

## **Hurricanes Statistics for The North Atlantic and The Bahamas**

### **Below are some of the worldwide cyclone records set by North Atlantic storms:**

- Costliest tropical cyclone: Hurricane Harvey – 2017 – US\$198.63 billion in damages.
- Fastest seafloor current produced by a tropical cyclone: Hurricane Ivan – 2004 – 5 mph.
- Highest confirmed wave produced by a tropical cyclone: Hurricane Luis – 1995 – 98 feet.
- Highest forward speed of a tropical cyclone: New England hurricane – 1938 – 70 mph.
- Longest time a tropical cyclone has continuously had sustained winds of at least 185 mph: Hurricane Irma – 2017 – 37 hours.
- Most tornadoes spawned by a tropical cyclone: Hurricane Ivan – 2004 – 120 confirmed tornadoes.
- Smallest tropical cyclone on record: Tropical Storm Marco – 2008 – gale force winds extended 11.5 miles from storm center (previous record: Cyclone Tracy 1974 – 30 miles).
- Smallest tropical cyclone eye on record: Hurricane Wilma – 2005 – diameter 2.3 miles. Longest duration as a Category 5 hurricane

**(Courtesy of Wayne Neely, The Weather Channel, NOAA-NHC, & Wikipedia).**

### **Fastest Intensification For North Atlantic Hurricanes:**

- Fastest intensification from a tropical depression to a hurricane (1-minute sustained surface winds) – 12 hours-Harvey 1981 – 35 mph to 80 mph – from 8am EDT September 12 to 8pm EDT September 13.
- Fastest intensification from a tropical depression to a Category 5 hurricane (1-minute sustained surface winds) – 54 hours-Wilma 2005 – 35 mph to 175 mph – from 8pm EDT October 17 to 2am October 19.  
Felix 2007 – 35 mph to 175 mph – from 2pm EDT August 31 to 8pm EDT September 3.
- Fastest intensification from a tropical storm to a Category 5 hurricane (1-minute sustained surface winds) – 24 hours - Wilma 2005 – 70 mph to 175 mph – from 2am EDT October 18 to 2am EDT October 19.
- Maximum pressure drop in 12 hours – 83 mbar - Wilma 2005 – 975 millibars (28.8 inHg) to 892 millibars (26.3 inHg) – from 2pm EDT October 18 to 2am EDT October 19.
- Maximum pressure drop in 24 hours – 97 mbar - Wilma 2005 – 979 millibars (28.9 inHg) to 882 millibars (26.0 inHg) – from 8am EDT October 18 to 8am EDT October 19.

(Courtesy of Wayne Neely, The Weather Channel, NOAA-NHC, & Wikipedia).

## **Most Active/Least Active North Atlantic Hurricane Seasons**

Most North Atlantic hurricane seasons before the weather satellite era include seven or fewer recorded tropical storms or hurricanes. As satellite data was available in the mid-1960s, early storm counts were less reliable. Before the advent of satellites, radars, airplanes, or advanced technological means of tracking storms, the ones recorded were storms that affected mainly populated areas. An undercount bias of zero to six tropical cyclones per year between 1851 and 1885 and zero to four per year between 1886 and 1910 has been estimated.

The introduction of satellites revolutionized weather tracking, significantly boosting storm data's accuracy and reliability. The first weather satellites, known as Television Infrared Observation Satellites (TIROS), were launched into space. In 1961, Hurricane Esther became the first hurricane to be 'discovered' through satellite readings. However, the early satellite systems were not without their limitations. Despite their potential, these systems needed to be more active to provide daily images of the storms. As a result, data for the North Atlantic region remained sparse as late as 1964, highlighting the need for further advancements in satellite technology.

The most active North Atlantic hurricane season on record regarding total storms occurred in 2020, with 30 documented. The storm count for the 2020 season also includes fourteen hurricanes, of which seven strengthened to major hurricane status. On the other hand, the least active season on record regarding total storms occurred in 1914—the 1914 season had just one tropical storm and no hurricanes.

<b>Most Storms in a Year</b>			
		<b>Hurricanes:</b>	<b>Hurricanes:</b>
<b>Year:</b>	<b>Tropical storms:</b>	<b>Hurricanes:</b>	<b>Major:</b>
<b>2020</b>	30 *	14	7
<b>2005</b>	28 *	15	7
<b>2021</b>	21 *	7	4
<b>1933</b>	20	11	6
<b>2023</b>	20 *	7	3
<b>1887</b>	19	11	2
<b>1995</b>	19	11	5
<b>2010</b>	19	12	5
<b>2011</b>	19	7	4
<b>2012</b>	19	10	2
	<i>* Includes at least one subtropical storm</i>		
<b>Fewest Storms in a Year</b>			
		<b>Hurricanes:</b>	<b>Hurricanes:</b>

Year:	Tropical storms:	Hurricanes:	Major:
1914	1	0	0
1930	3	2	2
1857	4	3	0
1868	4	3	0
1883	4	3	2
1884	4	4	1
1890	4	2	1
1917	4	2	2
1925	4	2	0
1983	4	3	1

\*Courtesy of "North Atlantic Ocean Historical Tropical Cyclone Statistics". Fort Collins, Colorado: Colorado State University.

### Earliest/Latest Formations For Each Category

Hurricane Alice, a unique event in the 1954–55 seasons, holds a significant place in the history of North Atlantic tropical cyclones. It is the only Atlantic tropical cyclone on record to span two calendar years at hurricane strength. This anomaly, along with the fact that approximately 97 percent of tropical cyclones that form in the North Atlantic develop between June 1 and November 30, adds to the intrigue of the North Atlantic hurricane season. The official end of the hurricane season has shifted from its initial date of October 31, but on average, once every few years, a tropical cyclone develops outside the limits of the season; as of 2023, there have been 92 tropical cyclones in the off-season, with the most recent being an unnamed subtropical storm in January 2023.

The first tropical cyclone of the 1938 North Atlantic hurricane season, which formed on January 3, became the earliest-forming tropical storm and hurricane after reanalysis concluded on the storm in December 2012. Hurricane Able in 1951 was initially thought to be the earliest forming major hurricane; however, following post-storm analysis, the National Hurricane Center determined that Able only reached Category 1 strength, which made Hurricane Alma of 1966 the new record holder, as it became a major hurricane on June 8. Though it developed within the bounds of the North Atlantic hurricane season, Hurricane Audrey in 1957 was the earliest developing Category 4 hurricane on record after it reached the intensity on June 27. However, a reanalysis of 1956 to 1960 by NOAA-NHC downgraded Audrey to a Category 3, making Hurricane Dennis of 2005 the earliest Category 4 on record on July 8, 2005. The earliest-forming Category 5 hurricane, Emily, reached the highest intensity on the Saffir–Simpson Hurricane Wind Scale on July 17, 2005.

Though the official end of the North Atlantic hurricane season occurs on November 30, the dates of October 31 and November 15 have also historically marked the official end date for the hurricane season. December, the only month of the year after the hurricane season, has featured the cyclogenesis of fourteen tropical cyclones. The second Hurricane, Alice, in 1954, was the latest to form a tropical storm and hurricane, reaching these intensities on December 30 and 31, respectively. Hurricane Alice and Tropical Storm Zeta were the only two storms to exist in two calendar years – the former from 1954 to 1955 and the latter from 2005 to 2006. No storms have been recorded to exceed Category 1 hurricane intensity in December. In 1999, Hurricane Lenny reached Category 4 intensity on November 17 as it took an unusual west-to-east track across the Caribbean; its intensity made it the latest developing Category 4

hurricane, though this was well within the bounds of the hurricane season. Based on reanalysis, the devastating "Cuba" hurricane in 1932 reached Category 5 intensity on November 5, making it the latest in any North Atlantic hurricane season to reach this intensity

Earliest and Latest Forming North Atlantic Tropical/Subtropical Cyclones by Saffir-Simpson Hurricane Wind Scale Classification:						
Earliest Formation:				Latest Formation:		
Storm classification	Season	Storm	Date Reached	Season	Storm	Date reached
Tropical depression	1900	One <sup>a</sup>	January 17	1954	Alice <sup>b</sup>	December 30 <sup>c</sup>
Tropical storm	1938	One <sup>d</sup>	January 3	1954	Alice <sup>e</sup>	December 30 <sup>f</sup>
Category 2	1908	One <sup>g</sup>	March 7	2016	Otto <sup>h</sup>	November 24
Category 3	1966	Alma <sup>i</sup>	June 8	2016	Otto <sup>j</sup>	November 24
Category 4	2005	Dennis <sup>k</sup>	July 8	1999	Lenny <sup>l</sup>	November 17
Category 5	2005	Emily <sup>m&amp;n</sup>	July 17	1932	"Cuba" <sup>o</sup>	November 5

(Chart courtesy of Wayne Neely, The Weather Channel, NOAA-NHC, & Wikipedia).

### Most Tropical/Subtropical Storms Formed in Each Month

The North Atlantic hurricane season runs from June 1 through November 30 yearly, with peak activity between August and October. Specifically, the height of the season is in early to mid-September. Tropical systems that form outside these months are called "off-season" and account for roughly 3% of all storms in a given year. The records below are for the most storms formed in a given month, as the threshold for "fewest" is zero for expected months. Cases where "fewest storms" are unusual include the months when the hurricane season is at its peak.

Number of North Atlantic Tropical / Subtropical Storm Occurrences by Month of Naming		
Month:	Most:	Season:
January	1	1938, 1951, 1978, 2016, 2023
February	1	1952
March	1	1908
April	1	1992, 2003, 2017
May	2	1887, 2012, 2020
June	3	1886, 1909, 1936, 1966, 1968, 2021, 2023
July	5	2005, 2020
August	8	2004, 2012
September	10	2020
October	8	1950

November	3	1931, 1961, 1966, 2001, 2005, 2020
December	2	1887, 2003

(Chart courtesy of Wayne Neely, The Weather Channel, NOAA-NHC, & Wikipedia).

### **Earliest and Next Earliest Forming North Atlantic Tropical/Subtropical Storms by Storm Number:**

Earliest and Next Earliest Forming North Atlantic Tropical / Subtropical Storms by Storm Number:				
		Earliest Formation:		Next Earliest Formation:
Storm number:	Name:	Date of Formation:	Name:	Date of Formation:
1		January 3, 1938		January 4, 1951
2		May 16, 1951		May 17, 1887
3		June 2, 2020		June 5, 2016
4		June 20, 2016		June 23, 2023 <sup>[nb 6]</sup>
5		July 1, 2021		July 6, 2020
6		July 9, 2020		July 21, 2005
7		July 22, 2020		July 24, 2005
8		July 24, 2020		August 3, 2005
9		July 30, 2020		August 7, 2005
10		August 13, 2020		August 22, 2005
11		August 14, 2020		August 24, 2005
12		August 21, 2020		August 29, 1995
13		August 22, 2020		September 2, 2005 <sup>[nb 7]</sup>
14		September 1, 2020		September 5, 2005
15		September 1, 2020		September 7, 2005 <sup>[nb 9]</sup>
16		September 7, 2020		September 17, 2005
17		September 7, 2020		September 18, 2005
18		September 12, 2020		September 23, 2021

19		September 14, 2020		September 24, 2021
20		September 14, 2020		September 29, 2021
21		September 17, 2020		October 9, 2005
22		September 17, 2020		October 17, 2005
23		September 18, 2020		October 22, 2005
24		October 2, 2020		October 27, 2005
25		October 5, 2020		November 15, 2005
26		October 19, 2020		November 22, 2005
27		October 25, 2020		November 29, 2005
28		November 1, 2020		December 30, 2005
29		November 10, 2020	<i>Earliest formation by virtue of being the only of that number</i>	<i>Earliest formation by virtue of being the only of that number</i>
30	Iota	November 13, 2020	<i>Earliest formation by virtue of being the only of that number</i>	<i>Earliest formation by virtue of being the only of that number</i>

(Chart courtesy of Wayne Neely, The Weather Channel, NOAA-NHC, & Wikipedia).

### Costliest U.S. North Atlantic Hurricanes 1900–2010

(Total estimated property damage, adjusted for wealth normalization)

Rank:	Hurricane:	Season:	Cost (2018 USD):
1	Harvey	2017	\$198.63 billion
2	“Great Miami”	1926	\$190.3 billion
3	Katrina	2005	\$130.9 billion
4	“Great Galveston”	1900	\$120.4 billion
5	“Galveston”	1915	\$82.3 billion
6	Andrew	1992	\$67.5 billion
7	“Great New England”	1938	\$47.5 billion

8	“Great Cuba-Florida”	1944	\$46.9 billion
9	“Great Okeechobee”	1928	\$40.6 billion
10	Ike	2008	\$34.1 billion
11	Donna	1960	\$32.4 billion

(Chart courtesy of Wayne Neely, The Weather Channel, NOAA-NHC, & Wikipedia).

### **Costliest All-Time North Atlantic Hurricanes**

The record of the costliest tropical cyclone in the North Atlantic is held jointly by hurricanes Katrina (2005) and Harvey (2017), which resulted in approximately \$125 billion in property damage during the year they occurred. These storms are also the costliest tropical cyclones recorded worldwide. The hurricane seasons of those two hurricanes, the 2005 and 2017 Atlantic hurricane seasons, are also the two costliest hurricane seasons recorded.

Most of the costliest North Atlantic hurricanes in recorded history have peaked as major hurricanes. However, weaker tropical cyclones can still cause widespread damage. Tropical storms Alberto in 1994, Allison in 2001, Lee in 2011, Imelda in 2019, and Fred in 2021 each caused over a billion dollars in damage. As of 2023, it's important to note that no numbered tropical depressions have become a billion-dollar disaster, highlighting the rarity of such events.

Flooding typically accounts for about 60% of a storm's damages, which is reflected in the list with Harvey, Florence, and most recently Ida, which produced catastrophic rainfall, and with Katrina, Ike, Sandy, and Ian, which produced devastating storm surges. Wind damage also encompasses much storm damage, evidenced by Andrew, Irma, and Michael. Due to their excessive damage, the names of tropical cyclones accruing at least \$1 billion are usually retired by the World Meteorological Organization, but this is not always true. Juan in 1985 was the first hurricane to cause at least a billion in damage and not be retired; its name was retired after a later usage (2003) that did not cause over a billion in damage. Since Juan, nine tropical cyclones that caused at least a billion in damage were not retired, the most notable being Sally in 2020, which caused at least \$7.3 billion, the costliest storm not to have its name retired. As of March 21, 2024, the most recent billion-dollar hurricane to not have its name retired was Idalia in 2023.

Understanding the patterns of these storms is key to being prepared and resilient. Betsy was the first hurricane to cause at least \$1 billion in damage in 1965, which caused much of its damage in southeastern Louisiana. Camille caused over \$1 billion in damage four years later, ravaging Louisiana and Mississippi at landfall and Virginia after moving inland. After the 1960s, each decade saw an increase in tropical cyclones, causing at least a billion in damage over the last decade due to increasing urban development and population. In the 1970s, four hurricanes caused at least a billion in damage, the costliest of which was Agnes, which caused \$2.1 billion—the following decade featured seven hurricanes causing at least a billion in damage. In the 1990s, twelve tropical cyclones accrued at least a billion in damage, including Hurricane Andrew in 1992. The system greatly exceeded the damage figure of any preceding tropical cyclone, causing \$27.3 billion in damage, mainly in South Florida. Nineteen tropical cyclones in the 2000s caused at least \$1 billion in damage. The 2005 season had six billion-dollar hurricanes, the most of any season on record; this record was later

surpassed in 2020 with eight billion-dollar hurricanes. Hurricanes Ivan (2004) and Irma (2017) caused at least \$1 billion in damage in four countries. In the 2010s, twelve storms caused at least \$1 billion in damage. Hanna was the first storm of the 2020s to become a billion-dollar disaster.

### **Costliest All-Time North Atlantic Hurricanes**

Name:	Damage/Adjusted Cost (Billions USD):	Season:	Storm classification at peak intensity:	Areas affected:
<b>Katrina</b>	\$198.8	2005	Category 4	<ul style="list-style-type: none"> <li>• The Bahamas</li> <li>• United States Gulf Coast</li> </ul>
<b>Harvey</b>	\$158.8	2017	Category 4 hurricane	<ul style="list-style-type: none"> <li>• Windward Islands</li> <li>• Suriname</li> <li>• Guyana</li> <li>• Nicaragua</li> <li>• Honduras</li> <li>• Belize</li> <li>• Cayman Islands</li> <li>• Yucatán Peninsula</li> <li>• Southern and Eastern United States (especially Texas and Louisiana)</li> </ul>
<b>Ian</b>	\$117.4	2022	Category 4 hurricane	<ul style="list-style-type: none"> <li>• Trinidad and Tobago</li> <li>• Venezuela</li> <li>• Columbia</li> <li>• ABC Islands</li> <li>• Jamaica</li> <li>• Cayman Islands</li> <li>• Cuba</li> <li>• Florida</li> <li>• The Carolinas</li> </ul>
<b>Maria</b>	\$114.3	2017	Category 4	<ul style="list-style-type: none"> <li>• Lesser Antilles</li> <li>• US Virgin Islands</li> <li>• Puerto Rico</li> <li>• Dominican Republic</li> <li>• Haiti</li> <li>• Turks and Caicos</li> <li>• The Bahamas</li> </ul>

<b>Sandy</b>	\$87.8	2012	Category 3 hurricane	<ul style="list-style-type: none"> <li>• The Caribbean</li> <li>• The Bahamas</li> <li>• United States East Coast</li> <li>• Eastern Canada</li> </ul>
<b>Ida</b>	\$83.9	2021	Category 4 hurricane	<ul style="list-style-type: none"> <li>• Venezuela</li> <li>• Columbia</li> <li>• Jamaica</li> <li>• Cayman Islands</li> <li>• Cuba</li> <li>• Gulf Coast States</li> <li>• East Coast United States</li> <li>• Atlantic Canada</li> </ul>
<b>Irma</b>	\$63.5	2017	Category 4 hurricane	<ul style="list-style-type: none"> <li>• Cape Verde</li> <li>• Leeward Islands</li> <li>• Cuba</li> <li>• Puerto Rico</li> <li>• Turks and Caicos</li> <li>• Jamaica</li> <li>• The Bahamas</li> <li>• Florida</li> </ul>
<b>Andrew</b>	\$59.9	1992	Category 5 hurricane	<ul style="list-style-type: none"> <li>• The Bahamas</li> <li>• Florida</li> <li>• United States Gulf Coast</li> </ul>
<b>Ike</b>	\$42.9	2008	Category 4 hurricane	<ul style="list-style-type: none"> <li>• Greater Antilles</li> <li>• Texas</li> <li>• Louisiana</li> <li>• Midwestern United States</li> </ul>
<b>Ivan</b>	\$33.6	2004	Category 5 hurricane	<ul style="list-style-type: none"> <li>• Windward Islands</li> <li>• Trinidad and Tobago</li> <li>• Venezuela</li> <li>• Barbados</li> <li>• Jamaica</li> <li>• Grand Cayman</li> <li>• Cuba</li> <li>• Yucatan Peninsula</li> <li>• Eastern United States</li> <li>• Florida</li> </ul>

				<ul style="list-style-type: none"> <li>• Alabama</li> <li>• US Gulf Coast States</li> <li>• Canada</li> </ul>
<b>Michael</b>	\$31.0	2018	Category 5 hurricane	<ul style="list-style-type: none"> <li>• Central America</li> <li>• Yucatán Peninsula</li> <li>• Cayman Islands</li> <li>• Cuba</li> <li>• Southeastern United States</li> <li>• Eastern United States</li> <li>• Eastern Canada</li> <li>• Iberian Peninsula</li> </ul>
<b>Florence</b>	\$29.8	2018	Category 4	<ul style="list-style-type: none"> <li>• West Africa</li> <li>• Cape Verde</li> <li>• Bermuda</li> <li>• Eastern Seaboard of the United States</li> <li>• Canada</li> </ul>
<b>Wilma</b>	\$29.8	2005	Category 5 hurricane	<ul style="list-style-type: none"> <li>• Greater Antilles</li> <li>• Central America</li> <li>• The Bahamas</li> <li>• Florida</li> </ul>
<b>Rita</b>	\$29.0	2005	Category 5 hurricane	<ul style="list-style-type: none"> <li>• Cuba</li> <li>• United States Gulf Coast</li> </ul>
<b>Laura</b>	\$27.9	2020	Category 4	<ul style="list-style-type: none"> <li>• Lesser Antilles</li> <li>• Greater Antilles</li> <li>• The Bahamas</li> <li>• Gulf Coast of the United States</li> <li>• Midwestern United States</li> </ul>
<b>Charley</b>	\$26.4	2004	Category 4 hurricane	<ul style="list-style-type: none"> <li>• Jamaica</li> <li>• Cayman Islands</li> <li>• Cuba</li> <li>• Florida</li> <li>• The Carolinas</li> </ul>
<b>Hugo</b>	\$22.5	1989	Category 5 hurricane	<ul style="list-style-type: none"> <li>• Cape Verde</li> <li>• Lesser Antilles</li> <li>• Puerto Rico</li> </ul>

				<ul style="list-style-type: none"> <li>• Dominican Republic</li> <li>• Eastern Coast of the United States</li> <li>• Atlantic Canada</li> <li>• Southern Greenland</li> </ul>
Irene	\$18.6	2011	Category 3 hurricane	<ul style="list-style-type: none"> <li>• The Caribbean</li> <li>• The Bahamas</li> <li>• United States East Coast</li> <li>• Eastern Canada</li> </ul>

(Chart courtesy of Wayne Neely, The Weather Channel, NOAA-NHC, & Wikipedia).

## List of the Most Intense North Atlantic Tropical Cyclones

### **The Most Intense North Atlantic Hurricanes by Minimum Central Pressure:**

The most intense storm in the North Atlantic by lowest central pressure was Hurricane Wilma in 2005. The strongest storm by 1-minute sustained winds was Hurricane Allen in 1980. Storms which reached a minimum central pressure of 920 millibars (27.17 inHg) or less are listed. Storm information has been compiled back to 1851, though measurements were rarer until aircraft reconnaissance started in the 1940s, and inexact estimates were still predominant until dropsondes were implemented in the 1970s.

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Rank	Hurricane	Year	Minimum Central Pressure
1	Wilma	2005	882 millibars (hPa)
2	Gilbert	1988	888 millibars (hPa)
3	Great Labor Day	1935	892 millibars (hPa)
4	Rita	2005	895 millibars (hPa)
5	Allen	1980	899 millibars (hPa)
6	Camille	1969	900 millibars (hPa)
7	Katrina	2005	902 millibars (hPa)
8	Mitch	1998	905 millibars (hPa)
9	Dean	2007	905 millibars (hPa)
10	Maria	2017	908 millibars (hPa)
11	Dorian	2019	910 millibars (hPa)
12	Irma	2017	914 millibars (hPa)

**The most intense North Atlantic Hurricanes (Courtesy of The Weather Channel, Wikipedia, NOAA-NHC, HURDAT).**

**The Total Amount of Record Rainfall for The Bahamas After Various Hurricanes-Some of the Wettest Bahamian Hurricanes on Record**

<u>Rank</u>	<u>Rainfall in mm</u>	<u>Rainfall in inches</u>	<u>Storm Name</u>	<u>Island/Location</u>	<u>Year</u>
<b>1</b>	747.5	29.43	Noel	Long Island	2007
<b>2</b>	436.6	17.19	Flora	Duncan Town	1963
<b>3</b>	390.1	15.36	Inez	Nassau International Airport	1966
<b>4</b>	337.1	13.27	Fox	Nassau International Airport	1952
<b>5</b>	321.1	12.64	Michelle	Nassau International Airport	2001
<b>6</b>	309.4	12.18	Erin	Church Grove, Crooked Island	1995
<b>7</b>	260.0	9.88	Fay	Freeport	2008
<b>8</b>	236.7	9.32	Floyd	Little Barbor, Abaco	1999
<b>9</b>	216.4	8.52	Cleo	West End, Grand Bahamas	1964
<b>10</b>	207.0	8.15	Betsy	Green Turtle Cay, Abaco	1965

Some of the wettest Bahamian hurricanes on record (Courtesy of Wayne Neely & Bahamas Department of Meteorology, and NOAA-NHC).

**Some of the Greatest and Deadliest Bahamian Hurricanes on Record**

<u>Year</u>	<u>Hurricane</u>	<u>Category</u>	<u>Deaths</u>
<b>1500</b>	The Vicente Yáñez Pinzón Hurricane or the Crooked Island Hurricane of 1500	Unknown	2 ships lost with entire crew
<b>1559</b>	The Don Tristan de Luna y Arellano Hurricane of 1559	Unknown	7 of 13 ships lost with entire crew of at least 1,2340 persons
<b>1563</b>	The Hurricane of 1563	Unknown	35 persons

<b>1589</b>	The Hurricane of 1589	Unknown	410 persons
<b>1609</b>	The Sea Venture Hurricane of 1609	Unknown	32 persons
<b>1622</b>	The Atocha Hurricane of 1622	Unknown	~1090 persons
<b>1623</b>	The Hurricane of 1623	Unknown	~400 persons
<b>1657</b>	The Hurricane of 1657	Unknown	~644 persons
<b>1715</b>	The Hurricane of 1715	Unknown	1,000 persons
<b>1800</b>	The Lowestoffe Hurricane of 1800	Unknown	5 persons
<b>1806</b>	The Great Coastal Hurricane of 1806	Unknown	207 persons
<b>1813</b>	The Hurricane of 1813	Unknown	3 persons
<b>1832</b>	The Hurricane of 1832	Unknown	52 persons
<b>1837</b>	The Hurricane of 1837	Unknown	45 persons
<b>1853</b>	The Hurricane of 1853	Unknown	12 persons
<b>1856</b>	The Hurricane of 1856	Unknown	4 persons
<b>1866</b>	The Great Bahamas Hurricane of 1866	4	387 persons
<b>1871</b>	The Hurricane of 1871	3	23 persons
<b>1883</b>	The Bahamas-North Carolina Hurricane of 1883	2	109 persons
<b>1899</b>	The Great San Ciriaco Hurricane of 1899	4	~334 persons
<b>1908</b>	Hurricanes #6 & #8 of 1908	3	134 persons
<b>1918</b>	The Great Florida Keys Hurricane of 1918	4	'At least-95 persons'
<b>1926</b>	The Great Nassau Hurricane of 1926	4	~258-268 persons
<b>1928</b>	The Great Okeechobee Hurricane of 1928	4	~4,118 persons in total but ~1,400 persons of Bahamian origins
<b>1929</b>	The Great Bahamas of 1929	4	142 persons
<b>1932</b>	The Great Abaco Hurricane of 1932	5	18 persons
<b>1933</b>	The Great Bahamian Hurricanes of 1933	5	20 persons
<b>1941</b>	The 1941 Florida Hurricane	3	4 persons
<b>1942</b>	Tropical Storm #10 of 1942	Tropical Storm	10 persons
<b>1945</b>	The Great Homestead Hurricane of 1945	4	2 persons
<b>1965</b>	Hurricane Betsy	5	1 person
<b>1992</b>	Hurricane Andrew	5	3 persons
<b>1999</b>	Hurricane Floyd	5	2 persons
<b>2004</b>	Hurricane Frances	4	1 person
<b>2005</b>	Hurricane Wilma	5	1 person
<b>2007</b>	Hurricane Noel	1	1 person
<b>2012</b>	Hurricane Sandy	3	2 persons
<b>2015</b>	Hurricane Joaquin	4	No deaths
<b>2016</b>	Hurricane Matthew	5	No deaths
<b>2017</b>	Hurricane Irma	5	No deaths
<b>2019</b>	Hurricane Dorian	5	74 deaths

(Courtesy of Wayne Neely, The Tribune, The Nassau Guardian, Wikipedia & NOAA\_NHC).

### List of the Deadliest Hurricanes of the North Atlantic From 1500-1825

Name:	Dates Active:	Areas Affected:	Deaths:
Nicaragua	1605	Central America	1,300
Straits of Florida	1622	Bahamas and Florida	1,090
Cuba and Florida	1644	Cuba and Florida	1,500
Caribbean	1666	Caribbean	2,000
Barbados	1694	Barbados	1,000+
Bahamas	1715	Bahamas	1,000-2,500
Martinique	1767	Greater and Lesser Antilles	1,600
Havana	1768	Cuba	43-1,000
Newfoundland	1775 August 29- September 9	North Carolina, Virginia, Newfoundland	4,000-4,163
Pointe-à-Pitre Bay	1776	Guadeloupe, Lesser Antilles	6,000
Great Hurricane/San Calixto	1780 October 9-20	Barbados, St. Lucia, Martinique, St. Eustatius	22,000
Gulf of Mexico	1780	Mexico and US Gulf Coast	2,000
Savanna-la-Mar Hurricane	1780	Jamaica and Cuba	42-1,090
Florida	1781	Florida	2,000+
Central Atlantic	1782	Central Atlantic	3,000+
'Cuba' Hurricane	1791	Cuba	3,000
Martinique	1813	Martinique, Leeward Islands	3,000
Caribbean	1824	Caribbean	372-1,300+

(List of the Deadliest Hurricanes of the North Atlantic from 1500-1825 (Image courtesy of NOAA-NHC).

### The most intense landfalling hurricanes in the Contiguous United States (Intensity is measured solely by minimum central pressure)

<u>Rank:</u>	<u>Hurricane:</u>	<u>Season:</u>	<u>Landfall Pressure:</u>
1	Great Labor Day	1935	892 millibars (hPa)
2	Camille	1969	900 millibars (hPa)
3	Katrina	2005	920 millibars (hPa)
4	Andrew	1992	922 millibars (hPa)
5	Great Indianola	1886	925 millibars (hPa)

6	Great Florida Keys	1919	927 millibars (hPa)
7	Great Okeechobee	1928	929 millibars (hPa)
7	Irma	2017	929 millibars (hPa)
9	Great Miami	1926	930 millibars (hPa)
9	Donna	1960	930 millibars (hPa)

The most intense landfalling hurricanes in the Contiguous United States (Courtesy of the National Hurricane Center-HURDAT-Hurricane Research Division, Wayne Neely & Wikipedia).

### Deaths Occurring on the Sponging Vessels and the Names of the Persons and Vessels Lost During the Great Bahamas Hurricane of 1899

Ship's Name:	Type of Vessel:	Number of Persons who Perished:	Names of the persons who Perished:
Solent	Schooner	9	Wm Nixon Fred K Smith Thos Sands T. Dawkin Jos Miller Samuel Miller Robert Wilson Hezekiah Tynes Daniel Miller
Catherine Ella	Sloop	1	Fred McKenzie
Ghost	Schooner	4	Daniel Bethel Luke Humes Two other names not known
Traffic	Schooner	6	Albert Kemp Esau Miller James Miller W. Black Horatio Summons Israel Aunett
Annie	Schooner	6	Hamilton Forbes George Mackey Thomas Sweeting Alexander Franks Samuel Adderley Simeon Thurston
Lilla	Sloop	2	T. Roach James Burke Roach

Sea Horse	Schooner	8	Captain Clinton, his son and six others drowned.
Claretta	Sloop	Unknown	Names unknown.
Terror	Sloop	8	Granville Wilson Nathaniel Humes Percival Wilson Naaman Sumner Daniel Knowles Thos Adderley Joshua Rolle Michael Knowles
Empress	Schooner	3	Robert Russell Nathaniel Bode Michael Rolle
Remembrance	Sloop	8	Matthias Woodside Solomon Woodside Cubit Woodside Jack Colebrook John White James Nottage Wm Flower Joe Ormond Woodside
Savage	Schooner	12	James Clarke Alfred Edin Jeremiah Pattern James Rolle Tobias Rolle Theophilus Rolle Gabriel McPhee Buddie McPhee Mitchell Rolle 3 others unnamed
Magic Light	Schooner	3	James Moxey Daniel Kemp Newton Jones
Eager	Schooner	1	Charles Martin
Snow Bird	Sloop	4	Charles Saunders John Bennett Robert George Miller Joseph Johnson
Magnolia	Sloop	1	Unknown
Complete	Sloop	11	Edward Johnson Sylvester Mackey Ramon Dorsett Uriah Bain Alfred Davis James Davis

			Wm. Johnson W. Pratt Benjamin Johnson Henry Evans
Soud	Sloop	2	Jeremiah Storr W. Rogers
Waterloo	Schooner	4	Alfred Evans Alexander Smith James Rahming Herbert Gibson
Uno	Schooner	3	James Ball Virginius Gordon Horatio Rolle
Sea Horse	Schooner	8	W. Clinton Horatio Lightbourn George Thompson Joshua Thompson Henry Edgecombe Samuel Clinton W. McBride Hezekiah Pinder
Julia	Schooner	8	Jeremiah Ferguson W. Adderley Wilfred Sands Melville Moxey Theodore Bain Alex Williams Thos Johnson Henry Douglas
Unknown	Schooner	6	Joseph Rolle Castilio Butler John Fox James Coakley Smith Coakley Johnson
Challenge	Sloop	9	Joseph Hamilton Jas Taylor Joseph Williams Frederick Deveaux Herbert Edgecombe Achilles Rolle Joseph Johnson Robert Bennett 1 Unknown
Western Queen	Sloop	10	Joseph Eulin Jacob McKey Joseph Bootle

			Joseph Western George Eulin, Daniel Taylor Thos Minnis Zodoc Armbrister George Weech Andrew Francis
Southern Queen	Schooner	11	Jas Adderley Norman Adderley Alex Bain Joseph Finn Arthur Pratt Felix Gibson J.F. Miller Sylvanus Hepburn Jas Rolle Jonathan Reckley Simeon Rolle
Guide	Sloop	7	Nathl. Wright H. Wallace Alphia Wallace Richard Thompson Simon Simons Adolphus Adderley Anthony McKinney
Dazzle	Schooner	3	Menin Albury Horthy Pinder Daniel Pinder
Mary	Schooner	4	Robert Forbes Tim Higgs Hezekiah Stubbs Joseph Rolle
Douglass	Sloop	7	Prince Woodside Tim Marshall W.H. Mackey Nathaniel Marshal Arthur Oliver Smith Sirus Butler W. Marshall
Will O' The Wisp	Schooner	6	Caiaphas McKenzie Wilson Rolle Leslie Rolle Henry Humes Isaac Curtis Nathl. Taylor
Equal	Schooner	1	W. Bain
Bowkin	Schooner	6	George Bain

			Ezekiel Nesbit Richard Farrington Three names unknown
Stinging Bee	Sloop	12	Benjamin Oliver 11 names unknown
Alert	Schooner	10	Sidney Delancy Alix Lightbourn Hezekiah Reckley John Moxey Alex Miller Sam Bowe Alfred Ferguson Jonathan Williams Thos Gould Neptune Storr
Proceed	Schooner	8	Wm Rolle Stephen Romer Daniel Forbes Nathan Forbes Samuel Rolle John Rolle Andrew Forbes P. Rolle
Choir	Schooner	6	Chas Russell Absalom Dorsett W. Haley Elijah Humes Jos Miller Alfred Frances
Jane	Schooner	1	J.T. McKey Jr.
Experience	Sloop	6	Hezekiah Farrington Alfred Brown Theo Munroe Jos Sims Jos Allen Winder Herman Boyd
Nonsuch	Sloop	12	Jas Rattray Ruben Sweeting Jas Mackey Jeremiah Strachan W. Rodgers Bruce Boyd Jas Bowleg Isaac Evans Wilfred McKenzie Three names unknown
Phoebe	Schooner	15	Isaac Bethel

			Liberty Sturrup Thaddeus Bethel Isaac (Sardens) Hart William Sturrup Jr. Enoch Bethel Chas Clark Mark Marshall Jas Wallace Michael Bethel Jr. Five names unknown
Lady Shea	Schooner	5	Robert (John) Murphy Daniel (Pompey) Whyley Abraham Rolle Edward Dean Thos Evans
Florence	Schooner	1	Israel McQueen
Alpine	Schooner	2	Samuel Demerritt Christopher Brown

Deaths occurring on the sponging vessels and the names of the persons and vessels lost during the Great Bahamas Hurricane of 1899. (Courtesy of Wayne Neely, The Tribune, & The Nassau Guardian).

**Below are the Names of the Persons Who Drowned at Andros During the Great Bahamas Hurricane of 1899:**

Name:	Where They Drowned:	Name:	Where They Drowned:
Ambrister, Zadoc	Joulter Cays	Bain, Bartholomew	Joulter Cays
Bain, Joseph	Red Bays	Bain, Daniel	Joulter Cays
Bain, Uriah	Red Bays	Bennett, John	Red Bays
Bennett, Robert	Joulter Cays	Bode, Nathaniel	Red Bays
Bootle, Joseph	Joulter Cays	Boyd, Bruce	Joulter Cays
Bowleg, Jos-Alex	Joulter Cays	Bunch, John	Unknown
Bain, George	Joulter Cays	Colebrooke, John	William Cays
Davis, James	Red Bays	Davis, Alfred	Red Bays
Duncombe	Unknown	Deveaux, Fred	Joulter Cays
Dorset, Ramon	Red Bays	Duncombe, Claudius	Joulter Cays
Evans, Henry	Red Bays	Evans, Thomas	Red Bays
Edgecombe, Henry	Red Bays	Edgecombe, Sylvanus	Joulter Cays
Edgecombe, Herbert	Joulter Cays	Forbes, Hamilton	Fresh Creek
Franks, Alexander	Fresh Creek	Fowler, William	Williams Cay
Ferguson, Esau	Unknown	Francis, Andrew	Joulter Cays
Farrington, Richard	Joulter Cays	Glinton, Samuel	Red Bays
Glinton, William	Red Bays	Gordon, Virginia	Red Bays

Hepburn, George	Joulter Cays	Hanna, Theophilus	Joulter Cays
Hamilton, Joseph	Joulter Cays	Johnson, James	Red Bays
Johnson, Joseph	Red Bays	Johnson, Joseph	Joulter Cays
Johnson, Edward	Red Bays	Johnson	Unknown
Lightbourn, Horatio	Red Bays	Mockey, G	Fresh Creek
Miller, Robert Geo	Red Bays	Mackey, Henry	Red Bays
Mickey, James	Joulter Cays	McKenzie, Wilfred	Joulter Cays
McQueen, Israel	Unknown	McKay, Jacob	Joulter Cays
McBride, William	Red Bays	Moxey, James	Unknown
Martin, Charles	Joulter Cays	Thomas, Minuis	Joulter Cays
Miller, Solomon	William Cays	Murphy Robi	Red Bays
Nottage, James	William Cays	Nesbitt, Nicholas	Joulter Cays
Oliver, Samuel	Fresh Creek	Oliver, Samuel	Joulter Cays
Oliver, Benjamin	Joulter Cays	Oliver, Cornelius	Joulter Cays
Pinder, Hezekiah	Red Bays	Rolle, Horatio	Red Bays
Rolle, Michael	Red Bays	Russell, Robert	Red Bays
Rattray, Joseph	Joulter Cays	Rolle, Archillus	Joulter Cays
Rolle, Graham	Red Bays	Rogers, William	Joulter Cays
Simmons, Edgar	Unknown	Saunders Charles	Unknown
Simmons, Horatio	Unknown	Simms, Theophilus	Joulter Cays
Sweeting, Reuben	Joulter Cays	Sweeting, Thomas	Fresh Creek
Saunders, Charles	Red Bays	Strachan, Jeremiah	Joulter Cayss
Thurston, Simeon	Fresh Creek	James, Taylor	Joulter Cays
Thompson, George	Red Bays	Thompson, Joshua	Red Bays
Ulin, Joseph	Joulter Cays	Ulin, George	Joulter Cays
Wemyss, Henry	Red Bays	Williams	Joulter Cays
Woodside, Mathis	Williams Cay	Woodside, Jno. Sol	Williams Cay
Williams, Joseph	Joulter Cays	Woodside, Cubit	Williams Cay
White, John	Williams Cay	Whilly, John	Williams Cay
Daniel, Whilly	Red Bays	Whilly, John	Joulter Cays

The names of the persons who drowned at Andros during the Great Bahamas Hurricane of 1899. (Courtesy of Wayne Neely, The Tribune, & The Nassau Guardian).

### **Strongest Hurricanes by 1-minute sustained wind speed.**

It is important to note here that most countries within the region use the World Meteorological Organization's regulations or standards to measure sustained wind speeds, getting the average wind speed over a ten-minute average as the official measurement. Still, the United States and its territories measure the average wind speed of 1 minute sustained average wind speed. It must be noted that when measuring the wind speeds within the region, the Reconnaissance aircraft is owned and operated by the United States Government.

Because they use the 1-minute sustained to measure the wind speeds in a hurricane, we in this region, by extension, indirectly follow this mandate. In the individual countries in the region, if a storm passes over a non-US country, they still use the ten-minute sustained winds. Still, when measuring the wind speeds via a Reconnaissance aircraft, the US-based aircraft follows US-based regulations.

Hurricane:	Season:	By peak sustained wind speed (mph):	By wind speed at landfall(mph):
<b>Allen</b>	1980	190	-
<b>“Great Labor Day”</b>	1935	185	185
<b>Gilbert</b>	1988	185	-
<b>Dorian</b>	2019	185	185
<b>Wilma</b>	2005	185	-
<b>Mitch</b>	1998	180	-
<b>Rita</b>	2005	180	-
<b>Irma</b>	2017	180	185
<b>“Great Cuba”</b>	1932	175	-
<b>Janet</b>	1955	175	175
<b>Camille</b>	1969	175	175
<b>Anita</b>	1977	175	175
<b>David</b>	1979	175	175
<b>Andrew</b>	1992	175	165
<b>Katrina</b>	2005	175	-
<b>Dean</b>	2007	175	175
<b>Felix</b>	2007	175	165