



NWS Climate Services

July PEAC Audio Conference Call Summary

11 July, 1430 HST (12 July 2024, 0030 GMT)

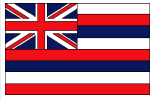


June rainfall totals reported

% Normal: **blue** above normal & **red** below normal. Departure from normal: **blue**-above & **red**-below (same for 3 mon %)

| | Rainfall | % Norm | Normal | Departure | 3 mon % |
|-----------|----------|--------|--------|-----------|---------|
| | Inches | June | Inches | inches | AMJ |
| Airai | 17.05 | 104 | 16.37 | 0.68 | 101 |
| Yap | 6.61 | 57 | 11.69 | -5.08 | 56 |
| Chuuk | 15.38 | 127 | 12.11 | 3.27 | 107 |
| Pohnpei | 15.34 | 102 | 15.04 | 0.30 | 118 |
| Kosrae | 16.03 | 108 | 14.83 | 1.20 | 88 |
| Kwajalein | 10.17 | 147 | 6.93 | 3.24 | 134 |
| Majuro | 10.92 | 97 | 11.25 | -0.33 | 112 |
| Guam NAS | 8.00 | 133 | 6.03 | 1.97 | 153 |
| Saipan | 7.71 | 214 | 3.61 | 4.10 | 117 |
| Pago Pago | 9.91 | 190 | 5.22 | 4.69 | 163 |
| Lihue | 0.82 | 64 | 1.29 | -0.47 | 372 |
| Honolulu | 0.06 | 27 | 0.22 | -0.16 | 559 |
| Kahului | 0.07 | 70 | 0.10 | -0.03 | 153 |
| Hilo | 3.88 | 61 | 6.37 | -2.49 | 125 |

Reports from around the Region



Hawaii (Kevin Kodama)

Precipitation Summaries for HI can also be found:

https://www.weather.gov/hfo/hydro_summary

Kauai

Rainfall totals for the month of June were near to below average at most of the gages on Kaua‘i. The U.S. Geological Survey’s (USGS) rain gage on Mount Wai‘ale‘ale had the highest monthly total of 22.90 inches (70 percent of average), and the highest daily total of 2.69 inches on June 21. The North Wailua Ditch rain gage, also operated by the USGS, posted its lowest June total since 2012.

Despite the recent dry conditions, nearly all of the gages on Kaua‘i continued to show near to above average rainfall for 2024 through the end of June. The Mount Wai‘ale‘ale rain gage had the highest year-to-date total of 197.03 inches (105 percent of average).

Oahu

After the wettest May in over 30 years, most of the rain gages on O‘ahu had below average rainfall for the month of June. Leeward sites were especially dry with many sites having June totals at less than 30 percent of average. The Mānoa Lyon Arboretum rain gage had the highest monthly total of 9.33 inches (72 percent of average) and the highest daily total of 1.18 inches on June 22. Wai‘anae Valley and Kahuku had their lowest June totals since 2006 and 2008, respectively.

Nearly all of the gages on O‘ahu had near to above average rainfall totals for 2024 through the end of June. The USGS’ Poamoho Rain Gage No. 1 had the highest year-to-date total of 98.80 inches (89 percent of average).

Maui

Most of the rain gages across Maui County had below average rainfall for the month of June. Locations with near to above average rainfall were mainly along the windward slopes. The USGS’ rain gage on Pu‘u Kukui had the highest monthly total of 23.80 inches (81 percent of average) and the highest daily total of 5.77 inches on June 22. The Kula Branch Station gage had its lowest June total since 1999. In contrast, the Māhinahina gage had its highest June total since 2005.

Maui County rainfall totals for 2024 through the end of June were mostly near to above average. The Pu‘u Kukui rain gage had the highest year-to-date total of 136.04 inches (71 percent of average).

Big Island

June rainfall totals were below average at most of the gages on the Big Island. The near to above average totals were mainly along the lower Hāmākua slopes and along the Kona slopes south of Hualālai. The USGS’ rain gage at Kawainui Stream had the highest monthly total of 20.00 inches (203 percent of average) and the highest daily total of 3.36 inches on June 22. The Kealakomo, Pali 2, and Waiki‘i gages had their lowest June totals since 2010.

Rainfall totals for 2024 through the end of June were near to above average at most of the gages on the Big Island. The USGS’ rain gage at Honoli‘i Stream had the highest year-to-date total of 116.76 inches (105 percent of average).

Current State of ENSO and predictions

Issued 9 May 2024

ENSO Alert System Status: [El Niño Advisory](#) / [La Niña Watch](#)

Synopsis: A transition from El Niño to ENSO-neutral is likely in the next month. La Niña may develop in June-August (49% chance) or July-September (69% chance).

During April 2024, below-average equatorial sea surface temperatures (SSTs) emerged in small regions of the eastern Pacific Ocean. However, above-average SSTs prevailed across the rest of the equatorial Pacific. The latest weekly Niño index values remained between +0.5°C and +0.8°C in all regions, except for Niño-3 which was +0.3°C. Below-average subsurface temperatures held steady during the month (area-averaged index) with negative anomalies extending from the Date Line to the eastern Pacific Ocean. Low-level wind anomalies were easterly over the western equatorial Pacific, while upper-level winds were near average. Convection was near average overall across the equatorial Pacific Ocean and Indonesia. Collectively, the coupled ocean-atmosphere system reflected the continued weakening of El Niño and transition toward ENSO-neutral.

The most recent IRI plume favors an imminent transition to ENSO-neutral, with La Niña developing during July-September 2024 and then persisting through the Northern Hemisphere winter. The forecast team continues to favor the dynamical model guidance, which suggests La Niña could form as early as June-August 2024, with higher confidence of La Niña during the following seasons. La Niña generally trends to follow strong El Niño event, which also provides added confidence in the model guidance favoring La Niña. In summary, a transition from El Niño to ENSO-neutral is likely in the next month. La Niña may develop in June-August (49% chance) or July-September (69% chance).

6. Rainfall Verification AMJ– April, May, June (Josie)

The verification result of AMJ rainfall forecasts was 9 hits and 5 misses (Heidke score: 0.4478).

| Location | UKMO | ECMWF | CA | NASA | NCEP | IRI | APCC | Rainfall Outlook | Final Probs | 3 mo Verification | | |
|------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------------|-------------|-------------------|------------|---------|
| | | | | | | | | | | % norm | Total (in) | Tercile |
| Palau | | | | | | | | | | | | |
| Airai 7° 22' N, 134° 32' E | Below | Below | Avg-below | Avg. | Avg-above | Avg-below | | Below | 45:30:25 | 101 | 37.50 | Avg. |
| FSM | | | | | | | | | | | | |
| Yap 9° 29' N, 138° 05' E | Below | Below | Below | Avg-below | Avg. | Below | | Below | 45:30:25 | 56 | 14.47 | Below |
| Chuuk 7° 28' N, 151° 51' E | Below | Below | Avg-below | Avg-below | Avg-above | Avg-above | Avg-below | Below | 45:30:25 | 107 | 38.54 | Avg. |
| Pohnpei 6° 59' N, 158° 12' E | Avg-below | Below | Avg-below | Avg. | Avg. | Below | | Below | 45:30:25 | 118 | 60.77 | Above |
| Kosrae 5° 21' N, 162° 57' E | Below | Avg. | Avg. | Avg-above | Avg. | Avg-below | | Below | 40:35:25 | 88 | 48.28 | Below |
| RMI | | | | | | | | | | | | |
| Kwajalein 8° 43' N, 167° 44' E | Avg-below | Below | Below | Avg-above | Avg-above | Below | | Below | 45:30:25 | 134 | 25.53 | Avg. |
| Majuro 7° 04' N, 171° 17' E | Avg-below | Below | Avg-below | Above | Avg. | Below | | Below | 45:30:25 | 112 | 36.52 | Avg. |
| Guam and CNMI | | | | | | | | | | | | |
| Guam 13° 29' N, 144° 48' E | Below | Below | Below | Avg-below | Avg-below | Below | | Below | 45:30:25 | 153 | 18.99 | Avg. |
| Saipan 15° 06' N, 145° 48' E | Below | Below | Below | Avg-below | Avg-below | Below | | Below | 45:30:25 | 117 | 10.73 | Avg. |
| American Samoa | | | | | | | | | | | | |
| Pago Pago 14° 20' S, 170° 43' W | Above | Avg-below | Avg-above | Avg-above | Avg-above | Avg. | | Avg-above | 30:35:35 | 163 | 41.11 | Above |
| State of Hawaii | | | | | | | | | | | | |
| 19.7° - 21.0° N, 155.0° - 159.5° W | | | | | | | | | | | | |
| Lihue | Below | Below | Avg-below | Avg-below | Avg. | Below | | Below | 45:30:25 | 372 | 17.50 | Above |
| Honolulu | Below | Below | Avg-below | Avg-below | Avg. | Below | | Below | 45:30:25 | 559 | 6.37 | Below |
| Kahului | Below | Below | Avg-below | Avg-below | Avg. | Below | | Below | 45:30:25 | 153 | 2.22 | Above |
| Hilo | Below | Below | Avg-below | Avg-below | Avg. | Below | | Avg-below | 35:35:30 | 125 | 27.04 | Avg. |

| | |
|---------|---------|
| 9 | Hit |
| 5 | Miss |
| Heidke: | 0.2734 |
| RPSS: | -0.0296 |

Tercile Cut-offs for Season based on 1991-2020 Pacific Rainfall Climatologies (Moore)

| | Koror | Yap | Chuuk | Pohnpei | Guam | Saipan | Majuro | Kwaj |
|-----------|-------|-------|-------|---------|-------|--------|--------|-------|
| below (<) | | | | | | | | |
| 33.33% | 34.28 | 21 | 32.97 | 49.71 | 13.05 | 8.14 | 25.63 | 15.41 |
| near | | | | | | | | |
| 66.66% | 42.1 | 32.89 | 39.15 | 56.96 | 15.95 | 11.06 | 34.51 | 26.35 |
| above (>) | | | | | | | | |

| | Lihue | Honolulu | Kahului | Hilo | Pago Pago | Kosrae |
|-----------|-------|----------|---------|-------|-----------|--------|
| below (<) | | | | | | |
| 33.33% | 4.74 | 1.23 | 1.25 | 21.42 | 22.42 | 47.62 |
| near | | | | | | |
| 66.66% | 5.97 | 1.77 | 2.17 | 29.01 | 33.53 | 51.87 |
| above (>) | | | | | | |

6. Rainfall Outlook JAS– June, August, September

| JAS Forecast Location | Rainfall Outlook | Probability Pre-Conference | Final Outlook | Final Probability |
|------------------------------------|---------------------|-------------------------------|------------------|----------------------|
| Palau | | | | |
| Airai 7° 22' N, 134° 32' E | Above | 25:30:45 | - | - |
| FSM | | | | |
| Yap 9° 29' N, 138° 05' E | Avg-Above | 30:35:35 | - | - |
| Chuuk 7° 28' N, 151° 51' E | Avg-Above | 30:35:35 | - | - |
| Pohnpei 6° 59' N, 158° 12' E | Avg-Above | 30:35:35 | - | - |
| Kosrae 5° 21' N, 162° 57' E | Avg-Below | 35:35:30 | - | - |
| RMI | | | | |
| Kwajalein 8° 43' N, 167° 44' E | Avg-Below | 35:35:30 | - | - |
| Majuro 7° 04' N, 171° 17' E | Above | 30:30:40 | - | - |
| Guam and CNMI | | | | |
| Guam 13° 29' N, 144° 48' E | Below | 45:30:25 | - | - |
| Saipan 15° 06' N, 145° 48' E | Below | 40:35:25 | - | - |
| American Samoa | | | | |
| Pago Pago 14° 20' S, 170° 43' W | Above | 30:30:40 | - | - |
| State of Hawaii | | | | |
| 19.7° - 21.0' N, 155.0° - 159.5' W | | | | |
| Lihue | Below | 40:30:30 | - | - |
| Honolulu | Below | 40:30:30 | - | - |
| Kahului | Below | 40:30:30 | - | - |
| Hilo | Below | 40:30:30 | - | - |

Tercile Cut-offs for JAS Season based on 1991-2020 Pacific Rainfall Climatologies (Moore)

| | <u>Koror</u> | <u>Yap</u> | <u>Chuuk</u> | <u>Pohnpei</u> | <u>Guam</u> | <u>Saipan</u> | <u>Majuro</u> | <u>Kwai</u> |
|-----------|--------------|------------|--------------|----------------|-------------|---------------|---------------|-------------|
| below (<) | | | | | | | | |
| 33.33% | 34.58 | 36.72 | 36.11 | 39.44 | 34.11 | 23.48 | 31.15 | 25.28 |
| near | | | | | | | | |
| 66.66% | 48.69 | 50.55 | 46.36 | 48.45 | 49.5 | 35.57 | 37.42 | 32.56 |

above (>)

| | <u>Lihue</u> | <u>Honolulu</u> | <u>Kahului</u> | <u>Hilo</u> | <u>Pago Pago</u> | <u>Kosrae</u> |
|-----------|--------------|-----------------|----------------|-------------|------------------|---------------|
| below (<) | | | | | | |
| 33.33% | 3.95 | 0.72 | 0.56 | 20.35 | 14.63 | 38.77 |
| near | | | | | | |
| 66.66% | 6.72 | 1.86 | 1.63 | 29.27 | 25.93 | 50.18 |

above (>)

A. End-of-June Monthly Drought Assessment:

- i. With WxCoder III data, we have 23 stations in the monthly analysis.
- ii. June was dry (less than the 4- or 8-inch monthly minimum needed to meet most water needs) in the northern Marshalls (Wotje) and western & southern FSM (Yap, Nukuoro, Kapingamarangi); it was wet in American Samoa, the Marianas, Republic of Palau, most of the Marshalls, and much of the FSM. June was drier than normal in Palau, western & southern FSM (Yap & Kapingamarangi), and southern Marshalls (Majuro); it was near to wetter than normal in the Marianas, American Samoa, and other parts of the FSM and Marshalls.
- iii. The end-of-June monthly analysis (June 30) is consistent with the weekly analyses for June 25 & July 2.
 - a. End-of-June drought conditions:

1. D3 improved to D0 at Rota & Saipan.
2. D3 improved to D1 at Ulithi.
3. D3 improved to D2 at Yap.
4. D2 improved to D0 at Guam.
5. D0 ended at Palau & Kwajalein.
6. D1 worsened to D2 at Wotje.
7. D-Nothing continued at all other locations.
8. Pingelap, Mili, Utirik, Woleai, & Fananu were plotted as missing due to missing data for the month.
 - b. Compared to the end-of-May monthly analysis:

1. 6 stations were in Dx -- 3 D0, 1 D1, 2 D2, none in D3 or D4 -- in June.
2. 9 stations were in Dx -- 2 D0, 2 D1, 1 D2, 4 D3, none in D4 -- in May.

iii. Some June 2024 precipitation ranks:

a. **Yap**: sixth driest June (in a 73-year record), third or fourth driest May-June back through September-June (all 9 time periods), 14th driest July-June (12-month period).

b. **Wotje**: eighth driest June (40 years), August-June, and July-June.

c. **Nukuoro**: fifth driest June (42 years), sixth driest May-June, and third driest February-June.

d. **Kapingamarangi**: eighth driest June (34 years) and May-June, but second wettest July-June.

e. **Jaluit**: fourth driest 12-month period June-May (38 years), but only 17th driest June.

f. **Ulithi**: seventh driest November-June (36 years) but ninth wettest June.

g. Some stations at the wet end of the scale:

1. **Saipan** had the fourth wettest June (44 years).

Pago Pago had the second wettest December-June (58 years) and November-June.

Current (Weekly) Drought Conditions: The discussion above is the monthly (end of June) analysis. The latest weekly USAPI USDM assessment may show different USDM classifications. The latest weekly USAPI USDM assessment is for July 9 (https://droughtmonitor.unl.edu/data/png/20240709/20240709_usdm_pg2.png).

i. The July 9 map is the same as the June 30 map, except Kosrae was missing.

C. June 2024 NCEI State of the Climate Drought Report: The June 2024 NCEI SotC Drought report will go online tomorrow, July 12.

i. The web page url for the June report will be:

a. <https://www.ncei.noaa.gov/access/monitoring/monthly-report/drought/202406#regional-usapi>