

# ENSO: Recent Evolution, Current Status and Predictions



Update prepared by:  
Climate Prediction Center / NCEP  
8 June 2026

# Outline

Summary

Recent Evolution and Current Conditions

Relative Oceanic Niño Index (RONI)

Pacific SST Outlook

U.S. Seasonal Precipitation and Temperature Outlooks

Summary

2/2/26: Tropical Pacific sea surface temperatures (SST) anomalies and Niño indices now reflect relative SST anomalies:

[https://www.weather.gov/media/notification/pdf\\_2026/pns26-05\\_Relative\\_ONI.pdf](https://www.weather.gov/media/notification/pdf_2026/pns26-05_Relative_ONI.pdf)

# Summary

ENSO Alert System Status: **El Niño Watch**

ENSO-neutral conditions are present.\*

Equatorial sea surface temperatures (SSTs) are mostly above average across the central and eastern Pacific Ocean.

El Niño is likely to emerge soon (82% chance in May-July 2026) and continue through Northern Hemisphere winter 2026-27 (96% chance in December 2026 - February 2027).\*

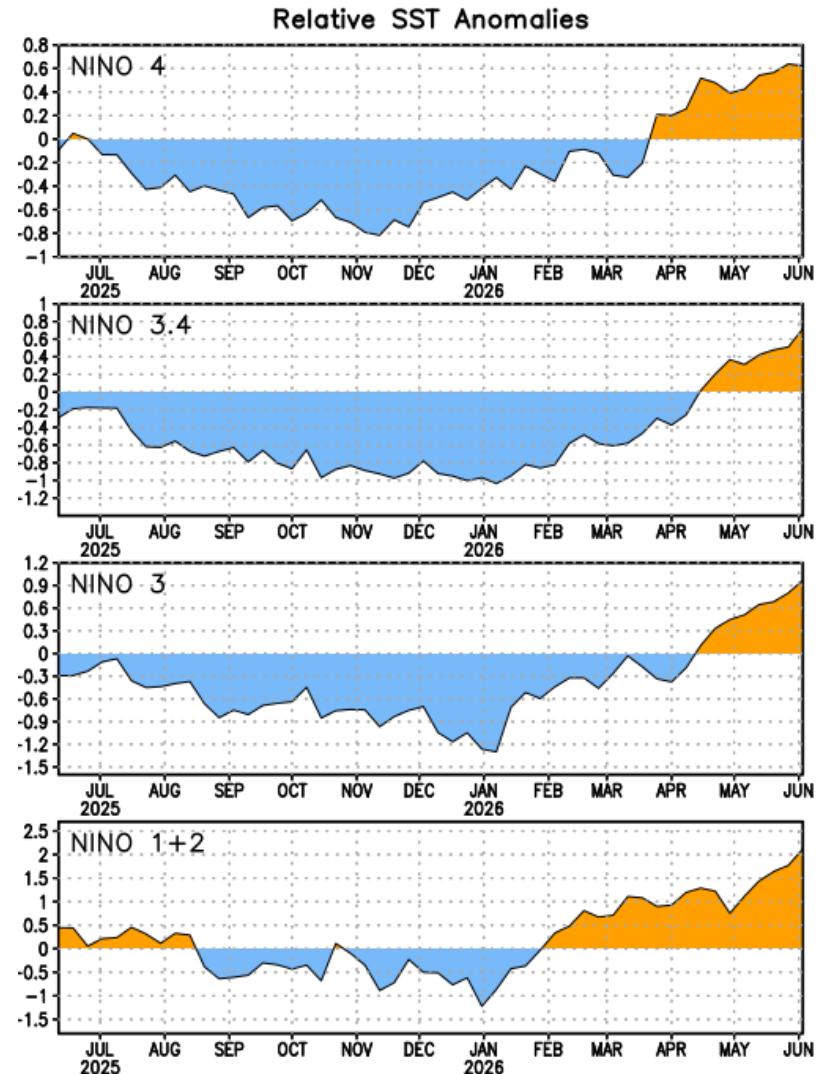
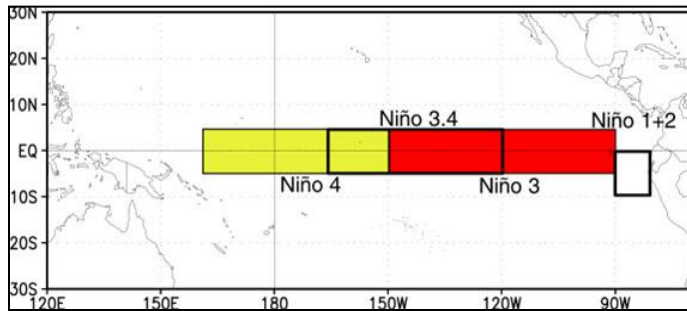
\* Note: These statements are updated once a month (2<sup>nd</sup> Thursday of each month) in association with the ENSO Diagnostics Discussion, which can be found by clicking [here](#).



# Niño Region SST Departures (°C) Recent Evolution

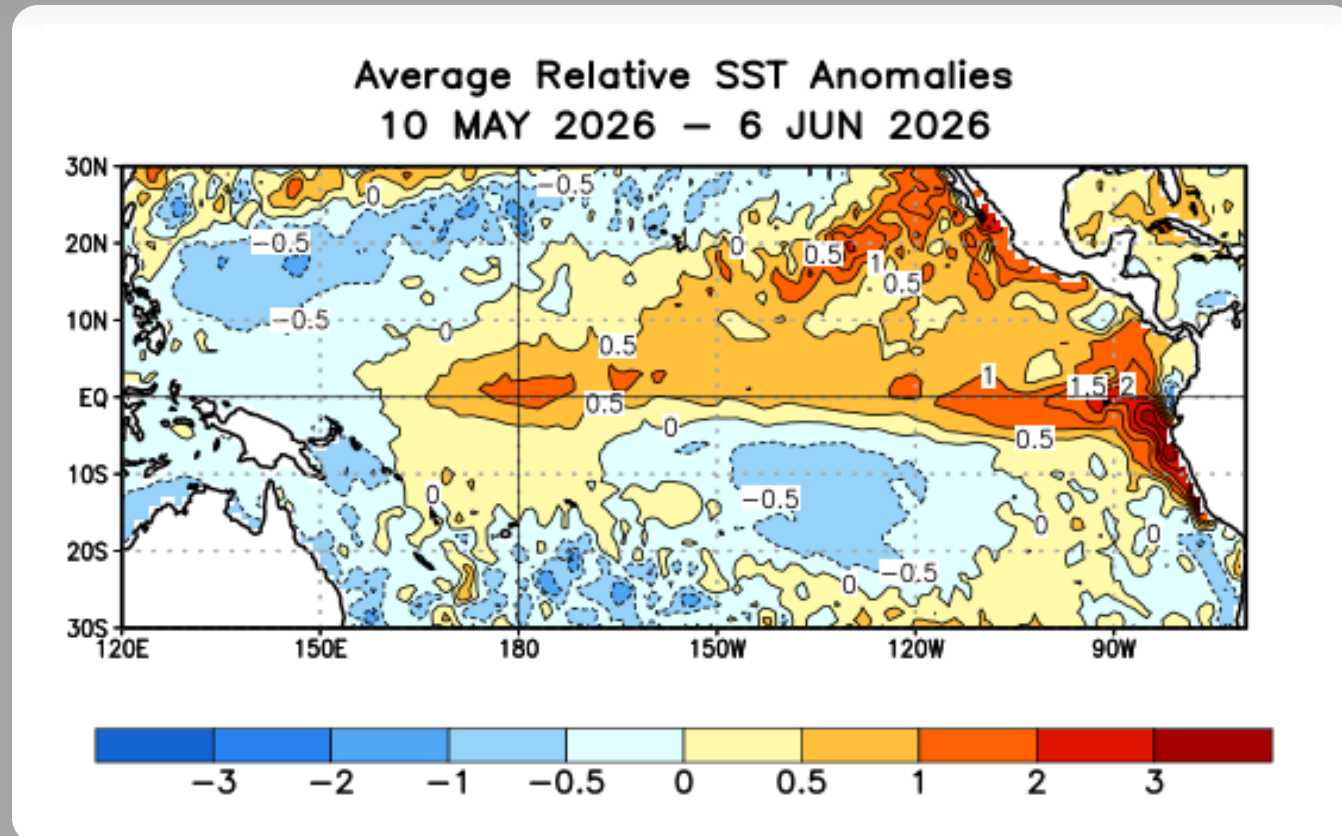
The latest weekly SST departures are:

Niño 4	0.7°C
Niño 3.4	0.7°C
Niño 3	1.0°C
Niño 1+2	2.1°C



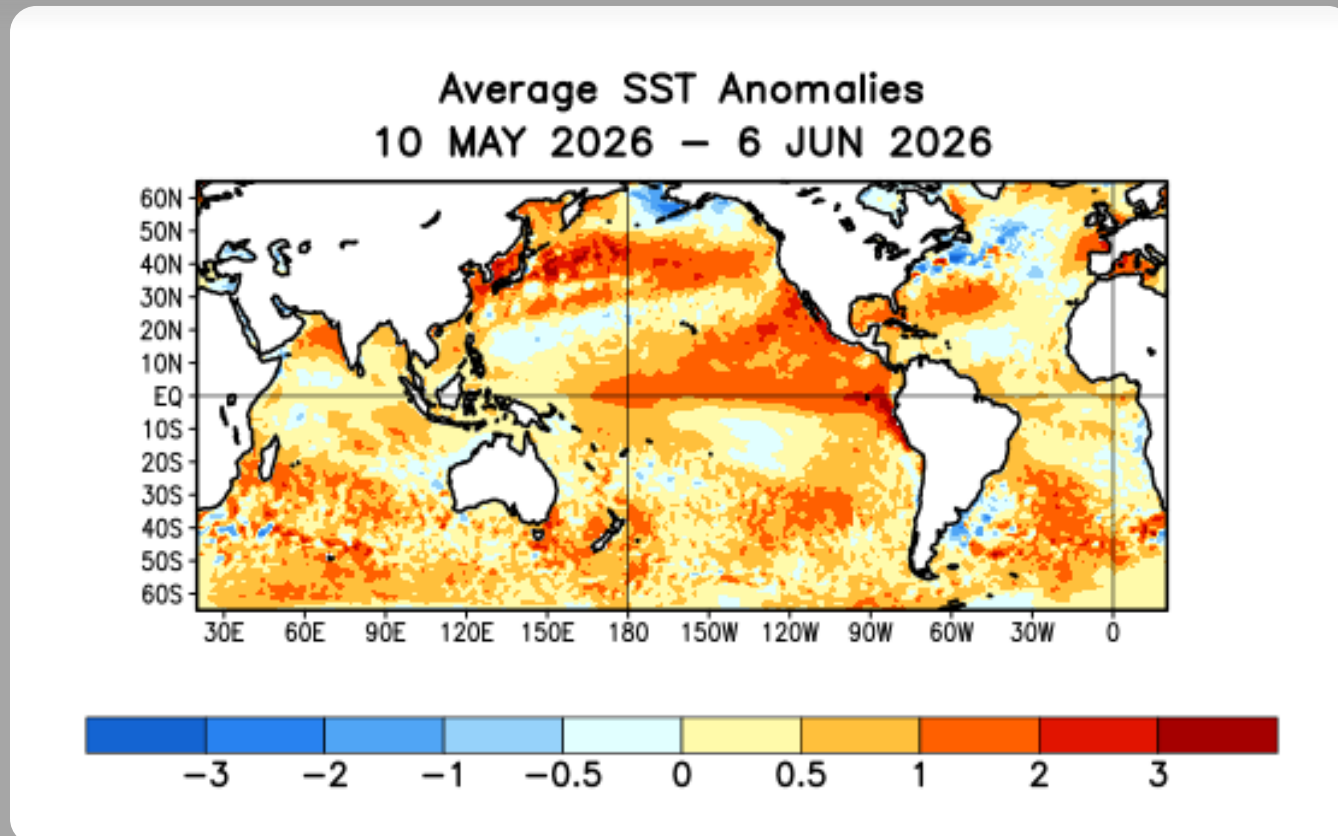
# SST Departures (°C) in the Tropical Pacific During the Last Four Weeks

In the last four weeks, equatorial SSTs were mostly above average in the central and eastern Pacific Ocean, and near-to-below average in the western Pacific Ocean.



# Global SST Departures (°C) During the Last Four Weeks (Traditional SST Anomalies)

During the last four weeks, above-average SSTs were prevalent over most of the global oceans. Equatorial SSTs were mostly above average in the Atlantic Ocean. In the equatorial Pacific, positive SSTs were amplified in the central and eastern part of the basin.

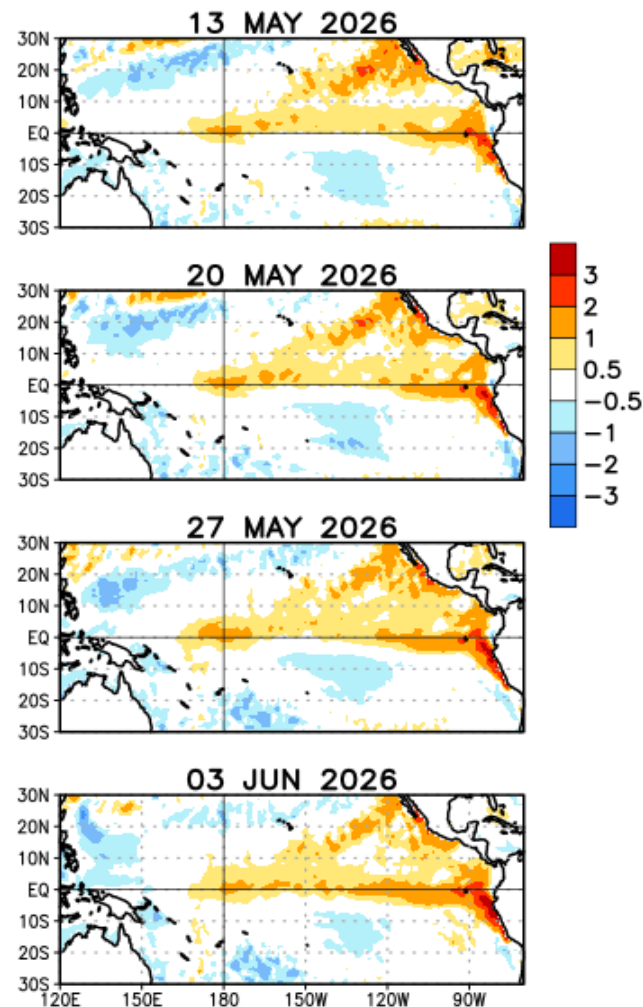


# Weekly SST Departures during the Last Four Weeks

During the last 4 weeks, above-average SSTs stretched from Baja to near the Date Line in the tropical Pacific Ocean.

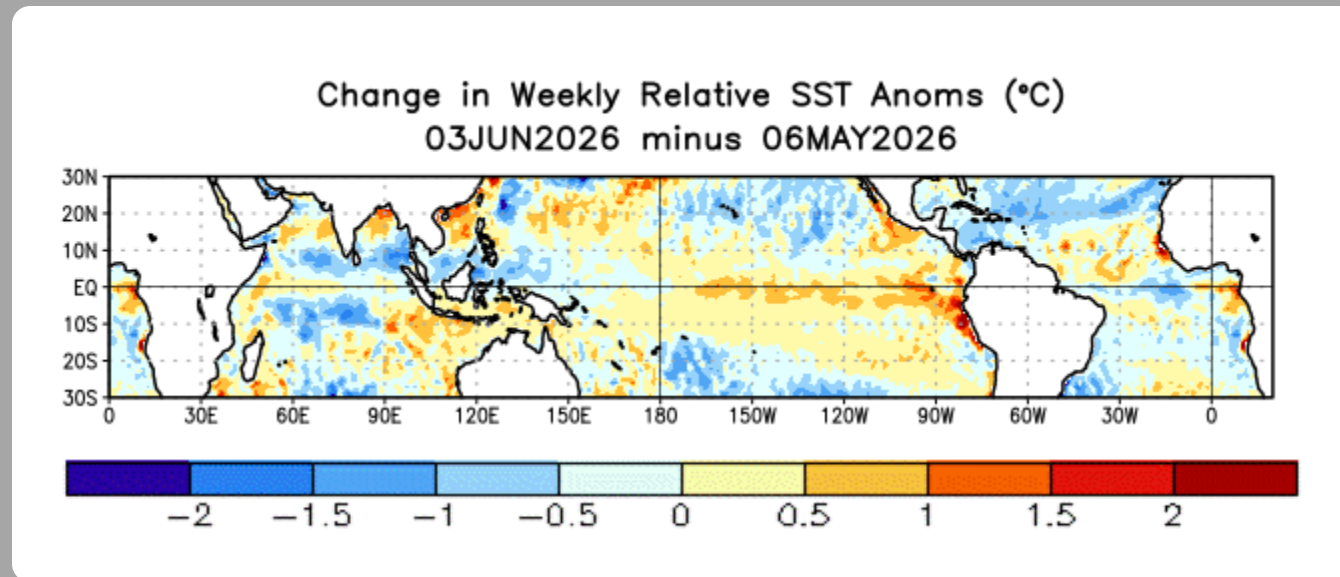
Above-average SSTs became increasingly established in the central and eastern equatorial Pacific Ocean

Weekly Relative SST Anomalies (DEG C)



# Change in Weekly SST Departures over the Last Four Weeks

During the last four weeks, positive equatorial SST anomaly changes were observed across the central and eastern Pacific Ocean and near Indonesia. Negative changes were evident in the central Atlantic Ocean.



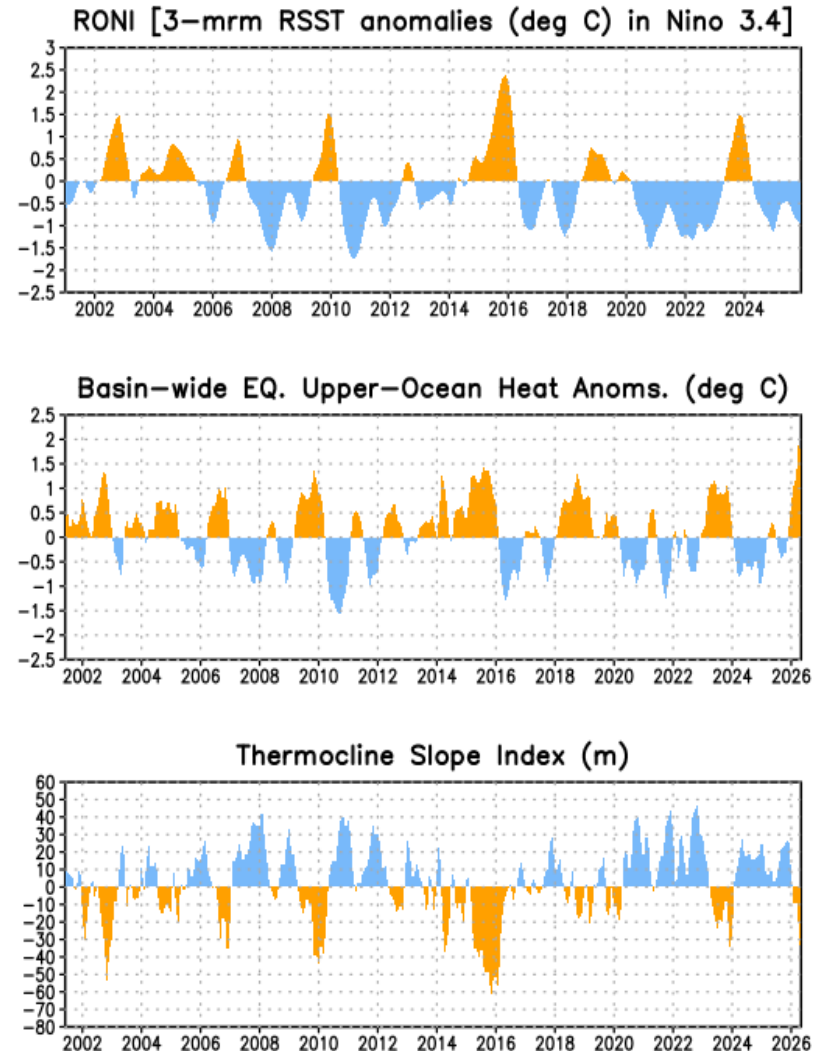
# Upper-Ocean Conditions in the Equatorial Pacific

The basin-wide equatorial upper ocean (0-300 m) heat content is greatest prior to and during the early stages of a Pacific warm (El Niño) episode (compare top 2 panels), and least prior to and during the early stages of a cold (La Niña) episode.

The slope of the oceanic thermocline is least (greatest) during warm (cold) episodes.

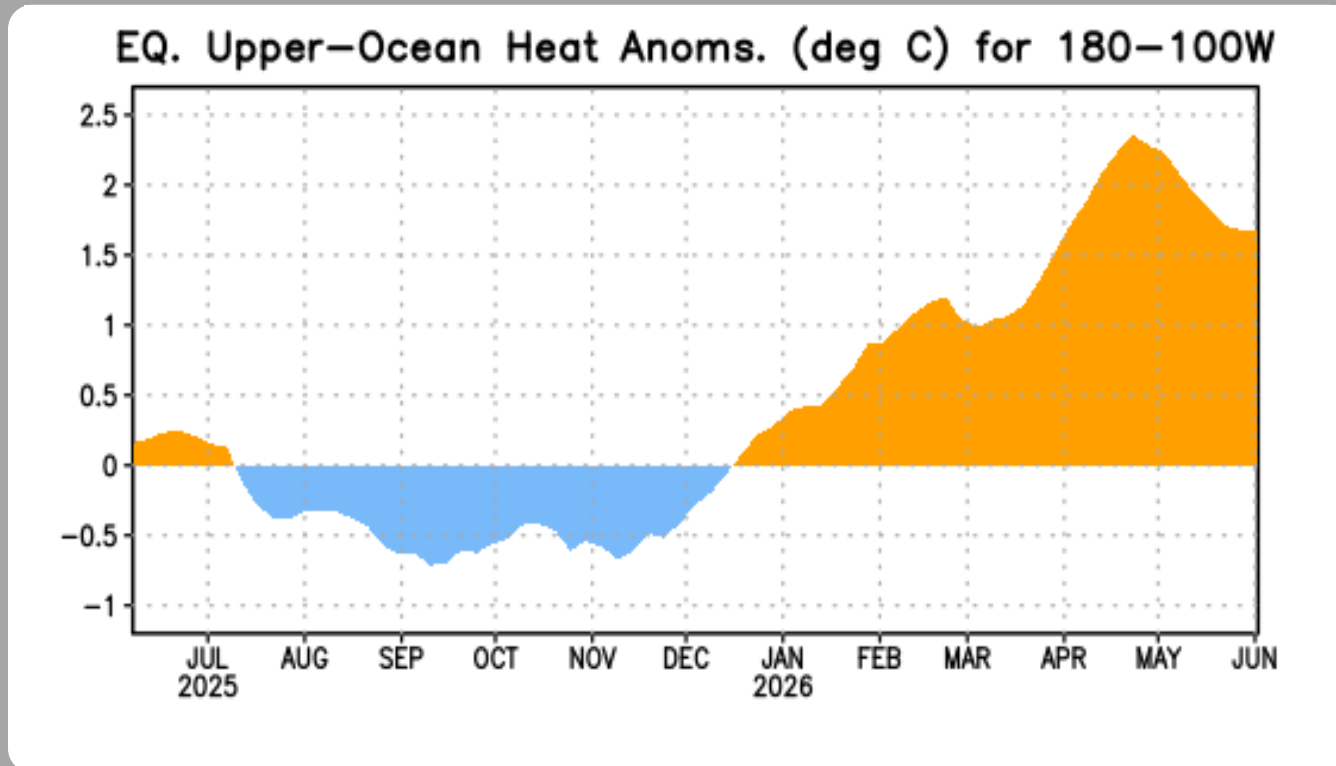
Recent values of the upper-ocean heat anomalies are above-average and the thermocline slope index is below-average.

*The monthly thermocline slope index represents the difference in anomalous depth of the 20°C isotherm between the western Pacific (160°E-150°W) and the eastern Pacific (90°-140°W).*



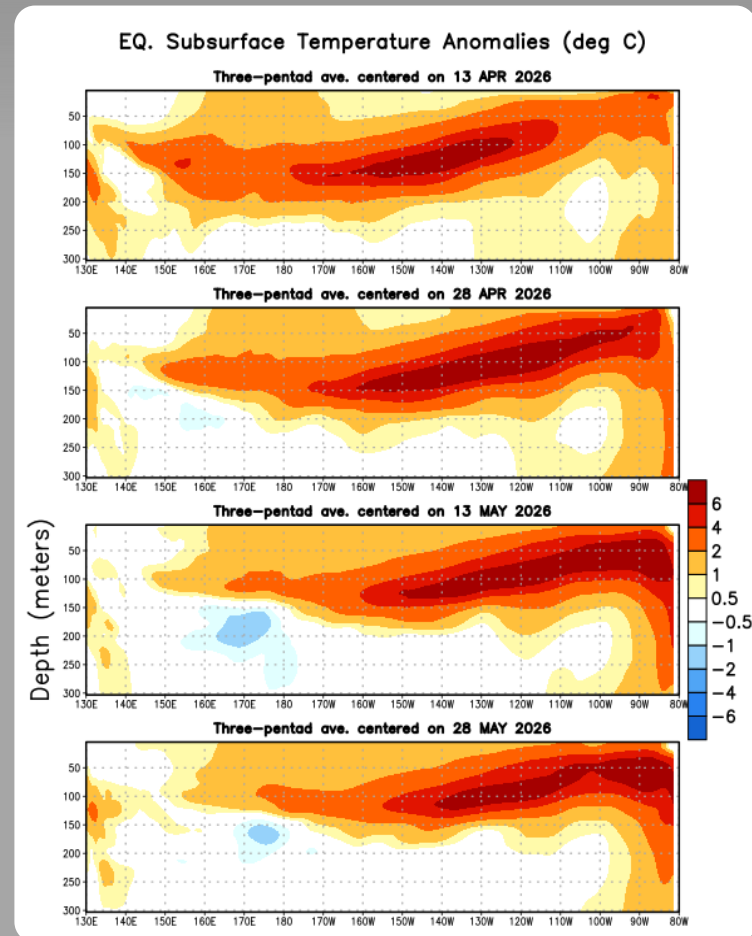
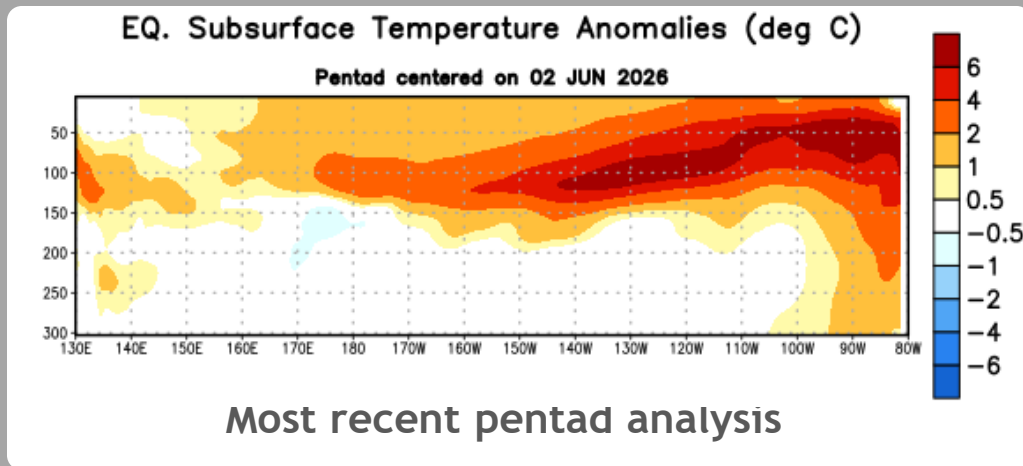
# Central and Eastern Pacific Upper-Ocean (0-300 m) Weekly Average Temperature Anomalies

Negative subsurface temperature anomalies emerged in mid-July 2025 and persisted through mid-December 2025. From mid-December 2025 through late April 2026, positive anomalies developed and gradually increased. From late April to late May 2026, positive anomalies decreased.



# Sub-Surface Temperature Departures in the Equatorial Pacific

In the last two months, above-average subsurface temperatures have strengthened and persisted across most of the equatorial Pacific Ocean.



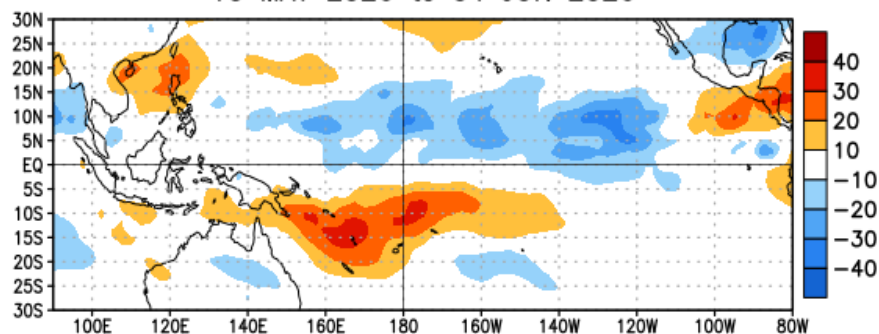
# Tropical OLR and Wind Anomalies During the Last 30 Days

Below-average OLR (enhanced convection and precipitation) was evident near the Date Line and over the east-central Pacific. Above-average OLR (suppressed convection and precipitation) was observed over the Philippines and south of the equator in the western and central Pacific.

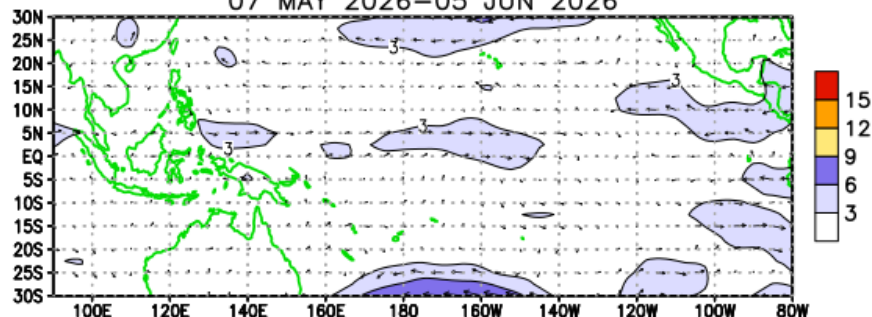
Low-level (850-hPa) westerly wind anomalies were evident over the central equatorial Pacific Ocean.

Upper-level (200-hPa) wind anomalies were easterly over the east-central equatorial Pacific and westerly over the eastern equatorial Pacific. An anomalous anticyclonic couplet straddled equator over the east-central Pacific.

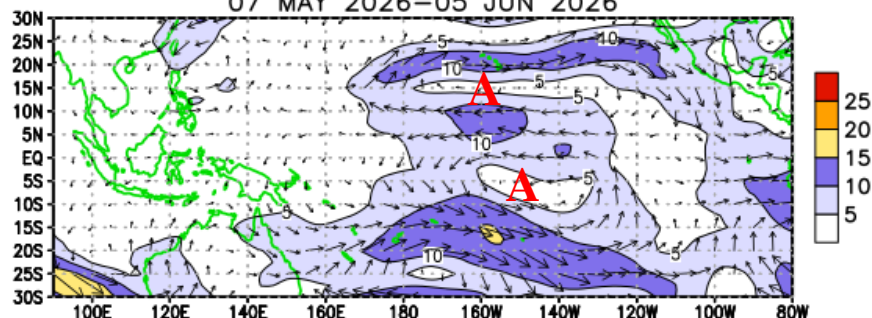
OLR Anomalies  
10 MAY 2026 to 04 JUN 2026



CDAS 850-hPa Wind Anoms  
07 MAY 2026-05 JUN 2026



CDAS 200-hPa Wind Anoms  
07 MAY 2026-05 JUN 2026



# Intraseasonal Variability

Intraseasonal variability in the atmosphere (wind and pressure), which is often related to the Madden-Julian Oscillation (MJO), can significantly impact surface and subsurface conditions across the Pacific Ocean.

Related to this activity:

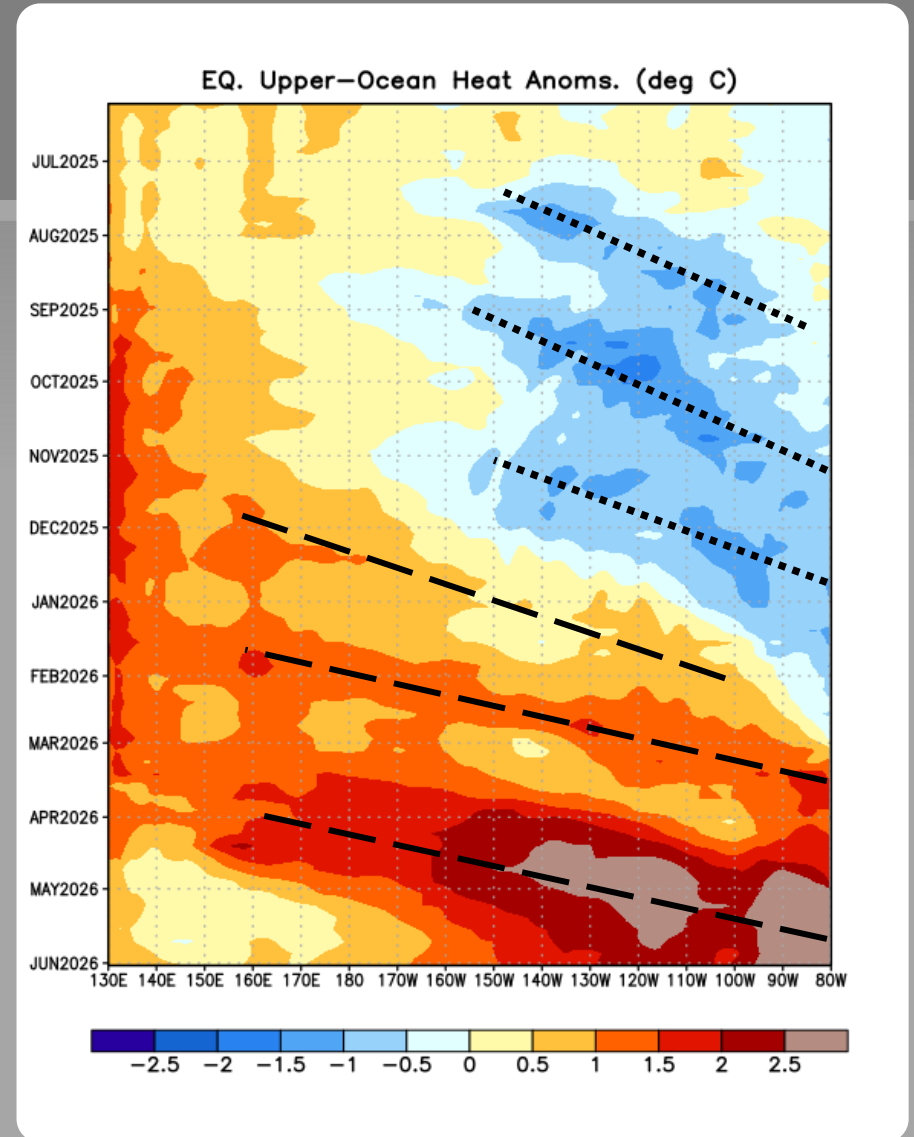
Significant weakening of the low-level easterly winds usually initiates an eastward-propagating oceanic Kelvin wave.

# Weekly Heat Content Evolution in the Equatorial Pacific

Equatorial oceanic Kelvin wave activity (dashed and dotted lines) has been present at times throughout the period shown. Upwelling Kelvin waves were initiated during July, August, and October 2025. Downwelling Kelvin waves were initiated in December 2025, January 2026, and March 2026.

From late December 2025 to April 2026, above-average subsurface temperatures strengthened across most of the equatorial Pacific. Since then, above-average temperatures have weakened, but persisted.

Equatorial oceanic Kelvin waves have alternating warm and cold phases. The warm phase is indicated by dashed lines. Down-welling and warming occur in the leading portion of a Kelvin wave, and up-welling and cooling occur in the trailing portion.



# Low-level (850-hPa) Zonal (east-west) Wind Anomalies ( $\text{m s}^{-1}$ )

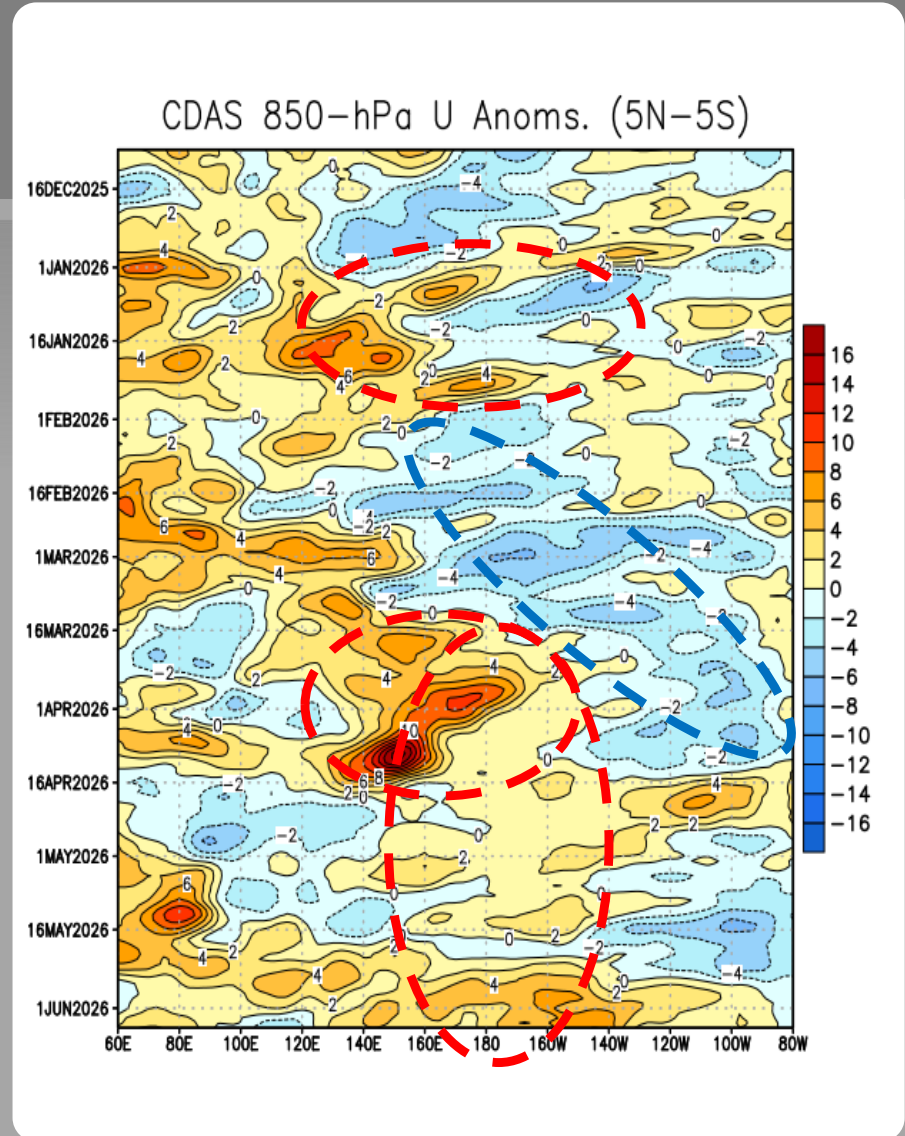
During December 2025 and January 2026, periodic westerly wind anomalies extended across the equatorial Pacific Ocean.

From mid-March through present, westerly wind anomalies were generally observed over the central equatorial Pacific Ocean.

Recently, westerly wind anomalies have expanded across most of the equatorial Pacific Ocean.

Westerly Wind Anomalies (orange/red shading)

Easterly Wind Anomalies (blue shading)



# Upper-level (200-hPa) Velocity Potential Anomalies

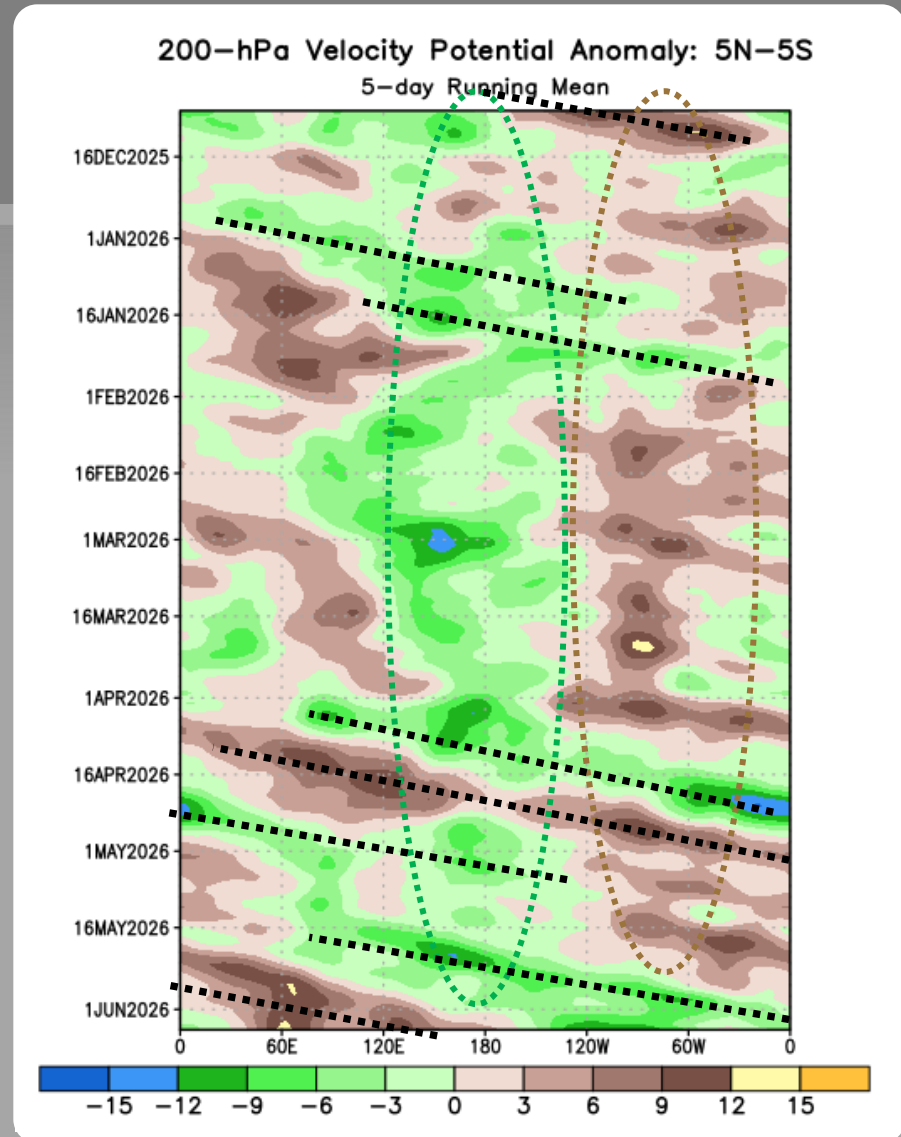
At times, regions of anomalous divergence (green shading) and convergence (brown shading) shifted eastward.

During most of the period, anomalous divergence persisted over the west-central equatorial Pacific Ocean. Anomalous convergence was evident over the eastern Pacific Ocean.

Unfavorable for precipitation (brown shading)

Favorable for precipitation (green shading)

Note: Eastward propagation is not necessarily indicative of the Madden-Julian Oscillation (MJO).



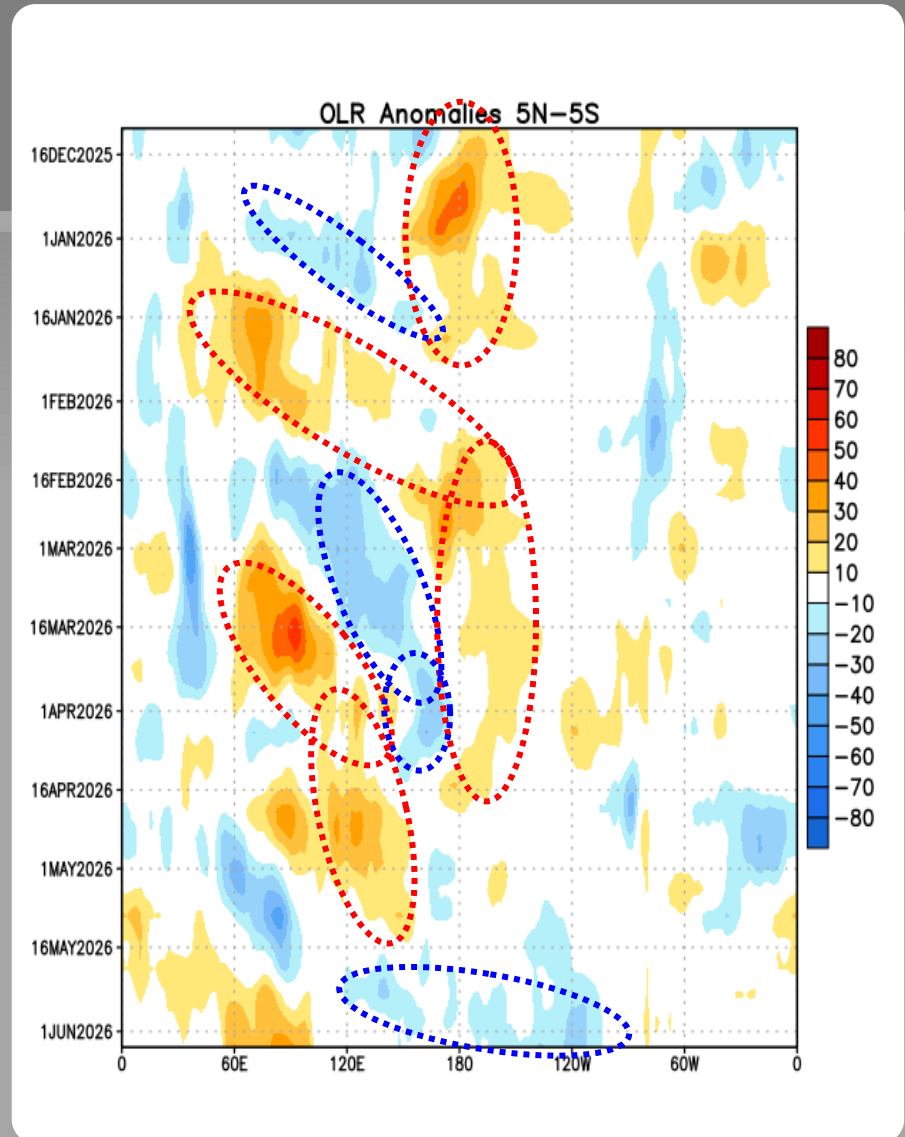
# Outgoing Longwave Radiation (OLR) Anomalies

From March to early April 2026, negative OLR anomalies (enhanced convection/rainfall) shifted into the western Pacific, and positive OLR anomalies (suppressed convection/rainfall) persisted near and east of the Date Line.

During April through mid-May 2026, positive OLR anomalies were observed over Indonesia or the western Pacific Ocean.

Since mid-May, weak, negative OLR anomalies were observed over the central and east-central equatorial Pacific.

Drier-than-average Conditions (orange/red shading)  
Wetter-than-average Conditions (blue shading)



# Relative Oceanic Niño Index (RONI)

The RONI is a principal measure for monitoring, assessing, and predicting ENSO. The RONI helps to place current events into a historical perspective.

RONI is the SST departures from average in the Niño 3.4 region (5°N-5°S, 120°-170°W) with the tropical mean (20°S-20°N) SST departures subtracted out. The variance is adjusted to match the variance of the original Niño 3.4 index. A three-month running-mean is applied to the index.

The SST data are based on a set of improved homogeneous historical SST analyses (Extended Reconstructed SST - ERSST.v5). The SST reconstruction methodology is described in Huang et al., 2017)

Note: a different SST dataset is used for weekly SST monitoring (slides #4-9) and is using OISSTv2.1 (Huang et al., 2021).

[https://www.weather.gov/media/notification/pdf\\_2026/pns26-05\\_Relative\\_ONI.pdf](https://www.weather.gov/media/notification/pdf_2026/pns26-05_Relative_ONI.pdf)

# NOAA Operational Definitions for El Niño and La Niña

El Niño: characterized by a positive RONI greater than or equal to  $+0.5^{\circ}\text{C}$ .

La Niña: characterized by a negative RONI less than or equal to  $-0.5^{\circ}\text{C}$ .

By historical standards, to be classified as a full-fledged El Niño or La Niña episode, these thresholds must be exceeded for a period of at least 5 consecutive overlapping 3-month seasons.

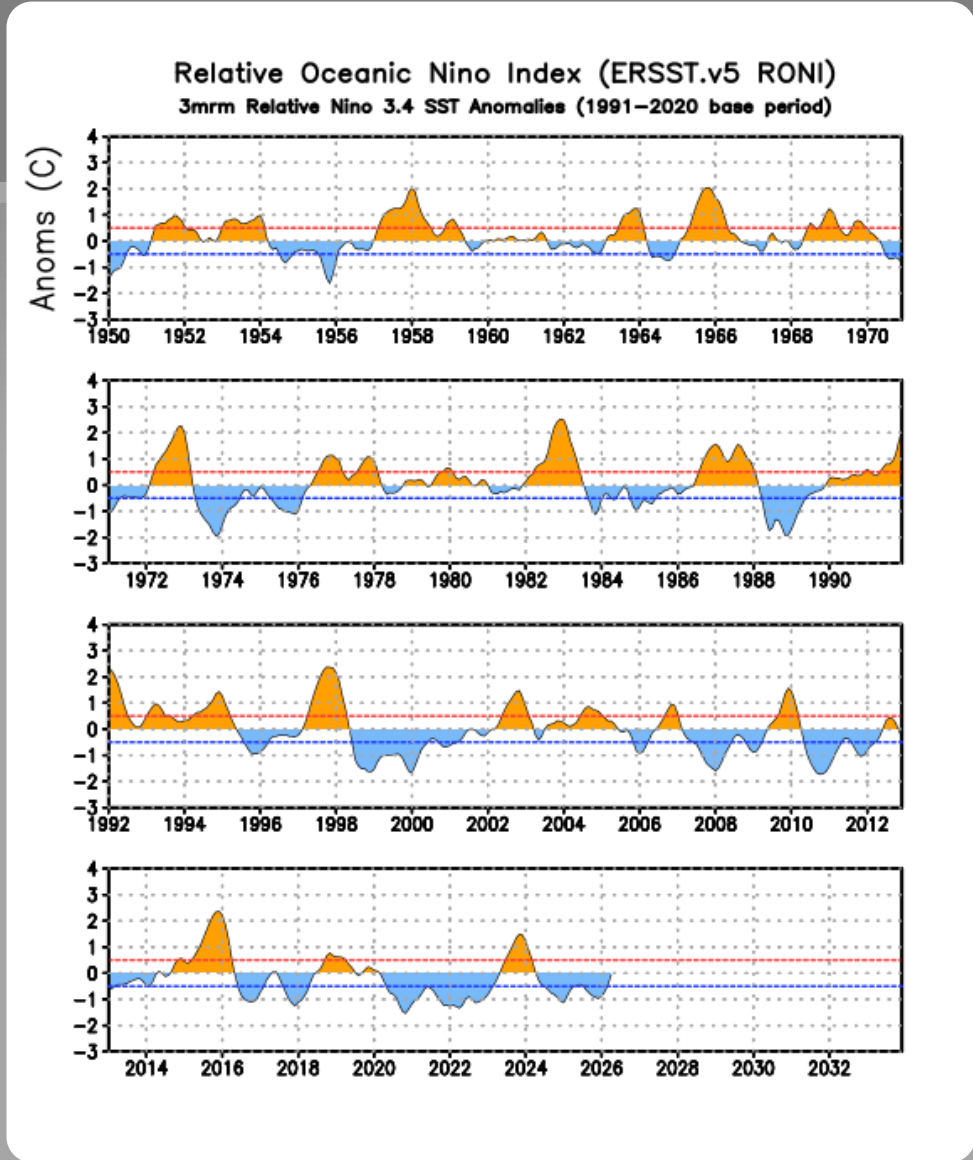
CPC considers El Niño or La Niña conditions to occur when the monthly relative Niño3.4 departures meet or exceed  $\pm 0.5^{\circ}\text{C}$  along with consistent atmospheric features. These anomalies must also be forecasted to persist for 3 consecutive months.

[https://www.weather.gov/media/notification/pdf\\_2026/pns26-05\\_Relative\\_ONI.pdf](https://www.weather.gov/media/notification/pdf_2026/pns26-05_Relative_ONI.pdf)

# RONI (°C): Evolution since 1950

The most recent RONI value (March - May 2026) is  $-0.1^{\circ}\text{C}$ .

El Niño ↑  
Neutral  
La Niña ↓

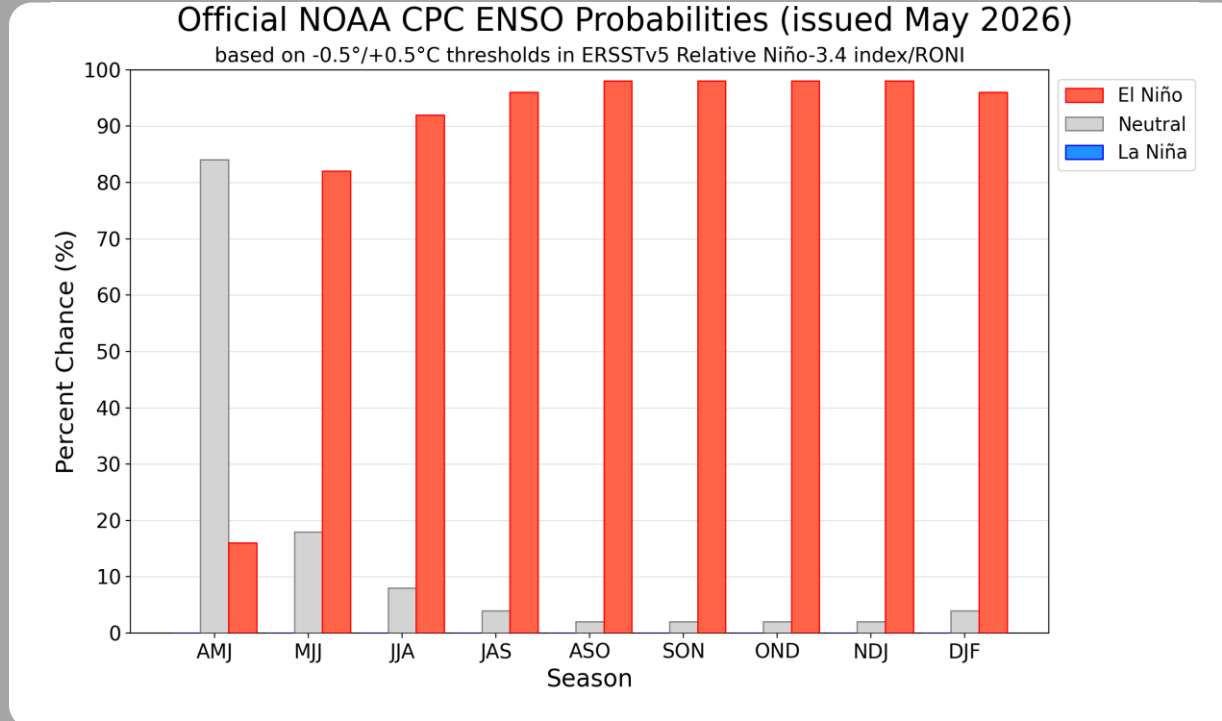




# CPC Probabilistic ENSO Outlook

Updated: 14 May 2026

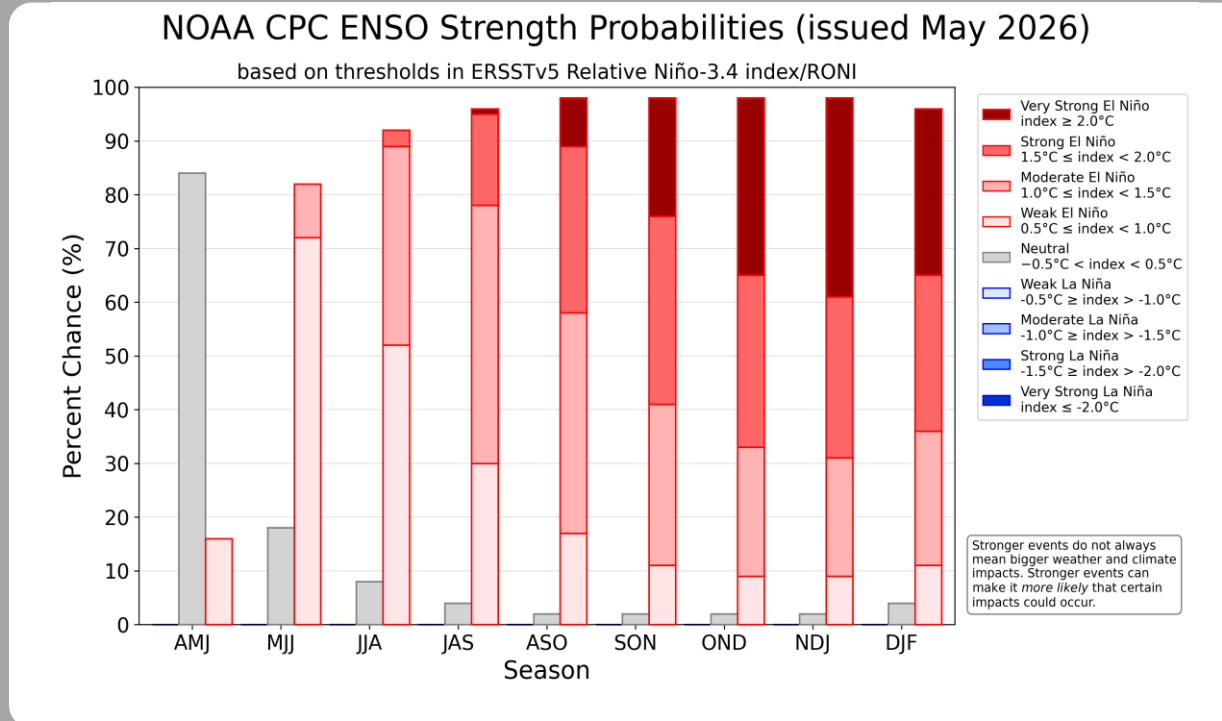
El Niño is likely to emerge soon (82% chance in May-July 2026) and continue through Northern Hemisphere winter 2026-27 (96% chance in December 2026 - February 2027).



# CPC Probabilistic ENSO Strength Outlook

Updated: 14 May 2026

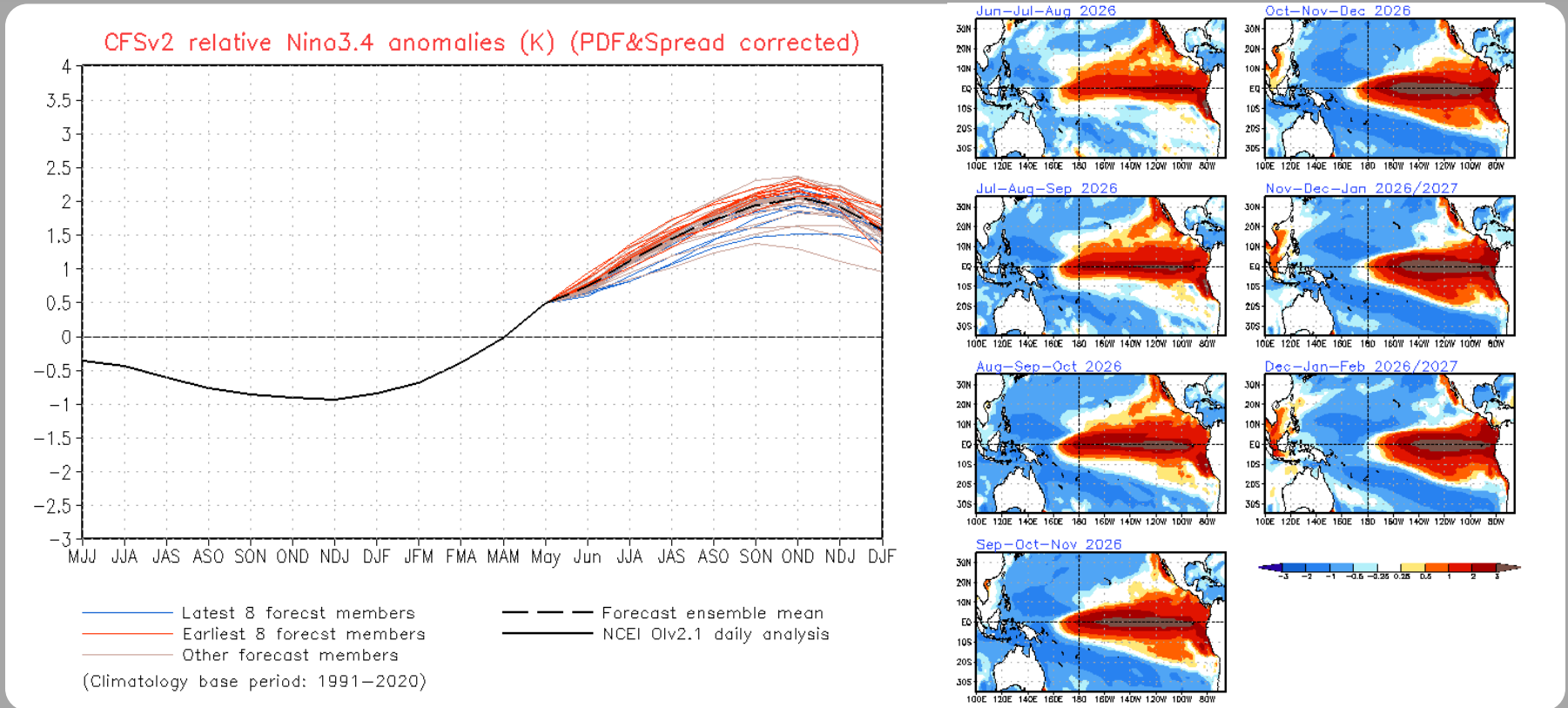
In November 2026- January 2027, there are nearly 1-in-3 chances of a strong and very strong El Niño (combined 2-in-3 chance). There is a 1-in-3 chance of RONI remaining weaker than strong El Niño.



# SST Outlook: NCEP CFS.v2 Forecast (PDF & Spread Corrected)

Issued: 8 June 2026

The CFS.v2 ensemble mean (black dashed line) favors a transition to El Niño in the next month, continuing through Northern Hemisphere winter 2026-27.

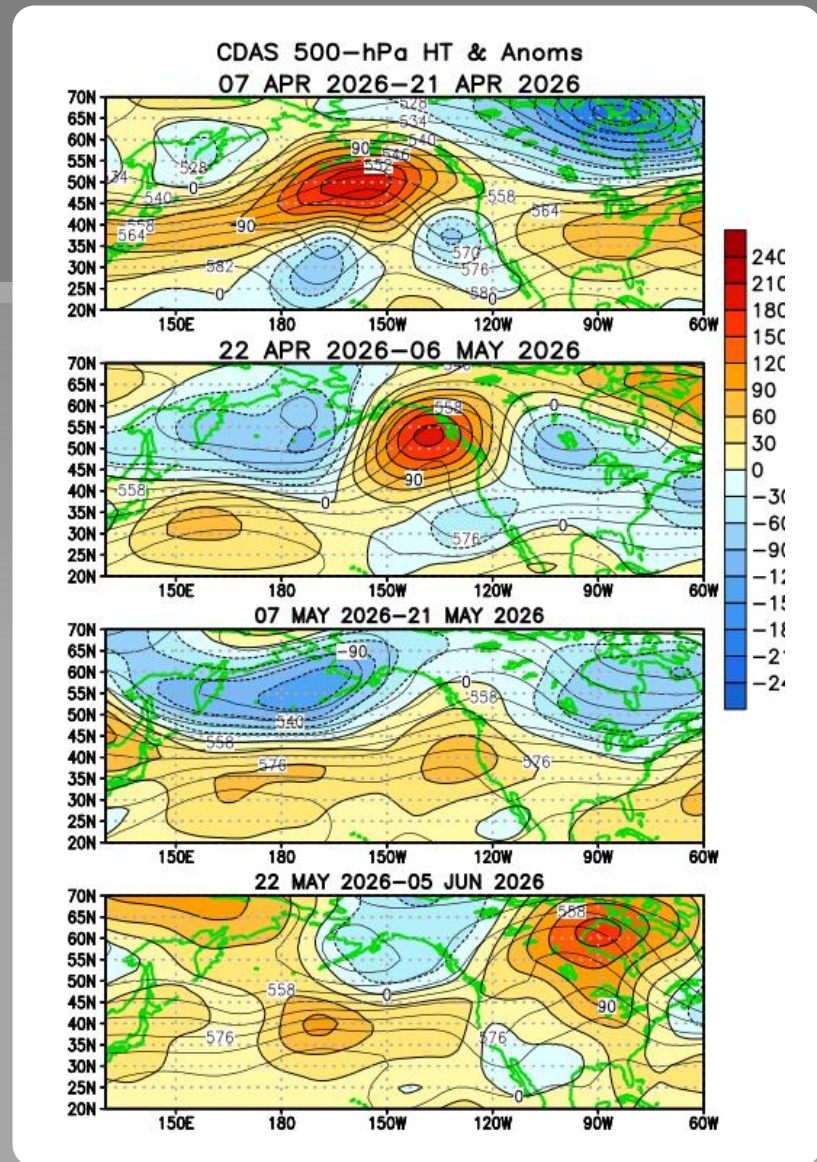


# Atmospheric anomalies over the North Pacific and North America During the Last 60 Days

From late April through late May, below-average heights and temperatures were dominant over central and eastern Canada.

Since late April, below-average heights have persisted near the southwestern U.S., periodically associated with below-average temperatures in the region.

Since late May, above-average heights and temperatures have prevailed over most of Canada and over the eastern U.S.

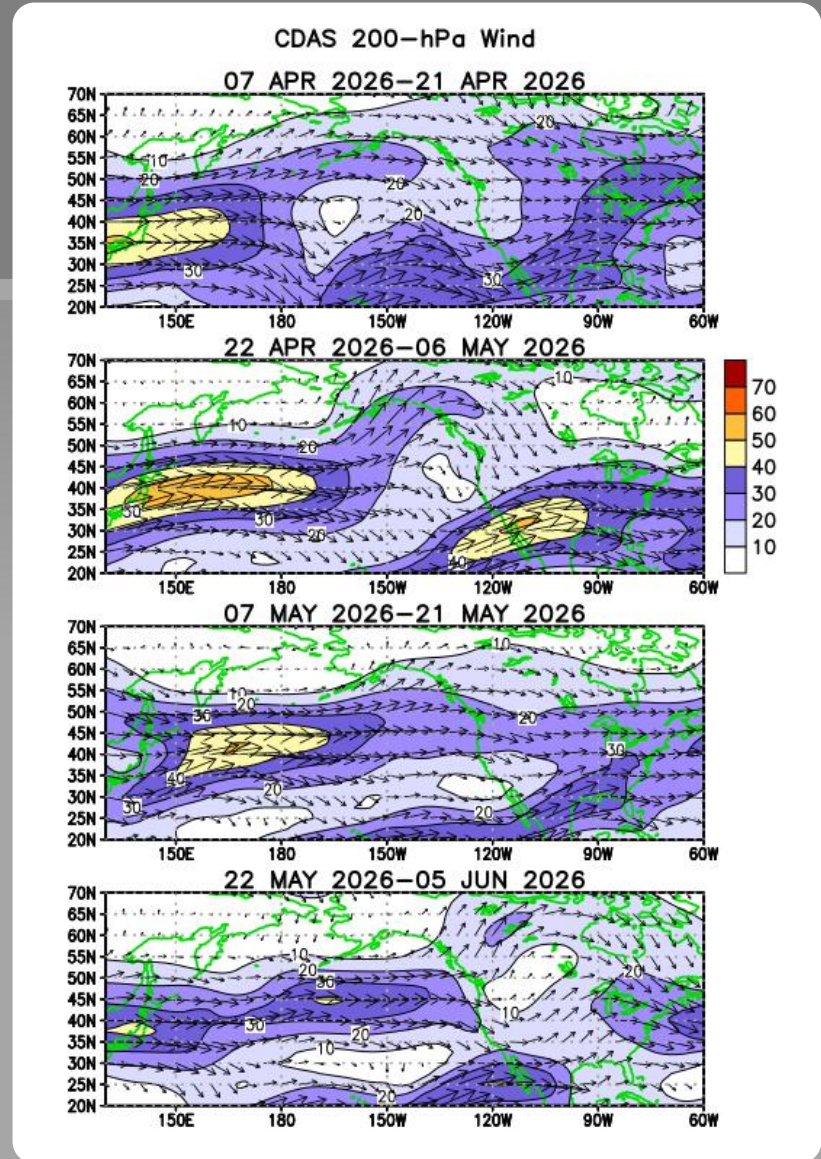


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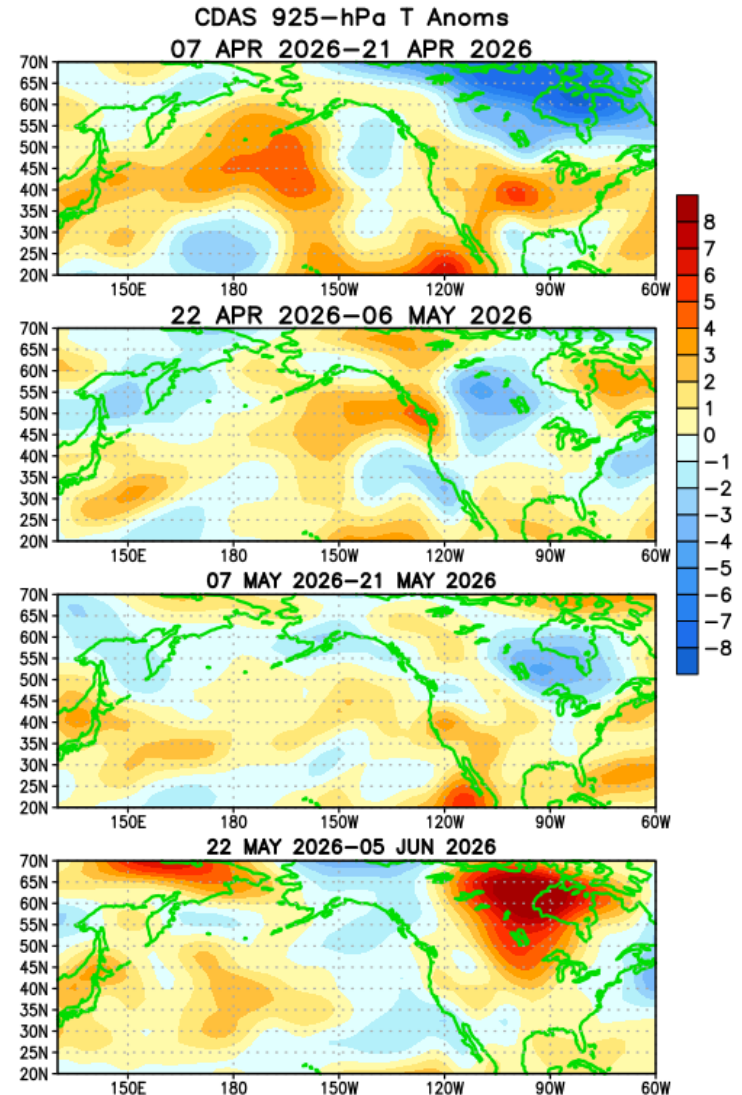


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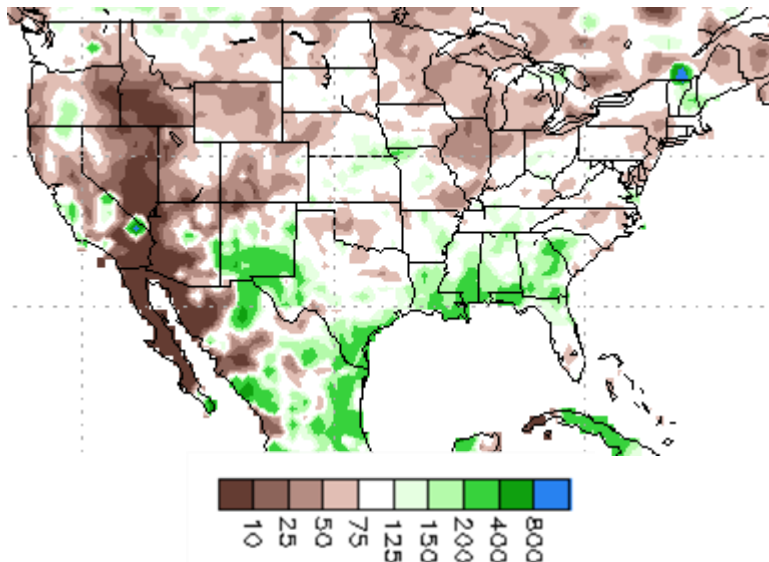
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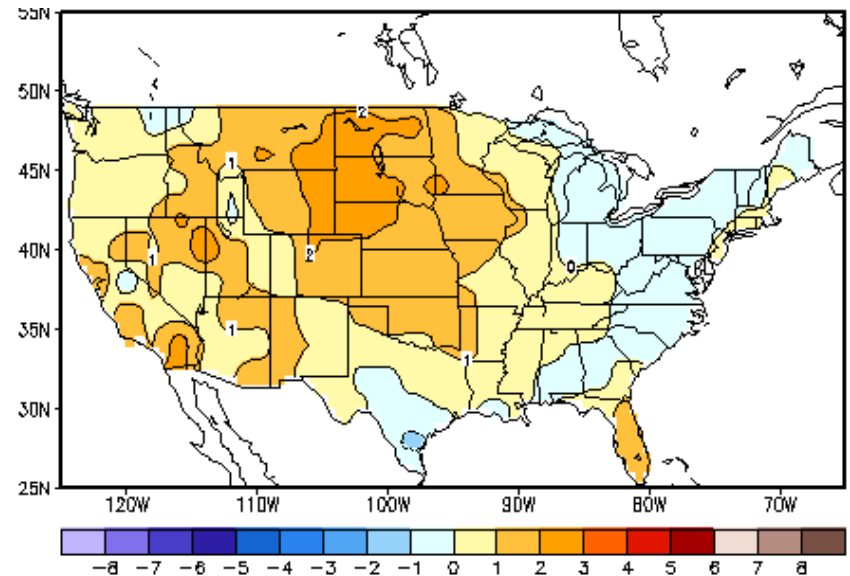
# U.S. Temperature and Precipitation Departures During the Last 30 Days

End Date: 6 June 2026

### Percent of Average Precipitation



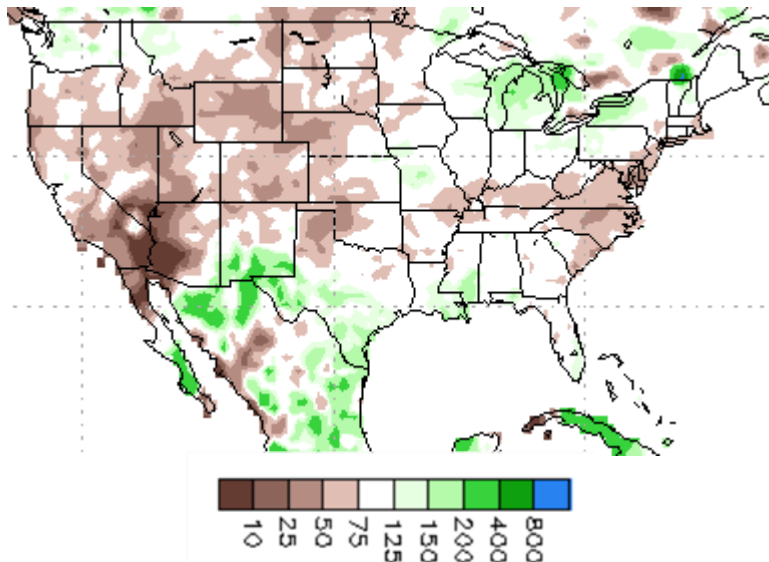
### Temperature Departures (degree C)



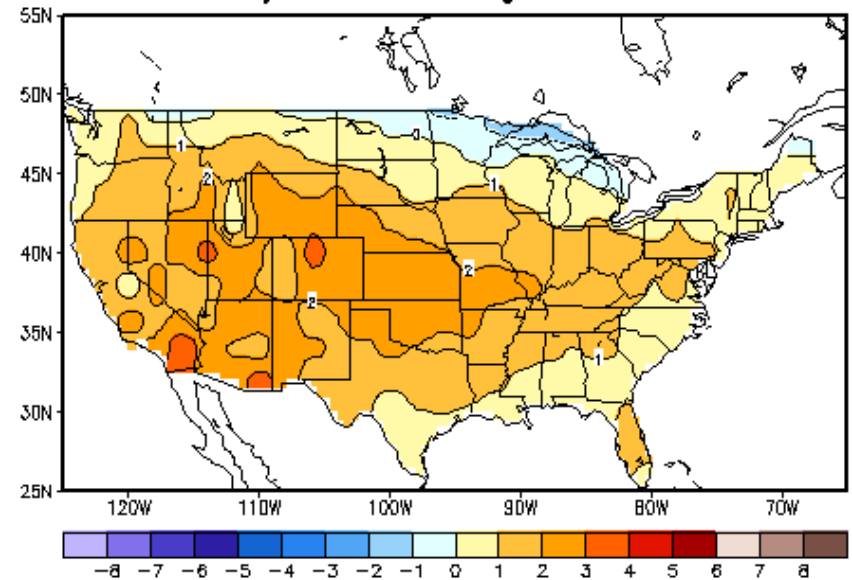
# U.S. Temperature and Precipitation Departures During the Last 90 Days

End Date: 6 June 2026

### Percent of Average Precipitation



### Temperature Departures (degree C)





# Summary

ENSO Alert System Status: **El Niño Watch**

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Equatorial sea surface temperatures (SSTs) are mostly above average across the central and eastern Pacific Ocean.

El Niño is likely to emerge soon (82% chance in May-July 2026) and continue through Northern Hemisphere winter 2026-27 (96% chance in December 2026 - February 2027).\*

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