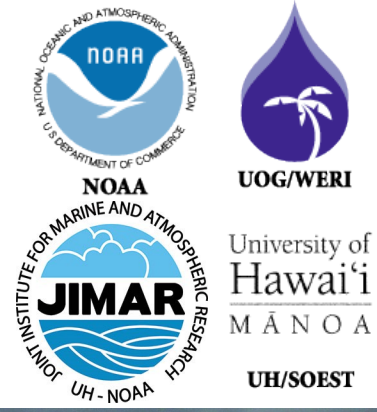




NWS Climate Services

May PEAC Audio Conference Call Summary

10 May, 1430 HST (11 May 2019, 0030 GMT)

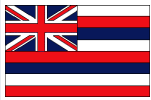


April rainfall totals reported (Joe)

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

	Rainfall	% Norm	Median	Departure	3 Month Total
	Inches	April	Inches	inches	FMA
Koror	6.89	94	7.32	-0.43	16.58
Yap	2.92	52	5.63	-2.71	9.37
Chuuk	6.00	48	12.47	-6.47	29.43
Pohnpei	12.23	66	18.41	-6.18	38.64
Kosrae	29.33	168	17.51	11.82	64.97
Kwajalein	1.14	22	5.26	-4.12	7.18
Majuro	3.34	35	9.42	-6.08	15.17
Guam NAS	1.15	45	2.53	-1.38	8.86
Saipan	0.93	35	2.63	-1.70	3.00
Pago Pago	10.17	108	9.39	0.78	45.68
Lihue	2.03	105	1.94	0.09	6.09
Honolulu	0.20	38	0.52	-0.32	2.45
Kahului	0.31	35	0.89	-0.58	6.60
Hilo	13.51	151	8.95	4.56	29.42

1. Reports from around the Region



Hawaii (Kevin)

Kauai

April rainfall totals were near to above average at most of the rain gages across Kauai. Drier than average conditions were mainly confined to the lower elevations of south Kauai. The U.S. Geological Survey's (USGS) gage on Mount Waialeale had the highest monthly total of 22.57 inches (60 percent of average) and the highest daily total of 3.75 inches on April 30. There were no long term records broken at any of the sites on the island.

Most of the gages on Kauai had near to below average rainfall totals for 2019 through the end of April. The driest conditions so far this year have been along the lower leeward slopes where all of the gages had totals at less than 50 percent of average. Mount Waialeale had the highest year-to-date total of 90.16 inches (72 percent of average).

Oahu

Rainfall totals for the month of April were near to below average at many of the gages on Oahu. However, several of the central Oahu gages had above average totals, mostly due to an episode of afternoon thunderstorms triggered by the passing upper level disturbance on April 28. The brief period of heavy rainfall resulted in 1 to 3 inches for the day, which in some cases exceeded the average values for the entire month. These downpours also helped produce the highest April rainfall totals at Mililani and Waipio since 1991, and the highest total at Wheeler Army Airfield since 1998. The Manoa Lyon Arboretum gage had Oahu's highest monthly total of 11.52 inches (82 percent of average) and the highest daily total of 4.02 inches on April 17. While the center of the island was wet, Aloha Tower had its lowest April total since 2006.

Oahu's rainfall totals for 2019 through the end of April were near to below average at most of the gages. The Manoa Lyon Arboretum gage had the highest year-to-date total of 55.15 inches (112 percent of average).

Maui

Maui County experienced a wide range of rainfall conditions during April. Lanai and portions of south Molokai had above average rainfall, while windward and west Molokai had below average totals. On the island of Maui, most of the rain gages logged below average totals. The exception was Upcountry Maui, which had near to above average April totals. The USGS' Puu Kukui rain gage had the highest monthly total of 21.55 inches (56 percent of average) and the highest daily total of 3.42 inches on April 16.

Most of the rainfall totals for 2019 through the end of April were near to above average across Maui County. Puu Kukui had the highest year-to-date total of 97.23 inches (72 percent of average).

Big Island

Big Island rainfall totals were near to above average at most sites for the month of April. The only region with mainly below average totals was the southeast flank of the Kau District from Kapapala Ranch to South Point. The USGS' Saddle Road Quarry rain gage had the highest monthly total of 24.72 inches (170 percent of average) and the highest daily total of 5.06 inches on April 13. The Mountain View and Waikii gages posted their highest April totals since 2004.

Other than a few sites on the Kohala Mountains and along the Kona slopes, rainfall totals for 2019 through the end of April were near to below average. The USGS' rain gage at Kawainui Stream had the highest year-to-date total of 74.78 inches (135 percent of average).



American Samoa (Chip):

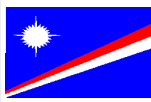
American Samoa is influenced by Tropical Wet climate. The month of March and April received 107% and 108% of normal (% of normal and % are synonymously used throughout this call-note) rainfall. Trades are picking up as SPCZ is still weakly active over American Samoa! There is no report of any significant damage, but there were some flash floods reported last week. The sea level stays elevated. Model-based PEAC's seasonal climate outlook is now indicating above-average rainfall for MJJ with moderate confidence. Currently the sea level is staying very high (+9 inches above normal). Forecasts indicate that it will stay elevated over the next three months. There is indication that the upcoming TC season in American Samoa could be busy (Source: NIWA).



Kwajalein (Chip):

Dry trades remain over Kwajalein Atoll. The atoll experiences a relatively dry windy season from mid-December to mid-May. March and April recorded only 52% and 22% of normal rainfall. The sea level is slightly elevated (+4 in). Current model projections show most of the precipitation staying to the north or southwest. Winds during this period will be gentle and generally easterly. PEAC-model forecasts have trended to show average-below rainfall and near normal sea level over the next 3 months, and there are no active TC warnings.

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



Majuro (Lee):

Majuro recorded less than average rainfall for the last few months. However, while in March, it recoded 102% of normal rainfall, the downpour again dropped down to only 35% in April. Majuro is, therefore, dry now. Current water reserves are about 65-70% capacity, which has already caused for water rationing on the Island. Currently, there are 4-hrs/week is okay as compared to the average 36 million gallons. There have been several warnings about fires. PEAC-model forecasts have trended average-below rainfall and slightly elevated sea level over the next 3 months, and there are no active TC warnings.

Reports from around the Region (CON'T)



Pohnpei (Wallace):

Pohnpei recorded 66% of normal rainfall in April. The recent tropical depression provided some rain, but not enough to change island's dry condition. Currently, the streamflow is less than normal. The southern part of the island is drier than the eastern part. There have been some reports of lightning storms with high surf and minor inundations along the North-East side of the island, but no damage reported, so far. PEAC-model forecasts have trended average rainfall and slightly elevated sea level over the next 3 months. At this time, winds are expected to stay at or below 20 knots all this week. Seas are expected to be at or below 8 feet. Therefore, other than a possible stray lightning strike, no weather related hazards are foreseen now in Eastern Micronesia.



Kosrae (Wallace):

The main weather feature in Western Micronesia was a near-equatorial trough. The recent tropical depression brought significant amounts of rain. Kosrae recorded 168% of normal rainfall in April, so the island is wet now. There were reports of several minor flooding and landslides. 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.



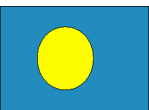
Chuuk (Sanchez):

Chuuk weather has been fairly normal for the last couple of months. However, while Chuuk received about 122% and 175% of normal rainfall in February and March, it recently received only 48% of rainfall in April. PEAC forecasts indicate average 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. Similar to Pohnpei, other than the possible odd lightning strike at Chuuk, no weather related hazards are anticipated now in Western Micronesia.



Yap (Chip):

Yap received 52% of normal rainfall in April, so they are a bit dry now, including the outer islands. The sea level recorded rise and it is currently below (-4.5 inches) normal. PEAC forecasts are favoring average-below rainfall and below normal sea level in the next three months.



Palau (Kikuko):

Palau's 2019 dry season has fallen below the Climatology Norms. On April 7th, a weak circulation and associated near equatorial trough provided 1.45 inches of rain at WSO Palau. Also, on April 24 a surface trough southwest of the Palau provided 1.03 inches of rain for WSO Palau. WSO Palau April totals are below the Normal (8.19 inches for April 1981-2010 Climatology) and Median (7.44 inches for April 1981-2010 Climatology). This is the last month of Palau's dry season (Jan to Apr) and rainfall totals for the dry season have all fallen below the Normals and Means. Short term precipitation forecasts look promising but when near real time, the precipitation becomes variable in location, duration and intensity or end up mostly off shore. Lately, the troughs and circulations become weaker systems by the time they reach this end of the western Pacific Ocean.



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 dry. While Guam received only 45% of normal rainfall in March, Saipan received ONLY 35%. There have been several brush fires in Guam and Saipan. Vegetation has turned to yellow. PEAC forecasts are now indicating below-average rainfall for both Guam and Saipan over the next three months and slightly below normal sea level. Satellite and radar show generally shower and cloud-free conditions across the Marianas with the exception of a few low-level clouds and thin cirrus. Little change is expected in the next month or so as a very dry trade-wind pattern remains entrenched over the Marianas.

2. 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 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.

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

Tide Gauge stations	Seasonal Forecasts MJJ (mean') (ano)	SD of FMA (mean)	Monthly mean ¹ anomaly			Current State/ Trend	Seasonal Forecasts MJJ (max ²) (ano.)	SD of FMA (max)	Monthly max ² anomaly		
			Observed rise/fall						Observed rise/fall		
			Feb/ 2019	Mar/ 2019	Apr/ 2019				FMA 2019	Feb/ 2019	Mar/ 2019
Marianas, Guam	+2	4.2	-1.2	+1	+2	Normal	+19	4.1	+18	+16	+15
Malakal, Palau	-2	4.8	-6	-2	-3	Below	+36	4.9	+32	+37	+33
Yap, FSM	-2	4.7	-6.6	-7	-4.5	Below	+30	5.2	+25	+23	+25
Chuuk, FSM***	0	*	0	0	**	Normal	+29				
Pohnpei, FSM	+1	2.6	+4.1	0	+4	Normal	+32	3.0	+34	+25	+30
Kapingamarangi	+2	**	**	**	**		**	3.7	**	+27	+27
Majuro, RMI	+2	2.0	+3.4	+3	**	Above	+40	2.6	+47	+45	**
Kwajalein, RMI	+1	2.8	+2.2	+2	+4	Above	+40	3.2	+43	+44	+42
Pago Pago*	+5 [+10]	3.9	+6 [+11]	+7 [+12]	+9 [+14]	Above	(+30) [+35]	4.2	+41	+39	+35
Honolulu	+2	1.7	+1	0	+2	Normal	+21	2.0	+20	+17	+19
Hilo	+2	1.9	0	+1	+4	Normal	+25	2.6	+23	+20	+24

+/- 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 AMJ: PEAC-CCA Statistical model is predicting **near normal to below-normal** sea level to 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.

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

(9 May 2019)

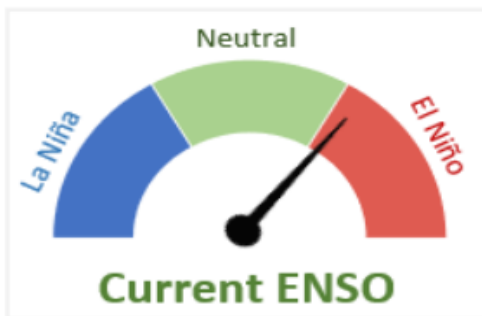
Synopsis: El Niño is likely to continue through the Northern Hemisphere summer 2019 (70% chance) and fall (55-60% chance).

During April, above-average sea surface temperatures (SSTs) persisted across most of the equatorial Pacific Ocean, reflecting the ongoing El Niño. All of the latest weekly Niño indices were near +0.8°C, except for Niño-1+2 index, which was at +0.3°C. While surface indicators were relatively unchanged during the month, the anomalous upper-ocean subsurface temperatures (averaged across 180°-100°W) decreased through April. Subsurface temperature anomalies remained positive close to the surface across the equatorial Pacific Ocean, but were increasingly negative at depth. Suppressed tropical convection was evident near Indonesia and enhanced convection continued near the Date Line, though weaker compared to the last two months. Low-level wind anomalies were weak over the tropical Pacific Ocean, with easterly anomalies evident over the western Pacific. Upper-level wind anomalies were easterly over the western Pacific and westerly over most of the eastern Pacific. Overall, oceanic and atmospheric conditions were consistent with El Niño.

The majority of models in the IRI/CPC plume predict El Niño to continue through 2019, with SST anomalies in the Niño-3.4 region clustering between +0.5°C and +1.0°C. However, model predictions made during the spring tend to be less accurate relative to the rest of the year, so uncertainty remains whether this outcome will occur. In the shorter term, a recent increase in westerly wind anomalies over the west-central Pacific Ocean portends the possible development of another downwelling oceanic Kelvin wave, which could build up the above-average subsurface temperatures needed for El Niño to persist. In summary, El Niño is likely to continue through the Northern Hemisphere summer 2019 (70% chance) and fall (55-60% chance; click [CPC/IRI consensus forecast](#) for the chance of each outcome for each 3-month period).

El Niño-Southern Oscillation Watch

Source: NIWA Island Climate Update: April 2019

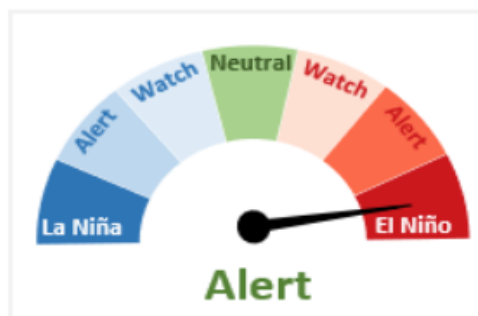


Current situation

Sea surface temperatures remained above El Niño thresholds in the central and eastern Pacific Ocean during April 2019, but cooled in the western Pacific.

The atmosphere continued to respond to the oceanic anomalies in the central Pacific.

The Southern Oscillation Index (SOI) was near neutral in April 2019 with a value of -0.1.



Forecast situation

83% chance for El Niño conditions during May-July 2019.

64% chance for El Niño conditions during August-October 2019

5. Rainfall Verification and Outlooks for MJJ (Rashed/Joe)

The verification result of **FMA** rainfall forecasts was 12 hits and 2 misses (Heidke score: 0.4857). The two stations we missed were: Kosrae in FSM and Kahului in Hawaii. While PEAC forecasts for FMA season tended to show average-above outlook for Kosrae, the final observation was above. It is important to note that, among the 6 (six) GCMs and 2 (two) statistical models, only two models (e.g., UKMO, APCC) displayed above tercile and all other showed below to average-below tercile. The other station Kahului provided above rainfall in FMA while PEAC forecasts tended to show average-below tercile. This was a bit of surprise as no other models (GCMs/Stats) under PEAC's considerations provided any wetter trend like this. All models displayed average to average-below tercile.

FMA 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	71	16.58	Below
FSM					
Yap 9° 29' N, 138° 05' E	Below	40:30:30	61	9.37	Below
Chuuk 7° 28' N, 151° 51' E	Avg-below	35:35:30	105	29.43	Avg.
Pohnpei 6° 59' N, 158° 12' E	Avg-below	35:35:30	94	38.64	Avg.
Kosrae 5° 21' N, 162° 57' E	Avg-below	35:35:30	140	64.97	Above
RMI					
Kwajalein 8° 43' N, 167° 44' E	Avg-below	35:35:30	70	7.18	Below
Majuro 7° 04' N, 171° 17' E	Avg-below	35:35:30	66	15.17	Below
Guam and CNMI					
Guam 13° 29' N, 144° 48' E	Avg-below	35:35:30	116	8.86	Avg.
Saipan 15° 06' N, 145° 48' E	Avg-below	35:35:30	42	3.00	Below
American Samoa					
Pago Pago 14° 20' S, 170° 43' W	Avg-above	30:35:35	142	45.68	Above
State of Hawaii					
19.7° - 21.0° N, 155.0° - 159.5° W					
Lihue	Avg-below	35:35:30	96	6.09	Below
Honolulu	Avg-below	35:35:30	107	2.45	Avg.
Kahului	Avg-below	35:35:30	172	6.60	Above
Hilo	Avg-below	35:35:30	105	29.42	Avg.

Hit
Miss

Heidke: **0.4857**

RPSS: **-0.0843**

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

	Koror	Yap	Chuuk	Pohnpei	Guam	Saipan	Majuro	Kwaj
below (<)								
33.33%	25.9095	14.18	25.26	38.32	6.88	6.15	21.03	8.63
near								
66.66%	35.9145	19.83	31.4	48.92	10.04	8.74	28.4	16.52
above (>)								

Lihue	Honolulu	Kahului	Hilo	Pago Pago	Kosrae
5.78	1.88	3.25	24.59	32.29	45.07
9.92	4.7	6.41	45.54	36.83	52.02

Rainfall in inches

5. Rainfall Verification and Outlooks for MJJ (Con't)

<i>Location</i>	<i>Rainfall Outlook</i>	<i>Final Probabilities</i>
Palau		
Koror	Avg-below	35:35:30
FSM		
Yap	Avg-below	35:35:30
Chuuk	Average	30:40:30
Pohnpei	Average	30:40:30
Kosrae	Avg-above	30:35:35
RMI		
Kwajalein	Below	45:30:25
Majuro	Avg-below	35:35:30
Guam and CNMI		
Guam	Below	45:30:25
Saipan	Below	45:30:25
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 **MJJ** season means there is a **35%** chance (probability) for occurrence of excess rainfall during the **MJJ** season, **35%** chance for occurrence of rainfall within a pattern considered normal during the **MJJ** season, and **30%** chance for occurrence of deficit rainfall during the **MJJ** season. *Also note that excess and deficit limit for each of the stations are b different*

6. Drought monitoring updates (Richard Heim).

A. End-of-April Monthly Drought Assessment:

- i. With WxCoder III data, we have 23 stations in the monthly analysis.
- ii. Like the last 2 months, April was dry (less than the 4- or 8-inch monthly minimum needed to meet most water needs) in northern and western portions of Micronesia, but it was also dry in the east (RMI), with only American Samoa, Kosrae & Pohnpei States, and southern Chuuk State wet (more than 8 inches). Drought Information Statements issued by Guam. With April ending on a Tuesday, the April monthly analysis (April 30) is the weekly analysis for April 30. Compared to the end-of-March analysis:
 - a. Drought worsened across the Marianas, Marshalls, Palau, and northern and western FSM:
 1. D4-S became D4-SL at Utirik
 2. D3-S worsened to D4-S at Saipan and Wotje
 3. D2-S worsened to D3-S at Kwajalein
 4. D1-S worsened to D3-S at Guam, Rota, Yap, and Majuro
 5. D1-S worsened to D2-S at Palau and Fananu
 6. Ailinglapalap went from D-Nothing to D1-S
 7. Mili went from D-Nothing to D0-S
 - b. Jaluit went from D0-SL to D0-S
 - c. But where it was wet:
 1. Lukonor went from D0-S to D-Nothing
 2. D-Nothing continued at Chuuk, Pohnpei, Pingelap, Kosrae, Nukuoro, Kapingamarangi, and Pago Pago
 - d. Ulithi was missing for the last several months, and Woleai had insufficient data, so they could not be analyzed for the month.
- iii. Some dry precipitation ranks, especially over the last 3 to 6 months (since September 2018):
 - a. Saipan: 7th driest April (out of 39 years of data), driest Feb-Apr & Jan-Apr and 4th driest Oct-Apr (38 yrs)
 - b. Utirik: 3rd driest April (18 yrs), driest Mar-Apr & Feb-Apr & Jan-Apr (13 yrs)
 - c. Guam: 4th driest April (63 yrs), 3rd driest Mar-Apr (63 yrs)
 - d. Wotje: 4th driest April (36 yrs), 3rd driest Mar-Apr & 6th driest Jan-Apr (36 yrs)
 - e. Kwajalein: 6th driest April & 7th driest Mar-Apr & 5th driest Sep-Apr (67 yrs)
 - f. Majuro: 8th driest April & 9th driest Jan-Apr & 9th driest Oct-Apr (65 yrs)
 - g. Woleai: 5th driest April (40 yrs), 6th driest Feb-Apr & Jan-Apr (33 & 32 yrs)
 - h. Ailinglapalap: 4th driest April (36 yrs) & May-Apr (33 yrs), 9th driest Mar-Apr (36 yrs)
 - i. Mili: 5th driest April (35 yrs)
 - j. Kosrae: 12th wettest April (49 yrs), but 6th driest Oct-Apr (34 yrs) & Jun-Apr (32 yrs)
 - k. Lukonor: 8th wettest April (35 yrs), but 7th driest May-Apr (22 yrs)
 - l. Nukuoro: 14th wettest April (36 yrs), but 6th driest May-Apr (33 yrs)

B. Current (Weekly) Drought Conditions: The discussion above is the monthly (end of April) analysis. The latest weekly USAPI USDM assessment may show different USDM classifications. When this report is given (May 9), the latest weekly USAPI USDM assessment will be for May 7 (this report is being written on May 4).

For May 7,

C. April 2019 NCEI State of the Climate Drought Reports: I'm including a discussion of USAPI drought and climate conditions in my April 2019 NCEI SotC Drought & Synoptic reports (which will go online May 13).

i. The web page url's will be:

- a. <https://www.ncdc.noaa.gov/sotc/drought/201904#det-reg-pacis-usapi>
- b. <https://www.ncdc.noaa.gov/sotc/synoptic/201904#usapi-wnp>

D. Alaska Drought Workshop: I am missing the May 9 PEAC conference call due to my participating in a Southeast Alaska Drought Workshop.

Drought monitoring updates (CON'T).

E. USAPI USDM Authors:

- i. **The OCONUS (USAPI) USDM became an operational product at the beginning of March, with authorship 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).**
 - a. **Claire, Curtis, & Brad have authored besides Ahira & me.**
- iii. Currently, the USDM is analyzed for the 50 States and Puerto Rico, and the USAPI USDM is done separately. The USDM web site (<https://droughtmonitor.unl.edu/>) has been revised 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 (dots), while the CONUS USDM will be what has been done for years (50 States & Puerto Rico) (polygon shapefiles).

F. Automated Ingest of Daily Rainfall Data:

- i. Automated Program: I modified 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: I've begun to research how to address several updates to the automated data ingest system. 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 (Capital Hill 1, Nimitz Hill, Palau International Airport, 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.**
 - 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.**

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).

Drought monitoring updates (CON'T).

G. USAPI Listserv:

- i. NDMC (National Drought Mitigation Center) set up a listserv for communication of the USAPI USDM analyses and discussion, similar to the lists ervs 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.
- iii. There is also a DMUpdate Listserver for those who just want to know when the new USDM maps are released.

Participants:

NWS Climate Services Program Managers (CSPMs): Joe Brinkley

WSO Climate Service Focal Points (CSFPs):

Lee (Majuro)

(Kosrae)

Kikuko(Palau)

Sanchez(Chuuk)

(Yap)

(Kwajalein)

Wallace (Pohnpei)

(Pago Pago)

Mark/Chip/Brandon (Guam & CNMI)

PEAC Principal Research Scientist: Rashed Chowdhury

WERI Scientist: Mark Lander

CPC Forecaster: Dan Collins

WFO Guam : Chip Guard, Clint Simpson

NWS MIC, Honolulu: Christopher Brenchley

NCEI: Richard Heim

Pacific RISA: Krista Jaspers

NWS Hydrologist: Kevin Kodama

Additional Attendees:

**** Next Call– 13 June 2019, 1430 HST (14 June 2019, 0030 GMT)****