Drought and Precipitation Statement for Antigua – March 2015
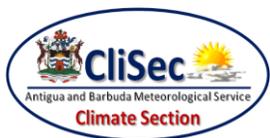
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…Drought reintensifies further to serious levels…

Statement

Below normal rainfall for March has contributed to our worst drought since 2002/2003 reintensifying further to serious levels. The rainfall total for March was 0.82 inch; this is the 15th lowest on record for the month. Further, the relatively dry weather over the past three months has also contributed significantly to the drought reintensifying. For January-March, the rainfall was well below normal, the driest since 2001 and the seventh driest start to a year on record (See table 1). The rainfall deficit since the drought started, September 2013 to present, is 17.5 inches, the seventh worst for any similar 19-month period.

Based on our latest analyses, below to near normal rainfall is projected for April and also the period April-June 2015. Given these and other projections, it is likely that the drought will continue for the foreseeable future.

Period	Rainfall				Rainfall Record – 1928 to 2015			
Previous Month(s)	Actual	Normal (1981 – 2010)	Anomaly (1981 – 2010)	Description of Actual (1981 – 2010)	Max	Year	Min	Year
1(Mar)	0.82	2.04	- 1.22	Below normal	8.90	1967	0.36	1930
3(Jan-Mar)	3.56	6.93	- 3.37	Well Below normal	12.95	1937	1.82	1931
6(Oct-Mar)	19.87	23.09	- 3.22	Below normal	38.52	1999	10.47	2000
9(Jul-Mar)	28.75	36.89	- 8.14	Below normal	55.26	1936	19.95	1930
12(Apr-Mar)	35.33	46.56	- 11.23	Well below normal	71.72	1951	23.87	2015
24(Apr-Mar)	78.08	94.09	- 16.01	Below normal	131.61	1951	59.20	2014

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 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 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

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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