



NWS Climate Services

March PEAC Audio Conference Call Summary

14 March, 1430 HST (15 March 2019, 0030 GMT)



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



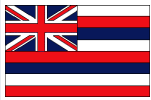
February rainfall totals reported (Joe)

% 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	February	Inches	inches	DJF
Koror	3.45	40	8.56	-5.11	24.72
Yap	1.57	30	5.19	-3.62	28.15
Chuuk	8.87	122	7.25	1.62	35.89
Pohnpei	7.57	79	9.55	-1.98	41.38
Kosrae	12.62	98	12.93	-0.31	36.12
Kwajalein	4.82	183	2.64	2.18	12.94
Majuro	5.09	74	6.88	-1.79	25.03
Guam NAS	6.90	228	3.03	3.87	18.89
Saipan	1.54	59	2.59	-1.05	5.50
Pago Pago	24.04	200	12.00	12.04	57.73
Lihue	2.95	160	1.84	1.04	7.50
Honolulu	2.17	219	0.99	1.18	3.10
Kahului	5.70	533	1.07	4.63	7.55
Hilo	11.24	134	8.38	2.86	22.47

Reports from around the Region



Hawaii (Rashed)

Kauai

Near to above average rainfall totals were recorded by most of the rain gages on the island of Kauai. All of the below average totals came from the leeward areas with amounts mainly at 20 to 50 percent of average. The U.S. Geological Survey's (USGS) Kilohana gage had the highest monthly total of 34.40 inches (235 percent of average) and the highest daily total of 7.94 inches on February 17. The Kokee gage registered its highest February total in a data record dating back to 1992.

Although the past month was quite wet in most areas of the island, most of the rainfall totals for 2019 through the end of February were near to below average due to a rather dry January. The USGS' gage on Mount Waialeale had the highest year-to-date total of 40.48 inches (82 percent of average), followed closely by the Kilohana total of 40.17 inches (136 percent of average). Lower elevation leeward sites had totals below 30 percent of average.

Oahu

February rainfall totals were above average at most of the gages across Oahu. There were a few below average amounts from the lower elevation leeward sites. The Manoa Lyon Arboretum gage had the highest monthly total of 25.87 inches (279 percent of average), which also marked the highest February total at this site since 1979. This gage also had the highest daily total of 7.28 inches on February 2. The Niu Valley monthly total of 7.80 inches was its highest February total in a data record going back to 1991.

Most of the rain gages on Oahu had near to above average rainfall totals for 2019 through the end of February. The Manoa Lyon Arboretum gage had the highest year-to-date total of 35.87 inches (170 percent of average). All of the lower elevation leeward sites and a few of the central Oahu sites had below average totals.

Maui

All of the rain gages across Maui County recorded above average rainfall for the month of February. The USGS' Puu Kukui gage had the highest monthly total of 41.15 inches (156 percent of average) and the highest daily total of 13.62 inches on February 14. It was the wettest February since 1979 and 1982 at Hana Airport and Kula Branch Station, respectively. Kahului Airport and Molokai Airport had their highest February totals since 1990.

The very wet conditions in February erased all of the January rainfall deficits on Maui and Molokai. Lanai rainfall was still somewhat below average. Puu Kukui had the highest year-to-date total of 61.50 inches (107 percent of average).

Big Island

Most of the rain gages on the Big Island posted above average totals for the month of February. The gage at Laupahoehoe had the highest monthly total of 25.58 inches (241 percent of average) among the real-time automated sites. However, a manually read gage near Honokaa in the Community Collaborative Rain, Hail, and Snow Network (CoCoRaHS) posted a February total of 30.41 inches. This site also had the highest daily total of 7.41 inches on February 24. Mountain View had the highest automated rain gage daily total of 6.63 inches on February 19. The Laupahoehoe monthly total marked the highest February amount in a data record going back to 1991. The Kahua Ranch, Kamuela, and Kamuela Upper gages recorded their highest February totals since 2002.

Despite having a wet month, most of the gages on the Big Island still had near to below average totals for 2019 thorough the end of February due to the substantial dryness in January. Gages along the Hamakua Coast and the Kohala Mountains had above average totals. The Laupahoehoe gage had the highest year-to-date total of 29.54 inches (124 percent of average). This ranking is not expected to last too long since totals from sites such as Kawainui Stream and Saddle Road Quarry are expected to eventually exceed Laupahoehoe's.

Rashed: Winter Storm in Hawai'i

A strong low pressure system with an exceptionally close approach to the Hawaiian Islands chain caused record-breaking wave heights on February 10. The PacIOOS wave buoy off Hanalei, Kaua'i, measured 38 ft in significant wave height and the largest wave recorded (Hmax) measured stunning 63 ft! The Waimea wave buoy also broke its 15-year record and climbed to a significant wave height of 29ft, and the largest wave measured 48ft. Both buoys are located approximately 4 miles offshore and moored in a depth of 200-240 m.

The combination of strong winds and high waves produced extremely rough ocean conditions at sea and along the shoreline. PacIOOS' suite of coastal forecasts, including the Wave Run-up Forecast for the North Shore of O'ahu and the Hale'iwa Harbor Surge Forecast, provided valuable information for agencies, the boating community, and home owners to better understand what to expect and to prepare for the storm system (also see <http://www.pacioos.hawaii.edu/waves/buoy-hanalei/> for more details).



American Samoa (Clint, Mark):

American Samoa is influenced by Tropical Wet climate. The month of February received 200% of normal (% of normal and % are synonymously used throughout this call-note) rainfall. Trades are picking up as SPCZ is active over American Samoa! There is no report of any significant damage, but sea level stays elevated. Model-based PEAC's seasonal climate outlook is now indicating above-average rainfall for MAM with moderate confidence. Currently the sea level is staying very high (+6 inches above normal). Forecasts indicate that it will stay elevated over the next three months. A pulse of MJO may push across the tropical Pacific which may be associated with an enhanced risk for tropical cyclone activity.

Reports from around the Region (CON'T)



Kwajalein (Jason)

Kwajalein's location gives it a tropical marine climate. The atoll experiences a relatively dry windy season from mid-December to mid-May. Currently in March, the weather in Kwajalein is dry. February recorded 183% of normal rainfall. On February 18, the island received 3.5 inches of rainfall. The sea level is slightly elevated, but there are no inundations reported, so far. Current model projections show most of the precipitation staying to the north or southwest. Winds during this period will be gentle and generally easterly. The sea level currently stays marginally above normal. PEAC-model forecasts have trended to show average-below rainfall and near 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>)



Majuro (Lee, Chip)

Majuro recorded less than average rainfall for the last few months. February being no different with a recorded rainfall value of 74% of normal. Majuro is, therefore, a bit dry now. Current water reserves are about 80% capacity, which is still okay as compared to the average 36 million gallons. However, this is still manageable without any major water crisis. PEAC-model forecasts have trended above average rainfall and slightly elevated sea level over the next 3 months, and there is no active TC warning now.



Pohnpei (Eden, Charles, Chip)

Pohnpei recorded 79% of normal rainfall in February. Streamflow is less than normal, and the southern part of the island is drier than the eastern part. There have been some high surf and some minor inundations along the North-East side of the island. The outer islands are fairly normal. PEAC-model forecasts have trended average-below rainfall and slightly elevated sea level over the next 3 months.

In February 2019, a few High Surf advisories issued for Kosrae and Pohnpei, first Drought Statement issued from Guam Forecast Office on February 11, 2019. Strong Trade winds existed across much of the region south of 7N. On February 19th, Pohnpei had total rainfall of 4.39 inches when Tropical Depression 02W (Wutip) hit south of Pohnpei. The WSO of Pohnpei raised concern about the expected pattern of El Niño for the coming 2-3 months.



Kosrae (Eden, Chip, Mark)

Kosrae recorded 11 inches of rainfall so far in March. A few High Surf Advisories were issued for Kosrae and Pohnpei in the month of February. On Feb 18, Tropical Disturbance Centered Southeast of Kosrae. With only 34%, 58%, and 47% of normal rainfall in October, November, and December, Kosrae is bit dry now. The rainfall situation is bit better in January and February—near normal (93% and 98%). The overall climate looks like post El Niño type. PEAC-model forecasts have trended average-above rainfall and slightly elevated sea level over the next 3 months.



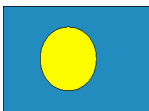
Chuuk (Sanchez):

Chuuk has been fairly normal (wet) for the last couple of months. Chuuk received about 183% and 122% of normal rainfall in January and February, which has improved the rainfall condition in Chuuk. PEAC forecasts indicate average-below rainfall for the island state for the next three months. While there is no operational tide gauge now sited at Chuuk, based on virtual satellite data, it is seen that the mean sea level throughout Chuuk State has been falling over the past few months. It is currently near normal.



Yap (Javis):

Yap is in their monsoon season with the monsoon trough moving towards them. However, it only received 30% of normal rainfall in February. It may be noted here that Yap received 249% of normal rainfall in January, but most of the rainfall recorded was in one day. So, Yap is bit dry now, including the outer islands. The sea level recorded further fall and it is currently below (-6 inches) normal. PEAC forecasts are favoring below average rainfall and below normal sea level in the next three months.



Palau (Kikuko & Joe):

Rainfall data for WSO Palau from Mar 1-13 is currently at 1.77 inches and Climate Normal (1981-2010) has March Norm at 8.27 inches. Seasonal Forecasts indicate drier conditions, warmer temps and lack of precipitation as the warmer equatorial Pacific waters remain in the central to eastern equatorial Pacific for the months ahead. Numerical Weather Prediction models hint on a couple of weak circulations approaching the islands this weekend and possibly mid-week of next week. These circulations may provide Palau with moderate to heavy showers during their passage but overall the precipitation amounts are not impressive but at least it's something.

Reports from around the Region (CON'T)



Guam and CNMI (Chip & Mark):

The summer monsoon became well established in the western North Pacific Basin, and after a wet month Guam and Saipan are now a bit drier. While Guam received 228% of normal rainfall in February, Saipan received only 59%. However, these two islands are still doing okay without any major water problems. PEAC forecasts are now indicating average-below rainfall for both Guam and Saipan over the next three months and slightly below normal sea level.



Tropical Cyclones (Mark)

Taking into account outside guidance, and considering current weather patterns and the evolution of ENSO, 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. 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. There are indications that the upcoming 2018/2019 TC season in American Samoa could be busy.

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

Tide Gauge stations	Seasonal Forecasts MA/m (mean) (ano)	SD of DJF (mean)	Monthly mean ¹ anomaly			Current State/ Trend	Seasonal Forecasts MAM (max ²) (ano.)	SD of DJF (max)	Monthly max ² anomaly		
			Observed rise/fall						Observed rise/fall		
			Dec/ 2018	Jan/ 2019	Feb/ 2019				DJF 2019	Dec/ 2018	Jan/ 2019
Marianas, Guam	-2	4.7	-1	-3	-1.2	Below	+19	4.3	+13	+12	+18
Malakal, Palau	-3	5.3	-4	-5	-6	Below	+37	5.3	+35	+33	+32
Yap, FSM	-3	4.9	-3	-5	-6.6	Below	+32	4.9	+25	+23	+25
Chuuk, FSM***	-2	*	-1	0	0	Normal	+29				
Pohnpei, FSM	+2	4.4	+2	+2	+4.1	Normal	+31	4.3	+31	+35	+34
Kapingamarangi	+2	**	**	**	**		**	**	**	**	**
Majuro, RMI	+3	3.1	+4.2	+7	+3.4	Above	+43	3.0	+45	+50	+47
Kwajalein, RMI	+2	3.6	+1	+3.3	+2.2	Above	+41	3.8	+39	+44	**
Pago Pago*	+4 [+9]	3.2	+7 [+12]	+6 [+11]	+6 [+11]	Above	(+30) [+35]	3.5	+37	+41	+41
Honolulu	+2	1.7	+1	+2	+1	Normal	+21	2.4	+23	+23	+20
Hilo	+2	2.0	+1	0	0	Normal	+24	2.8	+27	+23	+23

+/- 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: Since late October, the tropical Pacific Ocean surface temperature has maintained levels indicative of borderline to weak El Niño. However, although some atmospheric features have responded to the warmed ocean, others have shown only weak or short-lived responses. For example, reduced low-level trade winds across the tropical Pacific have been observed sporadically, and the pattern of cloudiness and rainfall resembled the pattern expected with El Niño only during early February. Models and expert opinion suggest a continuation of warm-neutral to weak El Niño conditions through April and May of 2019. Many models now suggest a strengthening of El Niño conditions toward the middle of the year, while a sizable minority does not predict new El Niño development. *Currently sea level in Palau is 6 inches below normal, which is an indication of El Niño as the sea level in Palau is highly sensitive to ENSO, with El Niño to low sea level and La Niña to high sea level.*

The recent variability of sea level may be explained as WP El Niño, the positive sea level anomaly is located over/or near the central Pacific and maximum near 160°E-180 (i.e., Pohnpei, Kwajalein, and Majuro). The negative SLA is located near 130°E-150°E (i.e., Guam, Koror, Yap, and Chuuk) (also see Kug, J.-S., et al. (2009).

Impacts: There is no noticeable inundation in low-lying atolls and there is no report for damage, so far.

Forecasts for MMA: PEAC-CCA Statistical model is predicting **normal to marginally** below-normal sea level for the north Pacific islands (**Guam, Koror, Yap, and Chuuk**). RMI's stations are likely to stay slightly higher than normal. In Hawaii, both Honolulu and Hilo are likely to be near normal.

Kug, J.-S., et al. (2009). Two types of El Niño events: Cold tongue El Niño and warm pool El Niño. J. Climate, 22, 1499–1515 (available @ <https://journals.ametsoc.org/doi/pdf/10.1175/2008JCLI2624.1>).

Chowdhury M. R., Chu P-S, and Guard C. (2014): An Improved Sea Level Forecasting Scheme for Hazards Management in the U.S.-Affiliated Pacific Islands. *Int. J. Climatology* 6, 2320-2329.

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

(14 March 2019)

Synopsis: Weak El Niño conditions are likely to continue through the Northern Hemisphere spring 2019 (~80% chance) and summer (~60% chance).

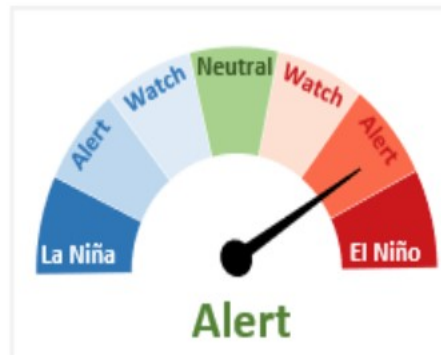
El Niño conditions strengthened during February 2019, as above-average sea surface temperatures (SSTs) increased across the equatorial Pacific Ocean and the associated atmospheric anomalies became increasingly well-defined. The SST index values in the Niño3, Niño3.4 and Niño4 regions all increased during February, with the latest weekly values near +1°C in each region. The anomalous upper-ocean heat content (averaged across 180°-100°W) increased appreciably during February, due to an increase in above-average temperatures at depth in association with a downwelling equatorial oceanic Kelvin wave. Enhanced equatorial convection prevailed near the Date Line, while suppressed convection was observed over Indonesia. Low-level wind anomalies were westerly in the central Pacific Ocean, while upper-level wind anomalies were mostly westerly over the far western and far eastern Pacific. The equatorial and traditional Southern Oscillation Index values were both negative (-1.4 standard deviations). Overall, these features are consistent with weak El Niño conditions.

The majority of models in the IRI/CPC plume predict a Niño 3.4 index of +0.5°C or greater through the Northern Hemisphere early autumn 2019. Given the recent downwelling Kelvin wave, and the increase in both the SSTs and subsurface ocean temperatures, most forecasters expect positive SST anomalies to persist across the central and eastern Pacific for at least the next several months. During that time, forecasters predict the SST anomalies in the Niño 3.4 region to remain between +0.5°C and +1.0°C, indicating weak El Niño conditions. However, because forecasts made during spring tend to be less accurate, the predicted chance that El Niño will persist beyond summer is currently about 50%. In summary, weak El Niño conditions are likely to continue through the Northern Hemisphere spring 2019 (~80% chance) and summer (~60% chance).

El Niño-Southern Oscillation Watch



Current situation



Forecast situation

Sea surface temperatures remained above average in the equatorial Pacific Ocean during February 2019.

The atmosphere has started to respond to the oceanic anomalies in the central Pacific.

76% chance for El Niño conditions during March-May 2019.

61% chance for El Niño conditions during May-July 2019

Source: NIWA Island Climate Update: February 2019

6. Rainfall Outlooks for MAM (Joe)

The verification result of DJF rainfall forecasts was 9 hits and 5 misses (Heidke score: 0.5225). The stations that hit the forecasts were: Koror Pohnpei, Kwajalein, Majuro, Saipan, Pago Pago, Lihue, Kahului, and Hilo. The 5 missed stations were Yap, Chuuk, Kosrae, Guam, and Honolulu. PEAC forecasts are based on six GCMs and two statistical models.

DJF Verification Location	Rainfall Outlook	Final Probs	3 mo Verification		
			% norm	Total (in)	Tercile
Palau					
Koror 7° 22' N, 134° 32' E	Below	40:30:30	78	24.72	Below
FSM					
Yap 9° 29' N, 138° 05' E	Avg-below	35:35:30	140	28.15	Above
Chuuk 7° 28' N, 151° 51' E	Avg-below	35:35:30	125	35.89	Above
Pohnpei 6° 59' N, 158° 12' E	Avg.	30:40:30	107	41.38	Avg.
Kosrae 5° 21' N, 162° 57' E	Avg.	30:40:30	79	36.12	Below
RMI					
Kwajalein 8° 43' N, 167° 44' E	Avg-below	35:35:30	104	12.94	Avg.
Majuro 7° 04' N, 171° 17' E	Avg.	30:40:30	96	25.03	Avg.
Guam and CNMI					
Guam 13° 29' N, 144° 48' E	Avg-below	35:35:30	155	18.89	Above
Saipan 15° 06' N, 145° 48' E	Avg-below	35:35:30	61	5.50	Below
American Samoa					
Pago Pago 14° 20' S, 170° 43' W	Avg-above	30:35:35	151	57.73	Above
State of Hawaii					
19.7° - 21.0° N, 155.0° - 159.5° W					
Lihue	Avg.	30:40:30	104	7.50	Avg.
Honolulu	Avg.	30:40:30	90	3.10	Below
Kahului	Avg.	30:40:30	125	7.55	Avg.
Hilo	Avg.	30:40:30	82	22.47	Avg.

Hit
Miss

Heidke: **0.5225**

RPSS: **0.0168**

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

	Koror	Yap	Chuuk	Pohnpei	Guam	Saipan	Majuro	Kwaj
below (<)								
33.33%	30.383	17.47	25.39	34.23	11.41	8.66	24.24	11.78
near								
66.66%	42.7915	25.53	32.01	45.42	16.49	11.56	30.01	16.47

above (>)

Lihue	Honolulu	Kahului	Hilo	Pago Pago	Kosrae
7.45	3.68	4.64	19.58	35.2	43.72
13.98	8.62	8.68	33.29	46.65	53.68

Rainfall in inches

6. Rainfall Outlooks for MAM (Con't)

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

Note:

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

7. Drought monitoring updates (Richard Heim).

A. End-of-February Monthly Drought Assessment:

- i. With WxCoder III data, we have 23 stations in the monthly analysis.
- ii. February was dry in northern and western portions of Micronesia, wet in parts of southern & eastern Micronesia & American Samoa. If not for the rains from Wutip/02W/92W, all of Micronesia would have been dry during February. Dry in Marianas (except Guam), Palau, Yap State, much of RMI (especially northern atolls), & parts of Chuuk & Pohnpei States. Drought Information Statements issued by Guam. The February monthly analysis (February 28) is consistent with the weekly analyses for February 26 & March 5. Compared to the end-of-January analysis:
 - a. D0-S improved to D-Nothing at Ailinglapalap. And ...
 - b. D1-SL improved to D0-SL at Jaluit. But ...
 - c. D-Nothing worsened to D0-S at Rota, Yap, Fananu, Lukonor, Kapingamarangi.
 - d. D-Nothing worsened to D1-S at Koror, Woleai, Majuro.
 - e. D0-S worsened to D2-S at Saipan and Wotje.
 - f. D1-S worsened to D2-S at Utirik.
 - g. D0-S continued at Kwajalein.
 - h. Ulithi was missing, so they could not be analyzed.
 - i. All other stations continued at a D-Nothing classification.
- iii. Some dry precipitation ranks, especially over the last 4 to 5 months (since September 2018):
 - a. Saipan: 4th driest Jan-Feb (out of 39 years of data)
 - b. Lukonor: 7th driest Feb (35 yrs); 8th driest Oct-Feb (33 yrs); 2nd driest Apr-Feb (22 yrs)
 - c. Kosrae: 22nd driest Feb (53); 2nd driest Oct-Feb (37)
 - d. Nukuoro: 12th driest Feb (37), 4th driest Mar-Feb (34)
 - e. Woleai: 13th driest Feb (35); 5th driest Sep-Feb (30)
 - f. Yap: 9th driest Feb (68)
 - g. Ailinglapalap: 54th wettest Feb (36); but 9th driest Nov-Feb (34) and 4th driest May-Feb (33)
 - h. Utirik: 4th driest Feb (18); 3rd driest Nov-Feb (11)
- iv. (FROM LAST TIME: Saipan: The ASOS (F6) data are being transmitted in WxCoder III for Saipan that we are intercepting for the automated page, instead of the data (manual rain gauge) that are actually in WxCoder III. The ASOS data (F6 data) are much drier than the WxCoder III data. I will need to investigate this to find out what really is going on.)

B. Current (Weekly) Drought Conditions: The discussion above is the monthly (end of February) analysis. The latest weekly USAPI USDM assessment may show different USDM classifications. The latest weekly USAPI USDM assessment is for March 12 and shows worse conditions for the following stations: D0-S for Guam; D1-S for Fananu and Kwajalein.

C. February 2019 NCEI State of the Climate Drought Reports: I included a discussion of USAPI drought and climate conditions in my February 2019 NCEI SotC Drought & Synoptic reports (which are online).
The web page url's:

- a. <https://www.ncdc.noaa.gov/sotc/drought/201902#det-reg-pacis-usapi>
- b. <https://www.ncdc.noaa.gov/sotc/synoptic/201902#usapi-wnp>

D. USAPI USDM Authors:

- i. **Last month, the OCONUS (USAPI) USDM was approved by the USDM steering committee to be an operational product, so the “experimental” label has been removed and authorship is now rotating amongst the NCEI, NDMC, USDA, & CPC authors.**
- ii. **There are 7 USAPI USDM (OCONUS) authors: Ahira Sanchez-Lugo and myself (Richard Heim) from NCEI; Curtis Riganti, Claire Shield, and Deb Bathke from NDMC; Brad Rippey (from USDA); Anthony Artusa (from CPC).**
- iii. Currently, the USDM is analyzed for the 50 States and Puerto Rico, and the USAPI USDM is done separately. The USDM authors are planning to revise the USDM web site (<https://droughtmonitor.unl.edu/>) and process so that two USDM products are produced each week: a CONUS USDM and an OCONUS USDM. The OCONUS USDM will include the USAPI and the US Virgin Islands, while the CONUS USDM will be what has been done for years (50 States & Puerto Rico).

E. Automated Ingest of Daily Rainfall Data:

- i. Automated Program: Soon I will be modifying the automated program that ingests the USAPI station daily data 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: **With the December-January government shutdown, lots of updates to the automated system have been delayed. I'm working on addressing them. This is a list of things I'll be doing or looking at in the weeks ahead:**
 - a. **Follow up on why Jaluit, Woleai, & Kwajalein are not getting into the automated process.**
 1. **From Chip: Kwajalein is in the Super Form in WxCoder III, but it is not in the regular station list. Question: Can Kwajalein's data be automatically transmitted daily from WxCoder III into the NOAAPort data feed? (need to find out station I.D. and other info to get it in to the NOAAPort feed)**
 2. **Question: Regarding Jaluit and Woleai, has it been determined yet why their data are not being sent into the NOAAPort data feed? -- From the November call: Guam will check with WRCC on the station code letters for Jaluit & Woleai since that may be why they aren't getting into the NOAAPort feed (what WxCoder III is using may be different from what WRCC is looking for) – status?**

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 (from emails that I have read and that are still in my inbox).

d. Follow-up with Bill Ward about good synoptic observations from the outer islands that we could be using (want to use) in this process (get into automated data ingest system and use for USAPI USDM analysis); let's (Bill and me and Chip) schedule a conference call to discuss how to get these data included.

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).

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. **We have been using this for communications, both for sending out the USAPI USDM analyses and it is also for NWS offices to report drought impacts to the authors and rest of the group.**

ii. If others want to be added to the listserv, let me (Richard Heim) or Brian Fuchs know and Brian will get them added.

Discussion: Bill Ward is working on getting automated stations set up for more stations so we don't have to manually search for them; their data will be sent through AWIPS so we can get it through that. I (Richard) will send a separate email to Chip to follow up on some station issues.

Participants:

NWS Climate Services Program Managers (CSPMs): Joe Brinkley

WSO Climate Service Focal Points (CSFPs):

Sampson (Majuro)

(Kosrae)

Kikuko (Palau)

Sanchez (Chuuk)

Justin, Jarvis (Yap)

Jason (Kwajalein)

Charles (Pohnpei)

(Pago Pago)

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: Bill Ward, John Mara, Heather, Jim Potemra

**** Next Call– 11 April 2019, 1430 HST (12 April 2019, 0030 GMT)****