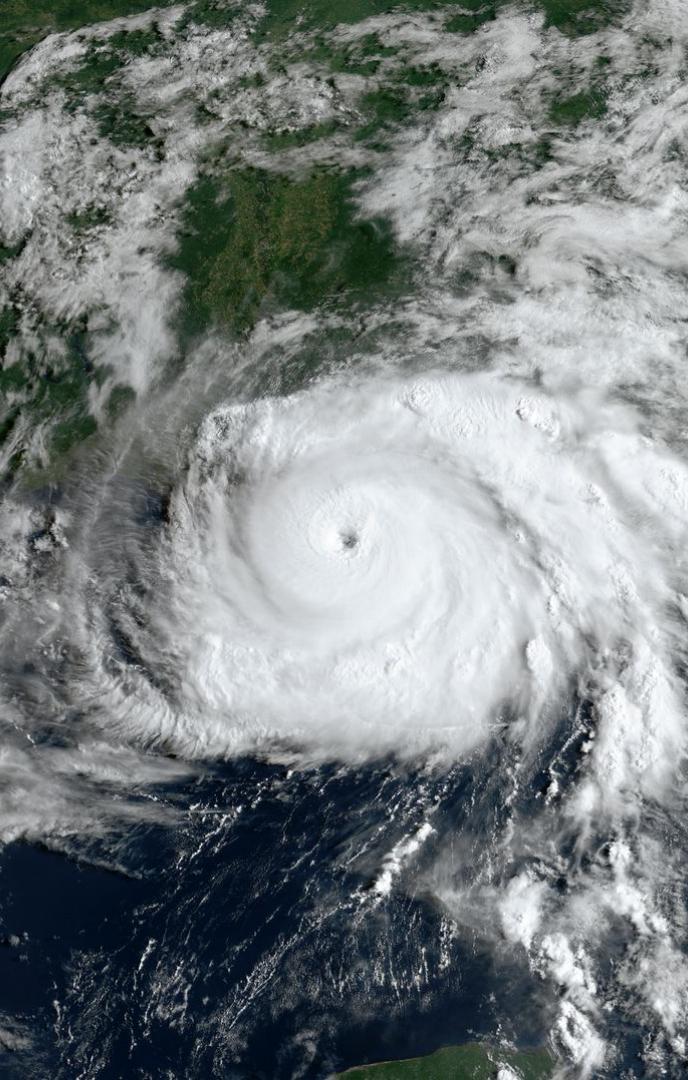


Hurricane Hazards and Communication

2022 Hurricane Season



NWS New Orleans/Baton Rouge



A Look Back at 2021

3rd Most active season on record

Behind only 2021 and 2005

21 Named storms

Average is 14. Exhausted the list of names for the second year in a row

7 Hurricanes & 4 Major Hurricanes

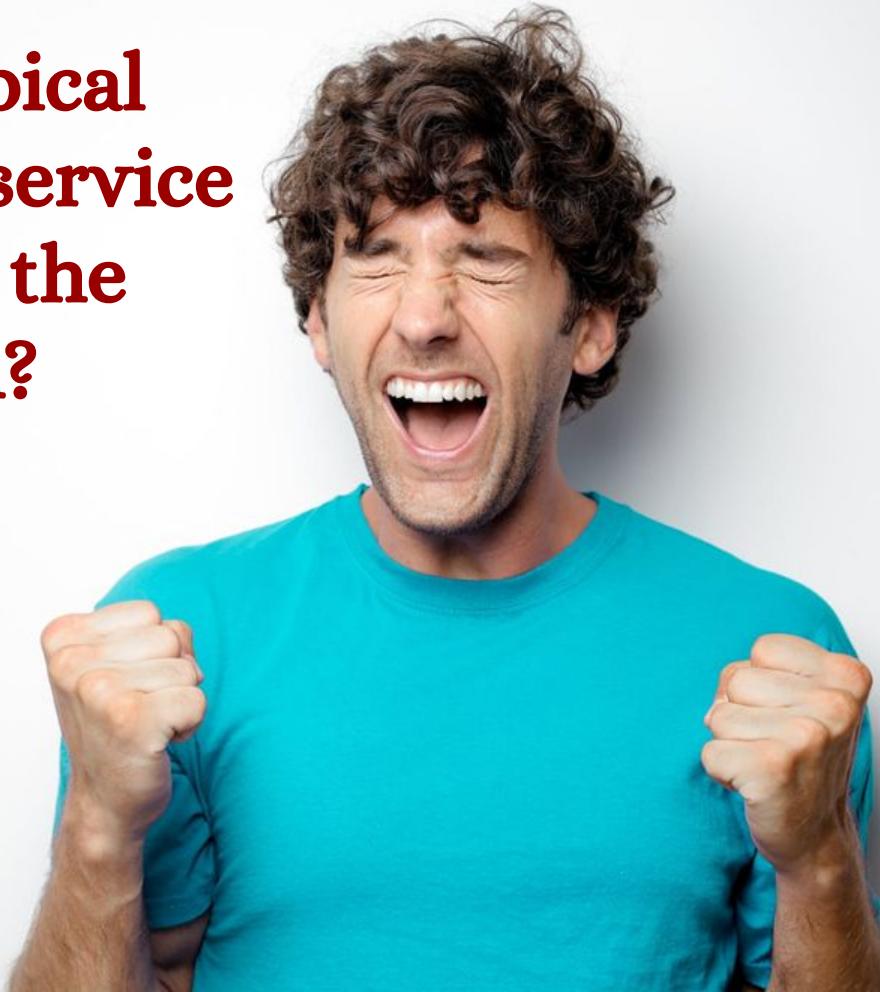
Average is 7 and 3

8 US landfalls

Including 2 local landfalls (TS Claudette and Hurricane Ida)



Any big tropical
product or service
changes for the
2022 season?



For the first
time in a long
time, NO!



2022 Atlantic Hurricane Names

Alex

Hermine

Owen

Bonnie

Ian

Paula

Colin

Julia

Richard

Danielle

Karl

Shary

Earl

Lisa

Tobias

Fiona

Martin

Virginie

Gaston

Nicole

Whitney

As was the case last year, if we run out of names on the main list, we will go to the supplemental list of names, rather than the Greek alphabet



No official NHC forecast until May

- We are in a La Nina and “could” stay in La Nina
 - ◆ 2020 and 2021 were strong La Nina while 2017-2019 were weak La Ninas
- 53% chance La Nina stays through August, 50-50 chance it stays La Nina or goes into Neutral
- “Could” mean a few less storms but remember.....



It only takes one **1** *storm to make it a bad season!*



General Timeline: When do products become available?



>5 Days Out

Tropical Weather Outlook



60 Hours Out

- Better surge guidance



5 Days Out

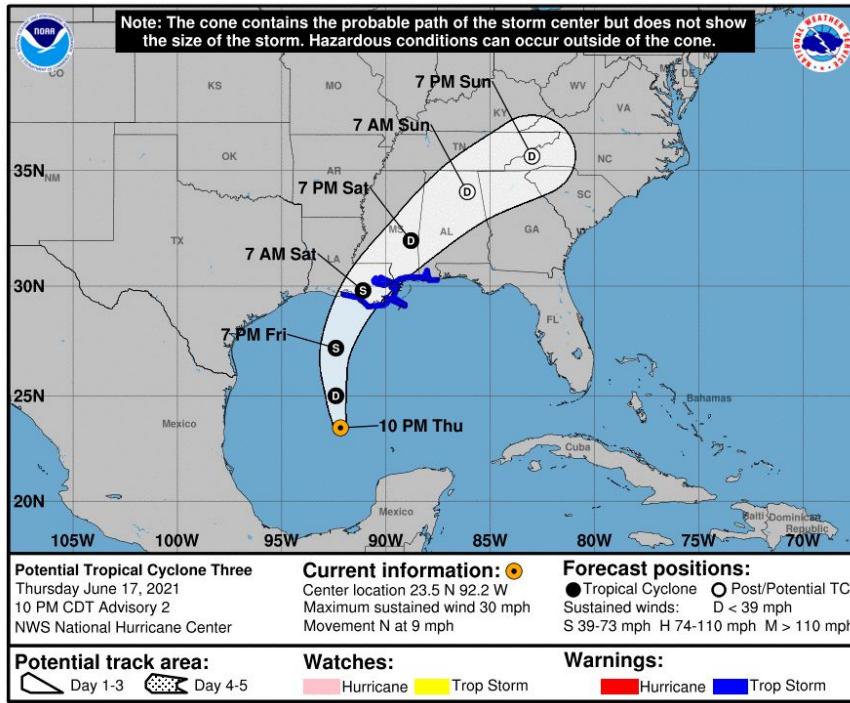
- NHC Advisory Packages 4 times a day (cone, wind speed probabilities, Time of arrival graphics)
- Basic surge examples

48 Hours Out

- Watch/Warning Products
- Hurricane Threats and Impacts Graphics
- PSurge/Inundation Forecasts



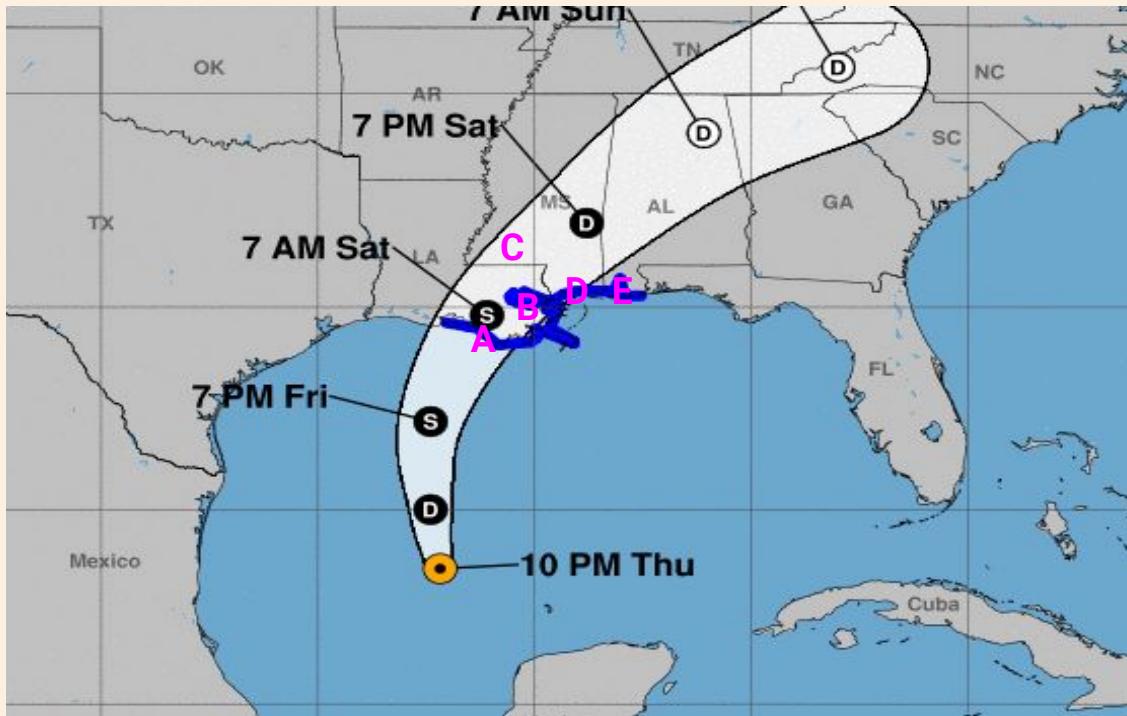
What information can you find in this graphic?



- A. Where the strongest winds are expected
- B. Where the center of the storm is most likely to move
- C. What areas will feel the greatest impacts from the storm
- D. When the greatest threat be in a specific area
- E. All of the above

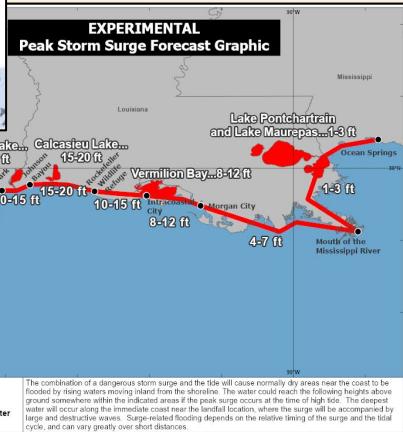
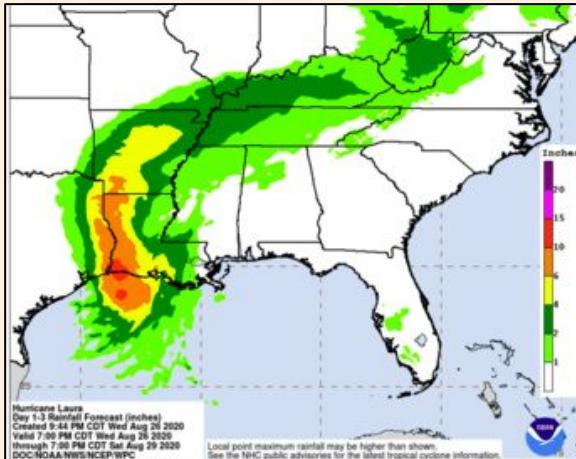


Which of these locations would you feel the “most safe” at?



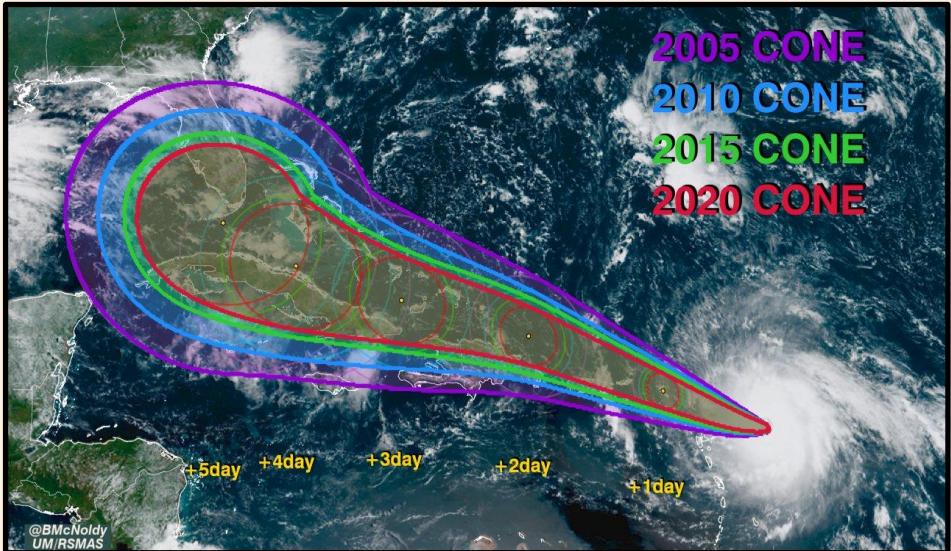
- A. Terrebonne Parish
- B. New Orleans
- C. McComb
- D. Pascagoula
- E. Mobile

Reminder: The Cone Doesn't Tell You About Impacts!

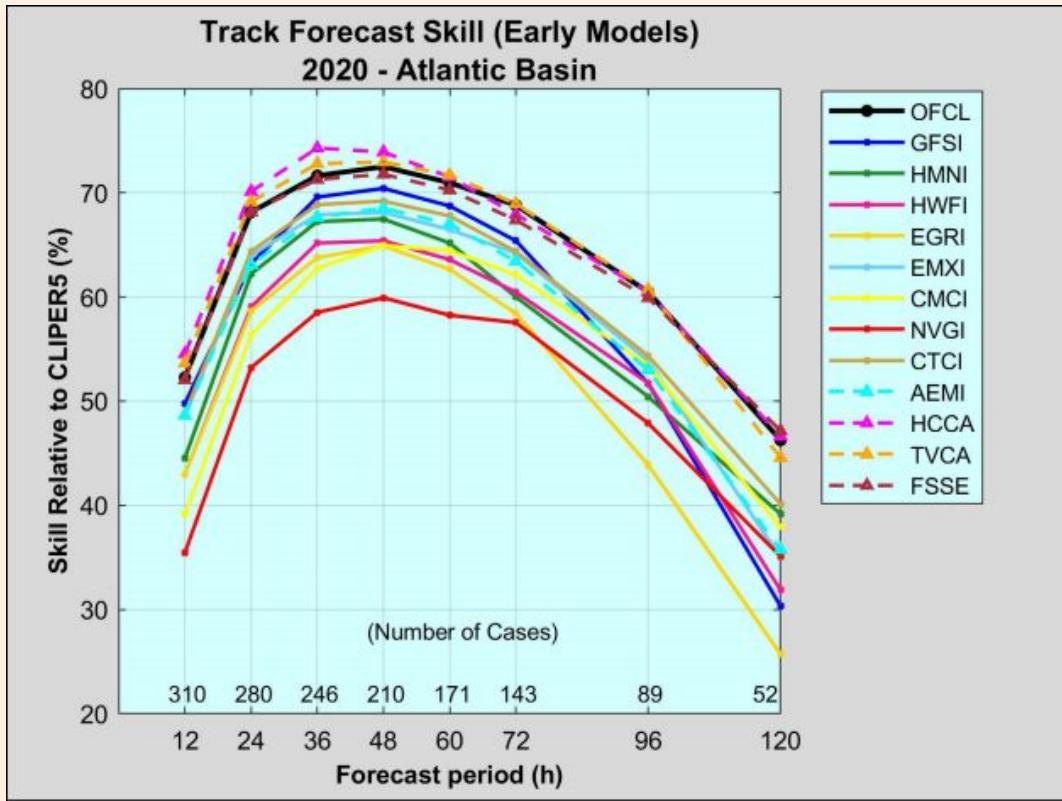


Then what is it?

- Represents the most likely path of the CENTER of the storm
- Created by connecting imaginary circles that represent 2/3 the average track error over the past 5 years.
- Small changes in size every year



How good are the forecasts?

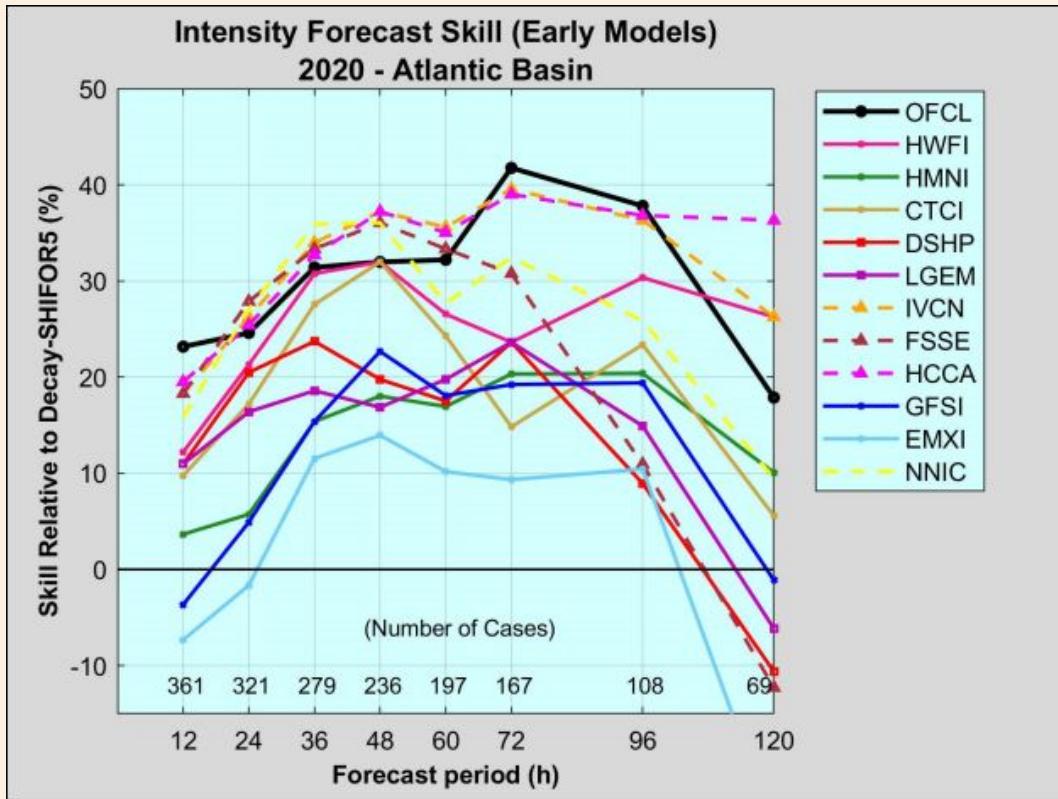


2021 track forecast verification stats still being computed.

In 2020, no individual model performed better than the official NHC track forecasts.

A few consensus aids (dashed lines) did slightly outperform NHC at early lead times.

How good are the forecasts?



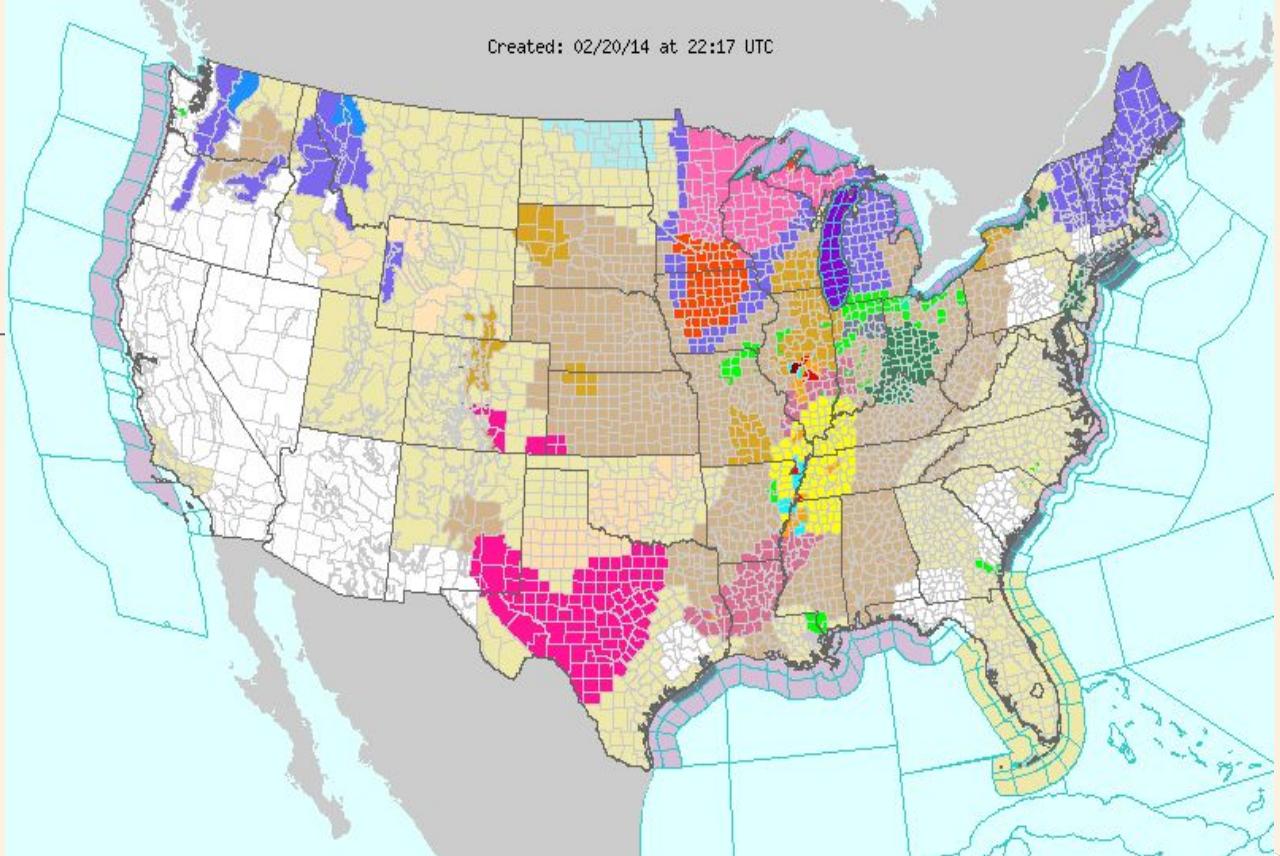
2021 intensity forecast verification stats still being computed.

In 2020, no individual model performed better than the official NHC intensity forecasts.

NHC outperformed all of the consensus aids (dashed lines) at some lead times.

What is a Watch?

What is a Warning?



We know this is confusing!



Warnings- Hurricane or Tropical Storm Force
Winds are expected in the next 24 hours



Watches- Hurricane or Tropical Storm Force
winds possible in the next 48 hours



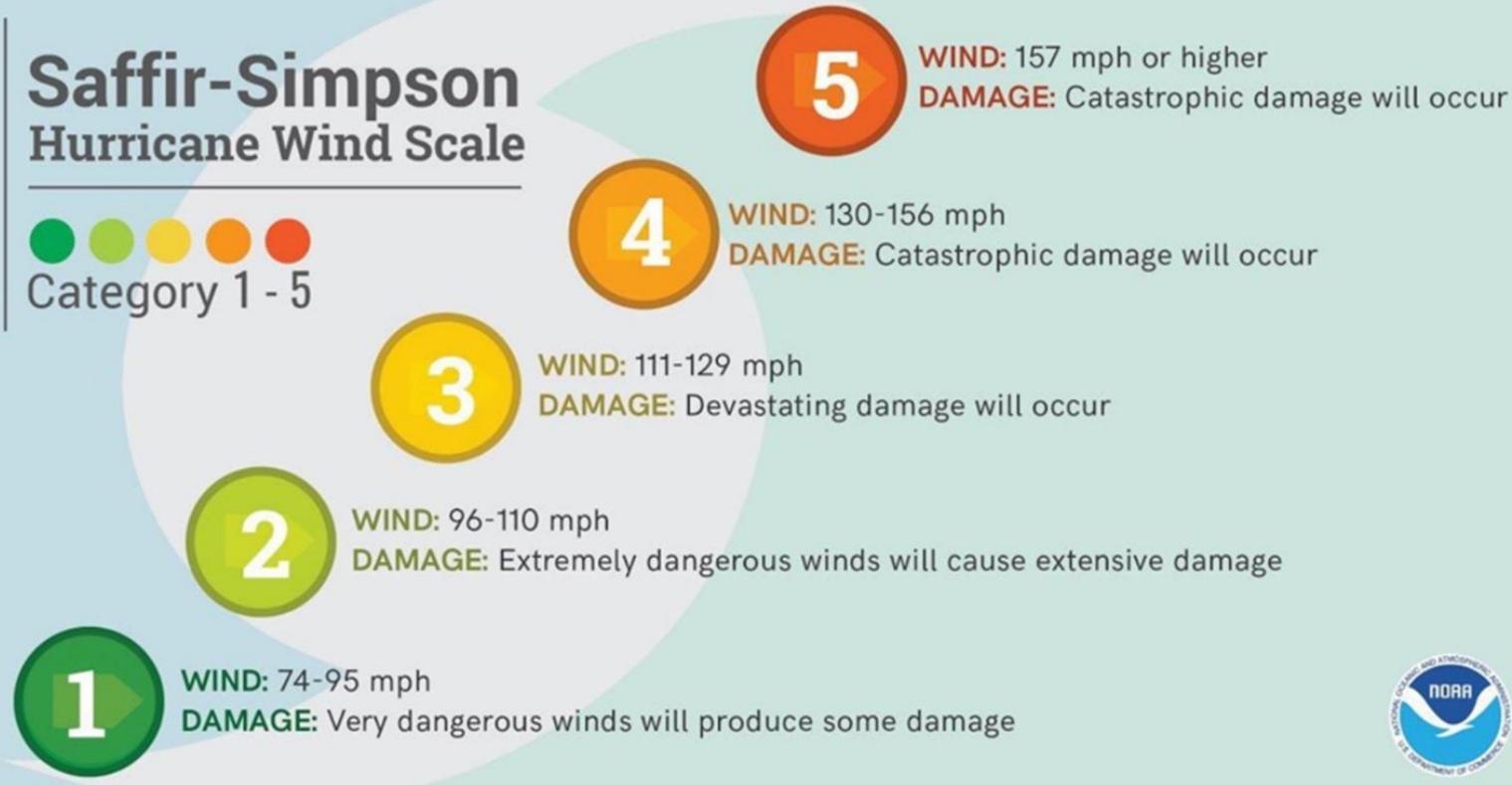
Wind Hazard Products and Communication



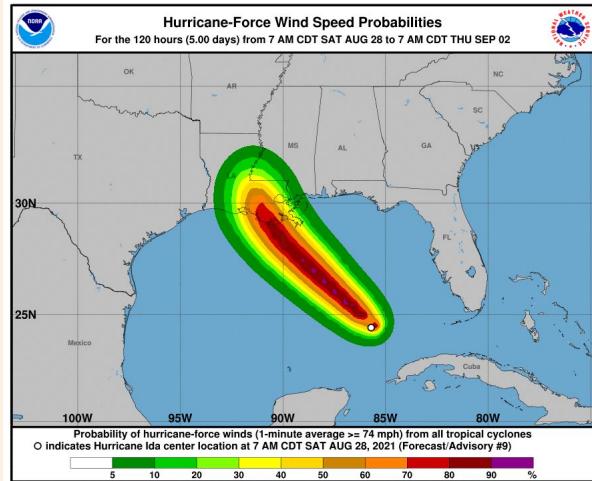
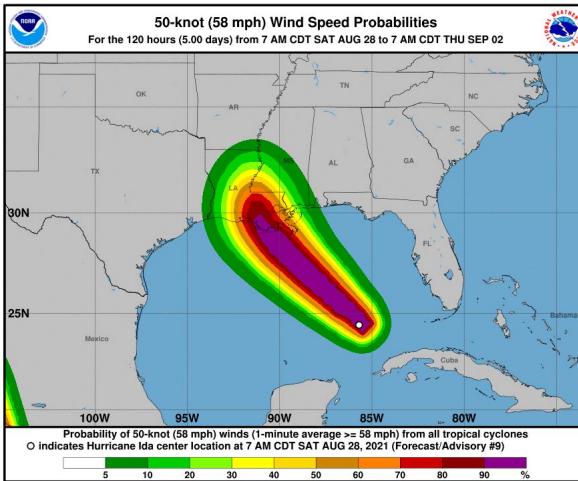
The Saffir-Simpson WIND Scale

Saffir-Simpson Hurricane Wind Scale

Category 1 - 5



Wind Speed Probabilities

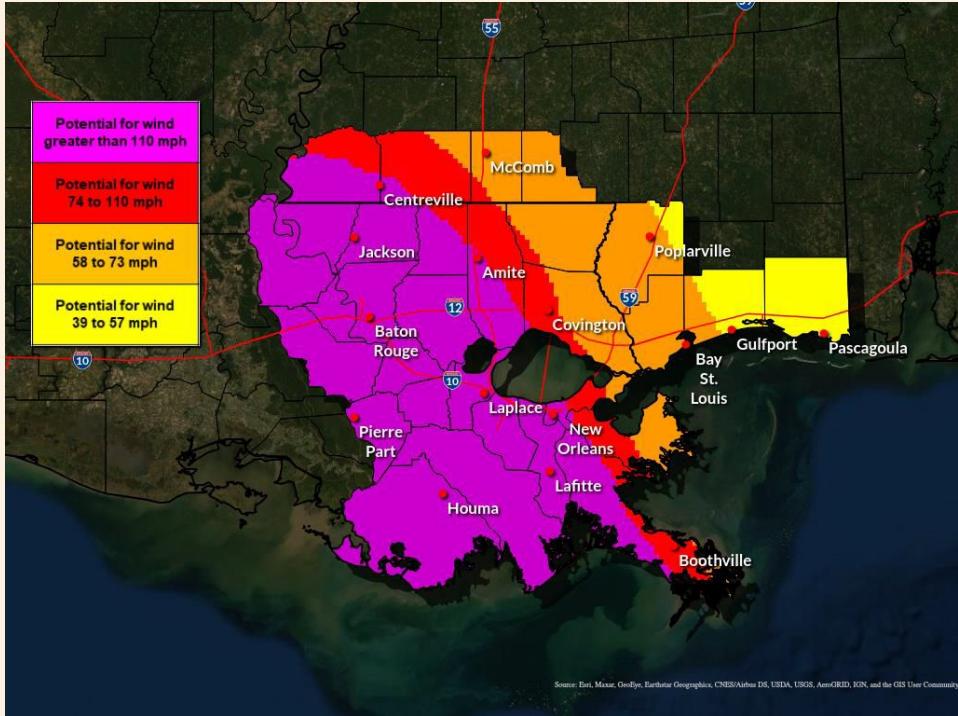


- Available for 34kt (40MPH), 50kt (58MPH), 64kt (74MPH) wind speeds out 5 days
- These are **point probabilities** based on the current NHC forecast as well as typical forecast errors, and to some extent the range of model guidance
- Remember, low probabilities can be significant, especially at long lead times



Hurricane Threats and Impacts

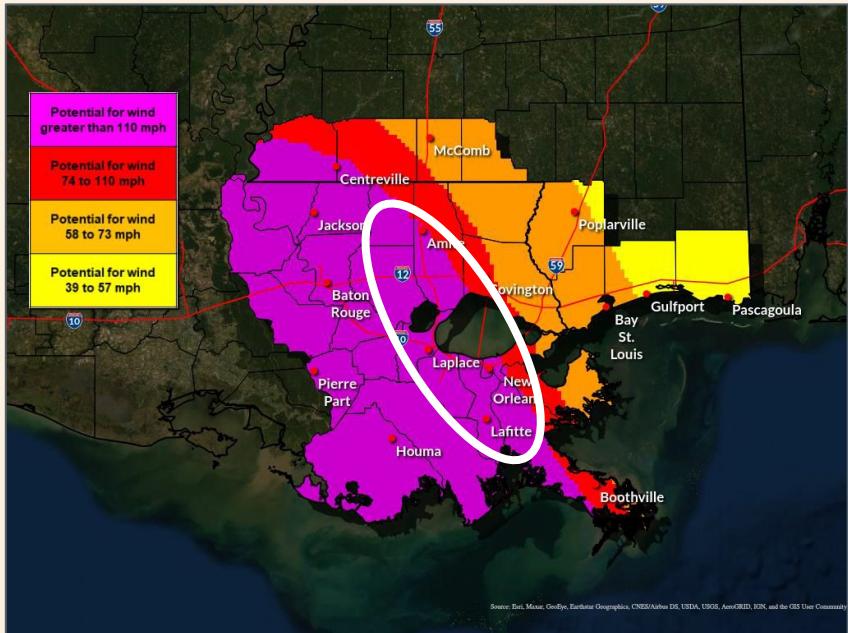
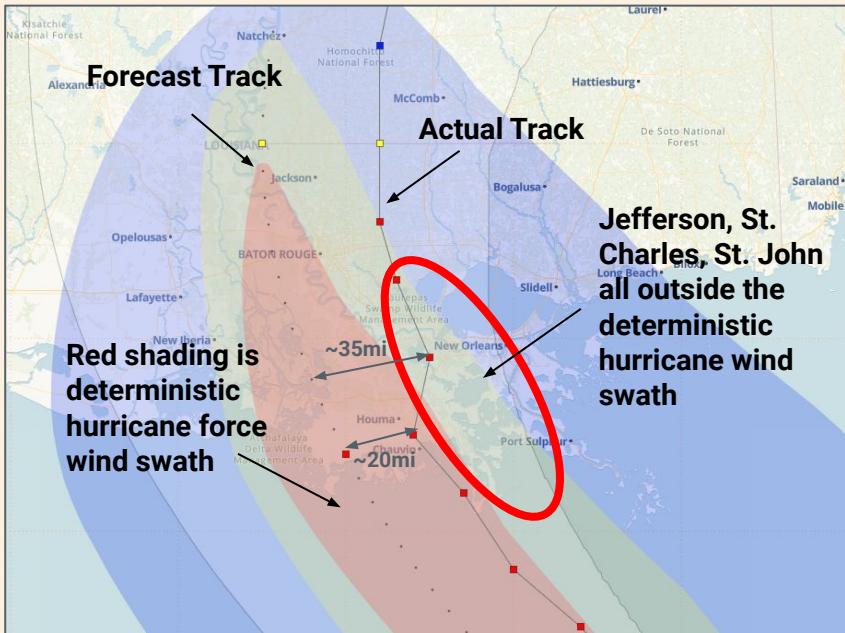
Graphics (HTI)



- Probabilistic forecast based on the current NHC advisory and accounting for reasonable forecast errors
- Provides the POTENTIAL winds you should prepare for, and in many cases may indicate higher winds than the official forecast
- Example from Hurricane Ida 10am 8/28.



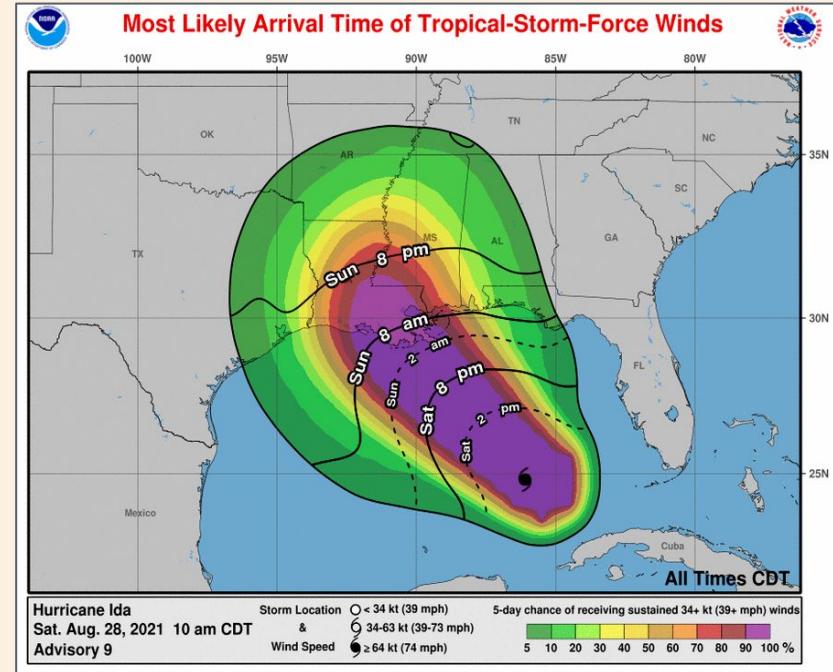
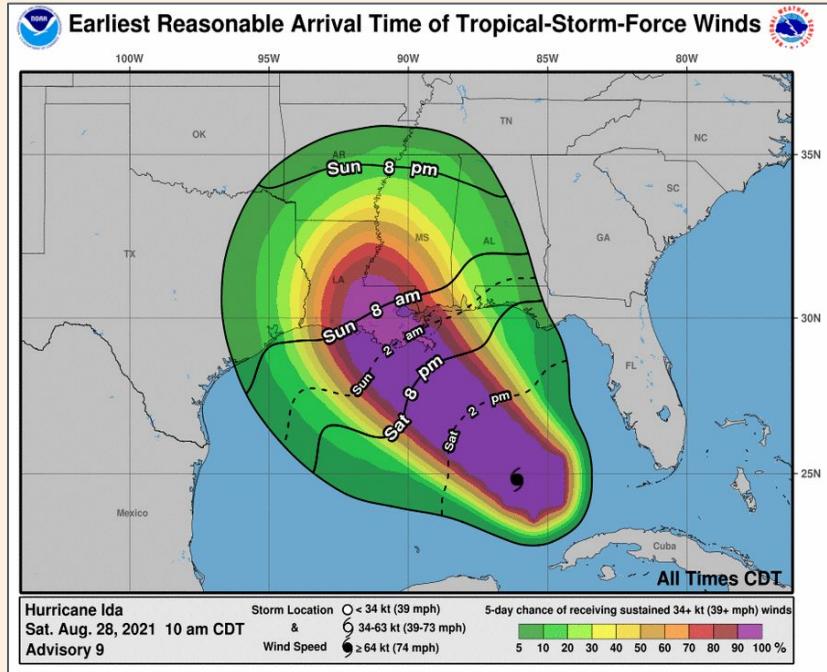
Why use HTIs?



All graphics associated with the 10am CDT forecast 8/28 for Hurricane Ida



Time of Arrival/Departure Graphics



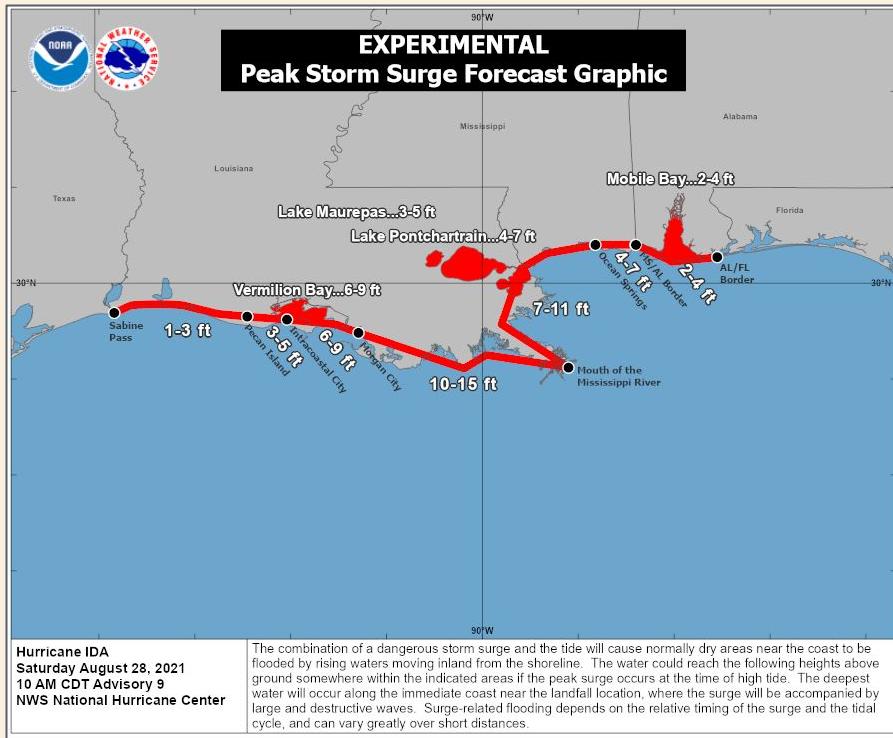
Based on these graphics, when do you think impacts will arrive in New Orleans?
How should you communicate this to your friends, family or partners?



Storm Surge Products and Communication



Peak Storm Surge Forecast Graphic



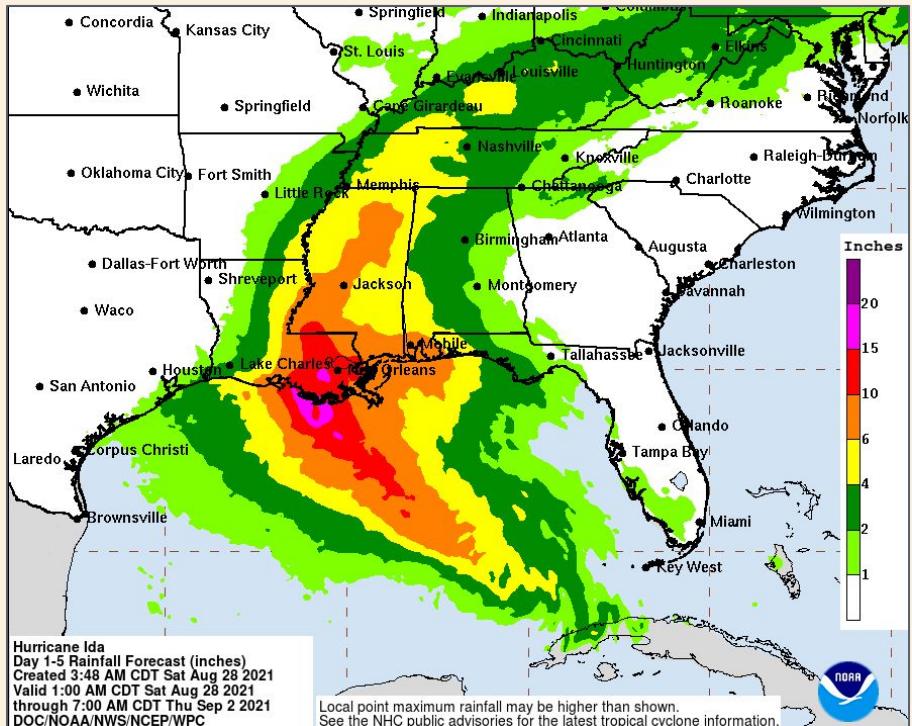
- Provides potential peak inundation values along the open coast
- Not everywhere will see these values
- Does NOT indicate potential depths away from the open coast
- Available around advisory time when watches/warnings are in effect



Flooding Rain Hazards and Communication



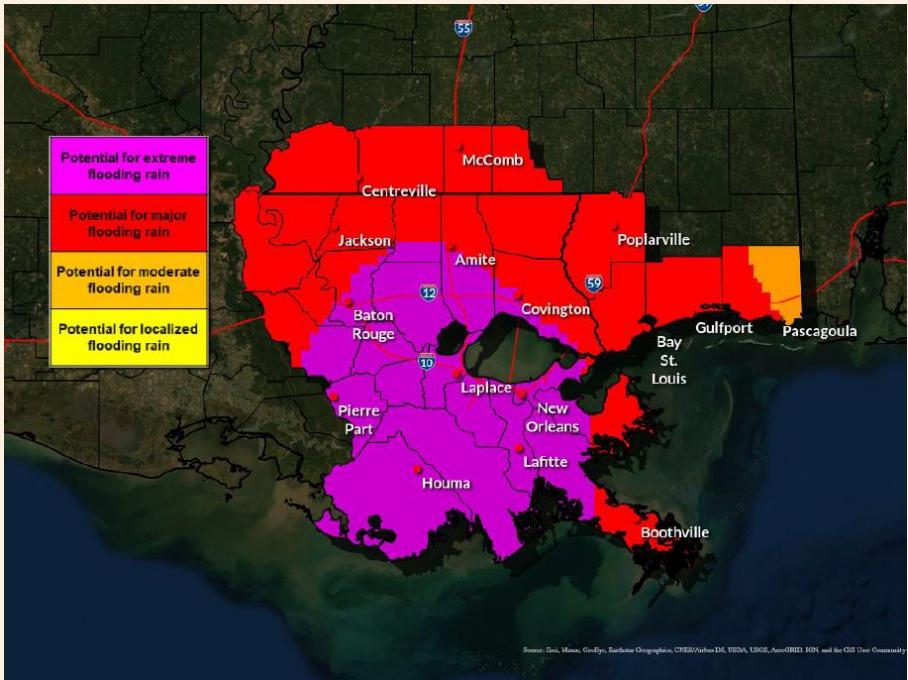
Deterministic Rainfall Forecast (QPF)



- Rainfall forecast graphics for tropical systems are created with a broader color scale
- They are hosted on both the WPC and NHC website and typically include 3 to 5 days of rainfall depending on the storm



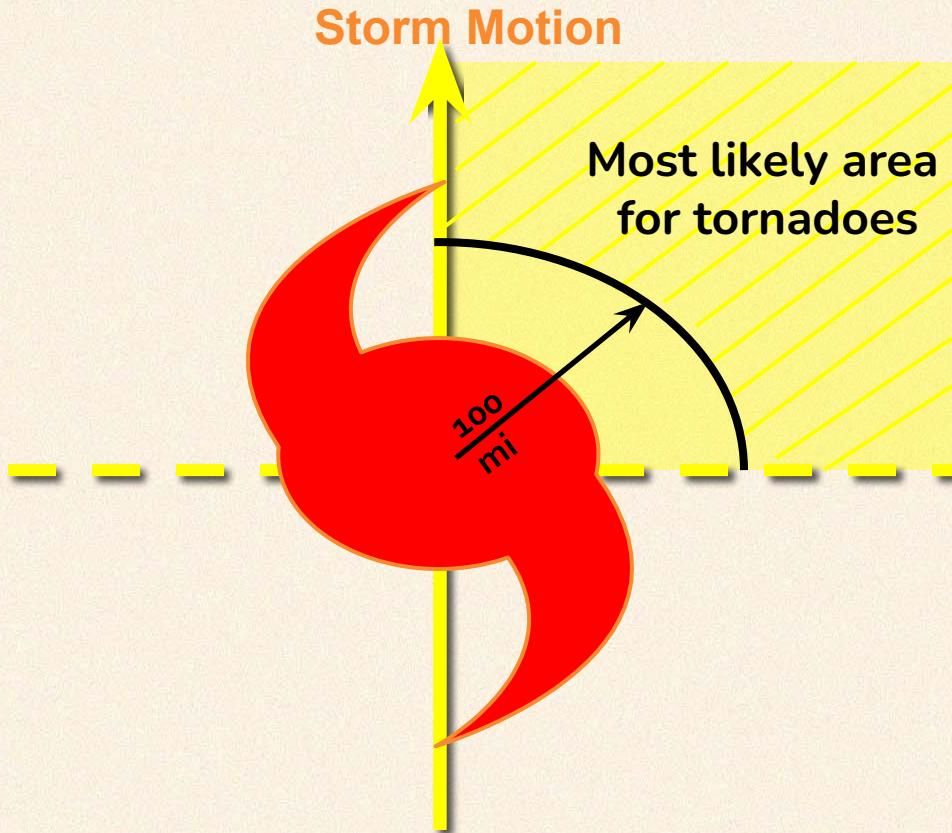
Flooding Rain HTI



- Generally matches the excessive rainfall outlooks, but in a different color palette to match the other HTI graphics
- When produced (generally after watches are issued), the HTI graphics are available on our website



Tornadoes



More than 90% of all tropical cyclone induced tornadoes occur in the right front quadrant of the storm relative to storm motion

Most develop more than 100 miles away from the storm center



**Situations
that drive us
all crazy...**



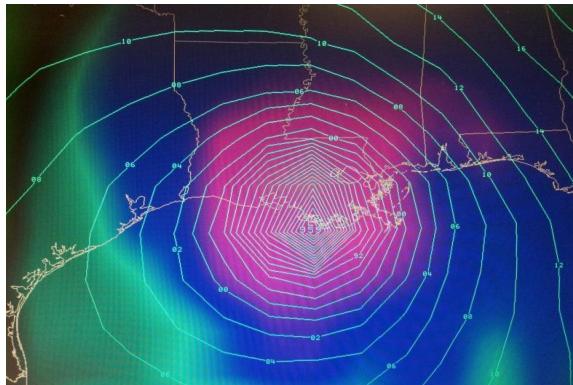
Single-Track, Long-Term Forecasts



Gulf Coast Weather “Expert”

4 hrs · Some City, USA

Look out Louisiana, latest GFS says you'll be dealing with a category 3 hurricane in 10 days. Better start getting ready!!!



1K 32K

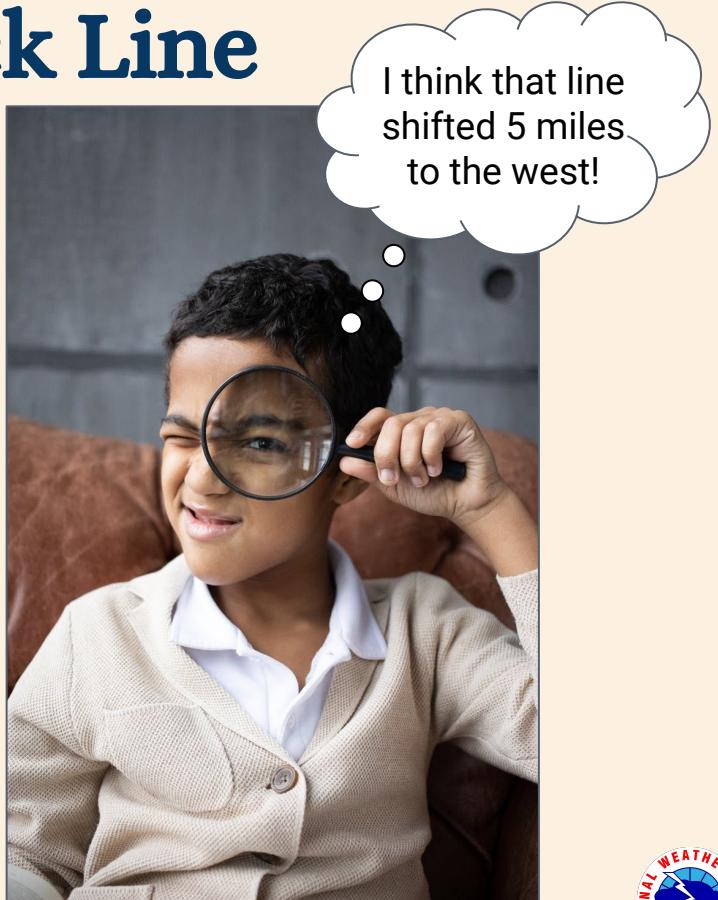
476 Comments 23,582 Shares

- Models frequently “spin up” storms that never happen, and also struggle with forecasting storms that are still developing
- Remember, NHC performs better than any individual model
- Take ANY long-term forecast (5+ days) with a huge grain of salt
 - Just because a forecast goes “viral” doesn’t mean it’s likely to happen
 - Alarmism spreads quickly
 - Be sure to follow official sources and if you have questions, just call us!



The Skinny Black Line

- Remember, a hurricane is not a point on a map and impacts can extend well away from the center
- Don't focus too much on the "centerline" of the cone or small nudges in one direction or another
- Sometimes the small adjustments are actually just an artifact of the timing of the forecast points.
- Focus on the impacts and whether the forecast impacts are changing.



Just a couple more
things before we
wrap up...



Last things to remember!

- Hurricanes make their own timelines! Sometimes you won't have 5+ days to prepare.
 -
 - Check EVERY SINGLE FORECAST UPDATE for changes and adjust accordingly!
 -
 - Prepare for EACH hazard- Just because you'll survive surge doesn't mean you'll have power or water due to the wind. (Also, 12+ hours of wind and your roof getting damaged is SCARY)
 -
 - In the last 4 years, we've lost more people to carbon monoxide poisoning and heat impacts after a storm than we have from any storm related deaths.



Resources



www.weather.gov/neworleans

www.weather.gov/srh/tropical?office=lix

www.nhc.noaa.gov

www.facebook.com/NWSNewOrleans

www.twitter.com/NWSNewOrleans

www.weather.gov/lix/embrief

(includes link to latest briefing slides and recording)

And last but not least... US! If you're struggling to put together the pieces, give us a call, **24/7**. We're here to help!

