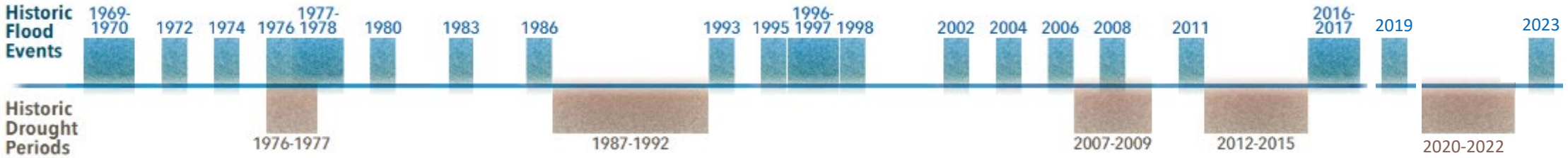
CALIFORNIA DEPARTMENT OF WATER RESOURCES

Expanding Recharge through Sustainable Groundwater Management

Southern California Water Dialogue

April 2025

California's Water Extremes



Challenges

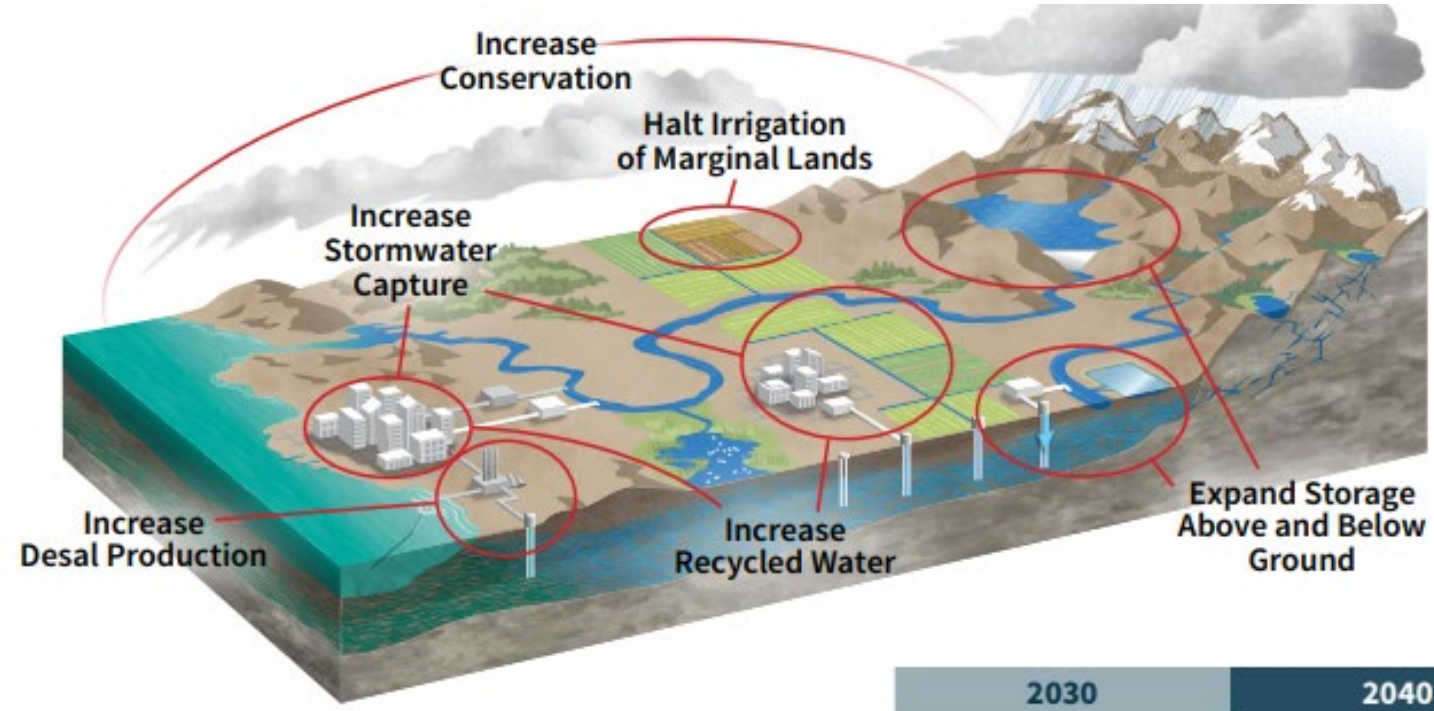
- **Increasing Demand –** Ag and Urban, Food production, Industrial use
- **Changing hydrology –** Less persistent snowpack (early melt), flashier more intense storms and droughts
- **Limited Surface water storage –** system designed around persisting snowpack and flood control
- **Flood control –** primary focus on purging dangerous flows, disrupting natural recharge processes
- **Expanding groundwater storage –** water quality, infrastructure (conveyance and infiltration), right to use, equity needs
- **Groundwater Management –** groundwater overdraft, **subsidence impacts to infrastructure**, dewatering of wells, water quality impacts

Expediting Flood Diversion & Recharge: *Drivers For State Action*

- **Sustainable Groundwater Management Act**
- **Water Resilience Portfolio & Climate Adaptation Strategy**
- **Governor's Water Supply Strategy**:
  - Recharge targets (500 TAF/yr)
  - Streamlined water rights permits for groundwater storage
  - Regulatory assistance on 180-day & 5 yr temporary permits

- **Flood/Drought Executive Orders**: CEQA suspension for local groundwater recharge projects, and other streamlining actions
- **Flood Water Recharge EO & Statute (WC 1242.1) & N-16-25**
- **2023 CA Water Plans, 2022 CV Flood Protection Plan, 2025 CA Groundwater (Bulletin 118)**

California's Water Supply Strategy for a Hotter, Drier Future



	2030		2040	
Increase Recycled Water	.8 MAF	About 5 MAF	1.8 MAF	About 7 MAF
Increase Desal Production	28,000 AF		84,000 AF	
Increase Stormwater Capture	.25 MAF		.5 MAF	
Increase Conservation	.5 MAF		.5 MAF	
SUBTOTAL FOR RECYCLED, DESAL, STORMWATER AND CONSERVATION	1.6 MAF		2.9 MAF	
Expand Storage Above and Below Ground*	3.7 MAF		4 MAF	
Total	4.8 MAF		6.9 MAF	

*Additional storage capacity does not equate to a similar volume of new water supply. MAF – million acre-feet.

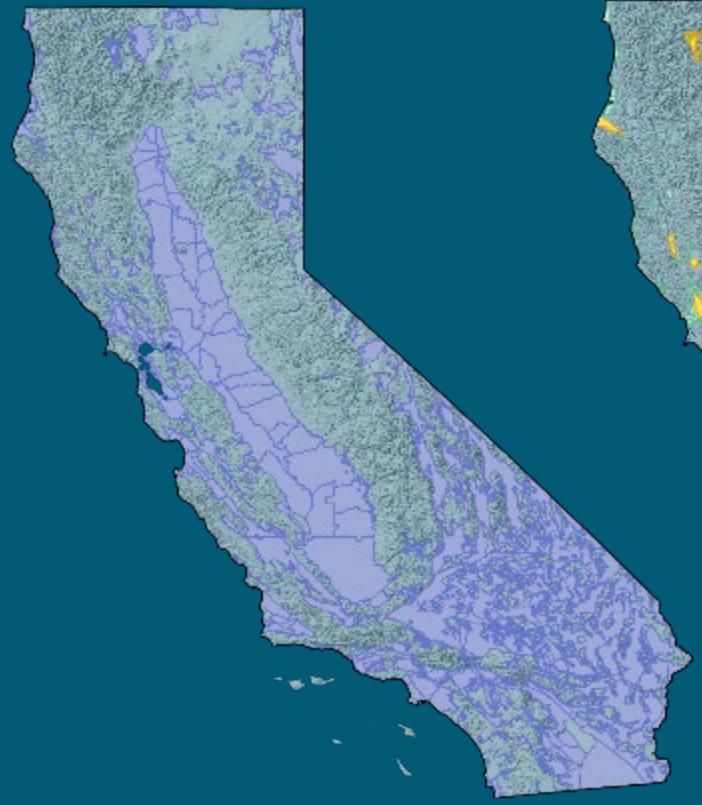
SGMA Timeline

2012 2012-2016 Drought

2014 **SGMA signed into law**

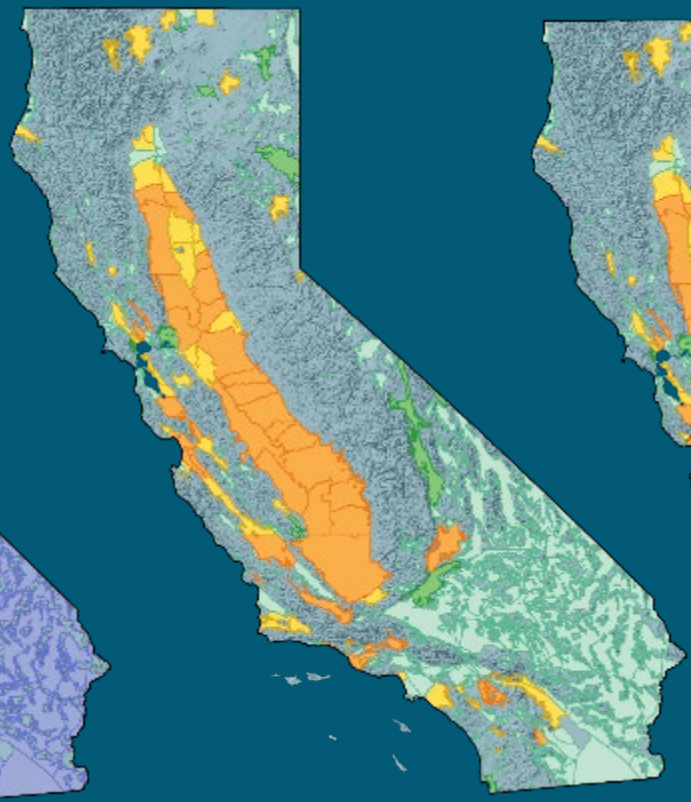
515 Basins

SGMA applies to all basins



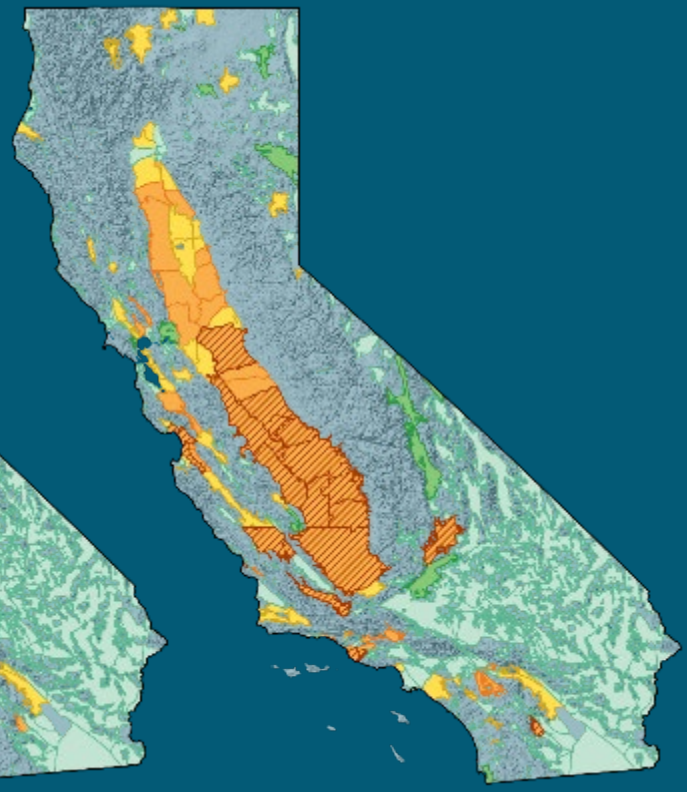
94 High & Medium Priority Basins

Cover 96% of groundwater use 88% of California's overlying population



21 Critically Overdrafted Basins

Accounts for 63% of all groundwater pumped in California



Groundwater Basins

Priority:

High | Medium | Critically Overdrafted Basins

Low | Very-Low

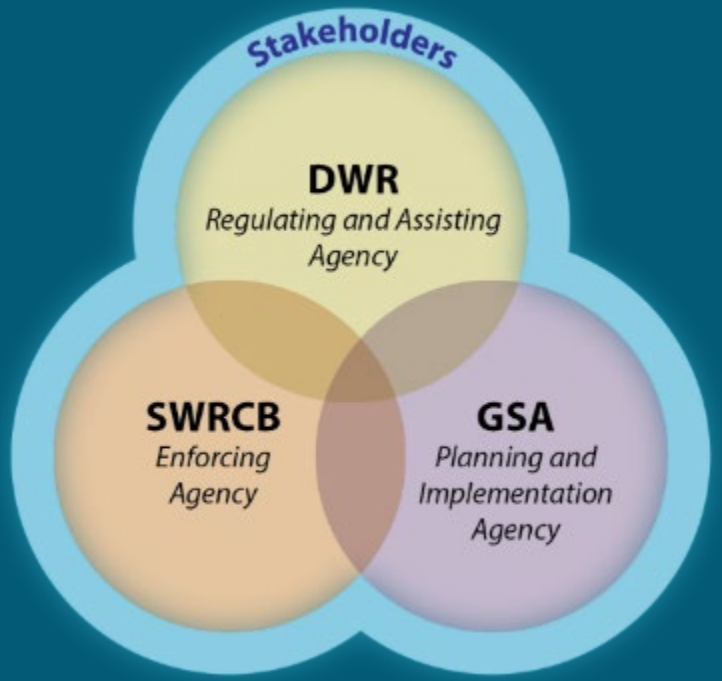
SGMA Overview

SGMA Timeline

2012 2012-2016 Drought

2014 **SGMA signed into law**

Local Control



Sustainability

Avoid Six Undesirable Results

Lowering of GW Levels

Reduction of GW Storage

Seawater Intrusion

Degraded Water Quality

Land Subsidence

Depletion of Interconnected Streams

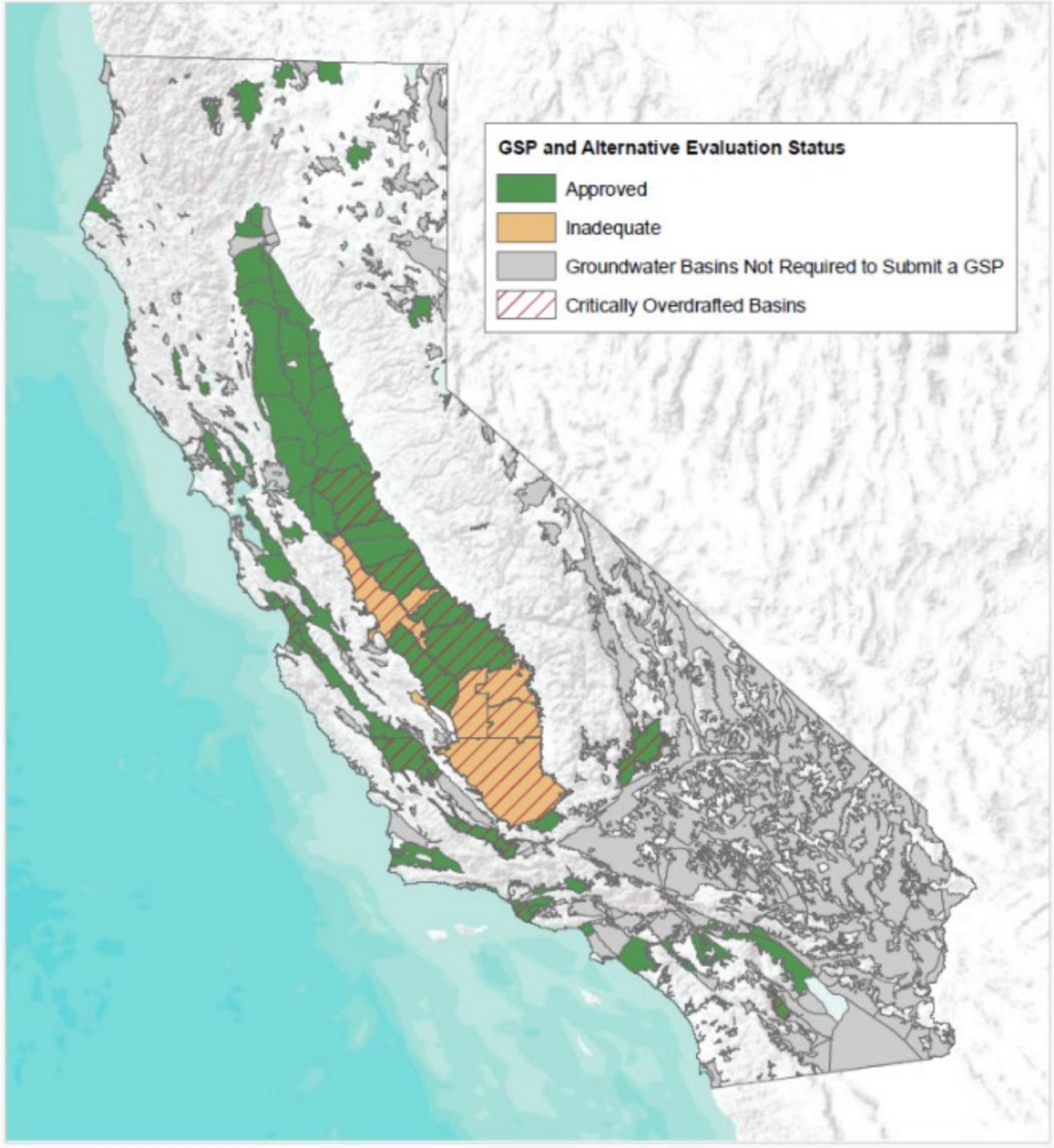
Groundwater Sustainability Plan Determinations

86 Basins

APPROVED BASINS

7 Basins

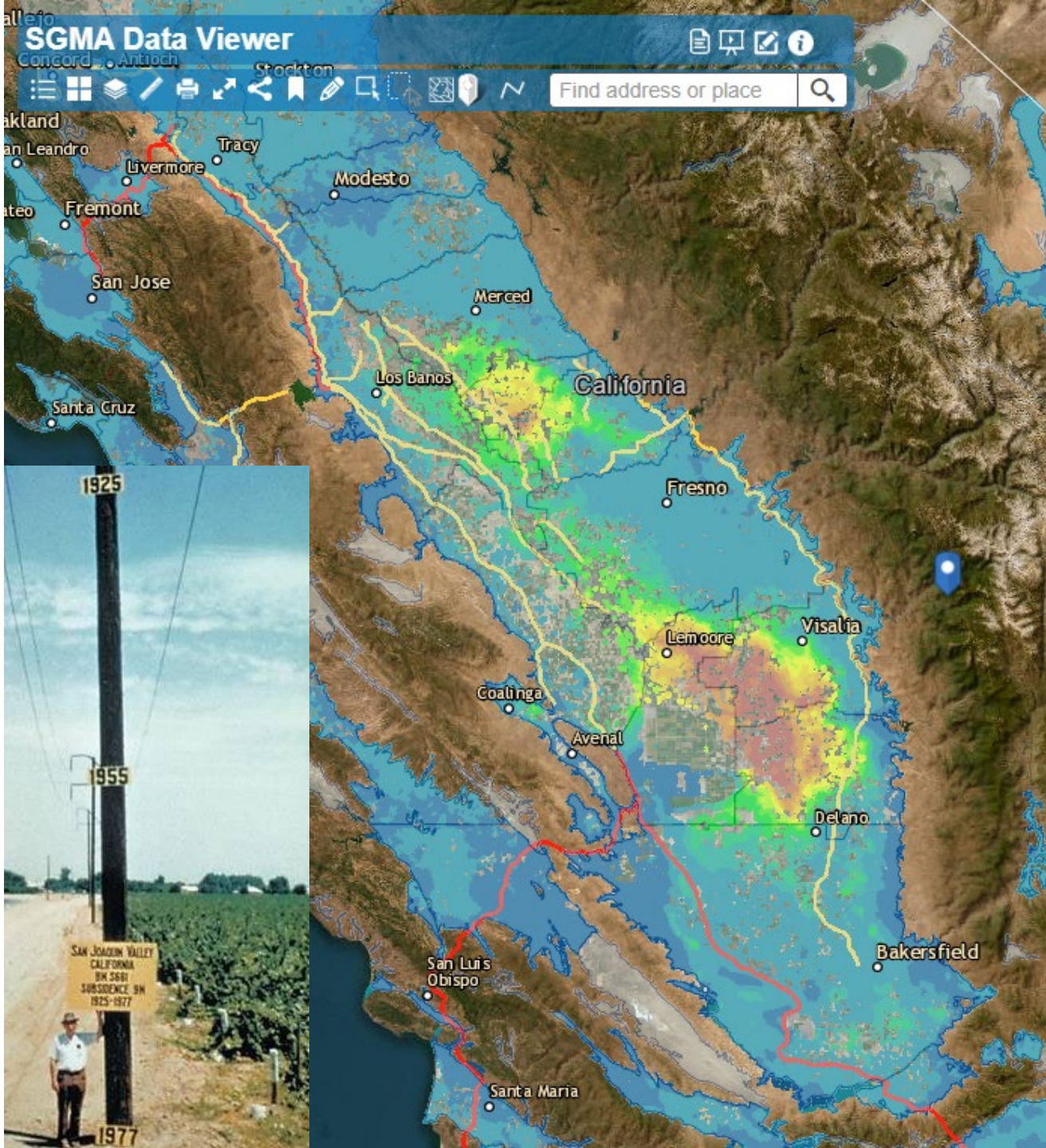
INADEQUATE BASINS



Map updated March 2025

Subsidence Impacts to Conveyance

- Subsidence has a long history in California
- SGMA intent is to avoid or minimize subsidence
- DWR developing Subsidence Best Management Practices
- Notable Impacts – Upwards of 46% capacity loss in some canals:
  - Friant-Kern Canal ($326M initial)
  - Red Top/Sack Dam SJ River (~$90M+)
  - Eastside Bypass (~$250M)
  - California Aqueduct ($Multi-Billion)
- Immediate action is necessary

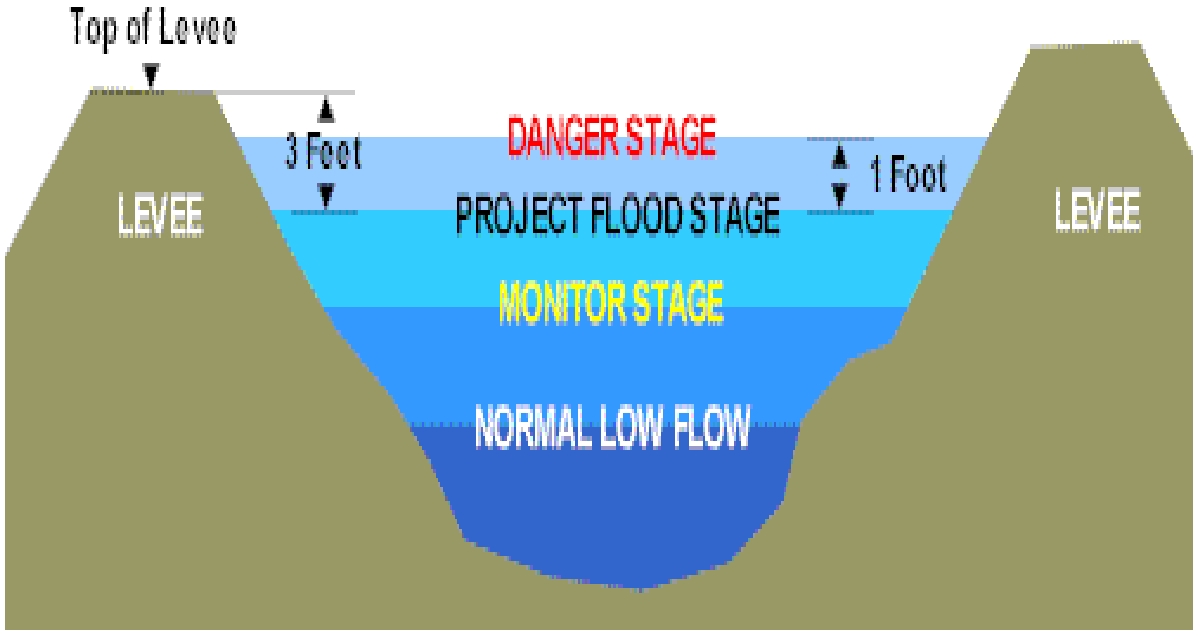


Expediting Flood Diversion & Recharge: *Assistance*

- **DWR Technical Assistance**
  - San Joaquin Watershed Studies
  - Multi-Benefit Floodplain Restoration Opportunities
  - Working with partners on on-farm demonstration sites
  - Groundwater Basin Characterization and Recharge Suitability
- **DWR Planning and Regulatory Assistance**
  - On-the-ground support for maximizing recharge during flood events
  - Supporting temporary water rights applications
  - Watershed Resilience Program
- **DWR Financial Assistance**
  - State Grants supporting planning and implementation projects
  - Prop 4 Funding

Diversions – What Water To Use

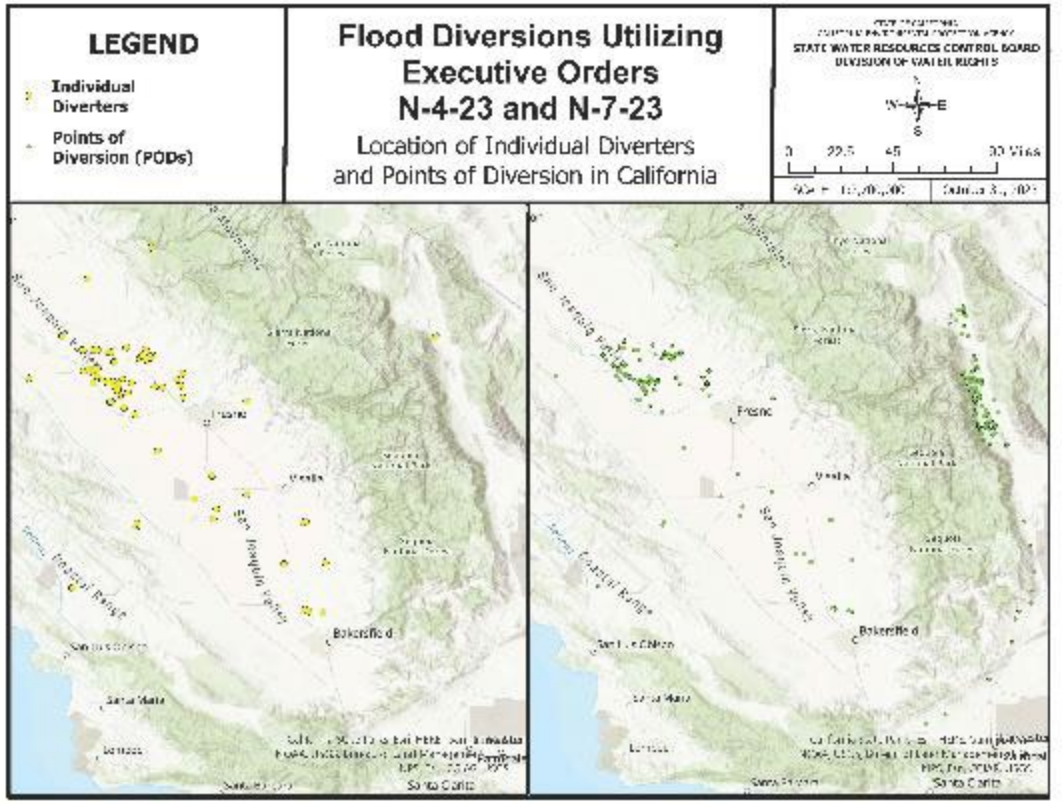
- **No Permit Needed**
  - **CWC 1242.1** (diversion of flood flows for recharge)
  - Flood management only (water diverted to avoid a hazard, not to achieve a beneficial use)
- **New Water Rights**
  - Temporary
    - 180-day
    - 5-year
  - Standard (i.e., permanent)
    - Streamlined (GW recharge, WAA = 90/20 or flood)
    - Non-streamlined
- **Existing Water Rights**
  - Pre 1914
  - Post 1914 (Permit or License)
  - Under Contractor Water Right
  - Surplus/Excess Water
    - Article 21 (SWP)
    - Article 215 (CVP)



https://www.cnrfc.noaa.gov/wfo_hydro.php

Expediting Flood Diversion and Recharge: Actions

- **Water Year 2023**
  - EO N-4-23 and N-7-23
  - Over 400 TAF of Flood Water Diverted on 90,000 Acres
  - Over 4 MAF of Managed Recharge Reported in SGMA Annual Reports, not including Adjudicated Areas
  - Significant Surplus water moved through SWP/CVP facilities to local entities
  - Flood Diversion and Recharge Enhancement Initiative
- **Water Year 2024**
  - 1242.1 Enacted: O AF Diverted
- **Water Year 2025**
  - 1242.1 + EO N-16-25: 499 AF Diverted
  - SWP Storm Flex = additional 16 TAF Captured
  - Delta Conveyance Project could have captured 700 TAF
  - WY 24 SGMA Annual Reports due 4/1
- **Future Water Years**
  - DCP, SGMA, and other water resilience projects



Top needs to expand storage through recharge

- Detailed accounting of groundwater and surface water resources
- Land repurposing support
- Partnerships and flexible agreements
- Protect and improve conveyance – Halt subsidence
- Expansion of Water Bank concepts
- Delta Conveyance Project
- Surface storage improvements (San Luis & Sites)
- Reform of Water Rights to improve flexibility
- Greater coordination – Feds, State, and Local agencies

Thank you!

DWR Sustainable Groundwater Management

https://water.ca.gov/Programs/Groundwater-Management

DWR Groundwater Recharge

https://water.ca.gov/Programs/Groundwater-Management/Groundwater-Recharge

DWR Flood-MAR

https://water.ca.gov/programs/all-programs/flood-mar

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