



SCAG Water Action Resolution Implementation Update

Energy & Environment Policy Committee

April 6, 2023

WWW.SCAG.CA.GOV

Water Action Resolution Summary

1. Support best practices in conservation
2. Work with jurisdictions to encourage housing types that have less water demand
3. Work with SCAG's Resilience & Conservation Subcommittee to explore water challenges and solutions
4. Facilitate SCAG's Energy & Environment Committee to make policy recommendations to the Legislation, Communications, & Membership Committee
5. Foster adoption of alternative groundwater recharge and best practices to increase and maintain a sustainable water supply

Water Action Resolution Summary

6. Support implementation of green infrastructure (model ordinances, training, education)
7. Hold an Industry Forum – *April 28th, 2023*
8. Develop connect SoCal policies and strategies to align investments in water infrastructure with housing needs
9. Advocate with partners for expansion of MPOs' role in water
10. White paper on the state of water in the region (address issues related to water acquisition, storage, supply, demand, quality, cost-effectiveness of strategies)

Resilience & Conservation Subcommittee



Waverly Klaw

Director of Growing Water Smart
Sonoran Institute



Charles Wilson

Executive Director and CEO
Southern California Water Coalition



**David Sumi &
Elise Goldman**

Resource Specialists
Metropolitan Water District



Dr. Qinqin Liu

Scientist and Former Analyst at the
California Natural Resources Agency

Connect SoCal Special Resilience & Conservation Subcommittee White Paper Recommendations

- 1. Define Resilience:** The capacity of the SCAG region's built, social, economic and natural systems to anticipate and effectively respond to changing conditions, acute shocks, and chronic stressors by creating multiple opportunities for a sustainable, thriving and equitable future;
- 2. Prioritize the most vulnerable populations and communities subject to climate hazards:** Help the people, places, and infrastructure that are most at risk for climate change impacts, recognizing that disadvantaged communities are often overburdened
- 3. Build strong partnerships:** Coordinate across multiple sectors, scales, and stakeholders to ensure all people have access to the fundamental physical, health, and social benefits of our natural and built systems
- 4. Apply ecosystem-based approaches:** Incorporate ecosystem resilience, protection of ecosystem services, and sustainable resource management
- 5. Maximize mutual benefits:** Support resilience and conservation initiatives across built, social, economic, and natural systems, such as disaster preparedness, to ensure synergies across systems and reduce/avoid impacts of maladaptation



INDUSTRY FORUM

REGIONAL UTILITIES SUPPORTING HOUSING (RUSH)

Friday, April 28 – 8am to Noon
Japanese American National Museum

Additional Information & Registration Details:

<https://scag.ca.gov/post/regional-utilities-supporting-housing-rush-industry-forum>

Online and Virtual Attendance Options

- Half-Day convening with RUSH Expert Panel
- Identify potential program strategies and projects for transformative investment and regional collaboration to overcome infrastructure obstacles and deliver accelerated housing production while addressing climate change and historical inequities
- Expert Panel will deliver recommendations on an advisory study from SCAG, Urban Land Institute, PlaceWorks

Expert Panel



Heather Cooley
Director of Research, Pacific Institute



Morgan Shimabuku
Senior Researcher, Pacific Institute



The Untapped Potential of California's Urban Water Supply:

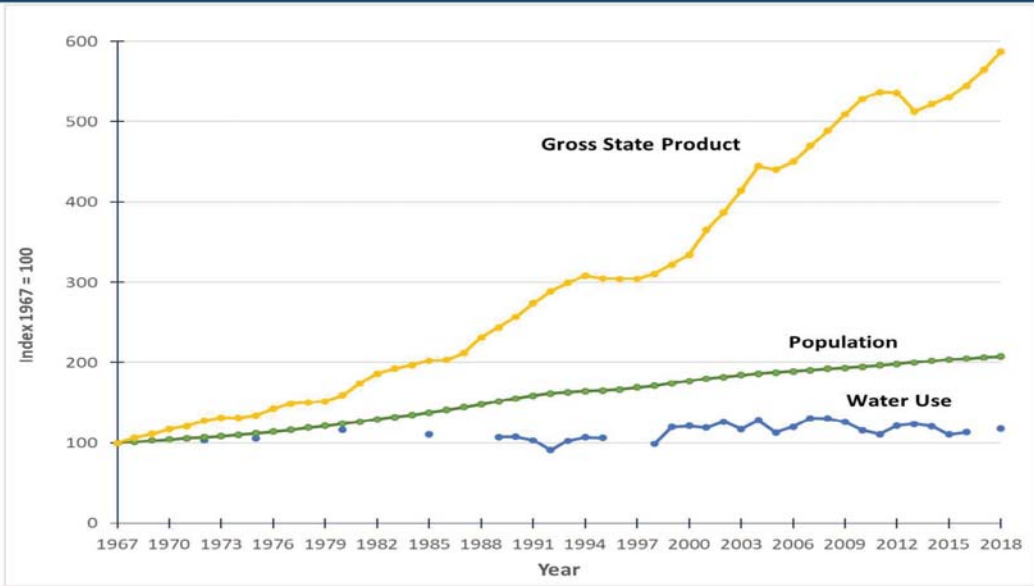
Water Efficiency, Water Reuse, and Stormwater Capture

Heather Cooley, Director of Research
Morgan Shimabuku, Senior Researcher

Southern California Association of Governments:
Energy and Environment Committee

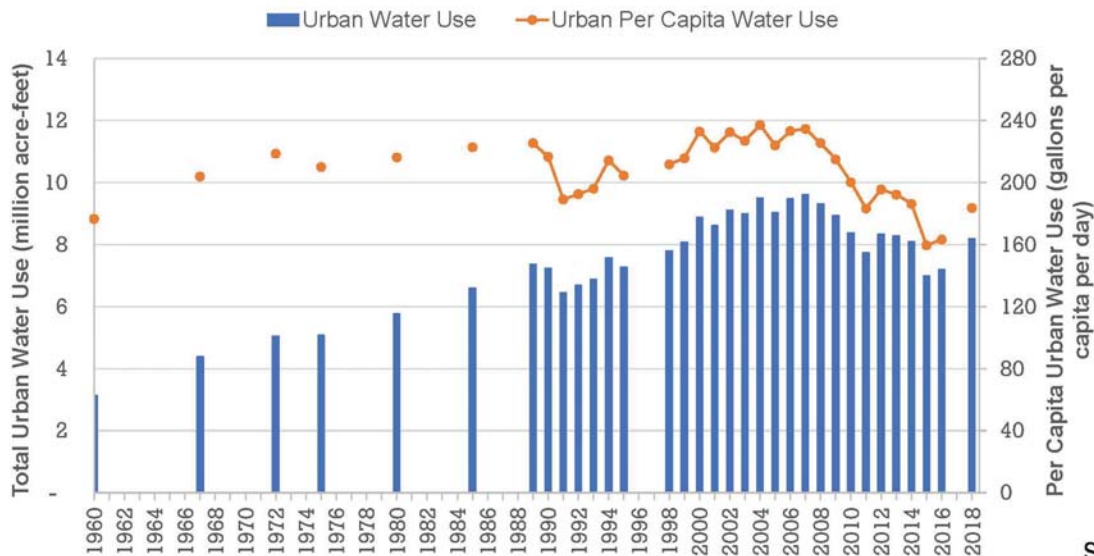
April 2023

California has experienced a dramatic decoupling between water use and growth.



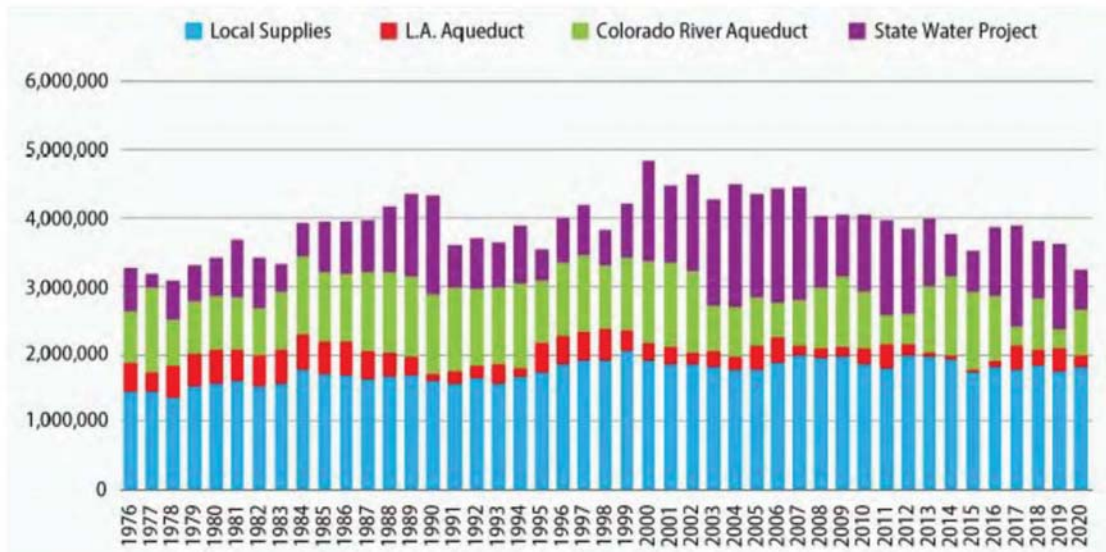
Source: Pacific Institute

Urban water use has declined dramatically since peaking in 2007.

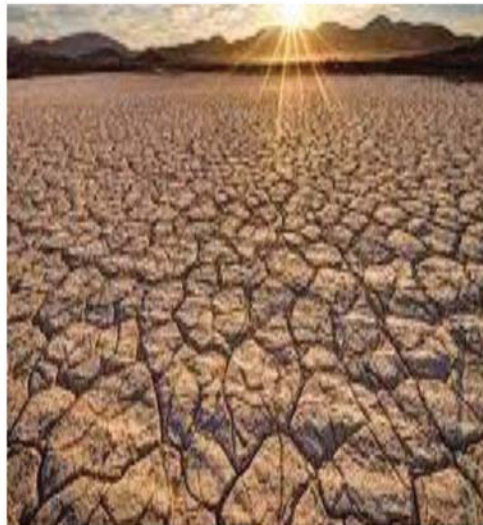


Source: Pacific Institute

Water Supply Trends for the Metropolitan Water District of Southern California's Service Area, 1976-2020

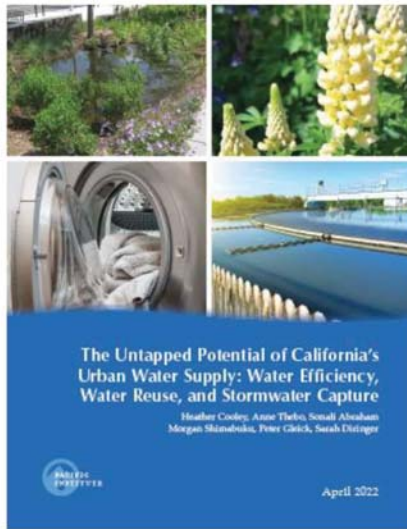


Source: MWD



Despite the progress made, pressures on water resources are intensifying.

The Untapped Potential of California's Urban Water Supply – Release April 2022



What is the additional potential for urban water efficiency, water reuse, and stormwater capture?

Available at <https://pacinst.org/publication/california-urban-water-supply-potential-2022/>

South Coast Hydrologic Region

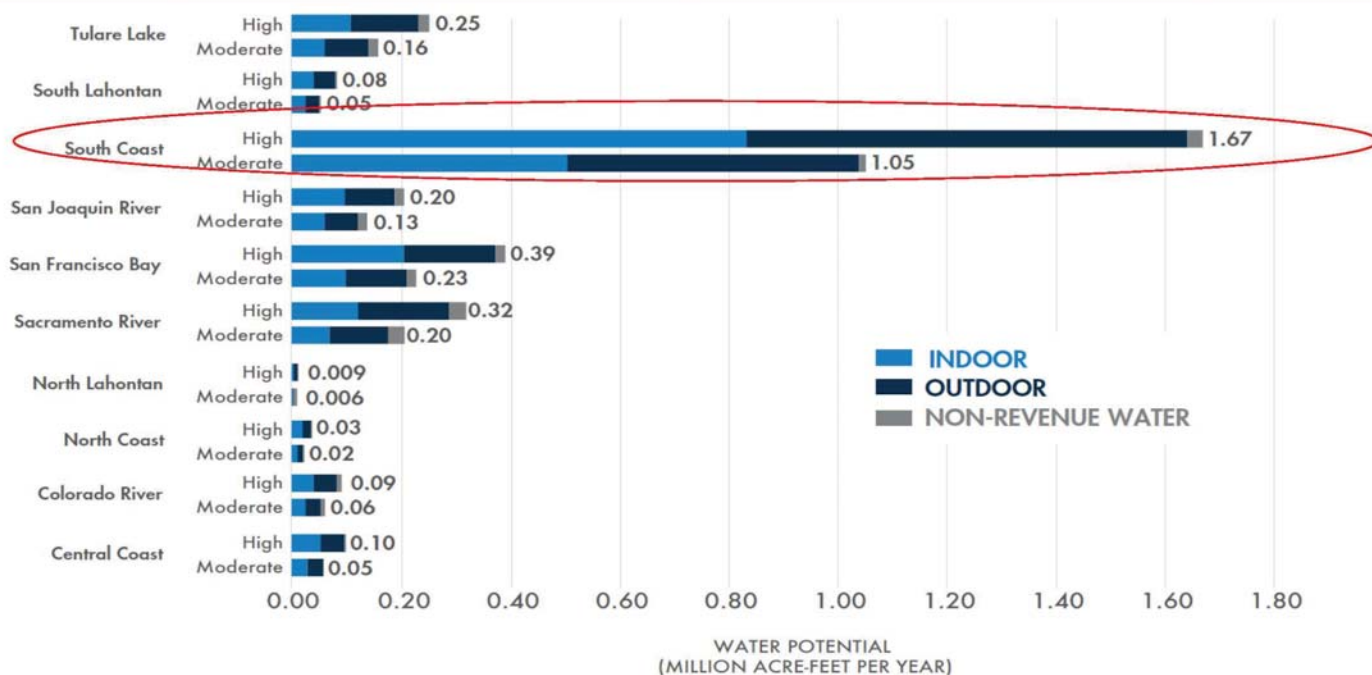
- Spans an area of about 11,000 square miles, including all of **Orange County** and major portions of **Los Angeles, Riverside, San Bernardino, San Diego, and Ventura** counties
- Home to more than **20 million people** and a **robust economy**



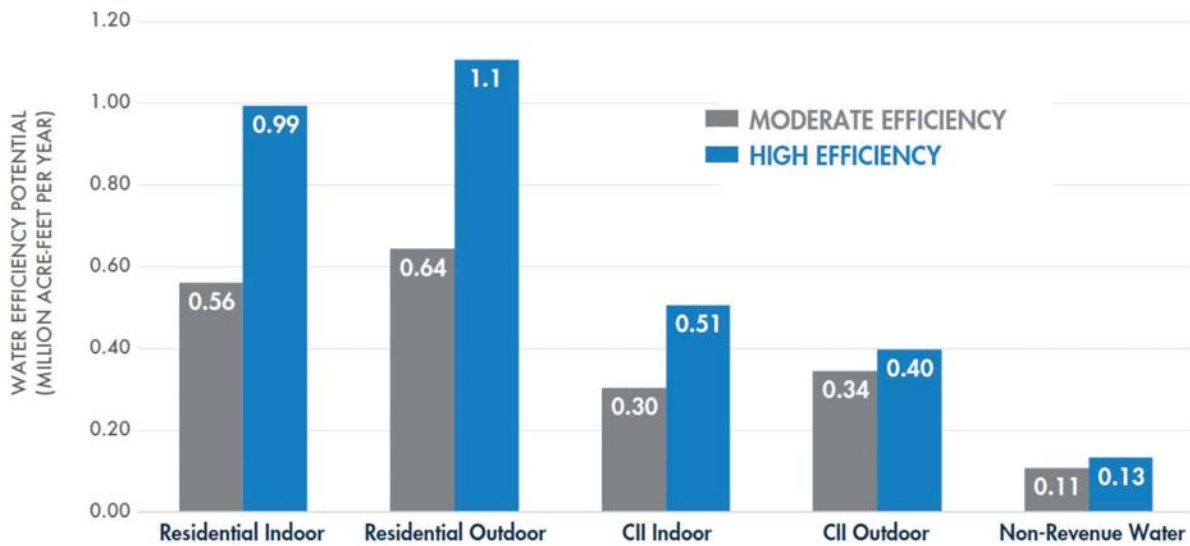
What is California's Water Efficiency Potential?

- **Current water use baseline** developed from data submitted by water agencies for 2017 to 2019.
- Two water-savings scenarios:
 - **Moderate efficiency** based on full compliance with current standards for appliances and fixtures, landscapes (MWELO), and distribution leaks (SB 555).
 - **High efficiency** based on *available* leading-edge technologies and practices that use less water than devices meeting current standards.

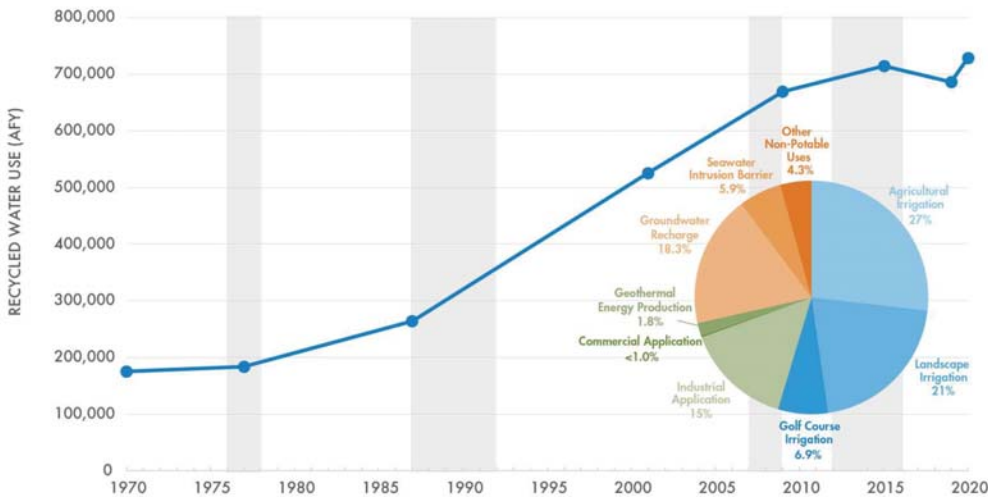
California's water efficiency potential is 2.0 to 3.1 million acre-feet per year, a 30% to 48% reduction in urban water use.



Water savings are possible in every sector.



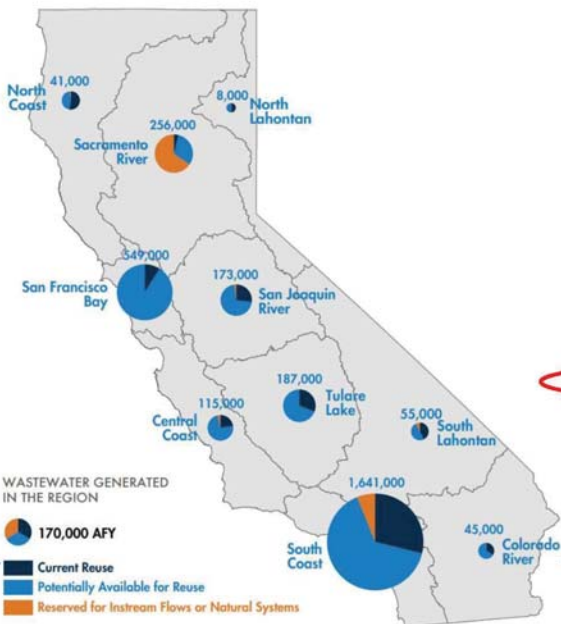
Water reuse has tripled over the last 50 years, but we still reuse just 25% of the wastewater generated.



What is California's Water Reuse Potential?



California's water reuse potential ranges from 1.8 million to 2.1 million acre-feet per year.



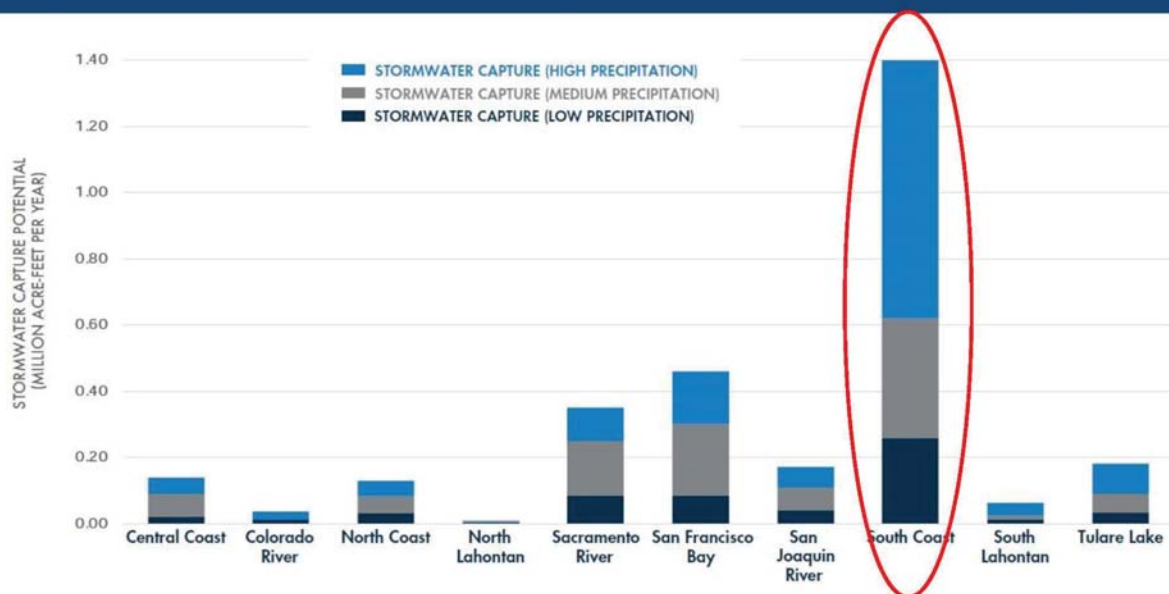
Hydrologic Region	Currently Reused (AFY)	Effluent Reserved for Instream Flows or Natural Systems (AFY)	Potentially Available for Reuse (AFY)	TOTAL Effluent (AFY)
Central Coast	26,000	4,000	84,000	115,000
Colorado River	15,000	0	30,000	45,000
North Coast	21,000	1,000	18,000	41,000
North Lahontan	4,000	0	4,000	8,000
Sacramento River	11,000	168,000	78,000	256,000
San Francisco Bay	49,000	3,000	497,000	549,000
San Joaquin River	47,000	4,000	123,000	173,000
South Coast	473,000	101,000	1,067,000	1,641,000
South Lahontan	24,000	4,000	27,000	55,000
Tulare Lake	58,000	0	129,000	187,000
TOTAL	729,000	285,000	2,057,000	3,071,000

What is California's Urban Stormwater Capture Potential?

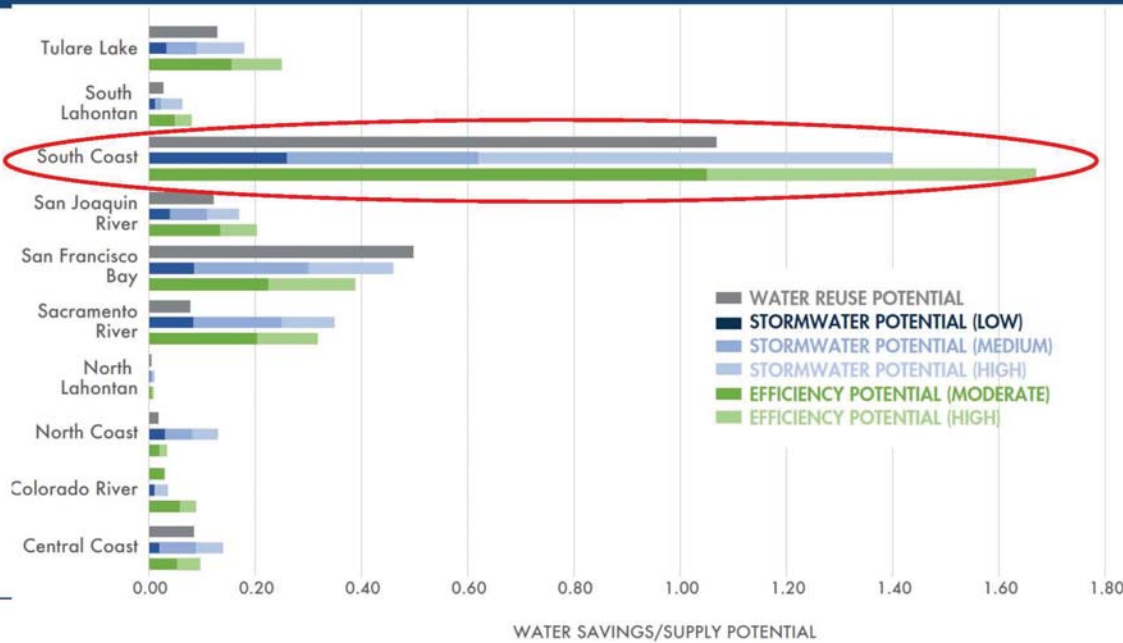
- For our study, we developed estimates:
 - **Impervious surfaces** in urban areas across the state
 - Areas overlying **public supply aquifers**
 - High, medium, and low historical **precipitation**



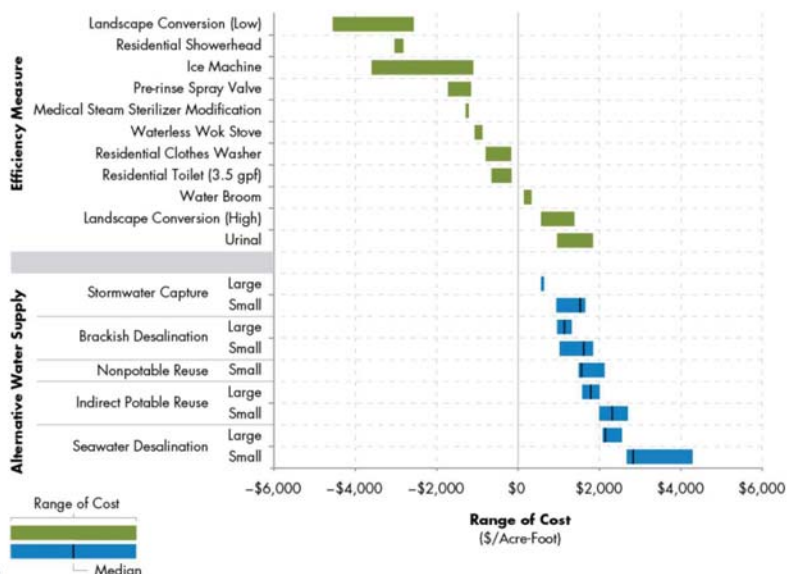
California's urban stormwater capture potential is 580,000 acre-feet in a dry year to 3.0 million acre-feet in a wet year.



There are opportunities across California – though some regional differences.



Costs vary widely – though efficiency is among the least expensive option.



- Water efficiency is the least expensive water supply option, followed by stormwater capture, brackish desalination, and recycled water.
- Seawater desalination is the most expensive option.

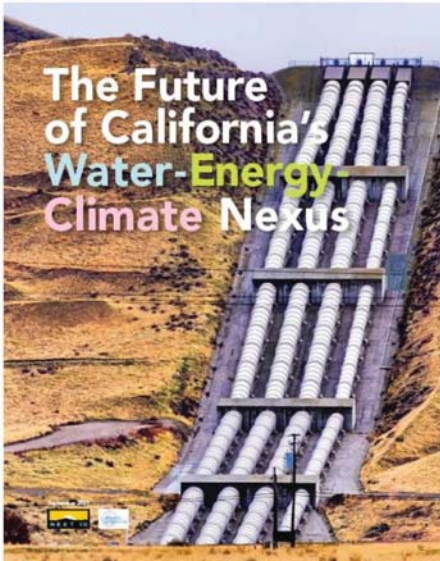


Water efficiency, reuse, and stormwater capture provide co-benefits, making them even more economically viable.



Source: Diringer et al. 2019, Pacific Institute

We can be water-wise and climate-smart.



- Saving water saves energy and reduces greenhouse gas emissions.
- Replacing imported water with water reuse and stormwater capture would reduce energy use and greenhouse gas emissions.
- Energy recovery at wastewater facilities would also reduce greenhouse gas emissions.

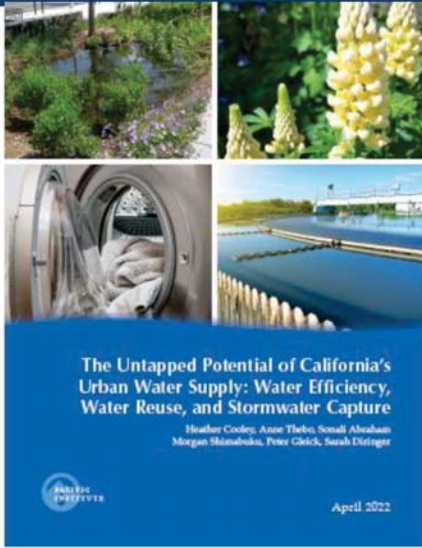
Key Findings

- Southern California has made laudable progress in recent years to reduce water use and augment local supplies, but more will be needed.
- Proven water efficiency technologies and practices could reduce urban water use in the South Coast by 1.1 million to 1.7 million AFY.
- Reuse of municipal wastewater could boost local water supplies in the South Coast by up to 1.1 million AFY, tripling current reuse levels.
- Urban stormwater capture in areas overlying public supply aquifers could boost local water supplies in the South Coast by 260,000 AF in a dry year to 1.4 million AF in a wet year.
- These strategies are proven – and can improve water reliability and provide other important co-benefits, including meeting energy and GHG reduction goals.

Recommendations

- Expand efficiency programs and provide targeted support for low-income and multi-family households.
- Support denser developments and ensure existing codes and ordinances are adequately enforced.
- Permanently ban non-functional grass at businesses and institutions and in large housing developments.
- Support onsite reuse of greywater, rainwater, and stormwater for residential and non-residential properties, including through incentives and ordinances.

Thank you!



The Untapped Potential of California's Urban Water Supply: Water Efficiency, Water Reuse, and Stormwater Capture

Heather Codrý, Anne Tietbo, Somali Abraham, Megan Hamabrook, Peter Glóck, Sarah Díttinger



April 2022

Untapped Potential

Innovative water efficiency, water reuse, and stormwater capture approaches for California

CHALLENGE Mismatch between water supply and water use

ANNUAL URBAN WATER USE 6.6 billion gallons per day (BGD) in California's urban areas. The average California household uses 150 gallons of water per day. The average California business uses 100,000 gallons of water per day.

WATER REUSE & STORMWATER CAPTURE The U.S. Environmental Protection Agency (EPA) estimates that California could save 1.5 BGD of water annually through water reuse and stormwater capture. This is equivalent to 10% of California's total water supply.

UNDEVELOPED WATER SUPPLY California has 1.5 BGD of undeveloped water supply. This is equivalent to 20% of California's total water supply.

URBAN WATER SOLUTION Innovative strategies can reduce the gap, reduce drought pressures, and build resilience.

Reduce urban water use through water efficiency improvements

- Increased residential water efficiency: 1.5 BGD of water saved annually (20% of total urban water use)
- Increased commercial water efficiency: 1.5 BGD of water saved annually (20% of total commercial water use)
- Increased industrial water efficiency: 1.5 BGD of water saved annually (20% of total industrial water use)

Boost local water supplies through water reuse and stormwater capture

- Increased water reuse: 1.5 BGD of water saved annually (20% of total water supply)
- Increased stormwater capture: 1.5 BGD of water saved annually (20% of total water supply)

KEY FINDINGS

- Water efficiency improvements can save 1.5 BGD of water annually.
- Water reuse and stormwater capture can provide 1.5 BGD of additional water supply.
- Water reuse and stormwater capture can reduce drought pressures and build resilience.

[Read the full report](#)

Leading the Way

Communities across California are already implementing these innovative urban water solutions with success!

Finally, scaled across the state, these solutions can provide drought-resilient and resilient water supplies for California. They can also improve water resources across the United States and beyond.

KEY REGIONAL INITIATIVES

- WATER-EFFICIENT RESIDENTIAL**
 - Water efficiency improvements can save 1.5 BGD of water annually.
 - Water efficiency improvements can reduce drought pressures and build resilience.
- SAN FRANCISCO BAY METROPOLITAN REGION**
 - Water reuse and stormwater capture can provide 1.5 BGD of additional water supply.
 - Water reuse and stormwater capture can reduce drought pressures and build resilience.
- SACRAMENTO BAY METROPOLITAN REGION**
 - Water reuse and stormwater capture can provide 1.5 BGD of additional water supply.
 - Water reuse and stormwater capture can reduce drought pressures and build resilience.

[Read the full report](#)

Full report available: <https://pacinst.org>



THANK YOU!