



Drought and Precipitation Statement for Antigua – February 2012

Dale C. S. Destin

Antigua and Barbuda Meteorological Service Climate Section

[mail](#) | [twitter](#) | [facebook](#) | [youtube](#) | [blog](#)

March 12, 2012

Below normal rainfall for February

The island had below normal rainfall during February with an average total of 1.21 inches. This is the second lowest since 2001 for the month. Meanwhile, winter - December to February (DJF), had near normal rainfall. Further, although rainfall has decreased over the past month, the past 24 month period ending February has been the wettest such period on record. See table 1 for more.

Based on various models, trends, climatology and subjective input, near normal rainfall is most likely for March and for MAM. However, it must be noted that there is a moderate chance, 35%, of a Meteorological Drought over spring - MAM.

Period	Rainfall (inches)			Description of Actual (1981 – 2010)	Rainfall Record – 1928 to 2012			
	Actual	Normal (1981 – 2010)	Anomaly (1981 – 2010)		Max	Year	Min	Year
1(Feb)	1.21	2.20	- 0.99	Near normal	5.15	1982	0.32	1982
3(Dec – Feb)	8.47	8.89	- 0.42	Near normal	17.16	1937	3.28	1931
6(Sep – Feb)	28.26	26.68	+ 1.58	Near normal	42.36	1937	13.78	1931
9(Jun – Feb)	49.16	37.39	+ 11.77	Well above normal	58.31	1937	21.12	1931
12(Mar – Feb)	64.30	46.44	+ 17.86	Well above normal	71.77	1937	23.95	1931
24(Mar – Feb)	129.80	93.88	+ 35.92	Well above normal	129.80	2012	65.22	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 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

Disclaimer

The information contained herein is provided with the understanding that the Antigua and Barbuda Meteorological Service makes no warranties, either expressed or implied, concerning the accuracy, completeness, reliability, or suitability of this statement. The information may be used freely by the public with appropriate acknowledgement of its source, but shall not be modified in content and then presented as original material.

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.