

WEATHER TERMS FOR THE HURRICANE SEASON

Definitions:

Tropical Depression	A weather disturbance with a clearly defined area of low pressure: highest constant wind speed reaching 38 miles per hour.
Tropical Storm	A storm with distinct low pressure area well-defined by a large rotating circulation: constant wind speeds of 39 – 73 miles per hour.
Hurricane	Once a tropical storm's constant wind speed reaches 74 miles per hour or greater, the storm is classified as a hurricane.
Small Craft Advisory	Storm conditions with winds reaching 21 – 38 miles per hour and hazardous wave conditions threatening a coastal area. Small boats are advised to remain in port.
Evacuation Order	The most important instruction you will receive from local government officials. It will be relayed over local radio and television stations. Once a mandatory evacuation order is issued for your area, gather your survival kit and leave <i>immediately</i>. Because of long evacuation times and the unpredictability of hurricanes, you may be ordered to leave before a hurricane watch or warning is issued.
Emergency	A condition which threatens or affects the public health safety and/or security and which is beyond the abilities of those normally responsible for the management of such conditions. It may result from an act or threatened act of war, riot, terrorism, or other act of violence; or from a weather event such as flood, hurricane, tornado or other cause.
Zulu Time	Zulu Time, also known as Universal Coordinated Time (UTC) or Greenwich Mean Time (GMT) is the standard time common to every place in the world. Expressed using a 24-hour clock, Zulu Time reflects the time along the prime meridian (0 longitude) that runs through the Greenwich Observatory in London, England. Eastern Standard Time (EST) is 5 hours BEFORE Zulu time, Eastern Daylight Time (EDT) is 4 hours BEFORE Zulu time. (Ex. If it is 0800 Z, then it is 0300 EST or 0400 EDT)

WEATHER TERMS FOR STORM SEASON

Tropical Storm Watch	indicates a tropical storm poses a threat to coastal and other specific areas, generally lasts up to 36 hours.
Tropical Storm Warning	warns that storm conditions including sustained winds ranging from 39 to 73 miles per hour are expected in specific coastal areas within 24 hours.
Hurricane Watch	indicates a hurricane poses a threat to a coastal area and to other specific areas, generally within 36 hours. Protective measures must be completed rapidly.
Hurricane Warning	warns that a hurricane is expected in a specified coastal area within 24 hours of being issued, and that all protective measures must be completed <i>immediately</i> .
Coastal Flood Watch	indicates saltwater flooding along the nearest coastline is possible. Usually occurs during high tide.
Coastal Flood Warning	warns that saltwater flooding along the nearest coastline is expected within 24 hours. Usually occurs during high tide.
Flood Watch	indicates rainfall might cause general street or property flooding is possible.
Flood Warning	warns that rainfall that will cause street or property flooding is expected to occur within the next 12 – 24 hours.
Flash Flood Watch	means that conditions are such that flood within 6 hours of a rainfall event is possible, but not imminent in the watch area.
Flash Flood Warning	warns that a flood event from a severe rainfall event which may be an imminent threat to life and property is expected within 6 hours.
Tornado Watch	indicates weather conditions are favorable for the formation of tornadoes in the Watch Area.
Tornado Warning	warns that a tornado has been sighted or indicated on radar in the Warning area. All protective measures must be completed <i>immediately</i> . The path of a tornado is usually very erratic, making specific forecasts difficult.

HURRICANE STRIKES:

Landfall The eye of a hurricane crosses from water to land and continues inland. (a storm strikes the West coastline of Florida from the Gulf of Mexico. Charlie, 2004)

Paralleling The eye of a hurricane passes by, but doesn't cross the Coastline. Severe weather may be experienced even though the storm doesn't actually make landfall. (A storm moves northwest along West coast of the Florida peninsula: Elena, 1985.)

Exiting The eye of a hurricane which crosses over land and returns to open water. (A storm enters Florida's west coast and exits via its east: Wilma, 2005.)

HAZARDS:

Storm Surge The most dangerous hurricane hazard is storm surge, which historically cause nine of ten hurricane-related deaths. A storm surge is a great dome of water that formed by the low internal pressure inside a hurricane. Areas south of the area of landfall experience the maximum storm surges. When coupled with the breaking waves, surges cause great destruction. The more intense the hurricane, the higher the storm surge. **We FLEE FROM FLOOD and HIDE FROM WIND!** Because of the shallow water and gradual slope of seafloor bottom, Pinellas County will get higher Storm Surges than most West Central Florida coastal areas, up to 24' or even greater depth. **This is what killed nearly all of the 2,000 victims of Katrina.**

High Winds High winds damage buildings and infrastructure and are the storm characteristic that people fear the most. The National Weather Service recommends that **all mobile home residents evacuate** to a more sound structure when **ANY hurricane threatens**. Also, high winds impact the timing of the Evacuation Order, since they arrive at the coastline several hours before the hurricane's eye. All evacuation activities must be completed prior to the arrival of sustained winds of 40 mph, since significantly higher wind gusts will occur. Additionally, tornadoes are often spawned during hurricanes and tropical storms. Unlike the hurricane winds, tornadoes develop instantly, inflict tremendous damage, vanish quickly, and remain impossible to predict when or where they will strike.

Rainfall Flooding from rainfall will be *in addition to* the Gulf water storm surge! Since every hurricane's structure is unique, there is no way to determine the rate and distribution of the expected six to twelve inches of rainfall accompanying a typical hurricane or tropical storm. Local rain-induced flooding will cause traffic to slow and evacuation routes to become blocked, thereby adding critical hours to total evacuation time. Hourly records of rainfall rates and accumulation for past hurricanes indicate that rates high enough to surpass drainage capabilities normally arrive with sustained gale force winds (40mph). These winds may extend out as many as 150 miles ahead of the actual eyewall of the hurricane. **Thus, if you live in an evacuation area, the time to evacuate your families is before the Hurricane Warning is actually declared.**

CATEGORIES AND DAMAGE POTENTIAL: Saffir-Simpson Scale

Category One ~ Winds of 74 to 95 MPH

- Damage primarily to shrubbery, trees, foliage, carports, and mobile homes with no real damage to other structures; and, some damage to poorly-constructed signs;
- Flooding at barrier islands and low-lying coastal roads, minor pier damage, and small boats in exposed anchorage torn from moorings;
- Storm Surge: 5 – 7 feet above normal.

Category Two ~ Winds of 96 to 109 MPH

- Considerable wind damage to shrubbery, trees, and foliage; some trees blown down; and, major damage to exposed mobile homes; extensive damage to poorly-constructed signs; and, some damage to buildings' roofing materials, windows, and doors;
- No major damage to inland buildings but considerable damage to piers, marinas, and small, unprotected crafts;
- Storm Surge: 7 – 12 feet above normal.

Category Three ~ Winds of 110 to 130 MPH: Major Hurricane

- Foliage torn from trees, and large trees blown down; nearly all poorly-constructed signs blown down; and, some damage to buildings' roofing materials, windows, and doors;
- Some structural damage to small buildings, and mobile homes unlivable;
- Serious flooding along barrier islands and coast, with larger structures damaged and smaller structures destroyed by waves and floating debris;
- Storm Surge: 12 – 15 feet above normal.

Category Four ~ Winds of 131 to 154 MPH: EXTREME Hurricane

- Shrubby and trees blown down; all signs blown down; and, extensive damage to roofing, windows, and doors;
- Complete destruction of mobile homes;
- Major damage to lower floors of structures near the coast or on barrier islands due to flooding, waves, and floating debris;
- Storm Surge: 15 – 20 feet above normal.

Category Five ~ Winds of 155 MPH +: CATASTROPHIC Hurricane

- **CATASTROPHIC DAMAGE**
- Shrubby and trees blown down; all signs blown down
- **Complete destruction** of entire buildings and obliteration of mobile homes;
- **Extreme damage** to lower floors of all structures less than 15 feet above sea level and within 500 yards of shoreline;
- Substantial damage to roofs of buildings;
- Storm Surge: 20 + feet above normal.