



Water Resilience Panel

Resilience & Conservation Subcommittee

January 23, 2023

WWW.SCAG.CA.GOV

Water Resilience Expert Panel



Waverly Klaw, AICP
Director of the
Growing Water Smart Program,
Sonoran Institute



David Sumi
Resource Specialist
MWD



Elise Goldman
Resource Specialist
MWD





Growing Water Smart

Waverly Klaw
Director, Resilient Communities and Watersheds
Sonoran Institute
Prepared for Southern California Association of Governments
January 23, 2023



Sonoran Institute

Est. 1990

Our mission is to connect people and communities with the natural resources that nourish and sustain them.

- Restore riparian habitat in the Colorado River delta.
- Secure water to reconnect the Colorado River with its tributaries and the the sea.
- Renew individual relationships with the River.
- Train and assist communities in implementing water conservation, efficiency, reuse, and stormwater management practices.



Waverly Klaw, Director, Growing Water Smart
wklaw@sonoraninstitute.org

www.sonoraninstitute.org

www.growingwatersmart.org

Background.



- SCAG Water Action Resolution and Climate Change Resolutions
- Striving for an “all of the above” approach to addressing the region’s water challenges
- Implementing strategies that
 - Reduce water use
 - Improve water conservation, reuse, and efficiency
 - Enhance water systems’ health and resilience
 - Pursue and potentially implement new water supply and storage opportunities
 - Support investments in water infrastructure and conservation practices that support the region’s economic and population growth and fosters planning for the region’s housing needs.

Integrating Water & Land Use Planning.

- **Land use planning** is the governmental power to regulate what is built, and where.
- **Land Use decisions** exert influence over the water resource management of the municipal and industrial (M&I) sector (people and businesses)
- **New development** increases water demand, impacts rainwater infiltration
- **Existing development** may use water inefficiently, possess outdated technology, set development footprint

The focus of water & land use planning.

Supply-Side



Acquisition



Treatment



Storage/
Distribution



Gray Infrastructure

Infrastructure

Demand-Side



Conservation



Efficiency



Reuse



Green Infrastructure

Low-Impact
Development

Opportunities for integrating water & land use.

Planning



Adequate
Water Supply



Land Use



Watershed Health &
Alternative Supplies



Post-Occupancy



Opportunity 1.

PLANNING & VISIONING

For a sustainable future, communities must create guiding plans that integrate land use planning with water resiliency goals.



Opportunity 2.

ENSURING WATER SUPPLY FOR DEVELOPMENT

Water supply should be adequate and sustainable through community build-out.



Opportunity 3.

LAND USE POLICY & PROCESS

Policies, programs, and processes that govern what and where development occurs can greatly impact the management of water resources.



Photo Credit: California Native Plant Society

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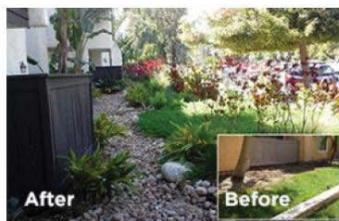
Opportunity 3. DENSITY AND LANDSCAPING



- 1 SMALLER LOT SINGLE FAMILY DEVELOPMENT**
Development patterns influence water use. Studies found 10 to 60% water savings with increased density of single family residences, mostly due to less irrigated lot area. Savings increase as lot size decreases.



- 2 MULTI FAMILY DEVELOPMENT**
Multifamily units consume 35 to 50% less water than SF detached homes. If a high-density development requires cooling towers, the savings may decrease or be eliminated.



- 3 LANDSCAPING AND IRRIGATION**
Approximately 50% of urban water produced in California is used for landscape irrigation. Large water savings can be gained by efficient landscape design, installation, management, and maintenance.

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Opportunity 4.

WATERSHED HEALTH & ALTERNATIVE SUPPLIES

Protecting sensitive areas, minimizing pollution, mimicking natural functions, and strategically using and reusing all sources of water support water availability and quality.



Photo Credit: Sacramento State/
Jessica Vernone

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Opportunity 5.

EFFICIENT WATER DEMAND PROGRAMS

Rate structuring, retrofit programs, emergency drought measures, and consumer education enable water conservation and efficiency opportunities for existing development.

USE LESS WATER PER FLUSH!

Qualified participants
can receive up to 2

FREE
High Efficiency Toilets

www.sgvwater.com



Photo Credit: San Gabriel Valley Water Company

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Breaking Down Silos.



Land Use Planners



Water Resource Managers



Elected Officials



Growing Water Smart



Growing Water Smart is a Training & Assistance Program that empowers local leaders to implement plans and policies that support community and regional water resilience.

Impact

- Trained 80 Cities, Counties, and Towns.
- These represent communities in which 65% of Coloradans and 23% of Arizonans live.
- Over 25 projects carried out.

California workshop: Mid-June, 2023

www.growingwatersmart.org

Supported in California by Water Education for Latino Leaders and CivicWELL.

The Growing Water Smart Workshop.

- 2.5 days
- No cost to participating teams
- 4-6 communities attend per workshop

 Attend with an Inter-Disciplinary Team

 Assess Current Conditions

 Set Goals

 Identify Opportunities

 Develop a Water-Smart Message

 Establish an Action Plan

 Implement (with funding assistance)



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Growing Water Smart Communities:

- Reduce gap between water supply and demand.
- Ensure water supports community values.
- Keep cost of water manageable.
- Build resilience to natural hazards.
- Protect and enhance ecosystem services.

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Thank you!

www.growingwatersmart.org

Waverly Klaw
Director, Growing Water Smart
Sonoran Institute
wklaw@sonoraninstitute.org



SONORAN
INSTITUTE

Water Resilience Panel

Challenges in an Uncertain World



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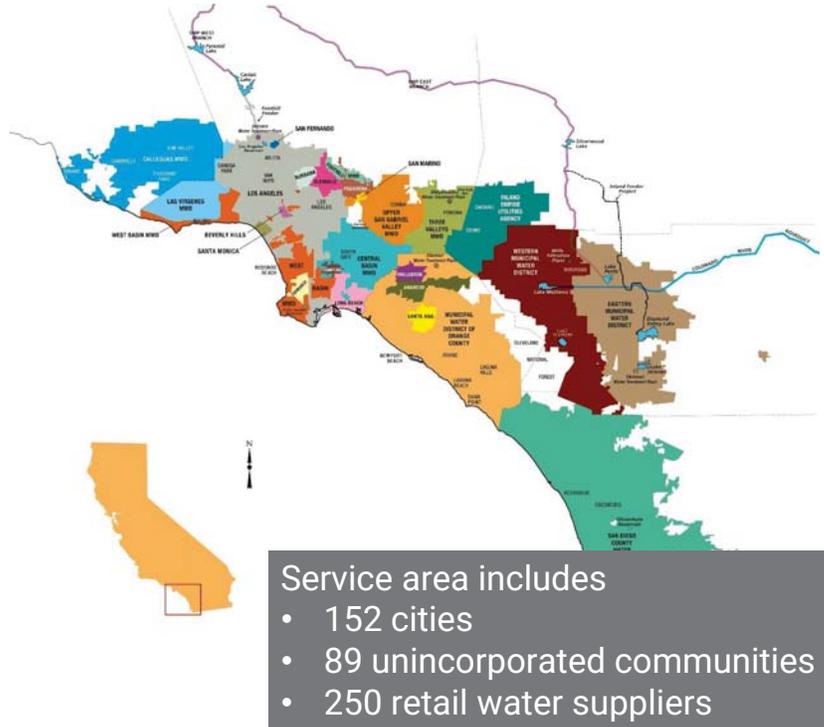
The Metropolitan Water District of Southern California



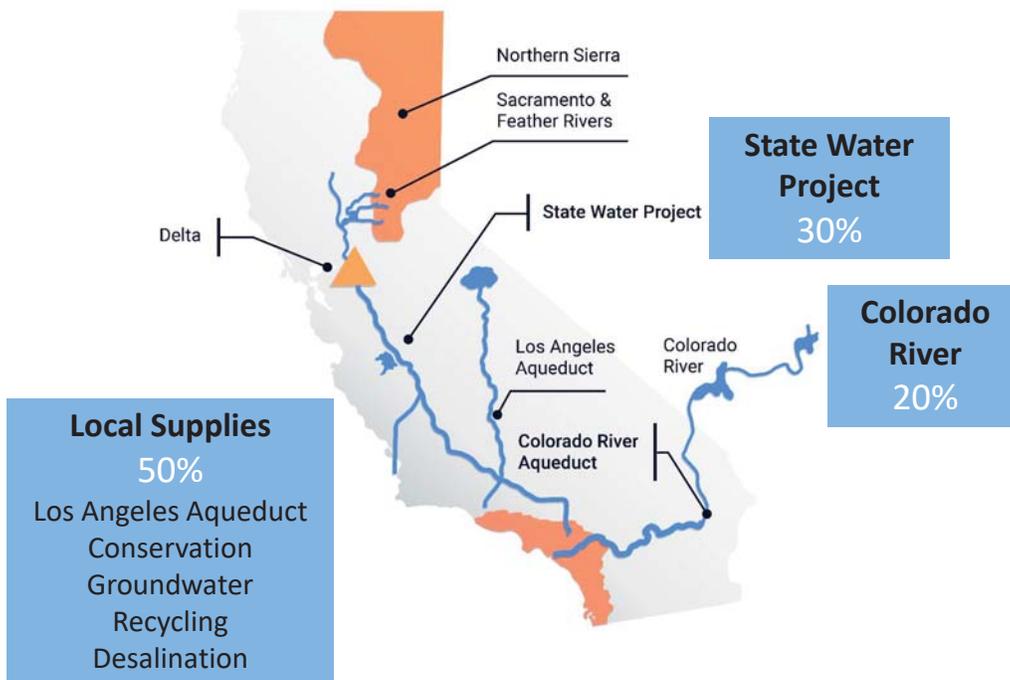


Metropolitan Water District of Southern California

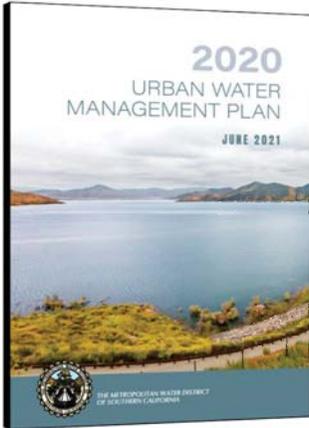
- Nation's largest wholesale water provider
- Service area: 19 million people, 5,200 square miles, parts of six counties
- 26 member agencies
- Supports \$1.7 trillion regional economy (ranks 12th in the world)



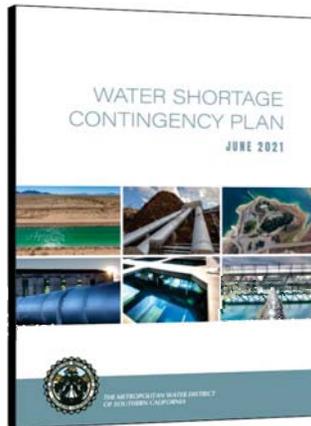
Securing Water for Southern California



Planning for Future Reliability



Urban Water Management Plan
Assessment of water service reliability



Water Shortage Contingency Plan
Action plan for droughts and shortages



Annual Regional Progress Report to Legislature
Investments in regional self-sufficiency

All informed by Metropolitan’s Integrated Water Resources Plan, Metropolitan’s adaptive strategy to identify water resources, needs, and opportunities for the region

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Integrated Water Resources Plan - Water Reliability Strategy

Average Year Water Supply 1990 v. 2035

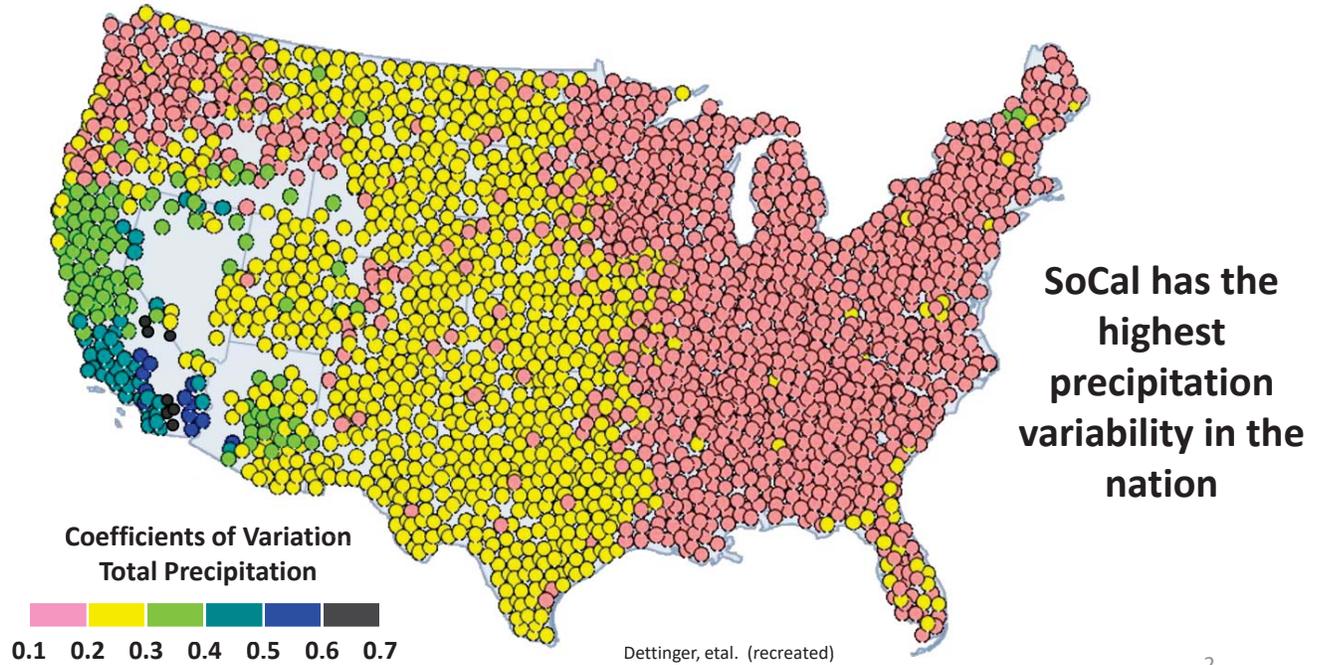
Local Supply Target 45 Year Goal Projection

- Colorado River Aqueduct
- State Water Project
- Other Local Supply
- Conservation & Recycling



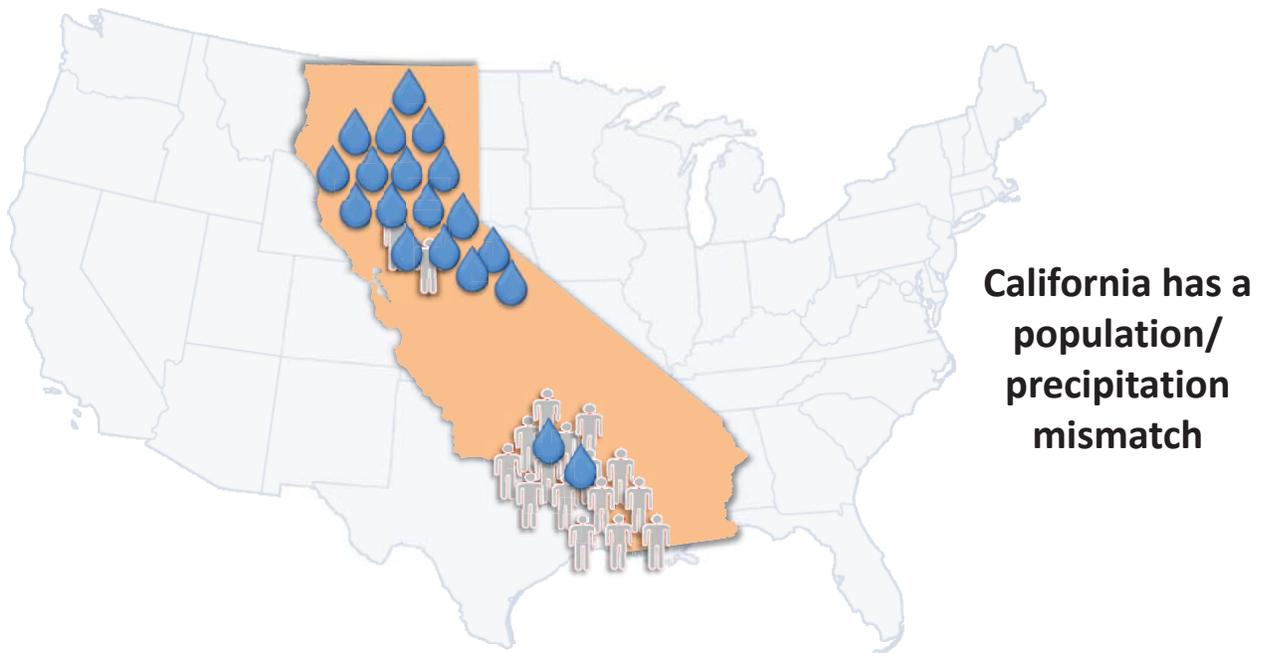
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Southern California Water Reliability Challenges



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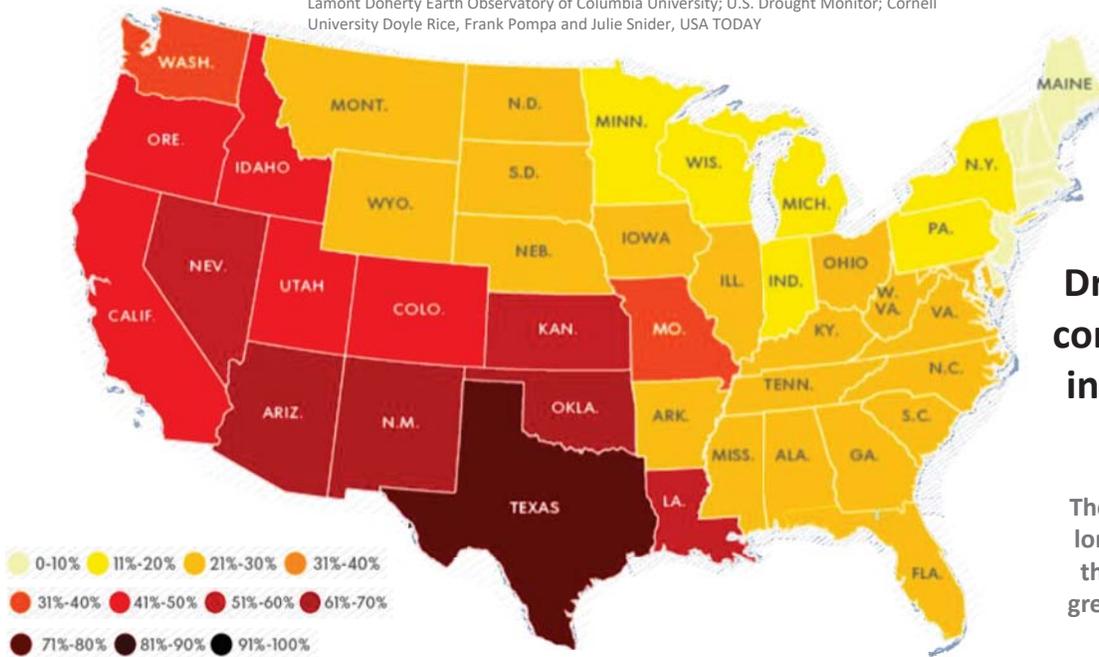
Southern California Water Reliability Challenges



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Southern California Water Reliability Challenges

Lamont Doherty Earth Observatory of Columbia University; U.S. Drought Monitor; Cornell University Doyle Rice, Frank Pompa and Julie Snider, USA TODAY

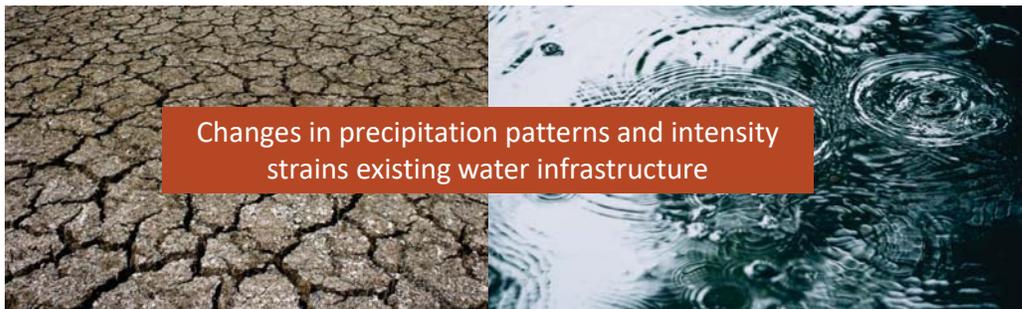


Droughts will continue to be in California's future

The risk of a decade-long drought within the next century is greatest in Texas and the Southwest

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Challenges of Climate Change



Future expectations:

- Warmer temperatures and sea level rise
- Flashier storms and more extreme weather
- Less snowpack/more rain

Ability to move and store water will become even more important

Supply Uncertainty for Both Imported Water Supplies

- Three years of drought on State Water Project
 - SWP Allocation remains at 5%
 - SWP storage depleted and shortage conditions persist for the SWP Dependent Area
 - Metropolitan receiving unmet Human Health and Safety water

- Colorado River Basin in drought since 2000
 - In 2021, shortage declared for first time in the Colorado River Basin, went into effect 2022
 - Metropolitan is not planning for a full Colorado River Aqueduct for 2023 and beyond



Low State Water Project Allocations Challenging Portions of Service Area



Physical and operational changes being made to the distribution system to preserve limited State Water Project Supplies

Planning for Uncertainties and Keeping the “Bucket” Full



Integrated Water Resources Plan utilized a scenario planning approach to better prepare for an uncertain future



Addressing SWP Dependent Area vulnerabilities



Storage availability and access



Stabilizing Imported Supplies



Safeguarding and developing new local supply production



Demand Management

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Metropolitan’s Conservation Efforts

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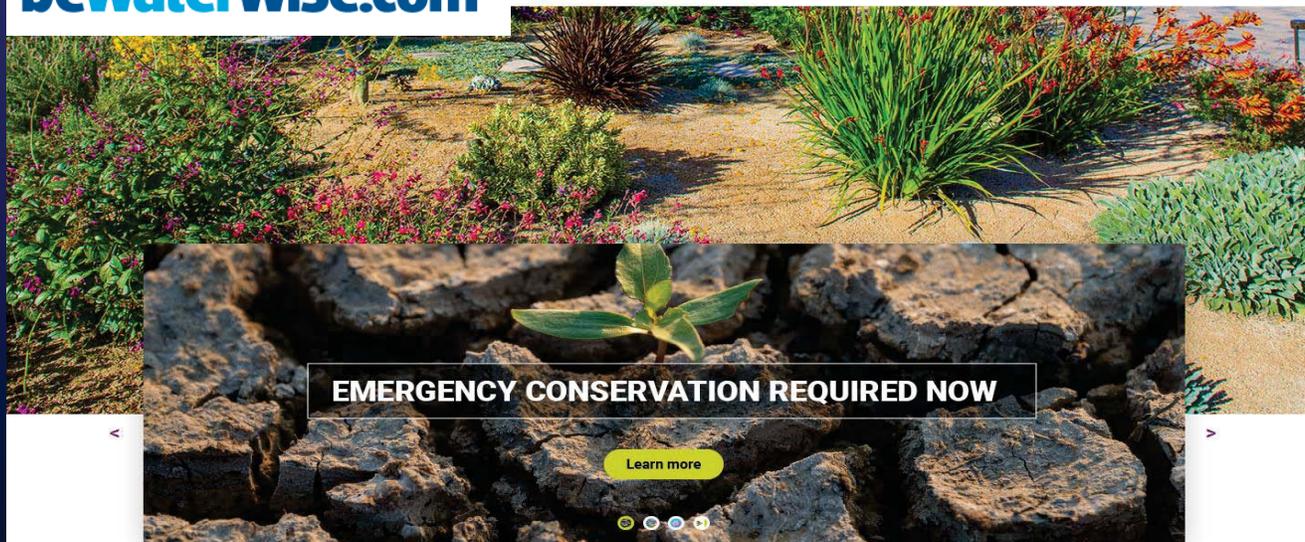
Rebates & Incentives

bewaterwise.com[®]

Español

中文

MENU



California is in a drought emergency. In Southern California, we don't have enough water in some parts of the region to meet normal demands. Every drop we save today counts. Metropolitan Water District and local water districts are taking extraordinary efforts to ensure we have what we need in the coming months. Now is the time to dramatically reduce your water use, and we're here to help.

Residential & Commercial Rebates

Indoor & Outdoor Devices

Residential rebates for:

- Premium high-efficiency toilets
- High-efficiency clothes washers
- Flow monitor/leak detection devices
- Rotating sprinkler nozzles
- Rain barrels and cisterns
- Weather-based irrigation controllers
- Soil moisture sensor systems

Commercial, Industrial and Institutional (CII) rebates for:

- Turf replacement
- High-efficiency plumbing fixtures
- HVAC Equipment
- Commercial kitchen & food equipment



bewaterwise.com

Spotlight on Turf Replacement Projects

CII Turf Replacement

- Current rebate \$2/square foot for all commercial sites; 50,000 sf cap



- Rebate for public sites \$4/sf & 200,000 sf cap

We offer technical assistance for public agency projects

Grant money available! Apply now!

Commercial Turf Removal is Non-Functional Turf Removal



City of Simi Valley Welcome Corner



<https://www.simivalley.org/departments/public-works/water-conservation/turf-removal>

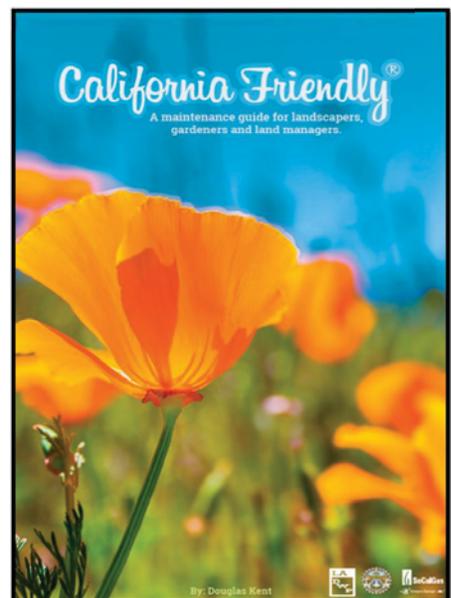
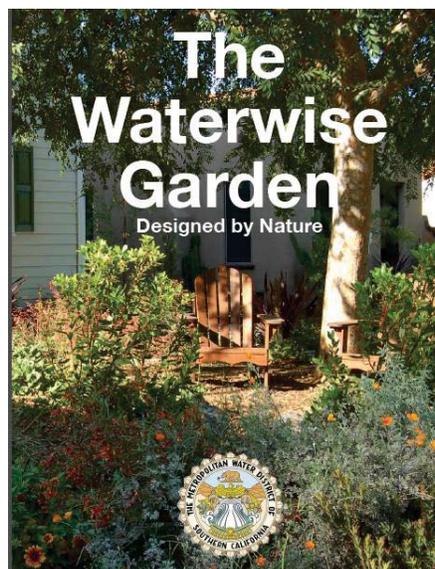
Landscape Classes & Resources

Residential Landscape Classes & Maintenance Resources



Topics include:

- Turf Replacement
- Garden Design
- Rainwater Capture
- Irrigation Basics
- And more!



Both available as PDF for free: <http://bewaterwise.com>

Classes for Landscape Professionals & City Staff

Sign up at www.clca.org

Water Efficient Landscape Dual Certification Program



Contractors placed on our website upon passing the course

Free class! \$50 deposit: Returned on completion of course | Next session: Feb 22 at Chino Basin Water Conservation District

Model Water Efficient Landscape Ordinance Training

Next class June 6th City of Thousand Oaks

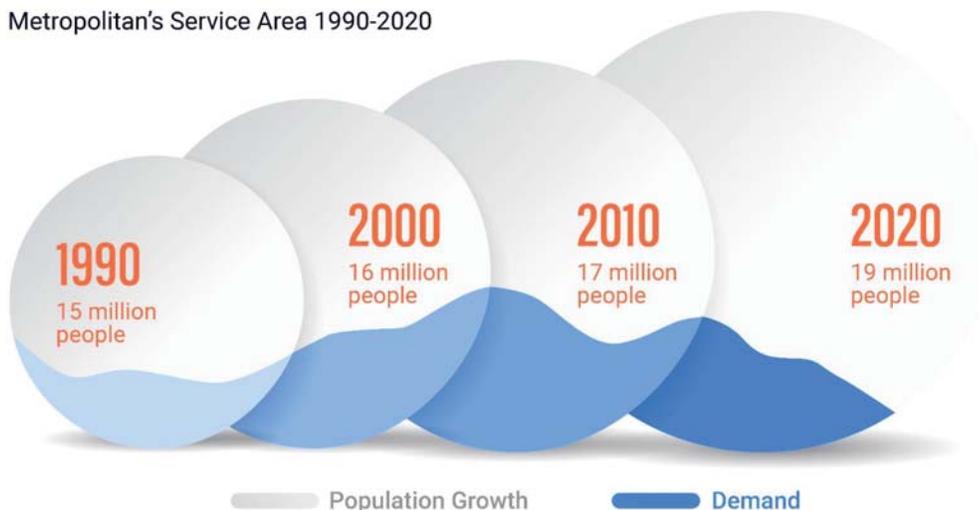
MWEL: State regulation designed to prevent water waste on irrigated landscapes

Typically triggered by building permits for irrigation systems, building additions, pools

Numbers Tell a Story of Decreasing Regional Demand

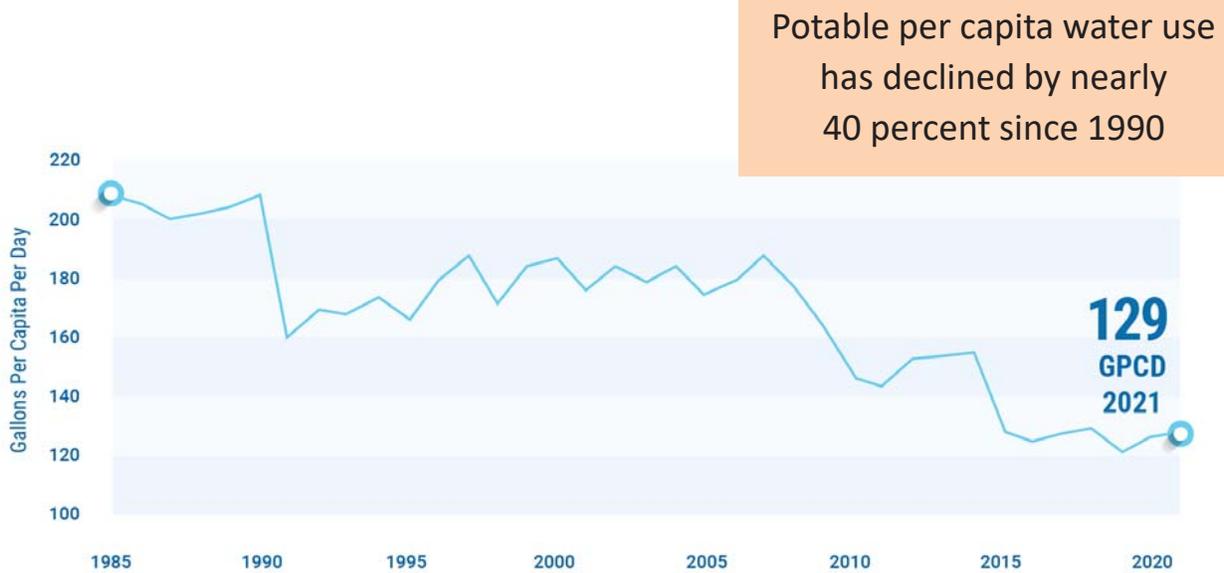
Population Growth versus Total Retail Demand

Metropolitan's Service Area 1990-2020



Southern Californians use less water today than they did more than 30 years ago, despite a population increase of 4 million people

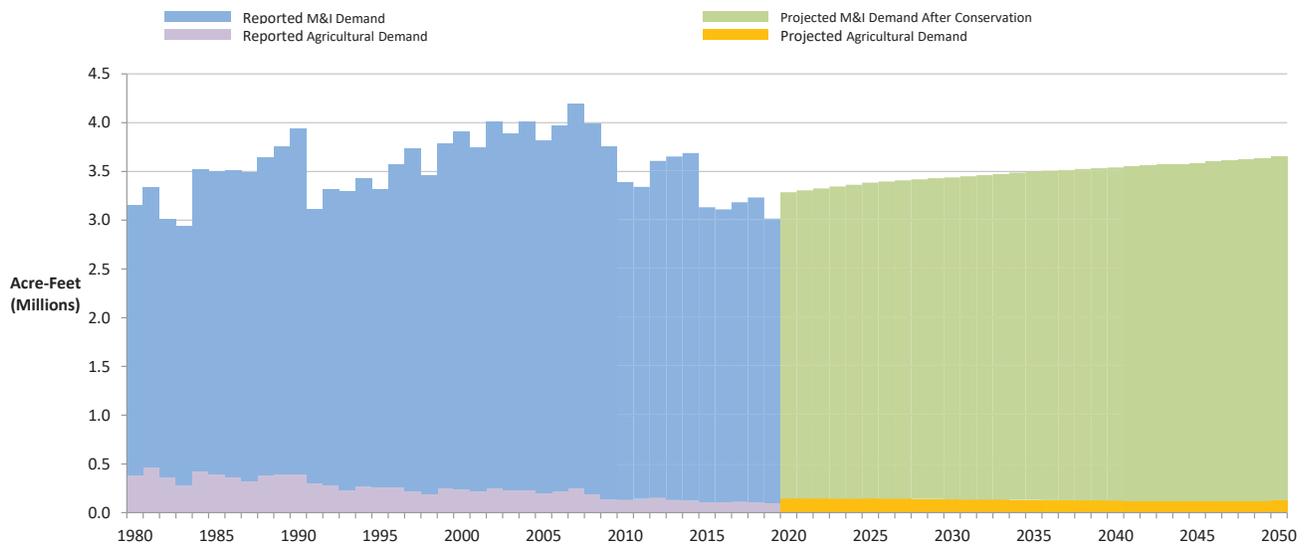
Regional Per Capita Water Usage Has Declined



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Water Demand Projected to Continue Upwards

Between 2020 and 2050, urban water use projected to grow from 3.1 MAFY to 3.5 MAFY, driven by growth in population and economy while efficiency also increases



Source: 2020 Urban Water Management Plan

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Top Three Things to Know



- Long-term planning that includes development of a diverse supply portfolio is a winning strategy for regional water reliability
- There is no silver bullet in satisfying future supply gaps, a combination of water use efficiency, maintaining and developing new supply and storage will be necessary
- Managing long-term demands through the efficient use of water reduces dependency on supplies, helps preserve storage, and helps reduce the need for extraordinary conservation measures

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David Sumi and Elise Goldman

dsumi@mwdh2o.com

egoldman@mwdh2o.com

Bewaterwise.com



THANK YOU!

For more information, please visit:

www.scag.ca.gov/greenprint

www.scag.ca.gov/ramp-atg