

## 2008 Atlantic Hurricane Names

<i>Arthur</i>	<i>Bertha</i>	<i>Cristobal</i>
<i>Dolly</i>	<i>Edouard</i>	<i>Fay</i>
<i>Gustav</i>	<i>Hanna</i>	<i>Ike</i>
<i>Josephine</i>	<i>Kyle</i>	<i>Laura</i>

***When does hurricane season start and end?*** Hurricane season the portion of the year having a relatively high incidence of hurricanes. The hurricane season in the Atlantic, Caribbean, and Gulf of Mexico runs from June 1 to November 30.

***What is a hurricane?*** A severe tropical storm with torrential rain and extremely strong consistent winds of 74 mph (64 knots) or greater. Usually these storms are accompanied by rain, thunder, lightening, and storm surge. Hurricanes originate in areas of low pressure in equatorial regions of the Atlantic or Caribbean, and then strengthen, traveling northwest, north, or northeast.

### **Terminology:**

***Tropical Depression:*** A tropical depression is an organized system of clouds and thunderstorms with a defined circulation and maximum sustained winds of 38 mph (33 knots) or less.

***Tropical Disturbance:*** A discrete tropical weather system of apparently organized convection--generally 100 to 300 nautical miles in diameter---originating in the tropics or subtropics, having a nonfrontal migratory character, and maintaining its identity for 24 hours or more. It may or may not be associated with a detectable perturbation of the wind field.

***Tropical Wave:*** A trough or cyclonic curvature maximum in the trade-wind easterlies. The wave may reach maximum amplitude in the lower middle troposphere.

***Tropical Storm:*** A tropical cyclone in which the maximum sustained surface wind speed (using the U.S. 1-minute average) ranges from 34 kt (39 mph or 63 kph) to 63 kt (73 mph or 118 kph).

***Advisory:*** Official information issued by tropical cyclone warning centers describing all tropical cyclone watches and warnings in effect along with details concerning tropical cyclone locations, intensity and movement, and precautions that should be taken.

***High Wind Warning:*** A high wind warning is defined as 1-minute average surface winds of 35 kt (40 mph or 64 kph) or greater lasting for 1 hour or longer, or winds gusting to 50 kt (58 mph or 93 kph) or greater regardless of duration that are either expected or observed over land.

**Hurricane Warning:** A warning that sustained winds 64 kt (74 mph or 119 kph) or higher associated with a hurricane are expected in a specified coastal area in 18-24 hours or less. A hurricane warning can remain in effect when dangerously high water or a combination of dangerously high water and exceptionally high waves continue, even though winds may be less than hurricane force.

**Hurricane Watch:** An announcement of specific coastal areas that a hurricane or an incipient hurricane condition poses a possible threat, generally within 24-36 hours.

**Tropical Storm Warning:** A warning for tropical storm conditions including sustained winds within the range of 34 to 63 kt (39 to 73 mph or 63 to 118 kph) that are expected in a specified coastal area within 24 hours or less.

**Tropical Storm Watch:** An announcement that a tropical storm poses or tropical storm conditions pose a threat to coastal areas generally within 36 hours. A tropical storm watch should normally not be issued if the system is forecast to attain hurricane strength.

**Coast Guard Conditions:** Used as a guideline but may be moved up or back depending on projections and analysis by the District Staff.

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| <b>Condition V</b>   | December 1 – May 31 each year   |
| <b>Condition IV</b>  | June 1 – November 30 each year  |
| <b>Condition III</b> | 48 hours prior to expected impact of higher winds not the projected landfall of the eye. Set by the District Commander and Sector CO    |
| <b>Condition II</b>  | 24 hours prior to expected impact of higher winds not the projected landfall of the eye. Set by the District Commander and Sector CO    |
| <b>Condition I</b>   | 12 hours prior to to expected impact of higher winds not the projected landfall of the eye. Set by the District Commander and Sector CO |

**Eye:** The relatively calm center of the hurricane that is more than one half surrounded by wall cloud. It is roughly a circular area if comparatively light winds and fair weather and usually is about 25-30 miles in diameter. Sometimes the eye is very small and in some cases much larger than the 25-30 miles in diameter.

**Center:** The vertical axis or core of a hurricane. It is usually determined by cloud patterns, wind, and/or pressure distributions.

**Eye Wall:** An organized band of clouds immediately surrounding the center of a tropical hurricane.

**Storm Surge:** A dome of seawater, often 50 miles across, that sweeps across the coastline inundating the land with as much as 26 feet or more of water above normal high tide. The ocean level rises as a hurricane approaches, peaking where the eye strikes land, and gradually subsiding after the hurricane passes. This is the greatest threat to life and property. Historically, nine out of ten deaths are caused by storm surge. Evacuation zones are based on storm surge possibilities in an area.

**Storm Tide:** The actual level of sea water resulting from the astronomic tide combined with the storm surge.

**Evacuation levels:** Areas pre-designated by local emergency management officials requiring evacuation for hazard vulnerability. Hurricane evacuation levels are normally based on salt water flooding from storm surge as determined by surge model data.

**Evacuation clearance time:** The amount of time to evacuate an area is based on the number of people required to evacuate, the number of vehicles that may be used, the suitability of the roads (capacity, elevation, location, etc.) and then any special evacuation considerations such as medical facilities and people with special needs.

**Best Track:** A subjectively smoothed path, versus a precise and very erratic fix-to-fix path, used to represent tropical cyclone movement. It is based on an assessment of all available data.

**Hurricane Local Statement:** A public release prepared by local National Weather Service offices in or near a threatened area giving specific details for its county/parish warning area on (1) weather conditions, (2) evacuation decisions made by local officials, and (3) other precautions necessary to protect life and property.

**Present Movement:** The best estimate of the movement of the center of a tropical cyclone at a given time and given position. This estimate does not reflect the short-period, small scale oscillations of the hurricane center.

**Gale Warning:** A warning of 1-minute sustained surface winds in the range 34 kt (39 mph or 63 kph) to 47 kt (54 mph or 87 kph) inclusive, either predicted or occurring not directly associated with tropical cyclones.

## **Categories:**

**Saffir-Simpson Hurricane Scale:** The Saffir-Simpson Hurricane Scale is a 1-5 rating based on the hurricane's present intensity. This is used to give an estimate of the potential property damage and flooding expected along the coast from a hurricane landfall. Wind speed is the determining factor in the scale, as storm surge values are highly dependent on the slope of the continental shelf in the landfall region.

**Category One Hurricane:** Winds 74-95 mph. Storm surge generally 4-5 feet above normal. No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Some damage to poorly constructed signs. Also, some coastal road flooding and minor pier damage.

**Category Two Hurricane:** Winds 96-110 mph. Storm surge generally 6-8 feet above normal. Some roofing material, door, and window damage of buildings. Considerable damage to shrubbery and trees with some trees blown down. Considerable damage to mobile homes, poorly constructed signs, and piers. Coastal and low-lying escape routes flood 2-4 hours before arrival of the hurricane center. Small craft in unprotected anchorages break moorings.

**Category Three Hurricane:** Winds 111-130 mph. Storm surge generally 9-12 feet above normal. Some structural damage to small residences and utility buildings with a minor amount of curtainwall failures. Damage to shrubbery and trees with foliage blown off trees and large trees blown down. Mobile homes and poorly constructed signs are destroyed. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the hurricane center. Flooding near the coast destroys smaller structures with larger structures damaged by battering of floating debris. Terrain continuously lower than 5 ft above mean sea level may be flooded inland 8 miles or more. Evacuation of low-lying residences with several blocks of the shoreline may be required.

**Category Four Hurricane:** Winds 131-155 mph. Storm surge generally 13-18 feet above normal. More extensive curtainwall failures with some complete roof structure failures on small residences. Shrubs, trees, and all signs are blown down. Complete destruction of mobile homes. Extensive damage to doors and windows. Low-lying escape routes may be cut by rising water 3-5 hours before arrival of the hurricane center. Major damage to lower floors of structures near the shore. Terrain lower than 10 feet above sea level may be flooded requiring massive evacuation of residential areas as far inland as 6 miles.

**Category Five Hurricane:** Winds greater than 155 mph. Storm surge generally greater than 18 feet above normal. Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. All shrubs, trees, and signs blown down. Complete destruction of mobile homes. Severe and extensive window and door damage. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the hurricane center. Major damage to lower floors of all structures located less than 15 feet above sea level and within 500 yards of the shoreline. Massive evacuation of residential areas on low ground within 5-10 miles of the shoreline may be required.