

## Drought and Precipitation Statement for Antigua - December 2014



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...Drought eased significantly...

### Statement

Our worst drought since 2002/2003 has eased significantly. The meteorological drought, which started September 2013 and degenerated into an [economic drought](#), has been reduced to slight levels by the showers of November and December. The rainfall total for December was near normal - 3.12 inches; also, the rainfall total for Oct-Dec was near normal – 16.32 inches. However, the 7.48 inches of rainfall for November was above normal and the highest in three years for the month. The rainfall for 2014 was 36.25 inches. This total is below normal and the lowest since 2003. Four months had below normal rainfall in 2014 – March, June, July and September, while only October had above normal rainfall; the driest month was March with 0.64 inch. See table 1 for more.

Based on our latest analyses, above normal rainfall is projected for [January](#) and near normal rainfall for [January-March](#) 2015. Given the projections, the meteorological drought is likely to end shortly.

Period	Rainfall			Description of Actual (1981 – 2010)	Rainfall Record – 1928 to 2014			
	Actual	Normal (1981 – 2010)	Anomaly (1981 – 2010)		Max	Year	Min	Year
1(Dec)	3.12	3.98	- 0.86	Near normal	11.02	1971	0.96	1947
3(Oct-Dec)	16.32	16.19	0.13	Near normal	31.18	1999	5.63	1983
6(Jul-Dec)	25.20	30.26	- 5.06	Below normal	44.26	1951	15.97	1983
9(Apr-Dec)	31.78	40.43	- 8.65	Below normal	62.60	1979	22.47	1930
12(Jan-Dec)	36.25	47.37	- 11.12	Below normal	69.45	1951	26.83	1983
24(Jan-Dec)	82.45	93.86	- 11.41	Below normal	133.02	1951	66.55	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 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 30<sup>th</sup> percentile to the 20<sup>th</sup> percentile
- **Moderate:** rainfall ranges from less than the 20<sup>th</sup> percentile to the 10<sup>th</sup> percentile
- **Serious:** rainfall ranges from less than the 10<sup>th</sup> percentile to the 5<sup>th</sup> percentile
- **Severe:** rainfall less than the 5<sup>th</sup> 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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