



## Drought and Precipitation Statement for Antigua – May 2011

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### Well above normal rainfall for May...ninth highest on record

The island had well above normal rainfall during May with a total of 8.95 inches. This is the highest total since 2004, and the ninth highest on record for May. For the period March to May (MAM), the rainfall was above normal; the islands in now in a period of abundant rainfall which started in April.

Based on various models, trends, climatology and subjective input, above normal rainfall is most likely for June, and for summer -JJA. There is only a slight chance of drought for summer. See table 1 for the rainfall totals for the past 24 months.

Period	Rainfall (inches)			Description (1928 – 2010)	Rainfall Record – 1928 to 2011			
	Actual	Normal (1981 – 2010)	Anomaly (1981 – 2010)		Max	Year	Min	Year
1(May)	8.95	4.08	+ 4.87	Above normal	20.02	1987	0.25	2001
3(Mar – May)	15.14	9.48	+ 5.66	Above normal	23.79	1987	2.50	2001
6(Dec – May)	22.66	18.37	+ 4.29	Above normal	29.53	1969	6.83	2001
9(Sep – May)	40.11	36.17	+ 3.94	Above normal	50.40	1993	19.51	2001
12(Jun – May)	64.59	46.87	+ 17.72	Well above normal	65.64	1952	27.17	2001
24(Jun – May)	108.22	94.07	+ 14.15	Above normal	123.55	1952	62.74	1931

Table 1: Rainfall (inches) over the past 24 months.

### Drought

Drought in general means water shortage and rainfall deficiency. 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 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 in the description of rainfall:

- **Well Below normal:** Rainfall totals in the lowest 10% of the historical data
- **Below Normal:** Rainfall totals in the lowest 30% of the historical data, but not in the lowest 10%
- **Near Normal:** Rainfall totals in the middle 40% of the historical data
- **Above Normal:** Rainfall totals in the highest 30% of the historical data, but not the highest 10%
- **Well Above Normal:** Rainfall totals in the highest 10% of the historical data
- **Rainfall:** Island average, based on rainfall at the airport and Green Castle

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Note: The issuing of formal drought and precipitation statements by the Antigua and Barbuda Met Service is not to be taken to mean that there are unprecedented rainfall totals. Rather, the Met Service in harmony with its mission has seen the need to provide these statements to inform the public regarding the state of rainfall in Antigua and Barbuda.