

This presentation premiered at WaterSmart Innovations

watersmartinnovations.com





EVALUATING WATER AFFORDABILITY AND THE IMPACT OF CONSERVATION ON CUSTOMER BILLS IN LONG BEACH, CALIFORNIA



Alliance
for Water
Efficiency

A VOICE FOR WATER EFFICIENCY IN NORTH AMERICA

- Our mission is to promote an efficient and sustainable water future
- Over 530 member organizations in 200 watersheds delivering water to 50 million water users



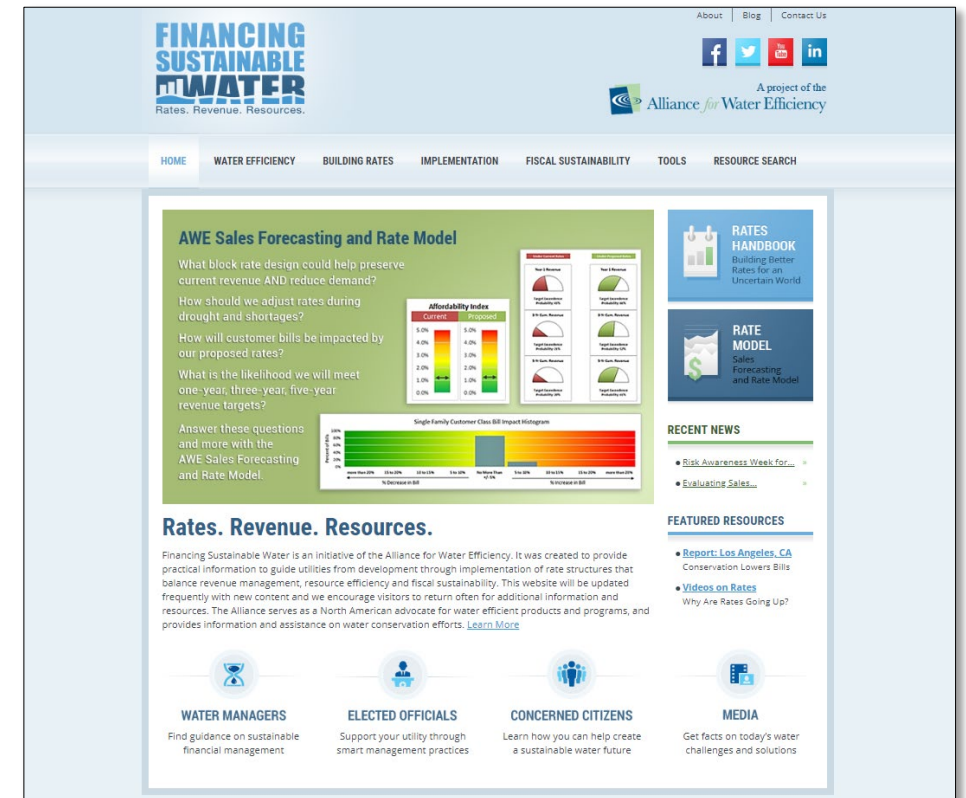
ROADMAP FOR THIS PRESENTATION

- AWE resources related to water utility finance and rates as it pertains to water affordability
- Forthcoming AWE report on Water Affordability in Long Beach, CA
- Questions and Discussion



FINANCING SUSTAINABLE WATER

- Website
- Resource Search
- Rates Handbook
- Sales Forecasting and Rate Model
 - Customer bill impacts resulting from a rate change
 - Available for free at:
FinancingSustainableWater.org

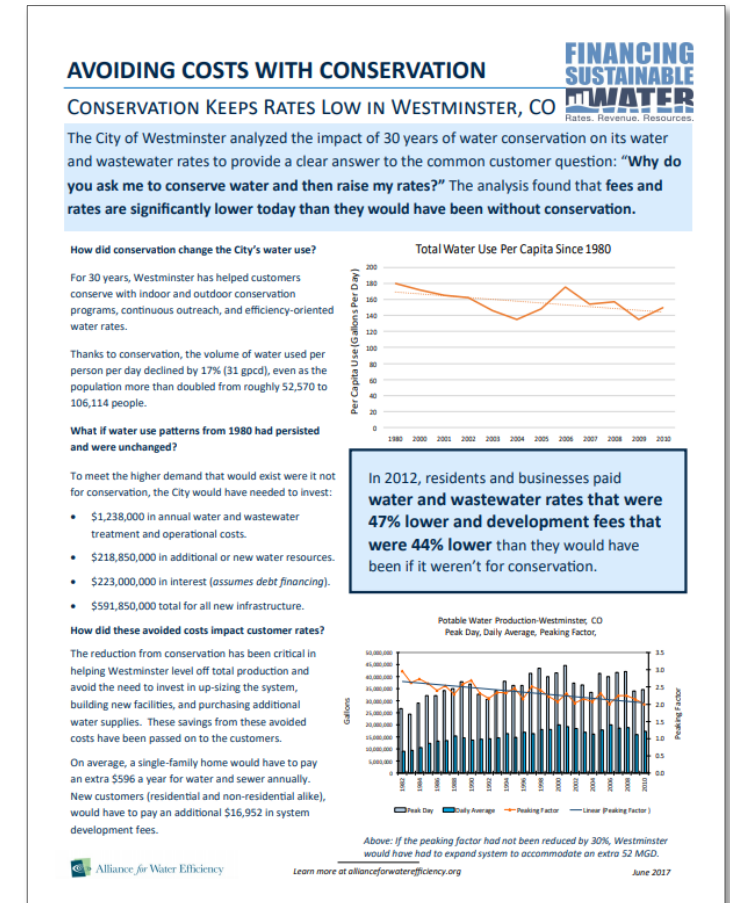


AVOIDED COST STUDIES

• Four Communities

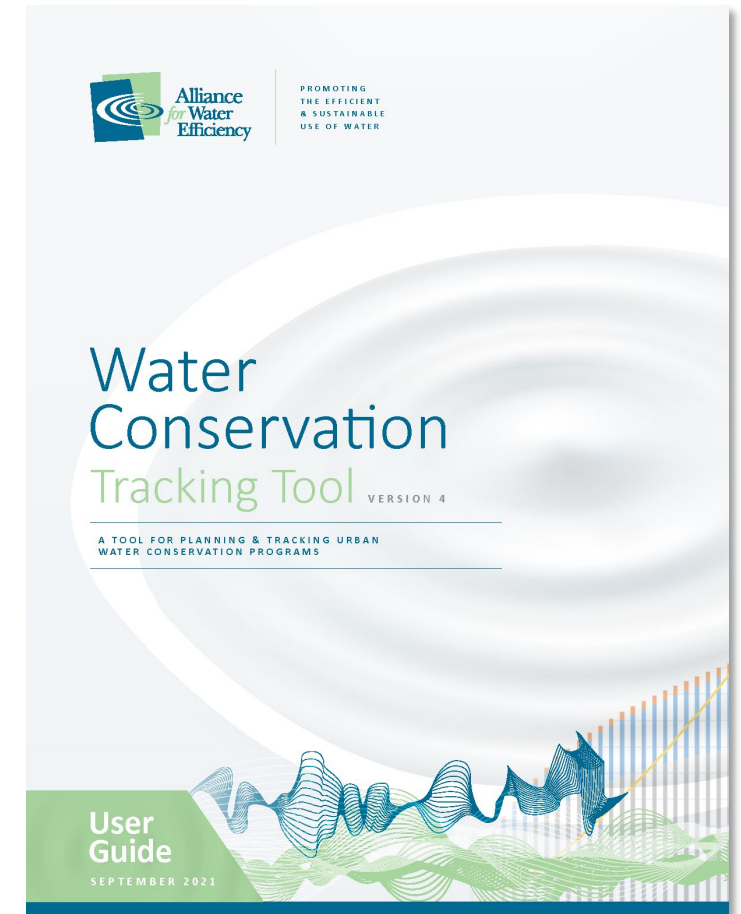
- Westminster, CO - water and wastewater bills 47% lower and development fees 44% lower because of conservation
- Tucson, AZ - water and wastewater bills 11.7% lower because of conservation
- Gilbert, AZ - water and wastewater bills 5.8% lower and development fees 45% lower because of conservation
- Los Angeles, CA - customers pay water bills that are 26.7% lower than they would have been without efficient rates and conservation

- Reports and factsheets available at:
FinancingSustainableWater.org



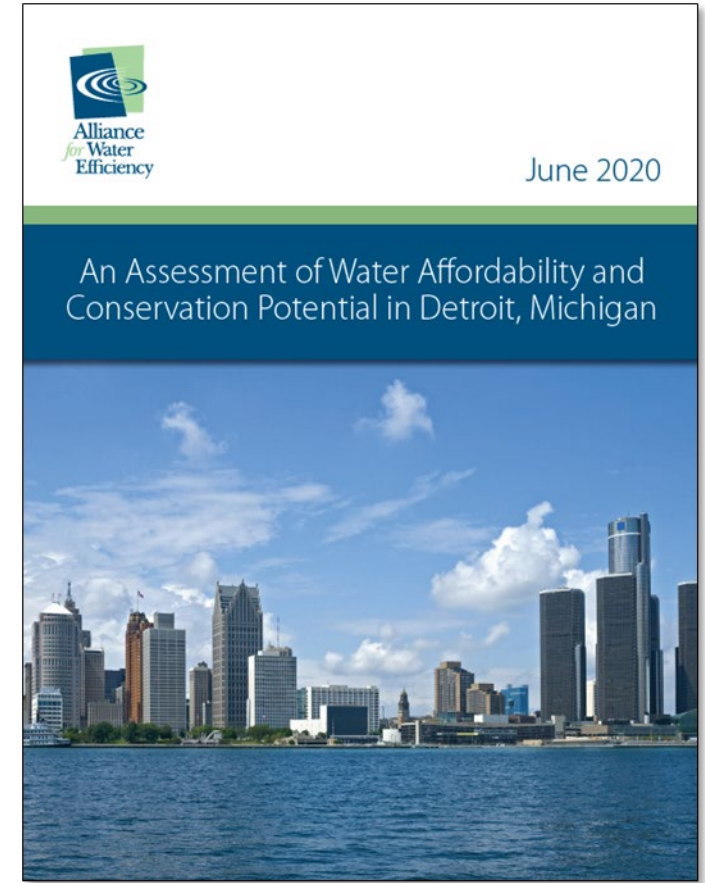
AWE WATER CONSERVATION TRACKING TOOL

- Conservation program planning
- Cost-benefit analysis
- Impact to utility revenue requirement
- Impact to rates and customer bills
- Available free for AWE members
www.allianceforwaterefficiency.org/resources/topic/water-conservation-tracking-tool



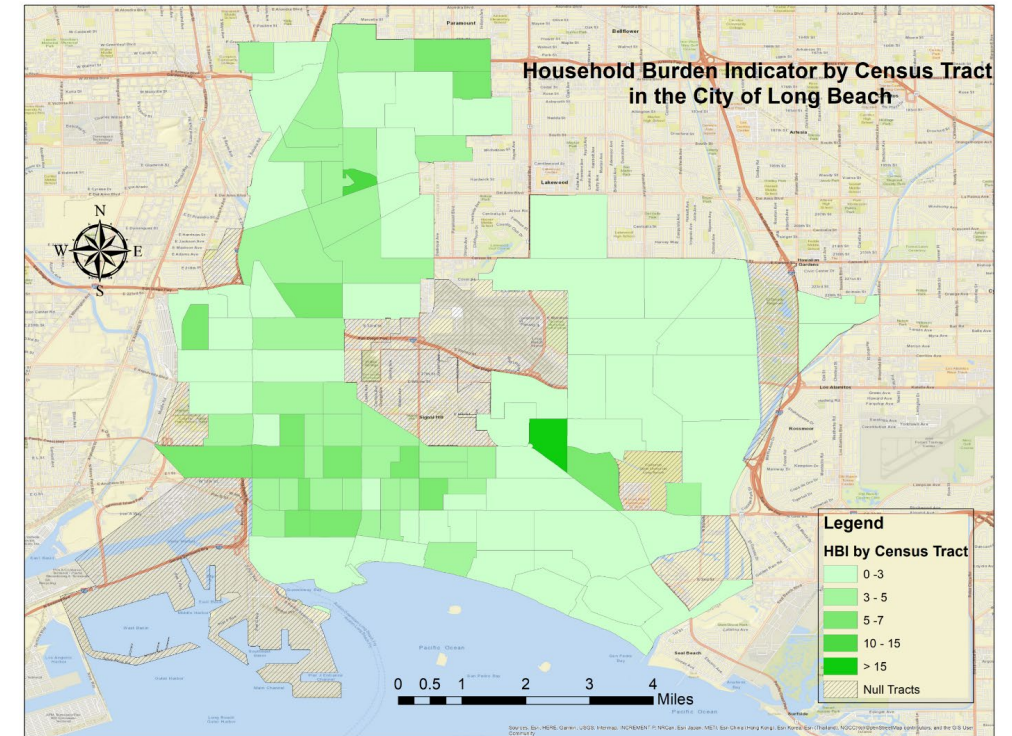
AWE'S AFFORDABILITY ASSESSMENT FOR DETROIT, MICHIGAN

- Water Affordability Assessment
 - Used relatively new indicators
 - Household Burden Indicator
 - Poverty Prevalence Indicator
- Conservation Potential Assessment
 - Used SF inefficient toilet stock estimates
- Assessments conducted for 291 census tracts using 2018 data
- Thank you to Kohler Co. for funding this work!



AWE'S AFFORDABILITY ASSESSMENT FOR LONG BEACH, CALIFORNIA

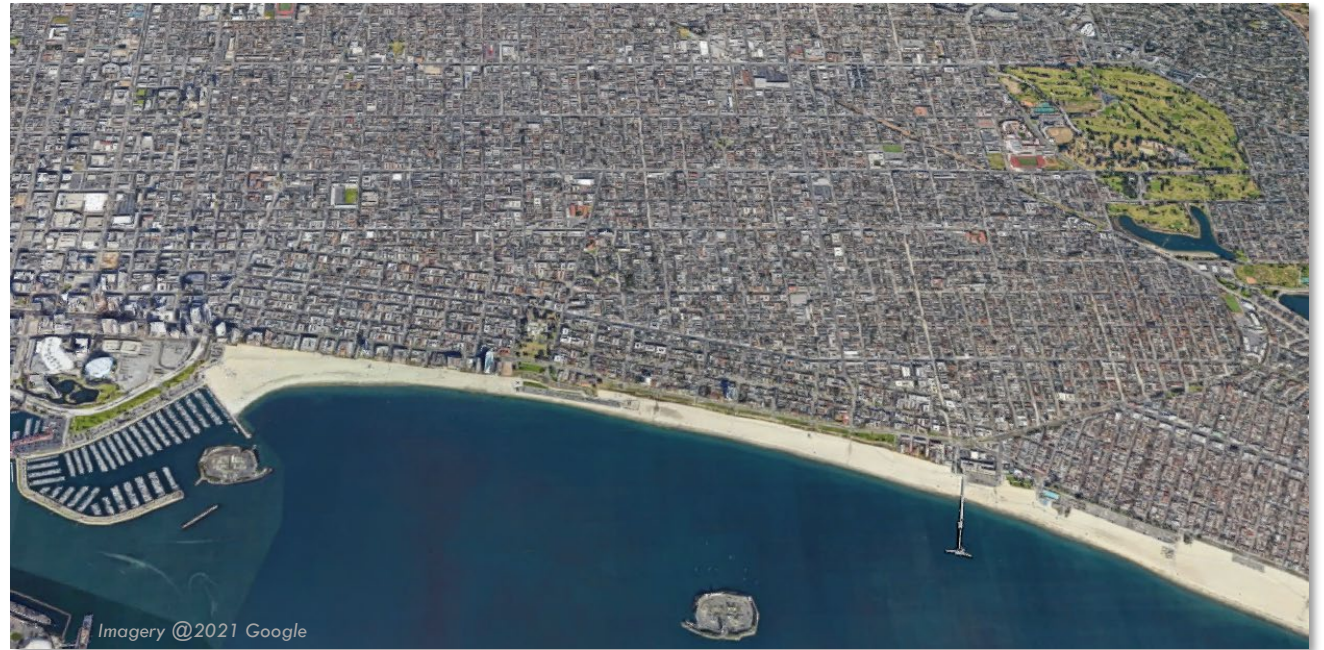
- Review of Long Beach Efforts
- Water Affordability Assessment
- Water Conservation Impact on Bills



Thank you to the Metropolitan Water District of Southern California for funding this work and Long Beach Water Department for Partnering!!!

LONG BEACH AFFORDABILITY EFFORTS

- Utility Users Tax Exemption Program
- Rate Restructure
- Conservation Programs



LONG BEACH UTILITY USERS TAX EXEMPTION PROGRAM

- Twenty percent discount on gas services.
- Exempts customer from paying the five percent (5%) Utility Users Tax on gas, water, electric, and telephone bills.
- Provides an approximate \$5.00 monthly water service charge credit.
- Exempts customers from paying for Tier I water usage.
- Provides reduced refuse/recycling rate.
- Reduces \$35.00 service establishment fee to \$15.00, if customers qualify within six months of establishing service.

The Utility Users Tax Exemption Program 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 **\$34,480** or less combined gross income of all members of the household for up to two people. **Each additional person adds \$8,960** to the income-eligibility requirement.



Select Language ▼



Long Beach Water's
Response to COVID-19

[Read Updates Here](#)

[Home](#) [Customer Service](#) [Save Water](#) [Water Quality](#) [Water Sources](#) [Outreach & Education](#)



Water Bill Program



MORE INFORMATION

[Understanding Your Bill](#)

[Assistance](#)

[Water Rates](#)

[Reclaimed Water Rates](#)

[Sewer Rates](#)

[Proposition 218](#)

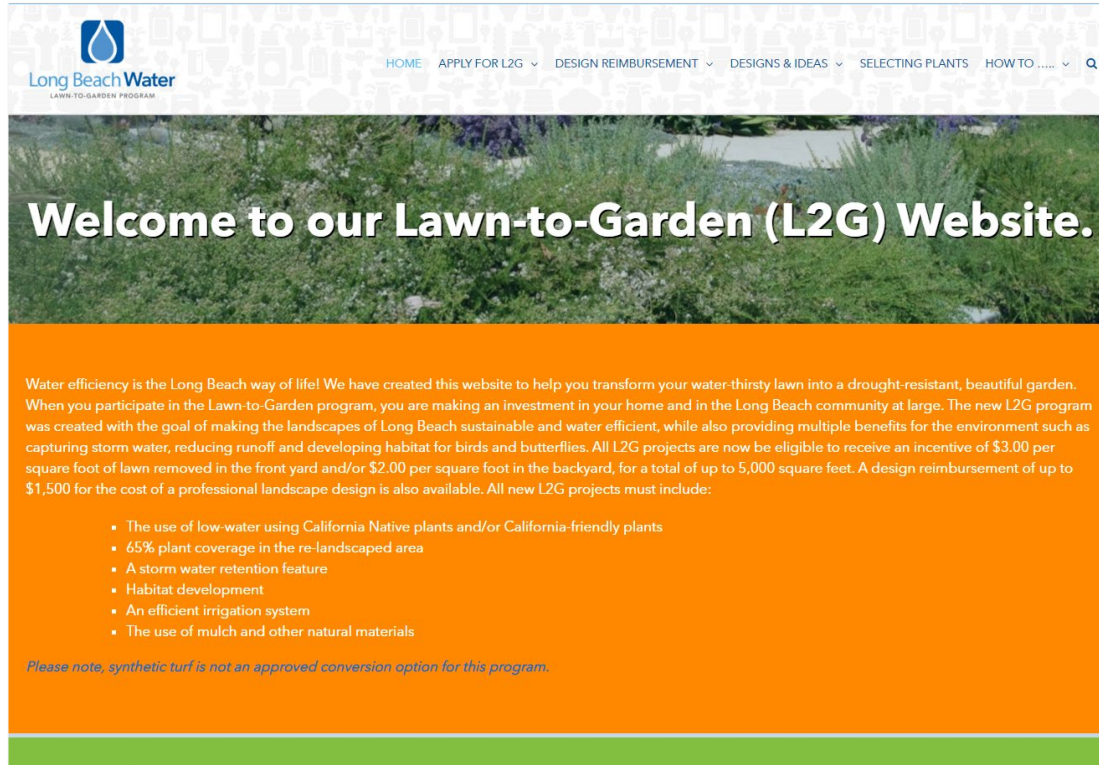
Water Bill Assistance Program for Customers Impacted by the COVID-19 Pandemic



LONG BEACH RATE RESTRUCTURE

Tier	Before 2017 Rate Restructure		After 2017 Rate Restructure	
	Block Switch Point	Volumetric Rate	Block Switch Point	Volumetric Rate
IA*	First 5	\$1.43	First 6	\$0.00
IB	First 5	\$2.57	First 6	\$1.92
II	Next 10	\$2.85	Next 7	\$3.68
III	Over 15	\$4.28	Over 13	\$5.37

LONG BEACH AFFORDABILITY EFFORTS – CONSERVATION PROGRAMS



The screenshot shows the homepage of the Long Beach Water Lawn-to-Garden (L2G) website. The header includes the Long Beach Water logo and a navigation menu with links: HOME, APPLY FOR L2G, DESIGN REIMBURSEMENT, DESIGNS & IDEAS, SELECTING PLANTS, and HOW TO A large banner image of a lush green lawn with the text "Welcome to our Lawn-to-Garden (L2G) Website." Below the banner, a paragraph explains the program's goal and benefits. A bulleted list outlines the requirements for the L2G program. A note at the bottom states that synthetic turf is not an approved conversion option.

Long Beach Water
LAWN-TO-GARDEN PROGRAM


HOME APPLY FOR L2G DESIGN REIMBURSEMENT DESIGNS & IDEAS SELECTING PLANTS HOW TO Q

Welcome to our Lawn-to-Garden (L2G) Website.

Water efficiency is the Long Beach way of life! We have created this website to help you transform your water-thirsty lawn into a drought-resistant, beautiful garden. When you participate in the Lawn-to-Garden program, you are making an investment in your home and in the Long Beach community at large. The new L2G program was created with the goal of making the landscapes of Long Beach sustainable and water efficient, while also providing multiple benefits for the environment such as capturing storm water, reducing runoff and developing habitat for birds and butterflies. All L2G projects are now be eligible to receive an incentive of \$3.00 per square foot of lawn removed in the front yard and/or \$2.00 per square foot in the backyard, for a total of up to 5,000 square feet. A design reimbursement of up to \$1,500 for the cost of a professional landscape design is also available. All new L2G projects must include:

- The use of low-water using California Native plants and/or California-friendly plants
- 65% plant coverage in the re-landscaped area
- A storm water retention feature
- Habitat development
- An efficient irrigation system
- The use of mulch and other natural materials

Please note, synthetic turf is not an approved conversion option for this program.



The screenshot shows the LiveH2OLB website. The header includes the LiveH2OLB logo and a navigation menu with links: Save Water, Programs & Tools, We LiveH2OLB, Resources, and Connect With Us. A large banner image of a dishwasher with the text "Small Habits, Big Savings" is on the left. On the right, a blue box contains the text "Save Water and Money" and a paragraph about the Long Beach Water Department's support for water efficiency. Below the banner, a section titled "Small Habits Add Up to Big Water Savings" includes a paragraph about simple ways to save water. A cartoon water drop character is in the bottom right corner.

LiveH2OLB

Select Language

Saving Water is the Long Beach Way

Save Water Programs & Tools We LiveH2OLB Resources Connect With Us

Small Habits, Big Savings

Save Water and Money

Long Beach Water Department supports water use efficiency through various programs to help our residents and businesses. We are continuously developing resources to help customers save water and money. [Read more about the programs and tools here.](#)


Small Habits Add Up to Big Water Savings

There are simple, easy things you can do to save water, whether you are a resident or a business owner. Continue the same water-wise behaviors you've already adopted into your daily lifestyle and check out our guides below for more ways to save.


LONG BEACH AFFORDABILITY EFFORTS – CONSERVATION PROGRAMS

Wednesday - October 6, 2021 MAIN: (562) 570-2300


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 **Long Beach Water**
Exceptional Water · Exceptional Service

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 **Long Beach Water's
Response to COVID-19** [Read Updates Here](#)

[Home](#) [Customer Service](#) [Save Water](#) [Water Quality](#) [Water Sources](#) [Outreach & Education](#) [Search](#) [Facebook](#) [Twitter](#) [YouTube](#) [Instagram](#)



Direct Install Gardens (DIG)

Welcome to DIG!


Water use efficiency is the Long Beach Way of Life! The Direct Install Gardens (DIG) Program was created to provide homeowners in low income neighborhoods affected by environmental pollution with a sustainable landscape free-of-charge. DIG gardens are designed to reduce runoff, capture and sequester carbon dioxide, and create habitats for birds and insects.

Program Requirements

To qualify for a DIG installation, the property/household must:

- be an owner occupied, single family residence
- be located within the boundaries of census tract 0603755070602 ([click here for a map](#))

* Priority will be given to residents who meet an income requirement at or below 80% of the local median income



LONG BEACH AFFORDABILITY EFFORTS – CONSERVATION PROGRAMS

The screenshot displays the bewaterwise.com website for Residential Rebates. The header includes the SoCal WaterSmart logo, the text "Residential Rebates", the website URL "bewaterwise.com", and language/location selectors for "English" and "Residential". A navigation bar contains links for "Rebates", "Retailer Tools", "Contractor Resources", and "Contact Us". A sidebar menu on the left lists categories: "General Information", "Available Rebates", "Apply Online", "Estimate Your Rebate", and "Program FAQs". The "Available Rebates" section is expanded, showing a list of programs: "Available Rebates Overview", "Turf Replacement Program", "Clothes Washers", "Toilets", "Rain Barrels & Cisterns", "Sprinkler Nozzles", "Soil Moisture Sensors", "Irrigation Controllers", and "Flow Monitor Devices Pilot Program". The main content area features a "WATER CONSERVATION HOW-TO TIPS" section with a "LEARN MORE" button and a "SUBMIT YOUR REBATE APPLICATION!" section with a description of the application process. At the bottom, there are two sections: "AVAILABLE REBATES" with icons for various appliances and "PROGRAM INFORMATION" with links for "ABOUT THE PROGRAM" and "TERMS & CONDITIONS".

SoCal WaterSmart | Residential Rebates | bewaterwise.com | English | Residential

Rebates | Retailer Tools | Contractor Resources | Contact Us

General Information

Available Rebates | Available Rebates Overview

Apply Online | Turf Replacement Program

Estimate Your Rebate | Clothes Washers

Program FAQs | Toilets

Rain Barrels & Cisterns

Sprinkler Nozzles

Soil Moisture Sensors

Irrigation Controllers

Flow Monitor Devices Pilot Program

WATER CONSERVATION HOW-TO TIPS

Visit bewaterwise.com for garden inspiration, landscape classes, helpful videos and much more.

LEARN MORE

SUBMIT YOUR REBATE APPLICATION!

Complete and submit your application online. Various rebates are available region-wide, so apply now to secure your place!

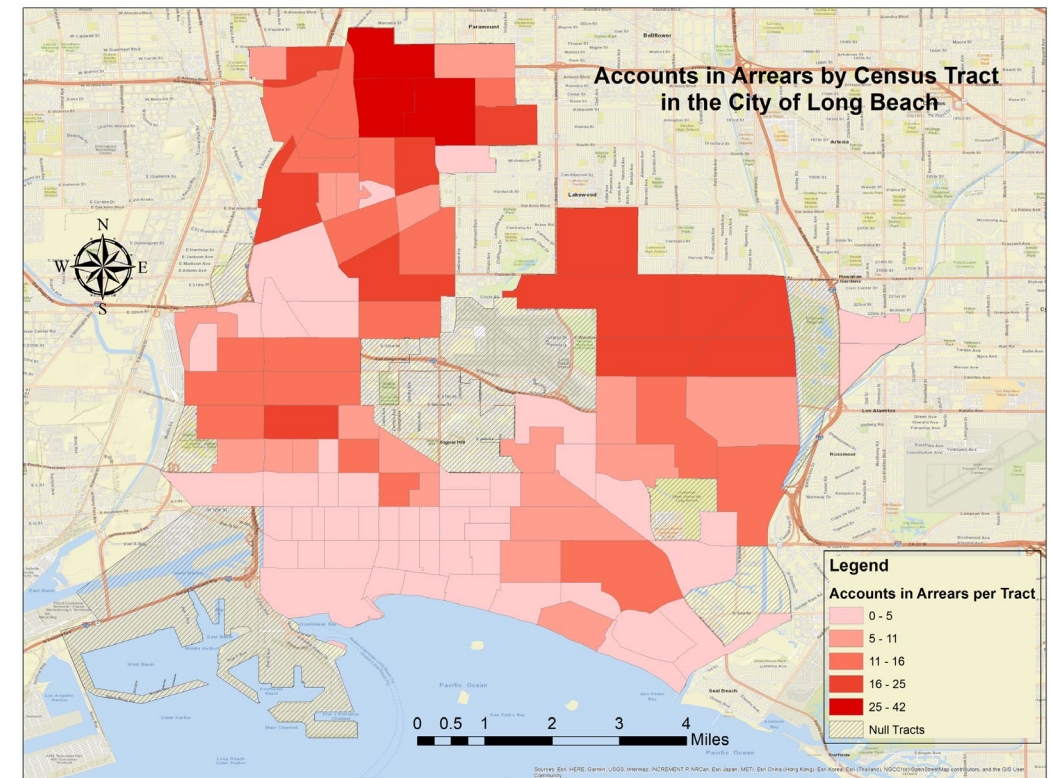
AVAILABLE REBATES

PROGRAM INFORMATION

ABOUT THE PROGRAM | TERMS & CONDITIONS

LONG BEACH AFFORDABILITY ASSESSMENT

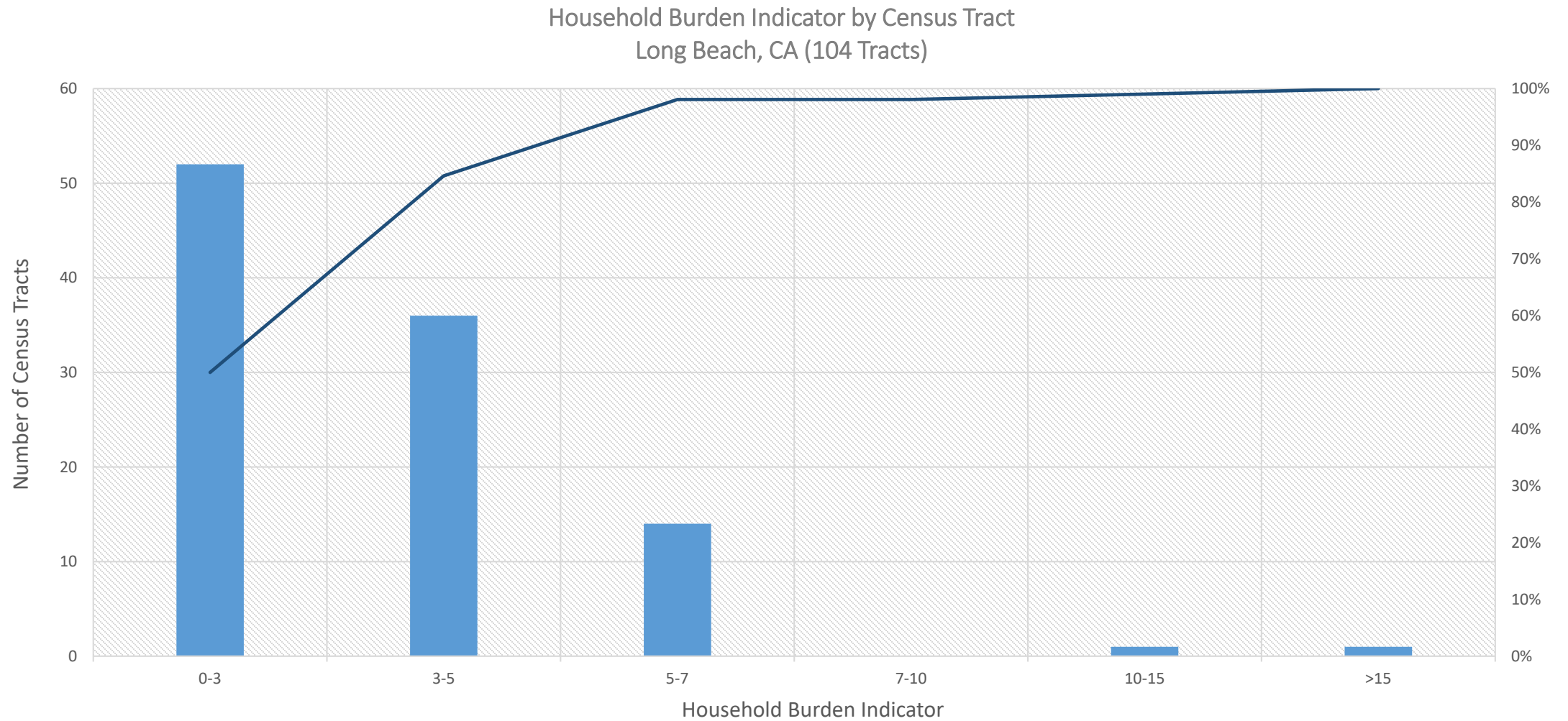
- Household Burden Indicator (HBI) for Single-Family Accounts
- Household Income Data
- Accounts in Arrears for Single-Family Customers
 - Consumption
- Exempt Customer Consumption
- 104 Census Tracts Using 2019 Data
- Water Conservation Bill Impacts



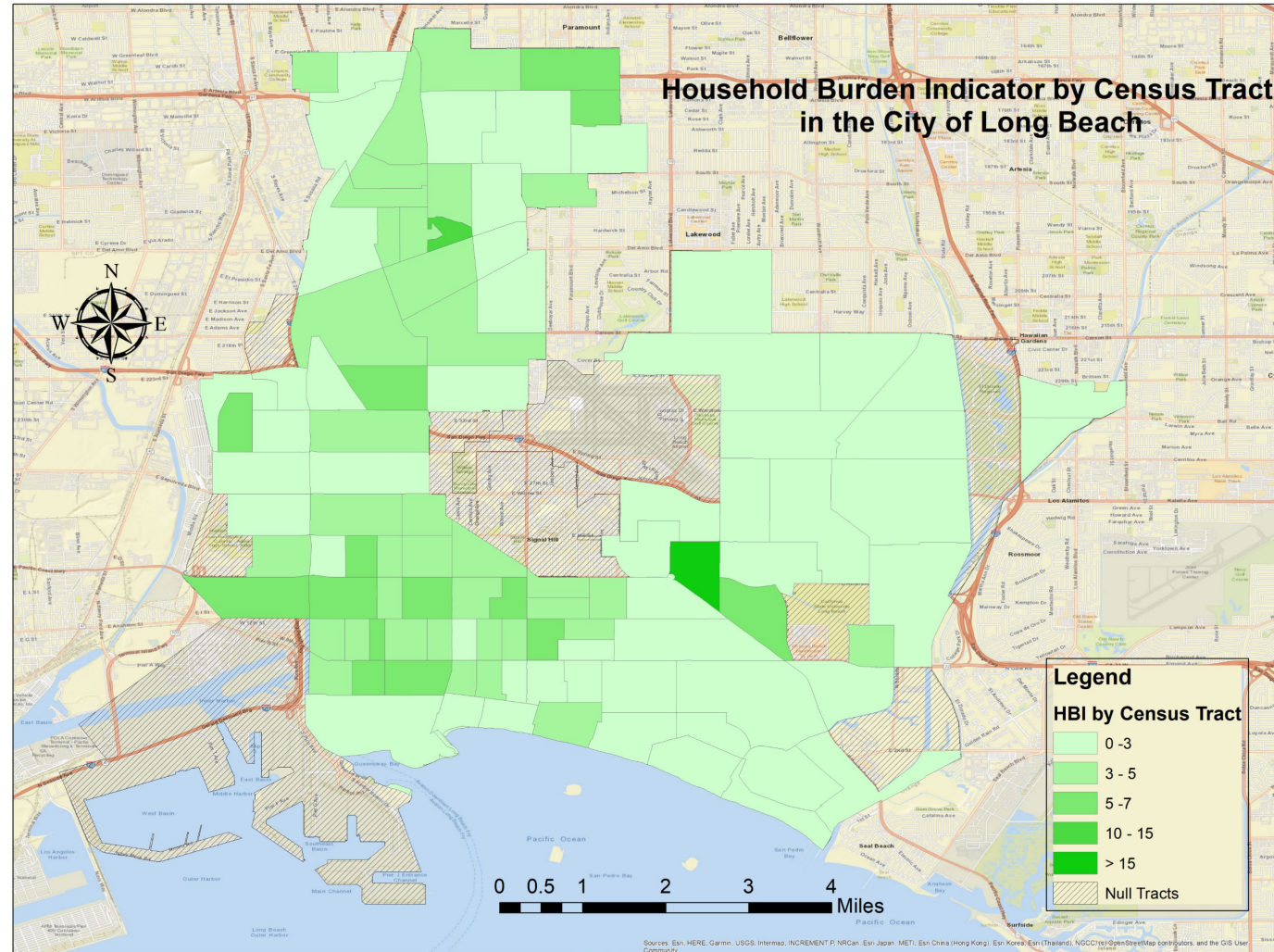
HOUSEHOLD BURDEN INDICATOR

- $HBI = \frac{\text{Total Annual Basic Water Sector Household Cost}}{\text{Upper Boundary of the Lowest Quintile Income}}$
- HBI = 3.27 for city, tract range of 0.90 to 24.16
- Average Annual Combined Water and Sewer Bill: \$824.27
- Average Monthly Water Consumption: 10.24 CCF
- Estimates based on consumption data from August 2019 through July 2020
- Census Tract HBI based on tract-level income and tract-level consumption data

HOUSEHOLD BURDEN INDICATOR

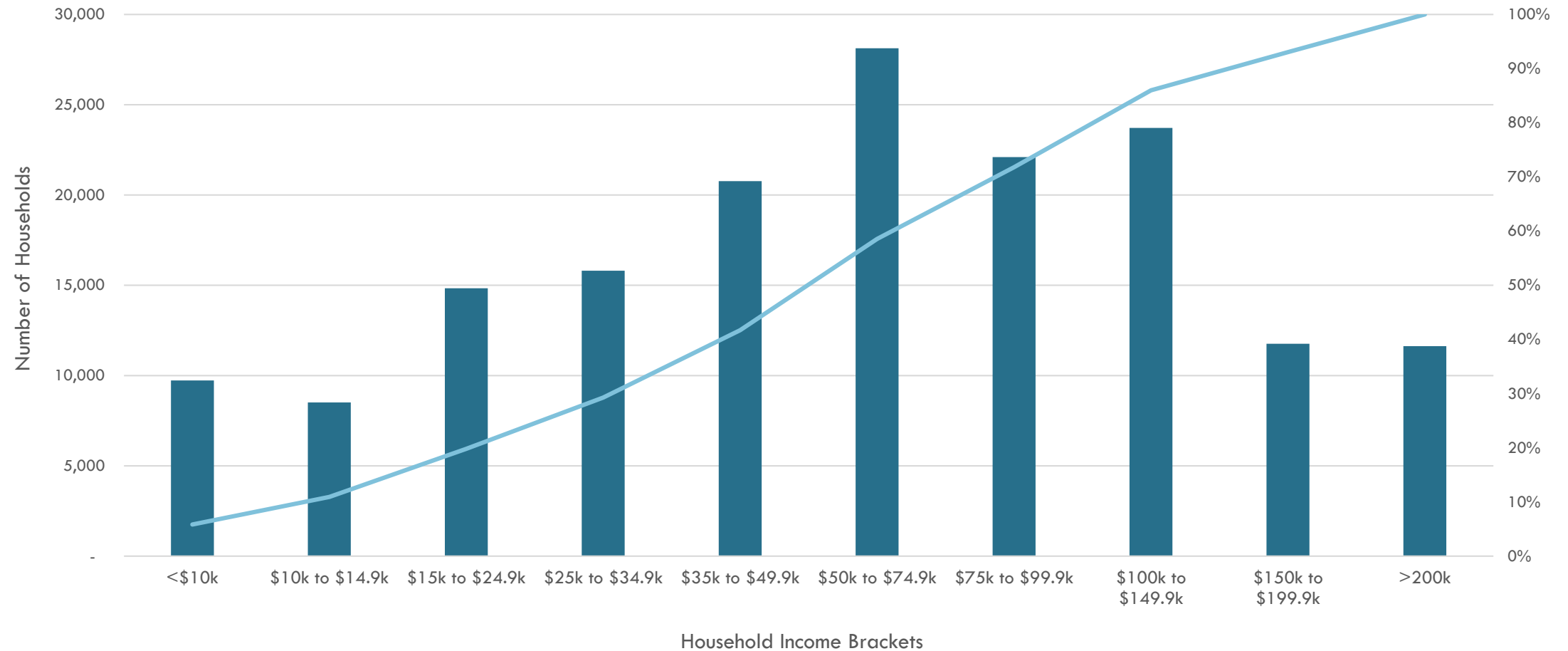


HOUSEHOLD BURDEN INDICATOR



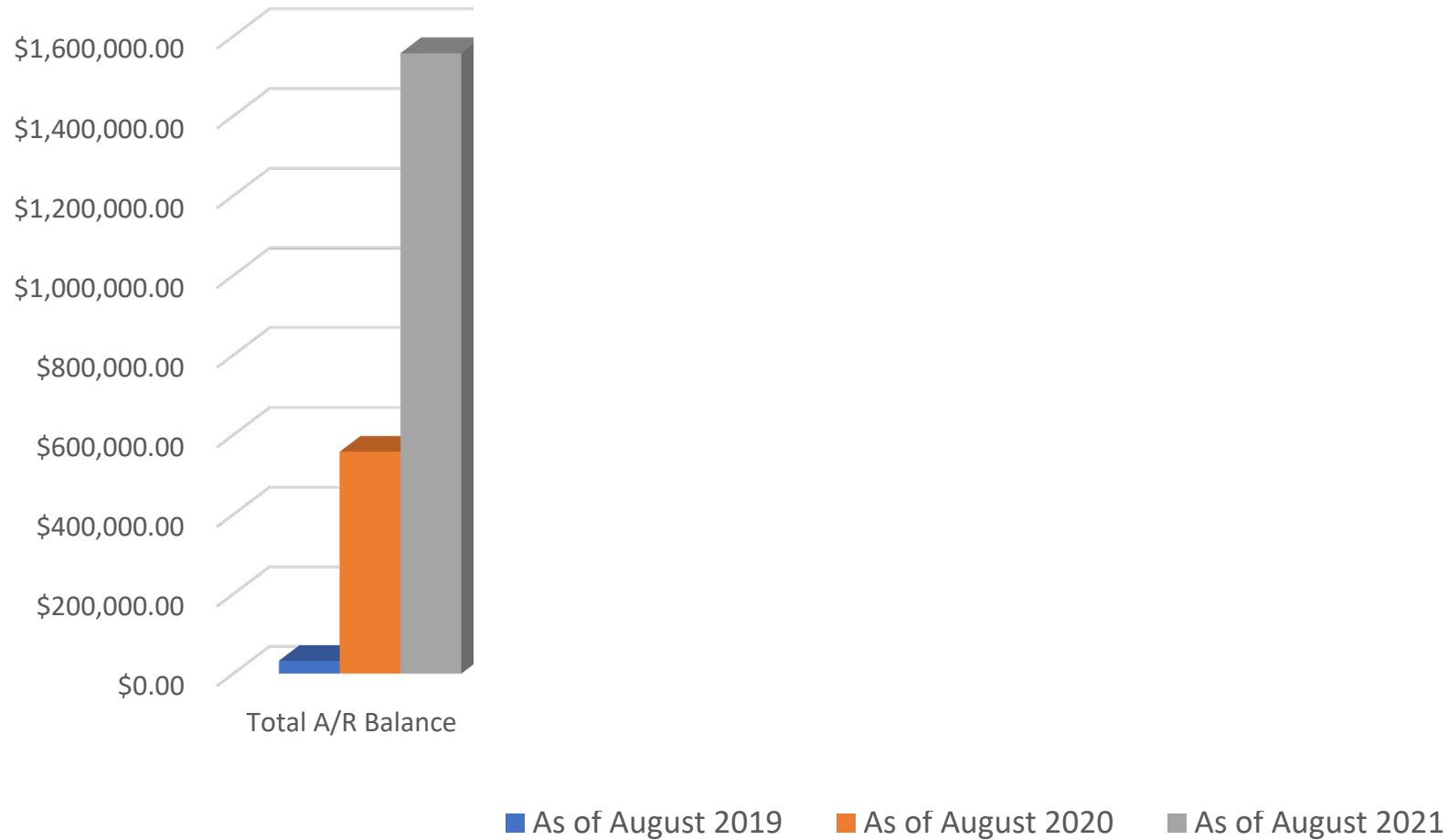
HOUSEHOLD INCOME DATA

City of Long Beach Income Distribution
(166,988 Households, 2019)

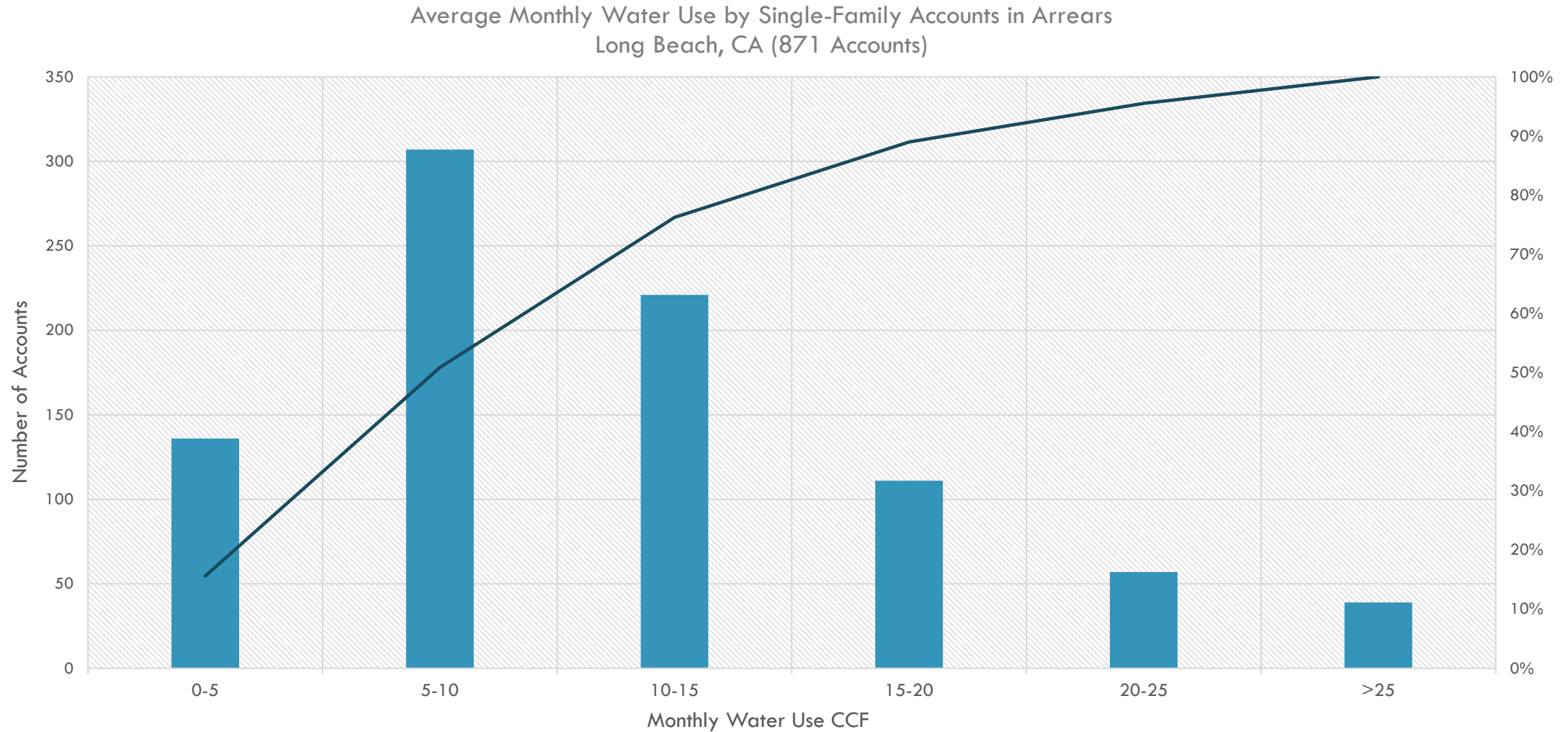


ACCOUNTS IN ARREARS

Accounts Receivable Balances for Residential Customers - Water Only

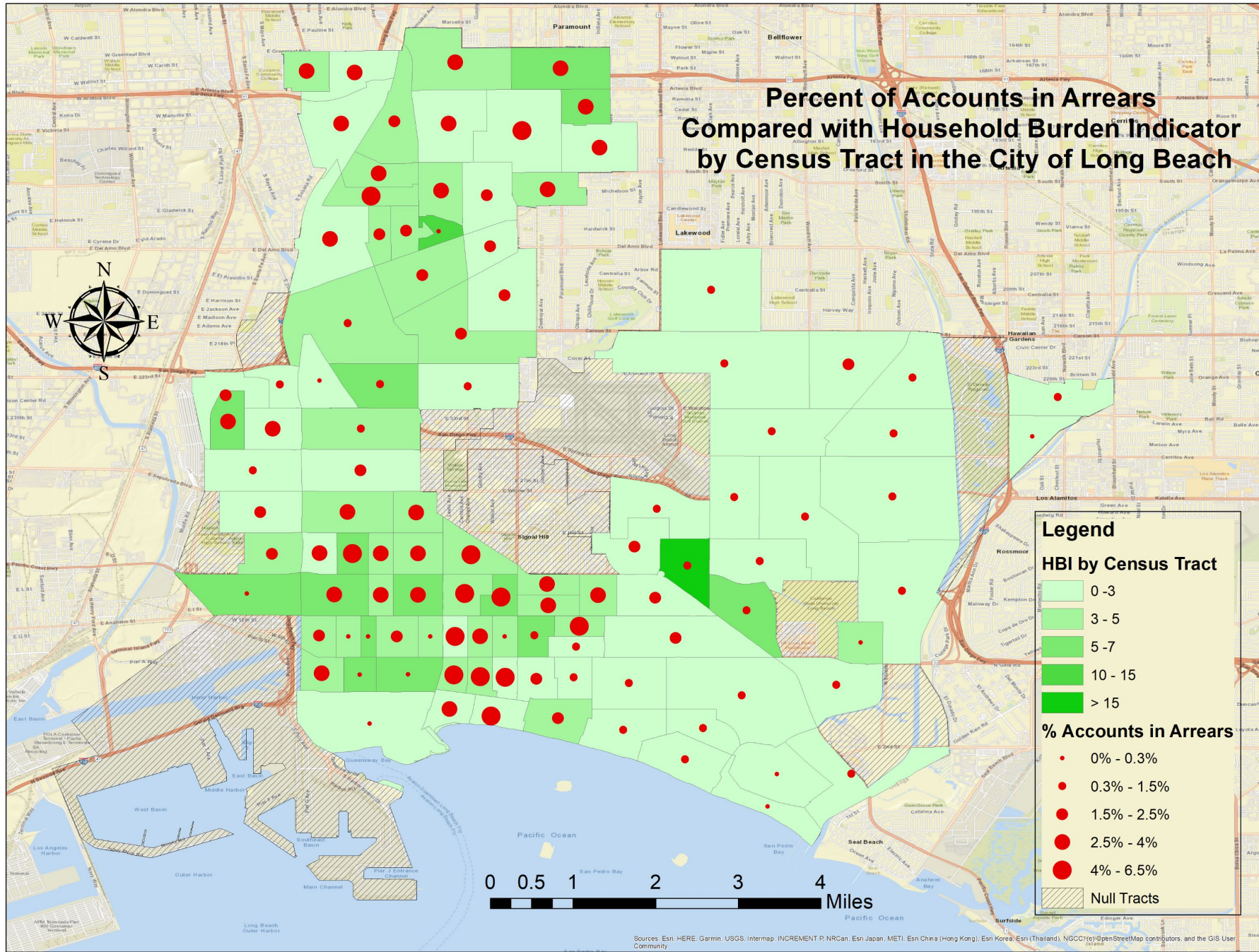


ACCOUNTS IN ARREARS - CONSUMPTION



Average monthly water consumption of 11.42 CCF, 11% higher than city average

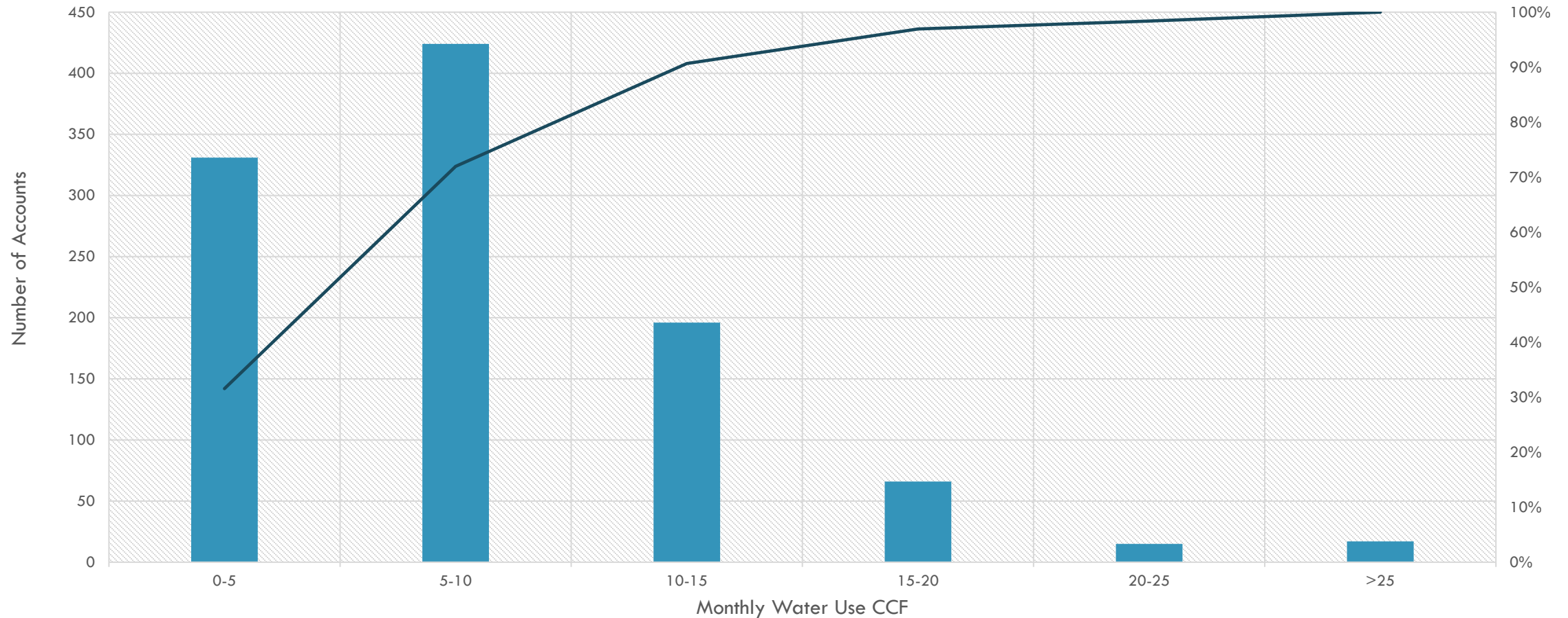
Percent of Accounts in Arrears Compared with Household Burden Indicator by Census Tract in the City of Long Beach



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

EXEMPT CUSTOMERS - CONSUMPTION

Average Monthly Water Use by Single-Family Exempt Accounts
Long Beach, CA (1,049 Accounts)



Average monthly water consumption of 8.08 CCF, 21% lower than city average

WATER CONSERVATION IMPACT ON BILLS

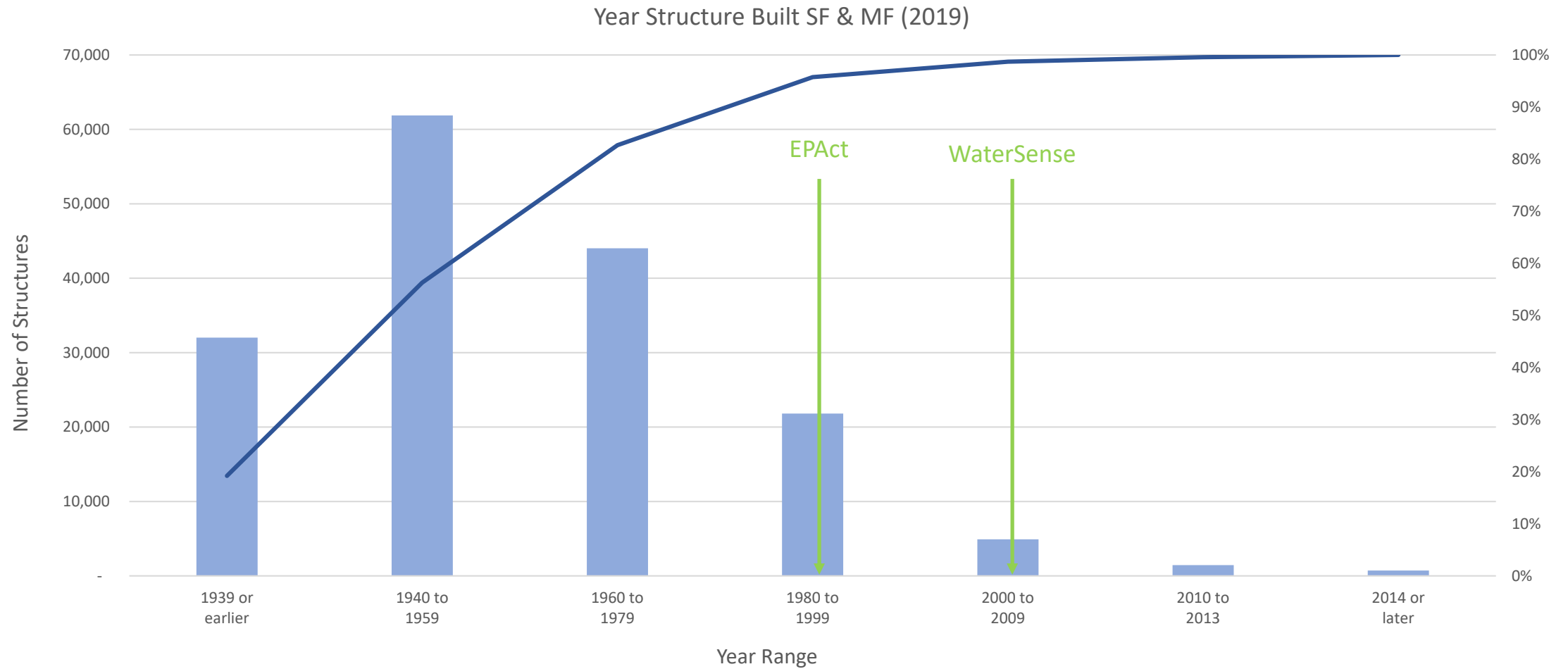
Conservation Measure	Annual Savings Estimate Gallons	Monthly Savings Gallons	Annual Bill Savings*	Percent Annual Savings Based on Average Bill**
Toilet Replacements	10,800	900	\$68.67	8.33%
Showerhead Replacements	2,062	172	\$13.11	1.59%
Clothes Washer Replacements	5,000	417	\$31.79	3.86%
Landscape Transformation (turf removal)	12,367	1,031	\$72.73	8.82%
Total	30,229	2,519	\$177.77	21.57%

*Assumes Tier II Savings at \$4.399/CCF and \$0.357/CCF for Sewer for Indoor Water Savings. Rates Effective October 1, 2019.

Includes fractions of CCF which may not comport with meter readings.

**Percent savings based on an estimated average combined water/and sewer bill of \$824.54.

ADDITIONAL PERSPECTIVE: HOUSING STOCK



SUMMARY

- Long Beach has taken action to help make essential water use more affordable for its customers
 - Rate restructure, tax exemption program, and a variety of conservation programs including the Direct Install Gardens (DIG) program
- Water affordability varies throughout the city
 - The HBI was 3.47 for the city, but ranged from 0.90 to 24.16 by census tract
- Water conservation can play a meaningful role in lowering water and sewer bills for Long Beach customers
 - A combination of indoor and outdoor water conservation strategies can lower an average single-family bill by an estimated 21% annually

A SINGULAR VOICE AND A PLATFORM FOR
WATER USE EFFICIENCY AND WATER CONSERVATION,
BRINGING A CRITICAL PERSPECTIVE TO AN INCREASINGLY
THIRSTY NORTH AMERICA.

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