

Saving Water and Saving Trees– Here we go again.



Lake Oroville 2015

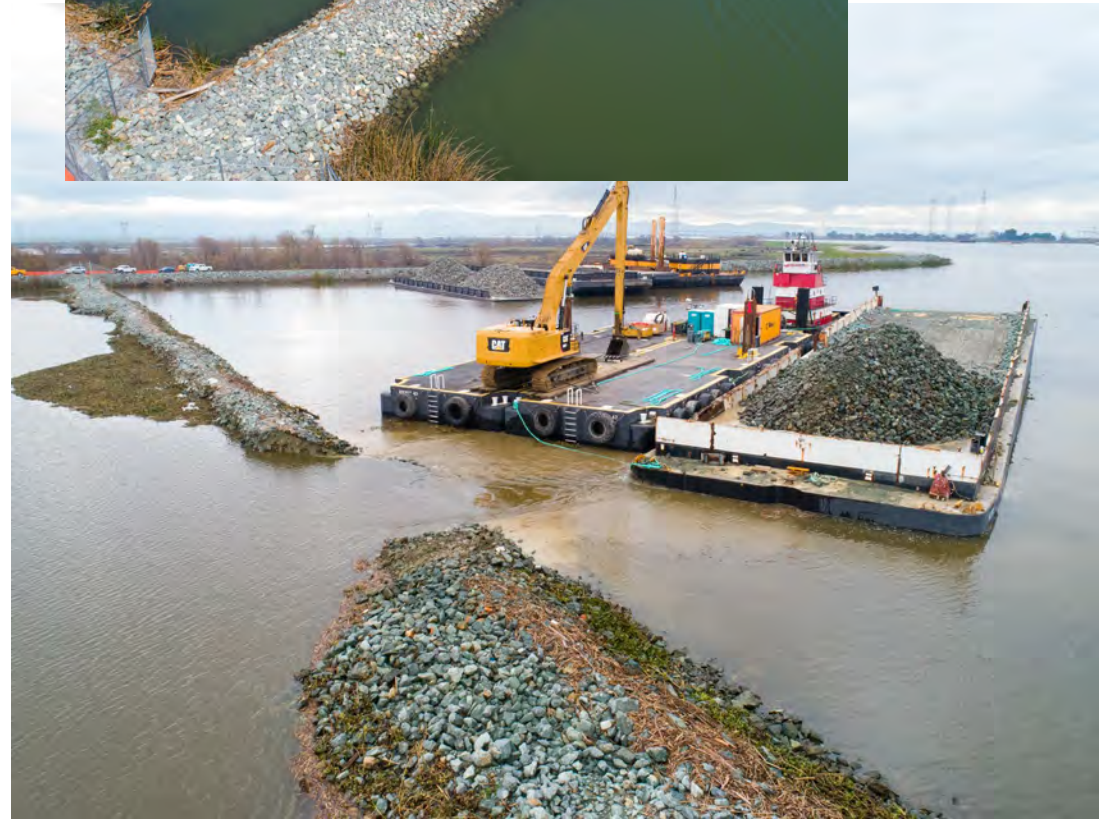



Lake Oroville 2022

The Drought is real..



Temporary salinity barriers in the Delta to reduce saltwater intrusion





DWR collects tremendous amounts of data- that is available to the public

- Precipitation, snowfall, water content, real time river flows, reservoir storage, temperature, long terms data comparisons
- Local water suppliers need this information for their short erm and long-term water supply planning (local supply)

Existing Federal and State Storage and Conveyance Systems in California



CALIFORNIA STATE WATER PROJECT



CURRENT CONDITIONS FOR SELECTED RESERVOIRS

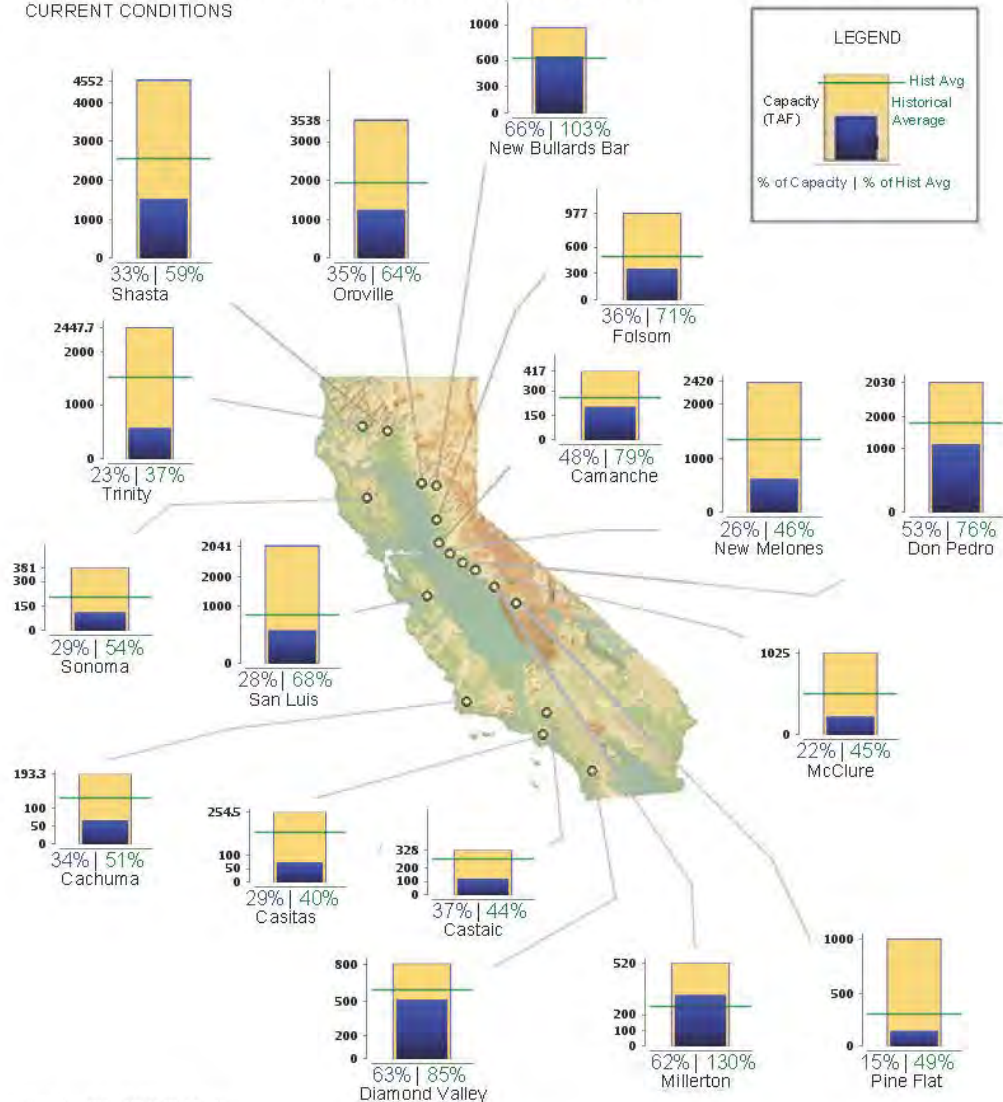




CALIFORNIA MAJOR WATER SUPPLY RESERVOIRS

CURRENT CONDITIONS

Midnight - September 26, 2022



Updated 09/27/2022 01:18 PM

Status of some major reservoirs
on 9/27/22

DWR oversees 1250 dams and
reservoirs in California

All of these maps and data graphs can be
found on the California Dept. of Water
Resources website: CDEC, Water Supply,
Safety of Dams

Index	Season to Date	% Average to Date	Season to Date Last Year	% Average Last Year
Northern Sierra	43.00	81	23.80	45
Southern Sierra	25.32	63	18.82	47
Tulare Basin	17.00	60	9.93	35

DAILY PRECIPITATION (IN INCHES) FOR SELECTED STATIONS AS OF 09/26/2022

Station	Oct 1 to Date 2021-2022	% Average	Season to Date 2020-2021	% Average Last Year	% Average Oct 1 - Sep 30
Mount Shasta	20.70	48	15.20	35	47
Eureka	25.45	63	23.46	58	63
Redding	19.43	56	12.64	37	56
South Lake Tahoe	20.12	100	9.04	45	99
Sacramento Executive Airport	16.82	91	6.36	34	91
Santa Rosa (Sonoma Co AP)	25.35	70	11.03	31	70
San Francisco	18.23	77	8.44	36	77
Stockton	9.87	71	7.75	55	70
Yosemite	4.66	12	13.91	37	12
Monterey	11.41	71	7.21	45	71
Paso Robles	8.77	69	6.50	51	69
Fresno	6.40	56	6.04	53	56
Bakersfield	5.33	83	2.53	39	82
Death Valley	2.43	105	1.56	67	103
Los Angeles	11.81	79	5.76	39	79
Riverside	4.79	39	3.43	28	39
Palm Springs	2.06	36	1.29	23	36
San Diego	6.65	65	3.72	36	64

Archived Report Products:

2022-09-26



Daily Hydrologic and Climate Information Summary (09/26/2022)

Report generated: September 26, 2022 12:11

RESERVOIR STORAGE AS OF 09/25/2022 AT 11:59:59 PM							
RESERVOIR	RIVER	Storage (in Acre Feet)	% Capacity	% Average	Storage Year Ago This Date	% Capacity Year Ago This Date	% Average Year Ago This Date
Trinity Lake	Trinity	559,554	23	37	734,654	30	49
Shasta Lake	Sacramento	1,520,385	33	59	1,097,387	24	43
Lake Oroville	Feather	1,246,874	35	64	788,740	22	41
New Bullards Bar Res	Yuba	642,023	66	103	401,616	42	65
Folsom Lake	American	357,643	37	71	231,757	24	46
New Melones Res	Stanislaus	617,823	26	46	848,929	35	63
Don Pedro Res	Tuolumne	1,067,536	53	76	1,022,698	50	73
Lake McClure	Merced	230,518	22	45	215,499	21	42
Millerton Lake	San Joaquin	320,329	62	128	289,833	56	116
Pine Flat Res	Kings	145,764	15	48	199,825	20	66
San Luis Res	(Offstream)	576,186	28	67	254,197	12	30
Terminus	Kaweah	12,087	7	99	21,566	12	176
Success	Tule	6,851	8	70	8,028	10	83
Isabella	Kern	40,066	7	24	52,143	9	32
SNOWPACK WATER CONTENT AS OF 06/13/2022							
Region	Water Content (in inches)		%	% of Apr 1	Water Content (in inches)		% Average

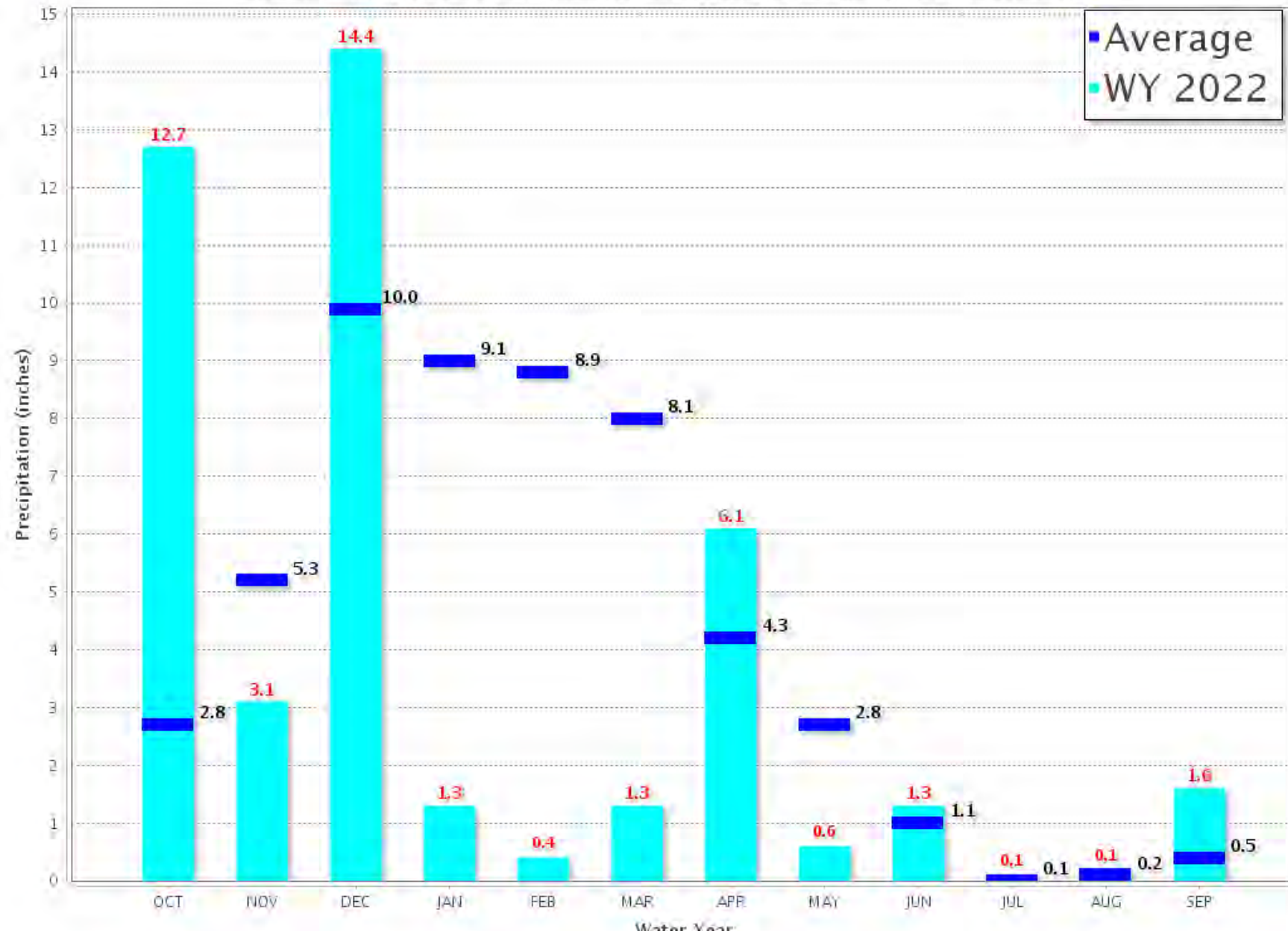


Northern Sierra 8-Station

Precipitation Index for Water Year 2022 – Updated on September 26, 2022 11:48 AM

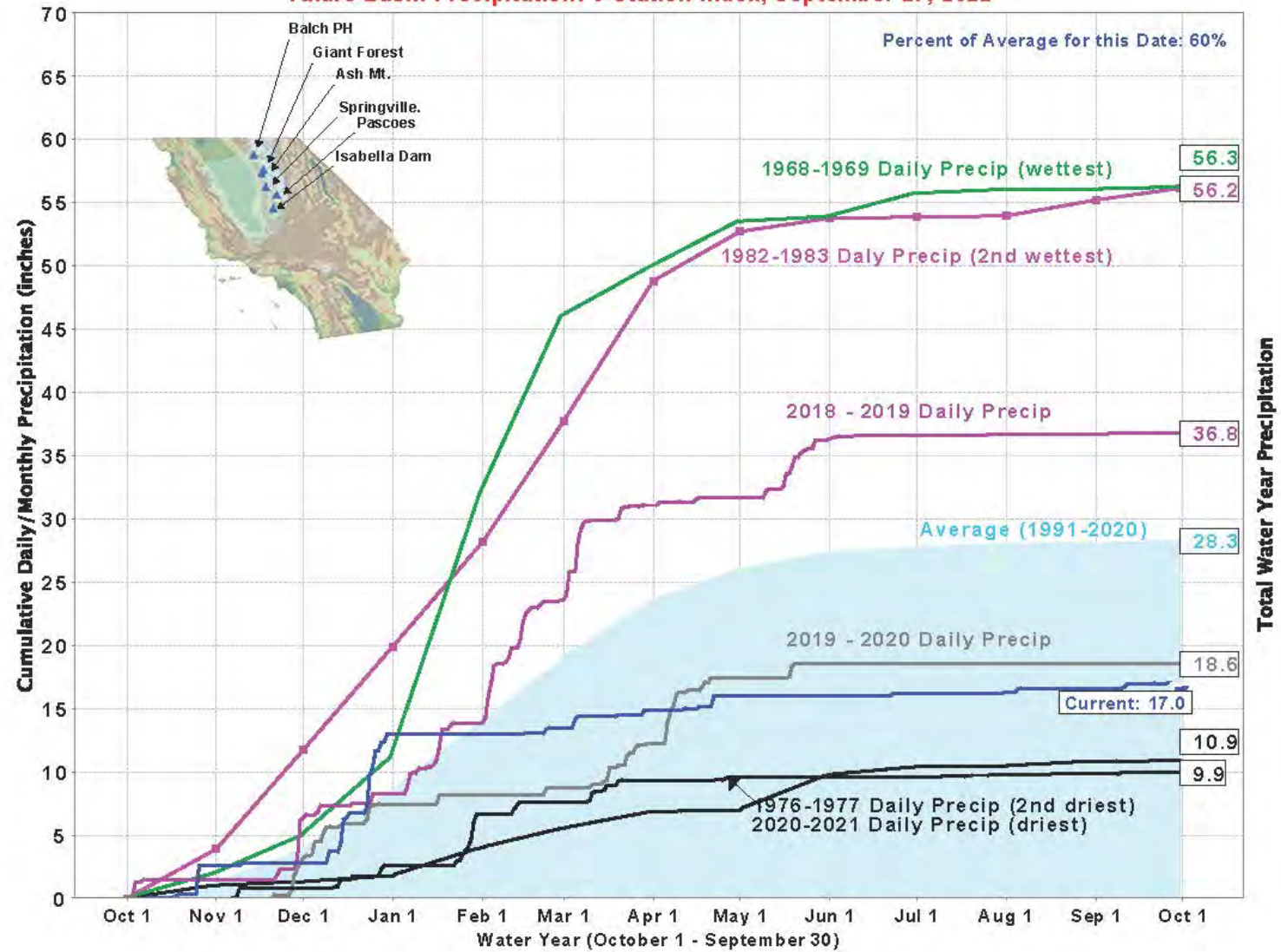
Note: Monthly totals may not add up to seasonal total because of rounding

Water Year Monthly totals are calculated based on Daily precipitation data from 12am to 12am PST



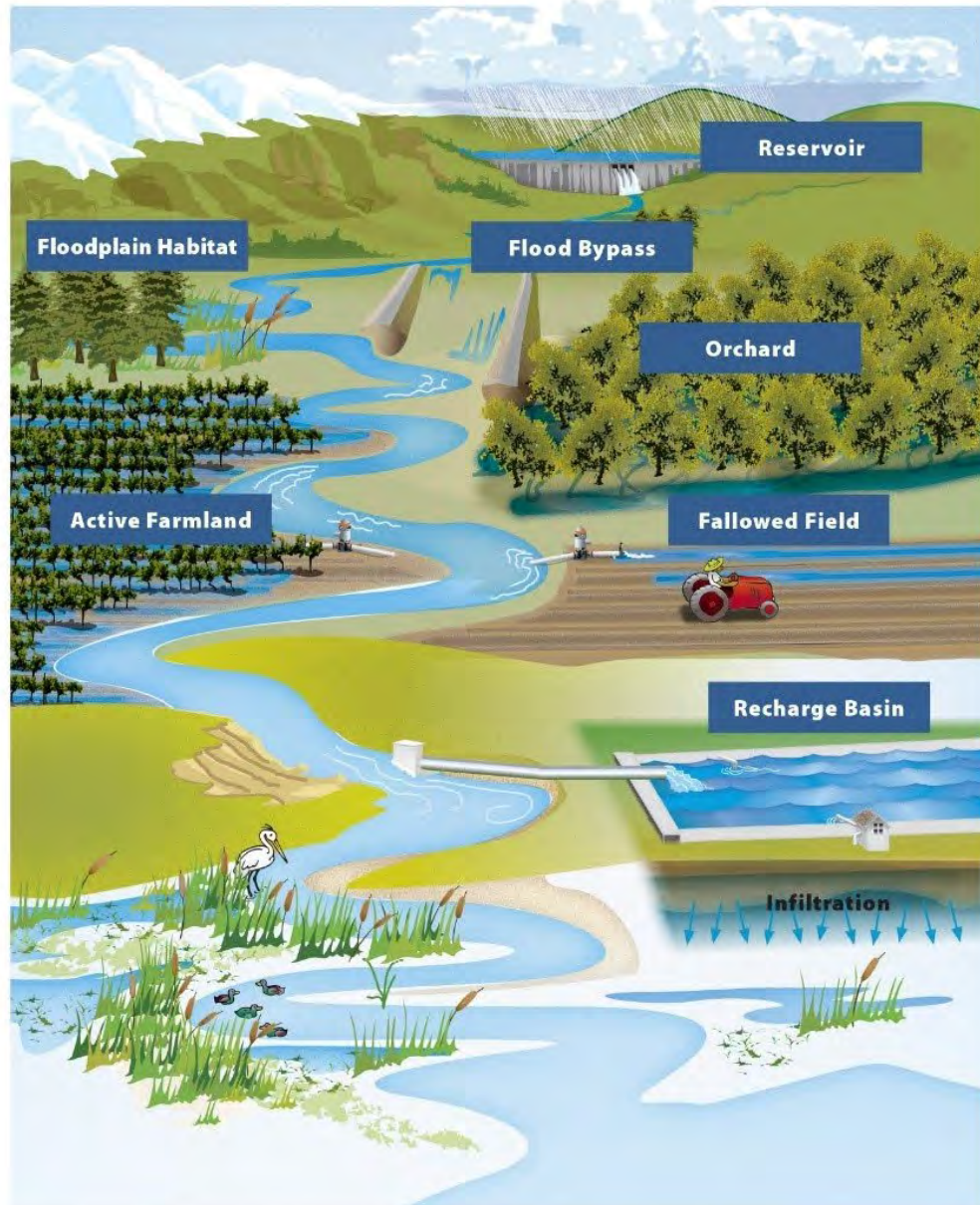
Precipitation was weird this water year. Extra wet October, December and April. Extra Dry November, January, February, March and May.

Tulare Basin Precipitation: 6-Station Index, September 27, 2022



CIMIS.CA.GOV
Free
evapotranspiration
data for irrigation
scheduling





Flood MAR- Managed Aquifer Recharge

- Enormous storage capacity
- Farmland, open space and urban opportunities

SGMA- Sustainable Groundwater Management Act-slows ground subsidence. Flood MAR helps stop or reverse sinking.





Why is the watering restrictions and information from water suppliers inconsistent from place to place?

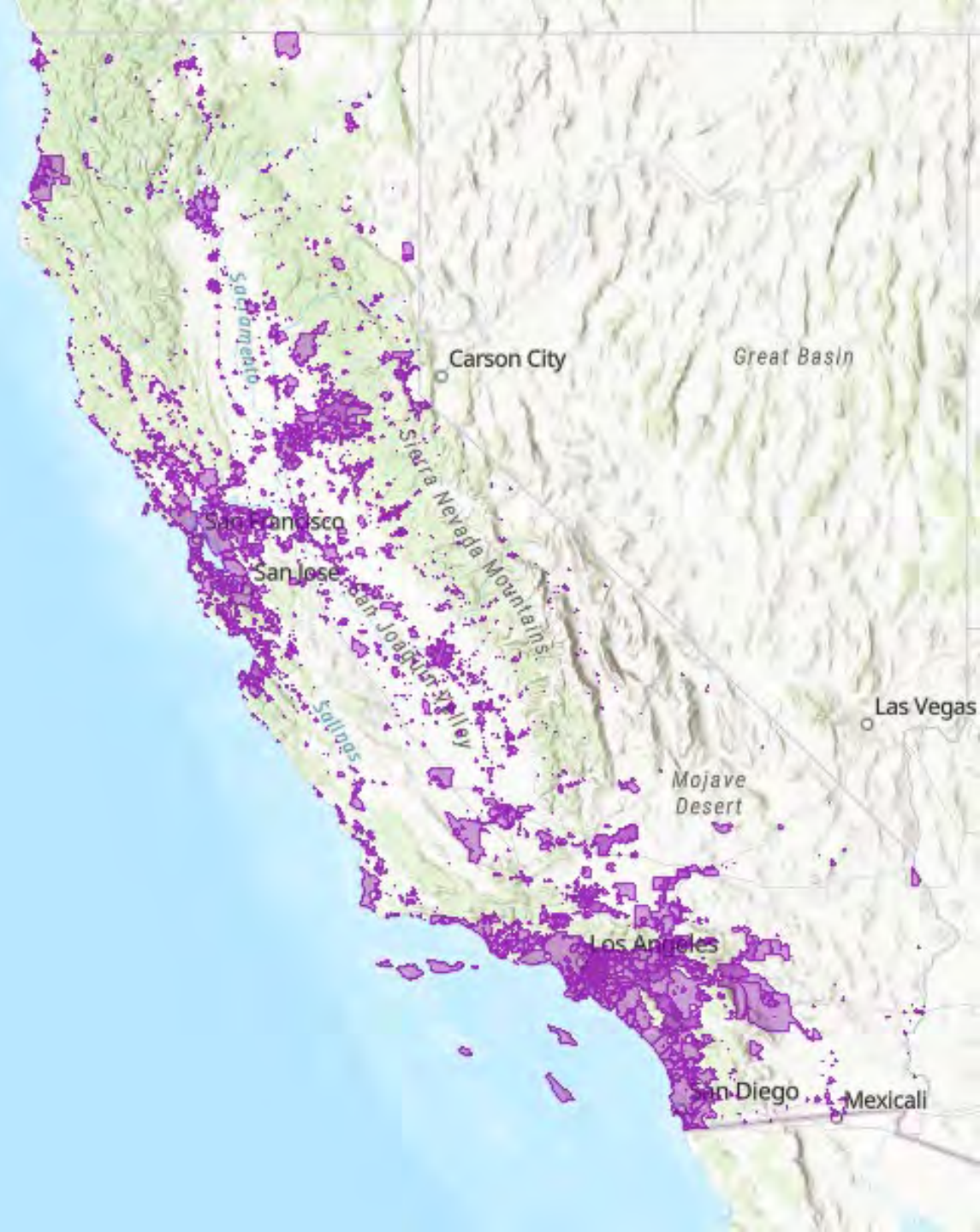
“Sometimes the watering restrictions aren’t the best way to keep plants alive”

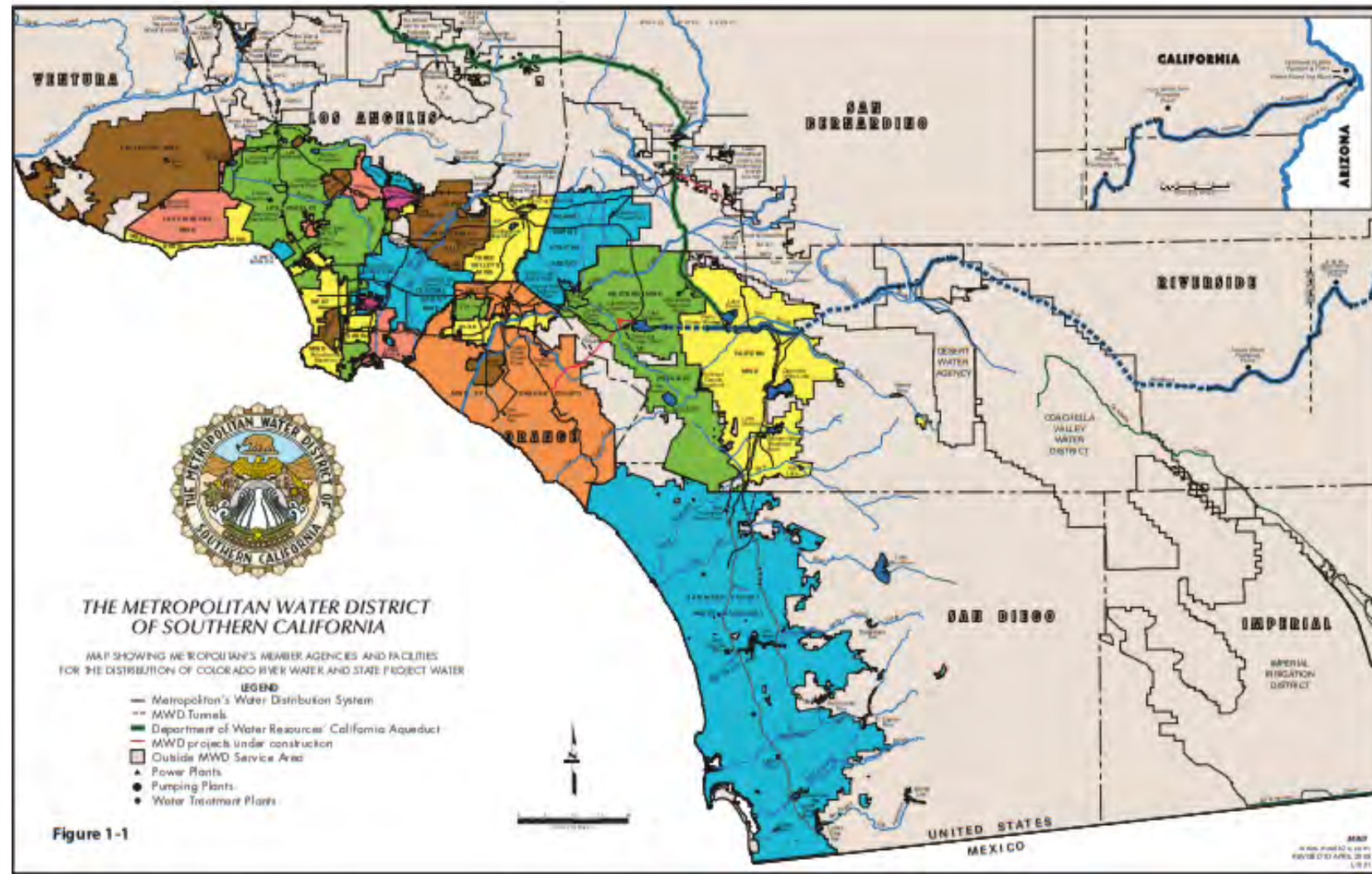
It's complicated.

- CA has more than 9000 drinking water systems.
 - Includes city and county utilities and water supply agencies
 - HOA's
 - Mutual Water Companies
 - Campgrounds
- Most of us get our water from one of 500+ Urban Retail Water Suppliers
 - Serve at least 3000 connections

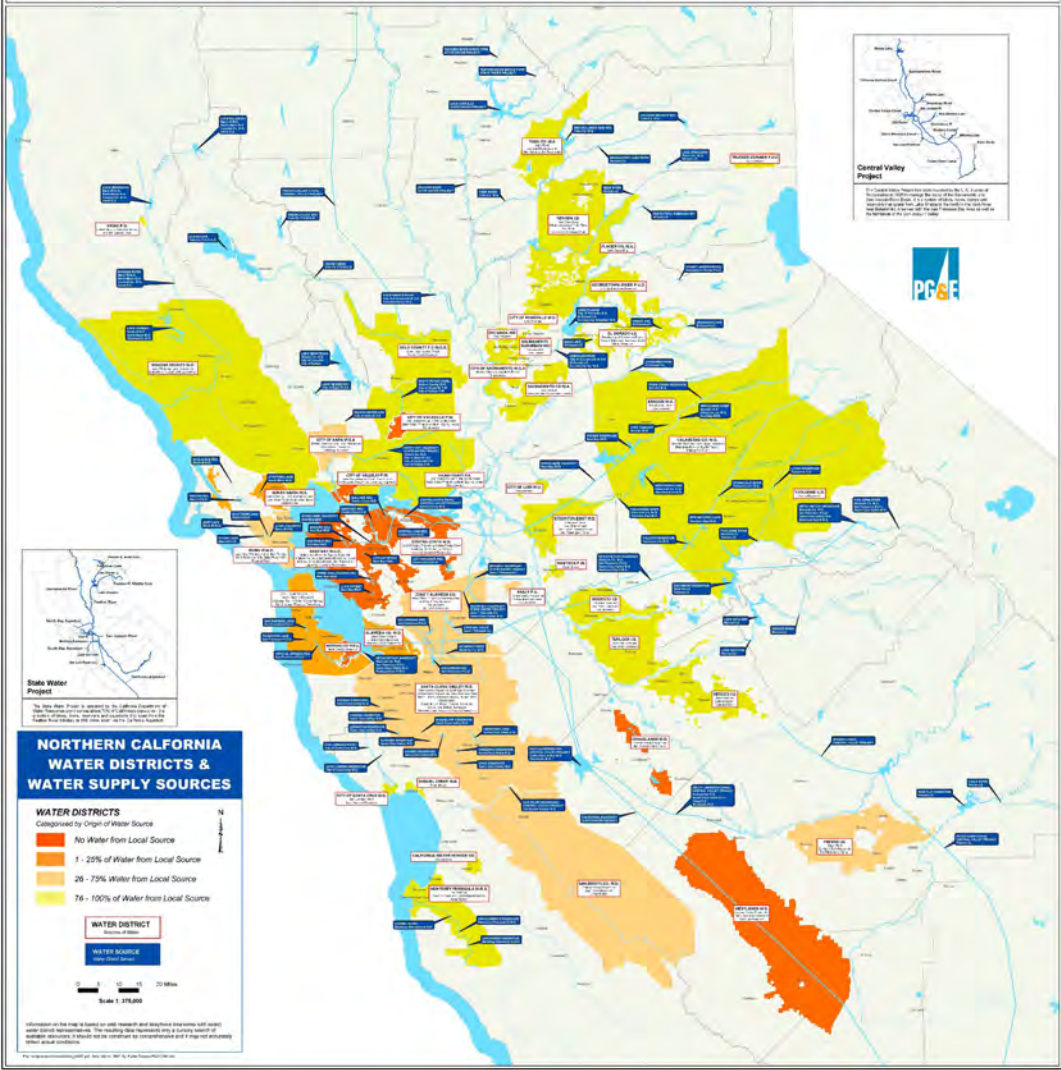


Water Systems and Water Districts





WHERE DOES OUR WATER COME FROM?



Drought restrictions and messaging can be inconsistent and confusing

- Water sources and storage vary- even in neighboring communities
- Politics can play a part
- Water billing structures sometimes penalize for conservation
- Water costs go up during drought
 - Higher treatment costs-chemical and energy
 - Securing new supplies
 - More staff time dealing with issues
 - More outreach and education
- They have to go with easy-to-understand messaging- even if it's not the best advice for horticulture




Good Landscapes can...

- ▶ Improve quality of life
- ▶ Improve public health
- ▶ Improve property values
- ▶ Create habitat for birds, insects, reptiles and more
- ▶ Clean the air
- ▶ Make shade
- ▶ Slow down rainwater
- ▶ Stabilize slopes
- ▶ Grow food
- ▶ Be resilient



Bad landscapes are on the way out

- ▶ Wastes water, uses too much energy, makes too much green waste
 - ▶ Not enough shade
 - ▶ No Watering non-functional lawns in commercial, industrial, and institutional areas, including common areas of homeowners' associations (HOAs)
 - Does **not** include residential and functional turf like parks and sports fields.
 - Carve out to allow for tree watering—even in non-functional turf.
- 



NOPE





NOW HIRING
Warehouse Drivers Clerical
916-625-4100

UNITED

Also NOPE

WHY?





Better designs, more function

Right Plant for the Function













After mulching and with appropriate irrigation, these trees will fulfill their promise-and No workers will be harmed mowing the non-functional grass.



How can we have healthy Trees?



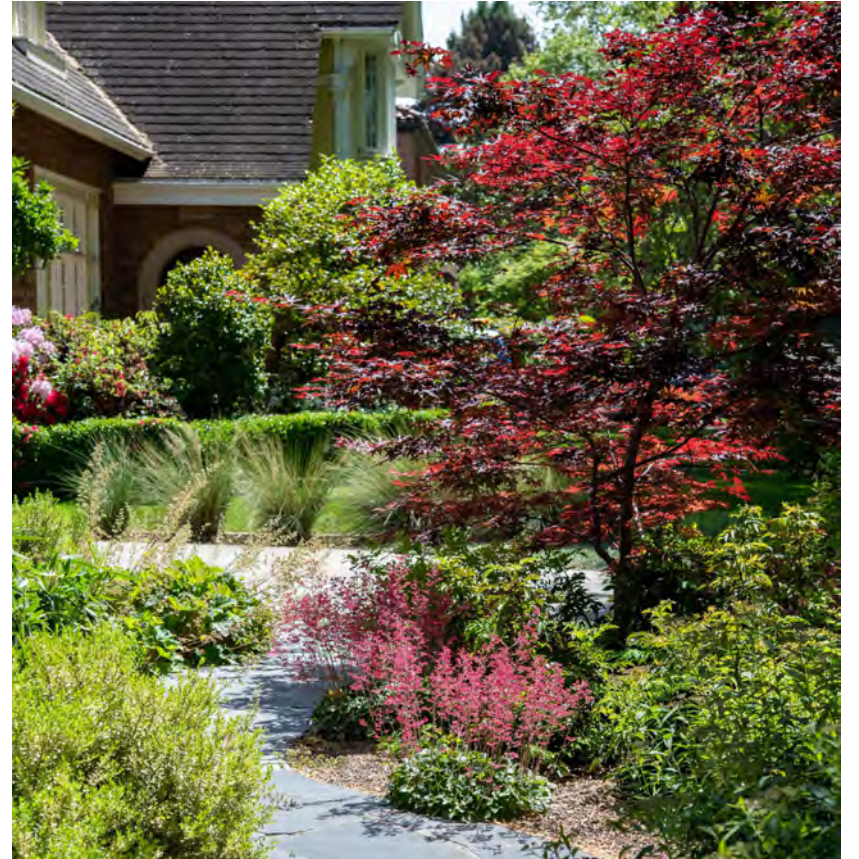
Getting from
here to there



**With high density
development?**

Model Water Efficient Landscape Ordinance MWELO

- Essentially a building code for landscaping
- Also included in Title 24 Building codes (CalGreen)
- In effect since 1993
- Updated in 2010 and 2015-probably 2024
- water budget based on local climate
- High priority in Water Resilience Portfolio



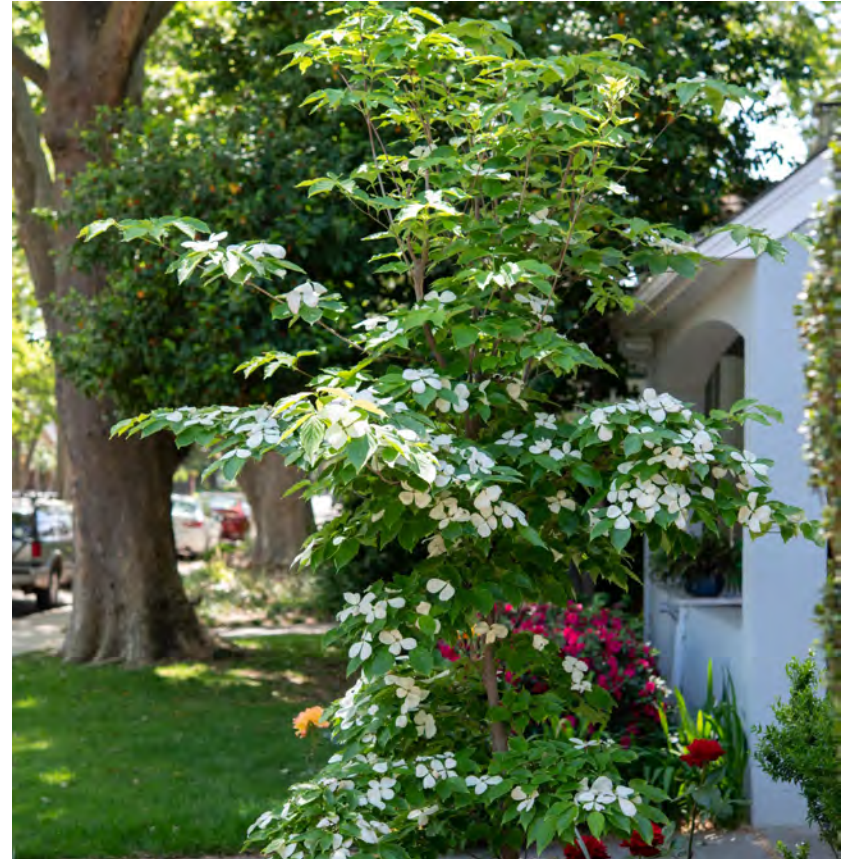
MWELO is a good idea that can get better



- Based on BMP's and holistic resource efficiency
- Factors-in economics, public health, climate change, biodiversity
- Efficiency-water, energy, waste generation, time

MWELO

- Landscape plan
- Irrigation plan
- Grading plan
- Plants grouped in hydrozones
 - Water needs compatibility
 - Rooting depth
- Water budget based on local climate
- A stated “Purpose” to make landscapes multi-benefit.



Synergy is happening

- Water Resilience Portfolio
 - making Agricultural, Urban and Environmental water use sustainable
 - Simplify the Model Water Efficient Landscape Ordinance... Support training for local government planners to ensure compliance with this law.
- CA's Water Supply Strategy-Adapting to a drier future
 - Identifies removal of non-functional, ornamental turf.
 - Identifies increase infiltration and groundwater storage
- Protecting Californians From Extreme Heat
 - Nature based solutions
 - Urban forestry, tree planting
 - compost





Nature Based Solutions for Extreme Heat

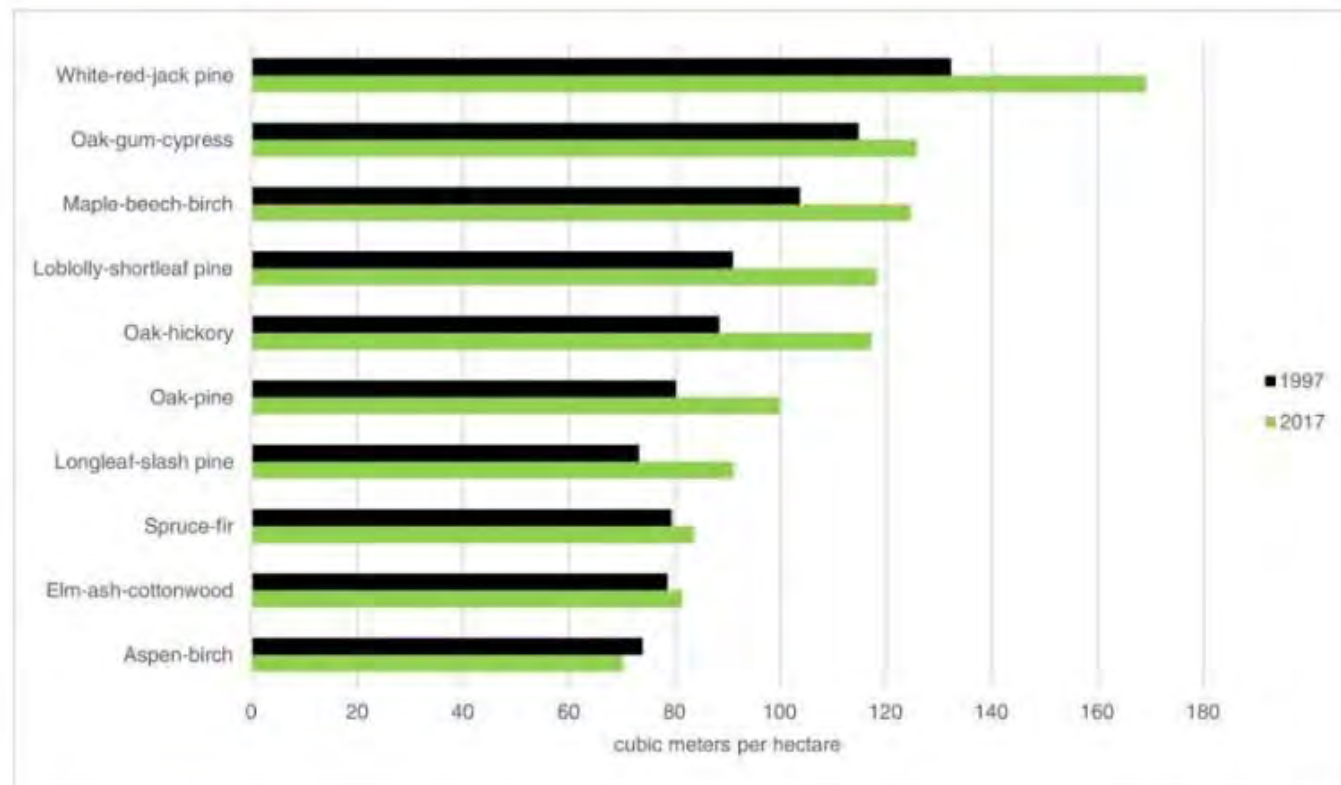
- Support CalFire's Urban Forestry program
- Support local composting production and use
- Fund tree planting in disadvantaged communities
- Analyze high functioning canopy
- Urban greening
 - Parks, regional parks, state parks,
 - Rehabilitation of parks and creation based on per capita
- Highway landscaping
- School greening

🕒 SEPTEMBER 27, 2022

Climate change is turning trees into gluttons

by Tatyana Woodall, The Ohio State University

*Published in Nature
Communications*



Wood volume per hectare in 1997 and 2017 separated by forest group. Source: USFS 1997 and 2017 ...



Landscape Stakeholder Advisory Group

- Open to all
- Landscape professionals
- City and county planners
- Building officials
- Educators
- Water agencies



LSAG

- Objective to find solutions to make the MWELD more effective and **easier to comply with**
- **Opportunity to shape regulations that affect you!**
- Join by emailing Landscape@water.ca.gov
- Subject: Join LSAG

How can we move this forward?

- Join LSAG or become an interested party to the MWELO update
- Find out about turf replacement from your water supplier. Do they require at least one tree?
 - If not go to the Board and ask for the program to be revised
- Support MWELO in your community. Tell the city council it's important. -Many think it's a burden or deters development\$
- Tell the School board to get on board with trees and greening
- Become a Master Gardener and advocate for trees



Tell me about tree shading ordinances

- I want to explore including tree ordinance language in MWELO
- We don't have to stay in our lane. MWELO is about more than water.

This is a crime.





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