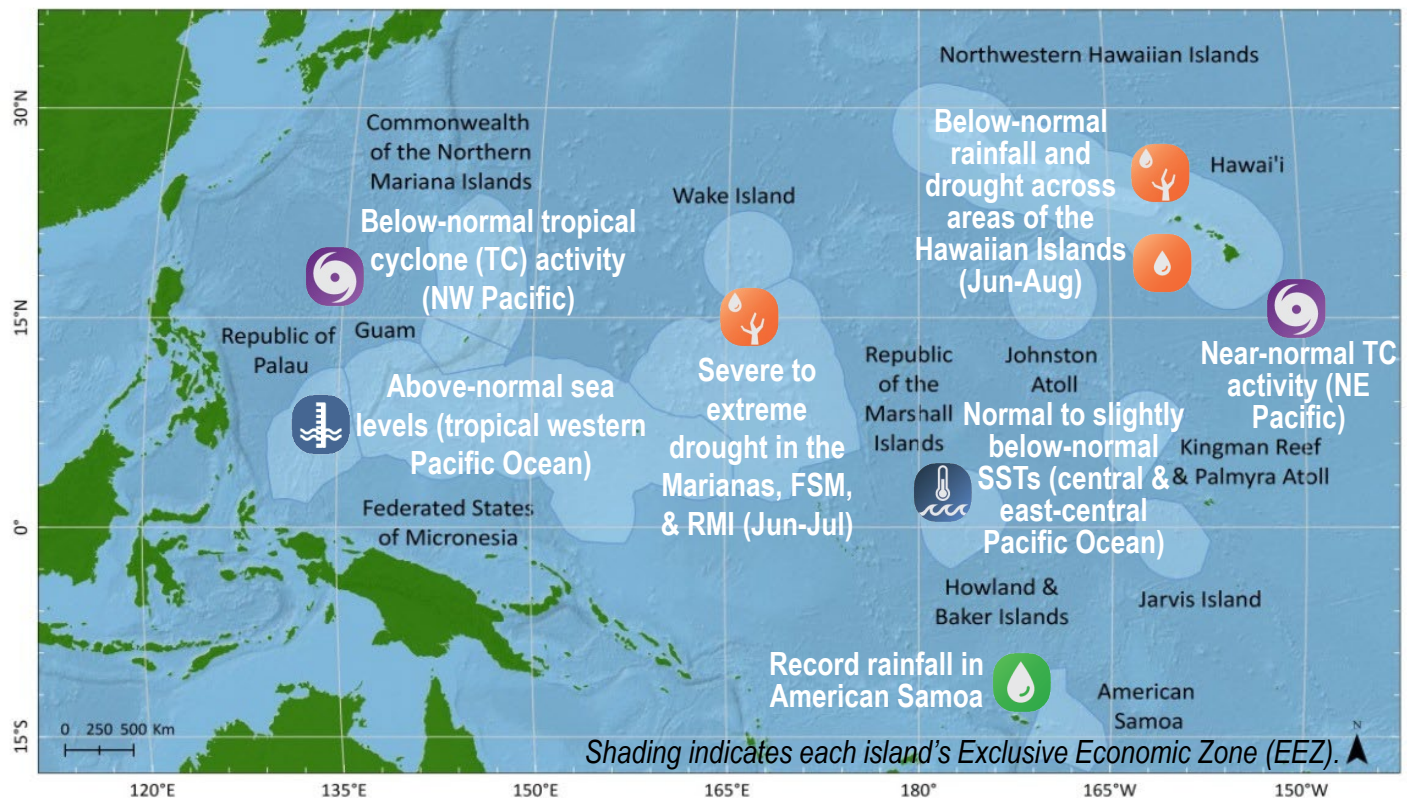


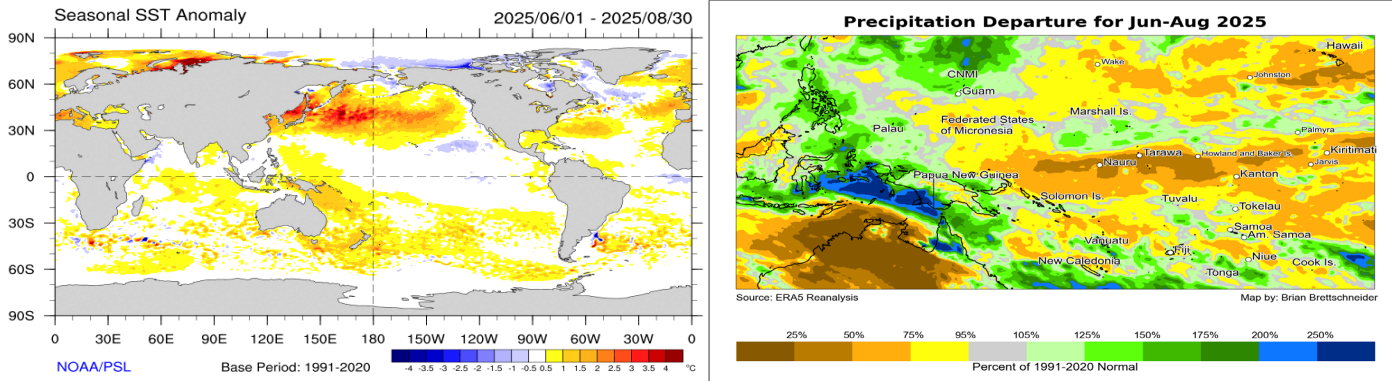
Significant Events – For June–August 2025



Highlights for Hawaii and the U.S. Affiliated Pacific Islands

- During the June-August period (JJA), ENSO-neutral conditions (Oceanic Niño Index [ONI] = -0.2°C for JJA) were present, with near-to-below normal sea surface temperatures (SSTs) observed across the central and east-central equatorial Pacific Ocean. Currently, a La Niña Watch is in effect and a transition to La Niña (71% chance during the Oct-Dec 2025 period) is favored, however, chances decrease to 54% during the Dec 2025-Feb 2026 period, according to the latest (9/11/25) ENSO status update by NOAA Climate Prediction Center (CPC).
- For the JJA period, above-normal precipitation was observed across areas of the U.S. Affiliated Pacific Islands (USAPI) including areas of Palau, Mariana Islands, isolated areas of the Federated States of Micronesia (FSM), and the Republic of the Marshall Islands (RMI). In American Samoa, wet conditions continued with record rainfall observed in Pago Pago for July 2025 as well as for the Jan-Aug 2025 period. In the Hawaiian Islands, drier-than-normal conditions prevailed across much of the island chain during JJA with moderate to extreme drought conditions observed.
- According to data from the University of Hawaii Sea Level Center, record daily high sea levels were observed during the JJA period in the western and central tropical Pacific Ocean including at tide gauges around Palau, Guam, FSM (Chuuk, Pohnpei, Yap), RMI (Majuro), American Samoa, and areas of the Hawaiian Islands (Hawaii Island, Kauai, Maui).

Climate Overview – For June–August 2025



Seasonal sea surface temperature anomaly map for 6/1/25 to 8/30/25 (left) and 3-month seasonal precipitation departures from normal for the June–August 2025 period for the central and western tropical Pacific Ocean with warmer colors representing drier-than-normal conditions and cooler colors wetter-than-normal conditions (right).

Source: NOAA Physical Sciences Laboratory (left); ERA5 Reanalysis, B. Brettschneider, National Weather Service (right).

By the end of the JJA period, SSTs were near to slightly below normal across the central and east-central tropical Pacific Ocean, while in the tropical western Pacific Ocean SSTs were near to slightly above normal. According to the NOAA CPC update (9/8/25), Niño region SST departures were as follows: Niño 3.4 at -0.3°C , Niño 3 at -0.4°C , Niño 1+2 at -0.2°C , and Niño 4 at -0.2°C .

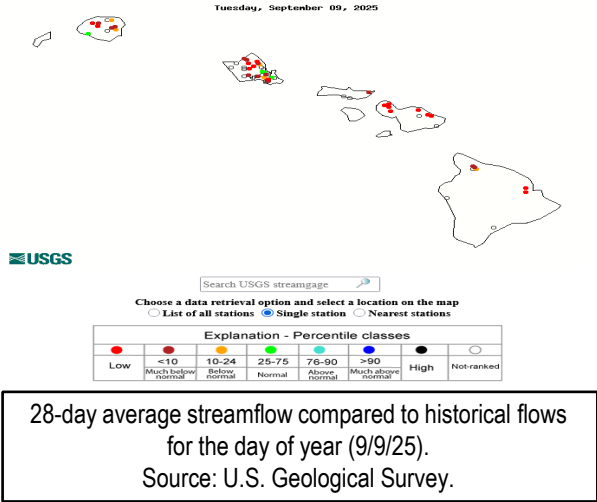
Below-normal sea levels (~ -5 to -20 + cm anomalies) were observed in proximity to the equator (from $\sim 10^{\circ}\text{N}$ to $\sim 10^{\circ}\text{S}$) during the June–August 2025 period across most of the central and east-central Pacific Ocean. Conversely, above-normal sea levels were observed in areas around the Hawaiian Islands as well as across much of the tropical western Pacific (from $\sim 5^{\circ}\text{S}$ to $\sim 20^{\circ}\text{N}$), including around Palau, the Mariana Islands, FSM, areas of RMI, American Samoa, and the Hawaiian Islands ($\sim +5$ to $+20$ cm anomalies), according to data from the University of Hawaii Sea Level Center.

During the JJA period, areas of moderate to extreme drought were observed in USAPI including areas of RMI (Ailinglaplap, Kwajalein, Jaluit, Utirik, Wotje), FSM (Pingelap, Yap) and the Mariana Islands (Guam, Rota, Saipan). Late in the JJA period, wet conditions across much of the USAPI region led to drought amelioration by the end of August, except for lingering drought in Utirik (RMI), according to the U.S. Drought Monitor. For JJA precipitation totals, Airai (Palau) recorded 52.34 in. (100% of normal). In FSM, Yap observed 38.55 in. (87% of normal), Kapingamarangi 24.61 in. (64% of normal), Pohnpei 53.9 in. (116% of normal), Lukunor 32.69 in. (79% of normal), Kosrae 66.89 in. (146% of normal), and Chuuk 41.31 in. (106% of normal). In the Mariana Islands, Saipan observed 28.89 in. (118% of normal) and Guam 39.55 in. (115% of normal). In the RMI, Majuro observed 42.87 in. (125% of normal), while Kwajalein logged 26.88 in. (99% of normal). In Pago Pago, American Samoa, precipitation for JJA was well above normal (34.69 in., 196% of normal; 4th wettest). Moreover, Pago Pago observed its wettest July on record (25.14 in.), its 2nd wettest June–July period (31.24 in.), and its wettest January–August period (137.49 in.) on record. In the Hawaiian Islands, dry conditions prevailed across much of the region with drought conditions persisting across the island chain during the summer months. For the JJA period, Lihue observed 3.46 in. (59% of normal), Honolulu 0.15 in. (8% of normal; 2nd driest), Molokai 0.42 in. (20% of normal; 4th driest), Kahului 0.18 in. (15% of normal; 5th driest), Kailua-Kona 2.16 in. (121% of normal), and Hilo 10.65 in. (38% of normal; 2nd driest).

In the Northwest Pacific region (west of 180°E), tropical cyclone (TC) activity was below normal, with 16 named storms and a regional Accumulated Cyclone Energy (ACE) Index of 56.1 (normal 151.6) on 9/11/25, while the Northeast Pacific observed 15 named storms with an ACE Index of 86.9 (normal 92.4), according to the Colorado State University Tropical Meteorology Project.

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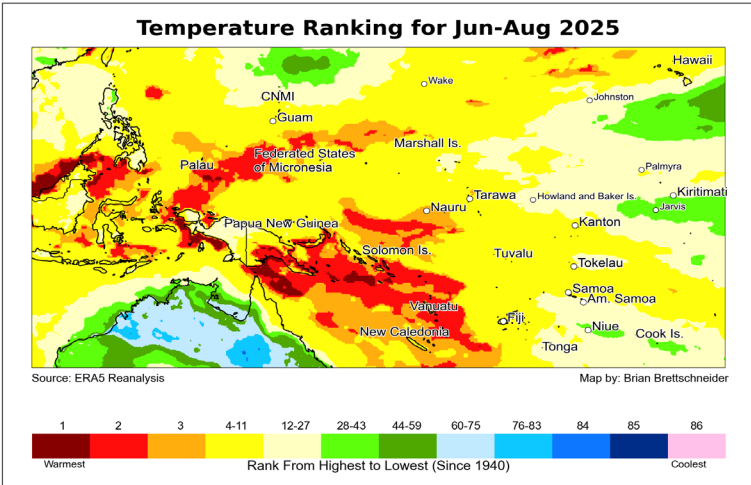
Fire crew from the Division of Forestry and Wildlife working to contain the Kunia Fire within parts of the Honouliuli Forest Reserve and adjacent private lands in West Oahu. The fire burned nearly 250 acres (August 2025).
Source: Hawaii Department of Land and Natural Resources.



Flash flooding observed (7/1/25) in the village of Aua, Tutuila Island, American Samoa.
Source: NWS WSO, Pago Pago.

Facilities and Infrastructure – In American Samoa, heavy rainfall during the JJA period led to incidents of flash flooding (bottom left) and landslides on Tutuila Island. Reports from a local news source (Talanei.com) indicated that heavy rains had caused flooding, landslides, evacuations, and damage to roads, homes, and property in the villages of Faga’alu and Nu’uuli.

Heat – In the western Pacific, anomalously warm air temperatures were observed during the JJA period in areas of the Republic of Palau, FSM, and RMI (below). In the Hawaiian Islands, Lihue Intl. Airport observed its 11th warmest mean maximum temperature for the June through August period with a temperature of 85.2°F.



2-meter surface air temperature rankings for the June-August 2025 period for the Pacific Ocean region.
Source: ERA5 Reanalysis, B. Brettschneider, NWS.

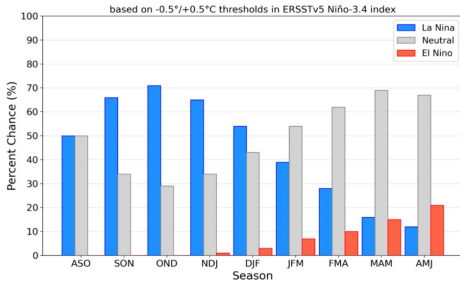
Water Resources – In Majuro (RMI), reservoir storage reached 89% of total capacity (36,000,000 gallons) on 8/31/25. Across the Hawaiian Islands, 28-day average streamflows (9/9/25) were well below normal at numerous USGS gauging stations (upper left), including along Hawaii’s longest river, Wailuku River (1st percentile), at Piihonua, Hawaii.

Wildfire – In the Hawaiian Islands, brush fires were reported during JJA including on Hawaii Island (Paauilo Fire), Maui (Kahikinui and Kaanapali fires), and Oahu (Kunia Fire; center left).

Seasonal Outlook – For September–November 2025

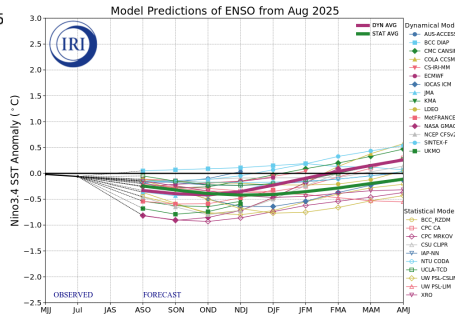
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Official NOAA CPC ENSO Probabilities (issued September 2025)



Forecast for each of the three possible ENSO categories for the next 8 overlapping 3-month seasons. Blue bars show the chances of La Niña, gray bars the chances for neutral, and red bars the chances for El Niño (left); and ENSO forecast model predictions (right).

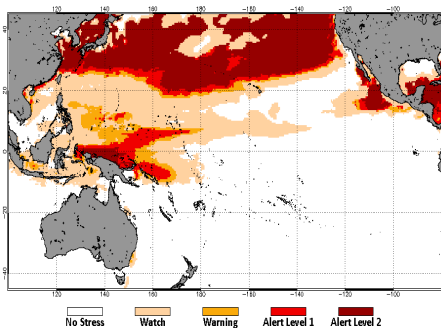
Source: NOAA CPC (left); Columbia University IRI (right).



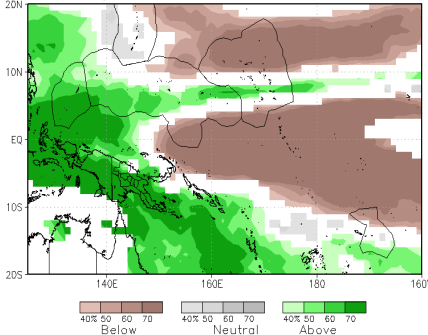
According to the latest NOAA CPC ENSO Diagnostic Discussion (9/11/25), a transition from ENSO-neutral to La Niña is expected during Oct-Dec 2025 (71% chance). During the Dec 2025-Feb 2026 period, La Niña is favored but chances decrease to 54%. In terms of seasonal sea level anomalies, the NOAA NCEP CFSv2 model suggests continued below-normal sea levels across much of the equatorial central and eastern Pacific, while elevated levels are expected across much of the western tropical Pacific as well as in the Hawaiian Islands, according to model forecast data from the University of Hawaii Sea Level Center.

The NOAA Coral Reef Watch four-month coral bleaching heat stress outlook (Sep-Dec 2025; below left) calls for a high probability (90%) of high heat stress (Alert Level 1-2) developing in the tropical western Pacific Ocean for areas of USAPI including southern RMI, southern and northwestern FSM, and other locations including areas near New Guinea and the Solomon Islands.

2025 Sep 9 NOAA Coral Reef Watch 90% Probability Coral Bleaching Heat Stress for Sep–Dec 2025



USAPI NMME prob fcst Prate IC=202509 for lead 0 2025 SON



NOAA Coral Reef Watch 90% probability coral reef heat stress outlook for September to December 2025 (left); and NOAA NMME USAPI seasonal precipitation forecast for September to November 2025 (right).

Source: NOAA NESDIS (left); NOAA CPC (right).

For the Sep-Nov 2025 precipitation forecast, above-normal rainfall amounts are favored for Palau and much of FSM, and central RMI. Elsewhere, near-normal conditions are expected in American Samoa and the Marianas, while below-normal precipitation is expected for northern and southern RMI and across the Hawaiian Islands, according to the NOAA NMME forecast.

NOAA Coral Reef Watch:

<https://coralreefwatch.noaa.gov/>

NOAA National Centers for Environmental Information:

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

NOAA NMFS Pacific Island Fisheries Science Center:

<https://www.fisheries.noaa.gov/about/pacific-islands-fisheries-science-center>

NOAA NWS Weather Forecast Offices Honolulu, Guam, & Pago Pago:

<https://www.weather.gov/hfo/>

<https://www.weather.gov/gum/>

<https://www.weather.gov/ppg/>

NOAA OceanWatch - Central Pacific Node:

<https://oceanwatch.pifsc.noaa.gov/index.html>

NPS Pacific Island Inventory & Monitoring Network:

<https://www.nps.gov/im/pacn/index.htm>

University of Guam - Water and Environmental Research Institute:

<https://weri.uog.edu/>

University of Hawaii - Asia Pacific Data Research Center (APDRC):

<https://apdrc.soest.hawaii.edu/>

University of Hawaii – Cooperative Institute for Marine & Atmospheric Research:

<https://www.soest.hawaii.edu/jimar/index.htm>

University of Hawaii - Sea Level Center:

<https://uhslc.soest.hawaii.edu/>

USGS Science Center - Pacific Coastal and Marine Science Center:

<https://www.usgs.gov/pacific-coastal-and-marine-science-center>

USGS Pacific Islands Water Science Center:

<https://www.usgs.gov/pacific-coastal-and-marine-science-center>

Western Regional Climate Center:

<https://wrcc.dri.edu/>



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