

Modernizing Delta Conveyance





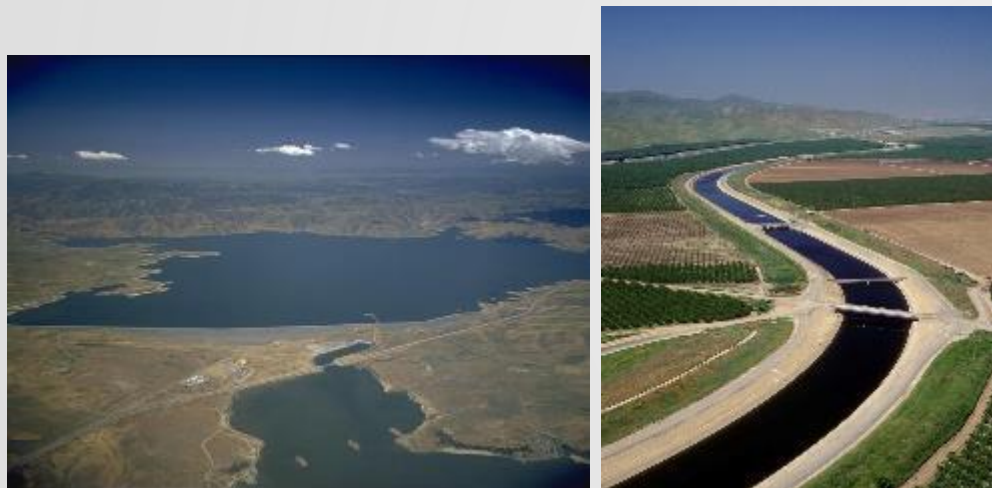
DWR Mission
To sustainably manage the water resources of California, in cooperation with other agencies, to benefit the State's people, and protect, restore, and enhance the natural and human environments.

Water Resiliency Portfolio

- Governor Newsom:
 - Directed state agencies to develop a comprehensive statewide strategy to build a climate-resilient water system
 - Seeks to broaden the state's approach on water to ensure safe and resilient water supplies, flood protection and healthy waterways for the state's communities, economy, and the environment
 - Supports the need to modernize conveyance with a single tunnel to protect our water supply from earthquakes and rising sea levels, preserve Delta fisheries, and meet the needs of cities and farms.

State, Federal, and Local water Projects

- 54 reservoirs and lakes
- 1,200 miles of canals and pipelines
- 16 hydro facilities

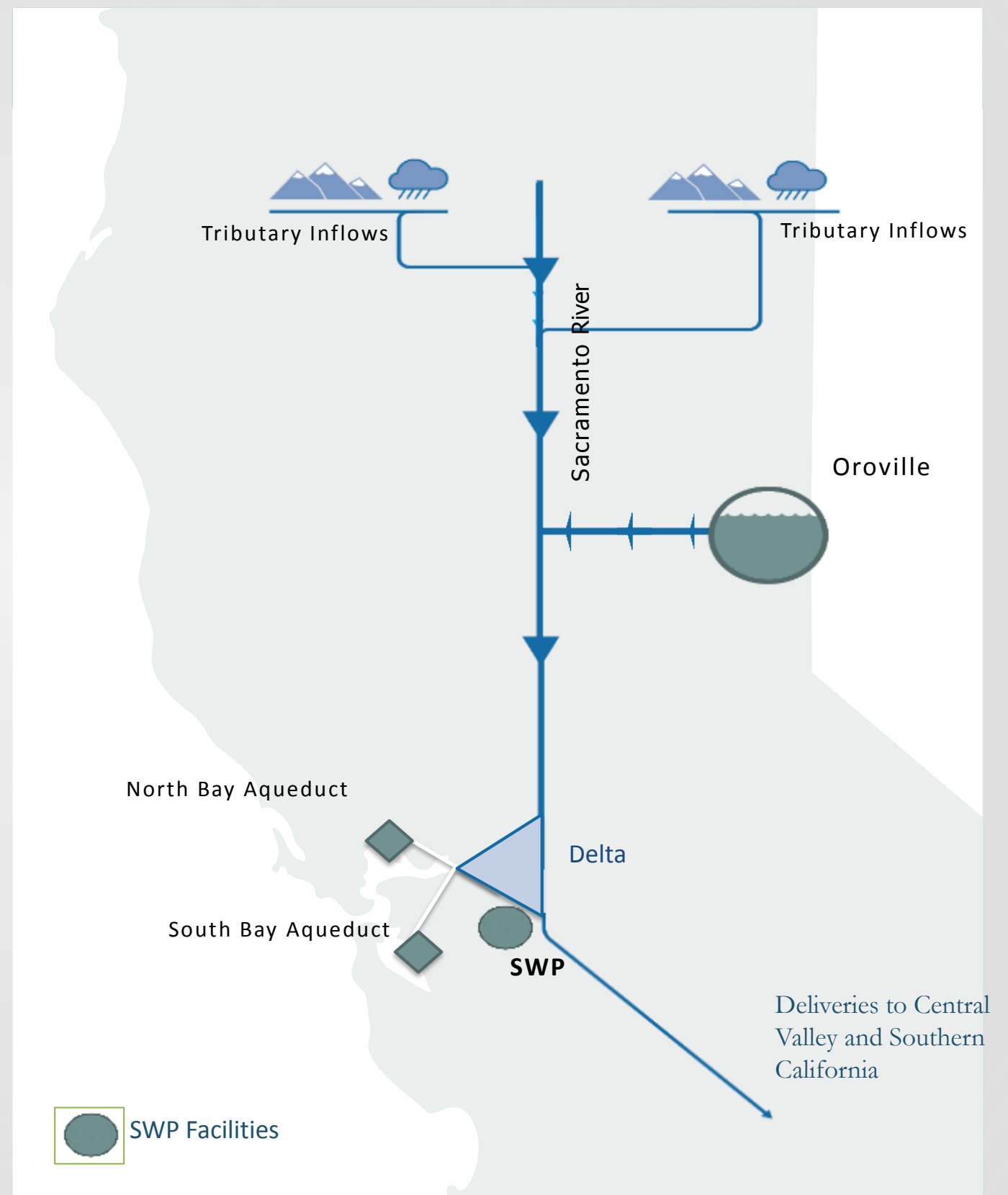


Largest publicly built and operated water supply project in the world

Bay-Delta is the hub of this infrastructure

State Water Project Facilities

- 33 Storage Facilities
- 29 Pumping and Generating Plants
- 700 Miles of Canals
- Hundreds of Miles of River Channels

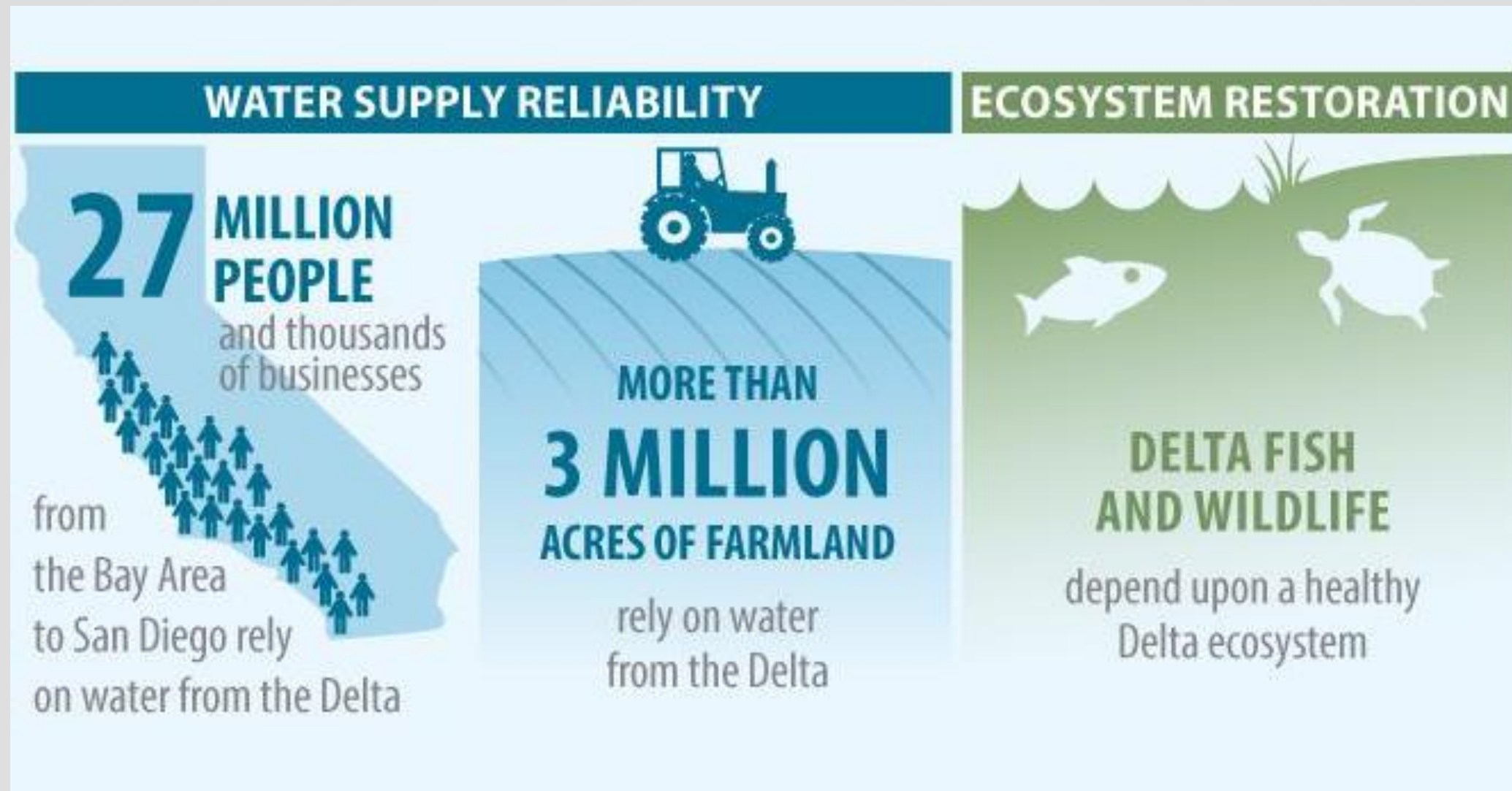


SWP Serves Bay Area, Central Valley, Southern CA and Coastal CA



YEAR	NAME	SERVICE AREA
1962	South Bay Aqueduct	Alameda & Santa Clara counties
1968	San Joaquin Valley	San Joaquin Valley
1973	West Branch	Los Angeles & Ventura counties
1973	East Branch	Riverside, San Bernardino & Orange counties
1988	North Bay Aqueduct	Napa & Solano counties
1994	Coastal	San Luis Obispo & Santa Barbara counties

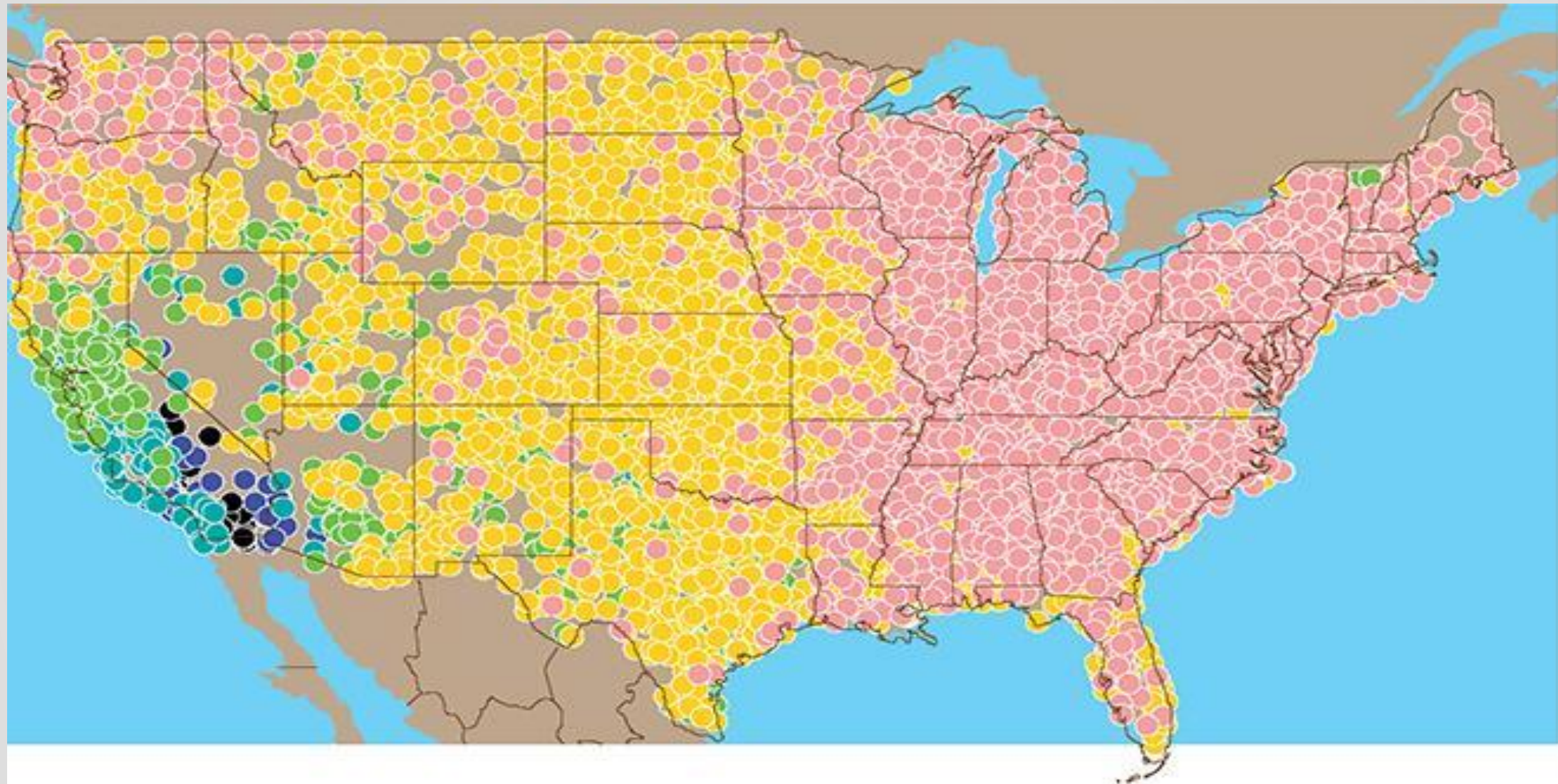
The Delta – Important for California



California:

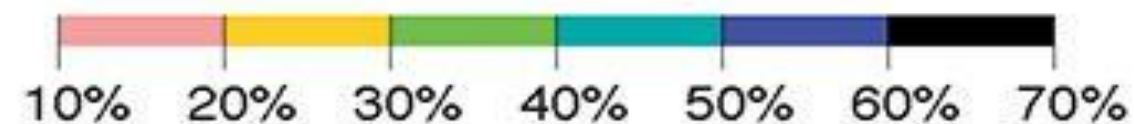
- Is the most populous state—39.9 million
- Has the largest agricultural production in the nation
- Has a \$2.7 trillion economy—the 5th largest in the world

California Precipitation is Uniquely Variable

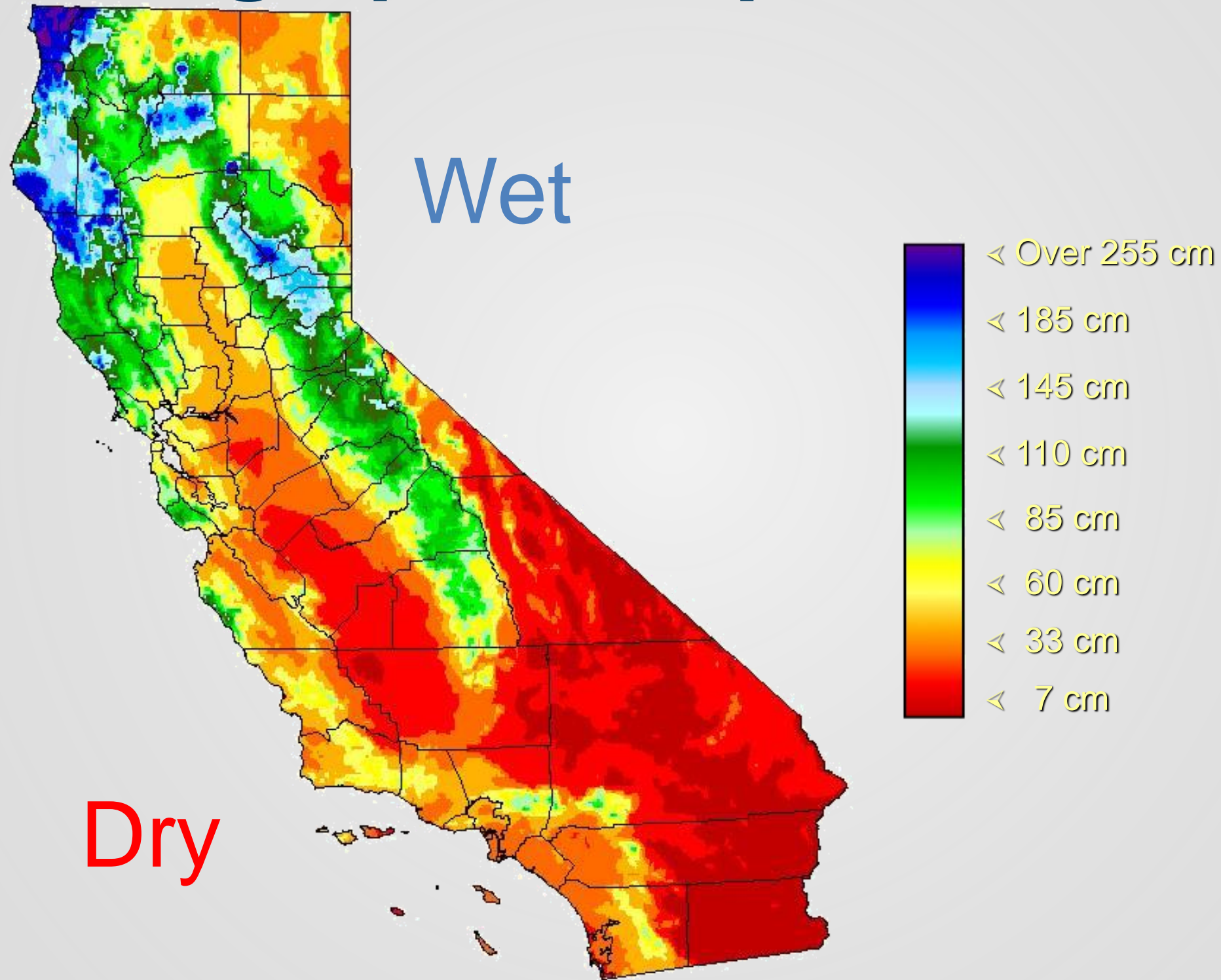


Variation of Total Precipitation, Water Years 1951-2008

$\frac{\text{Std Dev of Annual Precipitation}}{\text{Mean Annual Precipitation}}$



The Dilemma – Rainfall Distribution and Geographic Displacement



Water Supply Largely Dependent on Atmospheric Rivers

A strong AR transports an amount of water vapor roughly equivalent to 7.5–15 times the average flow of water at the mouth of the Mississippi River.

ARs are a primary feature in the entire global water cycle and are tied closely to both water supply and flood risks, particularly in the Western U.S.

On average, about 30-50% of annual precipitation on the West Coast occurs in just a few AR events and contributes to the water supply — and flooding risk.

ARs move with the weather and are present somewhere on Earth at any given time.

ARs are approximately 250–375 miles wide on average.

Scientists' improved understanding of ARs has come from roughly a decade of scientific studies that use observations from satellites, radar and aircraft as well as the latest numerical weather models. More studies are underway, including a 2015 scientific mission that added data from instruments aboard a NOAA ship.

WATER
VAPOR
COOLS

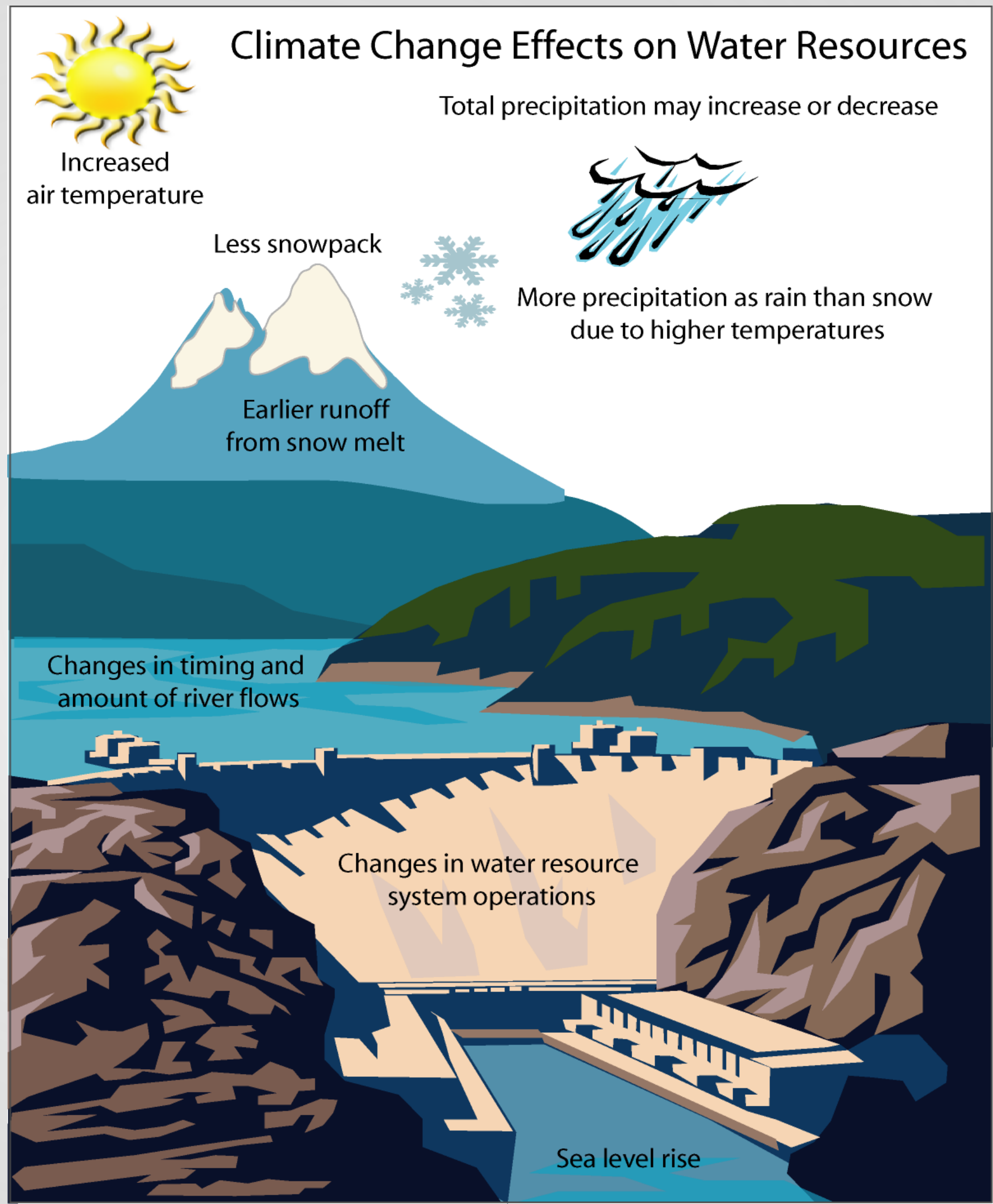
CALIFORNIA

Image not to scale.



3/2015

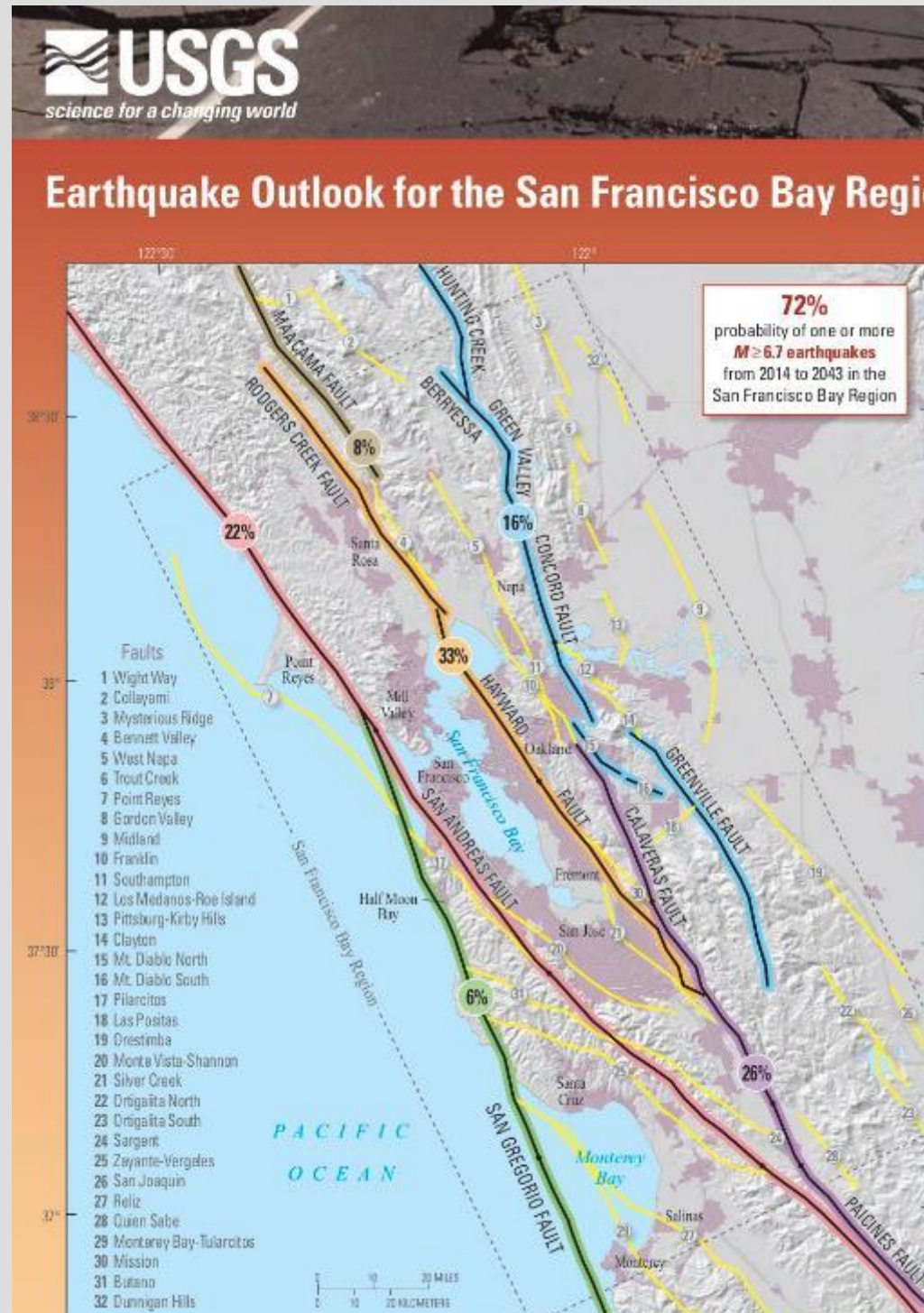
Climate Change



Climate Change: Delta Effects

- California Ocean Protection Council:
 - projects with a lifespan beyond 2050 should be built to withstand 10 feet of sea level rise by 2100.
- Risk: Sea level rise could dramatically alter and harm fragile ecosystems as well as the water supply distribution system.
- Risk: Increased salinity could also contaminate local drinking and irrigation water. Vast expanses of Delta farmland and communities already sit below sea level.

Seismic Risk



72% probability of one or more magnitude 6.7 or greater earthquakes by 2043 in the San Francisco Bay Region

Restoring More Natural Flows



A return to more natural river flows in the south Delta, minimizing harmful reverse flows caused by powerful pumps.



Continued compliance to meet San Francisco Bay outflow requirements to protect against salt water intrusion and improve the overall health of the Delta ecosystem.



New intake location away from endangered species, with advanced fish screens to protect aquatic species.

Status & Next Steps


- May 2: DWR took action to withdraw all previous approvals and permits for California WaterFix
- Will begin renewed environmental planning and permitting: NOP in Fall 2019
 - DWR will be the lead agency under CEQA and will oversee all planning and permitting activities.
 - The Delta Conveyance Design & Construction Authority (a Joint Powers Authority) will conduct field work, engineering and design activities to inform and support DWR's planning efforts

A New Path Forward

No one understands the unique character of the Delta better than the people who live and work here. It is only through dialogue that the community can give voice to that character and help guide Delta Conveyance planning along a mutually beneficial path.

Success will be measured by our ability to identify solutions that respect the Delta's history and help support its desired future.

More Information




CALIFORNIA DEPARTMENT OF
WATER RESOURCES

[Water Basics](#) [What We Do](#) [Programs](#) [Work with Us](#) [News](#) [Library](#) [Search](#)

[Home](#) | [Programs](#) | [State Water Project](#) | [Delta Conveyance](#)

Delta Conveyance



Aerial view looking east at the S Bacon Island road bridge connecting the Northern end of Bacon Island (Left) and Southern end of Mandeville Island (right), both part of the Sacramento-San Joaquin River Delta in San Joaquin County, California. DWR/2019

There is clear evidence of the vulnerabilities in the Sacramento-San Joaquin Delta (Delta) posed by climate change and earthquake risk. As sea levels continue to rise, the Delta will be faced with increasing water levels and salinity, which will dramatically alter and harm water quality and supply locally and for 27 million Californians across the state. Immediate action is needed to upgrade Delta infrastructure, ensuring the state's largest supply of clean water is climate resilient and able to respond to these risks.

As directed by the Governor and building on work already conducted, the Department of Water Resources is pursuing a new environmental review and planning process for a single tunnel solution to modernize Delta conveyance. This fresh approach is consistent with the Governor's recent executive order directing state agencies to develop a portfolio of statewide water actions and investments. Modernizing Delta conveyance paired with complementary projects that improve water recycling, recharge depleted groundwater reserves, strengthen existing levee protections and improve Delta water quality, is critical to building a resilient water supply for California's communities and economy.

The success of the state's Water Resilience Portfolio, and of water infrastructure upgrades, relies on a strong partnership with stakeholders. The state is committed to community and public engagement as this new process moves forward.

Information regarding schedule, opportunities for public review and other announcements and updates will be posted on this page, as available.

Contact Us

- Questions and More Information:
1-866-924-9955 | deltaconveyance@water.ca.gov
- Media Inquiries:
Lisa Lien-Mager (916) 653-9402
Lisa.LienMager@resources.ca.gov
- Erin Mellon (916) 704-5529
Erin.Mellon@water.ca.gov

Resources

- [Press Release - May 2, 2019](#)
- [Delta Conveyance Q&A](#)
- [Governor's Water Policy Executive Order](#)
- [DWR Director Memo to Delta Conveyance Office](#)
- [DWR Director Letter to State Water Contractors](#)
- [Letter from DWR to the Delta Conveyance Design and Construction Authority](#)
- [Letter from DWR/Reclamation to SWRCB - Withdrawal of Petition](#)
- [DWR Notice to State Clearing House](#)
- [Letter from DWR/Reclamation to Federal Fishery Agencies](#)
- [Letter from DWR to CDFW](#)

www.water.ca.gov/deltaconveyance



Questions?

Lisa Lien-Mager

Deputy Secretary for Communications

California Natural Resources Agency

lisa.lien-mager@resources.ca.gov