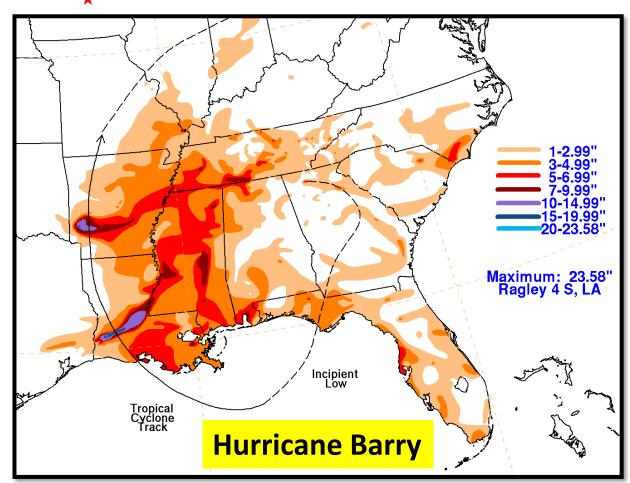
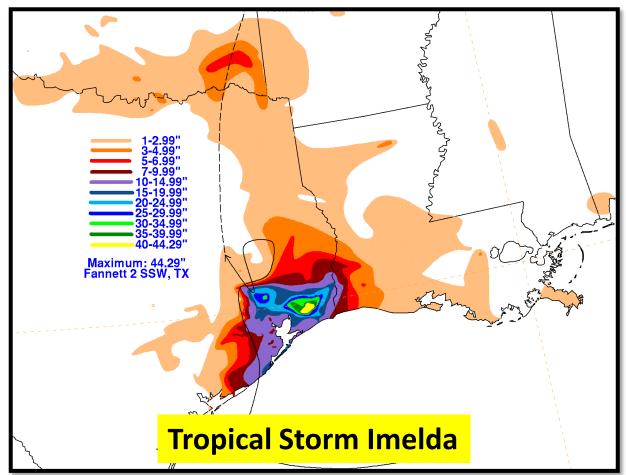


#### **2020 Hurricane Season**

By Roger Erickson, Warning Coordination Meteorologist







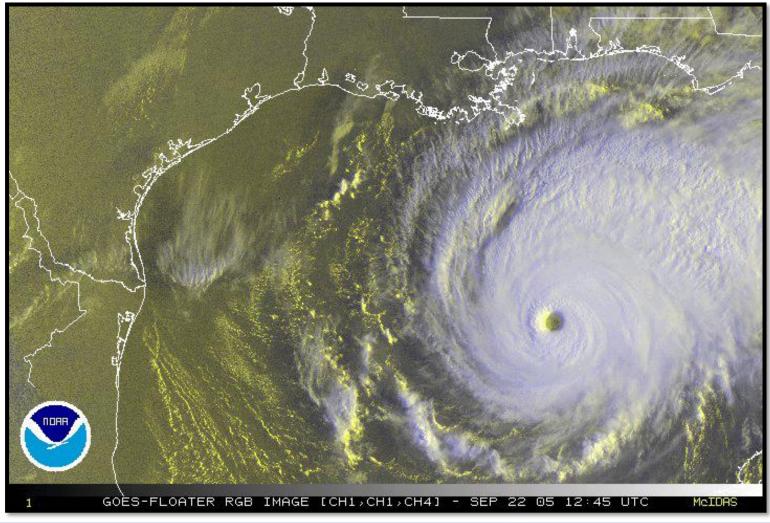






# Hazards of Tropical Cyclones

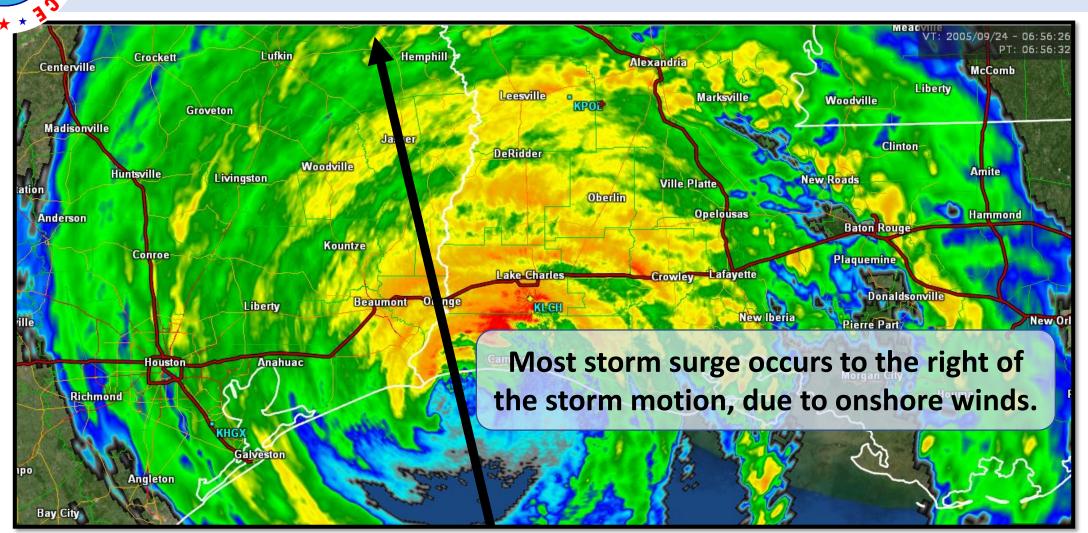
- 1. Storm Surge
- 2. Heavy Rain
- 3. Damaging Winds
- 4. Tornadoes







## Storm Surge

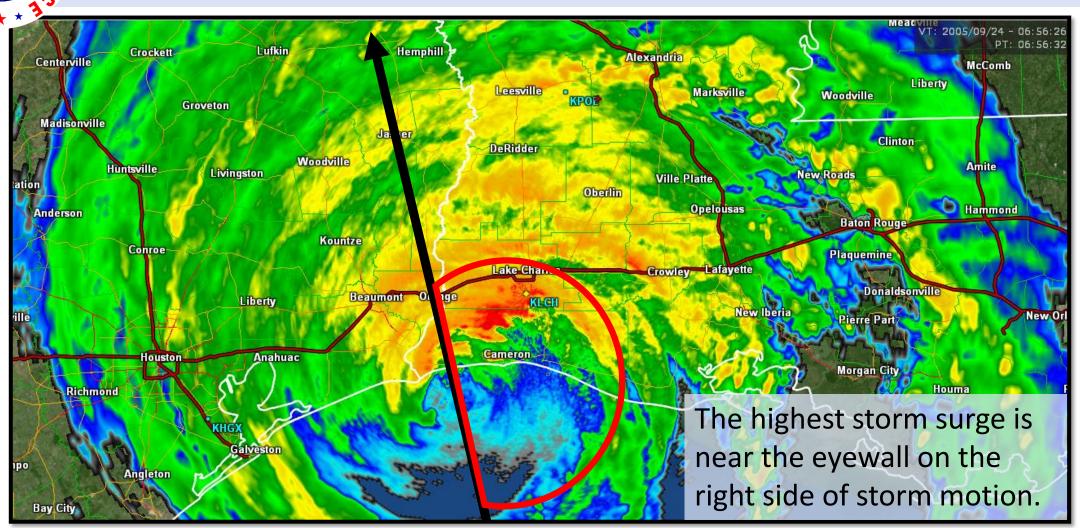








## Storm Surge

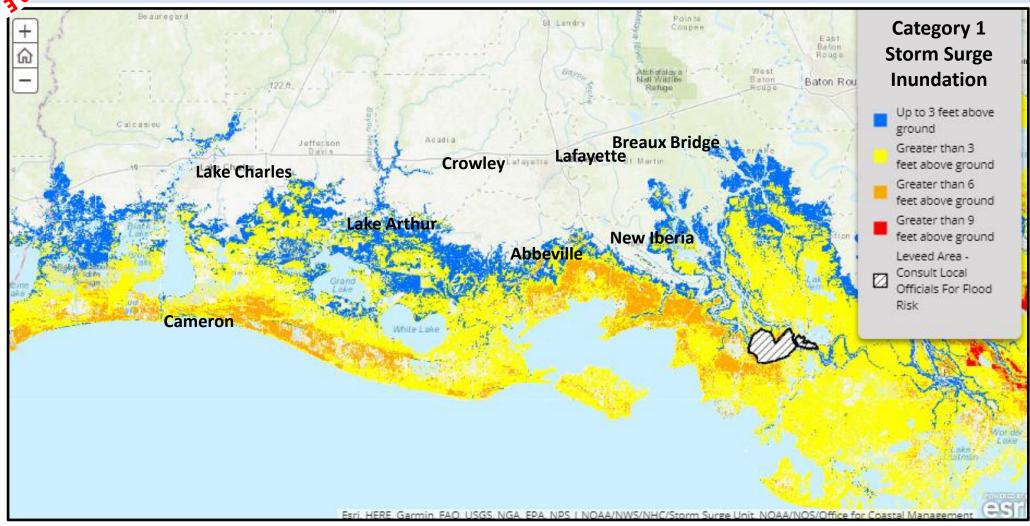


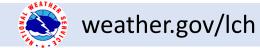








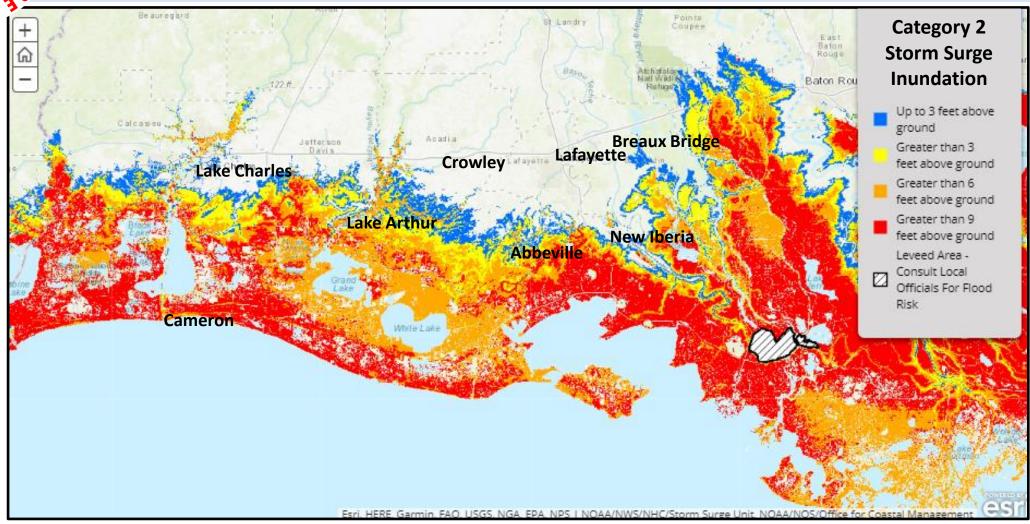








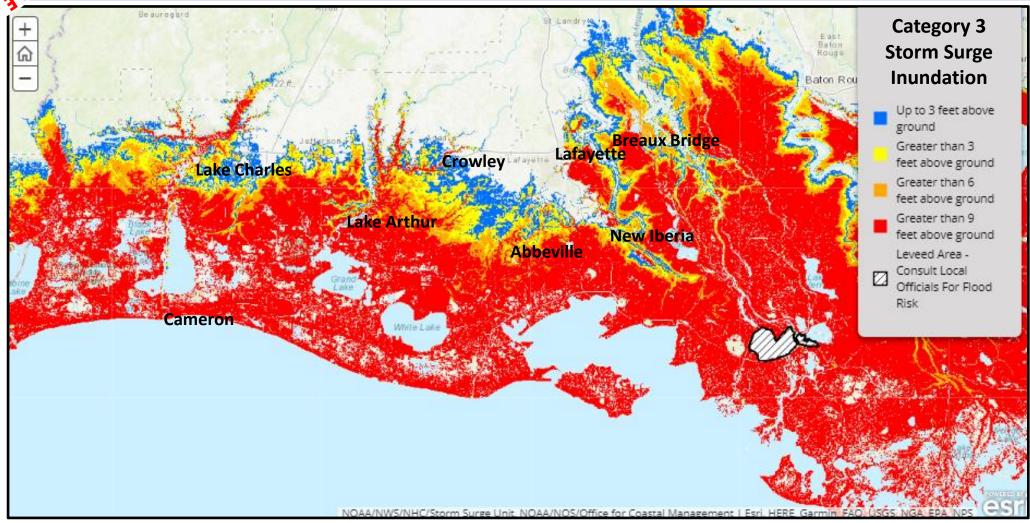


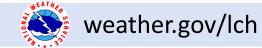


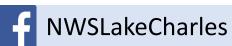




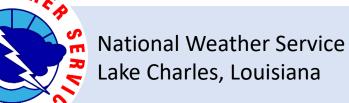


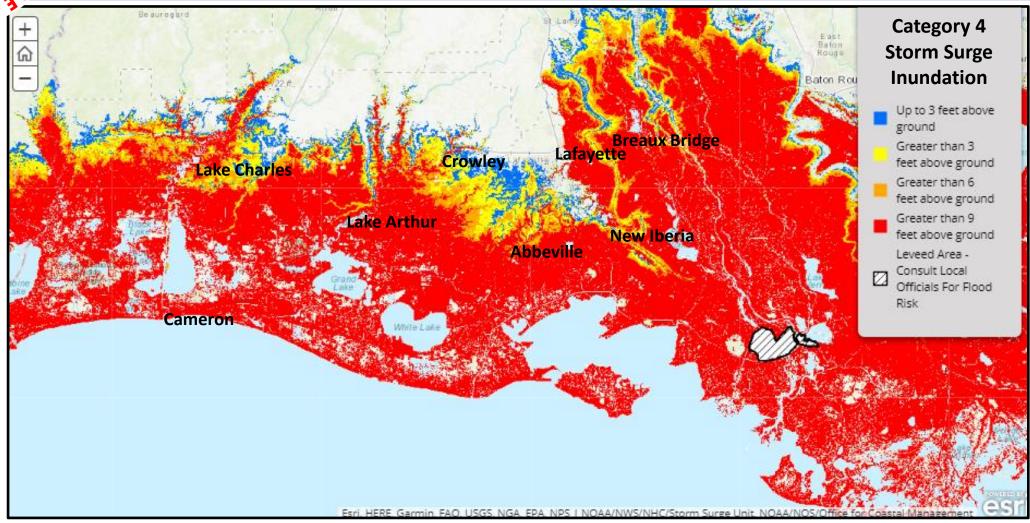








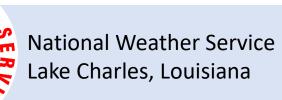


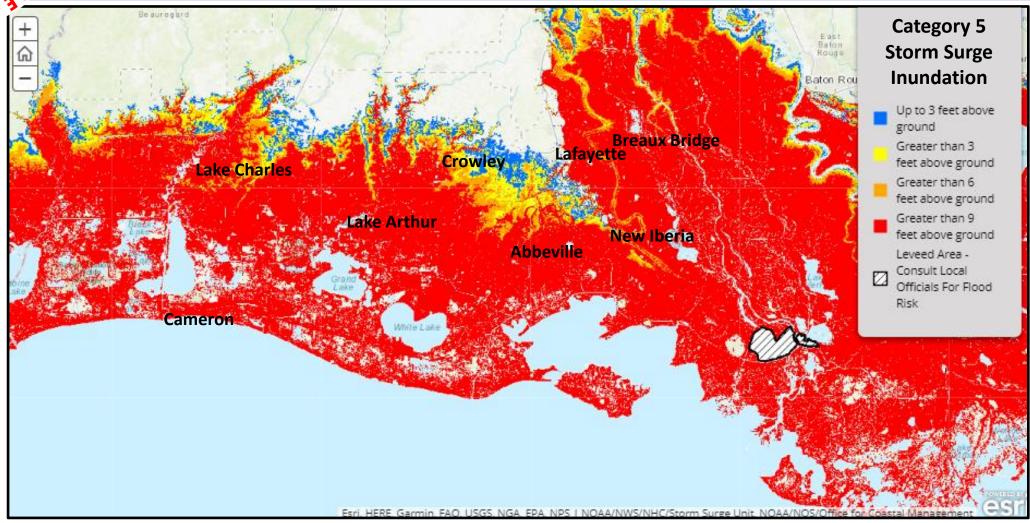


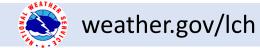
















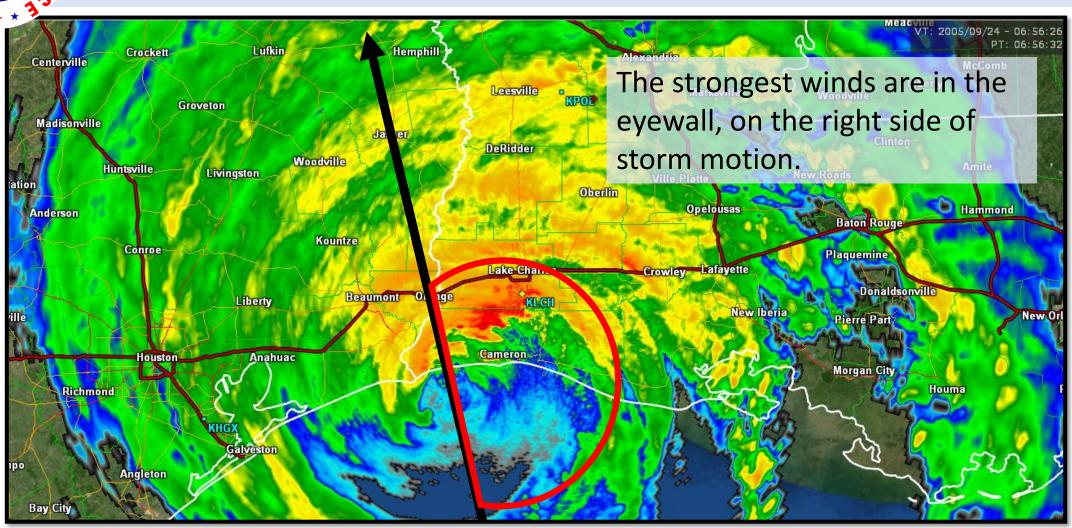
### Rainfall







# **Damaging Winds**

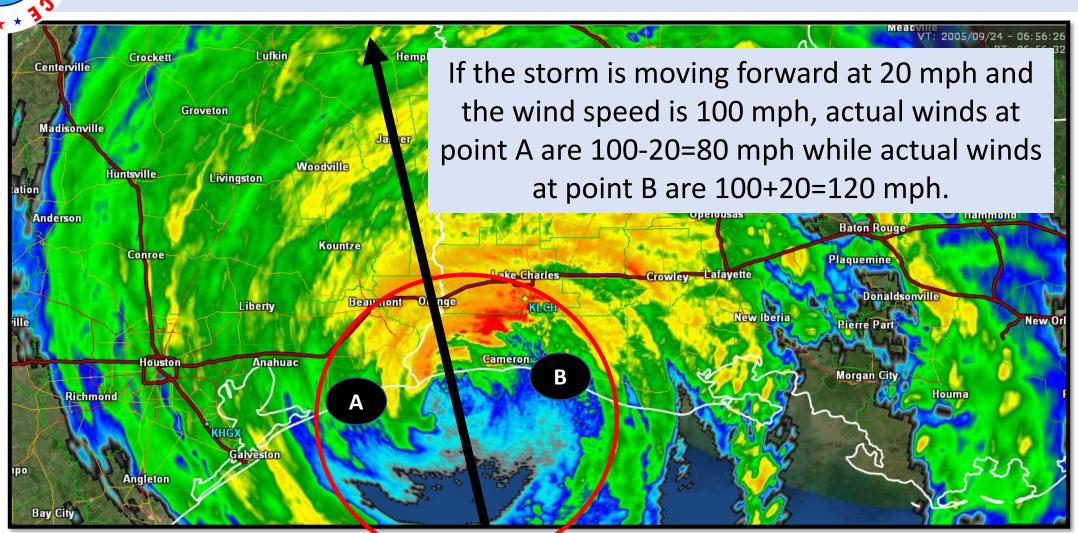




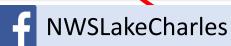




## Damaging Winds

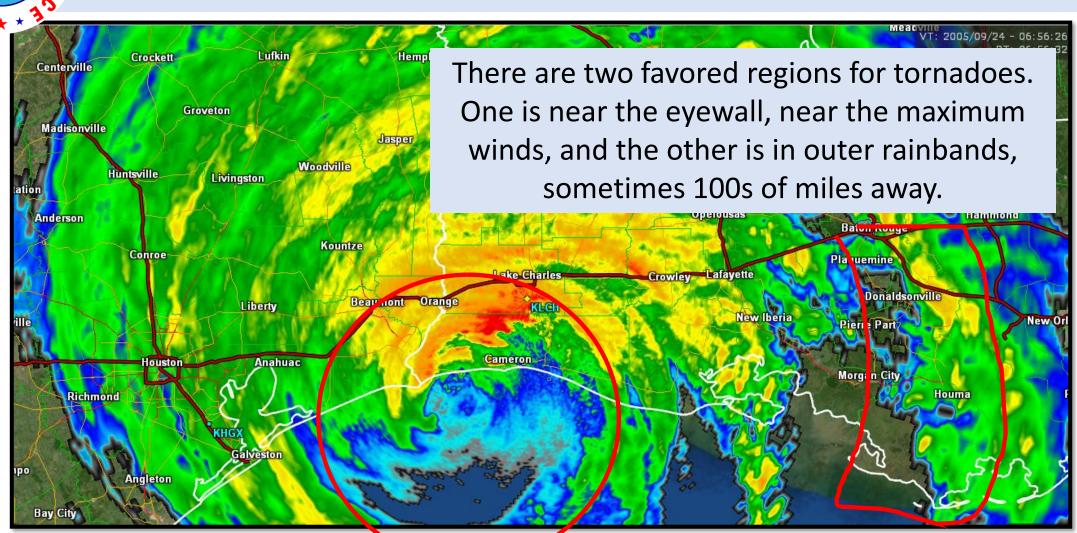


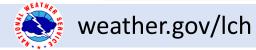


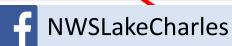




### **Tornadoes**









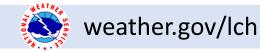
#### **NWS Wireless Emergency Alerts (WEA) related to Hurricane Season**

#### **Hurricane Warning: (current)**

NWS: HURRICANE WARNING this area. Check media and local authorities.

### **Hurricane Warning: (changing to Fall 2020)**

National Weather Service: A HURRICANE WARNING is in effect for this area for dangerous and damaging winds. This warning is issued up to 36 hours before hazardous conditions begin. Urgently complete efforts to protect life and property. Have food, water, cash, fuel, and medications for 3+ days. FOLLOW INSTRUCTIONS FROM LOCAL OFFICIALS.







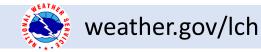
#### **NWS Wireless Emergency Alerts (WEA) related to Hurricane Season**

#### **Extreme Wind Warning: (current)**

NWS: EXTREME WIND WARNING this area til 11:35PM CDT. Take shelter now.

### **Extreme Wind Warning: (changing to Fall 2020)**

National Weather Service: An EXTREME WIND WARNING is in effect for this area for the immediate danger of life-threatening winds til 11:35PM EDT. Take cover NOW in an interior room of a sturdy building, away from windows. Protect your head from flying debris. Do NOT go out in the calm of the hurricane eye! Winds will quickly become dangerous again.







#### **NWS Wireless Emergency Alerts (WEA) related to Hurricane Season**

### **Tornado Warning: (current)**

NWS: TORNADO WARNING in this area til 10:30AM CDT. Take shelter now. Check media.

#### **Tornado Warning: (changing to Fall 2020)**

National Weather Service: TORNADO WARNING in this area until 12:15PM CST. Take shelter now in a basement or an interior room on the lowest floor of a sturdy building. If you are outdoors, in a mobile home, or in a vehicle, move to the closest substantial shelter and protect yourself from flying debris. Check media.





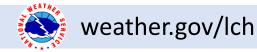
#### **NWS Wireless Emergency Alerts (WEA) related to Hurricane Season**

#### **Tornado Emergency: (current)**

NWS: TORNADO EMERGENCY til 10:45AM CDT. Tornado spotted in this area. Take shelter now!

### **Tornado Emergency: (changing to Fall 2020)**

National Weather Service: TORNADO EMERGENCY until 10:45PM MDT. Tornado spotted in this area. This is a life-threatening situation. Take shelter now in a basement or an interior room on the lowest floor of a sturdy building. If you are outdoors, in a mobile home, or in a vehicle move to the closest substantial shelter and protect yourself from flying debris.







#### **NWS Wireless Emergency Alerts (WEA) related to Hurricane Season**

### Flash Flood Warning: (current)

NWS: FLASH FLOOD WARNING this area til 9:00PM CDT. Avoid flooded areas.

### Flash Flood Warning: (changing to Fall 2020)

National Weather Service: A FLASH FLOOD WARNING is in effect for this area until 6:00AM EDT. This is a dangerous and life-threatening situation. Do not attempt to travel unless you are fleeing an area subject to flooding or under an evacuation order.





#### **NWS Wireless Emergency Alerts (WEA) related to Hurricane Season**

#### Flash Flood Emergency: (current)

NWS: FLASH FLOOD EMERGENCY this area til 9:00PM CDT. Avoid flooded areas.

### Flash Flood Emergency: (changing to Fall 2020)

National Weather Service: A FLASH FLOOD EMERGENCY is in effect for this area until 11:00AM EDT. This is an extremely dangerous and life-threatening situation. Do not attempt to travel unless you are fleeing an area subject to flooding or under an evacuation order.





#### **NWS Wireless Emergency Alerts (WEA) related to Hurricane Season**

#### **Storm Surge Warning: (current)**

NWS: Life-threatening STORM SURGE danger. FOLLOW THE INSTRUCTIONS OF LOCAL OFFICIALS.

### **Storm Surge Warning: (changing to Fall 2020)**

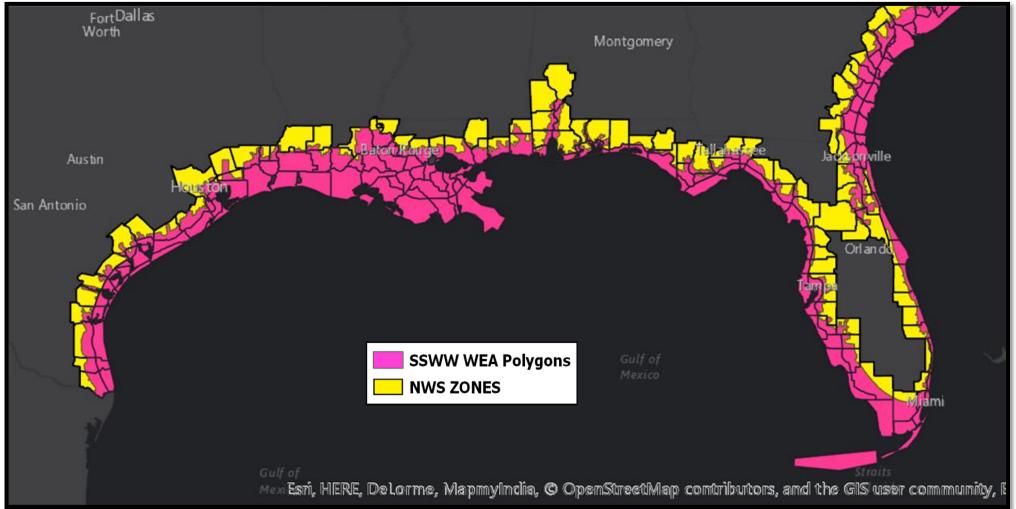
National Weather Service: A STORM SURGE WARNING is in effect for this area for the danger of lifethreatening flooding. This warning is issued up to 36 hours before hazardous conditions begin. Urgently complete efforts to protect life and property. Follow evacuation orders if given for this area to avoid drowning or being cut off from emergency services.







#### Inland Extent of Storm Surge Watch/Warnings







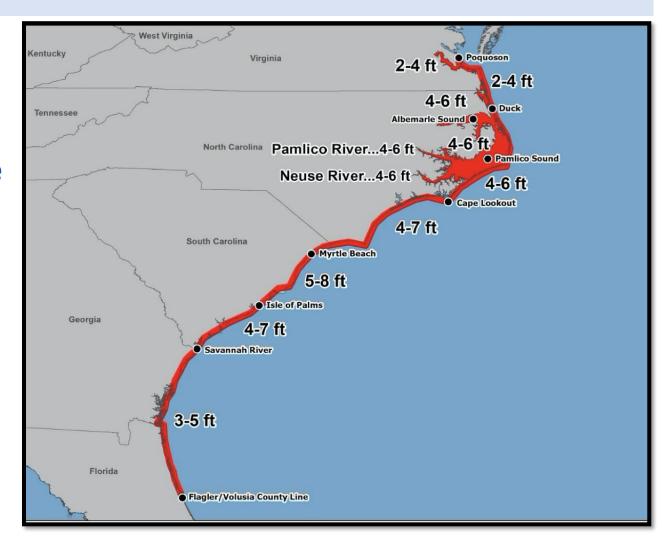




# National Weather Service Graphical Depiction of Storm Surge Values

**Graphical depiction of the peak storm surge** inundation values along the coast.

Values represent the peak height the water could reach above normally dry ground somewhere within the specified area.





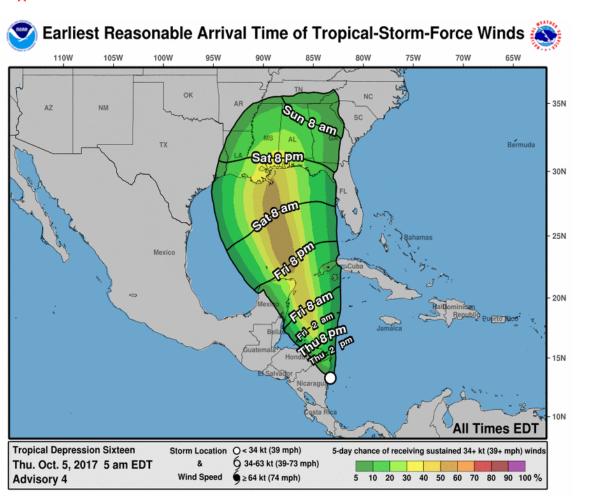






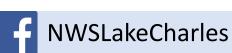


# Time of Arrival Graphics













## Tropical Cyclone Watch/Warning

#### \* WIND

- LATEST LOCAL FORECAST: Equivalent Cat 2 Hurricane force wind
  - Peak Wind Forecast: 80-100 mph with gusts to 120 mph
  - Window for Tropical Storm force winds: until early Sunday morning
  - Window for Hurricane force winds: Saturday morning until early Sunday morning
- POTENTIAL THREAT TO LIFE AND PROPERTY: Potential for wind greater than 110 mph
  - The wind threat has remained nearly steady from the previous assessment.
  - PLAN: Plan for extreme wind of equivalent CAT 3 hurricane force or higher due to possible forecast changes in track, size, or intensity.
  - PREPARE: Last minute efforts should solely focus on protecting life. The area remains subject to catastrophic wind damage.
  - ACT: Now is the time to shelter from life-threatening wind. Be ready to move to the safest place inside your shelter if necessary.







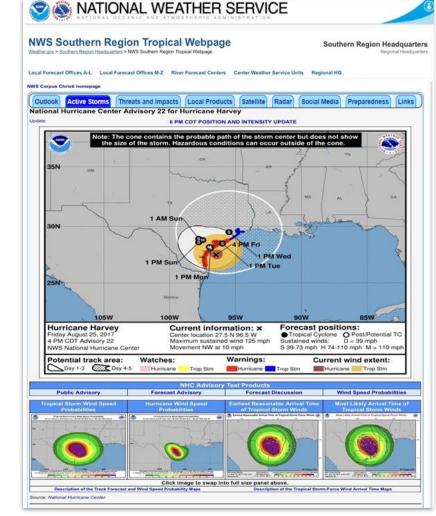




# Local Tropical Webpage

- Tropical Weather Outlook updates 7 & 3 am and pm
- Active Storms only when a system threatening us
- Threats and Impacts wind, surge, rain, tornado
- Local Products only when a system threatening us
- Satellite always current
- Radar always current
- Social Media always current
- Preparedness
- Links

#### https://www.weather.gov/srh/tropical?office=lch

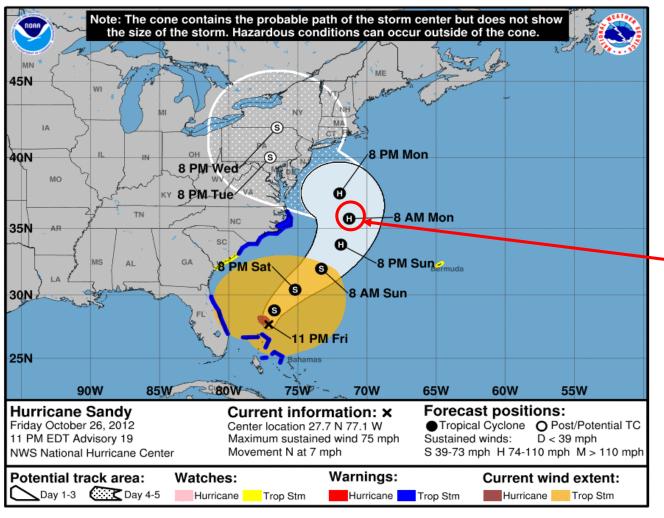








### 60 Hour Forecast Point Added



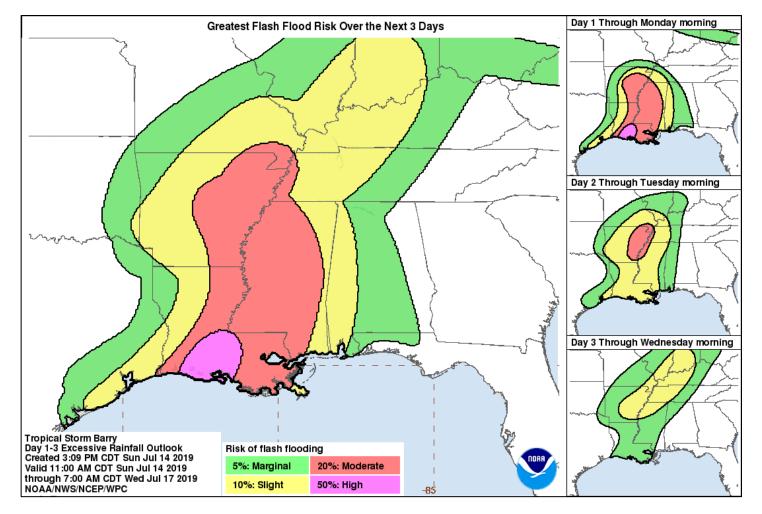
60-h forecast information on cone graphic







# Multi-Day Flash Flood Risk Graphic











# National Weather Service Meaning of Flash Flood Risk Graphic Lake Charles, Louisiana

#### **Understanding WPC Excessive Rainfall Risk Categories**

**MARGINAL** No Area/Label (MRGL) Flash floods are Isolated flash

> Localized and primarily affecting places that can experience rapid runoff with heavy rainfall.

floods possible

SLIGHT (SLGT)

Scattered flash floods possible

Mainly localized. Most vulnerable are urban areas, roads, small streams and washes. Isolated significant flash floods possible.

**MODERATE** (MDT)

Numerous flash floods likely

Numerous flash flooding events with significant events possible. Many streams may flood, potentially affecting larger rivers.

HIGH (HIGH)

Widespread flash floods expected

Severe, widespread flash flooding. Areas that don't normally experience flash flooding, could. Lives and property in greater danger.







generally not

expected.

www.wpc.ncep.noaa.gov

@NWSWPC











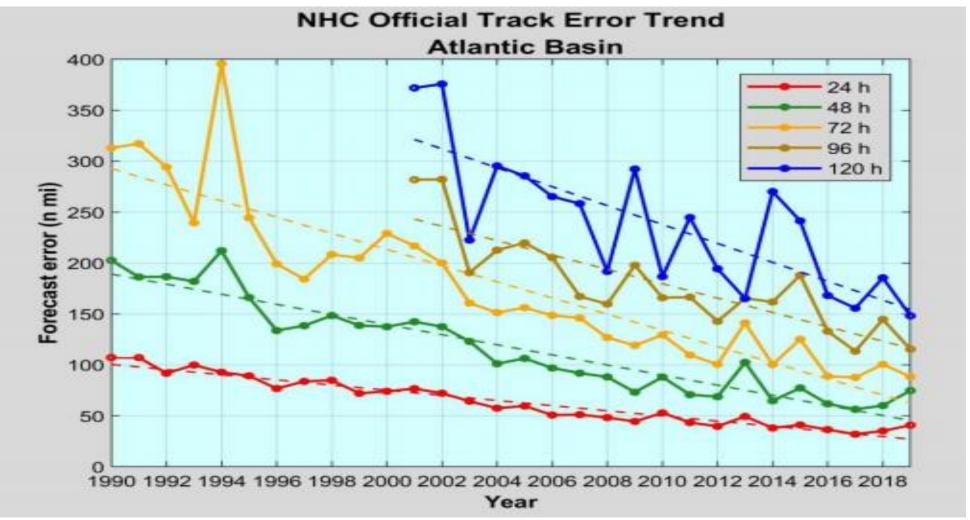








### **NHC Verification Statistics**



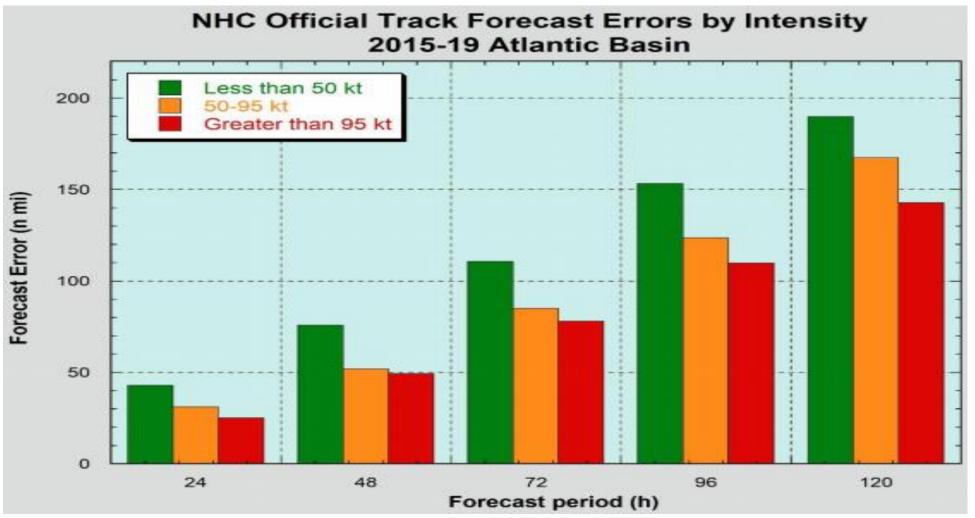








### **NHC Verification Statistics**



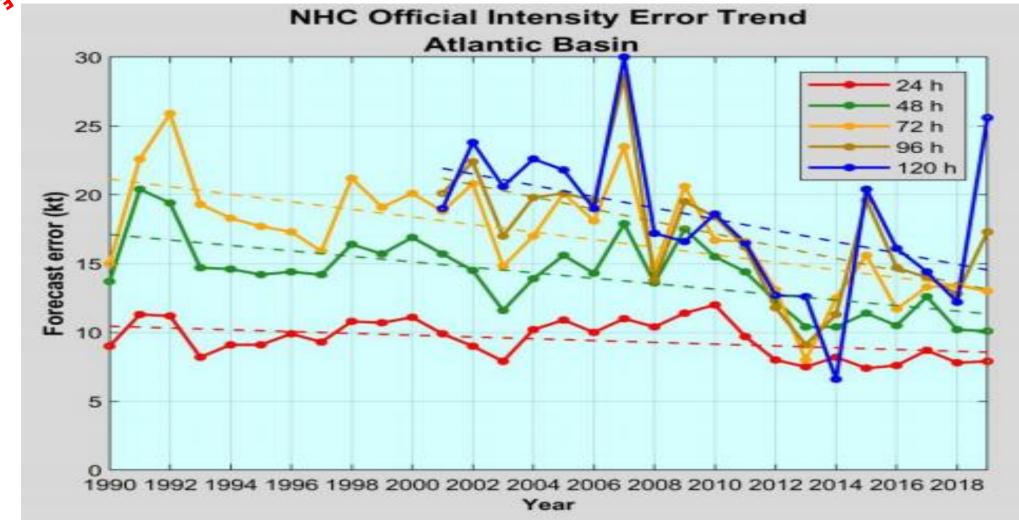








### **NHC Verification Statistics**



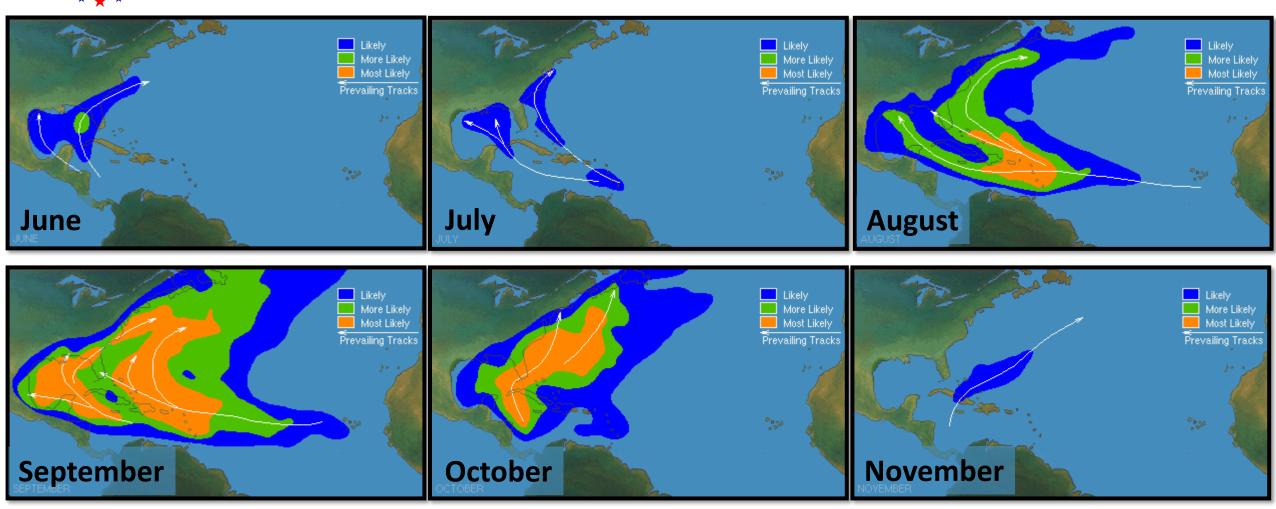




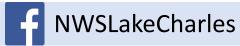




## Hurricane Season Climatology



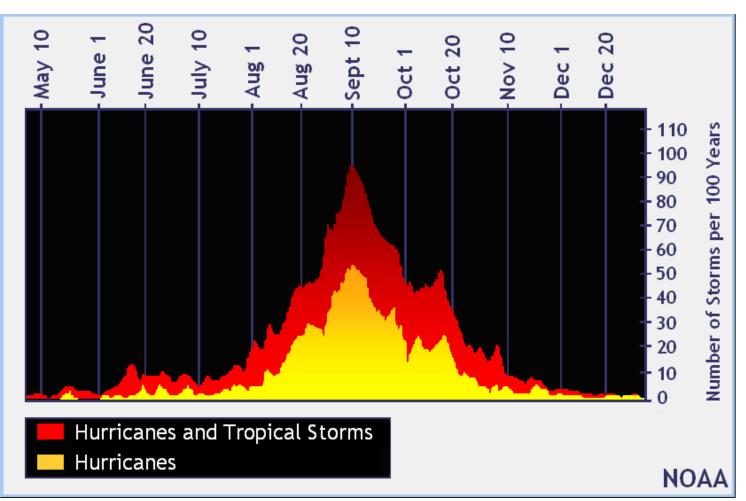








## 2020 Atlantic Tropical Season Names



Arthur Laura Bertha Marco Christobal Nana Dolly Omar Edouard **Paulette** Rene Fay Gonzalo Sally Hanna Teddy Vicky Isaias Wilfred Josephine Kyle











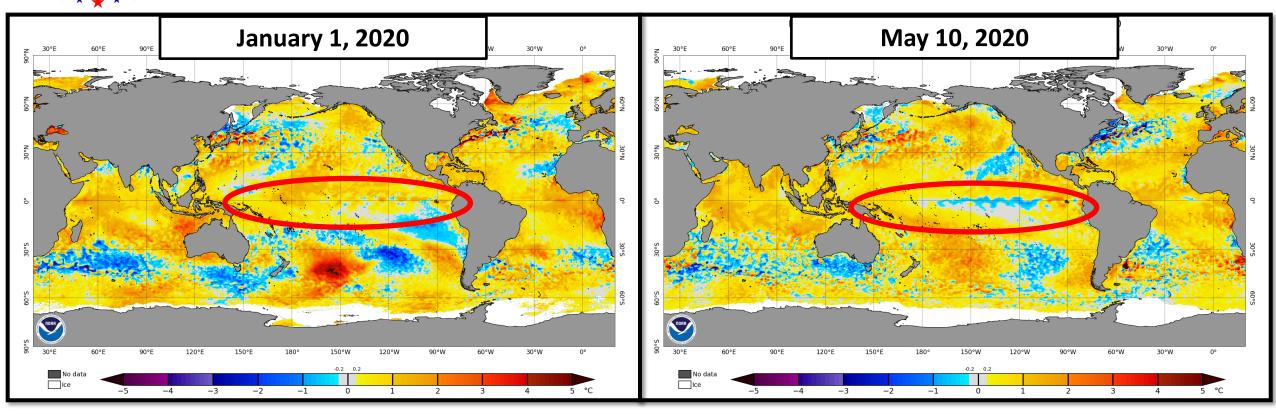
In an average hurricane season, we will track over 100 tropical waves moving across the Atlantic Ocean. Around 10 to 12 become tropical storms, of which 4 to 6 become hurricanes.











Water temperature anomalies in the equatorial Pacific have been trending from a little above normal to a little below normal. This is a neutral state of El Nino/La Nina.







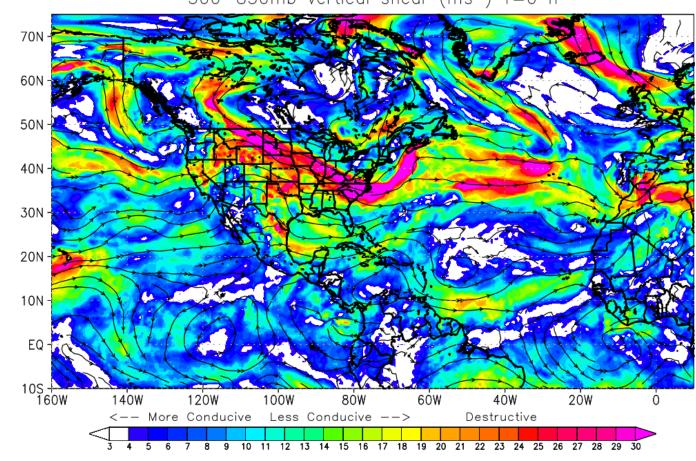




06Z12MAY2020 gfs 500-850mb vertical shear (ms<sup>-1</sup>) T=0 h

High wind shear inhibits development of tropical cyclones. It can change from one day to the next.

This time of year, there is usually pockets of high wind shear across the tropics.











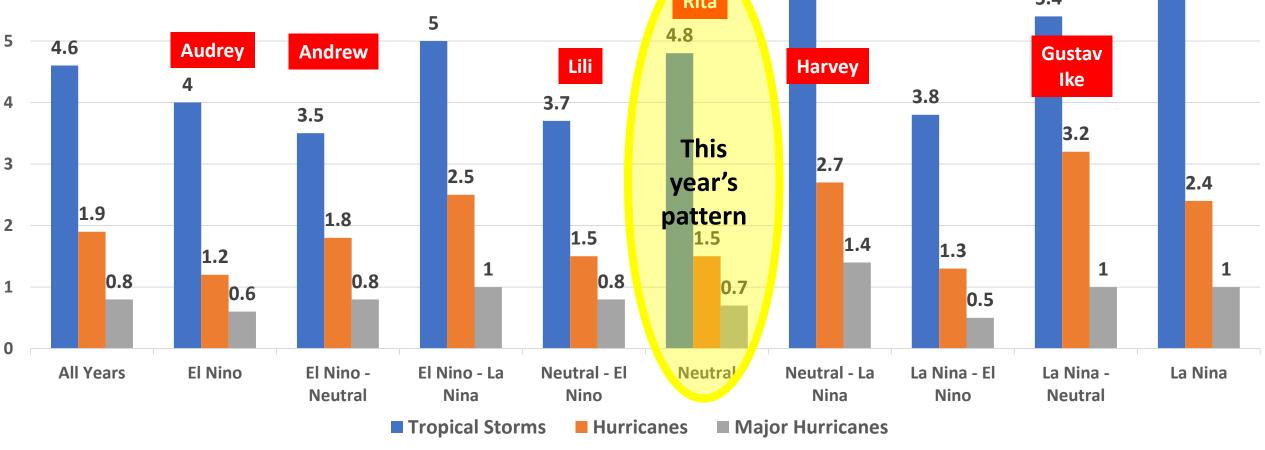


Average Number of Gulf of Mexico Tropical Systems 1950-2017

[Rita]

5.4

4.8









5.7

# BEREADY FOR HURRICANE SEASON



Before the 2020 hurricane season, there are actions you can take to be ready.

# TODAY YOU CAN:



Make a list of supplies for your hurricane kit. Check to see what you already have. Restock during the next several weeks.



Organize important documents and confirm coverage with your insurance agency.



Determine if you live in a hurricane evacuation zone. Make a plan of action with multiple options.



#### **MAY 3 - Determine Your Risk**

Hurricanes bring many hazards to U.S. coastlines and inland areas, including storm surge along the coast, inland flooding due to heavy rainfall, tornadoes, strong wind, rip currents and large waves.











#### MAY 4 - Develop an Evacuation Plan

Find out today if you live in a hurricane evacuation zone and determine who issues evacuation orders for your area. Plan for multiple options on where you would go and how you would get there.

Leave immediately if ordered to evacuate and be sure to plan for your pets.



Find out if you live in an evacuation zone



Plan your route out



Follow evacuation orders



Plan for your pets



#### **MAY 5 - Assemble Disaster Supplies**

Make a list of items to replenish your hurricane supplies and begin to assemble them before hurricane season begins. Have enough food and water for each person for at least three days. Be sure to fill your prescriptions and have medicine on hand. Radios, batteries and phone chargers are also must-haves. Gas up your vehicle and have extra cash on hand.







Batteries, Radio, Chargers





Cash on Hand



#### MAY 6 - Get an Insurance Checkup

Check in with your insurance agency well before hurricane season. Remember that flood insurance must be obtained separately. Prepare your home and vehicles according to your policy. Know where your insurance documents are located and take them with you if you evacuate. Visit **floodsmart.gov** for more information.



Check with your agent



Keep your documents with you



For more info: floodsmart.gov



Consider flood insurance



Know your policy



#### **MAY 7 - Strengthen Your Home**

There is a lot you can do around your home to help protect it from hurricane winds. Well ahead of the approaching storm, trim trees on your property, get approved window coverings, collect loose outdoor items, secure all doors on your property, and find a safe location for your vehicle.









Secure all doors



Move your car to a safe location





#### **MAY 8 - Help Your Neighbor**

Many people, especially senior citizens, rely on the assistance of neighbors before and after hurricanes. Help your neighbors collect the supplies they'll need before the storm. Assist them with evacuation if ordered to do so or check on them after it's safe for you to head outside. You may need to adjust your hurricane preparedness plans based on the latest health and safety guidelines from the CDC and your local officials.



Help your neighbors prepare



Help your neighbors evacuate



the storm passes



#### **MAY 9 - Complete a Written Plan**

Writing down your plan will help you avoid mistakes when faced with an emergency and ensure everyone in your home is prepared for the next storm.



Have photo documentation of valuables



Keep your important documents together for quick access





## Strengthening Partnerships WRN Ambassador Initiative

- What organizations can be a part of and contribute toward building a Weather-Ready Nation?
  - All levels of government
  - Weather, Water, Climate Enterprise
  - Academia
  - Businesses & non-profits
- Formal recognition of organizations that work with NOAA toward building a Weather-Ready Nation
  - Promote WRN messages and themes
  - Engage with NOAA on potential collaborations
  - Share success stories
  - Serve as an "Example"



Visit: www.noaa.gov/wrn











#### **2020 Hurricane Season**

By Roger Erickson, Warning Coordination Meteorologist

Keep up with NWS Lake Charles through the links listed below...

Or call me at 337.477.5285 x223.

