

2025 Hurricane Season

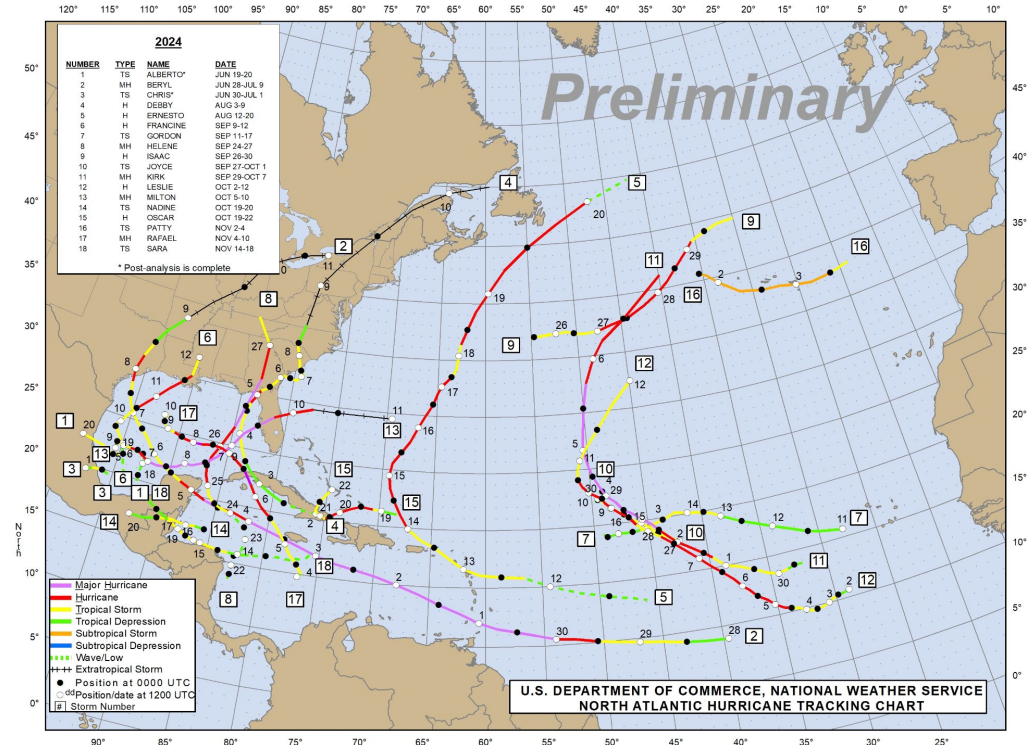
National Weather Service New Orleans/Baton Rouge



What happened in 2024?

18 named storms, 11 hurricanes, and 5 major hurricanes; it was also the first since 2019 to feature multiple Category 5 hurricanes. Additionally, the season had the highest accumulated cyclone energy (ACE) rating since 2020.

Beryl- 5- retired
Helene- 4- retired
Kirk- 4
Milton- 5- retired
Rafael- 3





2025 Atlantic Tropical Cyclone Names

Andrea
Barry
Chantal
Dexter
Erin
Fernand
Gabrielle

Humberto
Imelda
Jerry
Karen
Lorenzo
Melissa
Nestor

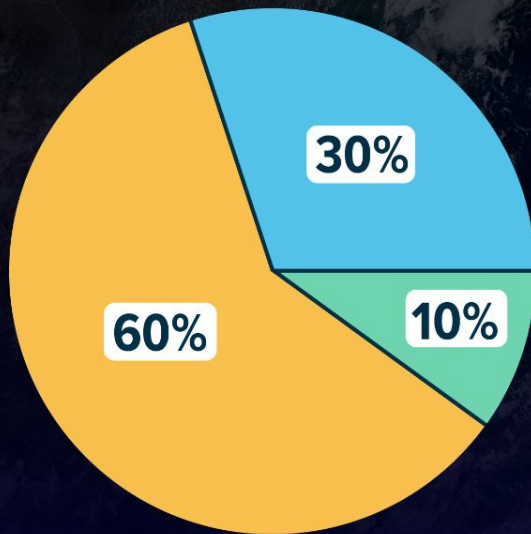
Olga
Pablo
Rebekah
Sebastien
Tanya
Van
Wendy

Names provided by the World Meteorological Organization



2025 Atlantic Hurricane Season Outlook

Season Probability



 Above Normal  Near Normal  Below Normal

Named Storms
13 - 19

Hurricanes
6 - 10

Major Hurricanes
3 - 5

What does 2025 look like?

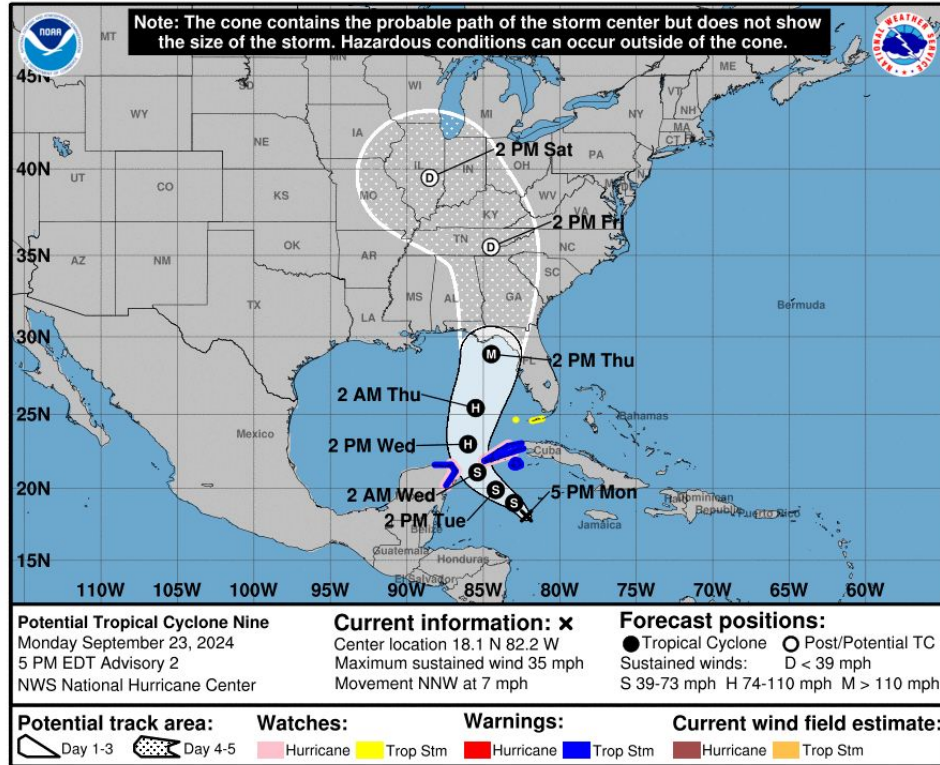
- **Weakening La Nina - > Moving towards ENSO Neutral through August**
- Sea Surface temperatures are above normal. In 2024 ocean heat content was the highest recorded in 65 years of record. 2024 was also the warmest year on record globally.

But a few things to remember:

- **There is exactly 0% skill when it comes to guessing which state will be affected or when over the course of the season**
- Incredibly active 2024 was La Nina, active 2023 was El Nino, 2022 season saw La Nina conditions, with no local impacts in 22/23.
- La Nina/El Nino does not tell us whether there will be local impacts



NEW- Earlier Potential Tropical Cyclone Advisories



Advisory products can be issued up to **72 hours in advance** of storm surge or tropical storm force winds reaching land. Previously this was 48 hours in advance.

A potential tropical cyclone is a disturbance that isn't yet a tropical cyclone (tropical depression, tropical storm, or hurricane), but there is high confidence that it will bring tropical cyclone impacts (wind and/or storm surge) to land.

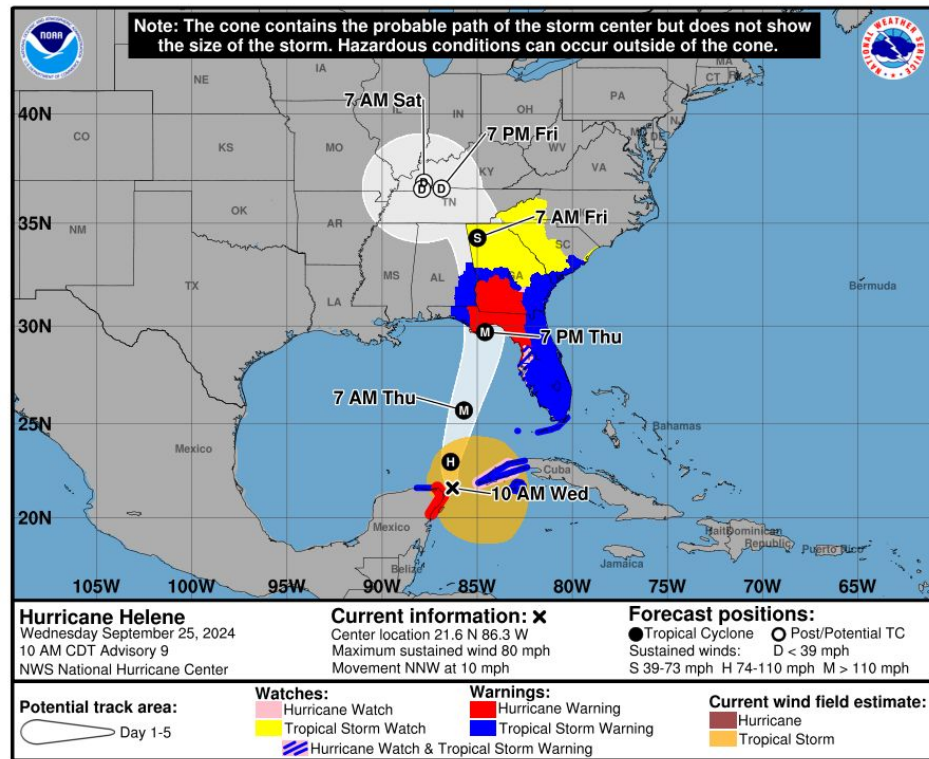
Experimental Cone Graphic Continues

Experimental cone graphic depicting inland U.S. tropical storm and hurricane watches and warnings will continue to be available experimentally.

The color/pattern for an area with both a Tropical Storm Warning and a Hurricane Watch has been added to the legend.

This graphic helps to convey wind hazard risk over land.

Graphic is not available as soon as the current cone graphic.



Verification



NHC Official Track Error

We are consistently improving! Less than a 20 mile error 24 hours before landfall. **This is only for the center line; not verification on IMPACTS.**

NOTE- 5 days out there is still over 100 miles of error on a landfall point. 35 years ago that 100 miles was at day 1 ! This is why our cones only go out 5 days.

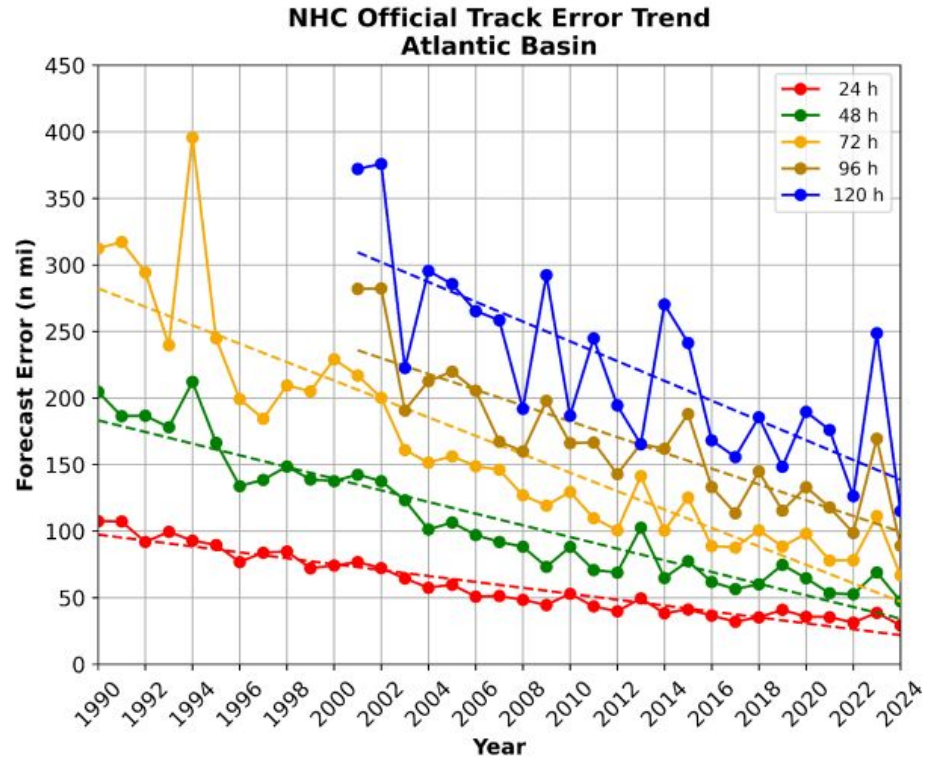


Figure 2 – Trends in NHC official track errors (n mi) from 1990-2024.



NHC Official Intensity Errors

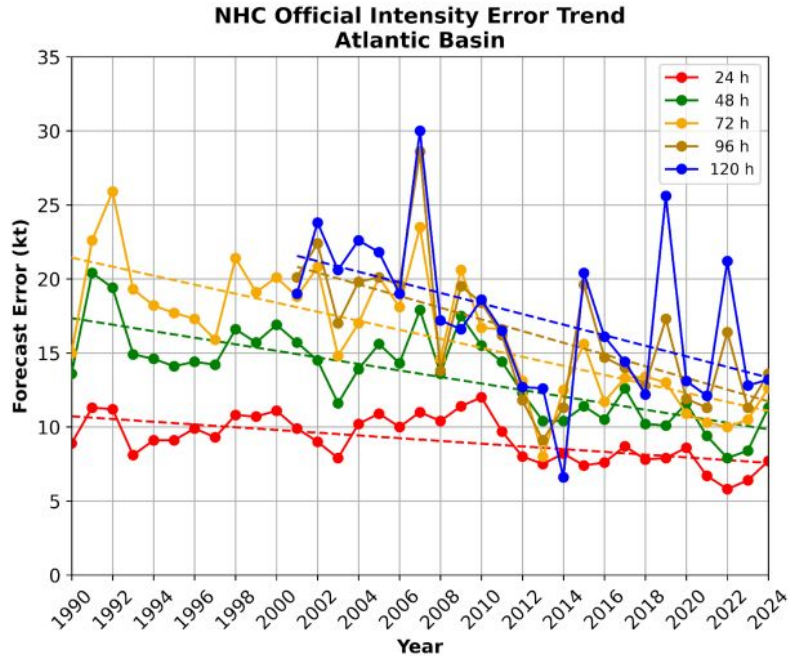
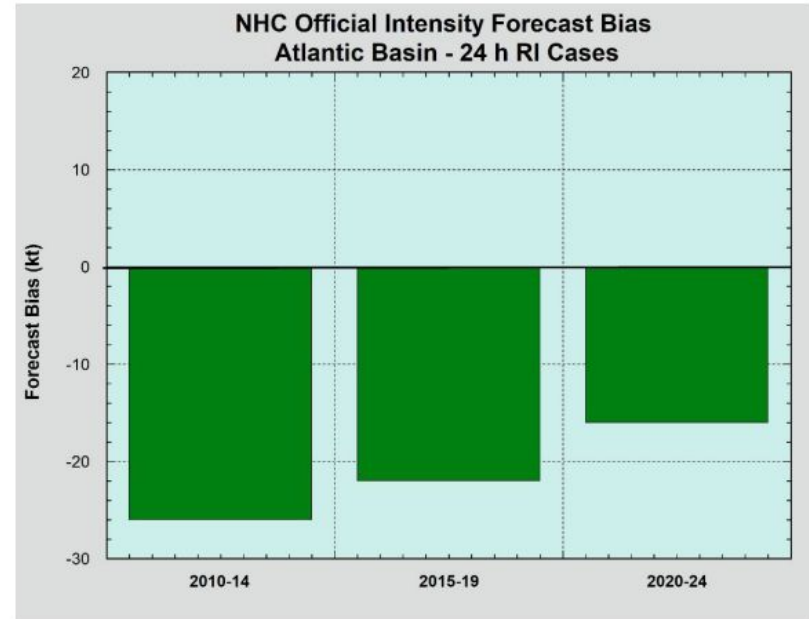


Figure 3 – Trends in NHC official intensity errors (kt) from 1990-2024.



10 to 15 knots is about a 1 category difference.



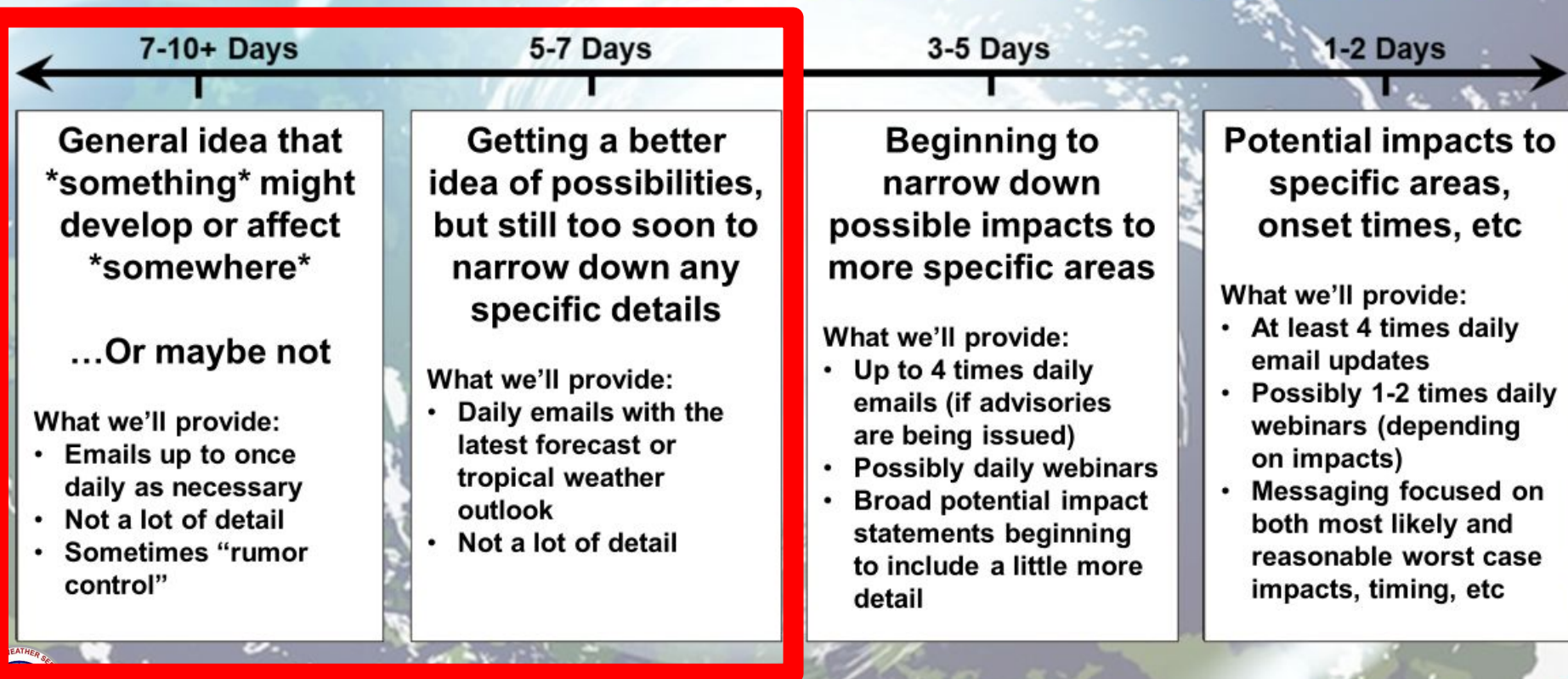
Social Media



But first...



What details can you **REASONABLY** expect from a hurricane forecast at different lead times?



Social Media Red Flags

Are they selling things?

Asking you to subscribe to see certain posts?

Only posting weather models and not forecasts? Only focusing on their page and not the actual forecast and impacts?

Remember, **most** of these pages, are looking to make money. Money is not made from correct information, it's made from popular information.

While there may be good influencers out there, we cannot endorse any certain one. Please rely on your official government sources for weather hazard information!



The latest forecast from the NHC shows both tropical depressions strengthening into category 1 hurricanes early next week as they head across the Gulf of Mexico. Nearly the entire Gulf Coast is in one of the two forecast cones. We've NEVER seen two simultaneous hurricanes in the Gulf, and it's very possible we won't again in our lifetime.

FIRST ALERT 12 TROUBLE IN THE GULF?

FOURTEEN

Location: 15.4°N, 82.1°W
Wind: 35 mph
Movement: WNW at 12 mph
Pressure: 1007 mb

THIRTEEN

Location: 17.8°N, 58.5°W
Wind: 35 mph
Movement: WNW at 21 mph
Pressure: 1008 mb

Send a gift

Like Comment Send Share

560

9.7K shares

Most relevant

Author
Randall Cargo
@highlight

5h Like Reply

This page makes you pay to see FREE weather model images and are very rude if you comment on their posts about how unpredictable the weather is.

7/25/24 @ 4pmEST
CONFIDENCE IS RISING OF TROPICAL TROUBLE THE FIRST WEEK OF AUGUST! MIGHT SEE 2 SYSTEMS BACK TO BACK!!!!

ONLY FOLLOWER COMMENTS ARE ALLOWED ON POST AND SUBSCRIBER ONLY COMMENTS ALLOWED ON LIVE BROADCAST!

LIVE BROADCAST AT 9pmEST TO COVER MODEL UPDATES!

This was posted in August 2024. It was a post from AUGUST 2020. It got MILLIONS of views and the poster got paid over 100k for the views.

Send a gift

210 65 comments 161 shares

Like Comment Copy Share

Wild that weather is so unpredictable with so much technology. I wonder why we even start tracking this far out when it's basically a guess for another week.

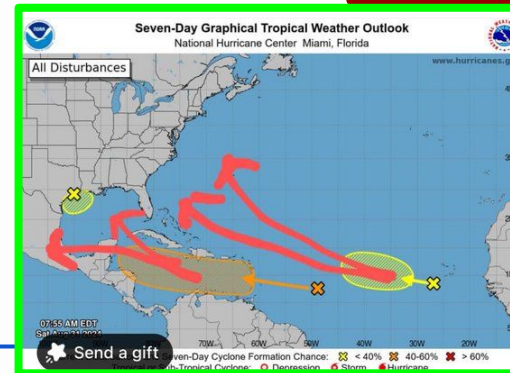
Like Reply

central wonder why you are here if you don't understand?

Like Reply

28

View 2 more replies...



NOT arrows from NHC. How does this help?

Forecasts vs a Computer Model

- Forecasters USE computer models to create a forecast
- We understand the uncertainties and complexities with the models to communicate the impacts
- Computer Models are no different than running the statistics for a lottery number, a sports bet, literally anything else that involves predicting the future. **We like to THINK computers can do it all!**
 - *Sure you can find a model. You can GUESS a number. But if it's not even possibly right, does it matter?*

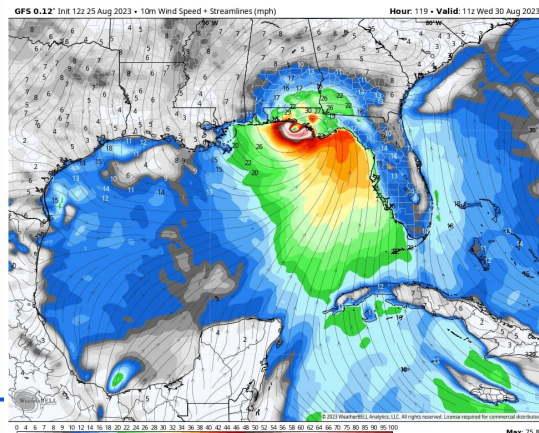
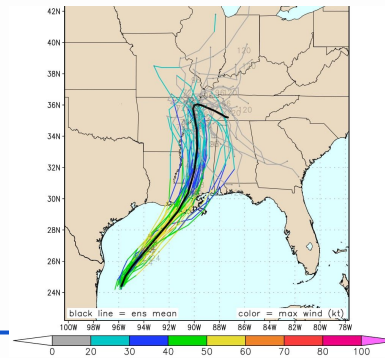
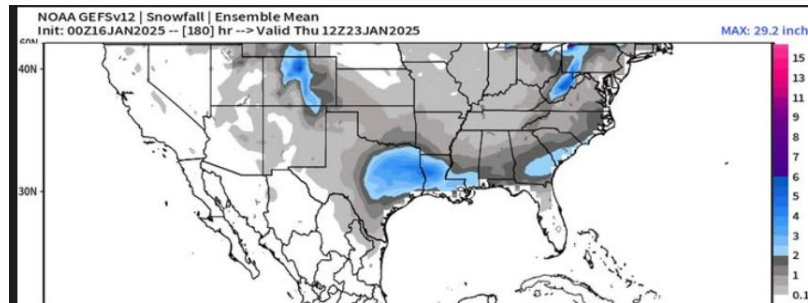
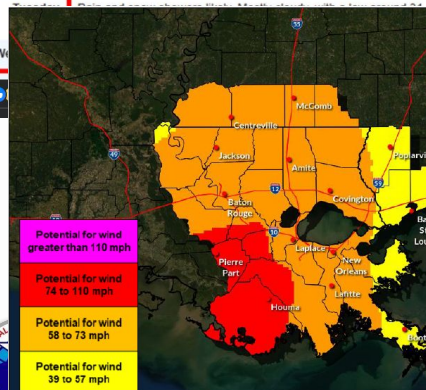
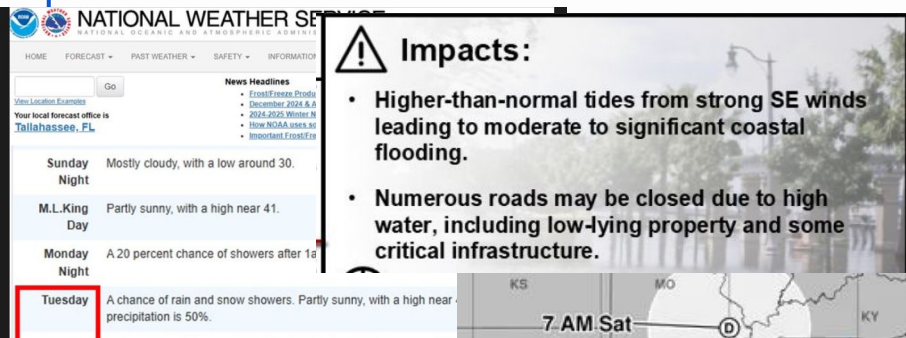
Because people continually think a model is a forecast, they get easily confused. All of this causes the public to lose confidence in weather forecasts and therefore, not take action when they need to.



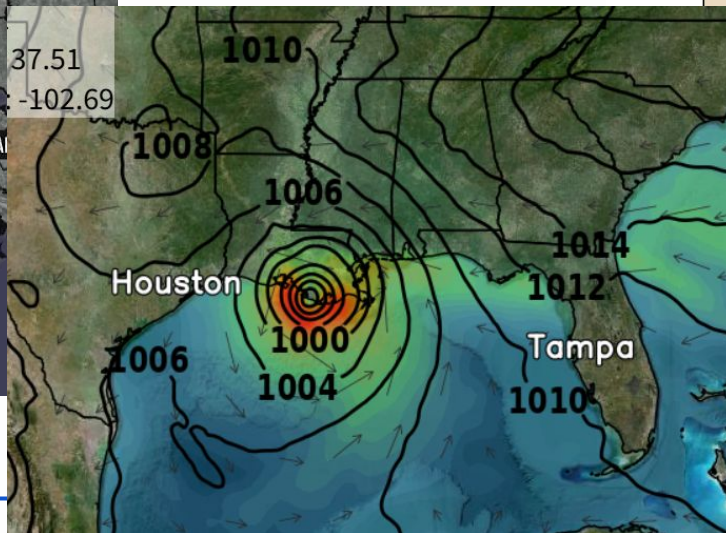
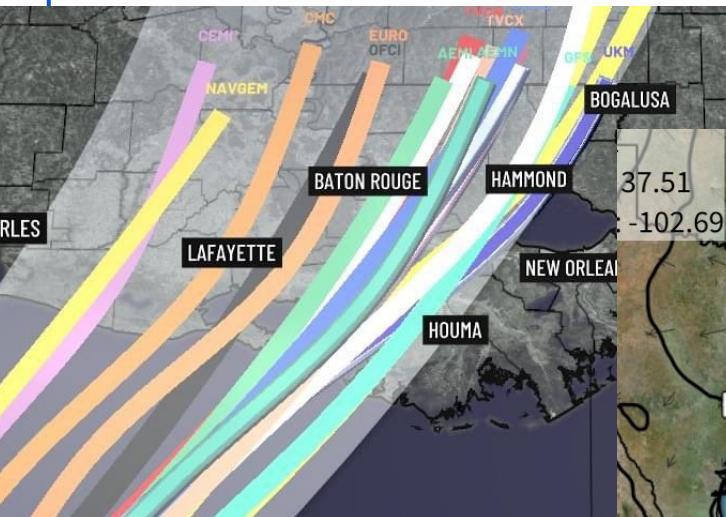
Forecasts vs a Computer Model

Forecast/Interpreted Model
Information/Impacts

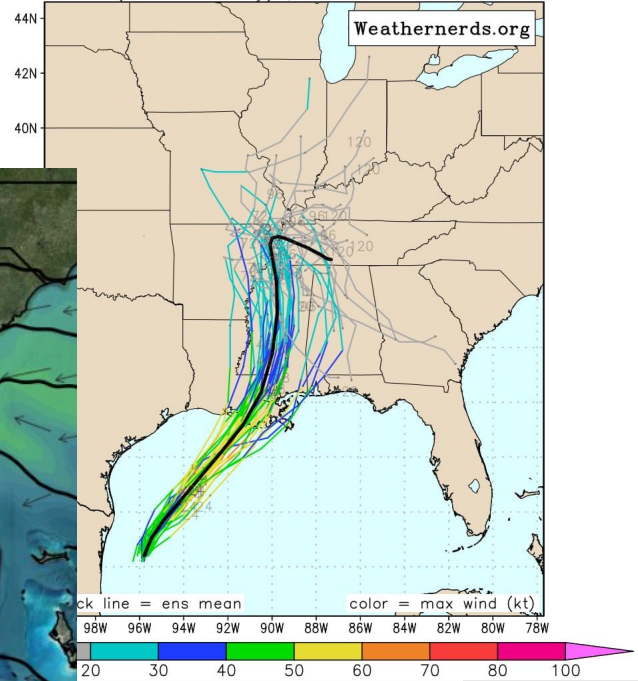
Pure Model Output- no uncertainty, no
impact information, no interpretation.



Looking at these images, how much rain will NOLA receive? What about wind? How high will the surge be? Where will the storm make landfall?



GEFS Ensemble (0-120 h only), init: 2024091012, AL06 Francine



Product Review



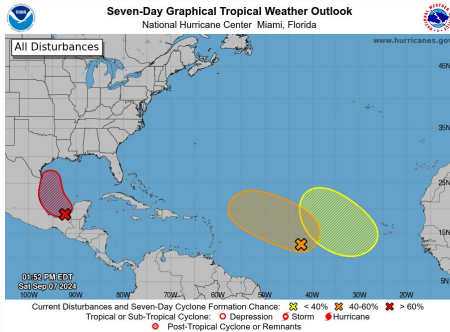
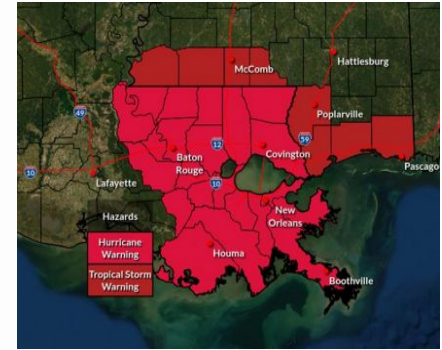
7 Days Out

- Tropical Weather Outlook



60-72 Hours Out

- PSurge (for select, well-behaved storms)



5 Days Out

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

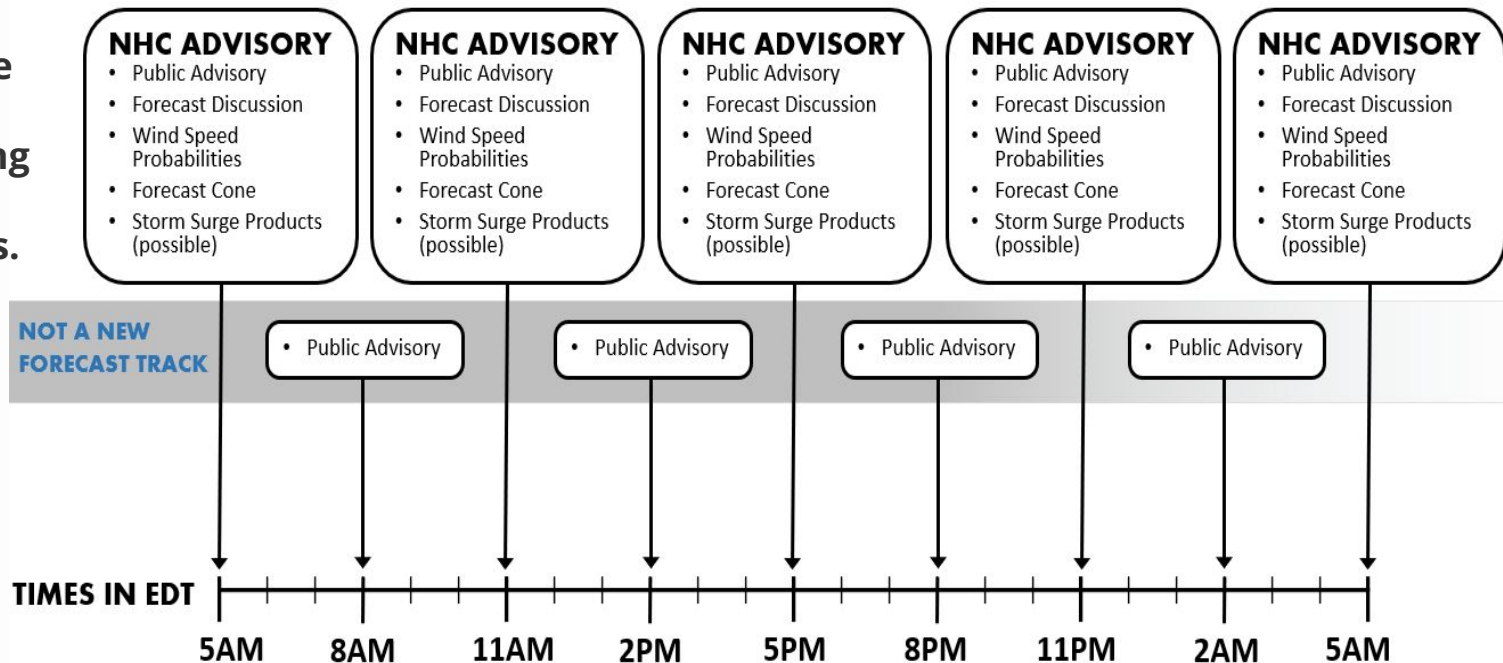
48 Hours Out

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



NHC Advisory Cycle

Can update
and/or change
watches and
warnings during
these public
advisory times.



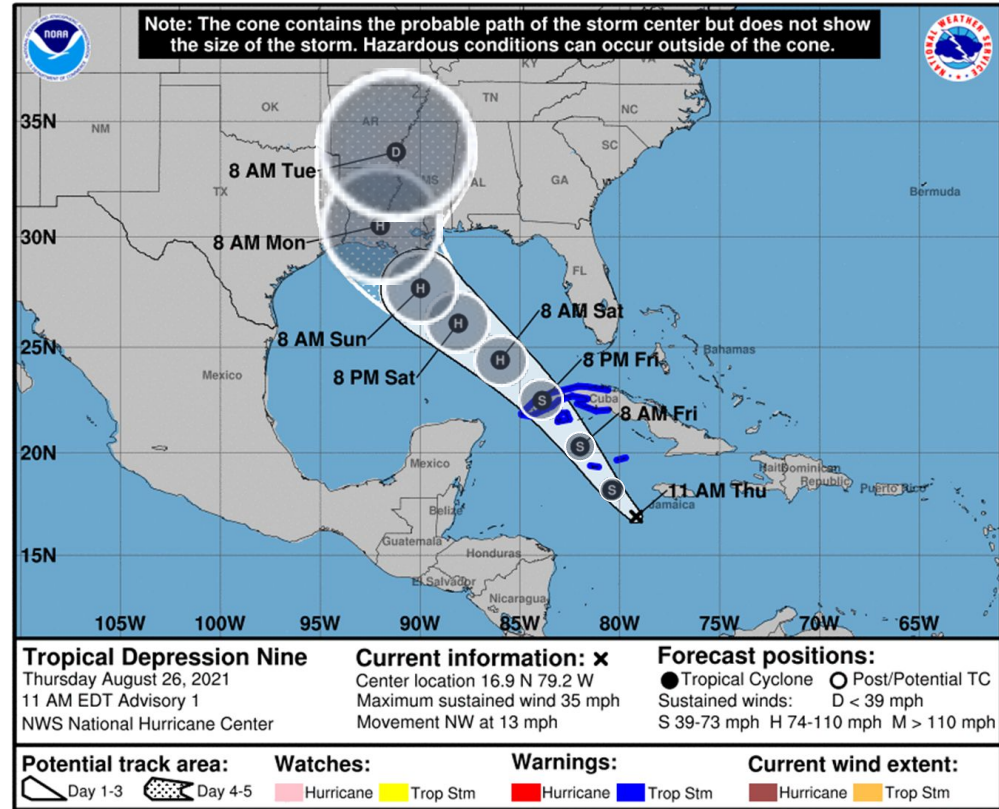
Forecast Cone- Statistics, Not Impacts!

Conveys the most likely track of the center of the storm.

Does NOT convey impacts OR the size of the storm.

Based on the 2/3rds track error from the past five years.

The cone size does not change through the season.



Saffir-Simpson Hurricane Wind Scale



Category 1 - 5

Based on
sustained winds,
not gusts.



WIND: 74-95 mph

DAMAGE: Very dangerous winds will produce some damage



WIND: 96-110 mph

DAMAGE: Extremely dangerous winds will cause extensive damage



WIND: 111-129 mph

DAMAGE: Devastating damage will occur



WIND: 130-156 mph

DAMAGE: Catastrophic damage will occur



WIND: 157 mph or higher

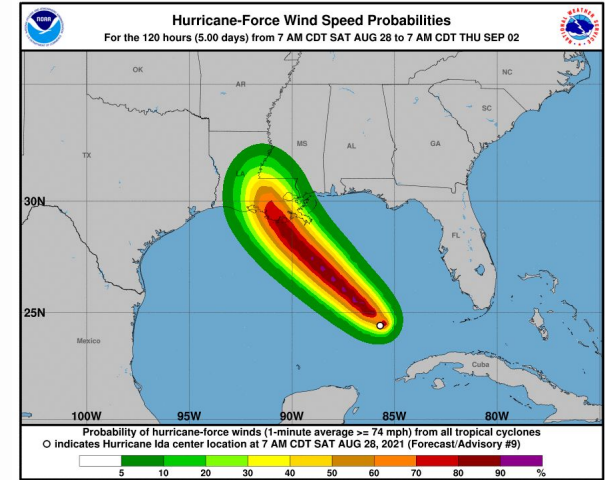
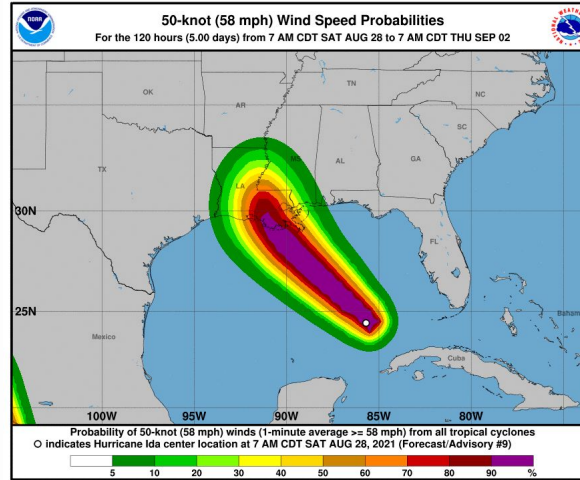
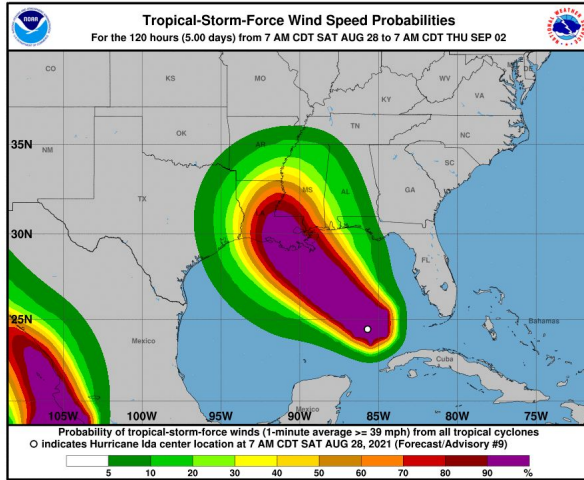
DAMAGE: Catastrophic damage will occur



You don't need a HURRICANE to get impacts!



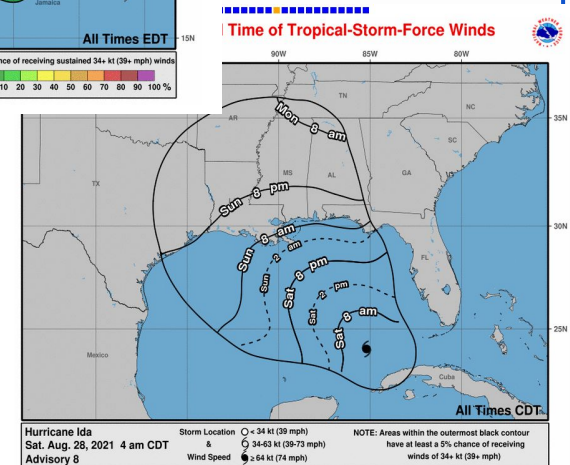
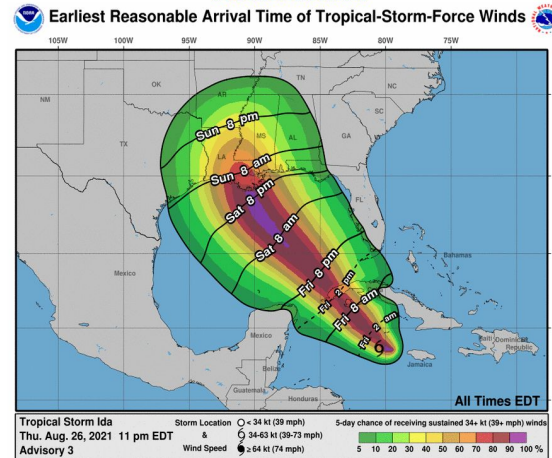
Wind Speed Probabilities



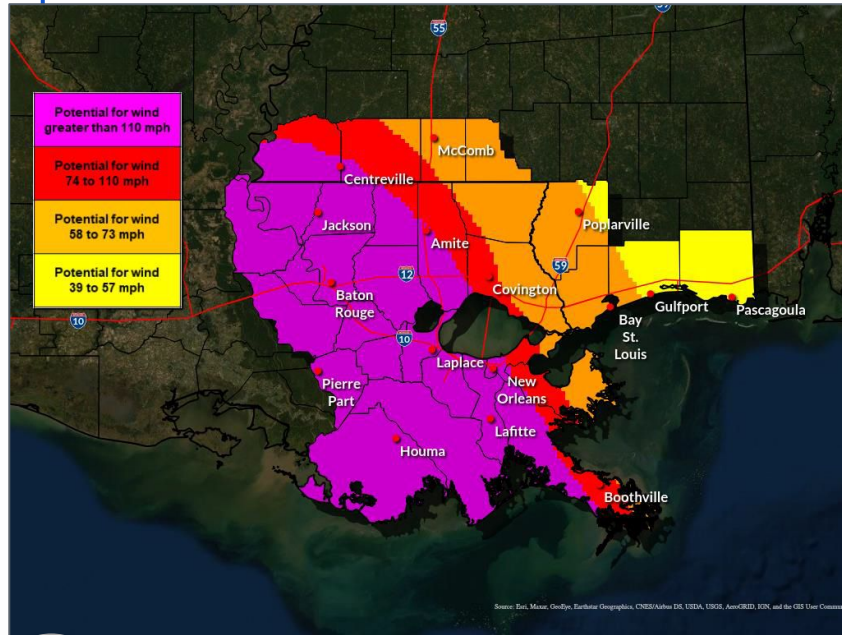
- Available for 39MPH, 58MPH, 74MPH wind speeds out 5 days
- Remember, low probabilities can be significant!
- Can be used to set a threshold for various decisions

Time of Arrival Graphics

- Provides probabilistic time of arrival of 34 KT/39 MPH winds
- Earliest reasonable is based on 10% threshold- 90% chance that the storm will arrive AFTER the time on the graphic. Most likely is 50%.
- Have preparations complete by the time tropical storm force winds arrive.



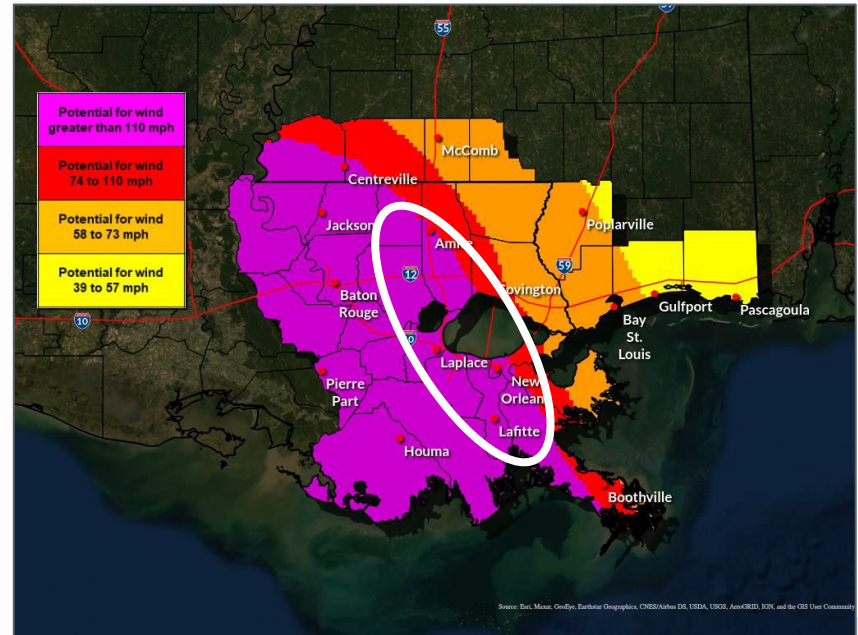
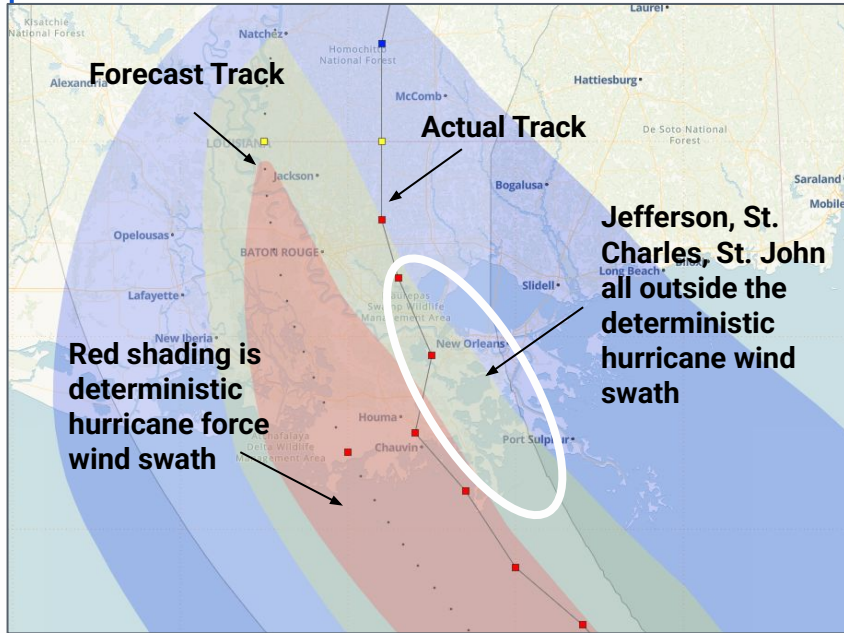
Hurricane Threats and Impacts Graphics (HTI)



- Probabilistic forecast based on the current NHC advisory. **Reasonable Worst Case Scenario to prepare for.**
- Wind, Tornado, Surge, Flooding
- Provides the **POTENTIAL** of what you should prepare for- likely will **be higher** than what is in the forecast
- Example from Hurricane Ida 10am 8/28.

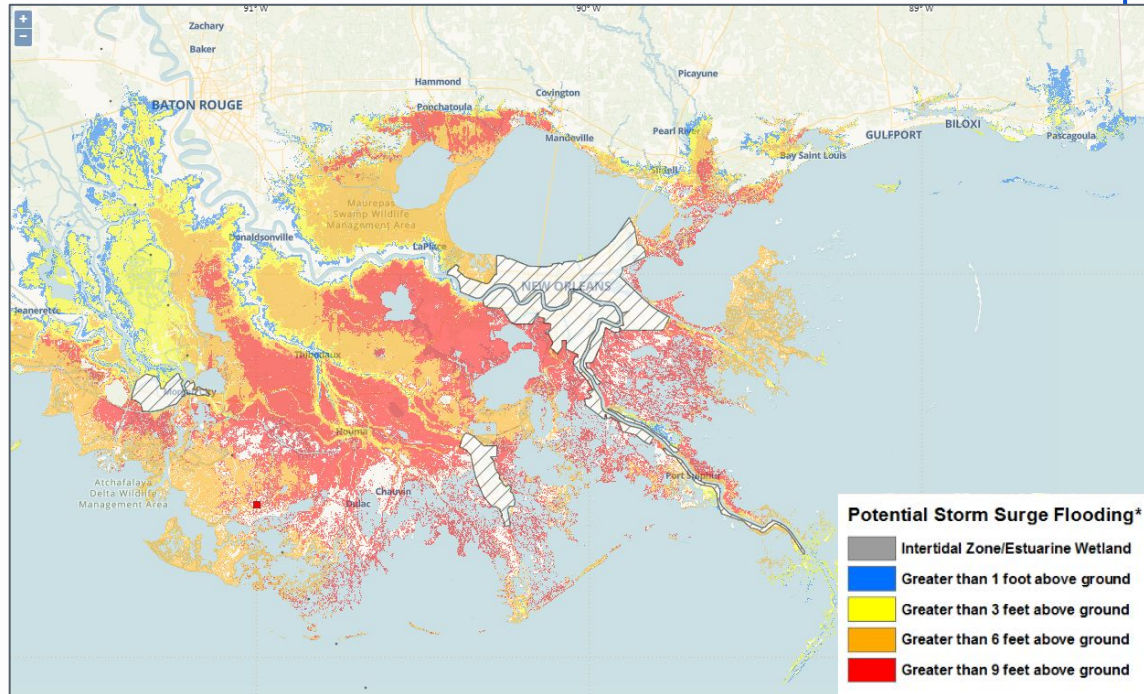


Why use HTI's?



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.
- Refer to your Emergency Management for evacuation information.

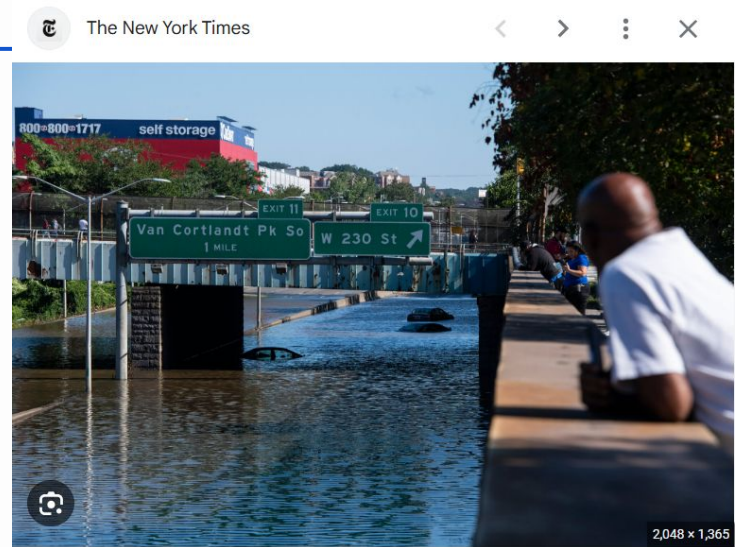


Don't forget about flooding!

- Still the most deadly hurricane hazard.
- Most people are worried about the wind and don't think about flood waters.
- A lot of rain can occur in a short amount of time and we don't always know *exactly* where.



ABC7 New York after Ida



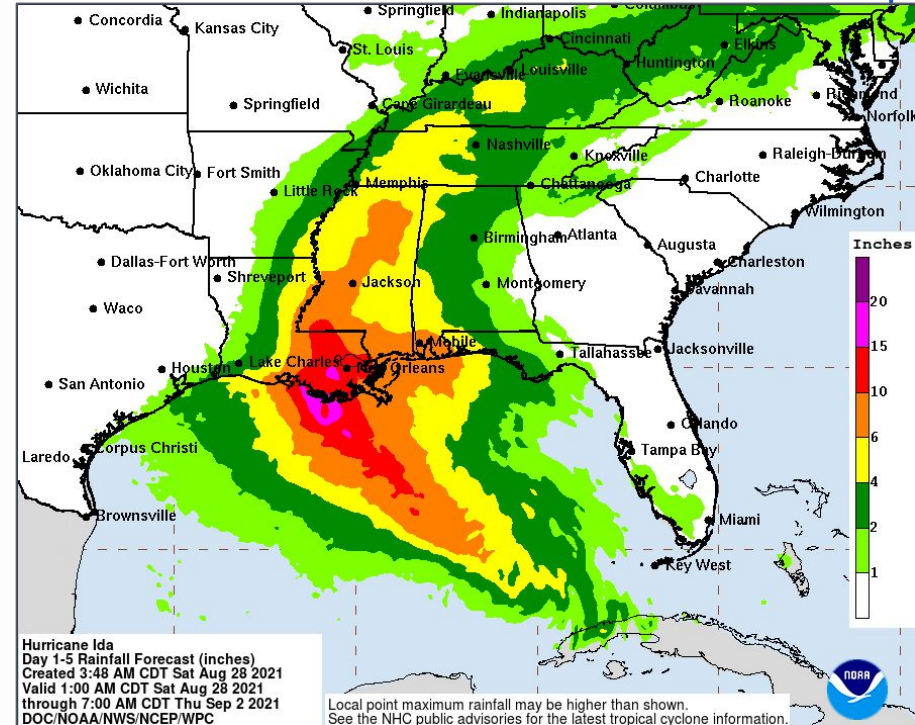
Ida Paralyzes the New York City Area

[Watch >](#)



Deterministic Rainfall Forecast

- 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.

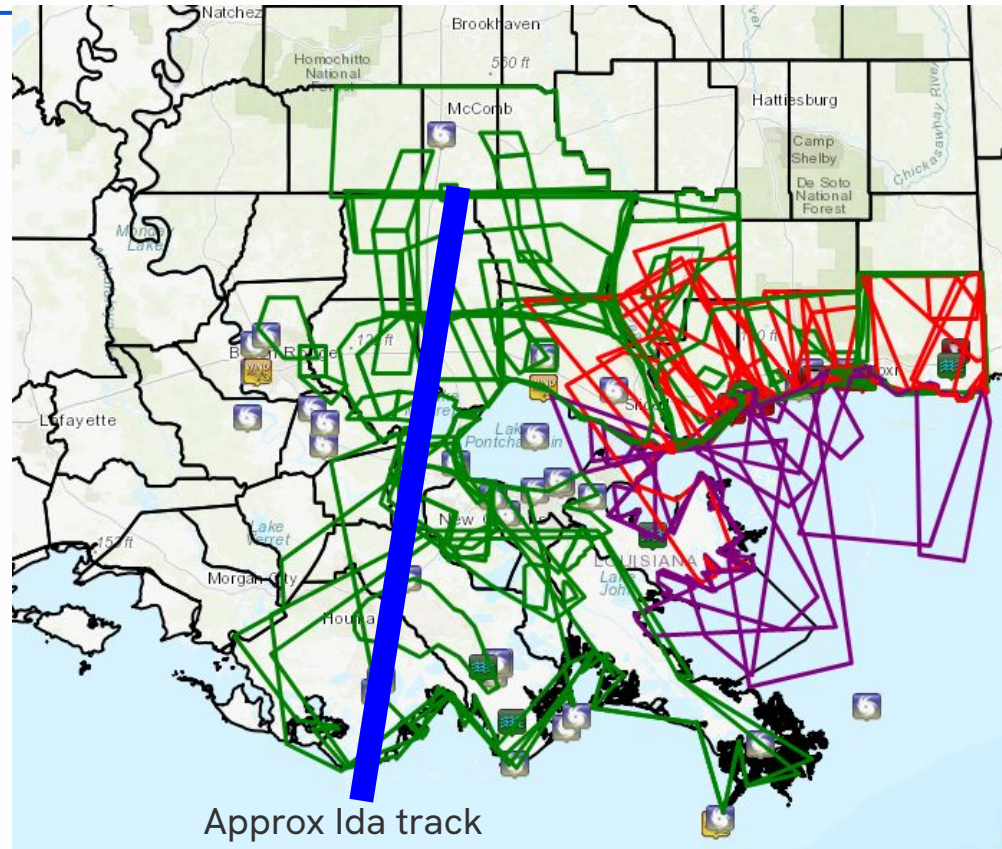


Tornadoes

Tornadoes occur to the northeast of the eye. If you were directly impacted by the center, you were impacted by the hurricane not the tornado.

Typically with tornadoes and hurricanes if one house was hit and one wasn't, it's construction.

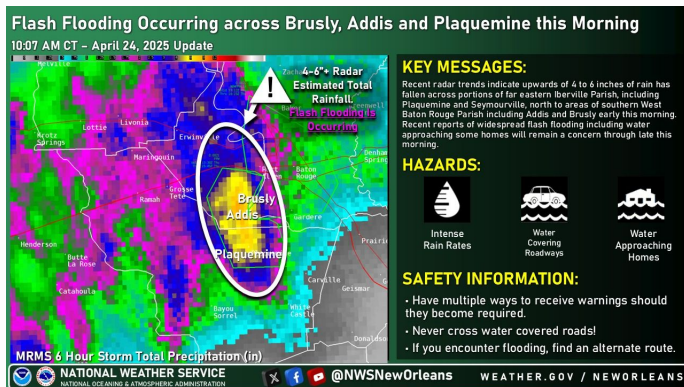
Will still issue Tornado Watches and Warnings during tropical systems.
"Typically" tornadoes are not much stronger than the actual tropical system.



Flash Flood, Marine and Hurricane Warnings during Ida



Decision Support



MY FORECAST 3 Miles NNW Gretna LA



Fair

Weather Forecast Office Baton Rouge

[Weather.gov](https://www.weather.gov) > New Orleans/Baton Rouge

Current Hazards Current Conditions Rad

Submit a Storm
Report

Briefing Page

My Tweets NWSNewOrle...

In reply to PezznolaPezz and 8 more

NWS New Orleans @NWSNewOrleans
1 hour ago

What a great picture! Could we save this for our graphics and use it with your permission/name attached? Thanks!

Show Conversation

NWS New Orleans @NWSNewOrleans
4 hours ago

We will also see locally heavy rain with the cold front. Widespread 1 to 2.5" of rain with locally higher amounts will be possible and with that there is a Marginal risk of excessive rainfall leading to isolated flash flooding. #LAWx #MSwx

My Posts US Nationa...

US National Weather Service New Orleans Louisiana
3 hours ago

Much warmer today with highs in the 70s under mostly sunny skies early but clouds should start to return this afternoon. A strong cold front is then...

Read more

Forecast for Today
TUE MAY 20 / 2025
Mostly Sunny Early and
76°
76°
72°
New Orleans
Baton Rouge
Gulfport

Severe Weather
OVERVIEW
THREATS
IMPACTS

Flash Flooding
OVERVIEW
THREATS & IMPACTS

Reinfall
OVERVIEW
THREATS & IMPACTS

Boost post

8



Resources and Questions

www.weather.gov/neworleans

www.weather.gov/neworleans/tropical

www.nhc.noaa.gov

www.facebook.com/NWSNewOrleans

www.x.com/NWSNewOrleans

www.weather.gov/lix/embrief (link to latest briefing slides and recording)

24/7 Monitored Email:
nws.neworleans@noaa.gov

Management Emails:
Mike.Buchanan@noaa.gov
Meteorologist in Charge

Lauren.Nash@noaa.gov
Warning Coordination
Meteorologist

