

Weather: What Is a Hurricane?



World Almanac for Kids

Palm trees blowing in hurricane-force winds

Hurricanes are the largest storms. They form over warm, usually tropical, oceans. As the warm seawater evaporates into the air, the pressure drops and winds begin to circulate, creating a huge wall of clouds and rain, wrapped around a calm center called the "eye." As warm, moist air continues to feed the storm, it gets stronger and can spread out to an area 300 miles wide and generate winds as fast as 150 miles per hour or more. In the Pacific Ocean hurricanes are called "typhoons."

Hurricanes can rip trees out by their roots and tear roofs off buildings. The strong winds blowing toward shore create a rise in ocean water called a "storm surge." Combined with heavy rains, this can cause flooding and massive damage.

For the Atlantic Ocean, Caribbean Sea, and Gulf of Mexico, hurricane season runs from June 1 to November 30. About 97% of tropical storms recorded since 1886 have fallen between those dates. Most hurricanes happen in August, September, or October, when the oceans are at their warmest. Very warm, humid air above tropical oceans is the source of energy that drives tropical storms and hurricanes. The water temperature of the ocean needs to be above 80 degrees for a hurricane to start.

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Hurricanes are classified into five groups based on wind speed. When steady winds from a tropical storm reach 40 mph, the storm is named. When the maximum sustained winds reach 74 mph, the storm is called a hurricane. Storms in category 3 or higher are considered major hurricanes.

Hurricane Categories

1	74-95 mph
2	96-110 mph
3	111-130 mph
4	131-155 mph
5	over 155 mph

Record Year

In 2004, the U.S. was affected by 15 named storms and nine hurricanes. Florida alone was hit by four hurricanes (Charley, Frances, Ivan, and Jeanne). Since record keeping began in 1851, the only other state to be hit by four hurricanes was Texas in 1886. One out every five houses in Florida was damaged by a hurricane in 2004, and over 9 million people were forced to evacuate their homes.

Watches and Warnings

A "hurricane watch" means that a hurricane could threaten an area in 24 to 36 hours. A "hurricane warning" means that sustained winds of at least 74 mph are expected in 24 hours or less. High water and waves may also be a reason for a warning.

Hurricane Names In The North Atlantic

For many years, hurricanes and other violent storms have been given names. Until the 20th century, people named storms after saints. In 1953, the U.S. government began to use women's names for hurricanes. Men's names came in 1978.

2005: Arlene, Bret, Cindy, Dennis, Emily, Franklin, Gert, Harvey, Irene, Jose, Katrina, Lee, Maria, Nate, Ophelia, Philippe, Rita, Stan, Tammy, Vince, Wilma

2004: Alex, Bonnie, Charley, Danielle, Earl, Frances, Gaston, Hermine, Ivan, Jeanne, Karl, Lisa, Matthew, Nicole, Otto, Paula, Richard, Shary, Tomas, Virginie, Walter

2003: Ana, Bill, Claudette, Danny, Erika, Fabian, Grace, Henri, Isabel, Juan, Kate, Larry, Mindy, Nicholas, Odette, Peter, Rose, Sam, Teresa, Victor, Wanda

2002: Arthur, Bertha, Cristobal, Dolly, Edouard, Fay, Gustav, Hanna, Isidore, Josphine, Kyle, Lili, Marco, Nana, Omar, Paloma, Rene, Sally, Teddy, Vicky, Wilfred

2001: Allison, Barry, Chantal, Dean, Erin, Felix, Gabrielle, Humberto, Iris, Jerry, Karen, Lorenzo, Michelle, Noel, Olga, Pablo, Rebekah, Sebastien, Tanya, Van, Wendy

2000: Alberto, Beryl, Chris, Debby, Ernesto, Florences, Gordon, Helene, Isaac, Joyce, Keith, Leslie, Michael, Nadine, Oscar, Patty, Rafael, Sandy, Tony, Valerie, William

1999: Arlene, Bret, Cindy, Dennis, Emily, Floyd, Gert, Harvey, Irene, Jose, Katrina, Lenny, Maria, Nate, Ophelia, Phillippe, Rita, Stan, Tammy, Vince, Wilma

Did You Know? Hurricane Names Can Be Retired

Hurricane names come from a set of six lists that are used in turn, one list per year. But if a hurricane is particularly destructive, its name will be retired—much as the jersey number of a great athlete is retired when the athlete steps down.

After deadly Hurricane Hugo (1989), for instance, "Hugo" was replaced on the lists by "Humberto." After 1998, "Mitch" was replaced by "Matthew," and after 1999 "Floyd" was replaced by "Franklin."