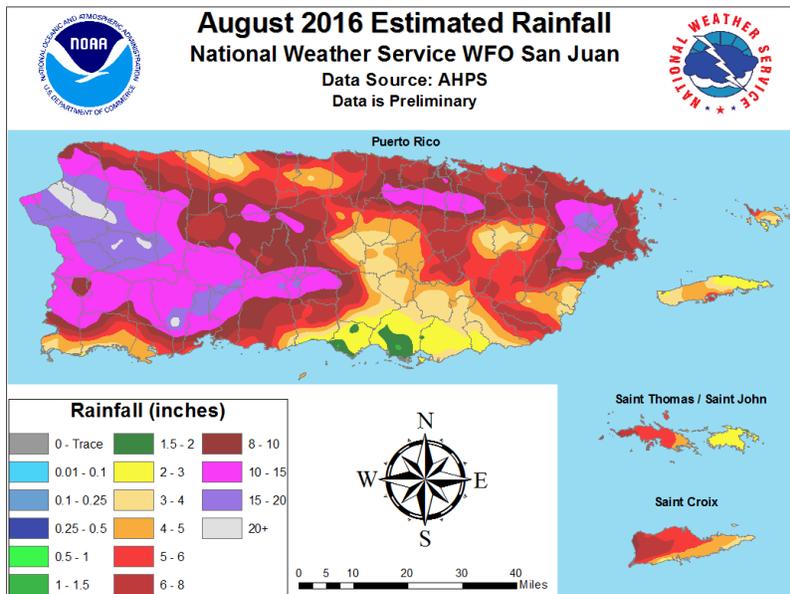


# August 2016 Climate Review for Puerto Rico and U.S. Virgin Islands.

**Synopsis:** *70 to 90 percent of the normal rainfall was observed across most of the area with warm to hot temperatures. Enough rain has fallen during August in order to prevent deterioration in drought conditions, but not enough to justify additional improvement. The D0/D1 still persists across south-central Puerto Rico. There is a slight shift in probabilities to near to above normal rainfall during the upcoming months.*

## Summary

A seasonable weather pattern prevailed across Puerto Rico and the U.S. Virgin Islands throughout the month. Diurnal and locally induced convection was observed across portions of the interior and western PR most afternoons, resulting in locally heavy rainfall activity. In addition, a series of tropical waves were observed across the islands. Three noticeable tropical waves were observed with the first two occurring the first week of the month, and the third one occurring August 24<sup>th</sup>-August 26<sup>th</sup>. Based on the Cooperative Observer Network Data (COOP), 93 percent of the normal rainfall was observed across Puerto Rico. Preliminarily, an average rainfall total of 5.61 inches was measured, which is 0.40 inches below normal (Table 1). Across the U.S. Virgin Islands, 77 and 156 percent of the normal rainfall was observed across Saint Thomas and Saint Croix, respectively.



**Figure 1. Rainfall Totals based on AHPS (click on the image to enlarge)**

Shower and thunder activity in August mainly missed the southwestern and south-central sections of the island. The latter area included in the existing D0-D1 area.

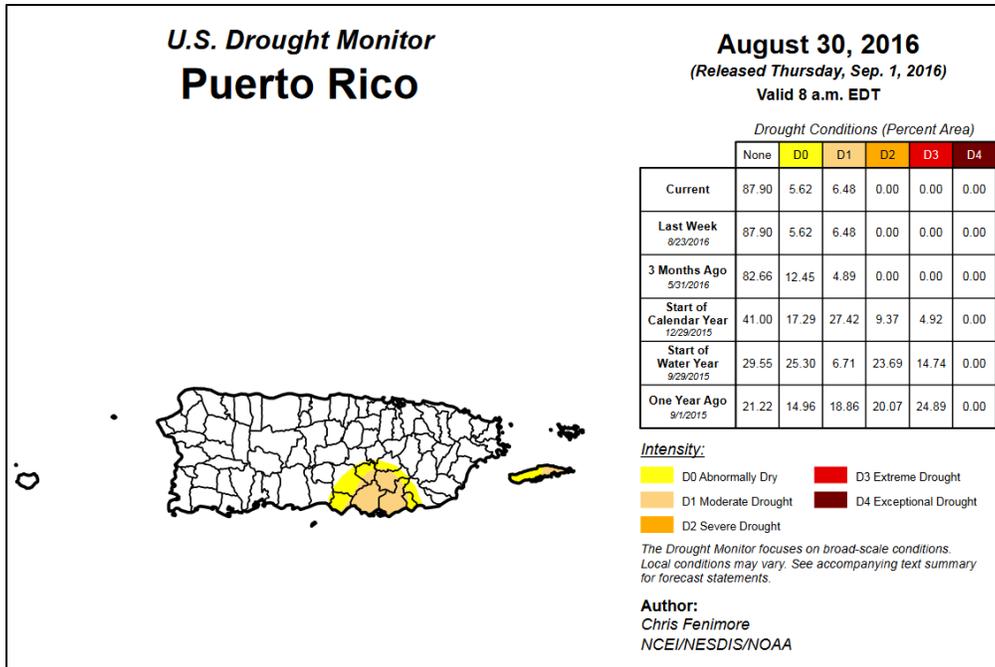
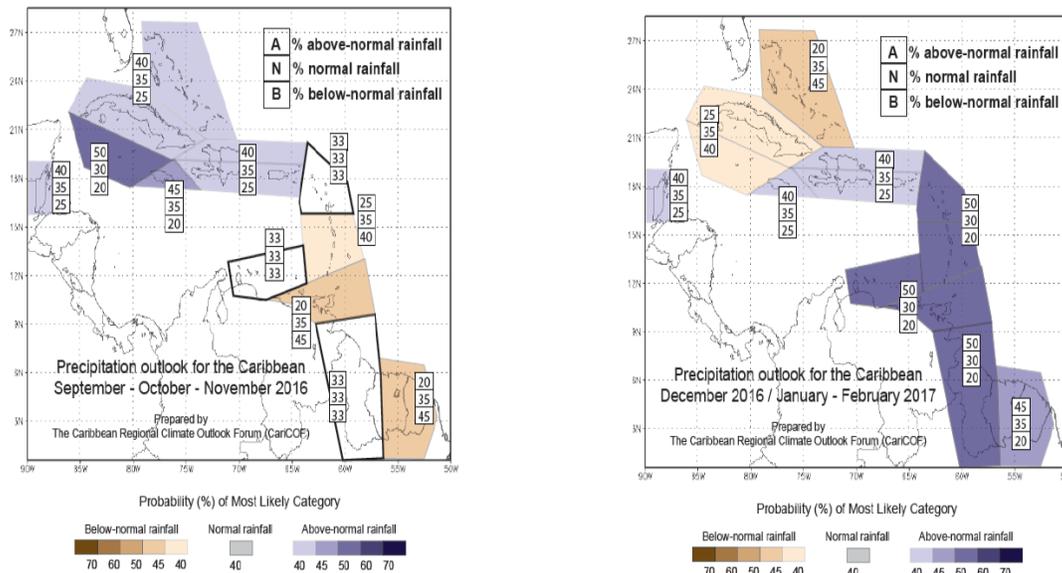


Figure 2. Latest US Drought Monitor Assessment.

## Looking Ahead

### Probabilistic SON rainfall forecast map    Probabilistic DJF rainfall forecast map



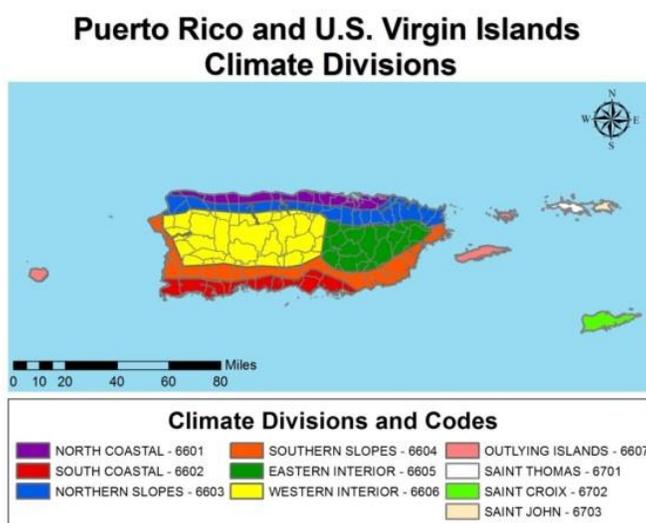
Sea surface temperatures (SSTs) in the El Niño regions are currently slightly below average. A large majority of models suggests temperature anomalies to remain slightly negative, with either a

developing weak La Niña or cold-neutral ENSO conditions. Tropical North Atlantic SSTs tend to be warmer than average during a developing La Niña, and are currently slightly above average throughout the Caribbean Islands.

La Niña tend to shift rainfall chances for Dec-Jan-Feb to above-normal in the southern and eastern Caribbean, and below-normal in the extreme north-west. However, with the forecast of ENSO conditions suggesting a weak La Niña at most, its effect on rainfall is not expected to be dominant. At this time, rainfall is likely to be near to above normal across the local islands during the upcoming months.

More Info: <http://rcc.cimh.edu.bb/long-range-forecasts/caricof-climate-outlooks/>

### Average Rainfall Accumulation per climate zones based on COOP



	North Coastal	South Coastal	Northern Slopes	Southern Slopes	Eastern Interior	Western Interior	All PR	St Croix	St Thomas
<b>Observed (Aug)</b>	7.76	3.35	7.40	4.30	7.09	5.94	5.61	5.01	2.92
<b>Normal (Aug)</b>	5.86	4.13	6.04	5.54	7.47	7.01	6.01	3.22	3.78
<b>% PON (Aug)</b>	132	81	123	78	95	85	93	156	77
<b>Accumulated YTD</b>	41.85	20.81	39.79	31.67	52.24	47.91	40.06	27.64	15.09
<b>Normal accumulation YTD</b>	38.53	21.76	39.68	28.86	46.91	40.24	36.00	20.55	22.37
<b>% PON accumulated YTD</b>	109	96	100	110	111	119	111	135	67

**Table 1. Aug 2016 and Year to date (YTD) Rainfall (inches). Percent of Normal (PON).**



## Historical Rainfall and Temperature

	Puerto Rico		San Juan Area		IST		ISX	
1	1987	4.26	1919	1.53	1993	0.70	2005	1.35
2	1984	4.58	1994	1.83	1991	0.98	1980	1.40
3	1994	4.67	1982	1.93	2002	1.26	2009	1.51

Table 2. Driest Aug. on record.

	Puerto Rico		San Juan Area		IST		ISX	
1	2011	16.43	2011	18.56	2011	9.14	1989	11.04
2	1979	14.13	1944	14.10	1963	8.54	1978	7.80
3	1963	13.15	1988	11.31	2005	8.22	1963	6.99

Table 3. Wettest Aug. on record.

	Puerto Rico**		San Juan Area		IST		ISX	
1	1948	82.4	1980	85.0	1994	87.3	1989	86.5
2	2005	81.0	1982	84.6	1993	87.2	1998	84.8
3	1949	80.8	1995	84.5	2016	85.6	1997	84.8

Table 4. Warmest Aug. on record.

	Puerto Rico**		San Juan Area		IST		ISX	
1	1941	73.9	1904	78.9	1956	81.2	1956	81.4
2	1940	74.1	1913	79.0	1954	82.3	1955	81.4
3	1996	78.0	1921	79.4	1955	82.6	1975	81.7

Table 5. Coolest Aug. on record.

\*\* Following years are not included due to lack of data: 1944, 1955, 1956, 1957, 1959, 1962, 1962, 1967, 1972, 1978, 1979, 1980 and 1981 \*\*

	Puerto Rico	San Juan Area	IST	ISX
Temperature	79.5	83.7	84.2	83.8
Rainfall	6.22	5.46	3.74	3.15

Table 6. Normal Values for August

## Monthly and Seasonal Highlights for Primary Climatological Data Sites.

	June	July	August	Season JJA	Year to Date
San Juan Area	9 <sup>th</sup> warmest (83.8F)	---		10 <sup>th</sup> warmest 83.6F	8 <sup>th</sup> warmest 81.2F
IST	5 <sup>th</sup> warmest (85.2)	4 <sup>th</sup> warmest 86.0F	3 <sup>rd</sup> warmest 85.6F	5 <sup>th</sup> warmest 85.6F	4 <sup>th</sup> warmest 82.8F
ISX	10 <sup>th</sup> warmest (83.9)	10 <sup>th</sup> warmest 84.3F	6 <sup>th</sup> warmest 84.5F	6 <sup>th</sup> warmest 84.3F	5 <sup>th</sup> warmest 81.7 F

Table 7. Summer 2016

## Additional Highlights Based on COOP Data

### Wettest Days

Station	Inches (inches)	Date
JAHOME ALTO	4.1	8/1/2016
ARECIBO OBSY	2.95	8/25/2016
SANTA RITA	2.6	8/26/2016

### Highest Maximum Temperatures

Station	Temperature (°F)	Date
PONCE 4 E	97	8/5/2016
LAJAS SUBSTN	96	8/9/2016
AGUIRRE	95	8/5/2016

### Lowest Minimum Temperatures

Station	Temperature (°F)	Date
MARICAO 2 SSW	64	8/29/2016
PONCE 4 E	65	8/19/2016
AIBONITO 1 S	66	8/28/2016

Data is preliminary and has not undergone final quality control by the National Centers for Environmental Information / NCEI/. Therefore, this data is subject to revision. Report based on data received until September 5<sup>th</sup> 2016.

*Puerto Rico Climate Record Period: 1940 to 2016*

*San Juan Metro Area Climate Record Period: 1898 to 2016 (Primary climatological site)*

*Cyril E. King Airport/St Thomas Climate Record Period: 1953 to 2016 (Primary climatological site)*

*Henry E. Rohlsen Airport/St Croix Climate Record Period: 1951 to 2016 (Primary climatological site)*