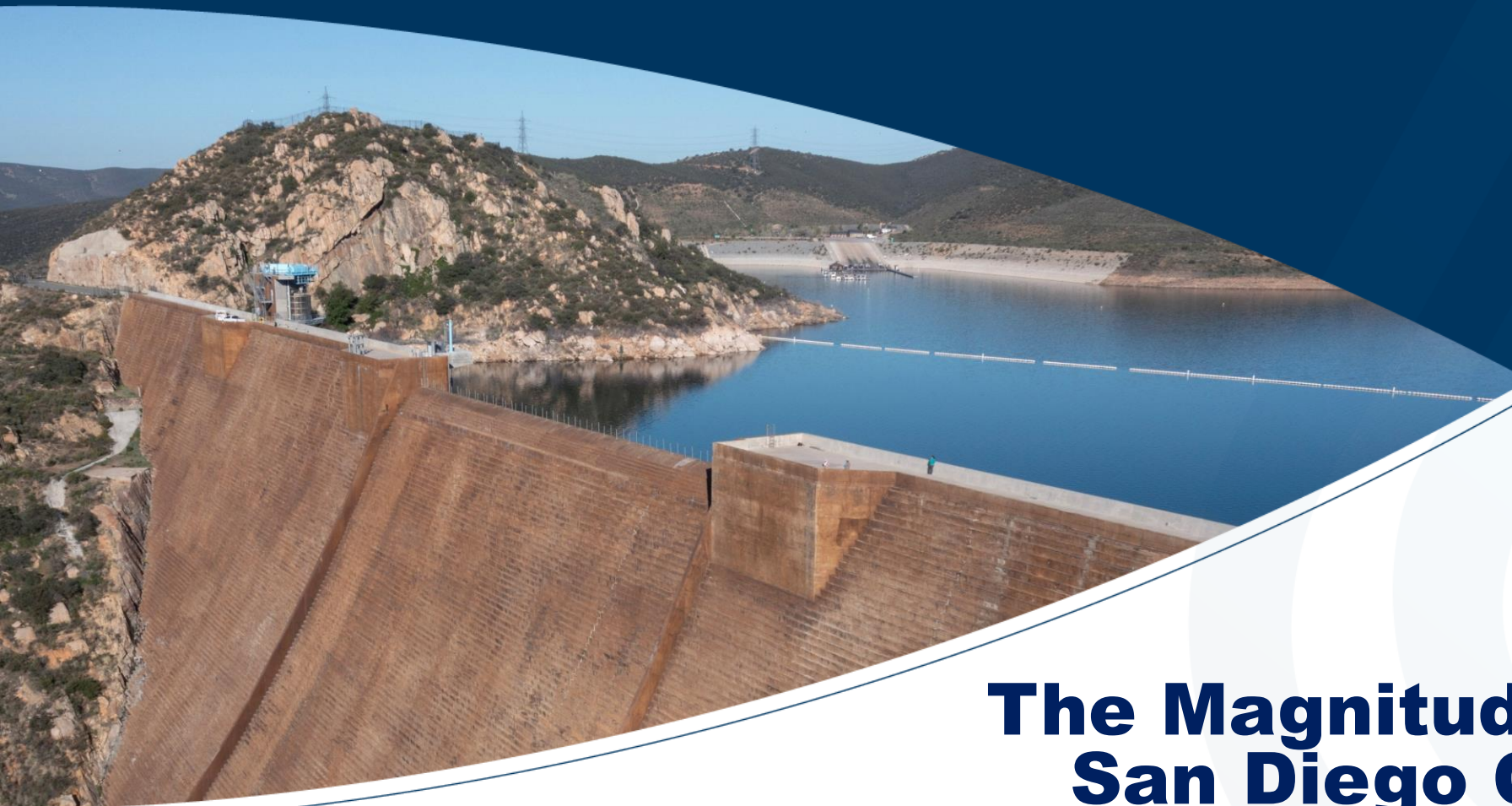




**San Diego County
Water Authority**
And Its 24
Member Agencies



The Magnitude of Managing San Diego County's Water

November 10, 2022

San Diego Farm & Nursery Expo

Dan Denham
Deputy General Manager

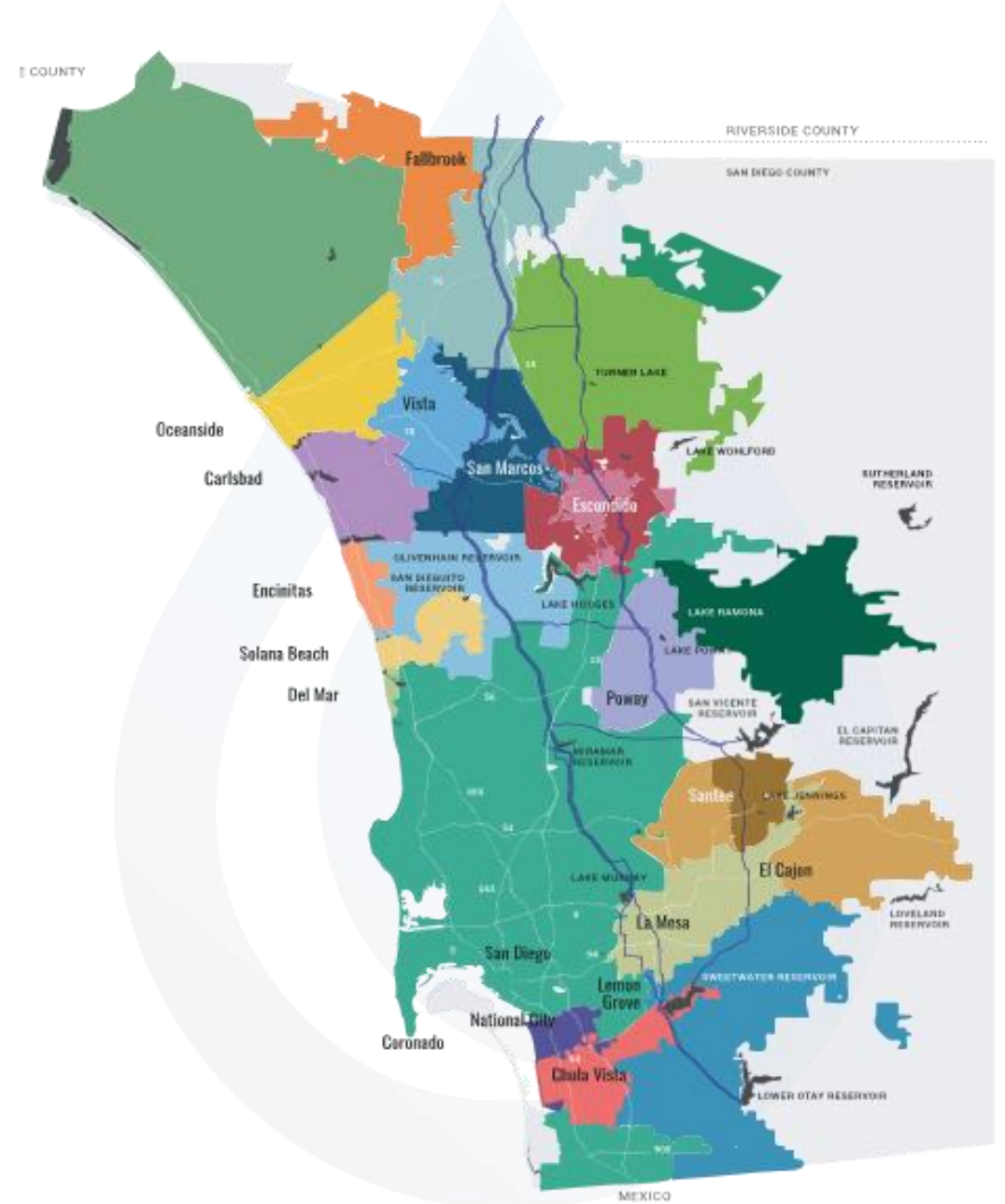
Serving a Vibrant Region

Established in 1944

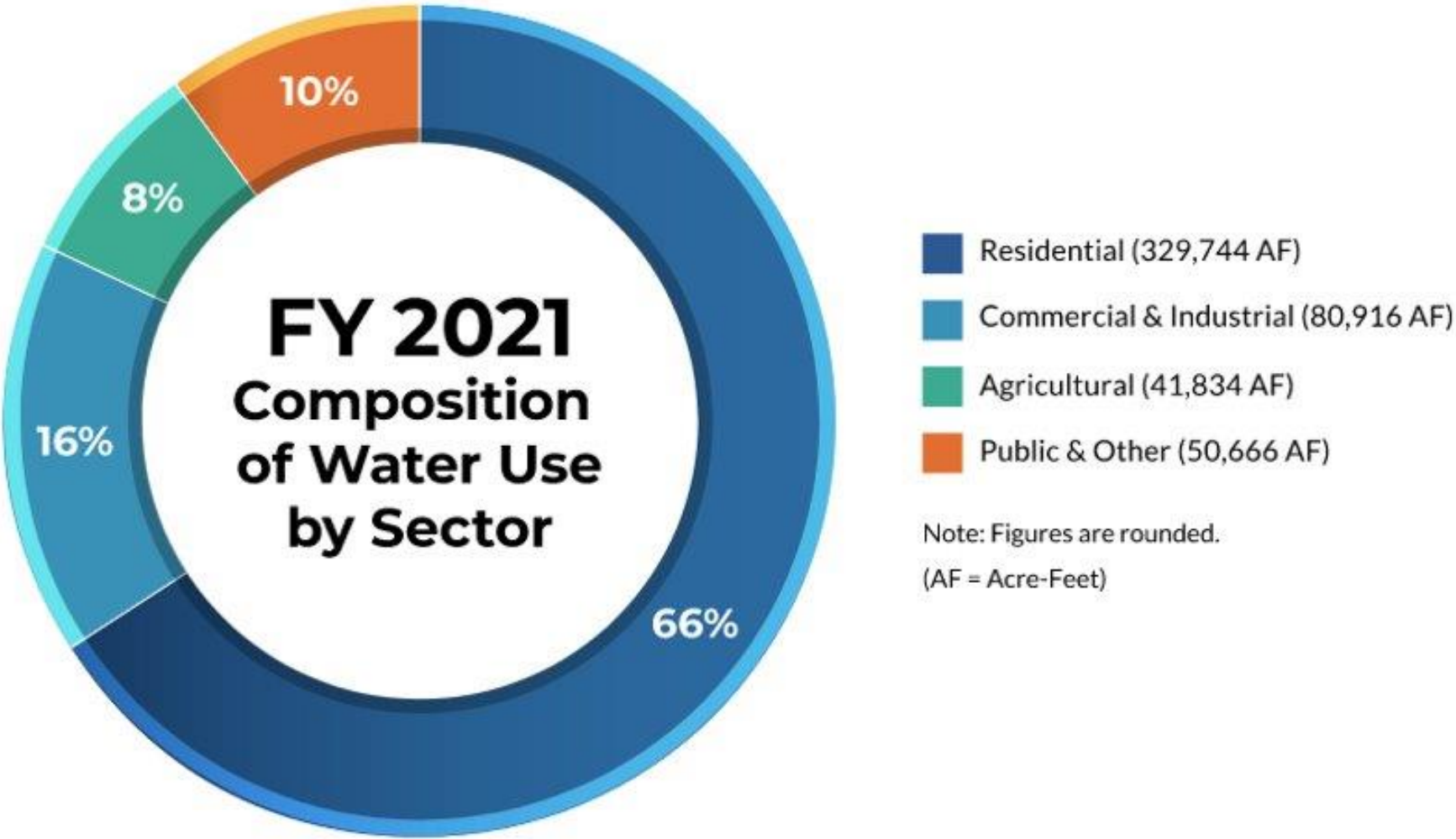
24 member agencies

3.3 million people

\$240 billion economy



FY 2021 Water Use by Sector



A Diversified Water Supply

Reducing Dependence on Imported Water

31%
**Local Water
Supply**

69%
Colorado River

<1%
State Water Project



Started Preparing in Early 1990's

Companies cringe at 50 percent cut in water

Firms offer conservation plans to mayor; some say cutbacks could cripple growth

State to Shut Off Water Delivery to Southland

By VIRGINIA ELLIS
and TED ROHRLICH
TIMES STAFF WRITERS

SACRAMENTO — Gov. Pete Wilson on Monday announced new and unprecedented cutbacks of state water deliveries so drastic that Southern California will be cut off from this traditional source of water by mid-March.

Wilson said that heightened drought conditions had forced the state to notify cities and industry

Water Dependence Bodes a Dry San Diego Future

■ **Drought:** A twisted history of water politics has left the county at the vulnerable end of the supply pipeline.

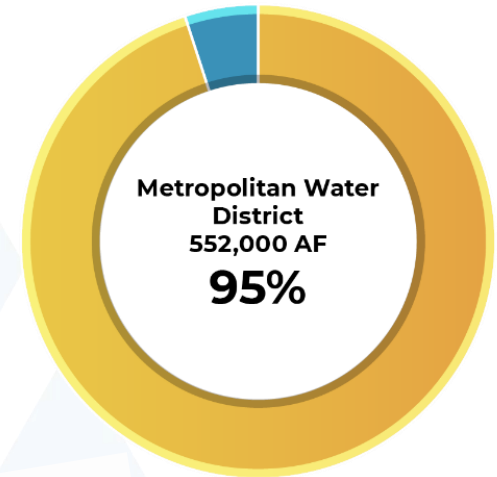
50% Water-Delivery Cut Will Be Blow to San Diego

■ **Drought:** Metropolitan Water District directors also vote a 90% cut in allocation for agricultural users.

Grim water outlook is getting even worse

By Steve LaRue
Staff Writer

SACRAMENTO — Southern Californians are likely to be ordered to cut back their water consumption by an unprecedented 30 percent this spring unless more snow falls on the Sierra Nevada, the area's chief water official said yesterday.



State Water Project cuts off water to farms; urban slash expected

Strategic Investments in Supply Reliability



Local Surface Water Storage
\$1 billion



Carlsbad Seawater Desalination
\$1 billion



QSA Water Transfer & Canal Linings
Hundreds of Millions \$



Pipeline Relining
\$493 million



**Potable Water Reuse
& Purple Pipe**
Hundreds of Millions \$



**Twin Oaks Valley Water
Treatment Plant**
\$179 million



**Water Use-Efficiency
Investments**
Hundreds of Millions \$

Conserved Water Supplies

Quantification Settlement Agreement



All-American and Coachella
Canal lining projects



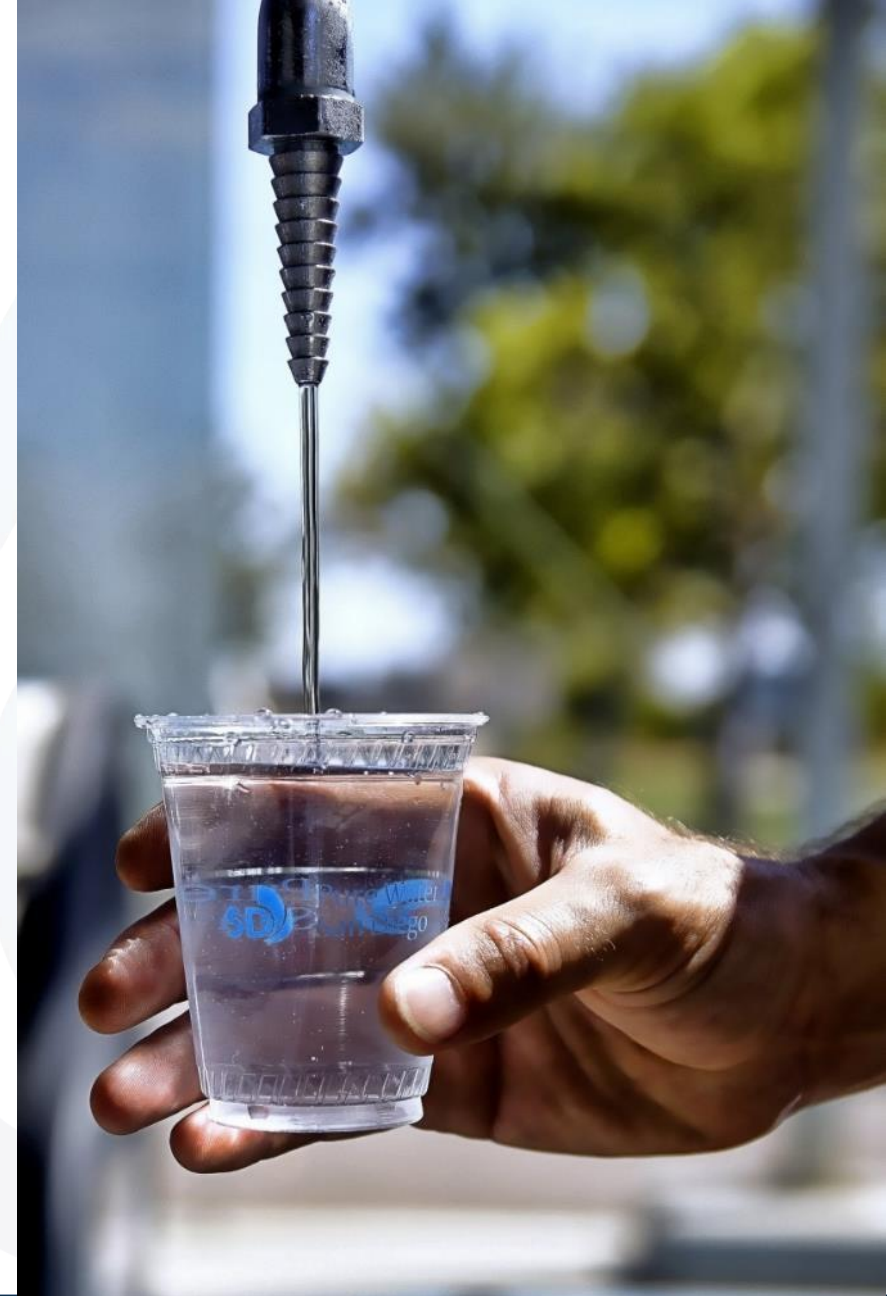
Conserved Agricultural runoff
and water transfer agreements

Claude "Bud" Lewis Carlsbad Desalination Plant

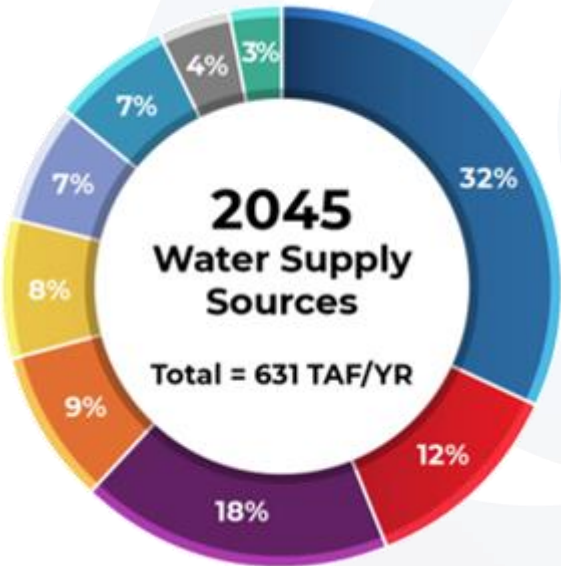
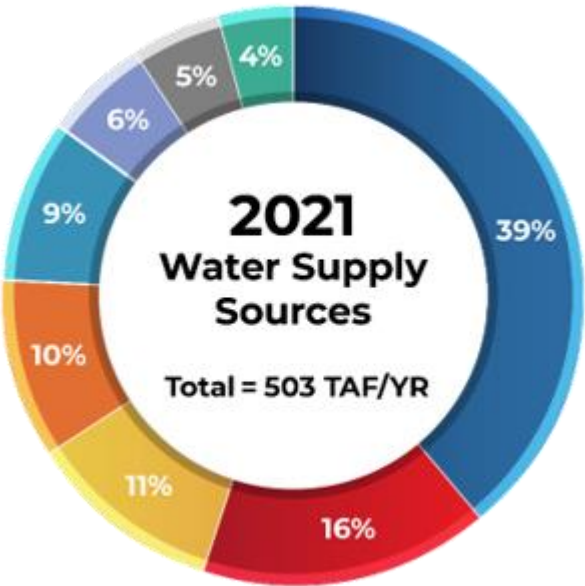
The Carlsbad Desalination Plant is the largest seawater desalination plant in the nation.



Potable Reuse Projects



Results of Supply Diversification



- Conserved Water/IID
- Conserved Water/Canal Lining
- Potable Reuse
- Seawater Desalination
- Metropolitan Water District
- Recycled Water
- Local Surface Water
- Groundwater
- San Luis Rey Water Transfer

Drought Response

State Actions by Governor

- July 2021 – Issued Executive Order N-10-21 – Voluntary 15% reduction in water use from 2020 levels
- March 2022 – Issued Executive Order N-7-22 – Bans irrigation of “non-functional” turf in commercial, institutional, and industrial sectors
- Aug 2022 - Released long-term strategy document – Lists actions needed to address 10% loss of water supplies by 2040



Drought Response

Federal Actions by Department of Interior

- Aug 2021 – Bureau of Reclamation Declares First Ever Shortage on CO River for 2022
 - Reductions to AZ, NV, and Mexico
- Aug 2022 – Dep. of Interior announced actions to reduce demands on CO River by 2-4 million acre-feet.
 - Shortage continues for 2023



2022 SoCal Drought Headlines

THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

News for Immediate Release__

Emergency Drought Restrictions Go Into Effect For Six Million Southern Californians

June 1, 2022

Select communities in Los Angeles, San Bernardino, Ventura counties under outdoor watering
limits, monthly water budgets

Amid drought, California declares war on lush lawns

by Veronique Dupont



CALIFORNIA

Los Angeles Times

State refuses request for more water in communities with high wildfire risk



The Metropolitan Water District of Southern California

NEWS RELEASE

P. O. Box 54153, Los Angeles, California 90054-0153 • (213) 217-6485 • www.mwdh2o.com

EMERGENCY PIPELINE REPAIR REQUIRES 4 MILLION PEOPLE ACROSS LA
COUNTY TO SUSPEND OUTDOOR WATERING FOR 15 DAYS, SEPT. 6-20
Important water delivery pipeline must be repaired to ensure water reliability for region

CITY OF CAMARILLO RESIDENTIAL WATER CUSTOMERS

1 DAY PER WEEK WATERING RESTRICTION SCHEDULE

Outdoor watering is NOT allowed between 8:00am and 6:00pm

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
ADDRESSES ENDING IN AN EVEN #	X	X		X	X	X	X
ADDRESSES ENDING IN AN ODD #	X	X	X	X		X	X

If your address ends with a fraction, use the number before the fraction to determine if you have an even or odd address. For example, 402½ would use 402 which is an even address.

WWW.CITYOFCAMARILLO.ORG/WATERCONSERVATION



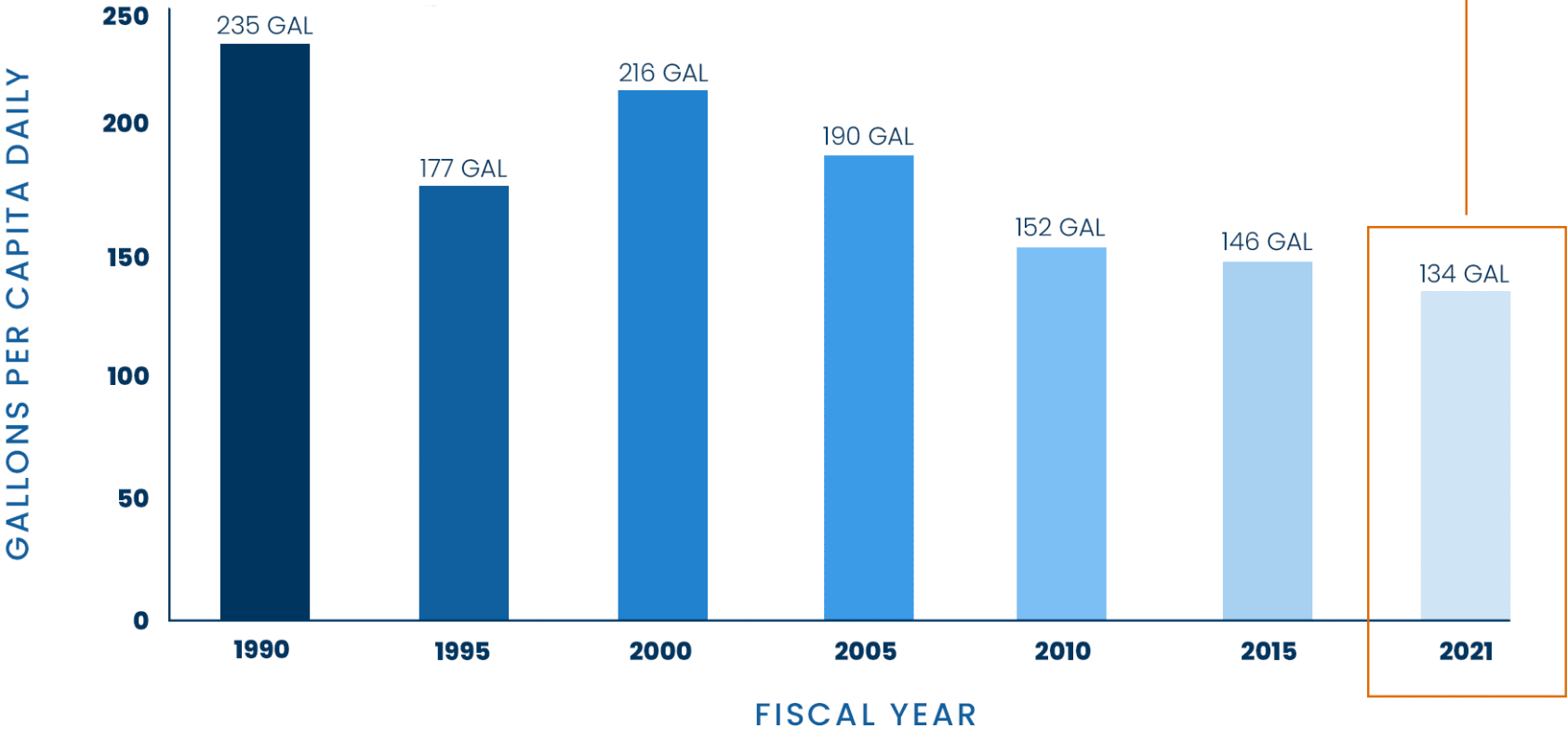
**SoCal water district installing flow
restrictors in homes of customers who
use too much water**



San Diego County Water Authority
And its 24 Member Agencies

Water Savings Continue into Current Drought

Per capita water use in San Diego region has declined 43% since 1990



Permanent Special Agricultural Water Rate (PSAWR) Program

- Voluntary program offered to Water Authority member/retail agencies
- Participants pay agricultural water rate in exchange for reduced supply reliability - CY 2022 estimated cost benefit is \$461 per AF
- Adopted by Board of Directors in 2019
- Implemented January 1, 2021
 - 13 participating agencies
 - FY 22 water use = 24,600 acre-feet



County of San Diego

Irrigation Efficiency Opportunity



- Provides technical assistance and cost-sharing for recommended irrigation system equipment retrofits
- Offers reimbursement up to \$550 per acre or \$5,000 per property

Agricultural Water-Use Efficiency

Opportunities

- Irrigation System Evaluation Efficiency Program
 - Free for one acre or more of trees or crops
 - On-site evaluation
 - Provides system information and recommendations
- Soil Moisture Sensor System Rebate Program
 - Cost share program
 - Up to \$5,000 per property



Recognition for the San Diego Strategy

The New York Times



THE WALL STREET JOURNAL





SDCWA.org



**WaterNews
Network.com**



SDCWA



SDCWA



**SanDiegoCounty
WaterAuthority**



San Diego County Water Authority
And Its 24 Member Agencies



Agricultural Runoff Management in San Diego

Farm & Nursery Expo 2022 Tasha Ardalan and Gerry Spinelli 11/10/2022

Regulations:

1. All non-storm water must stay on your property
2. Only rain down the storm drain

Reducing Runoff:

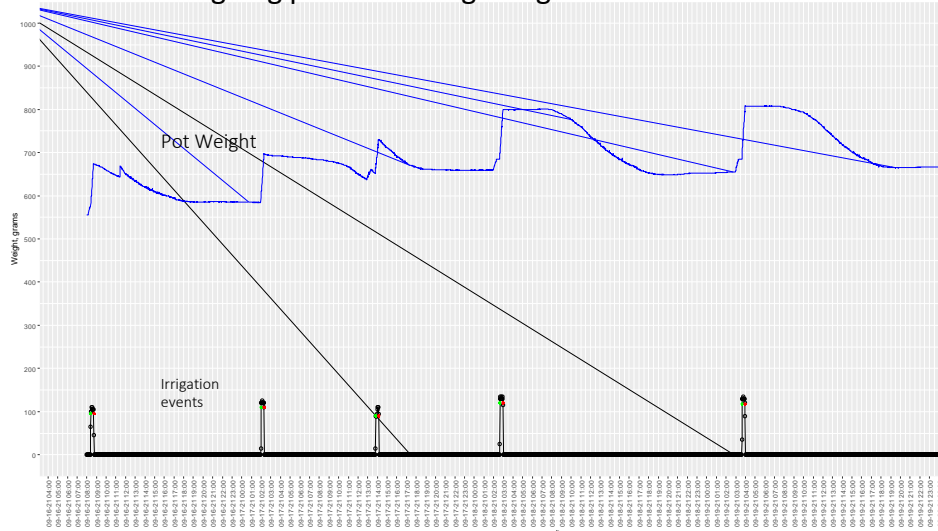
When and how long to irrigate:

1. Know your soil or your substrate. Available water is % of volume that you refill with one irrigation. You convert it to depth, for example 0.2 inch.
2. Measure the application rate of your irrigation system, for example 0.4 in/hr.
3. Knowledge of 1 and 2 will tell you how long to irrigate. For example, 30 min.
4. Understand evapotranspiration from CIMIS station or weight your pots, for example 0.1 inch/day.
5. This will tell you how often you need to irrigate, for example every other day.
6. If you don't understand 1,2,3,4 or 5, talk to Gerry

Improving distribution uniformity (DU)

1. Generally, sprinklers show DU = 0.7 to 0.8 while drip shows DU = 0.8 to 0.95.
2. Measure pressure in your irrigation system, generally sprinkler require about 50 psi and drip requires 10 psi.
3. Install pressure compensating emitters and pressure regulators at the blocks.
4. Flush your mains, laterals, submain, hoses and manifolds regularly to prevent plugging.
5. Fix leaks.
6. Do not mix different emitters/sprinkler heads. They are color coded!
7. Measure your distribution uniformity, the RCDs offer this service, or ask Gerry

Weighing pots to manage irrigation events



Weekly Reference evapotranspiration (ETo)

