

## Drought and Precipitation Statement for Antigua – May 2013



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### Above normal rainfall for May...

The island had another month of above normal rainfall. The average total of 6.78 inches makes this May the 14<sup>th</sup> wettest on record (1928 – 2013). Meanwhile, the period March to May (MAM) also had above normal rainfall; this was the eighth wettest such MAM on record and the wettest since 1993. See table 1 for more.

Based on various models, trends, climatology and subjective input, above normal rainfall is most likely for June and JJA with greater than 3.20 inches and greater than 11.74 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(May)	6.78	4.08	+ 2.70	Above normal	20.02	1987	0.25	2001
3(Mar – May)	16.55	9.48	+ 7.07	Above normal	23.79	1987	2.50	2001
6(Dec – May)	21.97	18.37	+ 3.60	Above normal	29.53	1968	6.83	2000
9(Sep – May)	38.38	36.17	+ 2.21	Near normal	50.40	1992	19.51	2000
12(Jun – May)	45.89	46.87	- 0.98	Near normal	65.64	1951	27.17	2000
24(Jun – May)	104.22	94.07	+ 10.15	Above normal	123.55	1951	62.74	1930

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 30<sup>th</sup> 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

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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