

# Drought and Precipitation Statement for Antigua - June 2015



Dale C. S. Destin ([follow @anumetservice](#))  
 Antigua and Barbuda Meteorological Service Climate Section  
 July 7, 2015

[Please take our Weather Survey](#)

**...Record low rainfall for the past 24 months...Drought continues at severe levels...**

## Statement

June proved to be another extremely dry month for Antigua with 0.82 inch. The severe drought levels reached in May, continued through June. This was the driest June since 2001 and the 11<sup>th</sup> driest on record dating back to 1928. The intensity of the drought is based on the rainfall total of the last three months. Over the period March-May and April-June, the rainfall totals were 2.79 inches, ranking them in the bottom 5% of all totals for these periods; hence, the classification of the drought to be at severe levels. April-June is now the fourth driest such period on record and also the driest since 2001. It continues to be the worst drought since 2002/2003. The year-to-date is the driest since 2001 and the second driest on record. The rainfall deficit since the drought started has increased to 26.82 inches, up 1.91 inches from last month; it is the third worst for any similar 22-month period ending June. Meanwhile, the past 24 months is the record driest such period, eclipsing the previous driest of 66.99 inches (1964-1966) by 1.43 inches. Of the 68 droughts on record dating back to 1928, it's the ninth worst of any length, and of eighteen lasting at least a year, it's the seventh worst.

Based on our latest analyses, below normal rainfall is [forecast](#) for the next six months. Given these and [other forecasts](#), it is likely that the drought will continue for the foreseeable future.

Period	Rainfall			Description of Actual (1981 – 2010)	Rainfall Record – 1928 to 2015			
	Actual	Normal (1981 – 2010)	Anomaly (1981 – 2010)		Max	Year	Min	Year
1(Jun)	<b>0.82</b>	2.73	<b>- 1.91</b>	<b>Well below normal</b>	12.22	1938	0.32	1974
3(Apr-Jun)	<b>2.79</b>	10.18	<b>- 7.39</b>	<b>Well below normal</b>	26.61	1987	2.26	1940
6(Jan-Jun)	<b>6.35</b>	17.11	<b>- 10.76</b>	<b>Well below normal</b>	31.75	1987	5.12	1929
9(Oct-Jun)	<b>22.67</b>	33.18	<b>- 10.51</b>	<b>Below normal</b>	49.53	1986	13.09	2000
12(Jul-Jun)	<b>31.55</b>	46.98	<b>- 15.43</b>	<b>Well below normal</b>	68.92	1951	26.34	2000
24(Jul-Jun)	<b>65.57</b>	94.15	<b>- 28.58</b>	<b>Record low</b>	127.51	1950	65.56	2013

Table 1: Rainfall (inches) over the past 24 months. (For records, the year given marks the start of the period).

## Definition

Drought in general means water shortage and rainfall deficiency. [Meteorological \(climatological\) drought](#) is defined in terms of the magnitude of a precipitation shortfall/deficit 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 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 consecutive three-month 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

The level of a drought period/episode (drought lasting three or more months) is described based on the maximum consecutive three-month rainfall deficit.

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 used on the 1981 to 2010 rainfall dataset:

- **Well below normal:** Rainfall totals in the lowest 10% of the dataset
- **Below normal** (lower or less than usual): Rainfall totals in the lowest 33.3% of the dataset
- **Near normal** (normal or usual): Rainfall totals in the middle 33.3% of the data
- **Above normal** (more or higher than usual): 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.