

# NSV IRWM Board

## 2023 Fall Hydrology and partial Groundwater Level Update

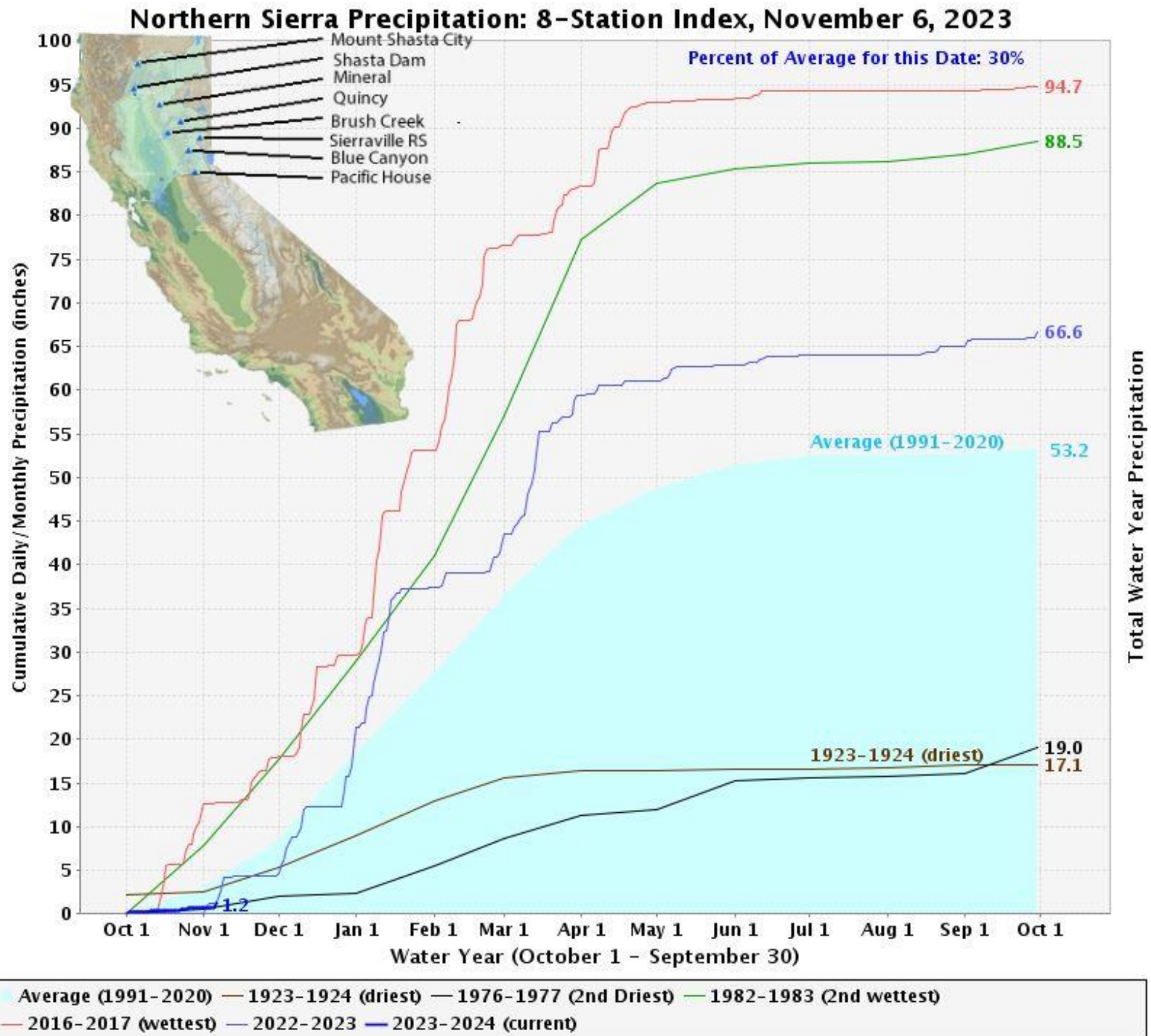
Michelle Dooley  
Regional Planning Branch  
DWR Northern Region

Michelle.Dooley@water.ca.gov  
530-945-0882



# Outline

- **Precipitation Index**
- **NOAA Climate Prediction**
- **California Water Watch**
- **California Groundwater Live**
- **Open Data Platform**



# Temperature Probability

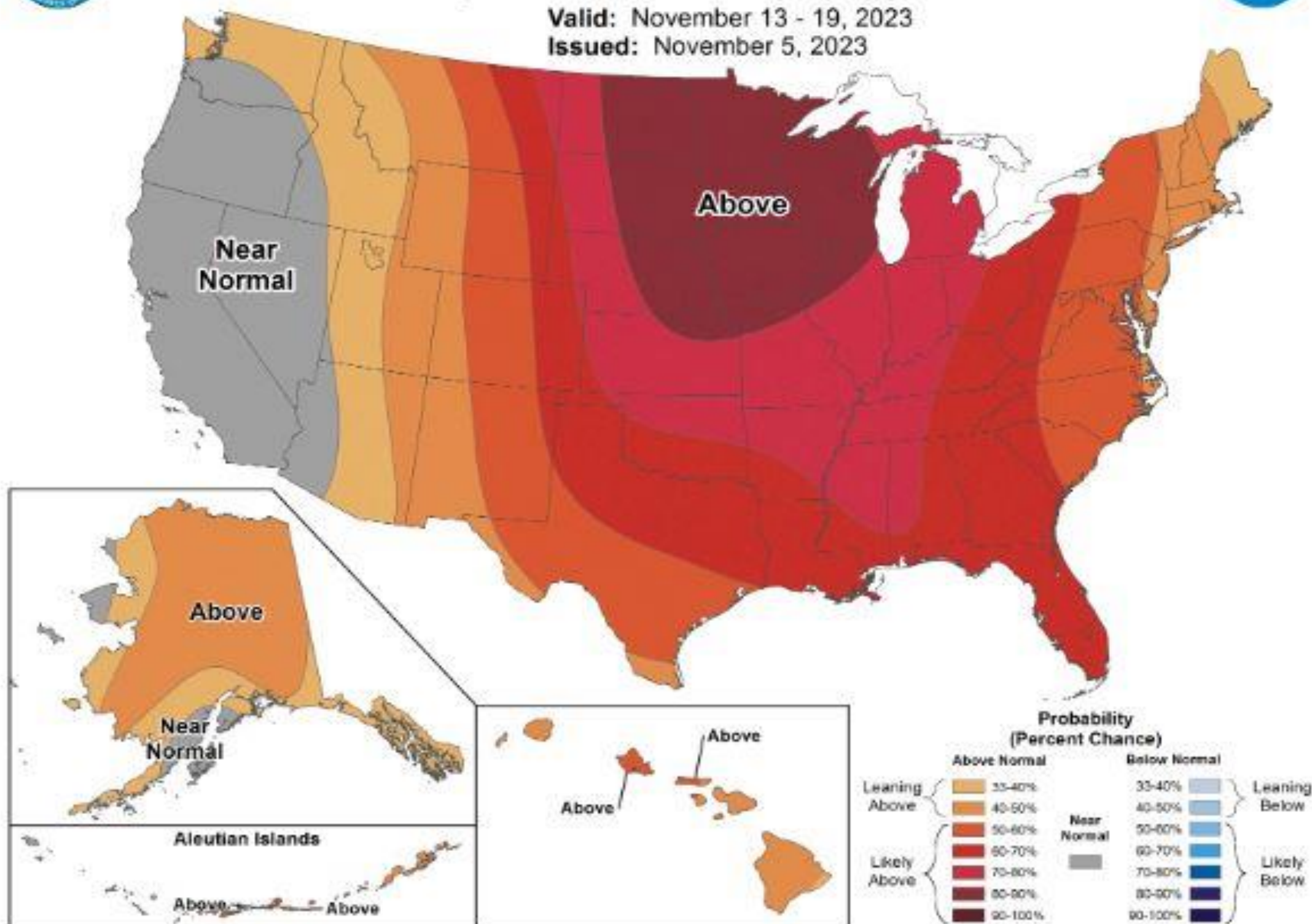


## 8-14 Day Temperature Outlook



Valid: November 13 - 19, 2023

Issued: November 5, 2023



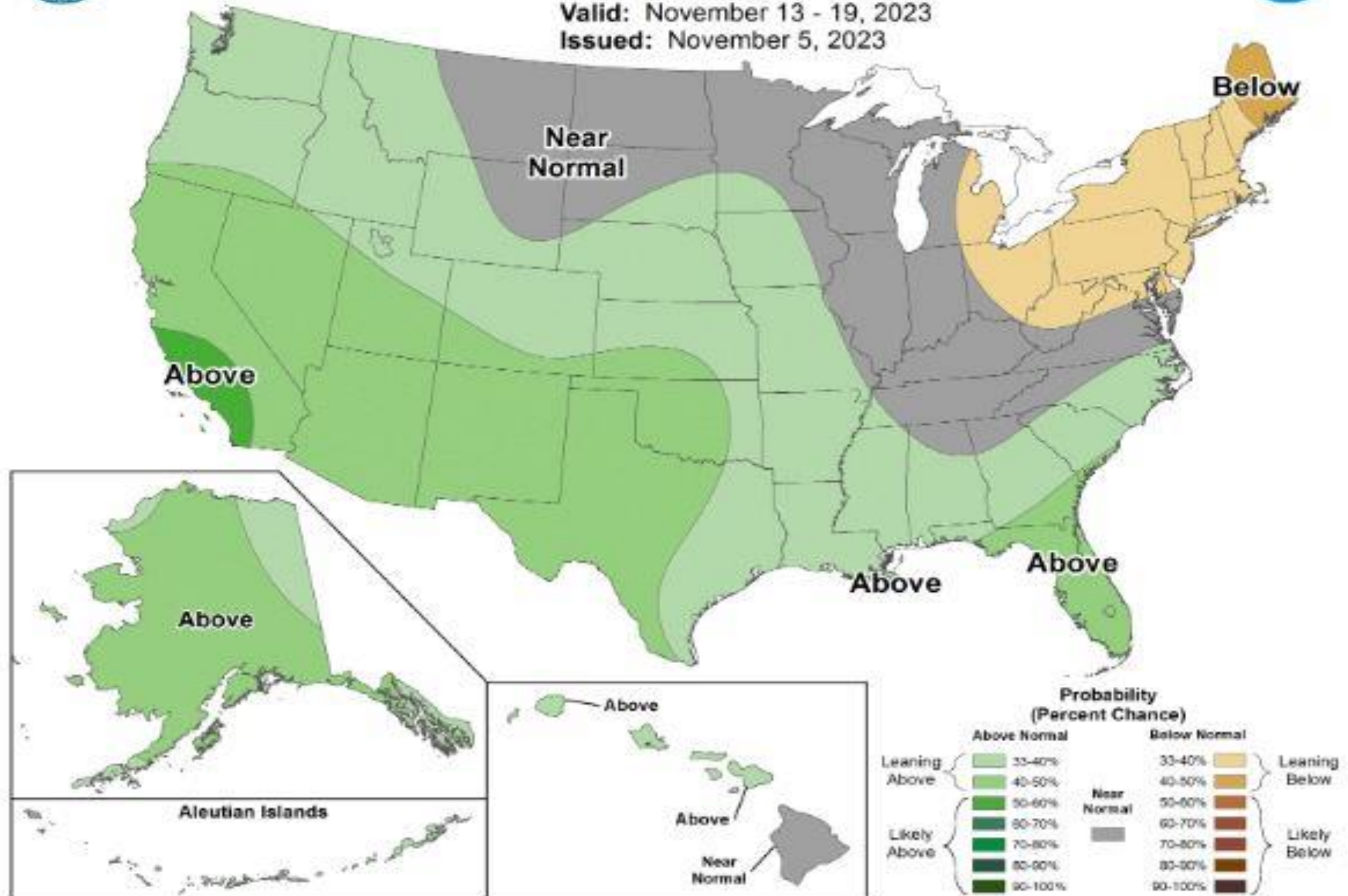
# Precipitation Probability



## 8-14 Day Precipitation Outlook

Valid: November 13 - 19, 2023

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# California Water Watch



California WATER WATCH

Home

Forecasting

Survey

PRECIPITATION

SNOWPACK

RESERVOIRS

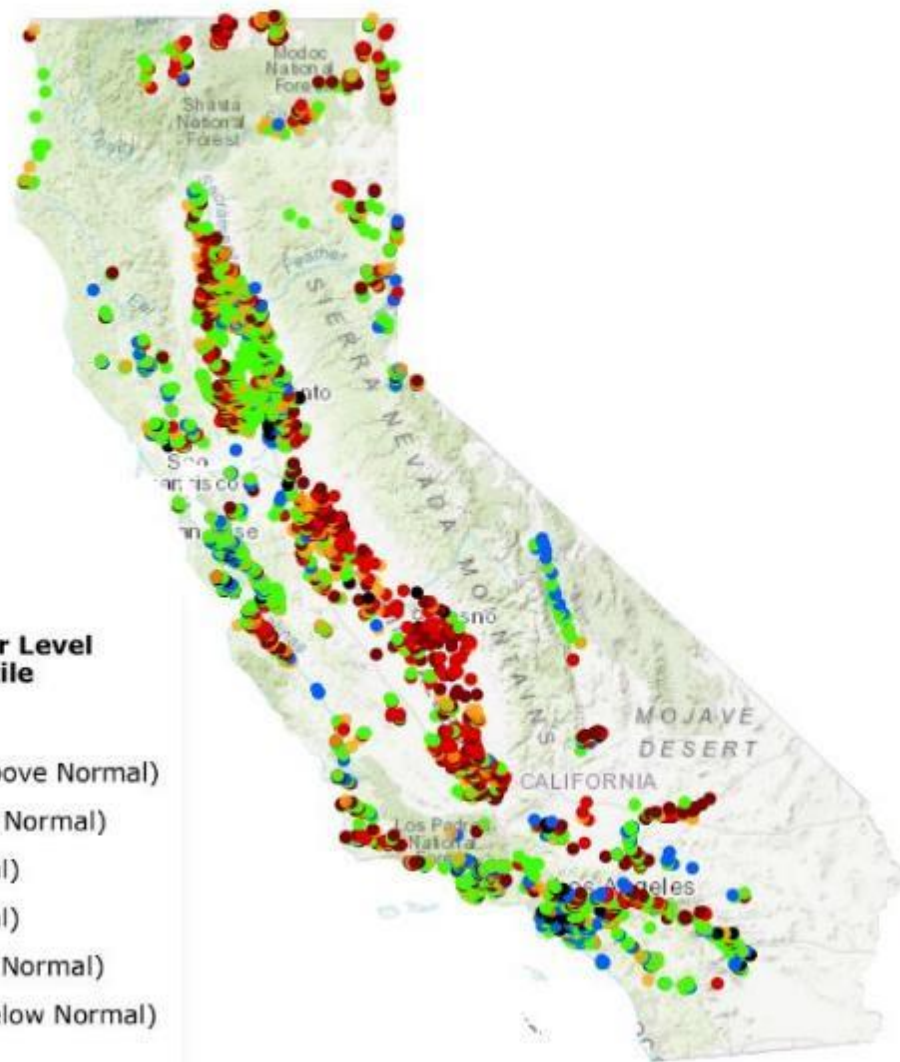
GROUNDWATER

TEMPERATURE

STREAMFLOW

SOIL MOISTURE

VEGETATION



## Groundwater as of 11/05/2023

The map of California shows groundwater level conditions across the state by comparing the most recent groundwater level measurement at individual monitoring wells to historical measurements during the same month. For a well to appear on this map, the most recent measurement must have occurred within the last 18 months, and measurements from at least 10 years must exist for that month.

Currently, most monitoring wells are only measured twice a year, in the spring and fall. Few wells have monthly data, however the State and local groundwater monitoring agencies are working to improve and expand groundwater level data collection.

We are collectively learning more than ever before about our groundwater basins from data being collected and reported by local groundwater agencies. These data are the foundation to support future decision-making related to land use and water resource planning.

The State and locals will continue monitoring and tracking groundwater conditions and collecting new data allowing locals to better manage water resources including implementing groundwater recharge during average and wet years to ensure groundwater will be available as a buffer for future dry and drought times when it is needed most.

[Get More Data >](#)

<https://cww.water.ca.gov/>

# California Water Watch

## Precipitation as of 11/04/2023

California's annual precipitation can vary greatly from year to year and region to region. The map of California shows how this water year's precipitation compares to what has been observed historically. The chart below provides a summary of California's current statewide precipitation statistics.

### Precipitation Statistics (period of record: 1981-current)

#### Statewide as of 11/04/2023

Water Year to Date: **0.57"**

% of Average: **37%**

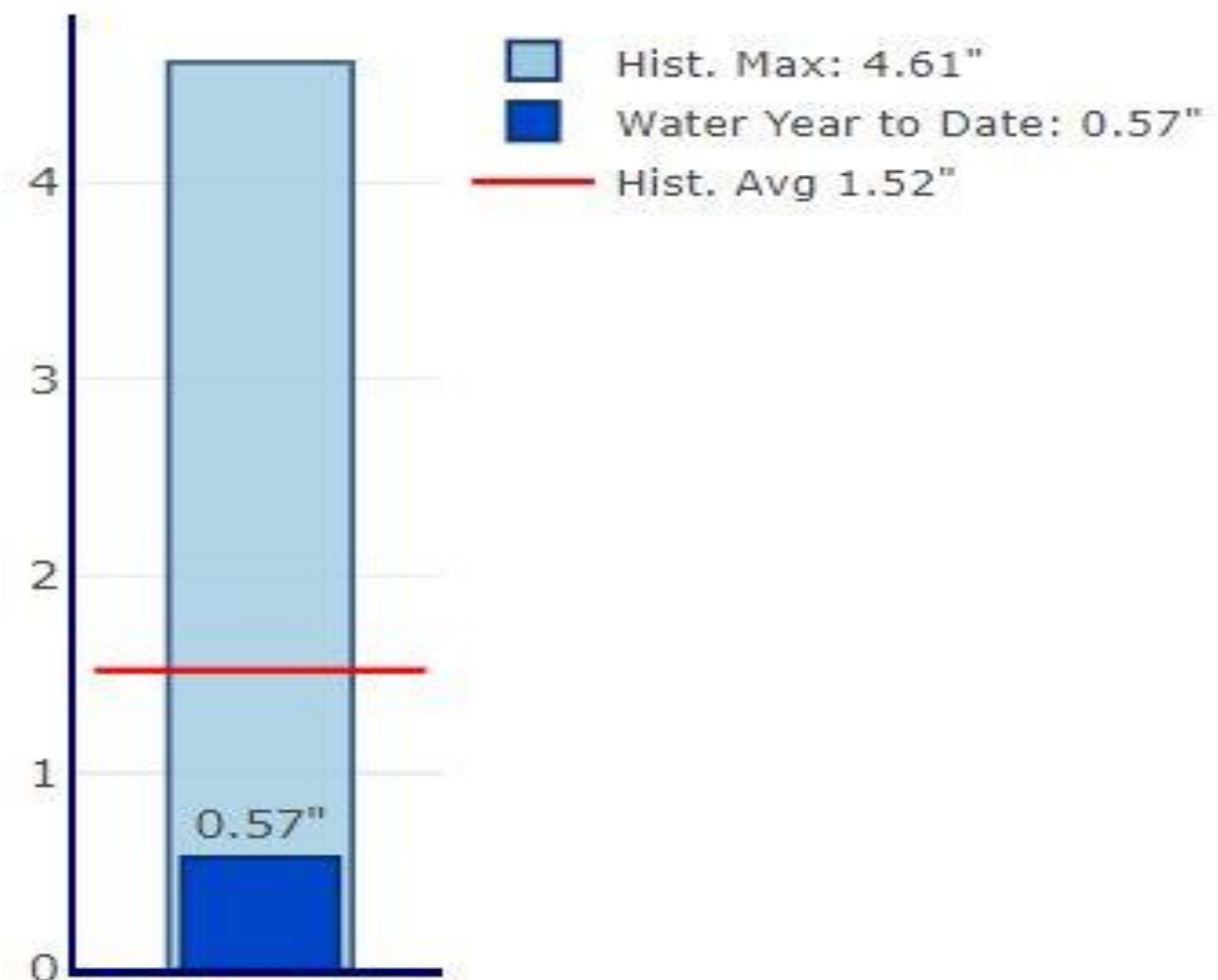
Precipitation % of average for  
full water year through  
September 30th: **2%**

#### Historical Record to Date:

Max: **4.61"**

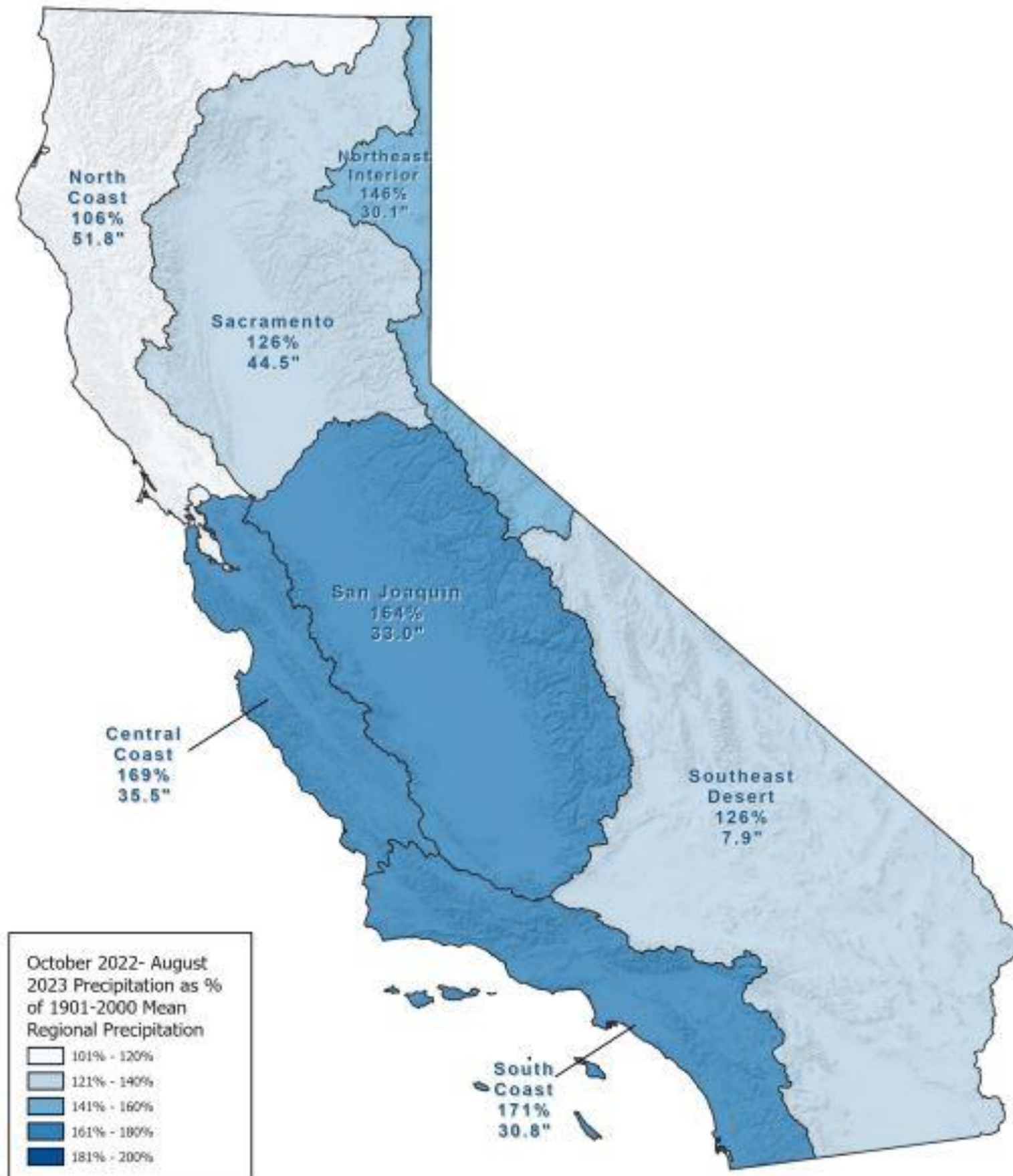
Mean: **1.52"**

Min: **0.05"**



Precipitation for water year to date is  
37% of historical average

## 2023 Water Year Precipitation



Precipitation percentage based on California Divisional Precipitation for October 2022 - August 2023, compared to the 1901-2000 mean regional precipitation. Data from NOAA National Centers for Environmental Information website. Data accessed 09/12/2023. Map Updated: 09/19/2023.



From California's  
Groundwater  
Conditions, Semi-  
Annual Update:  
October 2023

# CalGWLIVE Website



California's Groundwater Live

[Current Conditions](#) [Groundwater Levels](#) [Well Infrastructure](#) [Land Subsidence](#)

## California's Groundwater Live

CALIFORNIA'S LATEST GROUNDWATER INFORMATION AND CONDITIONS



### SECTIONS

[CURRENT CONDITIONS](#)

[GROUNDWATER LEVELS](#)

[WELL INFRASTRUCTURE](#)

[LAND SUBSIDENCE](#)

[About](#)

[How to access data](#)

[Questions/Feedback: \[calgw@water.ca.gov\]\(mailto:calgw@water.ca.gov\)](#)

<https://sgma.water.ca.gov/CalGWLIVE/#stats>

# Statewide – Statistics from the last 10 years

## Current Groundwater Conditions

Groundwater is a vital resource in California. It sustains our ecosystems, supports our agriculture, fuels our economy, quenches our thirst, and reduces the impacts of drought and our changing climate. Groundwater accounts for 40 percent of the State's total annual water supply in normal years and almost 60 percent in drought years. This is why the California Department of Water Resources (DWR) is committed to protecting this precious resource and has developed California's Groundwater Live in conjunction with the public release of [California's Groundwater Update 2020](#). We welcome you to explore our newest groundwater tool which features the latest groundwater information, live statistics and a series of interactive dashboards that can be accessed by clicking the icons below.

### Monitoring Wells Below Normal Level

42%

### Monitoring Wells at Normal Level

33%

### Monitoring Wells Above Normal Level

25%

These numbers are calculated from combining All-Time High, Above Normal, Normal, Below Normal and All-Time Low categories in the Current Groundwater Level Conditions dashboard below. [Learn more about the calculations](#)

<https://sgma.water.ca.gov/CalGWLIVE/#stats>

# Current Well Infrastructure Information

## Domestic Wells



279,240 Total  
**2,828 WCRs**  
Received Year to Date

## Irrigation Wells



61,656 Total  
**1,107 WCRs**  
Received Year to Date

## Public Supply Wells



13,858 Total  
**Active**  
Public Supply Wells

## Reported Dry Wells



439 in 2023  
**19 Reported**  
In the last 30 Days

**New!** Explore [Dry Domestic Well Susceptibility](#) within Groundwater Basins

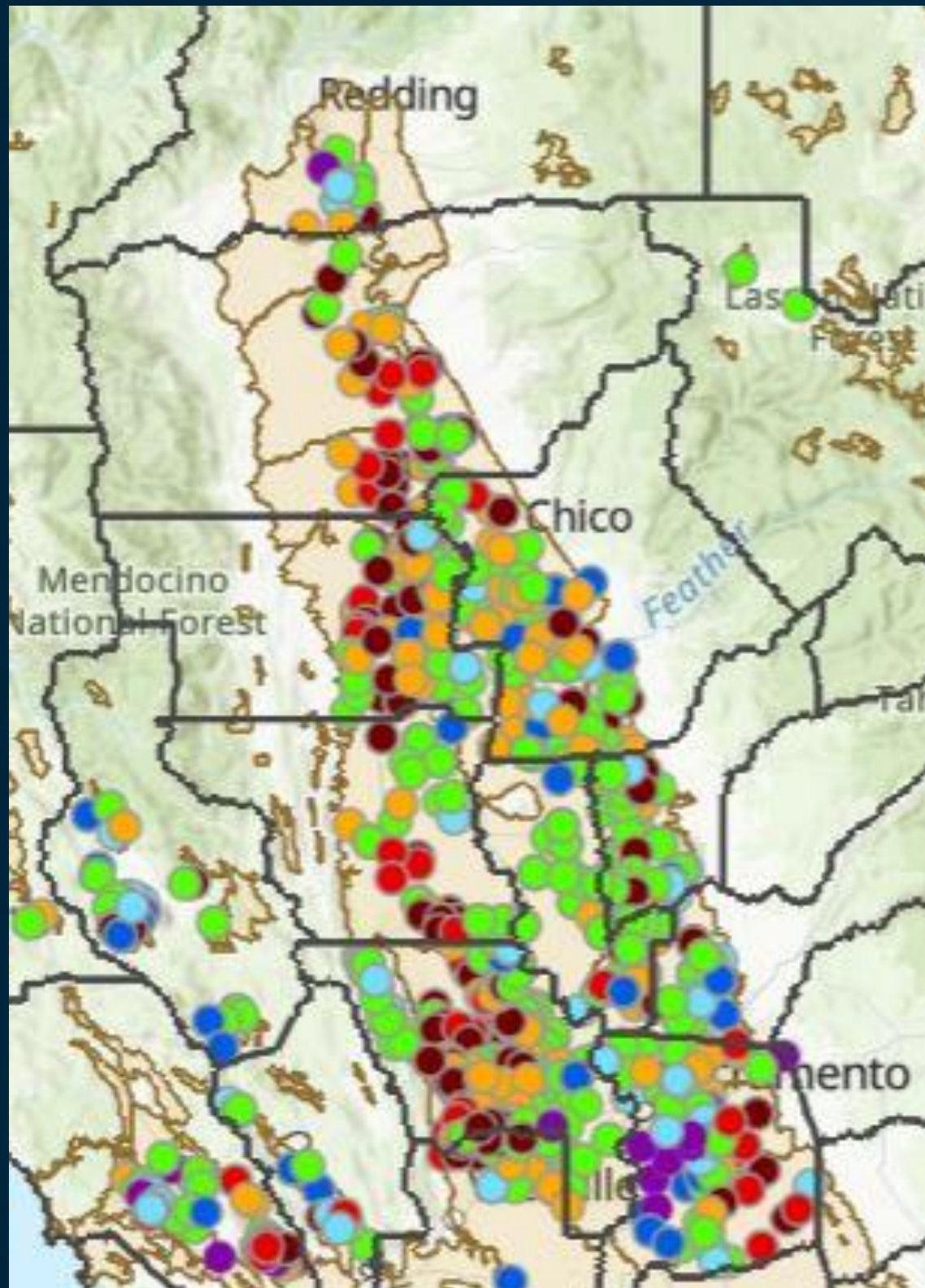
<https://sgma.water.ca.gov/CalGWLIVE/#wells>

Dry Well Reporting: <https://mydrywatersupply.water.ca.gov/report/publicpage>

List of Counties: [https://tableau.cnra.ca.gov/t/DWR\\_SGM/views/mydrywatersupply/Table.pdf?csrt=17124359341917200630](https://tableau.cnra.ca.gov/t/DWR_SGM/views/mydrywatersupply/Table.pdf?csrt=17124359341917200630)

Map of Reported Dry Wells: [https://tableau.cnra.ca.gov/t/DWR\\_SGM/views/mydrywatersupply/Map.pdf?csrt=17124359341917200630](https://tableau.cnra.ca.gov/t/DWR_SGM/views/mydrywatersupply/Map.pdf?csrt=17124359341917200630)

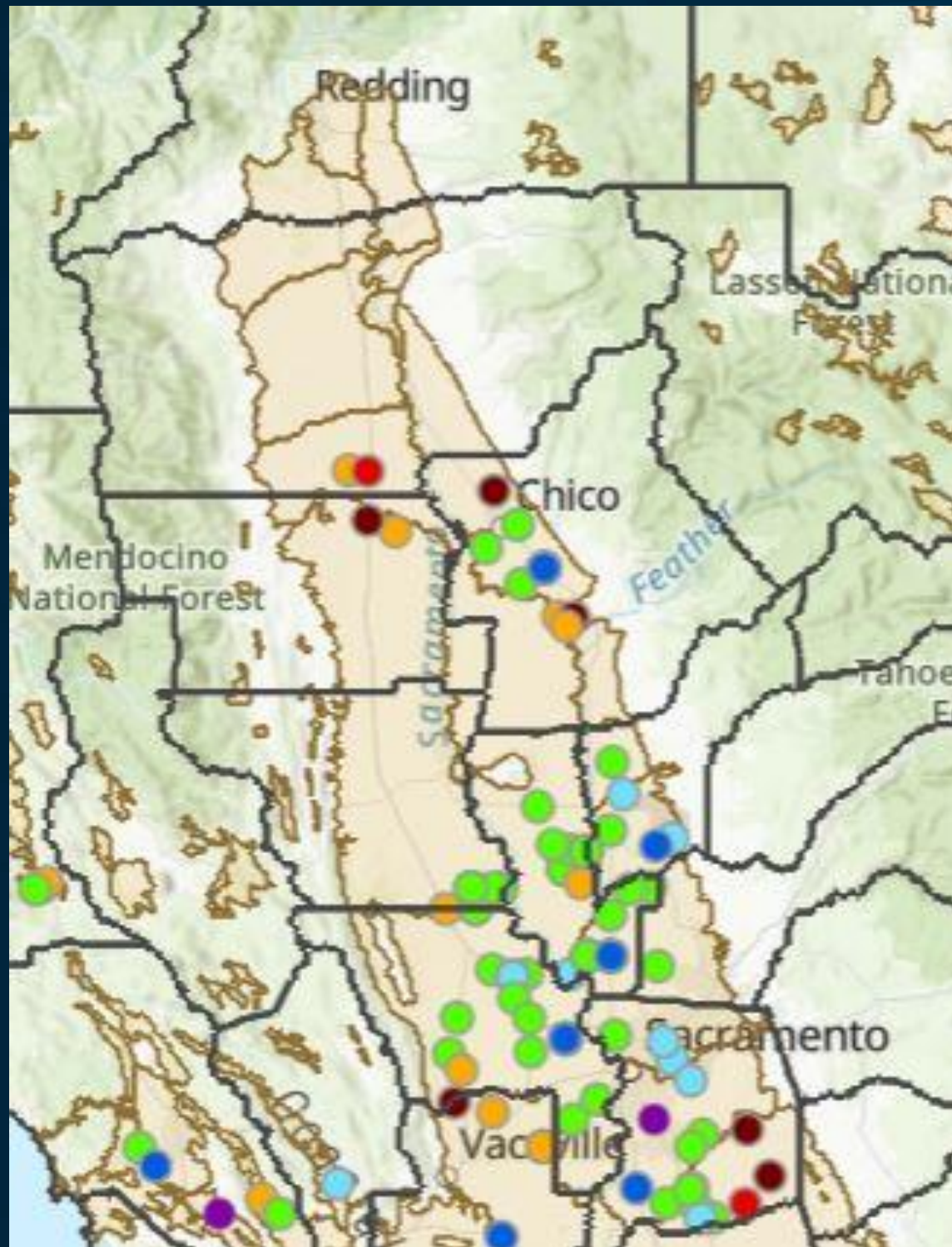
# Current GWL Conditions – Last 18 Months



## Groundwater Level Percentile Class

- All-Time Low
- <10 (Much Below Normal)
- 10-25 (Below Normal)
- 25-50 (Normal)
- 50-75 (Normal)
- 76-90 (Above Normal)
- >90 (Much Above Normal)
- All-Time High

# Current GWL Conditions – Last 90 Days

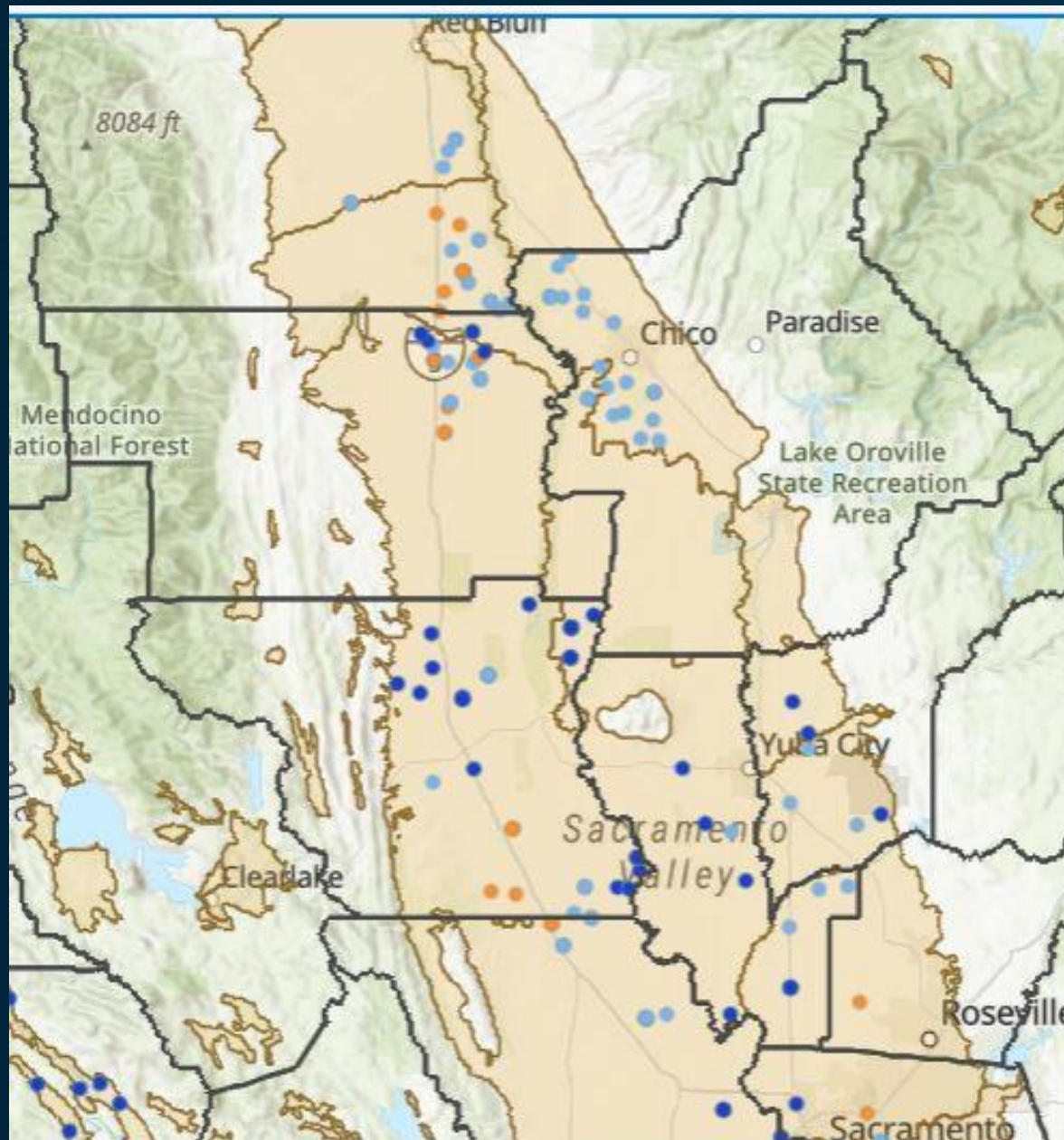


## Groundwater Level Percentile Class

- All-Time Low
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- 50-75 (Normal)
- 76-90 (Above Normal)
- >90 (Much Above Normal)
- All-Time High

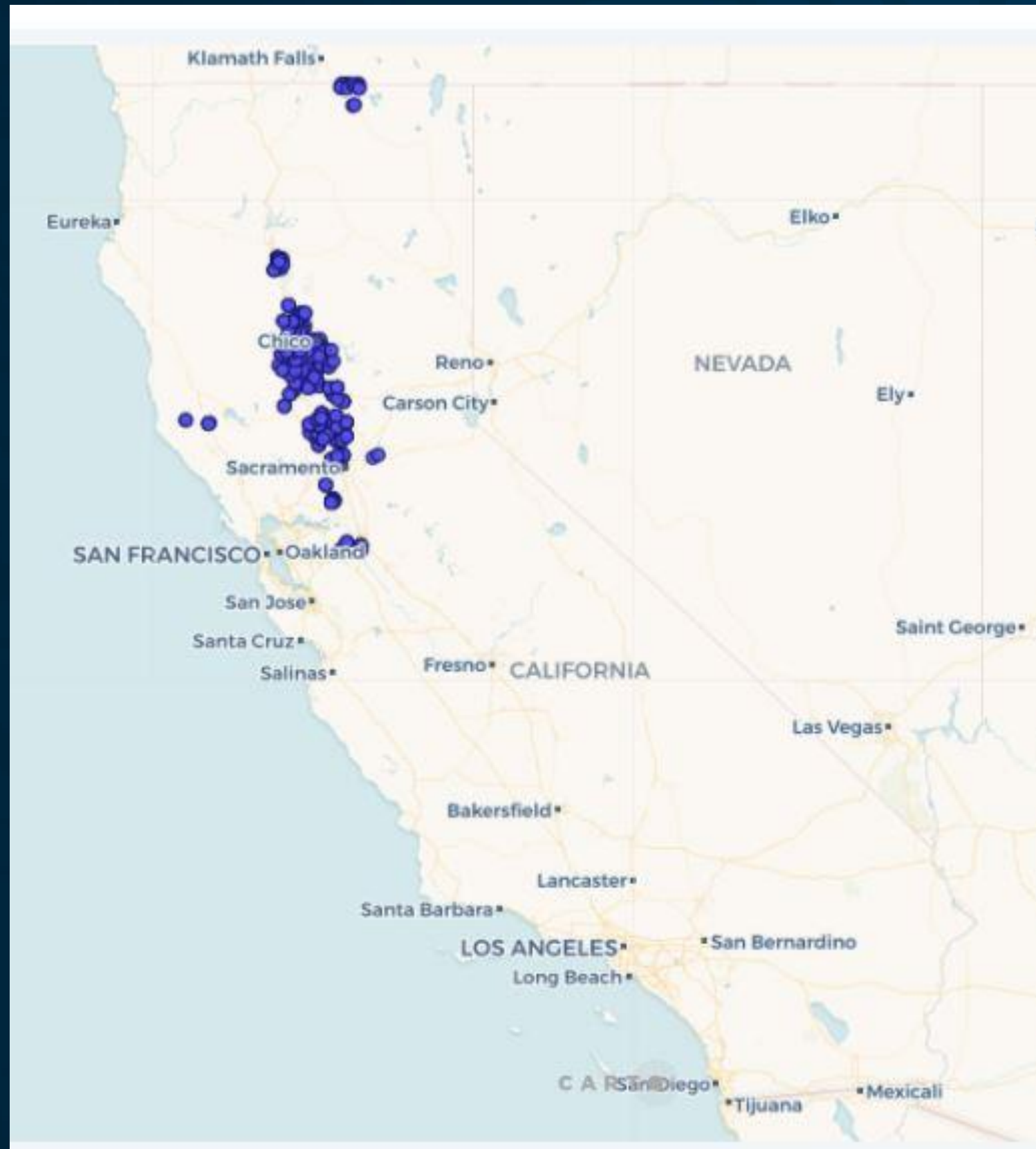
# Current GWL Conditions – Last 60 Days

These include the monthly measurements that DWR has started in the last year



<https://storymaps.arcgis.com/stories/b3886b33b49c4fa8adf2ae8bdd8f16c3>

# Continuous groundwater monitoring stations



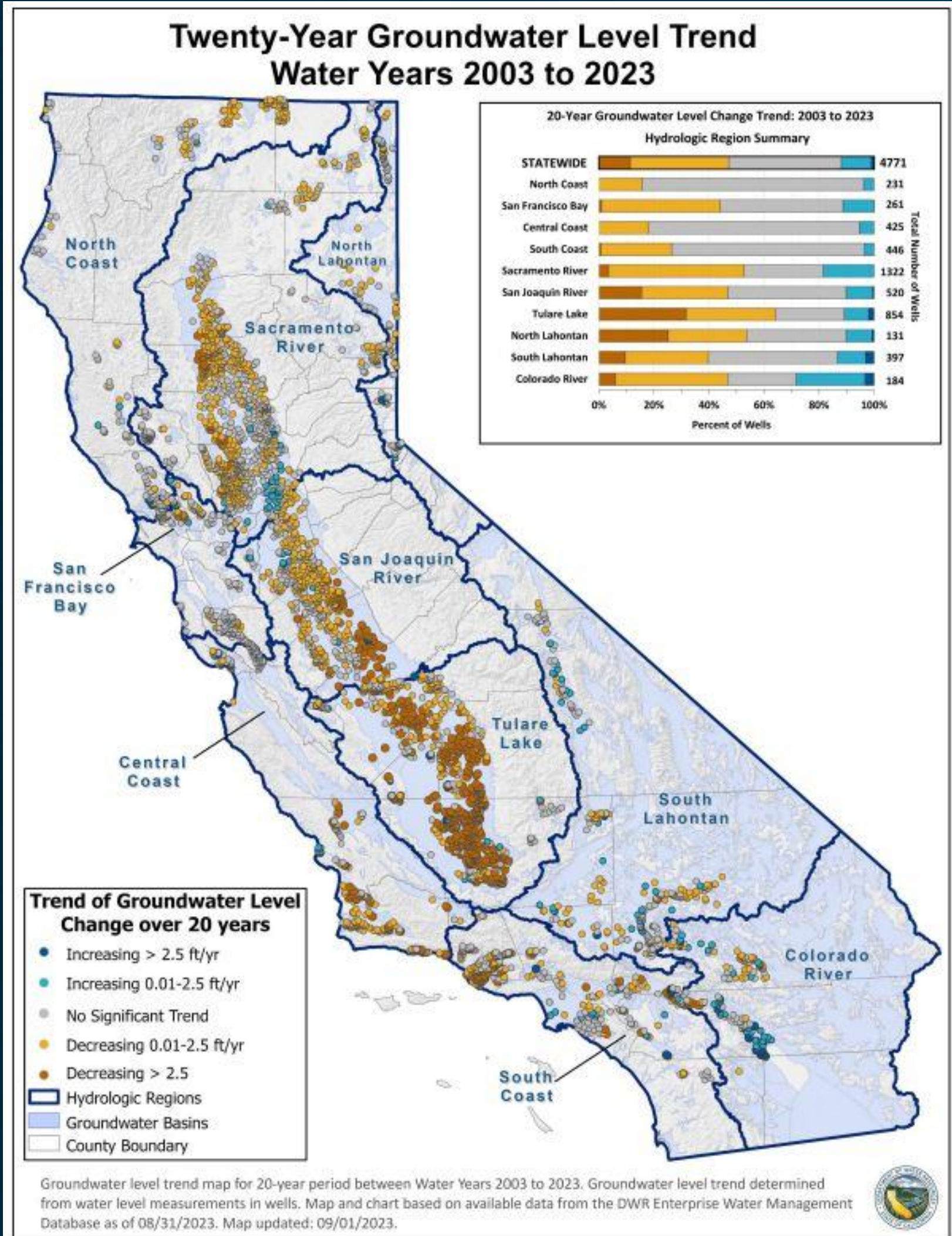
<https://data.cnra.ca.gov/dataset/continuous-groundwater-level-measurements>

**NEW!**

**CALIFORNIA'S  
GROUNDWATER CONDITIONS  
SEMI-ANNUAL UPDATE:  
OCTOBER 2023**

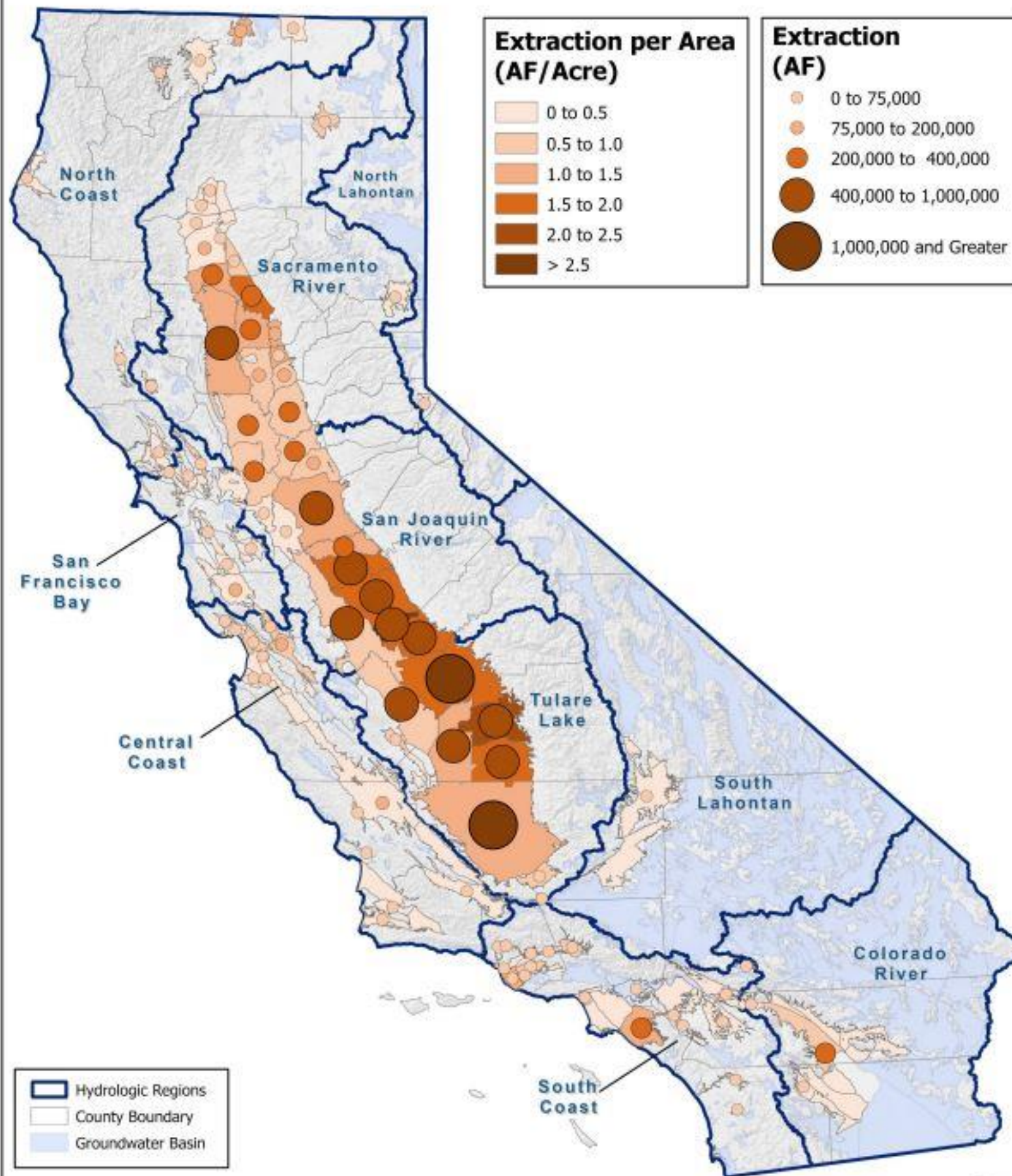
# California's Groundwater Conditions Semi-Annual Update: October 2023

[https://data.cnra.ca.gov/dataset/ae160cf2-51d8-450d-82cc-2708e63ccd95/resource/7a9f6a69-0f43-474c-b9a5-b8b6f3e5ed48/download/final\\_draft\\_oct\\_2023\\_semi\\_annual\\_groundwater\\_conditions\\_report.pdf](https://data.cnra.ca.gov/dataset/ae160cf2-51d8-450d-82cc-2708e63ccd95/resource/7a9f6a69-0f43-474c-b9a5-b8b6f3e5ed48/download/final_draft_oct_2023_semi_annual_groundwater_conditions_report.pdf)



California's  
Groundwater  
Conditions  
Semi-Annual  
Update:  
October 2023

## Groundwater Extraction Reported by Basin for Water Year 2022

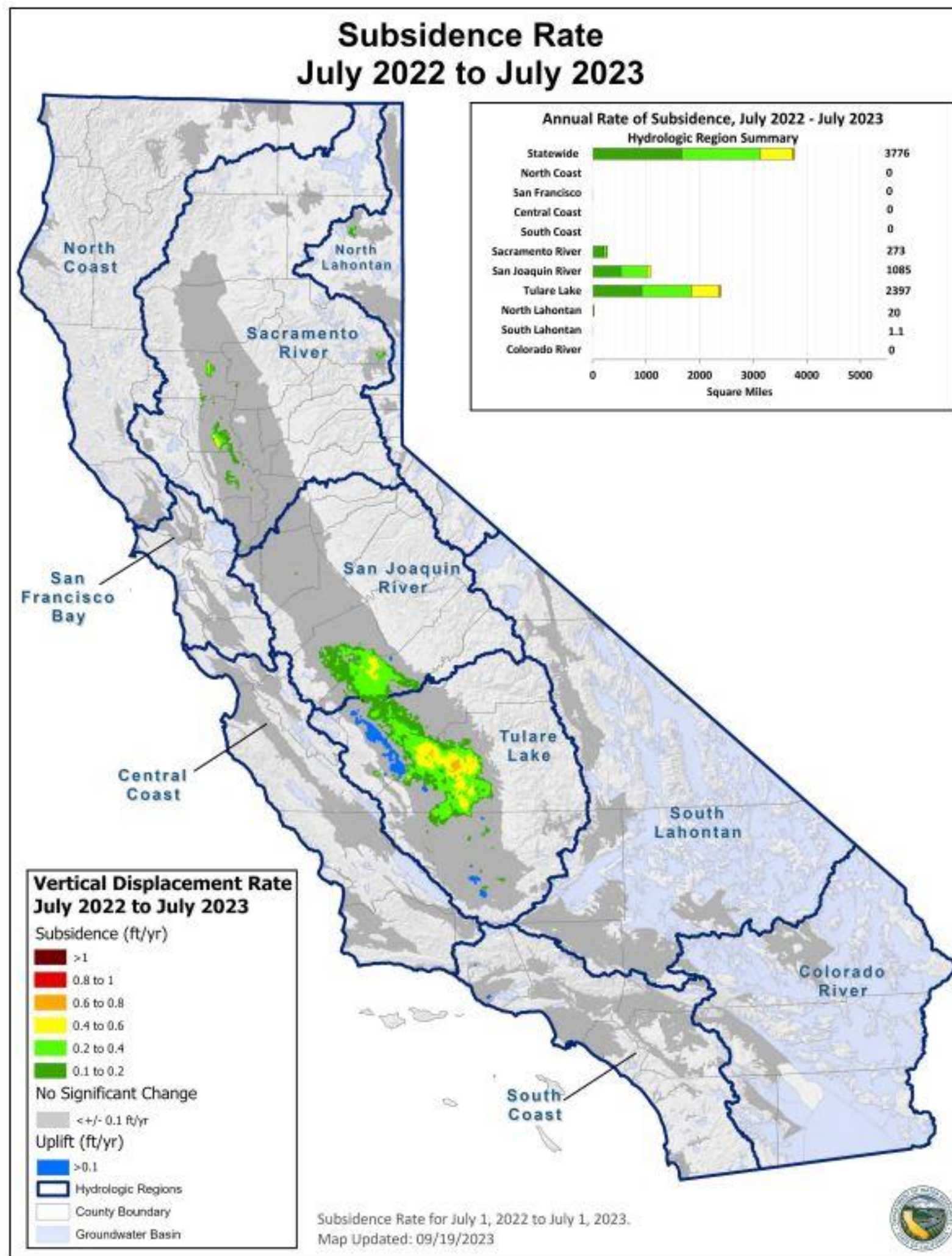


Groundwater Extraction for one-year period for Water Year 2022 (October 1, 2021 to September 30, 2022).  
Map based on data submitted through 2022 GSP/Alternative Annual Reports.  
Map Updated: 09/14/2023.



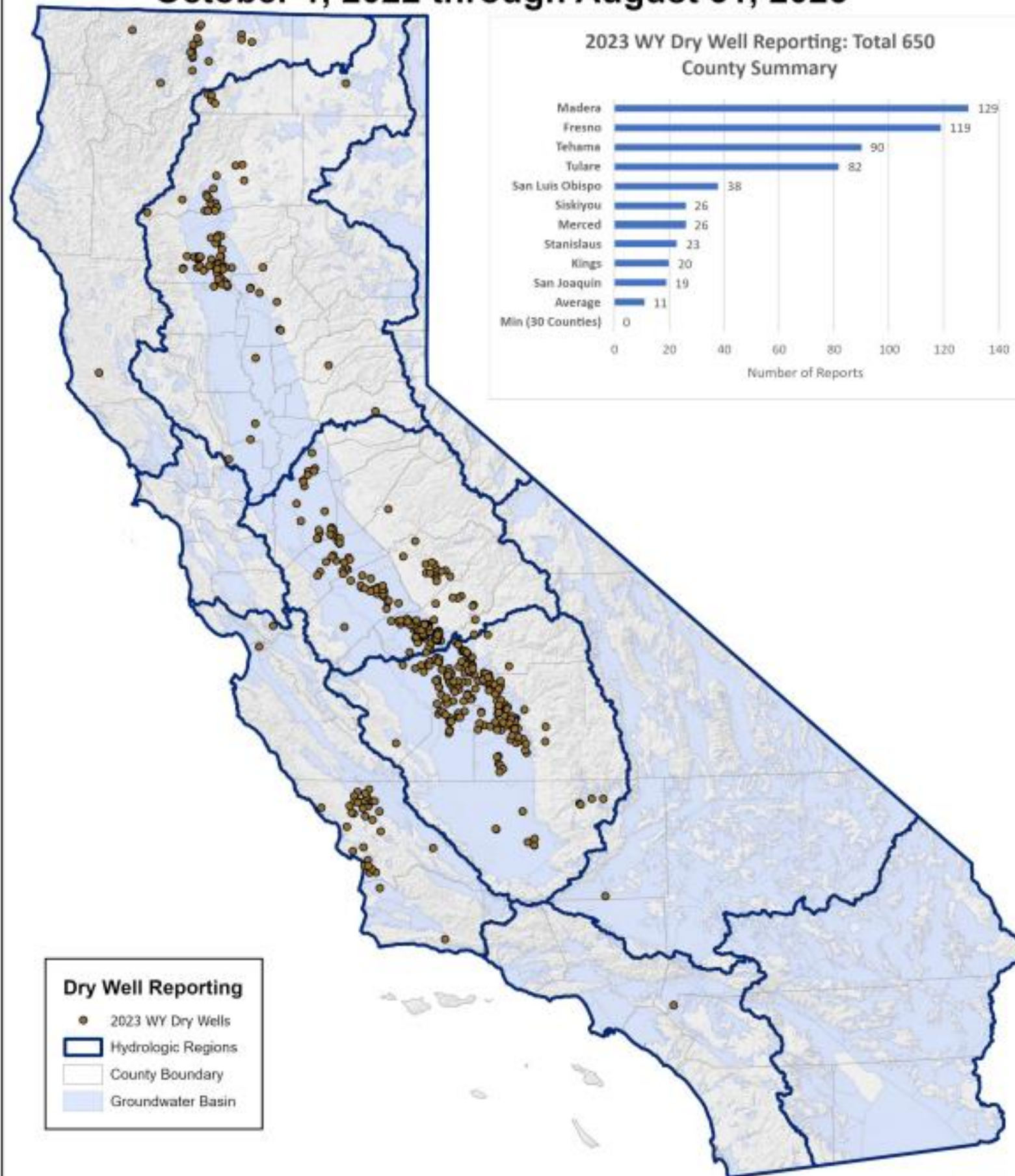
# California's Groundwater Conditions Semi-Annual Update: October 2023

InSAR data processing for 2022-2023 will be completed early 2024



# California's Groundwater Conditions Semi-Annual Update: October 2023

## Dry Well Reporting October 1, 2022 through August 31, 2023



Dry well reporting map for one-year period between October 1, 2022 and August 31, 2023. Map and chart based on available data from the Household Water Supply Shortage Reporting System database as of 08/31/2023. Map Updated: 09/01/2023



***Groundwater is a renewable resource  
and CAN be managed sustainably***



<http://water.ca.gov/groundwater/>

<https://sgma.water.ca.gov/CalGWLIVE/>

<https://data.cnra.ca.gov/dataset/california-s-groundwater-semi-annual-conditions-updates>