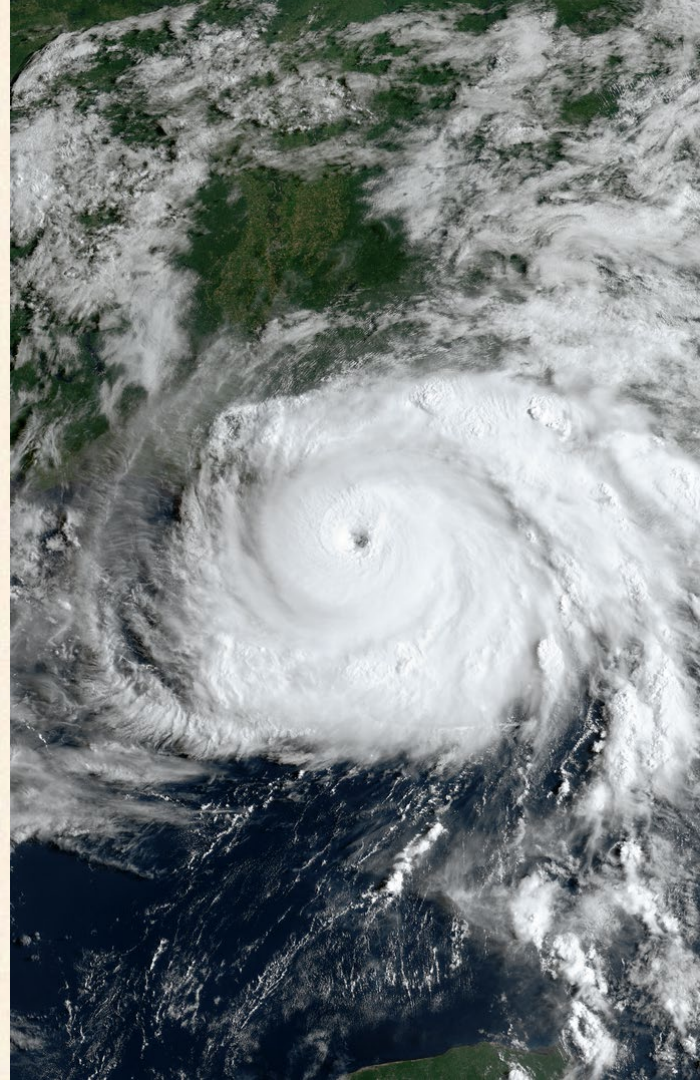


Hurricane Hazards and Communication

2022 Hurricane Season



NWS New Orleans/Baton Rouge



A Look Back at 2021

3rd Most active season on record

Behind only 2020 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

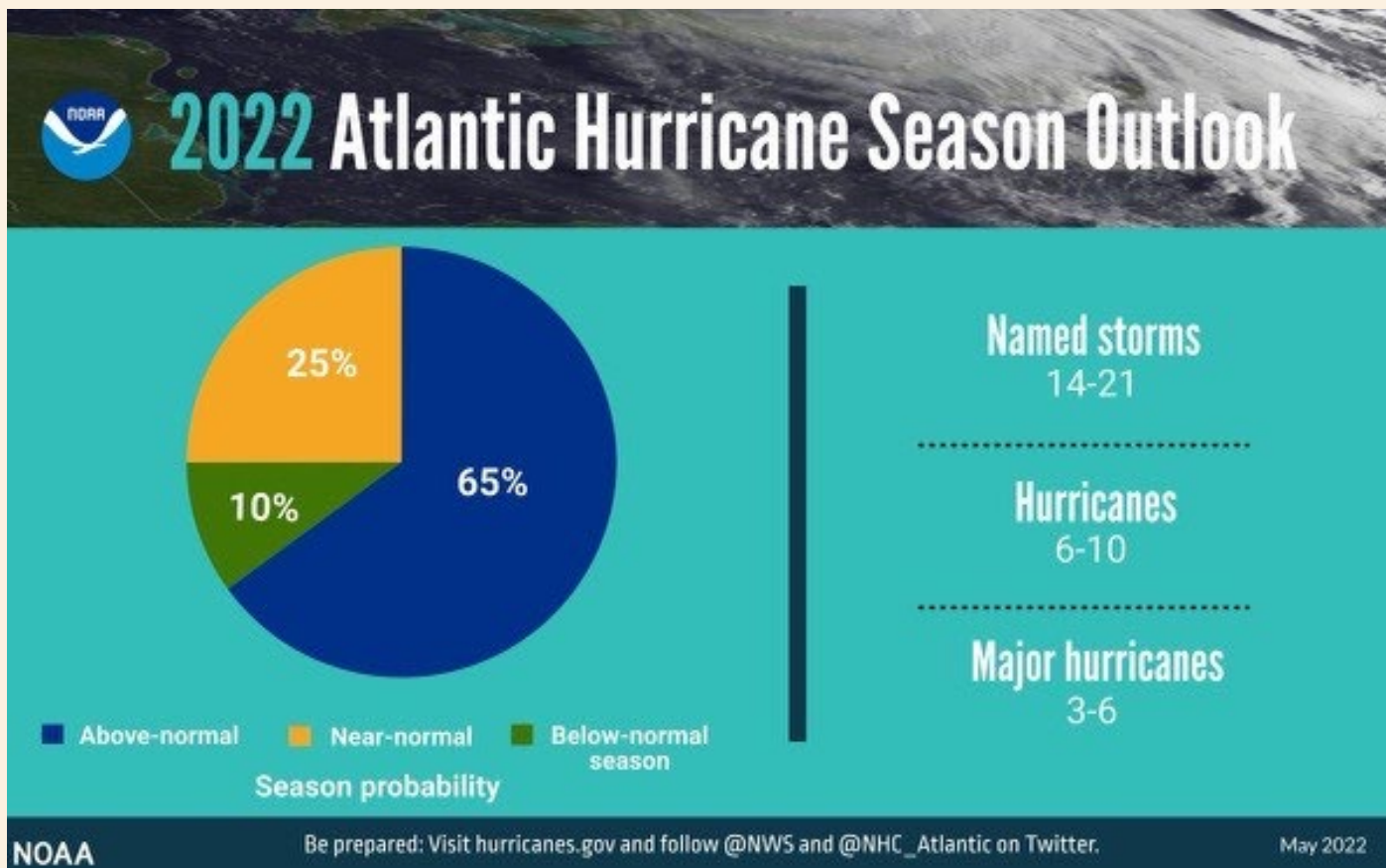
Average is 7 and 3

8 US landfalls

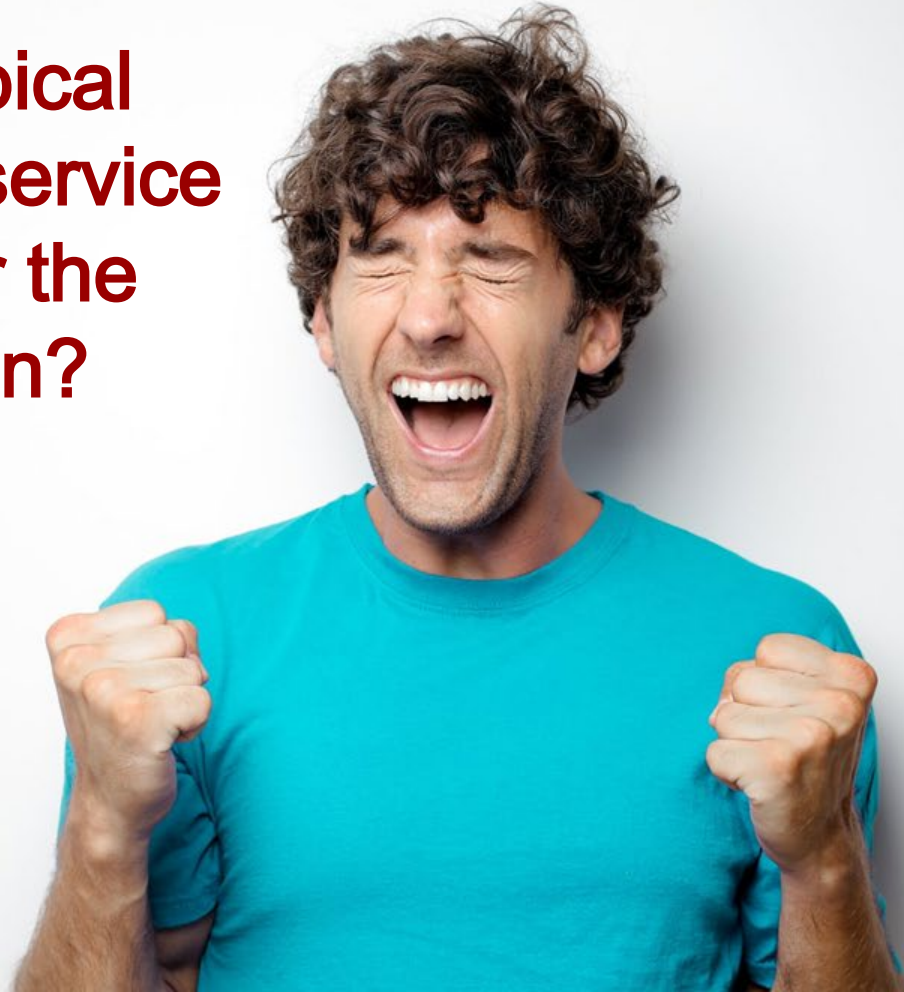
Including 2 local landfalls (TS Claudette and Hurricane Ida)



NHC 2022 Seasonal Forecast



**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	Walter

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



-
- 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
 - 58% chance La Nina stays through October, 61% chance it stays La Nina through Winter.



It only takes one



storm to make it a bad season



**General Timeline:
When do products
become available?**



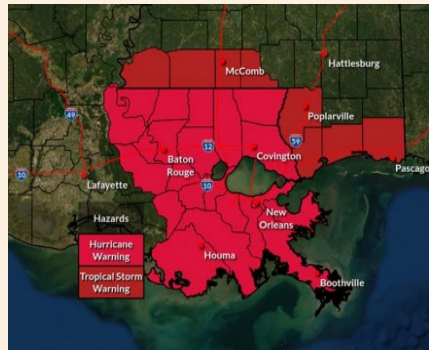
>5 Days Out

- Tropical Weather Outlook
- CPC Global Tropics Outlook*



60 Hours Out*

- PSurge (for select, well behaved storms)

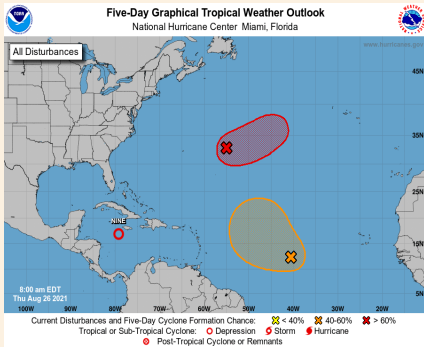


5 Days Out

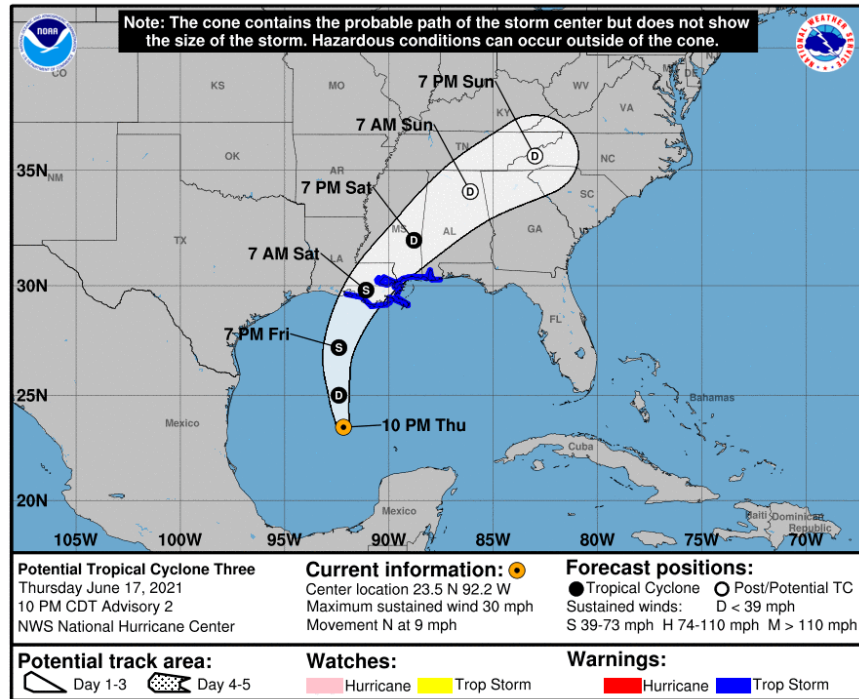
- NHC Advisory Packages (cone, wind speed probabilities, TOA)
- SLOSH MOMs and MEOWs*

48 Hours Out

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



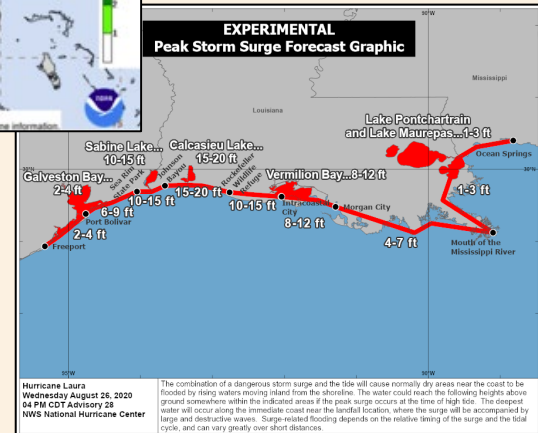
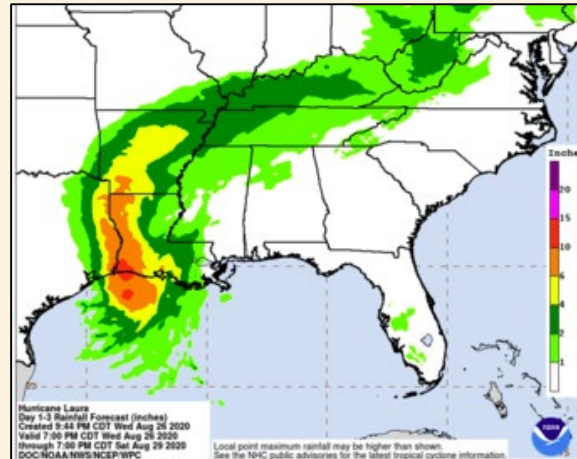
What information can you find in this graphic?



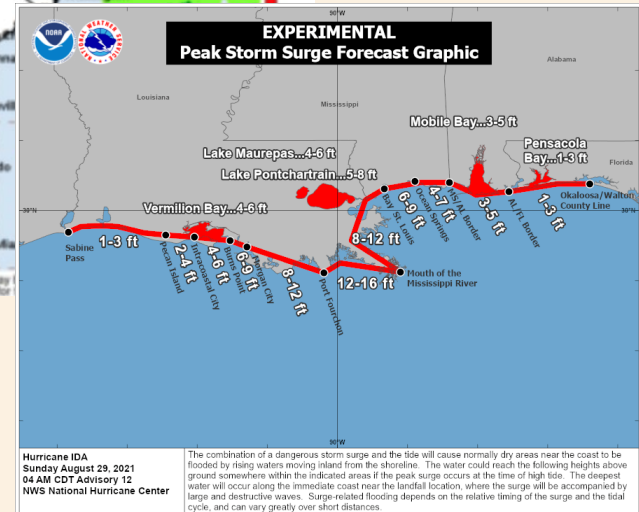
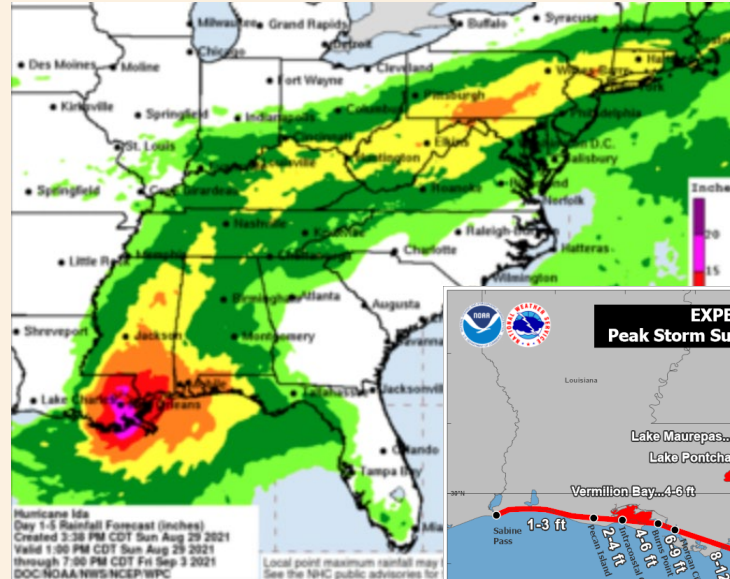
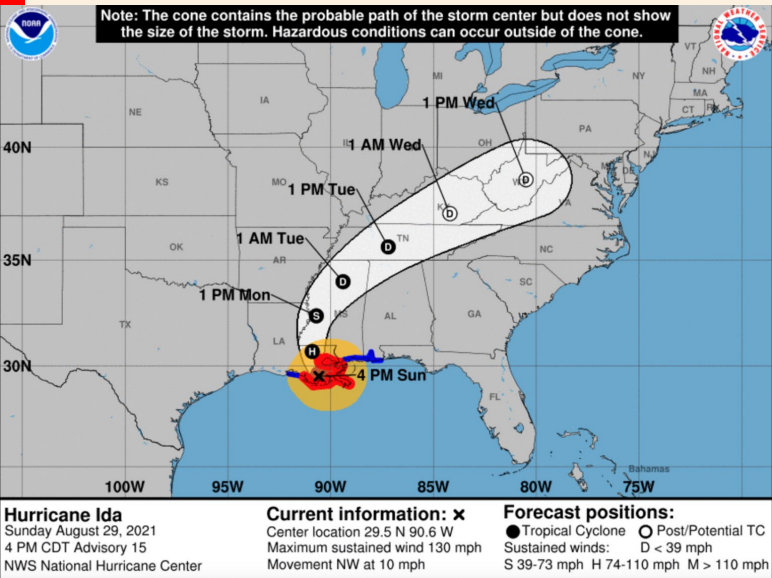
- A. Where the strongest winds are expected
 - B. Where the center of the storm is most likely to move
 - C. What areas will feel the greatest impacts from the storm
 - D. When will the greatest threat be in a specific area
- A. All of the above



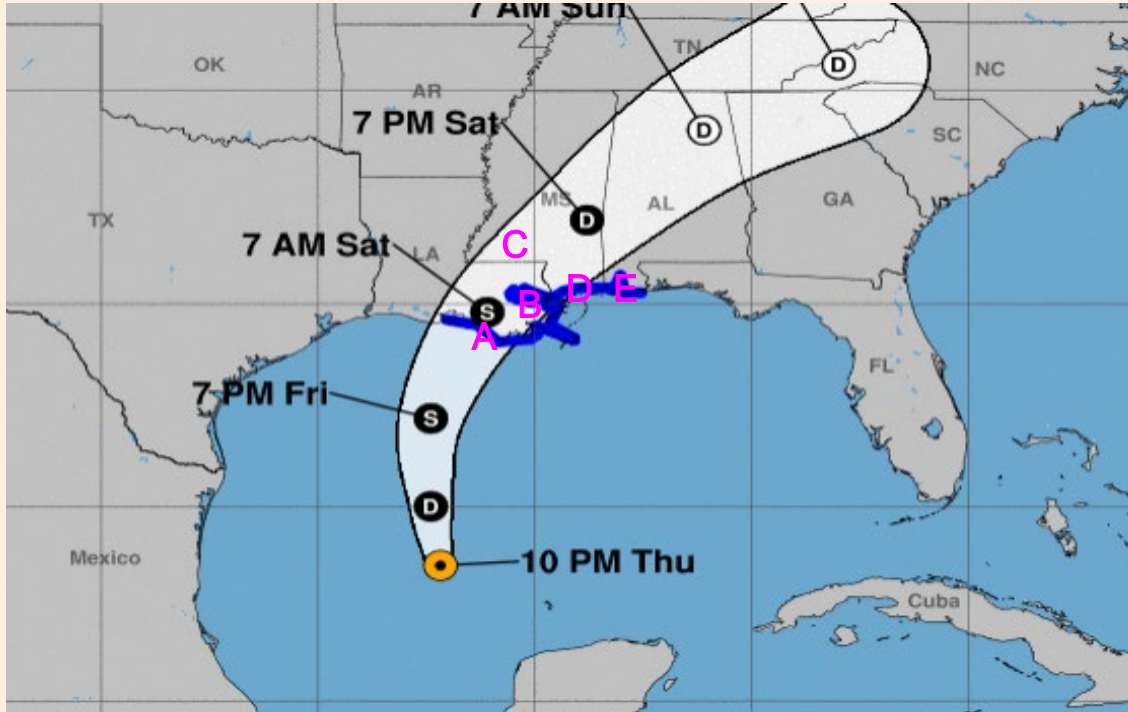
Reminder: The Cone Doesn't Tell You About Impacts!



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



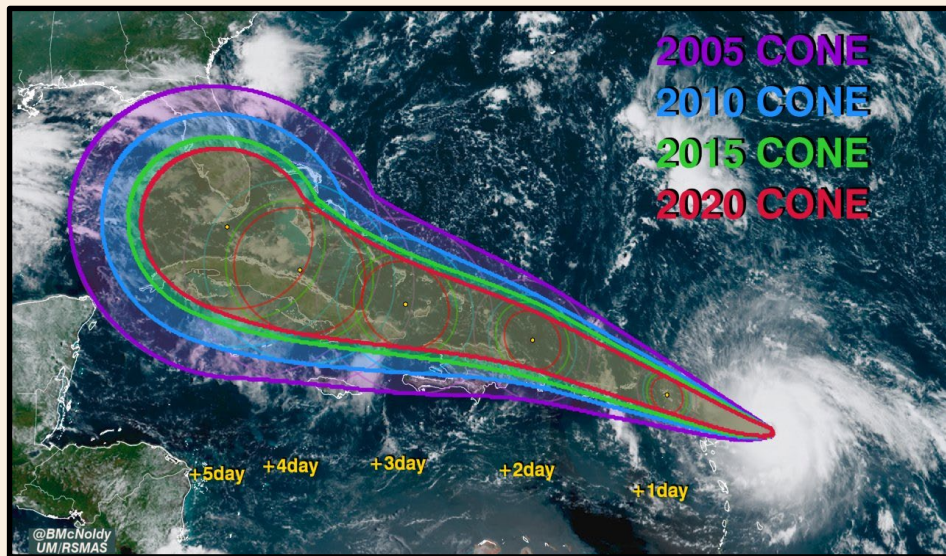
Which of these locations would you feel the “most safe” at?



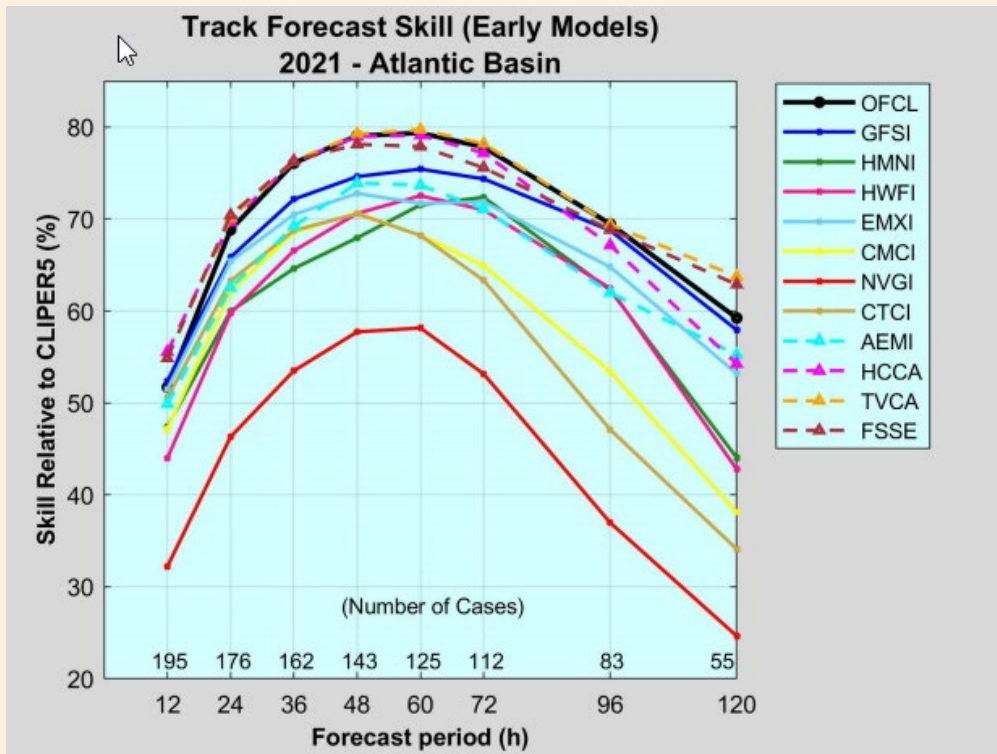
- A. Terrebonne Parish
- A. New Orleans
- B. McComb
- C. Pascagoula
- A. Mobile

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



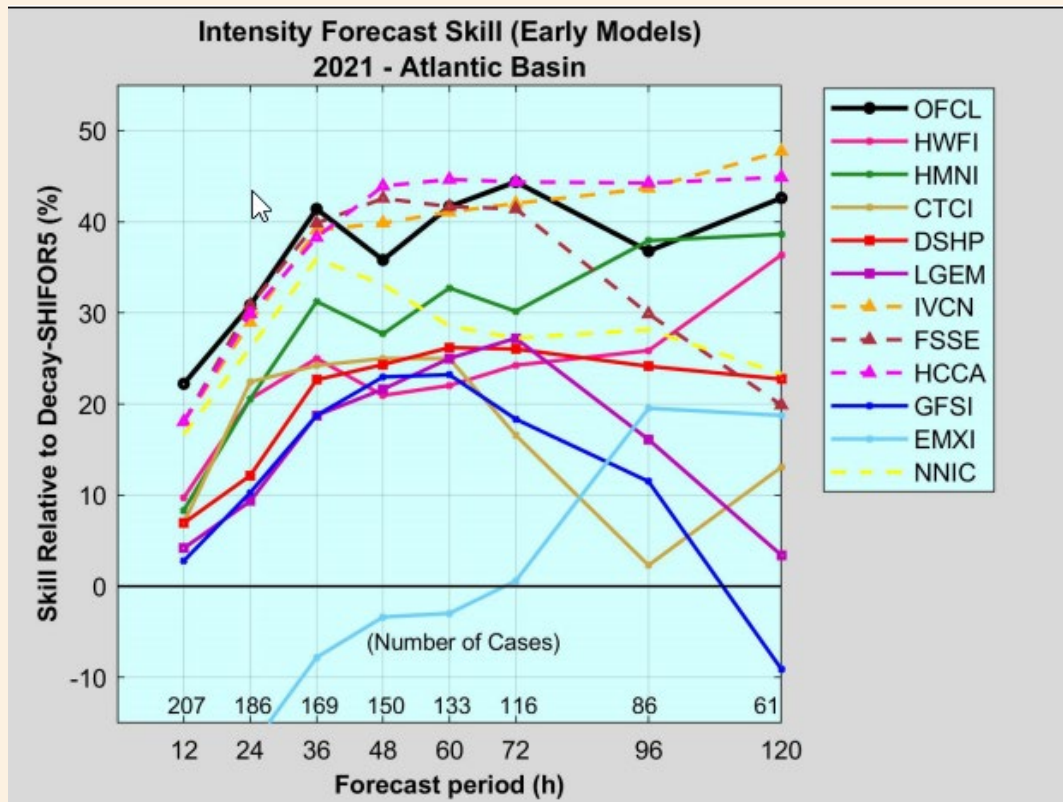
How good are the forecasts?



In 2021, 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.

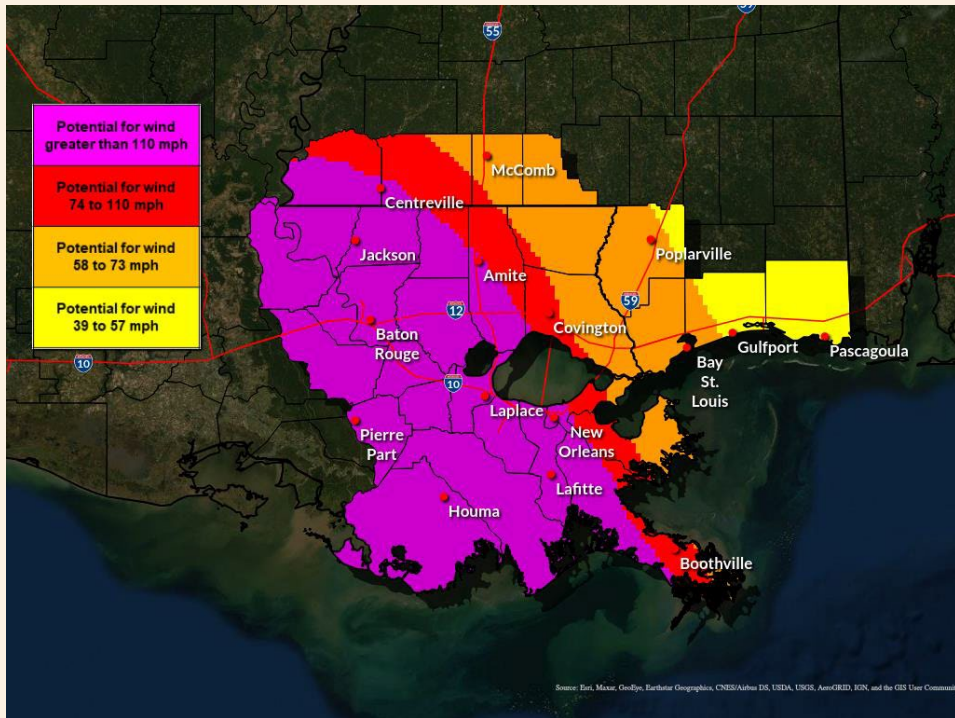
How good are the forecasts?



In 2021, no individual model performed better than the official NHC intensity forecasts.

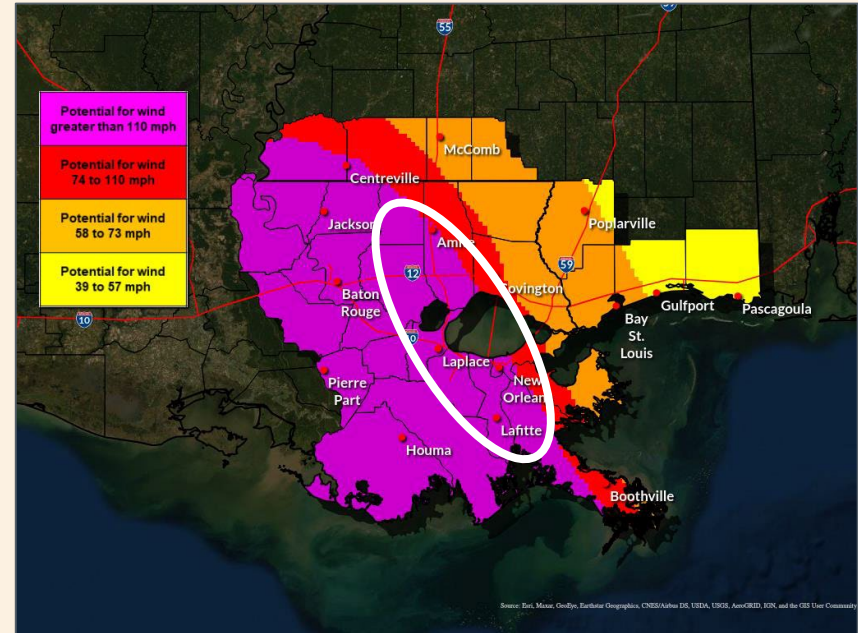
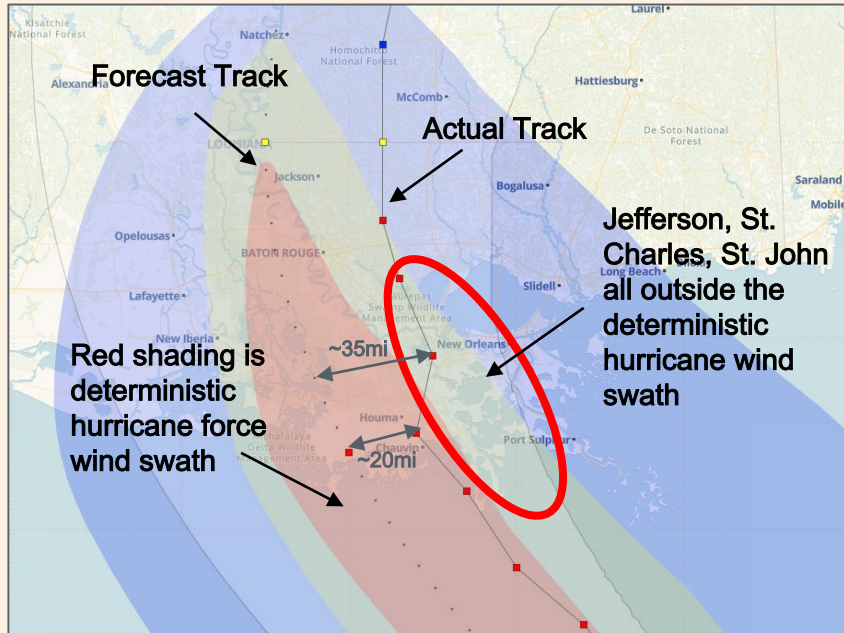
NHC outperformed all of the consensus aids (dashed lines) at some lead times.

Hurricane Threats and Impacts Graphics (HTI)



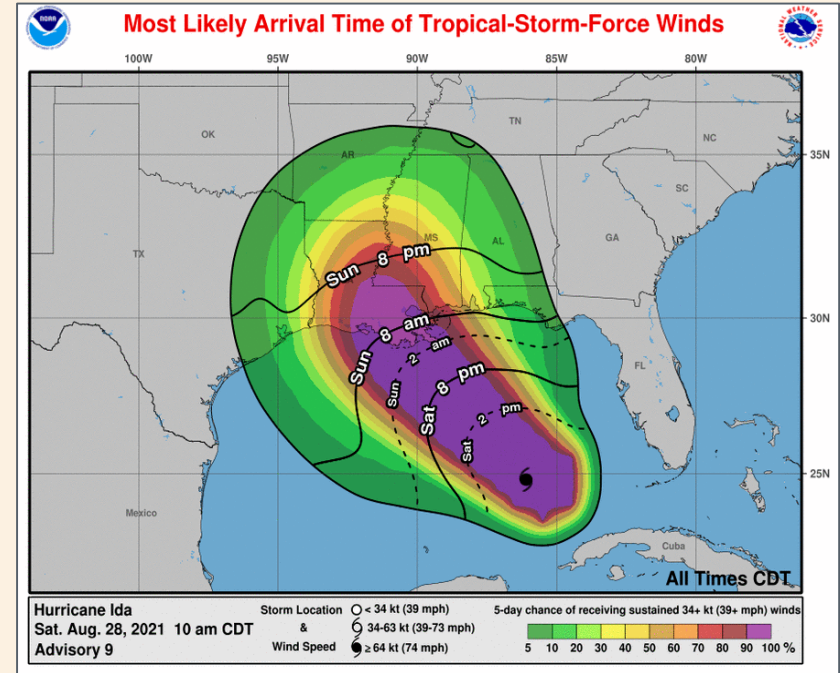
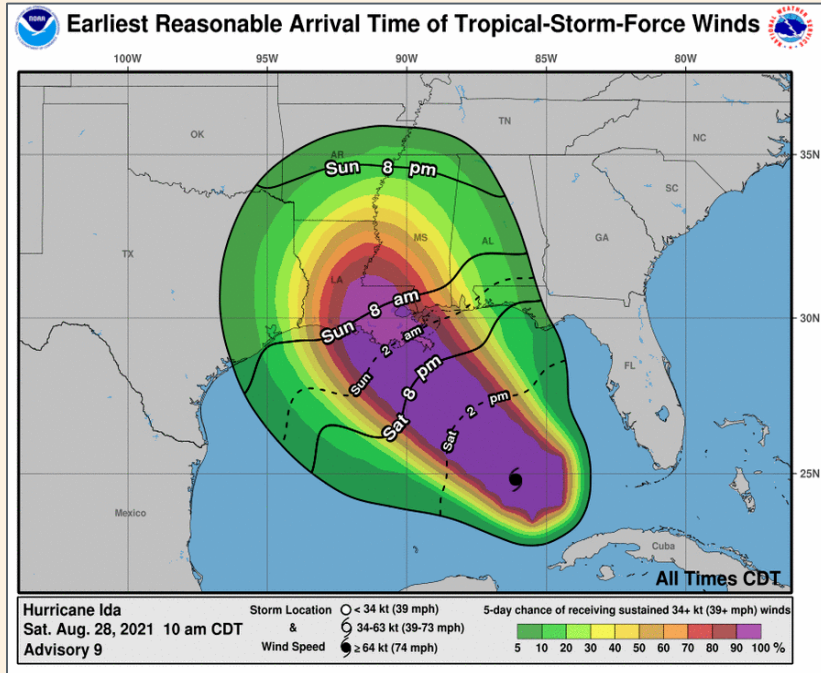
- Probabilistic forecast based on the current NHC advisory and accounting for reasonable forecast errors
- Provides the POTENTIAL winds you should prepare for, and in many cases may indicate higher winds than the official forecast
- Example from Hurricane Ida 10am 8/28.

Why use HTIs?



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

Time of Arrival/Departure Graphics



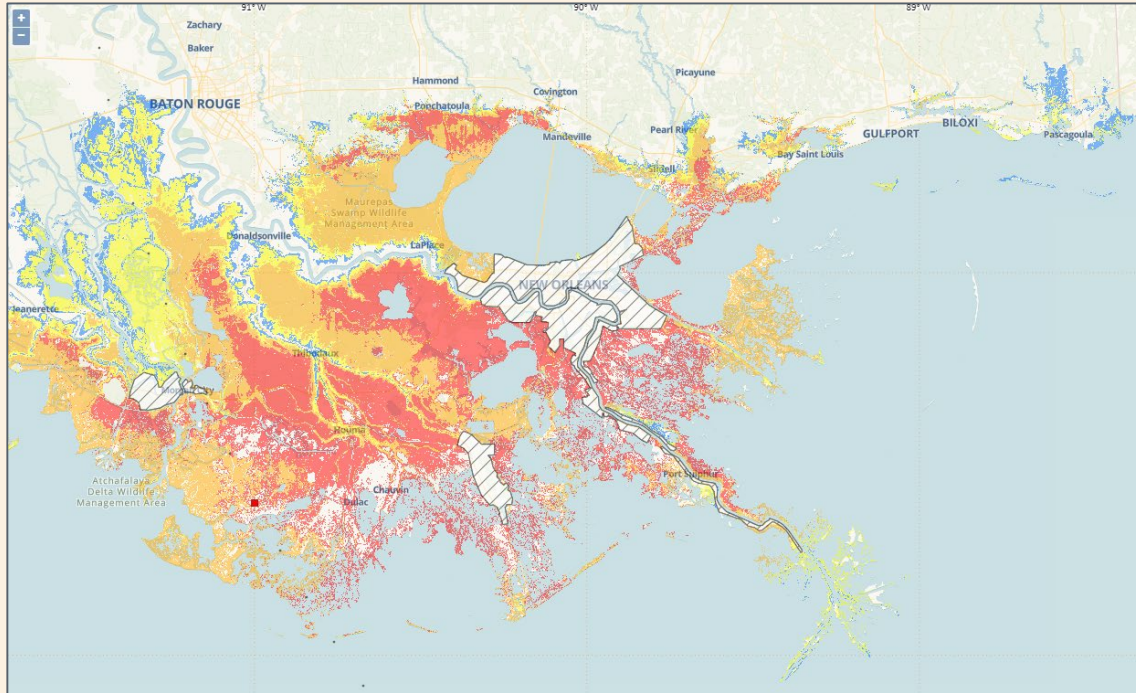
Based on these graphics, when do you think impacts will arrive in New Orleans?
How should you communicate this to your friends, family or partners?



Storm Surge Products and Communication

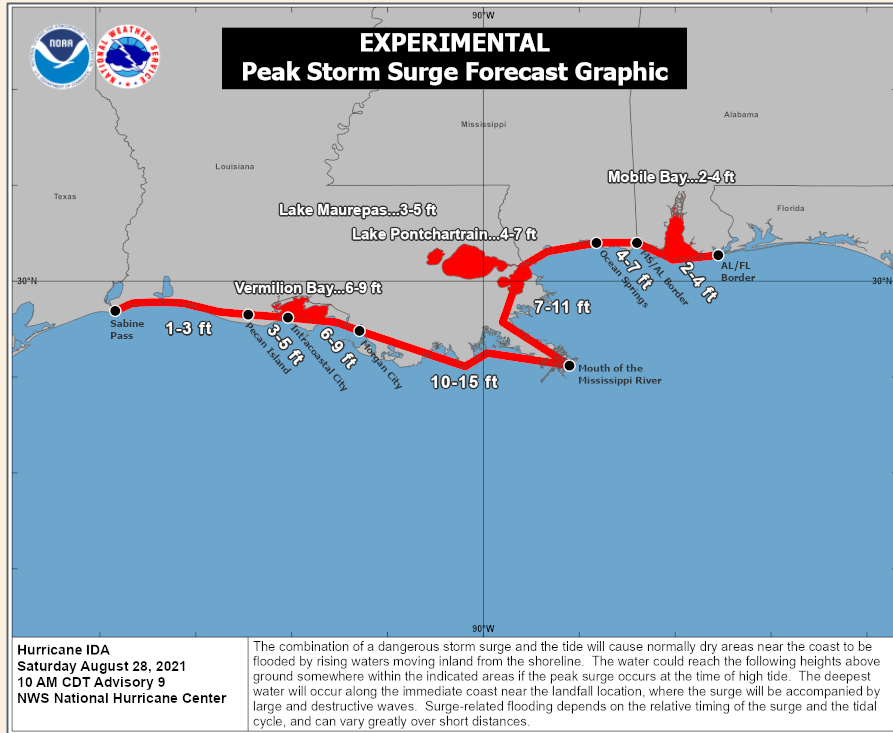


Storm Surge Flooding Map



- Based on probabilistic surge forecasts
- Provides a reasonable worst case inundation at each location based on the current NHC forecast track and intensity
- Available on the NHC website and through HVX during the watch/warning time frame, roughly 90 minutes after each advisory

Peak Storm Surge Forecast Graphic

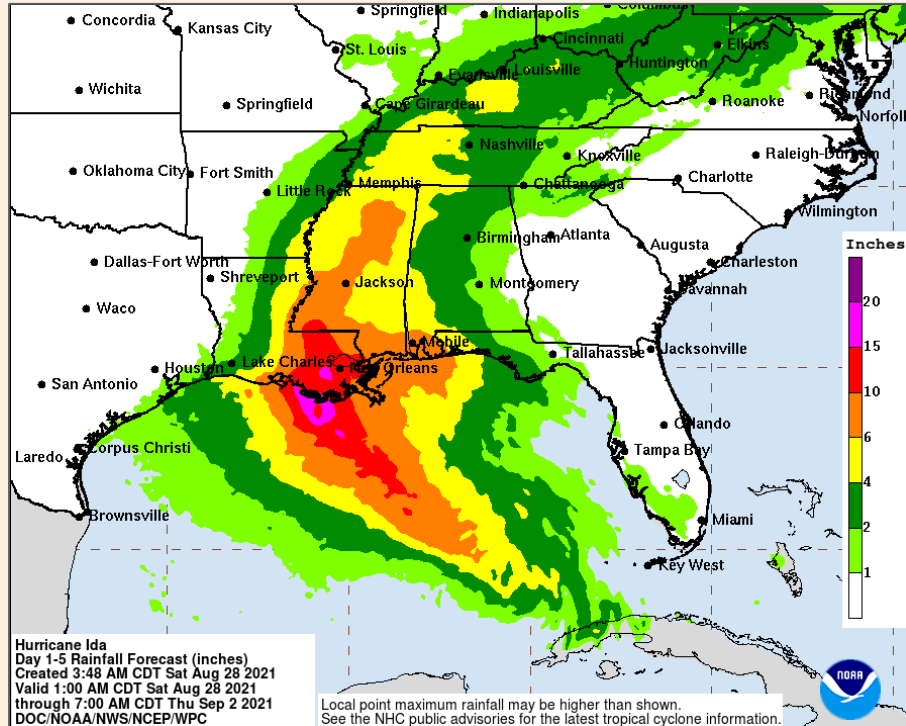


- Provides potential peak inundation values along the open coast
- Not everywhere will see these values
- Does NOT indicate potential depths away from the open coast
- Available around advisory time when watches/warnings are in effect

Flooding Rain Hazards and Communication

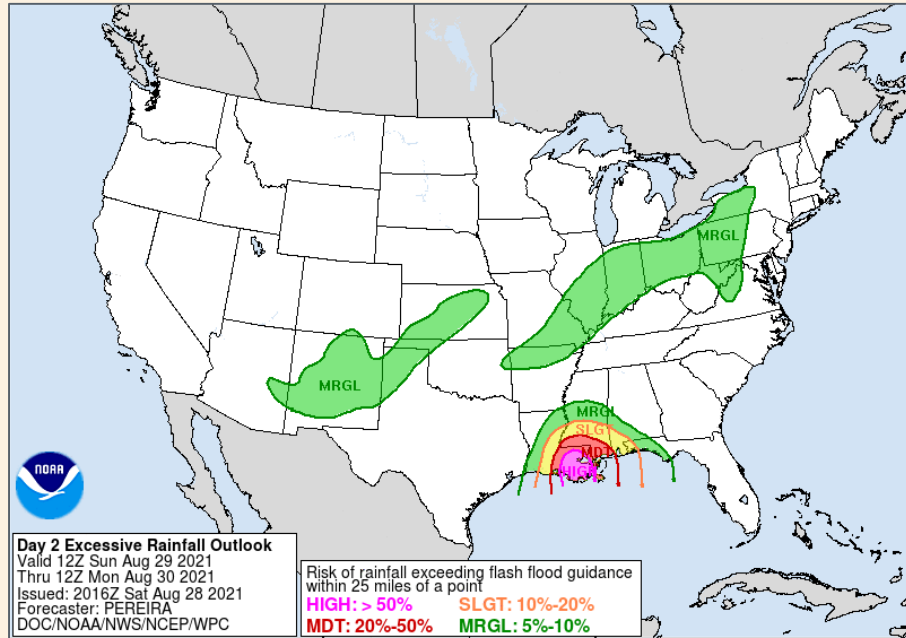


Deterministic Rainfall Forecast (QPF)



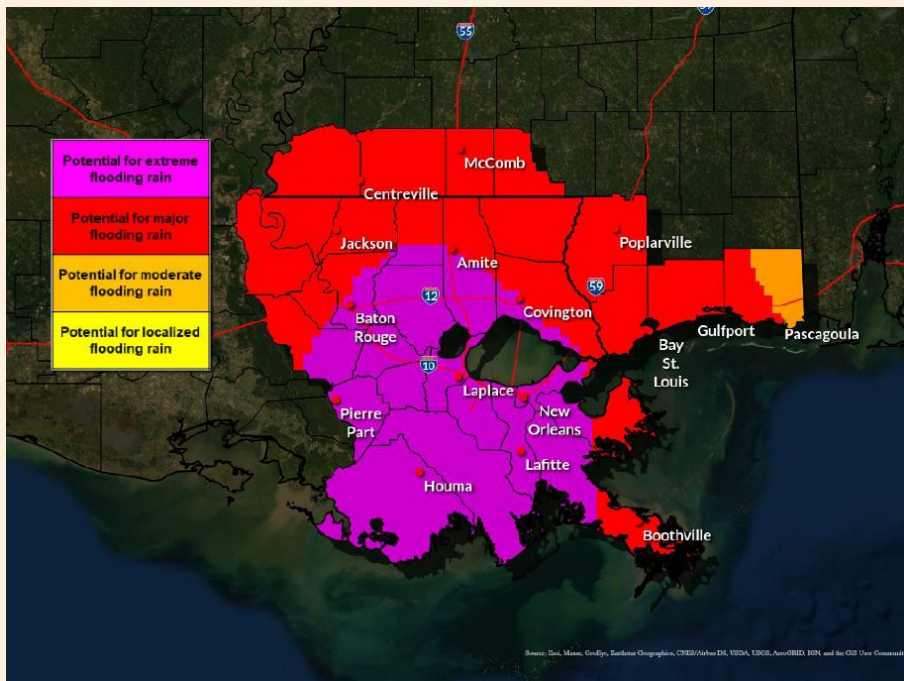
- Rainfall forecast graphics for tropical systems are created with a broader color scale
- They are hosted on both the WPC and NHC website and typically include 3 to 5 days of rainfall depending on the storm

Excessive Rainfall Outlooks (ERO)



- Describes flash flood threat
- Probabilistic product accounting for forecast rainfall, uncertainty and antecedent conditions
- High Risk context:
 - 54% result in at least 1 fatality
 - 73% result in at least \$1M damage

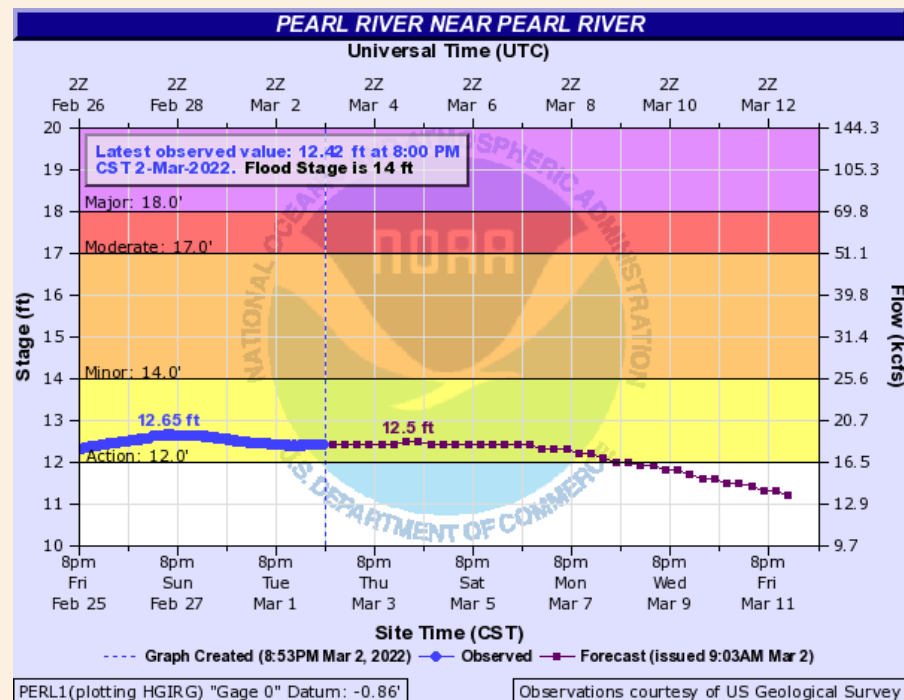
Flooding Rain HTI



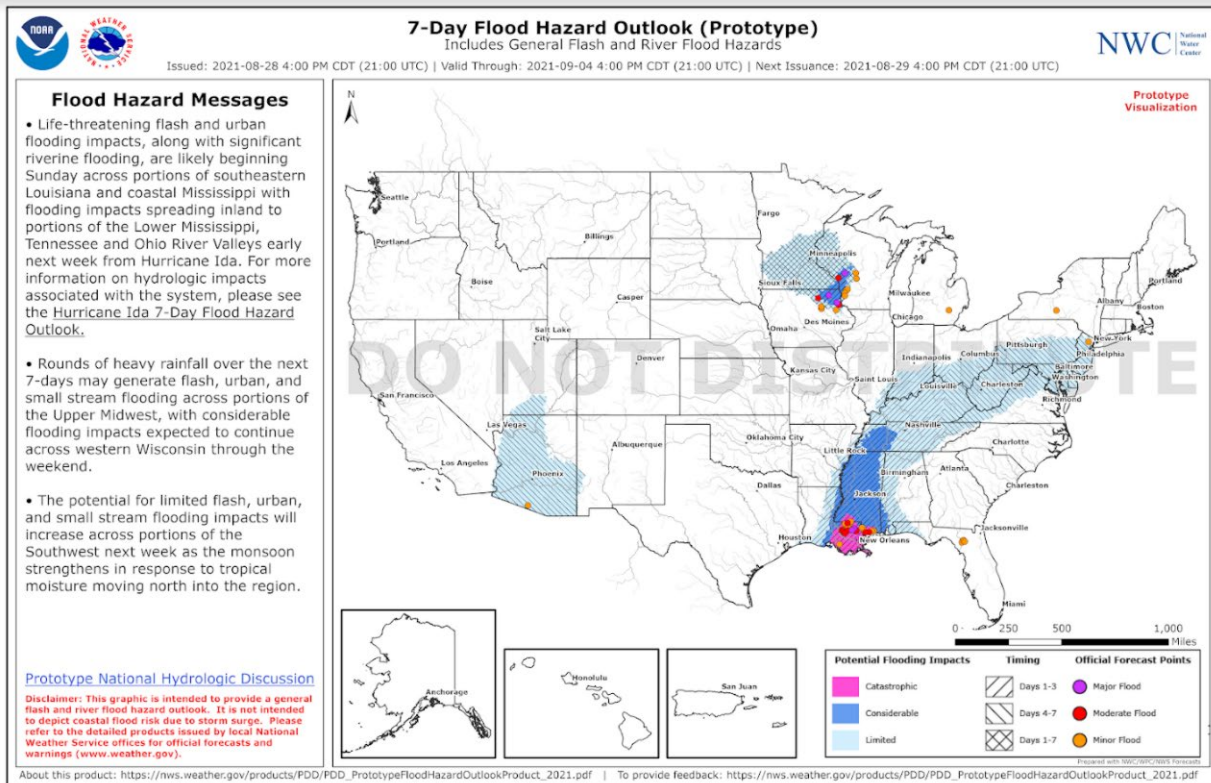
- Generally matches the excessive rainfall outlooks, but in a different color palette to match the other HTI graphics
- When produced (generally after watches are issued), the HTI graphics are available on our website:
<https://www.weather.gov/srh/tropical?office=lix>

River Forecasts

- Forecasts are deterministic. They do not account for errors in the forecast rain amounts or locations.
- Typically only include 24 hours of rainfall, but we can coordinate with them to request a longer duration
- In some cases, the LMRFC can produce “contingency forecasts” with extra rainfall
- For sites with a tidal influence, the LMRFC does incorporate storm surge into their river forecasts as well
- Forecasts available on our website:
<https://water.weather.gov/ahps2/index.php?wfo=LIX>



Flood Hazard Outlook



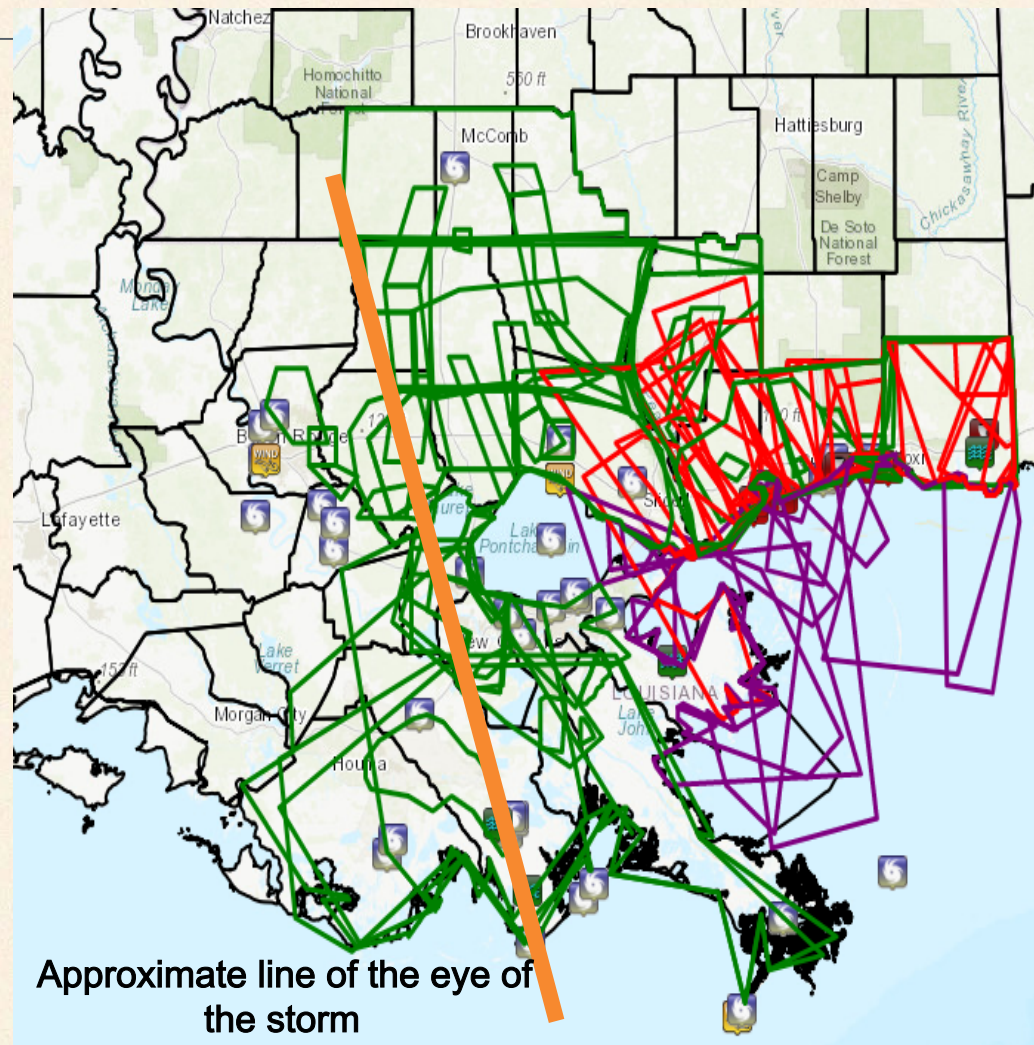
- Provides large-scale flood outlook with potential flood impact levels
- Best for regional views
- The outlook is issued by the National Water Center and coordinated with local forecast offices




Ida Short Term Warnings

Typically only see tornadoes ~ 100 miles from the center of the storm.

Red- Tornado Warnings
Purple- Special Marine Warnings
Green- Flash Flood and River Warnings
Black line- very approximate track of the eye
The icons- reports we received





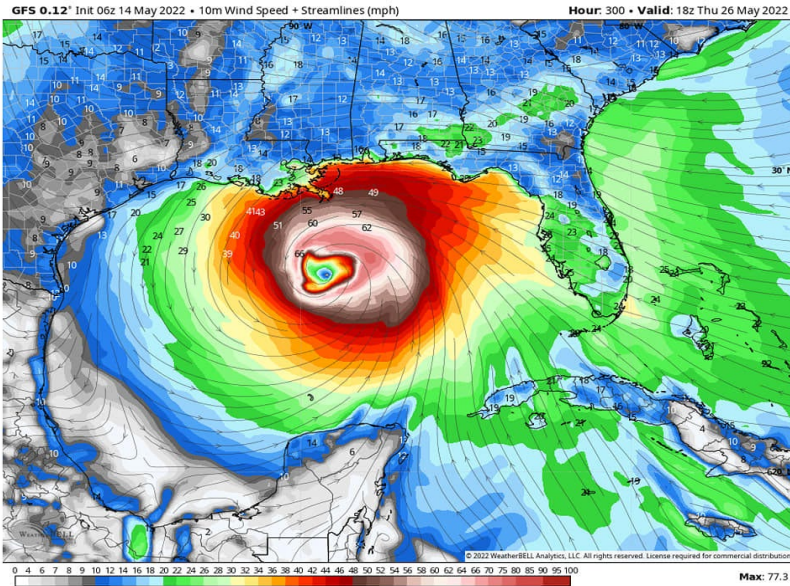
**Situations
that drive us
all crazy...**



“Social Mediarologists”

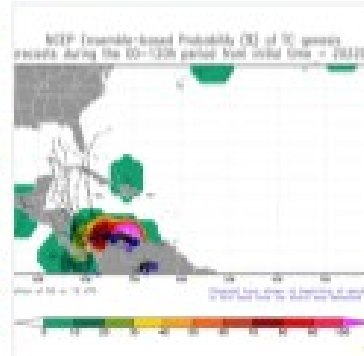
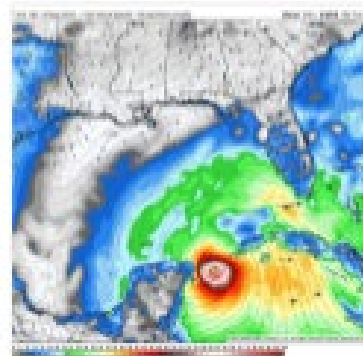
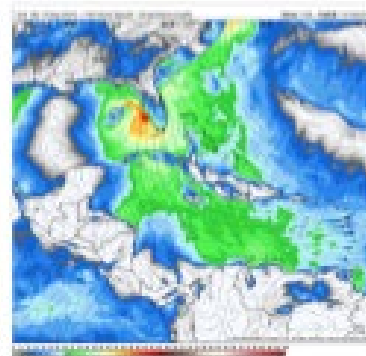
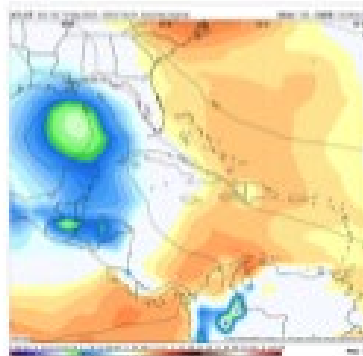
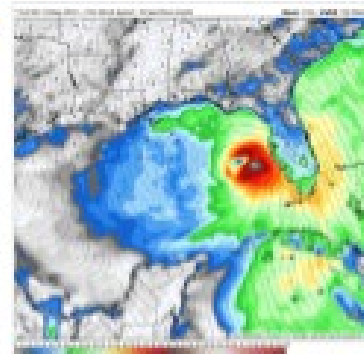
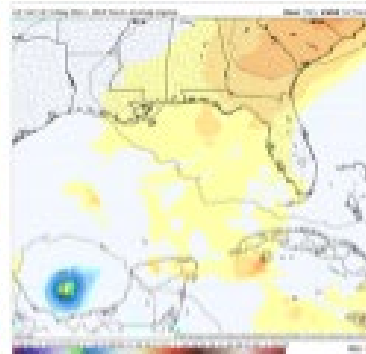
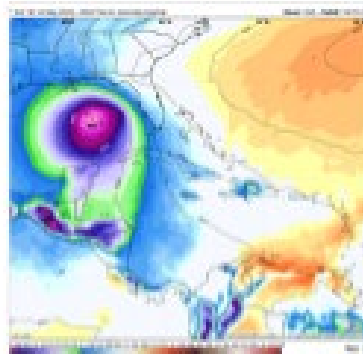
5/15/22 @ 2:15am

The GFS MODEL continues to show the possibility of a HURRICANE moving out of the CARIBBEAN into the GULF OF MEXICO. This last MODEL UPDATE moves the possibility across Florida into the Atlantic then moves back towards the Atlantic coast! Again, this has LOW CONFIDENCE as the EURO MODEL still shows no development other then the ENSEMBLES!



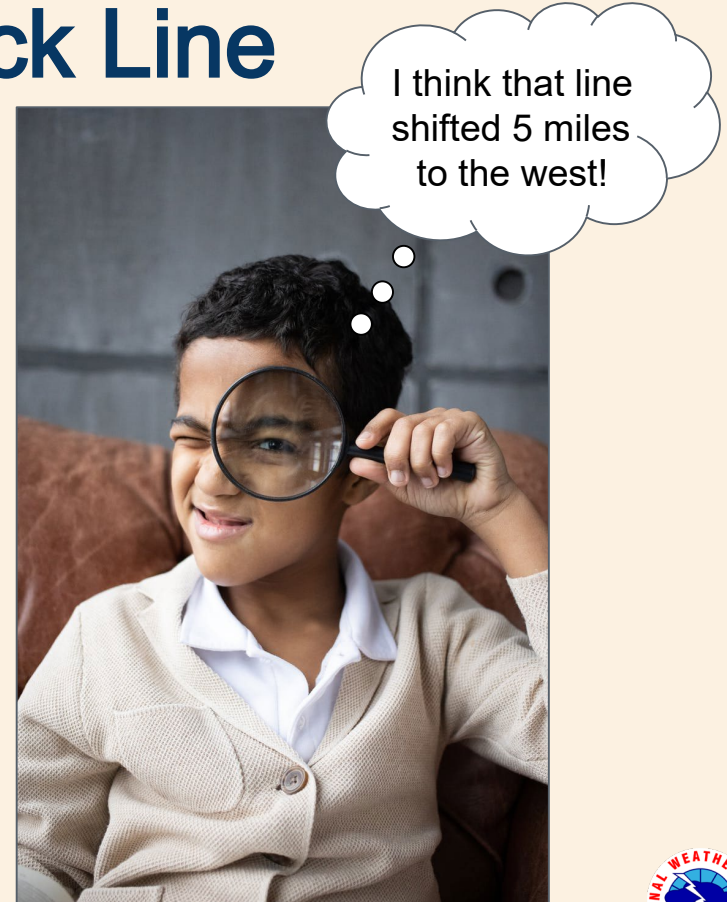
- Just because a forecast goes “viral” doesn’t mean it’s likely to happen.
- Individual models constantly create tropical systems.
- Be sure to follow official sources and if you have questions, just call us!
- There is a 175 mile track error out 5 days. Imagine what that is at 10 days?!
- We will NEVER hide a hurricane from you!





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. And many times they're negligible compared to typical forecast error.
- Focus on the impacts and whether the forecast impacts are changing



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



Sending us reports



We want YOU
To send us your storm
reports!

- The more information we have about what happened or is currently happening, the more accurate our warnings can be
- These reports also make up the “official record” and can help citizens with insurance claims, etc
- Injuries and fatalities (both direct and indirect) are recorded in the official database
- Trees down, structural damage, roads closed by flooding, hail, funnel clouds, tornadoes, etc. Send it all!



Hurricane Laura: 7 Direct Fatalities (Wind 5, 2 Rip Current)
34 Indirect Fatalities (16 from carbon monoxide)

Since 2017: 14 Hurricane Landfalls, 5 Were Major Hurricanes
7 Storm Surge Fatalities

Preliminary 2020: 46 Direct Fatalities (Rip Currents 16, Wind 14, Freshwater 9, Marine 3, Surge 2, Tornado 2) **51 Indirect, with at least 19 carbon monoxide.**

Historically, storm surge is the leading cause of fatalities in tropical systems.

In the last 4 years, we've lost more people to carbon monoxide poisoning after a storm than we have storm surge.



Radar Move

NWS Slidell Radar is Moving

Weather Forecast Office
New Orleans



WHAT YOU NEED TO KNOW

- Our primary radar will be moving from Slidell, LA to Hammond, LA in late 2022.
- The radar will also scan closer to the ground to improve low-level coverage.
- See the examples below for more info on changes around the region.

Similar / slightly improved
low-level coverage over
New Orleans

NEW

OLD

Hammond

New Orleans

Slidell

Improved low-level
coverage over Baton Rouge.

~4000-6000 ft

~300-600 ft

OLD

NEW

Baton Rouge

Hammond

Slidell

NEW

Hammond

Gulfport

Mobile

The Mobile radar will maintain
the same quality of coverage
over southern MS.

No discernable change
in radar coverage over
the New Orleans metro
area.

Radar move will begin
in late 2022 and should
be finished by March
2023.

Nearby radars will
provide adequate
coverage during the
moving process.



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!

