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**A Quarterly Bulletin of the Pacific El Niño/Southern Oscillation Applications Climate (PEAC) Center
Providing Information on Climate Variability for the U.S.-Affiliated Pacific Islands**

<http://www.prh.noaa.gov/peac>

CURRENT CONDITIONS

La Niña was nearly over by mid-April 2012. At the time of this writing, La Niña had not officially been declared over by NOAA, but on the most recent (April 12th) regional PEAC conference call among the weather offices of the USAPI, NCEP, and IRI, it was suggested that this declaration would be forthcoming (see CPC statement below). The weather of the 1st Quarter of 2012 was generally very tranquil throughout the USAPI, with the exception of Hawaii, where an extreme storm on March 9 brought very heavy rainfall, high winds, hail, and a weak tornado (see the State of Hawaii discussion below and on page 9). No significant tropical cyclone activity occurred in Micronesia or American Samoa during the 1st Quarter of 2012. While rainfall was near normal at many islands, some islands experienced notable dryness during certain months and for the whole 1st Quarter (see Figure 1 and Figure 2). Although Guam and the CNMI had above average rainfall for the 1st quarter, these locations have recently been experiencing periods of very low rainfall totals. The vegetation on these islands has become wilted and brown, and several wildfires were observed on Guam.

Other islands affected by recent dry spells include some of the northern islands of Chuuk State, Pohnpei Island and the eastern islands of Pohnpei State, Kosrae, and some of the northern atolls of the RMI. While recent dryness on Pohnpei Island has caused many residents to be concerned, it is anticipated that abundant rainfall should return within a few weeks to most of Pohnpei State.

Hawaii weather during the month of January 2012, was generally uneventful. Trade winds kept the islands with sufficient amounts of rainfall, while some areas remained in a drought state. These drought conditions still persist on Molokai and Maui although they did receive some relief. The Big Island maintains a large contrast from the plush windward areas and the drought-ridden Kahala district, north and south Kona districts, and the Hamakua district.

The State of Hawaii experienced a severe thunderstorm event on Friday, March 9th, associated with a cutoff upper-level low. A 4.25 inch hailstone was recorded in Kaneohe on Oahu, which is a new state record. Additionally, an EF-0 tornado with winds of 60-70 mph touched down near Lanikai on Oahu. This event brought significant 24-hour rainfall totals to the islands, including 11.14 inches at the Oahu Forest National Wildlife Refuge,

8.71 inches at Hanalei on Kauai, and 7.90 inches at Puu Kukui on Maui. The National Weather Service in Honolulu monitored the situation closely, and the response to this significant severe weather event was considered a success.

The following comments from the **EL NIÑO/SOUTHERN OSCILLATION (ENSO) DIAGNOSTIC DISCUSSION** were posted on the U.S. Climate Prediction Center/NCEP and the International Research Institute (IRI) for Climate and Society web site on April 5, 2012:

ENSO Alert System Status: La Niña Advisory

“Synopsis: La Niña is expected to transition to ENSO-neutral conditions during April 2012.

La Niña continued to weaken during March 2012, as below-average SSTs persisted primarily in the central Pacific. All of the Niño indices have warmed considerably during the last two months, and the Niño 4 and Niño 3.4 indices averaged only near -0.5 in March. The oceanic heat content (average temperature in the upper 300m of ocean) anomalies also continued to warm, with alternating pockets of negative and positive temperature anomalies observed within the upper 100 m in the central and eastern Pacific. Significant anomalous low-level westerly winds developed in the western tropical Pacific in late March, associated with the MJO. This wind event could further warm the central and eastern Pacific within the coming few months. Presently, however, the larger scale atmospheric circulation anomalies and the Southern Oscillation Index retain their La Niña characteristics. Accordingly, convection remains suppressed in the western and central Pacific, and enhanced over Indonesia, Malaysia and the Philippines. Collectively, these oceanic and atmospheric patterns indicate that a transition from La Niña to ENSO-neutral conditions is underway.

A majority of models predict ENSO-neutral conditions for March-April-May, continuing through the Northern Hemisphere summer 2012. Based on the continued weakening of the negative SST anomalies during March, as well as the historical tendency for La Niña to dissipate during the Northern Hemisphere spring, we continue to expect a weakening La Niña during April. ENSO-neutral conditions are then expected to persist through the summer. Thereafter, there is considerable uncertainty in the forecast, which slightly favors ENSO-neutral or developing El Niño conditions over a return to La Niña conditions during the remainder of 2012.”

SEA SURFACE TEMPERATURES

La Niña continued to weaken during March 2012, as below-average SSTs persisted primarily in the central Pacific. All of the Niño indices have warmed considerably during the last two months, and the Niño 4 and Niño 3.4 indices averaged only near -0.5 in March. The oceanic heat content (average temperature in the upper 300m of ocean) anomalies also continued to warm, with alternating pockets of negative and positive temperature anomalies observed within the upper 100 m in the central and eastern Pacific. Significant anomalous low-level westerly winds developed in the western tropical Pacific in late March, associated with the MJO. This wind event could further warm the central and eastern Pacific within the coming few months. Collectively, these oceanic and atmospheric patterns indicate that a transition from La Niña to ENSO-neutral conditions is underway.

SOUTHERN OSCILLATION INDEX

The 3-month average of the Southern Oscillation Index for the 1st Quarter of 2012 was 0.8, with monthly values of 1.1, 0.5 and 0.7 for the months of January, February, and March 2012 respectively. The larger scale atmospheric circulation anomalies and the Southern Oscillation Index retain their La Niña characteristics. Accordingly, convection remains suppressed in the western and central Pacific, and enhanced over Indonesia, Malaysia and the Philippines.

Normally, positive SOI values in excess of +1.0 are associated with La Niña conditions, and negative SOI values below -1.0 are associated with El Niño conditions. Low SOI values suggest a weak coupling between the ocean and the atmosphere. The SOI is an index representing the normalized sea-level pressure difference between Darwin, Australia and Tahiti.

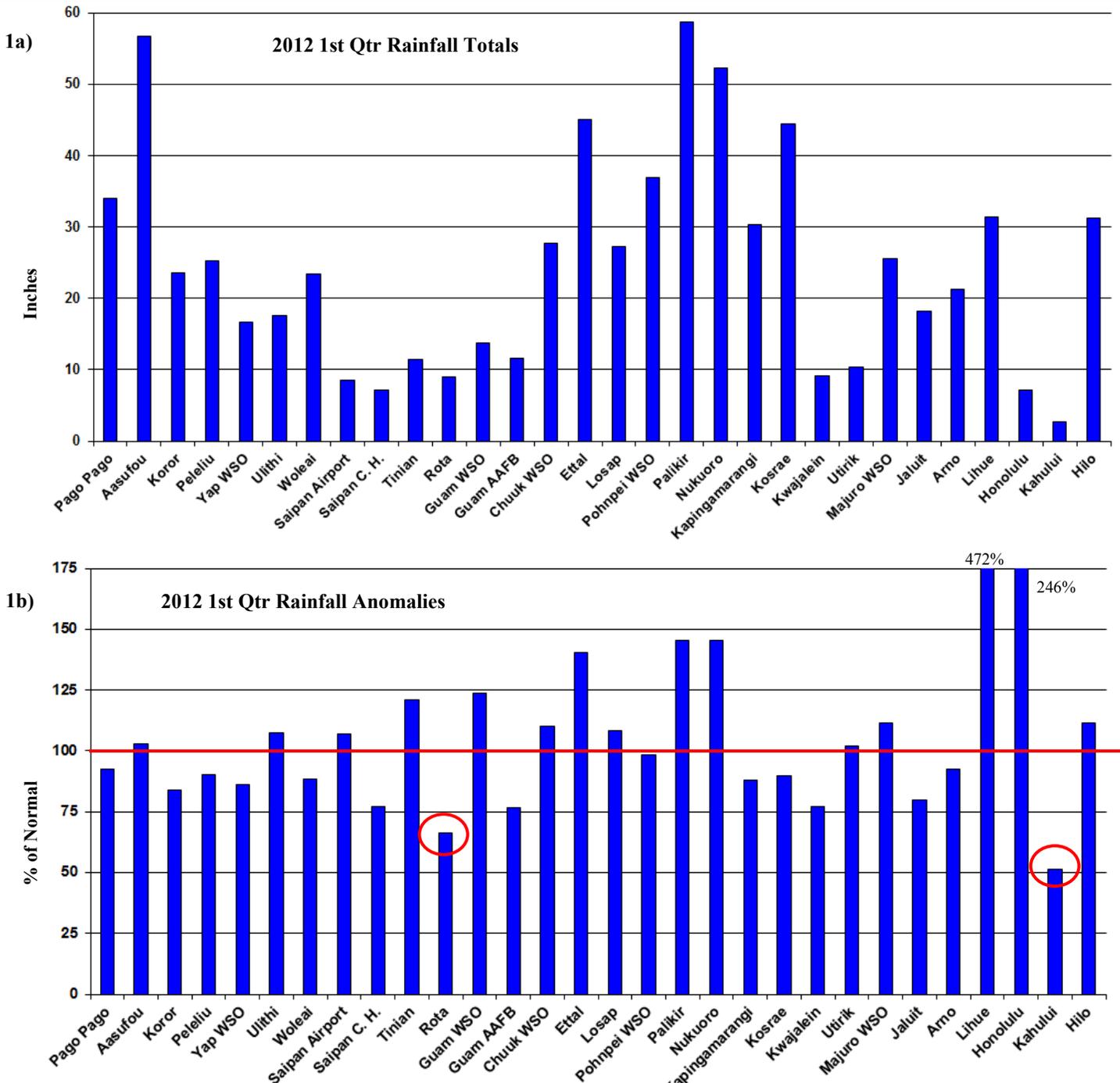


Figure 1, above. 2012 1st Quarter rainfall totals (a) in inches and (b) anomalies (expressed as % of normal). In 1b, solid line indicates normal rainfall (100%) and circles indicate rainfall less than 75% of normal.

TROPICAL CYCLONE

The PEAC Center archives western North Pacific tropical cyclone (TC) numbers, track coordinates, and 1-minute average maximum sustained wind taken from operational warnings issued by the Joint Typhoon Warning Center (JTWC) of the U. S. Air Force and Navy, located at Pearl Harbor, Hawaii. Western North Pacific TC names are obtained from warnings issued by the Japan Meteorological Agency (JMA), which is the World Meteorological Organization's Regional Specialized Meteorological Center (RSMC) for the western North Pacific basin. The PEAC archives South Pacific TC names, track coordinates, central pressure, and 10-minute average maximum sustained wind estimates from advisories issued by the Tropical Cyclone Warning Centers at Brisbane, Nadi, and Wellington. The numbering scheme and the 1-minute average maximum sustained wind estimates are taken from warnings issued by the JTWC. There are sometimes differences in the statistics (e.g., storm maximum intensity) for a given tropical TC among the agencies that are noted in this summary.

Tropical Cyclone Summary

TC activity in the western North Pacific during 2012 is expected to rebound somewhat from the record-setting inactivity experienced during 2010, and the below-normal activity in 2011. From January 2012 through mid-April of 2012, there was one notable episode in mid-March of westerly wind along the equator extending eastward to near 160°E accompanied by some areas of disturbed weather in low latitude (south of 8°N). Through mid-April 2012, there have been two TCs numbered by the JTWC, and four TCs carried in-warning by the Japan Meteorological Agency (JMA). The first of the JMA TCs was a weak short-lived (13-14 January 2012) tropical depression located to the northeast of Singapore. The second of the JMA tropical cyclones TCs, and the first of the year (01 W) for the JTWC formed in the South China Sea during mid-February 2012. It reached only tropical depression status. During late March 2012, TC 02W formed in the South China Sea. It was named Pakhar by the JMA. It reached tropical storm status according to the JMA but became a minimal (65 kt) typhoon according to the JTWC. Typhoon Pakhar made landfall in Vietnam. The fourth JMA TC formed northwest of Hawaii on April 4, when a large cluster of thunderstorms developed into a low-pressure area, which developed an extensive area of near gale-force wind on its north side. While showing subtropical characteristics, the large low-pressure area crossed the International Date Line and entered the northwestern Pacific Ocean. On April 8, the JMA began monitoring it as a tropical depression. Late on April 11, the tropical depression was absorbed by a weather front northeast of Wake Island.

The Southern Hemisphere cyclone season of 2011-2012 has been well below average, particularly in the South Pacific Ocean. Most of the Southern Hemisphere TC activity has been in the South Indian Ocean. This is consistent with La Niña, and was anticipated in earlier PEAC forecasts. The level of activity in the South Pacific was much lower than anticipated, and only three TCs were named in this basin. Cyril and Daphne were named by RSMC Nadi (Fiji), and Jasmine was named by the Brisbane TCWC. At the end of its long eastward trek from Australia's Cape York peninsula, cyclone Jasmine affected Tonga with gales and flooding rains. Cyclones Cyril and Daphne, along with monsoonal winds accompanying them, caused great flooding in Fiji. Fiji's Prime Minister, Frank Bainimarama, described the flooding as "three to four times worse" than the last devastating Fiji floods in 2009. TC activity east of the International Date Line has been virtually non-existent. Only the remnants of TCs Jasmine, Cyril and Daphne passed across the 180th meridian before dissipation.

The Tropical Storm Risk (TSR) extended range forecast for Northwest Pacific typhoon activity in 2012 anticipates a season with activity slightly below normal. Based on current and projected climate signals, the Northwest Pacific typhoon activity in 2012 is forecast by the TSR to be about 10% below the 1965-2011 long-term normal. As of this writing, the Hong Kong Laboratory for Atmospheric Research (LAR) has not released its April outlook for the 2012 western North Pacific typhoon activity. A forecast of 2012 western Pacific TC activity developed by Paul Stanko (a lead forecaster at the Guam WFO) calls for slightly reduced TC activity in the both the western North Pacific basin and within Micronesia.

No further TC activity is anticipated for American Samoa through June 2012 to finish out the current cyclone season.

PEAC Center Tropical Cyclone Outlook

Based on available guidance¹ and the forecast behavior of ENSO, the PEAC TC outlook for the upcoming western North Pacific typhoon season of 2012 is for slightly below normal activity, considering: (1) the late start of the season to-date; (2) the recent widespread trend toward reduced numbers of TCs; and, (3) the available guidance noted above. There may be a notable westward shift of TC activity in the first half of 2012 as the lingering effects of La Niña still exert some influence on the weather of Micronesia. By fall of 2012, under a scenario of ENSO-neutral conditions, the TC activity in the western North Pacific (and in Micronesia) should be near average to slightly below average for cyclone numbers. Cyclone formation locations and cyclone tracks should also be relatively normal during the second half of 2012. If El Niño develops late in 2012, then there could be slightly above normal activity within Micronesia from September through December. Even near-normal activity within Micronesia will be a large increase over the very quiet conditions of the past several years (see island summaries for further specific details). The latest TC outlooks and forecast updates from Paul Stanko, the TSR, and the City University of Hong Kong Laboratory for Atmospheric research will be provided in the 3rd Quarter Newsletter due in mid July.

¹ The PEAC tropical cyclone forecasts for 2012 are based on forecasts of the status of ENSO and input from three seasonal outlooks for tropical cyclone activity in the western North Pacific basin: (1) The Guam Weather Forecast Office (WFO), (2) The City University of Hong Kong Laboratory for Atmospheric Research, under the direction of Dr. J. C-L. Chan, and (3) The Benfield Hazard Research Centre, University College London, Tropical Storm Risk (TSR) research group, UK, led by Dr Adam Lea and Professor Mark Saunders.

LOCAL SUMMARY AND FORECAST



American Samoa: American Samoa passed through the heart of its rainy season with relatively quiet and uneventful weather. Rainfall totals for the first three months of 2012 were slightly lower than normal, with the Weather Forecast Office at Pago Pago receiving a total of 33.92 inches (93%). This total was over 10 inches below last year's 1st Quarter total of 44.88 inches. Tropical cyclone (TC) activity in the South Pacific was very quiet, and surges of the northwest monsoon were largely constrained within the Coral Sea out to the Fiji Islands. In January and again in late March, Fiji was impacted by major flooding. The northwest monsoon was anchored across Fiji during these events. During February 2012, TC Jasmine moved close to the southernmost islands of Tonga and generated strong winds and flooding rains on the Tongan main island of Tongatapu. No other TCs or strong surges of the northwest monsoon came near American Samoa during the 1st Quarter of 2012.

American Samoa Rainfall Summary 1st Qtr 2012						
Station		Jan.	Feb.	Mar.	1st Qtr	Predicted ¹
Pago Pago WSO	Inches	8.14	11.78	14.00	33.92	36.61
	% Norm	65%	92%	124%	93%	100%
Aasufou	Inches	14.62	26.12	*	*	55.11
	% Norm	79%	138%	*	*	100%

¹ Predictions made in 4th Quarter 2011 newsletter.
* Missing data

Climate Outlook: American Samoa is about to enter its dry season. Normal monthly rainfall is typically below 10 inches per month for the period May through September at Pago Pago. Computer forecasts and a consensus of outlooks from several regional meteorological centers indicate that rainfall in American Samoa is likely to be slightly below normal for the next few months as the dry season becomes established. Thereafter, for the remainder of 2012 and early 2013, the rainfall and TC activity in American Samoa will depend on the evolution of ENSO. If the climate system is ENSO-neutral or moving toward El Niño in the latter half of 2012, the rainfall and TC activity in American Samoa should be normal to above normal. If La Niña returns (as it did in the fall of 2011), the rainfall and TC activity should be near normal to below normal.

Predicted rainfall for American Samoa from April 2012 through March 2013 is:

Inclusive Period	% of long-term average / Forecast rainfall (inches) ²
April - June 2012 (Onset of Dry Season)	90% (24.78 inches - Pago Pago)
July - September 2012 (Heart of Dry Season)	95%
October - December 2012 (Onset of next Rainy Season)	100%
January - March 2013 (Heart of next Rainy Season)	100%

² Forecast rainfall quantities represent BEST ESTIMATES given the probabilistic forecast for each particular season and station.

2nd Quarter, 2012

LOCAL SUMMARY AND FORECAST



Guam/CNMI: The weather during the 1st Quarter of 2012 was very quiet across Guam and the CNMI. Thanks to a wet January on Guam and a wet February on Saipan, the 1st Quarter rainfall totals were above normal at most Guam and CNMI locations. Some locations in the region, however, were drier than normal, including Andersen AFB (Guam), Capitol Hill (Saipan) and the weather station at the Rota Airport. Extended periods of dry weather in mid-March and again in the first two weeks of April caused the vegetation in the grasslands of central and southern Guam to wilt and turn brown. Several brush fires scorched some of the grassland areas of central and southern Guam. The Guam Weather Forecast Office (WFO) issued a few Red Flag warnings indicating the danger for rapidly spreading grass fires.

The weather has been quieter in the region during the 1st Quarter of 2012 than it was last year at this same time when lightning was observed on several occasions in offshore convective cloud systems, and a tropical depression (02W) passed to the north of Guam and the CNMI in early April. Elevated sea levels were noted to have caused some minor coastal erosion along Guam's southwestern coastline, where the spring tides of the most recent full moon cycle brought the sea high enough to allow wave action to scour sand and clay away from the root systems of coconut trees and other vegetation at the inland limit of the beach.

Guam and CNMI Rainfall Summary 1st Qtr 2012						
Station		Jan.	Feb.	Mar.	1st Qtr	Predicted ¹
Guam						
GIA* (WFO)	Inches	6.50	2.85	4.45	13.80	12.29
	% Norm	146%	76%	149%	124%	110%
AAFB**	Inches	6.79	1.39	3.34	11.52	16.51
	% Norm	118%	27%	82%	77%	110%
University of Guam	Inches	6.86	3.39	4.29	14.54	12.29
	% Norm	154%	91%	144%	130%	110%
Ugum Watershed	Inches	8.24	3.36	4.71	16.31	16.51
	% Norm	145%	64%	115%	109%	110%
Ypapao (Dededo)	Inches	7.27	4.36	5.38	17.01	16.51
	% Norm	128%	84%	132%	113%	110%
Sinajaña	Inches	5.51	3.02	3.86	12.39	12.29
	% Norm	124%	81%	130%	111%	110%

¹ Predictions made in 4th Quarter 2011 newsletter.
* GIA-Guam International Airport, WFO-Weather Forecast Office
** AAFB-Anderson Air Force base

Climate Outlook: As was the case at this time last year, the status of ENSO is once again trending from La Niña to ENSO-neutral. This usually brings wetter weather to Guam and the CNMI. Unlike last year, however, there has not been an increase in heavy rain events nor other indicators of greater instability in the regional atmosphere during the 1st Quarter of 2012.

LOCAL SUMMARY AND FORECAST

Guam and CNMI Rainfall Summary 1st Qtr 2012						
CNMI						
Station		Jan.	Feb.	Mar.	1st Qtr	Predicted ¹
Saipan Intl. Airport	Inches	1.39	6.19	0.88	8.46	9.10
	% Norm	42%	248%	42%	107%	115%
Capitol Hill	Inches	2.05	3.77	1.30	7.12	10.64
	% Norm	51%	126%	52%	75%	115%
Tinian Airport	Inches	4.63	4.26	2.60	11.49	10.93
	% Norm	116%	142%	104%	121%	115%
Rota Airport	Inches	3.93	3.61	1.49	9.03	15.69
	% Norm	74%	77%	40%	66%	115%

¹ Predictions made in 4th Quarter 2011 newsletter.

Last year, the PEAC Center used these indicators to forecast an active rainy season for Guam and the CNMI with the occurrence of a few moderate or strong episodes of the southwest monsoon and an increase in rainfall extremes (e.g., 4 inches or more during a 24-hr period), and an increase in TC activity in regional waters. The former two of these three items did materialize during the latter half of 2011, but the return to La Niña in the fall of 2011 suppressed typhoon activity. The very quiet beginning to 2012 would suggest another tranquil year for the region. This would be more certain if the status of ENSO remains neutral for most of the remainder of the year, or goes back to La Niña, as it did in the fall of 2011. If the Pacific climate system evolves to El Niño, the weather could be active in the summer and fall of 2012, with some moderate or strong episodes of the southwest monsoon and an increase in the rainfall extremes. Also, if El Niño becomes established during the latter half of 2012, there would likely be an increase in TC activity in regional waters. The highest risk of a typhoon in the region occurs during El Niño, when the risk of gales (or higher) in regional waters increases 25 to 35% compared to non-El Niño years. We are now at the timing of a “predictability barrier” for ENSO. Thus, we cannot at this time choose with high confidence a preferred scenario for the evolution of ENSO over the course of the remainder of 2012, except to say that ENSO-neutral conditions should prevail in May and June. Most computer models are more strongly predicting a transition to El Niño than a return to La Niña.

Predicted rainfall for the Mariana Islands from April 2012 through March 2013 is as follows:

Inclusive Period	% of long-term average / Forecast rainfall (inches) ²	
	Guam/Rota	Saipan/Tinian
April - June 2012 (2nd Half of Dry Season)	120% (19.71 inches)	120% (10.30 inches)
July - September 2012 (Heart of Next Rainy Season)	120%	120%
October - December 2012 (End of Next Rainy Season)	110%	110%
January - March 2013 (1st Half of Next Dry Season)	110%	110%

² Forecast rainfall quantities represent BEST ESTIMATES given the probabilistic forecast for each particular season and station.

LOCAL SUMMARY AND FORECAST



Federated States of Micronesia

Yap State: January 2012 was very dry throughout Yap State, with only 1-3 inches recorded across Yap Island. Rainfall recovered to above normal values during February and March. February, March and April are typically the heart of the dry season in Yap State with average monthly totals just under 6 inches at most locations. Because of January’s extreme dryness, the higher rainfall during February and March 2012 was unable to make up the difference, and the 2012 1st Quarter rainfall totals were below normal throughout most of Yap State. Last year, Yap Island was very wet in the 1st Quarter, with roughly 30 inches (150%) of rainfall accumulation. Ulithi’s 17.56 inches of rain was 107% of normal, and the 3-month total of 23.46 inches at Woleai was 89% of normal. The weather conditions were generally tranquil throughout Yap State during the 1st Quarter of 2012.

Yap State Rainfall Summary 1st Qtr 2012						
Station		Jan.	Feb.	Mar.	1st Qtr	Predicted ¹
Yap Island						
Yap WSO	Inches	2.11	6.09	8.43	16.63	21.20
	% Norm	29%	102%	141%	86%	110%
Dugor	Inches	1.96	8.45	7.97	18.38	21.20
	% WSO	27%	141%	134%	95%	110%
Gilman	Inches	1.97	8.77	7.77	18.51	21.20
	% WSO	27%	147%	130%	96%	110%
Luweech	Inches	1.17	7.03	6.14	14.34	21.20
	% WSO	16%	118%	103%	75%	110%
Maap	Inches	1.54	4.30	5.07	10.91	21.20
	% WSO	21%	72%	85%	57%	110%
North Fanif	Inches	2.92	8.70	9.44	21.06	21.20
	% WSO	40%	145%	158%	109%	110%
Rumung	Inches	2.69	5.66	7.85	16.20	21.20
	% WSO	37%	95%	132%	84%	110%
Tamil	Inches	1.57	6.29	8.23	16.09	21.20
	% WSO	21%	105%	138%	83%	110%
Outer Islands						
Ulithi	Inches	3.53	5.66	8.37	17.56	15.56
	% Norm	57%	111%	165%	107%	95%
Woleai	Inches	2.79	10.81	9.86	23.46	25.16
	% Norm	26%	144%	119%	89%	95%

¹ Predictions made in 4th Quarter 2011 newsletter.

Climate Outlook: Similar to this time last year, computer forecasts and a consensus of outlooks from several regional meteorological centers indicate that rainfall throughout Yap State is likely to be slightly above normal for at least the next few months as the rainy season becomes established. Somewhat above normal rainfall is anticipated to occur throughout Yap State for the foreseeable future.

There is a normal risk (roughly a 10-15% chance – that is, once in 7 to 10 years) of a damaging TC in Yap State or its outer atolls during 2012. Most TCs affecting Yap State form near

LOCAL SUMMARY AND FORECAST

Chuuk or Guam and pass to the north of Yap Island. The northern atolls of Yap State (e.g., Ulithi and Fais) are probably most vulnerable to typhoons, but two recent typhoons (Mitag – March 2002, and Sudal – April 2004) made direct hits on Yap Island.

Predicted rainfall for Yap State from April 2012 through March 2013 is as follows:

Inclusive Period	% of long-term average / Forecast rainfall (inches) ²	
	Yap and Ulithi	Woleai
April – June 2012 (Onset of Rainy Season)	120% (32.63 inches)	100% (36.26 inches)
July – September 2012 (Heart of Rainy Season)	100%	100%
October – December 2012 (End of Rainy Season)	120%	100%
January – March 2013 (Onset of next Dry Season)	110%	100%

² Forecast rainfall quantities represent BEST ESTIMATES given the probabilistic forecast for each particular season and station.

Chuuk State: As is typical for the first three months of the year, there was a sharp north-south rainfall gradient across Chuuk State. Many of the atolls to the north of 8° N (e.g., Fananu and Onoun) had a 1st Quarter rainfall total that was less than 25 inches. Some of the atolls between 5-6° N (e.g., Ettal and Ta) had over 40 inches of rainfall during the 1st Quarter. WSO Chuuk, in the middle at 7.47°N, had 27.74 inches (110%). January 2012 saw the most widespread below normal rainfall of the quarter across Chuuk State, and February had some of the most abundant rainfall. Residents of some of the northern atolls (e.g., Fananu) were somewhat concerned with low rainfall amounts during the first quarter of 2012. Polowat also was dry with only 59% of its normal first quarter rainfall. Most of the islands of Chuuk State have a short dry season, with the average monthly rainfall during February and March falling below 10 inches.

Chuuk State Rainfall Summary 1st Qtr 2012						
Station		Jan.	Feb.	Mar.	1st Qtr	Predicted ¹
Southern Mortlocks						
Lukunor	Inches	7.22	11.06	12.51	30.79	35.34
	% Norm	68%	116%	104%	96%	110%
Ettal*	Inches	16.72	12.92	15.40	45.04	35.34
	% Norm	158%	136%	128%	140%	110%
Ta*	Inches	11.57	15.23	14.77	41.57	35.34
	% Norm	109%	160%	123%	129%	110%
Namoluk*	Inches	8.11	11.90	8.90	28.91	35.34
	% Norm	77%	125%	75%	90%	110%

LOCAL SUMMARY AND FORECAST

Chuuk State Rainfall Summary 1st Qtr 2012						
Station		Jan.	Feb.	Mar.	1st Qtr	Predicted ¹
Northern Atolls						
Fananu**	Inches	2.17	3.61	1.49	7.27	18.91
	% Norm	27%	78%	24%	38%	100%
Onoun**	Inches	1.97	12.56	12.20	24.76	18.91
	% Norm	25%	270%	195%	131%	100%
Northern Mortlocks						
Losap***	Inches	4.61	14.15	8.51	27.27	31.53
	% Norm	43%	180%	84%	95%	110%
Nama***	Inches	8.83	19.75	12.62	41.20	31.53
	% Norm	83%	251%	124%	144%	110%
Chuuk Lagoon						
Chuuk WSO	Inches	5.74	13.13	8.87	27.74	27.73
	% Norm	54%	212%	106%	110%	110%
Piis Panew	Inches	5.16	12.26	11.37	28.79	27.73
	% WSO	48	198	136	114	110%
Western Atolls						
Polowat	Inches	3.81	5.37	2.91	12.09	18.44
	% Norm	48%	86%	47%	59%	90%

¹ Predictions made in 4th Quarter 2011 newsletter.

* Ettal, Ta, and Namoluk normals based on Lukunor

** Fananu and Onoun normals based on 75% of WSO

*** Losap and Nama normals based on 50% of WSO and 50% of Lukunor

Climate Outlook: Conditions at Chuuk State are anticipated to continue to be wetter than normal. This is supported by long-range computer forecasts, and the known typical behavior of the weather and climate of Chuuk State. During times of a waning La Niña (the current scenario), or during the onset of El Niño, it tends to be wet throughout Chuuk State.

For the next five months (April 2012 through August 2012) there is a low risk (1-in-15, or 7%) of a tropical storm within the boundaries of Chuuk State. Later in the year (September through December), the risk of a tropical storm or typhoon occurring within the boundaries of Chuuk State will be higher (possibly 10-15%). In any case, these named cyclones, or their precursors will bring at least one or two episodes of heavy rain and gusty westerly winds across Chuuk State from September through December.

Predictions for Chuuk State from April 2012 through March 2013 are as follows:

LOCAL SUMMARY AND FORECAST

Inclusive Period	% of long-term average / Forecast rainfall (inches) ²			
	Chuuk Lagoon, Losap, and Nama	Polowat	Northern Atolls	Southern Mortlocks
Apr – Jun 2012	115% (40.87 inches)	95% (33.78 in)	100% (35.55 in)	110% (39.10 in)
Jul – Sep 2012	110%	95%	110%	100%
Oct – Dec 2012	110%	100%	110%	100%
Jan – Mar 2013	95%	95%	95%	100%

² Forecast rainfall quantities represent BEST ESTIMATES given the probabilistic forecast for each particular season and station.

Pohnpei State: The 2012 first quarter rainfall was near normal to above normal at locations on Pohnpei Island. Of all the atolls of Pohnpei State, only Nukuoro had above normal rainfall in the 1st Quarter. The rest recorded below normal rainfall in this time period. Nukuoro had a large amount of rain (28.12 inches) during March. The Nukuoro total of 52.18 inches was exceeded only at Palikir, Pohnpei Island, where 58.77 inches (145%) was recorded during the first quarter. A recent dry spell beginning in late March and continuing into early April has affected some of the northern islands of Chuuk State, Pohnpei Island and the eastern islands of Pohnpei State, Kosrae, and some of the northern atolls of the RMI. While recent dryness on Pohnpei Island and some of the eastern atolls has caused many residents to be concerned, it is anticipated that normal to above normal rainfall should return within a few weeks to most of Pohnpei State.

Pohnpei State Rainfall Summary 1st Qtr 2012						
Station		Jan.	Feb.	Mar.	1st Qtr	Predicted ¹
Pohnpei Island						
Pohnpei WSO	Inches	10.75	13.17	12.91	36.83	37.41
	% Norm	82%	122%	95%	98%	100%
Palikir	Inches	21.62	17.28	19.87	58.77	40.43
	% Norm	153%	148%	136%	145%	100%
Kolonia Airport	Inches	9.95	15.23	12.29	37.47	30.64
	% Norm	93%	172%	111%	122%	100%
Nukuoro	Inches	9.84	14.22	28.12	52.18	35.90
	% Norm	75%	132%	208%	139%	100%
Pingelap	Inches	8.31	20.82	4.80	33.93	39.00
	% Norm	67%	171%	33%	87%	100%
Mwoakil- loa	Inches	8.57	11.57	7.12	27.26	30.64
	% Norm	80%	130%	64%	89%	100%
Kapinga- marangi	Inches	9.94	6.61	13.82	30.37	20.76
	% Norm	95%	64%	100%	88%	60%

¹ Predictions made in 4th Quarter 2011 newsletter.

LOCAL SUMMARY AND FORECAST

Climate Outlook: Recent dryness on Pohnpei Island and on some of the eastern atolls of Pohnpei State should be replaced by normal rainfall in May, and thereafter rainfall should be normal to above normal throughout Pohnpei State for the remainder of the year. Pohnpei Island usually experiences its heaviest monthly rainfall during April through June. Although April has begun dry, it may be quite wet on Pohnpei Island during May and June of 2012, with 25-30 inches of rain possible in one of those months at the WSO or at Palikir.

A direct strike of any Pohnpei State location by a tropical storm or typhoon is not anticipated in the foreseeable future. If El Niño develops in the latter half of 2012, one or two tropical depressions or tropical storms may pass to the north of Pohnpei Island, but within range to produce heavy rainfall and gusty southwest winds on Pohnpei Island and possibly on some of the atolls. The greatest risk for these hazardous weather conditions will be during October through December. Also, if El Niño develops in the latter half of 2012, there could be some dry conditions in Pohnpei State during the 1st Quarter of 2013.

Predicted rainfall for Pohnpei State from April 2012 through March 2013 is as follows:

Inclusive Period	% of long-term average / Forecast rainfall (inches) ²		
	Pohnpei Island	Atolls	Kapinga-marangi
Apr - Jun 2012	110% (58.75 inches)	110% (58.75 inches)	95% (29.72 inches)
Jul - Sep 2012	110%	100%	95%
Oct - Dec 2012	100%*	100%*	100%*
Jan - Mar 2013	95%*	95%*	100%*

² Forecast rainfall quantities represent BEST ESTIMATES given the probabilistic forecast for each particular season and station.

* Reflecting possible effects of El Niño.

Kosrae State: With the exception of February (which was wet), Kosrae had below normal rainfall in the 1st Quarter of 2012, with rainfall totals below normal across the island. As at Pohnpei Island and some of the eastern atolls of Pohnpei State, Kosrae is experiencing a short-term dry spell that began in March and continues into April. As of April 12th, only 3.58 inches of rain has occurred. This is a pace that is far below normal for Kosrae's typical wettest month of the year. At the Kosrae airport, there is typically over 20 inches of rainfall during April. Dryness at Kosrae is a relative term, and during the first quarter, all island rain recording locations had over 40 inches, with the highest reading of 47.01 inches (95%) seen at the Nautilus Hotel. During the first quarter of 2012, monthly rainfall values below 10 inches occurred, first at Tofol during January and then at the Airport and Utwa during March. Monthly rainfall totals below 10 inches are relatively rare on Kosrae, comprising about 20% of all 1st Quarter months, and 15% of all months.

Climate Outlook: April, May, and June are normally the wettest months of the year at Kosrae. Although April began quite dry, near normal rainfall is likely to resume in May and continue thereafter. If El Niño develops in the latter half of 2012, it is possible that one or two TCs in the tropical depression

LOCAL SUMMARY AND FORECAST

Kosrae State Rainfall Summary 1st Qtr 2012						
Station		Jan.	Feb.	Mar.	1st Qtr	Predicted ¹
Airport (SAWRS)	Inches	10.89	23.93	9.59	44.41	44.47
	% Norm	76%	146%	52%	90%	90%
Utwa	Inches	12.03	22.61	8.87	43.51	44.47
	% Airport	84%	138%	48%	88%	90%
Nautilus Hotel	Inches	10.03	24.94	12.04	47.01	44.47
	% Airport	70%	153%	65%	95%	90%
Tofol	Inches	9.50	19.70	11.30	40.50	44.47
	% Airport	66%	120%	61%	82%	90%

¹ Predictions made in 4th Quarter 2011 newsletter.

stage or weak tropical storm stage will pass to the north of the island and bring heavy rain and gusty (20-25 kt) southwesterly winds. In the recent 10 years, dominated by La Niña, there have not been gusty southwesterly winds at Kosrae.

Predicted rainfall for Kosrae State from April 2012 through March 2013 is as follows:

Inclusive Period	% of long-term average / Forecast rainfall (inches) ²
April – June 2012	100%* (59.46 inches)
July - September 2012	100%
October - December 2012	100%
January - March 2013	90%**

² Forecast rainfall quantities represent BEST ESTIMATES given the probabilistic forecast for each particular season and station.

* Comprising a dry April and a wet May and June.

** Reflecting the effects of El Niño.



Republic of Palau: During the first three months of 2012, locations throughout Palau were very dry during January, and then wet during February and March. The dryness of January dominated the 1st Quarter rainfall totals, which were generally below normal except at the International Airport. The highest 1st Quarter rainfall total recorded in Palau was at the airport, which is typically higher than at other Palau locations. Peleliu is typically a bit drier than Koror and other locations, but during the 1st Quarter of 2012, the rainfall total at Peleliu surpassed that of Koror. Koror's 3-month total of 23.49 inches was less than half of the total seen during the 1st Quarter of 2011. The calendar year 2011 ended with the highest annual rainfall total recorded at Koror in its historical record.

For more information on Palau's weather and climate go to <http://www.prh.noaa.gov/koror/>

LOCAL SUMMARY AND FORECAST

Republic of Palau Rainfall Summary 1st Qtr 2012						
Station		Jan.	Feb.	Mar.	1st Qtr	Predicted ¹
WSO Koror	Inches	3.65	10.81	9.03	23.49	33.62
	% Norm	34%	119%	110%	84%	120%
Nekken	Inches	4.04	11.65	10.26	25.95	33.62
	% WSO	38%	128%	125%	93%	120%
Intl. Airport	Inches	4.42	12.48	11.36	28.26	33.62
	% WSO	41%	137%	139%	101%	120%
Peleliu	Inches	3.15	14.00	8.04	25.19	33.48
	% Norm	29%	156%	98%	90%	120%

¹ Predictions made in 4th Quarter 2011 newsletter.

Climate Outlook: As the state of the Pacific climate fades from La Niña and enters ENSO-neutral, monsoon activity should keep Palau wet over the next few months. If El Niño develops in the latter half of 2012, then the monsoon trough should migrate well to the north of Palau in late August through early October. This produces the slight dip in average rainfall seen in September. It also allows most of the TCs in the region to pass safely to the north of Palau during that time period, although gusty (25-30 mph) southwest winds with hazy skies are a typical weather pattern. Late in the year, the monsoon trough moves back to the south and is then closer to Palau. Late October through December is the most likely time for one of the western North Pacific basin's final typhoons of 2012 to pass to the north or northeast of Palau, bringing a few days of gusty westerly winds, high surf on the western shores, and some heavy showers.

Predicted rainfall for Palau from April 2012 through March 2013 is as follows:

Inclusive Period	% of long-term average / Forecast rainfall (inches) ²
April – June 2012 (Onset of Rainy Season)	110% (42.08 inches)
July – September 2012 (Heart of Rainy Season)	110%
October – December 2012 (End of Rainy Season)	100%
January – March 2012 (Next Dry Season)	95%

² Forecast rainfall quantities represent BEST ESTIMATES given the probabilistic forecast for each particular season and station.



Republic of the Marshall Islands (RMI): During the first three months of the year, the RMI enters its normal dry season. During this period of 2012, it was drier than normal at nearly all RMI locations, with only Majuro Atoll (Majuro WSO and Laura) and Utirik reporting above normal rainfall. Majuro WSO had the highest RMI first quarter rainfall total of 25.48 inches (111%), while nearby Arno Atoll had the second highest reported 1st Quarter rainfall total of 21.18 inches (93%). At Kwajalein, the 3-month total of

LOCAL SUMMARY AND FORECAST

9.18 inches was 77% of normal. This was far lower than the total (28.51) during the very wet 1st Quarter of 2011. Further south at Mili, it was quite dry. Mili's 1st Quarter total of 12.22 inches was only 53% of average. The very low monthly totals of rainfall recorded at Wotje appear too low, but based on other totals in the northern RMI, it is likely that they did have below normal rainfall. Just recently (early April 2012) Majuro had a 5 inch rainfall event. During April (through the 12th) Majuro received 6.91 inches, putting this station in a good position to surpass its normal April monthly rainfall of 10.28 inches. At the same time, Kwajalein remained very dry.

RMI Rainfall Summary 1st Qtr 2012						
Station		Jan.	Feb.	Mar.	1st Qtr	Predicted ¹
RMI Central and Southern Atolls						
Majuro WSO	Inches	8.27	4.46	12.75	25.48	21.72
	% Norm	98%	73%	154%	111%	95%
Laura	Inches	8.66	3.43	12.00	24.73	21.72
	% Norm	103%	56%	145%	108%	95%
Aling-laplap	Inches	4.29	3.80	4.69	12.78	16.41
	% Norm	66%	81%	76%	74%	95%
Arno	Inches	7.19	2.35	11.64	21.18	21.72
	% Norm	85%	38%	141%	93%	95%
Jaluit	Inches	3.99	4.39	9.84	18.22	22.86
	% Norm	47%	71%	119%	80%	100%
Mili	Inches	8.04	0.77	3.41	12.22	21.72
	% Norm	95%	13%	41%	53%	100%
RMI Northern Atolls						
Kwajalein	Inches	4.22	3.01	1.95	9.18	11.30
	% Norm	93%	93%	48%	77%	95%
Wotje	Inches	0.49	0.30	0.05	0.84	10.50
	% Norm	11%	10%	1%	8%	95%
Utirik	Inches	1.24	0.68	8.41	10.33	9.61
	% Norm	32%	25%	241%	102%	95%

¹ Predictions made in 4th Quarter 2011 newsletter.

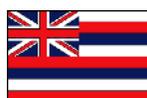
Climate Outlook: The rainy season in the RMI slowly builds from April through June, and then extends through the final quarter of the year. For the next three months, the rainfall should be near normal at Majuro and other atolls in the central and southern portions of the RMI. Further north at places such as Kwajalein, Utirik and Wotje, the April-June rainfall should be near normal or slightly below normal. Thereafter, near normal rainfall should prevail throughout the RMI for the remainder of the year. If El Niño develops in the latter half of 2012, then there is a very small chance (5%, or 1-in-20 odds) that a TC in its depression stage or early tropical storm stage may pass through the RMI, most likely late in the year (i.e., November 2012 through January of 2013).

Predicted rainfall for the RMI from April 2012 through March 2013 is as follows:

LOCAL SUMMARY AND FORECAST

Inclusive Period	% of long-term average / Forecast rainfall (inches) ²		
	Jaluit and Mili	Majuro	Northern Atolls
April – June 2012 (Onset of rainy Season)	100% (33.92 inches)	100% (33.92 in)	90% (22.60 in)
July – Sept 2012 (Heart of Rainy Season)	100%	100%	100%
Oct – Dec 2012 (End of Rainy Season)	100%	110%	110%
Jan – Mar 2013 (Dry Season)	90%	90%	90%

² Forecast rainfall quantities represent BEST ESTIMATES given the probabilistic forecast for each particular season and station.



Hawai'i: A strong upper-level trough to the west of the state combined with a stalled surface cold front to produce excessive rainfall during the first week of March. Extensive flooding, mudslides, road closures, and sewage overflows were reported on Kauai and Oahu, with brown water advisories issued for both islands. The Lihue airport set rainfall records on March 4th and 5th, with 24-hour totals of 3.31 and 8.64 inches, respectively. The Honolulu airport received 3.69 inches on March 5th, which accounted for 51% of the 1st Quarter total at that location. The National Weather Service issued severe thunderstorm watches for the islands of Kauai and Oahu on the night of March 5th, in addition to a severe thunderstorm warning for the island of Molokai.

State of Hawaii Rainfall Summary 1st Qtr 2012					
Station		Jan.	Feb.	Mar.	1st Qtr
Lihue Airport	Inches	4.18	9.03	18.17	31.38
	% Norm	188%	491%	702%	472%
Honolulu Airport	Inches	0.56	1.14	5.50	7.20
	% Norm	49%	115%	696%	246%
Kahului Airport	Inches	*	*	2.61	*
	% Norm	*	*	139%	*
Hilo Airport	Inches	2.07	13.49	15.63	31.19
	% Norm	23%	161%	145%	111%

* Missing data

Climate Outlook: The following comments are from the U.S. Climate Prediction Center's Hawaiian Seasonal Outlook Discussion: "NCEP models predict a tendency for below normals temperatures for Hilo and Kahului from May-June-July to June-July-August 2012. NCEP tools give no indication of either above or below median precipitation for Hawaii."

For more information on weather and climate in Hawai'i go to:
www.cpc.noaa.gov/products/predictions/long_range/fxhw40.html

Seasonal Sea-Level Outlook for the US-Affiliated Pacific Islands

The following sections describe: (i) the *Canonical Correlation Analysis (CCA)*-based forecasts of sea-level deviations for forthcoming seasons AMJ, MJJ, and JJA of 2012, (ii) the observed monthly mean and maximum sea-level deviations for the season JFM 2012, and (iii) a Synopsis of ENSO and seasonal sea-level variability. (The forecast verifications (observed/forecast values) for JFM 2012 can be found online at <http://www.prh.noaa.gov/peac/sea-level.php>) *Note that the deviations are defined as 'the difference between the mean sea level for the given month and the 1975 through 1995 mean sea-level value computed at each station'. Also note that the CCA-forecasting technique adapted here does not account for sea-level deviations created by other atmospheric or geological factors such as tropical cyclones, storm surges or tsunamis.*

(i) **Seasonal sea level forecast** (*deviations with respect to climatology*) for AMJ, MJJ, and JJA of 2012 (Table 1).

Forecasts of the sea-level deviations in the USAPI ((see <http://www.prh.noaa.gov/peac/map.php> for location of stations) are presented using CCA statistical model Based on the independent SST values in JFM 2012, the resulting CCA model has been used to forecast the sea-level of three consecutive months: AMJ, MJJ, and JJA (see Table 1: left panel shows values for seasonal mean while the right panel shows the seasonal maxima). All the tide gauge stations (at 0 to 2-months lead time) show skillful forecasts for these three consecutive seasons (Table 1: bottom panel). Consistent with the on-going La Niña event, the sea level in these islands are higher than normal.

Table 1: Forecasts of sea-level deviation (in inches) for April-May-June, May-June-July, and June-July-August 2012.

Tide Gauge Station	Seasonal Mean Deviations ¹				Seasonal Max Deviations ²					
	AMJ	MJJ	JJA	Forecast Quality ³	AMJ	MJJ	JJA	Forecast Quality ³	Return Period ⁴ for AMJ Season	
Lead Time ⁵	0	1M	2M		0	1M	2M		20 year	100 year
Marianas, Guam	+7	+7	+7	V. Good	+21	+23	+23	V. Good	5.6	6.7
Malakal, Palau	+8	+8	+8	V. Good	+41	+43	+43	Good	9.6	14.3
Yap, FSM	+8	+8	+8	V. Good	+32	+34	+34	Good	16.7	33.0
Chuuk, FSM**	+8	+8	+8	N/A	+32	+33	+33	N/A	N/A	N/A
Pohnpei, FSM	+6	+5	+5	V. Good	+35	+35	+34	V. Good	5.8	7.1
Kapingamarangi, FSM	+1	0	-1	Good	+26	+27	+27	Fair	7.4	9.4
Majuro, RMI	+3	+2	+2	Good	+42	+41	+41	Fair	4.1	5.1
Kwajalein, RMI	+5	+5	+4	Good	+41	+41	+41	Good	4.5	5.9
Pago Pago, AS	+2	+1	+1	V. Good	+25	+25	+25	V. Good	3.9	5.4
Honolulu, Hawai'i	0	+1	-1	Poor	+17	+16	+16	Poor	4.1	5.9
Hilo, Hawai'i	0	+1	+1	Good	+22	+20	+20	Fair	7.9	11.4

Note: (-) indicates negative deviations (fall of sea level from the mean), and (+) indicates positive deviations (rise of sea level from the mean); N/A: data not available. Deviations from -1 to +1 inch are considered negligible, and deviations from -2 to +2 inches are unlikely to cause any adverse climatic impact. Forecasts for Chuuk (**) are estimated subjectively based on information from WSO Chuuk and observations from neighboring stations of Pohnpei and Yap. See http://www.prh.noaa.gov/peac/peu/2012_2nd/sea_level.php#footnote for explanations of footnotes 1 through 5.

Remarks: The forecasts values of sea level for AMJ, MJJ, and JJA seasons (Table 1, above) indicate that sea levels for some of the stations (i.e., Guam, Malakal, Yap, and Pohnpei) are likely to be about 5-8 inches higher than normal in the forthcoming seasons. Kwajalein, at RMI, is also expected to be 5 inches higher than normal. However, stations like Majuro and American Samoa (Pago Pago) are expected to be marginally higher than normal in these seasons. Here in Hawaii, both Honolulu and Hilo are likely to remain normal.

Higher than average sea levels in some of the north Pacific Islands are slightly contradictory to the on-going La Niña condition, as according to CPC-IRI's ENSO Alert System Status, La Niña is likely to turn to ENSO-neutral condition soon. However, significant anomalous low-level westerly winds developed in the western tropical Pacific in late March, associated with the MJO. Presently, the larger scale atmospheric circulation anomalies and the Southern Oscillation Index still retain the characteristics of La Niña. This is the reason for which we still see a trend of higher sea levels in the forthcoming seasons.

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Seasonal Sea-Level Outlook for the US-Affiliated Pacific Islands

(ii) Observed Monthly Sea-Level Deviation in the January-February-March (JFM) 2012 Season

The monthly time series (January - March) for sea-level deviations have been taken from the UH Sea Level Center. The full time series (in mm) is available at <ftp://ilikai.soest.Hawaii.edu/islp/slpp/deviations>. Locations of these stations can be found at: <http://www.prh.noaa.gov/peac/map.php>.

Table 2: Monthly observed max/mean sea-level deviations in inches (year to year standard deviation in parentheses)

Tide Gauge Station	Monthly Mean Deviations ¹				Monthly Max Deviations ²			
	Jan.	Feb.	Mar.	Standard Deviations	Jan.	Feb.	Mar.	Standard Deviations
Marianas, Guam	+5.8	+8.4	+10.0	4.2	+21	+22	+25	3.8
Malakal, Palau	+5.9	+5.5	+6.7	4.8	+40	+40	+45	4.8
Yap, FSM	+3.3	+3.8	+5.2	4.0	+30	+30	+33	4.4
Chuuk, FSM**	*	*	*	*	*	*	*	*
Pohnpei, FSM	+7.8	*	*	2.6	+37	*	*	3.2
Kapingamarangi, FSM	*	*	*	2.4	*	*	*	4.1
Majuro, RMI	+5.7	+5.8	*	3.3	+45	+45	*	2.5
Kwajalein, RMI	+5.9	+7.6	+9.2	3.7	+44	+46	+47	2.8
Pago Pago, American Samoa	+9.3	+9.4	+8.5	2.8	+31	+31	+32	3.0
Honolulu, Hawai'i	-2.0	-1.0	0.0	1.7	+16	+16	+16	2.6
Hilo, Hawai'i	-1.0	-1.2	-3.0	2.1	+21	+22	+16	3.0

* Data currently unavailable; ¹ Difference between the mean sea level for the given month and the 1975 through 1995 mean sea level value at each station; ² Same as ¹ except for maxima; SD stands for standard deviations.

Remarks: As compared to February 2012, the monthly mean sea level in March 2012 shows slight rise in all stations except Pago Pago. A synopsis of last 6-months sea level variability is as follows: 1) In October, most of the stations recorded a marginal fall while a few stations recorded marginal rise; 2) In November, most of the stations recorded fall; 3) In December all stations except Yap and Kwajalein recorded fall; 4) In January 2012, all stations recorded fall except Guam and Kwajalein; 5) In February, all stations recorded slight rise except Palau; 6) In March, all stations recorded moderate rise; 7) Currently, all stations are 3 to 10 inches higher than normal. The monthly maxima also displayed similar trend.

(iii) ENSO and Seasonal Sea-Level Variability: A Synopsis

Seasons	Seasonal Mean Deviations: Observed rise/fall (inches)					
	JFM12 (Weak La Nina- Transition)	JFM11 (Moderate- to-weak La Nina)	JFM98 (Strong El Nino)	JFM99 (Strong La Nina)	OND97 (Strong El Nino)	OND98 (Strong La Nina)
Marianas, Guam	+8	+5	-6	+7	-7	+8
Malakal, Palau	+6	+9	-9	+8	-7	+9
Yap, FSM	+4	+5	-7	+6	-9	+7
Pohnpei, FSM	+8	+7	-5	+4	-10	+8
Majuro, RMI	+6	+7	-2	+2	-9	+6
Kwajalein, RMI	+7	+4	-4	+3	-7	+3
Pago Pago	+9	+10	-6	+4	+2	+7

Remarks: As the sea level in the USAPI is very sensitive to the phase of the ENSO climate cycle, a perspective of sea-level anomalies during the recent ENSO event (2011-12), as well as the ENSO event of 1998-99, are presented in Table 3. Data for the season OND is also presented here. Note that 1997 was a major El Nino (strong) year and 1998 was a major (strong) La Nina year.

**For more information on the
PEAC Seasonal Sea Level
Outlook go to:**

<http://www.prh.noaa.gov/peac/sea-level.php>

Table 3: Sea-Level Deviation in Current and Major ENSO Years

Pacific ENSO Update

Excerpts from El Niño/SOUTHERN OSCILLATION (ENSO) DIAGNOSTIC DISCUSSION

Issued by NOAA NWS Climate Prediction Center - 5 April 2012

http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.html

ENSO Alert System Status: La Niña Advisory

Synopsis: La Niña is expected to transition to ENSO-neutral conditions during April 2012.

La Niña continued to weaken during March 2012, as below-average SSTs persisted primarily in the central Pacific. All of the Niño indices have warmed considerably during the last two months, and the Niño 4 and Niño 3.4 indices averaged only near -0.5 in March. The oceanic heat content (average temperature in the upper 300m of ocean) anomalies also continued to warm, with alternating pockets of negative and positive temperature anomalies observed within the upper 100 m in the central and eastern Pacific. Significant anomalous low-level westerly winds developed in the western tropical Pacific in late March, associated with the MJO. This wind event could further warm the central and eastern Pacific within the coming few months. Presently, however, the larger scale atmospheric circulation anomalies and the Southern Oscillation Index retain their La Niña characteristics. Accordingly, convection remains suppressed in the western and central Pacific, and enhanced over Indonesia, Malaysia and the Philippines. Collectively, these oceanic and atmospheric patterns indicate that a transition from La Niña to ENSO-neutral conditions is underway.

A majority of models predict ENSO-neutral conditions for March-May 2012, continuing through the Northern Hemisphere summer 2012. Based on the continued weakening of the negative SST anomalies during March 2012, and on the historical tendency for La Niña to dissipate during the Northern Hemisphere spring, we continue to expect La Niña to dissipate during April 2012. ENSO-neutral conditions are then expected to persist through the summer. Thereafter, there is considerable uncertainty in the forecast, which slightly favors ENSO-neutral or developing El Niño conditions over a return to La Niña conditions during the remainder of 2012 (see CPC/IRI consensus forecast).

Because atmospheric impacts often lag the demise of an ENSO episode, aspects of La Niña are reflected in the coming season. Over the U.S. during April - June 2012, La Niña has the following weak influences on the climate outlook: There is an increased chance of above-average temperatures in the south-central U.S., and below-average temperatures in the Northwest. Also, drier-than-average conditions are more likely across Utah and Colorado, and along the western Gulf of Mexico (see 3-month seasonal outlook released on 15 March 2012).

The Pacific ENSO Update is a bulletin of the Pacific El Niño-Southern Oscillation (ENSO) Applications Climate (PEAC) Center. PEAC conducts research & produces information products on climate variability related to the ENSO climate cycle in the U.S.-Affiliated Pacific Islands (USAPI). This bulletin is intended to supply information for the benefit of those involved in such climate-sensitive sectors as civil defense, resource management, and developmental planning in the various jurisdictions of the USAPI.

The Pacific ENSO Update is produced quarterly both online and in hard copy, with additional special reports on important changes in ENSO conditions as needed. For more information about this issue please contact the editor, LTJG Charlene Felkley, at peac@noaa.gov or at the address listed below.

PEAC is part of the Weather Forecast Office (WFO) Honolulu's mission and roles/responsibilities. All oversight and direction for PEAC is provided by the Weather Forecast Office Honolulu in collaboration with the Joint Institute for Marine and Atmospheric Research (JIMAR) at the University of Hawaii. Publication of the Pacific ENSO Update is supported by the National Oceanic and Atmospheric Administration (NOAA), National Weather Service-Pacific Region Climate Services. The views expressed herein are those of the authors and do not necessarily reflect the views of NOAA, any of its sub-agencies, or cooperating organizations.

ACKNOWLEDGEMENTS AND FURTHER INFORMATION

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NOAA National Weather Service

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3232 Hueneme Road, Barrigada, Guam, 96913
Chip Guard, Warning Coordination Meteorologist, at 671-472-0900 for information on tropical cyclones and climate in the USAPI.

University of Guam - Water and Environmental Research Institute (WERI):

UOG Station, Mangilao, Guam 96913
Dr. Mark Lander, PEAC Meteorologist, at 671-735-2685 for information on tropical cyclones and climate in the USAPI.