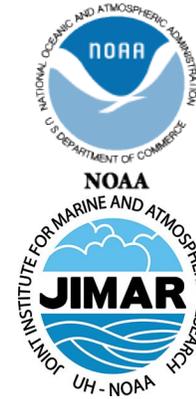




NWS Climate Services

June PEAC Audio Conference Call Summary

11 June, 1430 HST (12 June 2020, 0030 GMT)



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



April rainfall totals reported (Sony)

% Normal: **blue** above normal & **red** below normal. Departure from normal: **blue**-above & **red**-below

	Rainfall	% Normal	Normal	Departure	3 mon
	Inches	May	Inches	inches	MAM
Palau	24.24	171	14.15	10.09	39.60
Yap	8.22	105	7.85	0.37	13.86
Chuuk	13.09	116	11.30	1.79	26.51
Pohnpei	24.91	125	19.96	4.95	56.99
Kosrae	29.07	164	17.75	11.32	70.27
Kwajalein	6.15	92	6.72	-0.57	15.33
Majuro	15.78	156	10.11	5.67	35.05
Guam NAS	8.16	240	3.40	4.76	11.96
Saipan	1.10	46	2.38	-1.28	3.07
Pago Pago	6.96	72	9.66	-2.70	30.71
Lihue	1.88	126	1.49	0.39	19.46
Honolulu	0.55	138	0.40	0.15	6.87
Kahului	0.74	151	0.49	0.25	5.03
Hilo	3.45	47	7.36	-3.91	39.15

Reports from around the Region:

Hawaii: The first month of the 2020 Hawaiian Islands dry season produced persistent trade winds at mainly moderate speeds. Atmospheric conditions were rather stable through most of the month, which limited rainfall production and resulted in no flash flood events across the state. A weak upper atmospheric disturbance passing north of the island chain helped enhance shower activity along the windward slopes on May 7 and 8. This produced minor flooding along the windward areas of Kauai and Maui, but no reports of any damage.

A short break in the trade winds on May 13 and 14 allowed land and sea breezes to dominate local conditions. The daytime sea breezes helped trigger afternoon showers which were heavy enough to produce minor flooding over central and west Oahu on May 13, and over windward Oahu and southeast Kauai on May 14.

Trade winds resumed across the state on May 15 and persisted through most of the remainder of the month. The sole break in the trades during this period was on May 25 through 26, but conditions were too stable to produce significant rainfall.

Island of Kauai: Rainfall totals for the month of May were near to above average at most of the gages across Kauai. Those sites that had below average totals were mainly along the south and west sides of the island. The U.S. Geological Survey's (USGS) rain gage on Mount Waialeale had the highest monthly total of 25.27 inches (82 percent of average) and the highest daily total of 3.58 inches on May 21.

Heading into the dry season, rainfall totals for 2020 through the end of May were in surplus territory across the island. Mount Waialeale had the highest year-to-date total of 199.48 inches (128 percent of average).

Island of Oahu: Dry conditions that started in the second half of April continued through most of May. Monthly rainfall totals from across the island were near to below average, with many sites along the lower leeward slopes having totals at less than 50 percent of average. The USGS' Poamoho Rain Gage No. 1 had the highest monthly total of 9.79 inches (56 percent of average) and the highest daily total of 3.29 inches on May 23. The Kahuku rain gage recorded its lowest May total in a data record going back to 1991. Aloha Tower and Wheeler Army Airfield had their lowest May rainfall totals since 2009.

Oahu rainfall totals for 2020 through the end of May were near to above average at most locations. The USGS' Poamoho Rain Gage No. 1 had the highest year-to-date total of 81.48 inches (86 percent of average).

Maui County: Rain gages along the windward slopes of Maui County had mostly near to above average totals for the month of May. However, many of the leeward gages had below average totals with several less than 50 percent of the May average. The USGS' rain gage at West Wailuaiki Stream had the highest monthly total of 18.41 inches (99 percent of average) and the highest daily total of 5.78 inches on May 8.

Nearly all of the gages across Maui County had near to above average rainfall totals for 2020 through the end of May. The USGS' rain gage at West Wailuaiki Stream had the highest year-to-date total of 118.51 inches (110 percent of average).

Island of Hawaii: Most of the gages along the windward slopes of the Big Island recorded below average rainfall totals for the month of May. The exceptions were from Honokaa to Upolu Airport where near to above average monthly totals were logged. On the other side of the island, near to above average totals were observed along the slopes of the Kau and Kona slopes. The USGS' rain gage at Kawainui Stream had the highest monthly total of 18.07 inches (142 percent of average) and the highest daily total of 3.07 inches on May 20. Kona Airport had its highest May total since 2004, and Hilo Airport had its lowest May total since 2010.

Big Island rainfall totals for 2020 through the end of May were near to above average at most of the gages. The USGS' Saddle Road Quarry gage had the highest year-to-date total of 99.20 inches (162 percent of average).

Reports around the Region Cont.

American Samoa: (not present)

Kwajalein: (Jason)

Kwajalein is easing out of drought. First ten days in June were dry and precipitation is starting later beginning this week. Some wind damage reports (40 knots on May 27th).

Majuro: (Not present)

Trade wind patterns.

Pohnpei: (Wallace)

Plenty of rain for the month of May. Several flood statements were issued to the public.

Kosrae: (Wallace)

Flooding took place towards end of the month. No landslides were reported.

Chuuk: (Sanchez)

May was a wet month for Chuuk.

Yap: (Jay)

Reservoir levels are close to full capacity. Outer islands are looking dry but has been getting slightly more rainfall in the month of June.

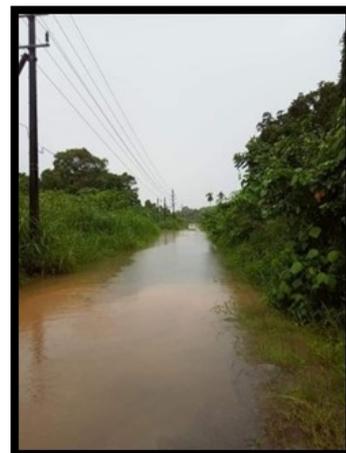
Palau: (Kikuko)

Invest 94W located near and northwest of Palau kicked off Day 1 of the wet season with a bang with rainfall amounts ranging from almost 3 inches to a little over 8 inches of rainfall across majority of the stations. Impacts were damages to pre-existing potholes, incomplete road works, weak and cracked roads, birthing of new potholes, and flooding in prone areas. A week later, within a three day time span from May 8 to May 10, Invest 95 later known as Typhoon Vongfong, the first Tropical Cyclone of Season 2020, dumps another 4.69 to 5.67 inches of rain from Melekeok through Koror. By Day 11, with the exception to Peleliu State, all other stations were well over the "monthly average of 8 inches of rainfall needed to meet most water needs". By the mid May, rainfall totals hit the double digits for majority of the stations with Peleliu falling low and in the single digit. For the second half of May, rainfall was mainly generated by moderate to strong converging trade-winds north of troughs found mainly south of Angaur. On May 22, Palau Public Utilities Corporation lifted the nationwide mandatory water rationing. By the end of May, Airai's rainfall total set the new Maximum at 24.24 inches (615.7 mm) at 154% of Airai's median rainfall for May. Airai's second highest on record (2004-2017) was 20.41 inches (518.4 mm) in 2005. Koror came in second place with rainfall totals at 23.12 inches (587.3 mm) at 195 % of its median for May.

Damage to pre-cracked road in Airai from May 1st rainfall.



Flood prone road in Aimeliik from May 1st rainfall event..



Reports around the Region Cont.

Guam/CMNI: (Brandon, Mark)

Guam has been wet and on the receiving end of trade wind disturbances that has moved through.

Tropical Cyclone: (Mark)

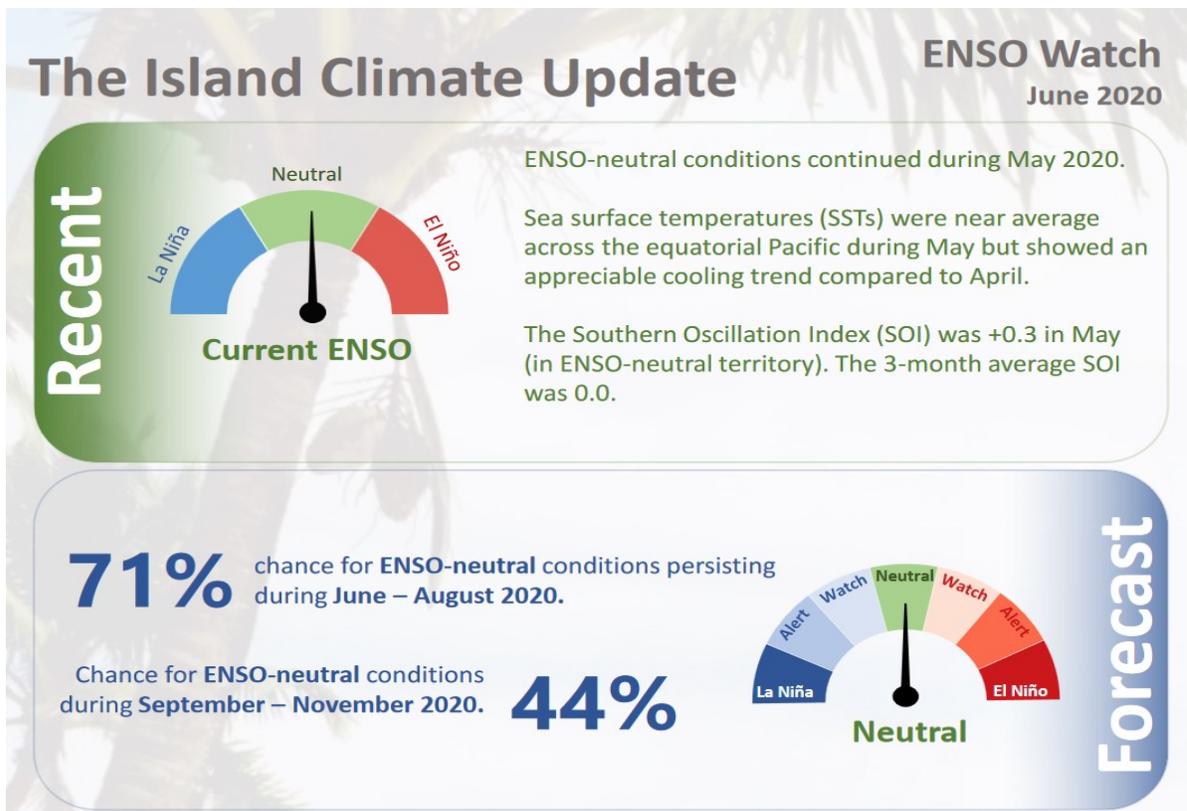
Western North Pacific has been quiet with a La Nina like pattern.

11 June 2020

Synopsis: There is a ~60% chance of ENSO-neutral during Northern Hemisphere summer 2020, with roughly equal chances (~40-50%) of La Niña or ENSO-neutral during the autumn and winter 2020-21.

During May 2020, sea surface temperature (SST) anomalies were near-to-below average across the east-central and eastern equatorial Pacific. All of the Niño indices decreased during the month, and the latest weekly Niño-3.4 index value was -0.4°C. Equatorial subsurface temperature anomalies (averaged across 180°-100°W) decreased further during the first half of the month, but rebounded slightly toward the end of the month. However, below-average subsurface temperatures prevailed east of the Date Line. Also during the month, low-level wind anomalies were easterly across the east-central Pacific, while upper-level wind anomalies were westerly over the central Pacific. Tropical convection departures were weak, but were enhanced near Indonesia and suppressed over the Date Line and west-central Pacific. Overall, the combined oceanic and atmospheric system remained consistent with ENSO-neutral.

The majority of models in the IRI/CPC plume favor ENSO-neutral (Niño-3.4 index between -0.5°C and +0.5°C) through the Northern Hemisphere winter. The forecaster consensus also favors ENSO-neutral during the summer, but then chances become roughly split between La Niña and ENSO-neutral beginning with the August-October season. That consensus mostly reflects the dynamical model guidance, which leans toward La Niña, along with ocean conditions that are somewhat favorable for the development of La Niña. However, enough uncertainty remains that the chance of La Niña remains lower than 50%, and it is unclear whether oceanic and atmospheric anomalies will lock in and persist. In summary, there is a ~60% chance of ENSO-neutral during Northern Hemisphere summer 2020, with roughly equal chances of La Niña or ENSO-neutral (~40-50%) during the autumn and winter 2020-21.



Source: NIWA **Island Climate Update:** June 2020

Rainfall Outlook for June, July, August (JJA 2020)

<i>Location</i>	<i>Rainfall Outlook</i>	<i>Final Probabilities</i>
Palau		
Airai	Average-Below	40:40:20
FSM		
Yap	Average-Below	35:35:30
Chuuk	Average-Below	35:35:30
Pohnpei	Average	30:40:30
Kosrae	Average	30:40:30
RMI		
Kwajalein	Average	30:40:30
Majuro	Avg-Above	30:35:35
Guam and CNMI		
Guam	Average-Below	35:35:30
Saipan	Average-Below	35:35:30
American Samoa		
Pago Pago	Avg-Above	30:35:35
State of Hawaii		
Lihue	Average-Below	35:35:30
Honolulu	Average-Below	35:35:30
Kahului	Average-Below	35:35:30
Hilo	Average-Below	35:35:30

Note:

Interpretation of tercile probability Example: The Avg-above probability, **30:35:35** forecasts in JJA season means there is a **35%** chance (probability) for occurrence of excess rainfall during the JJA season, **35%** chance for occurrence of rainfall within a pattern considered normal during the JJA season, and **30%** chance for occurrence of deficit rainfall during the JJA season. Also note that excess and deficit limit for each of the stations are different

Drought monitoring updates.

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 northern Marianas, northern RMI, & extreme southern FSM (Kapingamarangi). It was wet across the rest of Micronesia and American Samoa. The end-of-May monthly analysis (May 31) is consistent with the weekly analyses for May 26 and June 2 and is the same as both of them (there was no change from May 26 to June 2). Compared to the end-of-April monthly analysis:
 - a. The USDM status improved at Guam, central to western FSM, Palau, and central to southern RMI:
 1. Yap went to D2-S; Guam, Woleai, Ulithi, & Kwajalein went to D1-S; Chuuk went to D0-S; Palau & Majuro went to D-Nothing.
 - b. The USDM status worsened in the extreme southern FSM:
 1. Kapingamarangi went to D0-S.
 - c. The USDM status stayed the same at the other stations:
 1. D3-S or D3-SL at Rota, Saipan, & Wotje; D1-S at Ailinglapalap; D-Nothing at Pohnpei, Pingelap, Kosrae, Lukonor, Nukuoro, Jaluit, Mili, & Pago Pago.
 - d. Fananu was plotted as missing (could not be analyzed) due to missing data for the last 8 months (data has just started arriving again); Utirik was plotted as missing due to missing data for most of May.
- iii. Some May 2020 precipitation ranks:
 - a. Saipan: 3rd driest May in their 40-year record; driest April-May & March-May; 2nd driest Feb-May & Jan-May; 3rd driest Dec-May (31 years); 4th driest Nov-May (31 yrs); but 2nd wettest June-May (31 yrs)
 - b. Kapingamarangi: 3rd driest May (26 yrs); 5th driest Dec-May (23 yrs)
 - c. Nukuoro: 8th driest May (37 yrs); 7th driest Sep-May (35 yrs)
 - d. Lukonor: 15th wettest May (36 yrs) but 2nd driest July-May (23 yrs)
 - e. Woleai: 17th wettest May (38 yrs) but 4th driest July-May (23 yrs)
 - f. Yap: 32nd driest May (69 yrs); 8th driest Jan-May (69 yrs); 5th driest June-May (68 yrs)
 - g. Ailinglapalap: 13th wettest May (37 yrs) but 7th driest June-May (34 yrs)
 - h. Jaluit: 7th wettest May (37 yrs) but 5th driest July-May & June-May (34 yrs)
 - i. Kwajalein: 23rd driest May (69 yrs); 10th driest June-May (68 yrs)
 - j. At the other extreme:
 1. Mili: 4th wettest May (36 yrs) & wettest Nov-May & June-May (32 yrs)
 2. Pago Pago: 15th driest May (55 yrs) but wettest January-May (54 yrs)

Drought monitoring updates (CON'T).

- 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 9.
- i. The June 9 analysis has mostly the same status as end of May, except Saipan worsened to D4-SL and Ailinglapalap improved to D0-S
- C. May 2020 NCEI State of the Climate Drought Report: The May 2020 NCEI SotC Drought report went online today, June 11.
- i. The web page url is:
- a. <https://www.ncdc.noaa.gov/sotc/drought/202005#det-reg-pacis-usapi>
- D. Automated Ingest of Daily Rainfall Data:
- i. Automated Program: -- NCEI changed servers in June 2020, so the automated program is now running on climon-prod instead of cmb-us. It is also running in parallel on climon-dev. The automated program that ingests the USAPI station daily data has been modified to send out a master file of the current data to the authors, in case NCEI's web pages go down because of a future government shut down or for other reasons.
- ii. Updates and Fixes
- a. **Kwajalein is getting into the automated data system now, but Pago Pago still is not getting in on a regular basis. Efforts are being made to get Pago Pago in there.**
- b. Find out why Saipan's ASOS data are being transmitted and getting into our automated process instead of the manual gauge WxCoder III data.*
- c. Add new stations to the automated process (Capital Hill 1, Nimitz Hill, Koror COOP, Mwoakilloa). I need to identify the WxCoder I.D. call sign and the COOP station numbers for these stations, then find them in our (NCEI) metadata base, then determine if they are being captured from the NOAAPort feed.*
- iii. Web interface: url is:
- a. <https://www.ncdc.noaa.gov/temp-and-precip/drought/usapi-pcp/>
- b. The "All Indicators" tab is the most used tab by USDM authors:
1. <https://www.ncdc.noaa.gov/temp-and-precip/drought/usapi-pcp/all>
- c. The "Weekly", "Monthly", and "Seasonal" tabs have data tables as well as maps plotting the values.
- d. The web page is updated automatically every day by a computer program that automates the ingest and processing of the data. The program runs every morning at 10 a.m. EST; it also sends out an email every day containing daily and weekly rainfall totals for several USAPI stations.
- e. Some data on the web page are color coded to indicate wet or dry conditions (weekly and monthly precipitation totals), missing days (grey), and USDM categories (monthly and seasonal rank percentiles).
- f. The web page is for internal use by NWS Pacific Island personnel and USDM author personnel. It is not for public release (NCEI does not have the staff to answer questions from the public and media and other users about why there is missing data).

Participants:

NWS Climate Services Program Managers (CSPMs):

WSO Climate Service Focal Points (CSFPs):

(Majuro)	Sanchez (Chuuk)	(Pohnpei)
(Kosrae)	Jay (Yap)	(Pago Pago)
(Palau) Kiku	Jason (Kwajalein)	
Chip, Brandon, Mark, Landon (Guam & CNMI)		

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WERI Scientist:

CPC Forecaster: Lam

WFO Guam : Brandon, Chip

NWS MIC, Honolulu: Christopher Brenchley

NCEI: Richard Heim

Pacific RISA:

NWS Hydrologist: Kevin Kodama

Additional Attendees:

John Marra

Anthony Artusa

Elizabeth Vickery

***** Next Call– 9 July 2020, 1430 HST (10 July 2020, 0030 GMT)*****