



**STARTING SHORTLY**

## **2022 Hurricane Season Outlook Interagency Congressional Briefing**

May 25, 2022

NOAA -- Dr. Richard Spinrad, Under Secretary of Commerce for Oceans and Atmosphere, and NOAA Administrator

NOAA -- Ken Graham, Director, NOAA/NWS National Hurricane Center

FEMA -- Deanne Criswell, Administrator

ARC -- Brad Kieserman, Vice President of Disaster Operations and Logistics

Contacts:

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FEMA -- [Jason.Nelson2@fema.dhs.gov](mailto:Jason.Nelson2@fema.dhs.gov)

ARC -- [Jacqueline.Bassermann@redcross.org](mailto:Jacqueline.Bassermann@redcross.org)

***Briefing slides available at:  
[www.legislative.noaa.gov](http://www.legislative.noaa.gov)***



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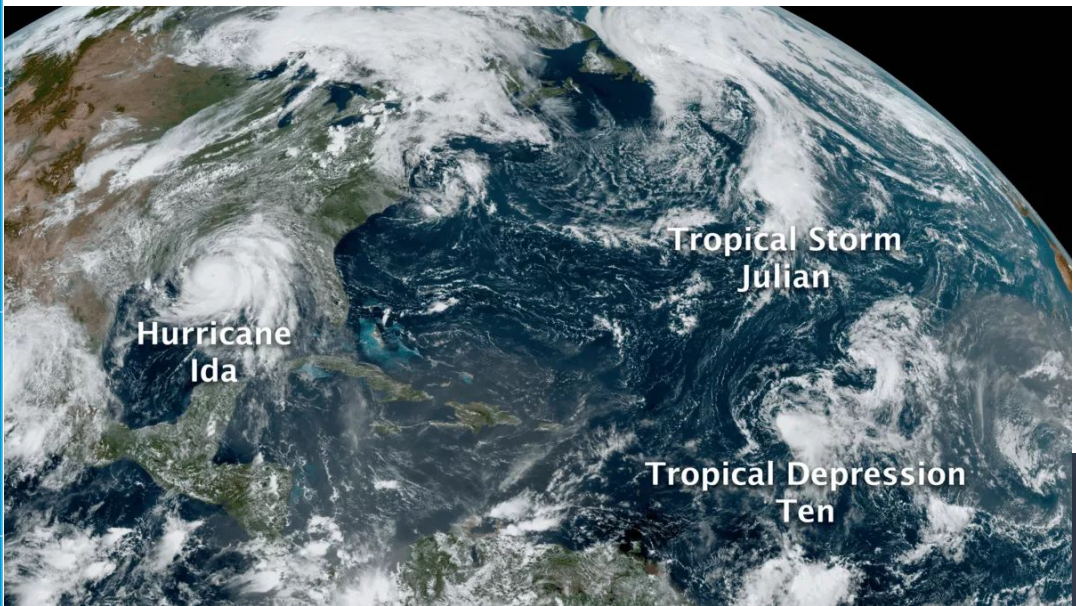
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# NOAA Serves Before, During and After the Storm



BRIEFING ROOM

## A Proclamation on National Hurricane Preparedness Week, 2022

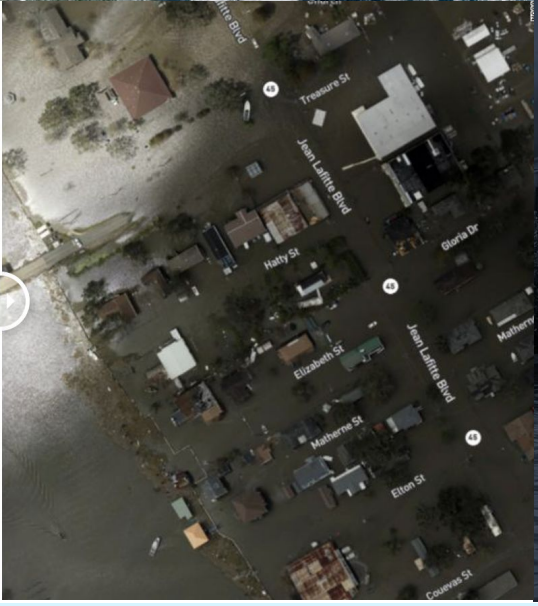
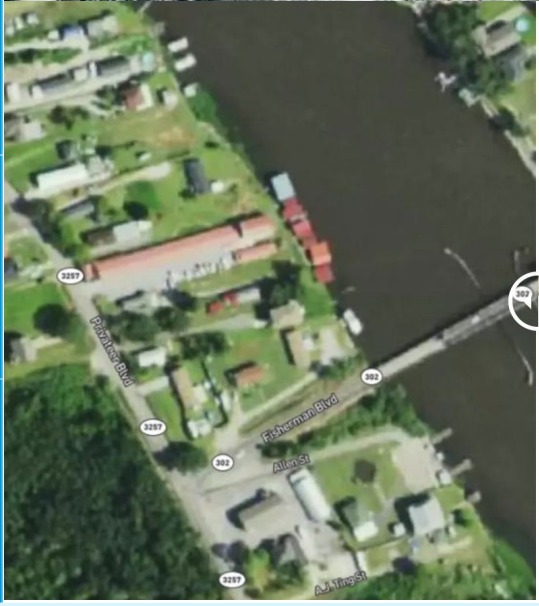
APRIL 29, 2022 • PRESIDENTIAL ACTIONS



# Hurricane Preparedness Week

## May 1-7, 2022

- Determine your risk.
- Develop an evacuation plan.
- Assemble disaster supplies.
- Get an insurance checkup.
- Strengthen your home.
- Help your neighbor.
- Complete a written plan.





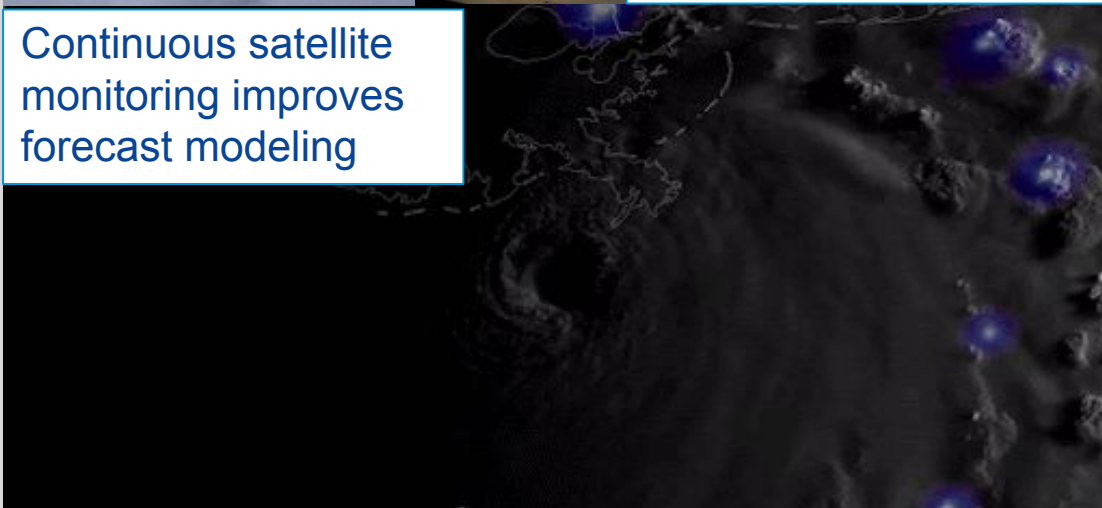
# Team NOAA: All In on Hurricanes

## Office of Marine and Aviation Operations



Flying into and around the eye of the storm

Continuous satellite monitoring improves forecast modeling



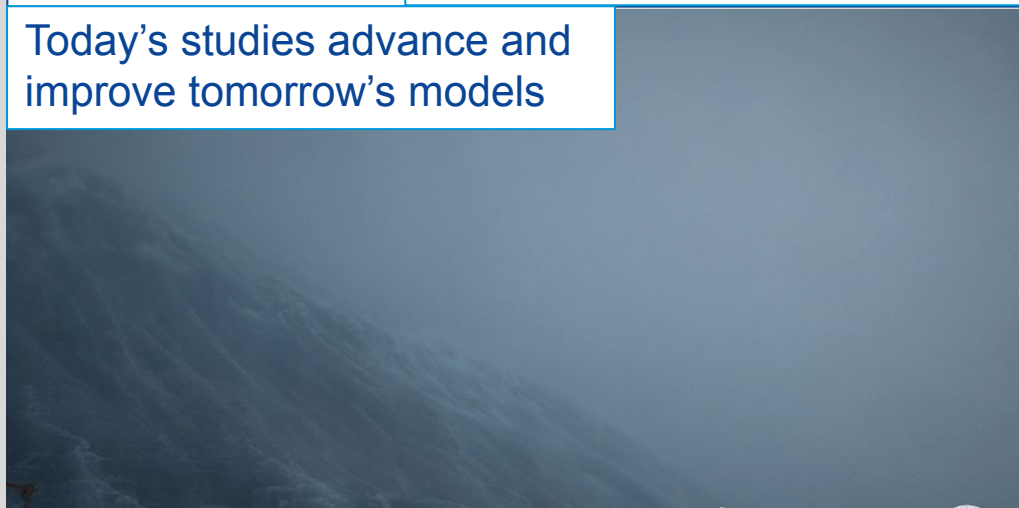
## National Environmental Satellite, Data, Information Service

## National Ocean Service



Real-time and historical flooding info; aiding waterway navigation in the aftermath; finding vessels in distress

Today's studies advance and improve tomorrow's models



Captured by SD 1045's on-board sensors  
Category 4 Hurricane Sam, Sept 13, 2011

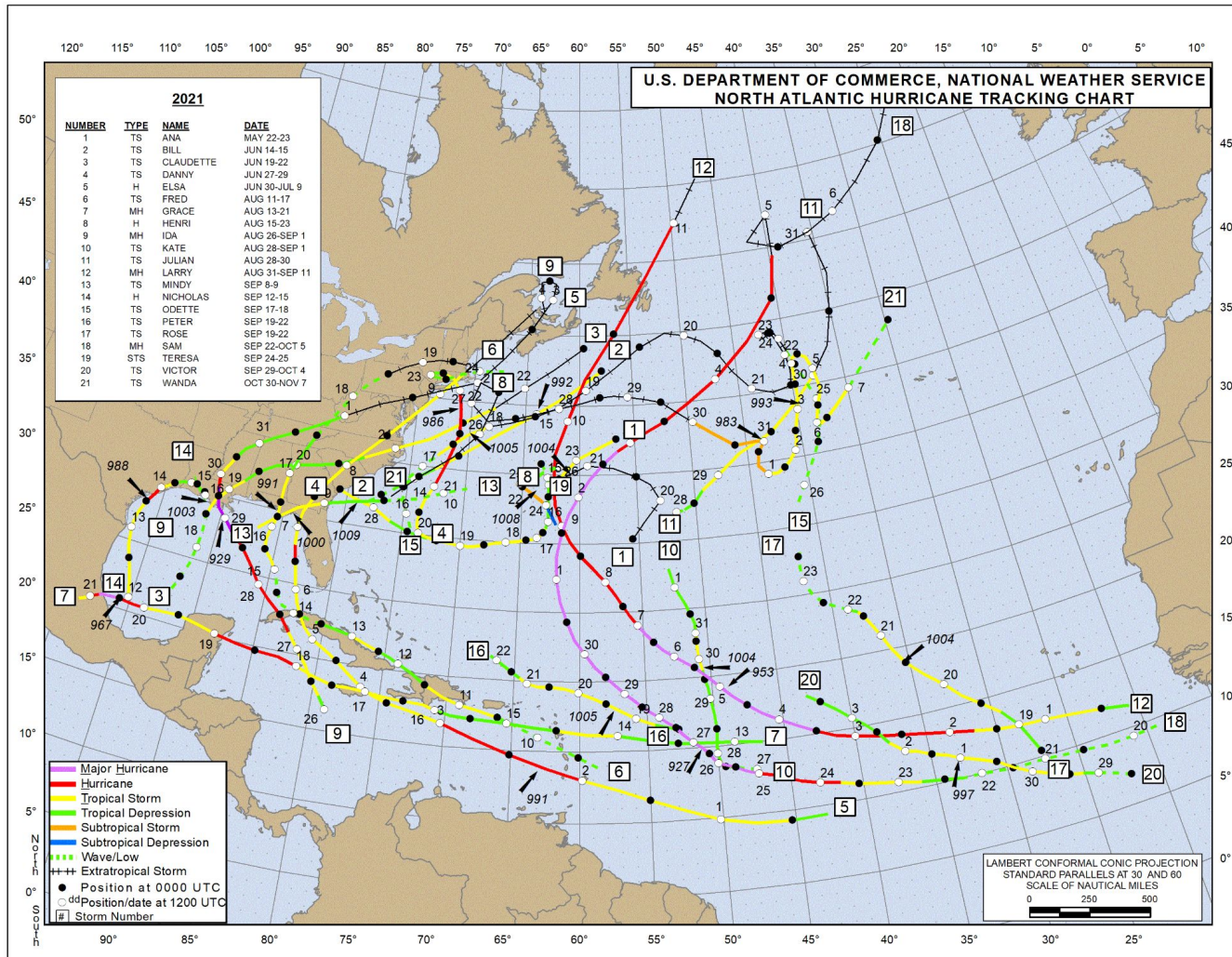
## Oceanic and Atmospheric Research

# Outline





# 2021 Atlantic Hurricane Season



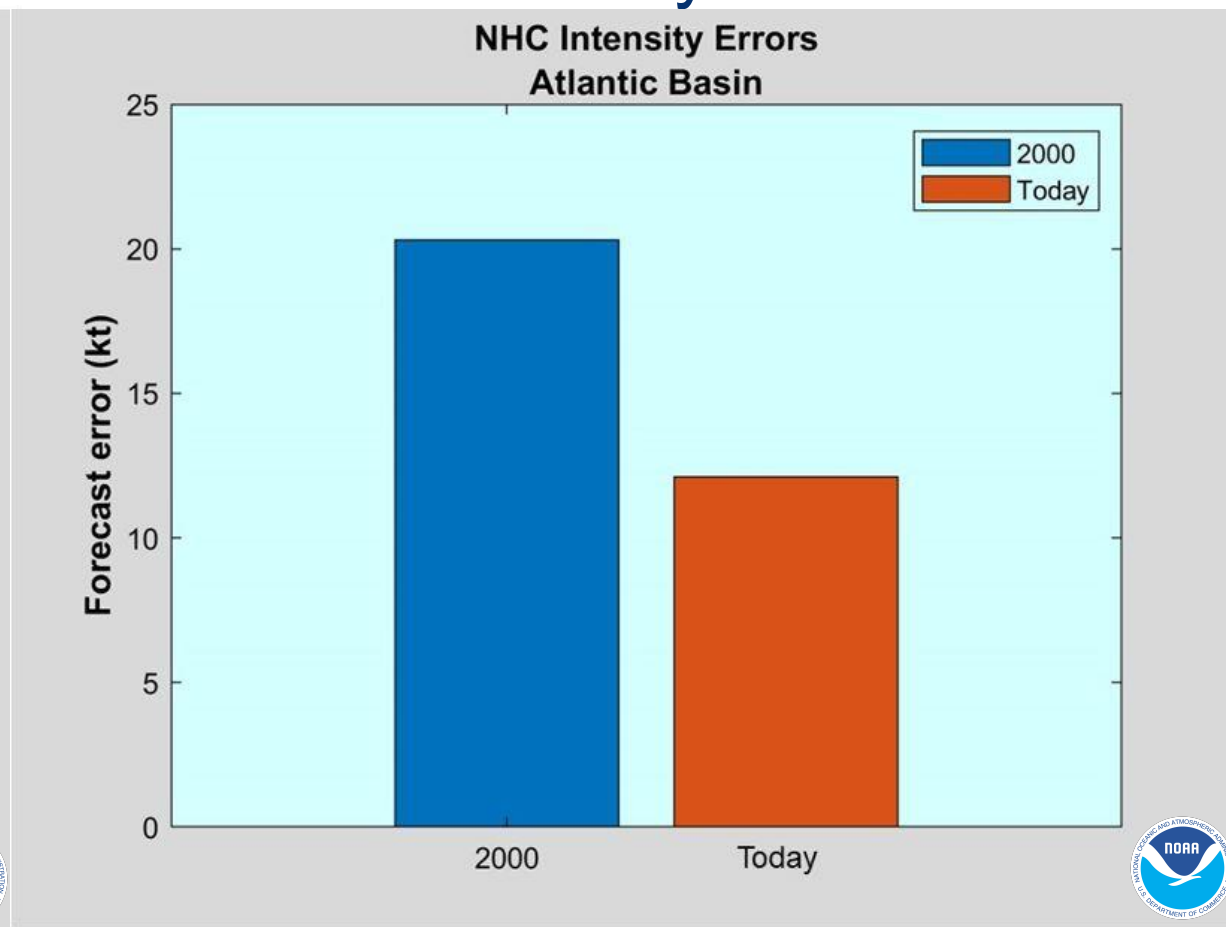
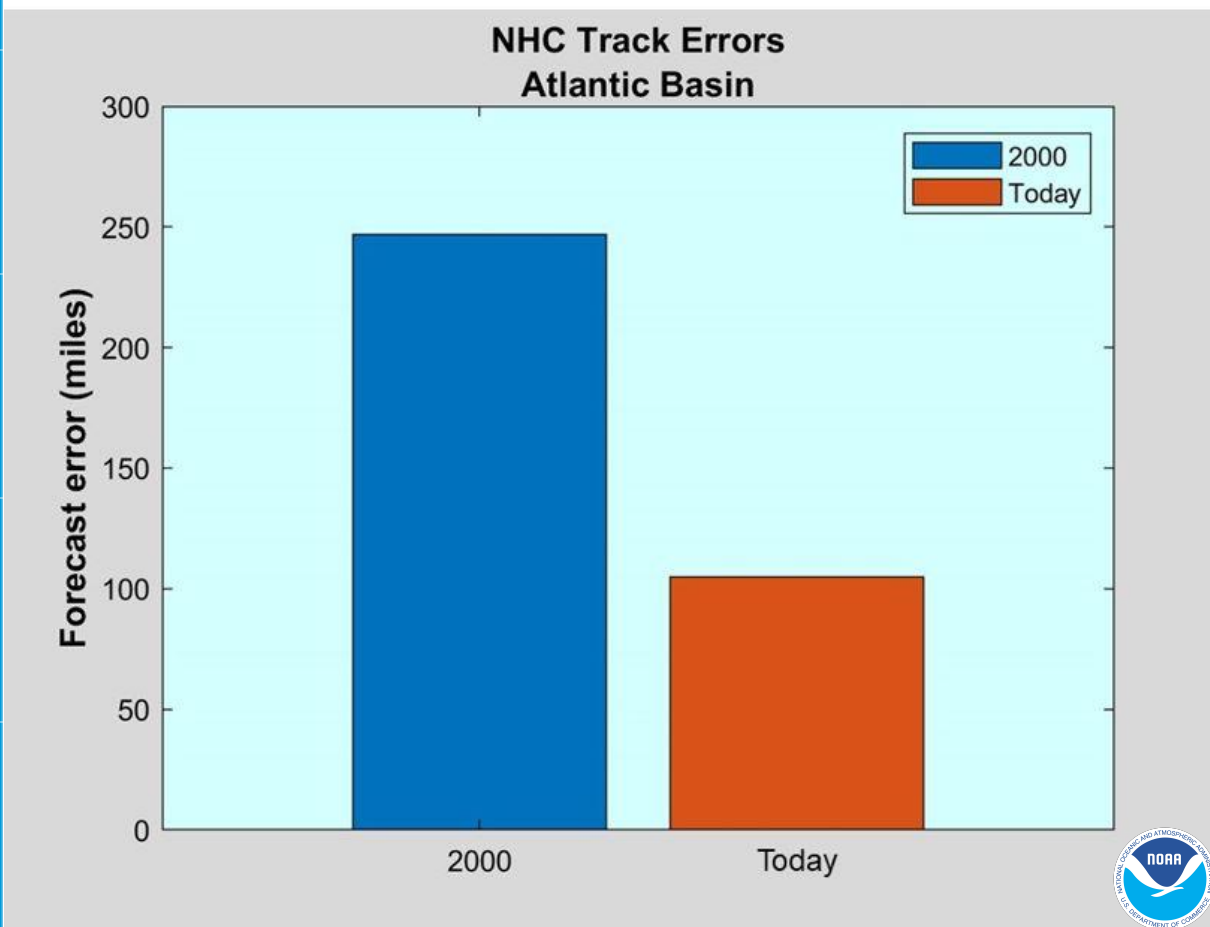
- 21 named storms
- 7 hurricanes
- 4 major hurricanes
- 2 U.S. hurricane landfalls (1 major hurricane - Ida)
- 6 U.S. tropical storm landfalls
- More than 70 U.S. direct fatalities
- Over \$78.5B in U.S. damage

**In sum: Economic damage and risk to life and property grow each year, readiness, communication, and improving forecasts are vitally important**

# Our Accuracy Continues to Improve

## 72-hr Track Forecast

## 72-hr Intensity forecast



# Our Accuracy Continues to Improve

## NOAA Narrows the Cone of Uncertainty



□ 2005 Cone      ■ 2021 Cone

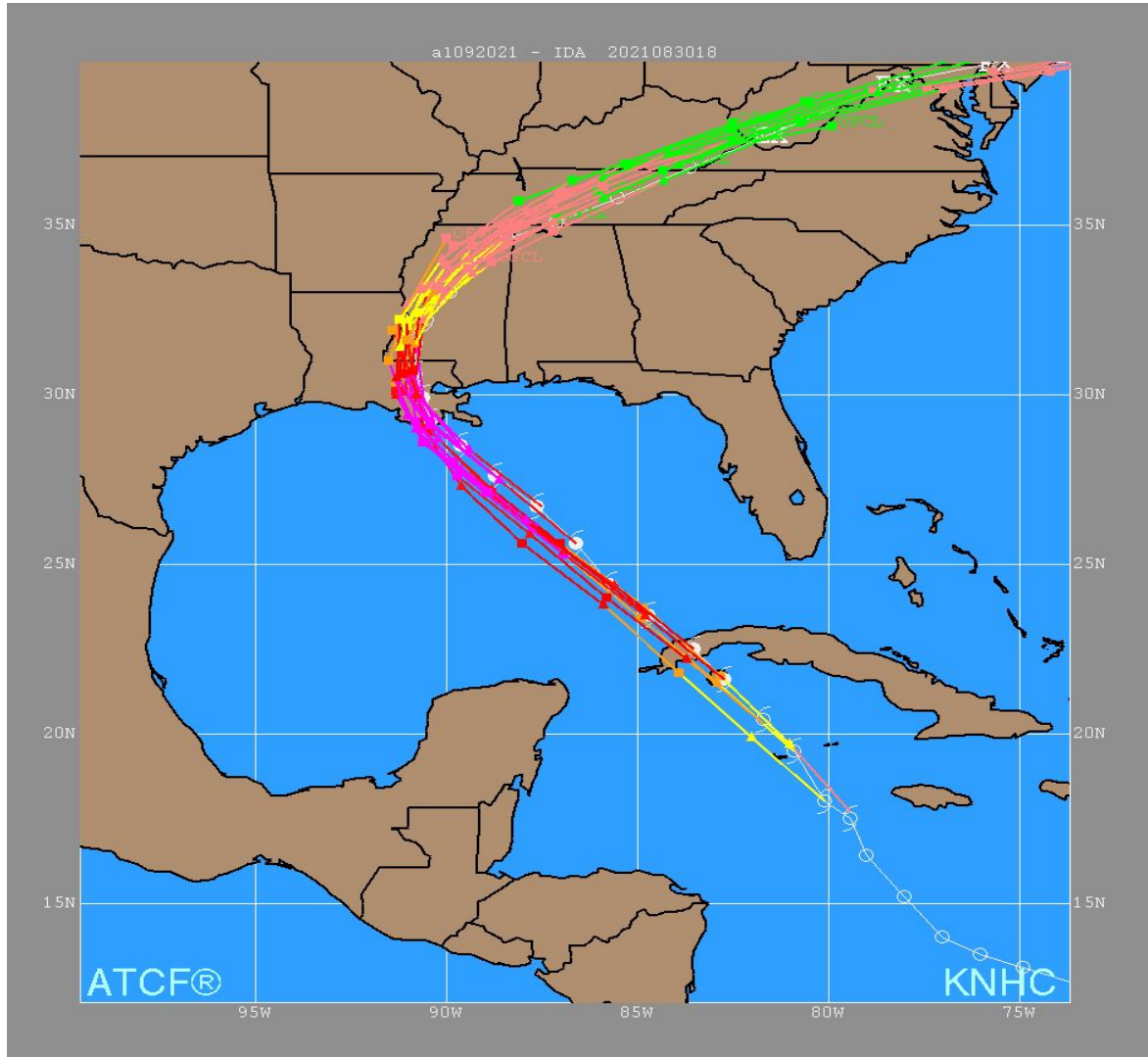




# Forecast Accuracy

## Hurricane Ida, 2021

From the first advisory, NHC track forecasts consistently showed Ida making landfall along the coast of southeastern Louisiana at or near major hurricane intensity



# Lessons & Successes

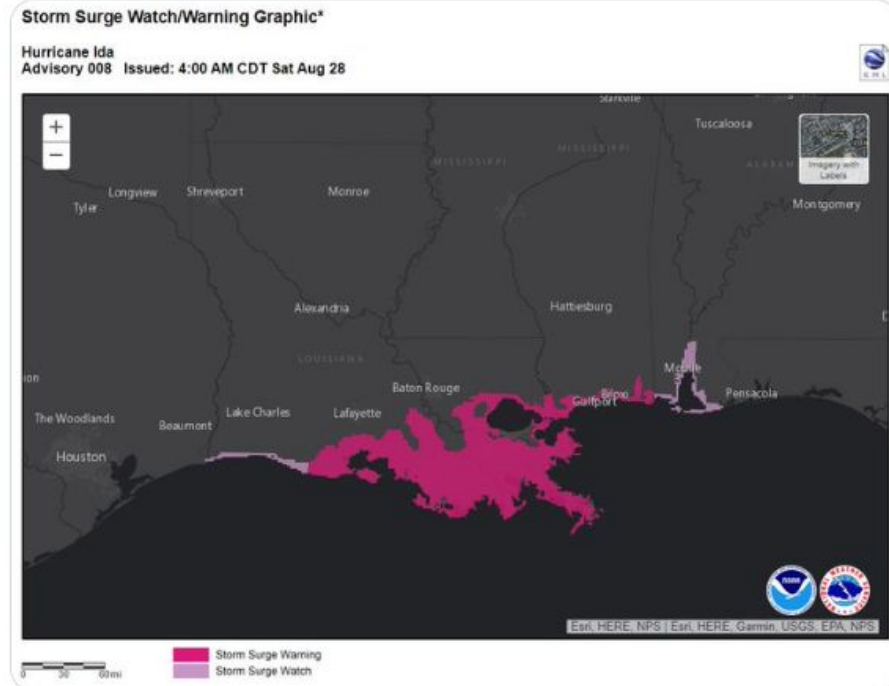
## #1: Communication - Words Matter

- From 1963-2012, we averaged 25 deaths/year from storm surge.
- Since 2017, there have been just 8 surge fatalities total, including 1 last year (Ida).
- In the last 5 years, we've lost more people to carbon monoxide poisoning after a storm than we have from storm surge.
- Last year saw a continued large number of indirect fatalities (such as carbon dioxide, no A/C, cardiac arrest).



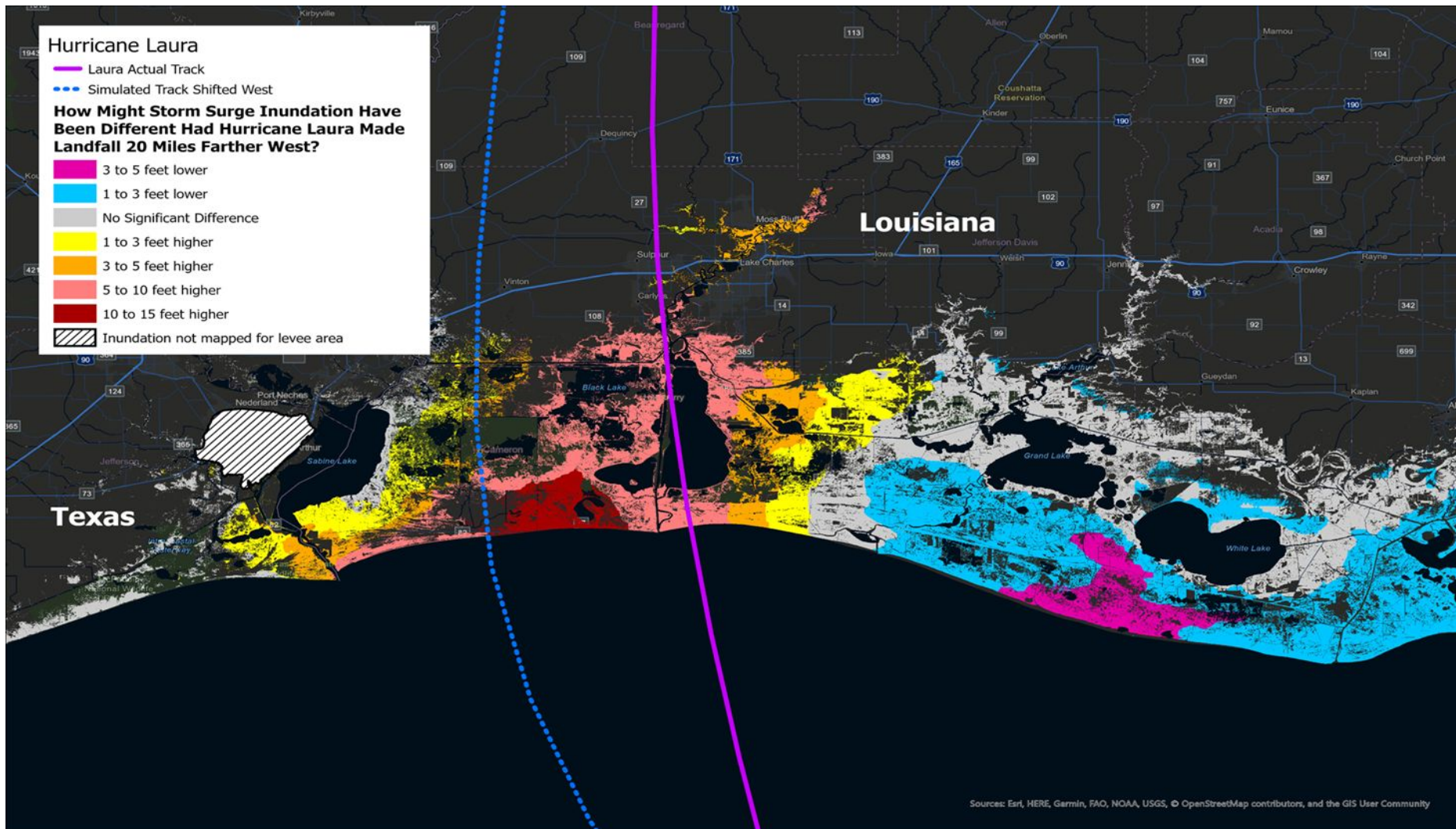
National Hurricane Center ✓  
@NHC\_Atlantic

There is a danger of life-threatening storm surge inundation along much of the Louisiana coast and the coast of Mississippi where a Storm Surge Warning is in effect. Residents in these areas should follow any advice given by local officials [#Ida](#) [hurricanes.gov](#)



# Lessons & Successes

## #2: Little Wiggles Matter

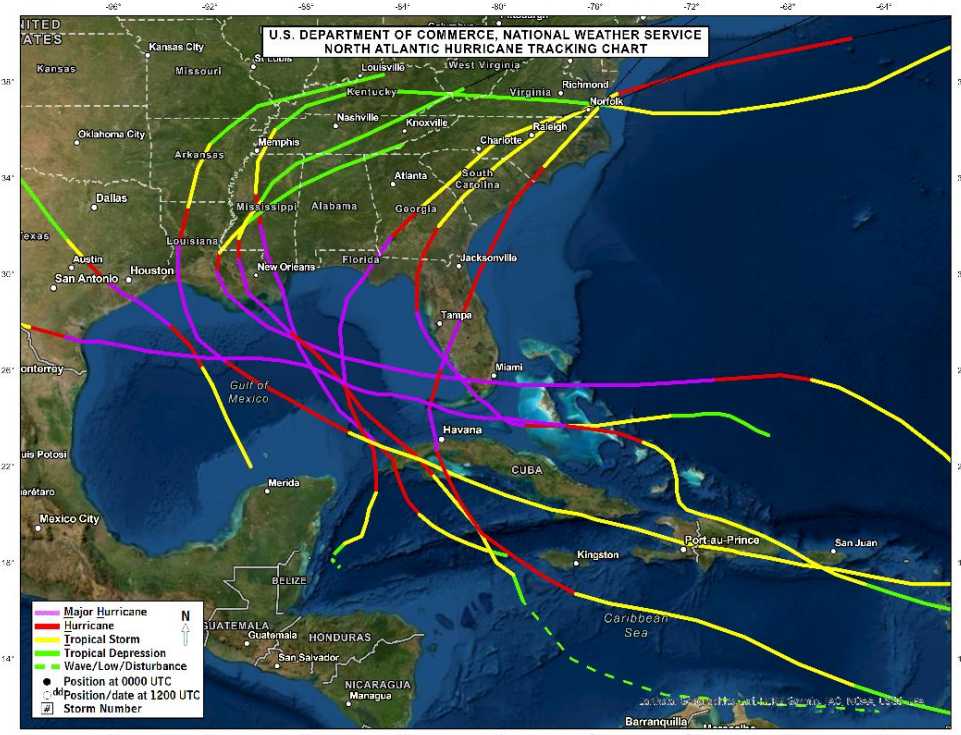




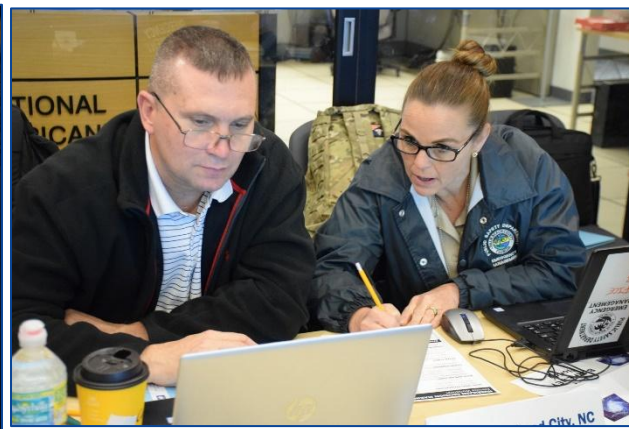
# Lessons & Successes

## #3: Hurricanes Don't Care About Your Timelines

- We teach and train Emergency Managers (~2000 since 1990/~70 per year) and NWS and international meteorologists through the World Meteorological Organization at NHC.
- Mixture of virtual and in-person training for 2022
- One of the key lessons is that we should all be ready to do several days' worth of planning in two, because Mother Nature doesn't wait.



The Nation's Strongest –  
150 MPH or Greater  
All But 1 Were Tropical Storms 3  
Days Before Landfall



# Outline



2021 in  
Review

New in  
2022

2022  
Outlook

Partner  
Prep:  
**FEMA**

Partner  
Prep:  
**ARC**

# Storm Surge Prediction Improved for 2022

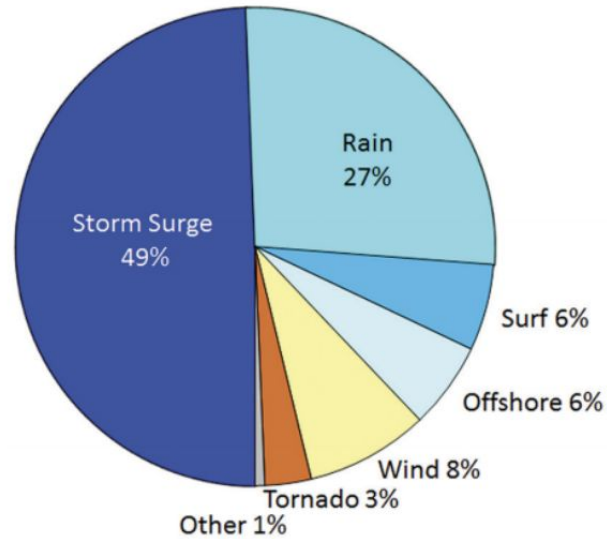
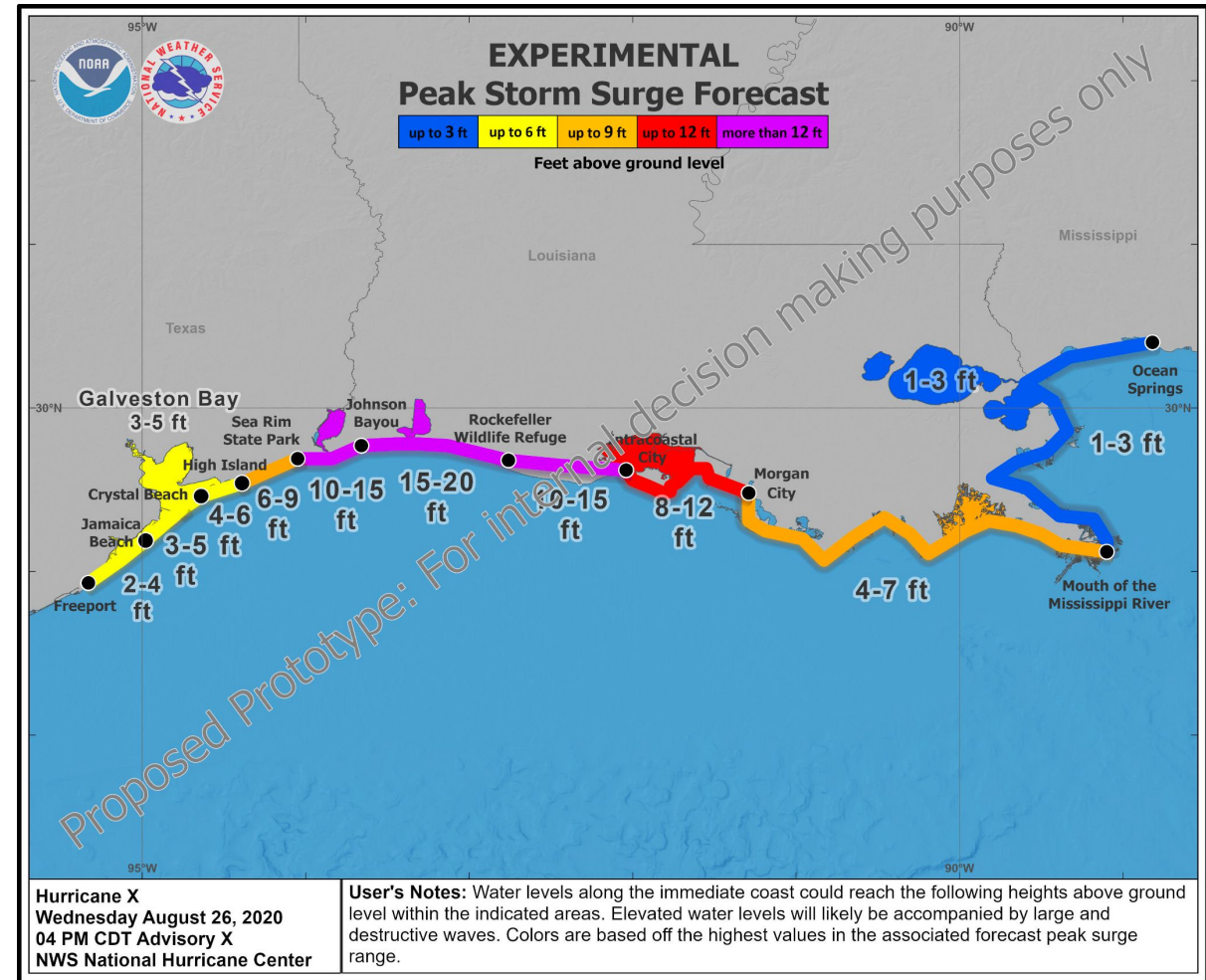


Figure 2. Causes of death in the United States directly attributable to Atlantic tropical cyclones, 1963-2012 (Rappaport 2014).





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# NOAA's 2022 Hurricane Season Outlooks

All ranges of activity are given with a 70% probability.



**Central Pacific**  
 Below-Normal Season  
 2-4 Tropical Cyclones  
 Average is 4-5 TCs

**Eastern Pacific**  
 Below-Normal Season  
 10-17 Named Storms  
 4-8 Hurricanes  
 0-3 Major Hurricanes  
 45%-100% Median ACE  
 Averages are 15 NS, 8 H, 4 MH

**Atlantic**  
 Above-Normal Season Likely  
 14-21 Named Storms  
 6-10 Hurricanes  
 3-6 Major Hurricanes  
 115%-200% Median ACE  
 Averages are 14 NS, 7 H, 3 MH

	Atlantic	Eastern Pacific	Central Pacific
Above Normal	65%	10%	10%
Near Normal	25%	30%	30%
Below Normal	10%	60%	60%

These outlooks are for the overall seasonal activity.  
 They are not a hurricane landfall forecast.

# NOAA 2021 Atlantic Hurricane Season Outlook Verification

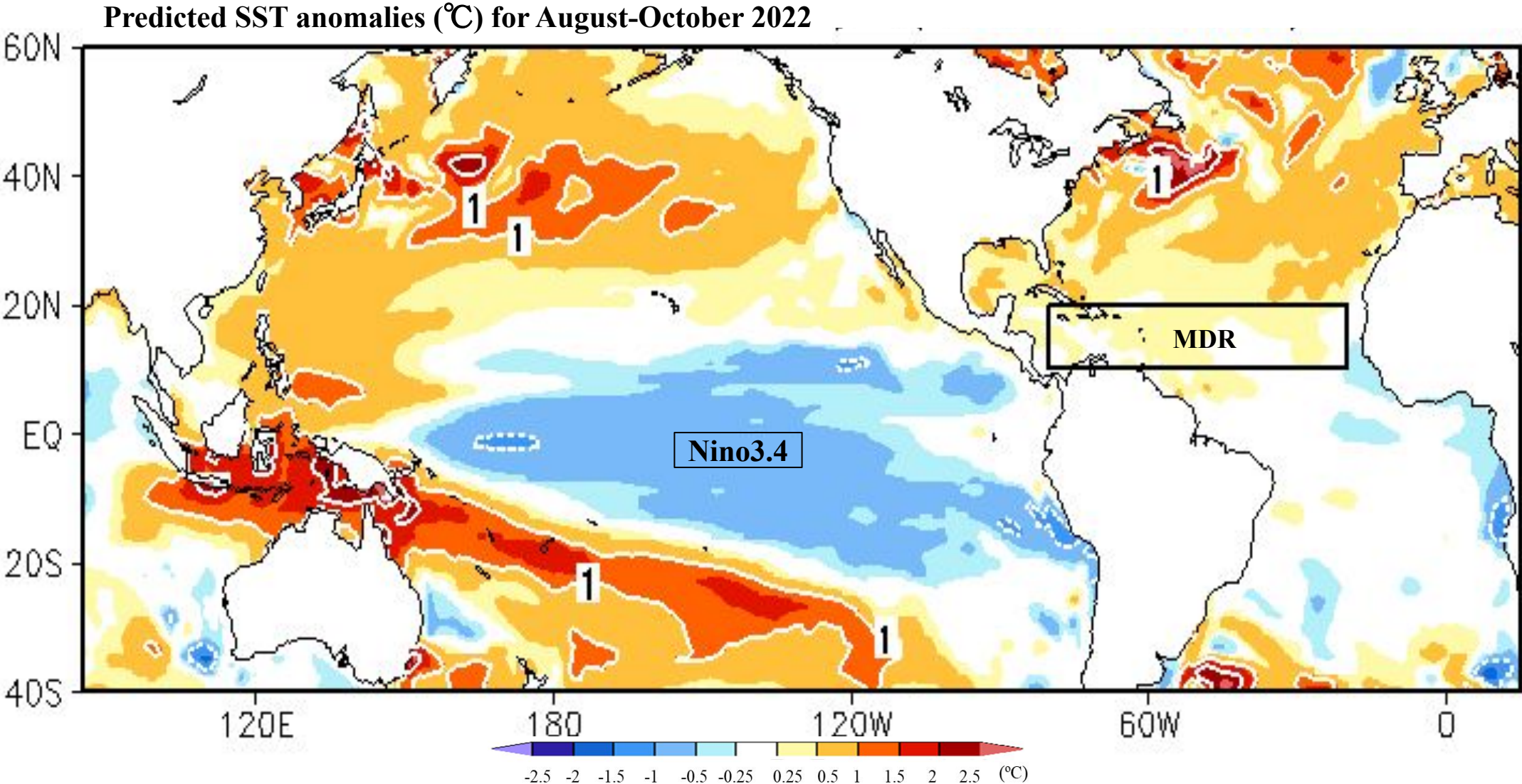
Season Activity and Type	May 2022	May 2021	Actual Observed
Chance Above Normal	65%	60% ✓	Above Normal
Chance Near Normal	25%	30%	
Chance Below Normal	10%	10%	
Total Named Storms	14 - 21	13 - 19	21
Hurricanes	6 - 10	6 - 10 ✓	7
Major Hurricanes	3 - 6	3 - 6 ✓	4
ACE - Accumulated Cyclone Energy (% Median)	110% - 190%	110% - 190% ✓	148

Percent Correct Forecast

May - Since 2008					August - Since 2008				
NS	H	MH	ACE	All	NS	H	MH	ACE	All
64%	64%	79%	50%	64%	64%	64%	71%	64%	66%



# Predicted Sea Surface Temperature (SST) Anomalies



# Expected Atlantic Conditions During August – October 2022

High-activity era conditions (warm phase of AMO)  
and La Niña

Above-average SSTs  
Near- or weaker-than-average vertical wind shear  
Weaker easterly trade winds

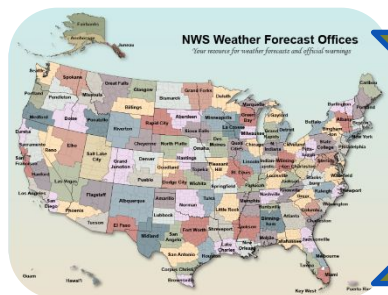
Stronger, wetter  
West African  
monsoon

**Atlantic Main Development Region**



# Ways to Stay Informed & Help Your Constituents

- Follow your local [NWS office](https://www.weather.gov) (weather.gov) and NHC (hurricanes.gov) on [social media](https://www.weather.gov/socialmedia) (weather.gov/socialmedia), and share relevant content
- Model safe behavior, follow guidance from local authorities (i.e., don't travel when not recommended)
- Do you have a [NOAA Weather Radio](https://www.weather.gov/NWR)? (weather.gov/NWR)
- Become a [Weather Ready Nation Ambassador](https://www.weather.gov/WRN) (weather.gov/WRN)
- Are you on our congressional email list? Get localized significant weather event information (email: [matthew.borgia@noaa.gov](mailto:matthew.borgia@noaa.gov))



Follow Your  
Forecast  
Office



Have multiple  
sources of  
info! NOAA  
Weather Radio





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# 2022 Hurricane Season

Congressional Briefing | May 25, 2022



**FEMA**

# We Are Ready



**28** Urban Search and Rescue Teams  
**7,800** Surge Capacity Force Rostered  
**13,800** Overall Incident Management



**95,000** people have received **\$350M** dollars in Individual Assistance and **2,700** survivors received Direct Housing assistance due to policy changes



**4** National IMATs  
**13** Regional IMATs  
**55** Federal Coordinating Officers



**26M+**  
Liters of Water



**23M**  
Meals (apx.)



**825**  
Generators



**1M**  
Blankets (apx.)



**74K+**  
Cots



# FEMA's Posture

- **Home Inspections**

- Transitioning back to in-person inspections.
- Will continue to support remote/virtual inspections upon request/when appropriate based on COVID concerns

- **Emergency Sheltering**

- Most states will return to congregate sheltering.
- FEMA will continue to support non-congregate options (e.g., hotels, motels.)
- Pandemic shelter kits restocked and ready to go



**FEMA**

# Overview of Updated Policies – Equity in Disaster Recovery

- **Expanded Ownership/Occupancy Documentation**
- **Revised threshold for Direct Housing eligibility**
- **Worked with SBA to increase the income level for loan referral prior to receiving FEMA assistance**

- For *ownership*, more than 42,000 survivors received an additional \$202.0M in assistance.
- For *occupancy*, nearly 54,000 survivors received an additional \$142.2M in assistance.
- Led to more than 2,740 lower income applicants that were eligible for direct housing.
- More than 86,000 survivors received \$129.7M in assistance.
- Nearly 70,000 survivors received more than \$23M in assistance.
- More than 19,000 survivors received \$32M that previously would have been referred to SBA.



# FEMA's Improved Communications: Updated Text-to-Shelter Feature & App

- **Text-to Shelter Feature**

- ◻ Users can now text “shelter” and their ZIP code to 43362 to look up the three closest open shelters within 200 miles.
- ◻ Users can also text “DRC” and their ZIP code to 43362 to get a list of nearby Disaster Recovery Centers.
- ◻ Feature works in all 50 states and U.S. territories.

- The **FEMA App** is being updated with a new look and new features that allow users to personalize their experience.

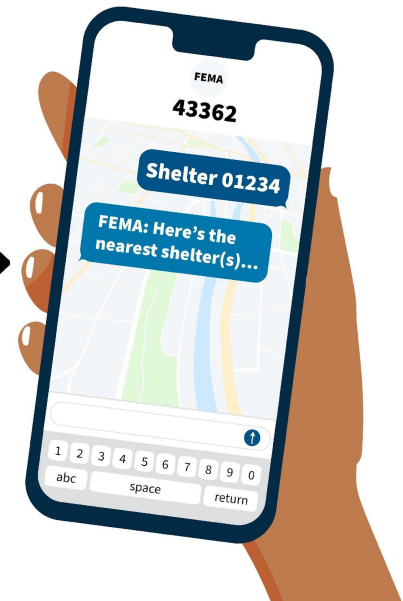


**FEMA**

**SEARCH FOR  
SHELTERS  
NEAR YOU**

**Text  
SHELTER  
and your  
ZIP CODE  
to 43362**

Example: Shelter 01234





# The Time to Prepare is Now

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- Hurricane season is just days away. There are actions your constituents can take today to prepare themselves, their families, and their pets
  - Visit [Ready.gov/hurricanes](https://www.Ready.gov/hurricanes) and make an emergency plan
  - Sign up for emergency alerts and warnings
    - Download the FEMA App
  - Review insurance policies
  - Know your evacuation zone and follow the instructions of local officials



Take advantage of the toolkit at [www.Ready.gov/fema-app-toolkit](https://www.Ready.gov/fema-app-toolkit) to share information with your constituents, using your social media accounts



**FEMA**



FEMA

*Helping People Before, During, and After Disasters.*

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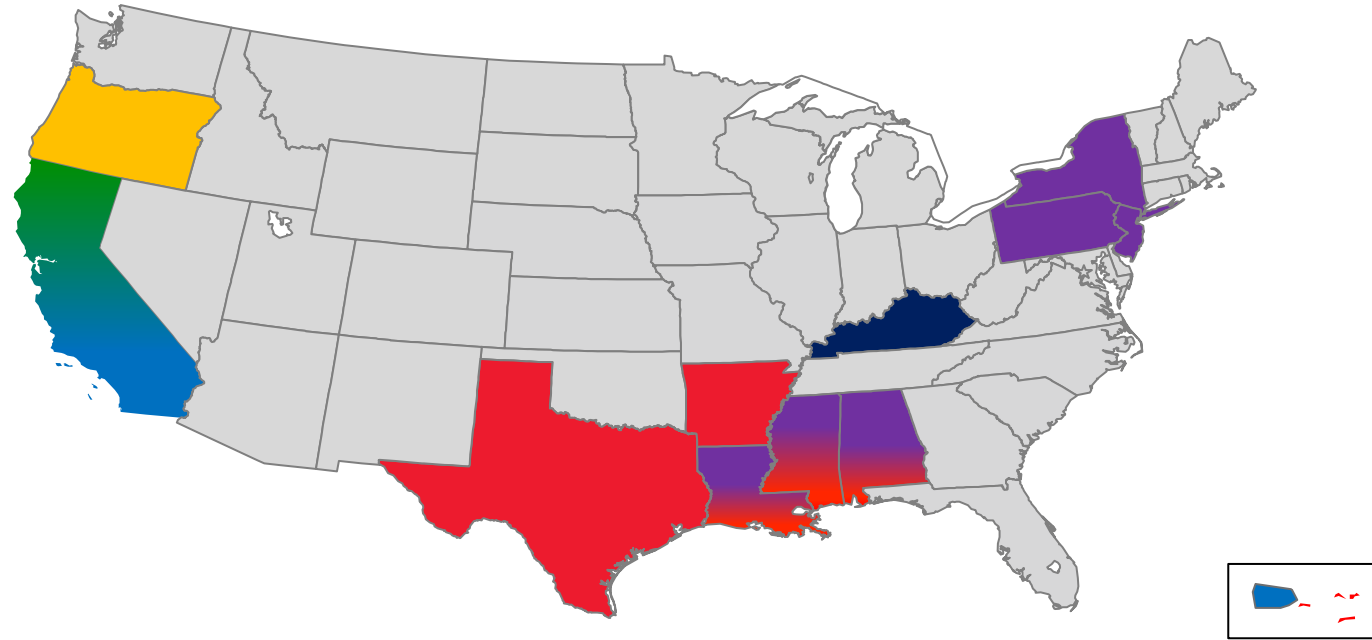
7

Disaster Cycle Services

# 2022 Hurricane Season Readiness Update

Mission Ready

# 2020 and 2021: We Were Ready



	August 2020	Sept. 2020	Sept. 2020	August 2020	Fall 2021	December 2021
	<b>Hurricane Laura (TX, LA, AL, MS, AR)</b>	<b>California Forest Fires</b>	<b>Oregon Forest Fires</b>	<b>Hurricane Ida (LA, AL, MS, PA, NJ, NY)</b>	<b>California Forest Fires</b>	<b>Kentucky Tornadoes</b>
<b>Disaster Responders</b>	3,875	3,822	3713	3,335	1,101	834
<b>Client Overnight Shelter Stays</b>	922,413	245,232	173,489	43,780	18,314	17,914

# 2022: We Are Ready

- **Over 38,000 affiliated volunteers and over 17,000 volunteers ready to deploy nationwide**
  - Encourage volunteerism now before disaster fatigue sets in later in the season
- **Prioritizing sheltering & care for socially vulnerable displaced populations**
  - Congregate shelters likely to be primary mode of sheltering
  - Masks required in all Red Cross shelters
  - Shelters as a “hub” for community services and information-as-a-service
  - Lack of affordable housing will continue to be our biggest challenge to transitioning shelter residents
- **Presence is a mission** – mobile mass care services in communities

- Pre-positioning
- Feeding
- Distribution of emergency supplies

- Disaster Health, Mental Health, and Spiritual Care
- Information-as-a-service

- Red Cross may provide several forms of **financial assistance**
  - Damage-based
  - Shelter resident transition
  - Health & mental health needs
  - Fatality assistance
  - “Bridge” assistance







**THANK YOU FOR YOUR TIME AND INTEREST**

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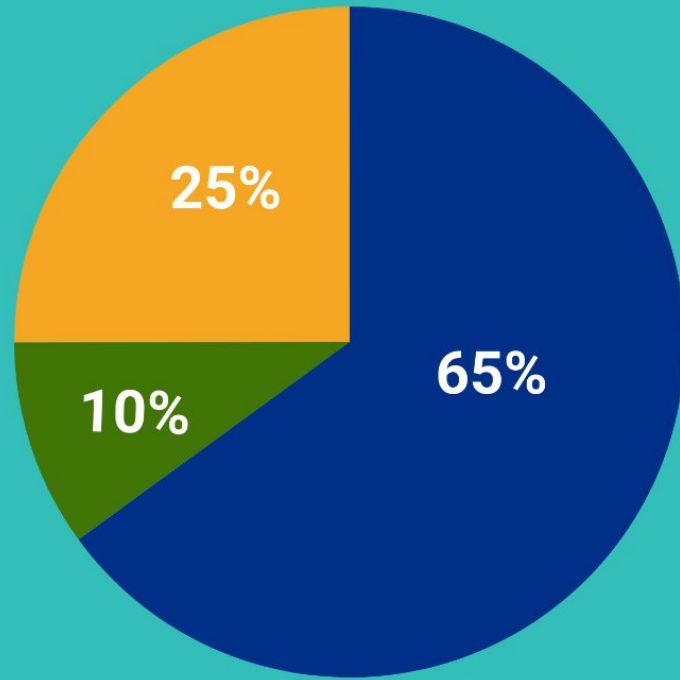
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# 2022 Atlantic Hurricane Season Outlook



■ Above-normal ■ Near-normal ■ Below-normal season

Season probability

Named storms  
14-21

Hurricanes  
6-10

Major hurricanes  
3-6

NOAA

Be prepared: Visit [hurricanes.gov](https://hurricanes.gov) and follow @NWS and @NHC\_Atlantic on Twitter.

May 2022

