

# Preparing for the 2025 Hurricane Season

**Jason Beaman**  
**Meteorologist-in-Charge**  
**NWS Mobile/Pensacola**



# All It Takes Is One!

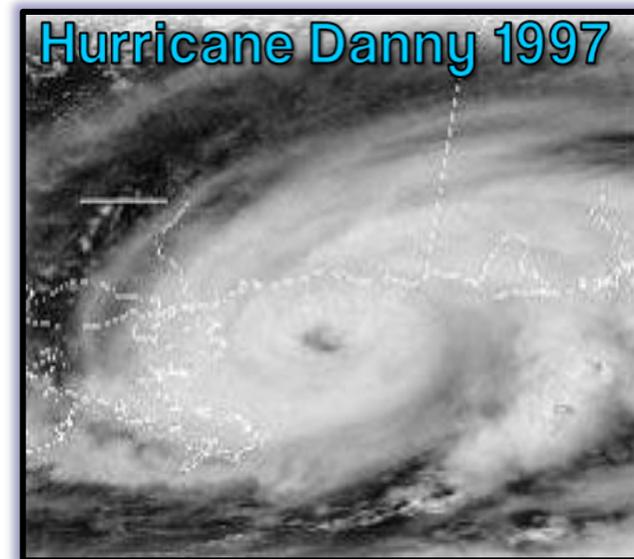
Seasonal outlooks do NOT provide any insight on potential landfalls/storm impacts

Regardless of the seasonal outlook, it is important to be prepared and to not become complacent

**IT ONLY TAKES ONE** hurricane landfall in our area to make it an active, and bad, season!

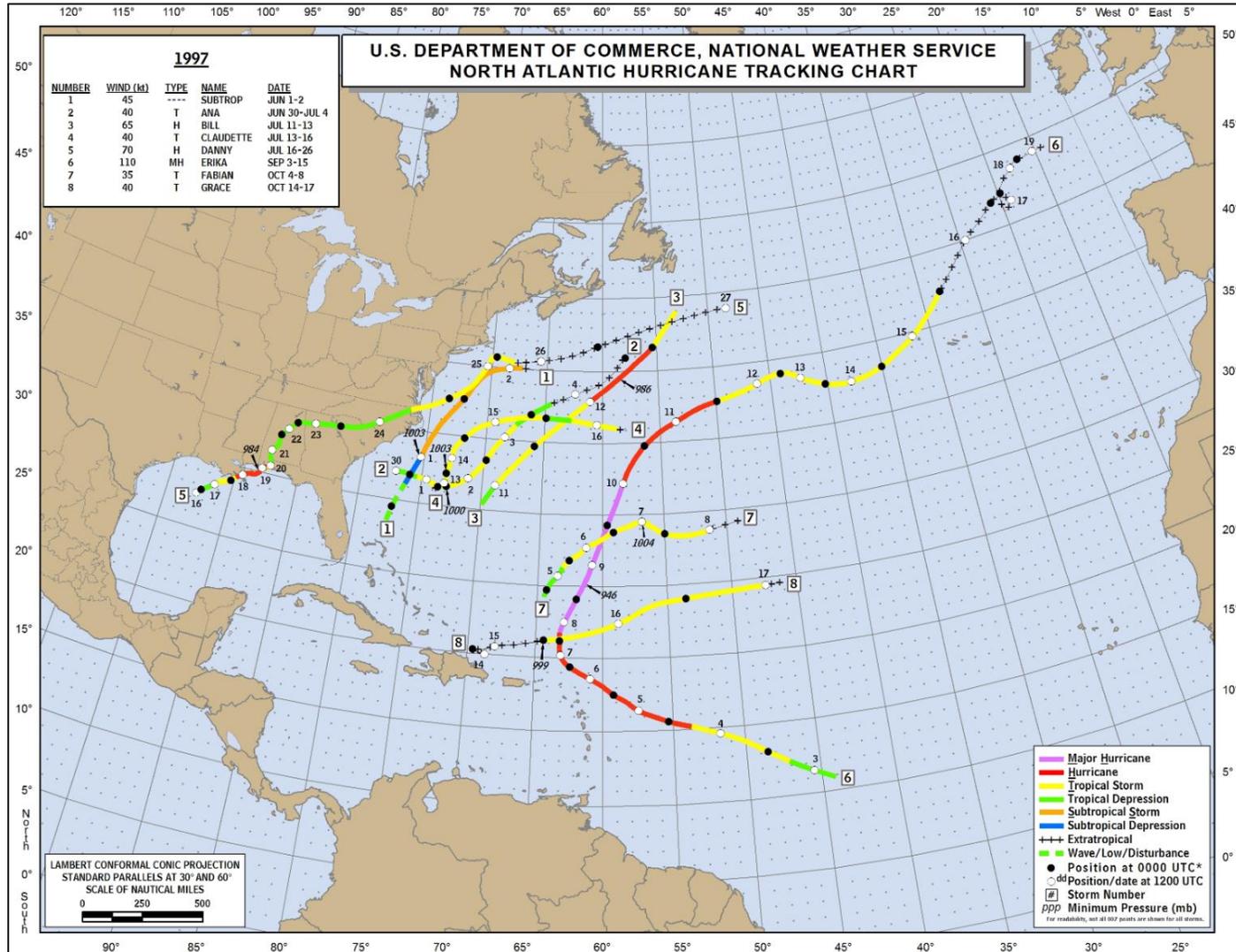


Both Hurricane Andrew and Hurricane Danny happened during well below normal hurricane seasons



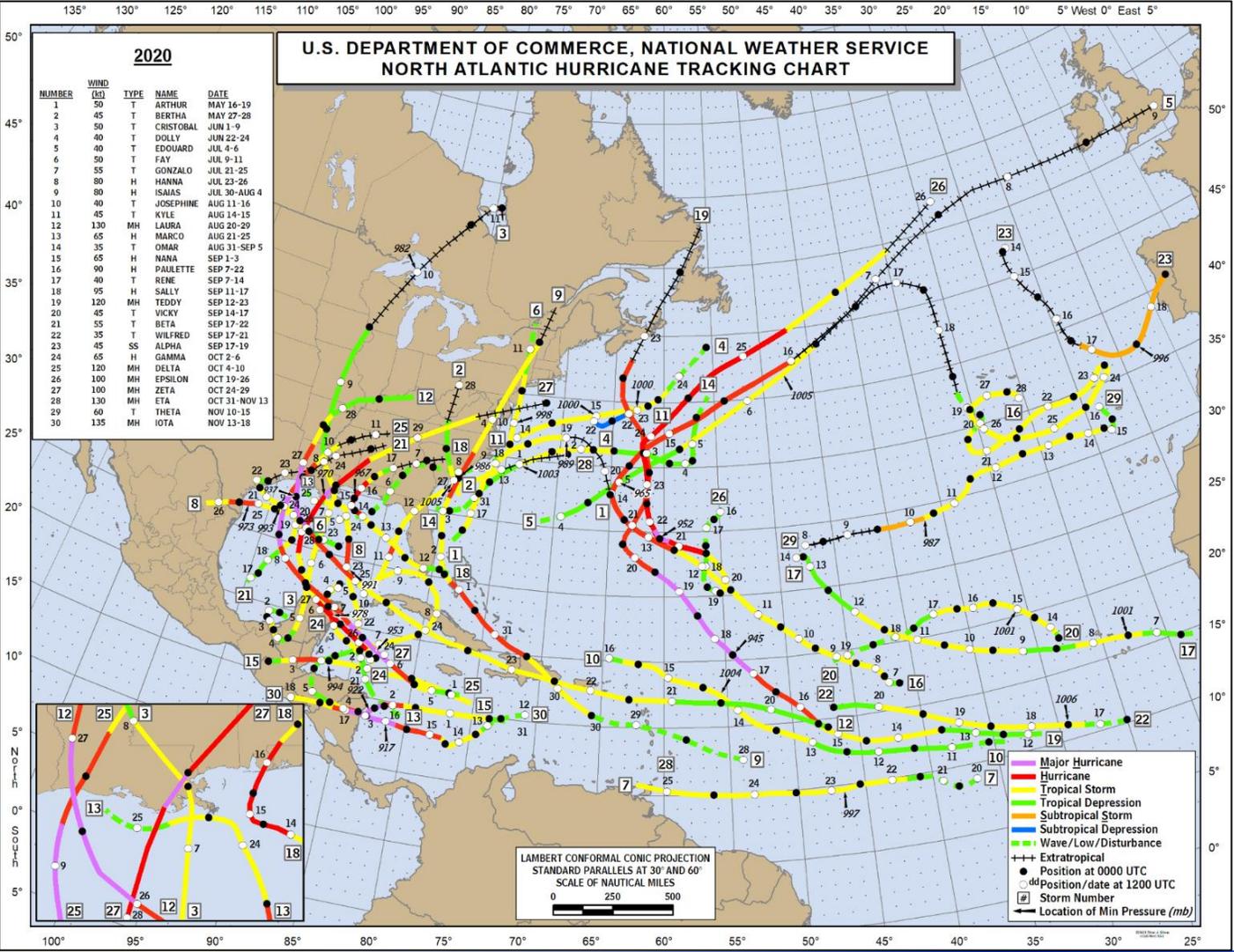
# 1997 Hurricane Season

## "Quiet" Season - BIG Local Impacts



# 2020 Hurricane Season

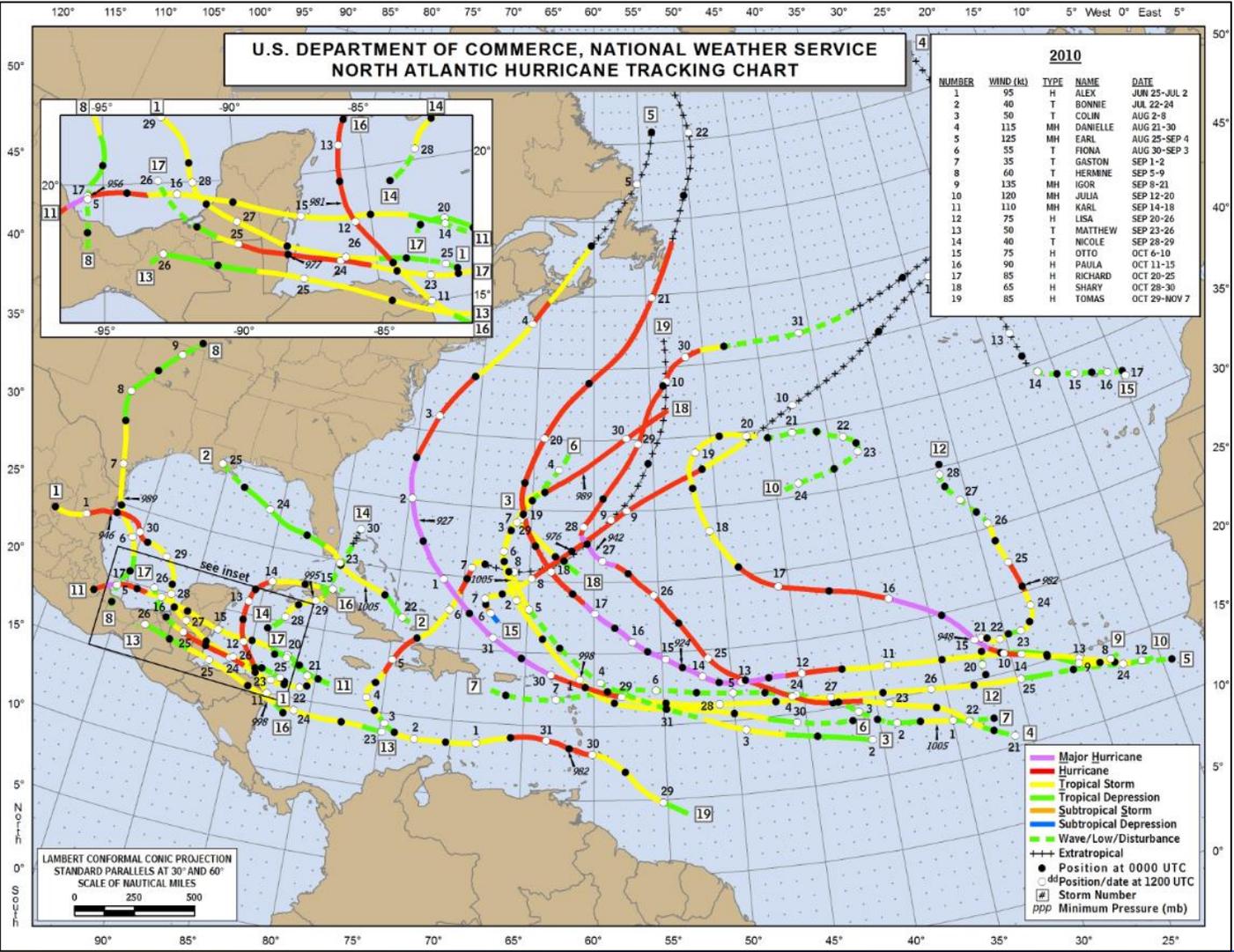
## Active Season - BIG Local Impacts



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# 2010 Hurricane Season

## Active Season - No Local Impacts



# 5 Days To Prepare? Not Always!

## Category 5 Landfalls:

Labor Day (1935)

Camille (1969)

Andrew (1992)

Michael (2018)

Where were these hurricanes  
5 days before landfall?



# 5 Days To Prepare? Not Always!

## Category 5 Landfalls:

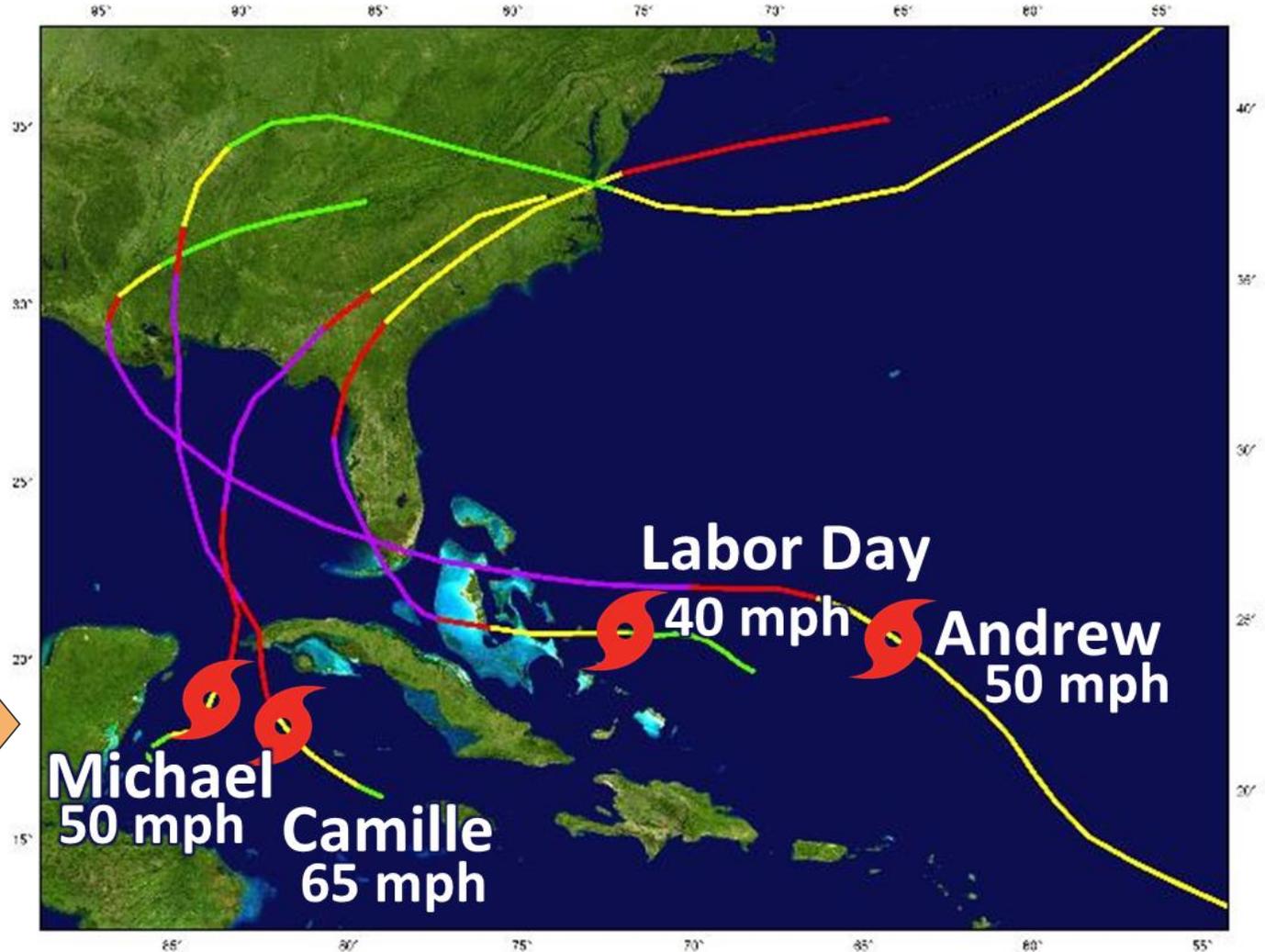
Labor Day (1935)

Camille (1969)

Andrew (1992)

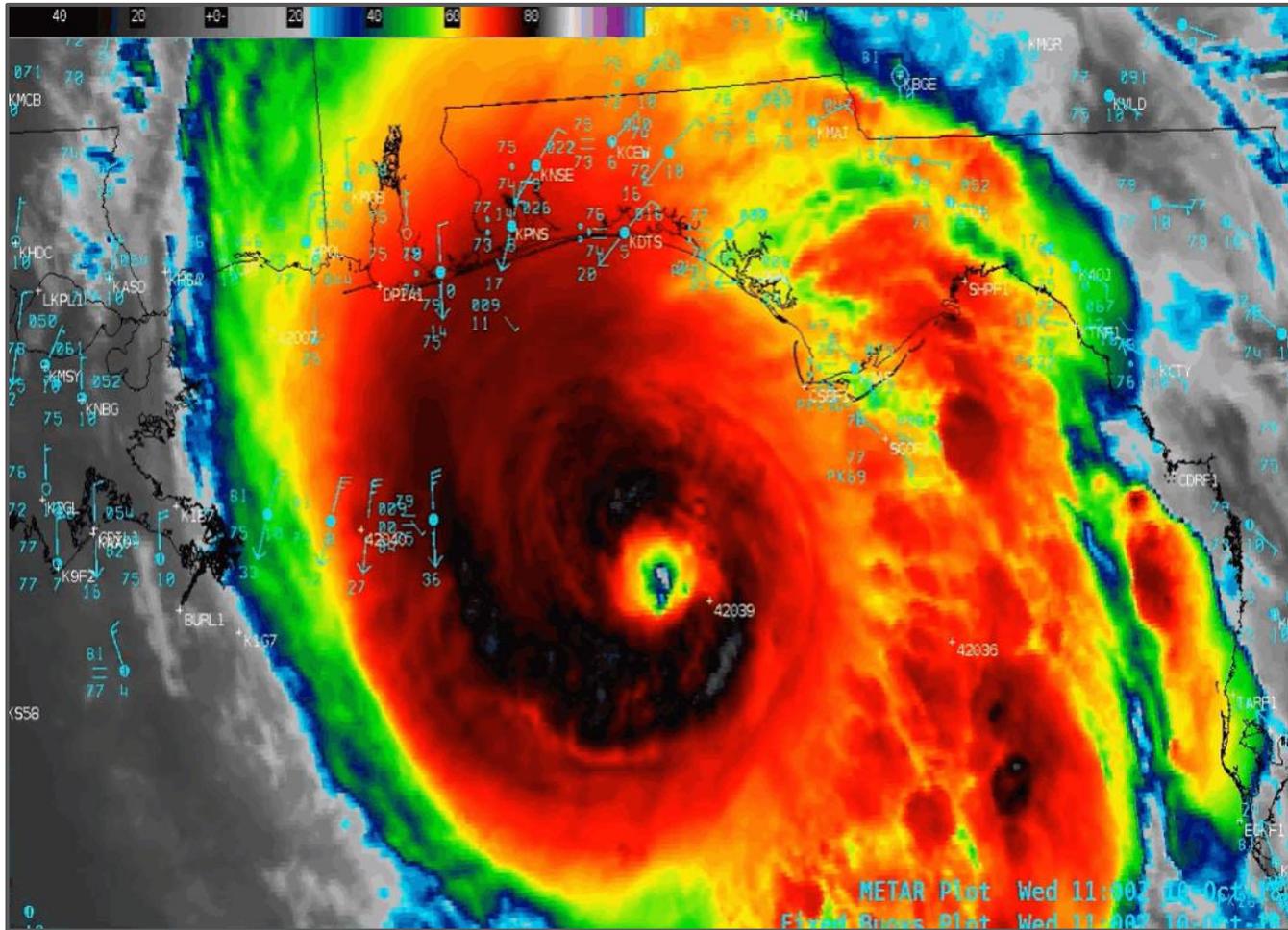
Michael (2018)

Where were these hurricanes  
3 days before landfall?



# 5 Days To Prepare? Not Always!

## HURRICANE MICHAEL 2018



Hurricane Michael made landfall as a CATEGORY 5 Hurricane with winds of 160 mph

Michael was a tropical storm 3 days prior to landfall

Intensified from a Category 1 Hurricane to a Category 5 Hurricane in the last 48 hours up to landfall

Pressure dropped **58 mb** in 48 hours and **42 mb** in 12 hours!



# Important Seasonal Reminders



# Tropical Weather Forecasts

## National Hurricane Center

- Storm forecast – size, intensity, track
- Regional scale view and impacts
- National and state level support

**Key Messages for Tropical Storm Idalia**  
Advisory 5: 4:00 PM CDT Sun Aug 27, 2023

1. Idalia is forecast to become a hurricane over the eastern Gulf of Mexico, and there is an increasing risk of life-threatening storm surge and hurricane-force winds along portions of the west coast of Florida and the Florida Panhandle beginning as early as Tuesday. Although it is too soon to specify the exact location and magnitude of these impacts, residents in these areas should monitor updates to the forecast and follow any advice given by local officials. Storm surge and hurricane watches have been issued for portions of the west coast of Florida and the coast of the Florida Panhandle, and residents in these areas should monitor updates to the forecast and follow any advice given by local officials.
2. Scattered flash and urban flooding can be expected across portions of the west coast of Florida, the Florida Panhandle and portions of the Southeast U.S. by Tuesday into Thursday. Flooding from heavy rainfall is likely over portions of the southeast U.S. by mid to late week.
3. Heavy rainfall from Tropical Storm Idalia is expected across portions of the eastern Yucatan and western Cuba and may produce areas of flash and urban flooding as well as landslides across western Cuba.
4. Tropical storm conditions are expected over portions of the Yucatan Peninsula and extreme western Cuba with tropical storm conditions possible on the Isle of Youth.

For more information go to [hurricanes.gov](https://hurricanes.gov)

## Local National Weather Service

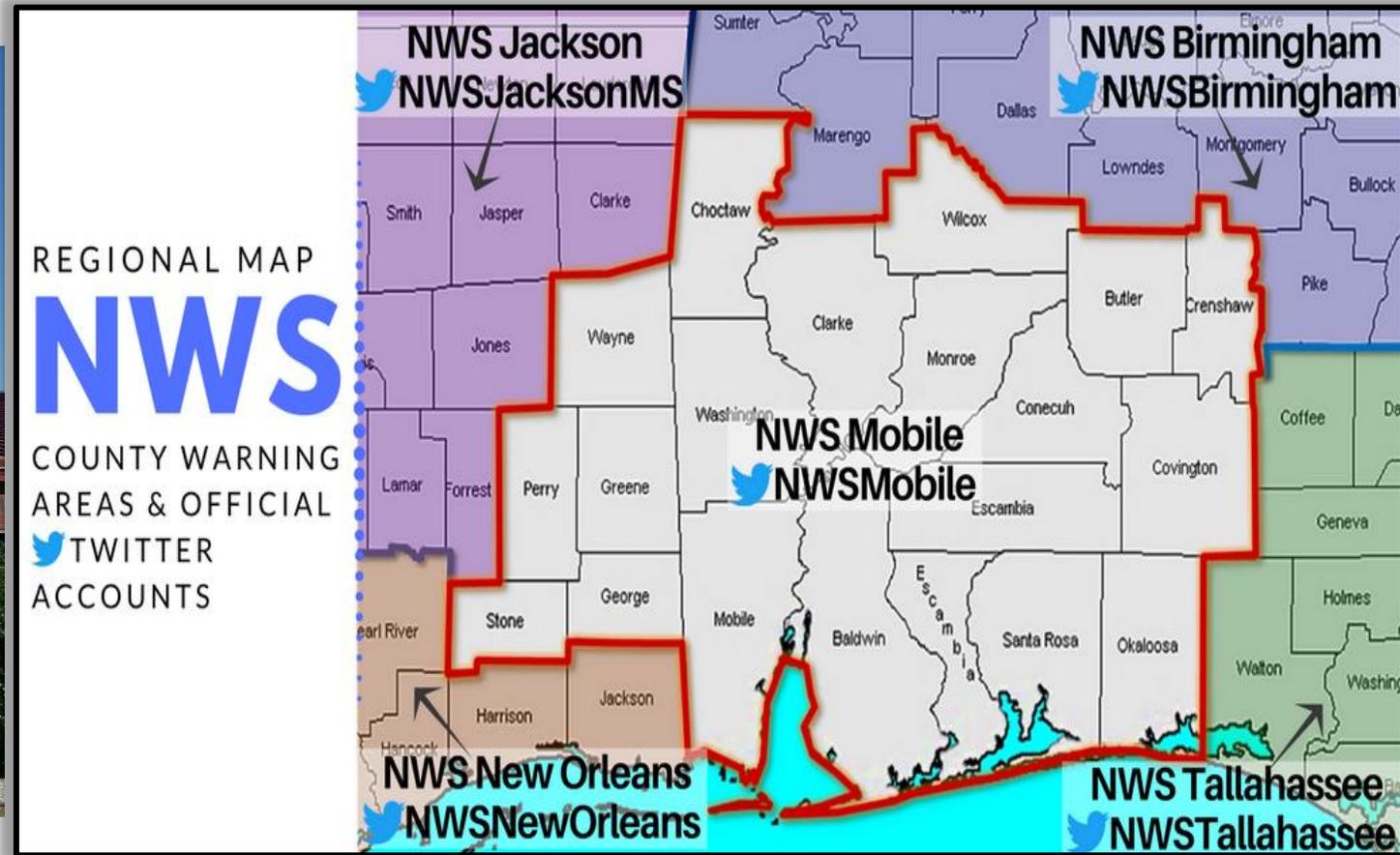
- Downscale the NHC forecast for local area
- County to city level view and impacts
- State and county level support

**Tropical Storm Idalia Potential Impacts**  
Impacts Anticipated Tuesday Night Through Wednesday

Wind	Storm Surge	Flooding Rain	Tornado
<ul style="list-style-type: none"> <li>• Hurricane/Tropical Storm force winds expected across NE FL and most of SE GA</li> <li>• Widespread fallen trees, power outages and damage to structures and mobile homes especially along the I-75 corridor</li> </ul>	<ul style="list-style-type: none"> <li>• 1-4 ft of surge possible for Atlantic coast, ICWW &amp; St. Johns. Higher surge expected along SE GA coast</li> <li>• High risk of rip currents</li> </ul>	<ul style="list-style-type: none"> <li>• 2-6 inches, isolated 8-10 inches possible</li> <li>• Potential for flash, urban and river flooding</li> <li>• Streets will flood and rivers may overflow their banks</li> </ul>	<ul style="list-style-type: none"> <li>• Several tornadoes possible along and east of Highway 301</li> <li>• Isolated tornadoes across NE FL &amp; SE GA</li> </ul>

Last Updated: 8/29/2023 5:49 AM <http://www.weather.gov/srh/tropical?office=jax> National Weather Service – Jacksonville, FL

# Your Local NWS Office



*NWS Forecasters Work 24/7 365 Days a Year*



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# Impacts vs. The Cone

## Risk OUTSIDE of The Cone

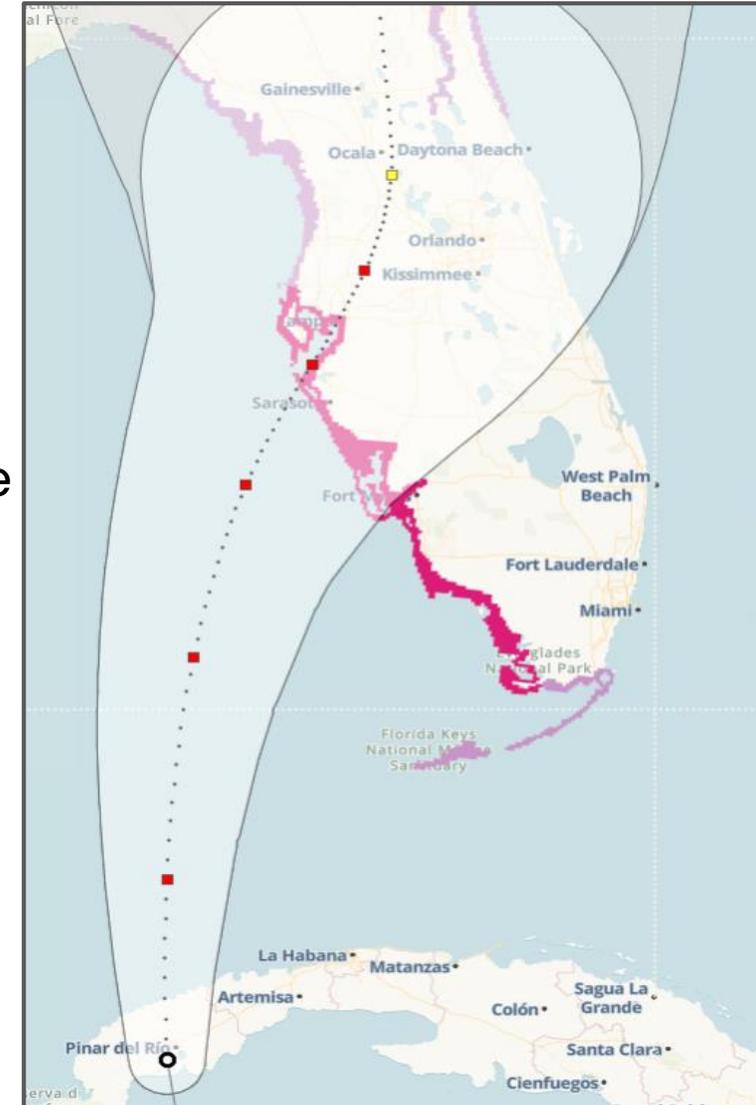
Deadly tropical hazards can occur outside of the cone

**DO NOT assume you are safe** if your location is not within the forecast cone

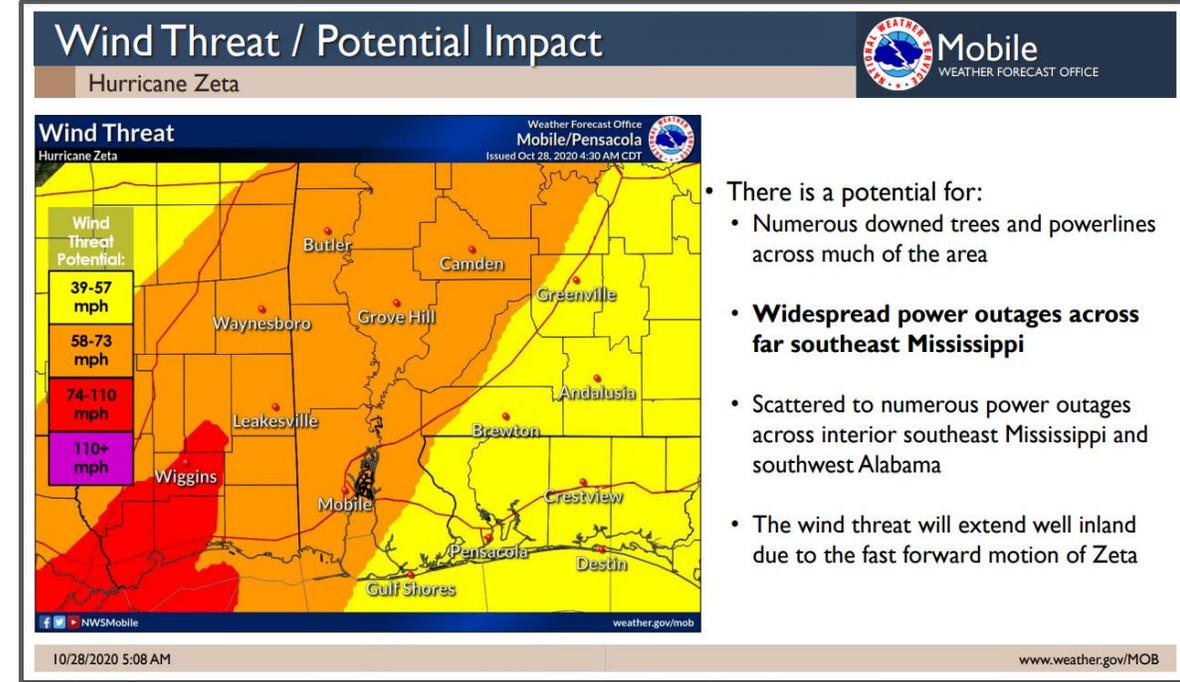
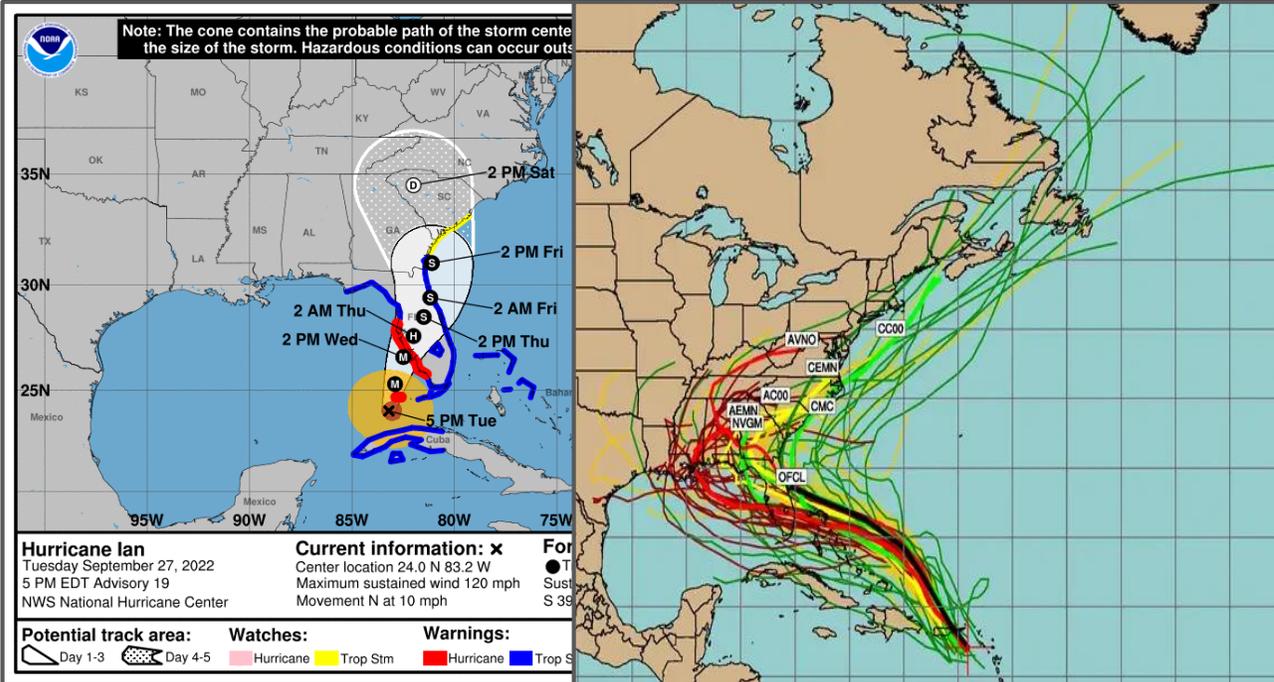
The entire west coast of Florida was at risk of deadly storm surge



*Pine Island Road Lee County Post Ian 2022  
Photo CBS 58*



# Help Change the Tropical Mindset



*Less emphasis on the forecast cone, computer models, and Saffir-Simpson Storm Category*

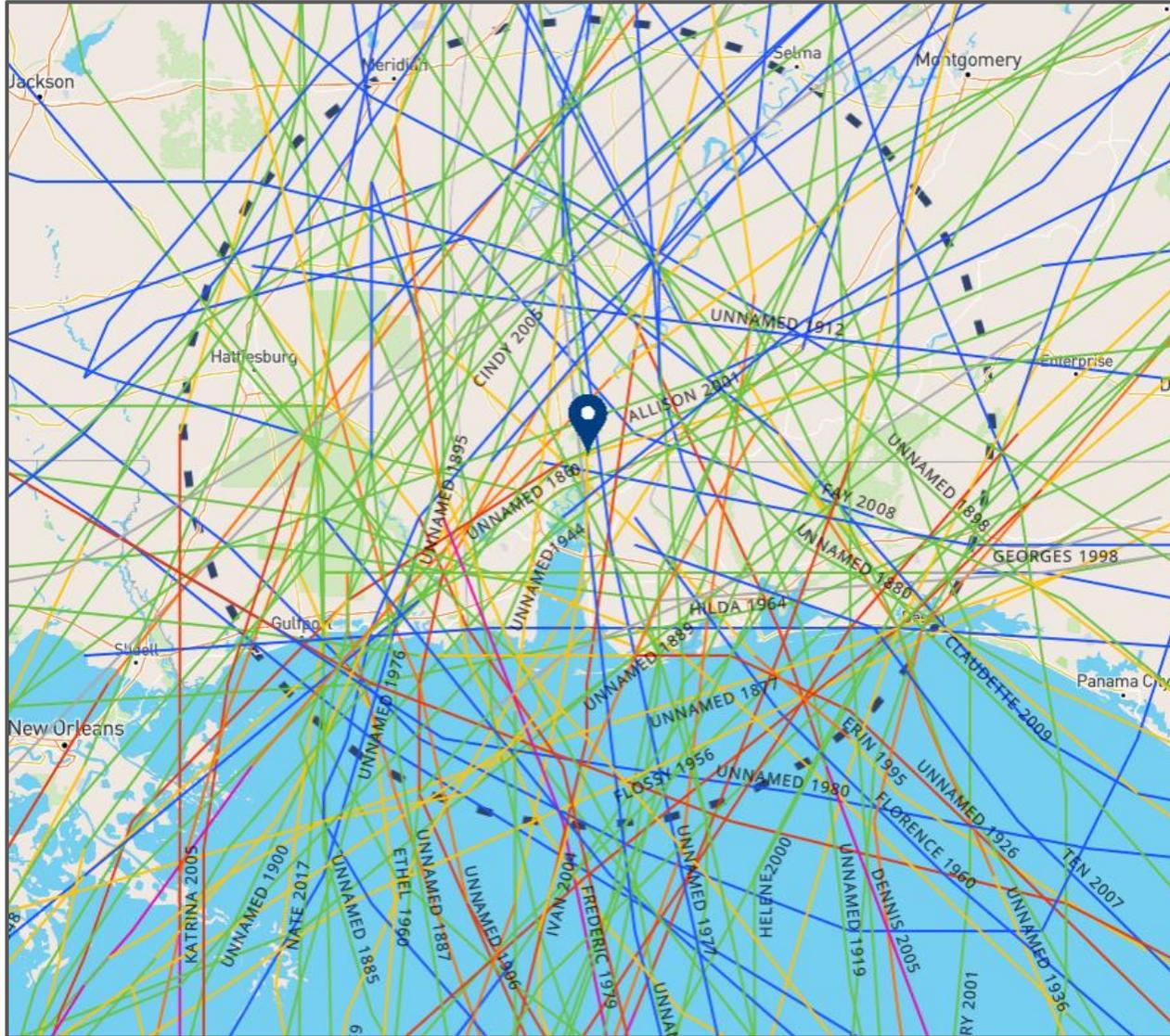
***MORE emphasis on the potential local impacts and local watches and warnings***

# Hurricane Impacts



***Run from the water, hide from the wind***

# Personal Vulnerability



Paths of known tropical depressions, tropical storms, and hurricanes that made landfall or impacted our region (*southeast Mississippi, southwest and south-central Alabama, and northwest Florida*) since 1842 🤖

**DID YOU KNOW:**  
The term “tropical cyclone” includes tropical depressions, tropical storms, and hurricanes

What is your tropical cyclone risk? Visualize past tracks & frequency at [coast.noaa.gov/hurricanes](https://coast.noaa.gov/hurricanes)



# Personal Vulnerability

*Don't Compare This Storm To "Last Time"*

**All Storms are Different**  
Don't Let Past Experiences Dictate Your Planning

- Impacts can be much worse for some hurricanes compared to others, even of similar strength, due to differences in landfall location, size, and forward speed
- The storm's scale only tells you about the strongest winds near the center of the storm and does not tell you about potentially life-threatening flooding from rain or storm surge
- Stay informed of the latest forecasts as changes in track, intensity, and landfall location can result in changes in potential impacts

Delivering the Right Message

weather.gov

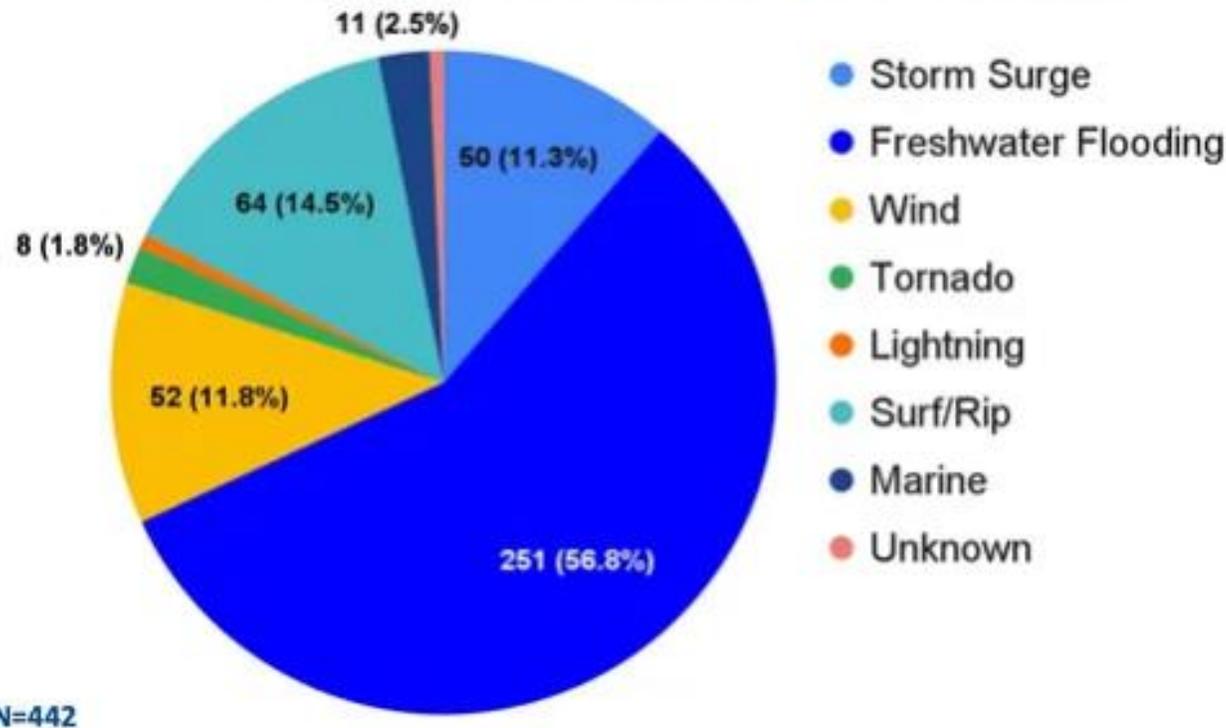


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# Direct Tropical Cyclone Fatalities

**442 direct fatalities in the U.S.**

## Direct Fatalities 2013-2022



Did you know that over 80% of all fatalities are water-related??

- 57% Freshwater Flooding
- 15% Surf and Rip Currents
- 11% Storm Surge

12% due to wind – many of those fatalities were tree-related

We must be prepared for the **total tropical threat** – be sure to know all potential threats not just the category!



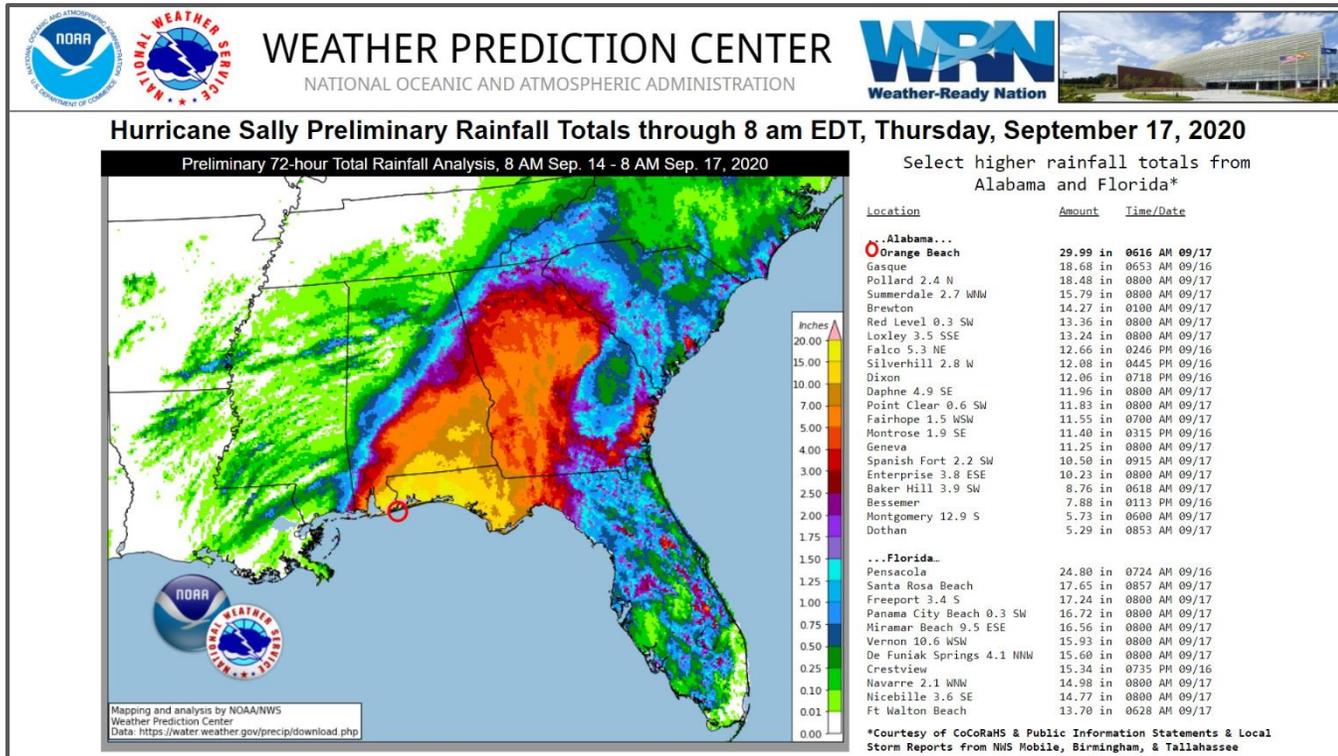
# Flooding

## Hurricane Sally 2020

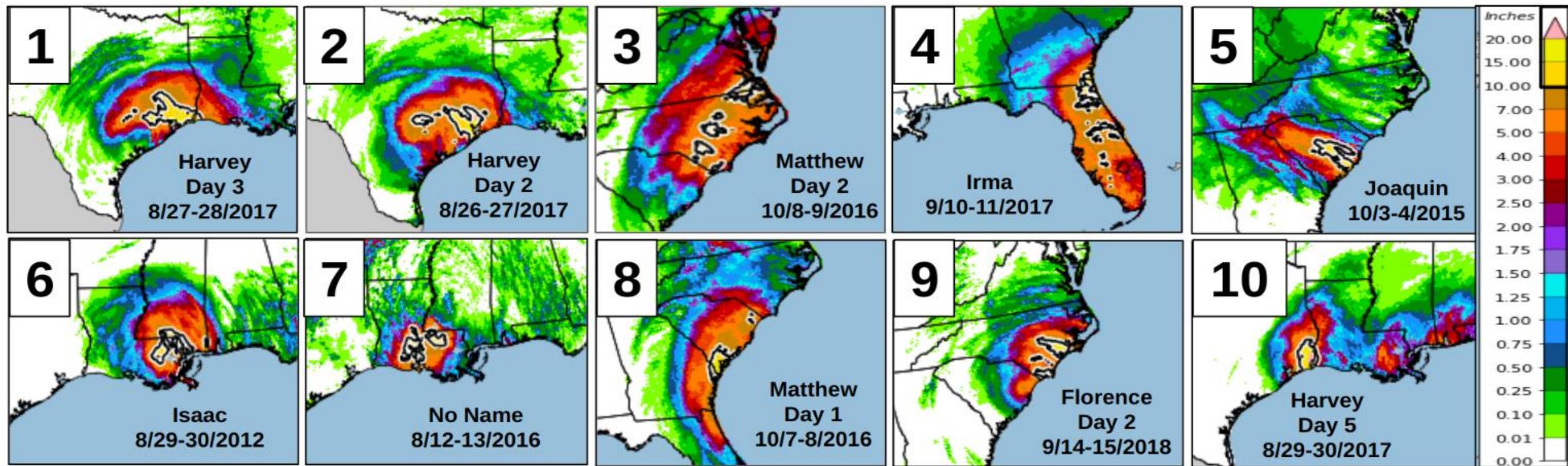
The leading cause of death in tropical systems is freshwater flooding (a.k.a. river flooding and flash flooding) – this is the result of heavy rainfall

Hurricane Sally produced 29.99 inches of rain with a widespread 1-2 FEET of rainfall

Catastrophic flooding occurred with numerous Flash Flood Emergencies



# Flooding



**\*By area covered with 10+ inches of rainfall in 24 hours.**

Three of the wettest TC days since 2005 are associated with **Hurricane Harvey** in 2017. **Hurricane Matthew** shows up twice in the top 10, producing the 3rd and 8th wettest days, while **Hurricane Sally**, in 2020, ties with Harvey's day 5 extreme rainfall swath, for 10th wettest TC rainfall day over the past 17 years. No 2021 tropical cyclones produced daily extreme rainfall sufficient to enter the top 10 shown here. However, Ida's rainfall across LA in the day following landfall on Aug. 29, ranked it as the 13th wettest day in this record.



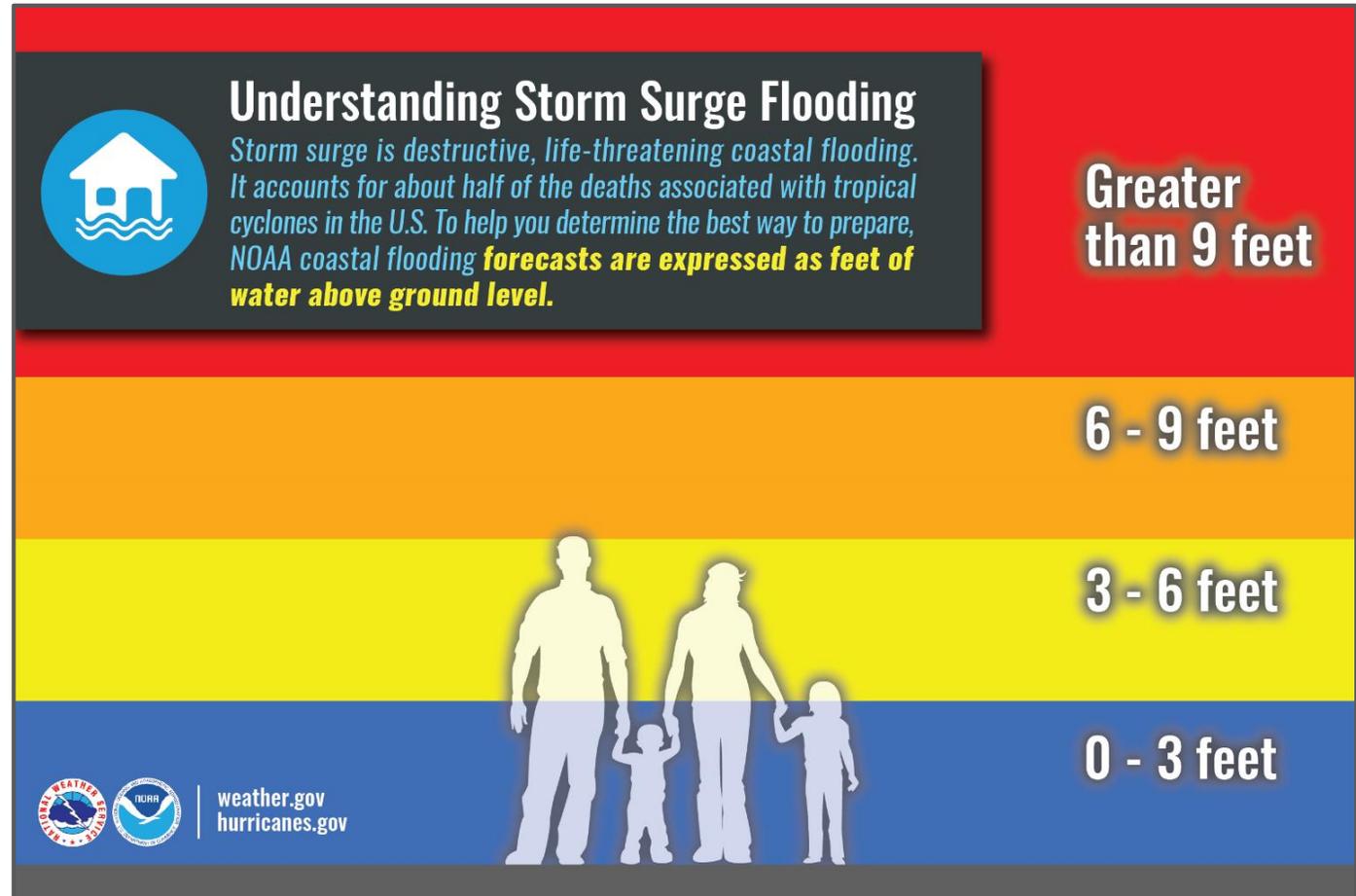
# Storm Surge

Storm surge forecasts represent the height above ground level

**Storm surge greater than 3 feet is considered life-threatening**

The forecasts are in 'still water' heights (i.e. as if you are standing in a pool of a particular depth)...

...in reality, there are wind battering waves ON TOP of the storm surge which can cause even more damage



# Storm Surge

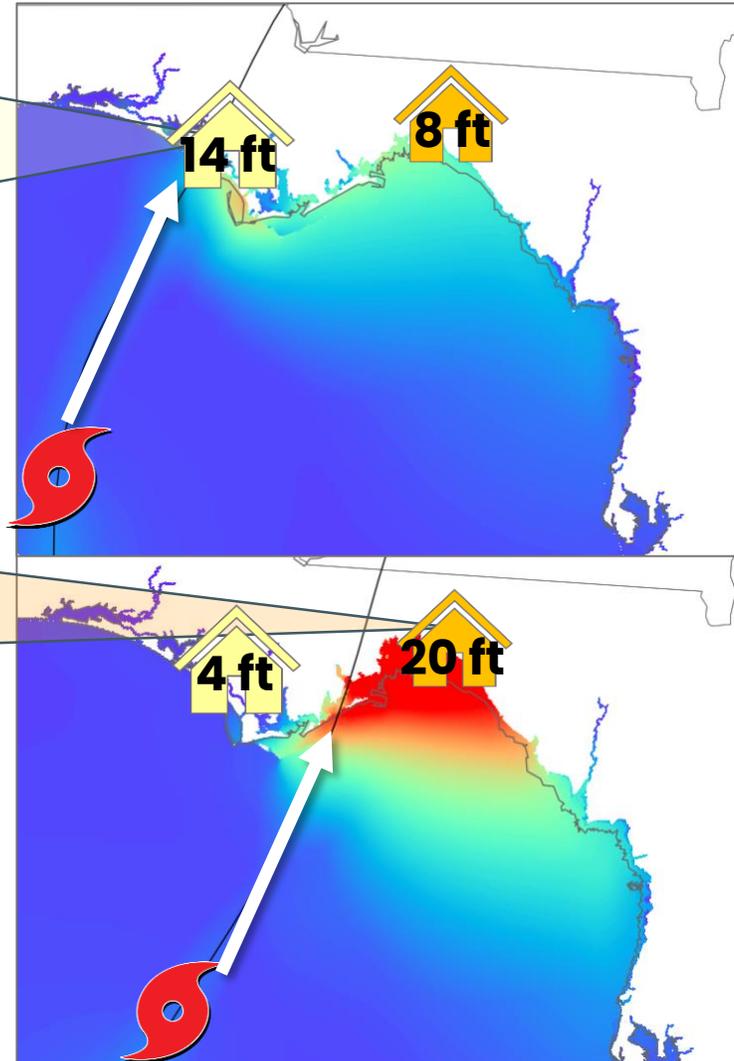
Just this morning they said 10-14 ft of surge, now it's "just" 3-5 ft.

Can't they make up their mind?

They don't know what this storm's going to do.

We were fine last time...

*These homes are only 50 miles apart*



Coastline shape and the track of the tropical system strongly influence storm surge values at specific locations

Do not base preparedness on specific "numbers" days in advance of the storm  
(ex: storm surge of X ft, rain of X inches, winds of X mph)

**Prepare for  
THREAT and IMPACT  
POTENTIAL**



# Storm Surge

## STORM SURGE WATCH

A Storm Surge Watch is issued when *life-threatening storm surge is possible, typically within 48 hours.*

Promptly follow evacuation and other instructions from local officials.

**Surge Possible.**



weather.gov

## STORM SURGE WARNING

A Storm Surge Warning is issued when *there is a danger of life-threatening storm surge, typically within 36 hours.*

Promptly follow evacuation and other instructions from local officials.

**Surge Expected!**

**Watch:** Life-threatening storm surge is possible (typically issued 48 hours before conditions start)

**Warning:** Danger of life-threatening storm surge (typically issued 36 hours before conditions start)

## HURRICANE IVAN

10-15 feet of storm surge was measured along the coast during Hurricane Ivan

I-10 Bridge over Pensacola Bay was severely damaged as a result of wave action on top of 12-13 foot storm surge

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# Extreme Wind Warnings

 Extreme Wind Warning is a very rare warning

These warnings are only issued when sustained surface winds of 115+ mph are expected from a MAJOR HURRICANE (Category 3, 4, or 5)

This is considered your **final call to SHELTER in PLACE** (an interior room in your home)

Put as many walls between you and the outside as possible

## *Extreme Wind Warnings Explained*



*The National Weather Service issues an Extreme Wind Warning when sustained hurricane winds of 115 mph or greater are happening now or expected within one hour. At these wind speeds, trees and wooden power poles are snapped and debris becomes dangerous missiles.*

### **Protect Yourself!**

- ✓ Take immediate shelter in an interior portion of a well-built structure.
- ✓ Stay away from windows.
- ✓ Put as many walls between you and the outside as possible.



# Extreme Wind Warnings

**DAMAGE OUTSIDE...**



**... SAFETY INSIDE!**



# Weather Preparedness:

**Ready, Set, Go!**



# What We Know, When We Know It

<b>Tropical Weather Potential</b> What Forecast Details Can You Reasonably Expect This Far Out In Time??			
<b>How Many Days Away Is This Tropical Thing?</b>			
<b>7+ Days</b>	<b>5-7 Days</b>	<b>3-5 Days</b>	<b>1-2 Days</b>
We have a general idea that something might develop somewhere	We have a better idea of the possibilities - still too soon to narrow down specific details	The possible impacts to specific areas are being narrowed down	The potential impacts to specific areas and onset times
<b>What Should You Do?</b>			
Monitor the official forecasts & know your location/evacuation zone  Refresh the supplies in your preparedness kit	Monitor the official forecasts  Review your plans and refresh the supplies in your preparedness kit	Pay attention to the official forecast for any changes  Start planning for potential evacuations & refresh the supplies in your preparedness kit	Pay close attention to the official forecast for changes & expected impacts  Enact your plans to prepare your home/family; evacuate if asked to do so by local officials
 <b>NWSMobile</b>			 <a href="https://www.weather.gov/mob">weather.gov/mob</a>



# Watch Vs. Warning



The infographic is split into two columns. The left column is titled 'HURRICANE WATCH' in yellow text. Below the title, it states: 'A Hurricane Watch is issued when hurricane force winds are possible.' and 'Prepare your home by boarding up windows and moving loose items indoors. Have an emergency supply kit ready.' At the bottom of the left column, it says 'Hurricane Possible.' in yellow. The right column is titled 'HURRICANE WARNING' in orange text. Below the title, it states: 'A Hurricane Warning is issued when hurricane force winds are expected.' and 'Seek shelter in a sturdy structure or evacuate if ordered.' At the bottom of the right column, it says 'Hurricane Expected!' in orange. The background of the infographic shows a beach with waves crashing onto the shore. In the bottom left corner of the infographic, there is a NOAA logo and the text 'weather.gov'.

**HURRICANE WATCH**

A Hurricane Watch is issued when **hurricane force winds are possible.**

Prepare your home by boarding up windows and moving loose items indoors. Have an emergency supply kit ready.

**Hurricane Possible.**

**HURRICANE WARNING**

A Hurricane Warning is issued when **hurricane force winds are expected.**

Seek shelter in a sturdy structure or evacuate if ordered.

**Hurricane Expected!**

NOAA weather.gov

**Watch:** Hurricane or Tropical Storm conditions possible (typically issued 48 hours before conditions start)

**Warning:** Hurricane or Tropical Storm conditions expected (typically issued 36 hours before conditions start)

Occasionally we will have to jump straight to the warning stage...

**Potential Tropical Cyclone:** Allows the National Hurricane Center to issue watches and warnings \*before\* the system has fully formed



# Ways To Get The Weather Info

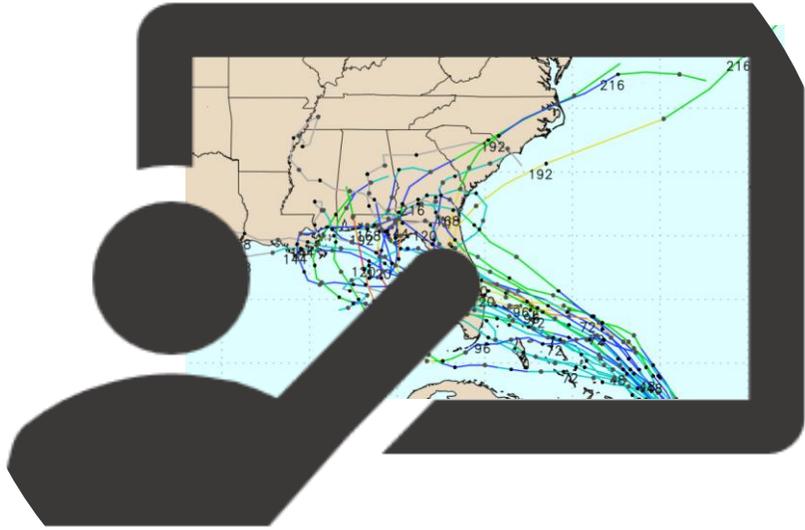


**IMPORTANT:** You need **MULTIPLE WAYS** to receive warnings (if one method fails, you need a backup)...including at least one way that will wake you up while you sleep!

- Weather Radio
- Television
- Reliable Websites (NWS, NHC, TV...)
- Cellphone Alerts
- Reliable Social Media Accounts



# Beware of Social Media Clickbait



**FORECAST SOURCE  
CAUTION**



## **SENSATIONALISM VS SCIENCE SIGNS**

- ✓ Show one forecast model
- ✓ Specific impacts way too early
- ✓ Early landfall prediction



## **SOCIAL MEDIA-ROLOGISTS**

Hype vs Science

Clicks vs Credibility

Distant Friends/Family (good intentions)



## **ANCHORING BIAS**

Folks tend to base actions on first forecast

Dangerous for appropriate preparedness

Monitor storm forecast/updates



# Beware of Social Media Clickbait

Don't fall into the trap!

**Our models drop off considerably in skill beyond 7 days**

Our meteorologists NEVER focus on a single model run

We will be there to guide you through hurricane season and we will let you know as soon as there is a potential threat for our region!



# Important Links

## **National Hurricane Center:**

[www.nhc.noaa.gov](http://www.nhc.noaa.gov) OR [www.hurricanes.gov](http://www.hurricanes.gov)

## **NWS Mobile Tropical Page:**

[www.weather.gov/srh/tropical?office=mob](http://www.weather.gov/srh/tropical?office=mob)

## **2025 Local Hurricane Preparedness Guide:**

[www.weather.gov/media/mob/pdf/GulfCoastHurricanePrep.pdf](http://www.weather.gov/media/mob/pdf/GulfCoastHurricanePrep.pdf)



Preparedness  
Guide

## **Hurricane Tracking Chart:**

[www.nhc.noaa.gov/images/tracking\\_chart\\_atlantic.png](http://www.nhc.noaa.gov/images/tracking_chart_atlantic.png)

## **Hurricane Preparedness/Safety Videos:**

[www.youtube.com/playlist?list=PLZcEBOTgZxbyyjlcA1A5j-CW\\_4TTQuWWA](http://www.youtube.com/playlist?list=PLZcEBOTgZxbyyjlcA1A5j-CW_4TTQuWWA)



# NWS Mobile Contact Info

**Phone:**

1-251-633-6443

**Webpage:**

[weather.gov/mob](https://weather.gov/mob)

☆ **Find Us On Social Media!**

**Facebook:**

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[instagram.com/NWSMobile](https://instagram.com/NWSMobile)

**X:**

[x.com/NWSMobile](https://x.com/NWSMobile)

**YouTube:**

[youtube.com/NWSMobile](https://youtube.com/NWSMobile)

The screenshot shows the National Weather Service website for Mobile/Pensacola. The top navigation bar includes links for HOME, FORECAST, PAST WEATHER, SAFETY, INFORMATION, EDUCATION, NEWS, SEARCH, and ABOUT. The main content area features a 'Local forecast by' section with a search box and a 'Go' button. Below this is a 'News Headlines' section with several links. The 'MY FORECAST' section for Mobile Regional Airport (AL) shows a 'Mostly Cloudy' condition with a temperature of 78°F (26°C). A 'Meso Update' section highlights 'Severe Storms Wednesday' and 'HOT and HUMID WEDNESDAY!!'. A prominent warning box titled 'Update on Potential Strong to Severe Storms' is displayed, featuring a map of the Mobile/Pensacola area and text explaining the threat. The warning includes details on 'WHAT' (strong to severe storms), 'WHERE' (south central Alabama and western Florida panhandle), 'WHEN' (5 PM - 9 PM), and 'ACTIONS' (take cover in a safe location). The bottom of the page includes social media links for NWSMobile and the website URL weather.gov/mob.



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# Any Questions?



## 2025 ATLANTIC HURRICANE SEASON

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Andrea	Dexter	Gabrielle	Jerry	Melissa	Pablo	Tanya
Barry	Erin	Humberto	Karen	Nestor	Rebekah	Van
Chantal	Fernand	Imelda	Lorenzo	Olga	Sebastien	Wendy