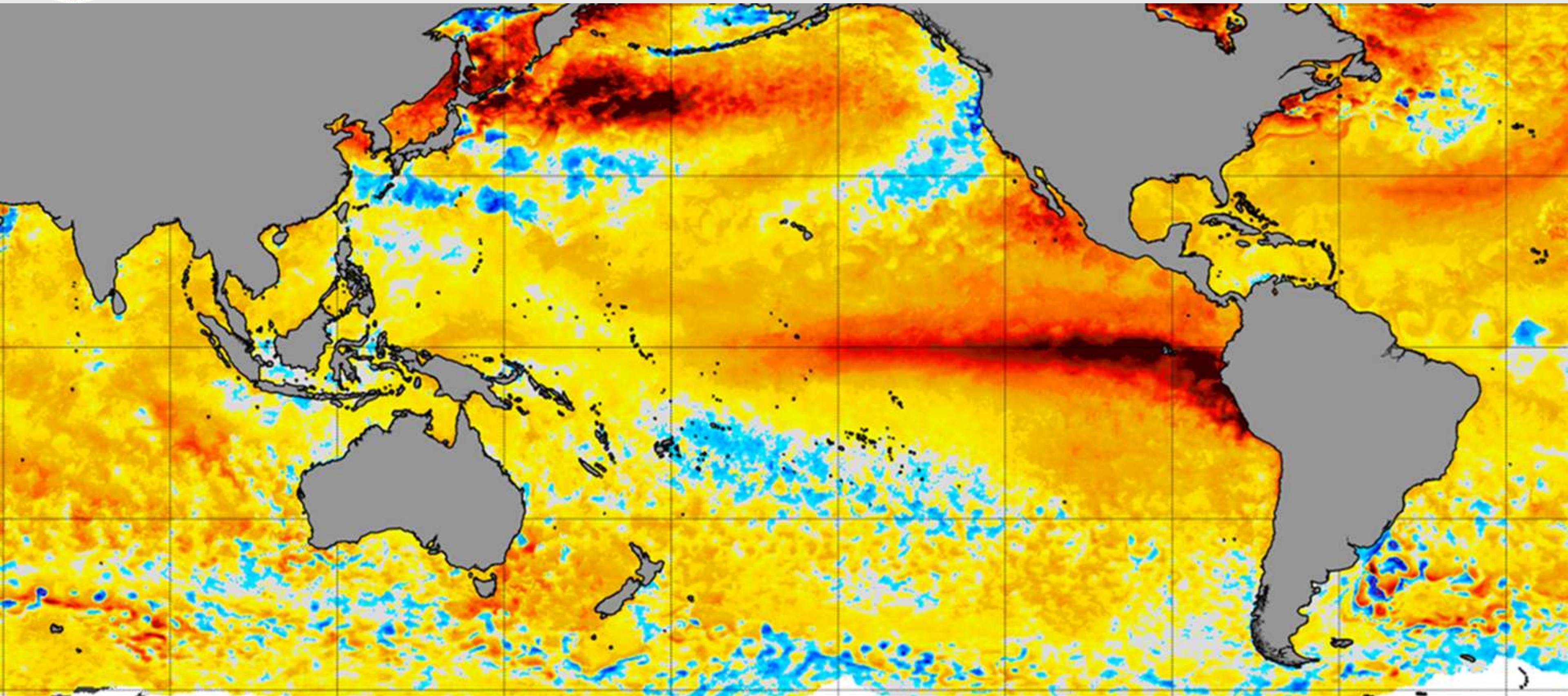




ENSO Outlook Briefing - CEAC Meeting

August 21, 2026
9:00 AM PDT

Scott Rowe | Senior Service Hydrologist | NWS Sacramento



National Oceanic and
Atmospheric Administration
U.S. Department of Commerce

National Weather Service
Sacramento, CA



What is El Niño?

August 21, 2026
9:00 AM PDT

El Niño is the warm phase of the coupled climate pattern between the ocean and atmosphere called **El Niño-Southern Oscillation (ENSO)** in the tropical Pacific Ocean.

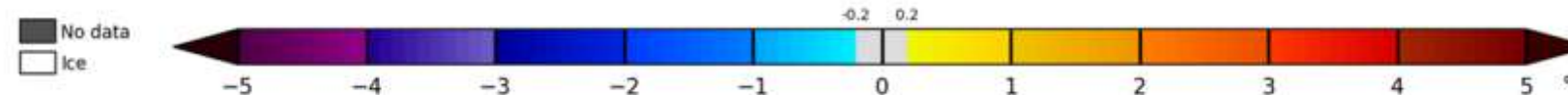
How is it quantified?

Sea-Surface Temperature Anomalies in this region

Niño 3.4 Region

El Niño technically occurs when this SST anomaly exceeds a 3-month average of $+0.5^{\circ}\text{C}$ for 5 consecutive monthly periods.

NOAA SST Anomalies



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How are the Strengths of El Niño Determined?

August 21, 2026
9:00 AM PDT

When the SST's peak anomaly exceeds...

$\geq +0.5^{\circ}\text{C}$

Weak El Niño

$\geq +1.0^{\circ}\text{C}$

Moderate El Niño

$\geq +1.5^{\circ}\text{C}$

Strong El Niño

$\geq +2.0^{\circ}\text{C}$

Very Strong El Niño

We are here as of mid-August

8/17 Weekly SST Anomaly = 1.8°C

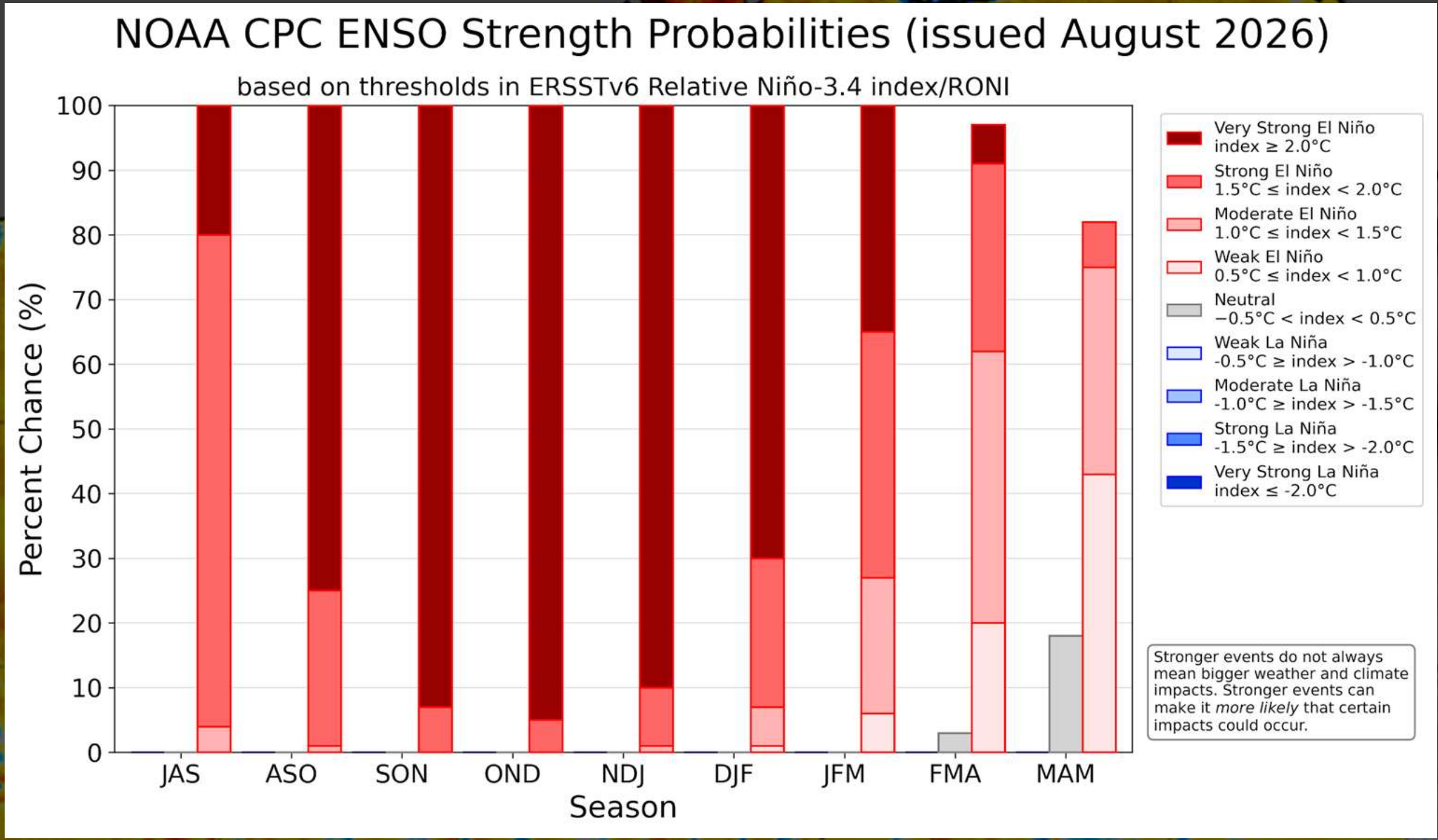
We will be here soon

NOAA SST Anomalies



Probability of Peak El Niño Strength

August 21, 2026
9:00 AM PDT



Weak El Niño
>99%

Moderate El Niño
>99%

Strong El Niño
>99%

Very Strong El Niño
>90%

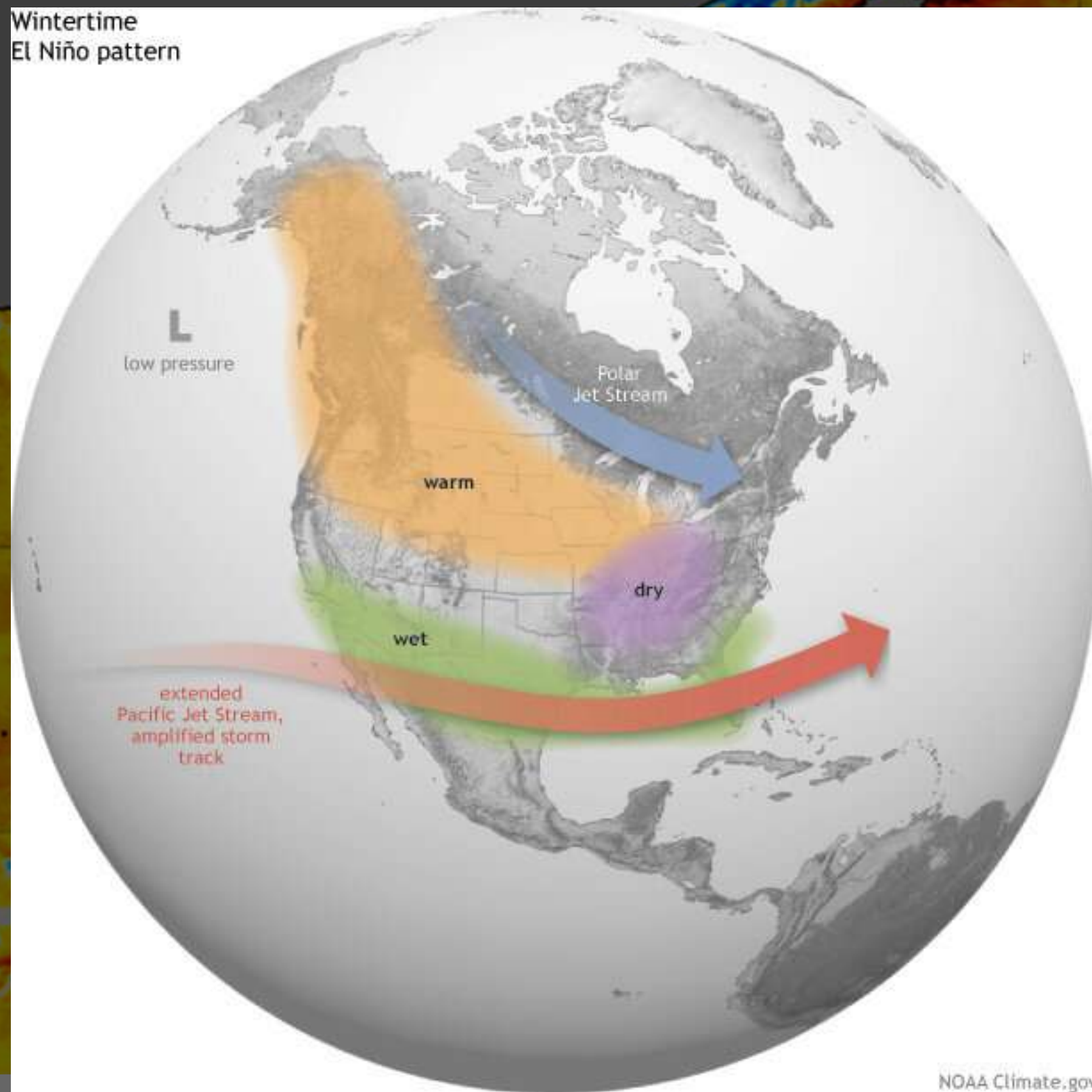
Record-Breaking Strength
69%

NOAA SST Anomalies



“Typical” Conditions in a El Niño

Wintertime
El Niño pattern



NOAA Climate.gov

Favored Wintertime Effects in Northern CA

⚠️ *No two years are alike*

Precip: No Clear Indicator

Temps: Warmer than Normal

Favored Wintertime Effects in Southern CA

⚠️ *No two years are alike*

Precip: Wetter than Normal

Temps: Warmer than Normal

We have documented **ALL** sorts of winters in California during El Niño Years!

NOAA SST Anomalies



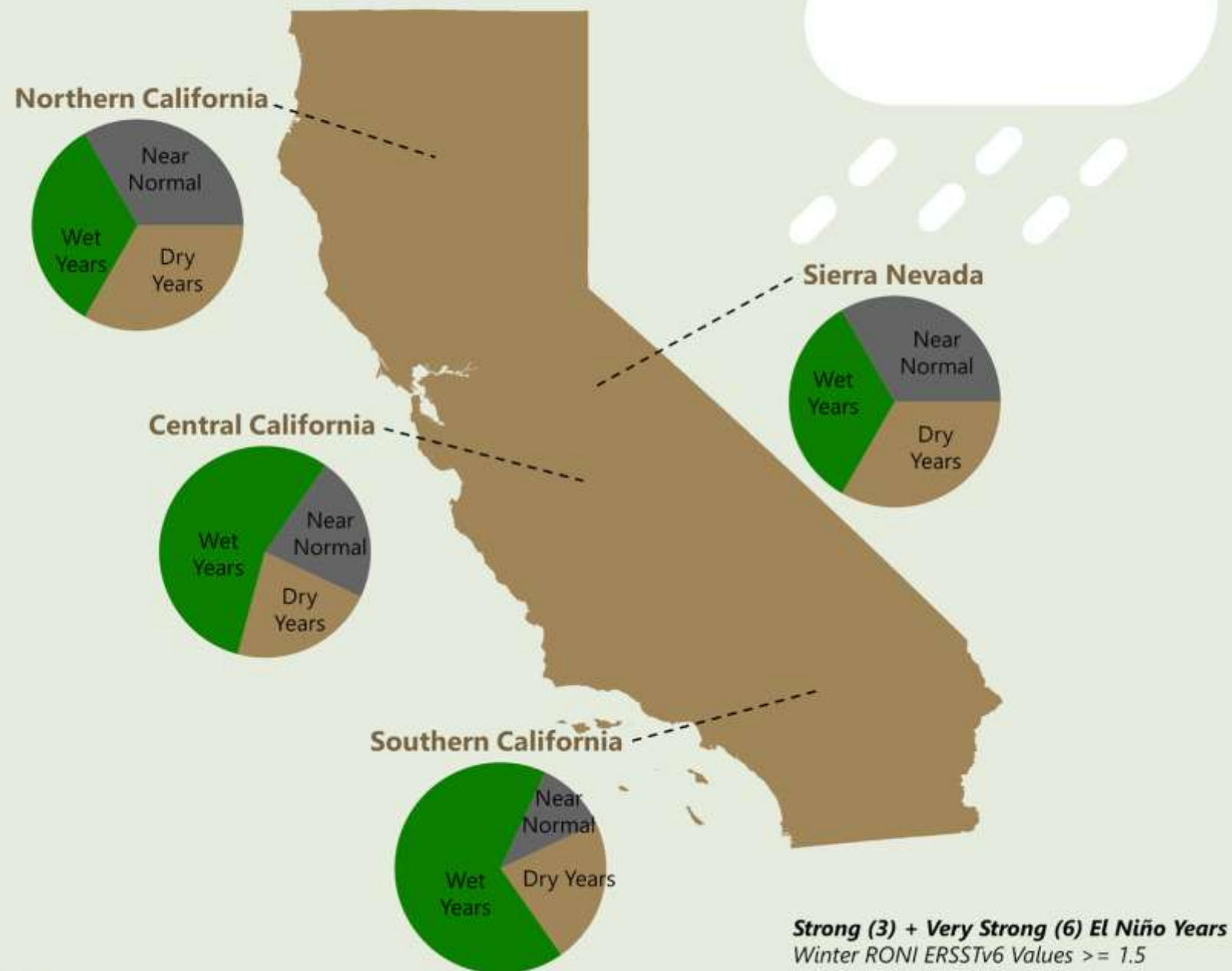


Historical Strong & Very Strong El Niños

August 21, 2026
9:00 AM PDT

Strong & Very Strong El Niños

Past observations do not guarantee a future outcome



Data: PRISM, Oregon State University
Updated: WY2026

NATIONAL WEATHER SERVICE
SACRAMENTO, CA

- There have been **3 Strong** + **6 Very Strong El Niños** since 1950.
- Of those 9, the breakdown has been...
 - Northern CA:
 - 3 Wet
 - 3 Normal
 - 3 Dry
 - Central CA:
 - 5 Wet
 - 2 Normal
 - 2 Dry
 - Sierra Nevada:
 - 3 Wet
 - 3 Normal
 - 3 Dry
 - Southern CA:
 - 6 Wet
 - 1 Normal
 - 2 Dry

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Historical **Very Strong** El Niños

August 21, 2026
9:00 AM PDT

Very Strong El Niños

Past observations do not guarantee a future outcome



Very Strong (6) El Niño Years
Winter RONI ERSSTv6 Values ≥ 2.0

Data: PRISM, Oregon State University
Updated: WY2026

NATIONAL WEATHER SERVICE
SACRAMENTO, CA

- There have been **6 Very Strong El Niños** since 1950.
- Of those 6, the breakdown has been...
 - **Northern CA:**
 - 2 Wet
 - 2 Normal
 - 2 Dry
 - **Central CA:**
 - 3 Wet
 - 2 Normal
 - 1 Dry
 - **Sierra Nevada:**
 - 2 Wet
 - 2 Normal
 - 2 Dry
 - **Southern CA:**
 - 5 Wet
 - 0 Normal
 - 1 Dry

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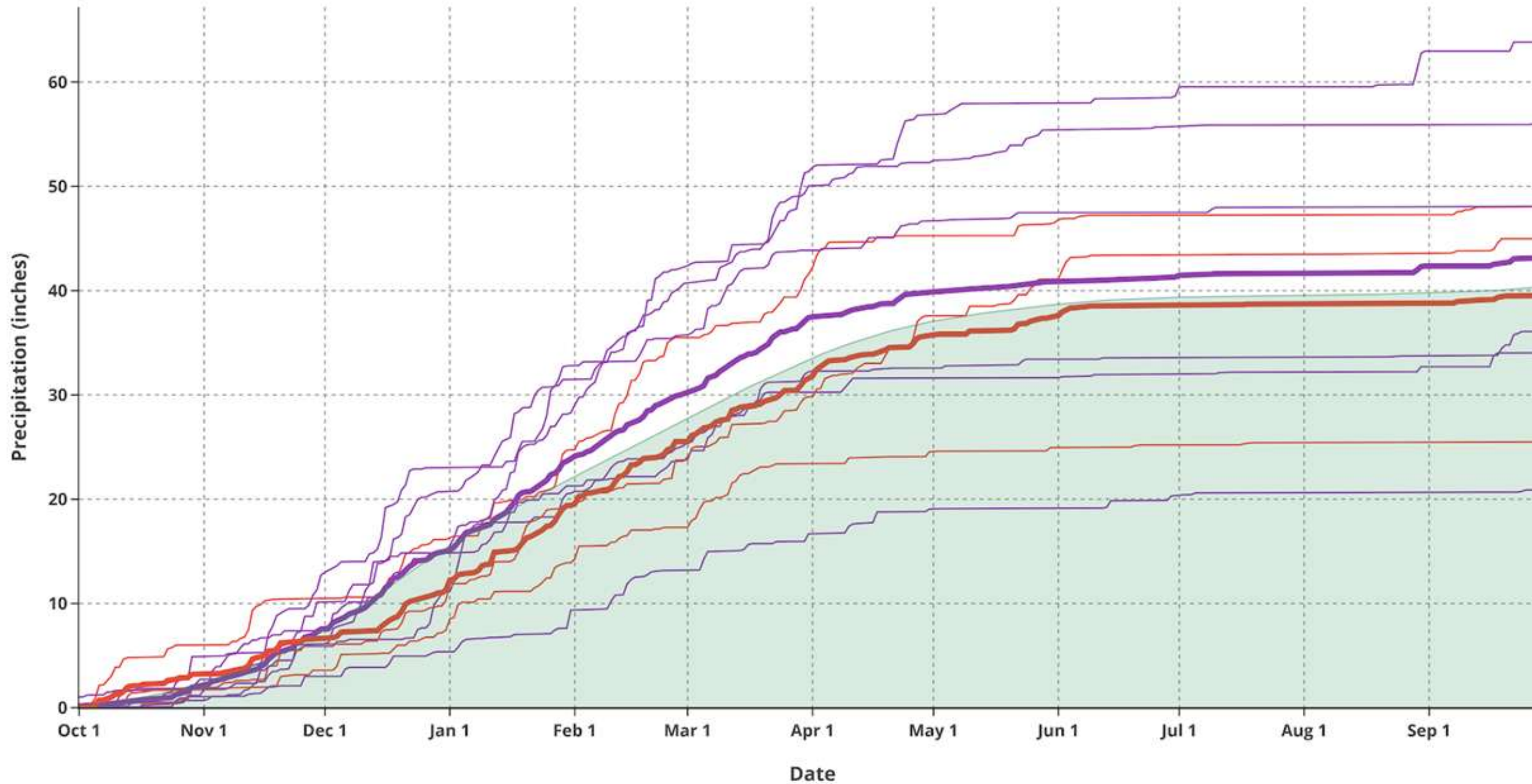


What about for some specific cities?

August 21, 2026
9:00 AM PDT

Eureka Area

Eureka Area (ekathr) — Cumulative Precipitation



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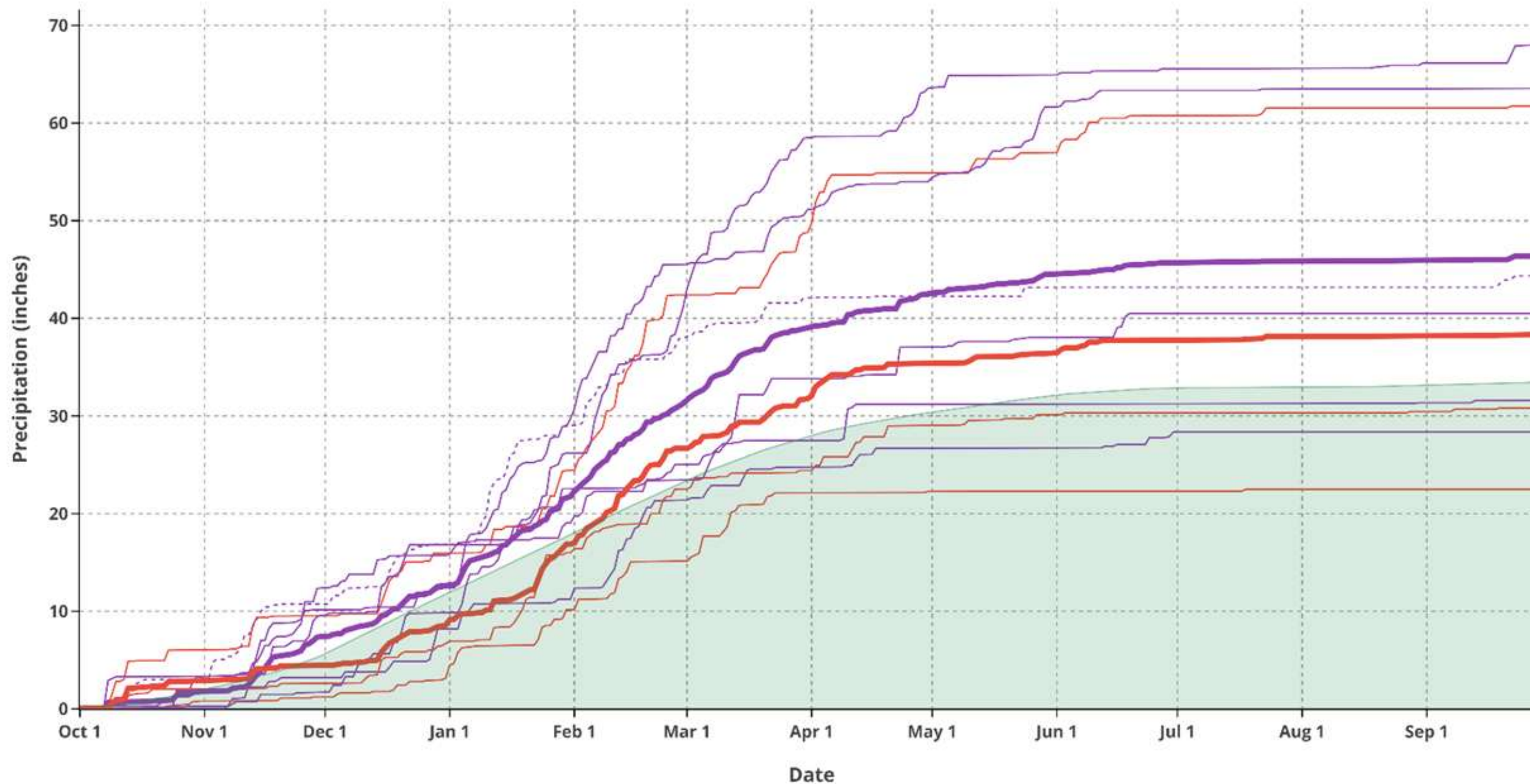


What about for some specific cities?

August 21, 2026
9:00 AM PDT

Redding Area

Redding Area (rddthr) — Cumulative Precipitation



- Very Strong El Nino — Avg (5 yrs)
Mean: 46.41"
- Strong El Nino — Avg (3 yrs)
Mean: 38.34"
- Normal (1991-2020)
33.52"

*Missing data from one Very Strong El Niño year

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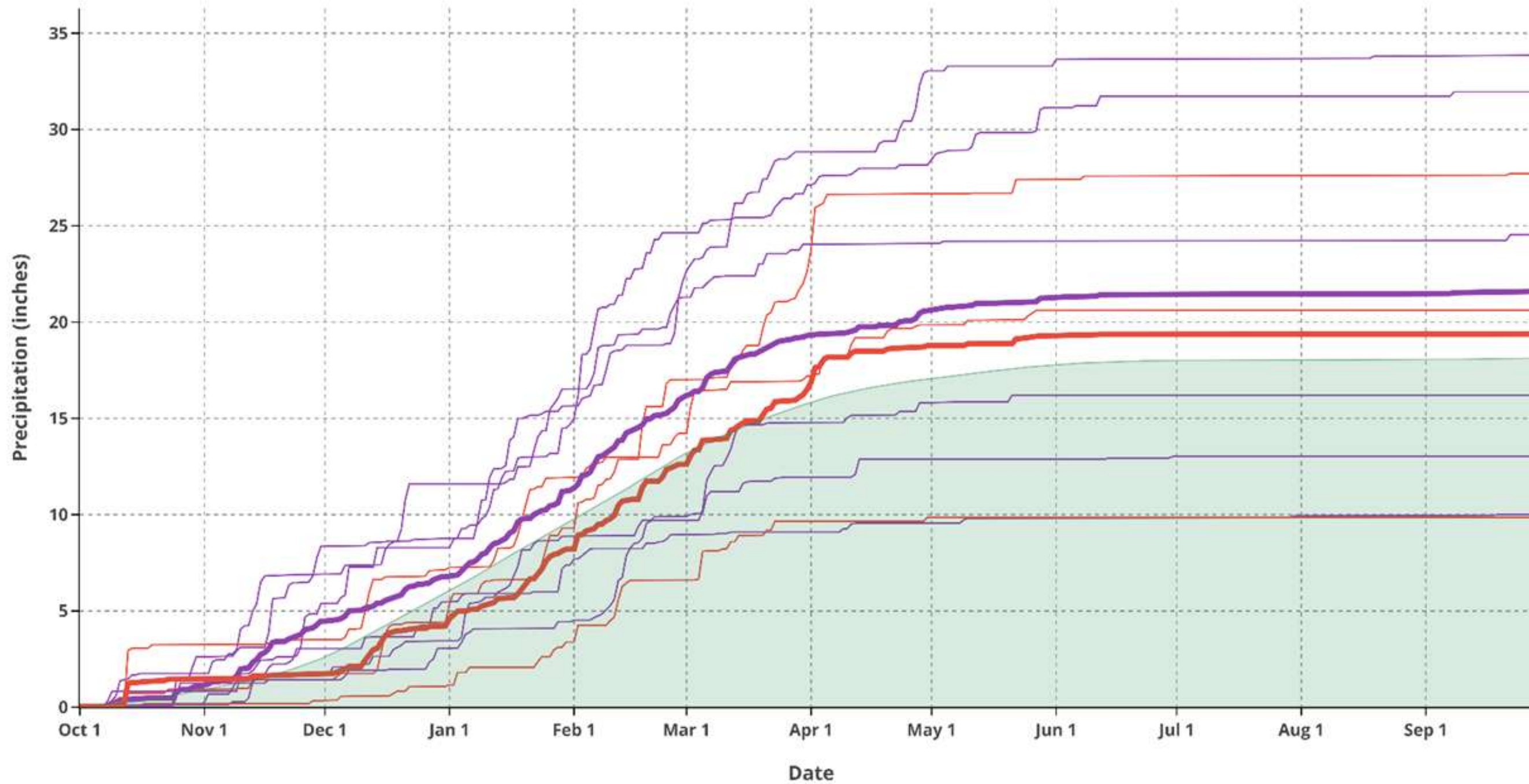


What about for some specific cities?

August 21, 2026
9:00 AM PDT

Sacramento Area

Sacramento Area (sacthr) — Cumulative Precipitation



2016

Last Very Strong El Niño

Very Strong El Nino — Avg (6 yrs)
Mean: 21.69"

Strong El Nino — Avg (3 yrs)
Mean: 19.39"

Normal (1991-2020)
18.14"

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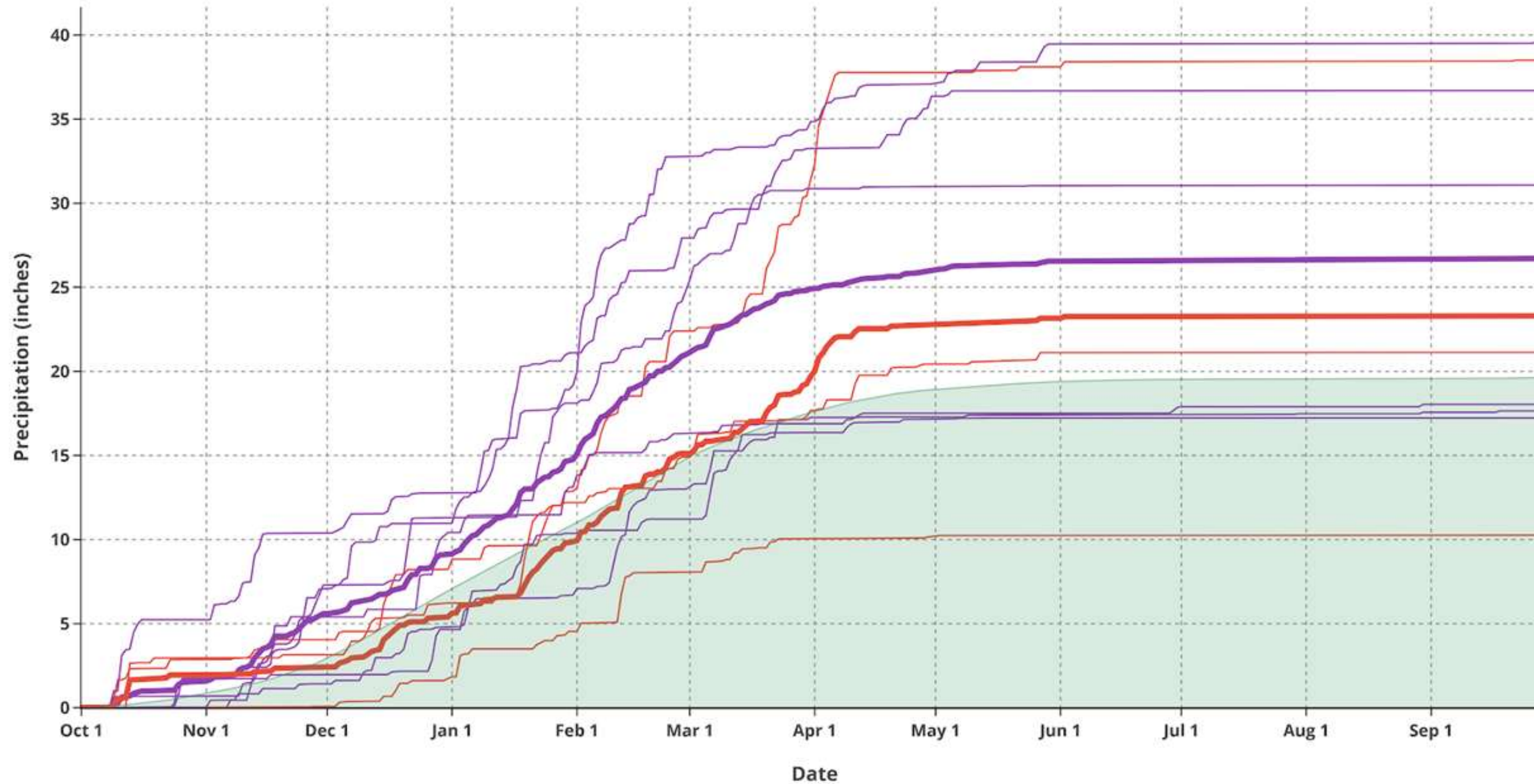


What about for some specific cities?

August 21, 2026
9:00 AM PDT

San Francisco Airport

SAN FRANCISCO INTERNATIONAL AP (sfo) — Cumulative Precipitation



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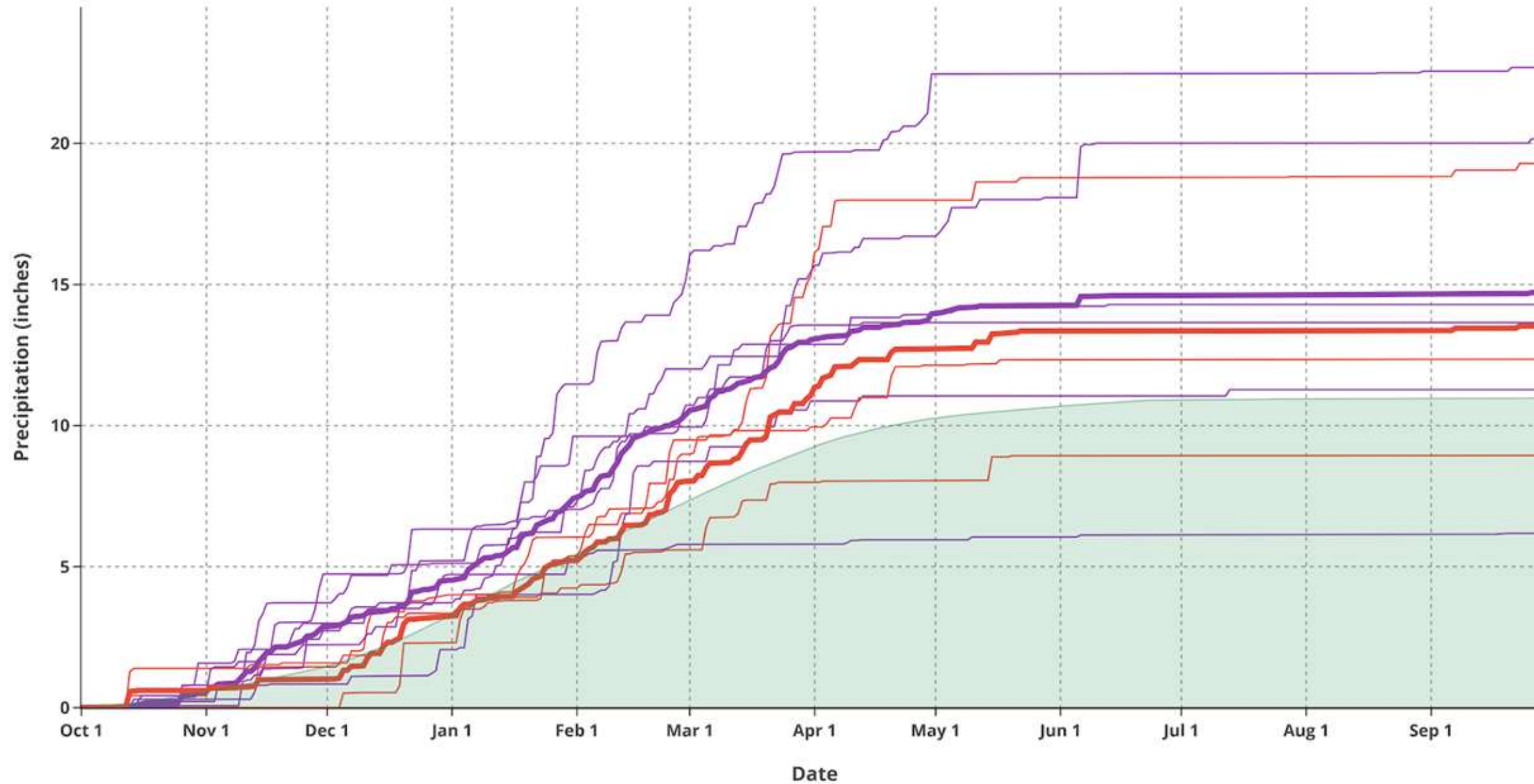


What about for some specific cities?

August 21, 2026
9:00 AM PDT

Fresno Area

Fresno Area (fatthr) — Cumulative Precipitation



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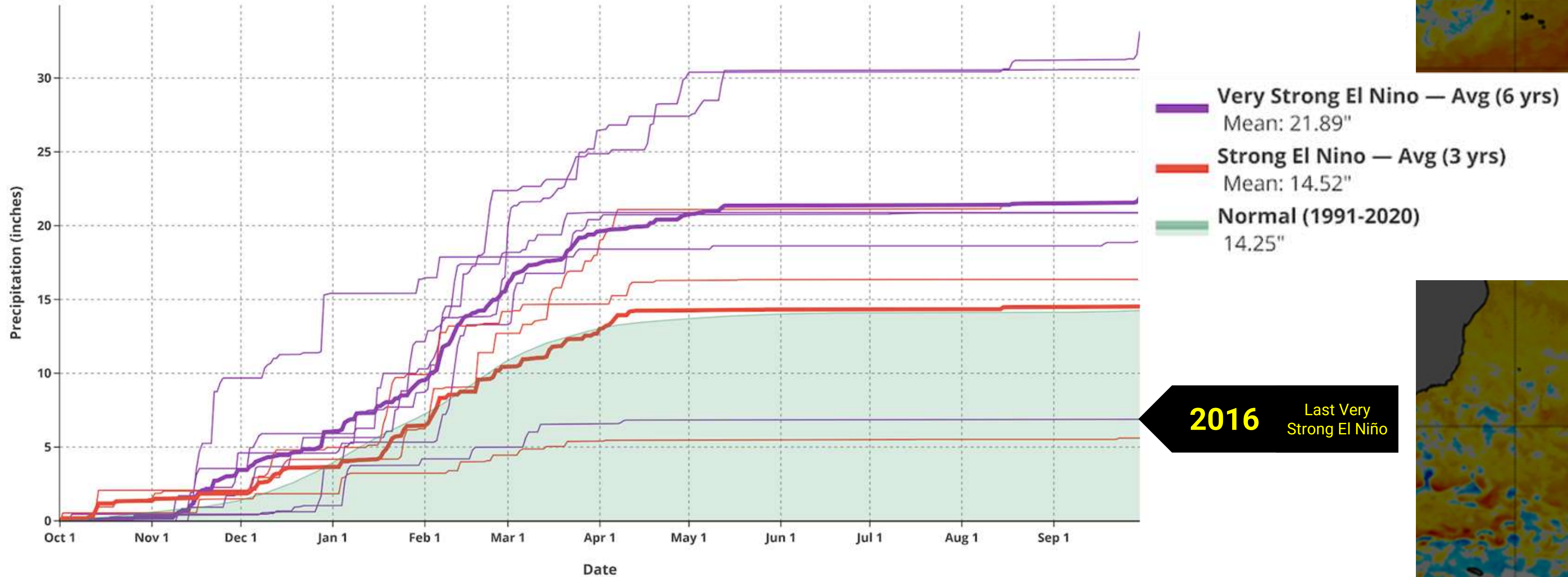


What about for some specific cities?

August 21, 2026
9:00 AM PDT

Los Angeles Downtown Area

Los Angeles Downtown Area (cqtthr) — Cumulative Precipitation



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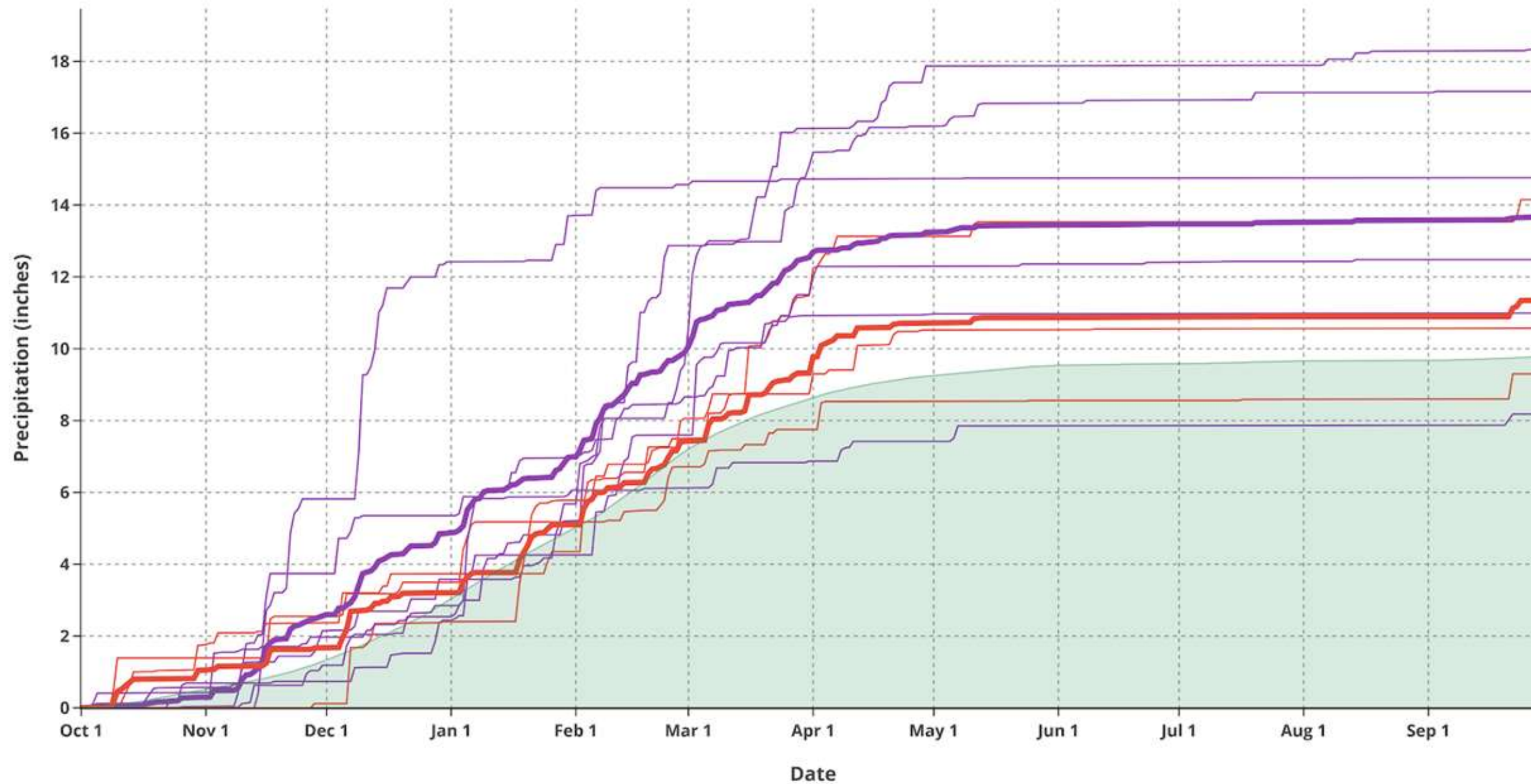


What about for some specific cities?

August 21, 2026
9:00 AM PDT

San Diego Area

San Diego Area (santhr) — Cumulative Precipitation



2016 Last Very Strong El Niño

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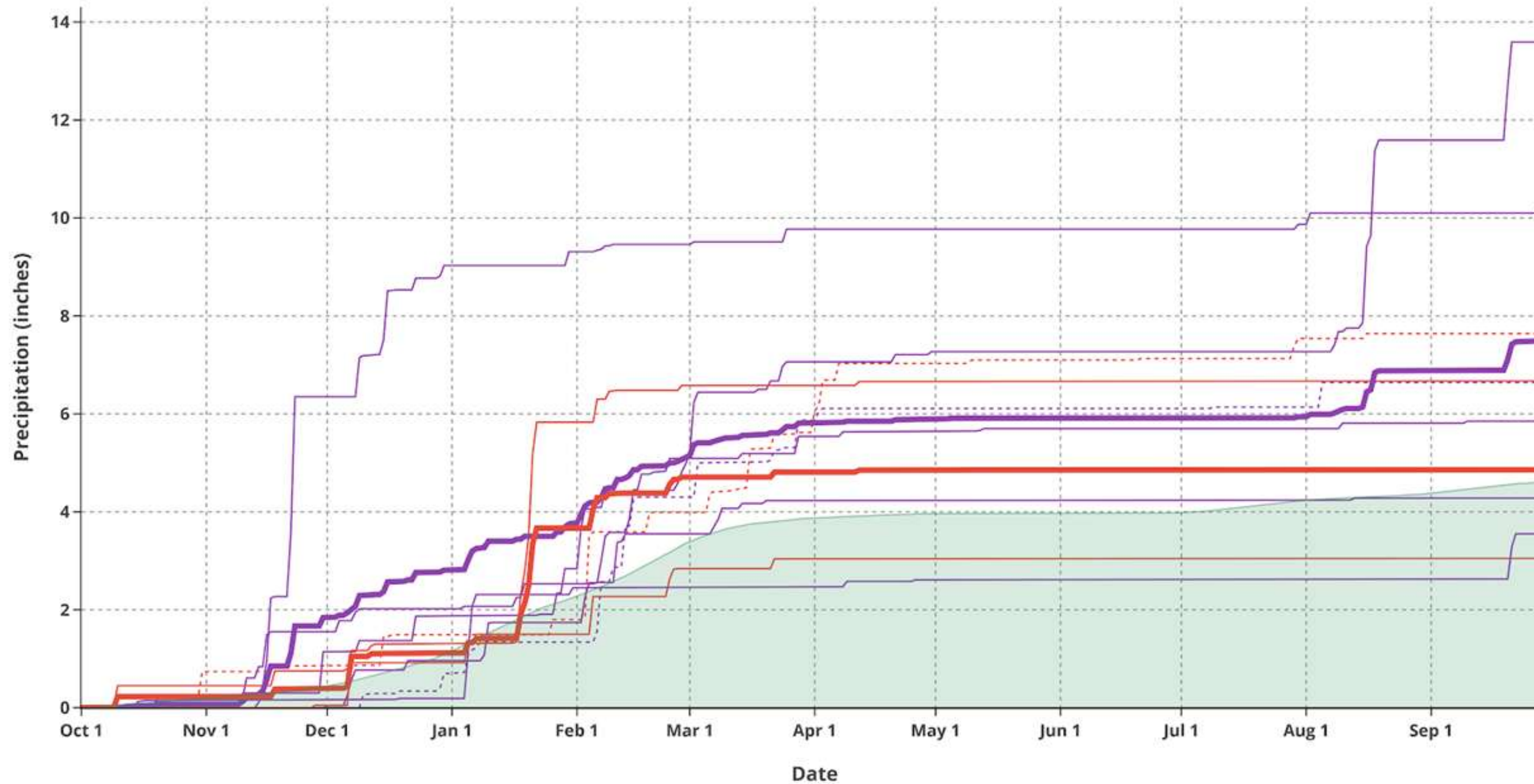


What about for some specific cities?

August 21, 2026
9:00 AM PDT

Palm Springs Area

Palm Springs Area (pspthr) — Cumulative Precipitation



*Missing data from one Very Strong El Niño year add one Strong El Niño year

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Sooooo ... What Do We Know?

August 21, 2026
9:00 AM PDT

- ✓ El Niño is already here.
- ✓ El Niño will be **strong** or **very strong**.
- ✓ El Niño historically results in an active Eastern Pacific tropical activity.
e.g., CA Impact: 2023 Hurricane Hilary
- ✓ **Southern California:**
Strong or **Very Strong** El Niños tend to favor *wetter than normal conditions*.
- ✓ **Northern California:**
Precipitation predictability is less certain.
- ✓ Individual storms define a season for a community.
- ✓ We are closing out the Water Year with nearly all the major reservoirs in good shape.

NOAA SST Anomalies



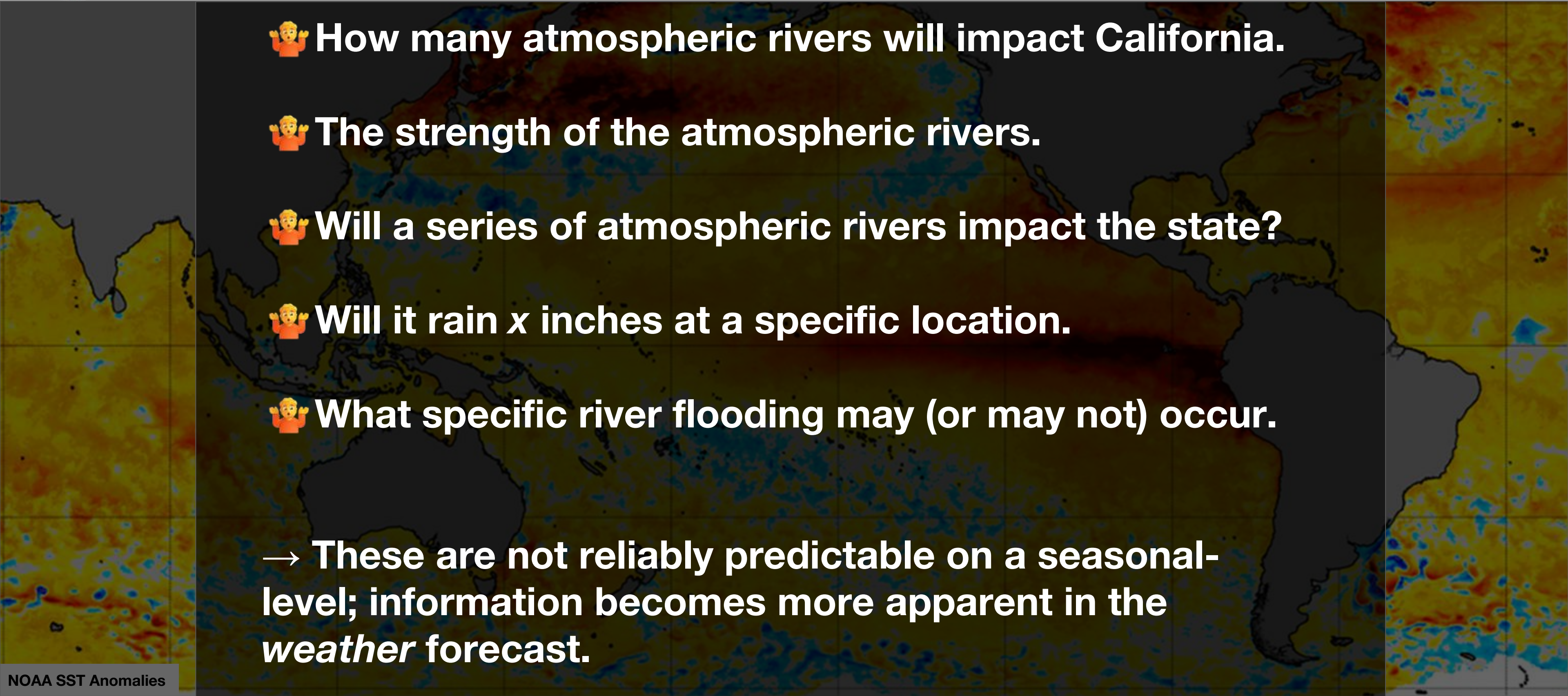
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Sooooo ... What Don't We Know?

August 21, 2026
9:00 AM PDT

- 
- 👉 How many atmospheric rivers will impact California.
- 👉 The strength of the atmospheric rivers.
- 👉 Will a series of atmospheric rivers impact the state?
- 👉 Will it rain x inches at a specific location.
- 👉 What specific river flooding may (or may not) occur.
- These are not reliably predictable on a seasonal-level; information becomes more apparent in the *weather* forecast.

NOAA SST Anomalies



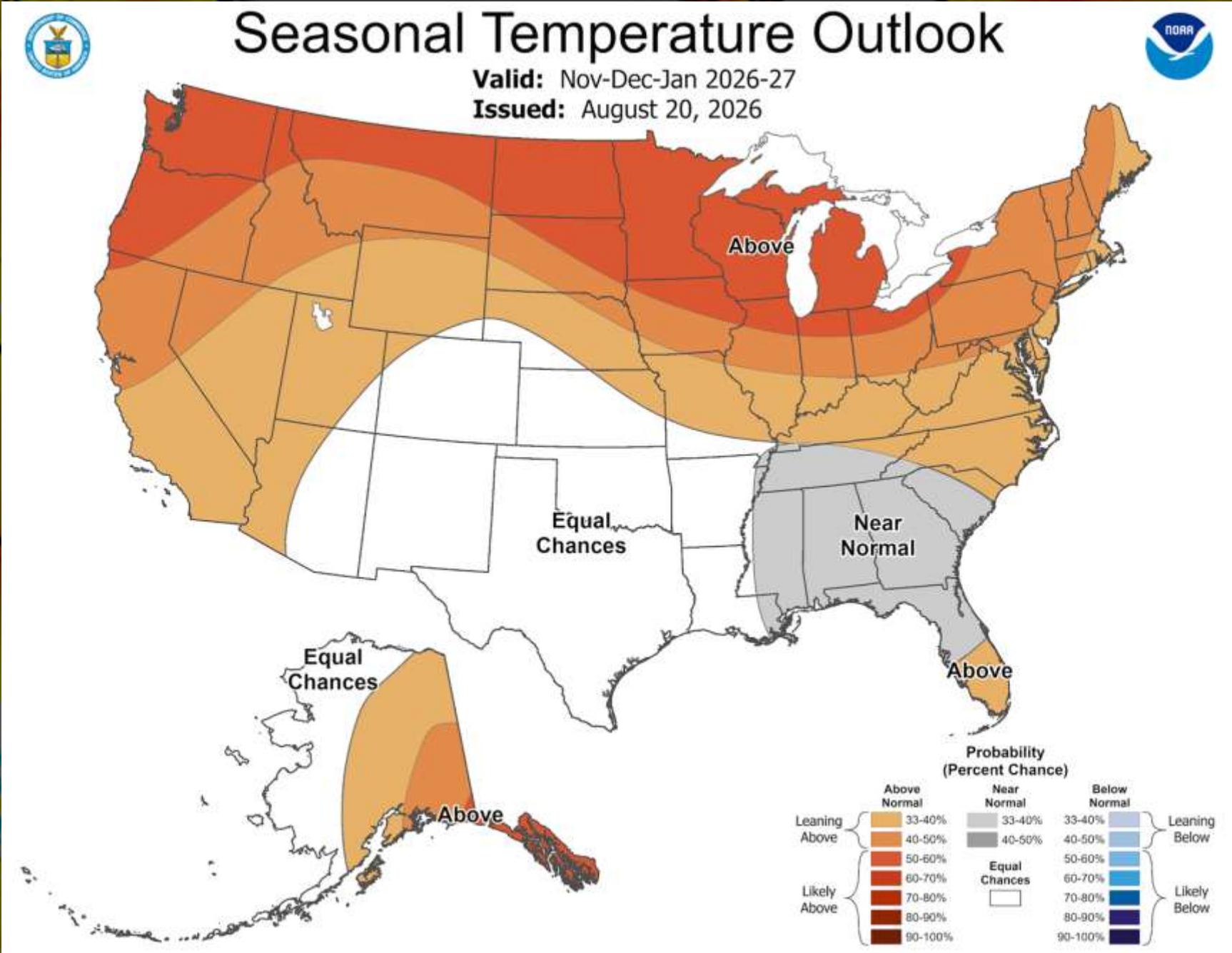
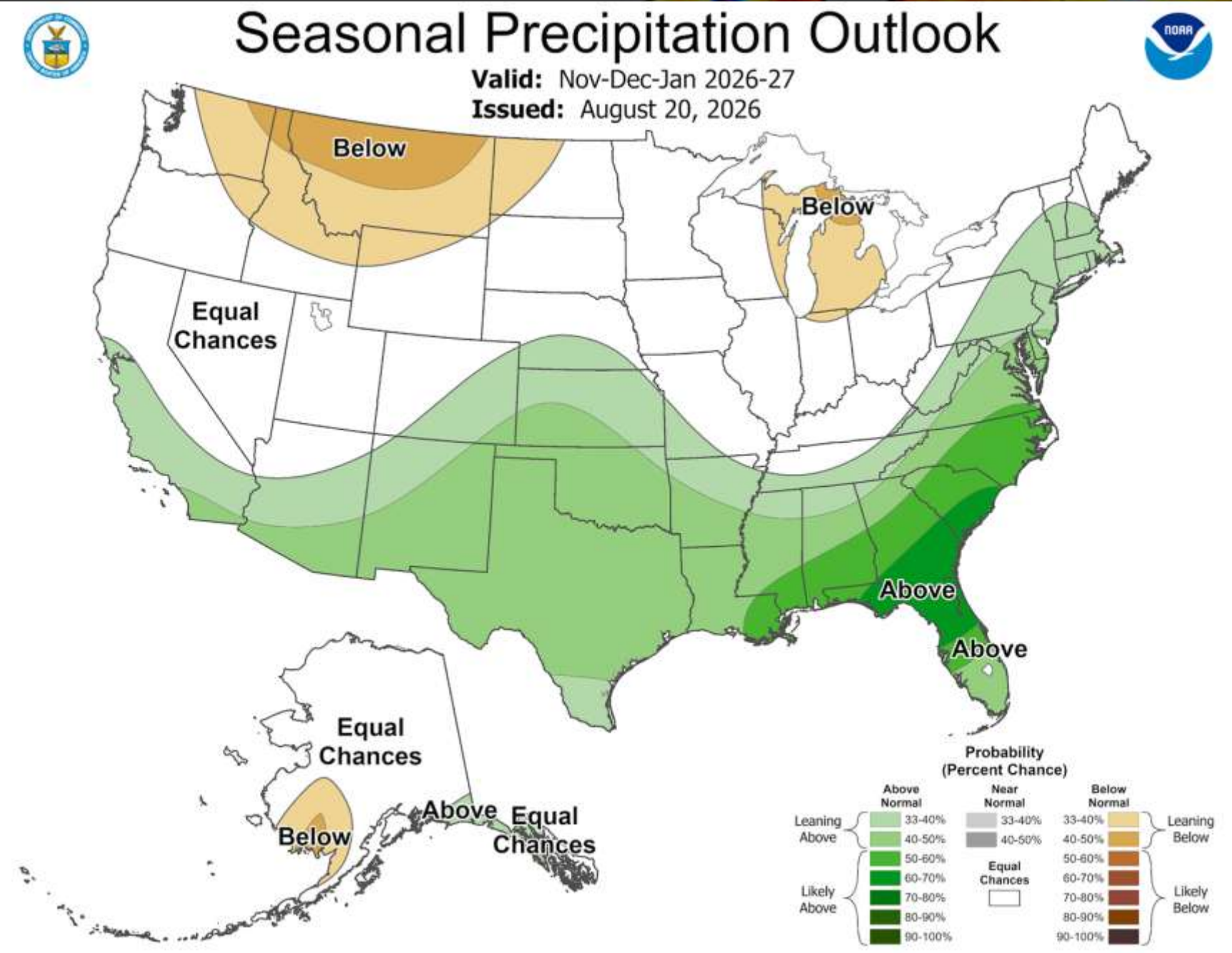
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Official CPC Outlook: Nov-Dec-Jan

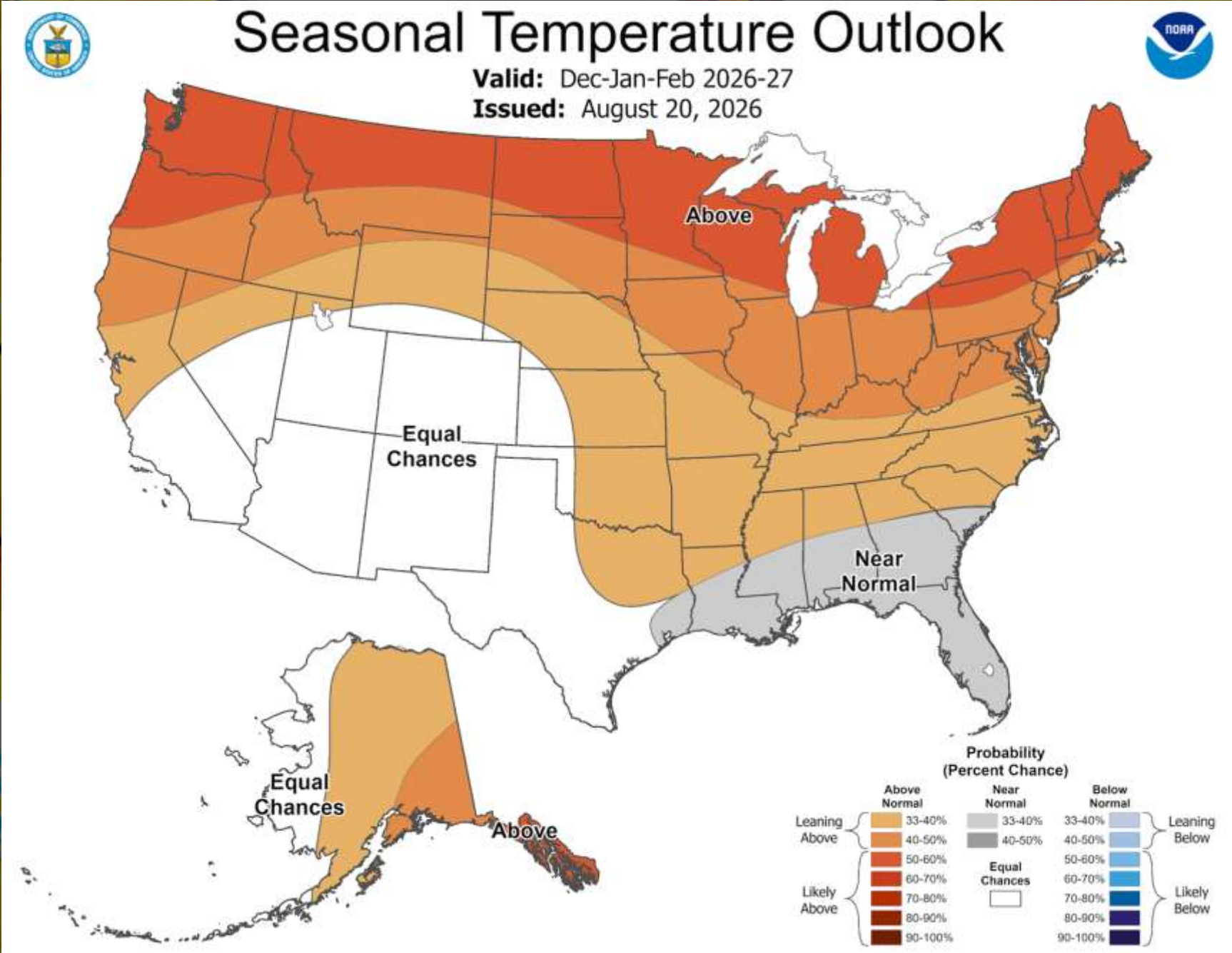
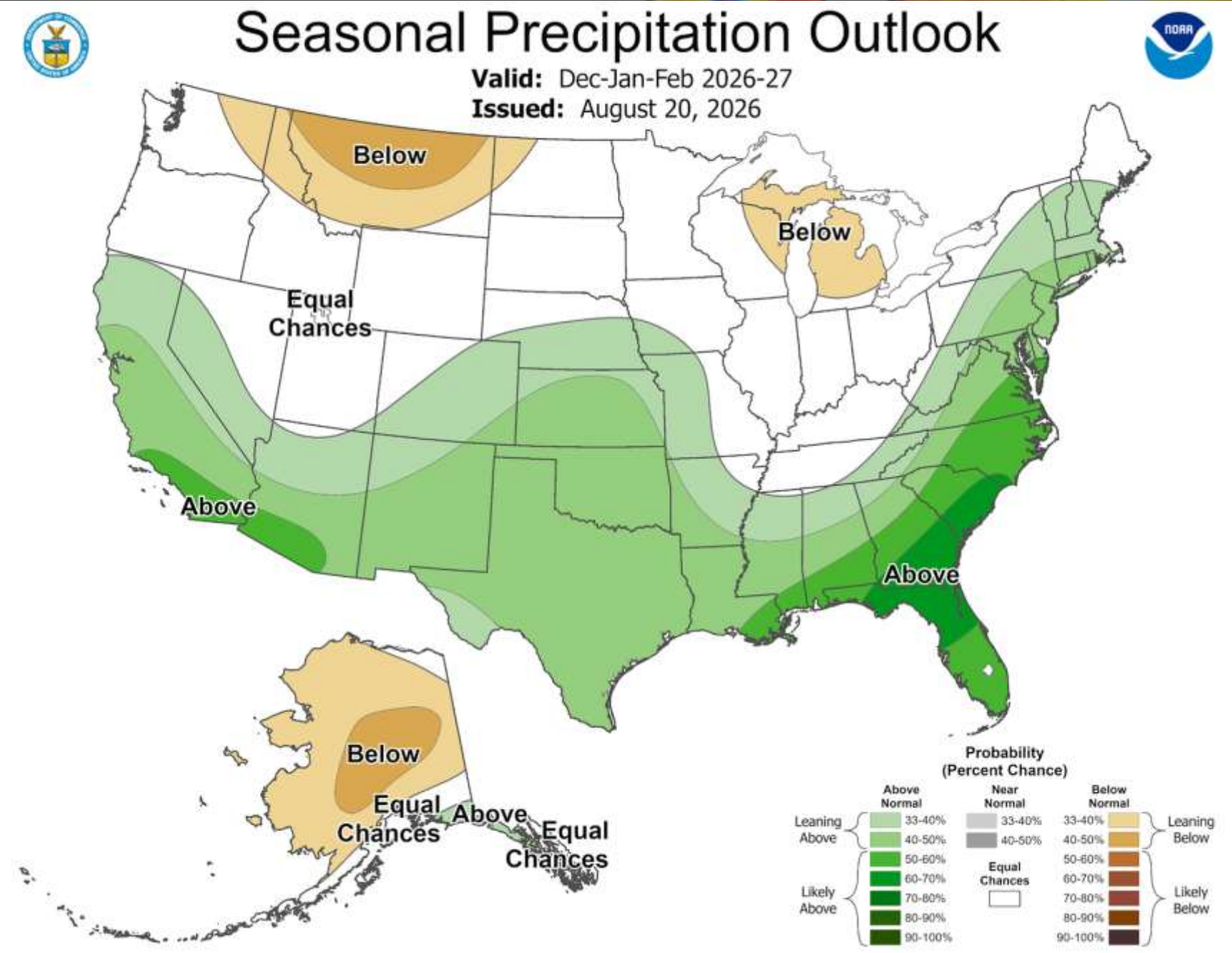
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9:00 AM PDT





Official CPC Outlook: Dec-Jan-Feb

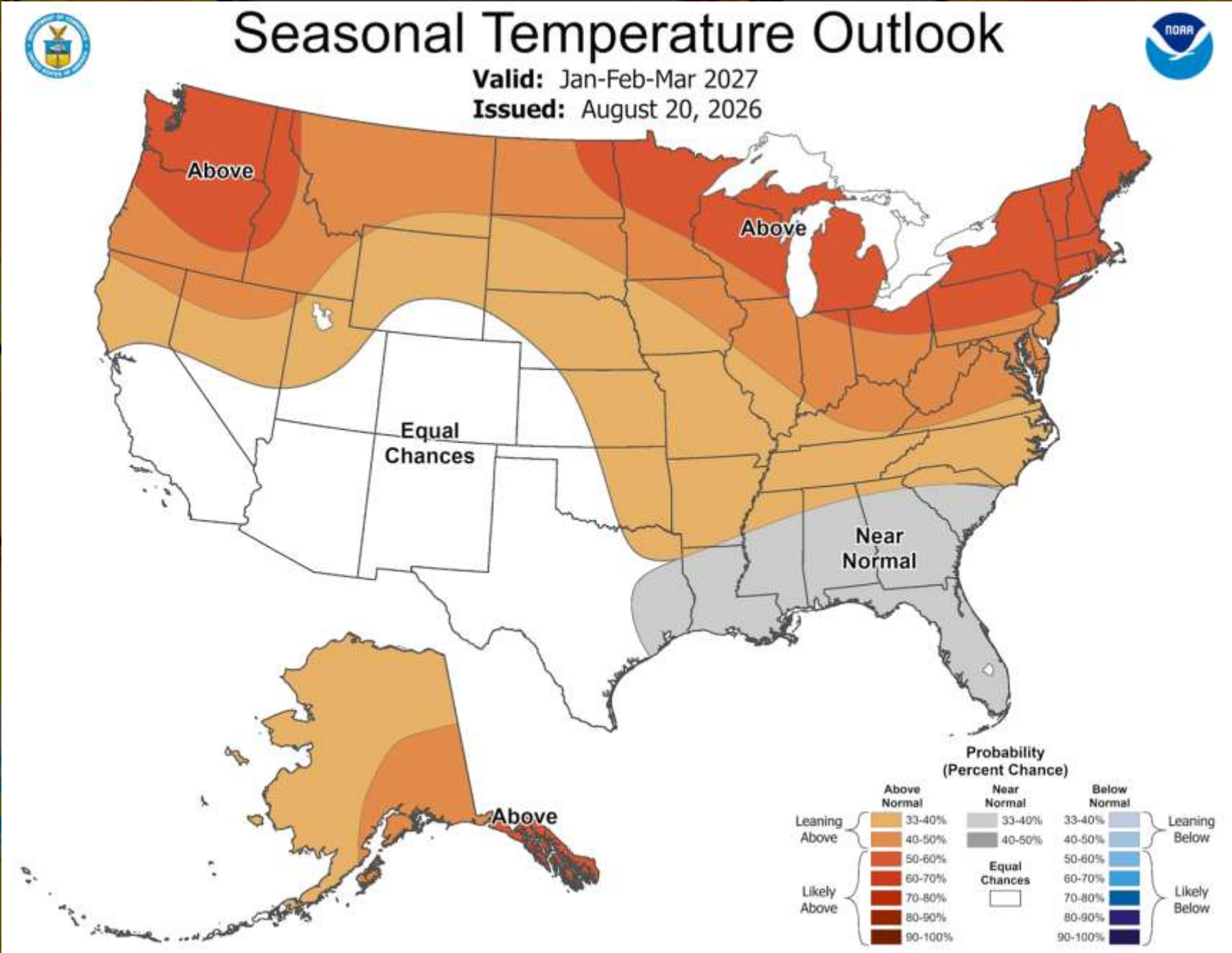
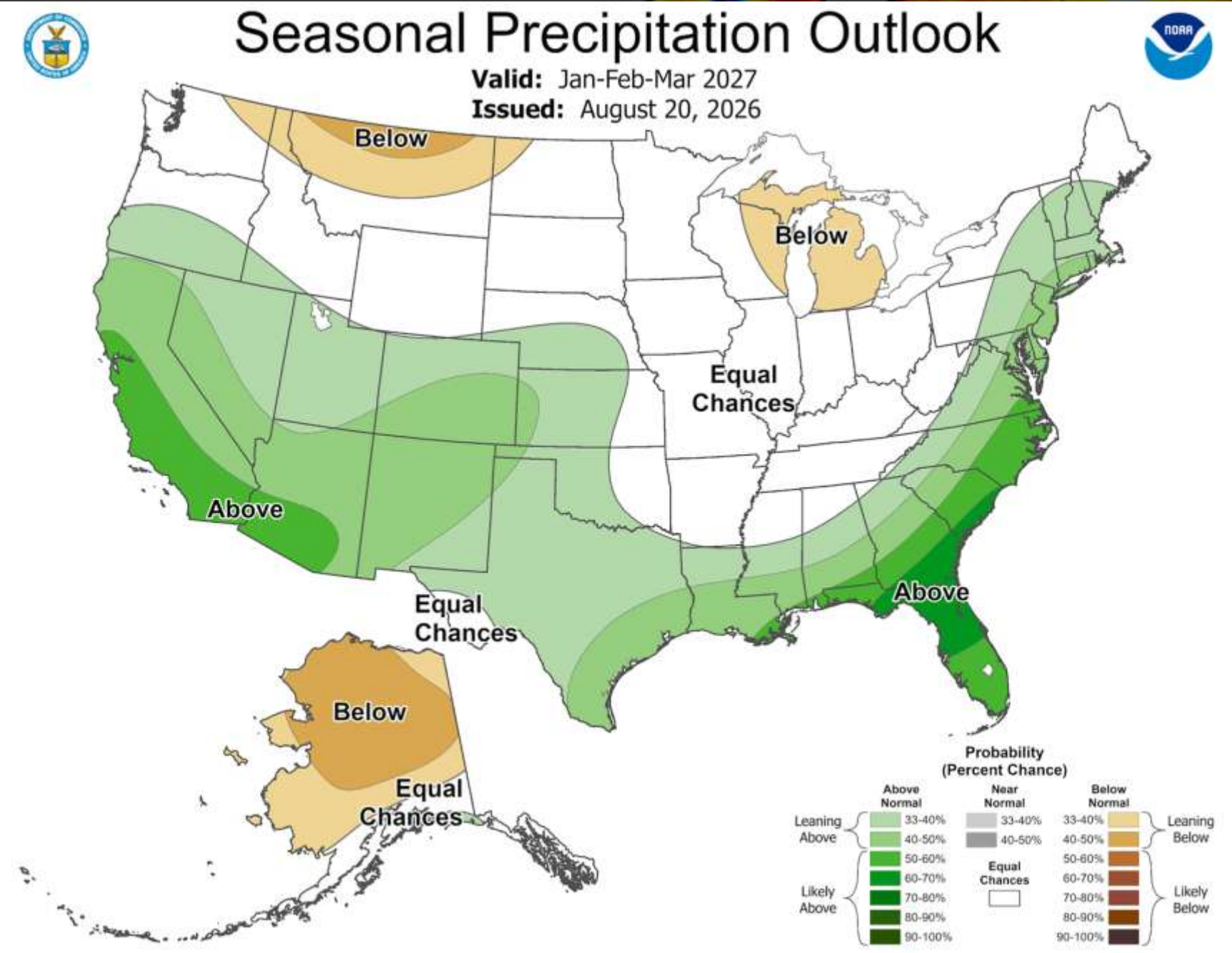
August 21, 2026
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Official CPC Outlook: Jan-Feb-Mar

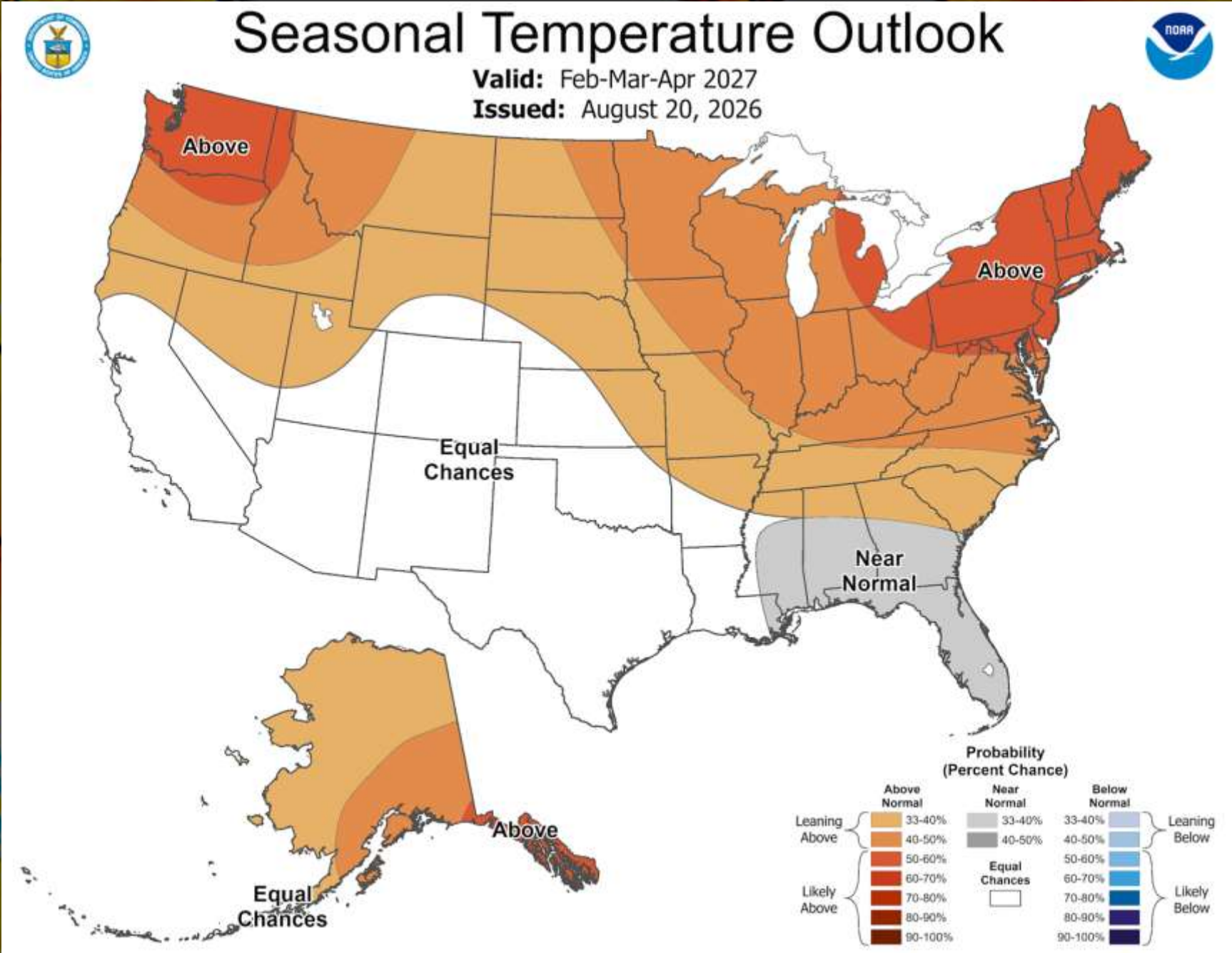
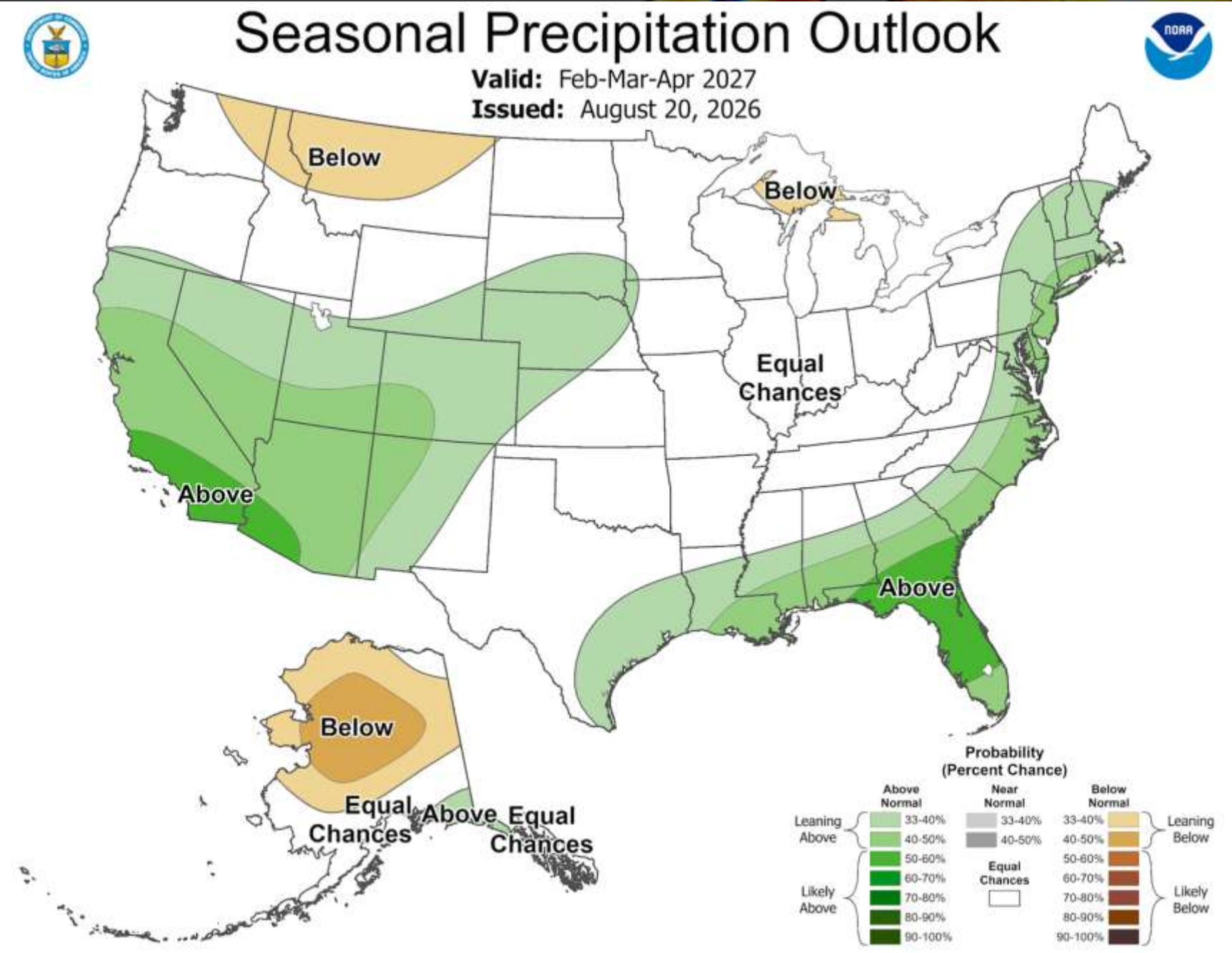
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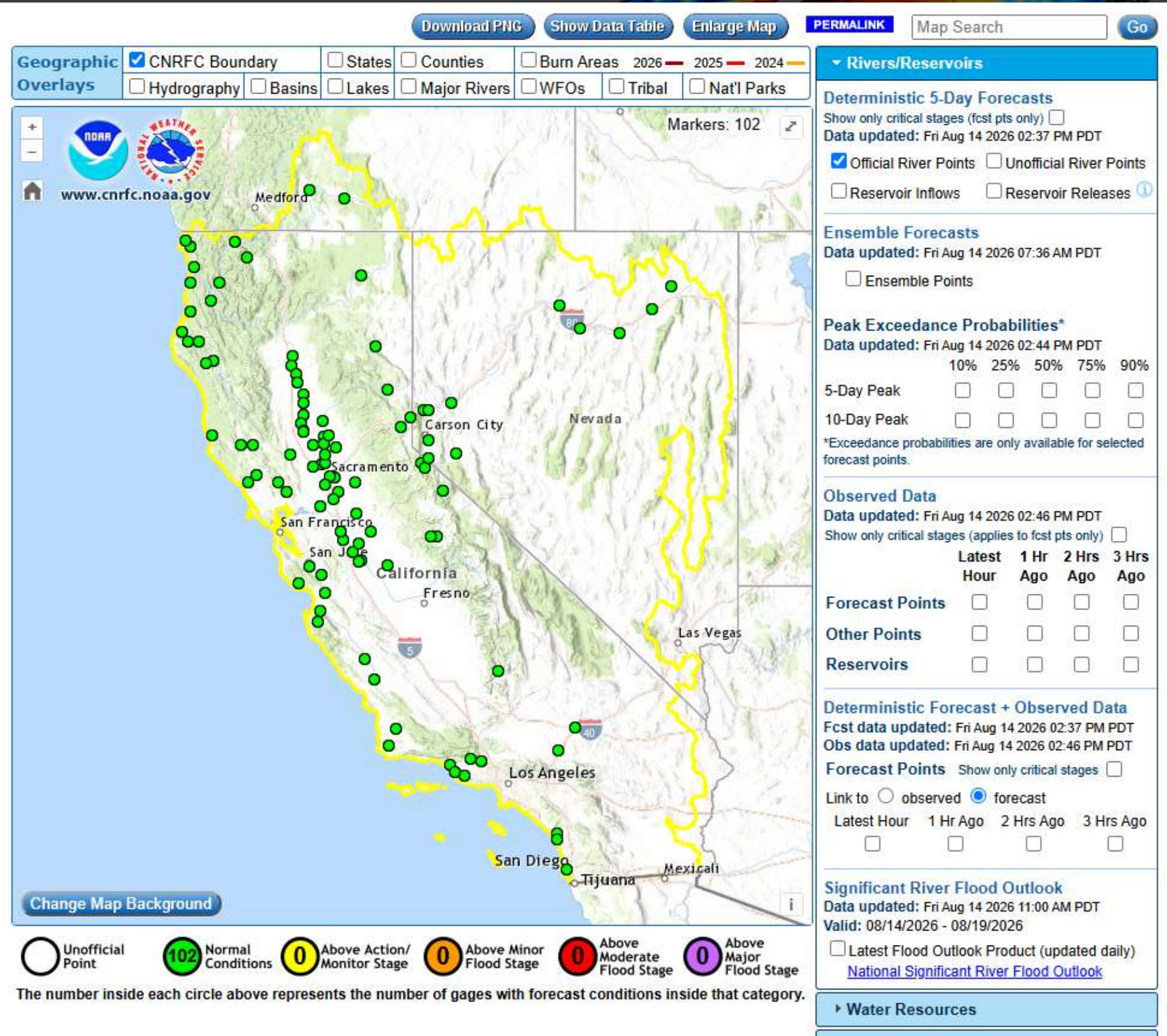




Official CPC Outlook: Feb-Mar-Apr

August 21, 2026
9:00 AM PDT





California-Nevada River Forecast Center

<https://www.cnrfc.noaa.gov/>





National Weather Service
National Oceanic and Atmospheric Administration

Weather Forecast Office
Sacramento
Friday, Oct 22, 2021

Significant Rain and Snow this Weekend into Early Next Week

KEY POINTS

- Periods of moderate to locally heavy rain could cause small stream and urban flooding
- Possible debris and ash flows on recently burned areas
- Breezy winds Sunday
- Winter Storm Watch in effect Sunday evening into Tuesday

CHANGES FROM PREVIOUS BRIEFING

- Winter Storm Watch issued for Sunday night into early Tuesday
- Flood Watch in effect from Late Saturday night through Sunday

WEATHER RISK OUTLOOK

Risk levels incorporate potential impacts from weather hazards and likelihood of occurrence.

	Fri 10/22	Sat 10/23	Sun 10/24	Mon 10/25	Tue 10/26	Wed 10/27	Thu 10/28
Valley	Rain	Rain	Rain/Wind	Rain	Rain	Rain	
Foothills	Rain/Debris Flows	Rain	Rain/Wind/Debris Flows	Rain	Rain	Rain	
Mountains	Rain/Debris Flows	Rain	Rain/Wind/Debris Flows	Snow	Snow	Rain	
Risk Levels	Little to None		Minor	Moderate	Major	Extreme	

DETAILS

Valley, Foothills, Mountains

 Rain	Impacts: • Moderate to heavy rain may lead to roadway ponding and minor flooding of poor drainage areas, creating difficult commute conditions • Periods of heavy rain with ash and debris flows possible on recently burned areas Timing: • Through this afternoon Confidence: • High
 Snow	Impacts: • Mountain travel delays and chain controls possible Timing: • Friday Confidence: • Medium • Snow levels 7000 - 9000 feet decreasing through the day

Partner Emails

To register, go to:

<https://partnerservices.nws.noaa.gov/registration>





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Activity

Later

Templates

Lists

More

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All workspaces

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gacc-northern-california

help-slack-partners

western-region-roc

wfo-sacramento-ca

wfo-sacramento-ca-datafeed

wfo-sacramento-ca-em-only

wfo-sacramento-ca-exercises

wr-event-1

Neighboring CWAs

california-nevada-rfc

wfo-eureka-ca

wfo-hanford-ca

wfo-las-vegas-nv

wfo-los-angeles-ca

wfo-medford-or

wfo-reno-nv

wfo-san-diego-ca

wfo-san-francisco-ca

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Today

NWS Sacramento CA [WxBot] APP 2:39 AM

Continues the Winter Weather Advisory

WINTER WEATHER ADVISORY REMAINS IN EFFECT FROM 5 PM THIS AFTERNOON TO 11 AM PDT SUNDAY

West Slope Northern Sierra Nevada CA, Western Plumas County/Lassen Park CA

NWS - Sacramento - Idamis Del Valle-Shoemaker 6:38 AM

Good morning, partners! Here are your morning forecast updates:

- A weather system will bring periods of light to moderate rain / mountain snow showers later today into Sunday afternoon, with best chances over the foothills and mountains. Most widespread shower activity is anticipated Saturday through early Sunday morning. Lingering Sierra showers are expected through Sunday afternoon.
- A Winter Weather Advisory remains in effect for the northern Sierra and southern Cascades above 6000 ft from Friday evening to Sunday morning. Total snow accumulations of 3 to 8 inches are expected, locally up to 12 inches over highest peaks.
- Thunderstorm chances have diminished for today. There is still a 10-15% chance of isolated thunderstorms on Saturday; highest chances south of Highway 50. Main threats will be lightning, brief heavy rain, small hail and gusty winds.
- Drier and warmer weather returns next week.

6 files

Mountain Travel Delays

Timing

Forecast

Impacts

Forecast

Impact

Probability of Thunderstorms - Saturday

NWS Chat on Slack

A way for deep core partners who have the need for two-way coordination with NWS meteorologists.

To register, go to:

<https://partnerservices.nws.noaa.gov/registration>





Thank You!

August 21, 2026
9:00 AM PDT





National Weather Service
California Offices

	NWS - Medford
	NWS - Eureka
	NWS - Sacramento
	NWS - Bay Area
	NWS - Hanford
	NWS - Reno
	NWS - Los Angeles
	NWS - San Diego
	NWS - Phoenix
	NWS - Las Vegas

If you have any questions please contact:

NWS Sacramento
Senior Service Hydrologist
scott.rowe@noaa.gov

Other NWS Office Contacts:

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- nws.lasvegas@noaa.gov
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