

Drought and Precipitation Statement for Antigua - April 2016



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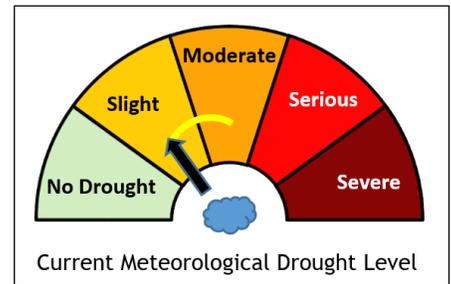
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...Meteorological drought eased to slight levels...

Statement

Near normal rainfall for April has resulted in at least the meteorological and agricultural droughts easing further to **slight levels**. The island-average rainfall for the month was 79.0 mm (3.11 in). Despite the modest rainfall, it's the wettest April since 2013 and the fourth wettest month since December 2014.

A number of rainfall records were again broken dating back to the start of the drought **34 months** ago. Specifically, there has been **record low rainfall** over the past 16, 23, 24, 25...34 months (see table 1). In addition to being the driest of any similar period ending April, the past 28, 29, 30, 31 and 32 months are the absolute driest ending any month.



The intensity of drought is based on the rainfall deficit of the previous three months, using the deciles approach. This is the first time since November 2014-January 2015 (NDJ) that the drought (from a meteorological and agricultural standpoint) has eased to slight levels. Otherwise, it has been mostly serious or worse.

Another indicator of the drought intensity is the Standardized Precipitation Index or **SPI** for the 3-month time scale. As of the end of April, island-average SPI stood at **0.01**. This means that FMA rainfall was deemed normal, based on the [regional climate centre SPI classification 2011](#).

The current drought, which started in **July 2013**, is the worst on record. It is the longest meteorological drought on record, surpassing that of 1964-1967. Of the 71 droughts on record, it has the greatest rainfall deficit, which currently stands at **1168.4 mm** (46 in); the next highest is 889 mm (35 in) caused by the 1964-1967 and 1929-1931 droughts. Of the 12 droughts lasting at least 18 months, it is presently the fifth in intensity.

For the period of the ongoing drought, it is the driest of the (86) **similar** 34-month time intervals ending April. It is also the second driest of any consecutive 34 months, of which there are 1027 on record. Only January 1928-October 1930 has been drier since 1928.

Based on our latest analyses, near to below normal and above normal rainfall is being forecast for **May-July** and **August-October** respectively. Given these and **other forecasts**, it is likely that the **drought will continue into the second half of the year**.

PERIOD	RAINFALL				RAINFALL RECORD – 1928 to 2016			
	Previous Month(s)	Actual	Normal (1981 – 2010)	Anomaly (1981 – 2010)	Description of Actual	Max	Year	Min
1(Apr)	3.11	3.37	- 0.26	Near normal	9.66	1981	0.23	1944
3(Feb-Apr)	6.11	7.60	- 1.49	Near normal	16.19	1992	2.44	1947
6(Nov-Apr)	14.00	20.16	- 6.16	Below normal	34.31	1999	8.83	1947
9(Aug-Apr)	22.88	36.23	- 13.35	Well below normal	53.44	1951	20.05	1930
12(May-Apr)	25.84	46.76	- 20.92	Well below normal	72.04	1951	25.11	1930
24(May-Apr)	60.33	94.18	- 33.85	Record low	130.93	1951	60.33	2014

Table 1: Rainfall (inches) over the past 24 months. (For records, the year given marks the start of the period).

Related Products

Climate outlooks: [May](#), [May-July 2016](#), [August-October 2016](#), [May-October 2016](#), [Drought](#)

Other statements: [Temperature](#), [Wet Season](#), [Dry Season](#)

Definition

[Drought in general means](#) water shortage and rainfall deficiency. [Meteorological \(climatological\) drought](#) is defined in terms of the magnitude of a precipitation shortfall/deficit and the duration of this shortfall event. This is assessed by first examining the rainfall periods of three months or more for selected places to see whether they lie below the 30th percentile (lowest 30% of the historical records or below the 3 decile). The approach used to determine the rainfall deficit is an adjusted version of the decile method developed by Gibbs and Maher (1967). An adjusted version of this method is used as the measurement of droughts within the Australian Drought Watch System.

The drought levels, based on consecutive three-month historical data, are defined as follow:

- **Slight:** rainfall ranges from less than 30th percentile to the 20th percentile
- **Moderate:** rainfall ranges from less than the 20th percentile to the 10th percentile
- **Serious:** rainfall ranges from less than the 10th percentile to the 5th percentile
- **Severe:** rainfall less than the 5th percentile

The level of a drought period/episode (drought lasting three or more months) is described based on the maximum consecutive three-month rainfall deficit.

Probability of drought:

- **Slight chance:** 5 to 25% chance of occurring
- **Chance:** 30 to 55% chance of occurring
- **Likely:** 60 to 75% chance of occurring
- **Highly likely/expected:** Greater than or equal to 80% chance of occurring

Rainfall Description used on the 1981 to 2010 rainfall dataset:

- **Well below normal:** Rainfall totals in the lowest 10% of the dataset
- **Below normal** (lower or less than usual): Rainfall totals in the lowest 33.3% of the dataset
- **Near normal** (normal or usual): Rainfall totals in the middle 33.3% of the data
- **Above normal** (more or higher than usual): Rainfall totals in the highest 33.3% of the dataset
- **Well above normal:** Rainfall totals in the highest 10% of the dataset
- **Rainfall:** Island average, based on rainfall at the Airport and Green Castle

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