



WATER CONSERVATION PROGRAM ANNUAL REPORT

FY 2023 - 2024



tucsonaz.gov/water/conservation

Water Conservation Program FY 2023-2024 Annual Report

January 2025

City of Tucson

Regina Romero, Mayor

Tim Thomure, P.E., City Manager

City Council Members

Lane Santa Cruz, Ward One

Paul Cunningham, Ward Two

Kevin Dahl, Ward Three

Nikki Lee, Ward Four

Richard Fimbres, Ward Five

Karen Uhlich, Ward Six

Prepared by

Candice Rupprecht, Conservation Program Manager

James MacAdam, Conservation & Stormwater Resources Administrator

Jaimie Galayda, Conservation Planner

Valeria Galindo, Conservation Specialist

Acknowledgments

Thank you to the Conservation & Stormwater Resources team and the GIS staff at Tucson Water for helping to execute our programs and gather data for this annual report. We are grateful to our partners who make our high-quality conservation program possible, by working in our community every day, educating and providing services to our customers. This report reflects our collective conservation ethic and commitment to a thriving Tucson, with a focus on delivering programs that conserve water, while increasing access and delivering equitable solutions.

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FY 2023-2024 Conservation Snapshot

In FY23-24, total potable water use was 130 gallons per capita per day (GPCD) with a residential GPCD of 74, continuing a two-decade downward trend. The conservation fee, now in its 15th year, has allowed Tucson Water to offer our customers high-quality conservation and education programs and robust efficiency incentives, detailed in this report.

In FY23-24, programs funded by the conservation fee have resulted in:

- 17.2 million gallons conserved
- \$0.6 million invested in rebates and incentives
- 1,313 high-efficiency toilet (HET) and urinal installations
- 185 rainwater harvesting and gray water installations
- 993 water audits for customers

To date, programs funded by the conservation fee have resulted in:

- 5.8 billion gallons (17,936 acre-feet) conserved
- Nearly \$17 million invested in rebates and incentives
- Nearly 73,000 HET and urinal installations, including 9,100 free toilets for low-income customers
- Over 3,800 rainwater harvesting and gray water installations, including over 320 subsidized systems for low-income customers

In FY23-24, our partner education programs reached over 28,000 students, teachers, and adults.

In the last 15 years with a dedicated conservation fund, our education partners have reached over 700,000 students and community members and

Tucson Water Zanjeros have conducted over 20,000 water audits for customers.

Milestones for FY23-24 include:

- Revamped the Rainwater Harvesting Rebate to include a pre-approval, online application and site inspection with a Zanjero.
- Implemented additional Tier 2 Drought Preparedness and Response Plan measures.
- Continued focus on equity-based program offerings, including more data collection about program participation and launching two new low-income programs.
- Received our first WaterSense award for Excellence in WaterSense Label Promotion
- Were awarded two grants from the Water Infrastructure Finance Authority of Arizona (WIFA); one to develop a turf replacement program to accompany the prohibition on new ornamental turf, and the second to retrofit plumbing fixtures for low-income multifamily customers.

Water Demand Trends Down

Tucson Water has a long history of planning and developing water supplies for today and the future. This has been accomplished by increasing the use of renewable Colorado River water, using recycled water for irrigation, expanding the use of rain and stormwater, and supporting one of the longest running conservation programs in the nation. As a result, Tucson Water customers today use the same total amount of potable water as they did in mid-1980s, while population has increased by more than 200,000 and service connections have increased by more than 50% (75,000). This is a strong indicator that water is being used more efficiently than ever and that Tucson is a community of responsible Sonoran Desert dwellers.

Conservation Program Budget

This report describes the expenditures and activities of the Tucson Water Conservation Program for the Fiscal Year July 1, 2023 through June 30, 2024, (FY23-24). Funding for the Conservation Program is collected by a conservation fee assessed on all potable water sales. These funds are kept in a restricted fund that may only be used for water conservation and education purposes.

The Conservation and Education subcommittee of the Citizen’s Water Advisory Committee (CWAC) reviews and advises the Mayor and Council on the budget and programs funded by the water conservation fee. The subcommittee meets monthly with staff and makes recommendations to the full CWAC.

Water Conservation Program Expenditures

The Conservation Fund expenditures listed below reflect a financial summary from the City’s financial reporting system. The water conservation fund can be separated into six main categories as shown in Figure 1 with a total fund expenditure of \$4,099,592. See Appendix B for historic financial information.

The seven categories are:

1. Operating (\$422,161)

Salaries and wages for permanent employees:

- a. 1.0 FTE Conservation Manager
 - b. 1.0 FTE Water Conservation Specialist
 - c. 1.0 FTE Lead Planner
 - d. 0.5 FTE Urban Landscape Manager
 - e. 0.5 FTE Administrative Assistant
 - f. 0.75 FTE Temp Assistant
- 6 Zanjeros (including 1 Supervisor) are covered by Tucson Water Operating Fund

2. Professional Services (\$2,616,895)

Contractors that support research, resource development and program implementation of

education, green stormwater infrastructure (GSI) and low-income services.

3. Rebate Programs (\$627,082)

Incentive and rebate programs designed to offset customer expense of implementing water efficiency retrofits.

4. Outreach & Marketing (\$100,523)

Public relations, advertising, and printing to promote conservation programs and resources.

Conservation devices to support program outreach and promotional materials including store displays and conservation giveaway items.

5. Miscellaneous (\$97,275)

Travel, training, memberships, subscriptions, uniforms, computers, fixtures and devices, promotional materials, etc.

6. Administration Fee (\$235,656)

Paid to the City of Tucson for business and administrative services.

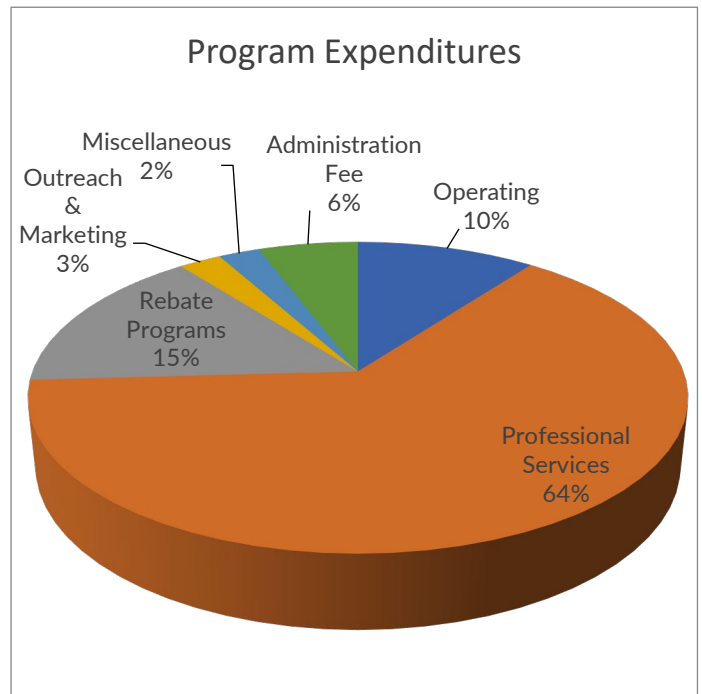


Figure 1: FY 23-24 Water Conservation Program expenditures by percentage.

Conservation Program Overview

The Conservation Program serves the community through three key areas: conservation services, rebates and incentives, and education programs.

Conservation Services

Tucson Water and our partners provide a range of services directly to customers, including:

- In-person water audits or checkups provided by Tucson Water Zanjeros
- Consumption reports that provide customers with their usage trends and savings opportunities
- Low-Income installation services including:
 - free toilet installations
 - emergency plumbing repairs
 - rainwater harvesting and gray water grants and no-interest loans
 - discounted clothes washers
- Grants for neighborhoods to install green stormwater infrastructure
- Water Waste code enforcement

Rebates & Incentives

Incentives are available to residential and commercial customers and help offset the cost of implementing conservation solutions for households and businesses. In FY23-24 these included:

Single-family Incentives:

- toilet rebate
- clothes washer rebate
- gray water rebate
- rainwater harvesting rebate

Multifamily Incentives:

- clothes washer rebate
- customized rebates

Commercial Incentives:

- toilet rebate
- urinal rebate
- non-functional turf removal (July 2024)

Other incentives:

- free customized conservation kits mailed directly to customers

- bill credits for completing a Home Water Works Calculator and survey

Education & Resources

Educational programs are provided to K-12 classrooms throughout each school year and teachers can take advantage of a variety of water-focused lessons, presentations and field trips.

Landscape education is also offered throughout the year to landscape professionals and City of Tucson employees.

The impacts and updates of these various efforts are described in the following sections of this annual report.

Drought Plan Response

As drought conditions on the Colorado River have changed, Tucson Water has implemented additional drought response measures in line with the City of Tucson's Drought Response and Preparedness Plan. Tier 2 response measures included promoting existing conservation programs, developing new self-help tools for customers and communicating directly to customers exceeding their water use guidelines, including offering water audits.

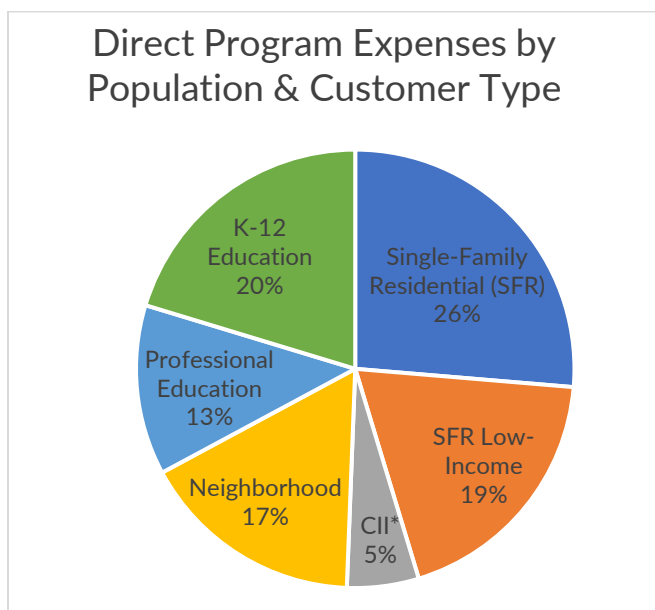


Figure 2: FY 23-24 financial expenditures, broken out by customer class or population served. *CII (Commercial, Industrial & Institutional customers)

Zanjeros Water Audit Program

Zanjeros serve as Tucson Water’s conservation experts, providing customer water audits, rainwater harvesting inspections and water waste enforcement throughout the community.

“Our Zanjero took time to explain all the things that needed to be done so we could easily understand. He also answered all our questions and provided materials for us to read. He was friendly, considerate, and very knowledgeable. We are already making all the repairs to toilet and irrigation. Thank you.” Customer, 1/4/2024

Water Audits

Water audits are requested by customers, usually driven by a high bill and high consumption concerns. Audits are scheduled in two-hour blocks, scheduled at the customer’s convenience. The onsite audit includes a download and review of hourly, 40-day water use data recorded at the meter when available, a review of all onsite water uses, identification of leaks and additional water efficiency opportunities at the property. A total of 993 audits were performed in FY23-24; 934 were for residential customers and 59 were commercial audits.

Audits for commercial customers and Homeowners’ Associations (HOAs) also include an initial desktop audit, where staff provide information and analysis on their water use and opportunities to conserve.

“Our Zanjero found some very big leaks in the landscape watering system that I did not know existed. This was causing a very inflated bill. He gave me several tips about watering plants, including how often to water and where to place the water. I found the charts that showed the difference between water days and non-water days to be extremely helpful.” Customer, 12/20/2023

Leaks were identified at 35% of the properties that were audited. Based on meter readings taken during audits, the total excess usage was 5.1 million gallons and average monthly water usage for properties with continuous flow was over

“The single best consumer experience we have had since moving to Tucson- just excellent” Customer, 4/3/2024

20,000 gallons per month. Irrigation and toilet issues continue to be the leading causes of high-use issues identified during audits, accounting for 70% of reported causes.

In follow-up surveys sent to customers when they receive an email with their audit report, 98% of customers indicated they would recommend a Tucson Water audit to friends and family. Customers report very high levels of satisfaction with the audit service.

How often customers report being Very Satisfied			
Friendliness of Staff	Knowledge of Staff	Issue(s) Resolved	Quality of Service
97%	89%	96%	97%

Water Waste Enforcement

Enforcement of the City of Tucson’s Water Waste Ordinance (27-15) is under the purview of the Conservation Program staff. Water waste typically involves overwatering, leaks, improper discharge of water, malfunctioning irrigation systems, hose washing of hard surfaces, and misting systems operating in unoccupied areas.

Emails and phone calls are the two most common ways that water waste is reported. Reports of water waste also come in through Tucson’s 311/SeeClickFix phone app. Water waste enforcement is first seen as a opportunity to educate the public on best practice. The fine structure for a first offense is a minimum of \$250. Subsequent offenses within three years are a minimum of \$500.

In FY23-24 the Zanjeros responded to 476 water waste complaints. 177 complaints resulted in an educational opportunity and the property owner was given a chance to make repairs, 119 were verbal warnings about water waste violation and 5 were written warnings about water waste violation. No citations were issued this fiscal year.

Water Waste Complaints by Customer Type			
Commercial or Multifamily	Residential	Public Property	Tucson Water system
34%	21%	20%	25%

Low-Income Services

Three local organizations provide low-income conservation services on behalf of Tucson Water: Community Home Repair Projects of Arizona (CHRPA), Sonora Environmental Research Institute (SERI) and Tucson Clean and Beautiful (TCB).

CHRPA Services



High-efficiency Toilet Replacements

CHRPA has been installing free, high-efficiency toilets for low-income customers since 2009. In FY23-24, 566 toilets were installed, and over 9,100 since inception.

Emergency Plumbing Repairs

This service was launched in 2019, in response to increasing needs for major leak repair assistance. Services range in scope and cost, depending on the plumbing issue. In FY23-24, CHRPA completed 173 emergency repairs, bringing the total to over 900 since inception.

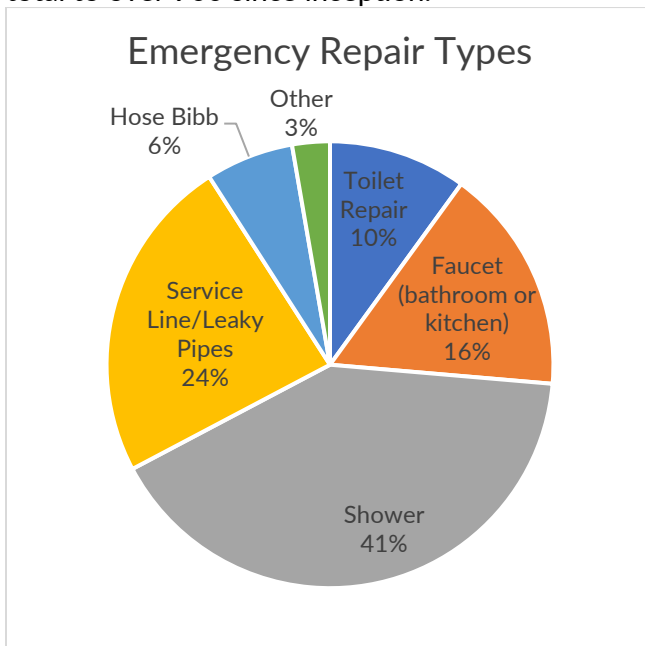


Figure 3: Percent breakdown of emergency repairs done by CHRPA in FY23-24.

SERI Services



Low-Income Rainwater Harvesting Grants & Loans

SERI has been installing rainwater harvesting systems for low-income customers since 2017. Currently, qualifying customers can receive grants up to \$1,000, zero-interest loans up to \$2,000 and access to the \$2,000 rebate. In FY23-24, SERI installed 11 systems, bringing the total to over 320 since inception.

Discounted Clothes Washers

Recognizing that many customers cannot utilize the existing \$200 clothes washer rebate because of the up-front cost, SERI is now offering a limited selection of high efficiency, front-load washers for \$200. A \$50 down payment is required and the balance can be paid over six months. In FY23-24, SERI installed 45 systems, bringing the total to 68 since the program launched in March 2023.

Low-Income Graywater Harvesting Grants & Loans

In 2023, SERI launched graywater grants and loans to accompany the existing \$1,000 rebate and expand access to installing graywater systems. Similar to how the graywater rebate has performed, to-date only one graywater system has been installed.

Green Stormwater Infrastructure (GSI) Mini-Grant Program



Tucson Clean & Beautiful works with community organizations and neighborhoods to install GSI in heat-vulnerable, low-tree canopy neighborhoods. In FY23-24, 12 new projects were installed, bringing the total to 76 projects since 2017. These projects account for 152,297 square feet of new GSI, which include 5,286 new trees and plants.

Rebates and Incentives

Rebate Program Administration

In 2023, the rainwater harvesting rebate was the last to be converted to an online application system, while also revamping the entire rebate process. Now all rebate processes are online; rebates less than \$600 are processed as bill credits and rebates greater than \$600 are issued as checks.

The program has historically tracked incentive participation by geography and customer class to identify any areas of underperformance. Additionally, voluntary demographic data began being collected this fiscal year during the application process for all rebates.

A stated policy of the conservation program is to “provide an equitable distribution of conservation benefits throughout customer classes and the community.” The conservation program continues to strive for more equitable distribution of benefits and savings. See Table 1 for detailed information about incentive program activity.

Distribution of Programs by Customer Class

In FY23-24, residential rebates accounted for 88% of the total estimated water savings from incentives, while commercial rebates only accounted for 12%. This compares to on average, 25% of water consumption from commercial customers. Developing additional commercial conservation incentives continues to be a program priority.

Distribution of Programs by Jurisdiction

The geographical distribution of residential rebate programs by jurisdiction, compared to the percentage of customers by jurisdiction illustrates each rebate program’s geographic distribution and saturation. Additionally, combining the impacts of regular rebate and low-income incentive programs provides a more holistic understanding of program uptake in specific parts of our community. See Table 2 for detailed information about program participation by jurisdiction.

Water Savings

Annual water savings are calculated for each program by multiplying the number of fixtures replaced with an estimated annual savings number. Tucson Water calculates water savings for each incentive program using a mix of field research and customer consumption analysis. Savings for each program are calculated with the known information about fixture usage and behavior patterns.

The cumulative savings are calculated for each program by summing the annual savings calculated for each year a given program has been running. This calculation is done for the expected lifetime of the fixtures, which is based on industry research for fixture devices and has been adopted by conservation organizations such as the Alliance for Water Efficiency. Specific program savings and useful life factors are listed in Appendix A.

Conservation Kits for Customers

In 2019, Tucson Water, in partnership with Environmental Education Exchange (EEExchange), began mailing conservation kits to customers upon request. Customers complete an online request form in English or Spanish. In FY23-24, kits were distributed to 2,880 customers, including nearly 22,000 devices.

Shower heads	2,567
Shower timers	2,723
Toilet tank bags	3,031
Toilet tank dye tabs	3,489
Faucet aerators	3,451
Irrigation repair kit	1,982
Hose timer	2,359
Rain gauge	2,323
Total	21,925

Home Water Works Calculator

The Home Water Works Calculator walks the customer through a series of questions about water-using devices in the home and behaviors regarding them and provides them with a report comparing the water use to the average and efficient households within their zip code area. The report also provides customized recommendations with direct links to Tucson

Water resources. A campaign to promote the calculator was launched in January 2024 to encourage customers to use it. Customers were required to take a 30-minute online workshop, use the calculator, and answer a survey to get a \$25 bill credit. 520 customers completed the calculator from January through June of 2024.

	FY08-09	FY09-10	FY10-11	FY11-12	FY12-13	FY13-14	FY14-15	FY15-16	FY16-17	FY17-18	FY18-19	FY19-20	FY20-21	FY21-22	FY22-23	FY23-24	Total
Single-Family HET	353	2,959	2,629	1,716	1,916	2,493	2,171	2,304	1,891	1,527	1,561	1,322	991	793	188	164	24,978
Low-Income HET		484	808	288	840	871	1,041	734	720	503	521	586	290	422	513	566	9,187
Multi-Family HET	29	378	284	1,237	3,638	4,942	6,580	1,419	3,023	2,146	3,036	2,941	1,663	907	670	306	33,199
Commercial HET	4	428	382	345	137	363	418	698	249	409	133	474	905	61	282	264	5,552
High-Efficiency Urinal			10	6	3	108	423	205	14	25	0	2	273	95	429	13	1,606
Clothes Washer								1,330	1,948	1,417	1,338	1,370	1,217	1,120	814	779	11,333
Gray Water			2	9	11	10	34	38	23	21	17	18	20	19	19	19	260
Irrigation Upgrade		1	10	3	7	10	0	0	1	0	1						33
Commercial Upgrade								22	9	5	3	0	1	1			46
Rainwater Harvesting					296	272	333	321	430	365	333	301	371	334	308	196	3,860
Emergency Repairs												229	169	197	155	173	923
Discounted Clothes Washers															23	45	68

Table 1: Total Rebates by Fiscal Year; gray cells indicate program had not started in that year or had ended.

Ward / Jurisdiction	Single-Family Customers	HET Participation	CW Participation	RWH Participation	GW Participation	Emergency Repairs	Zanjero Audits	Conservation Kits
Ward 1	10%	15%	7%	12%	10%	20%	8%	8%
Ward 2	12%	6%	15%	14%	10%	8%	10%	12%
Ward 3	8%	7%	9%	10%	20%	13%	5%	9%
Ward 4	13%	8%	13%	8%	5%	5%	10%	12%
Ward 5	11%	11%	5%	4%	0%	19%	6%	8%
Ward 6	11%	13%	12%	19%	35%	9%	8%	12%
Marana	5%	6%	4%	0%	0%	0%	6%	5%
Oro Valley	1%	0%	0%	1%	0%	0%	1%	1%
South Tucson	1%	0%	0%	1%	0%	0%	0%	0%
Pascua Yaqui	0%	0%	0%	0%	0%	0%	0%	0%
Unincorp. Pima County	29%	33%	34%	32%	20%	27%	46%	32%

Table 2: This table lists the percent of single-family customers in each jurisdiction and compares to the percent of incentive participation by jurisdiction for FY23-24. All programs listed include offerings for low-income customers (Emergency Repairs is only available for low-income customers) and this data includes low-income participation to determine total percent participation.

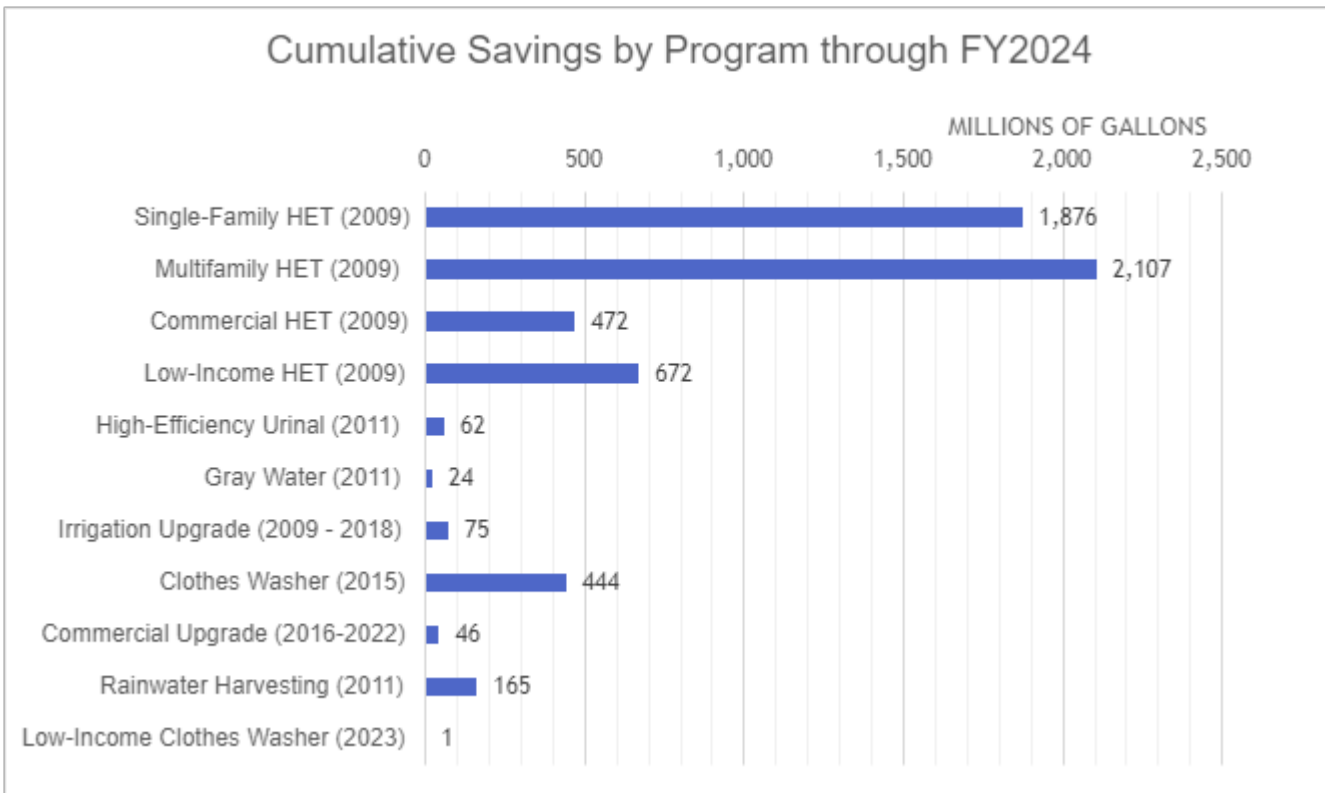


Figure 4: Cumulative Water Savings shown by program achieved from Tucson Water's Incentive Programs.

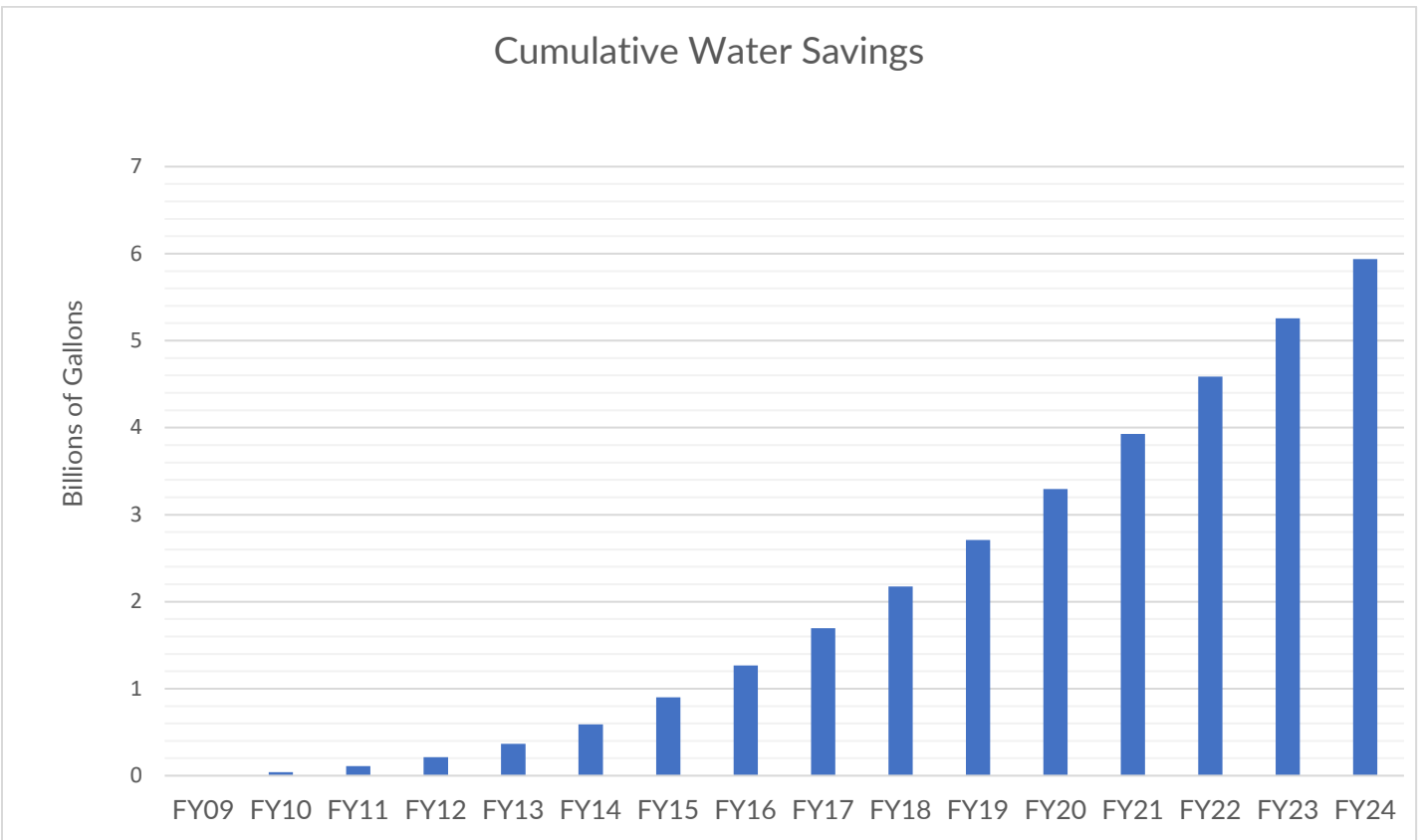


Figure 5: Total program water savings calculated from incentives since Conservation Fee inception.

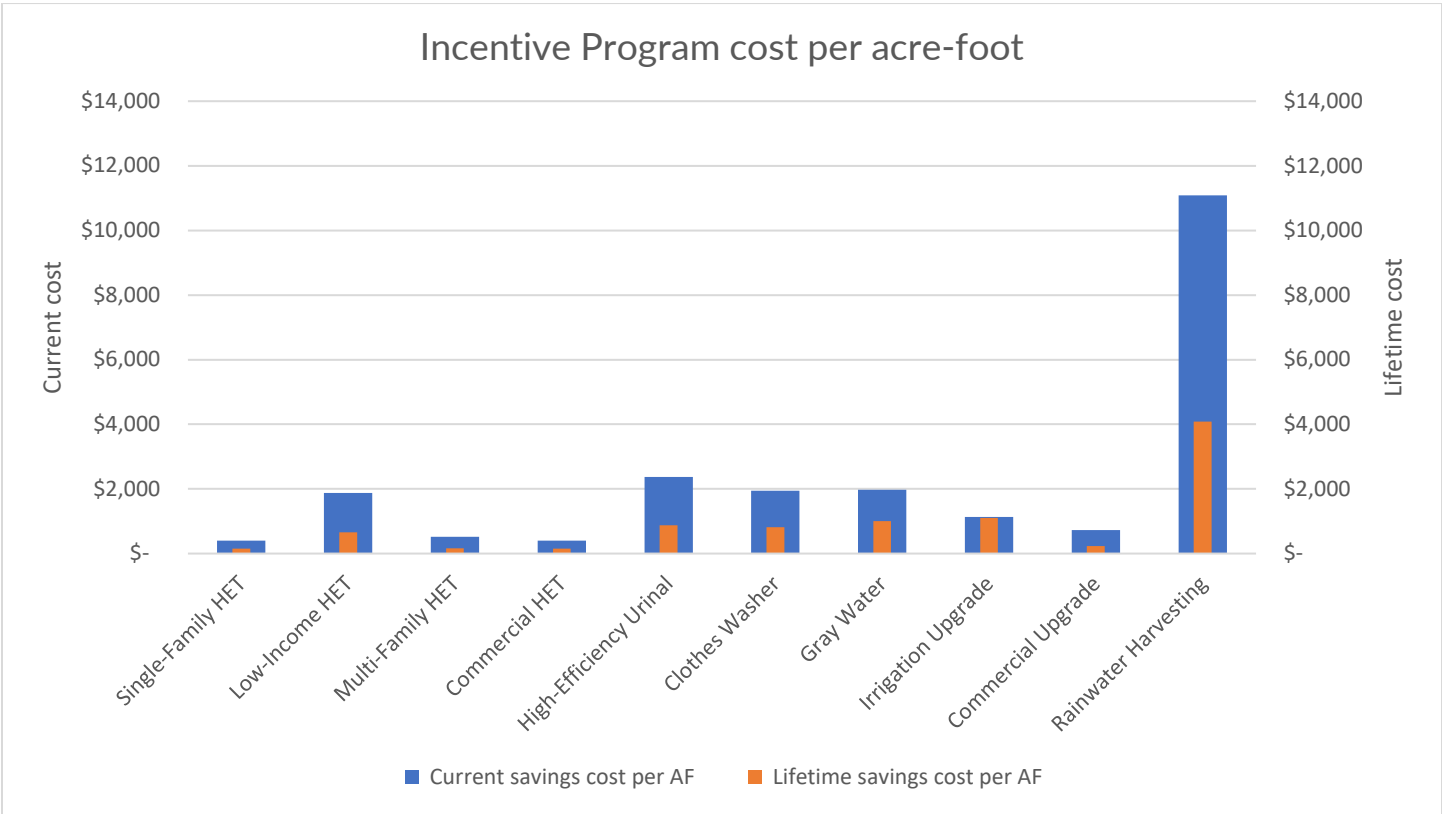


Figure 6: Cost per acre-foot of savings per program, to-date and for projected fixture life.

Community Education & Outreach Programs

Tucson Water, with the support of several community partners, provides outreach, education and conservation services throughout our service area. Together, our community partners have reached over 700,000 students, teachers, and community members in the last 15 years.

K-12 Education Programs

Tucson Water partners with Arizona Project WET (APW) and Environmental Education Exchange (EEExchange) to offer youth education programs in classrooms at various grade levels throughout the school year. These programs are both designed to meet Arizona Department of Education K-12 Academic Standards. Together, they reach over 25,000 students annually. An online map illustrating the geographic distribution of school programs is at tucsonaz.gov/water/conservation.

Arizona Project WET (APW)



Since 2006, APW has engaged 6,360 teachers, 353,569 students, and 37,259 adults in STEM-based water education throughout the Tucson Water service area. APW provides four

programs to elementary through high school students, including teacher professional development.

FY23-24 Activity:

Students Reached	8,289
Teachers Reached	150
Adults Reached	240

Programs include:

- 4th grade Water Festivals
- 3rd-5th grade groundwater presentations

- 6th-12th grade Water Scene Investigations
- 6th-12th grade Recharge the Rain curriculum

Environmental Education Exchange



Since 1998, EEExchange has engaged 275,058 students and 8,575 teachers in classroom-based water education programs throughout the Tucson Water service area. EEExchange

provides four programs to elementary through high school students.

FY23-24 Activity:

Students Reached	18,659
Teachers Reached	836

Programs include:

- 1st-3rd grade Water Smart Kids presentations
- 4th-5th grade Our Water, Our Future presentations
- Middle School Watching Our Water presentations
- 8th-12th grade Student Stories of Climate Change presentations

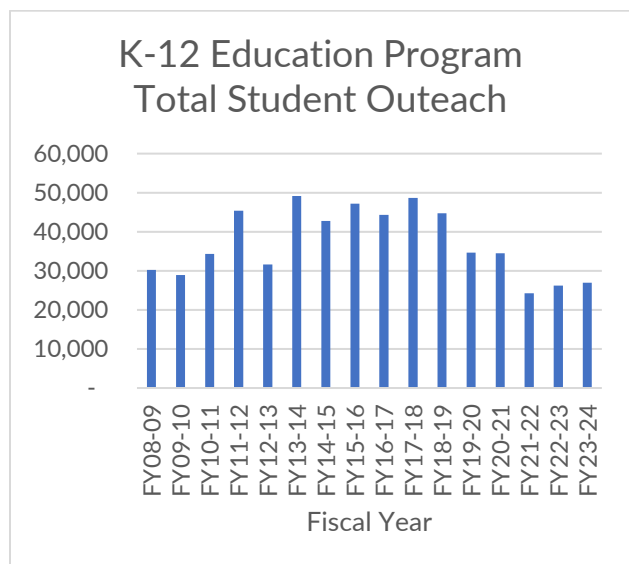


Figure 7: Bar graph showing the yearly impact of the K-12 Education Programs funded by Tucson Water.

Smartscape: Landscape Pro Training



Since 1989, Tucson Water has funded Smartscape, a University of Arizona Cooperative Extension Program. Smartscape trains landscape professionals and residents to properly manage urban Sonoran Desert landscapes.

University faculty and industry experts teach Smartscape classes, which are a mix of classroom learning and field experience.

FY23-24 Activity:

Professional Workshops	62
Pro Workshop Attendees	255
Pro Certificates	164
Residential Workshops	15
Workshop Attendees	442

The keystone training program for landscape professionals, the *Smartscape Series*, offered in both English and Spanish, includes classes on:

- Plants, Soils and Water
- Landscape Irrigation Systems
- Landscape Water Management
- Desert Adapted Plants
- Maintaining Desert Adapted Plants
- Plant Disorders
- Landscape Design and Renovation
- Plant Selection and Installation

Completion of the Smartscape Series allows participants to take advanced classes. Additional advanced classes for professionals include:

- Green Stormwater Infrastructure
- Sustainable Landscapes
- Plant Material
- Urban Forestry Management

City of Tucson employees who have a role in landscape management and tree care attend a one-day bootcamp instead of the *Smartscape Series* and can then take the Green Stormwater Infrastructure and Urban Forestry Management courses.

Additionally, Smartscape launched a HOA Landscape Transformation pilot program which provides condensed *Smartscape Series* training, guidance and a toolkit for transitioning to water efficient landscapes for Homeowners Associations. Grants are also available from Tucson Water for participating HOAs. The first three HOAs completed their landscape plans during this year and five additional HOAs have been selected to participate in a cohort to continue HOA engagement.

EPA WaterSense Program



Tucson Water, along with over 2,000 organizations across the county, is a proud partner of the U.S. Environmental Protection Agency's (EPA) WaterSense

program, which provides water conservation outreach resources and water efficiency product labeling. In 2023, Tucson Water earned its first WaterSense award for Excellence in WaterSense Label Promotion from the EPA.

Through the end of 2023, WaterSense has helped Americans save a cumulative 8.7 trillion gallons of water, 997 billion kilowatt-hours of electricity, and \$207 billion in water and energy bills. Tucson Water reports data annually to WaterSense, contributing to these national savings numbers.

Water Use It Wisely Regional Partnership



Tucson Water has been a steering committee member of Water Use It Wisely since 2022. This Arizona-wide campaign provides tips and resources on water conservation to the public and provides partners with a toolkit of outreach materials. The

campaign targets audiences through diverse platforms that include Instagram, Facebook, Tiktok, YouTube ads, magazine ads, programmatic display ads, in-store signage, and innovative partnerships like the one with local influencer AZ Plant Lady. Over this fiscal year, the campaign received nearly 70 million impressions with a significant focus of programmatic out of home display ads in the Tucson area during the Spring 2024 campaign. The statewide Water Use It Wisely program routinely receives some of its highest levels of engagement from Tucson residents.

Drought Response Measures

Based on Bureau of Reclamation Drought Contingency Plan guidelines, a Tier 2 drought level was declared for the Colorado River Basin, triggering the City of Tucson's level 2 drought responses. Tucson Water's level 2 response measures include developing new self-help tools for customers and communicating directly to customers exceeding their water use guidelines.

New resources include a new series of DIY videos and a customized water calculator. The DIY videos, available on the Tucson Water website, cover how to read your meter and how to find and fix leaks; these videos have been featured in the Water Matters newsletter. A Home Water Works calculator from the Alliance for Water Efficiency was customized to include Tucson-specific features.

High-use letters were sent to 6,566 single family customers, 70 multifamily customers and 15 duplex/triplex customers. Sixty-three percent of these customers received a high-use letter for the second year in a row. Two-hundred customers scheduled water audits after receiving the high-use letters and the primary finding for these audits was irrigation system and scheduling issues.

Customers receiving these high-use letters who were receiving bill assistance were provided with additional outreach including phone calls and home visits to offer water audits. Of the 122 low-income accounts who received the high-use letters, Zanjeros made contact with two-thirds of these customers and provided water audits for 17%. Findings from these audits were primarily toilets, hose and hand-watering issues or other household characteristics that increased water use.

Appendix A – Water Savings Factors and Useful Life Projections for Conservation Programs

The table below lists the useful life of fixtures used to project out lifetime incentive savings and calculate cost per achieve the savings. All numbers are from the Alliance for Water Efficiency except for Rainwater Harvesting, which was taken from Batchelor, C., Fonseca, C. and Smits, S., 2011. *Life-cycle costs of rainwater harvesting systems*. <<http://www.irc.nl/op46>>.

<i>Incentive Program</i>	<i>Useful Life (years)</i>
<i>Single-Family HET</i>	25
<i>Low-Income HET</i>	25
<i>Multi-Family HET</i>	25
<i>Commercial HET</i>	25
<i>High-Efficiency Urinal</i>	25
<i>Clothes Washer</i>	15
<i>Gray Water</i>	15
<i>Irrigation Upgrade</i>	10
<i>TAP Commercial Upgrade</i>	20
<i>Rainwater Harvesting</i>	20

The table on the following page lists the per unit savings, annual savings and the source of those savings for each of the incentive programs in the Conservation Fund that data is available for.

Incentive Program	Per Unit Per Day Savings (gallons)	Annual Savings Per Unit (gallons)	Source of Savings
Single-Family HET	20.5	7,483	The Alliance for Water Efficiency determined this value in their Conservation Tracking Tool 2.0.
Low-Income HET	23.5	8,578	2014 analysis of program participants that had participated in 2011
Multi-Family HET	20.5	7,483	The Alliance for Water Efficiency determined this value in their Conservation Tracking Tool 2.0.
Commercial HET	23 (tank-type)	8,366 (tank-type)	Differentiated water savings were calculated for flushometer-type and tank-tank types based on the CII estimated toilet savings in the CCTF 2006 report. These original estimates were based on ULFTs (1.6 gpf), so a 20% additional savings is added for WaterSense HETs (1.28 gpf).
	50 (flushometer)	18,240 (flushometer)	
High-Efficiency Urinal	17	6,206	The Alliance for Water Efficiency determined this value in their Conservation Tracking Tool 2.0. This number compares closely with a study completed in California that looked at potential savings from large-scale urinal retrofits.
Clothes Washer	19.3	7,043	The Alliance for Water Efficiency determined this value in their Conservation Tracking Tool 2.0. This value is a mid-range estimate, as published literature has indicated both higher and lower potential savings.
Gray Water	37.2	13,615	Calculated by multiplying the percent end use of clothes washers (16%) and Tucson's GPCD, to get 13.5 GPCD. This number is multiplied by the average persons per single-family household (2.76).
Irrigation Upgrade	N/A		
TAP Commercial Upgrade	N/A		
Rainwater Harvesting		FY13-FY23: 6,773	Calculated from the assumption that tanks will fill, on average, five times per year, based on historic weather and assumed tank usage patterns. This "engineering estimate" provides a total savings number based on total tank storage for all participants.
		FY24 & beyond: 12,985	Weighted average calculated of total estimated savings and number of participants for each fiscal year. Savings from FY13-FY23 only include tank capacities, but after July 2023 rebate revamp, savings also includes basin capacities, so savings value increased significantly.
Low-Income Rainwater Harvesting	N/A	N/A	Preliminary tracking of water use for the thirty-one participants was about 0.8 ccf more per month than the class average. The passive water harvesting installations have not shown a decrease in usage since installing the systems.
Residential Water Audit (continuous flow)		30,000 (for two months post audit)	Based on internal analysis of residential customer usage before and after a Zanjero water audit, for cases where meter indicated continuous flow at the time of audit.
Residential Water Audit (no flow at meter)		14,400 (for 2 years post audit)	Based on internal analysis of residential customer usage before and after a Zanjero water audit, for cases where meter indicated no continuous flow at the time of audit.



Appendix B – Conservation Fund Annual Budget

This table includes annual fiscal year financial information since the inception of the Water Conservation Fund in FY 08-09. The fund was established by the Mayor and Council through adoption of ordinance 10555 on May 20, 2008.

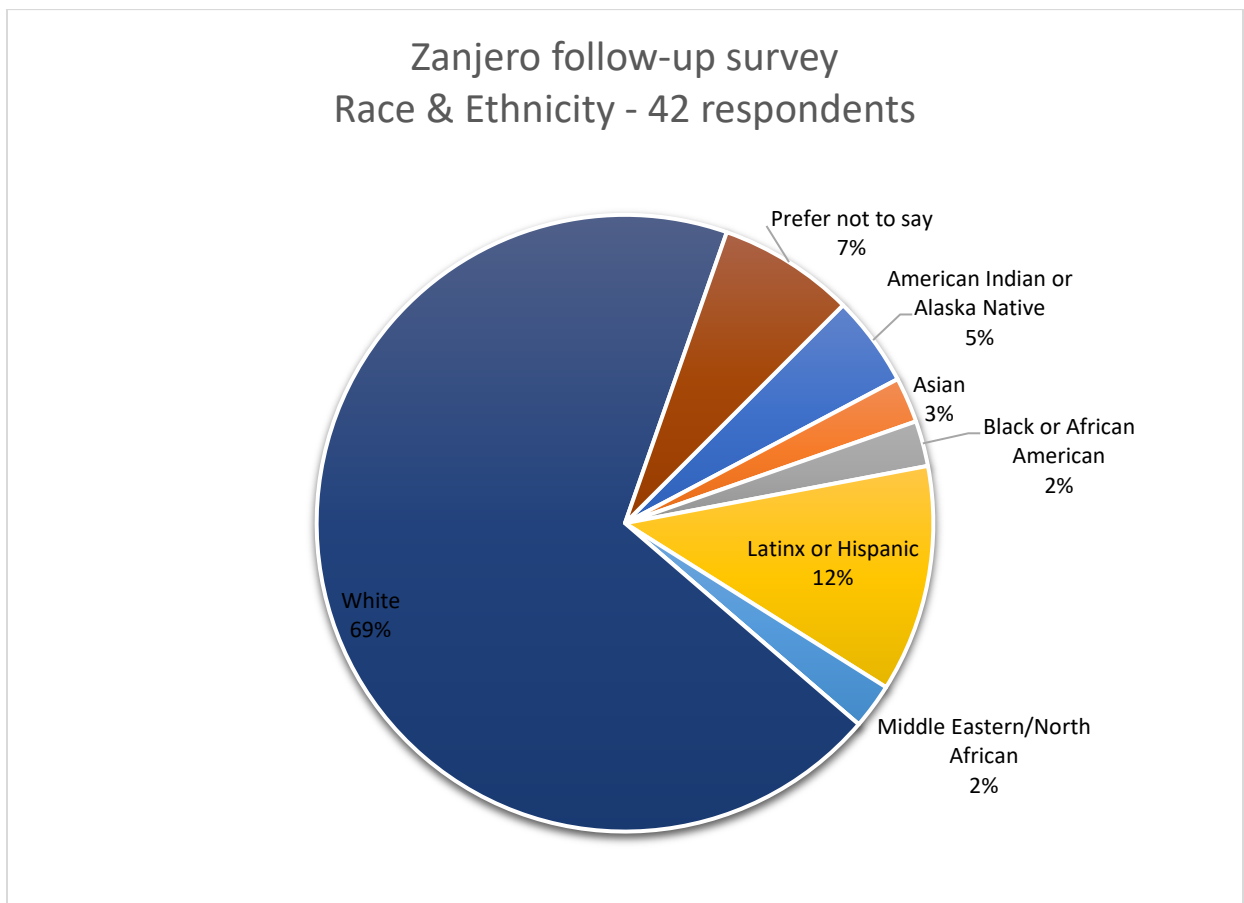
<i>Fiscal Year</i>	<i>Conservation Fee (\$/ccf)</i>	<i>Approved Budget</i>	<i>Expenditures</i>	<i>Revenue</i>
FY 08/09	\$ 0.03	\$ 997,000	\$ 794,462	\$ 1,217,280
FY 09/10	\$ 0.04	\$ 997,000	\$ 831,883	\$ 1,716,880
FY 10/11	\$ 0.05	\$ 1,086,690	\$ 1,720,075	\$ 2,124,838
FY 11/12	\$ 0.07	\$ 2,902,630	\$ 1,795,082	\$ 2,816,241
FY 12/13	\$ 0.07	\$ 3,356,820	\$ 2,727,541	\$ 2,830,967
FY 13/14	\$ 0.07	\$ 2,950,000	\$ 2,725,288	\$ 2,832,950
FY 14/15	\$ 0.07	\$ 3,050,000	\$ 2,771,450	\$ 2,726,208
FY 15/16	\$ 0.08	\$ 3,540,250	\$ 2,785,621	\$ 3,000,905
FY 16/17	\$ 0.08	\$ 3,540,250	\$ 3,445,812	\$ 3,035,932
FY 17/18	\$ 0.09	\$ 3,540,250	\$ 3,108,333	\$ 3,524,361
FY 18/19	\$ 0.10	\$ 3,895,620	\$ 3,036,034	\$ 3,613,761
FY 19/20	\$ 0.10	\$ 3,829,450	\$ 3,776,282	\$ 3,766,785
FY 20/21	\$ 0.10	\$ 3,707,690	\$ 3,327,383	\$ 4,019,836
FY 21/22	\$ 0.10	\$ 3,612,590	\$ 3,733,428	\$ 3,744,938
FY 22/23	\$ 0.10	\$ 3,649,160	\$ 5,166,411	\$ 4,289,406
FY 23/24	\$ 0.10	\$ 3,921,156	\$ 4,099,592	\$ 3,719,035

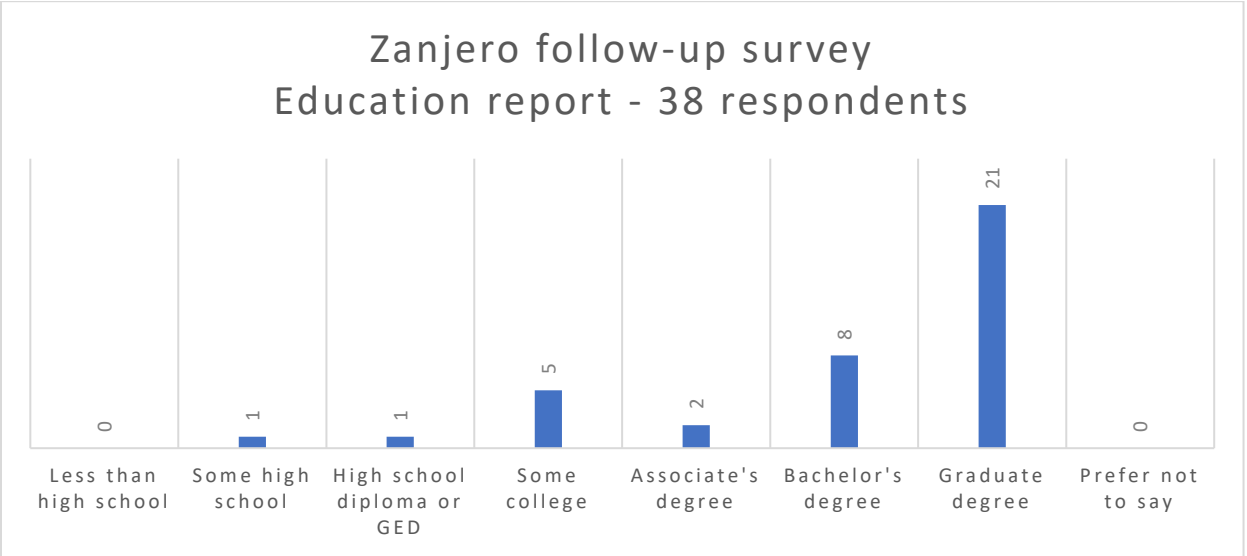
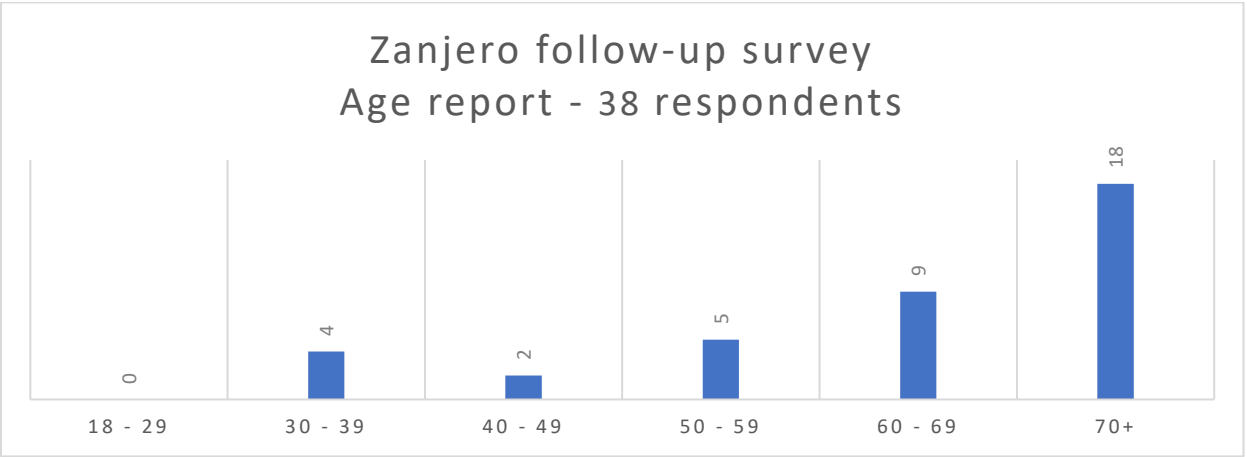
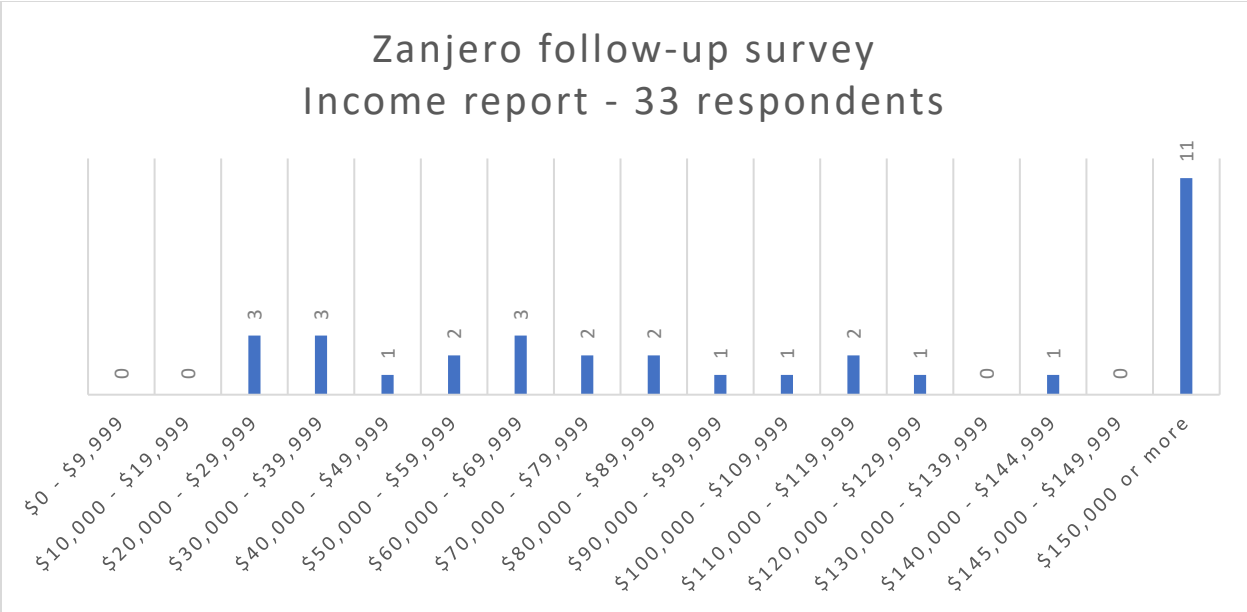
Appendix C – Demographic Data on Conservation Program Participation

In 2024, the Conservation Program began collecting voluntary demographic data from program participants to better understand customers who are and are not being reached and engaged with various conservation activities. This approach supports direction from the City's Equity Office to collect and understand participation gaps, and is further supported by Tucson Water's larger efforts to drive equity in its operations. The Office of Equity provided guidance on the type and structure of data to collect. Demographic data collection began in Spring 2024, therefore response numbers do not reflect a full year of participation. This data will inform future outreach and programming efforts of the Conservation Program to increase equity.

Zanjero Water Audit Demographic Data

Demographic data from water audit participants is collected during the follow-up survey, which is emailed to all audit participants along with the audit report. 92% of respondents indicated English as their primary language, and 8% indicated Spanish.



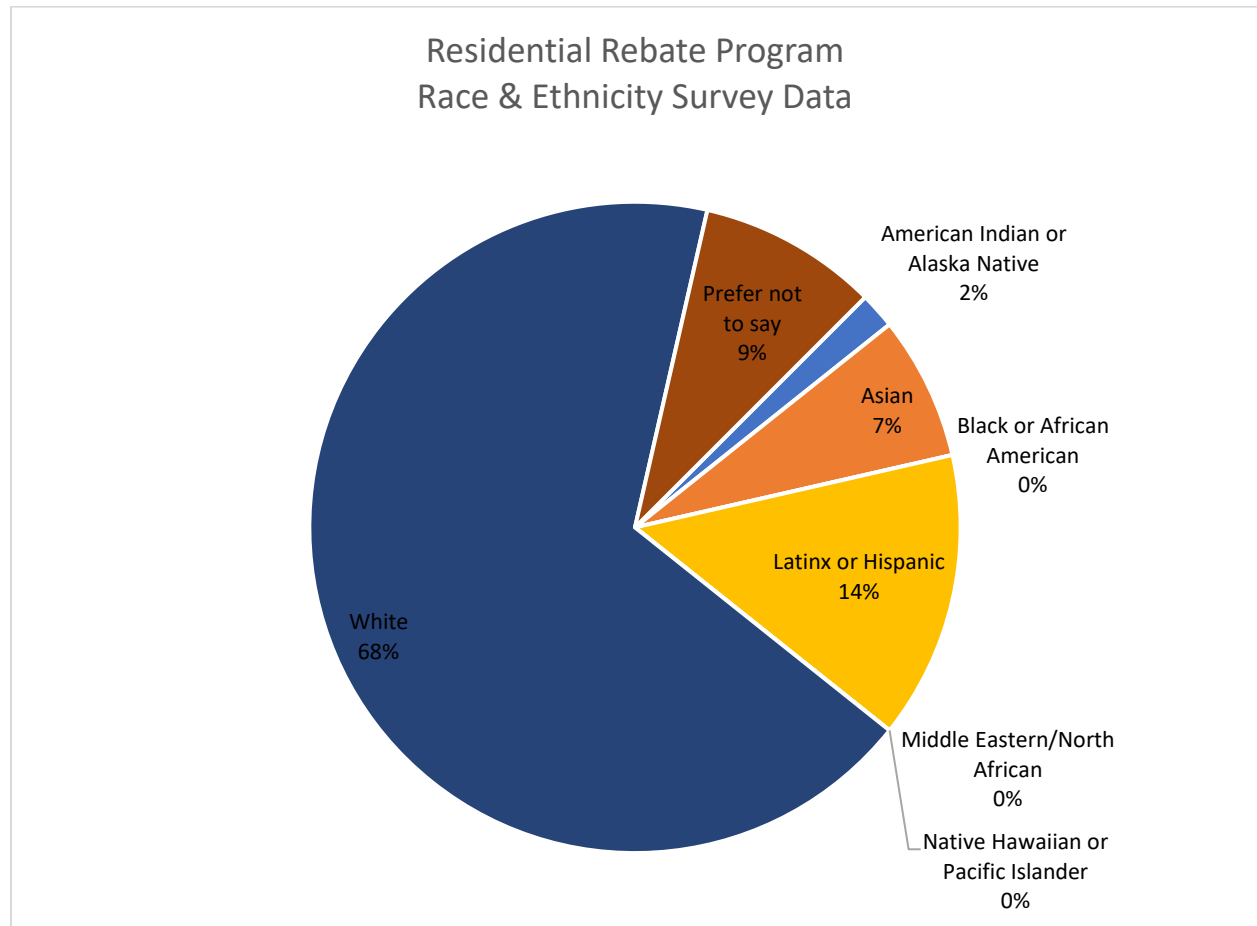


Residential Rebate Program Demographic Survey Data

Demographic data collection began in April of 2024 for the following rebates: high-efficiency toilets, high-efficiency clothes washers, rainwater harvesting, and gray water. Since the beginning of demographic data collection, 257 rebates have been given to our customers.

Race and Ethnicity

The race and ethnicity question was formatted as a checkbox and allowed customers to select multiple choices. A total 49 customers responded to the question that was phrased like this: "Which of the following describes your racial or ethnic identity?"

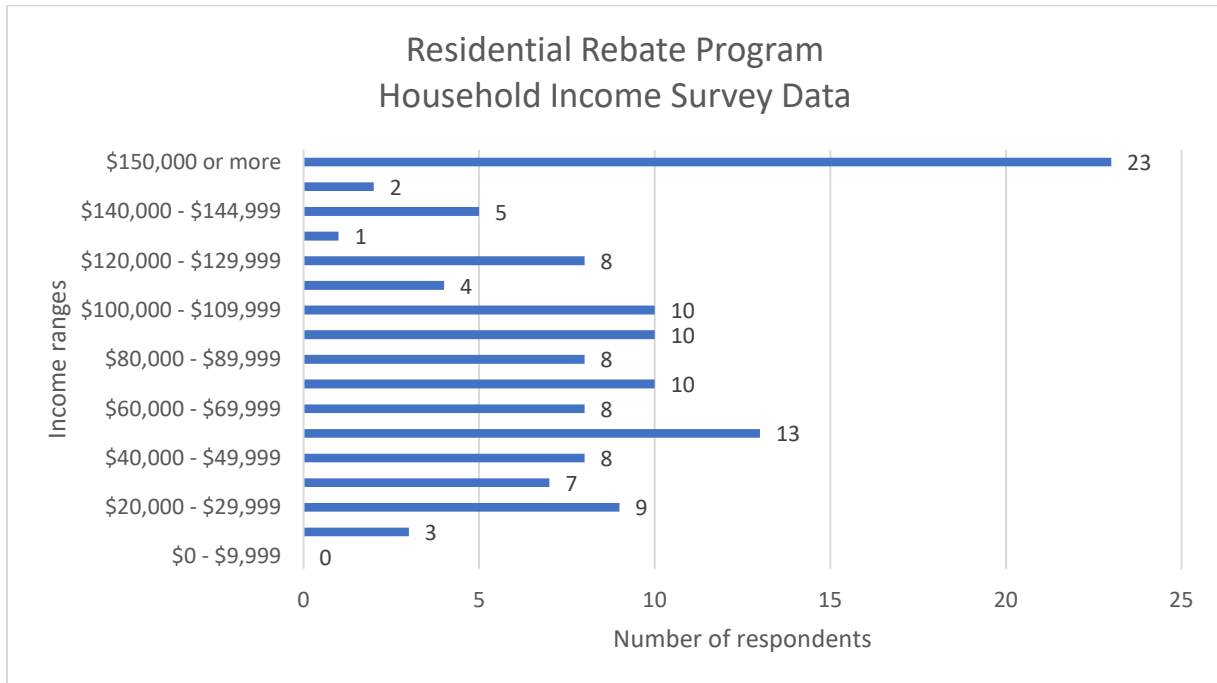


Tribal Affiliation

The tribal affiliation question was also formatted as a checkbox. A total of 46 customers responded to the question that was phrased like this: "Are you an enrolled member and/or a descendant of a Federal or Stat recognized American Indian Tribe? Which one(s)? Please select ALL that apply: Pascua Yaqui Tribe, Tohono O'odham Nation, Not listed, Prefer not to say, Not a member or descendant." Forty-five customers stated that they are not a member or descendant, and one customer stated that their tribe was not listed.

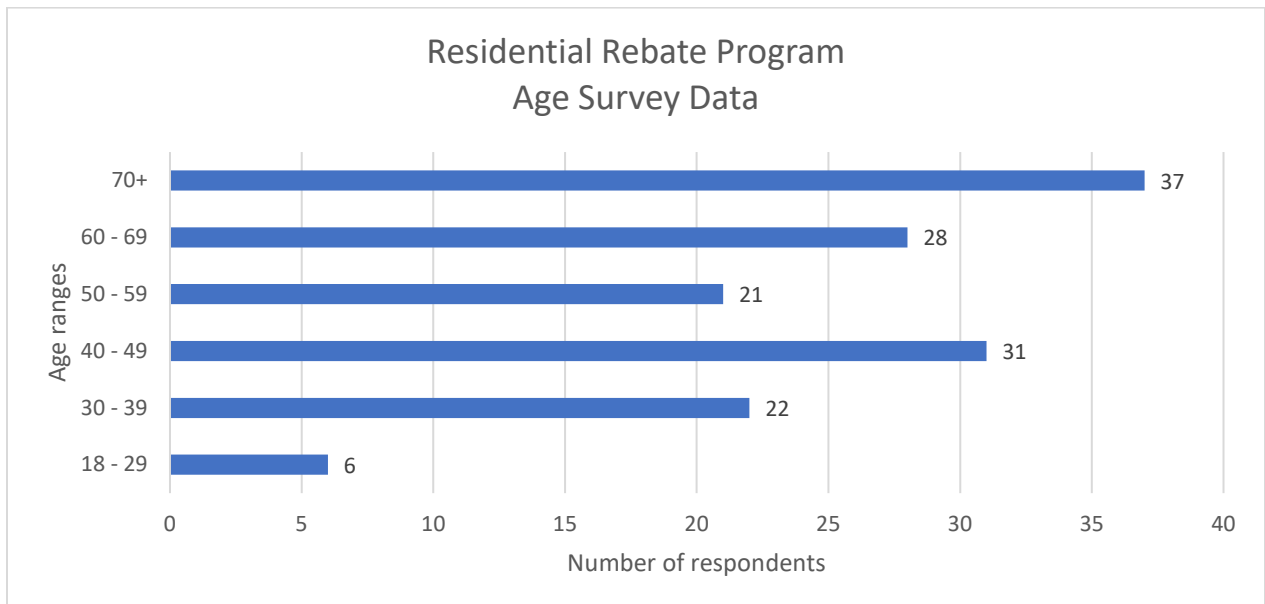
Household Income

The income question was formatted as a dropdown and the customer was only allowed to select one option. A total of 129 customers responded to the question that was phrased like this: *“Which of the following options best represents your annual household income?”*



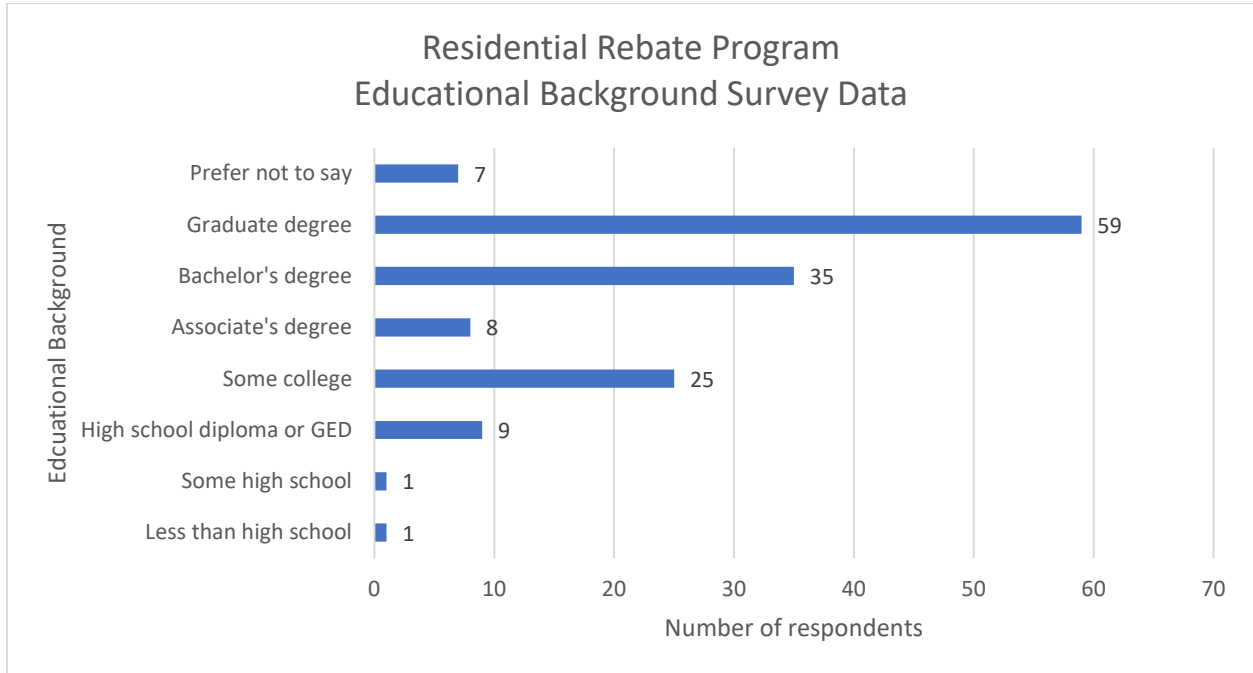
Age

A total of 145 customers responded to the question that was phrased like this: *“What age range are you in?”*



Educational Background

The education question was phrased as follows: "What is the highest degree or level of education you have completed?" 145 customers responded to the question.



Primary language

The language question was formatted as an open-ended question and was phrased as follows: "What is your primary language spoken at home?" 146 customers responded to the question and 140 of those customers stated that the primary language spoken at home was English only. The other responses included: Spanish, English & Spanish, English & French, Swahili.