

Drought and Precipitation Statement for Antigua - April 2015



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...Drought continues at serious levels...

Statement

With well below normal rainfall for April, drought continues at serious levels. The rainfall for April was 1.14 inches; this is the lowest since 2006 and the 14th all-time lowest for April. The past three months have been seriously dry also. The 3.43 inches is the lowest since 2001 and the 8th all-time lowest for February-April. This low total signals the continuation of the drought, which started in September 2013, at serious levels. The current drought is the worse since 2002/2003. The year-to-date is the driest since 2001 and the fourth driest on record. The rainfall deficit since the drought started has increased to 21.67 inches, the fifth worst for any similar 20-month period.

Based on our latest analyses, below normal rainfall is forecast for [May](#) and near to above normal rainfall is forecast for [May-July](#) 2015. Given these and [other forecasts](#), it is likely that the drought will continue for the foreseeable future.

Period	Rainfall			Description of Actual (1981 – 2010)	Rainfall Record – 1928 to 2015			
	Actual	Normal (1981 – 2010)	Anomaly (1981 – 2010)		Max	Year	Min	Year
1(Apr)	1.14	3.37	- 1.22	Well below normal	9.66	1981	0.23	1944
3(Feb-Apr)	3.43	7.60	- 3.37	Well Below normal	16.19	1992	2.44	1947
6(Nov-Apr)	15.30	20.16	- 3.12	Below normal	34.31	1999	8.83	1947
9(Aug-Apr)	29.14	36.23	- 8.04	Below normal	53.44	1951	20.05	1930
12(May-Apr)	34.50	46.76	- 11.13	Well below normal	72.04	1951	25.11	1930
24(May-Apr)	74.03	94.18	- 15.82	Below normal	130.93	1951	63.07	1929

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

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). 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:** Rainfall totals in the lowest 33.3% of the dataset
- **Near Normal:** Rainfall totals in the middle 33.3% of the data
- **Above Normal:** 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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