



# NWS Climate Services

## August PEAC Audio Conference Call Summary

**11 August, 1430 HST (12 August 2022, 0030 GMT)**



University of  
Hawai'i  
M Ā N O A  
UH/SOEST

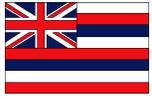


### July rainfall totals reported

% 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	July	Inches	inches	MJJ
Airai	13.31	61	21.99	-8.68	94
Yap	16.54	110	15.08	1.46	110
Chuuk	12.86	107	11.98	0.88	116
Pohnpei	26.66	173	15.43	11.23	133
Kosrae	25.14	169	14.91	10.23	143
Kwajalein	9.23	94	9.87	-0.64	137
Majuro	10.70	96	11.17	-0.47	78
Guam NAS	13.71	135	10.14	3.57	106
Saipan	14.16	159	8.91	5.25	133
Pago Pago	9.23	166	5.55	3.68	119
Lihue	0.92	54	1.69	-0.77	91
Honolulu	0.24	67	0.36	-0.12	176
Kahului	0.09	24	0.38	-0.29	29
Hilo	5.39	57	9.53	-4.14	110

## Reports from around the Region



**Hawaii** (Kevin Kodama)

Precipitation Summaries for HI can also be found:

[https://www.weather.gov/hfo/hydro\\_summary](https://www.weather.gov/hfo/hydro_summary)

### Kauai

Most of the rain gages on Kaua'i recorded below average totals for the month of July. Many of the totals were in the range of 40 to 70 percent of average. The U.S. Geological Survey's (USGS) rain gage on Mount Wai'ale'ale had the highest monthly total of 23.35 inches (60 percent of average), and the highest daily total of 2.72 inches on July 7. The gages at Hanapēpē and Hanalei recorded their lowest July totals since 2002 and 2006, respectively.

Rainfall totals for 2022 through the end of July were below average at most of the gages on Kaua'i. Many of these totals were in the range of 40 to 70 percent of average. The Mount Wai'ale'ale gage had the highest year-to-date total of 168.02 inches (74 percent of average).

### Oahu

The July rainfall totals on O'ahu were mostly below average. Gages along the lower leeward slopes had monthly totals mostly below 50 percent of average. The USGS' Hālawā Tunnel Rain Gage had the highest monthly total of 10.60 inches (97 percent of average), followed closely by Mānoa Lyon Arboretum's 10.55 inches (69 percent of average). The Lyon Arboretum gage had the highest daily total of 2.42 inches on July 3. While there were no monthly rainfall records broken, the Punalu'u Pump gage had its lowest July total since 2004. On the north end of the island, the Kahuku gage posted its lowest July total since 2006.

O'ahu rainfall totals for 2022 through the end of July were below average for most of the gages. Many of the totals were in the range of 30 to 70 percent of average. The USGS' Poamoho Rain Gage No. 1 had the highest year-to-date total of 63.48 inches (49 percent of average). While Honolulu Airport has 8.47 inches so far this year (97 percent of average), it has recorded only 0.25 inches in the last 2 months.

### Maui

The rain gages across Maui County continue to show widely varying totals, from 149 percent of average at Haiku on the windward side of Ha-leakalā, to zero rainfall at 7 sites, mainly in Maui's central valley and Upcountry regions. The USGS' rain gage on top of Pu'u Kukui had the highest monthly total of 26.20 inches (79 percent of average). This site also had the highest daily total of 6.53 inches on July 13 associated with the passage of remnant moisture from former Tropical Cyclone Bonnie. The July totals registered as the lowest since 1933 at 'Ulupalakua Ranch, and 2004 at Kula Branch Station.

Accumulations for 2022 through the end of July were below average at all of the rain gages across Maui County. Most of the year-to-date totals remained below 50 percent of average. The Pu'u Kukui rain gage had the highest total of 125.16 inches (56 percent of average).

### Big Island

Most of the rain gages across the Big Island reported near to below average July totals. Monthly totals from the windward sites were mostly 50 to 80 percent of average. Totals from the Ka'ū, Kona, and leeward Kohala areas were mostly below 50 percent of average. The USGS' rain gage at Kawainui Stream had the highest monthly total of 28.50 inches (212 percent of average). The Piihonua gage had the highest daily total of 3.47 inches on July 13. Kealakekua and Waikoloa Village had their lowest July totals since 2011.

Big Island rainfall totals for 2022 through the end of July were near to below average at most of the gages. The USGS' rain gage at Kawainui Stream had the highest year-to-date total of 119.80 inches (131 percent of average).

# Current State of ENSO and predictions

Issued 11 August 2022

## ENSO Alert System Status: [La Niña Advisory](#)

**Synopsis: La Niña is expected to continue, with chances for La Niña gradually decreasing from 86% in the coming season to 60% during December-February 2022-23.**

During the past month, below-average sea surface temperatures (SSTs) expanded across the central and eastern equatorial Pacific Ocean (Fig. 1). The weekly Niño indices indicated renewed cooling, with the latest Niño-3.4 and Niño-4 indices reaching  $-1.0^{\circ}\text{C}$  (Fig. 2). Subsurface temperature anomalies also decreased rapidly in the past month (Fig. 3), reflecting the reemergence of below-average subsurface temperatures across the east-central Pacific Ocean due to an upwelling Kelvin wave propagating eastward (Fig. 4). Low-level easterly wind anomalies and upper-level westerly wind anomalies persisted across most of the equatorial Pacific. Convection and rainfall remained suppressed over the western and central tropical Pacific and enhanced over Indonesia (Fig. 5). Overall, the coupled ocean-atmosphere system remained consistent with an ongoing La Niña.

The most recent IRI plume average for the Niño-3.4 SST index forecasts La Niña to persist into the Northern Hemisphere winter 2022-23 (Fig. 6). The forecaster consensus, supplemented with the latest models from the North American Multi-Model Ensemble (NMME), concurs that La Niña is the most likely outcome during the fall and winter. While a majority of NMME models suggest that La Niña will transition to ENSO-neutral in January-March 2023, forecasters are split on this outcome resulting in equal forecast probabilities for that season. In summary, La Niña is expected to continue, with chances for La Niña gradually decreasing from 86% in the coming season to 60% during December-February 2022-23 (Fig. 7).

This discussion is a consolidated effort of the National Oceanic and Atmospheric Administration (NOAA), NOAA's National Weather Service, and their funded institutions. Oceanic and atmospheric conditions are updated weekly on the Climate Prediction Center web site (El Niño/La Niña Current Conditions and Expert Discussions). Additional perspectives and analysis are also available in an ENSO blog. A probabilistic strength forecast is available here. The next ENSO Diagnostics Discussion is scheduled for 8 September 2022. To receive an e-mail notification when the monthly ENSO Diagnostic Discussions are released, please send an e-mail message to: [ncep.list.enso-update@noaa.gov](mailto:ncep.list.enso-update@noaa.gov).

## 6. Rainfall Verification MJJ-May, June, July (Josie)

The verification result of MJJ rainfall forecasts was 6 hits and 8 misses (Heidke score: 0.1988

Updated 8/23/2022		MJJ							Initial:	Initial:			
Location	UKMO	ECMWF	CA	NASA	NCEP	IRI	APCC	Rainfall Outlook	Final Probs	% norm	Total (in)	Tercile	
<b>Palau</b>													
Airai 7° 22' N, 134° 32' E	Above	Below	Below	Below	Avg.	Above	Avg.	Avg-below	35:35:30	94	51.56	Avg.	
<b>FSM</b>													
Yap 9° 29' N, 138° 05' E	Avg-below	Avg.	Below	Below	Avg.	Below	Avg.	Avg-below	35:35:30	110	38.62	Avg.	
Chuuk 7° 28' N, 151° 51' E	Avg.	Avg-below	Avg-below	Avg.	Avg.	Clim.	Avg.	Avg.	30:40:30	116	40.66	Above	
Pohnpei 6° 59' N, 158° 12' E	Avg.	Avg-below	Avg.	Avg.	Avg.	Clim.	Avg-below	Avg.	30:40:30	133	67.00	Above	
Kosrae 5° 21' N, 162° 57' E	Avg.	Avg-below	Avg-below	Avg-below	Avg.	Clim.	Avg.	Avg.	30:40:30	143	67.65	Above	
<b>RMI</b>													
Kwajalein 8° 43' N, 167° 44' E	Above	Above	Avg-below	Above	Avg-below	Avg-below	Avg-below	Avg-below	30:35:35	137	32.18	Above	
Majuro 7° 04' N, 171° 17' E	Avg.	Above	Avg-below	Avg.	Avg-below	Above	Avg.	Avg-below	30:35:35	78	25.20	Below	
<b>Guam and CNMI</b>													
Guam 13° 29' N, 144° 48' E	Avg-below	Avg-below	Avg-below	Avg.	Avg.	Avg.	Avg.	Avg.	30:40:30	106	20.94	Below	
Saipan 15° 06' N, 145° 48' E	Avg-below	Avg-below	Avg.	Avg.	Avg.	Above	Avg-below	Avg.	30:40:30	133	19.81	Above	
<b>American Samoa</b>													
Pago Pago 14° 20' S, 170° 43' W	Below	Below	Avg-below	Avg-below	Avg-below	Below	Avg-below	Below	40:30:30	119	24.39	Avg.	
<b>State of Hawaii</b>													
19.7° - 21.0° N, 155.0° - 159.5° W													
Lihue	Below	Avg-below	Avg.	Avg-below	Avg.	Clim.	Avg.	Avg-below	35:35:30	91	4.05	Below	
Honolulu	Below	Avg-below	Avg.	Avg-below	Avg.	Clim.	Avg.	Avg-below	35:35:30	176	1.45	Below	
Kahului	Below	Avg-below	Avg.	Avg-below	Avg.	Avg-below	Avg.	Avg-below	35:35:30	29	0.28	Below	
Hilo	Below	Avg-below	Avg.	Avg-below	Avg.	Avg-below	Avg.	Avg-below	35:35:30	110	35.74	Above	

6	Hit
8	Miss
Heidke:	0.1988
RPSS:	-0.0110

### Tercile Cut-offs for Season based on 1981-2010 Pacific Rainfall Climatologies (Luke He)

	Koror	Yap	Chuuk	Pohnpei	Guam	Saipan	Majuro	Kwai
below (<)								
33.33%	42.33	31.95	34.01	45.79	18.47	13.58	30.51	20.99
near								
66.66%	55.62	39.5	37.92	54.28	25.81	18.53	33.4	26.52
above (>)								

	Lihue	Honolulu	Kahului	Hilo	Pago Pago	Kosrae
below (<)						
33.33%	4.87	0.84	0.7	20.19	18.47	45.01
near						
66.66%	5.93	1.62	1.83	29.13	26.83	50.14
above (>)						

## 6. Rainfall Outlook ASO– August, September, October (Josie)

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

### Tercile Cut-offs for JFM Season based on 1981-2010 Pacific Rainfall Climatologies (Luke He)

	<b>Koror</b>	<b>Yap</b>	<b>Chuuk</b>	<b>Pohnpei</b>	<b>Guam</b>	<b>Saipan</b>	<b>Majuro</b>	<b>Kwaj</b>
below (<)								
33.33%	35.83	37.61	33.32	40.96	39.08	31.99	32.51	29.26
near								
66.66%	43.49	44.47	42.92	45.22	44.79	36.25	40.5	34.92

above (>)

	<b>Lihue</b>	<b>Honolulu</b>	<b>Kahului</b>	<b>Hilo</b>	<b>Pago Pago</b>	<b>Kosrae</b>
below (<)						
33.33%	6.24	1.62	0.84	26.06	19.26	37.76
near						
66.66%	8.43	3.14	2.45	33.29	27.9	40.35

above (>)

## Drought monitoring updates.

Notes for USAPI USDM authors -- Highlights from Reports from Around the Region and drought discussion:

- Kwajalein: vegetation still pretty brown.
- Wotje: Satellite-derived precip looks dry Wotje & surrounding islands; probably last half of March before it gets better.
- Majuro: Not much crops on Majuro (limited bandana, taro, tree crops) so they focus on reservoir levels as impacts.
- Kapingamarangi & Nukuoro: Possibly could improve Kapinga & Nukuoro to D-Nothing next week if rains continue.
- Chuuk: Wildfires happening on Chuuk, vegetation is drying out. 2 water tanks service downtown area, are half full, in northern part of Chuuk. Guam, Saipan: were some decent fires in south part of Guam. Vegetation still green on Guam, D-nothing good. Saipan drier, but drought concerns are minimal.

## Drought monitoring updates.

### A. End-of-July Monthly Drought Assessment:

- With WxCoder III data, we have 23 stations in the monthly analysis.
- July was dry (less than the 4- or 8-inch monthly minimum needed to meet most water needs) at Fananu (FSM); it was wet elsewhere. July was drier than normal at Airai (Palau), Kapingamarangi & Lukunor (FSM), and Kwajalein & Majuro (RMI); July was wetter than normal at the rest of the main stations.
- The end-of-July monthly analysis (July 31) is consistent with the weekly analyses for July 26 and August 2, and is the same as the August 2 analysis. Compared to the end-of-June monthly analysis:
  - abnormal dryness ended at Majuro.
  - D2 improved to D1 on Kapingamarangi.
  - The USDM status stayed the same (D-Nothing) at the other stations.
  - Utirik was plotted as missing due to missing data for the month.
- Some July 2022 precipitation ranks:
  - Kapingamarangi:** tenth driest July (in a 33-year record), but driest May-July, April-July, & March-July; 2<sup>nd</sup> or 3<sup>rd</sup> driest rank for all other longer time periods (February-July through August-July).
  - Lukunor:** 3<sup>rd</sup> driest June-July and fourth driest May-July (38 years).
  - Ulithi:** 5<sup>th</sup> driest June-July (38 years).
  - Jaluit:** 7<sup>th</sup> driest May-July (38 years).
  - Pago Pago:** 13<sup>th</sup> wettest July (57 years of data), but seventh driest September-July.
  - At the wet end of the scale:
    - Mili wettest Mar-Jul, Feb-Jul, Dec-Jul, Nov-Jul, Sep-Jul, Aug-Jul.
    - Ulithi 2<sup>nd</sup> wettest Dec-Jul, Nov-Jul, & Aug-Jul.
    - Ailinglaplap wettest Apr-Jul thru Jan-Jul, 2<sup>nd</sup> wettest Nov-Jul thru Aug-Jul.
    - Pingelap 2<sup>nd</sup> wettest July & Mar-Jul.
    - Woleai 2<sup>nd</sup> wettest Sep-Jul.
    - Pohnpei 2<sup>nd</sup> wettest Mar-Jul thru Sep-Jul.