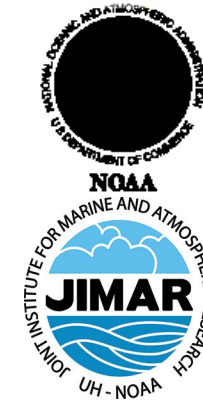




# NWS Climate Services

## November PEAC Audio Conference Call Summary

### 12 November, 1430 HST (13 November 2020, 0030 GMT)

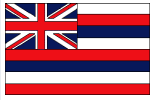


#### October rainfall totals reported

% 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	October	Inches	inches	ASO
Airai	20.11	175	11.51	8.60	49.52
Yap	12.71	104	12.18	0.53	34.30
Chuuk	10.57	92	11.51	-0.94	42.38
Pohnpei	18.49	121	15.27	3.22	47.50
Kosrae	16.25	149	10.94	5.31	44.82
Kwajalein	15.64	140	11.18	4.46	36.39
Majuro	22.35	176	12.73	9.62	43.57
Guam NAS	16.75	146	11.44	5.31	40.39
Saipan	11.08	104	10.62	0.46	27.42
Pago Pago	18.63	201	9.26	9.37	43.16
Lihue	4.05	123	3.30	0.75	6.59
Honolulu	3.20	254	1.26	1.94	3.40
Kahului	0.26	47	0.55	-0.29	0.56
Hilo	4.82	56	8.61	-3.79	17.86

## 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

Unstable and unusually persistent southerly low level winds over Kauai produced above average rainfall along the south and west sides of the island. On the normally wetter east side, monthly totals were mostly below 50 percent of average. The U.S. Geological Survey's (USGS) rain gage on Mount Waialeale posted the highest monthly total of 11.06 inches, but this was just 33 percent of the October average. This total marked the driest month so far in 2020 at this site, and was the third driest October on record. The highest daily total was 3.12 inches on October 28 from a CoCoRaHS observer in Kilauea. The 7.56 inches recorded at the Hanapepe gage marked the highest October total at this site in a data record going back to 1991.

Recent rainfall over Kauai has kept all rainfall totals for 2020 through the end of October at near to above average levels. The Mount Waialeale gage had the highest year-to-date total of 337.44 inches (103 percent of average).

### Oahu

Monthly rainfall totals along the Waianae Range were near to above average due to rain bands produced by low pressure systems to the northwest of the state. The low frequency of trade winds also resulted in sites along the Koolau Range mostly recording near to below average monthly totals. The highest monthly total came from the Palehua gage with 9.68 inches (210 percent of average). This site also had the highest daily total of 4.73 inches on October 23. Out of this daily total, 4.09 inches occurred during the two-hour period from 3:00 to 5:00 AM HST. For the Lualualei and Waianae Kawiwi sites, it was the highest October total since 1991. In contrast, the Manoa Lyon Arboretum gage had its lowest October total on record.

Oahu rainfall totals for 2020 through the end of October remained near average at most of the gages. The USGS' Poamoho Rain Gage No. 1 had the highest year-to-date total of 122.43 inches (66 percent of average).

### Maui

Gages along the windward slopes of Maui County had below average rainfall totals. Leeward sites had mostly near to above average totals. The highest monthly total came from the Lanai 1 rain gage on the leeward side of Lanai, which is very unusual. This site recorded 6.57 inches (344 percent of average), and also had the highest daily total of 3.51 inches on October 1. The USGS rain gage on Puu Kukui, normally one of the wettest spots in the state, logged just 5.30 inches (20 percent of average), which registered as the fourth lowest October total on record.

Most of the rainfall totals for 2020 through the end of October were near average across Maui County. The Puu Kukui gage had the highest year-to-date total of 169.93 inches (55 percent of average), retaking the Maui County lead after being passed by the West Wailuaiki total in September.

### Big Island

Due to the lack of trade winds, windward Big Island rainfall totals for October were mostly below 50 percent of average. Many of the sites along the Kona slopes and in the Pohakuloa region had near to above average monthly totals. The high frequency of low level southeasterlies resulted in the highest October total coming from the Pali 2 rain gage in the Kau District. This gage logged 10.90 inches (250 percent of average) for the month, and had the highest daily total of 5.58 inches on October 26. The Kamuela Upper, Piihonua, and Waiakea Uka rain gages all broke records for the lowest October rainfall total, and the Mountain View gage had its lowest October total since 2003.

Rainfall totals for 2020 through the end of October remained near to above average at most of the gages. The USGS' rain gage at Kawainui Stream had the highest year-to-date total of 139.84 inches (123 percent of average).

Big Island rainfall totals for 2020 through the end of June remained near to above average at most of the gages. The USGS' Saddle Road Quarry gage had the highest year-to-date total of 105.62 inches (152 percent of average).

## Reports from around the Region CON'T



**Kwajalein** (Jason Selzler):

November rainfall to date is 4.99, which is 0.93 above the running average. No inundation. Some local minor wind damage 60mph gusts from convective outflow late last week.



**Majuro** (no attendance):



**Pohnpei** (Wallace)

Reports of minor inundation that took place on October 27th.



**Kosrae** (Eden Skilling):

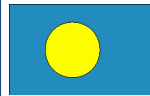
Kosrae reported plenty of rainfall but no landslides to be reported.



**Chuuk** (Sanchez Salle):



**Yap** (no attendance):



**Palau** (Kikuko Mochimaru):

All stations except for Peleliu surpassed the 8 inches of monthly average rainfall needed to meet most water needs. The greatest 24-hour rainfall recorded by majority of the stations accumulated on Day 8 ranging between 2.06 inches to 3.15 inches contributed by a monsoon trough linked to Invest 93W (later known as TC Vamco). Airai's rainfall totals fell below both the average and median Normals and Koror's rainfall totals fell between the two. The highest temperatures recorded ranged from 85 to 93°F, lowest temperatures observed ranged from 70 to 78°F, while temperature averages fell below the Normal with exception to Peleliu.

## Current State of ENSO and predictions

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

Issued 12 November 2020

**Synopsis: : La Niña is likely to continue through the Northern Hemisphere winter 2020-21 (~95% chance during January-March) and into spring 2021 (~65% chance during March-May).**

La Niña strengthened during October, as indicated by well below-average sea surface temperatures (SSTs) extending from the Date Line to the eastern Pacific Ocean. The SST indices in the two westernmost Niño regions, Niño-4 and Niño-3.4 cooled further from last month, and the Niño-3.4 index was  $-1.5^{\circ}\text{C}$  in the past week. The equatorial subsurface temperature anomalies (averaged from  $180^{\circ}$ - $100^{\circ}\text{W}$ ) also became colder, and continue to reflect below-average temperatures from the surface to 200m depth in the eastern Pacific Ocean. The atmospheric circulation anomalies over the tropical Pacific Ocean remained consistent with La Niña. Low-level wind anomalies were easterly across most of the tropical Pacific and strengthened during October. Upper-level westerly wind anomalies expanded over most of the tropical Pacific. Tropical convection continued to be suppressed from the western Pacific to the Date Line, and enhanced convection remained over Indonesia. Also, both the Southern Oscillation and Equatorial Southern Oscillation indices were positive. Overall, the coupled ocean-atmosphere system indicates the continuation of La Niña.

A majority of the models in the IRI/CPC plume predict La Niña (Niño-3.4 index less than  $-0.5^{\circ}\text{C}$ ) to persist through the Northern Hemisphere winter 2020-21 and to weaken during the spring. The latest forecasts from several models suggest the possibility of a strong La Niña (Niño-3.4 index values at  $-1.5^{\circ}\text{C}$ ) during the peak November-January season. The forecaster consensus supports that view in light of significant atmosphere-ocean coupling already in place. In summary, La Niña is likely to continue through the Northern Hemisphere winter 2020-21 (~95% chance for January-March) and spring 2021 (~65% chance for March-May; click [CPC/IRI consensus forecast](#) for the chances in each 3-month period).

## 6. Rainfall Verification ASO– August, September, October (Sony)

The verification result of **ASO** rainfall forecasts was 9 hits and 5 misses (Heidke score: 0.3417). The stations that hit the forecasts were: Yap, Pohnpei, Kosrae, Kwajalein, Guam, Saipan, Lihue, Honolulu, and Kahului. The 5 missed stations were Arai, Chuuk, Majuro, Pago Pago, and Hilo.

AMJ Verification Location	Rainfall Outlook	Final Probs	3 month Verification			
			% norm	Total (in)	Tercile	
<b>Palau</b>						
Airai 7° 22' N, 134° 32' E	Avg-above	30:35:35	115	49.52	Above	
<b>FSM</b>						
Yap 9° 29' N, 138° 05' E	Avg.	30:40:30	85	34.30	Below	
Chuuk 7° 28' N, 151° 51' E	Avg-above	30:35:35	117	42.38	Avg.	
Pohnpei 6° 59' N, 158° 12' E	Avg.	30:40:30	113	47.50	Above	
Kosrae 5° 21' N, 162° 57' E	Avg.	30:40:30	114	44.82	Above	
<b>RMI</b>						
Kwajalein 8° 43' N, 167° 44' E	Avg-below	35:35:30	115	36.39	Above	
Majuro 7° 04' N, 171° 17' E	Avg-below	35:35:30	122	43.57	Above	
<b>Guam and CNMI</b>						
Guam 13° 29' N, 144° 48' E	Avg-below	40:30:30	104	40.39	Avg.	
Saipan 15° 06' N, 145° 48' E	Avg-below	35:35:30	81	27.42	Below	
<b>American Samoa</b>						
Pago Pago 14° 20' S, 170° 43' W	Avg-above	30:35:35	204	43.16	Above	
<b>State of Hawaii</b>						
19.7° - 21.0' N, 155.0° - 159.5' W						
Lihue	Avg-below	35:35:30	93	6.59	Avg.	
Honolulu	Avg-below	35:35:30	166	3.40	Above	
Kahului	Avg-below	35:35:30	46	0.56	Below	
Hilo	Avg-below	35:35:30	68	17.86	Below	
					8	Hit
					6	Miss
					Heidke:	0.2719
					RPSS:	-0.0475

### 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%	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 (>)

	Lihue	Honolulu	Kahului	Hilo	Pago Pago	Kosrae
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 (>)

## 6. Rainfall Outlook NDJ– November, December, January (Sony)

NDJ Forecast	Rainfall	Probability	Final	Final
Location	Outlook	Pre-Conference	Outlook	Probability
<b>Palau</b>				
Airai 7° 22' N, 134° 32' E	Above	20:30:50	-	-
<b>FSM</b>				
Yap 9° 29' N, 138° 05' E	Above	20:30:50	-	-
Chuuk 7° 28' N, 151° 51' E	Above	30:30:40	-	-
Pohnpei 6° 59' N, 158° 12' E	Avg-above	30:35:35	-	-
Kosrae 5° 21' N, 162° 57' E	Avg-above	30:35:35	-	-
<b>RMI</b>				
Kwajalein 8° 43' N, 167° 44' E	Avg-above	30:35:35	-	-
Majuro 7° 04' N, 171° 17' E	Avg-above	30:35:35	-	-
<b>Guam and CNMI</b>				
Guam 13° 29' N, 144° 48' E	Avg-above	30:35:35	-	-
Saipan 15° 06' N, 145° 48' E	Avg-above	30:35:35	-	-
<b>American Samoa</b>				
Pago Pago 14° 20' S, 170° 43' W	Avg-above	30:35:35	-	-
<b>State of Hawaii</b>				
19.7° - 21.0' N, 155.0° - 159.5' W				
Lihue	Avg-above	30:35:35	-	-
Honolulu	Avg-above	30:35:35	-	-
Kahului	Avg-above	30:35:35	-	-
Hilo	Avg-above	30:35:35	-	-

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	Koror	Yap	Chuuk	Pohnpei	Guam	Saipan	Majuro	Kwai
below (<)								
33.33%	29.21	21.82	30.16	38.94	14.88	11.78	32.31	21.12
near								
66.66%	38.94	28.08	36.49	47.32	21.97	16.53	36.56	25.30

above (>)

	Lihue	Honolulu	Kahului	Hilo	Pago Pago	Kosrae
below (<)						
33.33%	8.57	3.89	5.16	26.44	32.98	44.1
near						
66.66%	16.95	8.76	9.46	42.99	47.68	55.78

above (>)