

Drought and Precipitation Statement for Antigua - February 2015



Dale C. S. Destin ([follow @anumetservice](#))
 Antigua and Barbuda Meteorological Service Climate Section
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...Drought reintensifies to moderate levels...

Statement

Our worst drought since 2002/2003 has once again intensified to moderate levels. After reaching serious levels in mid 2014, the rainfall of November eased the drought to slight levels. However, for the past two months, January and February, the rainfall has been well below normal and below normal respectively. Hence, the ongoing drought, which started in 2013, has slipped back to moderate levels. The accumulated rainfall of 2.74 inches for the period January-February is the lowest since 2001 and the 11th lowest on record. Further, the rainfall total for December-February of 5.86 inches is the lowest since 2001 and the 18th lowest on record. See table 1 for more.

Based on our latest analyses, near to above normal rainfall is projected for [March](#) and also the period [March-May](#) 2015. Given the projections, it is high likely that the drought will not get any worse and a moderate chance of it ending in three months.

Period	Rainfall			Description of Actual (1981 – 2010)	Rainfall Record – 1928 to 2015			
	Actual	Normal (1981 – 2010)	Anomaly (1981 – 2010)		Max	Year	Min	Year
1(Feb)	1.47	2.20	- 0.73	Below normal	5.15	1982	0.32	1982
3(Dec-Feb)	5.86	8.89	- 3.03	Below normal	17.16	1937	3.28	1931
6(Sep-Feb)	22.72	26.68	- 3.96	Below normal	42.36	1937	13.78	1931
9(Jun-Feb)	29.11	37.39	- 8.28	Below normal	58.31	1937	21.12	1931
12(Mar-Feb)	35.16	46.44	- 11.28	Well below normal	71.77	1937	23.95	1931
24(Mar-Feb)	81.84	93.88	- 12.04	Below normal	129.80	2012	65.22	1931

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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