

Drought and Precipitation Statement for Antigua – April 2013



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Top 10 wettest April...

The island had above normal rainfall during April. The average total of 5.20 inches makes this April the 7th wettest on record (1928 – 2013) and the second wettest since 2002. Meanwhile, the period February to April (FMA) also had above normal rainfall. See table 1 for more.

Based on various models, trends, climatology and subjective input, above normal rainfall is most likely for April and MJJ with greater than 3.34 inches and greater than 11.54 inches respectively. Given the outlooks, there is just a slight chance of drought over the next three months.

Period	Rainfall (inches)			Description of Actual (1981 – 2010)	Rainfall Record – 1928 to 2013			
	Actual	Normal (1981 – 2010)	Anomaly (1981 – 2010)		Max	Year	Min	Year
1(Apr)	5.20	3.37	+ 1.83	Above normal	9.66	1981	0.23	1944
3(Feb – Apr)	10.19	7.60	+ 2.59	Above normal	16.19	1992	2.44	1947
6(Nov – Apr)	17.74	20.16	- 2.42	Near normal	34.31	1999	8.83	1947
9(Aug – Apr)	34.73	36.23	- 1.50	Near normal	53.44	1951	20.05	1930
12(May – Apr)	44.09	46.76	- 2.67	Near normal	72.04	1951	25.11	1930
24(May – Apr)	106.39	94.18	+ 12.21	Above 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)

Drought

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

The following definitions are being 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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