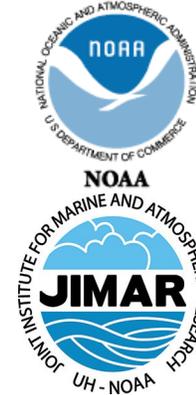




NWS Climate Services

June PEAC Audio Conference Call Summary

10 June, 1430 HST (11 June 2021, 0030 GMT)



University of
Hawai'i
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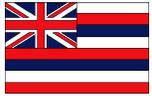


May rainfall totals reported

% 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	May	Inches	inches	MAM
Airai	21.06	134	15.72	5.34	50.93
Yap	8.59	109	7.85	0.74	35.00
Chuuk	27.53	244	11.30	16.23	52.94
Pohnpei	30.38	152	19.96	10.42	73.06
Kosrae	27.37	154	17.75	9.62	77.20
Kwajalein	8.45	126	6.72	1.73	23.83
Majuro	28.81	285	10.11	18.70	56.52
Guam NAS	7.14	210	3.40	3.74	12.86
Saipan	2.85	120	2.38	0.47	5.73
Pago Pago	7.71	80	9.66	-1.95	24.30
Lihue	0.49	33	1.49	-1.00	13.90
Honolulu	0.03	8	0.40	-0.37	4.68
Kahului	0.14	29	0.49	-0.35	10.52
Hilo	6.17	84	7.36	-1.19	38.96

Reports from around the Region



Hawaii (Kevin Kodama)

Precipitation Summaries for HI can also be found:

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

Kauai

Kauai rainfall totals for the month of May were mostly near to below average. Several leeward locations between Hanapepe and Kekaha had monthly totals below 50 percent of average. The U.S. Geological Survey's (USGS) rain gage on Mount Waialeale had the highest monthly total of 27.03 inches (88 percent of average), and the highest daily total of 3.40 inches on May 22. Lihue Airport's 0.49 inches (24 percent of average) marked to lowest May rainfall total since 2009 and the fifth lowest May total on record for this site.

While April and May were generally dry, rainfall totals for 2021 through the end of May were above average across the island due to wet conditions in February and March. Mount Waialeale had the highest year-to-date total of 243.86 inches (157 percent of average).

Oahu

It was another generally dry month on Oahu with most sites posting below average rainfall totals for the month of May. Most of the west Oahu sites had totals below 50 percent of the long term May average. The USGS' Poamoho Rain Gage No. 1 had the highest monthly total of 8.52 inches (49 percent of average). The highest daily total on Oahu was 1.97 inches at the Punaluu Pump gage on May 6 during the period of trade wind rainfall enhanced by a low pressure system aloft. Honolulu Airport's 0.03 inches (5 percent of average) marked its lowest May total since 2000. This total was also tied for the second lowest May rainfall on record at this site. Kamehame and Schofield Barracks had their lowest May totals since 2003.

Although most of the rainfall totals for 2021 through the end of May remained near to above average, a few west Oahu sites have dropped below average for the year. The USGS' Poamoho Rain Gage No. 1 had the highest year-to-date total of 99.87 inches (106 percent of average).

Maui

May rainfall totals were below average across most of Maui County. Windward Haleakala and some of the Upcountry gages had near average totals. In contrast, several low elevation leeward sites from Waikapu to Kihei had no measurable rainfall the entire month. Most of the gages on Molokai and Lanai had May totals below 50 percent of average. The USGS' Puu Kukui gage had the highest monthly total of 18.33 inches (66 percent of average) and the highest daily total of 2.50 inches on May 13. The Pukalani and Waikapu Country Club gages had their lowest May totals since 2010.

Most of the rainfall totals for 2021 through the end of May were near to above average across Maui County. However, a few of the leeward sites had year-to-date totals drop into below average territory due to the dry May conditions. Puu Kukui had the highest year-to-date total of 144.90 inches (89 percent of average). Puu Kukui and West Wailuaiki have been leap-frogging each other's totals through the year.

Big Island

Big Island rainfall totals for May were near to below average at most locations. A significant exception was the Kona slopes region where all sites reported above average rainfall. In fact, the Kealakekua rain gage posted its highest May rainfall total on record with its 12.86 inches (240 percent of average) passing the previous record of 9.76 inches by a wide margin. This site also had the Big Island's highest daily total of 2.28 inches on May 3. Windward monthly totals were mostly in the range of 60 to 100 percent of average. Among the automated rain gage sites, Glenwood had the highest monthly total of 13.74 inches (86 percent of average). However, a manually read CoCoRaHS volunteer network gage at Holualoa in the North Kona District had a higher May total of 14.99 inches.

Rainfall totals for 2021 through the end of May were near to above average at most of the Big Island gages. The main exceptions were along the slopes of the Kohala Mountains and in the Pohakuloa region of the island where several year-to-date totals were 40 to 70 percent of average. Piihonua had the highest year-to-date total of 100.98 inches (131 percent of average).

Current State of ENSO and predictions

ENSO Alert System Status: Not Active

Issued 10 June 2021

Synopsis: ENSO-neutral is favored through the Northern Hemisphere summer (78% chance for the June-August season) and fall (50% chance for the September-November season).

ENSO-neutral conditions continued during May, with near-average sea surface temperatures observed across most of the equatorial Pacific Ocean. In the last week, the Niño indices were all at -0.2°C , except for the Niño-1+2 index, which was -0.4°C . Subsurface temperature anomalies remained positive but decreased slightly due to the weakening of above-average subsurface temperatures around the thermocline in the central Pacific Ocean. Low-level easterly and upper-level westerly wind anomalies extended across most of the equatorial Pacific Ocean. At the Date Line, tropical convection was mostly near average, and enhanced rainfall was evident over the western Pacific Ocean. Overall, the ocean and atmosphere system reflected ENSO-neutral conditions.

A majority of the models in the IRI/CPC plume predict ENSO-neutral to continue through the fall 2021. The forecaster consensus generally agrees with this model outlook, although lower probabilities are assigned to El Niño during this period (remaining less than 10%). By the late fall and winter, La Niña chances increase to near 50%, reflecting the historical tendency for a second winter of La Niña following the first, and also the predictions from the North American Multi-Model Ensemble. However, these cooler conditions are predicted to exist for a short duration (3 overlapping seasons) and these predictions are still over 6 months into the future. In summary, ENSO-neutral is favored through the Northern Hemisphere summer (78% chance for the June-August season) and fall (50% chance for the September-November season; click [CPC/IRI consensus forecast](#) for the chances in each 3-month period).

6. Rainfall Verification MAM– March, April, May (Sony)

The verification result of **MAM** rainfall forecasts was 10 hits and 4 misses (Heidke score: 0.4138). All but four stations missed the forecast. The 4 missed stations were Pohnpei, Kosrae, Honolulu, and Kahului.

DJF Verification Location	Rainfall Outlook	Final Probs	3 month Verification		
			% norm	Total (in)	Tercile
Palau					
Airai 7° 22' N, 134° 32' E	Above	20:30:50	155	50.93	Above
FSM					
Yap 9° 29' N, 138° 05' E	Avg-above	30:35:35	194	35.00	Above
Chuuk 7° 28' N, 151° 51' E	Avg-above	30:35:35	165	52.94	Above
Pohnpei 6° 59' N, 158° 12' E	Avg.	30:40:30	142	73.06	Above
Kosrae 5° 21' N, 162° 57' E	Avg.	30:40:30	150	77.20	Above
RMI					
Kwajalein 8° 43' N, 167° 44' E	Avg-above	30:35:35	166	23.83	Above
Majuro 7° 04' N, 171° 17' E	Avg-above	30:35:35	216	56.52	Above
Guam and CNMI					
Guam 13° 29' N, 144° 48' E	Avg-above	30:35:35	161	12.86	Above
Saipan 15° 06' N, 145° 48' E	Avg-above	30:35:35	83	5.73	Avg.
American Samoa					
Pago Pago 14° 20' S, 170° 43' W	Below	40:30:30	82	24.30	Below
State of Hawaii					
19.7° - 21.0' N, 155.0° - 159.5' W					
Lihue	Avg-above	30:35:35	231	13.90	Above
Honolulu	Avg.	30:40:30	274	4.68	Above
Kahului	Avg.	30:40:30	323	10.52	Above
Hilo	Avg-above	30:35:35	144	38.96	Above

Heidke:	0.4138
RPSS:	0.0769

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

	Koror	Yap	Chuuk	Pohnpei	Guam	Saipan	Majuro	Kwai
below (<)								
33.33%	26.86	14.74	30.3	46.13	7.61	5.88	21.02	9.74
near								
66.66%	33.44	22.41	36.94	58.61	11.51	8.02	32.44	21.13

above (>)

	Lihue	Honolulu	Kahului	Hilo	Pago Pago	Kosrae
below (<)						
33.33%	5.32	1.83	2.45	22.5	27.97	51
near						
66.66%	7.98	3.05	4.64	34	38.33	55.49

above (>)

6. Rainfall Outlook JJA– June, July, August (Sony)

(-) means no changes were made to Rainfall outlook/probability

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

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

	Koror	Yap	Chuuk	Pohnpei	Guam	Saipan	Majuro	Kwai
below (<)								
33.33%	47.11	40.34	33.35	40.21	29.26	21.38	31.08	24.49
near								
66.66%	55.07	45.79	43.35	50	36.54	30.82	35.58	28.47

above (>)

	Lihue	Honolulu	Kahului	Hilo	Pago Pago	Kosrae
below (<)						
33.33%	4.39	0.71	0.74	19.45	14.32	43.42
near						
66.66%	6.88	1.3	1.51	31.4	21.74	46.35

above (>)

7. Drought monitoring updates (Richard Heim).

A. End-of-May Monthly Drought Assessment:

- i. With WxCoder III data, we have 23 stations in the monthly analysis.
- ii. May was dry (less than the 4- or 8-inch monthly minimum needed to meet most water needs) in the Marianas at Saipan, in the Marshalls at Ailinglaplap & Wotje, and at a few places in the FSM (Maap, North Fanif, & Tamil); it was wet elsewhere. May was drier than normal at Pago Pago, and wetter than normal elsewhere. The end-of-May monthly analysis (May 31) is consistent with the weekly analyses for May 25 and June 1, and is the same as the June 1 analysis. Compared to the end-of-April monthly analysis:
 - a. The USDM status improved at Kwajalein and in the Marianas (D1 to D-Nothing).
 - b. The USDM status improved at Kapingamarangi (D1 to D0).
 - c. The USDM status improved at Wotje (D3 to D1).
 - d. The USDM status stayed the same (D-Nothing) at the other stations.
 - e. Utirik was plotted as missing due to missing data for the month.
- iii. Some May 2021 precipitation ranks:
 - a. **Kapingamarangi:** 7th wettest May & 3rd wettest April-May, but still 2nd driest Aug-May, Jul-May, & Jun-May (last 10, 11, & 12 months).
 - b. **Saipan:** 17th wettest (25th driest) May, but 4th driest Jun-May in a 32-year record.
 - c. **Ailinglaplap:** 3rd driest May but 2nd wettest Jun-May thru Oct-May.
 - d. **Wotje:** 16th driest May (37 years).
 - e. On wet side: wettest May at Lukunor (37 years), Mili (37 years), & Majuro (67 years); 2nd wettest May at Woleai (39 years) & Chuuk (70 years).

B. Current (Weekly) Drought Conditions: The discussion above is the monthly (end of May) analysis. The latest weekly USAPI USDM assessment may show different USDM classifications. The latest weekly USAPI USDM assessment is for June 8.

- i. The June 8 analysis is the same as the May 31 analysis.

C. May 2021 NCEI State of the Climate Drought Report: The May 2021 NCEI SotC Drought report will go online tomorrow (Friday, June 11).

- i. The web page url will be:
 - a. <https://www.ncdc.noaa.gov/sotc/drought/202105#regional-usapi>