

Drought and Precipitation Statement for Antigua – October 2010

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Well above normal rainfall for October

Well above normal rainfall was experienced across Antigua during October. The average total rainfall for October of 10.58 inches or 268.73 mm was the third highest on record. Further, the rainfall for the season (period) August to October was the highest since 1995 and the third highest on record. The abundance of rainfall which started in April continues. Additionally, the period February to October is the wettest on record.

Based on various models, trends, climatology and subjective input, near normal rainfall is most likely for the month of November and the season November to January (NDJ). There is a slight chance of drought over the period NDJ. See table 1 for the rainfall totals for the past 24 months.

Period	Rainfall (inches)			Description	Rainfall Record			
	Actual	Standard Normal	Anomaly (1961 – 1990)		Max	Year	Min	Year
1(Oct)	10.58	5.64	+ 4.94	Well above normal	15.13	2008	1.13	1953
3(Aug – Oct)	27.86	15.60	+ 12.26	Well above normal	32.63	1995	6.43	'68&94
6(May – Oct)	44.24	26.42	+ 17.82	Well above normal	45.01	1951	13.10	'30&53
9(Feb – Oct)	55.88	33.40	+ 22.48	Well above normal	55.88	2010	16.25	1930
12(Nov – Oct)	64.64	46.33	+ 18.31	Well above normal	67.70	1987	24.88	1968
24(Nov – Oct)	105.87	92.79	+ 13.08	Above normal	132.45	1952	65.06	1968

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 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 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

Disclaimer

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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.