden	
3.01	50%	3.9	Moderate-High Burden	
3.02	26%	3.2	Moderate-Low Burden	
4	12%	2.6	Low Burden	
5.01	9%	4.2	Low Burden	
5.02	12%	2.6	Low Burden	
6	8%	3.1	Low Burden	
7	15%	4.2	Low Burden	
8.01	34%	3.8	Moderate-Low Burden	*
8.05	28%	1.2	Moderate-Low Burden	
8.06	46%	3.2	Moderate-High Burden	
9	41%	5.5	Moderate-High Burden	
10.01	48%	6.3	Moderate-High Burden	*
10.02	37%	4.3	Moderate-High Burden	
11.01	34%	3.4	Moderate-Low Burden	*
11.02	59%	3.9	Moderate-High Burden	
12.03	35%	6.5	Moderate-High Burden	*
12.06	39%	3.5	Moderate-High Burden	
12.08	31%	4.0	Moderate-Low Burden	*
13.06	19%	4.3	Low Burden	*
13.07	16%	5.6	Low Burden	
13.08	17%	5.0	Low Burden	

2.4 Demographics & Discussion

The affordability analysis shows that the City has done well to implement modest rate increases over time, to help avoid big and likely unmanageable spikes in changes to monthly bills. Generally, the affordability metrics indicate modest challenges across the community, however, with high poverty and very low incomes in some areas of the community, future rate increases and/or other cost-of-living increases could quickly exacerbate affordability challenges for some households in the City.

Understanding the underlying characteristics (and variation in these characteristics) of the community is essential for designing targeted and effective affordability programs that address the specific needs of the community. Additionally, awareness of cultural and linguistic factors within the community helps tailor outreach strategies, ensuring that information about water affordability is accessible and relatable. A nuanced understanding of the community's characteristics is vital for crafting equitable, inclusive, and practical approaches to enhance water affordability and accessibility for all residents. This assessment collected a

variety of additional data about residents in each Census tract, which is summarized along with the water affordability assessment metrics into a single “heat map”, in Table 7. Some of the data is discussed in greater detail in other sections of the document. Demographic data summarizing information about the populations living in each Census tract is largely from the 2021 American Community Survey.^{11, 12}

Most people do not know which Census tract they live in. To help contextualize this data, the heat map table includes a loose cross walk to neighborhood names throughout the City based on those described in the City's most recent General Plan (2011). This document has additional information about neighborhoods, including detail into the various challenges they face, observed trends, and examples of community-led initiatives to improve neighborhood quality of life and sustainability.¹³

The following Figure 11 from the City's General Plan illustrates the neighborhoods, which align relatively closely to the Census tracts used throughout this study, though not perfectly:

Figure 11

Map of Santa Barbara Neighborhoods

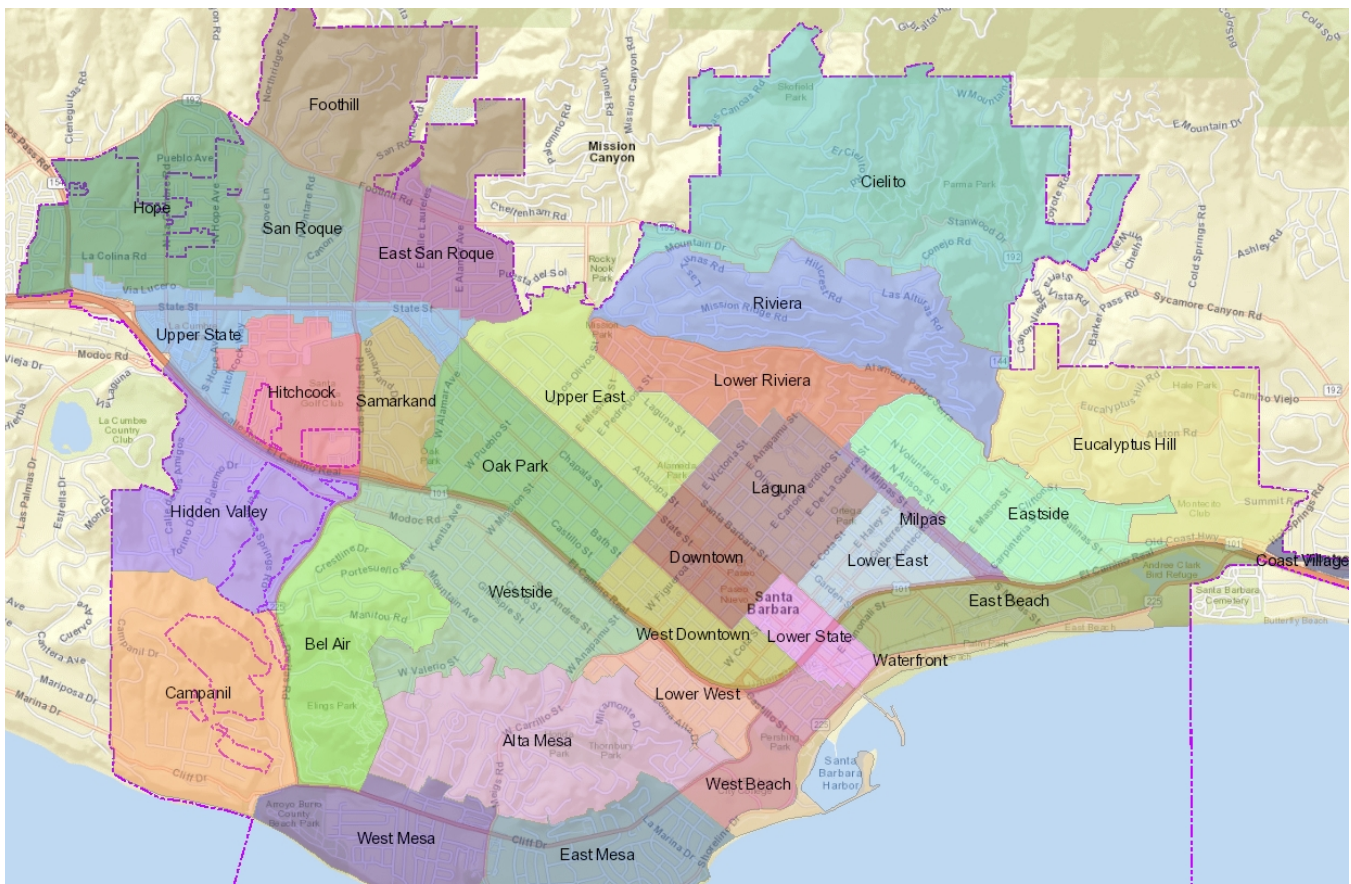




Table 7

Heat Map of Water Affordability Related Data by Census Tracts

Census Tract	Neighborhood	Poverty Prevalence Indicator (2021)	FY23 Household Burden Indicator	Upper Boundary of Lowest Quintile Income	Median Income	% Householder with Bachelor's Degree or Higher	Average Household Size	% Household Aged 65 & HH Income less than \$45k	% Hispanic Residents	% of Housing Units Occupied by Renters	% of Accounts in Tract with at least one Water Shut-off between 2017-2020	% of Total Water Shut-offs (2017-2020)	% of total LIHWAP participants	Disadvantaged Community (DAC)
1.01	Hope	22%	4.5	\$26,308	\$78,524	48%	2.90	39%	20%	31%	15%	2%	14%	N
1.02		17%	3.5	\$36,038	\$98,214	57%	2.80	53%	25%	49%	11%	4%	10%	N
1.03	Samarkand, Hitchcock	8%	4.1	\$81,390	\$216,528	74%	3.24	17%	7%	16%	7%	1%	0%	N
2.01		10%	2.7	\$49,457	\$88,237	64%	2.59	19%	6%	56%	7%	2%	4%	N
2.02	Oak Park	12%	1.5	\$71,852	\$104,138	44%	3.13	15%	23%	64%	9%	1%	0%	N
3.01		50%	3.9	\$26,049	\$71,050	56%	3.43	65%	30%	82%	8%	1%	1%	N
3.02	Upper East	26%	3.2	\$32,357	\$82,905	55%	2.95	39%	34%	79%	9%	3%	1%	N
4	Mission Canyon, Foothills, Roque	12%	2.6	\$57,616	\$123,274	76%	2.91	16%	10%	61%	7%	4%	1%	N
5.01		9%	4.2	\$68,885	\$160,231	71%	2.94	9%	7%	19%	9%	5%	2%	N
5.02		12%	2.6	\$63,639	\$123,203	73%	2.95	18%	7%	27%	9%	7%	4%	N
6	Riviera	8%	3.1	\$63,206	\$153,864	77%	2.52	16%	13%	40%	8%	6%	7%	N
7	Eucalytus Hill	15%	4.2	\$59,603	\$132,977	67%	2.66	21%	12%	28%	8%	4%	1%	N
8.01	East Beach	34%	3.8	\$34,638	\$70,625	29%	3.28	14%	65%	55%	15%	6%	5%	N
8.05	Eastside, Lower East	28%	1.2	\$67,659	\$127,976	90%	2.01	12%	7%	58%	12%	1%	0%	N
8.06		46%	3.2	\$42,786	\$56,648	15%	3.21	46%	73%	63%	18%	10%	14%	Y
9	Downtown, Laguna, Lower East	41%	5.5	\$17,136	\$47,089	40%	3.21	80%	33%	82%	11%	3%	8%	Y
10.01	Downtown	48%	6.3	\$16,403	\$57,474	32%	2.75	41%	51%	81%	12%	3%	5%	Y
10.02		37%	4.3	\$22,163	\$59,669	40%	2.43	69%	30%	92%	8%	2%	4%	Y
11.01	Westside	34%	3.4	\$38,081	\$90,268	40%	3.68	39%	34%	56%	10%	5%	6%	N
11.02		59%	3.9	\$35,257	\$63,340	29%	3.84	42%	62%	77%	13%	5%	1%	Y
12.03	West Beach, Lower West	35%	6.5	\$25,583	\$77,104	56%	2.66	46%	17%	52%	10%	3%	1%	Y
12.06	Mesa	39%	3.5	\$36,522	\$76,756	31%	3.34	36%	46%	84%	12%	5%	4%	N
12.08		31%	4.0	\$36,727	\$103,719	53%	2.84	25%	18%	56%	11%	5%	0%	N
13.06		19%	4.3	\$45,944	\$140,281	67%	3.38	17%	11%	36%	7%	2%	4%	N
13.07	Bel Air, Campanil, Hidden Valley	16%	5.6	\$33,056	\$84,679	63%	3.29	22%	27%	43%	9%	4%	2%	N
13.08		17%	5.0	\$33,039	\$130,819	69%	2.57	13%	5%	34%	8%	4%	1%	N

 "Hot" data more likely to be a contributing factor to water affordability challenges  "Cool" data that is less likely to contribute to water affordability challenges

The heat map shows “hot” spots in red, meaning the data indicates an attribute which may be negatively correlated with the higher household water burdens (Household Burden Indicator (HBI)). For example, in the column of poverty prevalence, red indicates where there is a relatively higher level of poverty compared to other Census tracts in the community. Blue indicates “cool” spots where the data suggest correlation with lower affordability issues. For example, in the Median Income column, blue represents the tracts with higher incomes and thus households may typically be more easily able to pay for their water and wastewater services.

The heat map table shows that the “hot” spots are largely concentrated in the downtown areas and the lower east and west side neighborhoods. This study helps highlight which areas of the City may have concentrated populations of households struggling with water affordability. These areas tend to have greater concentrations of renters, lower incomes, lower education levels, more fixed or low-income seniors, more Hispanic residents, and were more likely to experience a water shut-off between 2017-2020 (more on this in Section 5).

It is important to remember that there are households who are experiencing even more challenging situations than what are reflected by the average data for each Census tract. For example, within a given Census tract there are households with lower household income levels, larger families to support, and/or other circumstances that may exacerbate their ability to afford their water and wastewater bills, among other living expenses.

The community members who participated in the engagement efforts often cited that there is a larger affordability problem in the City, and that utility bills are just one piece of that overall challenge. They often asked how water and wastewater bills measure up compared to other cost-of-living expenses.

Disadvantaged Communities

A relevant community determination in California is what are known as a Disadvantaged Community (DAC), which is defined in California Water Code 79505.5 as a community with an annual median income (MHI) that is less than 80 percent of the statewide annual median household income, and a severely disadvantaged community (SDAC) as a community where the MHI is less than 60 percent.¹⁴ The statewide MHI is based on an average across multiple years of the American Community Survey data from 2016-20 and is \$78,672. Therefore, a community where the MHI is \$62,938 or less reflects a DAC and, if is \$47,203 or less it is a SDAC. Based on the 2016-2020 definitions and data, there are six census tracts in the City that are considered DACs and none are considered a SDAC.¹⁵ Given that state-level data and community-level data changes, which tracts end up qualifying as a DAC or SDAC could change over time.

Residents in the DAC Census tracts are more likely to be Hispanic and renters, based on Census data for the Census tracts in this study, see Table 8. This data is also presented in maps in Figures 12 and 13 below.

Figure 12

Map of Percentage of Hispanic Residents by Census Tract (2021)

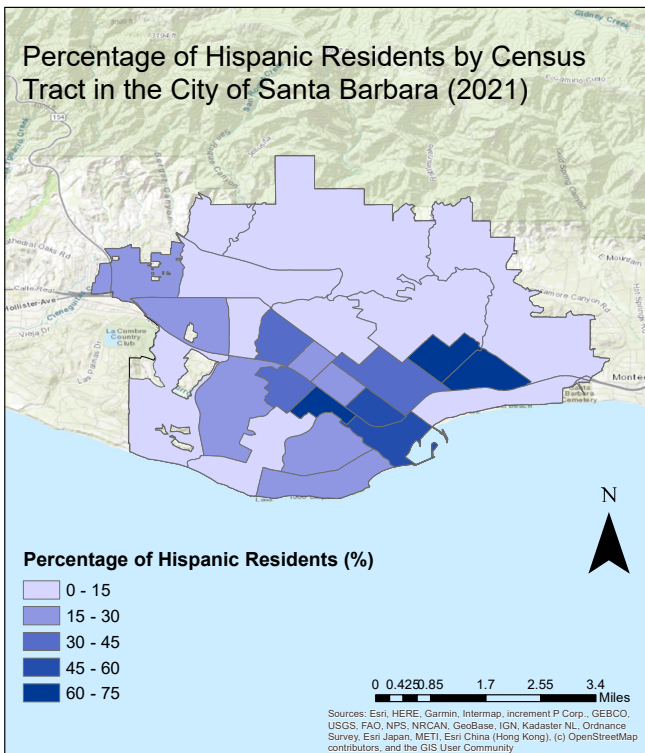


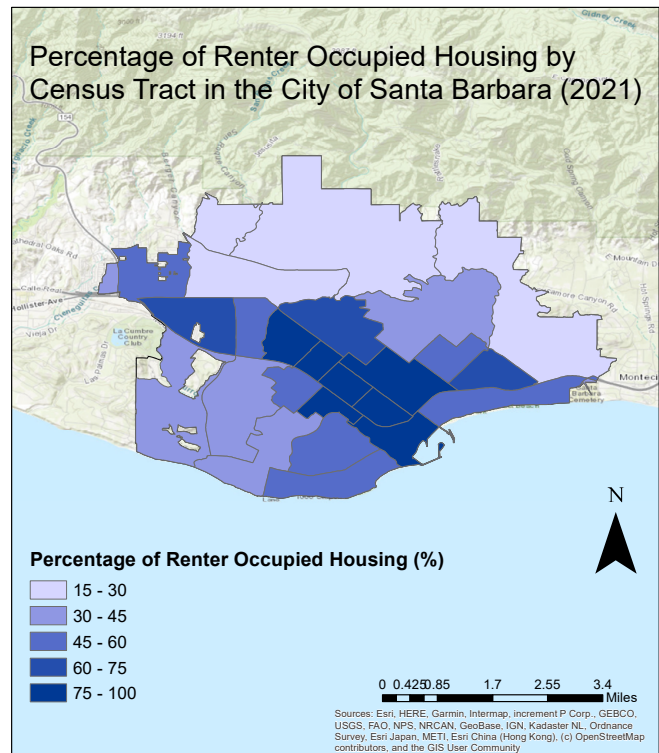
Table 8

Characteristics of DAC Census tracts vs. All Other Census Tracts

	Average Percentage of Hispanic Residents across Census Tracts	Average Percentage of Renter-Occupied Housing Units across Census Tracts
Disadvantaged Communities (DAC) designated Census tracts (6 tracts)	44.3%	74.5%
Other Census tracts (20 tracts)	19.6%	46.5%

Figure 13

Map of Percentage of Renter-Occupied Housing Units by Census Tract (2021)



3. Community Outreach & Engagement

3.1 Overview

Residents are the experts of their own lived experiences in using water and paying for water and wastewater services. The City opted to incorporate a public engagement process in its efforts to better understand the community’s perspective on what water affordability challenges they believe are most prevalent in the City of Santa Barbara as well as what kind of solutions are in line with community values and needs. By involving residents in discussions about issues like water affordability, there is a greater likelihood of identifying innovative solutions that are culturally sensitive, sustainable, and well-received by the community.

Previously, the City implemented a robust stakeholder engagement program as part of its development of the Enhanced Urban Water Management Plan (EUWMP) in 2020. The program, known as “Water Vision Santa Barbara,” convened a group of 25-30 local organizations, nonprofits, and community leaders to collaborate on and develop an EUWMP reflective of community values. The group met over the span of one and a half years via a series of workshops, one-on-one interviews, and public meetings. Through this campaign, the group developed a list of pillars with which to frame the EUWMP and future water management efforts in the City, including water conservation, equitable access to water resources, and water affordability.

In developing the community outreach and engagement strategy, AWE utilized the relationships and collaboration developed through Water Vision to ensure a project reflective of the community values and needs.

The vision for AWE’s community engagement strategy was to conduct research and develop resources and recommendations that are reflective of the residents’ experiences and challenges with water affordability and conservation.

To achieve this vision, the following goals were developed:

- Build relationships by leveraging Water Vision Santa Barbara groups, outreach, and communication strategies.
- Provide residents and stakeholders with accurate information and opportunities to be involved in the study.
- Identify and listen to residents to understand their water affordability challenges, concerns, and ideas for solutions.
- Gather input on topics that are of interest and concern to residents, and provide opportunities for feedback.

Smart Practices at the City: Community Engagement

Provides many engagement materials in both English and Spanish and provides interpretation services at public events; has bilingual City staff available to translate materials and interpret in person and on the phone.

Has built and worked to maintain relationships with several key community-based organizations.

Utilizes a variety of communication and outreach avenues to reach community members, including bill inserts, newsletters, regularly updated websites, social media, and press releases.



3.2 Outreach and Engagement Strategies

AWE and the City implemented a Community Outreach and Engagement Plan using the following core strategies:

1. In-Person Water Affordability Community Workshop

2. Online Water Affordability Community Survey

3. Individual Phone Conversations

4. Public Comment and Feedback on the Draft Report

5. Sharing Findings and Recommendations

AWE and the City advertised engagement opportunities to community members using a variety of communication tools, all available in both English and Spanish, including:

Informational flyers

Outreach through partner organizations

Printed bill inserts

Project webpage

Email outreach

Phone calls and individual interviews

Press release

Newsletters

Online community survey

To ensure communications reached vulnerable and at-risk communities, Water Services and Metering City staff handed out flyers and spoke to community members at over 30 community gathering spaces to inform them about the project and encourage participation in engagement opportunities. Locations canvassed include local markets, churches, libraries, schools, and neighborhood centers across Santa Barbara.

Complete documentation of the communication materials is in Appendix D.

This section provides a summary of each core strategy from the Community Outreach and Engagement Plan. *Complete documentation and further analysis of each strategy is in Appendix D.*

Strategy 1 Water Affordability Community Workshop

The Water Affordability Community Workshop (Workshop) was held on November 2, 2023 from 5:30–7:00 PM (PT) at the Westside Neighborhood Center in Santa Barbara. All materials during the Workshop were available in English and Spanish, and live interpretation was provided for Spanish-speaking residents. During the Workshop, participants:

Learned about the Water Affordability Study and were introduced to the project team.

Completed a guided self-reflection activity about water affordability and conservation.

Shared open conversation in small groups on the topic of water affordability and conservation.

Discussed how water affordability and water use challenges impact others, including renters, fixed income and senior communities, low-income communities, and non-English native speakers.

Engaged in collective brainstorming on potential solutions and ideas to improve water affordability and conservation in their community.

Who attended the Workshop?

The Workshop was attended by 9 community members, including both individual residents and local organization representatives. Participants shared a general interest in water efficiency and prioritize water conservation in their daily lives. While participants did not express challenges in paying their water bills, they are concerned about water affordability challenges in their community. Additionally, participants were generally informed about their water rates and utility and wanted to learn more about available resources and strategies to better manage their water bills and use.

Strategy 2 Online Water Affordability Community Survey

The Water Affordability Community Survey (Survey) was available from October 18, 2023 through December 31, 2023 via Jotform in both English and Spanish. The Survey served as an online platform for residents to share their experiences managing their water bills and use, and to express their thoughts on what barriers and solutions exist to address water affordability challenges in their communities. The Survey also served to provide insights into how experiences differ across demographics in Santa Barbara, including for low-income, renter, senior, and non-English speaking residents. The responses not only inform the City on what challenges community members are experiencing, but also helps shape and prioritize solutions that resonate with said experiences.

The Survey contained 17 multiple-choice and free-response questions across 4 categories:

Household Information
Water Affordability Questions
Water Conservation Questions
Other

Who took the Survey?

AWE received 74 complete survey submissions, all of which were completed through the English version of the form.¹⁶ Survey respondents were predominantly English-speaking homeowners who've lived in Santa Barbara for more than 10 years and reside mostly in single-family detached homes. Over 50% of respondents report a household income over \$120,000 per year, and 58% live in households with individuals ages 65 or older.

Census data, while not broken down enough for an exact comparison, can illustrate how the average survey respondent compares to the average City resident.

Census data for the City of Santa Barbara estimates that English-speakers make up about 78% of the 18 years and older population and 47% of housing units are owner-occupied. Additionally, about 50% of households have an income of \$100,000 per year and about 18% of residents are 65 years or older.¹⁷ The City's billing data also suggests that about 53% of housing units are multi-family units.



Strategy 3 Individual Phone Conversations

Community-based organizations continue to be important partners to the City. Not only do they serve as trusted liaisons to share information with residents, but they also represent and advocate for individuals who may not have been able to participate in previous engagement opportunities—both of which are increasingly prevalent when working with vulnerable communities. The AWE team conducted outreach to over 30 local organizations, including those previously involved in Water Vision Santa Barbara. AWE shared phone conversations with community leaders from the Barbareño Band of Chumash Indians, The Santa Barbara Association of Realtors, and The League of Women Voters, all of which shared their perspective and insights into the topic of water affordability. Additionally, resources, engagement opportunities, and general updates were shared via email to community organizations throughout the project.

Strategy 4 Public Comment and Feedback on Draft Report

The Draft Water Affordability and Conservation Study was published on the City's Water Affordability webpage for a public comment period from January 12 to February 16, 2024. During this time, the AWE team conducted a round of email outreach to community organizations to encourage feedback or comments on the Draft Report. The City received one public comment from an individual, who echoed opinions and concerns in line with what was shared through the Workshop and Survey efforts.

While public comment opportunities are important to build transparency with community members, the outcome from this engagement strategy suggests that this alone is not an effective way to engage community members on the topic of water affordability. This also points to a broader challenge for the City to not only ensure that opportunities for feedback are reaching target audiences, but also that those opportunities are designed and shared in a way that resonates with the community. Residents and community-based organizations can be engaged during the development and implementation of any new water affordability or assistance programs, policies, or initiatives resulting from this Report. It may be easier to reflect on tangible options rather than water affordability as a broad concept. The City can also build on lessons learned from the effort to date in how they design community engagement opportunities to be inclusive and accessible.

3.3 Discussion

Four key themes emerged from the Workshop, Survey, and one-on-one conversations that provide a general sense of how community members are thinking about the issue of water affordability, as well as what challenges and solutions feel most top-of-mind.

Figure 14

Key Themes Emerging from Community Outreach and Engagement

<p>1</p> <p>Water affordability is one piece of the larger cost of living challenge faced by residents.</p>	<p>2</p> <p>Water supply challenges stemming from drought, population growth, and future climate conditions are a concern to residents.</p>
<p>3</p> <p>Improving residential access to and understanding of water bills, water use, and City resources is a solution to improve water affordability outcomes.</p>	<p>4</p> <p>Water bills seem high despite efforts to conserve, and do not feel reflective of individual household use.</p>

First, while water affordability impacts all community members, it is not an issue that many are prioritizing and thinking about. Individuals are juggling monthly water bills among other expenses from daily life, including other utility bills, rent, groceries, childcare, and more. This indicates that residents don't see water affordability as a stand-alone issue, but rather as one piece of the increasing cost-of-living challenges in Santa Barbara.

Conversely, community members do feel concerned about how water supply challenges from extended droughts, population growth, and future climate change impacts may increase their water bills and their ability to access water resources. This illustrates that residents are focused on long-term impacts, and are viewing the issue of water affordability through a wholistic "one water" lens.

The community also places significant emphasis on increasing outreach and education to ensure that residents, particularly those who are vulnerable, have improved access to and understanding of water bills and usage information. This theme reveals where the community is: because individuals feel like they don't know enough about the issue, they cannot address it. Education and increasing general awareness on water affordability and conservation may therefore serve as a first step to help residents feel more empowered to effectively manage their water bills and usage.

Lastly, many community members express that their water bills seem too high despite their efforts to conserve water; and that their monthly bill does not reflect the water they are using. Given this, many residents suggest implementing a rate structure that better rewards conservation and targets high water using customers.

The City may utilize these four key themes as a decision-making framework to take on initiatives and programs that are reflective of community needs.

In addition to the four themes, community members also shared specific ideas including:

- ✔ Work with neighborhood level resource hubs to share water use and billing information and to provide assistance to customers.
- ✔ Send a yearly survey to customers to qualify residents for certain discounts and assistance programs.
- ✔ Work with local realtor associations to include educational materials on managing water bills and water conservation as part of home ownership orientation packets that are given to new homeowners (Santa Barbara Association of Realtors).
- ✔ Use an 80% median income threshold for designating a household as low-income for assistance program qualifications (CommUnify).
- ✔ Create assistance programs targeted to senior, low-income, and Spanish speaking communities.
- ✔ Work with landlords and property managers to ensure that renters are able to see their monthly water bill and understand their individual usage.

3.4 Observations and Lessons Learned about the Community Engagement

- ✔ **Stakeholder group networks comprised of local organizations and community representatives serve as effective liaisons.** They build trust, represent community needs, and ensure consistent participation throughout a public engagement campaign.
- ✔ **Sharing information via bill inserts and the City's "City News in Brief" newsletter were an effective way to inform the public and solicit feedback.** Physical flyer canvassing is best used as a supplement to these strategies or when interacting one-on-one with residents and community members, however it is unclear how well the canvassing led to participation in the survey. The canvassing was intended to boost survey participation from groups who may be facing or at risk for affordability challenges including multi-family households, Spanish-speaking households, and renters. Unfortunately, this survey had very little representation from these groups.
- ✔ **Online surveys, while valuable, may not reach all community members.** Thus, they are best used as a supplemental tool. The project team discussed offering a gift card in return for participation in the survey, to reflect that everyone's time is valuable and residents should be paid for their time and contribution. A tool and logistics to execute this were not available within the time-frame and scope of this project, but could have helped boost participation **from target audiences.**
- ✔ **Finally, although not explored fully in the context of this assessment, it is clear that the City may need to engage trusted community partners to reach historically underserved communities.** Examples might include community-based organizations, council members, faith leaders, local business associations, social workers, legal advocates, healthcare professionals, educators, and more. Further, a general best practice is to meet people where they are, rather than asking them to take time out of otherwise busy schedules to attend a City event focused only on a single topic. This could look like partnering with other City and County departments and community-based organizations to create a one-stop shop for education and resources, or perhaps tabling in a community setting like a grocery store or church, or at a community event like a street fair.

4. Strategies to Mitigate Water Affordability Challenges

Costs to provide water services continues to rise, often even faster than inflation and wages, leading to households spending an increasing percentage of their income on water and wastewater bills.¹⁸

Local governments and water providers are also facing inflationary costs which impact the total cost to provide services, which can further drive up the rates that customers face.

While overall cost-of-living challenges span more than the affordability of water and wastewater services, as anchor institutions that provide critical services to the public, water and wastewater providers still have a role to play. Communicating that the water provider cares about the customers its serves and is working to offer a variety of strategies is critical to maintain and build public trust, which is not always a given for water providers, especially among low-income or other households less likely to trust public water providers. Even though a water provider is unlikely to be able to influence things like housing or wages, they can take steps to help some households. Finally, it takes multiple strategies to solve a complex problem like affordability, so any institution that can help should embrace this responsibility.

As noted in the AWWA report, *A Water Utility Manager's Guide to Community Stewardship*, "Utilities may not have created the adverse conditions and past inequitable experiences of these neighborhoods, but rather have inherited this legacy from past land use and zoning practices and discrimination. However, utilities have an opportunity to design their services so that past injustices are not replicated and services and programs are distributed equitably".¹⁹

Water Affordability and Assistance Programs can include strategies like, but are not limited to:

Rate Structure Designs

Budget Billing Programs and Other Payment Plans

Bill or Rate Discount Programs

One-time Bill Relief Programs

Water Conservation & Efficiency Programs

Plumbing Repair Services

Leak Forgiveness Policies

Programs across the United States are often designed to support certain residents based on eligibility criteria, like low-income, seniors on fixed incomes, residents with medical challenges, etc. Utilities may also explore how their policies, late fees, language-access, application processes, and other components of their services may be further exacerbating water and wastewater affordability challenges.

The following sections outline both the City's current strategies that help mitigate water affordability challenges and suggested recommendations for their current and possible future strategies. These are broken down by:

1. Rate structure

2. Water conservation programs

3. Customer assistance programs

At the end of this section, a few examples of water affordability and assistance programs across California are presented, followed by an analysis showing how various bill assistance programs could impact average bills and water affordability.

4.1 Rate Structure

The City employs a conservation-oriented rate structure with a fixed charge and volumetric charges structured with tiers, where low levels of water use face a low rate and higher levels of water use move into higher-priced tiers. Tiered rate structures can promote equity as well as efficiency. There is additional nuance and differences across different customer categories. Full information about current rates and customer categories can be found on the City's website.²⁰

Rate structures can have a big effect on household bills and the ability of the residents to control their bills through water-saving actions. Like other strategies discussed throughout this report, more equitable rate structures alone will not eliminate all water affordability issues. But they can help reduce the size and spread of the challenges throughout the community.

The City already demonstrates a number of smart practices relevant to rate structures, affordability, and water conservation.

Smart Practices at the City: Rate Structure

Regularly conducts rate studies.

Adopts incremental rate increases over time, which avoids bill shock to customers.

Uses tiered rates for the volumetric portion of residential water bills.

Sets the first tier of consumption at a relatively low level compared to the highest tier.

Collects one time capacity charges for new customers connecting to the system and to existing customers increasing their capacity.



The City bills for water use in units of one hundred cubic feet (HCF), which is equivalent to 748 gallons. Across all years in the dataset, the residential water rate structure has been an increasing block or tiered rate structure. Residents pay a monthly water service charge or “fixed charge”, which varies by the meter size. The rest of the bill is a function of how much water the household uses. The volumetric portion has three tiers, where each is increasingly more expensive. The first four HCF of water are the lowest price per HCF. For single-family accounts, the next twelve HCF are priced at a higher rate, which has typically been approximately triple the first tier's rate. Any water use beyond that is charged at a much higher rate, nearly double the second tier rate. For multi-family, the second tier is structured for the next 4 HCF used per dwelling unit, then all water use beyond that is charged at the highest volumetric rate.

The structure for wastewater service charges has evolved a bit over the study time period. For single family residential customers, usage above a certain amount is assumed to be used outdoors for landscapes and other purposes. This water does not enter the City's wastewater system and is not subject to wastewater rates. The City has changed the total amount of water use that is subject to wastewater charges for both the single-family and multi-family residential customer classes. For single-family, the cap has been lowered from 10 HCF per month in FY18 to 9 HCF in FY23 and 8 HCF in FY24. For multi-family, there used to be two different caps depending on the number of dwelling units served by the meter. Now there is no cap and all water use is utilized in calculating the bill for wastewater charges.



As of the completion of this report, the City is actively updating its water and wastewater cost of service studies. While still in progress, early analysis indicates significantly greater revenue requirements for the next four fiscal years than previously estimated. It has not yet been determined how the revenue requirements will translate into rate changes for specific customer classes and rate components. Adopting and enhancing strategies to help households struggling to regularly pay water and wastewater bills will be even more important moving forward.

**City of Santa Barbara Water and Wastewater Rates
Fiscal Year 2018**

1 hcf = 100 cubic feet = 748 gallons

Customer Class	Water Service Rates ¹	Wastewater Service Rates
Single Family Residential	First 4 hcf @ \$4.44/hcf Next 12 hcf @ \$12.96/hcf All other @ \$23.98/hcf	\$18.52 per month; plus \$3.22/hcf, up to 10 hcf per month
Multi-Family Residential	First 4 hcf per dwelling unit @ 4.44/hcf Next 4 hcf per dwelling unit @ \$12.96/hcf All other @ \$23.98/hcf	\$18.52 per month per dwelling unit; for accounts serving 1-4 dwelling units: add \$3.22/hcf up to 8 hcf per month for accounts serving 5+ dwelling units: add \$3.22/hcf up to 7 hcf per month

Water Monthly Service Charges by Meter Size¹

Meter Size	5/8"	3/4"	1"	1½"	2"	3"	4"	6"	8"	10"
Monthly Service Charge:	\$25.89	\$37.65	\$61.15	\$119.91	\$190.43	\$413.74	\$742.81	\$1,530.25	\$2,823.06	\$4,459.38

**City of Santa Barbara Water and Wastewater Rates
Fiscal Year 2024**

1 hcf = 100 cubic feet = 748 gallons

Customer Class	Water Service Rates ¹	Wastewater Service Rates
Single Family Residential	First 4 hcf @ \$5.10/hcf Next 12 hcf @ \$15.19/hcf All other @ \$28.54/hcf	\$27.00 per month; plus \$4.28/hcf, up to 9 hcf per month
Multi-Family Residential	First 4 hcf per dwelling unit @ 5.10/hcf Next 4 hcf per dwelling unit @ \$15.19/hcf All other @ \$28.54/hcf	\$27.00 per month per dwelling unit; plus \$4.28/hcf

Water Monthly Service Charges by Meter Size¹

Meter Size	5/8"	3/4"	1"	1½"	2"	3"	4"	6"	8"	10"
Monthly Service Charge:	\$32.60	\$47.73	\$77.97	\$153.59	\$244.33	\$531.67	\$955.12	\$1,968.37	\$3,631.93	\$5,749.18

Recommendations 1 through 4 could be considered and evaluated as part of the effort to update the City’s water and wastewater rate studies.²¹ This assessment was developed independently of the cost-of-service analysis and related rate studies, and as a result any recommendations in this assessment that the City chooses to consider further should be fully evaluated with the City’s staff, rate consultant, and legal counsel to ensure they are compatible with the City’s cost of service, rate structure, and Proposition 218. While the recommendations in this assessment have been developed by AWE in light of what has worked to address affordability at other water utilities, including in California, this assessment does not, and is not intended to, address these issues in a definitive fashion based on the specifics of the City’s cost of service and rate structure.

RECOMMENDATION 1 ► Explore maintaining relatively low fixed charges for residential customers.

Generally, lower fixed charges improve affordability and increase the conservation pricing signal. Lower fixed charges give customers greater control over their bill because conserving and using water more efficiently has a larger and more direct effect on the amount of a given customer’s total bill.

This desire was also reflected throughout the community engagement strategies. This assessment showed that lower income households tend to use less water, however, even at low levels of water use, the bills can feel large due to the fixed charges.

For the utility, however, there can be tradeoffs between the revenue stability provided by a higher portion of costs recovered through fixed charges and the improved affordability from lower fixed charges. These revenue stability challenges can be more acute in areas where there is significant variation in outdoor water use and related revenues from year to year. Additionally, it is widely recognized that in the short-run most water utility costs are fixed, but it is an economic maxim that in the long-run all costs are variable. As noted above, the rate study and rate impacts of these recommendations are generally beyond the scope of this study and should be considered by the City and its rate consultants.

In 2023 the fixed charges for a residential customer with a 5/8-inch meter that is served by the City total \$56.40, which is the sum of \$31.05 for water and \$25.35 for wastewater.

To provide some context, the City's fixed charges are comparable and sometimes lower compared to nearby water providers. Here are three examples:

Goleta Water District's fixed charges are based on levels of consumption each month, with ultra-low flow residential customers (6 HCF or less) on a 5/8 inch meter paying \$29.20 per month and low flow residential customers (7 –12 HCF) paying \$52.46 per month.²² See Recommendation #6 for more details on how these consumption based fixed charges function.

The Montecito Water District's fixed charge is \$50.92 per month for residential customers using a 3/4 inch meter.²³

The Carpinteria Valley Water District's fixed charge is \$43.40 per month for residential customers using a 3/4 inch meter.²⁴

The districts providing wastewater services in the areas surrounding the City charge a fixed annual fee for wastewater on property tax bills, which makes comparison of wastewater rates more difficult.

To provide some further background for comparison purposes, here are the average and mean water and wastewater costs from a subset of California utilities who participated in the 2021 AWWA/Raftelis Water and Wastewater Rate Survey of close to 200 utilities across the United States (AWWA/Raftelis Rate Survey).²⁵

Table 9 shows the 2021 fixed charges for customers on a 5/8-inch meter, which average \$23.39 for water and 25.63 for wastewater, and an average of \$47.85 combined for those who reported both water and wastewater fixed charges.

RECOMMENDATION 2 ▶ Explore consumption-based fixed charges.

Some utilities vary the fixed charge based on how much water the customer uses such that high-use accounts face higher fixed charges. This approach can indirectly help lower water affordability challenges as low-income households tend to use less water, on average.

Consumption-based fixed charges are becoming more common for residential electricity, gas, and even some water utilities. These charges are also sometimes referred to as capacity charges or fixed demand charges.²⁶

These charges are a fixed amount based on the volumetric use of a given customer. The amount may be a function of monthly or annual average consumption, or perhaps each customer's maximum month, day, or hour demands (depending on system characteristics and data availability). Then the fixed charge represents the portion of the fixed costs of the system attributable to serving that specific customer. As a result, customers with lower average consumption levels and/or peak demands will have a lower consumption based fixed charges.

Table 9

Comparison of Rates across California Communities (2021 AWWA/Raftelis Rate Survey)

Utility Name	5/8" Meter Fixed Charge		Utility Name	5/8" Meter Fixed Charge	
	Water	Wastewater		Water	Wastewater
1. Big Bear Lake	\$46.50	n/r	12. Lompoc	\$17.04	\$45.55
2. Carlsbad	\$25.02	\$28.66	13. Napa	\$19.08	n/r
3. Clearlake	\$36.30	n/r	14. Ontario	\$23.85	\$33.63
4. Corona	\$19.23	\$45.60	15. Placentia	\$22.26	\$8.10
5. Costa Mesa	\$13.62	n/r	16. Placerville	\$31.77	\$39.83
6. Covina	\$13.88	n/r	17. Riverside	\$20.53	n/r
7. El Monte	\$19.50	n/r	18. San Diego	\$26.30	\$15.33
8. Encinitas	\$31.44	\$15.09	19. Santa Ana	\$20.51	\$5.60
9. Grass Valley	\$27.75	n/r	20. Santa Rosa	\$13.10	\$25.23
10. Hemet	\$30.75	n/r	21. Vallejo	\$22.48	n/r
11. Irvine	\$10.35	\$19.30	Average	\$23.39	\$25.63

*n/r means not reported in the AWWA/Raftelis Rate Survey

Consumption-based fixed charges have the potential to improve affordability because lower income customers tend to use less water than higher-income customers and thus would pay lower fixed charges. In the water use analysis section in this assessment, it was found that households in low-income census tracts use around 30% less water on an annual basis compared to households in high-income census tracts. While consumption-based fixed charges are calculated on an individual household basis, the water use analysis strongly supports the general principle that low-income households are likely to benefit from consumption-based fixed charges.

The community regularly commented about the rates structure and bills, with some folks specifically noting that at lower levels of water use, the fixed charge is a greater portion of the overall bill. Further, there can be a perceived disincentive to reduce water use when there is a relatively high fixed charge that doesn't change regardless of how much water is used.

One example of a consumption-based fixed charge can be found in neighboring Goleta Water District which is based on monthly water usage.²⁷ They have three possible fixed charges listed in the chart below.

Category Name	Monthly Water Use	Monthly Fixed Charge (2024)
Ultra-Low Flow	6 HCF or less	\$29.20
Low Flow	7-12 HCF	\$52.46
All Other 5/8" or 3/4" Meters	13 or more HCF	\$74.41

More information can be found in Goleta Water District's 2020 Water Cost of Service and Rate Design Study.²⁸

RECOMMENDATION 3 ▶ Explore alternative options to make the multi-family rates more closely mirror single-family rates.

The current residential rate structures have a regressive quality to them such that single-family households have more of the less-expensive Tier 2 water available to them than multi-family households. Single-family accounts also have a cap on how much water use is used to calculate their wastewater bills, whereas all multi-family water use is used in determining their wastewater bill.

In the multi-family water rate structure, each dwelling unit gets four units of water at the same lowest rate as single-family households do. However, a multi-family dwelling unit only gets four units at the Tier 2 price before their usage is charged at the third tier rate, which is the most expensive. On the other hand, a single-family customer can use up to 12 units of water at the Tier 2 price before moving into the third and highest priced tier of water.

Further, in the multi-family wastewater rate structure, there is no volumetric cap on usage charges. However, the single-family wastewater rate structure includes a volumetric cap on usage charges, which was 9 HCF in FY23 and is 8 HCF in FY24. For multi-family customers that do not have a separate irrigation meter, there may be reason to have a volumetric cap on wastewater usage charges, similar to that of the single-family category.

It is recommended that these distinctions be evaluated from a cost-of-service perspective to determine whether single family and multifamily rates should more closely mirror each other.

RECOMMENDATION 4 ► Evaluate the cost of service for residential customers that drive peak demands; consider a fourth tier if needed based on review of consumption data.

Peak water demands determine the size and timing of water supply and related water infrastructure capacity investments, and ratemaking should aim to recover these costs from the customers that contribute most to peak demands. Peak demands are also relatively more costly to serve because doing so requires investing in more water supplies and larger capacity infrastructure that is used seasonally and most especially during a few dry and hot weeks during a given year.

Furthermore, it is common to see that a small subset of residential customers play an outsized role in contributing to peak demands with a large group of customers contributing little. This means that the small group of customers may be driving peak demands and, if so, should pay higher rates to recover the cost of serving them. This is most frequently done through a tiered structure of increasingly expensive block water rates.

Santa Barbara’s single-family residential rates are structured as increasing tiered rates with a noteworthy difference between the lowest tier of \$5.10/HCF for the first four HCF and the third tier of \$28.54/HCF for 17 or more HCF. The ratio of the unit price for the highest tier to the lowest tier is more than 5 to 1. Given the high cost of serving peak demands, differences like Santa Barbara’s are to be expected.

A way to assess “peakiness” across customers is to calculate a peak ratio comparing average summer use to average winter use, where winter use is assumed to represent an average indoor-only use level. Using FY21 as an example, this peak ratio was calculated by comparing average summer monthly water use (average of use in July, August, September) to average winter use (average of use in November, December and January). For single-family accounts, the median peak ratio is 1.2, meaning water use during the summer is only 1.2 times higher than winter use, indicated that many households water use is relatively constant throughout the year. Only 10 percent of single-family households have a ratio near 2 or higher. For multifamily households, the median peak ratio is only 1.1 and only 5 percent of accounts have a ratio near 2 or higher.

For single-family residential accounts, the average monthly water use in August (typically the highest water use month) is around 11 HCF, which lands average household bills in the middle of Tier 2. Table 10 shows the portion of single-family accounts that use more of the third tier level (more than 16 HCF), and 30 or more HCF in August, typically the highest consumption month in the City. Between 16-19 percent of single-family residential customers significantly exceed 17 HCF (or 12,716 gallons) in August each year. And yet a smaller portion, but still notable portion of accounts, between 4 and 7 percent, use significantly more water than the third-tier level (more than 16 HCF). Depending on the year, this may be about 700 to 1,200 accounts.

Households using 30 or more HCF in August consistently have high-water use compared to their winter use, whereas households with water use less than 17 HCF in August exhibit

very little “peakiness” from winter to the summer, on average (5.4 to 7.0 HCF and 6.1 to 8.7 HCF, respectively). The City may consider whether a fourth tier of residential water rates may be appropriate for customers with exceptionally high summer peaks.

The rate study should make clear connections between the relative cost to serve customers using different amounts of water. Ensuring these high use customers are charged appropriately may also improve the relative affordability of lower and moderate-income customers because they contribute less to peak demands. Aligning the cost of serving peak demands with the rates charged to the customers who contribute the most may be a way to increase both the efficiency and equity of the City’s ratemaking.

Table 10

Summary of High Use Single-family Residential Accounts

	Average single-family water use in August (HCF)	Percent of single-family residential accounts using more than 16 HCF in August	Percent of single-family residential accounts using 30 HCF or more in August	Accounts using 30 HCF or more in August		
				Average August Water Use (HCF)	Average January Water Use (HCF)	Average Monthly Use (HCF)
FY18	11.9	19%	7%	50.4	21.7	25.4
FY19	11.8	19%	6%	49.6	15.6	23.4
FY20	10.4	16%	4%	45.4	13.5	29.0
FY21	11.0	17%	5%	45.8	23.7	34.1
FY22	11.7	19%	6%	46.7	11.3	29.7
FY23	10.9	17%	5%	46.8	12.9	25.9

4.2 Water Conservation

For most households, the more water you use, the more you pay on your water bill—or put differently—the less water you use, the less you pay. Conservation strategies that help households sustain lower water use over time can reduce water bills, as well as wastewater bills where the wastewater rates are based on water usage, like they are for the City.

Further, if low-income households experience greater challenges to participating in conservation programs and adopting efficiency strategies, this can increase their bills in the long run. As higher-income households reduce their water use, the low-income households can be left to bear a greater share of costs.²⁹

Some examples of how utilities integrate water efficiency strategies into their customer assistance and affordability programs can be found in the 2021 WaterSense report titled *Assistance That Saves: How WaterSense Partners Incorporate Water Efficiency Into Affordability Programs*.³⁰ This report also points to equity concerns. Low-income residents are more likely to live in older, unrenovated housing stock which may have older, outdated, inefficient fixtures. Traditional conservation programs, like rebate programs, may tend to benefit customers in a better financial position to purchase and install water-efficient products; outreach strategies may not be reaching all community members, either.

Utilities across the country are exploring strategies including, but not limited to:

Direct install program models, where high-efficiency products are installed directly at no cost or effort-outlay to the owner. This model removes the upfront financial barrier of traditional rebate models.

Direct or discounted plumbing repair services

New outreach strategies to reach more community members

Partnerships with energy utilities

Current Water Conservation Programs

California has long been a leader in water conservation and efficiency strategies. The City's conservation program dates to the 1970s. Over the years, the City has offered rebates to incentivize adoption of water-efficient appliances, fixtures and technology, programs to support transformation to water-wise landscapes and efficient irrigation systems, and a variety of strategies to inform and educate community members. These programs have been available to residents as well as businesses.

The City released its recent Water Conservation Strategic Plan (Plan) in 2020 to support the Enhanced Urban Water Management Plan and to prepare for the state of California's legislative framework on "Making Water Conservation a California Way of Life". The Plan projects long range demands, identifies attainable conservation goals, develops strategies, and identifies and prioritizes conservation measures. The plan aims to save an estimated 2,615 acre-feet per year of water in 2050 by combining new initiatives with existing programs in the City.³¹ The City also has a 2021 Water Shortage Contingency Plan which details how the City will respond to water shortages and identifies actions to manage water shortages efficiently and equitably. The plan includes a water supply and demand analysis, monitoring, reporting, and compliance protocol, communication protocol, financial considerations, and more.³²

In addition to its own water conservation programs, the City participates in the Regional Water Efficiency Program (RWEP). RWEP is comprised of the Santa Barbara County Water Agency and 15 local water purveyors in Santa Barbara County to collaborate on regional programs such as an educational website, landscape professional training, recognition programs, and grant opportunities.

Through its planning efforts, the City offers robust water conservation programs and resources to assist, engage with, and educate community members and stakeholders. Further, the City's practices and policies have also been certified as "Platinum" meaning they meet all the standards outlined in the AWWA G480-20 Water Conservation and Efficiency Program Operation and Management Standard, which describes the critical elements of an effective water conservation and efficiency program.³³ In fact, the City was the first water supplier in the country to be certified "Platinum" in the G480-20 Standard.

As of this assessment, the City offers the following water conservation programs and resources:

Water Checkups

Water checkups are free to the City’s water customers and help customers assess their water use and identify ways to save water and money on water bills. Assistance is given over the phone to help customers identify possible causes of high water use or leaks, and in-person appointments can be scheduled for outdoor irrigation evaluations for homes and businesses.

Water checkups are useful in finding a leak or better understanding irrigation systems. Water checkups can include:³⁴

- Evaluating all water uses on the customer’s property
- Recommendations for improved efficiency of indoor and outdoor usage
- Evaluating irrigation systems and providing recommendations on improvements, scheduling, and upgrades
- Demonstrations for how to read meters and check for leaks
- Develop an irrigation schedule
- Provide information on landscaping, irrigation technologies, and rebate programs at the City

Water Efficiency Incentives

Rebate programs provide customers with a financial payment after providing proof of purchasing water-saving devices like an irrigation controller or a clothes washer—or by transforming their landscapes. The goal is to accelerate adoption of water-saving strategies and help reduce the cost of making water efficiency changes. Table 11 reflects the incentives available at the time of developing this report.

Youth Education Efforts

The City empowers its youth to understand the importance of water and learn about where their water comes from. The City provides musical assemblies about the importance of water for grades K-6, field trips to the El Estero Water Resource Center, a water awareness high school video contest, and science fair awards for applicable water projects.³⁵

Other Conservation Resources

In addition to its programs that engage directly with customers, the City also provides resources for residents and businesses to explore at their leisure. These include:

- Demonstration garden tours
- Garden Wise TV Show and Gardening Classes
- Landscape Watering Calculator
- Water wise plant databases and guidance documents
- Videos, brochures, and fliers on a variety of water conservation and water use topics
- Directives on how to check for leaks, read water meters, and determine water use
- Resources to purchase water efficient products

Table 11

City of Santa Barbara Water Conservation Incentives in 2023

Rebate Program	Incentive Offered
Sustainable Lawn Replacement Rebate	\$2.00/square foot
Sprinkler to Drip Irrigation Retrofit	50% materials cost, max \$100
Spray Sprinklers to Low-Precipitation Sprinklers Retrofit	\$2.00/nozzle, max \$50
Smart Irrigation Controller	50% materials cost, max \$100
Laundry to Landscape Graywater System	50% materials cost, max \$100
Flume Smart Home Water System Discount	54% off cost of Flume
High Efficiency Clothes Water Rebate	\$150 per washer
Mulch Delivery Rebate	\$45 per delivery, max \$90 per site per fiscal year

RECOMMENDATION 5 ▶ Assess historical participation in water conservation programs by census tract.

This assessment did not explore if there is, or historically has been, a difference in participation in conservation programs between households based on income level or other relevant socio-demographic data like those presented earlier in this assessment. This would be a good first step to understanding historical participation and where more vulnerable households may not yet have benefited from water-saving programs.

Smart Practices at the City: Water Conservation

Has dedicated staff supporting water conservation programs.

Offers a variety of conservation programs and educational resources.

Incentives help cover a sizable portion of costs.

Partners with others in the region and community.

Has a current Water Conservation Plan.

Continuous effort to explore programs for future implementation.



RECOMMENDATION 6 ▶ Explore strategies to expand and improve accessibility of current water conservation programs.

Accessibility can be improved through process and program design. For example, the City can improve language-access by ensuring all information, outreach communications, and resources are also available in Spanish, since that is the main additional language spoken in the community. The City could also continue to work with and identify any new opportunities to train others to assist residents with water conservation education and strategies, including folks at community-based organizations who might be working with residents on housing-related issues, local water-related businesses or volunteers with plumbing skills.³⁶

Potential for Water Conservation Programs to Reduce Bills

The 2020 City of Santa Barbara Water Conservation Strategic Plan provides a detailed analysis of conservation programs and potential and outlines a variety of strategies for the City to consider implementing. This study does not replicate that effort, but instead focuses on illustrating how example program strategies can reduce individual household water use and water and wastewater bills, serving as one strategy to lower water affordability challenges.

Throughout the community engagement effort, residents often encouraged the use of water conservation and efficiency to help. Some encouraged the City to simply focus on the highest water users and that lower income household tend to already be water-efficient. Others noted that it's really hard for low-income households to participate in water conservation programs either because of the need for upfront investment, lack of financial resources overall, or because they are a renter.

Toilets and Indoor Water Use

Conservation programs that support water affordability often focus on indoor water uses as these are considered “essential” water uses: water used for drinking, cooking, cleaning and human-health related purposes. On average, toilets represent the largest source of indoor water use, followed by showers and clothes washing.³⁷

The City put significant resources toward replacing older toilets with more efficient toilets throughout the community from 1988 to 1995. The focus was on installing 1.6 gallons per flush toilets, but these efforts were prior to the establishment of the Environmental Protection Agency’s (EPA) WaterSense-labeled toilets in 2007; this specification includes both a water-efficient requirement and a performance requirement. The City’s efforts were also largely prior to the establishment of Maximum Performance (MaP) Testing which started in 2003 and helped advance the performance of high-efficiency toilets beyond the first generations which performed relatively poorly.

For context, prior to 1970, most toilets used more than 6 gallons per flush. In 1978, California adopted a law requiring all toilets to use no more than 3.5 gallons per flush. In 1992, the first federal standard was put in place through the Energy Policy Action of 1992 requiring toilets to use no more than 1.6 gallons per flush. California adopted the CalGreen plumbing fixture standards requiring that starting in 2014 any toilet sold must be aligned to WaterSense standards such that toilets cannot use more than 1.28 gallons per flush,³⁸ and as a result the City discontinued toilet rebate and replacement efforts in 2014 once toilets using 1.28 gpf or less were required.

Not surprisingly, the majority of homes in the City were built prior to 1995. Based on Census data, there were 44,970 occupied housing units as of 2021 and approximately 83 percent of all homes were built in 1995 or earlier, with only 17 percent built since then.³⁹ Approximately 16 percent, or just about 7,000 homes were built during the gap between the end of the City’s toilet rebate program and California’s adoption of the CalGreen plumbing fixture standards. The City estimates their early rebate program replaced about 19,000 high-use toilets with 1.6 gpf toilets, which is not to say 19,000 households participated since many homes have more than one toilet and may have replaced multiple toilets through the program. Note that it is expected that some portion of households have replaced their toilets on their own, especially as drought and water conservation messages have been prevalent across California. The typical assumption is a 4% natural replacement rate, which starting in 1995 up to 2021 is about 1,500 to 1,800 toilets per year.

Water providers may choose to still have programs to encourage more efficient toilets and/or to accelerate transformation of appliances to higher efficiency fixtures. Further, despite the original efficiency rating, the toilets replaced in 1988 are now 35 years old and are more likely to be using more water per flush and are more prone to leaks. The City’s 2020 Water Conservation Plan identifies ultra-high efficiency toilet rebates as a new measure to add to their current program. This assessment further supports that this would be a smart strategy to implement to help with both conservation and affordability goals.

RECOMMENDATION 7 ► Implement an indoor water efficiency focused program and explore alternative program models to maximize access across all types of customers.

The City has great potential to reduce indoor water use through reliable strategies like toilet replacements, however, traditional rebate water conservation and efficiency programs are not designed with low-income households in mind who may not be able to make the upfront purchase and wait for reimbursement, or may not be able to pay for plumbing services. Common alternative program models could include a direct install model (with or without a customer cost-share), or a free or subsidized leak detection and plumbing repair service program. The City also already has a rebate for a smart home device, which can help households with tips to reduce use and flag leaks; the City could explore offering these at a lower cost or directly installing for lower-income households.

Outdoor Water Use

Given the City’s climate and relatively dense housing with small lots, there is relatively low outdoor water use compared to other communities in California and across the western U.S. Most single-family households, which are most likely to have a single meter serving both indoor and outdoor uses, have relatively consistent water use throughout the year. A small portion of residential customers, however, do have significant increases in water use during the summer and early fall months. Where it is strategic, a landscape transformation or irrigation efficiency program can greatly reduce water costs during the irrigation season.

Many community members reflected on their experiences living in the City, recognizing that there are periods of significant rainfall and they expressed curiosity about how to make better use of rainwater for outdoor purposes. Many folks were eager to learn more about the recycled water system, too.

The impacts of water saving strategies are presented for two different types of customers:

Single-family households with average water use.

Multi-family households with mostly indoor water use.

The impact from three strategies are presented for single-family households, and one strategy for multi-family households for illustrative purposes. Average water use is derived from Fiscal Year 2022 consumption data and bill savings are based on FY24 rates. FY23 was an atypical year due to a very wet winter and spring, so it wasn't used despite being the most recent year of consumption data.

The true individual impact of each strategy will vary by household. Results are presented Table 12.

Note that the bill savings percentage reduction from the toilet replacement strategy is lower for the multi-family households. This is because multi-family households use less water on average and therefore their savings are more likely to come in at the Tier 1 rate, currently \$5.10 per HCF in FY24, rather than at the Tier 2 rate of \$15.19 per HCF. If fixed charges or the first tier variable rate decreased, bills and savings would be different than what is presented.

Though only the Low Scenario is presented for multi-family, there are likely higher flush volume toilets or leaky toilets existing in multi-family homes as well. Savings will be greater for these households as well as households with higher occupancy.

These bills savings would directly translate into a lower HBI since the HBI is a ratio with the water and wastewater bills in the numerator. For the High Scenario Toilet Replacement that could result in an average of 12 percent bill reduction, for example, would translate into a 12 percent reduction in the HBI.

RECOMMENDATION 8 ▶ Leverage the average water use data presented in the Water Use & Affordability Analysis section to help identify low-income or otherwise vulnerable households that may be using water inefficiently.

Utilities commonly promote the same conservation programs and tips across their entire service area. Relatively simple data analysis can help target outreach to households who are likely to benefit from water conservation strategies, and thus lower their water and wastewater bills.

Table 12

Potential of Water Conservation Strategies to Reduce Water and Wastewater Bills

Water Conservation or Efficiency Strategy	Annual Water Savings (gallons)	Annual Water Savings (HCF)	Annual Water and Wastewater Bill Savings	Percent Reduction from Average Bill	
High Scenario Toilet Replacement (3.5 gpf to 0.8 gpf)	12,000	16	\$285	12%	Average single-family household. Average annual use is 110 HCF, \$2,300 average annual bill using FY24 rates
Low Scenario Toilet Replacement (1.6 gpf to 0.8 gpf)	8,800	12	\$216	9%	
Landscape Transformation (assumes about 56 gallons saved per day per household)	15,000	20	\$355	15%	Average individually-metered multi-family household. Average annual use is 49 HCF, \$1,200 average annual bill using FY24 rates
Low Scenario Toilet Replacement (1.6 gpf to 0.8 gpf)	8,800	12	\$82	7%	

Future of Water Conservation: Advanced Metering Infrastructure

The City has adopted advanced metering infrastructure (AMI), which is a metering and technology system which allows for automated meter reading and captures hourly water use.⁴⁰ This can be incredibly powerful data. With hour-by-hour water use information, there is great potential to identify and support households who may have abnormally high water usage trends ahead of getting a high bill. Households can avoid unexpectedly high bills by being proactive when issues arise. AMI can help identify leaky toilets, spikes in use that might indicate a pipe break, and generally identify households with high water use. This data can help utility staff better support customers who call in concerned about or are struggling with high water bills.

On March 11, 2024, all customers were given access to a water usage portal called WaterSmart. The portal gives customers the ability to track hourly water use, receive leak alerts, compare usage to similar households, and receive recommendations on how to reduce water use.

The community often mentioned leaks, and for those who were involved in the AMI pilot or aware that the AMI tools are coming were enthusiastic about the potential for leak notifications and other water use and bill alerts to help out community members.

RECOMMENDATION 9 ▶ Ensure communications and marketing strategies for the Advanced Metering Infrastructure and WaterSmart portal are specifically designed to reach account holders in low-income and multi-family settings.

Similar to Recommendation 6, the City could also train others in the community who work with or are trusted by low-income or otherwise vulnerable households to help account holders get registered with the customer portal, set up leak and high usage alerts, and understand their water use patterns.

RECOMMENDATION 10 ▶ Leverage the Advanced Metering Infrastructure hourly data and WaterSmart portal communication platform to help target water conservation tips, programs, and customer assistance programs to those who are using water inefficiently and if done proactively, can help avoid high bills.

4.3 Customer Assistance Programs

This section provides an overview of current bill-related customer assistance programs and resources offered by the City of Santa Barbara. In general, the City offers online bill pay services for water, wastewater, and solid waste. Registered accounts receive email reminders when a payment is due and confirmation when a payment is made. Additional options are to pay by text, pay by phone, pay using mobile devices, schedule payments, and receive text notifications. The City also has a procedure in place for customers to dispute a bill.⁴¹

Utility Users Tax Exemption Program

The Utility Users Tax (UUT) is a general tax levied on the use of residential and commercial utility services, including water, refuse, electric, and natural gas, which is set at 6% as of 2023. The Utility Users Tax Exemption Program removes this tax from qualifying residents' utility bill(s). Residents must be at or below certain income requirements to qualify, and applications must be renewed yearly.⁴²

Low-Income Household Water Assistance Program (LIHWAP)

LIHWAP is a temporary, federally funded program originally created as part of federal COVID-19 relief efforts.⁴³ Under this federal program, states, tribes, and territories were provided with funding to assist income-eligible residents with their water and wastewater bills. In California LIHWAP is administered by the California Department of Community Services and Development in partnership with local service providers and participating water and wastewater utilities. The City has signed up to participate in the LIHWAP program, which means its customers are eligible subject to funding availability.⁴⁴

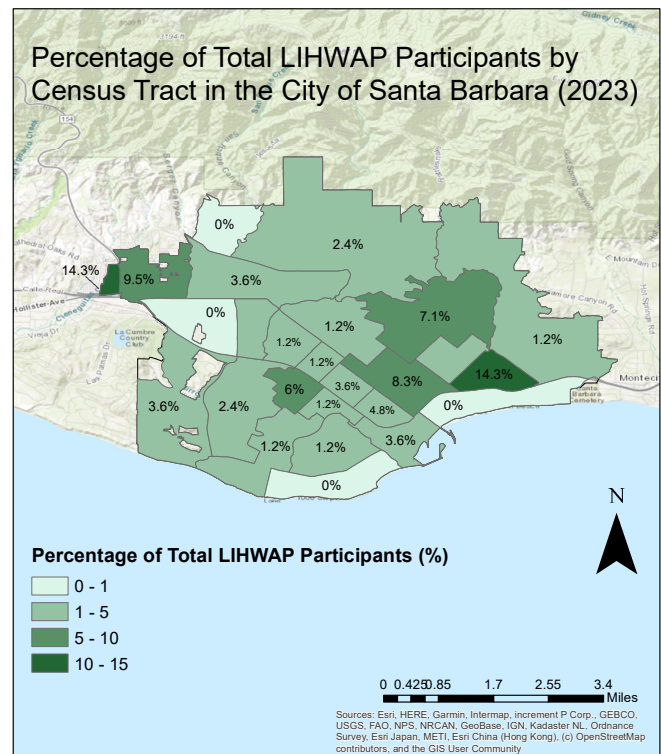
As provided on the City's website, LIHWAP offers a one-time payment to help residents pay their past-due or current water or wastewater bills, up to \$15,000 per household. The amount of help that each resident receives depends upon the past due balance and current charges. Renters whose utility payments are included in their rent payments may also be eligible.⁴⁵

To implement LIHWAP, the City partnered with CommUnify, a nonprofit organization that works collaboratively with community members to assist the City's vulnerable populations achieve economic stability and improved quality of life through a variety of education and support services.⁴⁶

Between July 3 and October 30, 2023, 90 residential customers were supported through the continued LIHWAP program. The total funds disbursed was about \$210,000 and the average amount of bills paid off per customer was around \$2,330. Figure 14 shows a map of the distribution of accounts receiving LIHWAP benefits in 2023.

Figure 15

Map of LIHWAP participants by Census Tract (2023)



Adjustment to Extraordinary Water Charges

The City offers partial relief from extraordinary water charges because of hidden leaks, line breaks, or circumstances outside the reasonable control of the account holder. The program is available to customers who apply within 45 days of a relevant billing date, for a maximum of two consecutive months' worth of billings. To qualify, the total water usage must be deemed "extraordinary" compared to regular usage and cannot be due to negligence. Additionally, the account holder must include documentation that explains how the loss occurred and actions taken to repair leaks. Customers may only participate in this program once every five years.

Once qualified, the discount is calculated by taking an average of six months of the customer's usage and subtracting the difference at the block 1 rate. This rate is then subtracted from the extraordinary bill as the final adjustment. While the customer must still pay for the water used, the intention is to do so with the lowest possible rate and considering the customer's average water use.

Payment Plans

The City offers payment plans to help customers pay their balance over time without incurring late fees or being disconnected. While the City offers payment plans to any customer, specific analysis of payment plan data was not included in this study. Since there were no mechanisms to combat non-payments while shut-offs and late fees were suspended. Staff observed that households across the service area stopped paying their bills, regardless of ability to pay. Thus, analysis of this data may not reveal insights about the prevalence of customers' ability to pay or need for additional financial assistance. Once things settle out after reinstating shut-offs and late fees, the data might be more helpful. More information about shut-offs can be found in Section 5. Table 13 shows the number of residential accounts with a payment plan. Note that unlike other data in this assessment, the City maintains this data by calendar year instead of fiscal year.

Table 13

Number of Residential Accounts on Payment Plans by Calendar Year

Calendar Year	Single Family Accounts	Multi-Family Accounts
2022	166	81
2021	160	48
2020	238	127
2019	506	231
2018	488	217
2017	535	245

RECOMMENDATION 11 ► Explore opportunities to improve the clarity and accessibility of water bills, including using easy-to-understand units and language.

This recommendation connects well to opportunities for education through the new AMI system and customer portal. These strategies collectively can help empower customers with a better understanding of their water use patterns, improve trust and confidence in the City, and may reduce customer service calls. With the large Spanish-speaking population in the City, translating even a sample bill would be helpful.

The community engagement efforts captured several requests for this, citing desire for greater education and transparency. Community survey responses often asked for transparency in overall finances for the utility, noting some confusion about why rates continue to rise even though water use has declined over time. The City might explore improvement to communications about rates and why rates are changing; some utilities have an annual "Where do your rates go?" communication campaign that helps tell the story of why rates are changing, the value of water for the community, and how the utility is working to improve resilience and long-term sustainability of the system.

A Note About Multi-family, Billing, and Transparency

A commonly-cited challenge in multi-family settings is known as the split incentive barrier where there may be excessive water use and/or under-investment in water efficiency and plumbing repairs depending on which party pays the water bills. There is a high level of rentership in some portions of the City, so consideration of how to support multi-family customers was of importance to the City in this study. The community engagement effort noted that tenants may be hesitant to ask for information, report leaks, or ask for fixes or upgrades to appliance and fixtures. Some ideas from the community included having the City working directly with stakeholders like multi-family managers or rental agencies and offering cost-sharing programs to upgrade fixtures and appliances.

In many communities, it is a mystery as to how much water individual dwelling units are using in a multi-family setting. This makes it hard to encourage water conservation, find leaks, and can lead to inequitable billing practices. The City, however, has required individual metering since the late 1980s for multi-family properties. The City later adopted an ordinance in 2018 allowing privately-owned and operated submetering when there is not enough space in the public right-of-way to fit one water meter for each dwelling unit.⁴⁷ In these cases there is a single larger meter leading to private submeters on site. In the cases of multi-family properties with dedicated City water meters for each dwelling, each dwelling unit receives a water bill directly from the City for that unit's water usage. For privately submetered properties, owners are required to bill tenants based on usage registered on the submeters per state law, but the City is not involved in this process. The rules on billing tenants are set at the state level in California.⁴⁸ California state regulations stipulate what options landlords have for passing on utility costs for tenants. The input from the community also echoed this desire for greater transparency.

The community engagement efforts captured requests for this, recognizing that many renters do not have awareness of their water use or water bills. They also cited concerns about how costs are passed on. One community member who is a renter, but is individually metered, felt that costs were reasonable, also noting that they live in an apartment with no outdoor water use. They reflected that others might not feel this way if they had a larger family or didn't have transparency on their usage and bills.

RECOMMENDATION 12 ▶ Explore a regular communications campaign designed to inform renters about how water and wastewater bills are calculated, the ways they might be billed for services, what programs and resources are available to them, and where to turn for support.

This effort could be in partnership with agencies focused on housing, like the City's Housing and Human Services Division, the County of Santa Barbara's Housing and Community Development Department, CommUnify, the Housing Authority of The City of Santa Barbara, and/or others.

Smart Practices at the City: Metering & Billing

Bills monthly

Provides an online bill calculator.

Provides multiple ways to pay and receive notifications

Requires metering for each dwelling unit

Requires submetering in situations with space constraints

Requires that non-residential uses on a lot or within a structure must be separately metered from residential units

Requires that irrigation be separately metered for larger landscapes



4.4 Prop 218 and Example Programs in California Communities

There is a legal requirement in California that can impact the development of customer affordability and assistance programs, commonly referred to as “Prop 218”.⁴⁹ Prop 218 limits how a water provider can set retail water rates; they must establish equitable and proportional rates for the services provided. This effectively prohibits a customer from receiving a discount through a customer assistance program, if it means that other non-discounted customers are paying more than the cost to provide service to them. Said another way, one group of customers cannot subsidize the costs of another group of customers.

As a result of Prop 218, California utilities must find funding for customer assistance programs from sources other than rates. This may include City general funds, grants, non-rate revenues, and voluntary donations. Despite this challenge, California utilities have found ways to support low-income or otherwise vulnerable households.

Because Proposition 218 does not allow California utilities to fund customer assistance programs using revenue from ratepayers, the City of Santa Barbara must assess how to comply with Prop 218 while also providing assistance to customers.

AWE reviewed examples implemented in California to gain an understanding of:

Program structures

Eligibility criteria

Funding sources

Program outcomes

Table 14 below summarizes the programs reviewed.

Table 14

Summary of Example Programs in Other California Communities

Customer Assistance Programs in California			
Utility	Program Type	Customer Qualification Criteria	Funding Source
Santa Rosa Water	Bill assistance	Income-based	Cell Tower Leases Donations
San Diego County Water Authority	Water efficiency	Income-based	State Grant
Long Beach Utilities	Landscape Conversion	Designated DAC	Regional & Federal Grants
Long Beach Utilities	Bill assistance	Seniors (65 or older) or disability, and income-based	General Fund
City of Sacramento Utilities	Water efficiency	Designated DAC	State Grant Groundwater sales
City of Pleasanton	Bill assistance	Seniors (65 or older)	General Fund
City of Tracy	Bill assistance	Income-based	External Partnership

Santa Rosa Water—“Help 2 Others” H2O Water Bill Assistance Program

Santa Rosa Water’s H2O Water Bill Assistance Program eliminates the fixed portion of water and wastewater bills for qualifying residential customers, amounting to approximately \$42 of savings per month using 2023 rates (note: the total discount amount changes with rate changes). While all customers on the program receive an 100% coverage of fixed fees, the total amount varies depending on the customers’ meter size, with meters over ¾ inches subject to larger fixed fees.

Eligibility to participate is based on income, defined by the City as “the combined income of all persons who live in a household.” In addition to meeting income threshold requirements, residents must also participate in a free financial capacity workshop and schedule free one-on-one financial coaching. Because participants will still be paying for the cost of the water they use, the program helps incentivize water efficiency and conservation for residents to lower their water bills even further through a free water-use efficiency home audit prior to enrollment in the program. The audit facilitates water-use efficiency improvements for qualifying individuals and families, including providing free water saving devices, plumbing leak detection for further water savings, advice on water saving strategies, and eligibility assessments for rebates and fixture replacements.

The H2O Program is largely funded by cell phone tower companies that pay rent to the City for their placement of cell towers on City property. The City of Santa Rosa also allows for online or mail donations from residents to support the H2O Water Bill Assistance Program, which can be set up as a fixed monthly donation added to their water bill or as a one-time donation. Donation-based approaches are useful to supplement assistance programs due to the variability of the funding source.

As of 2023, there are 756 accounts on the program out of approximately 45,849 residential accounts, accounting for approximately 1.65 % of total City of Santa Rosa accounts.⁵⁰

San Diego County Water Authority (SDCWA)—Direct Install Program

SDCWA’s Direct Install Program aims to provide both water use and water cost savings to qualifying customers through free installations of high-efficiency toilets (up to two per single-family household) and smart irrigation controllers to customers within SDCWA’s service area. To participate in the program, customers must meet income qualifications, reside

in disadvantaged communities (such as manufactured housing communities, deed restricted multifamily properties, and single-family homes), and must complete a site audit before the installation to verify qualifications.⁵¹ The Direct Install Program is funded by a \$3 million three-year grant from the Department of Water Resources (DWR)’s Urban Community Drought Relief Funding program, awarded to SDCWA in 2022. Other funding sources include \$1.3 million from the Metropolitan Water District of Southern California’s Member Agency Administered Program and \$250,000 from DWR’s Prop 1 Round 2 Grant.

Participation in the program varies across communities in the service area. Where participation is low, SDCWA has focused on installations in mobile home parks. Overall, response to the program is positive across program stakeholders. Preliminary water use analysis shows anticipated savings significantly higher than their turf removal programs.

Long Beach Utilities—Direct Install Gardens Program

Long Beach Utilities’ Direct Install Gardens (DIG) Program offers a free-of-charge water-wise landscape conversion to low-income single-family residents who live in historically underserved neighborhoods impacted by environmental pollution. Through this pilot program participants can choose from pre-made drought tolerant landscape design templates depending on shade availability and lot type. Customers must also complete a pre-inspection visit to participate.⁵²

The DIG Program, now on its second round of funding, is funded entirely from grants. Currently, Long Beach Utilities received a \$220,000 grant from Metropolitan Water District, funding special projects for member agencies aimed at SB535 Disadvantaged communities, as labeled by the US EPA. Long Beach also has a matching grant of \$150,000 from the Department of Interior for turf grass removal.

Water and cost savings information was not collected during the first round of the pilot program, given that most participating households did not have existing irrigation in place. The second round of the DIG pilot program, which was launched at the time of writing, will ensure that new program applicants have existing irrigation in place to compare water usage from before and after the low water use garden is installed. Additionally, in response to feedback from participants, Long Beach’s outreach team is working to provide free garden maintenance workshops, classes, and guides to assist residents keep newly installed gardens maintained after installment.

Long Beach Utilities—Low Income Senior or Disability Discount Program

The Low-Income Senior or Disability Discount Program at Long Beach Utilities provides several utility benefits to customers that are either disabled or over the age of 62 and meet income eligibility requirements. At the time of this writing, the income-eligibility requirement for the Utility Users Tax Exemption Program is \$39,440 or less combined gross income of all members of the household for up to two people. Each additional person adds \$10,280 to the income-eligibility requirement.

Customers participating in this program receive a 20% discount on gas charges, a monthly credit to water service charge (around \$5), the first billing units of water usage at no charge, reduced refuse/recycling rate, and an exemption from the 5% utility users tax (UUT) on water, gas, electric, and telephone bills. The program is funded through the utility's general operating fund.

City of Sacramento Utilities—Leak Free Sacramento

The City of Sacramento's Leak Free Program offers free leak repair services in homes of low-income residents. To be eligible for the program, residents must be single-family residential homeowners, live in areas designated by the State of California as disadvantaged (DAC), and must show irregular water usage and/or demonstrate need of leak detection and repair. Participation includes one free house call to a contracted plumber for both indoor and outdoor leaks.⁵³

Starting in 2016, the program was originally funded by a \$2.5 million grant from the California State Department of Water Resources. Since 2018, the program has been administered primarily by groundwater rights sales and transfers; this is unlike its other programs, which are funded through rates.

At the time of writing, The City of Sacramento has relaunched the program and is utilizing advanced metering infrastructure (AMI) to identify and reach out to customers who may be eligible for the Leak Free Sacramento Program. The City is also seeking additional grant funding to expand the program to duplexes in the City's disadvantaged communities.

City of Pleasanton—Senior Discount Program

The City of Pleasanton offers a 20% discount to city residents age 65 and older on the fixed costs portion of their water and wastewater bills, regardless of income. The discount is only applied to residents that consume 30 units (1 unit= 1 HCF = 748 gallons) or less during each billing period.⁵⁴ The program is funded by transfers from the City's general fund.

As of 2023, the City of Pleasanton has 3,108 single family residents on this program and 26 multi-family accounts, accounting for approximately 15% of total accounts.

City of Tracy Low-Income Rate Assistance (LIRA) Program

The City of Tracy's low-income rate assistance (LIRA) program waives the minimum monthly meter charge of \$18.50, discounts the monthly wastewater fee by \$2.55, and discounts the basic monthly garbage fee by \$5.00 for low-income qualifying customers. Customers in this program are only responsible to pay for water used and a monthly storm drain fee, offering the opportunity to further incentivize water savings through efficiency and conservation strategies.⁵⁵

This program is administered through the City of Tracy's Finance Department in partnership with PG&E. To qualify, customers must show the same name and service location as on the PG&E bill and must be approved or already enrolled in PG&E's California Alternate Rates for Energy (CARE) program.⁵⁶ In FY22-23, auto-enrollments of qualified customers from CARE into LIRA resulted in a 400% increase in the number of households receiving the discount.⁵⁷

Potential for Assistance Programs to Reduce Bills

Using the same example households as the Water Conservation Potential section, Table 15 illustrates how a customer assistance program might help improve water affordability. The community engagement efforts generated interest in assistance programs that would offer a basic amount of water for free or a reduced rate for essential indoor needs.

RECOMMENDATION 13 ► Explore customer assistance programs to improve and/or expand support to low-income households. This effort should also assess the process for customer participation and aim to make it as easy and accessible as possible.

In light of Prop 2018, some options that could be explored without finding significant non-rate revenue are:

Voluntary donation program to fund free or discounted fixed charges or the first tier of water use

Voluntary “donate your rebate” program where residents participating in water conservation programs can opt to donate their rebate to a household in need

Fund a program from non-rate revenue source like late fees

Improve processes for existing programs to improve accessibility; increase awareness through education and outreach to target populations. This could include:

Ensuring all resources and information are available in Spanish

Expanding the “Understanding Your Bill” resource to include a copy of a sample bill and explain the information within

Leverage eligibility for other more commonly-used affordability programs to define and determine eligibility for the Utility Users Tax Exemption program

Ensuring all resources and information are provided in common, easy-to-understand language. For example, consider updating program information on the Adjustment to Extraordinary Water Charges Program and providing a customer-oriented summary on the City’s water shut-off policy in addition to the required legal policy language already provided online.

Table 15

Potential for Customer Assistance Programs to Reduce Water and Wastewater Bills

Customer Assistance Strategy	Annual Water and Wastewater Bill Savings	Average single-family household. Average annual use is 110 HCF, \$2,300 average annual bill using FY24 rates	Average individually-metered multi-family household. Average annual use is 49 HCF, \$1,200 average annual bill using FY24 rates
		Percent Reduction from Average Water and Wastewater Bill	
100% Waiver on Fixed Charge	\$391.20	17%	32.6%
50% Waiver on Fixed Charge	\$195.60	8.5%	16.3%
100% Waiver on Tier 1 volumetric water use	\$244.80	10.6%	20.4%
50% Waiver on Tier 1 volumetric water use	\$122.40	5.3%	10.2%

The City can also offer programs that would support low-income or otherwise vulnerable households without specifically limiting participation or having income-eligibility requirements. The City can then focus on ensuring these programs are easy to access, and are marketed using strategies that are effective at reaching households that have typically not participated in affordability or conservation programs.

These might include:

- A direct install program for indoor bathroom fixture retrofits
- Ultra high-efficiency toilet retrofit rebate
- Free or discounted leak detection and plumbing repair services
- Leak and high use notifications

RECOMMENDATION 14 ▶ Explore partnerships with existing efforts addressing a broader range of affordability challenges.

Customers who have trouble paying their water and wastewater bill are likely to struggle with other costs-of-living. The City could consider partnering with relevant City and community organizations and their staff on a coordinated approach for addressing a range of affordability challenges a customer may face. Even aligning eligibility requirements or applications can make a meaningful difference for struggling households. Potential partners could include organizations focused on housing, energy services, employment services, and more.

Potential Partners for the City's Consideration

AWE provides this list knowing it is not the most comprehensive possible set of resources.

General

County of Santa Barbara Social Services, which includes employment services, cash aid programs, and more: countyofsb.org

CommUnify, a community-based organization providing a variety of community stabilization services. The City already partners with this organization to administer the LIHWAP program. Consider expanding this partnership. communifysb.org

Housing

Housing Authority of the City of Santa Barbara: hacsb.org

City of Santa Barbara Rental Housing and Human Services Programs⁵⁸: santabarbaraca.gov

Electric Services

Southern California Edison's assistance programs, including bill assistance and affordability: sce.com

Natural Gas Services

SoCalGas's assistance programs: socalgas.com

Transportation Services

Santa Barbara MTD discounted fares for seniors: sbmtd.gov

Employment Services

County of Santa Barbara Employment Assistance: countyofsb.org

Health Services

County of Santa Barbara Social Services resources on Medi-Cal: countyofsb.org

County of Santa Barbara Social Services resources on CalFresh: countyofsb.org

By exploring partnerships, the City can better serve its customers using a holistic approach. The City could also explore joint applications, shared application criteria, and automatic enrollment in and through complementary programs. Furthermore, if the City does not have sufficient funding or a customer is otherwise ineligible for water and wastewater bill assistance, establishing a partnership network would allow for a seamless referral process for a customer in need.

5. Water Shut-Offs Policy and Considerations

Shut-offs or water disconnections are the practice of shutting off water service at the meter, typically until a customer resumes payment of their past-due bills. This policy has long been used as a tool for enforcement against non-payment and is increasingly criticized since shut-offs can have serious consequences on the health, well-being, and overall housing stability of residents. Further, processes are often accompanied by additional late or reconnection fees, further setting back the resident’s ability to get back on track. The community input posed a question wondering about alternative options for non-payments rather than water shut-offs, citing that access to water is a human right.

Like many water providers, the City suspended shut-offs and late fees during the pandemic. Table 16 summarizes residential water shut-off data from January 1, 2017—March 16, 2020, when water shut-offs were suspended per California Governor’s Executive Order N-42-20 related to the COVID-19 pandemic.⁵⁸

The City uses the term “disconnects” instead of shut-offs, though most of the utility industry and customer advocacy organizations use the term “shut-offs”. Table 16 and Figures 16 and 17 summarize a variety of data about the City’s disconnections prior to the pandemic. Water disconnects appear to be relatively low in the City, are used as a measure of last resort for non-payment, and are often resolved within the same day or the next day.

About 5 percent of all residential accounts experience a water disconnect each year, with a small portion experiencing 2 to 6 disconnections per year. Most customers typically experience a same day reconnection or a next day reconnection. Anecdotally, staff reflected that long-standing disconnects are typically cases where the tenant moves out of the residence without closing their water account and stops paying their bill. Note that the process involves additional fees, which can further impact the ability of a household to pay their bill, even if the lack of access to water is short-lived.

Table 16

Summary of Residential Water Service Disconnects 2017-March 2020

Calendar Year	2017	2018	2019	2020 (thru 3/16)
Number of unique residential accounts in FY20 dataset used in this analysis was approximately 22,400				
Number of unique instances of disconnects	1,437	1,566	1,516	211
Number of unique accounts per year	1,047	1,116	1,047	211
Approximate percentage of accounts experiencing a disconnect per year	4.7%	5.0%	4.7%	0.9%
% of unique accounts that are multi-family	26%	27%	28%	31%

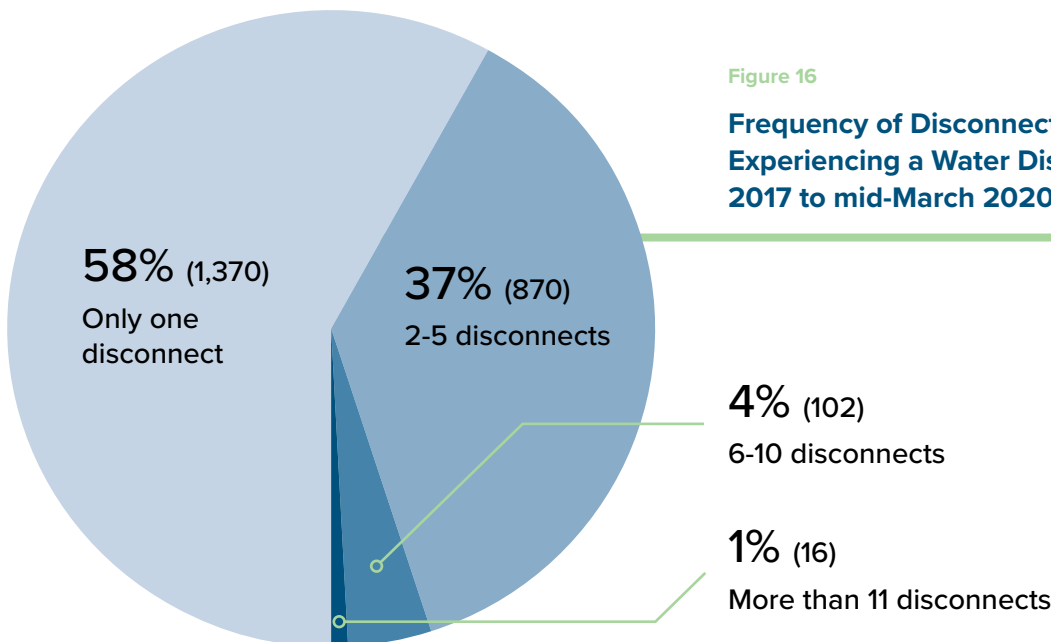


Figure 16

Frequency of Disconnects for Accounts Experiencing a Water Disconnect, 2017 to mid-March 2020

Shut-offs in communities can tend to cluster in low-income or otherwise disadvantaged areas, suggesting that they are primarily caused by inability to pay. While some of the higher incidences of disconnections do occur in DAC designated Census tracts, there isn't a clear correlation in the City's case.

The City suspended the assessment of late fees during the COVID-19 pandemic. The City began assessing late fees again in September 2023. In January 2024, the City reinstated water disconnections for accounts that are 60 days past due that do not have a payment plan. The current City policy begins with mailing overdue and disconnect notices. If a mailed notice is returned as undeliverable, the City will attempt to reach the customer by phone or email. If that is unsuccessful, the City will leave a door tag with the notice at the property.

RECOMMENDATION 15 ▶ Exploring use of text-messaging and emails to reach customers at risk of their water being shut-off.

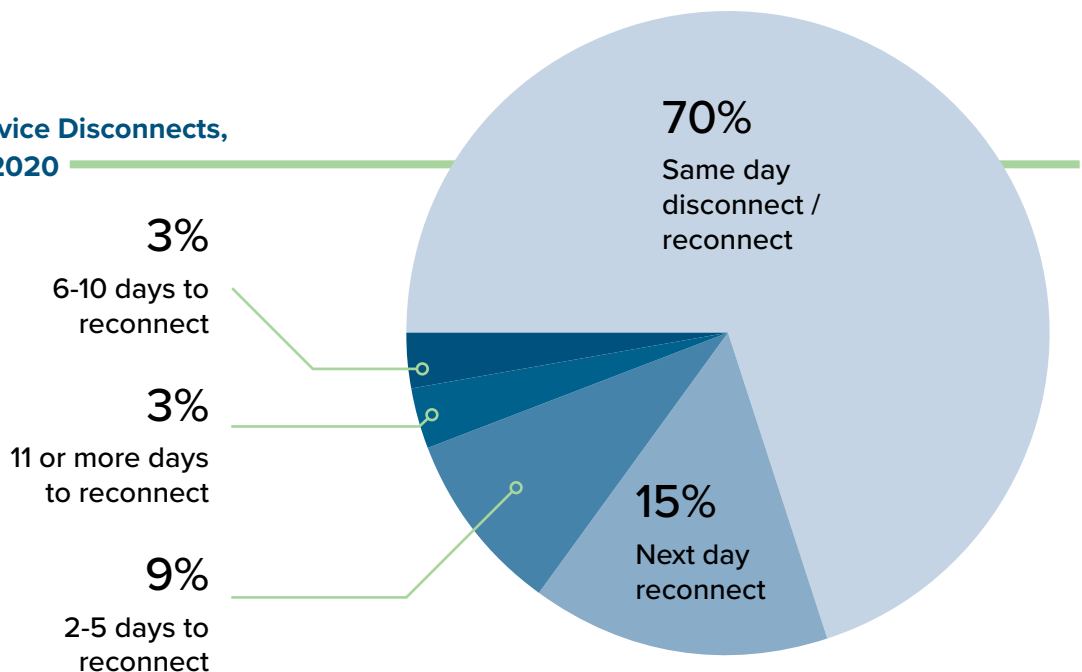
Given the prevalence of same-day and next-day reconnections, this suggests that water is an important service for residents to maintain and are willing to make sufficient payment to resume service once a consequence has been instated. The City might consider additional communication channels to reach customers and make it easier to leverage the multiple existing payment channel options. People are increasingly used to and may expect the option to receive communications through texts and emails. The City may even leverage communication through the new WaterSmart portal. The City should generally aim to maintain robust and up-to-date contact information for customers. The City may explore asking for feedback on the communications from customers who have experienced a water disconnect.

The City has modified their policies to protect customers experiencing certain types of hardships and improve the program's overall equity considerations.⁶⁰ The City will not shut off water service when doing so would pose a health and safety threat to the customer, the customer is financially unable to pay, and the customer has agreed to a payment arrangement. A customer may declare they are financially unable to pay if any member of the household is a current recipient of the following benefits: CalWORKS, CalFresh, general assistance, Medi-Cal, SSI/State Supplementary Payment Program, or California Special Supplemental Nutrition Program for Women, Infants and Children; or if the customer declares the household's annual income is less than 200% of the federal poverty level.⁶¹ For reference, the income threshold for a household of 4 is \$60,000 per year.

The City could explore working with residents and community-based partners to review City practices to see what processes and requirements may serve as barriers to resident participation in customer assistance programs. Just because residents aren't asking for resources, programs or information, or potentially not participating in the programs is often a symptom that there may be barriers to participation, rather than a sign that they aren't interested in or don't need assistance.

Figure 17

Length of Water Service Disconnects, 2017 to mid-March 2020



6. Summary and Conclusions

Water conservation and efficiency strategies can mitigate affordability challenges by reducing household water use and lowering water and wastewater bills. Sustained water conservation at a large scale can help utilities avoid, defer, or downsize capital investments in facilities and infrastructure. Affordability is a challenge that requires a multi-pronged approach and must be incorporated into all strategic, financial, and operational planning efforts.

AWE employed a data-driven approach to assess water affordability in the City of Santa Barbara. By leveraging Census data, monthly household-level water consumption, and water and wastewater billing data, the Assessment provides insights into:

- ✔ How water affordability challenges vary across the community and demographics,
- ✔ Water affordability impacts to vulnerable households,
- ✔ Strategies to mitigate water affordability challenges,
- ✔ Smart practices at the City that encourage water affordability and conservation,
- ✔ And recommendations to improve water affordability and conservation outcomes.

AWE also recognizes that each community is unique. To tailor this Assessment to the City of Santa Barbara's needs, special considerations are included on:

- ✔ Water affordability for multi-family residents,
- ✔ Engaging with community members and gathering local perspectives and experiences in managing water use and bills,
- ✔ Proposition 218,
- ✔ And water shut-off policy.

This Assessment reviewed the water and bill savings potential across a variety of water conservation, efficiency, and bill assistance strategies. Findings show that:

- ✔ Water conservation and efficiency strategies have the potential to yield annual water and wastewater bill savings ranging from \$82-\$355, translating to 7-15% reductions across household types, on average.
- ✔ Customer assistance programs have the potential to yield annual water and wastewater bill savings ranging from \$122.40-\$391.20, translating to 10-33% reductions across household types, on average.
- ✔ When unaffordable water bills are even partly a function of inefficient behaviors or old, leaky fixtures, appliances, and pipes, then water conservation and efficiency programs can tackle structural issues that may be keeping a household from getting back on track and/or staying on track with on-time payments.

Next Steps

Incremental changes to water and wastewater rates implemented by the City to date have helped slow the growth of water affordability challenges across the community. As the City explores future rate increases, the findings and recommendations in this Report will be critical. This assessment provides a framework to understand how changes might exacerbate existing equity issues among the most burdened and disadvantaged communities; and provides strategies to mitigate possible impacts through the policy, programmatic, and educational measures discussed.

Community members and customers need clear and consistent education on water affordability, water conservation, and the resources available to them to better manage their bills and water use. As the City considers the recommendations from this Report, it will be important to evaluate outcomes from community outreach and engagement to determine what solutions resonate with community members, as well as what messaging, communication, and engagement strategies will be most effective going forward to reach vulnerable communities.

7. Full List of Recommendations and Summary of Smart Practices



This is a consolidated list of the smart practices already in place in the City related to community engagement, rates, metering, billing, and water conservation.

Smart Practices at the City

Community Engagement

Provides many engagement materials in both English and Spanish and provides interpretation services as public events; has City staff available to translate materials and interpret in person and on the phone.

Has built and worked to maintain relationships with several key community-based organizations.

Utilizes a variety of communication and outreach avenues to reach community members, including bill inserts, newsletters, regularly updated websites, and press releases.

Rate Structure

Regularly conducts rate studies.

Adopts incremental rate increases over time, which avoids bill shock to customers.

Uses tiered rates for the volumetric portion of residential water bills.

Sets the first tier of consumption at a relatively low level compared to the highest tier.

Collects one time capacity charges for new customers connecting to the system and to existing customers increasing their capacity.

Metering & Billing

Bills monthly.

Provides an online bill calculator.

Provides multiple ways to pay and receive notifications.

Requires metering for each dwelling unit.

Requires submetering in situations with space constraints.

Requires that non-residential uses on a lot or within a structure must be separately metered from residential units.

Requires that irrigation be separately metered for larger landscapes.

Water Conservation

Has dedicated staff supporting water conservation programs.

Offers a variety of conservation programs and educational resources.

Incentives help cover a sizable portion of costs.

Partners with others in the region and community.

Has a current Water Conservation Plan.

Continuous effort to explore programs for future implementation.

Next is the consolidated list of the recommendations throughout the report. Note that these recommendations are merely listed in the order they appeared in the report and do not reflect order of importance, priority, or ability to implement. Some of these recommendations may be easier for the City to explore and possibly implement, while others may take considerably more effort. It is ultimately up to the City to determine its next steps on the journey to support its community.

Rate Structure Related Recommendations

These recommendations are to be explored within the City's rate studies, and the City should evaluate if and when the timing makes sense.

RECOMMENDATION 1 ▶ Explore maintaining relatively low fixed charges for residential customers.

Generally, lower fixed charges improve affordability and increase the conservation pricing signal. Lower fixed charges give customers greater control over their bill because conserving and using water more efficiently has a larger and more direct effect on the amount of a given customer's total bill.

RECOMMENDATION 2 ▶ Explore consumption-based fixed charges.

Some utilities vary the fixed charge based on how much water the customer uses such that high-use accounts face higher fixed charges. This approach can indirectly help lower water affordability challenges as low-income households tend to use less water, on average.

RECOMMENDATION 3 ▶ Explore alternative options to make the multi-family rates more closely mirror single-family rates.

The current residential rate structures have a regressive quality to them such that single-family households have more of the less-expensive Tier 2 water available to them than multi-family households. Single-family accounts also have a cap on how much water use is used to calculate their wastewater bills, whereas all multi-family water use is used in determining their wastewater bill.

RECOMMENDATION 4 ▶ Evaluate the cost of service for residential customers that drive peak demands; consider a fourth tier if needed based on review of consumption data.

Peak water demands determine the size and timing of water supply and related water infrastructure capacity investments, and ratemaking should aim to recover these costs from the customers that contribute most to peak demands. Peak demands are also relatively more costly to serve because doing so requires investing in more water supplies and larger capacity infrastructure that is used seasonally and most especially during a few dry and hot weeks during a given year.

Recommendations from Appendix B

These recommendations are also related to the rate structure and would be options to explore in the long-term, within the context of the City's rate studies.

RECOMMENDATION B-1 ▶ Evaluate and adjust the volumetric pricing based on the cost to serve the gravity-fed portion of Santa Barbara's system compared to the various pressure zones, which require more extensive pumping.

RECOMMENDATION B-2 ▶ Evaluate how dwelling unit density affects the cost of service and consider whether rate design changes could be made to account for density-related differences.

Water Conservation Related Recommendations

RECOMMENDATION 5 ▶ Assess historical participation in water conservation programs by census tract.

This assessment did not explore if there is, or historically has been, a difference in participation in conservation programs between households based on income level or other relevant socio-demographic data like those presented earlier in this assessment. This would be a good first step to understanding historical participation and where more vulnerable households may not yet have benefited from water-saving programs.

RECOMMENDATION 6 ▶ Explore strategies to expand and improve accessibility of current water conservation programs.

Accessibility can be improved through process and program design. For example, the City can improve language-access by ensuring all information, outreach communications, and resources are also available in Spanish, since that is the main additional language spoken in the community. The City could also continue to work with and identify any new opportunities to train others to assist residents with water conservation education and strategies, including folks at community-based organizations who might be working with residents on housing-related issues, local water-related businesses or volunteers with plumbing skills.⁶²

RECOMMENDATION 7 ▶ Implement an indoor water efficiency focused program and explore alternative program models to maximize access across all types of customers.

The City has great potential to reduce indoor water use through reliable strategies like toilet replacements, however, traditional rebate water conservation and efficiency programs are not designed with low-income households in mind who may not be able to make the upfront purchase and wait for reimbursement, or may not be able to pay for plumbing services. Common alternative program models could include a direct install model (with or without a customer cost-share), or a free or subsidized leak detection and plumbing repair service program. The City also already has a rebate for a smart home device, which can help households with tips to reduce use and flag leaks; the City could explore offering these at a lower cost or directly installing for lower-income households.

RECOMMENDATION 8 ▶ Leverage the average water use data presented in the Water Use & Affordability Analysis section to help identify low-income or otherwise vulnerable households that may be using water inefficiently.

Utilities commonly promote the same conservation programs and tips across their entire service area. Relatively simple data analysis can help target outreach to households who are likely to benefit from water conservation strategies, and thus lower their water and wastewater bills.

RECOMMENDATION 9 ▶ Ensure communications and marketing strategies for the Advanced Metering Infrastructure and WaterSmart portal are specifically designed to reach account holders in low-income and multi-family settings.

Similar to Recommendation 6, the City could also train others in the community who work with or are trusted by low-income or otherwise vulnerable households to help account holders get registered with the customer portal, set up leak and high usage alerts, and understand their water use patterns.

RECOMMENDATION 10 ▶ Leverage the Advanced Metering Infrastructure hourly data and WaterSmart portal communication platform to help target water conservation tips, programs, and customer assistance programs to those who are using water inefficiently and if done proactively, can help avoid high bills.

Customer Assistance Related Recommendations

RECOMMENDATION 11 ► Explore opportunities to improve the clarity and accessibility of water bills, including using easy-to-understand units and language.

This recommendation connects well to opportunities for education through the new AMI system and customer portal. These strategies collectively can help empower customers with a better understanding of their water use patterns, improve trust and confidence in the City, and may reduce customer service calls. With the large Spanish-speaking population in the City, translating even a sample bill would be helpful.

RECOMMENDATION 12 ► Explore a regular communications campaign designed to inform renters about how water and wastewater bills are calculated, the ways they might be billed for services, what programs and resources are available to them, and where to turn for support.

This effort could be in partnership with agencies focused on housing, like the City's Housing and Human Services Division, the County of Santa Barbara's Housing and Community Development Department, CommUnify, the Housing Authority of The City of Santa Barbara, and/or others.

RECOMMENDATION 13 ► Explore customer assistance programs to improve and/or expand support to low-income households. This effort should also assess the process for customer participation and aim to make it as easy and accessible as possible.

In light of Prop 2018, some options that could be explored without finding significant non-rate revenue are:

- Voluntary donation program to fund free or discounted fixed charges or the first tier of water use
- Voluntary "donate your rebate" program where residents participating in water conservation programs can opt to donate their rebate to a household in need.
- Fund a program from non-rate revenue source like late fees.

Improve processes for existing programs to improve accessibility; increase awareness through education and outreach to target populations. This could include:

- Ensuring all resources and information are available in Spanish.
- Expanding the "Understanding Your Bill" resource to include a copy of a sample bill and explain the information within.
- Leverage eligibility for other more commonly-used affordability programs to define and determine eligibility for the Utility Users Tax Exemption program.
- Ensuring all resources and information are provided in common, easy-to-understand language. For example, consider updating program information on the Adjustment to Extraordinary Water Charges Program and providing a

customer-oriented summary on the City's water shut-off policy in addition to the required legal policy language already provided online.

The City can also offer programs that would support low-income or otherwise vulnerable households without specifically limiting participation or having income-eligibility requirements. The City can then focus on ensuring these programs are easy to access, and are marketed using strategies that are effective at reaching households that have typically not participated in affordability or conservation programs.

These might include:

- A direct install program for indoor bathroom fixture retrofits
- Ultra high-efficiency toilet retrofit rebate
- Free or discounted leak detection and plumbing repair services
- Leak and high use notifications

RECOMMENDATION 14 ► Explore partnerships with existing efforts addressing a broader range of affordability challenges.

Customers who have trouble paying their water and wastewater bill are likely to struggle with other costs-of-living. The City could consider partnering with relevant City and community organizations and their staff on a coordinated approach for addressing a range of affordability challenges a customer may face. Even aligning eligibility requirements or applications can make a meaningful difference for struggling households. Potential partners could include organizations focused on housing, energy services, employment services, and more.

RECOMMENDATION 15 ► Exploring use of text-messaging and emails to reach customers at risk of their water being shut-off.

Given the prevalence of same-day and next-day reconnections, this suggests that water is an important service for residents to maintain and are willing to make sufficient payment to resume service on a consequence has been instated. The City might consider additional communication channels to reach customers and make it easier to leverage the multiple existing payment channel options. People are increasingly used to and may expect the option to receive communications through texts and emails. The City may even leverage communication through the new WaterSmart portal. The City should generally aim to maintain robust and up-to-date contact information for customers. The City may explore asking for feedback on the communications from customers who have experienced a water disconnect.

Appendix A: City of Santa Barbara Water and Wastewater Rates 2018 to 2024

Table A-1

Single-Family and Multi-Family Residential Water Rates per Dwelling Unit

Fiscal Year	Fixed Rate 5/8 inch meter*	Tier 1 (First 4 HCF)	Tier 2 (Next 12 HCF)	Tier 3 (All other HCF)
2018	\$25.89	\$4.44	\$12.96	\$23.98
2019	\$27.36	\$4.44	\$12.96	\$23.98
2020	\$28.92	\$4.44	\$12.96	\$23.98
2021	\$28.92	\$4.44	\$12.96	\$23.98
2022	\$29.57	\$4.62	\$13.77	\$25.89
2023	\$31.05	\$4.85	\$14.46	\$27.19
2024	\$32.60	\$5.10	\$15.19	\$28.54

* Fixed rates are larger if the account has a larger meter. 5/8" is the most common meter size for both single and multi-family customer classes.

Table A-2

Single-Family Residential Wastewater Rates

Year	Fixed Rate	Volumetric Rate	Volume Cap
2018	\$18.52	\$3.22	10 HCF
2019	\$19.63	\$3.41	10 HCF
2020	\$20.57	\$3.37	10 HCF
2021	\$21.60	\$3.53	10 HCF
2022	\$22.68	\$3.71	10 HCF
2023	\$25.35	\$3.83	9 HCF
2024	\$27.00	\$4.28	8 HCF

Table A-3

Multi-Family Residential Wastewater Rates*

Year	Fixed Rate	Volumetric Rate
2018	\$18.52	\$3.22
2019	\$19.63	\$3.41
2020	\$20.57	\$3.37
2021	\$21.60	\$3.53
2022	\$22.68	\$3.71
2023	\$25.35	\$3.83
2024	\$27.00	\$4.28

* In FY18 and FY19 there was a volume cap of 8 HCF for accounts serving 1-4 units, and a cap of 7 HCF for accounts serving 5 or more dwelling units. For FY20 through FY22, the cap for accounts serving 1-4 units was 10 HCF, and the cap was removed for accounts with 5 or more dwelling units. In FY23 the cap was removed for all multi-family accounts.

Appendix B

Long-term Considerations for Future Rate Studies

Looking ahead to future rate studies, there are two areas where deeper exploration may result in rates that improve affordability for low- and moderate-income customers. While the primary driver would remain designing rates that reflect the cost of service, it is also worthwhile to consider the affordability impacts of rate design decisions. As stated previously, this assessment was developed independent of the cost-of-service analysis and related rate studies, and as a result any recommendations in this assessment that the City chooses to consider further should be fully evaluated with the City's staff, rate consultant, and legal counsel to ensure they are compatible with the City's cost of service, rate structure, and Proposition 218.

RECOMMENDATION B-1 ► Evaluate the feasibility of adjusting volumetric pricing based on pressure zones to account for areas of the system that are gravity-fed rather than areas that require extensive pumping to provide water service.

Providing water service to the downtown areas of the City and the relatively flat areas immediately around it requires very little pumping because water flows by gravity from the City's Cater Water Treatment Plant. Serving the hillier areas outside of the downtown area requires the use of more numerous and larger pumps and tanks to push the water up the hills and to maintain adequate water pressure at higher elevations. This has been achieved through the creation of various pressure zones within the City's water distribution system. The City's low- and moderate-income customers are more concentrated in the gravity fed portions of the system, while higher income customers are more concentrated in the areas of the system that require pumping.

Future cost of service studies could include the data for capital cost of pumping-related infrastructure and the variable costs of pumping, such as electricity and other operations and maintenance costs. These costs could be allocated to customers within a given pressure zone. These pumping-related costs, in turn, would no longer be borne by customers in the gravity-fed portion of the system.

In the City's case, this change in rate design would also result in relative affordability improvements to low- and moderate-income customers who are concentrated in and around the downtown area, which is the gravity fed area of the system.

RECOMMENDATION B-2 ► Evaluate how future rate designs may account for how dwelling unit density affects infrastructure renewal, repair, and replacement and whether accounting for these differences could improve affordability for low-income customers.

In addition to the characteristics used to group customers into classes in the current rate study, future rate studies could evaluate how the density related characteristics of different customer classes relates to capital expenses for infrastructure renewal, repair, and replacement. Furthermore, additional customer classes could be created if feasible.

Consider, for example, that the length of pipe need per dwelling unit is relatively low for multifamily development and the length of pipe per dwelling unit increases as you move to townhomes and attached residential, and finally to single-family residential, which requires the longest length of pipe on a per dwelling unit basis to serve.

Based on these principles, the portion of the rates and charges related to infrastructure renewal, repair, and replacement could be adjusted to reflect the relative cost of service for different residential customer classes based on density effects. This could mean the lowest relative fixed charge for multifamily, a higher charge for single-family attached, and the highest charge for single-family detached. While the City currently only has single and multi-family classes, multi-family housing takes many forms. Further differentiation among residential customer classes could be explored.

Given that low- and moderate-income customers are more likely to rent than own a home, this approach would likely improve relative affordability for these customers.⁶³

Appendix C: California Affordability Efforts & Metrics

The state of California has been assessing the issue of affordability and has underscored the importance of access to water. Two resolutions are key in this effort.

State policy through AB 685 (2012), the Human Right to Water, aims to ensure universal access to water by declaring that “every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes.” “However, water is becoming more expensive and as a result low-income households are becoming more burdened by drinking water costs”.

Next, AB 401 (2015) the Low-Income Water Rate Assistance Act specifically focuses on the State developing strategies to assist low-income households in affording their drinking water. The State Water Board has committed to achieving the Human Right to Water commitment in full. This includes implementation of safe drinking water solutions, reducing vulnerability to shortages, community-level affordability and financially sustainable drinking water systems, and access to water and sanitation for the most marginalized in our society. The Low-Income Water Rate Assistance program will provide a safety net for low-income residents statewide. A variety of efforts for this Act are publicly available online.⁶⁴ Currently, the state is supporting funding for the federally-established Low Income Household Water Assistance Program (LIHWAP).

Comparison of City-specific Affordability Analyses to Statewide Analyses

This City-specific assessment provides a deeper and more nuanced look at affordability in two ways when compared to the California State Water Resources Control Board (State Water Board) and the California Public Utilities Commission’s (CPUC) analyses.

First, this study uses the latest affordability metrics which focus on affordability for the lowest quintile of customers based on household income rather than the median household income.

Second, it looks at affordability on the Census tract level rather than the City as a whole. For these reasons, this study will help the City fine tune its rates and more granularly consider the impacts to low-income or otherwise vulnerable customers in its service area. From the statewide perspective, the California Water Boards’ and the CPUC’s approaches do a great job at looking at the big picture, and it is important to keep their community-level findings in mind as the City considers affordability at the local level.

State Water Board

As part of its annual Drinking Water Needs Assessment, the State Water Board publishes data on water utility affordability. These metrics have evolved over time:

Affordability Indicators Used in the Annual State Water Board's Drinking Water Needs Assessment

Table C-1

Indicators	Household / Community	Rates-Based?	2021	2022	2023
Percent of Median Household Income (%MHI)	Community	Yes	✓	✓	✓
Extreme Water Bill	Community	Yes	✓	✓	✓
% Shut-Offs (Removed 2023)	Household	Yes	✓		
Percentage of Residential Arrearages (Removed 2023)	Household	Yes		✓	
Residential Arrearage Burden (Removed 2023)	Community	Yes		✓	
NEW: Household Socioeconomic Burden	Community	No			✓

The State Water Board's **2023 Drinking Water Needs Assessment Affordability Assessment Results** (2023 Affordability Assessment) was recently completed, and it uses the following two rate-based indicators and adds a new non-rate based indicator, which includes a component of the analysis that was conducted for this study:⁶⁵

% MHI: Percentage of water bills compared to median household income, with 1.5% being the affordability threshold; and

Extreme bills: Measures drinking water customer charges that meet or exceed 150% of statewide average drinking water customer charges at the six HCF (about 4,500 gallons per month) level of consumption.

Household Socioeconomic Burden: This risk indicator identifies water systems that serve communities with both high levels of poverty and high housing costs for low-income households.

Poverty Prevalence: the percent of population living below 200% of the federal poverty level. (Calculated at the Census tract level for this study).

Housing Burden Indicator: the percent of households in a Census tract that are both low income (making less than 80 percent of the Housing and Urban Development (HUD) Area Median Family Income) and also severely burdened by housing costs (paying greater than 50 percent of their income to housing costs).

Based on these indicators, and considering the community as a whole, the California Water Boards determined for 2023 that the City's overall affordability burden is none, which is the lowest level.⁶⁶

The median household income for the City used in the State Water Board's 2023 Affordability Assessment was \$127,387.90, and the total drinking water charges for 6 HCF was \$75.59. The City's average bill for drinking water charges at this consumption level was determined to be only 0.7% of MHI. The Statewide average water bill for 6 HCF in the 2023 Affordability Assessment was \$65.85, so the City's average bill of \$75.59 is 115% of the statewide average, and the City's average bill, therefore, does not meet the threshold to be considered an extreme water bill. The overall poverty prevalence for the community was determined to be 18% and the overall housing burden to be 15.5%. This illustrates the challenges with assessing affordability at a community scale—it masks the nuance of impacts and experiences to subsets of a community's population. The very high incomes of a portion of the City of Santa Barbara's water service area are offsetting the burdens and challenges of low-income households.

California Public Utilities Commission

Through a series of regulatory actions, the CPUC has made affordability rules and as part of that process, collected rate and affordability data for all utilities in the state, including water utilities like the City that are not regulated by the CPUC.⁶⁷ In 2018 they examined the impact of essential energy, water, and communications service charges for residential households, given their socioeconomic statuses. Phase 1 concluded in 2020, which defined affordability, set essential service levels (also 6 HCF like the consumption threshold used in the California Water Board's 2023 Affordability Assessment), and adopted 3 affordability metrics.

The CPUC most recently issued the 2022 Affordability Ratio Calculator, which includes all water utilities, whether regulated by the CPUC or not. Each water utility is evaluated based on service area. The CPUC focuses on two metrics, the affordability ratio and hours at minimum wage, and also looks at relative standing according to CalEnviroScreen data. The affordability ratio is the main metric for assessing affordability.

The affordability ratio "quantifies the percentage of a representative household's income that would be used to pay for an essential utility service, after non-discretionary expenses such as housing and other essential utility service charges are deducted from the household's income."⁶⁸ The threshold for affordability ratio is 10 percent.

The hours at minimum wage metric is based on the hours of work needed at the city's minimum wage to pay for essential utility services. Interactive maps and web-based tools are available from the CPUC online.⁶⁹ This interactive tool can be used to search for the City.

At the community level, these are the data for the City of Santa Barbara compared to the state average:

Affordability Ratio:

- City: 7.23%
- Threshold for Affordability Concern: 10%

Hours at minimum wage:

- City: 5.61 hours
- Statewide Average: ~5.5 hours

Based on these affordability metrics from the California Water Boards and the CPUC, the affordability concerns viewed at a City-wide level do not present a citywide challenge whether one looks at the combined affordability for utilities or for water alone.

Appendix D: Community Outreach and Engagement Strategy & Results

Key Messages

Below are the key messages with which communication materials and resources for this assessment were developed:



MESSAGE 1 Water Vision Outcomes

Water affordability, conservation, and equitable access were identified as important community values in the Water Vision Santa Barbara effort conducted in 2020.

Providing affordable and equitable access to clean water is a primary objective of the City's Water Resources Division. To meet this objective, the City has partnered with AWE to further explore the topic of water affordability.



MESSAGE 2 Why Water Affordability?

Affordability is a growing concern as water and wastewater rates rise to account for increasing costs due to aging infrastructure, extreme weather events, climate change, regulations, a growing population, and inflation, to name a few.



MESSAGE 3 Community Perspectives on Water Affordability

Residents are experts of their own experiences. Recommendations and solutions proposed by AWE must be reflective of community needs, experiences, and concerns surrounding water affordability, access, and conservation.



MESSAGE 4 Water Conservation as a Solution to Water Affordability Challenges

Water conservation and efficiency strategies can help keep water and wastewater bills affordable in vulnerable communities.

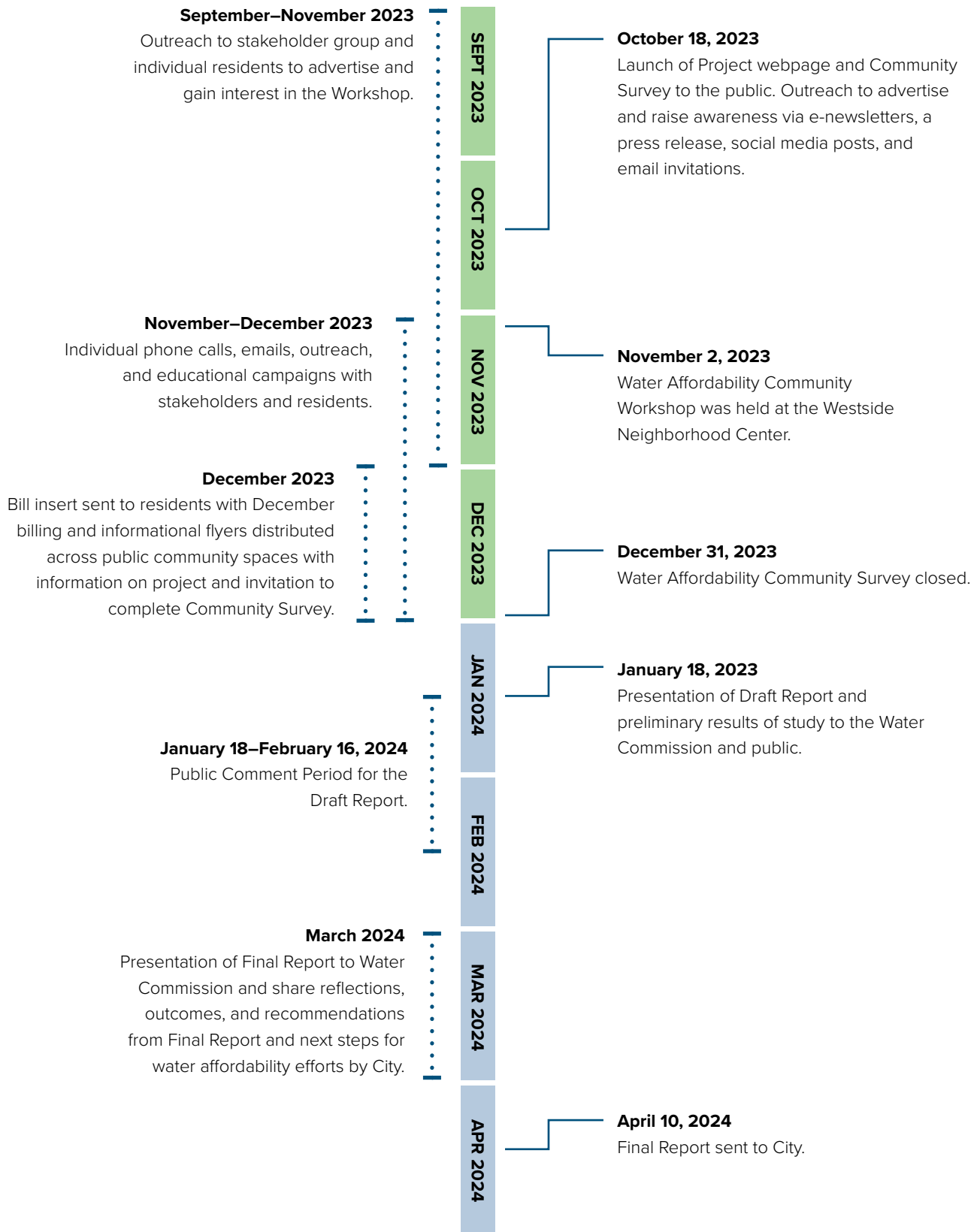
Stakeholder List

This stakeholder list is comprised of participants from Water Vision Santa Barbara and additional local organizations identified through outside research.

Organization

Allied Neighborhoods Association
Barbareño Band of Chumash Indians
Black Lives Matter
Citizens Planning Association
Coastal Housing Coalition
CommUnify
Community Environmental Council
Food and Water Watch
Habitat for Humanity Santa Barbara Chapter
Heal the Ocean
Hispanic Chamber of Commerce
La Casa de la Raza
League of Women Voters
Neighborhood Advisory Council
People's Self-Help Housing
SB ACT (Santa Barbara Alliance for Community Transformation)
Santa Barbara of Realtors
Santa Barbara Rescue Mission
Santa Barbara Rental Property Association
UCSB Pan Asian Network
United Way of Santa Barbara County
Visit Santa Barbara

Outreach Program Timeline



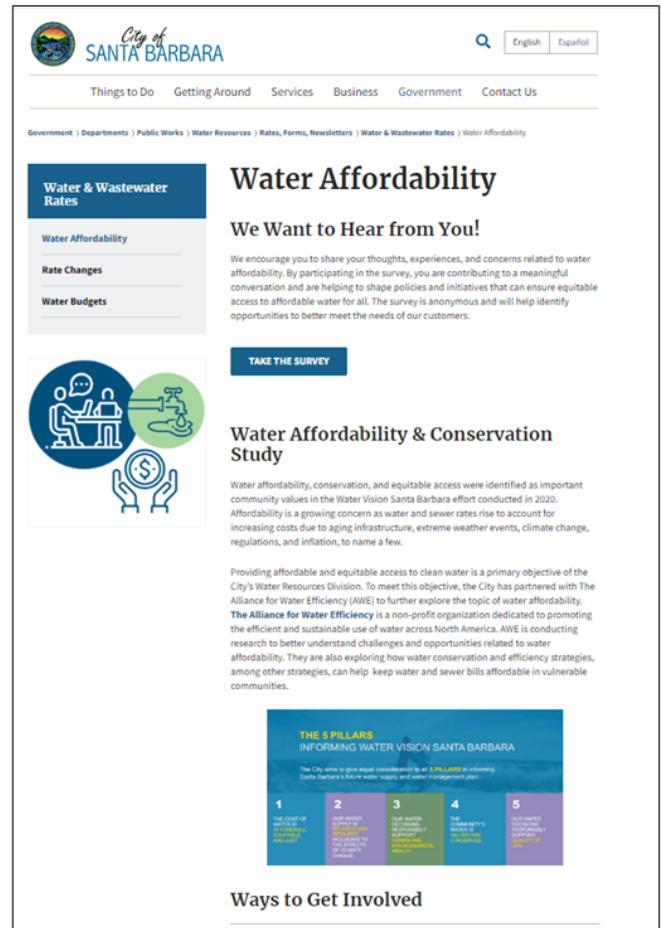
Public Engagement Activities

Water Affordability City Webpage

AWE worked with the City to launch a Water Affordability webpage, housed within the “Water & Wastewater Rates” section of the City’s website.⁷⁰ The webpage, available in both English and Spanish, provides residents with a platform to learn more about the Water Affordability Study, be updated on project milestones, see upcoming opportunities for engagement (with external links when relevant), and access contact information for the project. Residents can subscribe online to receive email alerts notifying them when the project webpage is updated with project news. A snapshot of the project webpage is provided here in Figure D-1.

Figure D-1

Screenshot of the City of Santa Barbara Water Affordability Webpage



Water Affordability Community Workshop

The Water Affordability Community Workshop (Workshop) was held on November 2, 2023 from 5:30–7:00 PM (PT) at the Westside Neighborhood Center in Santa Barbara.

The goals for the Workshop were as follows:

- Inform:** Provide stakeholders and community members a refresher on Water Vision Santa Barbara, its outcomes, and current programs relating to water affordability and equity.
- Relationship-building:** Introduce the community to the project team to establish relationships and roles.
- Educate:** Share the background, rationale, and goals for Water Affordability Study.
- Listen:** Solicit community's ideas and thoughts on water affordability challenges and solutions.

To advertise the Workshop, the AWE team and the City employed the following strategies:

- Emailed and called the 22 local community organizations identified as stakeholders. Via this outreach effort, AWE was able to reach 9 community representatives who expressed interest in being involved in the project.
- Disseminated a digital flyer with workshop information via the City's project webpage, individualized emails to stakeholders, and City newsletters (see flyer in Figure D-2 below).
- Issued a City press release sharing project and Workshop information (see press release here in Figure D-3).⁷¹

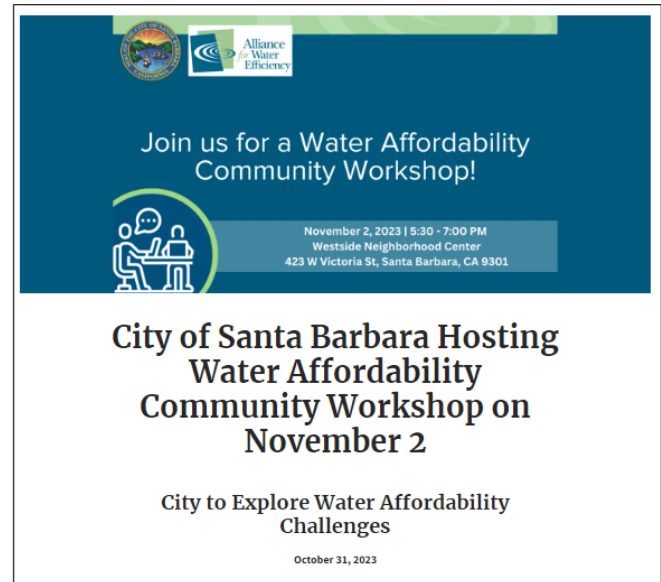
Figure D-2

Water Affordability Community Workshop Flyers



Figure D-3

Screenshot of the City of Santa Barbara's Press Release Advertising the Water Affordability Community Workshop



All materials to advertise and during the Workshop were available in English and Spanish, and live interpretation was provided for Spanish-speaking residents.



Community Workshop Outcomes

The workshop was attended by 9 individuals, including residents, local organization representatives, and City staff. Participants reported they decided to attend the Workshop because of general interest in water efficiency, concerns about water affordability among other high cost of living challenges in Santa Barbara, and interest in learning about available City resources. Participants did not report challenges in paying their water bills. They prioritize water conservation in their water use and are generally informed on water systems and utilities.

Participants believe that water is a human right and expressed general concern for future conditions that are limiting water supply, including climate change impacts, projected population growth, and drought conditions. They are also concerned about how water costs contribute to the increasing cost of living in Santa Barbara. Participants want to know more about solutions and technologies available for managing the City's water supply, how water rates can be structured to improve affordability, what the challenges are for achieving affordability, and want to explore definitions of low income in ratemaking.

Participants also engaged in a group brainstorming session to generate ideas for improving water affordability, conservation, and equity.

Solutions can be categorized in 3 areas of intervention:

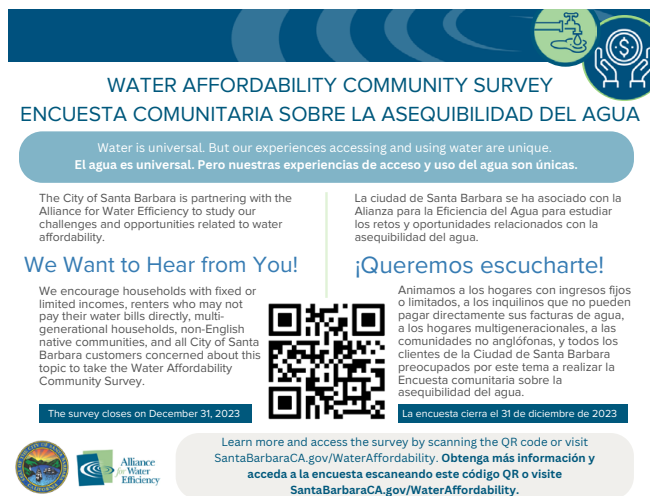
-
- 1. Education-based Interventions:** efforts by City to improve transparency of information and conduct tailored and targeted outreach to communities experiencing water affordability challenges.
 - Provide information on the timeline for improving affordability.
 - Develop a neighborhood level resource hub as a platform to interact directly with residents, answer questions and concerns, and disseminate information.
 - Target and increase outreach efforts within designated DAC communities.
 - Tailor the type of education based upon on how the community receives information.
 - Improve access to information on water bills to renter populations and non-English speakers.
-
- 2. Rate/Policy-based Interventions:** changes to current water rate structure to improve affordability and equitable access to basic water needs.
 - Eliminate shut-offs.
 - Implement a rate structure that incentivizes water conservation by targeting high water using customers.
 - Offer assistance programs based on income levels.
 - Use 80% median area income as threshold for low-income households.
 - Provide a certain threshold of water use free for basic human necessities.
 - Reduce or waive fixed charges on water bills.
 - Create a flat or consistent bill across a given year.
-
- 3. Institutional Interventions:** connecting water affordability to existing challenges residents face.
 - Increase collaboration across City departments and programs where relevant to improve water affordability, in the context that water affordability is one part of larger cost of living challenges for residents.

Flyer

Community feedback from the Water Affordability Workshop emphasized the need for increased education to residents on water affordability and water use, and targeted outreach to vulnerable communities. As a response to this, AWE and the City of Santa Barbara developed a flyer to better connect with residents living in areas of the City where water affordability challenges were identified as most prevalent and advertised the Water Affordability Community Survey. The flyer was posted and distributed in 30 community gathering spaces throughout Santa Barbara, including churches, markets, libraries, local nonprofits, and more. As shown in Figure D-15 below, the flyer directed community members to the City's Water Affordability Webpage and invited them to complete the Water Affordability Community Survey.

Figure D-15

Flyer Advertising the Water Affordability Community Survey



Bill Insert

A bill insert, displayed in Figure D-16, was sent to all Santa Barbara customers with their water and wastewater bill in December 2023. This bill insert directed customers to the City's Water Affordability Webpage and invited them to complete the Water Affordability Community Survey.

Figure D-16

Screenshot of Bill Insert Sent with the December 2023 Water and Wastewater Bill



Water Affordability Community Survey

The Water Affordability Community Survey (Survey) was available in English and Spanish online via JotForm and contained 17 questions across 4 categories:

1. Household Information
2. Water Affordability Questions
3. Water Conservation Questions
4. Other

The purpose of the Survey was to provide a platform for residents to share their experiences managing their water use and water bills in the City of Santa Barbara, and their opinions on the barriers and solutions to address water affordability challenges in their communities. The Survey also allowed the City to hear first-hand how experiences differ across demographics and living conditions in Santa Barbara, including for low-income, renter, senior, and non-English speaking residents. This data not only serves to inform the City on where challenges exist, but also helps shape what kind of solutions resonate with target communities.

The Survey launched October 18, 2023 and remained open through December 31, 2023. AWE received 74 submissions, all of which were completed on the English version of the form. A summary of responses is provided in the “Survey Outcomes” and “Free Response Analysis” sections below.

To advertise the Survey, AWE and the City employed the following digital and physical strategies. All materials were available in English and Spanish:

Posted the Survey links on the City’s Water Affordability webpage.

Sent individual emails to stakeholders.

Disseminated Survey information and link via the City News In Brief newsletter, City social media platforms, and the Santa Barbara Unified School District e-newsletter.

Included the Survey link and information in bill inserts to all City residents with December’s water and wastewater utility bill.

Distributed physical flyers with project information, QR codes, and an invitation to complete the Survey in 30 community spaces throughout the City, specifically focusing on DAC neighborhoods. Staff who disseminated the fliers were bilingual.

Posted the flier in the Central and Eastside Libraries.

Survey Outcomes

The Survey included nine multiple-choice and short-response questions. Individual submissions were analyzed to better understand the demographic make-up of survey respondents. The following figures illustrate demographic trends of respondents based on said analysis.

Figure D-4

Respondents Living in Households with Individuals Ages 65 or Older

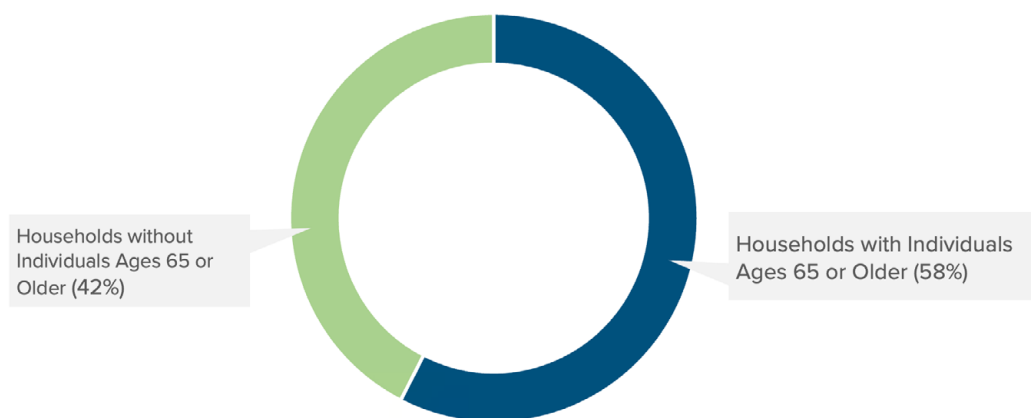


Figure D-5

Respondent Household Types

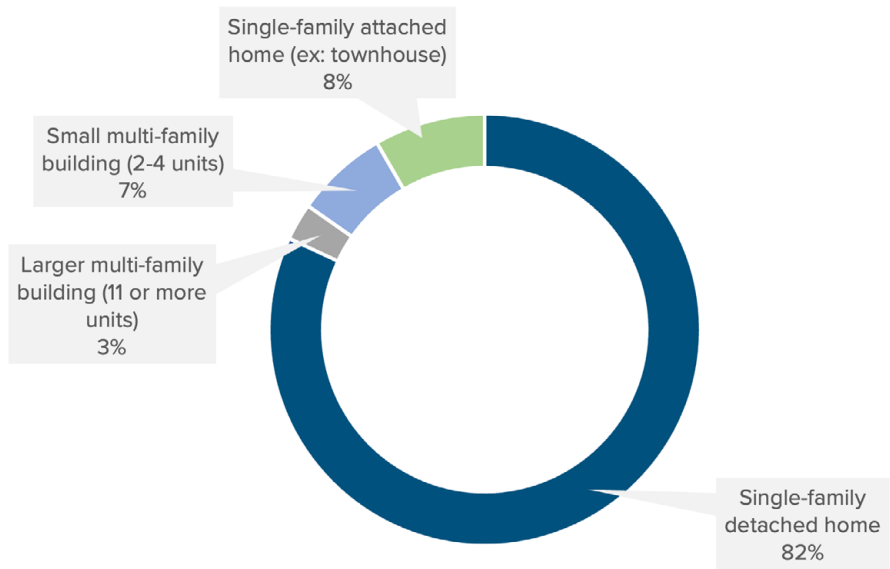
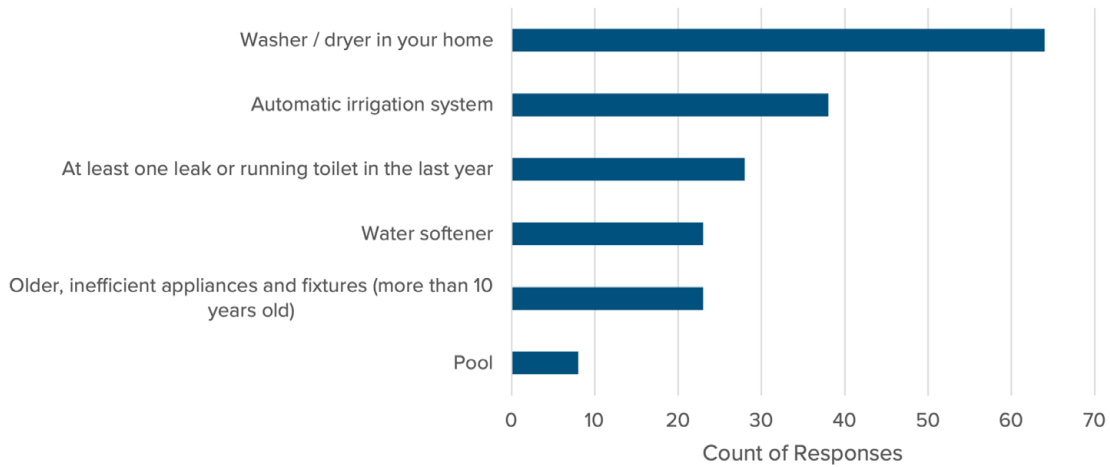


Figure D-6

Respondent Household Water Use and Appliances



Free Response Analysis

The Survey included eight free response questions. Individual submissions for each free response question were grouped into categories to draw out common themes emerging from respondents. The following figures illustrate said emerging themes.

Figure D-7

What Water Affordability Means to Community Members

What does affordable water mean to you?

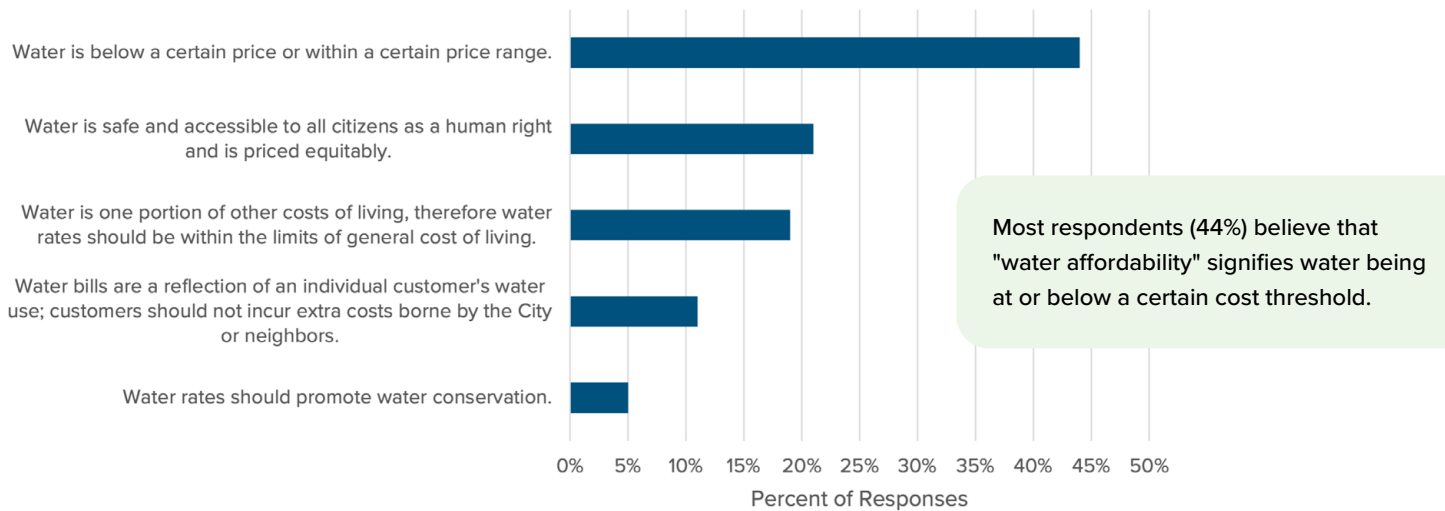


Figure D-8

Factors the Community Believes Contributes to Water Affordability Issues

What factors do you believe contribute to water affordability issues in our community?

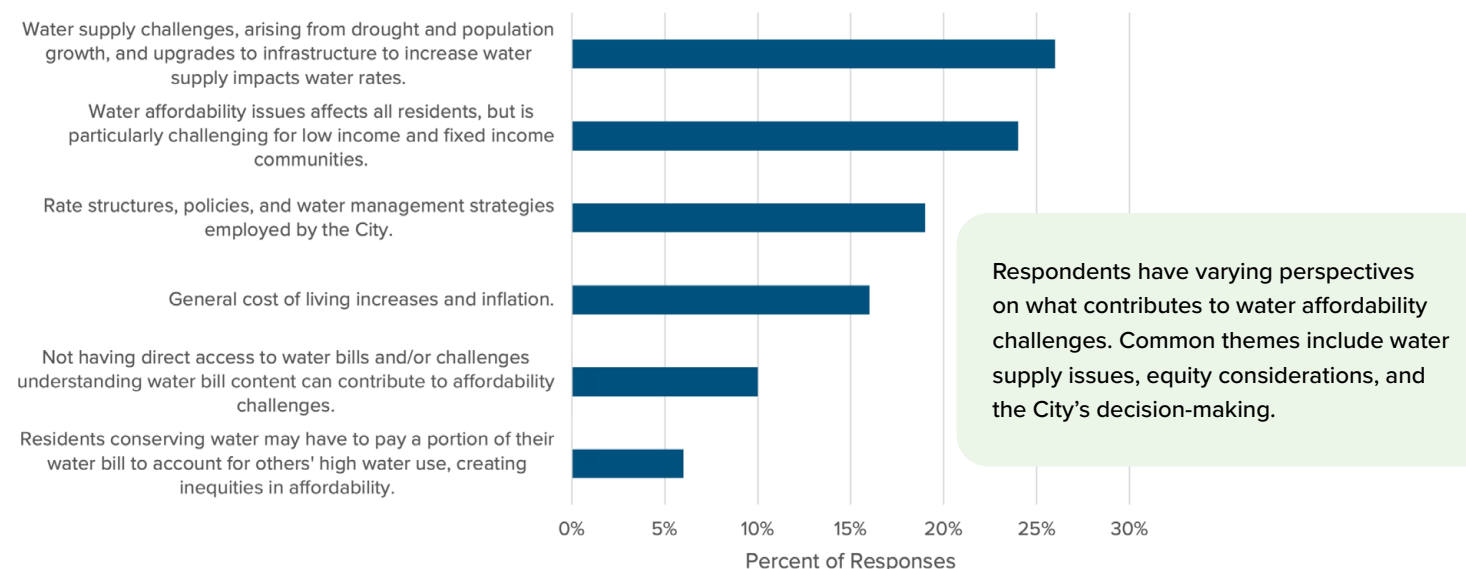
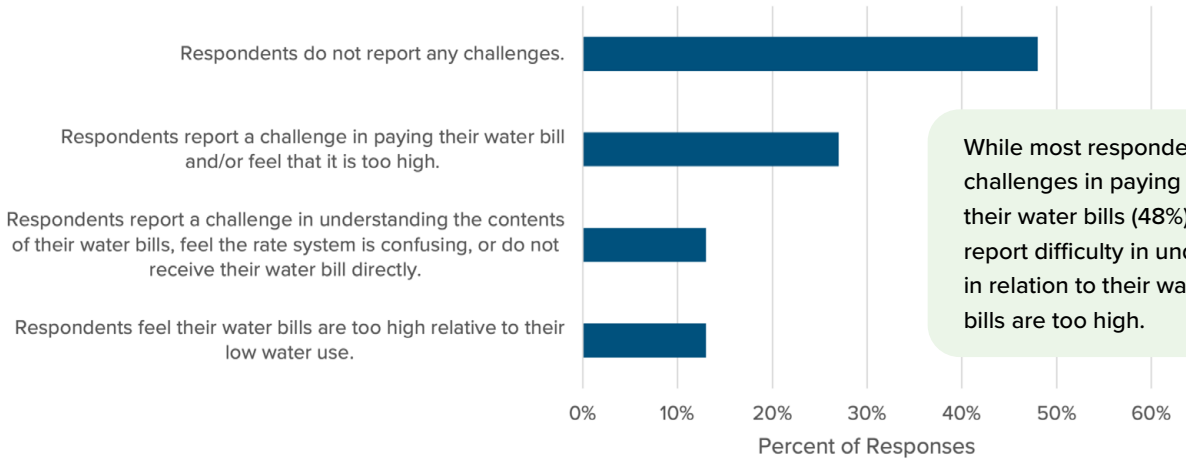


Figure D-9

Community Challenges in Paying and Understanding Water Bills

Are there any specific challenges you face in paying and understanding your water bills?

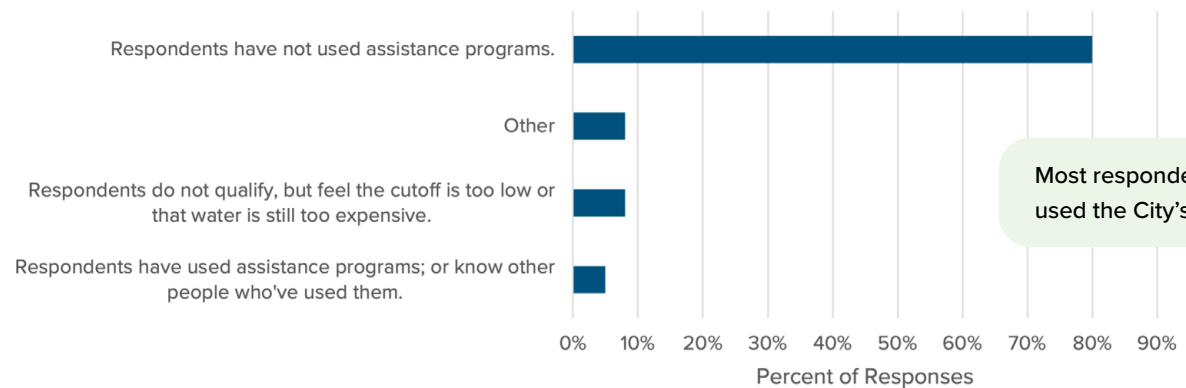


While most respondents do not experience challenges in paying and understanding their water bills (48%), respondents did report difficulty in understanding water bills in relation to their water use and feel their bills are too high.

Figure D-10

Use and Effectiveness of City's Assistance Programs

Have you or others you know used any assistance programs to help cover the cost of water bills? Were these programs effective? If not, what improvements are needed?



Most respondents (80%) have not used the City's assistance programs.

Figure D-11

Community Actions to Manage and Reduce Water Bill

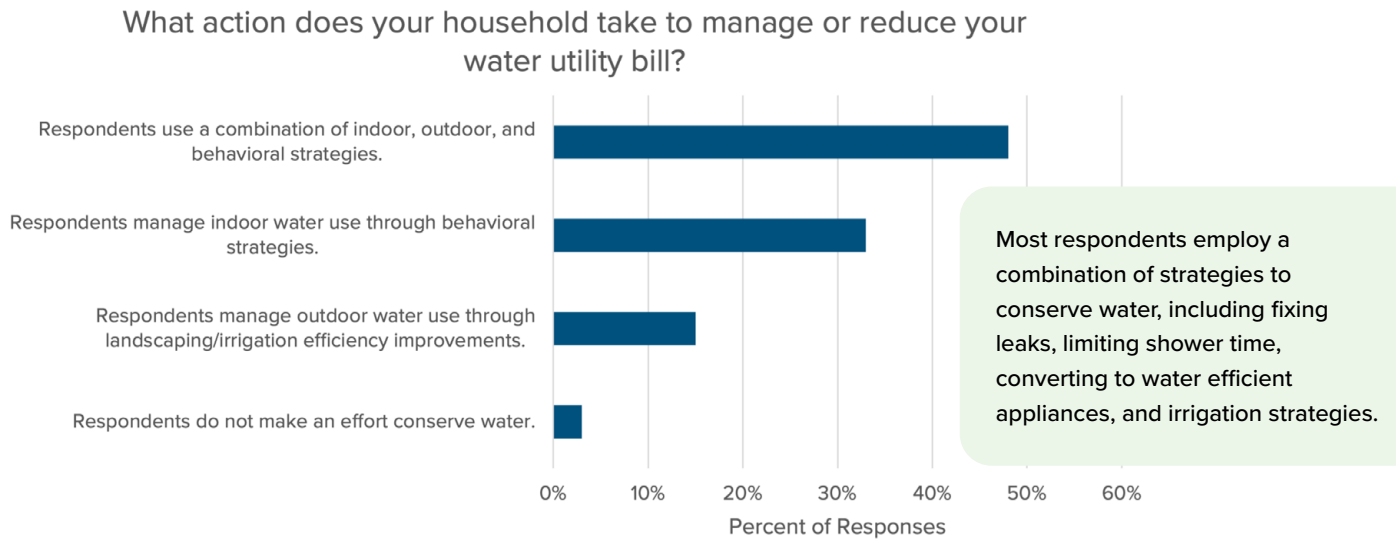


Figure D-12

Barriers to Saving Water and Managing Water Bills

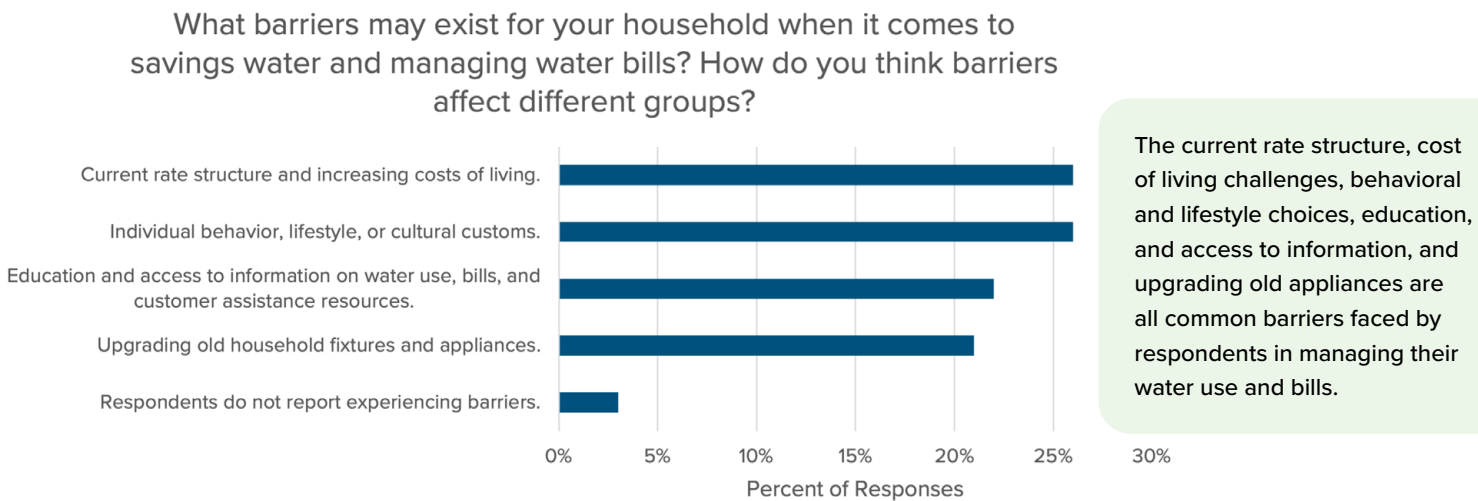


Figure D-13

Recommendations or Improvements to Water Conservation Programs

What recommendations or improvements do you have for making water conservation programs more inclusive and accessible for all populations?

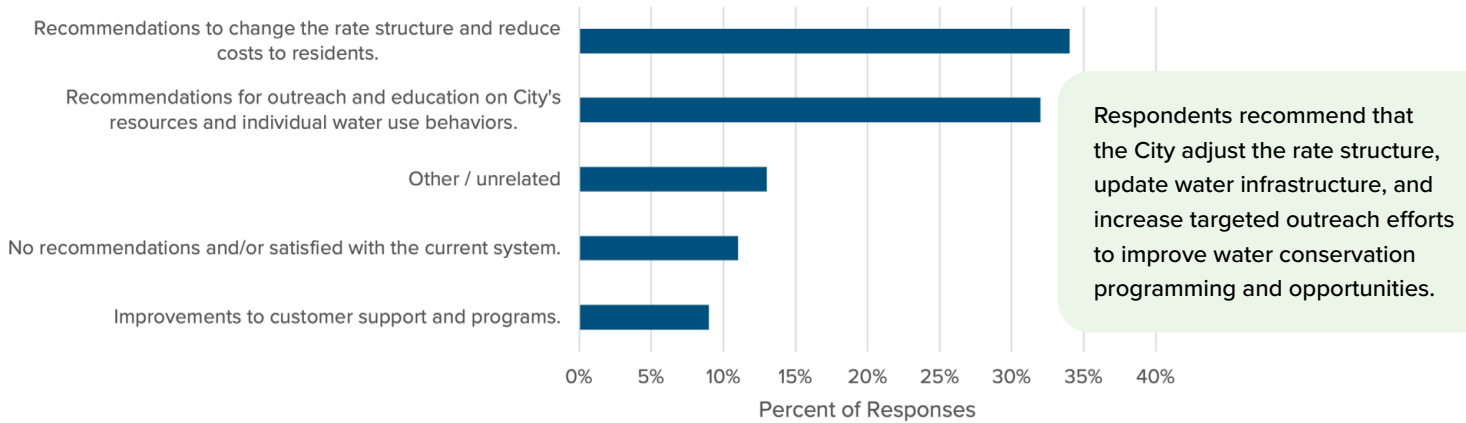
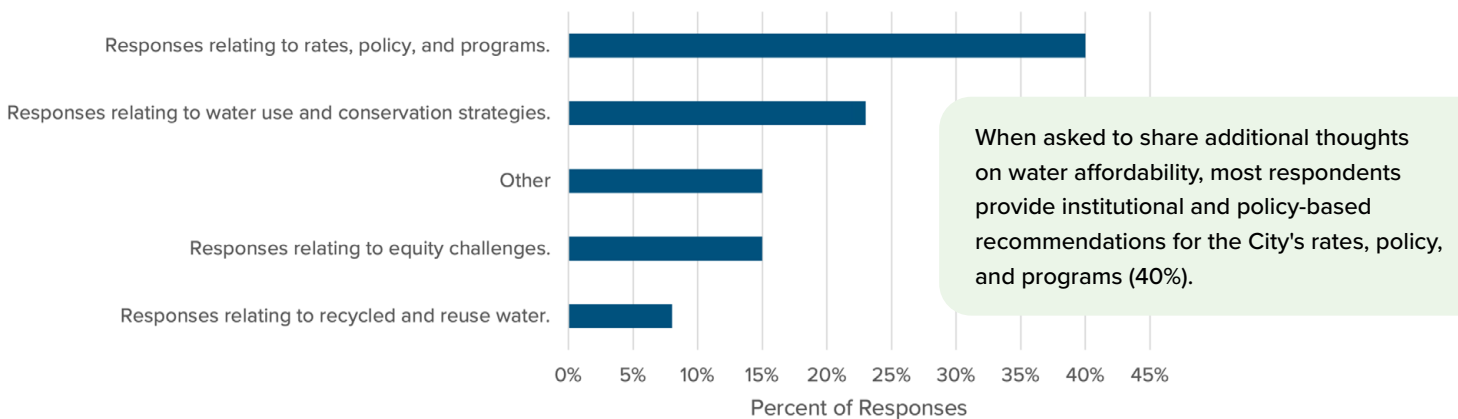


Figure D-14

General Topics of Importance to Community Relating to Water Affordability

Please share any additional thoughts you have about water affordability and water conservation in our community. Is there anything else you believe is important for us to know?



Stakeholder Conversations

Additional perspectives and insights were gathered through phone interviews for community-based organizations and stakeholders that couldn't attend the workshop but who expressed interest in this subject matter, including the Barbareño Band of Chumash Indians, The Santa Barbara Association of Realtors, and The League of Women Voters. Additionally, engagement resources and opportunities were shared via email to the Water Vision Stakeholder Group throughout the project.

The goal of these conversations was to provide background on the Water Affordability Study, share resources, and better understand the perspectives of local organizations and leaders who are working with the community on the ground on these issues. Phone call participants shared what they feel are key barriers and challenges to improving water affordability as well as brainstorming potential avenues for solutions. A main theme from the conversations involved how to improve education and access to information to community members, especially those who are most vulnerable to water affordability challenges.

Draft Report Public Comment Period

The Draft Report and an Executive Summary were available on the City's Water Affordability webpage for public review and comment from January 18 – February 16, 2024. The Executive Summary served to make the information from the Report digestible by highlighting the main takeaways, graphs, and recommendations from the Report. It also served as a directive, pointing to relevant sections in the full Report for further detail.

Why No Feedback Is Still Important Feedback

One public comment was received by the City regarding water affordability. Given this, it is important for the City to evaluate the factors at play contributing to this outcome. For instance, a lack of public comment may suggest that the community was not aware of the opportunity, or it may suggest that the community did not feel strongly enough about the topic to review the Report. Alternatively, it could also indicate that community members did not have the capacity to read the Report, review, and provide written feedback. The main audience for this report was utility staff, who already have a foundational understanding of the concepts and data the report is built upon. Evaluating outcomes of public engagement strategies in this way can provide insights for how to better reach other target audiences in the future and meet people where they are, whether that means scaling up communication efforts, providing different feedback mechanisms, or ensuring information is digestible and relatable to the intended audience(s).

Appendix E: Affordability Analysis with Solid Waste Services

This assessment was focused on water and wastewater bills, however, the City bills residents for up to three services on one single bill: water, wastewater, and solid waste (trash and recycling).⁷² The City wanted to better understand the full weight of the total utility bill so a Household Burden Indicator (HBI) metric was calculated using the average total annual utility bills by Census tract (per dwelling unit). The general trends are similar to those presented in the main assessment, though incorporating solid waste services generates a notable bump up in the HBI. In recent years, three Census tracts have an HBI around 7-8. Below are similar charts, tables and maps to illustrate the HBI data for the total utility bill with all three services.

Having additional services and charges on the utility bills can make it more difficult for residents to understand and manage their bills, especially when some charges are fixed and others are influenced by residents actions and behaviors.

Figure E-1

Total Utility Bill Household Burden Indicator across all Census tracts by Fiscal Year

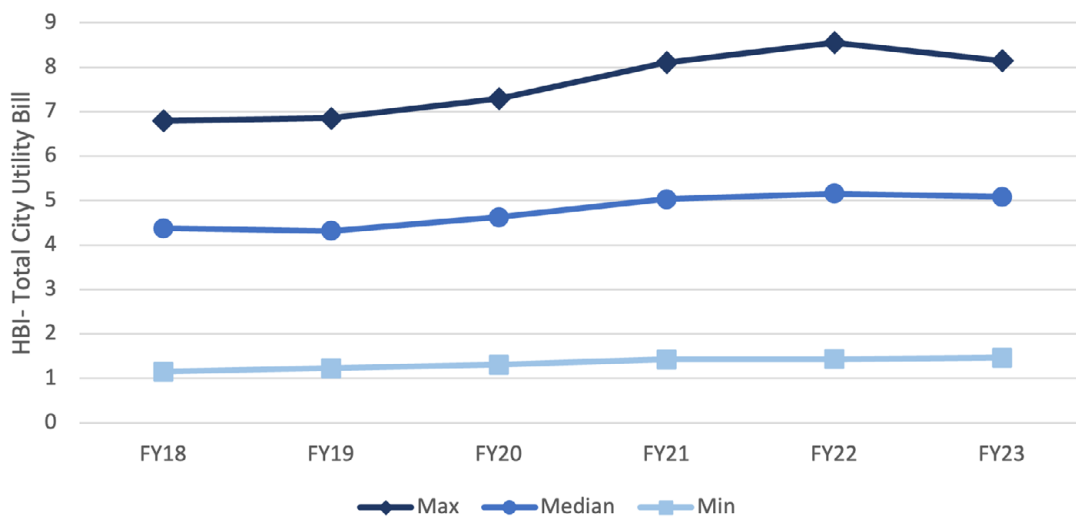


Table E-1

Minimum, Median, and Maximum HBI across Study Census tracts by Fiscal Year, including Solid Waste Services

	FY18	FY19	FY20	FY21	FY22	FY23
Max	6.8	6.9	7.3	8.1	8.6	8.1
Median	4.4	4.3	4.6	5.0	5.2	5.1
Min	1.2	1.2	1.3	1.4	1.4	1.5

Figure E-2

FY18 Household Burden Indicator Inclusive of Solid Waste Services in the City of Santa Barbara

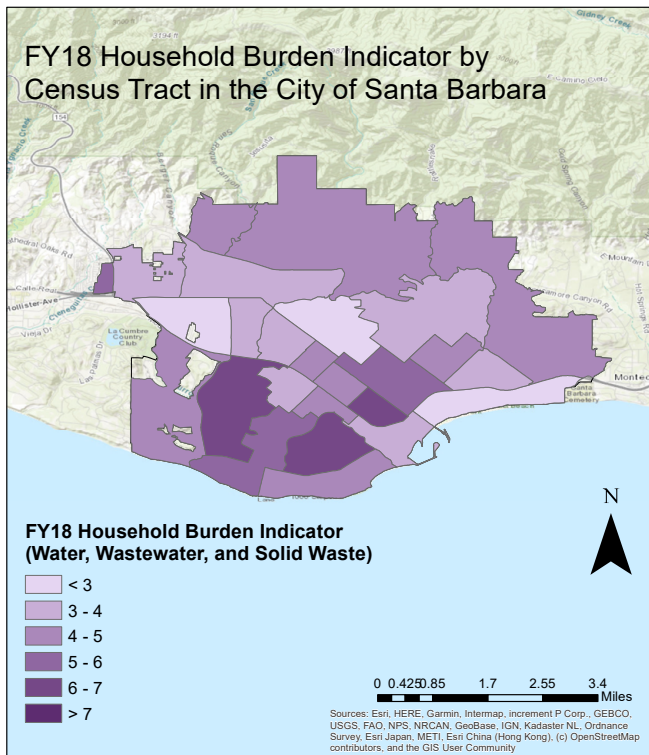
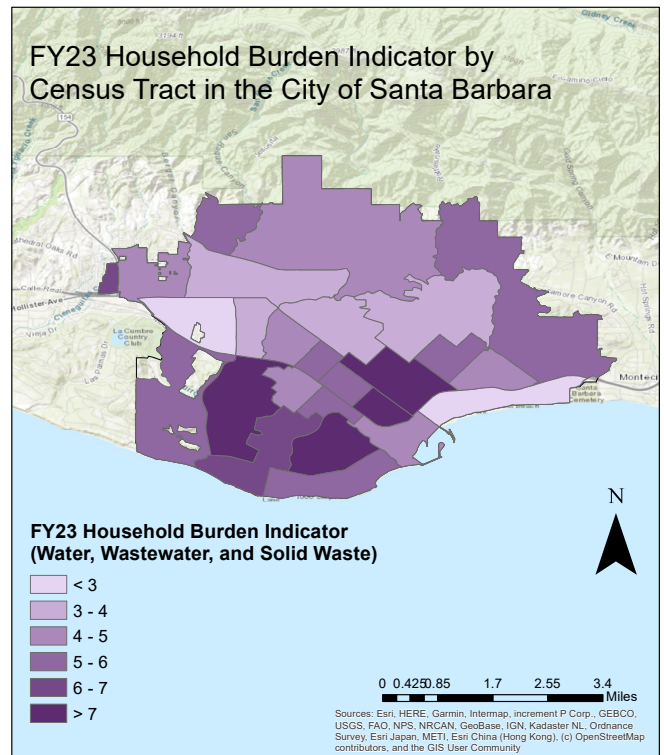


Figure E-3

FY23 Household Burden Indicator Inclusive of Solid Waste Services in the City of Santa Barbara



Endnotes

- 1 <https://santabarbaraca.gov/watervision>
- 2 <https://www.eriery.com/cost-of-living/united-states/california/santa-barbara>
- 3 <https://santabarbaraca.gov/government/priorities-policies/housing-initiatives/housing-element-update>
- 4 American Community Survey 2022 1-Year Estimates. DP04 “Selected Housing Characteristics”.
- 5 [Final 2020 Enhanced Urban Water Management Plan.pdf](#) (santabarbaraca.gov)
- 6 [Climate Action Plan Update – Sustainability and Resilience – City of Santa Barbara](#) (santabarbaraca.gov)
- 7 [Water Conservation Strategic Plan.pdf](#) (santabarbaraca.gov)
- 8 https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/needs/results_and_methodology_affordability_assessment.pdf
- 9 Leslie Sanchez et al 2023 Environ. Res. Lett. 18 044022
- 10 The specific tables are B19080: “Household Income Quintile Upper Limits” and S1901: “Income In the Past 12 Months (in 2021 Inflation-Adjusted Dollars)”.
- 11 The specific tables are S2505: “Demographic Characteristics for Occupied Housing Units” and DP04: “Selected Housing Characteristics”
- 12 Note that there are other datasets and tools including CalEnviroScreen 4.0 and the Affirmatively Furthering Fair Housing (AFFH) Mapping Tool that have been developed through a lens of environmental justice and social justice; these tools bring together a variety of data, including Census demographic data and other environmental factors. These might be useful, easy-to-access data tools for the City’s future use. See at <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40> and <https://belonging.berkeley.edu/2024-hcd-affh-mapping-tool>
- 13 [General Plan.pdf](#) (santabarbaraca.gov)
- 14 <https://gis.water.ca.gov/app/dacs/>
- 15 The six tract codes are: 8.06, 9, 10.01, 10.02, 11.02, 12.03
- 16 Overall, there were over 700 views of the survey, many of which were the same individual visiting multiple times. This tells us that while we were able to reach residents, most did not feel compelled to fill it out in its entirety.
- 17 American Community Survey (2022) tables: S1601 “Language Spoken at Home”, S0103 “Population 65 Years and Over in the United States”, DP04 “Selected Housing Characteristics”, and S1901 “Income in the Past 12 Months (in 2022 Inflation-Adjusted Dollars)”.
- 18 <https://www.awwa.org/Portals/0/AWWA/ETS/Resources/Technical%20Reports/Thinking-outside-the-bill-2022-3rd-edition.pdf>
- 19 <https://www.awwa.org/AWWA-Articles/new-guide-shows-benefits-of-community-stewardship>
- 20 <https://santabarbaraca.gov/waterrates>
- 21 Appendix B includes additional recommendations that would require significantly more analysis but could support affordability in future rate studies. These additional areas of exploration for future rate studies include 1) evaluating and adjusting the volumetric pricing based on the cost to serve the gravity-fed portion of the City’s system compared to the various pressure zones, which require more extensive pumping; and 2) evaluate how dwelling unit density affects the cost of service and consider whether rate design changes could be made to account for density-related differences.
- 22 <https://www.goletawater.com/rates/current-rates/>
- 23 <https://montecitowater.com/customer-service/rates-fees-meters/>
- 24 <https://cvwd.net/customer-service/billing/rates-and-fees/service-charges/>
- 25 Several California utilities do not appear to charge fixed charges based on the AWWA/Raftelis Rate Survey, which is very unusual. Without further review of the underlying data, it was determined that these utilities are not a useful point of comparison and were not included.
- 26 One of the most frequently cited, peer reviewed articles on this topic is “Consumption-Based Fixed Rates: Harmonizing Water Conservation and Revenue Stability” Edward S. Spang, Sara Miller, Matt Williams and Frank J. Loge, Journal AWWA Vol. 107, No. 3, Regulatory Issues (March 2015), pp. E164-E173.
- 27 <https://www.goletawater.com/rates/current-rates/>
- 28 <https://www.goletawater.com/doc/1183/>
- 29 <https://www.nrdc.org/resources/water-affordability-advocacy-toolkit>

Endnotes (continued)

- 30 <https://www.epa.gov/system/files/documents/2021-07/ws-assistance-that-saves-efficiency-and-affordability.pdf>
- 31 [Water Conservation Strategic Plan.pdf](#)
santabarbaraca.gov
- 32 [Final Water Shortage Contingency Plan.pdf](#)
santabarbaraca.gov
- 33 <https://www.allianceforwaterefficiency.org/resources/topic/g480-20-standard-and-awe-leaderboard>
- 34 [Water Checkup | City of Santa Barbara](#)
santabarbaraca.gov
- 35 [Water Education | City of Santa Barbara](#)
santabarbaraca.gov
- 36 Master Gardeners are one example of a group the City has partnered with in the past. https://cesantabarbaraca.ucanr.edu/Master_Gardener/ The City has worked to build relationships with landscapers in the community to address on outdoor water use through education and training, and this could serve as a model for partnership with others to help address indoor water use.
- 37 Residential End Uses of Water (2016).
- 38 Toilets and Urinals. (2013) Response to California Energy Commission 2013 Pre-Rulemaking Appliance Efficiency Invitation to Participate. Docket Number 12-AAER-2C; Water Appliances. Prepared by Energy Solutions.
- 39 American Community Survey 2021 data table S2504: “Physical Housing Characteristics for Occupied Housing Units”.
- 40 <https://santabarbaraca.gov/AMI>
- 41 <https://santabarbaraca.gov/utility-billing>
- 42 <https://santabarbaraca.gov/utility-billing>
- 43 The American Water Works Association and its partners are advocating for making the LIHWAP program and its federal funding permanent. Details and a report on this effort can be found here - <https://www.awwa.org/AWWA-Articles/awwa-partners-call-for-federal-assistance-to-support-water-affordability>. Absent further Congressional action, the funding for the LIHWAP program is expected to run out within the next year.
- 44 Participating utilities are listed online with CSD here - <https://www.csd.ca.gov/Pages/LIHWAP-Water-Utility-Enrollment.aspx>.
- 45 [Need Help Paying Your Water Bill? Apply for Assistance! | City of Santa Barbara \(santabarbaraca.gov\)](#)
- 46 [CommUnify – Formerly Community Action Commission of Santa Barbara County \(communifysb.org\)](#)
- 47 Santa Barbara Municipal Code Chapter 14.08. Further, in 2017 and earlier, the City trialed City-owned submetering, where both the master meter and submeters were city owned. There are about a dozen legacy properties like this, where the City owns, maintains, reads, and bills both the master meter and the submeter. This has become cumbersome and was phased out in 2018. The existing properties with City submeters still remain, but no new developments are allowed to take this approach.
- 48 Senate Bill 7. <https://legiscan.com/CA/bill/SB7/2015>
- 49 California Constitution Article XIII D, Section 6
- 50 [H2O Bill Assistance | Santa Rosa, CA \(srcity.org\)](#)
- 51 <https://www.synergycompanies.com/utility-program/sdcwa-dip#:~:text=SDCWA%20Direct%20Install%20Program%20aims,utility%20costs%20and%20conserve%20water>
- 52 <https://lbwater.org/save-water/residential/dig/digdesigns/>
- 53 <https://www.cityofsacramento.org/Utilities/Water/Conservation/Residents/Residential-Water-Wise-Services/Leak-Free-Sacramento>
- 54 <https://www.cityofpleasantonca.gov/our-government/public-works/utility-billing/>
- 55 <https://www.cityoftracy.org/our-city/departments/finance-department#:~:text=LIRA%20%E2%80%93%20The%20City%20of%20Tracy,monthly%20garbage%20fee%20by%20%245.00>
- 56 <https://www.pge.com/en/account/billing-and-assistance/financial-assistance/california-alternate-rates-for-energy-program.html>
- 57 <https://city-tracy-ca-budget-book.cleargov.com/12572/departments/finance>

Endnotes (continued)

- 58 The City’s Housing and Human Services Division offers a “Rental Housing Mediation Program,” which is housed within the City’s Community Development Department, Housing and Human Services Division. The purpose of the program is to resolve renter disputes by providing mediation services, information on landlord-tenant rights, and related housing and legal resources available to Santa Barbara residents. <https://santabarbaraca.gov/services/housing-human-services/rental-housing-mediation-program>
- 59 <https://www.gov.ca.gov/2020/04/02/governor-newsom-issues-executive-order-protecting-homes-small-businesses-from-water-shutoffs/>
- 60 <https://santabarbaraca.gov/utility-billing>
- 61 <https://www.healthforcalifornia.com/covered-california/income-limits>
- 62 Master Gardeners are one example of a group the City has partnered with in the past. https://cesantabarbara.ucanr.edu/Master_Gardener/ The City has worked to build relationships with landscapers in the community to address on outdoor water use through education and training, and this could serve as a model for partnership with others to help address indoor water use.
- 63 See “From Size of Homes to Rental Costs, Census Data Provide Economic and Lifestyle Profile of U.S. Housing” U.S. Census Bureau, Phil Thompson, June 29, 2023.
- 64 https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/assistance/
- 65 https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/afforddashboard.
https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/needs/2023affordabilityassessment.pdf
- 66 This data can be found in Attachment D1: Affordability Assessment Data and Results
- 67 <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/affordability>
- 68 <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/affordability/2021-and-2022-annual-affordability-refresh>
- 69 <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/affordability/2021-and-2022-annual-affordability-refresh>
- 70 <https://santabarbaraca.gov/wateraffordability>
- 71 <https://santabarbaraca.gov/press-releases/city-santa-barbara-hosting-water-affordability-community-workshop-november-2>
- 72 <https://santabarbaraca.gov/services/utilities/trash-recycling>

An Assessment of
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City of Santa Barbara

CALIFORNIA

March 2024