MAWAC-ENA WORKSHOP

PARIS

November
2025

Greater Los Angeles Mega-Region

Felicia Marcus
Introductory Session
MAWAC
Paris, France
November 18, 2025

Overview—and reminders

- Team Members
- Overview/Context
- Plans & Projects
- What we've been interested in

Institutions

Team Members – a snapshot

Facilitator (Academic/former government/former NGO)

- **Felicia Marcus**
  - Landreth Visiting Fellow, Stanford University (former LA Public Works, State Water Board, USEPA)

Governmental (and former NGO in some cases)

- **Elizabeth Crosson**
  - Chief Sustainability, Resilience, and Innovation Officer, Metropolitan Water District of Southern California (former Director of Infrastructure, LA Mayor's office; LA Waterkeeper)
- **Nancy Sutley**
  - City of Los Angeles Deputy Mayor for Energy and the Environment
- **Virginia Wei**
  - Water policy director for Deputy Mayor for Energy and the Environment
- **Rita Kampalath, PhD**
  - Chief Sustainability Officer, LA County (former policy director Heal the Bay)

Team Members - con’t

NGO (and Academic)

- **MaryAnn Dickenson**
  - Policy Director, Lincoln Land Institute for Land and Water (former Founder/President/CEO Alliance for Water Efficiency)
- **Mark Gold, PhD**
  - Director of Water Scarcity Solutions, Natural Resources Defense Council (former ED of Heal the Bay, Deputy Secretary for Coasts and Oceans of California Natural Resources Agency, Vice-chancellor UCLA and founding Director of Sustainable LA Grand Challenge)

Academic (and Government in some cases)

- **Gregory Pierce, PhD**
  - Senior Director, UCLA Luskin Institute for Innovation; Director, Human Right to Water Solutions Lab
- **Nurit Katz, PhD candidate**
  - UCLA Chief Sustainability Officer; Commissioner, Los Angeles Department of Water and Power

Team Members, con't

- **Alex Hall, PhD**
  - Interim Director, UCLA Sustainable LA Grand Challenge; Professor Atmospheric and Oceanic Sciences

Other team members:

- **Barbara Romero**
  - Director and General Manager, LA Bureau of Sanitation and Environment; former Deputy Mayor
- **Mark Pestrella**
  - General Manager, LA County Public Works Department
- **Evelyn Cortez-Davis**
  - Director of Strategy, City of Los Angeles Department of Water and Power
- **Rafael Villegas**
  - Program Manager, City of Los Angeles Department of Water and Power

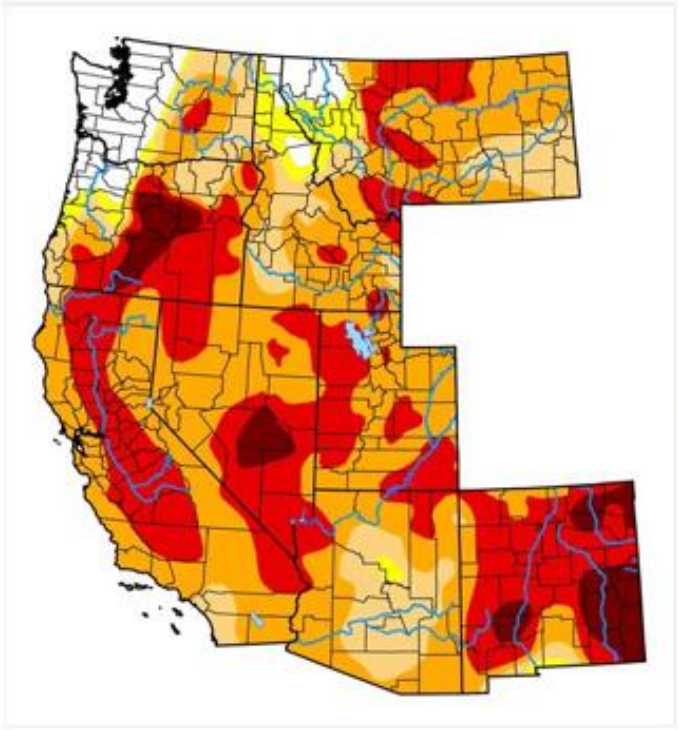
LA DWP Los Angeles Department of Water & Power

City of Los Angeles

Shaping the Future of Water
Stanford University

Western US Water Challenges

U.S. Drought Monitor
West



May 3, 2022
(Released Thursday, May. 5, 2022)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	5.64	94.36	91.09	77.25	35.71	5.52
Last Week 04-26-2022	6.12	93.88	91.28	79.44	37.24	4.58
3 Months Ago 02-01-2022	4.75	95.25	87.08	63.93	21.08	3.89
Start of Calendar Year 01-04-2022	4.43	95.57	87.78	64.63	25.30	4.75
Start of Water Year 09-28-2021	1.32	98.68	93.35	81.07	58.72	21.77
One Year Ago 05-04-2021	3.75	96.25	84.88	70.88	52.88	23.79

Intensity:
- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:
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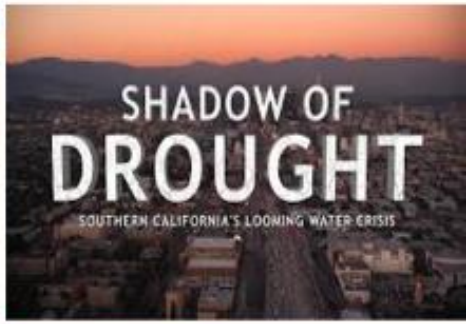
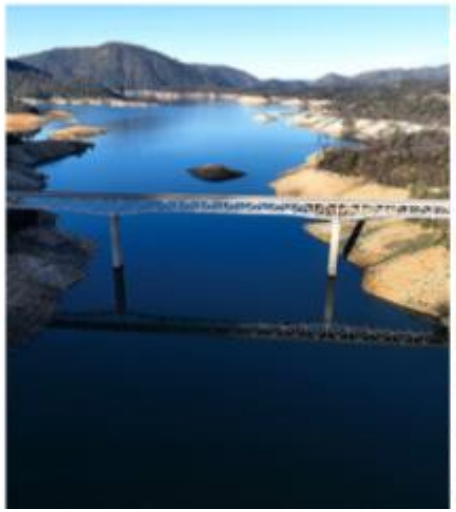
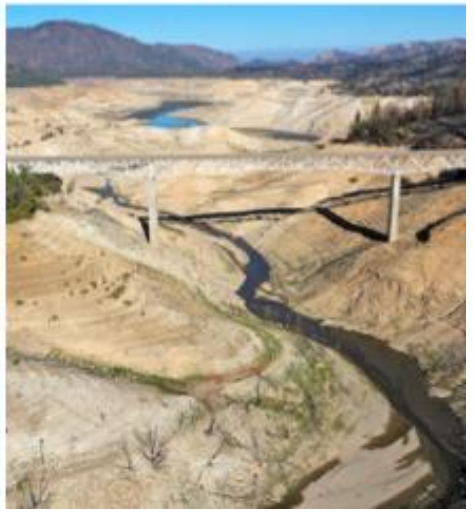
Western Regional Climate Center

USDA NDMC

droughtmonitor.unl.edu

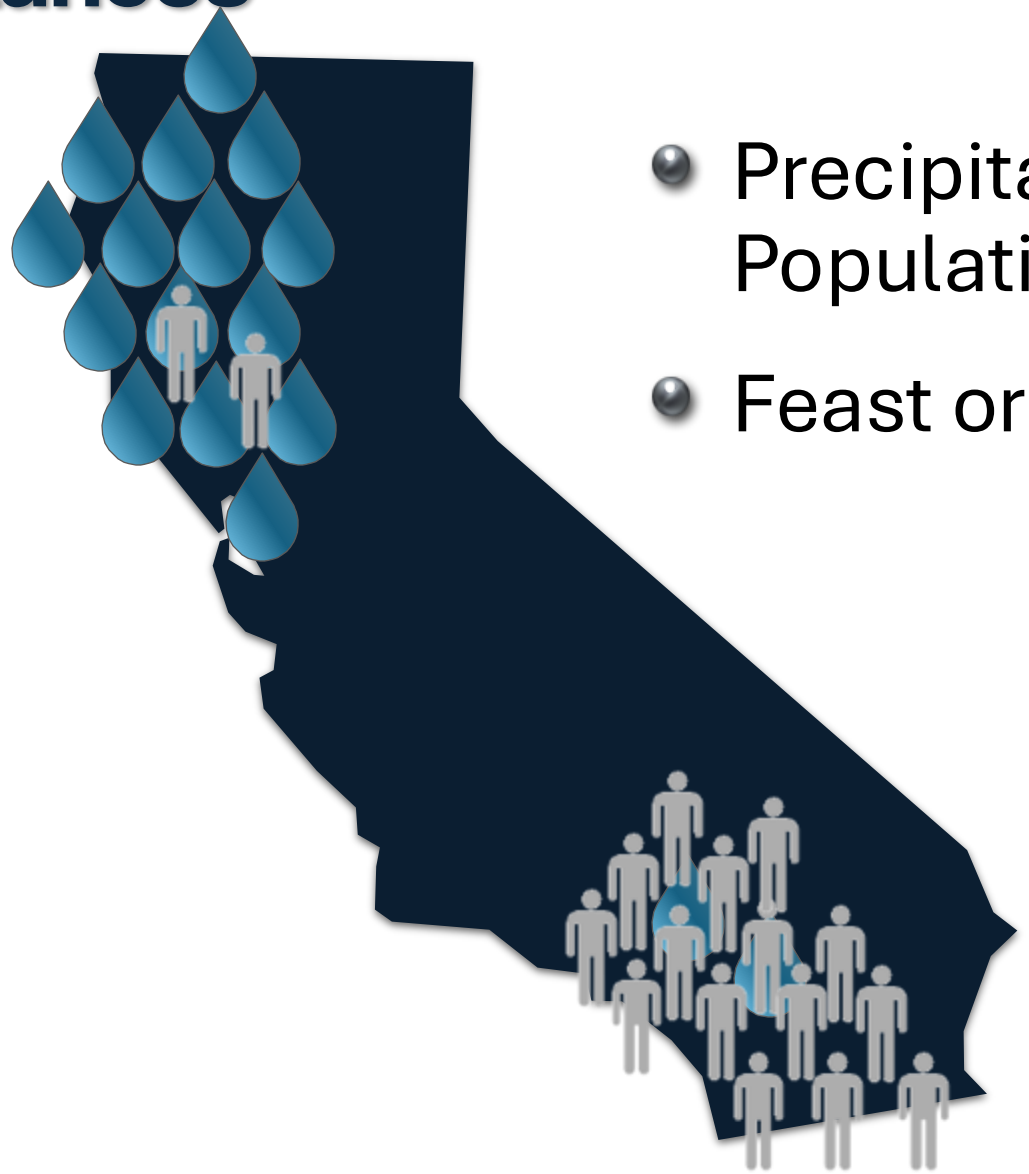




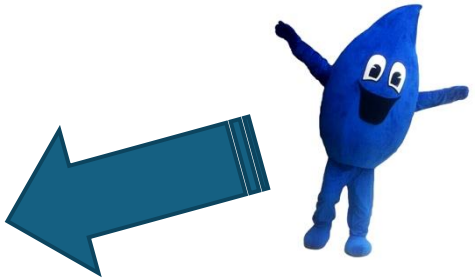


Credit: Jesus Gonzalez, LADWP

Managing Hydrologic and Geographic Imbalances



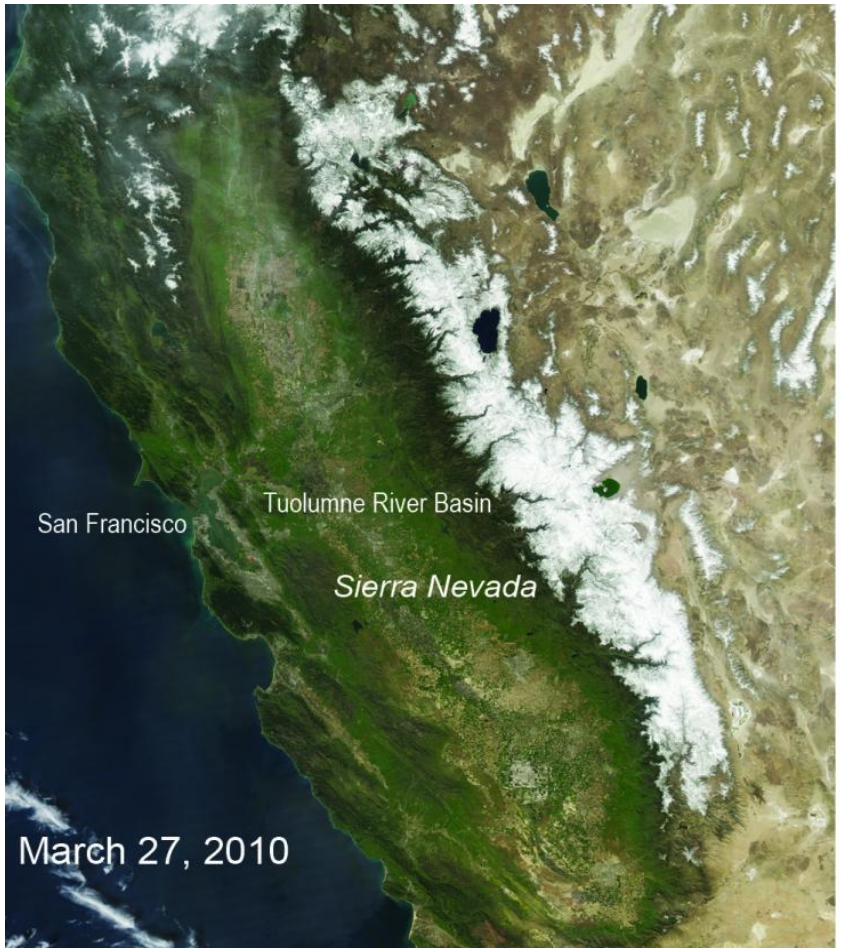
- Precipitation vs. Population
- Feast or Famine

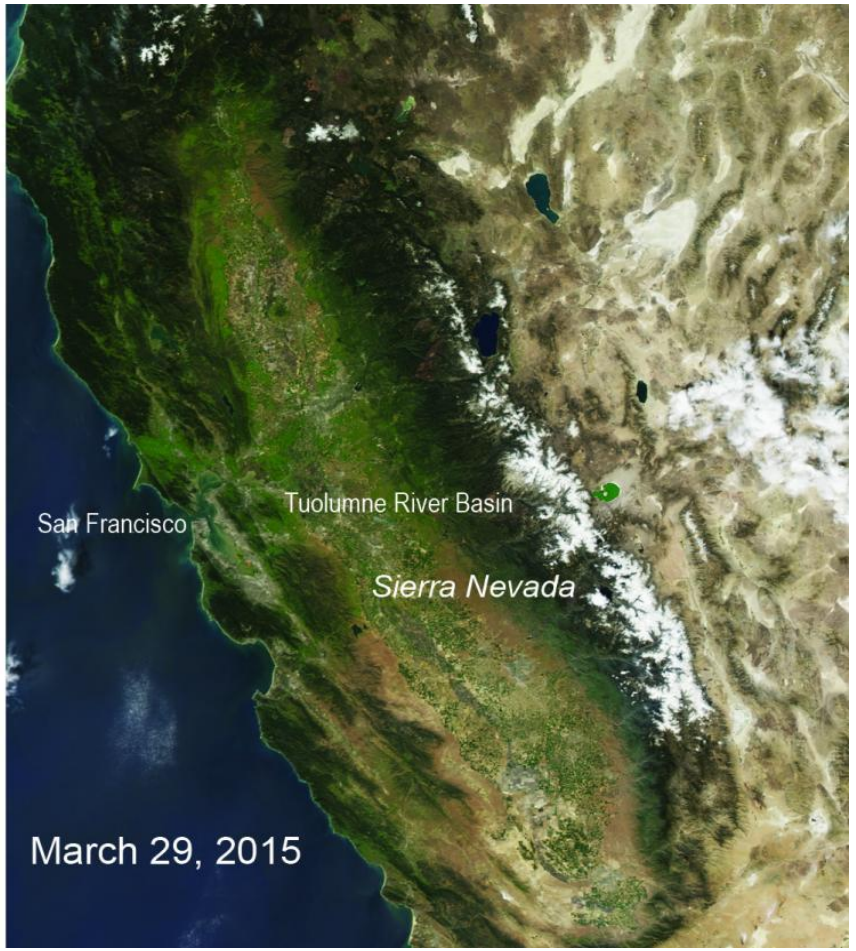


And, let's not forget the Colorado River....
Why do we forget the Colorado?

Major Water Projects Define California and Southern California would not exist without them

This is California on Climate Change





March 27, 2010 **March 29, 2015**

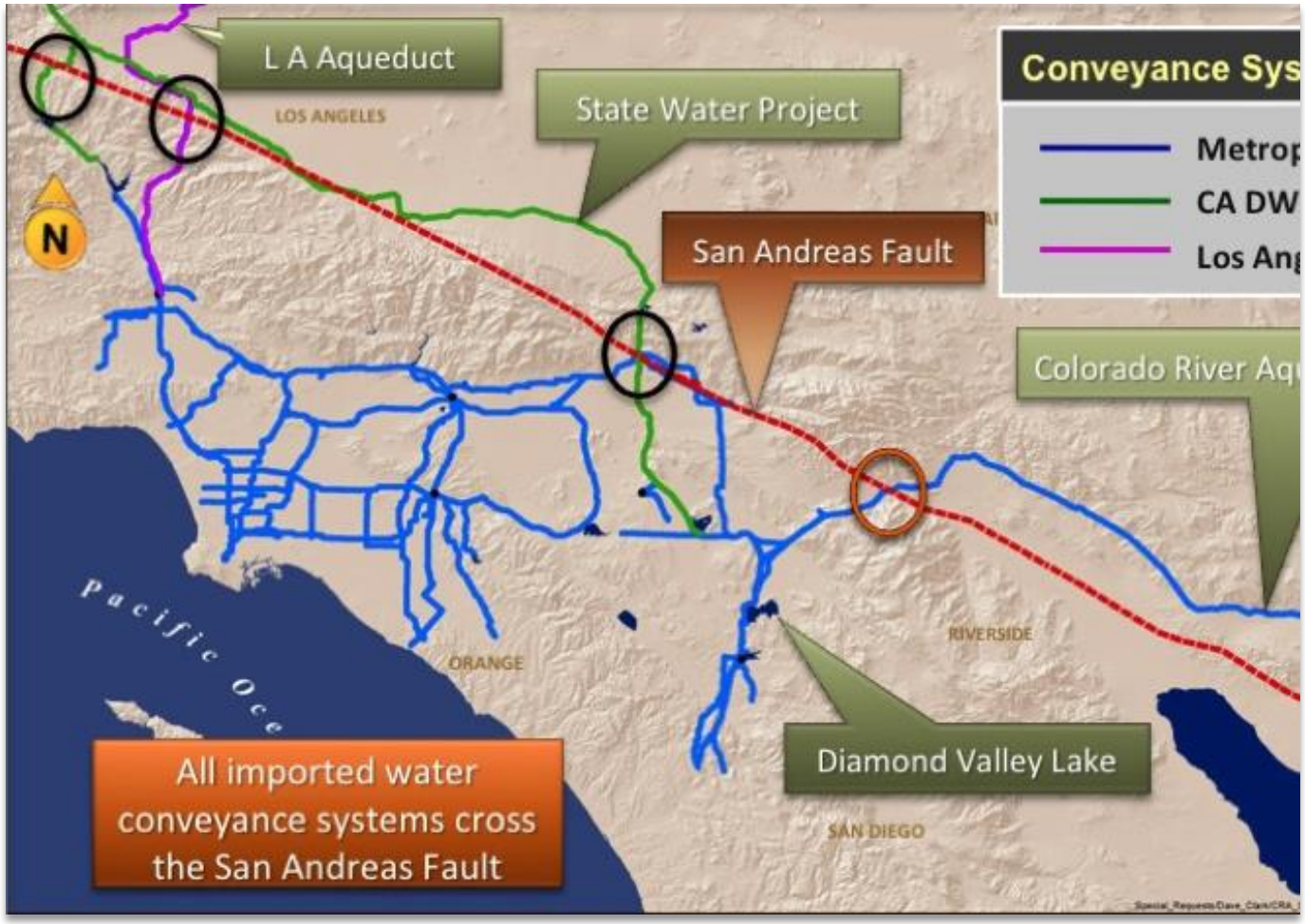
Source: NASA

Scale of mega-region huge in population and geography and water sources

- Metropolitan (19 million) is wholesaler, historically focused on imported water, increasingly moving towards increasing local sources.
- City of LA (4 million) historic (30+ year) leadership in region on conservation, stormwater programs, and wastewater recycling.
- County of LA (10 million) historic lead on stormwater capture; flood control; delivery of water in unincorporated area.
- LA County Sanitation Districts (10 million) leaders in recycling since 1962

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 $1.4 trillion regional economy (ranks 13th in the world)



Not just climate change….

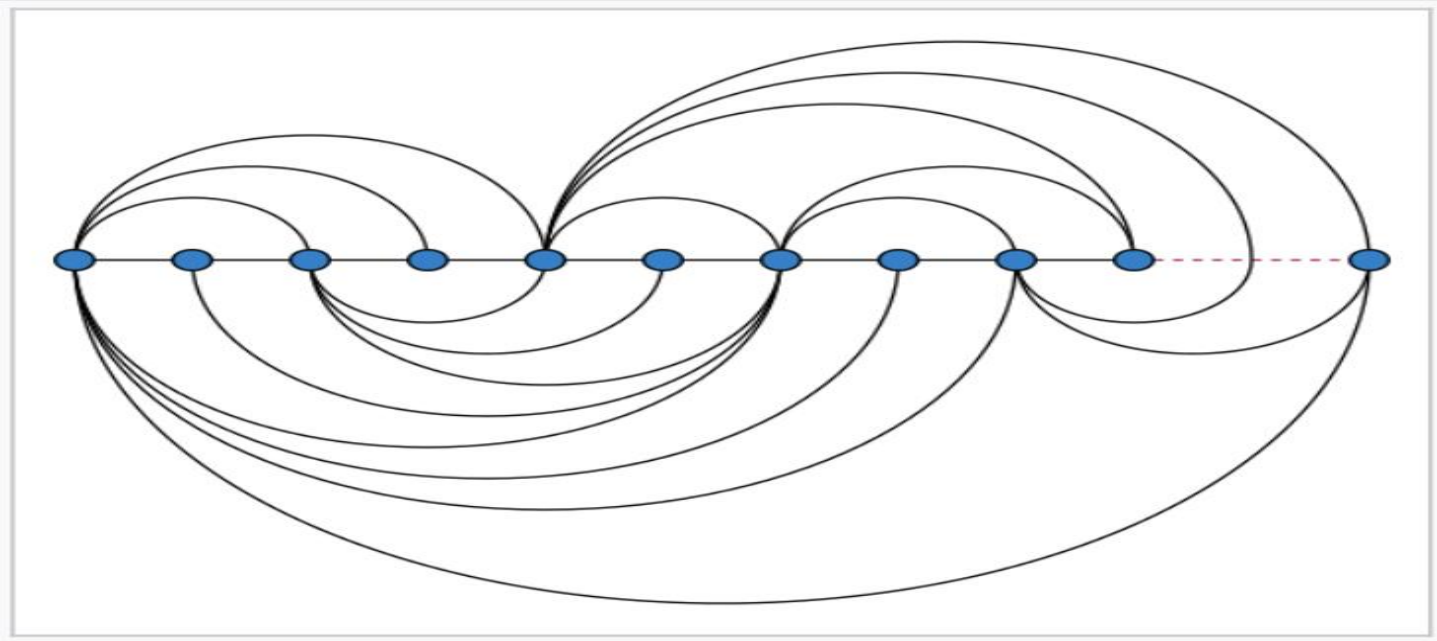
- Earthquakes
- Wildfires
- Other natural disasters
- Cyber
- Etc.

Summary

- Region dependent upon imported water from hundreds of miles away for 50-60% of its current water use.
- Climate change threatens that source as do natural disasters and the need for increased environmental flows. Drought on Colorado and Sierra systems punctuated by historic snowpack this year.
- *Metropolitan, LA County Sanitation Districts, LA City, LA County all have pieces of the system and responsibility. Historically not so close, but that is changing in part because of the people in our project.*
- Key adaptation efforts:
  - Conservation/efficiency (over decades)
  - Water recycling
  - Stormwater capture + multi-benefits
  - Charrettes to talk about how to maximize common resources
  - Inclusion of equity important and work in progress in all plans

Water Efficiency Arc of Progress

Fastest, cheapest, smartest…..But still long way to go



credit Wikipedia

1970s

- uh oh
- urn off taps
- …mellow …yellow

Early 90s

- oh no, not again!
- turn off taps
- toilet and shower retrofits

Mid 20-teens

- ✓ holy crap!
- ✓ worst in 500 years, no 1100 years, no. Just no.
- ✓ mandatory urban conservation

Just yesterday

- wait, not again?
- Lawns and leaks+
- Efficiency Standards
- *More from MaryAnn tomorrow*

Key elements reminder (see other ppts for detail)

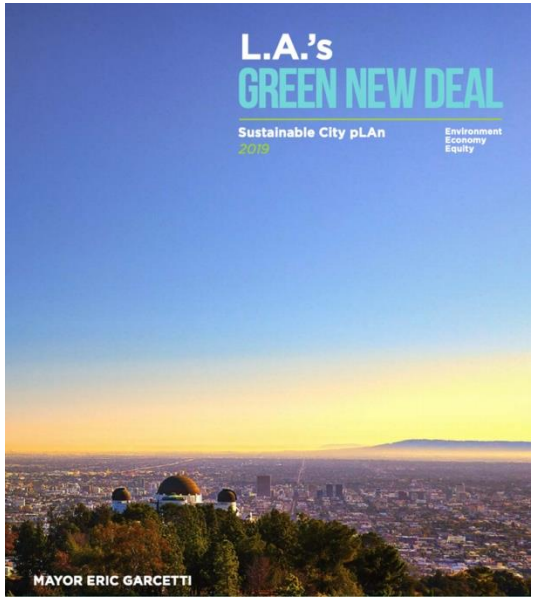
- City of LA: Conservation, recycling, stormwater multi-benefit, groundwater clean-up. Pure Water LA-up to 230 MGD; Tillman GWRS 40 MGD
- County of LA: Flood control, stormwater multi-benefit
- Metropolitan Water District of Southern California: 150 MGD Pure Water Southern California with LACSD below; massive turf rebate program ($400 m)
- Los Angeles County Sanitation Districts: Leaders in recycling since 1962; Partner on PureWater So.Cal

Related:

- Orange County Sanitation Districts/Orange County Water District:World leader in potable reuse (130 MGD; 100%)
- City of San Diego: 83 MGD recycled water for indirect or maybe direct potable reuse
- And more…

Audacious Plans build on partnerships, including academia

UCLA Sustainable LA Grand Challenge



Audacious plans are good; implementation is hard

Issues our team has been most interested in

- How to develop audacious plans AND how to implement them
- How to pay for them? How to sell them given costs? Can we do group paper on the costs of inaction? (see UCLA Luskin paper)
- How to create multi-agency governance mechanisms across metropolitan areas for climate adaptation
- Focus on multiple-benefit stormwater projects seems most universal of on the ground projects—but have lost our lead person
- Community engagement, with an emphasis on integrating equity
- How national and state governments can (and should) assist megacities take the big leaps required for adaptation
- How to manage data for decision-making and to track performance. What are we all aiming at?

Where we have expertise

- Community engagement/equity
- Conservation/water recycling/stormwater capture
- UCLA economics paper re: how to estimate the cost of inaction as the proper comparator when assessing cost of climate adaptation measures (Nick Chow)
- How to create coalitions to pass big measures (e.g., Measure W—business, equity, environmental, governmental), but everywhere is different
- How to downscale climate models to create more local targets (Alex Hall, CLIMA/JPL/CalTech partnership)

Thank you

More detail to follow in other sessions

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Thank you for your attention

NAME :

INSTITUTION :

MEGACITY :

MAWAC- ENA PARIS
2025