

Drought and Precipitation Statement for Antigua – August 2010

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Record rainfall for August

The island continues to experience above normal rainfall, which started in April 2010. The average total rainfall for August of 13.23 inches was well above normal for Antigua. This total was also the highest ever for August and 1.53 inches better than the previous highest. Most of this rainfall came from Hurricane Earl, which accounted for about 60% of the total for the month. Further, the rainfall for the season (period) June to August was also the highest ever for August and 1.71 inches more the previous highest.

Based on various models, trends, climatology and subjective input, near normal rainfall is most likely through the season October to December (OND). 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(Aug)	13.23	4.55	+8.68	Well Above Normal	13.23	2010	0.62	1976
3(Jun – Aug)	24.48	10.85	+13.63	Well Above Normal	24.48	2010	5.63	1984
6(Mar – Aug)	40.53	20.63	+19.90	Well Above Normal	40.53	2010	9.09	1939
9(Dec – Aug)	46.54	29.15	+17.39	Well Above Normal	49.05	1952	15.23	1939
12(Jul – Aug)	57.84	46.17	+11.67	Well Above Normal	71.84	1952	27.56	1984
24(Jul – Aug)	114.60	92.57	+22.03	Well Above Normal	130.76	1952	66.07	1966

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

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.