



NWS Climate Services

September PEAC Audio Conference

Call Summary

**13 September, 1430 HST (14
September 2018, 0030 GMT)**



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



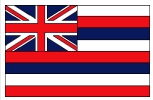
August rainfall totals reported (Joe)

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

*** Denotes missing data

| | Rainfall | % Norm | Median | Departure | 3 Month Total |
|-----------|----------|--------|--------|-----------|---------------|
| | Inches | August | Inches | Inches | JJA |
| Koror | *** | *** | 13.50 | -13.50 | *27.79* |
| Yap | 14.82 | 100 | 14.82 | 0.00 | 41.67 |
| Chuuk | 12.33 | 96 | 12.86 | -0.53 | 41.77 |
| Pohnpei | 23.61 | 166 | 14.26 | 9.35 | 57.30 |
| Kosrae | 22.60 | 159 | 14.22 | 8.38 | 49.20 |
| Kwajalein | 18.81 | 193 | 9.74 | 9.07 | 43.44 |
| Majuro | 11.96 | 102 | 11.69 | 0.27 | 44.46 |
| Guam NAS | 21.89 | 149 | 14.74 | 7.15 | 42.15 |
| Saipan | 19.12 | 146 | 13.13 | 5.99 | 32.83 |
| Pago Pago | 9.76 | 181 | 5.38 | 4.38 | 23.68 |
| Lihue | 4.65 | 253 | 1.84 | 2.81 | 7.73 |
| Honolulu | 1.02 | 537 | 0.19 | 0.83 | 1.40 |
| Kahului | 1.93 | 402 | 0.48 | 1.45 | 2.21 |
| Hilo | 48.85 | 584 | 8.37 | 40.48 | 63.41 |

Reports from around the Region



Hawaii (Kevin)

Hawaii is a small target in a vast ocean, and isn't often threatened. Hawaii gets a named storm within 60 miles of its coastline about once every four years on average. Only two hurricanes have made landfall in Hawaii since the 1950s: Hurricane Dot in 1959, and Hurricane Iniki in 1992.

Powerful Hurricane Lane Approaches Hawaii on Wednesday (August 22, 2018). It weakened (on 8/22/2018) as it chugged toward Hawaii on Thursday. More than 19 inches of rain fell on a northeastern section of Hawaii's Big Island during a 24-hour period. The outer bands of the Category 3 cyclone hit Big Island on Thursday, triggering landslides and causing flooding that forced officials to close some roads. Hawaii's Big Island -- the easternmost island in the chain -- was hammered hardest by rain. Some residents there had to evacuate, with water rescues occurring in Hilo and Keaau. Trailing deep tropical moisture left over from Lane brought additionally heavy rainfall through Tuesday. "Any additional heavy rainfall over these already highly saturated grounds could quickly lead to flash flooding." Hurricane Lane then caused widespread flooding on the islands of Maui and Oahu. A number of roads were closed by flooding and landslides. There was another unnamed storm which has also caused aggravated flooding problems in Hilo.



Flooding near Hilo, Hawaii, Friday (PC. CNN)

All the Hawaiian Islands recorded significant rainfall: Hilo-584%, Kahului-402%, Honolulu-537%, and Lihue-253%. Among all, Hilo recorded the historical highest rainfall.

Hawaii has also been hit by tropical Storm Olivia on Wednesday, September 12, 2018. The storm passed over Lanai, had maximum sustained winds of 40 mph and moved west-southwest at 20 mph. A few homes were evacuated in Maui County. A flash-flood warning was also in effect for much of Maui.



American Samoa (Chip):

August in American Samoa (AS) was influenced by Tropical Wet climate. American Samoa experienced hot days with heavily overcast skies in August. Typically temperature fluctuates around 30°C and winds are a light breeze. It is a bit drier there now, though the month of July and August recorded 192% and 181% of normal (% of normal and % are synonymously used throughout this call-note) rainfall. Trades are picking up! There is no report of any significant damage, but sea level stays elevated. Model-based PEAC's seasonal climate outlook is now indicating average rainfall for SON with moderate confidence. The sea level is staying above but stable now. Forecasts indicate that it will stay marginally elevated over the next three months (SON).



Kwajalein (Justin):

The weather is typical now. The atoll experienced a relatively dry windy season from mid-December to mid-May and a relatively wet calm (wind) season from mid-May to mid-November. The month of July and August recorded 90% and 193% of normal rainfall. Widely scattered showers are slowly continuing to build to the north of Kwajalein due to a weak Intertropical Convergence Zone (ITCZ). There are some scattered showers across the atoll. The sea level currently stays marginally below normal. PEAC-model forecasts have trended to show average-above rainfall and normal sea level over the next 3 months, and there is no active TC warning now.

(Also see <https://www.rts-wx.com/forecasts-kwajalein-atoll-forecast>)

Reports from around the Region (CON'T)



Majuro (Nover):

Majuro has been receiving good rainfall since January 2018. The rainfall in June and July was 151% and 142% of normal. However, rainfall slightly declined in August (102%). This downpour sufficiently improved Majuro's drought situation and made the island wet for now. Most of the rainfall can be attributed to low-level convergence. The water reservoirs capacity in Majuro now is 36 million gallons. As of September 13th, 2018 the water reservoirs reached around 32 million gallons. There was high surf advisories due to strong westerlies that caused some low-lying atolls to be inundated on September 11, 2018. One unfortunate yacht Ahaluna broke free from her mooring during the event and ended up stranded on the reef. (See Pic. 2). PEAC-model forecasts have trended average rainfall and normal sea level over the next 3 months, and there is no active TC warning now.



Figure 2: Picture of high tides due to westerly winds in Majuro (lagoon side) on September 11, 2018 (PC: Nover Juria, Weather Service Specialist, Majuro, RMI).



Pohnpei (Chip):

Currently, Pohnpei is "fairly" wet. There has been some westerly winds in Pohnpei and 166% of normal rainfall has been recorded in August. Computer model forecasts continually indicated wet conditions for Pohnpei Island and nearby atolls for all of the monthly forecast cycles for 2017, and have continued to do so for all of 2018 (including the latest 3-month forecast made for ASO). High rainfall during the 1st Quarter of 2018 was successfully anticipated by the models and, for the most part, by the consensus PEAC forecasts (although the extreme magnitude of the rainfall in March was not foreseen). Dryness for all of Pohnpei State in May and June of the 2nd Quarter was not forecast by the models, and was not anticipated by the PEAC. The PEAC concurs with the latest model forecasts for average to above average rainfall over the next few months.



Kosrae (Chip):

Kosrae received 159% of normal rainfall in August. After prolonged dry periods, the situation has improved in Kosrae. Currently, the island is fairly wet. The trade-winds have been strong and the sea level has gone down as well. PEAC has predicted average to above average rainfall for the island state for at least the next three months. Damaging TCs are rare at Kosrae, and those rare storms that do occasionally strike Kosrae do so primarily during strong El Niño events. Thus, the risk of a damaging TC on Kosrae during the first half of 2018 was considered to be typically low (less than 1-in-10 chance). But, depending on a move toward El Niño conditions beyond the summer months, the risk of a late-season tropical storm tracking near but north of Kosrae could be enhanced. The PEAC is now leaning toward an expectation of a higher than average risk of TC impacts for Kosrae (high waves, heavy rainfall and rough seas) in the fall months (OND).



Chuuk (Joe Berdon):

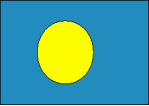
Chuuk recorded slightly below normal rainfall (96%) in August, but the rainfall in June and July were 107% of normal. The island is normal conditions now; there is no report of a water shortage. There was a surf advisory issued this month (August 14). With the recent demise of La Niña, the regional sea level fell across nearly all major island groups of Micronesia. Although there is no operational tide gauge sited in Chuuk, the virtual satellite data indicated that the mean sea level throughout Chuuk State has been falling over the past few months. Now, it is marginally elevated. With the long-range evolution of ENSO moving in the direction of El Niño, and with some climatic signals indicating a possible enhancement to typhoon activity in Micronesia, the PEAC anticipates an elevation of the risk of impacts in Chuuk State by the near passages of tropical storms or typhoons. The PEAC assesses the risk of potentially damaging effects from a passing TC at 20-25% chance (to 1-in-3) in the SON season.

Reports from around the Region (CON'T)



Yap (Chip):

Yap is having their monsoon season now. Yap received 96% of normal rainfall in August, but the rainfall in June and July were 97% and 105% respectively. There were some convergences, but it only produced some rainfall to the northern side of Yap. Everything looks normal now (e.g., reservoirs are full and streams are flowing well), but it turned out to be bit drier in August. PEAC forecasts are favoring above-average rainfall and below normal sea level in the next three months. With the long-range evolution of ENSO now moving in the direction of El Niño, and with some climatic signals indicating a possible enhancement to typhoon activity in Micronesia, the PEAC anticipates an elevated risk of impacts to Yap State by the near passages of tropical storms and/or typhoons, particularly in the fall.



Palau (Chip):

Note that the rain-gauge of Palau has moved to higher location and that made Koror rainfall data availability a bit difficult. However, as Chip G reported, from statistical point of view the new location is about 15% (approximately) wetter than the old location at Koror. This assumption is very much subjective, but this is the best source of information available for us now.

Palau has been dry with putty showers. It received 66% and 87% of normal rainfall in June and July. It is currently a bit drier than normal, but will get sufficient rainfall soon. The normal sea level and drier than normal atmospheric climate is a precursor of forthcoming El Niño. PEAC forecast favors average rainfall and below normal sea level in the next season. With the long-range evolution of ENSO now moving in the direction of El Niño, and with some climatic signals indicating a possible enhancement to typhoon activity in Micronesia, the PEAC anticipates an elevation of the risk of impacts to Palau by the near passages of tropical storms and typhoons later in the year (OND). The risk of damaging effects from TCs is anticipated to rise in the final months of the year (OND) to a 25% chance (to 1-in-4) for the occurrence of large TC-related waves (> 15 feet), gales (35 kt or greater) or very heavy rainfall (> 10 inches in 24 hours).



Guam and CNMI (Mark):

The summer monsoon became well established in the western North Pacific Basin and, after prolonged dry conditions, Guam and Saipan is wet now. The 240% and 384% of rainfall in June in Guam and Saipan have significantly improved the dry conditions and changed these two islands to wet and green again. However, in August rainfall was significant, 149% in Guam and Saipan received 146% of normal rainfall. The overall island climate is normal. PEAC forecasts are now indicating average-above rainfall for both Guam and Saipan over the next three months and slightly below normal sea level. The long-term rainfall forecast (late fall 2018 into winter 2018-2019) is contingent upon the evolution of ENSO, with a stronger and earlier transition into El Niño bringing about the best chances for wetter than average conditions and enhanced TC activity. That means, we expect more tropical cyclone activity than in 2016 and 2017, about the same activity as in 2015 for Guam, but not quite as busy as 2015 for the CNMI.



Tropical Cyclones (Mark L)

With the long-range evolution of ENSO now moving in the direction of El Niño, and with some climatic signals indicating a possible enhancement to typhoon activity in Micronesia and other islands, the PEAC anticipates an elevated risk of impacts to FSM, RMI, and other States by the near passages of tropical storms and/or typhoons, particularly in the fall.

The PEAC will adopt the press-release forecast by the WFO Guam (Mr. Charles P. Guard and collaborators) for the 2018 typhoon season for Guam and the CNMI, wherein the odds for a severe tropical storm at each location is given as 50% (about average); the odds of a CAT 1 typhoon is set at 25% (above average); and the odds for a major typhoon (CAT 3 or higher) is set at 15% (slightly above average). Elsewhere in Micronesia, the odds for damaging TC strikes are set to slightly above average (for example, the average annual number of named tropical cyclones passing within 180 n mi of Yap or Palau is four, with a 10-15% chance of a damaging strike). Eastward of Chuuk State, the risk of a tropical storm or typhoon is much lower than at locations farther to the west, except during strong or some moderate El Niño events. During 2016 and 2017, the PEAC set very low odds (< 10%) for TC activity eastward of Chuuk State. This year, the PEAC anticipates an enhancement of TC development at locations to the east of Chuuk State, with the odds of some damaging effects from a TC (high surf; gale-force or stronger wind; and extreme rainfall > 10 inches in 24 hours) set at 25% (1-in-4) for all locations. This is an above average risk and is well above the level of activity seen throughout Micronesia in both 2016 and 2017.

The 2017-18 South Pacific cyclone season ended on June 30, 2018, with no TC activity (< 10% risk of damaging impacts) anticipated to occur near American Samoa through September. It is early yet for a confident assessment of the character of the upcoming 2018-19 South Pacific TC season.

Sea Level Discussion Remarks (Rashed) All values are in inches (1 inch=25.4 mm); Seasonal cycle removed.

| Tide Gauge stations | Seasonal Forecasts SON (mean ¹) (ano) | SD of JJA (mean) | Monthly mean ¹ anomaly | | | Current State/Trend | Seasonal Forecasts SON (max ²) (ano.) | SD of JJA (max) | Monthly max ² anomaly | | |
|---------------------|---|------------------|-----------------------------------|----------|----------|---------------------|---|-----------------|----------------------------------|--------------------|----------|
| | | | Observed rise/fall | | | | | | MJJ 2018 | Observed rise/fall | |
| | | | Jun/2018 | Jul/2018 | Aug/2018 | Jun/2018 | | | | Jul/2018 | Aug/2018 |
| Marianas, Guam | 0 | 3.5 | +3 | +2 | +2 | Falling | +16 | 4.6 | +19 | +20 | +19 |
| Malakal, Palau | -3 | 4.4 | -4 | -3 | -3 | Falling | +36 | 4.4 | +31 | +33 | +33.5 |
| Yap, FSM | -2 | 3.9 | +1 | -1.5 | -1.5 | Falling | +27 | 3.9 | +29 | +27 | +28.3 |
| Chuuk, FSM*** | +1 | * | 0 | +1 | ** | Stable | +28 | | | | |
| Pohnpei, FSM | 0 | 3.1 | 0 | +2.5 | +1 | Falling | +28 | 3.3 | +30 | +35 | +30 |
| Kapingamarangi | +4 | ** | +6 | +8 | +7 | Stable | +28 | ** | +36 | +36 | +35 |
| Majuro, RMI | +1 | 2.4 | +1 | +2 | +2.5 | Stable | +40 | 2.6 | +43 | +43 | +47 |
| Kwajalein, RMI | 0 | 2.8 | -1.5 | -2 | -1 | Stable | +37 | 3.0 | +37 | +29 | +37.5 |
| Pago Pago* | +10 (+5) | 3.6 | +12 [+7] | +12 [+7] | +12 [+7] | Above Stable | +30 (+25) | 3.7 | +37 | +37 | +38 |
| Honolulu | +2 | 1.7 | +3 | +3.2 | +4 | Stable | +20 | 2.3 | +25 | +25 | +24 |
| Hilo | +2 | 2.0 | +5 | +4 | +3 | Stable | +22 | 2.6 | +28 | +30 | +25 |

+/- indicate positive anomaly (rise) and negative anomaly (fall) respectively. Note that any changes between (0~ ±1) inch is considered to be negligible. Also note that changes within the range of (+/-) 2 inches are unlikely to cause any adverse climatic impact. *** (Experimental) Satellite Aviso Altimetry data, ** Data currently unavailable; *Figures in parenthesis for monthly-max anomaly indicates difference between the maximum anomaly for the given month and the long-term monthly average anomaly.*

1: Difference between the mean sea level for the given month and the 1983 through 2001 monthly mean sea level value at each station (seasonal cycle removed); 2: Same as 1 except for maxima; SD stands for standard deviations.

* **In Pago Pago**, There was a level shift (approximately 5 inches) in American Samoa at the time of September 2009 earthquake. So, -5 inches has been adjusted (shown in parenthesis) to the current tide-gauge values of Pago Pago.

Current Conditions: Consistent to forthcoming El Niño, all of the north Pacific stations displayed considerable fall in August. ONLY Kapingamarangi and Pago Pago are currently elevated. These stations are likely to start falling soon. Hawaii sea levels also returned to normal, but Honolulu recorded slight rise and currently stays elevated. Note that the south Pacific station (i.e., Pago Pago) is elevated (+7). This station maintains 4-6 months' time-lag w.r.t north Pacific stations (i.e., Guam and the Marshalls).

The recent fall of sea level may be explained as a lagged response to the easing of trade-wind forcing. The response is lagged because it takes about 2-months for wind-forced mounds or depressions of sea surface topography to propagate across the Pacific basin.

Impacts: While the MSL is falling, tides have been very high with high waves for some of the islands (e.g., Majuro, Pago Pago). However, there is no noticeable inundation in low-lying atolls and there is no report for damage, so far.

Forecasts for SON: PEAC-CCA Statistical model is predicting normal to marginally below-normal sea level in the forthcoming SON seasons. If El Niño develops as per projections, then the lowest anomalies of sea level may likely to occur at the later part of 2018. In Hawaii, both Honolulu and Hilo are likely to be slightly elevated, but still close to normal.

5. Current State of ENSO and predictions: (Rashed) ENSO Alert System Status: **El Niño Watch**

Synopsis: There is a 50-55% chance of El Niño onset during the Northern Hemisphere fall 2018 (September-November), increasing to 65-70% during winter 2018-19.

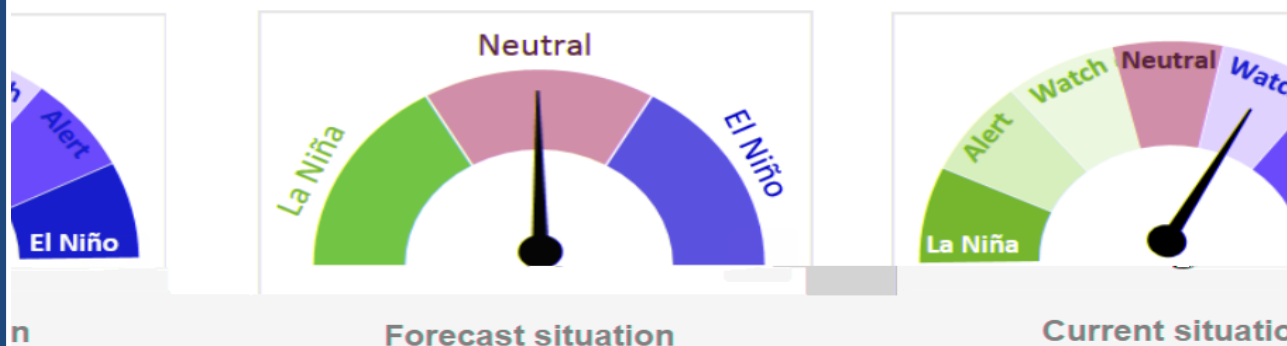
ENSO-neutral continued during August, as indicated by a blend of slightly above- and below- average sea surface temperatures (SSTs) across the equatorial Pacific Ocean. Over the last month, the westernmost Niño-4 region was the warmest (latest weekly value was +0.5°C), while the Niño-3 and Niño-3.4 regions were weakly positive, with Niño1+2 remaining negative. Subsurface temperature anomalies (averaged across 180°-100°W) were positive, with an increase in above-average subsurface temperatures in the central Pacific and slight expansion of negative anomalies in the eastern Pacific. Convection returned to near average over the Date Line, and was slightly enhanced over Indonesia. Low-level westerly wind anomalies re-developed across the east-central and western Pacific, although they were only slightly evident in the monthly average. Upper-level wind anomalies were westerly over the eastern Pacific. Overall, the oceanic and atmospheric conditions reflected ENSO-neutral.

The majority of models in the IRI/CPC plume continue to predict the onset of El Niño sometime during the Northern Hemisphere fall and continuing through the winter. The forecasters also favor El Niño formation during the fall, and are leaning toward the more conservative model guidance that indicates a weak El Niño event. The persistence of above-average subsurface temperatures and continuing flare-ups of westerly wind anomalies also support the eventual development of El Niño. In summary, there is a 50-55% chance of El Niño onset during the Northern Hemisphere fall 2018 (September-November), increasing to 65-70% during winter 2018-19.

WMO Summary:

- Conditions in the ocean and atmosphere in the tropical Pacific have remained neutral since April 2018;
- Model predictions and expert opinion indicate that El Niño/Southern Oscillation conditions are about 70% likely to reach weak El Niño levels by the fourth quarter of 2018 and into the Northern Hemisphere winter 2018-19;
- While predictions of El Niño and La Niña have relatively high confidence at this time of the year, some uncertainty is reflected by the broad range of model forecasts currently available, which generally indicate the sea surface temperatures to be 0.6 to 1.2 degrees Celsius above average in the east-central tropical Pacific during the period of November 2018 through January 2019. A strong El Niño event appears unlikely.
- Through Northern Hemisphere winter 2018-19, the development of La Niña can be practically ruled out.

El Niño-Southern Oscillation Watch



Source: NIWA , The Island Climate Update Bulletin

| | Forecast situation | Current situation |
|-------------------------|--|--|
| ended in the 2018. | 65% chance for El Niño conditions to emerge during September-November 2018 | ENSO-neutral conditions persisted in the tropical Pacific during August 2018 |
| was negative in August. | 78% chance for El Niño conditions during March-May 2019 | The Southern Oscillation Index was at -0.9 (i.e. on the El Niño side) in August. |

6. Rainfall Outlooks for SON (Joe)

The verification result of JJA rainfall forecasts has been found to be encouraging with 10 hits and 3 misses (Heidke score: 0.6283). The stations that hit the forecasts were: Yap, Chuuk, Pohnpei, Kwajalein, Majuro, Saipan, Lihue, Honolulu, Kahului, and Hilo. The 3 missed stations were Kosrae, Guam, and Pago Pago. PEAC forecasts are based on six GCMs and two statistical models.

(Note: Because of missing data, Koror's forecast verification could not be calculated)

| JJA Verification Location | Rainfall Outlook | Final Probs | 3 mo Verification | | |
|------------------------------------|---------------------|----------------|-------------------|------------|---------|
| | | | % norm | Total (in) | Tercile |
| Palau | | | | | |
| Koror 7° 22' N, 134° 32' E | Avg-above | 30:35:35 | *56* | *27.79* | |
| FSM | | | | | |
| Yap 9° 29' N, 138° 05' E | Avg. | 30:40:30 | 99 | 41.67 | Avg. |
| Chuuk 7° 28' N, 151° 51' E | Avg-above | 30:35:35 | 114 | 41.77 | Above |
| Pohnpei 6° 59' N, 158° 12' E | Above | 25:35:40 | 129 | 57.30 | Above |
| Kosrae 5° 21' N, 162° 57' E | Avg. | 25:40:35 | 112 | 49.20 | Above |
| RMI | | | | | |
| Kwajalein 8° 43' N, 167° 44' E | Above | 25:30:45 | 164 | 43.44 | Above |
| Majuro 7° 04' N, 171° 17' E | Above | 25:35:40 | 131 | 44.46 | Above |
| Guam and CNMI | | | | | |
| Guam 13° 29' N, 144° 48' E | Avg. | 25:40:35 | 136 | 42.15 | Above |
| Saipan 15° 06' N, 145° 48' E | Avg-above | 30:35:35 | 128 | 32.83 | Above |
| American Samoa | | | | | |
| Pago Pago 14° 20' S, 170° 43' W | Avg-below | 35:35:30 | 146 | 23.68 | Above |
| State of Hawaii | | | | | |
| 19.7° - 21.0' N, 155.0° - 159.5' W | | | | | |
| Lihue | Above | 25:30:45 | 161 | 7.73 | Above |
| Honolulu | Above | 25:30:45 | 192 | 1.40 | Above |
| Kahului | Above | 20:30:50 | 233 | 2.21 | Above |
| Hilo | Above | 20:30:50 | 262 | 63.41 | Above |

| |
|------|
| Hit |
| Miss |

| | |
|---------|--------|
| Heidke: | 0.6283 |
| RPSS: | 0.2041 |

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

| | Koror | Yap | Chuuk | Pohnpei | Guam | Saipan | Majuro | Kwaj |
|-----------|-------|-------|-------|---------|-------|--------|--------|-------|
| 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 |
|-------|----------|---------|-------|-----------|--------|
| 4.39 | 0.71 | 0.74 | 19.45 | 14.32 | 43.42 |
| 6.88 | 1.3 | 1.51 | 31.4 | 21.74 | 46.35 |

Rainfall in inches

6. Rainfall Outlooks for SON (Con't)

| <i>Location</i> | <i>Rainfall Outlook</i> | <i>Final Probabilities</i> |
|------------------------|-------------------------|----------------------------|
| Palau | | |
| Koror | Avg-below | 35:35:30 |
| FSM | | |
| Yap | Average | 30:40:30 |
| Chuuk | Avg-above | 30:35:35 |
| Pohnpei | Avg-above | 30:35:35 |
| Kosrae | Average | 30:40:30 |
| RMI | | |
| Kwajalein | Avg-above | 30:35:35 |
| Majuro | Average | 30:40:30 |
| Guam and CNMI | | |
| Guam | Avg-above | 30:35:35 |
| Saipan | Avg-above | 30:35:35 |
| American Samoa | | |
| Pago Pago | Average | 30:40:30 |
| State of Hawaii | | |
| Lihue | Above | 25:35:40 |
| Honolulu | Above | 25:35:40 |
| Kahului | Above | 25:30:45 |
| Hilo | Above | 25:30:45 |

Note:

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

7. Drought monitoring updates (Richard Heim).

A. End-of-August Monthly Drought Assessment:

- i. With WxCoder III data, we have 23 stations in the monthly analysis.
- ii. August was dry (less than the monthly minimum required to meet most water needs) at Nukuoro and Kapingamarangi (in the FSM) and Ailinglapalap, Jaluit, and Utrik (in the RMI), and it was wet at all of the other USAPI stations. Pingelap & Koror could not be analyzed due to missing data. The August monthly analysis (August 31) is consistent with the weekly analyses for August 28 and September 4. Compared to the end-of-July analysis, abnormally dry conditions began at Ailinglapalap and Jaluit:
 - DO-S began at Ailinglapalap and Jaluit.
 - Pingelap & Koror were missing in August, so they could not be analyzed.
 - All other stations continued at a D-Nothing classification.

B. Current (Weekly) Drought Conditions: The discussion above is the monthly (end of August) analysis. The latest weekly USAPI USDM assessment may show different USDM classifications. The latest weekly USAPI USDM assessment is for September 11 and shows D0-S also for Lukonor and Nukuoro.

C. August NCEI State of the Climate Drought Report: I included a discussion of USAPI drought and climate conditions in my August 2018 NCEI SotC Drought & Synoptic reports (which went online yesterday).

- i. The web page url's:
 - <https://www.ncdc.noaa.gov/sotc/drought/201808#det-reg-pacis-usapi>
 - <https://www.ncdc.noaa.gov/sotc/synoptic/201808>

D. September and October Travel: I was out of town September 10-12 (for a NIDIS drought workshop) and will be out of town October 7-13.

- i. NCEI's Ahira Sanchez-Lugo prepared the September 11 USAPI USDM analysis this week, and is planning to do the October 9 analysis in my absence.
- ii. I won't be able to participate in the October 11 PEAC conference call. Ahira probably won't be able to either.

E. Automated Ingest of Daily Rainfall Data: Discussion: Q1: Chip, have you found out why Jaluit and Woleai aren't getting into the NOAAPort data feed? A1: NWS Guam has looked into it and can't figure out what the issue is, but will keep investigating. Q2: Also, any progress on getting Kwajalein and Pago Pago daily data entered into WxCoder III? A2: Jason is having Kwajalein data put in WxCoder III for the last couple weeks; need to find out station I.D. and other info to get it in to the NOAAPort feed and into the automated data ingest system; will check on this and send an email (to Richard). Previous report: We are working with NWS, WRCC, and HPRCC personnel to have the WxCoder III daily data transmitted near-real time every day so we can incorporate it into our GHCN-Daily data base here at NCEI. This will enable us to automate the processing, which is a required step before we can make the USAPI USDM weekly analyses official and release them publicly (they are considered experimental now). – **Status:**

- i. A web interface has been created where the automated data is summarized and can be viewed. The url is:
 - a. <https://www.ncdc.noaa.gov/temp-and-precip/drought/usapi-pcp/>
 - b. The "All Indicators" tab will be the most used tab by USDM authors:
 - <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. It is crucial that daily rainfall data for all stations be entered into WxCoder III every day, so that it can be incorporated into this automated system. Otherwise, if too many days are missing, then drought will not be analyzed for the station.
 - f. 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).
 - g. 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).

F. USAPI Listserv:

- i. NDMC (National Drought Mitigation Center) set up a listserv for communication of the USAPI USDM analyses and discussion, similar to the listservs that were set up for the Mainland and for the U.S. Virgin Islands.
- ii. If others want to be added to the listserv, let me (Richard Heim) or Brian Fuchs know and Brian will get them added.

G. Weekly USAPI Drought Assessment:

- i. I assessed drought conditions for each week from December 9, 2014 through September 4, 2018. Other authors have started rotating the assessment with the September 11, 2018 USAPI USDM.
- ii. Stations that don't have data (or enough data) for the week in question are designated as having No Data for that weekly assessment.

- iii. Source of the daily data for the weekly assessments: automated system ingesting data from WxCoder III that are transmitted through the NOAAPort feed. Other sources: Pago Pago NWS web site, Kwajalein PLCD web site.
- iv. **Ahira Sanchez-Lugo and I will continue this on a weekly basis (Monday or Tuesday afternoons EST) until the USAPI analysis becomes an official part of the USDM, at which time other USDM authors will be added to the roster to do the USAPI analysis. I will bring this up (making USAPI USDM official) at the USDM authors conference call Friday 9/21.**

Preferred process: I can do the weekly rainfall analysis, send my drought classification recommendation to the USAPI folks (either just Guam or Guam and all WSOs) for confirmation and local impacts, then send it after any modification to the USDM author.

Discussion: There has also been dryness in the Mortlocks southeast of Chuuk. The dryness there and at Kapingamarangi and Nukuoro could be a harbinger of an impending El Nino.

Participants:

NWS Climate Services Program Managers (CSPMs): Joe Brinkley

WSO Climate Service Focal Points (CSFPs):

Nover, Sampson (Majuro)

(Pohnpei) (Kosrae)

(Palau)

Joe Berdon (Chuuk)

(Yap)

(Pago Pago)

Jason (Kwajalein)

Mark/Chip/Brandon B. (Guam & CNMI)

PEAC Principal Research Scientist: Rashed Chowdhury

WERI Scientist: Mark Lander

CPC Forecaster:

WFO Guam : Chip Guard, Clint Simpson

NWS MIC, Honolulu: Christopher Brenchley

NCEI: Richard Heim

Pacific RISA: Krista Jaspers

NWS Hydrologist: Kevin Kodama

Additional Attendees: Jim Potemra

***** Next Call– 11 October 2018, 1430 HST (12 October 2018, 0030 GMT)*****