



NEW ADVOCACY AND RESEARCH INITIATIVES

WATER EFFICIENCY AND AFFORDABILITY

September 11, 2024

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Alliance for Water Efficiency



The Alliance for Water Efficiency is a stakeholder-based nonprofit organization dedicated to the efficient and sustainable use of water.

Collaboration: Network of colleagues across water providers, governments, business and industry, researchers, nonprofits and other partners.

Knowledge: Creating and sharing resources, tools, trainings, expertise and research.

Change: Advocacy for funding, policies, and partnerships that advance water efficiency.

Learn more: www.a4we.org

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TODAY'S AGENDA

1 Affordability & Efficiency

2 Advocating for a New Federal Program – PREAP

- Introducing PREAP
 - Background on the Weatherization Assistance Program as model for PREAP
 - Ideas and Rationale for Pairing LIHWAP with Water Efficiency
-

3 Complementary Research Concept – Water Use in Low-Income Homes

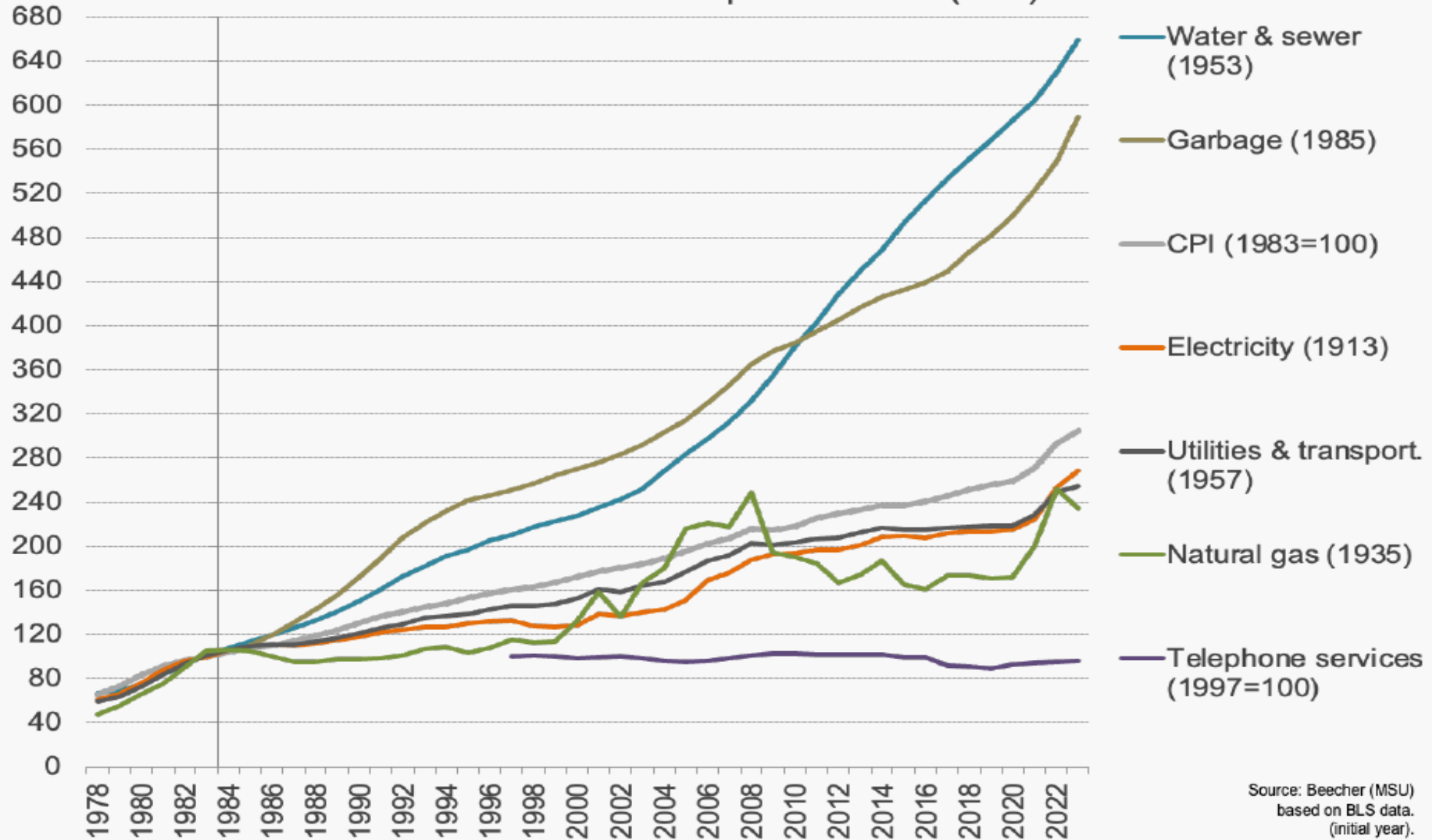
4 Next Steps and Questions



AFFORDABILITY & EFFICIENCY

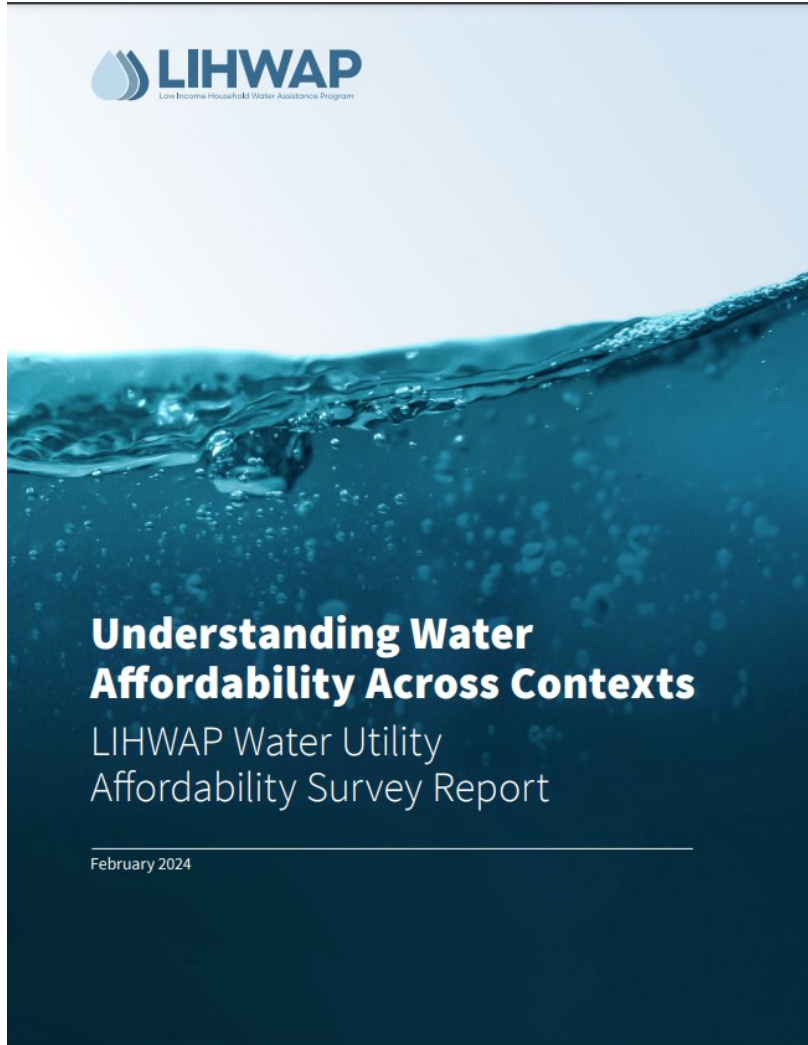
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Trends in the CPI for public utilities (BLS)



Source: Beecher (MSU)
based on BLS data.
(initial year).

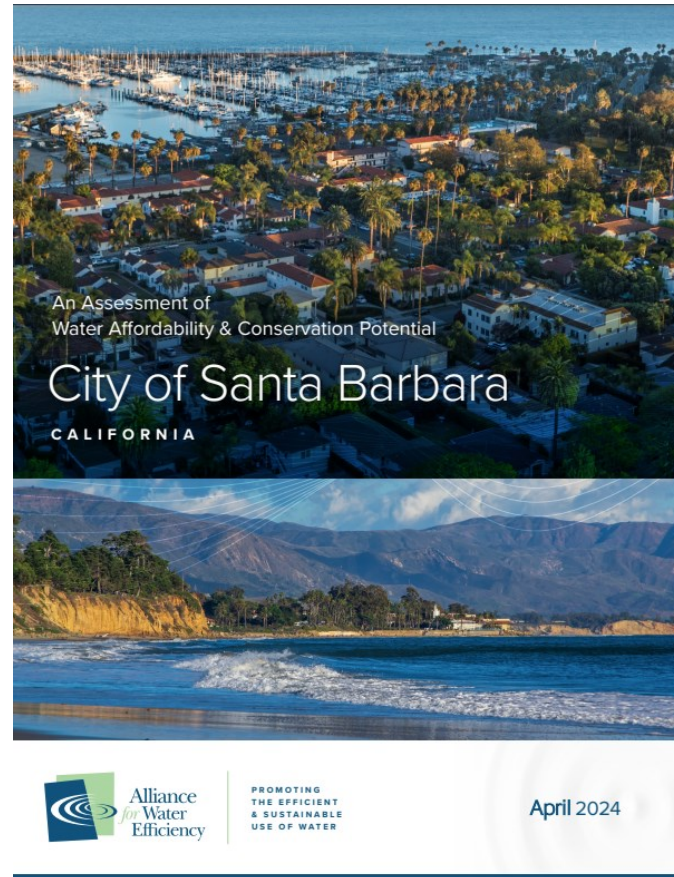
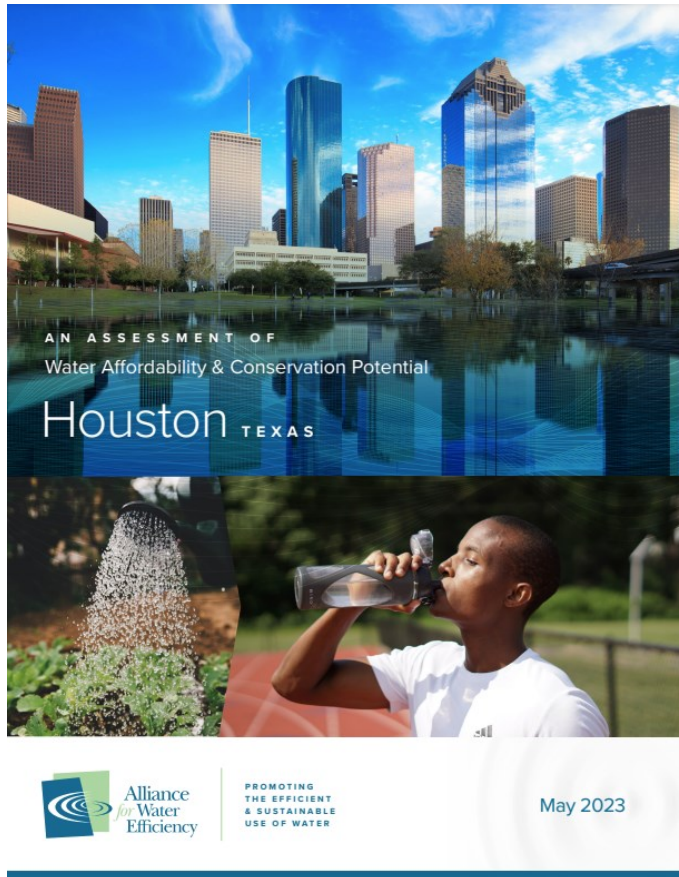
HHS RECENTLY ISSUED REPORT BASED ON LIHWAP DATA



Based on utility survey responses and data from Low-Income Household Water Assistance Program (LIHWAP). Findings include:

- On average, **20% of households** are in debt to their water utility
- The average household debt is **\$285**
- For households at 75% of the federal poverty level, up to **40% of monthly income is spent on water and sewer bills**
- Report made no mention of water use

EFFICIENCY CAN HELP LOW-INCOME CUSTOMERS WITH AFFORDABILITY



Reports explore, among other things, how water efficiency strategies can be used to reduce low-income customers' water and sewers bills



ADVOCATING FOR A NEW FEDERAL PROGRAM

What is PREAP?

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INTRODUCING PREAP

- PREAP: Plumbing Repair and Efficiency and Assistance Program
- This program does not yet exist; AWE wants to work with partners to advocate for its creation
- **AWE is proposing that Congress create and generously fund a new federal program covering plumbing repairs and water efficiency improvements for low-income households in states, tribes, and territories**
- PREAP is modeled after the federally funded DOE Weatherization Assistance Program (WAP)

Thank you to the working group members and others who helped review and develop this concept!

WEATHERIZATION ASSISTANCE PROGRAM (WAP)

DOE'S WEATHERIZATION ASSISTANCE PROGRAM

 **\$3.5B** Bipartisan Infrastructure Law (BIL) investment

 **500K+ HOMES** will be weatherized

 **\$283 IN ENERGY COSTS** saved per household per year
(average)

 **8,500+ JOBS** created per year

 **7M HOMES** weatherized since 1976

WEATHERIZATION ASSISTANCE PROGRAM – IMPLEMENTATION PATHWAY

Department of Energy

States, Territories, & Tribes

**Community Action
Agencies**

**Low-Income
Households**

Mechanical Measures

- Clean, tune, repair, or replace heating and/or cooling systems
- Install duct and heating pipe insulation
- Repair leaks in heating/cooling ducts
- Install programmable thermostats
- Repair/replace water heaters
- Install water heater tank insulation
- Insulate water heating pipes
- Install solar hot water heating systems.

Health & Safety Measures

- Perform heating system safety testing
- Perform combustion appliance safety testing
- Repair/replace vent systems to ensure combustion gas drafts safely outside
- Install mechanical ventilation to ensure adequate indoor air quality
- Install smoke and carbon monoxide alarms when needed
- Evaluate mold/moisture hazards
- Perform incidental safety repairs when needed.

Building Shell Measures

- Install insulation where needed
- Perform air sealing
- Repair/replace windows and doors
- Install window film, awnings, and solar screens
- Repair minor roof and wall leaks prior to attic or wall insulation.

Electric Baseload Measures

- Install efficient light sources
- Install low-flow showerheads
- Replace inefficient refrigerators with energy-efficient models.

Client Education Activities

- Educate on potential household hazards such as carbon monoxide, mold and moisture, fire, indoor air pollutants, lead paint, and radon
- Demonstrate the key functions of any new mechanical equipment or appliances
- Discuss the benefits of using energy-efficient products.



Allowable: Water efficiency related to hot water use; some variation between states

Not Allowable: Leak detection, leak repair, toilets, and other water-only improvements

PREAP & LEAKS: POTENTIAL FOR IMPACT

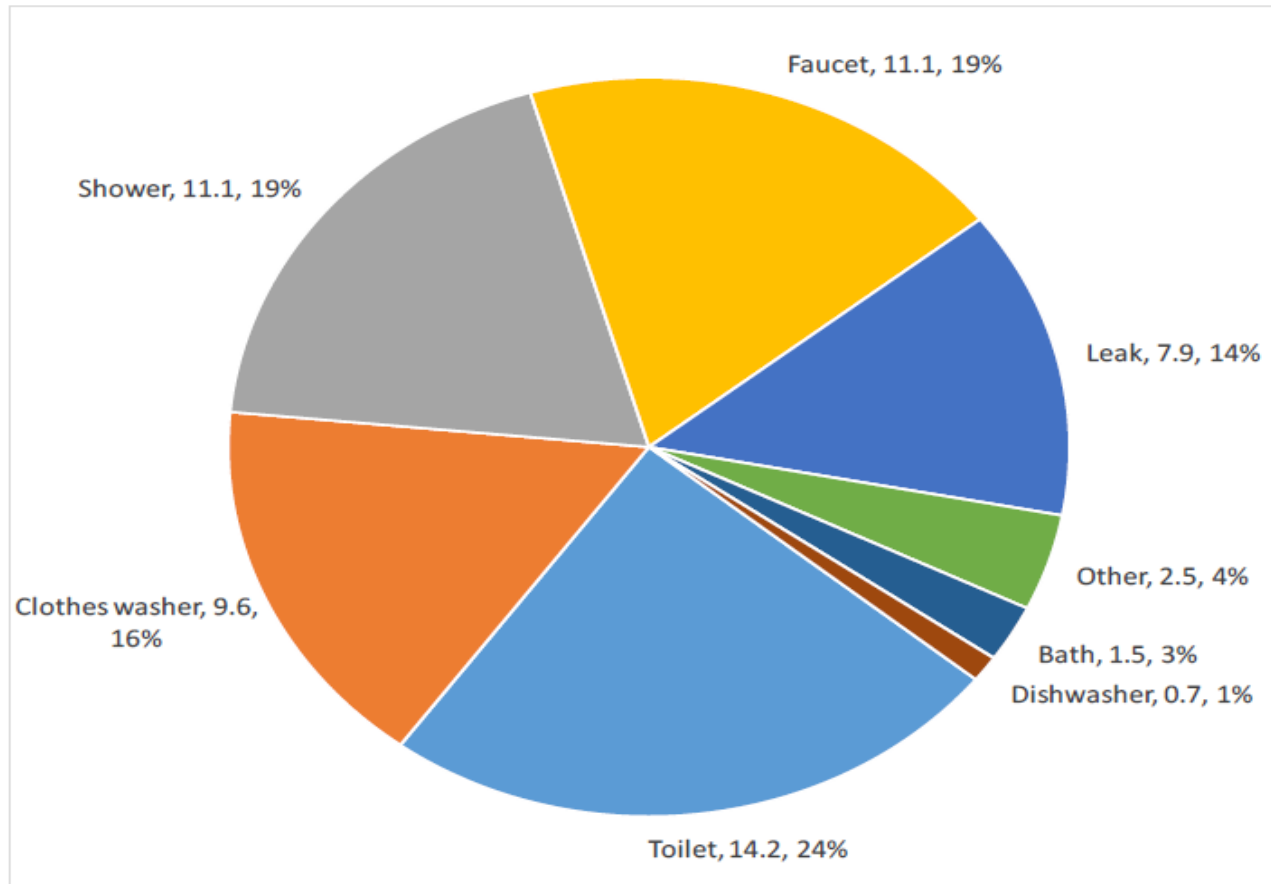


Figure ES.4 Indoor per capita use (gpcd and percent of indoor use) by fixture, 9 study sites, n=737

Residential End Uses of Water, Version 2 (WRD Report #4309b)

Take the 10-Minute Leak Challenge!

You could **save...**



- 10** thousand gallons of water per year
- 10** percent on water and sewer bills
- 10** months of water to wash laundry



PREAP & EFFICIENCY: POTENTIAL FOR IMPACT

<u>Existing Condition</u>	<u>Water Efficiency Improvement</u>	<u>Annual Savings per Household (gal)</u>	<u>Estimated Annual Water & Sewer Savings per Household*</u>	<u>Expected Cost (Materials & Labor)</u>	<u>Simple Payback (yrs)</u>	<u>Useful Life (yrs)</u>	<u>Lifecycle Net Benefits**</u>
15+ yr old clothes washer	New Energy Star Top Loader	7,400	\$93	\$800	8.6	13	\$412
3.5 gpf toilet	WaterSense toilet	10,100	\$127	\$750	5.9	30	\$3,068
2.5 gpm shower head	WaterSense shower head	2,200	\$28	\$90	3.2	15	\$326
2.2 gpm bathroom faucet	WaterSense bathroom faucet	500	\$6	\$20	3.2	12	\$56
2.2 gpm kitchen faucet	1.8 gpm kitchen faucet	1,800	\$23	\$100	4.4	12	\$172
	Total	22,000	\$277.20	\$1,760	6.3		\$4,033

gpf = gallons per flush; gpm = gallons per minute

*Assumed rate combined water & sewer: \$12.60 / 1,000 gal

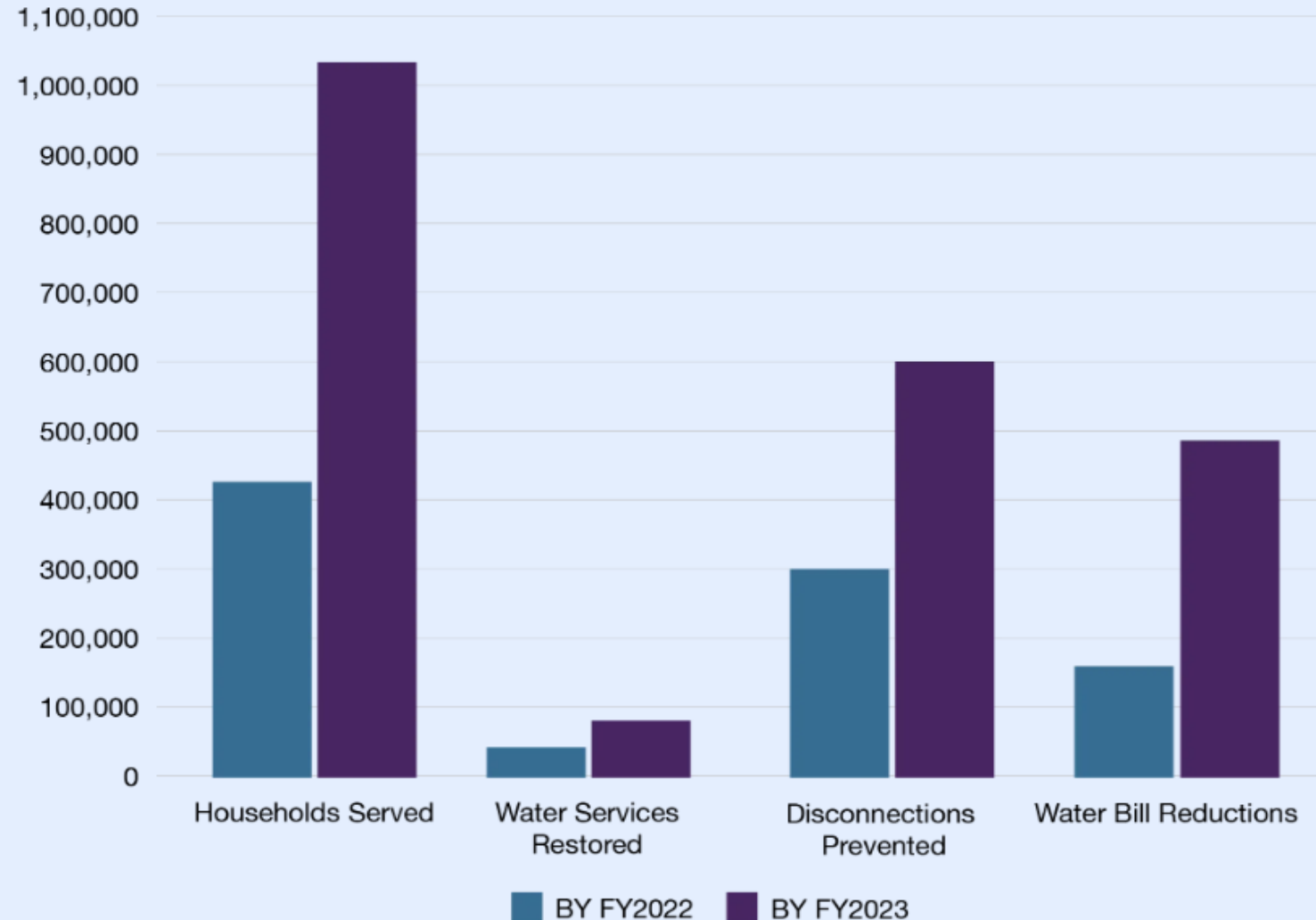
*Does not include energy savings from reduced hot water use

**Holds savings constant & doesn't account for time value of money

Low Income Household Water Assistance Program (LIHWAP)

- Served > 1 million households
- Helped with bills; but no options for addressing leaks and inefficiency
- Program has expired
- Congressional action needed to make LIHWAP permanent

Key Findings for 2022 and 2023



WE NEED LIHWAP + PREAP

Water Sector Associations' Recommendations for a Permanent Federal Low-Income Household Water Assistance Program

April 2023



Policy White Paper
Improving Water Affordability by
Creating a New Federal Plumbing
Repair and Efficiency
Assistance Program



AUGUST 2024

PREAP ADVOCACY



Convene a coalition to help with further policy development and advocacy.



Develop any additional details needed before legislation can be written.



Seek out affiliations beyond the water sector to seek unity whenever possible in efforts that benefit low-income households on water and energy.



Identify and work with sponsors in Congress with a goal of bicameral, bipartisan legislation being introduced in 2025.



COMPLEMENTARY RESEARCH CONCEPT

Water Use, Leaks, and Efficiency in Low-Income Households

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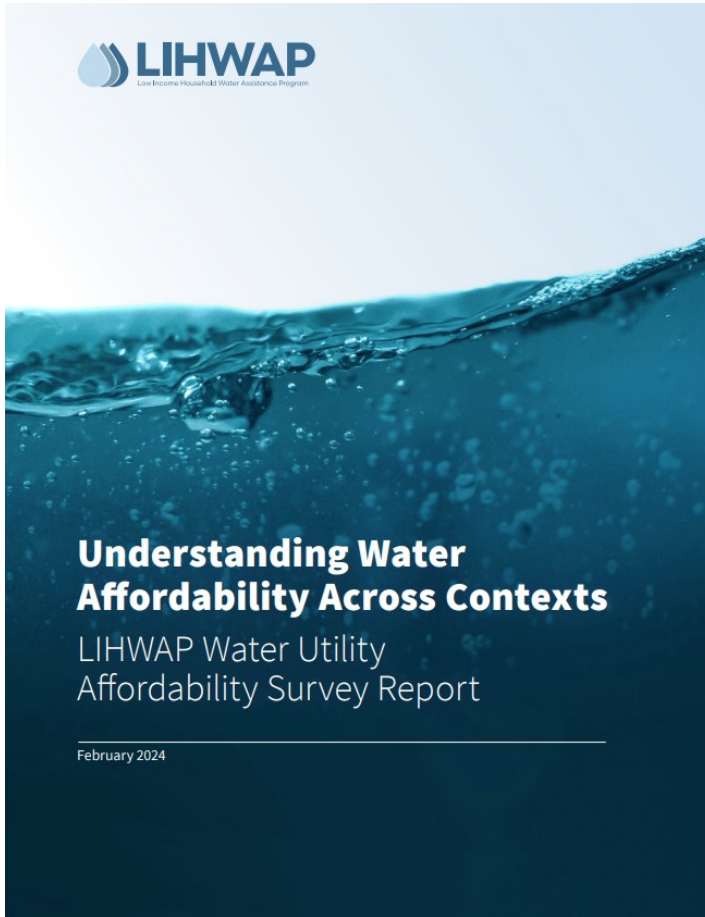
WATER USE, LEAKS, AND EFFICIENCY IN LOW-INCOME HOUSEHOLDS

Need: There is limited research on water use, leaks, and efficiency focused on low-income households

↳ **Goal:** Characterize how many customers' water affordability challenges stem from leaks, inefficient appliances, fixtures, and/or practices.

↳ **Connection to PREAP:** Topics directly influence customer bills and affordability, and better understanding them will improve the rules and implementation of PREAP

LIHWAP STUDIES HAVE NOT INCORPORATED WATER USE



Example:

- HHS LIHWAP Report only mentions 5k and 10k gals as assumed consumption levels.
- No data or analysis of actual use or drivers of use.

Is anyone aware of LIHWAP or other low-income water use studies?

POSSIBLE RESEARCH APPROACH

1

Enlist utilities and their community action agency partners

2

Gather data on LIHWAP participants water use before, during, and after receiving assistance

3

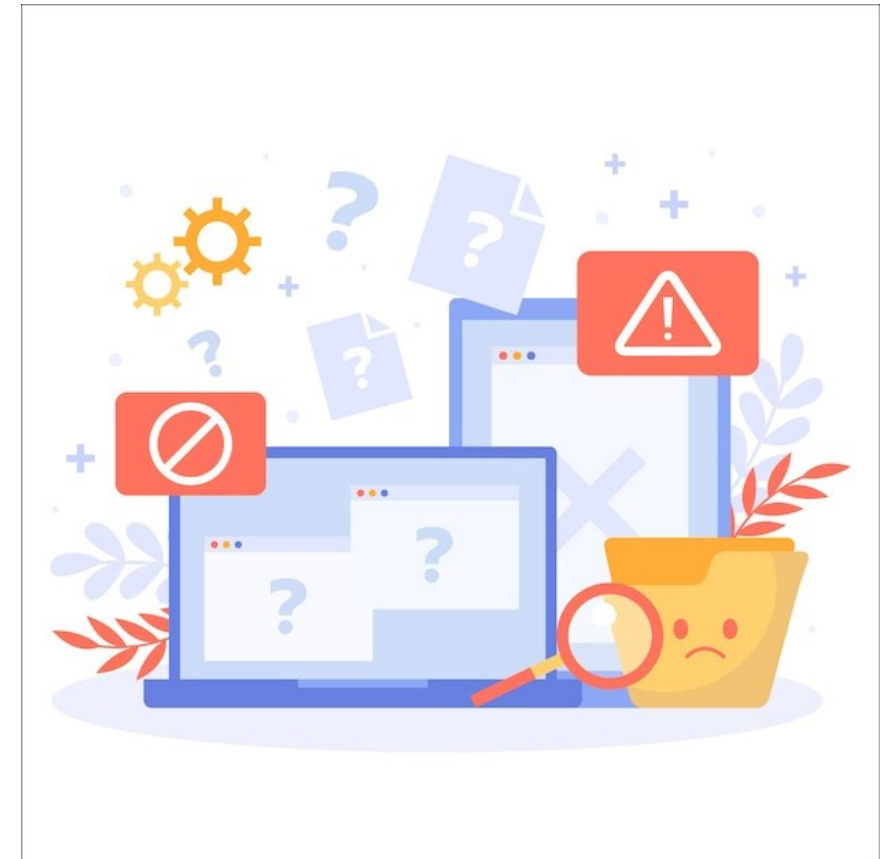
Identify prevalence of suspected leaks and apparently high baseline usage

4

Compare low-income participants to others in low-income census tracts and to average water customer

POTENTIAL CHALLENGES

- **Data resolution**
 - Need at least some data more frequently than monthly through (e.g. AMI, Flume, etc.)
- **Data privacy**
 - Ability to share customer information for analysis
- **Household size**
 - Need household size to analyze whether a customer's baseline usage is high





QUESTIONS?

To learn more or follow up, contact:
Andrew@a4we.org

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GET INVOLVED!

We are looking for collaborators who are interested in:



PREAP Advocacy

- Stay informed
- Join advocacy coalition to further policy development



Research on water use, leaks, & efficiency in low-income households

- Join a working group
- Define project goals, approach, & partnerships
- Contribute data
- Contribute funding

FILL OUT THIS SHORT
FORM TO INDICATE HOW
YOU WANT TO BE
INVOLVED



Involvement Form: AWE Advocacy
and Research Initiatives on Water
Efficiency & Affordability



COME TALK TO US AT WATERSMART INNOVATIONS

- Liesel and Amanda – *Advanced Metering Infrastructure (AMI) for Conservation Programs* (Tuesday, September 24 from 1 to 5 pm in Sonoma Room D)
- Andrew – *New Frontiers for National Water Efficiency Policies – Tax Incentives, Low-Income Programs, and Whole-House Approaches* (Thursday, September 26 from 11 to 11:30 AM in Sonoma Room C)

You can also find us at the AWE & CalWEP booth in the exhibit hall.

REFERENCES

AWE PREAP Report - www.allianceforwaterefficiency.org/impact/our-work/improving-water-affordability-creating-new-federal-plumbing-repair-and-efficiency

HHS LIHWAP Water Utility Affordability Survey Report - www.hhs.gov/about/news/2024/03/21/lihwap-water-affordability-report.html

Recent AWE Affordability Report- www.allianceforwaterefficiency.org/impact/our-work/assessment-water-affordability-conservation-potential-city-santa-barbara-ca

Water Sector Associations' Recommendations for a Permanent Federal LIHWAP - www.awwa.org/Portals/0/AWWA/Communications/Water-Sector-Associations-Recommendations-for-Permanent-Fed-LIHWAP.pdf

HHS Implementation and Impact Report - <https://acfhhs.foleon.com/lihwap/impact-report/>



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Thank You!