

Who is left behind when we shift to outdoor conservation? **(and how do we fix it)**

Peer to Peer
June 3, 2021

Presented by: Lindsay Edelman, Anya Kamenskaya, Jessica Woodard (EBMUD)
Karen Guz, San Antonio Water System

Welcome Peers!



Karen Guz
Conservation Director
San Antonio Water System



Anya, Jessica & Lindsay
Water Conservation Representatives
East Bay Municipal Utility District



Workshop Purpose

- As more utilities embrace the concept that water savings will increasingly be found in landscape water efficiency programs, many people may be left out:
 - Low-income single-family homeowners
 - Renters
 - Residents in multi-family dwellings
 - Linguistically isolated populations
- Join us in a guided discussion to find out more and what we can do about it.
- Participants will have the opportunity to share their perspective and ideas!



Agenda

- Introduction to EBMUD
 - Identified barriers and challenges
- Barriers and challenges
 - Poll and open discussion
- Solutions and ways forward
 - Conservation Programs for People in Poverty (SAWS)
- Q/A and Discussion
- Wrap-up
 - Key takeaways
 - Resources





Discussion n Tips

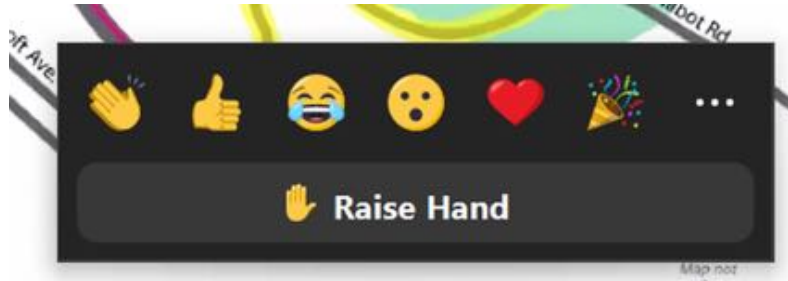
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Type in the chat box for questions or comments



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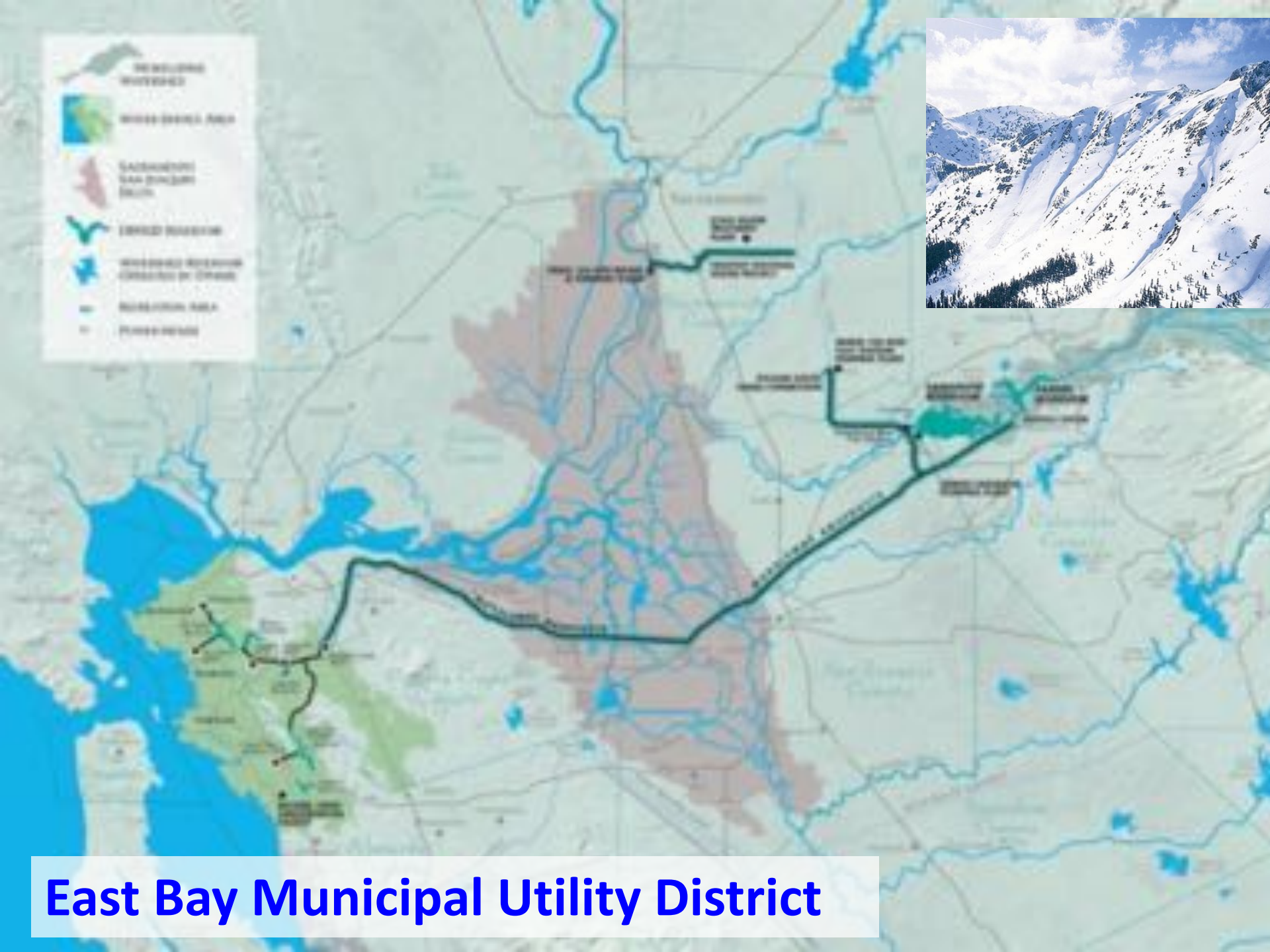


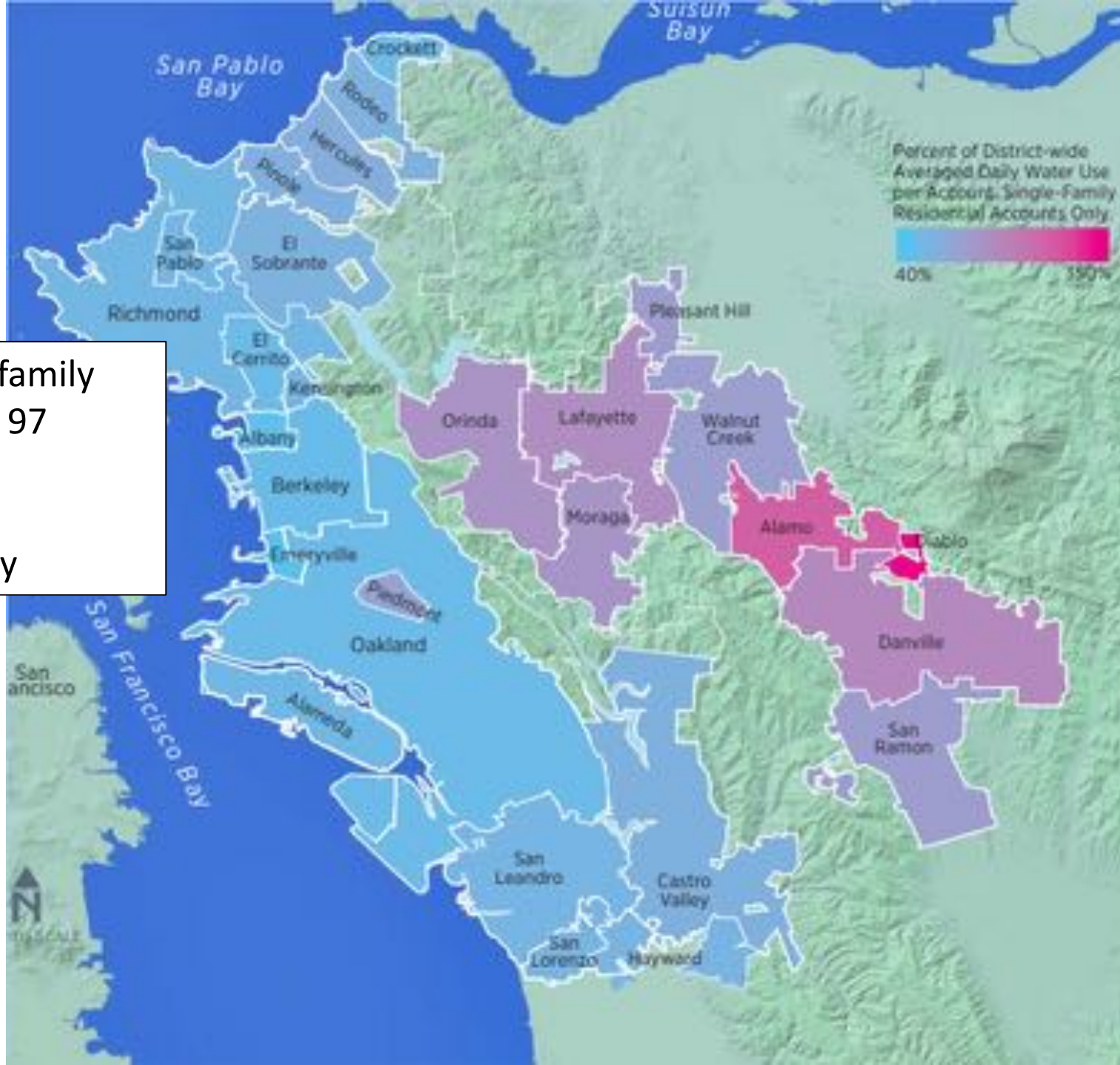
Roll Call

- What industry are you from?
- Where is your water utility located?
- What is the size of your water utility (number of customers)?
- What is the focus of your conservation programming?



East Bay Municipal Utility District

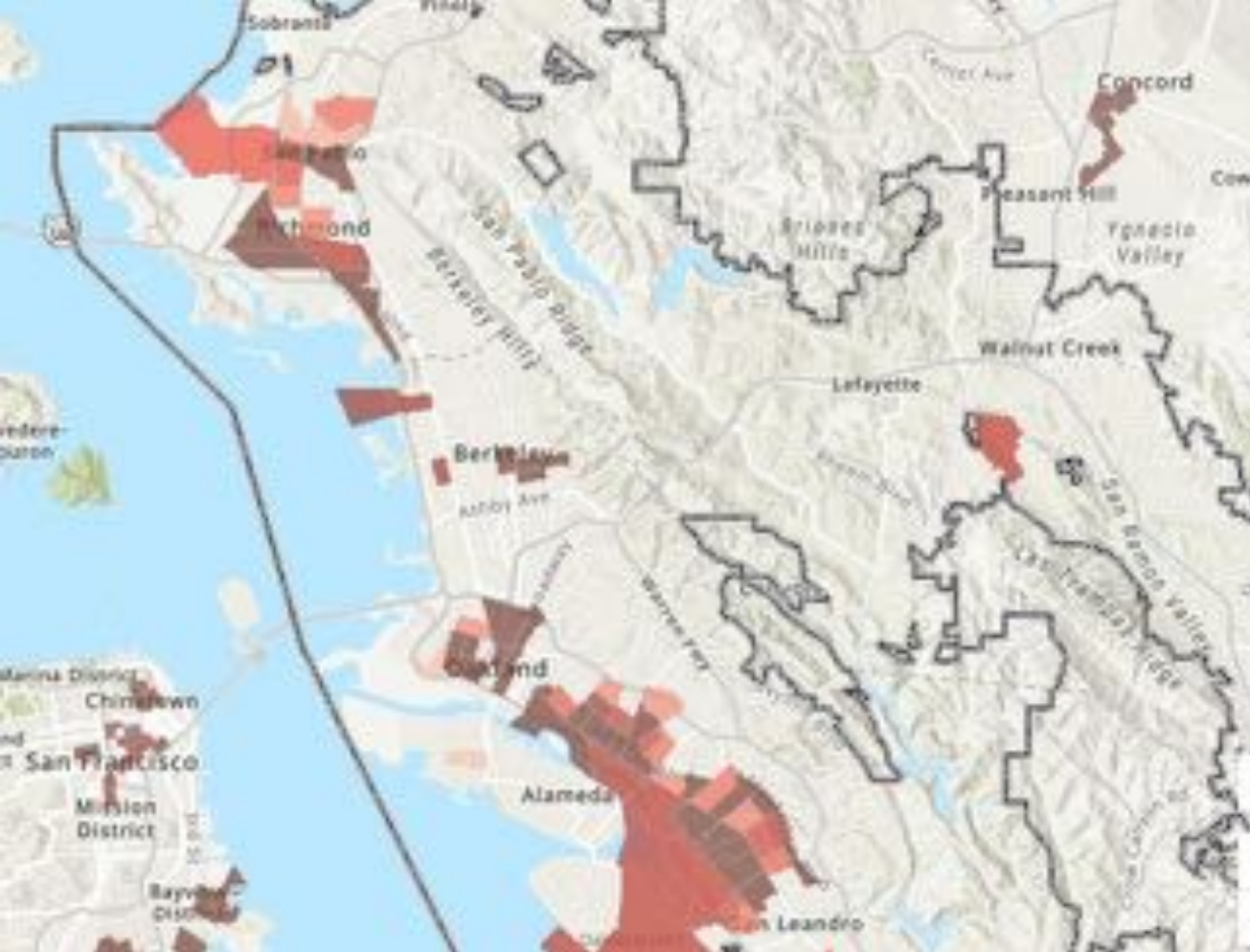




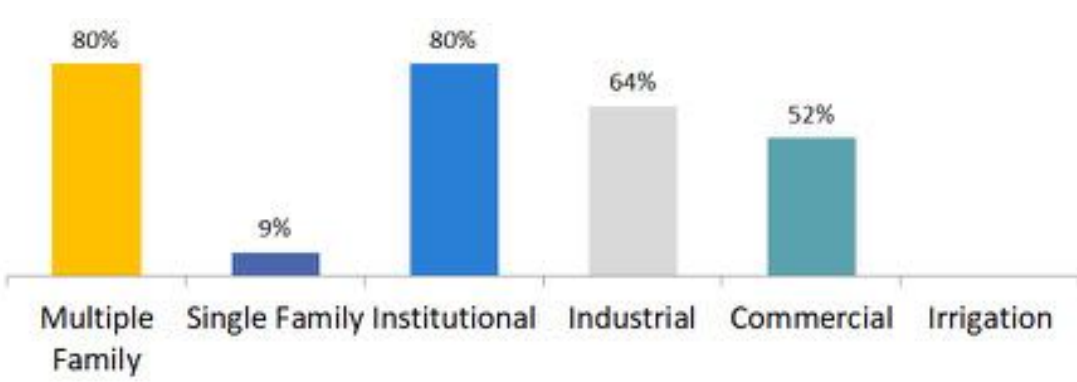
Average single-family residential use: 97 gallons per day

Varies regionally

Source: EBMUD
Urban Water Management Plan
2020 (Draft)



Disadvantaged Communities determined by income and poverty levels



EBMUD Conservation Programs



At home

Save water at home and troubleshoot high bills with tools for indoor and outdoor water use. [Tell me more](#)



At your business

Save water at your business with tools and services for indoor and outdoor use. [Tell me more](#)



Rebates

Apply for rebates to help with the cost of landscape, plumbing, and technology upgrades. [Tell me more](#)



See your Water Report

Track water use, set leak alerts, and get recommendations for reducing your bill. [Tell me more](#)



WaterSmart Gardener

Design a low-water garden with resources on planting, irrigation, mulch, and more. [Tell me more](#)



Landscape Advisory Committee

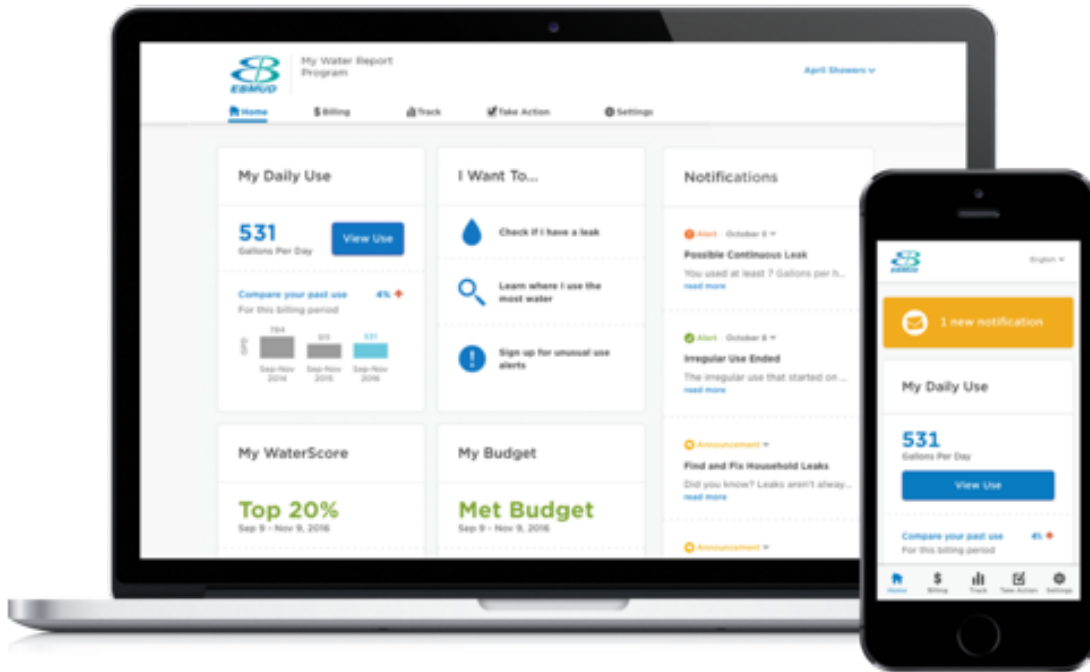
Participate in the committee to promote sustainable landscaping practices. [Tell me more](#)

Toilet and clothes washer upgrades

- Programs ended in 2017 for residential and 2019 for commercial
- **Why?** Market saturation of toilets at 79% in CA (20% remain inefficient) + codes
- **Still available** multi-family through On-Bill Financing.
Low participation – evaluating regional program.



Remaining indoor efficiency offerings



Water Reports and portal, leaks and tips

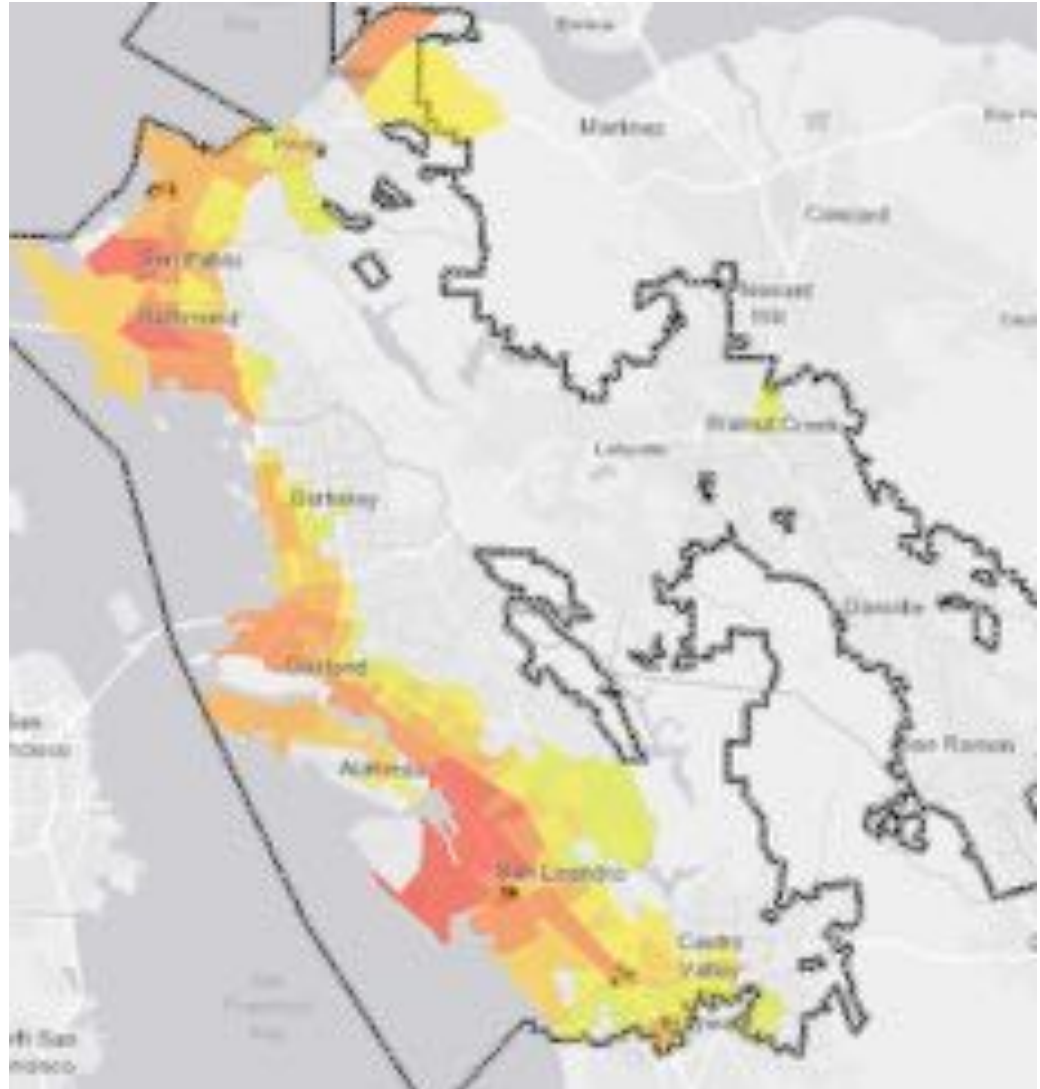


Home Survey Kit and free devices

Also: Phone consultation that can lead to home survey (limited staff capacity, however)

Indoor efficiency challenges: reaching customers

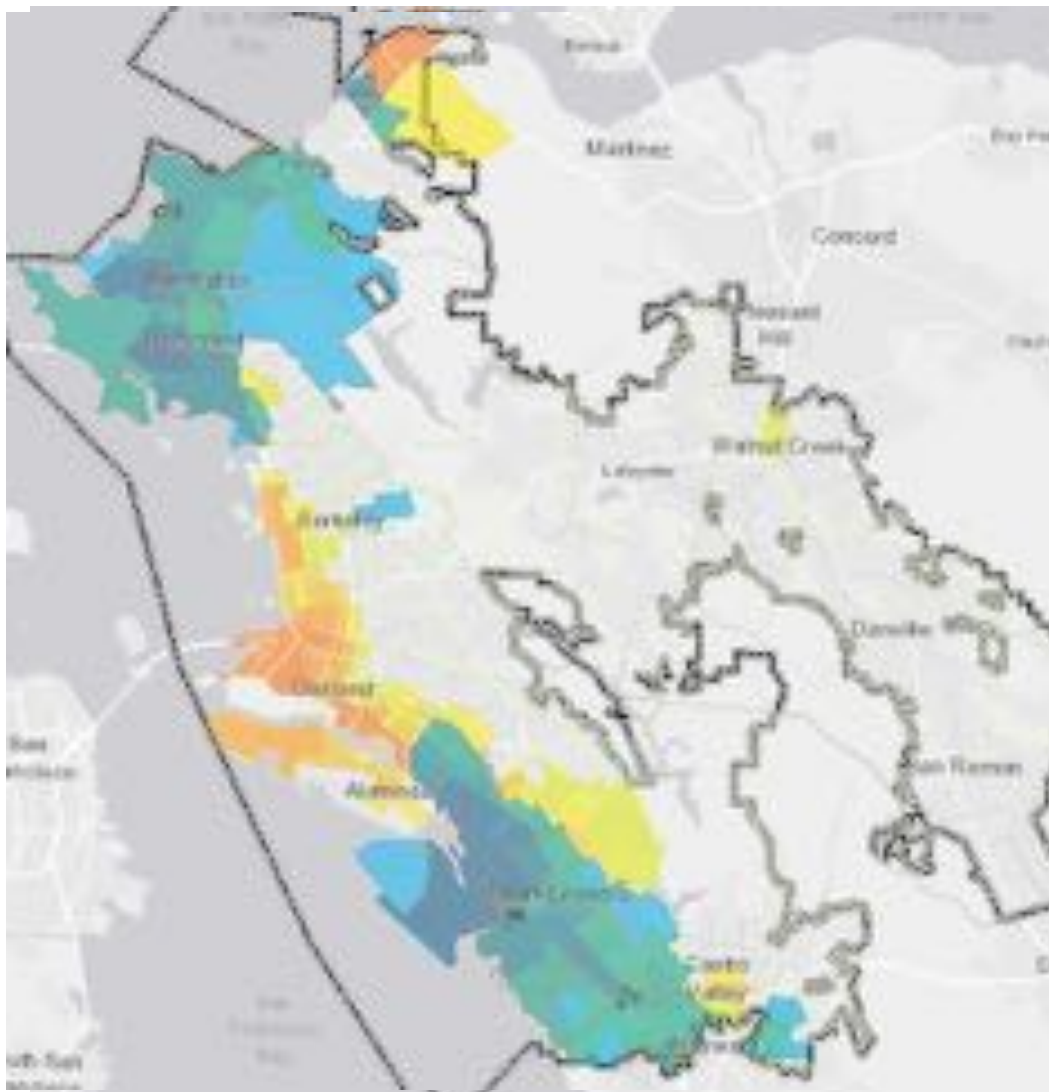
- Materials are mostly English-only
- No contact information for renters
- Variable contact information for bill payers



Map highlights neighborhoods burdened by **socioeconomic stressors** (yellow/orange)

Indoor efficiency challenges: reaching customers

- Materials are mostly English-only
- No contact information for renters
- Variable contact information for bill payers



Map highlights areas with **below average email availability (blue)** on top of neighborhoods burdened by **socioeconomic stressors (Cal Enviro Screen)**

Mapping gaps using existing tools

Income and Poverty Indicators

- US Census and American Community Survey Data
- Tracts and Blocks as units of analysis
- Existing tools make this easier
gis.water.ca.gov/app/dacs/



Linguistic Isolation



Poverty

California EPA Environment Screen

- Indicators fall into four broad groups
 - Exposures
 - Environmental effects
 - Sensitive populations
 - Socioeconomic factors



Educational Attainment



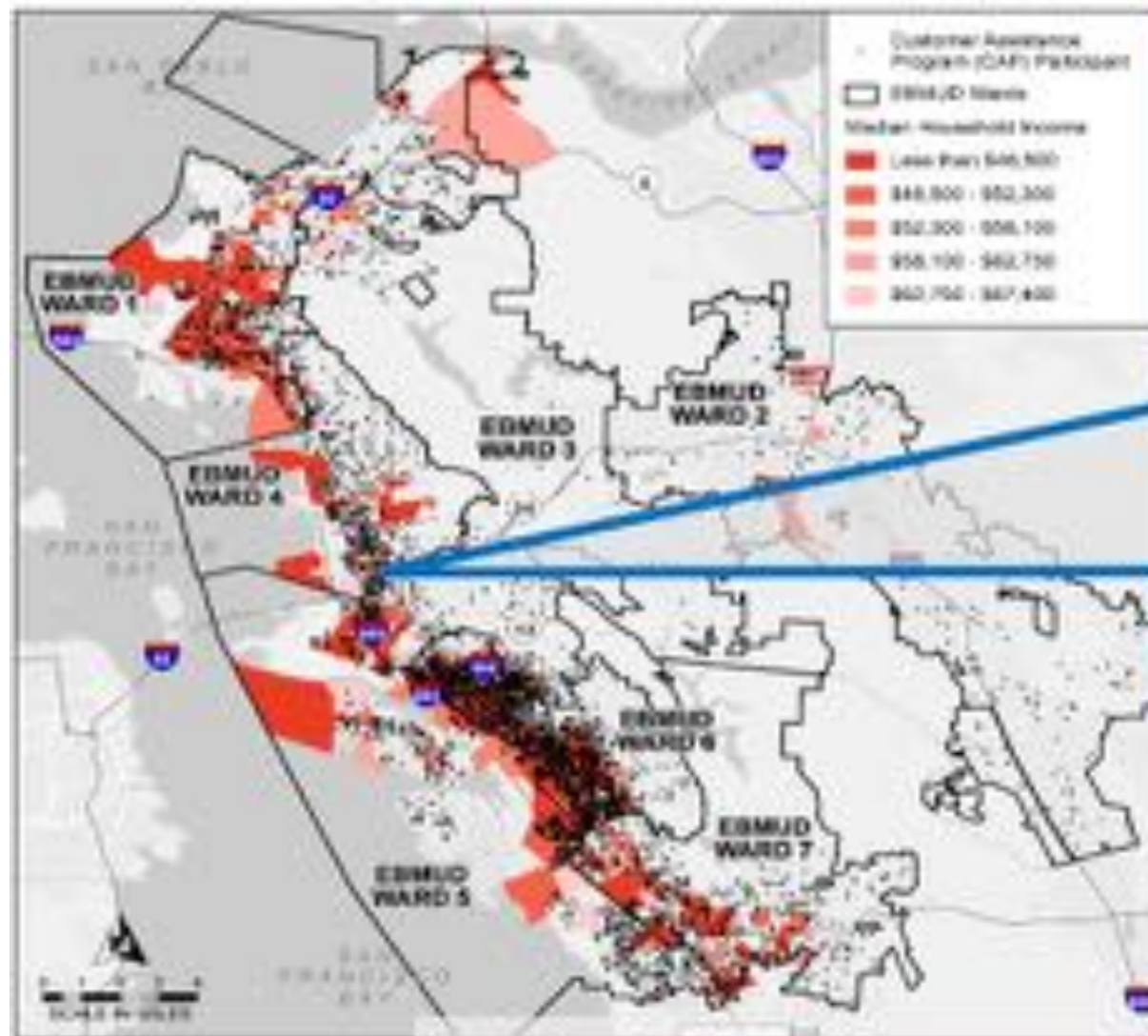
Housing Burden



Unemployment

oehha.ca.gov/calenviroscreen

90% of CAP participants are within 1 mile of DAC



- *Disadvantaged communities (DACs) denoted in red*
- *Remaining 10% of CAP participants are dispersed throughout service area*

Partnership with California Youth Energy Services

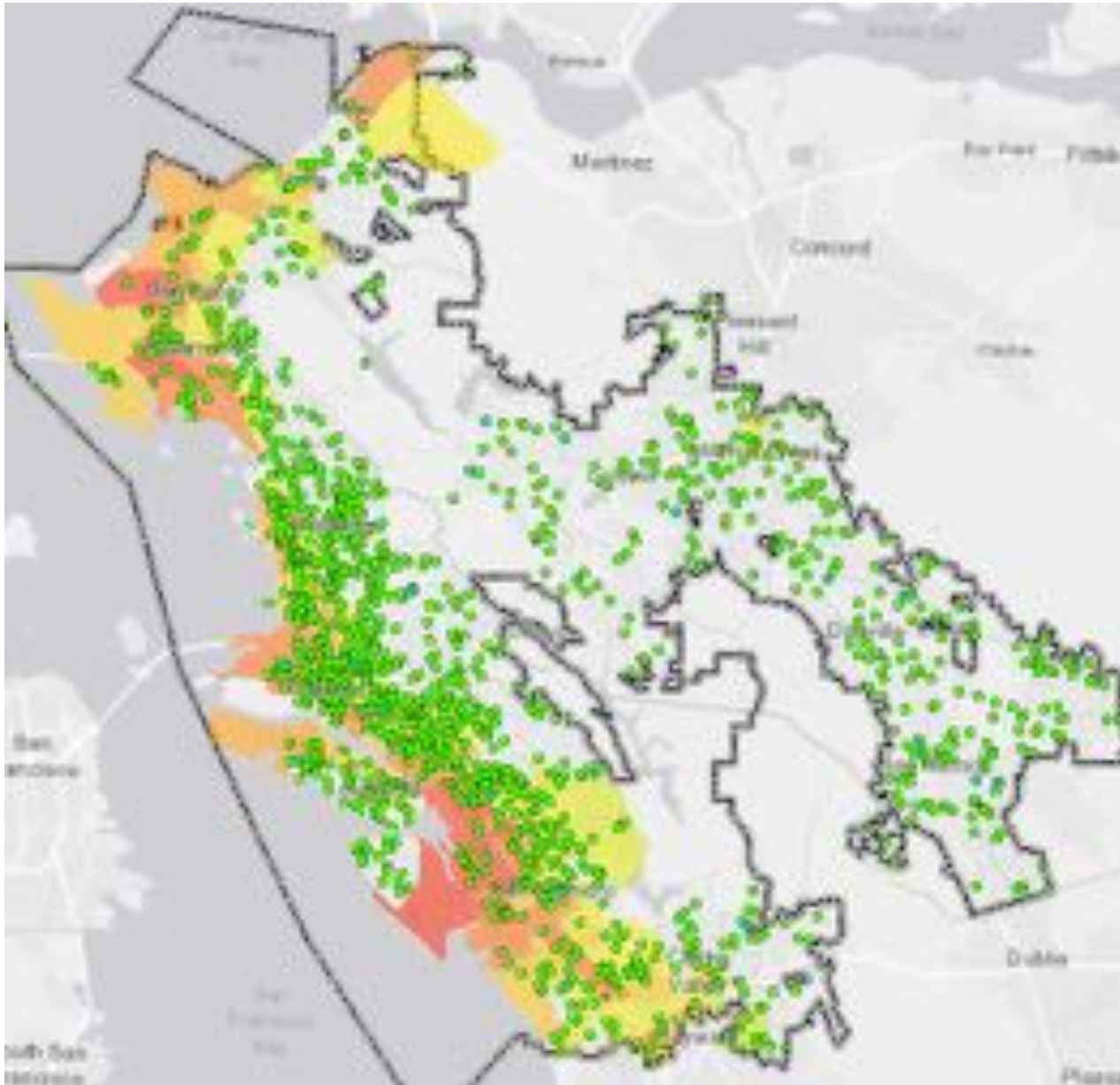
- Started in 2004 - provides summer jobs for students to develop work life skills
- Audits focused underserved community, provide energy and water services and resources for customers
- Students collect fixture information
 - toilets (82% are 1.6 gpf saturation rate)
 - Showerheads and clothes washers (40% saturation rate)



RISING SUN
CENTER FOR OPPORTUNITY

risingsunopp.org

Audit and device distributions (2016-2020)



- Audit
- CYES Audit

Outdoor conservation programs

Landscape Changes



Lawn conversion rebate & efficiency upgrades



WaterSmart Gardener

- Webinars
- Garden design and plant resources
- Mulch and compost coupons

Outdoor conservation program... challenges

- Expensive
- DIY as affordable alternative is not always an option
- Rebate credited *after* project is completed
- Strict eligibility requirement:
 - Irrigated and maintained lawn
 - Verified visually and by reviewing consumption



What programs/changes could we consider?

- Direct Install
- Materials delivery (mulch, cardboard)
- Plant Coupons
- Design Assistance
- Rebates/resources for non-irrigated front lawns



Survey to understand barriers to participation

In 2017, we surveyed **irrigators with lawns** to understand barriers.

Among those less interested in lawn conversion, barriers were:

- Cost
- Other priorities
- Time

Among those more interested, barriers were:

- Design
- Getting started
- Finding contractor

Community-Based Social Marketing approach:

1. Identify barriers and benefits for target audience
2. Develop outreach strategy to pilot and evaluate
3. Broad-scale implementation and evaluation



Resource: [Toolbox.calwep.org/wiki/Community_based_social_marketing](https://www.toolbox.calwep.org/wiki/Community_based_social_marketing)



Poll & Discussion

Understanding Barriers

- Which program barrier is the most challenging for your utility?
- Which type of customer is the most challenging to reach at your utility?
- What are your biggest challenges with reaching those specific customers from the previous question?

Next: Conservation Programs for People in Poverty



Discussion n Tips

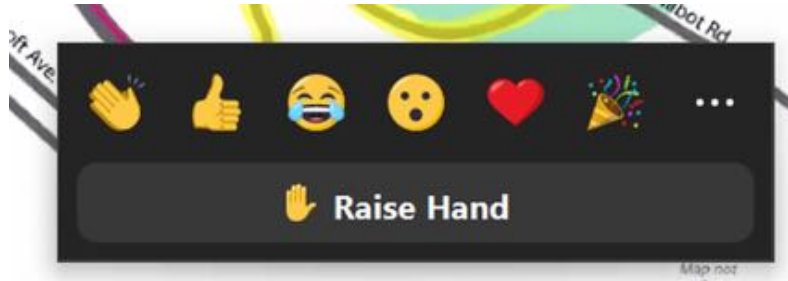
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Conservation Programs for People in Poverty

Karen Guz

Director – Conservation



MAKING SAN ANTONIO
WATERFUL



San Antonio Water System

- 1.8 million served water & wastewater
- Produce and deliver water
- Over 600,000 accounts
- Diverse Customer Base
 - Socioeconomic divisions in community
 - System investments = rate increases
- Conservation Drivers:
 - Fast growing region
 - Drought prone with strict aquifer regulations
 - Part of San Antonio culture



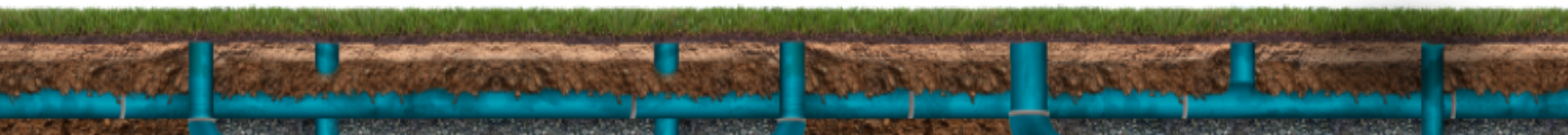
GARDEN STYLE
SAN ANTONIO

Affordable Water in the U.S.? It Depends

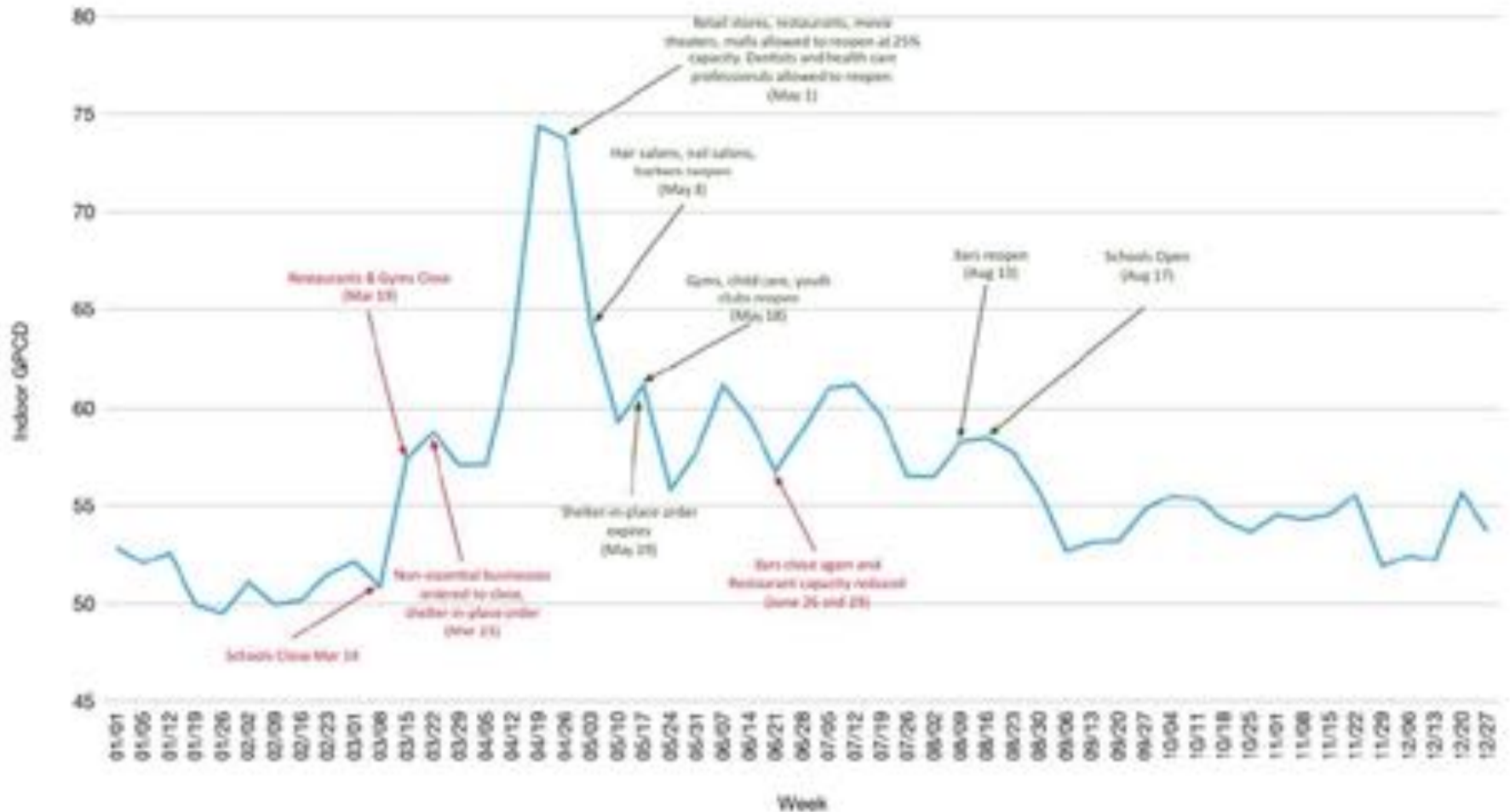
- 35% of Households may pay over 4.5% of income for water services within five years
- Costs have gone up 31% above inflation levels since 2012
- Pattern?
 - 1990: 7% paid at least 3% of total income
 - 2000: 9% paid at least 3% of total income
 - 2015: 10% paid at least 3% of total income
 - **Current about 11.9% above 4.5% of total income**

How Many In Poverty?

- United States 14.05%
- Texas 15.5%
- San Antonio 18.6%



COVID Restrictions Increased Home Water Use/Bills



2021 Freeze Brought New Challenges in Texas

- As many as 100,000 S.A. homes had pipe bursts from “the freeze.”
- Older homes with original plumbing fared particularly badly
- Lower income homes often do not carry homeowner insurance



Pipe bursts resulted in water outages and destruction; particularly in older homes

SAWS Assistance Programs

Suite of Programs Specific to Needs

- Affordability Discount
- Senior Citizen Billing
- Disability Billing
- Courtesy Notice
- Project Aqua
- **Plumbers to People**
- Laterals to People
- **New: Community Pipe Repair**



Over 35,000 families are enrolled in UpLift Programs

Plumbers to People (PTP); Leak Assistance



Free Plumbing Repairs

- Qualify through UpLift at 125% of poverty
- Must own and live in home
- Must be a potable water leak that results in water waste
- Home must be habitable

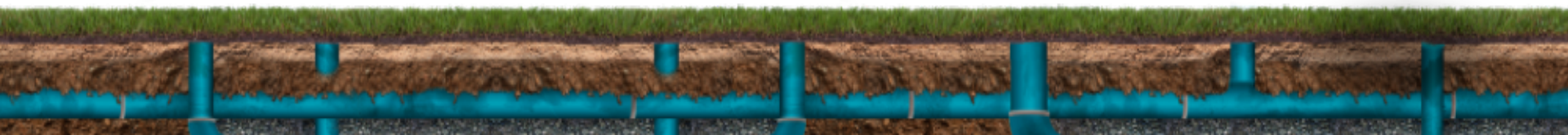
PTP currently repairs about 1,000 homes per year

Program Upgrade...Why Wait?

Finding Little Leaks Before They Are BIG

1. Analysis of UpLift household consumption against family size
2. Reach out to those at 150% of expected
3. Invite to contact us if they have a leak
4. **85% of time process correctly identifies a leak**

Proactive analysis increased program participation over 20%



Community Pipe Repair; Post Freeze Assistance

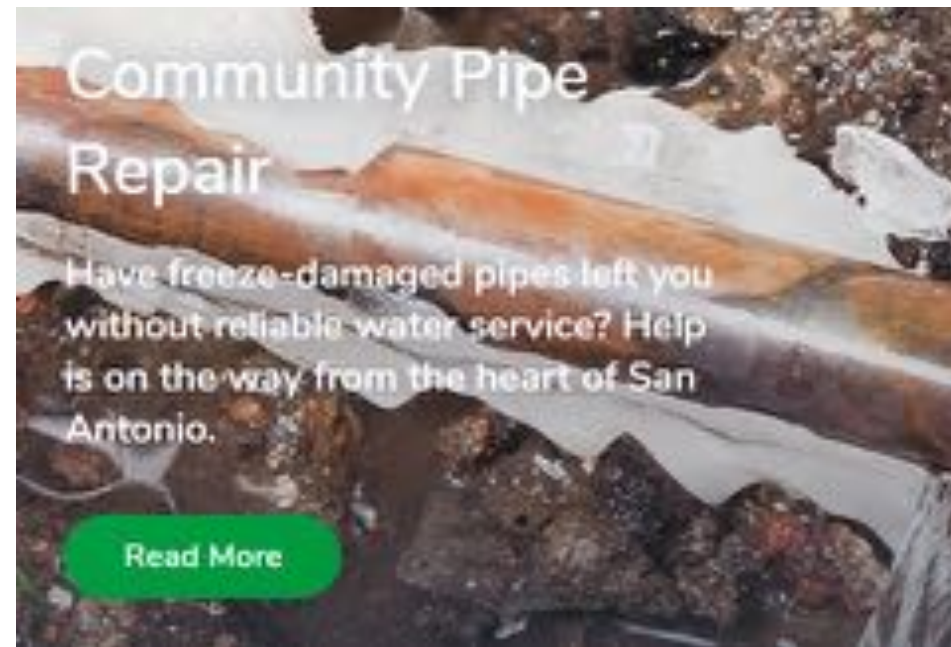
Broader Criteria than PTP

- Single family home only
- Home value \$140,000 or less qualifies household
 - Renters must have landlord consent
 - Alternate: 140% of Federal Poverty

Goal:

Restore basic water service within impacted lower income homes

\$1.1 million from community donations



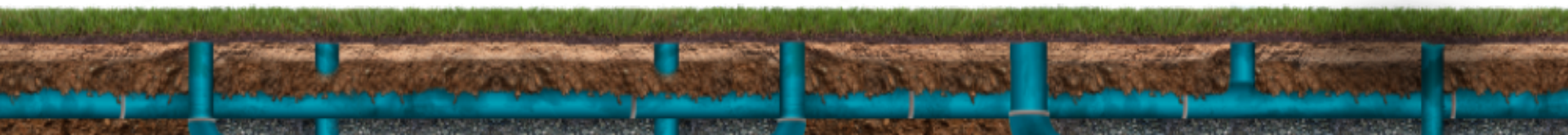
CPR; Over 1,000 Applications First Week

What We Are Doing?

- Receipt reimbursement OR Direct Plumber help
- Constant communication
- Triage
 - Phase One: restore cold water
 - Phase Two: restore hot water if needed?
 - Phase Three: fixtures & complex issues
 - Phase Four: final communication with ALL applicants and fairness review

Important Work ...NOT Easy Work

- Most needed “Direct Plumber” option
- Complex problems at many homes
- ALL plumbers BUSY....hard to hire
- Parts in short supply
- Many homes in poor condition
- Many elderly being served
- Hard to get to people fast!



Targeted Communication Critical

Plan mobile friendly digital communications BUT have other options too

- 80% of CPR applicants had email
 - Most applied on mobile
 - Constant email updates
- People will call & try EVERY channel
- Daily CPR Update Spreadsheet
 - Call center had quick access to status of applicants

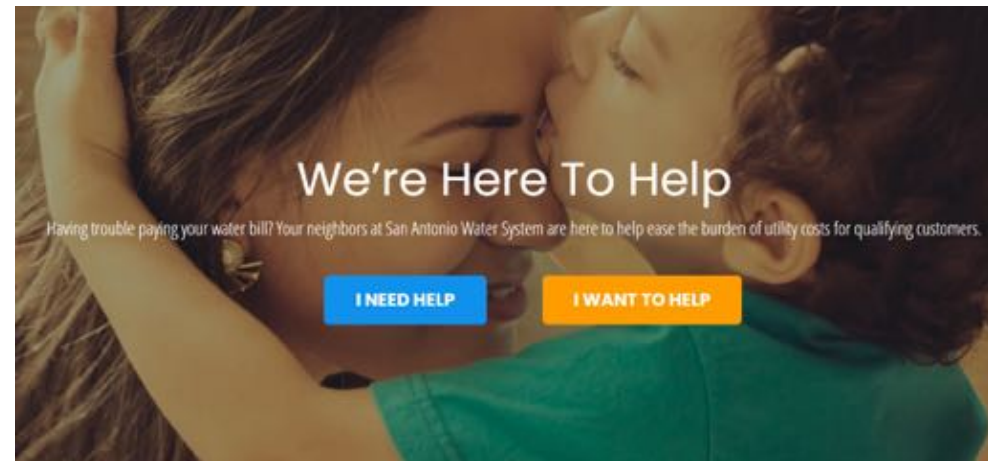


Nationwide 85% of poverty households currently have smart phone..NOT computer

Key Lessons in Plumbing Assistance Programs

- Plumbing Contract Key
- Program Management Platform Capabilities Critical
 - Flagging status, sorting, communication etc.
- Program Limits Needed
- Waiver of Damages Forms
- Cannot Overcommunicate!

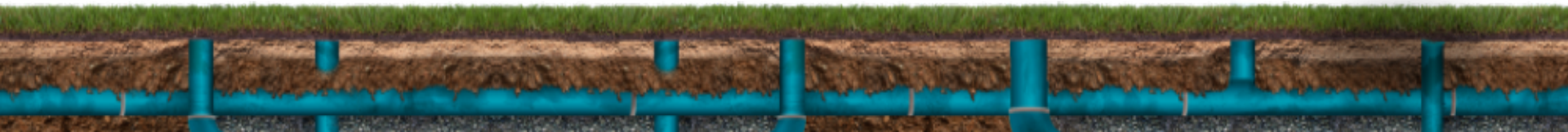
Partnership With SAWS UpLift Team



Other Programs Targeted for Lower Income

WaterSaver Landscape Coupons

WaterSmart Affordability Home Reports



Stop the Running Toilet Mailer

Winter average push; sewer often 70% of the bill for low-use households

- Directions to test toilets
- Dye strips for toilet tanks
- English/Spanish both available



Stop the Running Toilet!

Leaky toilets waste water and cost you money. Toilets are the most common source of leaks and can waste 1,440 gallons of water a day or more.

A leaky toilet can waste
1,440 gallons a day or more.



Use this dye strip to detect toilet leaks. Follow the simple instructions below.

Please keep away from children. Strips are non-toxic and harmless if swallowed.

Directions

1. Remove the tank cover and drop one strip into the tank.
2. DO NOT FLUSH.
3. Wait 20 minutes.
4. Look in the bowl. If you see blue water, you have a leak. Toilet leaks are often easy to fix. Learn how to make simple repairs yourself at saws.org/ToiletRepair or contact a licensed plumber.
5. After dye test, flush the toilet to remove dye.



Questions or More Ideas to Add?

Contact Information:

Karen Guz

Karen.guz@saws.org

Saws.org/conservation

GardenStyleSA.com



Recap

What we've learned

- COVID, other disasters show immediate needs for most vulnerable
 - Forward planning crucial
- Focus on provider partnerships and interdepartmental programs to serve most in need and reach further
 - Uplift (interdepartmental), CYES (partnership)
- Indoor penetration of water efficiency still possible, especially surrounding leaks



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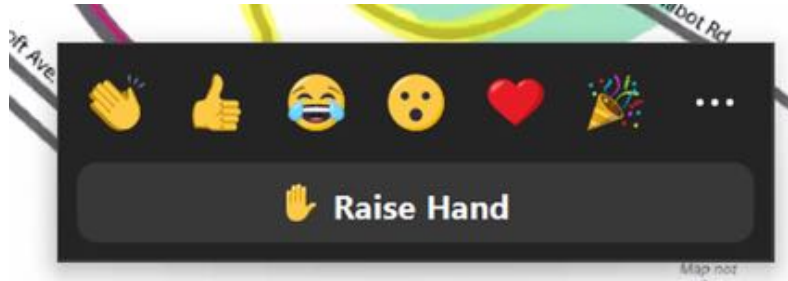
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Discussion

- **Which SAW programs could you bring to your utility?**
- **What other programs would you want to bring to your utility?**
- What challenges do you anticipate?
- Have you found innovative ways to:
 - Deepen market saturation of water-efficient indoor fixtures
 - Make outdoor programs available to low-income single-family homeowners or renters
 - Reach residents or owners/managers in multi-family dwellings



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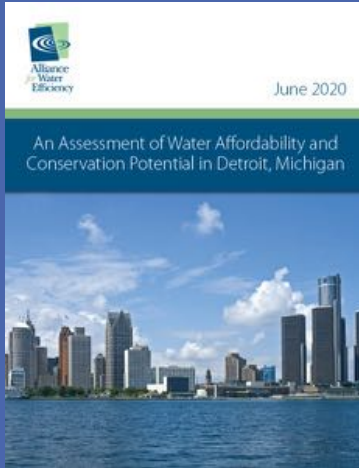
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The Tap into Resilience Toolkit

Your source for practical, actionable information on decentralized water infrastructure

Get Started



- WaterNow [Tap Into Resilience](#)
- Project Accelerator
 - Tailored support for your program, which may include policy guidance, research and analysis, program design, and training and education
 - Access to a broad network of water sector experts in program development and innovative financing
 - Up to 250 hours of assistance over an approximately 6-month period (valued at \$25,000)
- AWE Detroit Water Affordability Assessment
- DWR and Cal EPA Indicator maps
- Presentation/notes (to be sent out later)
- Put in your contact information if you are open to being included

Resources





Takeaways

- Identify water conservation program barriers for low-income single-family and multi-family residents
- Discuss programs and approaches that address specific barriers
- Tips on implementation and what challenges to expect along the way
- Inspiration, resources, and contacts to follow up with after Peer to Peer



Peer to Peer
June 3, 2021

Thank you!

Lindsay Edelman, Water Conservation Representative

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Anya Kamenskaya, Water Conservation Representative

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Jessica Woodard, Water Conservation Representative

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Karen Guz, Conservation Director

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EBMUD Population Characteristics

Water Customer Segmentation – 2017 Survey

- Urban Homeowner w/Yard 41%
- Suburban Homeowner w/Yard 12%
- Renter with Yard, Receives Bill 19%
- No Yard, Receives Bill 12%
- Renter, Non-Payer 15%



[This Photo](#) by Unknown author is licensed under [CC BY](#).

FIGURE 4-7

**AVERAGE SINGLE-FAMILY
RESIDENTIAL HOUSEHOLD
INDOOR WATER USE**



ELEMENT OF INDOOR USE	CALENDAR YEAR 2009 USE PER HOUSEHOLD (GAL/DAY/HH)	PERCENT OF USE
TOILET	35.3	20
CLOTHES WASHER	33.5	19
SHOWER	33.3	19
FAUCETS	33.2	19
LEAKS	25.6	14
BATH	9.7	5
DISHWASHER	2.3	1
OTHER	5.7	3
TOTAL	178.6	100

Method 1: CAP Participation per 2017 American Housing Survey Data



Method 1 - 2017 AHS Data:

Income eligible households
 $561,000 \times 31\% \sim 174,000$



(Non-bill payers)
 $174,000 \times 60\% \sim 105,000$



Reachable households
 $174,000 - 105,000 = 69,000$



Participation Captured:
 $6,952 / 69,000 = 10\%$

- AHS data estimates 60% of income eligible households do not receive a water bill
- 60% of 174,000 District income eligible households do not receive a water bill
- 105,000 households income eligible, are **NOT** bill payers
- 69,000 households estimated eligible for CAP
- 6,952 CAP customers represent 10% captured
- Estimate may not consider the unique make up of the District

Cal EPA Enviro Screen



California EPA: oehha.ca.gov/calenviroscreen

CalEnviroScreen 3.0 Overall Results and Individual Indicator Maps

Pollution Burden

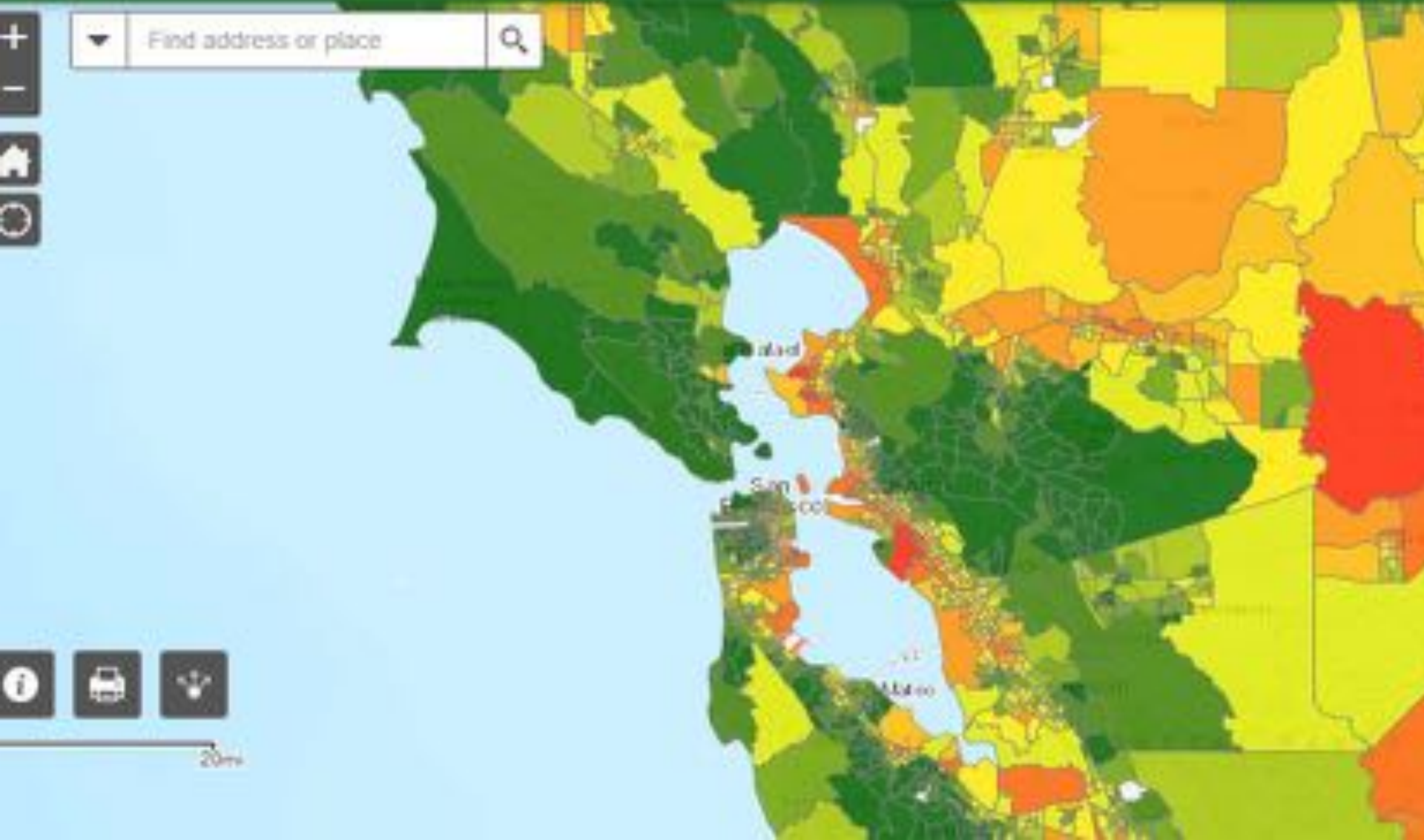
Population Characteristics

Overall Results

CalEnviroScreen 3.0 Results (June 2018 Update)

from OEHHA

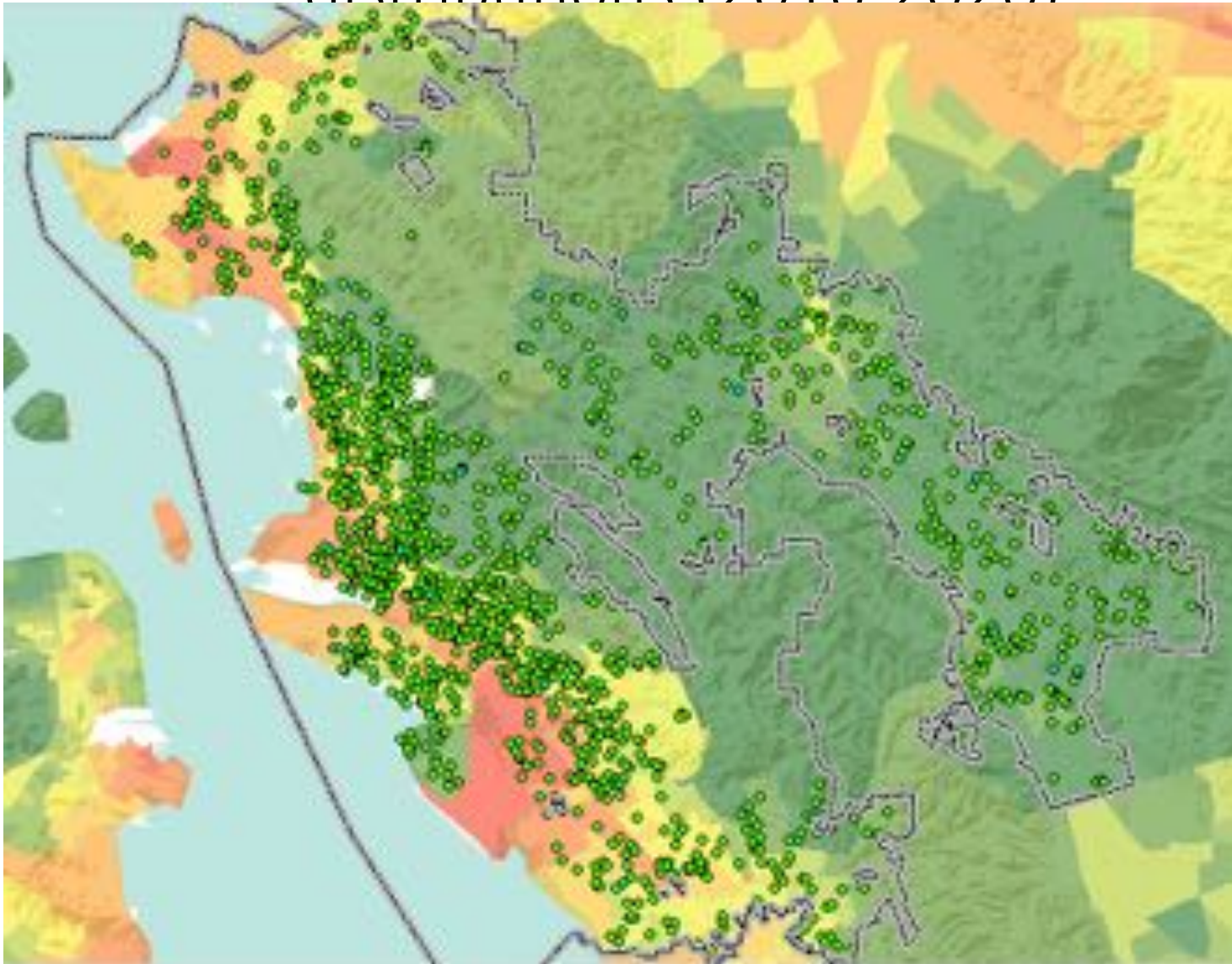
CalEnviroScreen Website



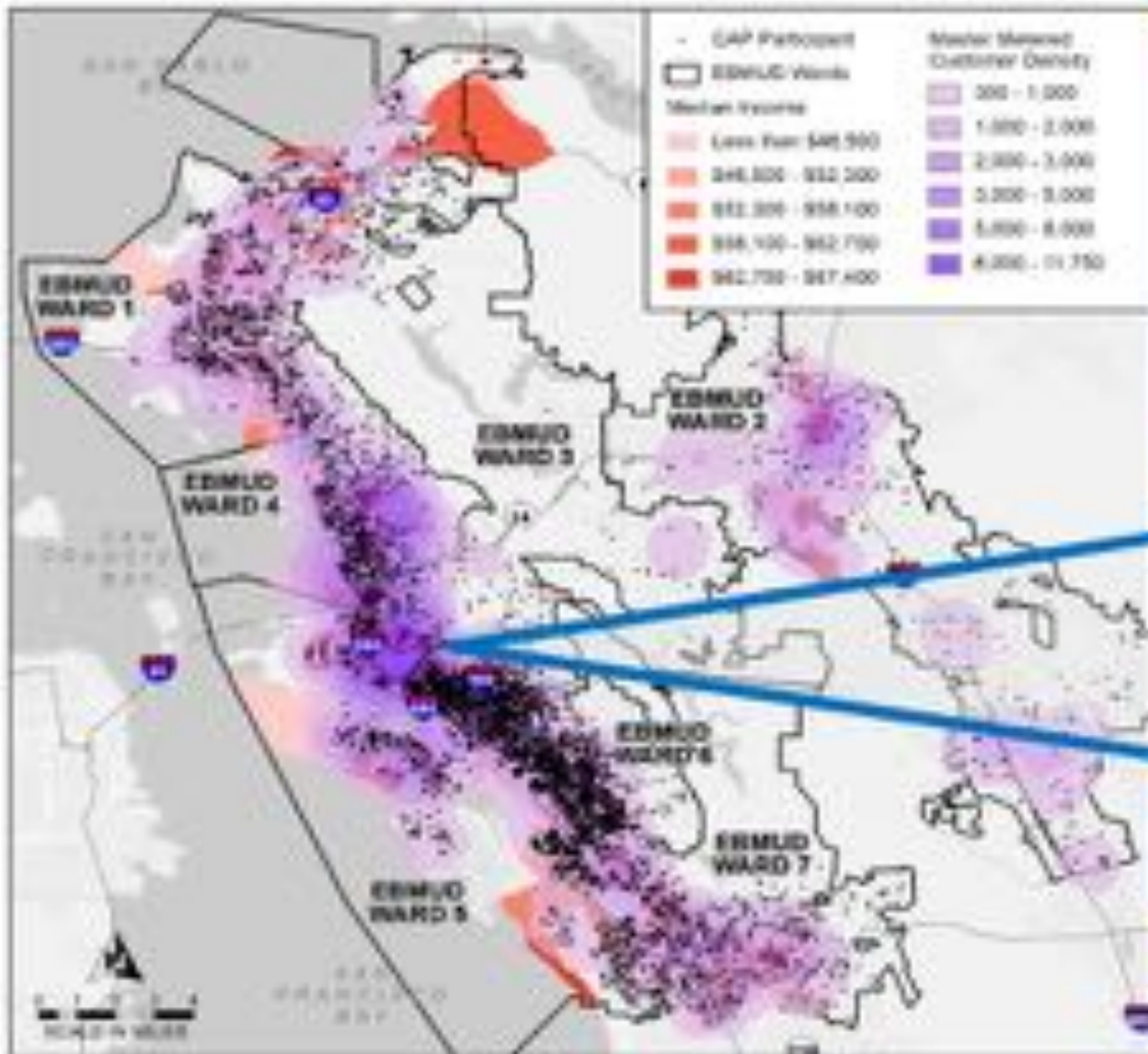
Closer look in Richmond and CYES program



Overlay programs: Audit and Device distributions (2016-2020)



84% of master-metered accounts are also within 1-mile of DAC



- High correlation between CAP participation and master-metered household areas
- Concentration of master-metered accounts in DACs mean more households are unable to participate

Increase Programming for MFR

- Enhance water reports for multi-family residential customers
- Create messaging for apartment building managers to inform their tenants how to save water during the drought and report leaks
- Investigate tools to capture number of dwellings/tenants for better understanding of water use



Closer look in Richmond and CYES program

