

2017 HURRICANE SEASON NOTES

JUNE-1 KICKS OFF THE 2017 HURRICANE SEASON. BELOW ARE THE NAMES FOR THE COMING 2017 ATLANTIC TROPICAL SEASON, ALONG WITH SOME DEFINITIONS AND FACTS THAT PERTAIN TO TROPICAL SYSTEMS. DURING HURRICANE SEASON (OR IF NEEDED EARLIER), TROPICAL UPDATES ALONG WITH THE LOCAL CONDITIONS WILL BE DISSEMINATED EVERY AM OR AS WARRANTED. PREDICTIONS FOR THE 2017 HURRICANE SEASON WILL BE SENT OUT IN THE IMMEDIATE FUTURE. PLEASE KEEP IN MIND, NO MATTER HOW MANY TROPICAL SYSTEMS ARE PREDICTED, ALL IT TAKES IS 1 TO AFFECT OUR COUNTY.

MODELS

NOTE - IN REFERENCE TO THE MODELS FOR THESE TROPICAL SYSTEMS – MODELS ARE NOT AN EXACT SCIENCE, THEY ARE BASED ON THE CURRENT CONDITIONS. AS CONDITIONS CHANGE, SO DO THE MODELS. THE MODELS ARE USED FOR GENERALIZATION OF THE TRAJECTORY AND INTENSITY OF THE TROPICAL SYSTEM(S). A FOUR AND FIVE-DAY TRACK FORECASTS CAN HAVE SIGNIFICANT ERRORS AND COMBINED WITH THE FACT THAT THE MODEL SPREAD IS STILL NOTABLE BEYOND 72 HOURS ONE SHOULD NOT FOCUS ON THE EXACT TRACK.

CATEGORIES

Category	Sustained Winds	Types of Damage Due to Hurricane Winds
1	74-95 mph 64-82 kt 119-153 km/h	Very dangerous winds will produce some damage: Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.
2	96-110 mph 83-95 kt 154-177 km/h	Extremely dangerous winds will cause extensive damage: Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.
3 (major)	111-129 mph 96-112 kt 178-208 km/h	Devastating damage will occur: Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many

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		trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.
4 (major)	130-156 mph 113-136 kt 209-251 km/h	Catastrophic damage will occur: Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.
5 (major)	157 mph or higher 137 kt or higher 252 km/h or higher	Catastrophic damage will occur: A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

DEFINITIONS

Tropical Depression:

A tropical cyclone in which the maximum sustained wind speed is 38 mph or less (33 kt or less or 17 m/s or less). Depressions have a closed circulation.

Tropical Storm

A tropical cyclone in which the maximum sustained wind speed ranges from 39 mph (34 kt or 18 m/s) to 73 mph (63 kt or 33 m/s). The convection in tropical storms is usually more concentrated near the center with outer rainfall organizing into distinct bands.

Hurricane

When winds in a tropical cyclone equal or exceed 74 mph (64 kt or 34 m/s) it is called a hurricane. Hurricanes are further designated by categories on the Saffir-Simpson scale. Hurricanes in categories 3, 4, and 5 are known as Major Hurricanes or Intense Hurricanes.

The Saffir-Simpson Hurricane Wind Scale

The Saffir-Simpson Hurricane Wind Scale is a 1 to 5 categorization based on the hurricane's intensity at the indicated time. The scale provides examples of the type of damages and impacts

in the United States associated with winds of the indicated intensity. In general, damages rise by about a factor of four for every category increase. The maximum sustained surface wind speed [peak 1-minute wind at 10 m (33 ft.)] is the determining factor in the scale. The scale does not address the potential for such other hurricane-related impacts, as storm surge, rainfall-induced floods, and tornadoes. These wind-caused impacts are to apply to the worst winds reaching the coast and the damage would be less elsewhere. It should also be noted that the general wind-caused damage descriptions are to some degree dependent upon the local building codes in effect and how well and how long they have been enforced. Hurricane wind damage is also dependent upon such other factors as duration of high winds, change of wind direction, amount of accompanying rainfall, and age of structures.

ACRONYMS

Accumulated Cyclone Energy (ACE) - A measure of a named storm's potential for wind and storm surge destruction defined as the sum of the square of a named storm's maximum wind speed (in 104 knots²) for each 6-hour period of its existence. The 1950-2000 average value of this parameter is 96 for the Atlantic basin.

Atlantic Basin – The area including the entire North Atlantic Ocean, the Caribbean Sea, and the Gulf of Mexico.

El Niño – A 12-18 month period during which anomalously warm sea surface temperatures occur in the eastern half of the equatorial Pacific. Moderate or strong El Niño events occur irregularly, about once every 3-7 years on average.

Hurricane (H) - A tropical cyclone with sustained low-level winds of 74 miles per hour (33 ms⁻¹ or 64 knots) or greater.

Hurricane Day (HD) - A measure of hurricane activity, one unit of which occurs as four 6-hour periods during which a tropical cyclone is observed or is estimated to have hurricane-force winds.

Major Hurricane (MH) - A hurricane which reaches a sustained low-level wind of at least 111 mph (96 knots or 50 ms⁻¹) at some point in its lifetime. This constitutes a category 3 or higher on the Saffir/Simpson scale.

Major Hurricane Day (MHD) - Four 6-hour periods during which a hurricane has an intensity of Saffir/Simpson category 3 or higher.

Named Storm (NS) - A hurricane, a tropical storm or a sub-tropical storm.

Named Storm Day (NSD) - As in HD but for four 6-hour periods during which a tropical or sub-tropical cyclone is observed (or is estimated) to have attained tropical storm-force winds. .

Saffir/Simpson Hurricane Wind Scale – A measurement scale ranging from 1 to 5 of hurricane wind intensity. One is a weak hurricane; whereas, five is the most intense hurricane.

Sea Surface Temperature – SST

Sea Surface Temperature Anomaly – SSTA

Tropical Cyclone (TC) - A large-scale circular flow occurring within the tropics and subtropics which has its strongest winds at low levels; including hurricanes, tropical storms and other weaker rotating vortices.

Tropical Storm (TS) - A tropical cyclone with maximum sustained winds between 39 mph (18 ms-1 or 34 knots) and 73 mph (32 ms-1 or 63 knots).

Vertical Wind Shear – The difference in horizontal wind between 200 mb (approximately 40,000 feet or 12 km) and 850 mb (approximately 5000 feet or 1.6 km).

1 knot = 1.15 miles per hour = 0.515 meters per second

2017 ATLANTIC STORM NAMES – (Note – Storm name Arlene was already used April 21, 2017 for subtropical Storm Arlene that formed in the middle Atlantic and posed no threat to Florida or the continental U.S.)

Arlene
Bret
Cindy
Don
Emily
Franklin
Gert
Harvey
Irma
Jose
Katia
Lee
Maria
Nate
Ophelia
Philippe
Rina
Sean
Tammy
Vince
Whitney