

Antigua and Barbuda Tropical Cyclone Climatology

A tropical cyclone is a rotating, organized system of clouds and thunderstorms that originates over tropical or subtropical waters and has a closed low-level circulation. Tropical cyclones rotate counterclockwise in our hemisphere – the Northern Hemisphere ([taken from NOAA](#)). Here is how they are classified:

- **Tropical Depression:** A tropical cyclone with maximum sustained winds of 38 mph (33 knots) or less.
- **Tropical Storm:** A tropical cyclone with maximum sustained winds of 39 to 73 mph (34 to 63 knots).
- **Hurricane:** A tropical cyclone with maximum sustained winds of 74 mph (64 knots) or higher.
- **Major Hurricane:** A tropical cyclone with maximum sustained winds of 111 mph (96 knots) or higher, corresponding to a Category 3, 4 or 5 on the Saffir-Simpson Hurricane Wind Scale.

Named storm is the generic term for a tropical cyclone of at least tropical storm strength.

The Atlantic hurricane season is officially from 1 June to 30 November. There is nothing magical in these dates, and hurricanes have occurred outside of these six months, but these dates were selected to encompass over 97% of tropical activity. June 1st has been the traditional start of the Atlantic hurricane season for decades. However, the end date has been slowly shifted outward, from October 31st to November 15th until its current date of November 30 ([Atlantic Oceanographic and Meteorological Laboratory](#)).

Antigua is located between latitude 17.0 and 17.167 north and between longitude 61.667 to 61.9 west. Barbuda is located between latitude 17.55 and 17.722 north and longitude 61.0725 to 61.883 west.

Storm and Hurricane Return Periods

Storm and hurricane return periods are the frequency at which a certain intensity hurricane can be expected within a given distance (15, 65 or 105 nautical miles - nm, 17.3, 74.8 or 120.8 statute miles - sm) of a given location, in this case Antigua and Barbuda. In simpler terms, a return period of 16 years for a major hurricane means that *on average* during the previous 100 years, a Category 3 or greater hurricane passed within the specified distance (15 nm or 17.3 sm) of Antigua about 6-7 times. We would then expect, *on average*, an additional 6-7 Category 3 or greater hurricanes within a 15 nm radius over the next 100 years.

Antigua

Return periods in years of a storm or hurricane passing within 15, 65 and 105 nm:

15 nm (17.3 sm):

- Named storm – 6 to 7
- Hurricane – 8
- Major hurricane – 15 to 16

65 nm (74.8 sm):

- Named storm – 2

- Hurricane – 3
- Major hurricane – 8

105 nm (120.8 sm):

- Named storm – 1 to 2
- Hurricane – 2 to 3
- Major hurricane – 8

Barbuda

Return periods in years of a storm or hurricane passing within 15, 65 and 105 nm:

15 nm (17.3 sm):

- Named storm – 6 to 7
- Hurricane – 8
- Major hurricane – 30 to 31

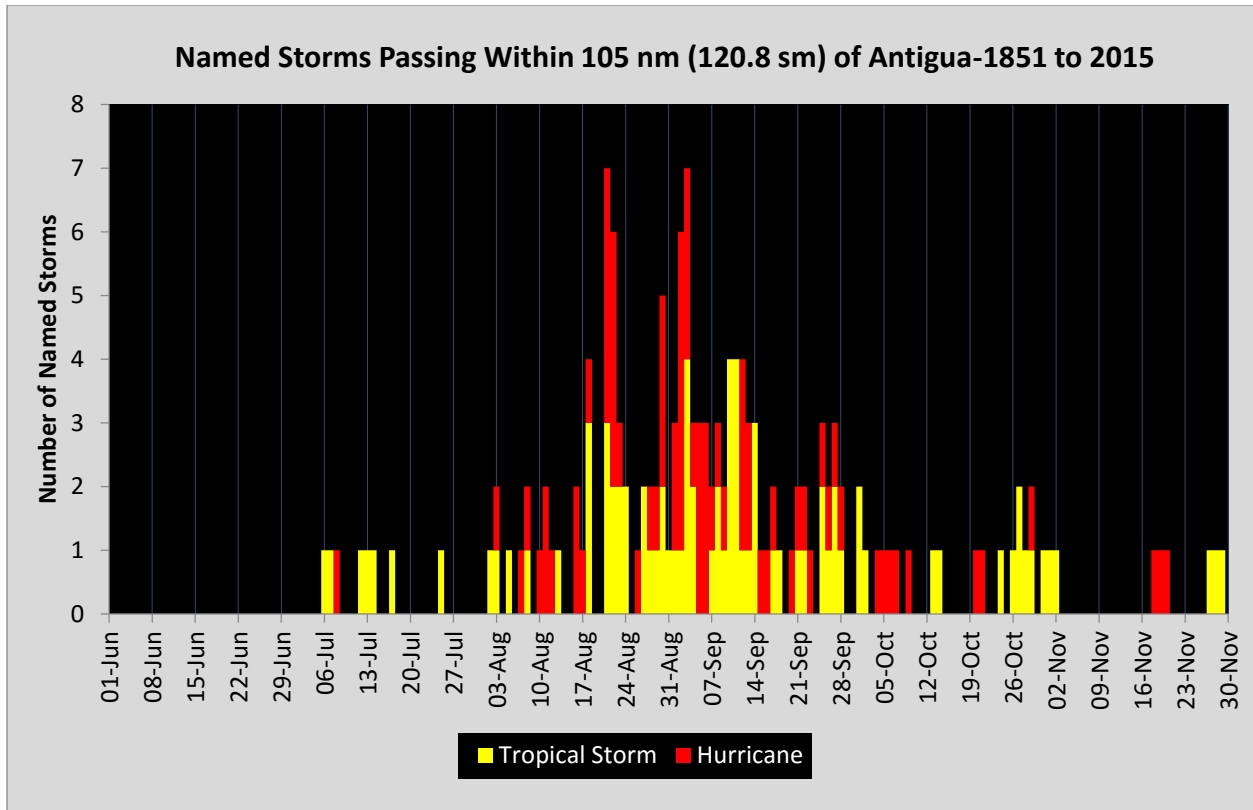
65 nm (74.8 sm):

- Named storm – 3 to 4
- Hurricane – 4 to 5
- Major hurricane – 15 to 16

105 nm (120.8 sm):

- Named storm – 2
- Hurricane – 3
- Major hurricane – 6 to 7

Dates on Which Named Storms Have Affected Antigua



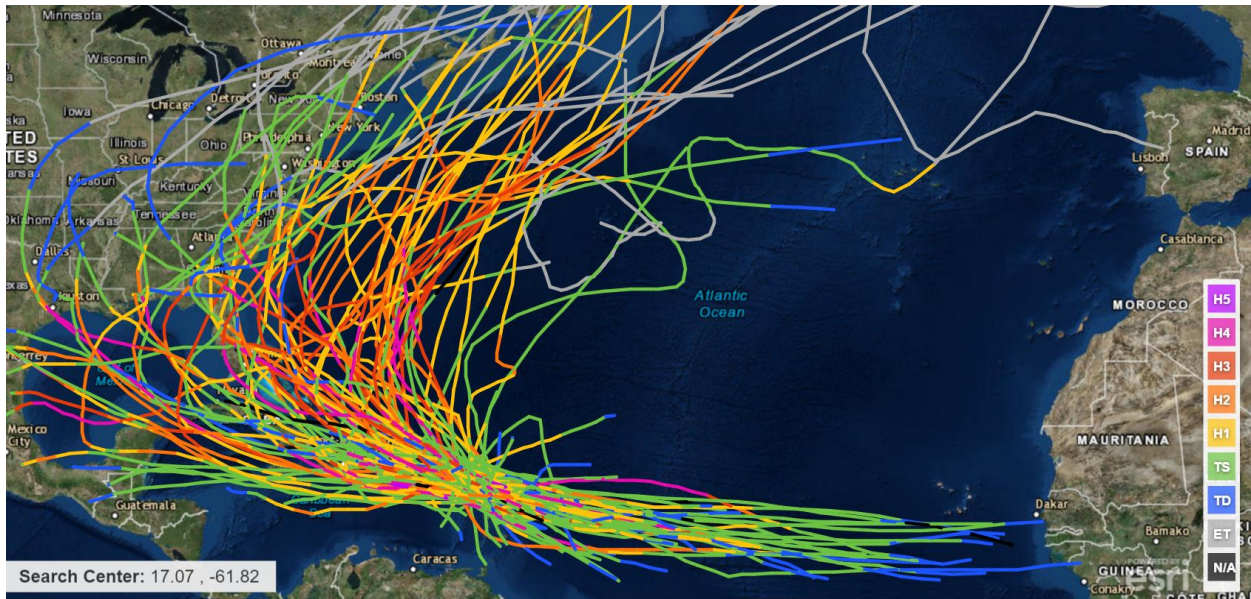
The official hurricane season for the Atlantic Basin (the Atlantic Ocean, the Caribbean Sea and the Gulf of Mexico) is from 1 June to 30 November. As seen in the graph above, there are two peaks to the season – around 21 August and around 3 September. However, deadly tropical cyclones can occur anytime in and even out of the hurricane season.

Tally of All Named Storms to Have Affected Antigua and Barbuda (Passing Within 105 nm or 120.8 sm) – 1851 to 2015

Antigua

- 110 named storms
- 49 hurricanes
- 17 major hurricanes
 - 1 Cat 5 – Donna, 4 and 5 September, 1960

According to [AOML](#), the total number of named storms to have formed over the Atlantic Basin is 1559 (1851 to 2015), of these about 7.1% have affected Antigua.

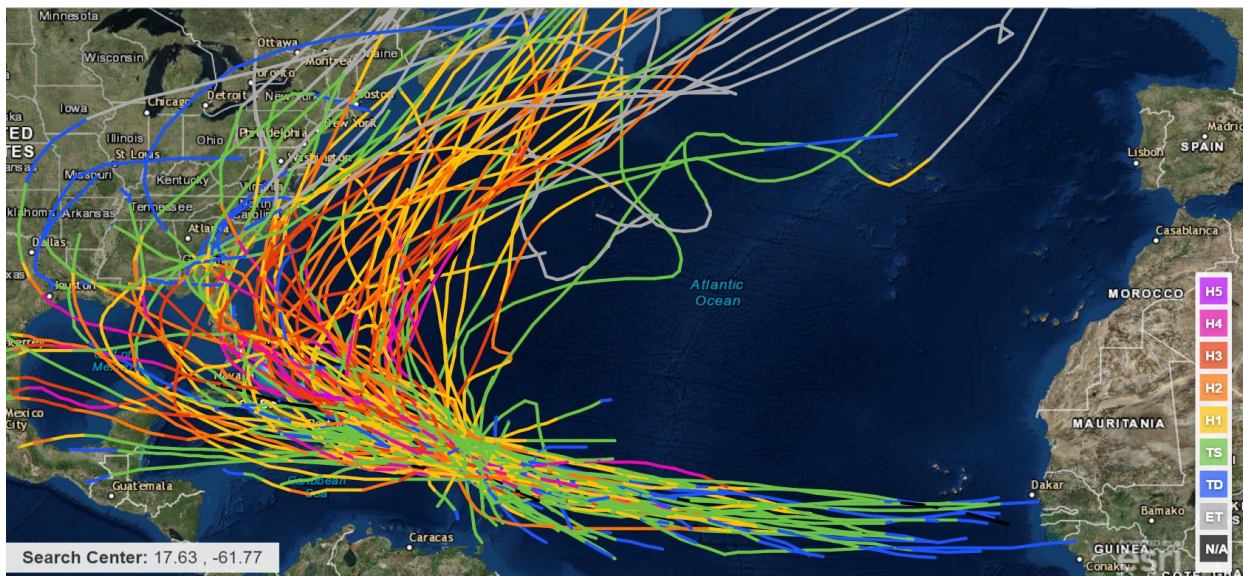


Named storms to have affected or passed within 105 nm (120.8 sm) of Antigua

Barbuda

- 102 named storms
- 51 hurricanes
- 18 major hurricanes
 - 1 Cat 5 – Donna, 4 and 5 September, 1960

According to [AOML](#), the total number of named storms to have formed over the Atlantic Basin is 1559 (1851 to 2015), of these about 6.5% have affected Barbuda.



Named storms to have affected or passed within 105 nm (120.8 sm) of Barbuda

The above numbers include Unnamed Hurricane which affected Antigua and Barbuda 7 and 8 March 1908 and Hurricane Alice which formed in December 1954 and affected Antigua and Barbuda 2 and 3 January 1955.

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