Government Networks Committee

June 28, 2024

Agenda

Meeting Objectives:

a) Provide status of State projects and priorities
b) Review process to update Management Plan and discuss GNC Action Plan
c) Provide NWS update on projections for hurricane season

1. **Welcome and Introductions**
   GNC Co-Chairs:
   Commissioner Skip Gruber, Baldwin County
   Commissioner Merceria Ludgood, Mobile County

2. **Review and Approval of Minutes**

3. **Old Business**
   a) State Update
   b) MBNEP update

4. **New Business**
   a) National Weather Service Update- Jason Beaman, NWS
   b) Announcements

5. **Adjourn**

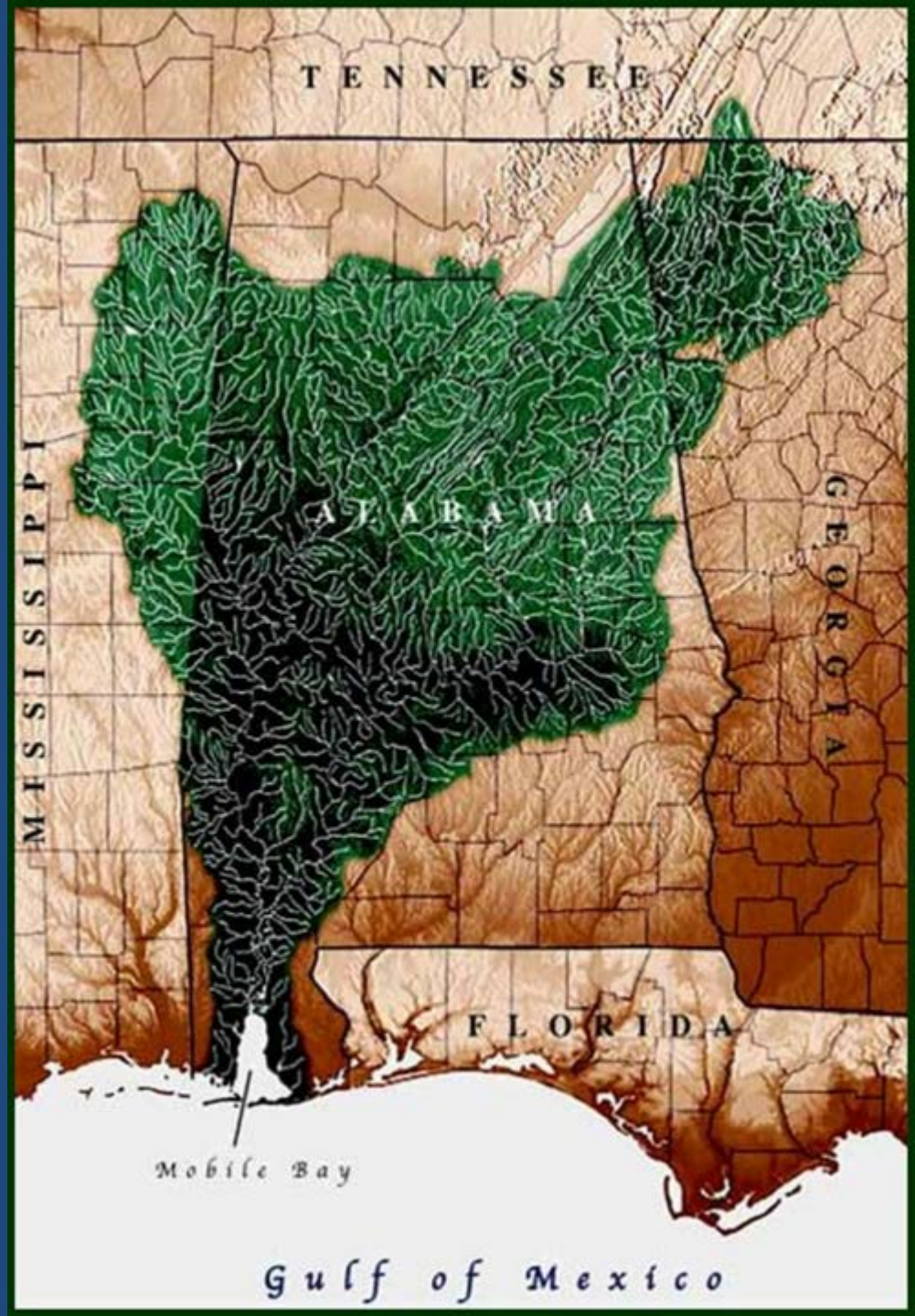
CREATE A Clean Water FUTURE

Welcome & Approval of Minutes

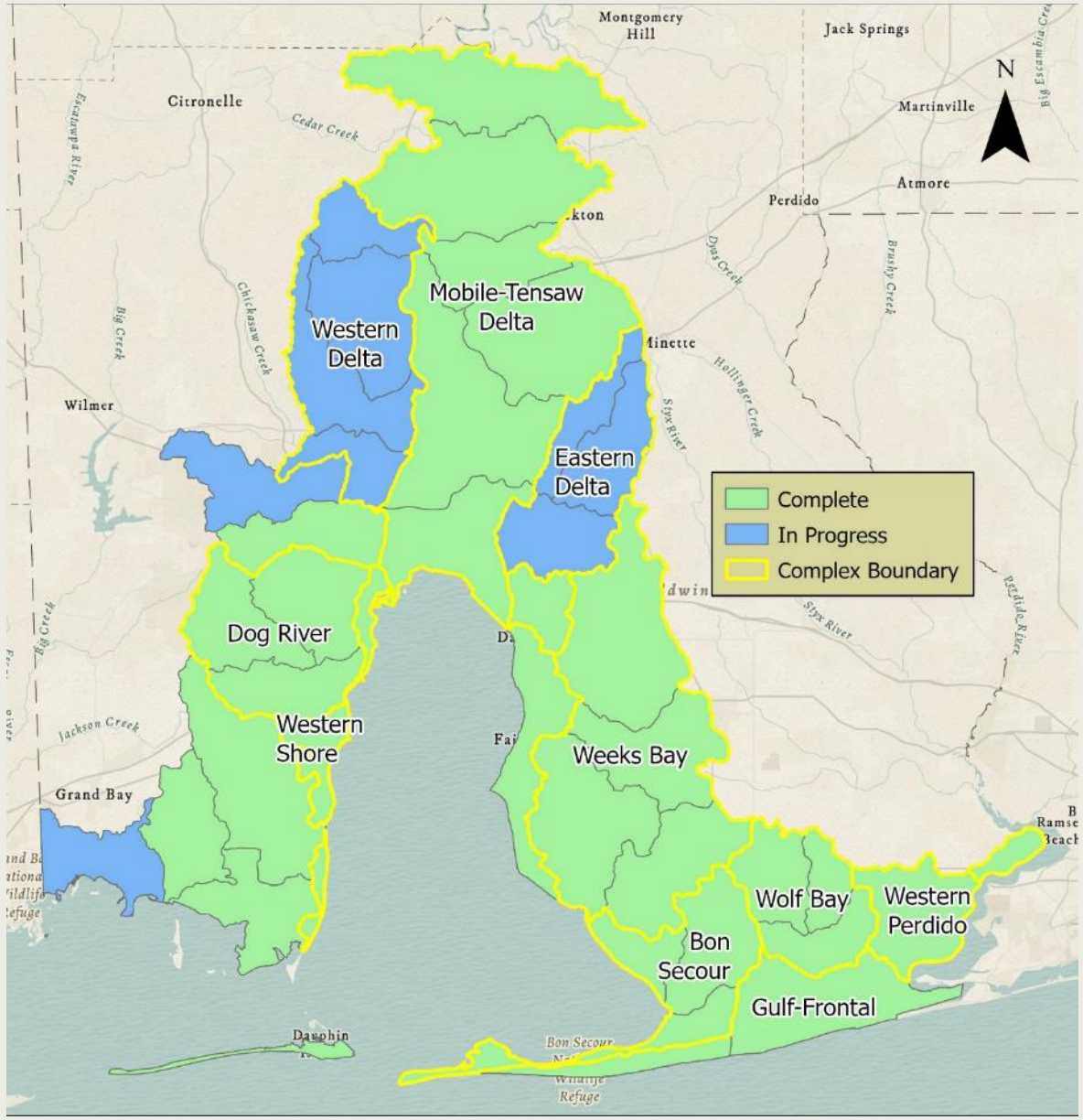
Merceria Ludgood, Mobile County Commission
Charles “Skip” Gruber, Baldwin County Commission

ADCNR update

MBNEP Update



MBNEP Watershed Planning & Restoration Update



Watershed	Status
MTA Delta	Complete
Eastern Shore	Complete
Dauphin Island	Complete
Perdido	Complete
Western Delta	In Progress
Eastern Delta	In Progress
Grand Bay	In Progress
Eight Mile Creek	Update In Progress

MBNEP Restoration Update

- **D'Olive**
  - Pine Run under construction
- **Lower Fish River**
  - Marlow – warranty and maintenance
  - Magnolia River Watershed – Magnolia River and Schoolhouse near procurement (August) – BrightHouse fiber cable?
- **Fowl River**
  - Under construction
- **Three Mile Creek**
  - 12-Mile complete
  - Apple snail treatment continues
  - RFP invasive plant control
- **Deer River**
  - Phase I complete

Fowl River

Pine Run

Getting to a new CCMP

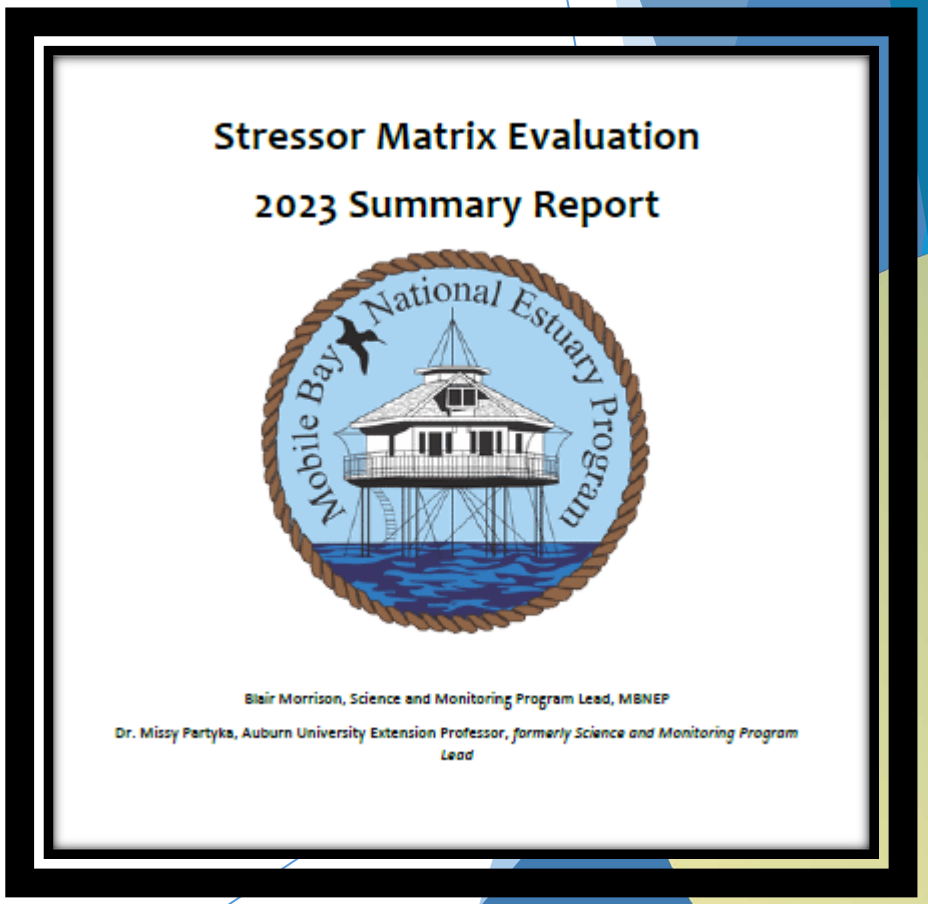
Element	Completion Date	Status
Watershed Plan Assessment	9/30/2023	Complete
CCMP Evaluation of Implementation Technical Report	9/30/2023	Complete
Stressor Evaluation Technical Report	5/31/2024	Complete
Management Conference Organizational Assessment-Bylaws Update	3/31/2024	Complete
State of the Bays and Coast Report	9/30/2024	In Progress
CCMP Development-Outreach, Strategies for each committee, Financing, Publication	6/30/2025	In Initial Planning; this will be a mix of in-house staff effort and support from contractor
Community Outreach	Summer 2025	Not Initiated
CCMP Comment Period and Approvals	9/30/2025	Not Initiated

Stressor Evaluation: Final Review and Consensus

Blair Morrison

Identifying Environmental Stresses: The Science Advisory Committee

- Conducted in 2011-2012 and again in 2021-2023
- SAC members were asked to evaluate the effects of stressors on the ecosystem services provided by a wide range of habitats
- 2012 effort prioritized Freshwater Wetlands, Intertidal Marshes and Flats, Streams and Rivers, and Riparian Buffers as the most stressed habitats
- 2012 effort had 26 participants
- 2023 effort had 32 total participants



Stressor Matrix Evaluation: Top Habitats Under Stress

1. Intertidal Marshes and Flats
2. Beaches and Dunes
3. Pine Savannas*
4. Streams and Rivers
5. Freshwater Wetlands
6. Longleaf Pine Habitat*






Stressor Matrix Evaluation:
Top Ecosystem Services Under Stress

1. Biodiversity
2. Fisheries Habitat
3. Sediment and Nutrient Retention
4. Water Quality Enhancement
5. Wildlife Habitat

CCMP Government Networks Committee Action Plan 2025-2030: Things to Consider

CCMP overarching goals:

Improve management of changing Landscapes

Land Use Change, Sediments, Nutrients, Pathogens, Litter, other

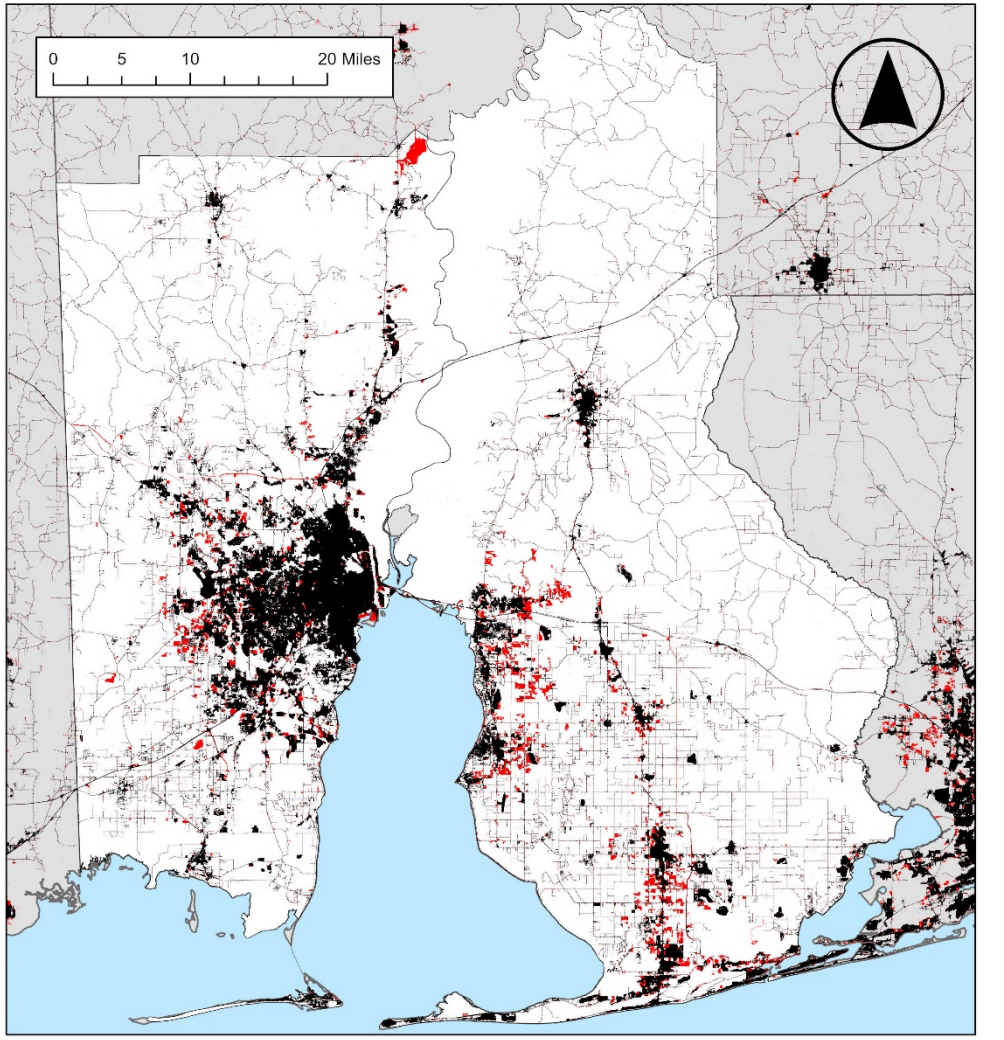
Improve resilience to impacts of changing climates

Sea Level Rise, Climate Variability, Resilience

CCMP Government Networks Committee Action Plan 2025-2030: Things to Consider

Methods for prioritizing issues to address over the next 5-10 years, such as:

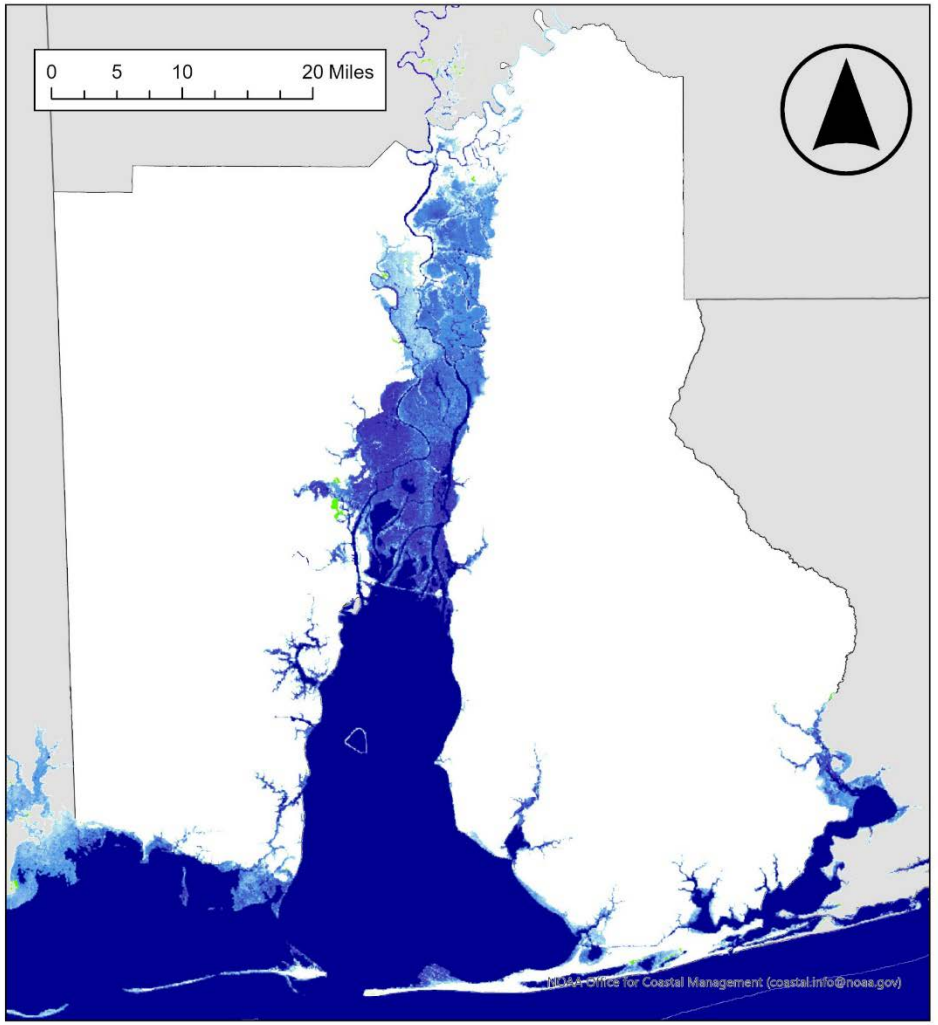
Changes in Urbanization



CCMP Government Networks Committee Action Plan 2025-2030: Things to Consider

Methods for prioritizing issues to address over the next 5-10 years, such as:

Changes in Sea Level Rise



Preparing for the 2024 Hurricane Season

Seasonal Outlooks, Changes, Messaging and Reminders

2024 Hurricane Outlook

Seasonal Outlook

- What is an average season?
  - 14 named storms
  - 7 hurricanes
  - 3 major hurricanes

- Many factors go into determining how many storms will develop over the course of the Atlantic Hurricane Season

- Some of these factors can be predicted with some skill far in advance while other factors can only be resolved 1-2 weeks out at most

- Here are some of the factors we look at prior to and as the season evolves:
  - Atlantic Water Temperatures
  - State of El Niño or La Niña
  - Amount of wind shear

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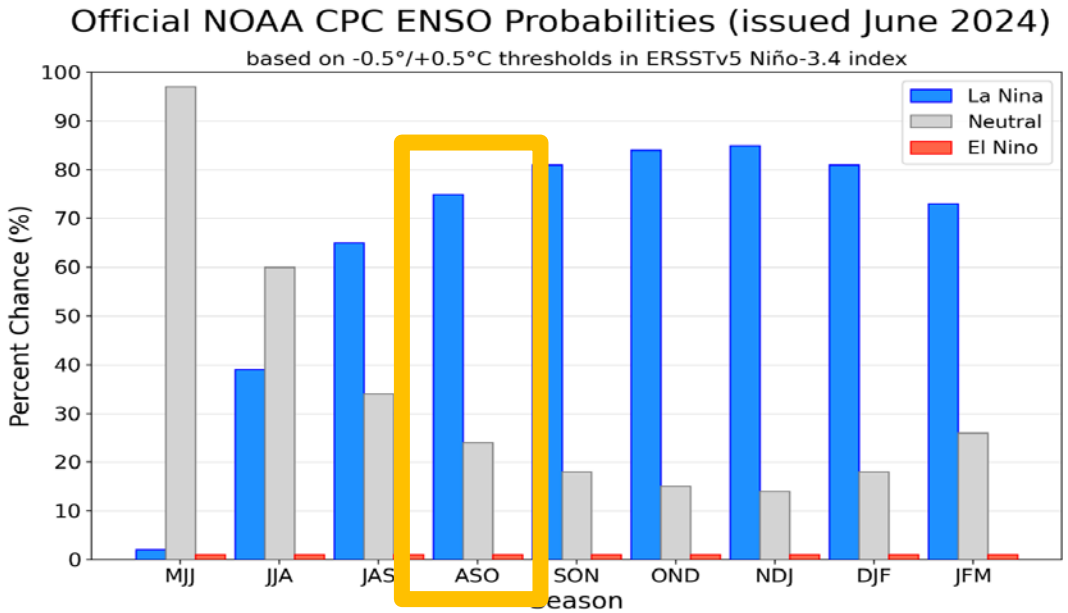
- Here are some of the factors we look at prior to and as the season evolves:
  - Atlantic Water Temperatures - **Near-record warmth in the Atlantic Ocean**
  - State of El Niño or La Niña - **Development of La Niña in the Pacific Ocean**
  - Amount of wind shear - **Less wind shear**

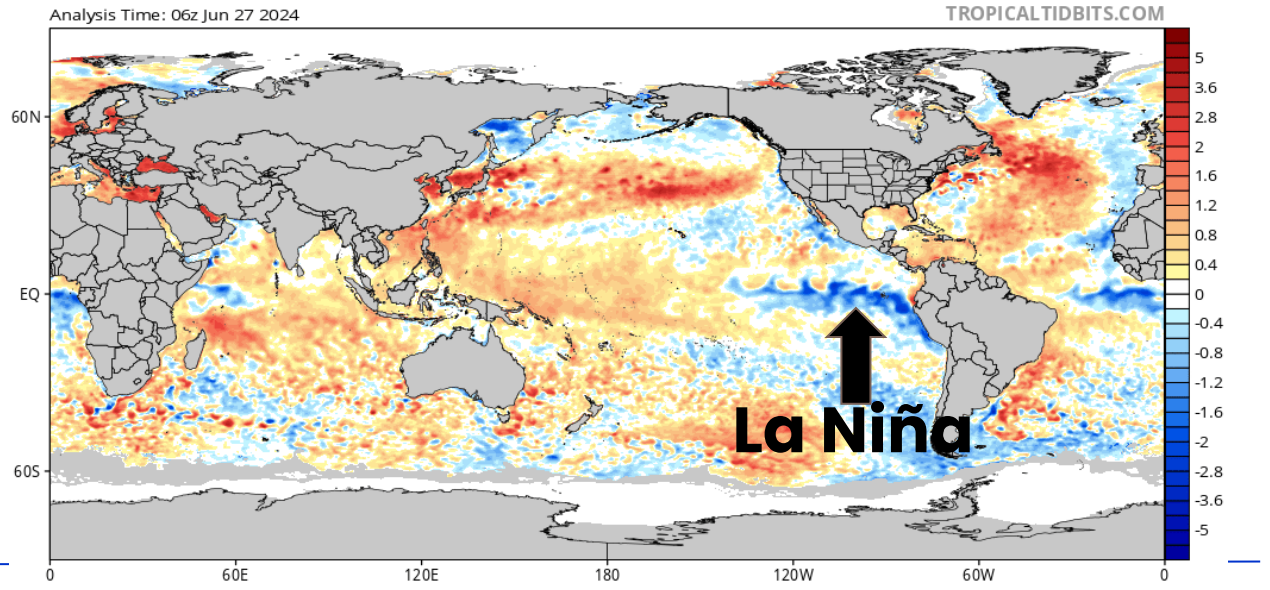
2024 Seasonal Outlook

- Very quick transition from Neutral conditions to La Niña
  - **La Niña** is developing in the Pacific Ocean and will persist through the end of 2024

- During La Niña, wind shear tends to be lower over the Atlantic basin, which is favorable for tropical developing/maintaining

- Light trade winds allow hurricanes to grow in strength without the disruption of strong wind shear, and also minimize ocean cooling

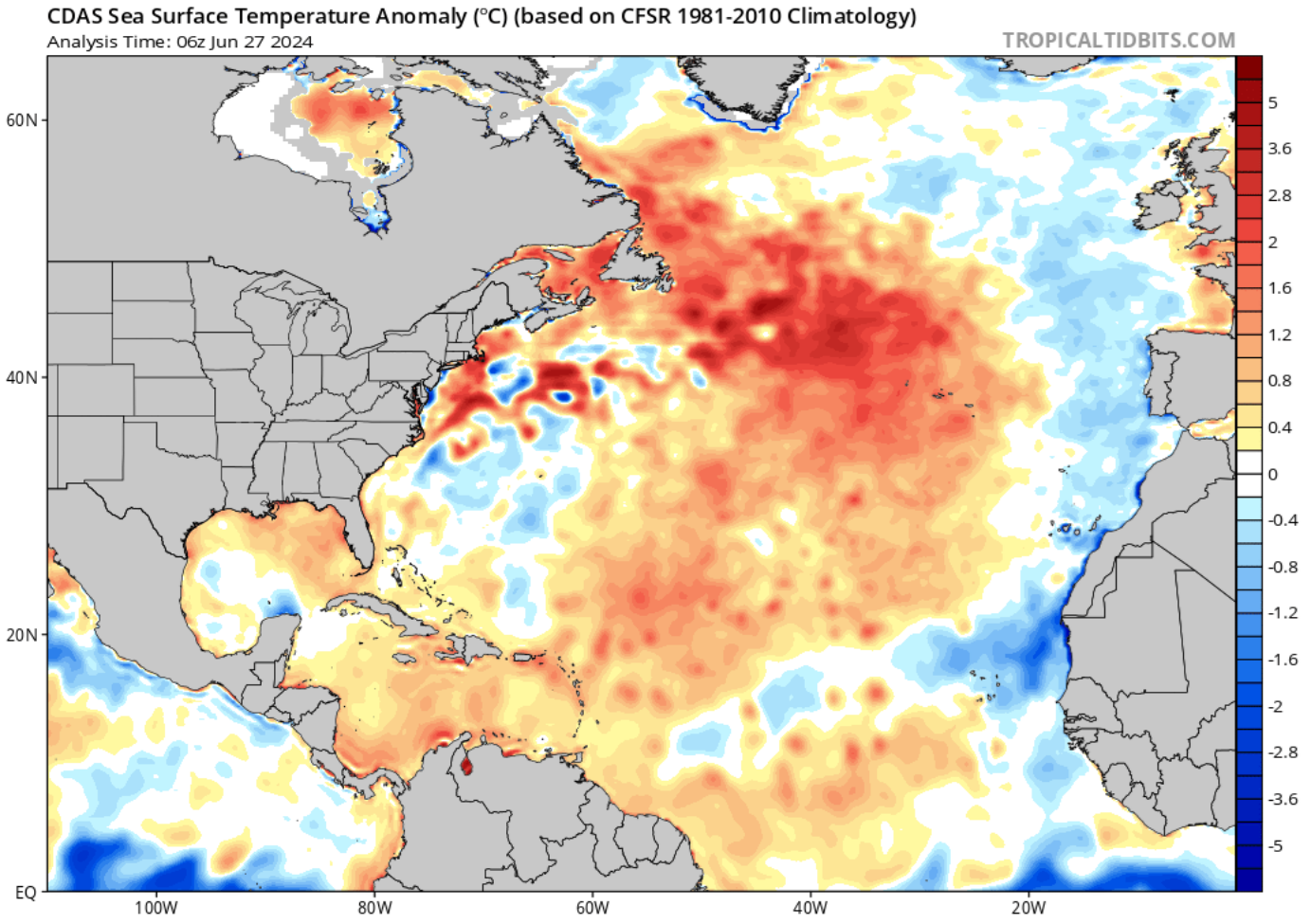




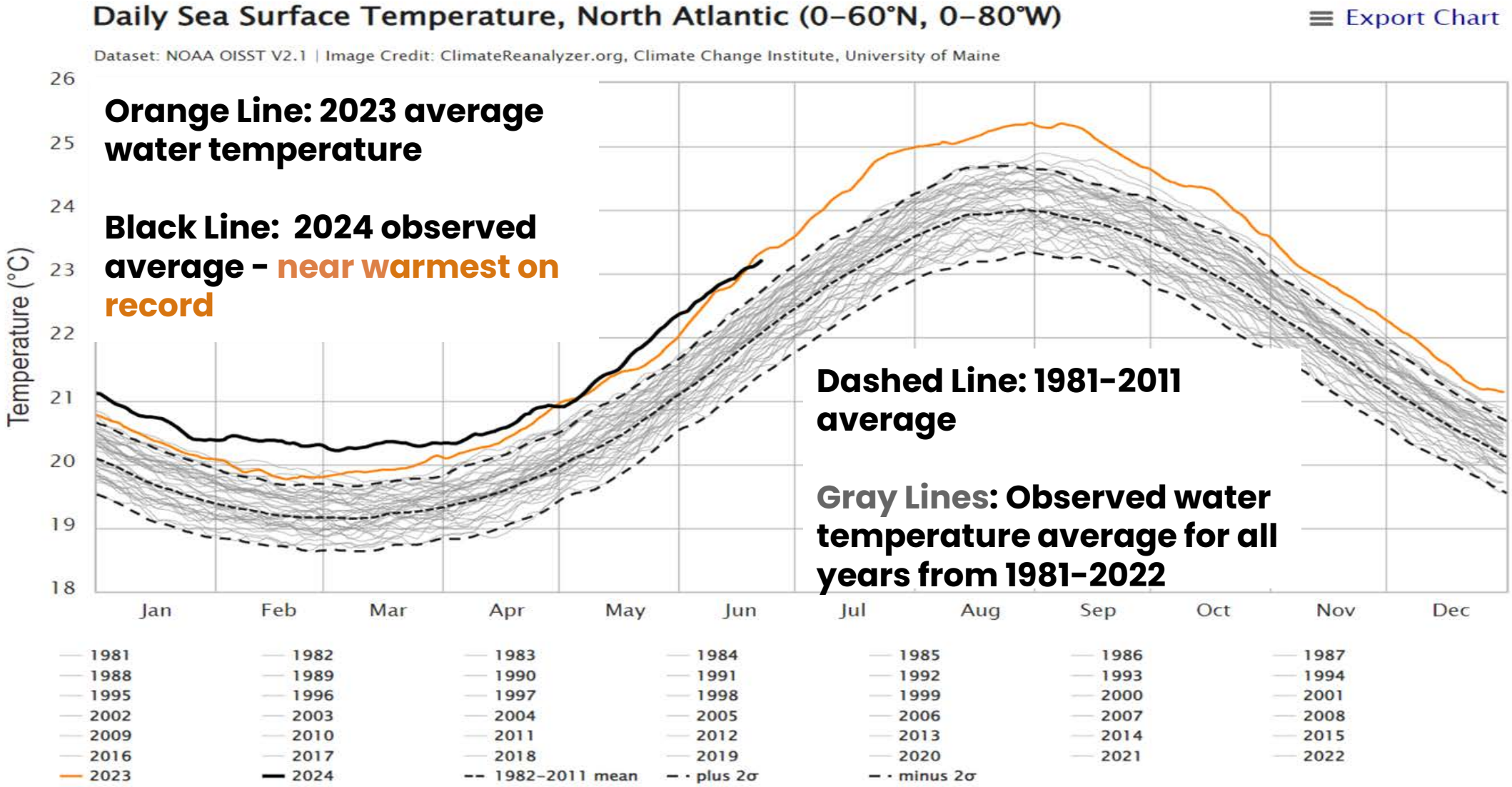
2024 Seasonal Outlook

- Water temperatures are **well above normal** across much of the Atlantic Basin, which can lead to more storm activity and may amplify La Niña
  - Orange and red colors indicate well above normal water temperatures

- ALSO, the potential for an above-normal west African monsoon
  - Can produce African easterly waves that seed some of the strongest and longer-lived Atlantic storms



Seasonal Outlook



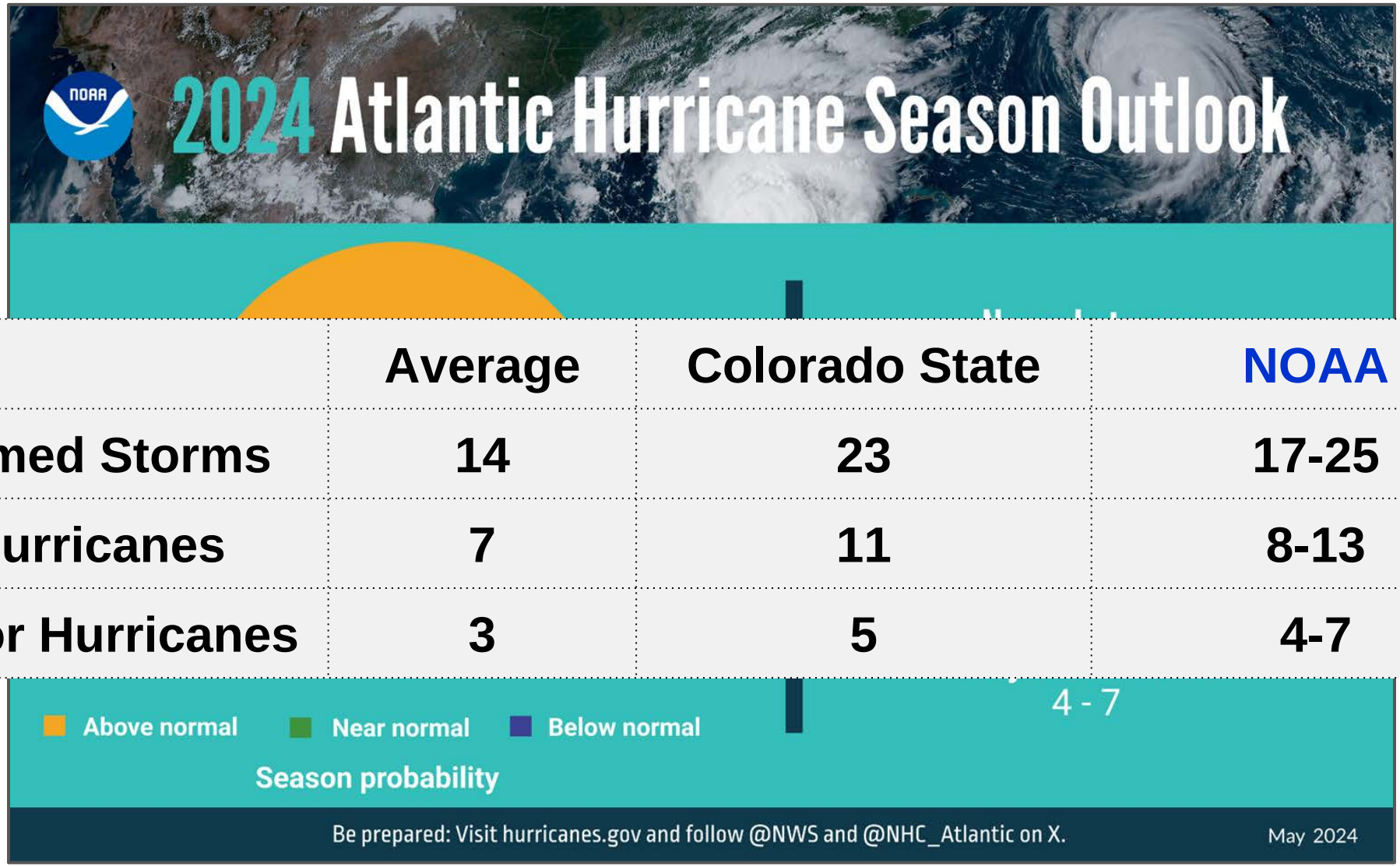
Orange Line: 2023 average water temperature

Black Line: 2024 observed average - near warmest on record

Dashed Line: 1981-2011 average

Gray Lines: Observed water temperature average for all years from 1981-2022

2024 Hurricane Season Outlook



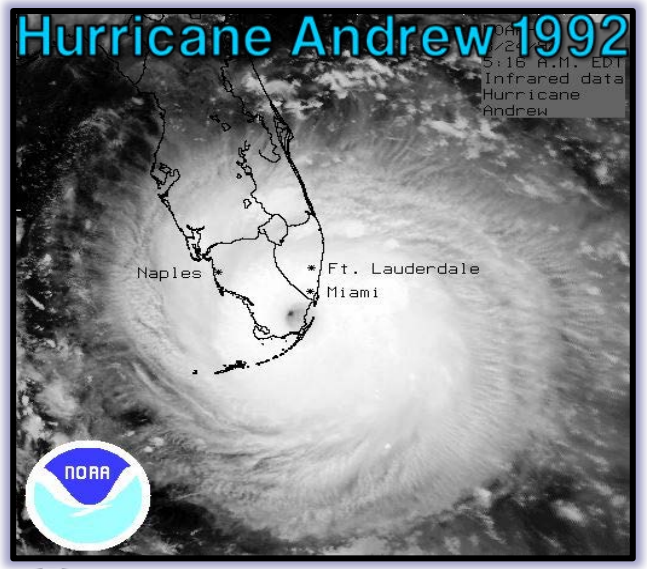
	Average	Colorado State	NOAA
Named Storms	14	23	17-25
Hurricanes	7	11	8-13
Major Hurricanes	3	5	4-7

All It Takes Is One!

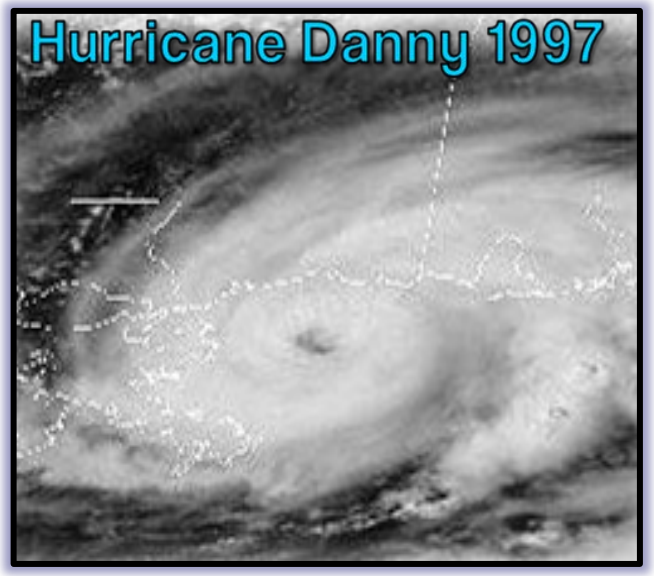
Seasonal outlooks do NOT provide any insight on potential landfalls/storm impacts

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!

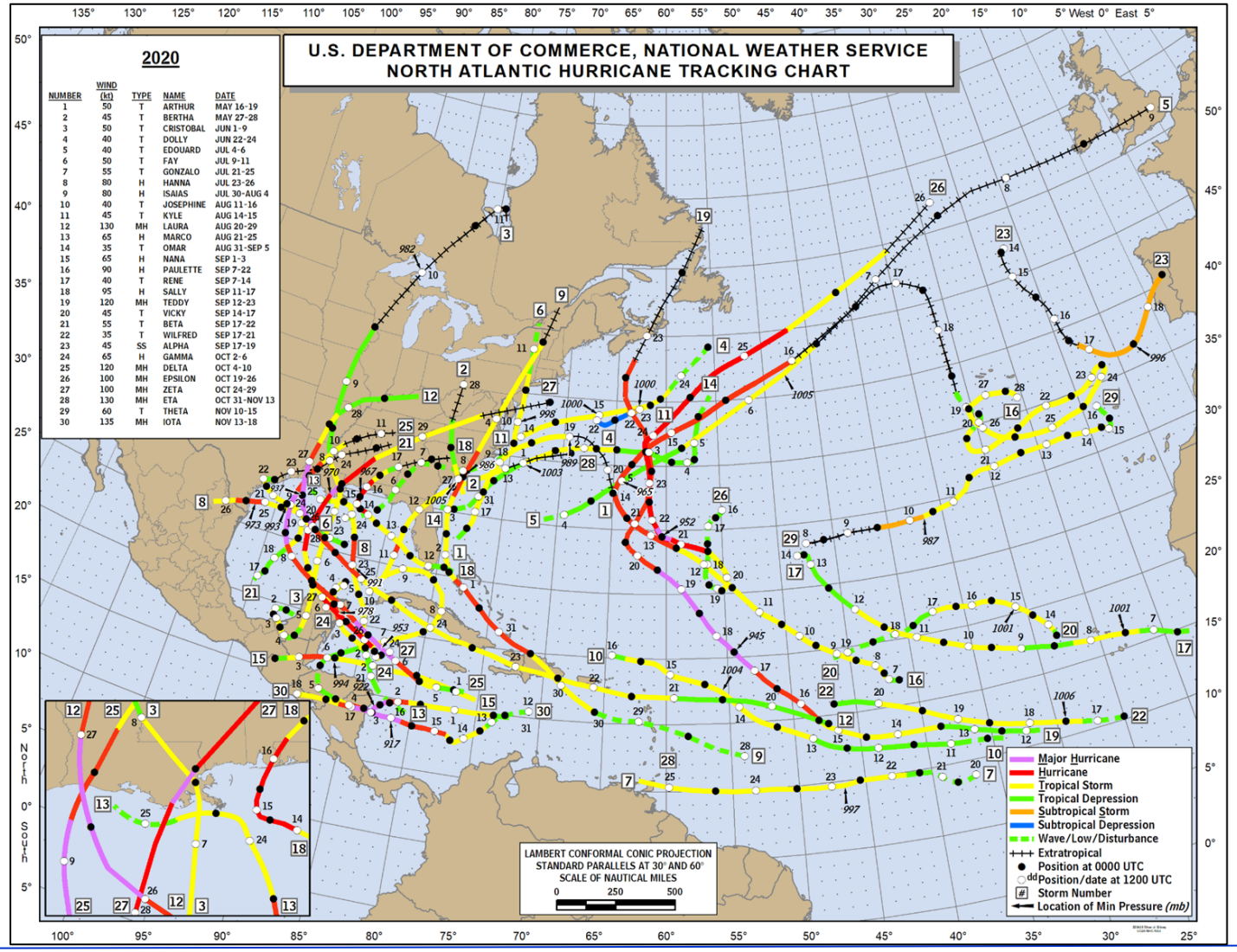


Both Hurricane Andrew and Hurricane Danny happened during well below normal hurricane seasons



2020 Hurricane Season

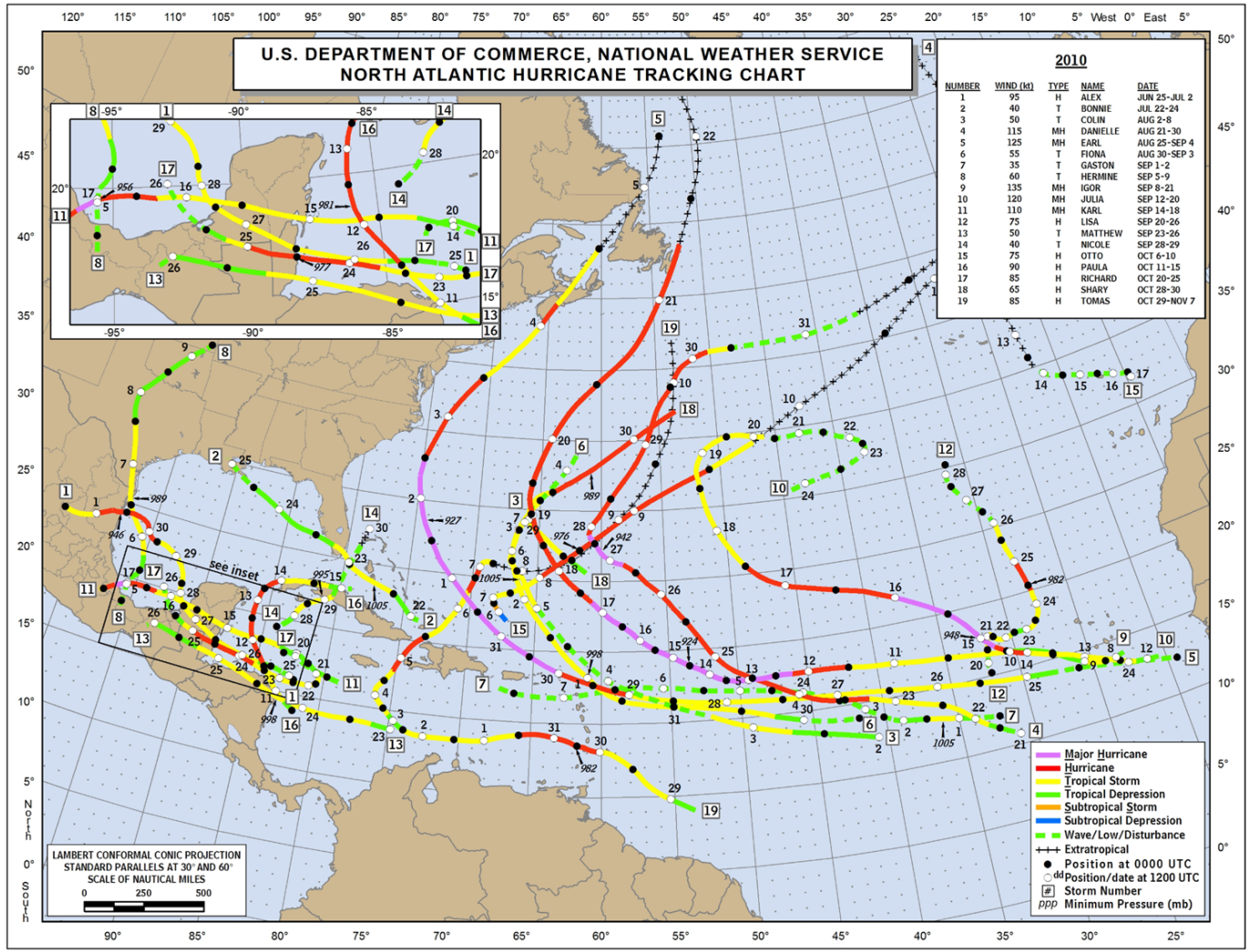
Active Season – BIG Local Impacts



NWSMobile

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)
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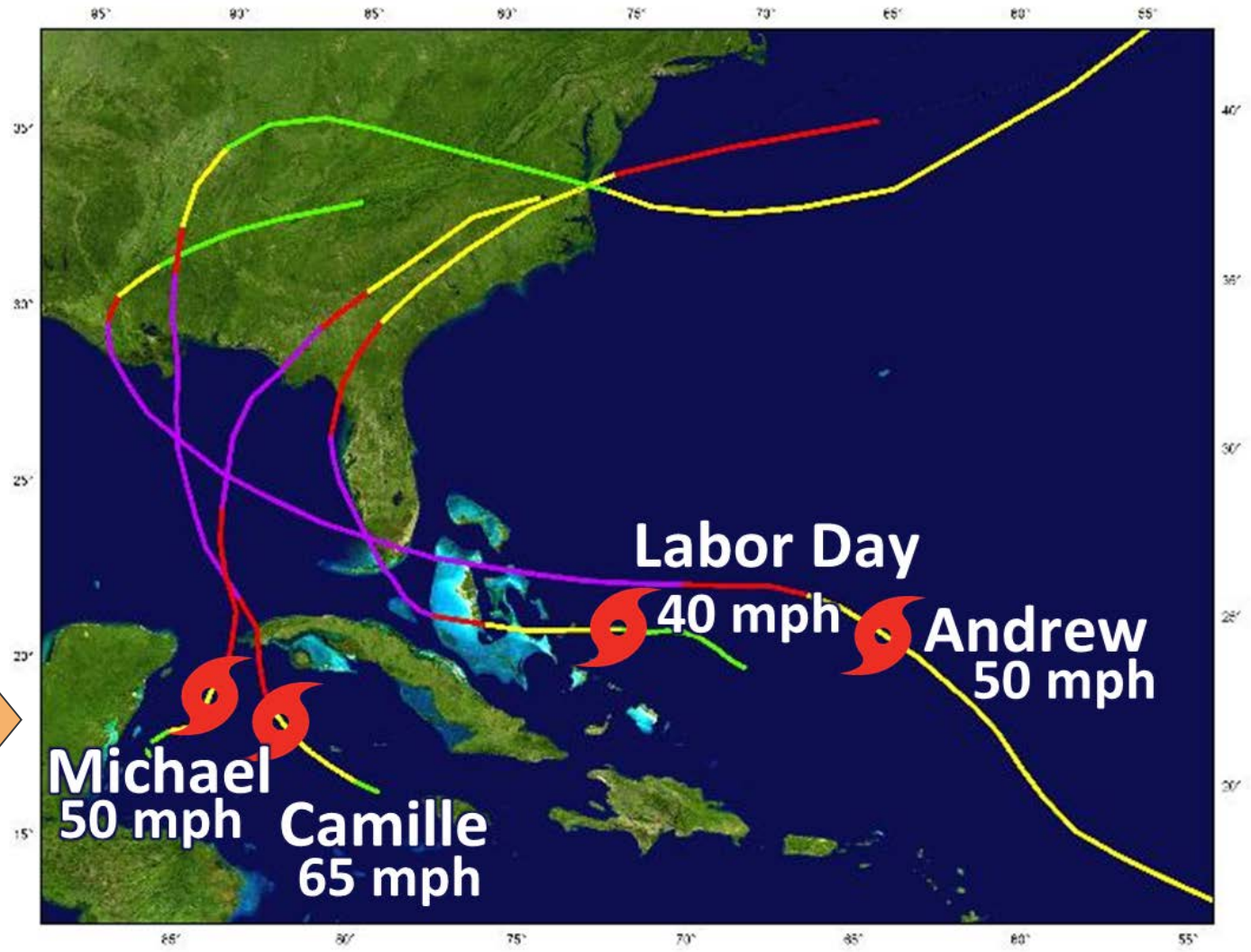
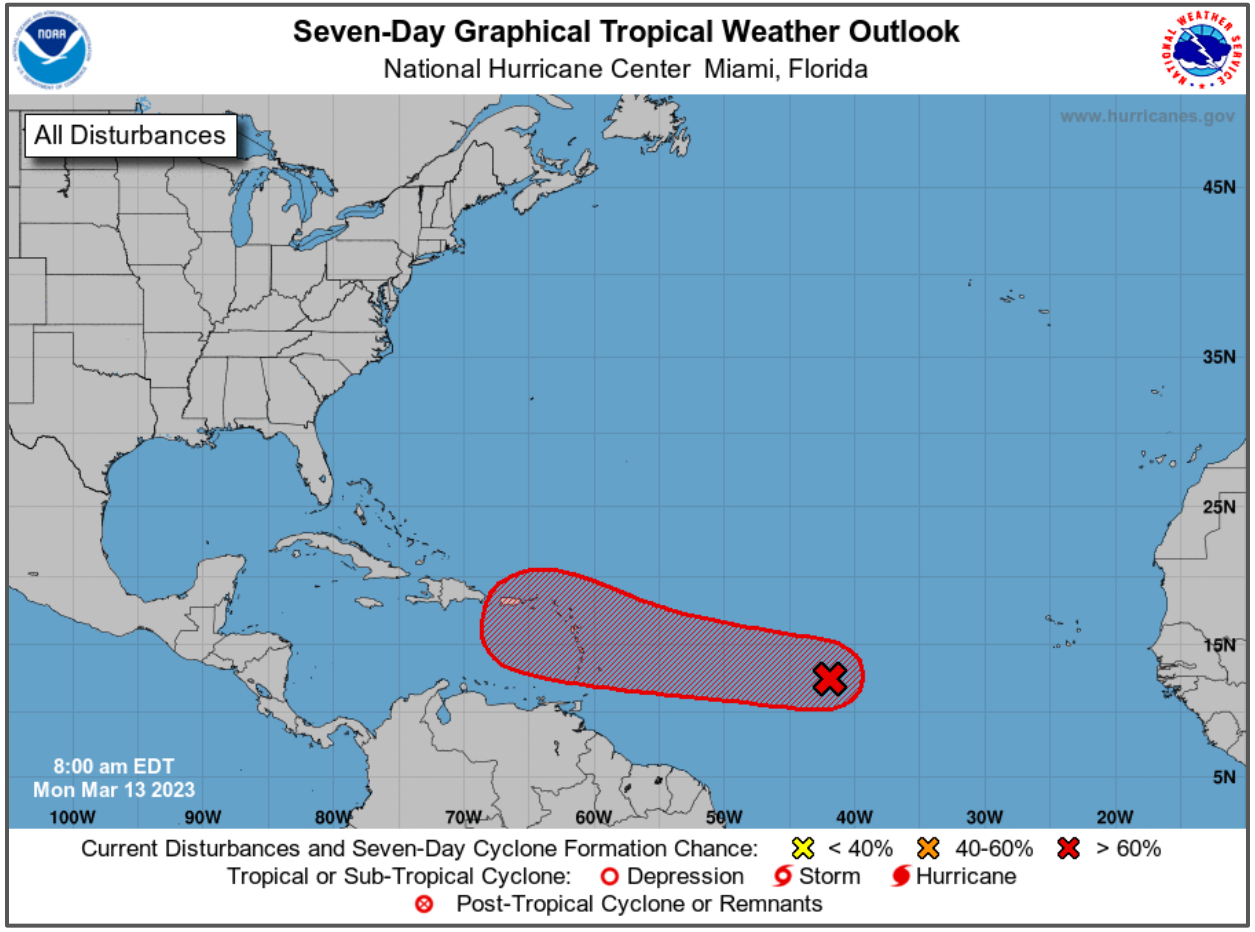
Where were these hurricanes [3 days](#) before landfall?



Important Seasonal Reminders

Tropical Weather Outlook

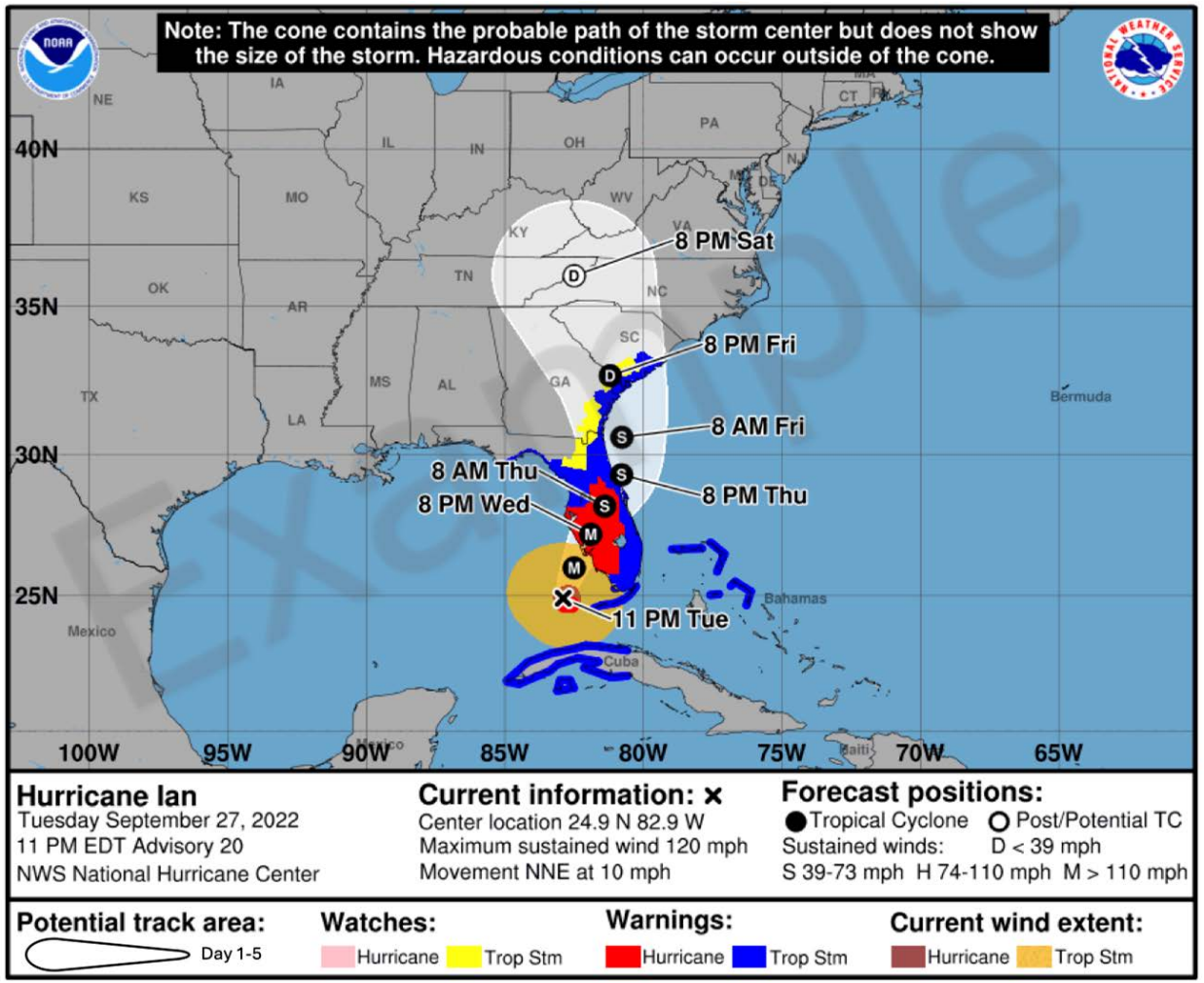


- **YES** - What the genesis area is…
  - Outlook for the chance for formation over the next 2 days or 7 days
  - A tropical depression, storm, or hurricane could form somewhere in the hatched area at some point

- **NO** - What the genesis area isn't…
  - The eventual track of a potential tropical depression, storm, or hurricane
  - The area impacted by a potential tropical system

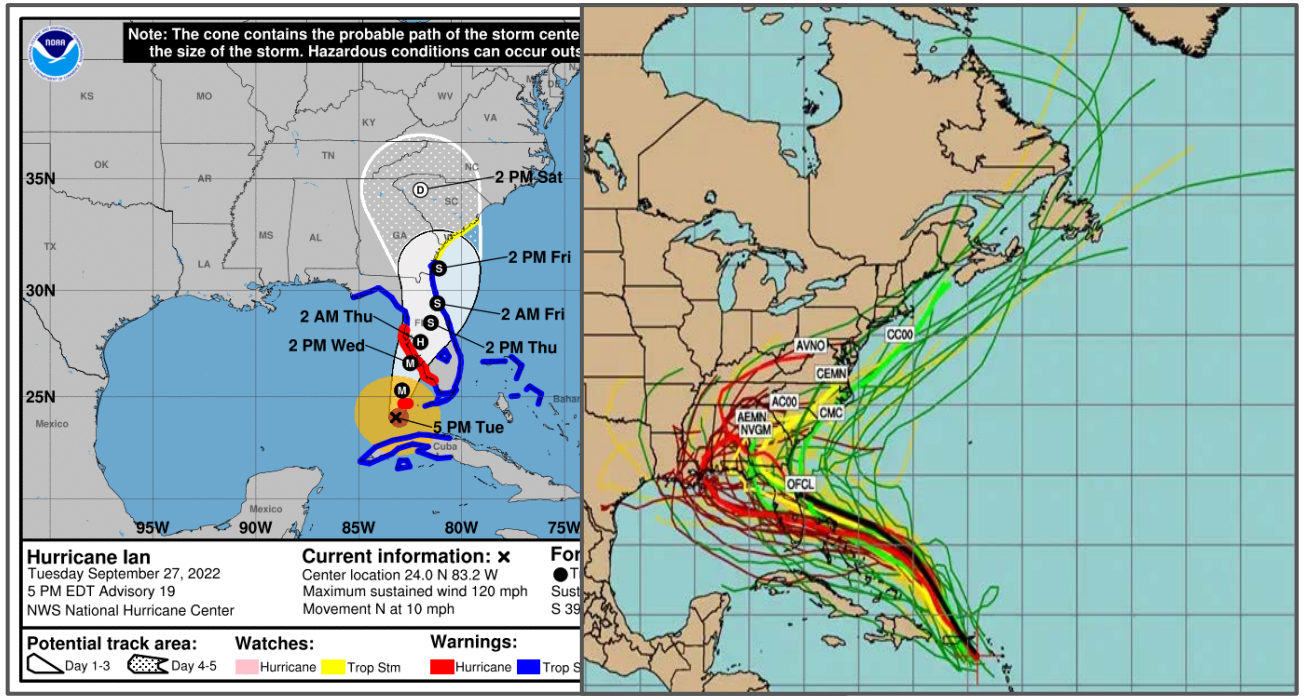
NEW! Updated Cone Graphic

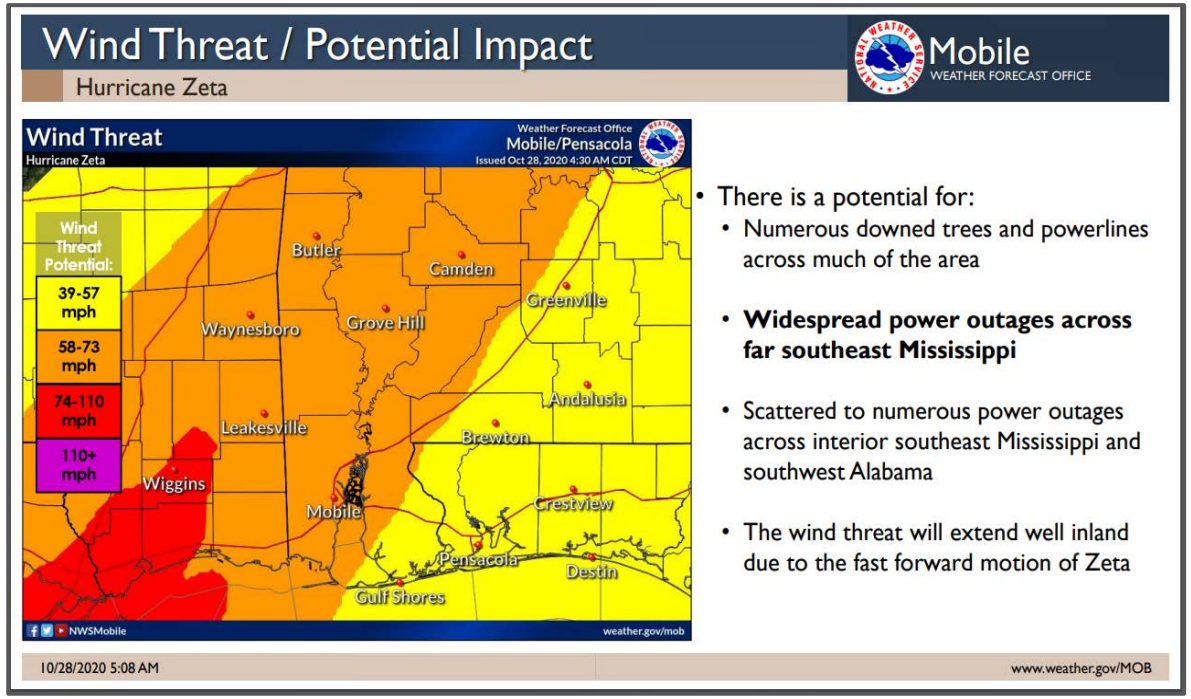
Available starting around August 15



- **NEW!** Experimental cone will depict the **inland** U.S. tropical storm and hurricane watches and warnings
- This will help convey the wind risk over land better
- 5-day cone will be completely white instead of the solid 1-3 day cone and hatched 4-5 day cone
- Graphic likely delayed each advisory cycle (due to the time need to compile the inland information)
- Available at hurricanes.gov

Help Change the Tropical Mindset



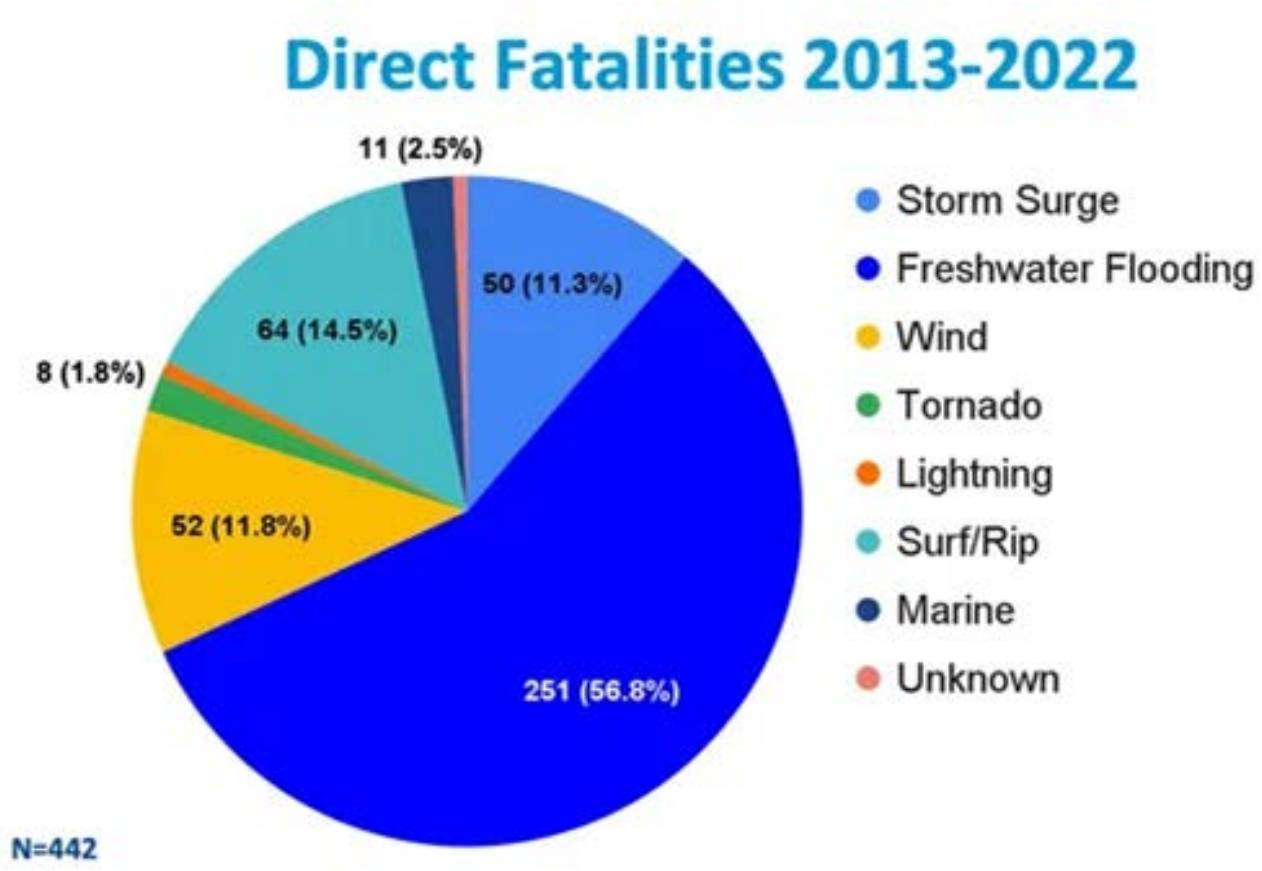


- There is a potential for:
  - Numerous downed trees and powerlines across much of the area
  - **Widespread power outages across far southeast Mississippi**
  - Scattered to numerous power outages across interior southeast Mississippi and southwest Alabama
  - The wind threat will extend well inland due to the fast forward motion of Zeta

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

<u>MORE</u> emphasis on the potential local impacts and local watches and warnings

Direct Tropical Cyclone Fatalities

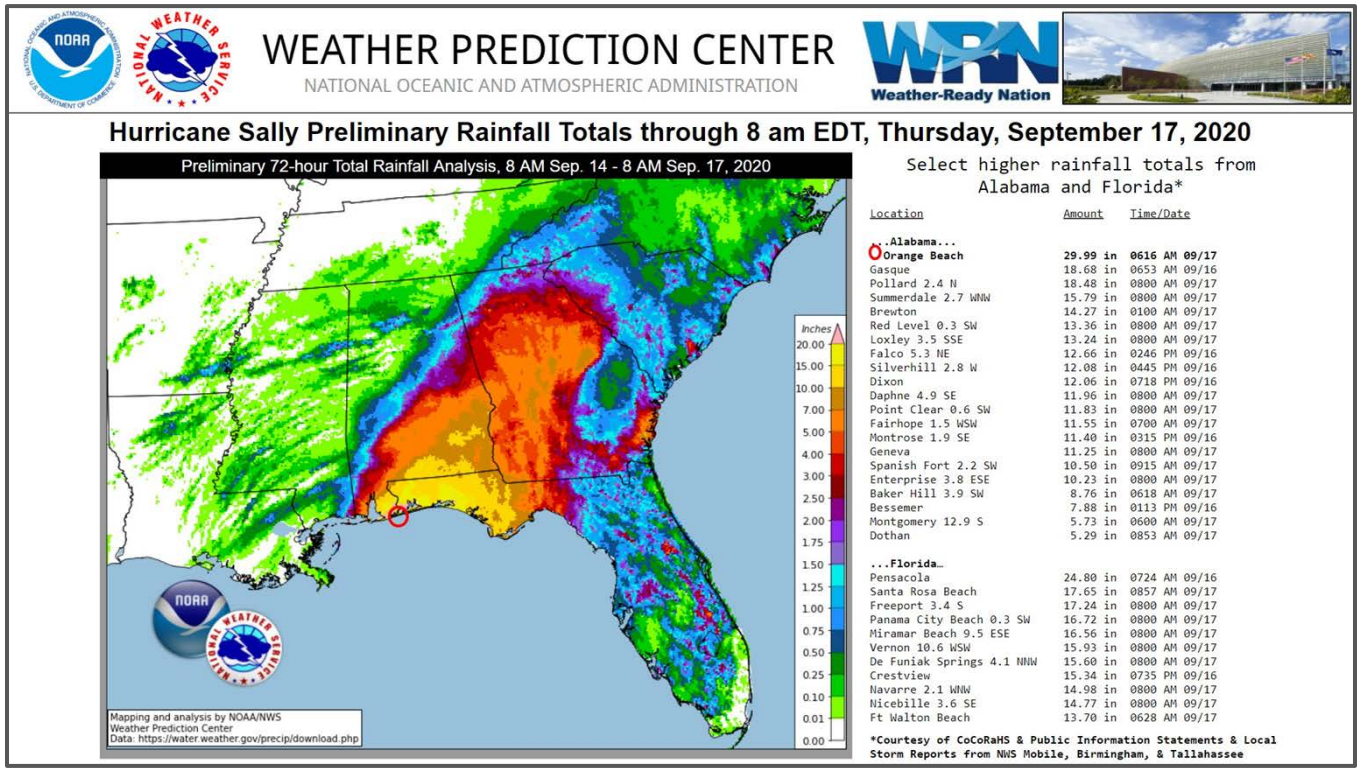


442 direct fatalities in the U.S.

- Did you know that over 80% of all fatalities are water-related??
  - 57% Freshwater Flooding
  - 15% Surf & Rip Currents
  - 11% Storm Surge
- 12% due to the 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!

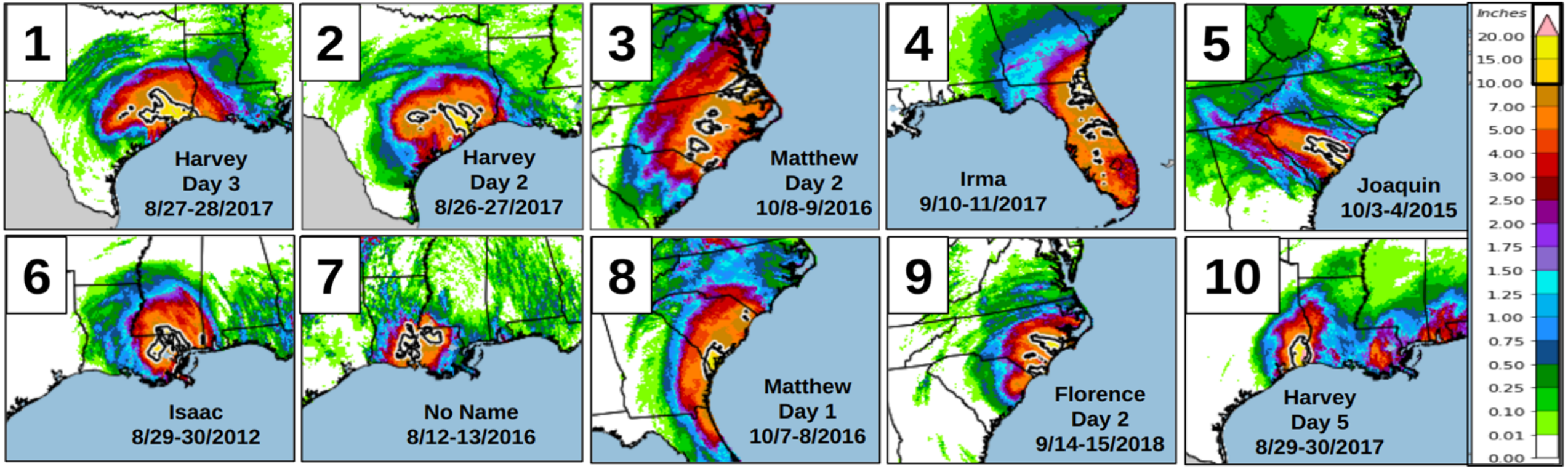
Freshwater Flooding (Inland)

Hurricane Sally 2020



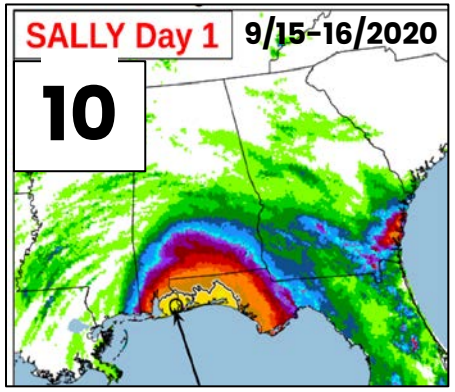
- The leading cause of death in tropical systems is freshwater flooding (a.k.a. river flooding and flash flooding) - this is the result of heavy rainfall
- Hurricane Sally produced 29.99 inches of rain with a widespread 1-2 FEET of rainfall
- Catastrophic flooding occurred with numerous Flash Flood Emergencies

Freshwater Flooding (Inland)



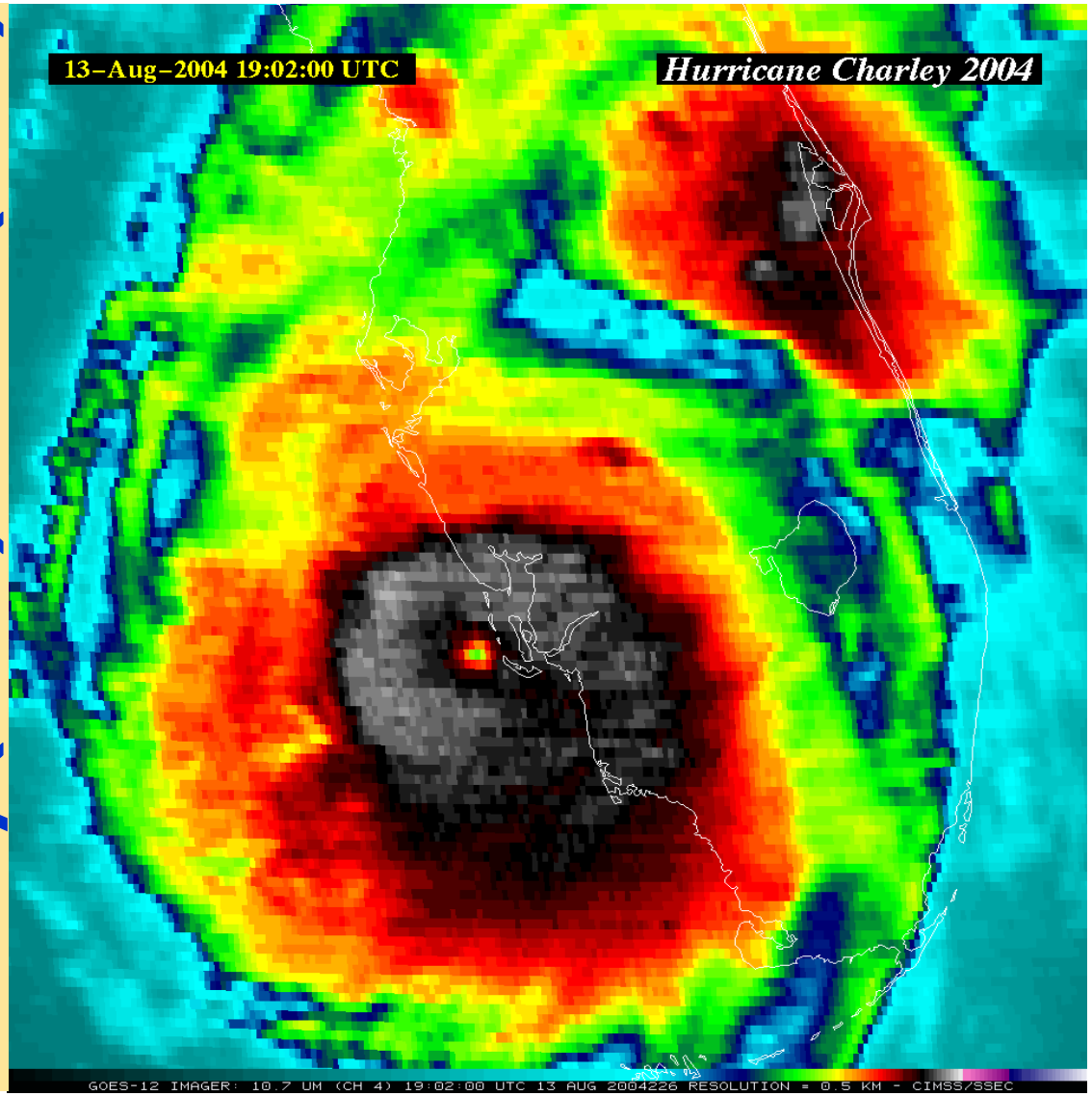
*By area covered with 10+ inches of rainfall in 24 hours.

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.



Storm Surge is Complex – Don't Compare Storms!

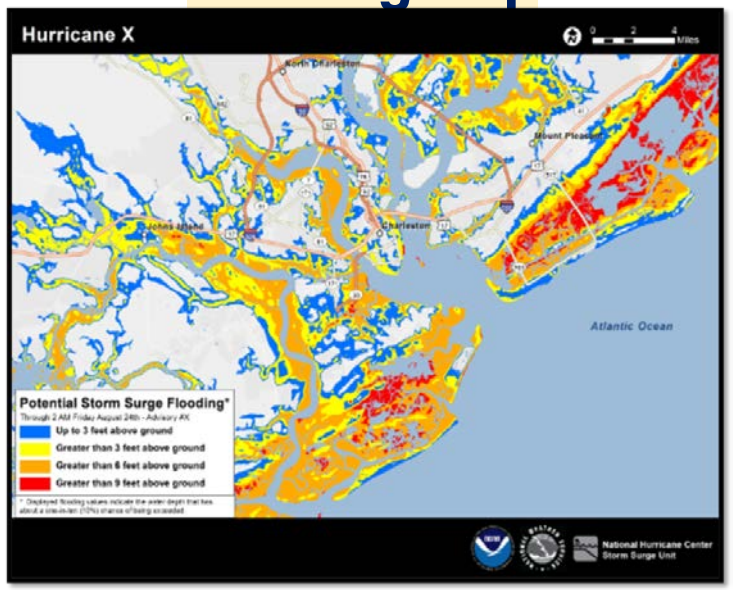
Charley (2004) vs. Ian (2022)



- Both Charley and Ian were Category 4 storms at landfall… but that is where the similarities end
- Ian was MUCH larger than Charley
- Ian's forward speed was ½ of Charley
- **End result:** Ian produced double the surge of Charley with 10-15 feet of inundation was observed in southwest Florida

Storm Surge Products

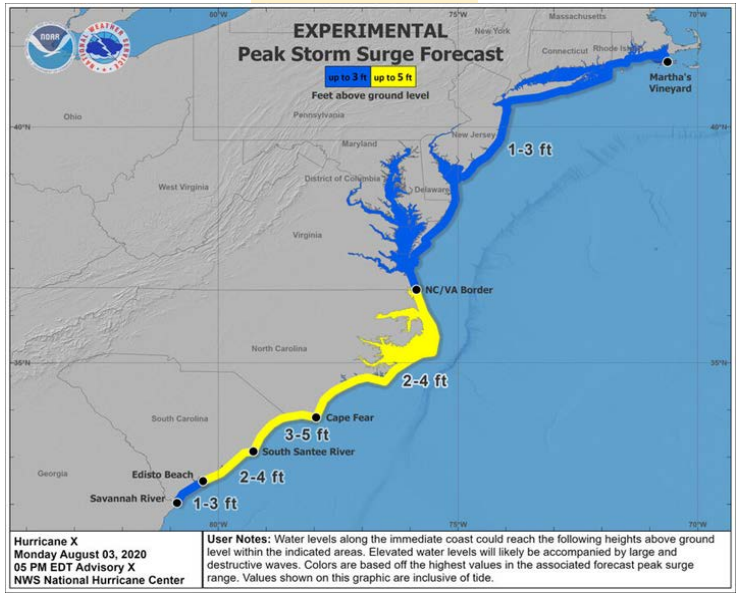
Potential Storm Surge Flooding Map



Reasonable worst case scenario *(1 in 10 chance storm surge will be greater than shown)*

Does NOT represent a flooding footprint

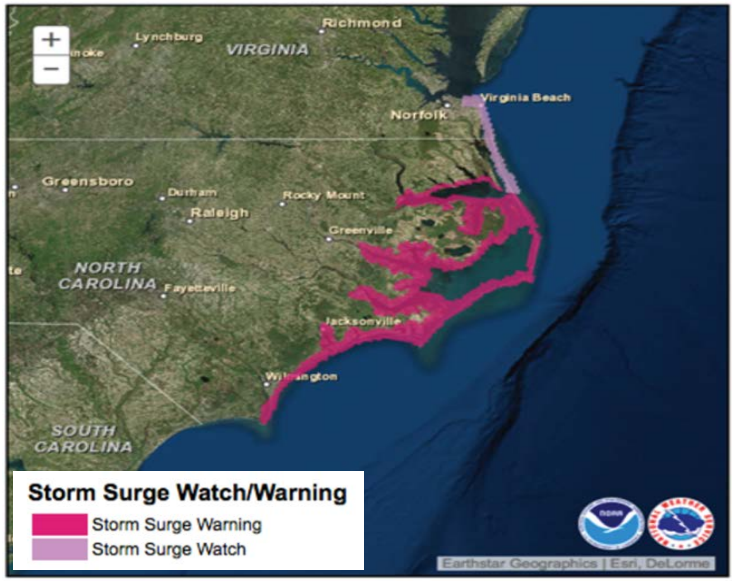
Peak Storm Surge Forecast



Peak values water could reach above normally dry ground

Only valid along the immediate coast - does not depict inland extent

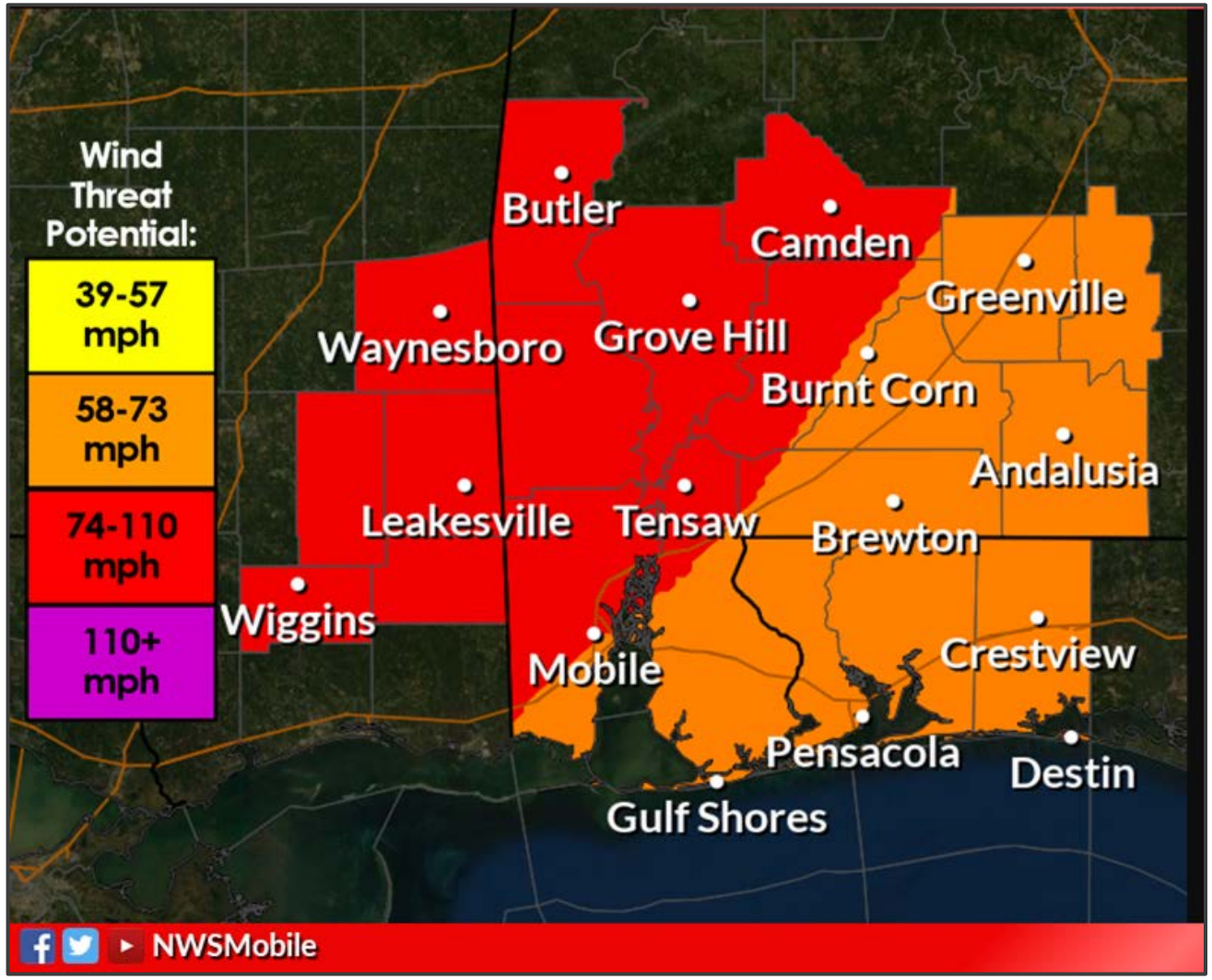
Storm Surge Watch/Warning



Watch - Possibility of life-threatening inundation generally within 48 hours

Warning - Danger of life-threatening inundation generally within 36 hours

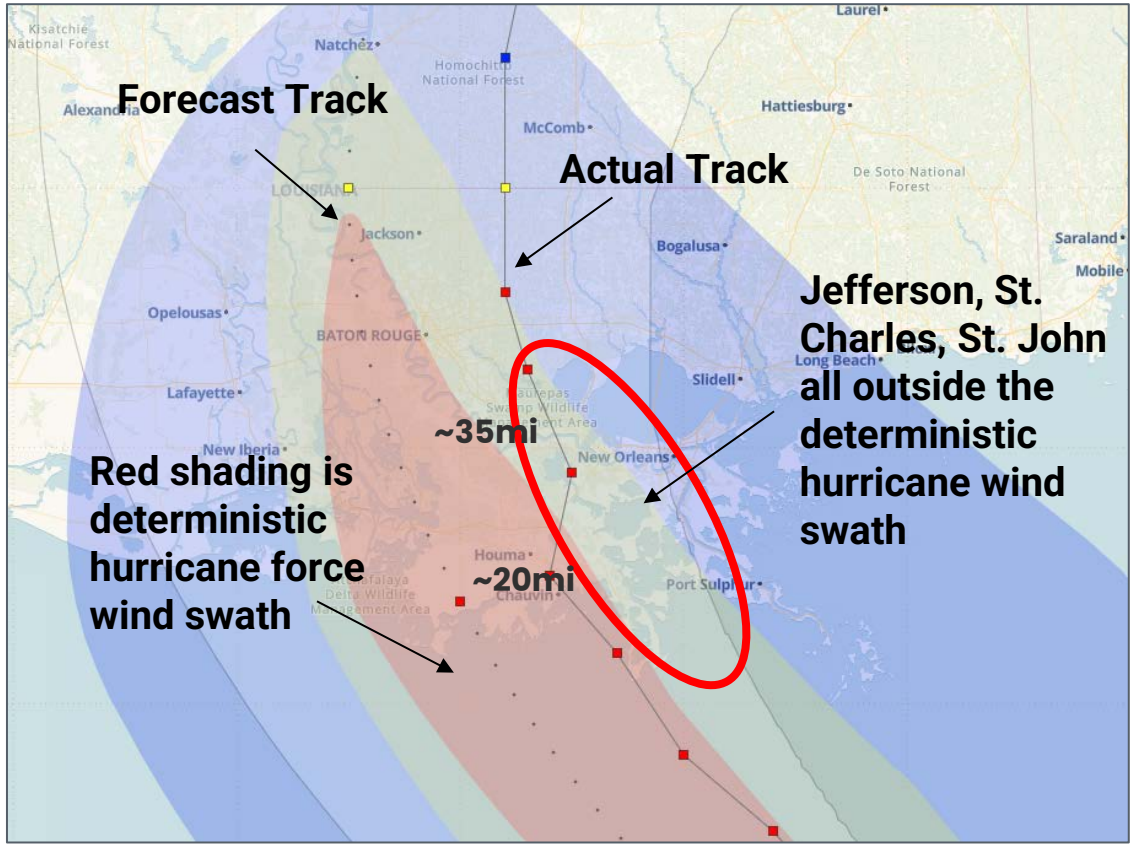
Hurricane Threat & Impacts (HTI)

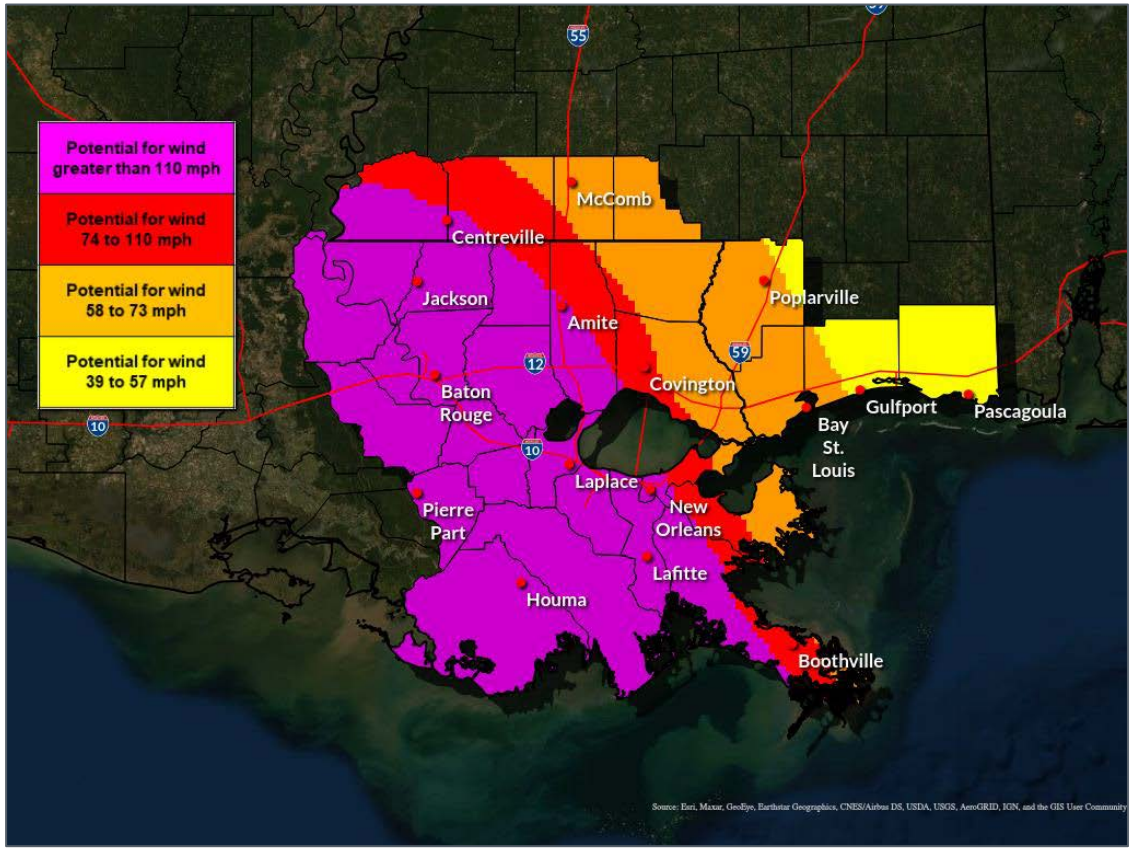


- Probabilistic forecast based on the current NHC advisory + accounting for reasonable forecast errors
- Provides the POTENTIAL of what you should prepare for - HTI will likely be higher than what is in the forecast
- Local HTI graphics are produced for all tropical threats: inland flooding, storm surge, wind, and tornadoes
- Color-coded scale to let you quickly know your relative threat

Hurricane Threat & Impacts (HTI)

Why Use HTIs??





Graphics associated with the 10am CDT forecast August 28th for Hurricane Ida

Any Questions?

Waters of the U.S.

Lee Yokel, Ecosolutions

Adjourn