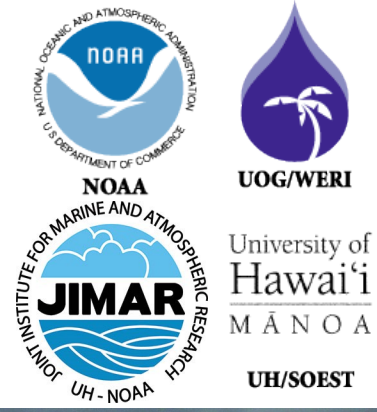




**NWS Climate Services**  
**September PEAC Audio Conference**  
**Call Summary**  
**12 September, 1430 HST (13 September 2019, 0030 GMT)**



**August rainfall totals reported (Sony)**

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

	Rainfall	% Norm	Median	Departure	3 Month Total
	Inches	August	Inches	inches	JJA
Koror	18.91	140	13.50	5.41	50.25
Yap	11.58	78	14.82	-3.24	36.97
Chuuk	16.13	125	12.86	3.27	42.40
Pohnpei	15.74	110	14.26	1.48	54.94
Kosrae	16.61	117	14.22	2.39	40.88
Kwajalein	10.10	104	9.74	0.36	19.63
Majuro	12.69	109	11.69	1.00	31.12
Guam NAS	19.92	135	14.74	5.18	27.40
Saipan	18.32	140	13.13	5.19	27.16
Pago Pago	8.60	160	5.38	3.22	32.35
Lihue	1.79	93	1.84	-0.12	9.23
Honolulu	0.18	95	0.19	-0.01	5.98
Kahului	0.28	56	0.48	-0.21	0.45
Hilo	9.40	140	13.13	5.19	22.86

## Reports from around the Region

### Hawaii (Kevin)

August began with wet conditions over portions of the state due to enhanced moisture from two tropical cyclones. The first cyclone, named Erick, passed south of the main Hawaiian Islands on August 1 and 2. Moisture in the northern fringe of its circulation produced periods of heavy rainfall over the southeast-facing slopes of the Big Island but no significant flooding impacts were reported. On August 4, an upper level low pressure system west of the state tapped into Erick's trailing moisture and generated heavy rainfall and thunderstorms over the northeastern slopes of Kauai. Rainfall rates of 3 to 4 inches per hour produced flash flooding which briefly blocked access to homes in Anahola and overflowed the Keapana Bridge in Kapaa. The second tropical cyclone, Flossie, passed north of the main Hawaiian Islands as it was weakening on August 6. Enhanced low level moisture pulled up by Flossie from the deep tropics helped produce heavy rainfall over portions of west Maui and the windward and central sections of Oahu on August 6 and 7, respectively. Fortunately, there were no significant flooding impacts on either island.

The rest of the month mainly involved light to moderate trade winds along with above average temperatures. Enhanced low level moisture produced, in part, by persistent above average sea surface temperatures boosted rainfall along the leeward slopes of the Big Island during the month. Heavy afternoon rainfall produced minor flooding along portions of the Kona and leeward Kohala slopes on August 11, 27, and 28. Similarly, a brief period of heavy rainfall over Upcountry Maui (leeward slopes of Haleakala) produced minor flooding on the afternoon of August 31.

#### Island of Kauai :

Rainfall totals over most of Kauai were near to above average for the month of August. The main exceptions, with below average totals, were located along the lower elevations of the island's southern slopes. The U.S. Geological Survey's (USGS) gage on Mount Waialeale had the highest monthly total of 18.96 inches, but this was only 54 percent of its long term August average. The Anahola rain gage had the highest daily total of 4.14 inches during the flash flood event on August 4. This one-day total accounted for more than 70 percent of its total for the month. Kalaheo's 1.10 inches marked its lowest August total since 1994.

Most of the gages on Kauai had near to above average rainfall for 2019 through the end of August. Gages along the lower southern slopes from Koloa to Port Allen continued to have below average totals. Mount Waialeale had the highest year-to-date total of 191.13 inches (73 percent of average).

#### Island of Oahu:

August rainfall totals were below average across most of Oahu. The USGS' Poamoho Rain Gage No. 1 had the highest monthly total of 7.95 inches (44 percent of average), followed closely by Manoa Lyon Arboretum's 7.65 inches (59 percent of average). The highest daily total was 2.32 inches from the USGS' rain gage at Waiahole Stream on August 7. The Aloha Tower, Hawaii Kai Golf Course, Moanalua, Palolo Fire Station, Poamoho Rain Gage No. 1, and Waihee Pump sites had their lowest August totals in more than 10 years.

Oahu rainfall totals for 2019 through the end of August were near to below average at most of the gages. The Manoa Lyon Arboretum gage had the highest year-to-date total of 97.82 inches (99 percent of average).

#### Maui County:

Most of the rain gages across Maui County recorded near to above average totals for the month of August. These statistics can be a bit misleading for the lower elevation leeward sites since they have low monthly averages during this time of the year, and the recorded rainfall totals actually translate to very little relief from the recent dry conditions. The highest monthly total of 16.91 inches (99 percent of average) was recorded by the USGS' rain gage at West Wailuaiki Stream. This site also posted the highest daily total of 7.57 inches on August 1. The 13.58 inches reported by the USGS' gage on Puu Kukui registered as the lowest August total since 2006.

Rain gages across Maui County have mostly recorded near average rainfall totals for 2019 through the end of August. The rain gage at West Wailuaiki Stream had the highest total of 147.93 inches (94 percent of average).

#### Island of Hawaii:

Windward Big Island monthly rainfall totals were near average at most locations. However, most of the rest of the island had above average totals. In fact, the highest monthly total of 15.96 inches (339 percent of average) came from the Waiaha rain gage on the slopes of Hualalai in the North Kona District. The Kona Coffee belt region had a very wet month with all four gages in the area reporting more than 10 inches of rainfall. Records for the highest August rainfall total were tied at Honaunau and broken at Kealakekua. The highest daily total of 3.84 inches on August 2 was recorded by the USGS' Saddle Road Quarry rain gage. This rainfall was associated with moisture from Tropical Cyclone Erick.

Big Island rainfall totals for 2019 through the end of August were near to below average at most of the gages along the windward slopes, and near to above average at most of the sites over the rest of the island. The USGS' rain gage at Kawainui Stream had the highest year-to-date total of 116.31 inches (116 percent of average).

**American Samoa:** (Elinor)

Rainfall was above normal for previous month of August due to tropics and trade winds in the area. Coastal inundation is resulting from high surf conditions. Physical observations were made that water levels were much higher than previous months and seasons.

**Kwajalein:** (absent)

Monsoon trough which stretched from the Marianas and northern Palau across the Federated States of Micronesia (FSM) to the northern Marshall Islands (RMI). The eastern end of the monsoon trough gradually eroded as the week progressed. A weak but broad circulation moved slowly westward across central to western Micronesia, following the pressure weakness of the monsoon trough and bringing areas of rain with it. Surface troughs combined with divergence associated with upper-level troughs and lows at times, especially over the RMI and north of the FSM and, later in the week, over western Micronesia. Trade-wind convergence and disturbances also brought rain to parts of the RMI. South of the equator, high pressure dominated the Samoan Islands for most of the week; a surface trough brought some showers as it crossed American Samoa later in the week.

**Majuro:**

Majuro's reservoir storage level on August 27<sup>th</sup> was at 28.671 million gallons, which is right at the 80% of maximum threshold. The spotty rainfall pattern in the RMI resulted in dry areas where Jaluit reported 0.05 inch of rain, Utirik 1.56 inches, and Ailinglapalap 1.71 inches, contrasting with wet areas. On the wet side, Kwajalein recorded 2.61 inches, Majuro 2.81 inches, and Mili 5.30 inches.

**Pohnpei:**

Heavy rain and disturbances in the area.

**Kosrae:**

The whole island has been relatively wet.

**Chuuk:**

On the fringe of strong southwest flow bringing moisture from equatorial areas. Some coastal inundation in the area and a reported missing boat.

**Yap:**

Strange monsoon since it has been relatively dry for the area. There is currently some strong southwest winds in addition to dry conditions.

**Palau:**

THE MONSOON TROUGH LINKED WITH INVESTS WAS RESPONSIBLE FOR THE LARGE AMOUNTS OF DAILY RAINFALL FOR PALAU IN THREE SEPARATE EVENTS MAKING RAINFALL TOTALS ABOVE NORMAL (MEDIAN AND MEAN FOR 19981-2010 CLIMATOLOGY) FOR MOST STATIONS. THE MONSOON TROUGH WITH INVEST 94W (UPGRADED TO LEKIMA) IN THE BEGINNING OF THE MONTH, INVEST 99W (UPGRADED TO BAILU) TOWARDS THE END OF THE MONTH AND ON THE 30TH OF AUGUST AND INVEST 92W (UPGRADED TO LINGLING). THE SIGNIFICANT RAIN PRODUCER OUT OF THE THREE WAS THE MONSOON TROUGH LINKED TO INVEST 92W. PLEASE NOTE THERE WAS SUBSTANTIAL RAINFALL PRIOR AND AFTER THE DAYS SPECIFIED BELOW BUT THESE ARE BY FAR THE LARGEST. THIS LAST NEW MOON EVENT BROUGHT THE KING TIDES TO MANY COASTLINES IN PALAU THAT LASTED A FEW DAYS CREATING TIDAL SURGES, INUNDATION AND COASTAL EROSION TO SOME AREAS OF PALAU. THIS WAS WORSE THAN LAST MONTH'S EVENT.

**Guam/CNMI:** (Lander/Bukundt)

Wet and weak monsoon but no tropical cyclone. Some minor coastal erosion was noted on the island.

**Tropical Cyclone:**

The first half of 2019 was very dry at many locations across Micronesia. Drought was particularly severe in the CNMI and in the northern RMI. A very dry first-half of a calendar year is typical of the year following El Niño; also known as the post-Peak phase of El Niño, or the El Niño Year (+1). Whereas 2018 was noted for a very busy typhoon season for Micronesia (especially for Guam and the CNMI) and a very busy Hurricane season for Hawaii; so far during 2019, TC activity has been relatively subdued in Micronesia and Hawaii. After widespread dryness at many locations through July of 2019, southwesterly monsoonal winds made their first surge into Micronesia during the first week of August (see the time series of Saipan sea-level pressure in that nicely highlights the timing of the monsoon surge of early August, and another one in mid- September). Heavy rainfall occurred throughout the Mariana Islands during both of these monsoon episodes. In addition, gusty southwest winds with very high surf affected locations in Palau, Yap, Guam and the CNMI.

**PEAC Teleconference: Sea-Level Outlook—September 12, 2019**

All values are in inches (1 inch=25.4 mm); Seasonal cycle removed.

Tide Gauge stations	Seasonal Forecasts SON (mean) (ano)	SD of JJA (mean)	Monthly mean <sup>1</sup> anomaly			Current State/Trend	Seasonal Forecasts SON (max <sup>2</sup> ) (ano)	SD of JJA (max)	Monthly max <sup>2</sup> anomaly			
			Observed rise/fall						MJJ 2019	Observed rise/fall		
			Jun/ 2019	Jul/ 2019	Aug/ 2019					Jun/ 2019	Jul/ 2019	Aug/ 2019
Marianas, Guam	+3	3.5	+4.5	+4.5	+4.5	Above	+19	4.6	+18	+18	+20	
Malakal, Palau	0	4.4	+2	-2	+2	Normal	+36	4.4	+33	+36	+40	
Yap, FSM	+3	3.9	+1	+4	**	Above	+30	3.9	+25	+27	+32	
Chuuk, FSM***	+3	*	+3.5	+4.5	+5.2	Above	+29					
Pohnpei, FSM	+4	3.1	+6	+8	+8	Above	+36	3.3	+33	+39	+39	
Kapingamarangi	+4	**	**	**	+4	**	**	**	**	**	+30	
Majuro, RMI	+4	2.4	+6	**	**	Above	+40	2.6	+41	**	**	
Kwajalein, RMI	+4	2.8	+6.5	+4.5	+3.5	Above	+40	3.0	+41	+43	+43	
Pago Pago*	+7 [+10]	3.6	+9 [+14]	+9 [+14]	+10 [+15]	Above	(+35) [+40]	3.7	+35	+36	+40	
Honolulu	+3	1.7	+1	+4	+5.5	Above	+28	2.3	+20	+26	+30	
Hilo	+4	2.0	+4	+6	+5	Above	+28	2.6	+25	+29	+28	

+/- 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: Models and expert opinion suggest that El Niño has already transitioned to ENSO neutral—

- Since January 2019, the pattern of sea level variability corresponded very well with WP El Niño, where 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) and the negative SLA is located near 130°E-150°E (i.e., Koror) (also see Kug, J.-S., et al. (2009). Currently, the sea level pattern looks like impacted by La Niña.
- The MJO displays eastward propagating signal across eight phases from the Indian Ocean to the Pacific and later the western hemisphere.

Impacts: There are reports of minor-to-moderate inundations in the low-lying atolls with some minor damages.

Forecasts for SON: PEAC-CCA<sup>3</sup> Statistical model is predicting above-normal sea level to the north Pacific islands (Koror, Yap, and Chuuk). Other FSM stations (Chuuk, Pohnpei) and RMI's stations are likely to remain in higher than normal state. In Hawaii, both Honolulu and Hilo are likely to be elevated.

El Niño has already transitioned to ENSO neutral—this is most likely to continue through Northern Hemisphere winter 2019-20 (50-55% chance). So, the sea level is also likely to come back to normal by the end of 2019.

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.

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

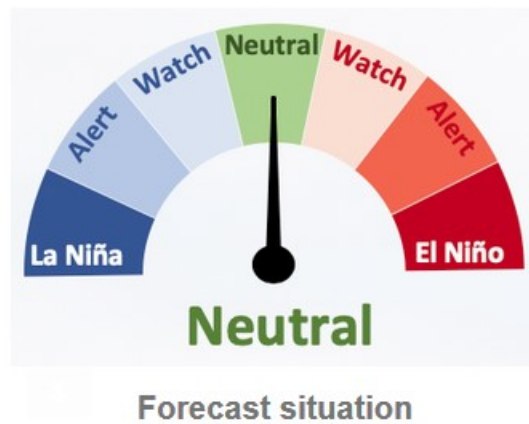
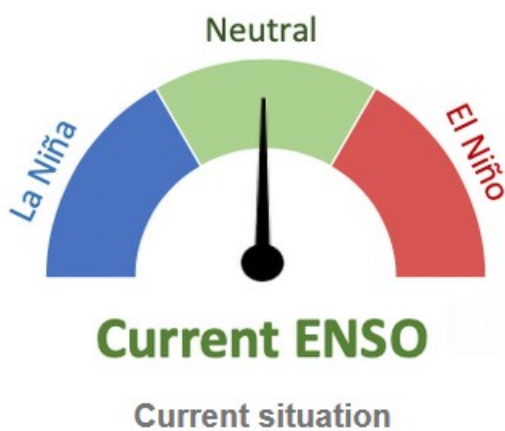
**Synopsis:** ENSO-neutral is favored during the Northern Hemisphere fall 2019 (~75% chance), continuing through spring 2020 (55-60% chance).

During August, ENSO-neutral continued as reflected by near-average sea surface temperatures (SST) across most of the central and eastern equatorial Pacific Ocean . The latest weekly Niño-3 and Niño-3.4 indices were  $-0.2^{\circ}\text{C}$  and  $0.0^{\circ}\text{C}$ , respectively, with the westernmost Niño-4 region index remaining above average ( $0.5^{\circ}\text{C}$ ) and the easternmost Niño-1+2 region index remaining below average ( $-0.6^{\circ}\text{C}$ ). Upper-ocean subsurface temperature anomalies (averaged across  $180^{\circ}$ - $100^{\circ}\text{W}$ ) decreased slightly during the month, with below-average temperatures strengthening in the east-central equatorial Pacific. Suppressed tropical convection continued over parts of Indonesia, while near-average convection was evident near the Date Line. Low-level and upper-level winds were near average over most of the tropical Pacific Ocean. Overall, oceanic and atmospheric conditions were consistent with ENSO-neutral.

The majority of models in the IRI/CPC plume continue to favor ENSO-neutral (Niño-3.4 index between  $-0.5^{\circ}\text{C}$  and  $+0.5^{\circ}\text{C}$ ) through the Northern Hemisphere spring. Interestingly, the statistical model averages favor Niño-3.4 values above the El Niño threshold ( $+0.5^{\circ}\text{C}$ ) during the fall and winter, while the dynamical model average indicates values near  $+0.2^{\circ}\text{C}$ . Forecasters are leaning toward the dynamical model average, which is also supported by the current tendency of the ocean toward cooler conditions. In summary, ENSO-neutral is favored during the Northern Hemisphere fall 2019 (~75% chance), continuing through spring 2020 (55-60% chance; click [CPC/IRI consensus forecast](#) for the chance of each outcome for each 3-month period).

Source: NIWA Island  
Climate Update:  
September 2019

### El Nino-Southern Oscillation Watch





## Rainfall Verification and Outlooks for SON (Con't)

<i>Location</i>	<i>Rainfall Outlook</i>	<i>Final Probabilities</i>
<b>Palau</b>		
Koror	<b>Below</b>	<b>45:35:20</b>
<b>FSM</b>		
Yap	<b>Average-below</b>	<b>35:35:30</b>
Chuuk	Average	<b>30:40:30</b>
Pohnpei	<b>Average-Above</b>	<b>30:35:35</b>
Kosrae	Average	<b>30:40:30</b>
<b>RMI</b>		
Kwajalein	<b>Average-Above</b>	<b>30:35:35</b>
Majuro	Average	<b>30:40:30</b>
<b>Guam and CNMI</b>		
Guam	<b>Above</b>	<b>30:35:35</b>
Saipan	<b>Above</b>	<b>30:35:35</b>
<b>American Samoa</b>		
Pago Pago	Average	<b>30:40:30</b>
<b>State of Hawaii</b>		
Lihue	<b>Average-Above</b>	<b>30:35:35</b>
Honolulu	<b>Average-Above</b>	<b>30:35:35</b>
Kahului	<b>Average-Above</b>	<b>30:35:35</b>
Hilo	<b>Average-Above</b>	<b>30:35:35</b>

### 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 b different*

## Drought monitoring updates.

### A. End-of-August Monthly Drought Assessment:

- i. With WxCoder III data, we have 23 stations in the monthly analysis.
- ii. August was wet (more than the 4- or 8-inch monthly minimum needed to meet most water needs) at all of the USA-PI stations except Jaluit which was dry (less than 8 inches). Even though it was wet across most of Micronesia, normals are high during this time of year, so the August percent of normal values were below normal at some stations in the FSM & RMI. The end-of-August monthly analysis (August 31) is consistent with the weekly analyses for August 27 and September 3 (and, in fact, is identical to the August 27 analysis except Wotje was analyzed/not missing). Compared to the end-of-July analysis:
  - Drought/Abnormal dryness improved everywhere that there was drought in July (except at Jaluit):
    - D3 improved to D-1 at Utirik
    - D2 improved to D1 at Wotje and D-Nothing at Kwajalein
    - D1 improved to D-Nothing at Majuro
    - D0 improved to D-Nothing at Fananu & Ailinglapalap
  - Conditions stayed the same (D2) at Jaluit
  - Others: The rest of the stations were D-Nothing (no drought or abnormal dryness)
  - Ulithi was missing for the last several months, so could not be analyzed for the month.
- iii. Jaluit had the 3<sup>rd</sup> driest August (out of 36 years) and driest Jul-Aug thru Apr-Aug & Nov-Aug thru Sep-Aug

### 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 10.

- i. For September 10, differences include:
  - Improvement at Utirik (D1 to D0)
  - Worsening at Pingelap and Tutuila (D-Nothing to D0)

### C. August 2019 NCEI State of the Climate Drought Report: I included a discussion of USAPI drought and climate conditions in my August 2019 NCEI SotC Drought report (which went online Wednesday).

- i. The web page url:  
<https://www.ncdc.noaa.gov/sotc/drought/201908#det-reg-pacis-usapi>

Next Week: I will be at the USDM Forum Workshop in Kentucky next week. NDMC's Curtis Riganti is OCONUS USDM author next week. If I do not have email/internet access next week from the hotel and I can't provide data support to Curtis, then Curtis may ask Chip for Saipan and Palau weekly rainfall data.

North America Commission for Environmental Cooperation Survey: As part of a project to improve drought indices, drought monitoring, and drought products in the US, Canada, & Mexico, a group of us are working with a contractor to run a survey on drought indices used in the 3 countries. We plan to have the contractor send the survey request to you for USAPI input, so please do participate in the survey! The RFP has just been re-issued.

### A. USAPI USDM Authors: -- NO CHANGE IN STATUS

- 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).  
Claire, Curtis, & Brad have authored besides Ahira & me.

**With the June 4 map, the U.S. Virgin Islands have been added to the USDM product suite. The USDM web site (<https://droughtmonitor.unl.edu/>) has been revised so that two USDM products (sets of maps) are produced each week: a CONUS USDM and an OCONUS USDM. The OCONUS USDM includes the USAPI and the US Virgin Islands (dots), while the CONUS USDM is what has been done for years (50 States & Puerto Rico) (polygon shapefiles).**



## Drought monitoring updates (CON'T).

A. Automated Ingest of Daily Rainfall Data: -- NO CHANGE IN STATUS

i. Automated Program: -- NO CHANGE IN STATUS—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

**Follow up on why Kwajalein & Palau are not getting into the automated process.**

**Thank you, Chip, for getting the metadata for Jaluit and Woleai changed so they are getting into the automated system!**

**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)**

**Chip: C/would you send me the COOP station i.d. number and NWSLI code for Palau International Airport, so we can get that station into the automated data base.**

**Find out why Saipan's ASOS data are being transmitted and getting into our automated process instead of the manual gauge WxCoder III data.**

**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.**

**I had a good meeting with Bill Ward (when I was in Honolulu last month) about getting automated observations set up.**

iii. Web interface: url is:

<https://www.ncdc.noaa.gov/temp-and-precip/drought/usapi-pcp/>

The "All Indicators" tab is the most used tab by USDM authors:

<https://www.ncdc.noaa.gov/temp-and-precip/drought/usapi-pcp/all>

The "Weekly", "Monthly", and "Seasonal" tabs have data tables as well as maps plotting the values.

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.

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).

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).

A. USAPI Listserv: -- NO CHANGE IN STATUS

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.

There is also a DMUpdate Listserv for those who just want to know when the new USDM maps are released.

**Participants:**

**NWS Climate Services Program Managers (CSPMs):**

**WSO Climate Service Focal Points (CSFPs):**

Lee, Nover (Majuro)  
(Kosrae)  
(Palau) Kikuko

Sanchez (Chuuk)  
Matt, Justin (Yap)  
Jason (Kwajalein)

Wallace (Pohnpei)  
(Pago Pago)  
Mark/Chip/Brandon/Clint (Guam & CNMI)

**PEAC Principal Research Scientist:** Rashed Chowdhury

**WERI Scientist:** Mark Lander

**CPC Forecaster:** Mathew Rosencrans

**WFO Guam :** Chip Guard

**NWS MIC, Honolulu:** Christopher Brenchley

**NCEI:** Richard Heim

**Pacific RISA:**

**NWS Hydrologist:** Kevin Kodama

**Additional Attendees:** Bill Ward, Stanley Keolanui,  
Theodora, Jane, Bill Ward, Stanley Keolanui, Elinore

***\*\* Next Call– 10 October 2019, 1430 HST (11 October 2019, 0030 GMT)\*\****