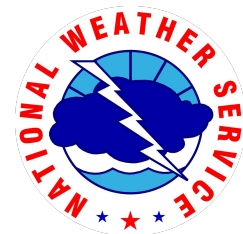




NOAA's National Weather Service

Stephen Konarik - National Hurricane Center
John Schmidt - Southeast River Forecast Center
Emily Carpenter - Columbia, SC WFO

SECART All-Hazards Workshop
May 20, 2024
Jacksonville, FL





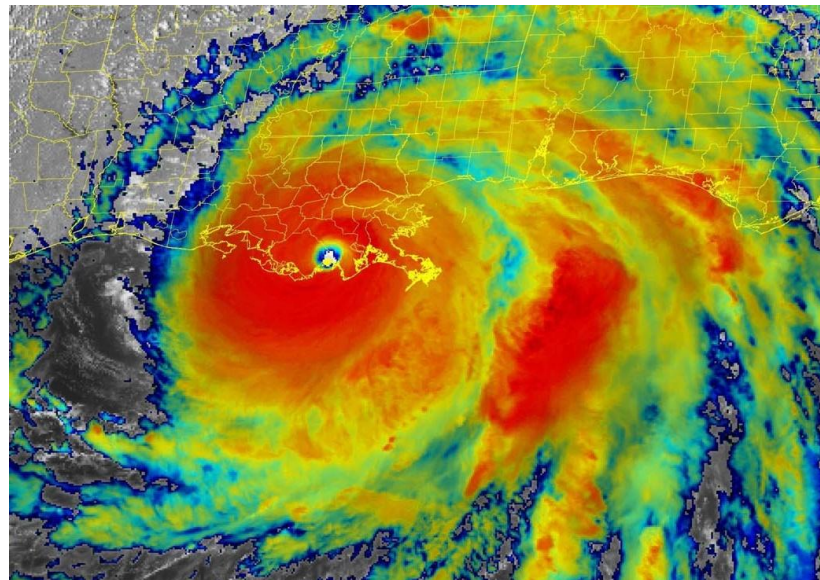
National Hurricane Center



National Hurricane Center

Our Mission

To save lives, mitigate property loss, and improve economic efficiency by issuing the best watches, warnings, forecasts and analyses of hazardous tropical weather, and by increasing understanding of these hazards.





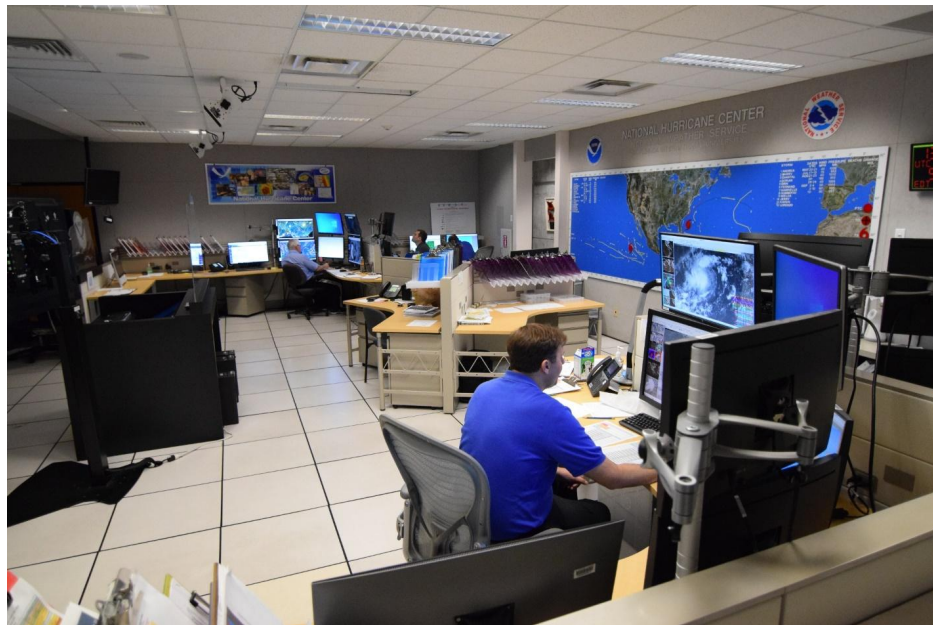
National Hurricane Center *Organization*

- Tropical Analysis and Forecast Branch (TAFB)
- Hurricane Specialist Unit (HSU)
- Technology and Science Branch (TSB)
 - Storm Surge Unit
- The Chief, Aerial Reconnaissance Coordination, All Hurricanes (CARCAH)
- Hurricane Liaison Team (HLT/FEMA)



Hurricane Specialist Unit

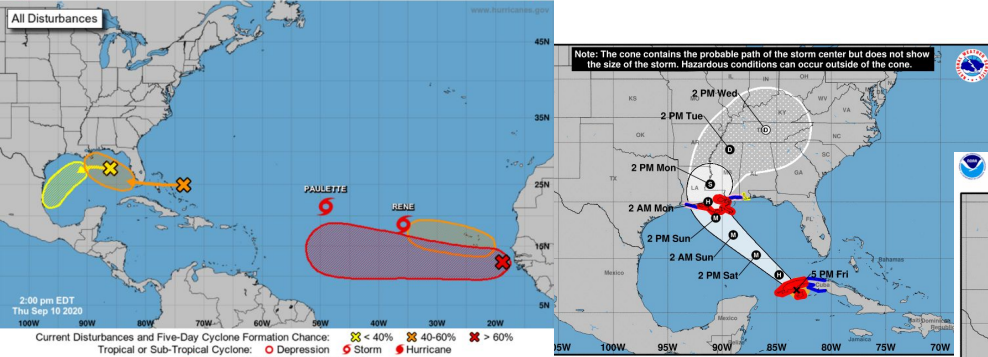
Tropical Cyclone Forecasts





Hurricane Specialist Unit Tropical Cyclone Forecasts

Five-Day Graphical Tropical Weather Outlook
National Hurricane Center Miami, Florida



2:00 pm EDT
Thu Sep 10 2020

Current Disturbances and Five-Day Cyclone Formation Chance:
 Tropical or Sub-Tropical Cyclone:
 Post-Tropical Cyclone or Remnants

Ida
Friday August 27, 2021
5 PM EDT Advisory 6
NWS National Hurricane Center

Current information:
Center location: 22.1 N 83.2 W
Maximum sustained wind: 80 mph
Movement: NW at 15 mph

Forecast positions:
Tropical Cyclone
Sustained winds: D < 39 mph
S 39-73 mph H 74-110 mph M >

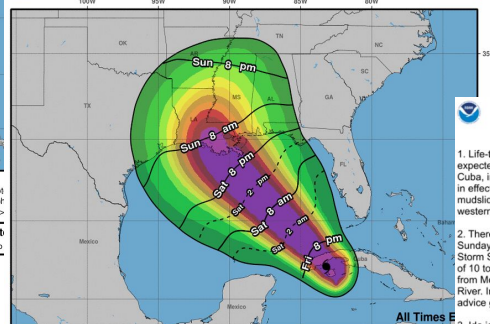
Potential track area:
Day 1-3
Day 4-5

Watches:
Hurricane
Trop Stm

Warnings:
Hurricane
Trop Stm
Hurricane
Trop

Current wind ext

Earliest Reasonable Arrival Time of Tropical-Storm-Force Winds



Hurricane Ida
Fri, Aug. 27, 2021 5 pm EDT
Advisory 6

Storm Location: 24 kt (29 mph)
34-43 kt (39-73 mph)
Wind Speed: 24 kt (29 mph)

5-day chance of receiving sustained 34-kt (39-mph) winds:
5 10 20 30 40 50 60 70 80 90

Key Messages for Hurricane Ida Advisory 6: 5:00 PM EDT Fri Aug 27, 2021

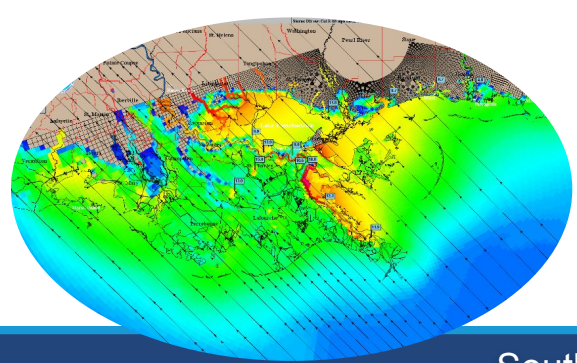
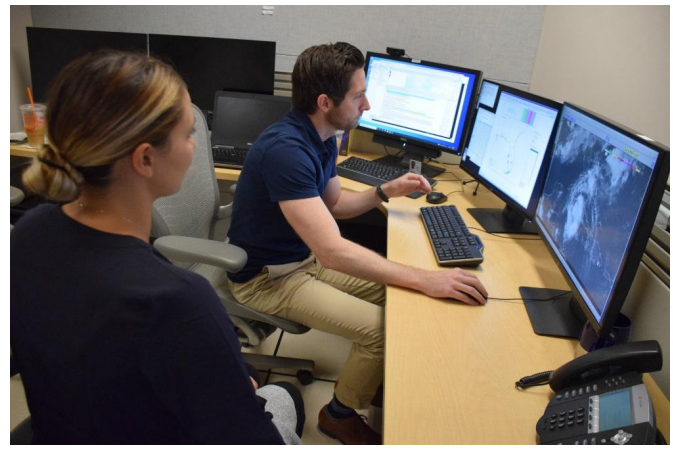
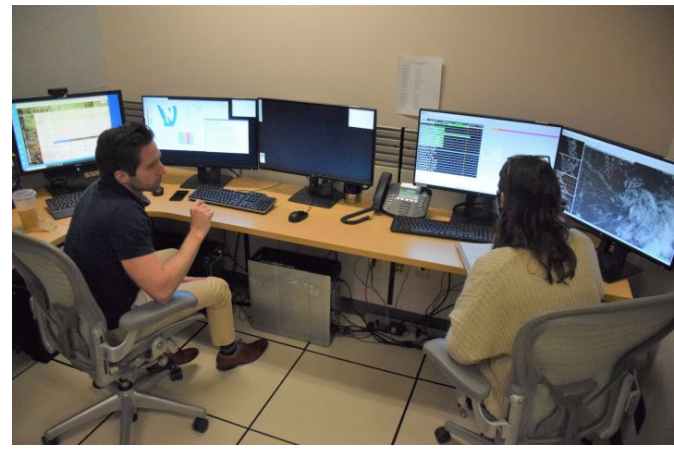
1. Life-threatening storm surge and hurricane conditions are expected to continue through tonight in portions of western Cuba, including the Isle of Youth, where a Hurricane Warning is in effect. Life-threatening heavy rains, flash flooding and mudslides are expected across Jamaica, the Cayman Islands, and western Cuba, including the Isle of Youth.
2. There is a danger of life-threatening storm surge inundation Sunday along the coasts of Louisiana and Mississippi within the Storm Surge Warning area. Extremely life-threatening inundation of 10 to 15 feet above ground level is possible within the area from Morgan City, Louisiana, to the Mouth of the Mississippi River. Interests throughout the warning area should follow any advice given by local officials.
3. Ida is expected to be an extremely dangerous major hurricane when it reaches the coast of Louisiana. Hurricane-force winds are expected Sunday in portions of the Hurricane Warning area along the Louisiana coast, including metropolitan New Orleans, with potentially catastrophic wind damage possible where the core of Ida moves onshore. Actions to protect life and property should be rushed to completion in the warning area.
4. Ida is likely to produce heavy rainfall later Sunday into Monday across the central Gulf Coast from southeast Louisiana to coastal Mississippi and Alabama, resulting in considerable flash, urban, small stream, and riverine flooding impacts. As Ida moves inland, flooding impacts are possible across portions of the Lower Mississippi and Tennessee Valleys.



For more information go to hurricanes.gov



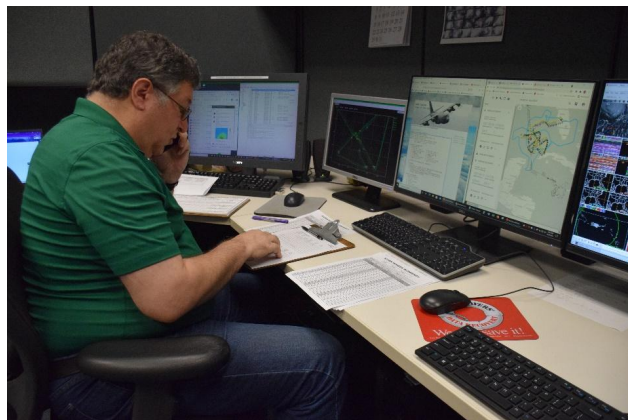
Storm Surge Unit





CARCAH

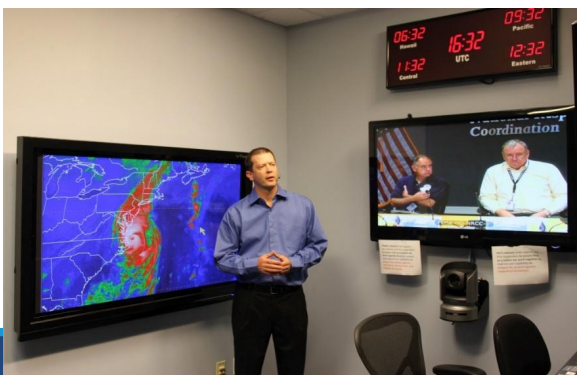
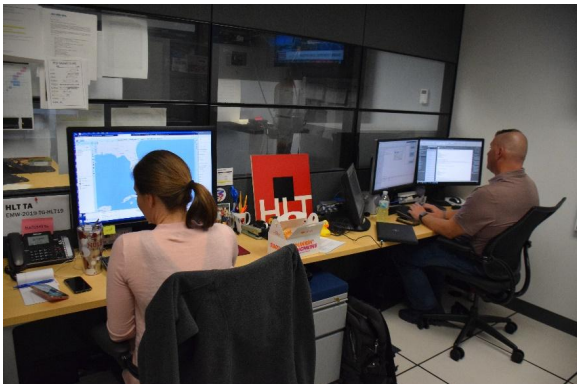
Operational Reconnaissance Coordination





FEMA Hurricane Liaison Team

Hurricane Response Operations Support





Tropical Analysis and Forecast Branch (TAFB)

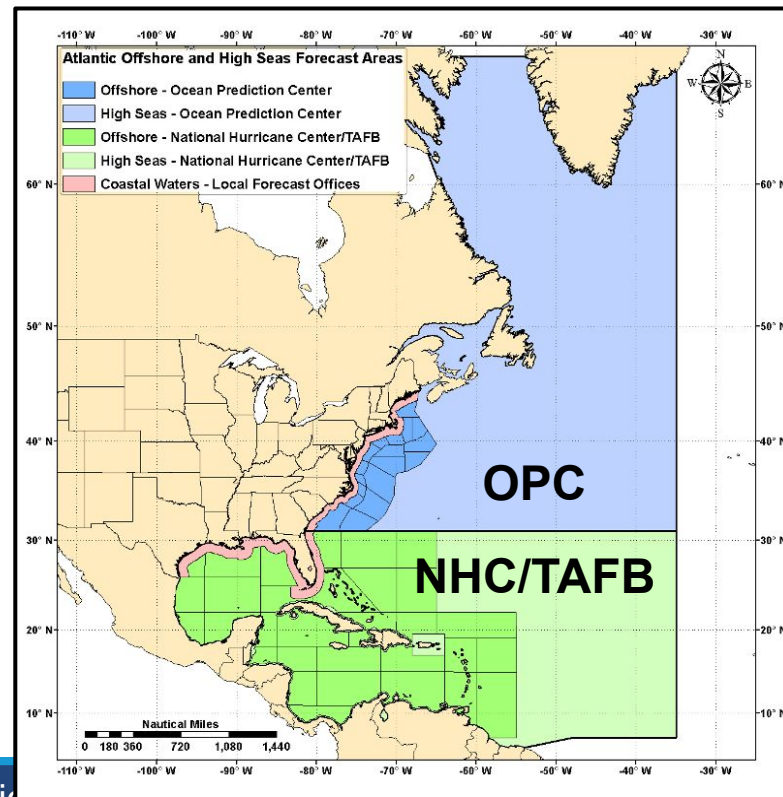
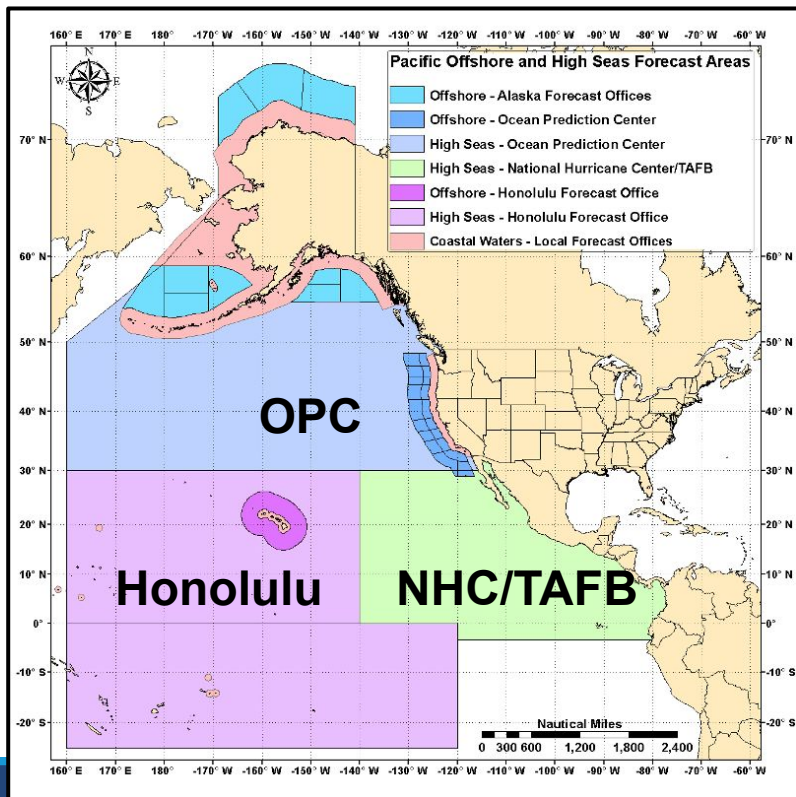
Marine Forecasts





Tropical Analysis and Forecast Branch (TAFB)

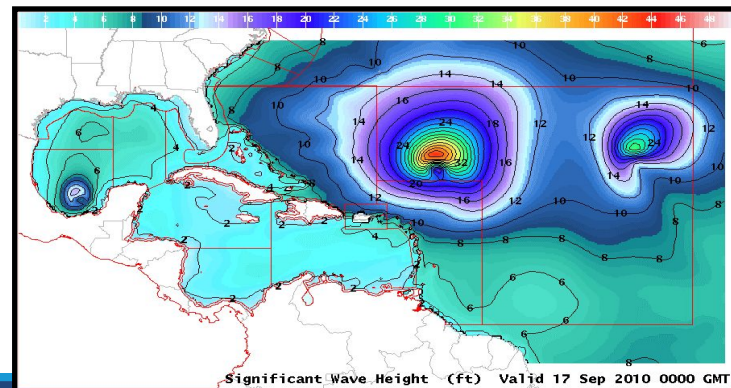
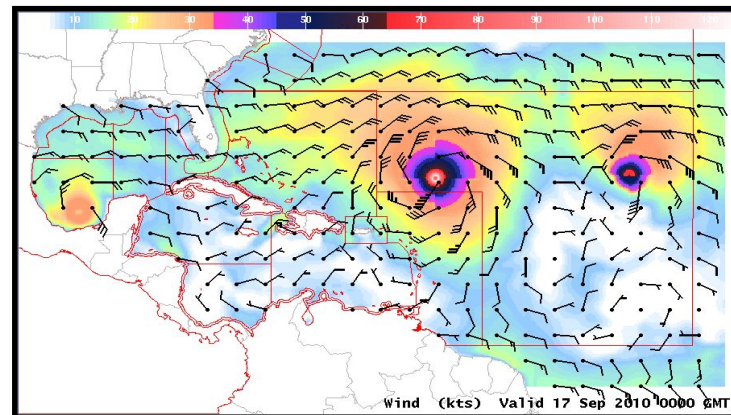
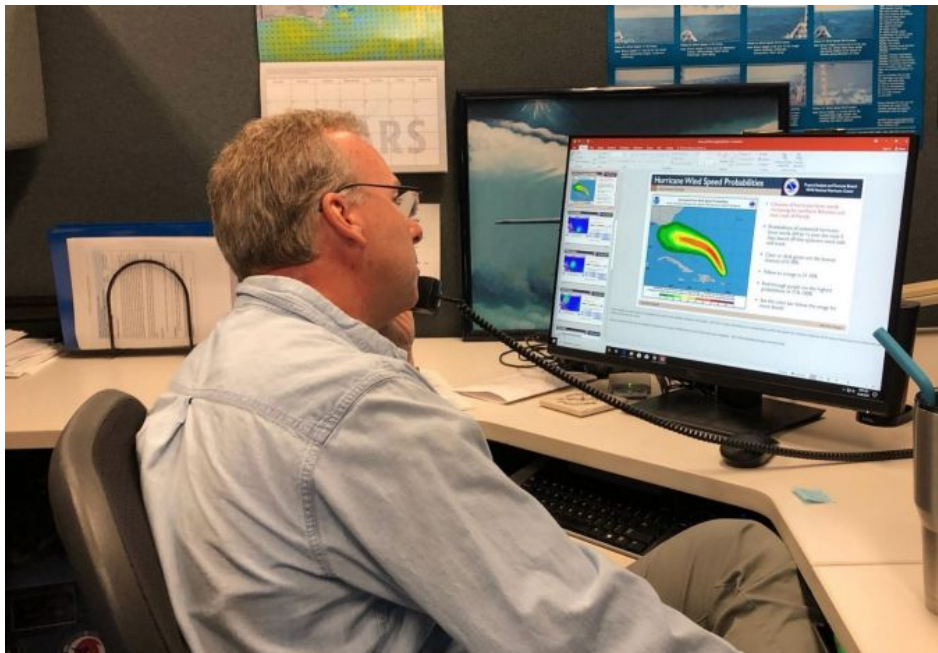
Marine Forecasts





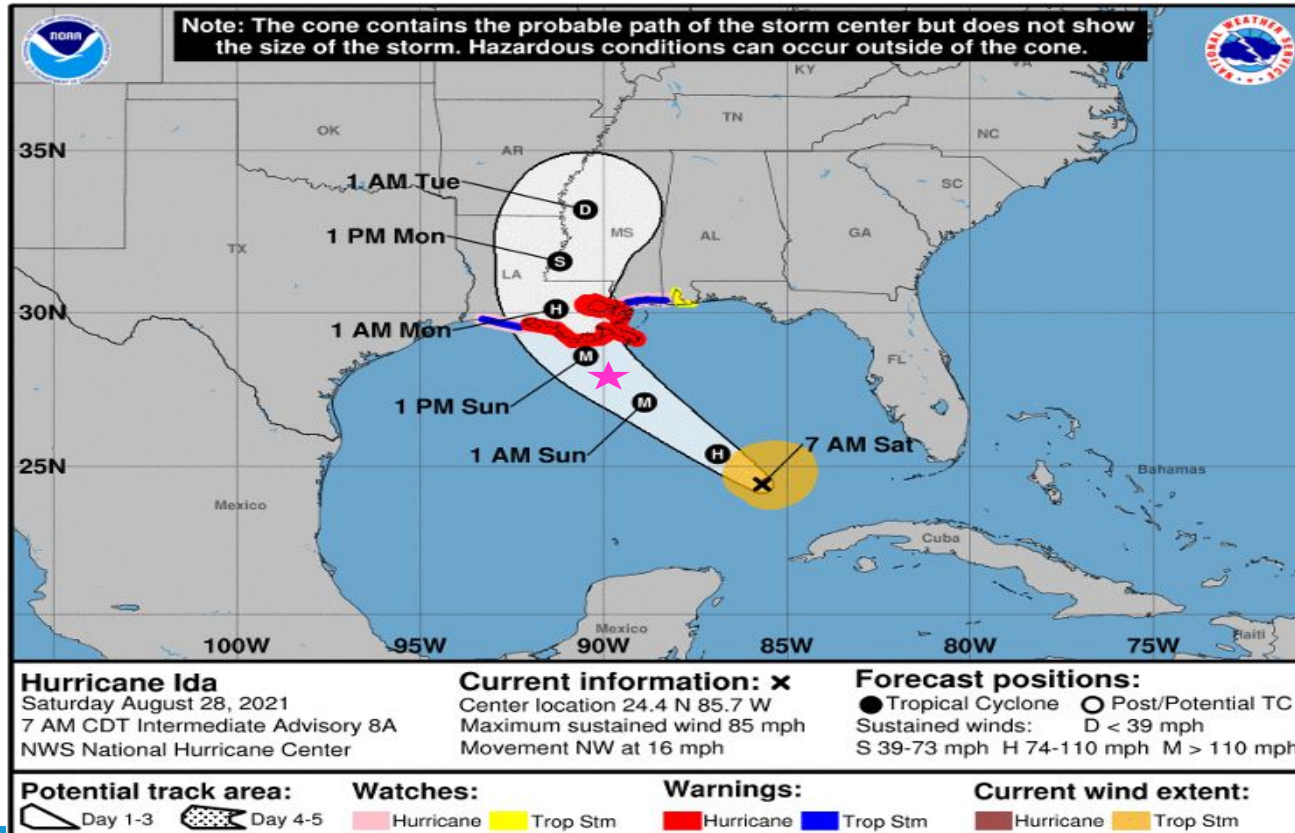
Tropical Analysis and Forecast Branch (TAFB)

Marine Forecasts



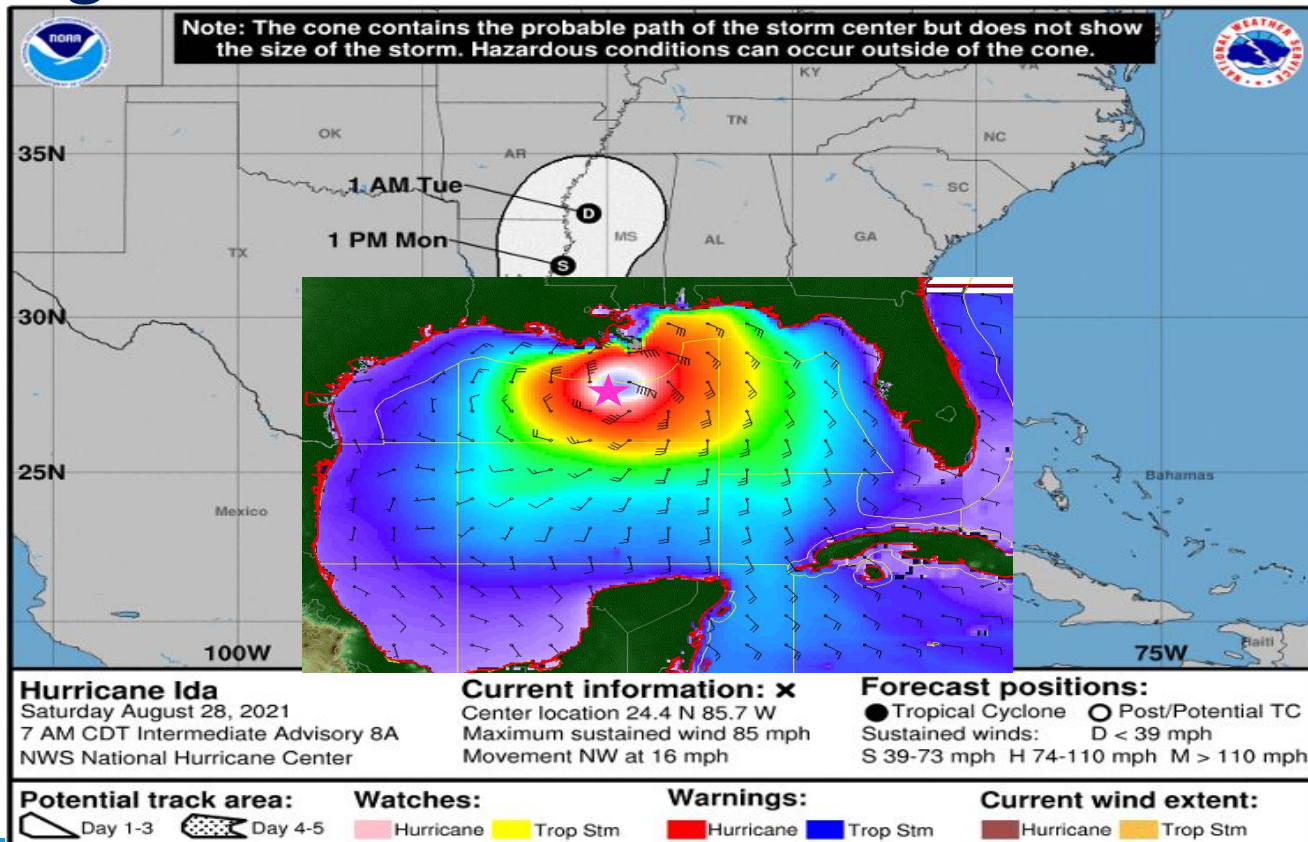


Using HSU Forecast to Make TAFB Marine Forecasts



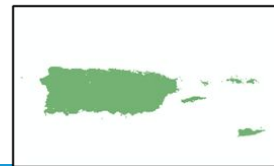
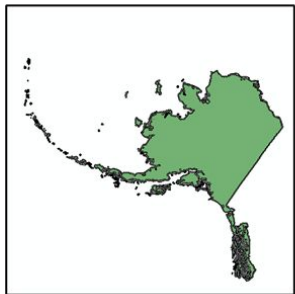


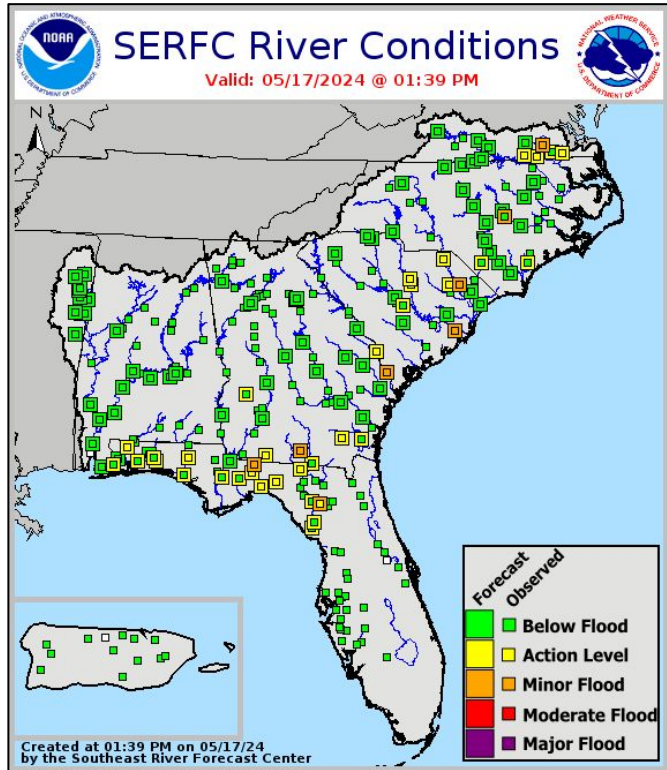
Using HSU Forecast to Make TAFB Marine Forecasts





Southeast River Forecast Center



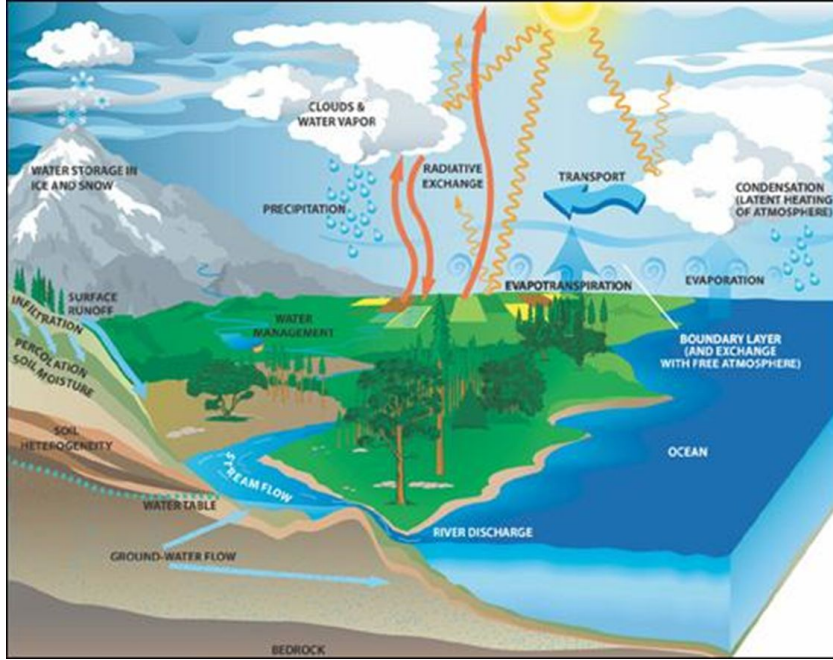


- We are a staff of 15 meteorologists, hydrologists, engineers, and geographers that develop tools and models to perform water forecast operations.
- We collaborate with federal, state, local, and private entities to accomplish this mission.



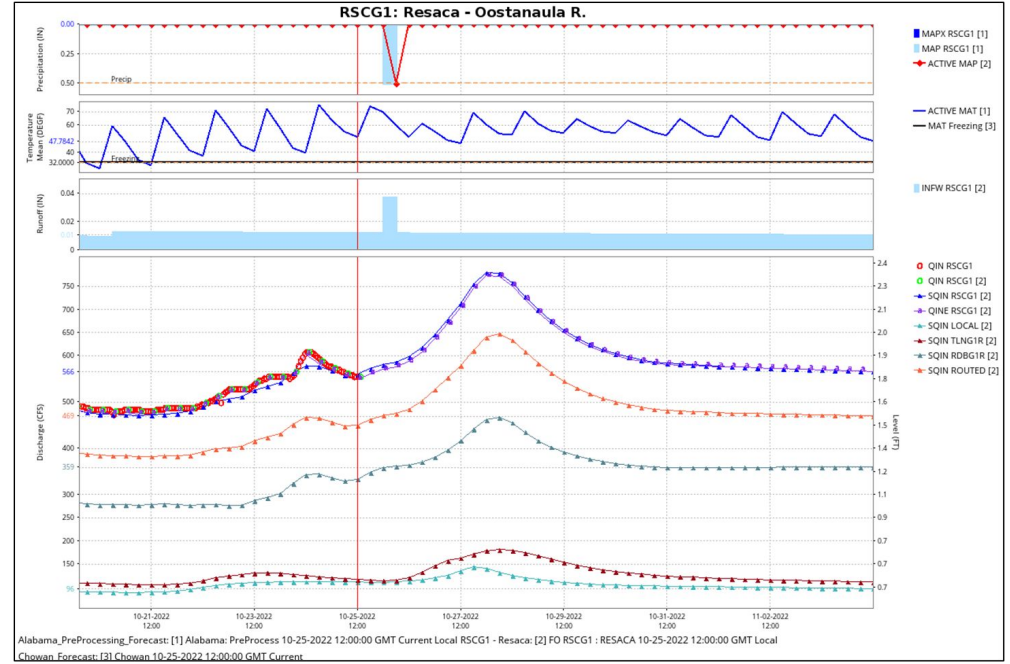
US Army Corps of Engineers®





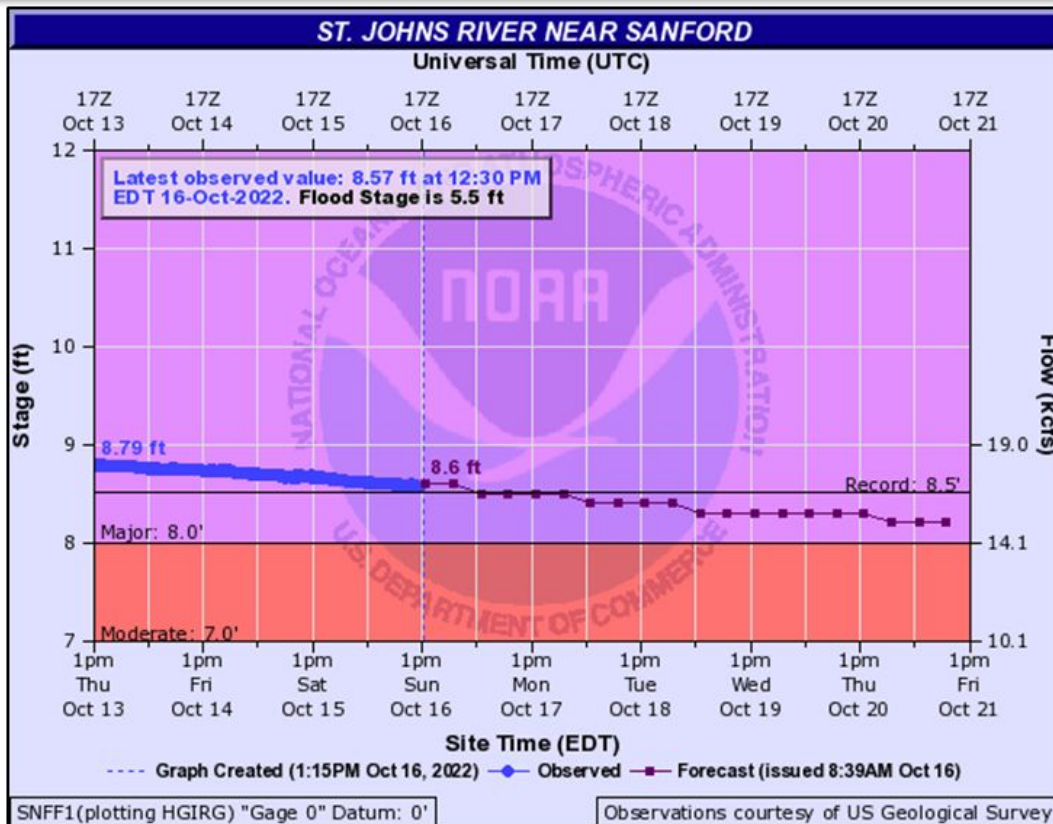
Observations and models of the hydrologic cycle allow for flood forecasting.

Forecasters interact with model information in the past to “calibrate” forecasts.



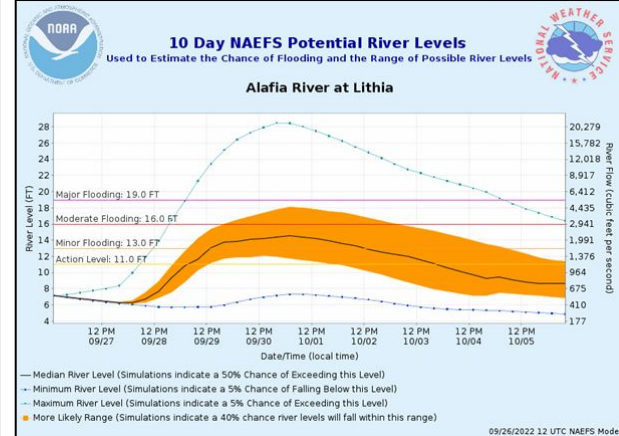
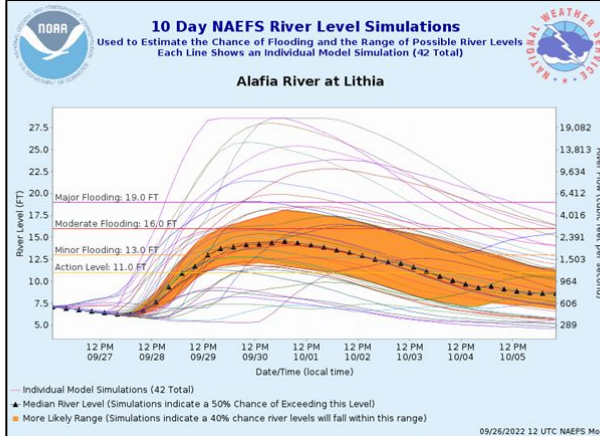
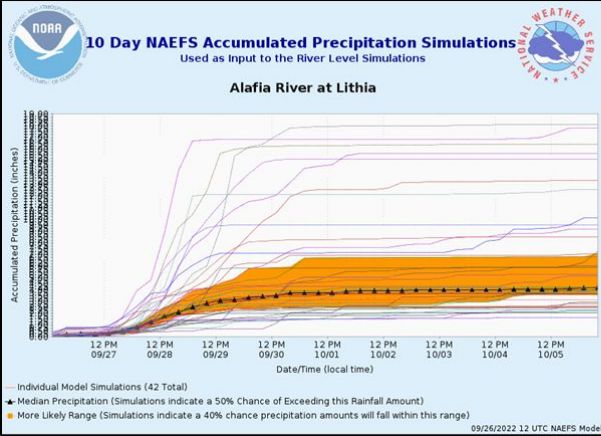
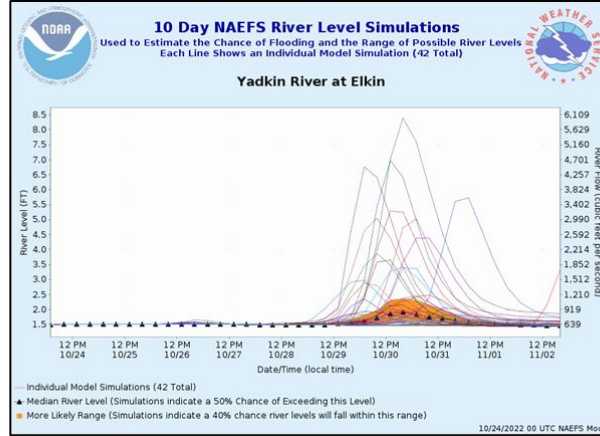
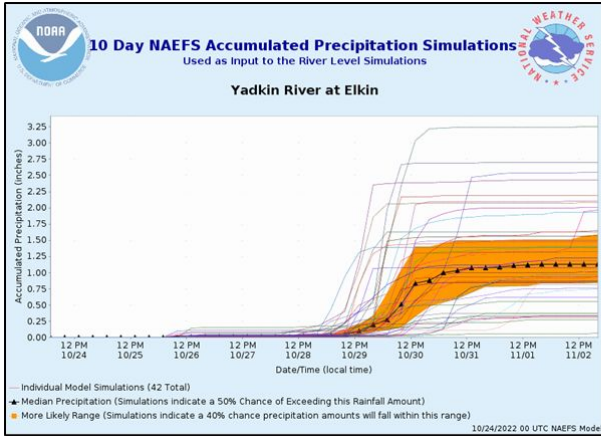


Traditional 5-day RFC Forecast



<https://www.weather.gov/serfc>

Describing Flood Threats Probabilistically





Communicating Flood Risk

Decision Support Briefing - Southeast River Forecast Center

Key Points

- Tropical Storm Ian is currently in the central Caribbean and is forecast to cross the Cayman Islands and western Cuba before turning NNE and impacting the Gulf Coast of Florida Thursday or Friday.
- Florida is very much still saturated from recent rains with many streams already in flood stage.
- Potential for moderate to major river flooding across much of Florida based on current guidance, though considerable uncertainty exists in Ian's forecast track at this point.

10/26/2022 3:19 PM

f NWSSERFC @NWSSERFC

Decision Support Briefing - Southeast River Forecast Center

Latest forecast from NHC

lan is forecast to quickly intensify into a major hurricane as it moves across the western Caribbean and approaches the Cayman Islands and Cuba. As land interaction will be minimal, it will likely still be a major hurricane as it approaches the Gulf Coast of Florida.

Quite a bit of track uncertainty still exists, largely due to uncertainties in the timing and depth of a trough expected to dig southward across the southeastern CONUS mid week. A deeper trough will result in a more eastward track, a shallower trough a more westward track.

Regardless, a significant wind, precipitation, and storm surge threat exists across essentially the entire Gulf Coast of Florida.

10/26/2022 3:19 PM

f NWSSERFC @NWSSERFC

Decision Support Briefing - Southeast River Forecast Center

River Flood Vulnerability - Past Precipitation Anomalies

One of the few regions in the Southeast that continues to have saturated soils is unfortunately the central part of the Florida peninsula—precisely the region at high risk for impacts from T.S. Ian.

10/26/2022 3:19 PM

f NWSSERFC @NWSSERFC

Decision Support Briefing - Southeast River Forecast Center

River Flood Vulnerability - Current Streamflow and Flooding

14-Day Average Streamflow compared to normal

Streamflows remain normal to well above normal in many of the streamflows of the eastern Gulf Coast states. In Central Florida, river flooding is ongoing. Tropical impacts will only make the problem worse, likely sending many river gages into moderate or major flooding.

10/26/2022 3:19 PM

f NWSSERFC @NWSSERFC

Decision Support Briefing - Southeast River Forecast Center

7-Day Precipitation Forecast

Here is the latest 7-Day expected rainfall from the NWS Weather Prediction Center. There still is much uncertainty with the track of Tropical Storm Ian and so there is much uncertainty with these rainfall forecasts.

10/26/2022 3:19 PM

f NWSSERFC @NWSSERFC

Decision Support Briefing - Southeast River Forecast Center

River Flood Potential this week

7-Day River Flood Potential

- Minor to Moderate
- Moderate to Major

There is a large area of river flood threat at this time since the track of Ian remains uncertain. At this time, there is a wide area where rainfall could cause river flooding over the next 7 days. Nearly all of the Southeast has some threat of river flooding at this time. However, the area with the greatest vulnerability is the Florida Peninsula, especially West-Central Florida, where there is a risk for widespread moderate to major river flooding in that area if the current rainfall forecast verifies.

10/26/2022 3:19 PM

f NWSSERFC @NWSSERFC

Are you on our flood briefing mailing list? (todd.hamill@noaa.gov)



NWS Flood Inundation Mapping Services

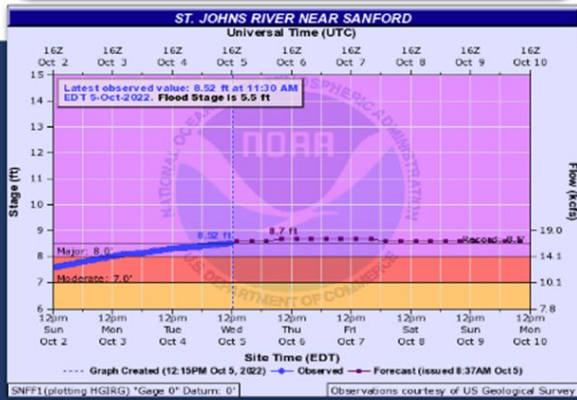
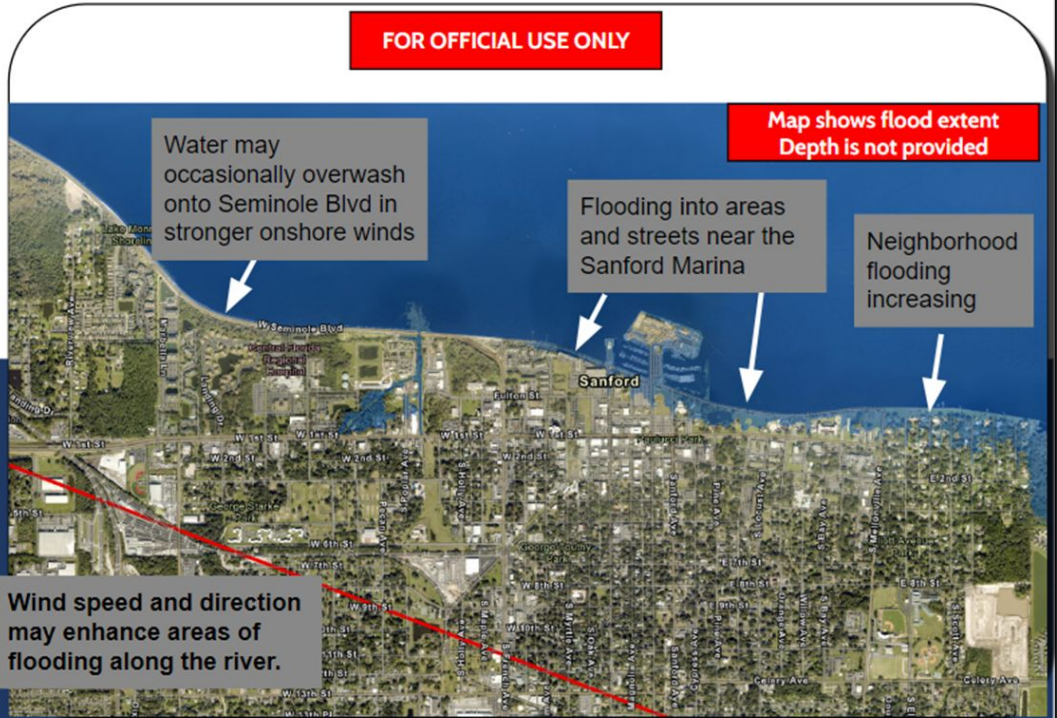
Disclaimer: This map shows the flood extent based on a river crest of 9.0 feet. This is an approximate-based FIM which should be used more conservatively.

St Johns River at Sanford (SNFF1)

Forecast Crest Height: 8.7 feet
Map Height Shown: 9.0 feet
FIM Source: Local NWS Map (FESM Model)
FIM Type: Static (depth not depicted)
FIM Creation Time: 10/5/2022 12:30 pm ET

FOR OFFICIAL USE ONLY

**Map shows flood extent
Depth is not provided**



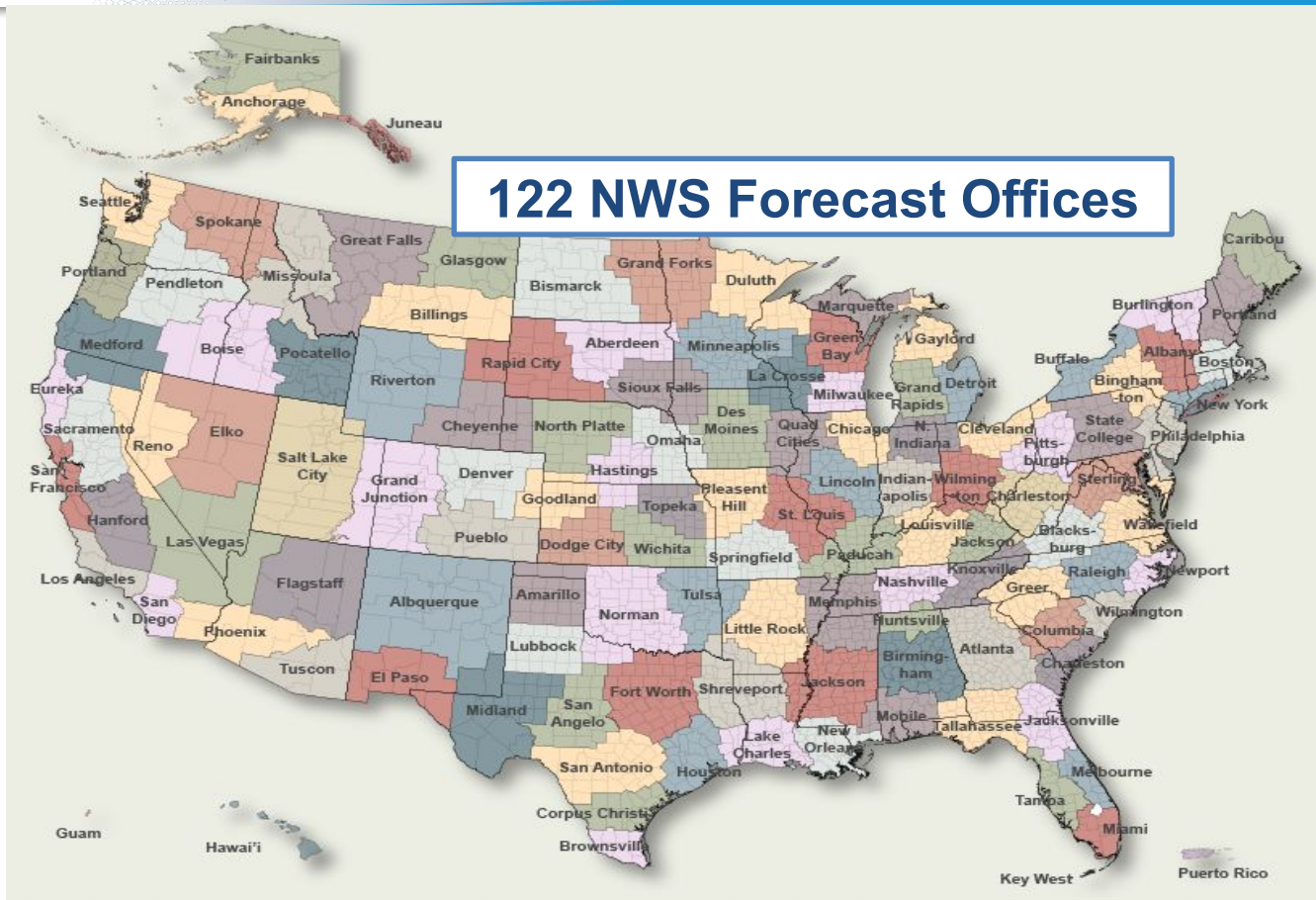
For the latest observations: [St Johns River at Sanford](#)



10/5/22 @ 12:30 PM

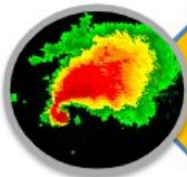


Weather Forecast Office



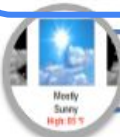


Forecaster Responsibilities



Highest Priority:

Severe Weather
 Watches, Warnings,
 & Advisories



7 Day Public Forecasts



Aviation Forecasts



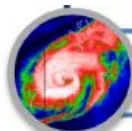
Fire Weather Forecasts



River Flood Warnings



Lake Forecasts



Tropical Support



Collect Weather Data



Climate Reports



Decision Support Services



Education/Outreach & Preparedness



Collaboration w/ Federal, State, Media, etc.



Local Research, Attend Scientific Conferences



Impact Decision Support Services (IDSS):

“the provision of relevant information and interpretative services to enable core partners’ decisions when weather, water, or climate has a direct impact on the protection of lives and livelihoods.”



WEATHER INTELLIGENCE THAT IS

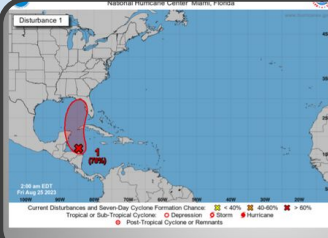
- ✓ **AVAILABLE**
- ✓ **MEANINGFUL**
- ✓ **UNDERSTANDABLE**
- ✓ **ACTIONABLE**




5:29 PM **NWS - Jacksonville** - Andrew Shaahy A new Special Weather Statement was issued for the storms in southeast GA and into far northeast FL. Marine Weather Statement also issued. Note: we got a public report of some small hail in Brantley county recently.

5:31 PM **EM - Brantley County** - Andrew Altman Got reports of pea sized hail when it came through Schlatterville, Hoboken, and Atkinson. I didn't see any in Nahutta.

Max Temp, °F	83	82	68	61	71	74	71
Min Temp, °F	63	62	51	37	40	47	55
Max Wind Chill, °F	63	62	51	29	37	46	55
Max Heat Index, °F	82	83	67	61	71	74	71
Max Wind, mph	10	8	15	15	10	10	14
Min Wind, mph	6	3	7	7	5	3	10
Max Wind Gust, mph	17	14	23	23	16	16	21
Max Prob. of Precip., %	24	85	85	0	1	42	57
Max Prob. of Thunder, %	21	43	30	1	0	9	12
Max Dew Point, °F	66	65	63	34	44	52	60
Min Dew Point, °F	60	61	34	25	34	43	53
Max RH, %	100	100	100	61	79	86	100
Min RH, %	47	49	42	28	32	38	66



Main Points

- A broad low pressure system (L) has developed off the NE coast of Honduras.
- This system is expected to gradually develop. Formation chance remains **low (30%)** over the next 7 days.
- A tropical depression is likely to form late this weekend or early next week as this system lifts slowly over the NW Caribbean and eastern Gulf of Mexico (**watched area**).
- Interacts in the tri-state area

**NWSChat 2.0
aka SLACK**

(instant Chat Interface with on duty team)

Event Forecasts

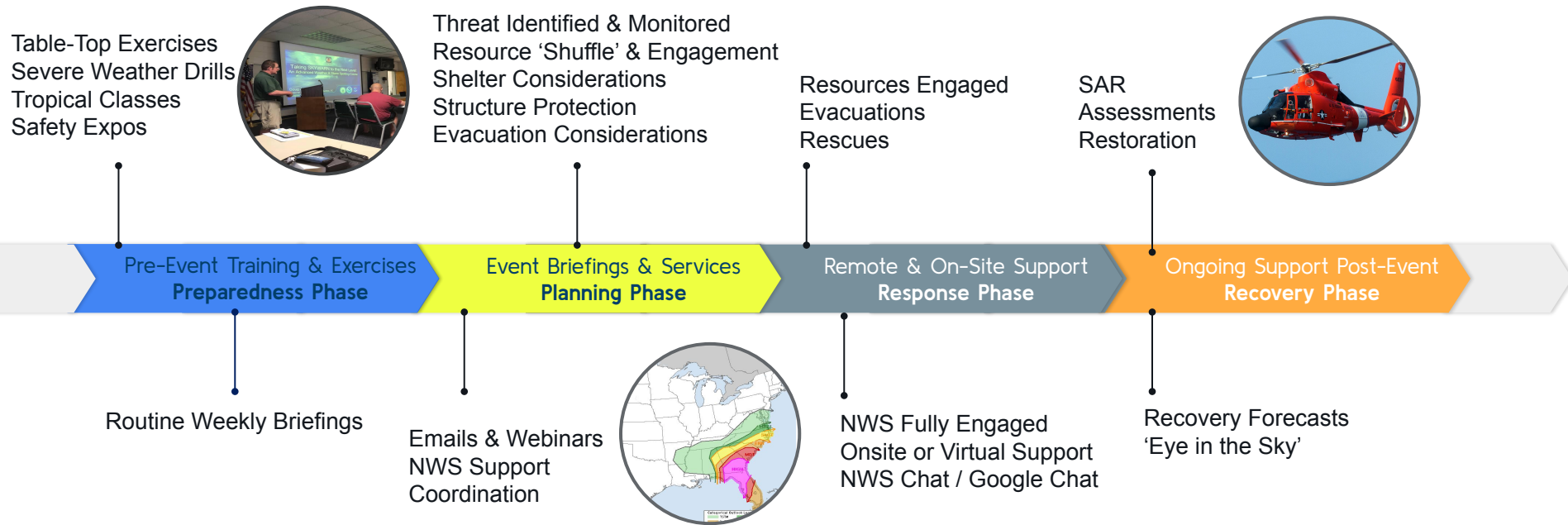
(SPOT Forecasts & Event Support)

Briefings

(phone, email, webinar, press conferences)



NWS Decision Support Services

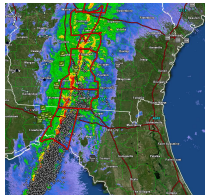


NWSCChat

NWS JAX, we just
got a report of trees
down...



Clinch
County, we
see some
rotation
developing...



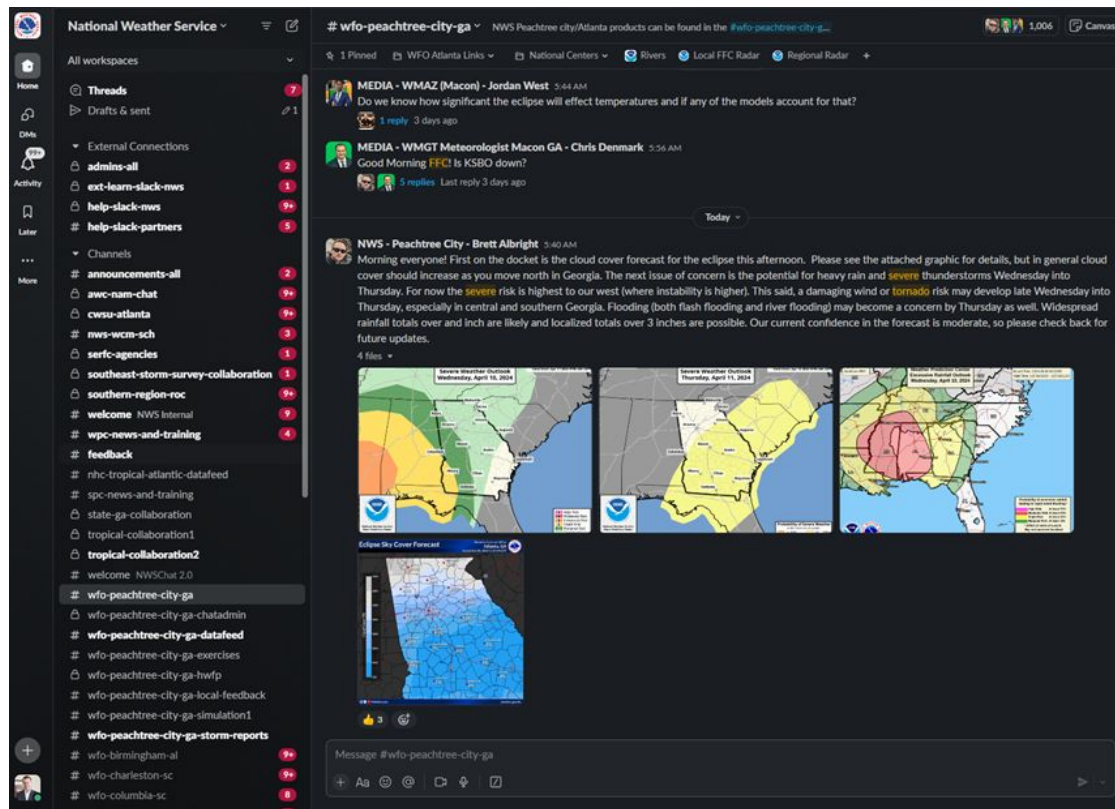
2.0

Powerful new chat interface

Share pictures, videos & host private 'huddles'

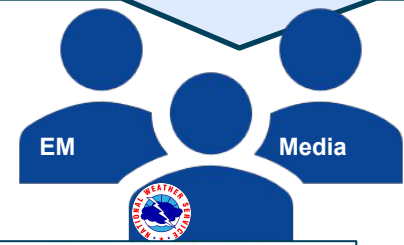
Stable & Interactive

MOBILE!



Steer key weather messages & safety recommendations between media, EM & Emergency Response Agencies

Collectively messaging the same thing, at the same time...
AMPLIFIED THREAT MESSAGING



NWS - Jacksonville - Angela Enyedi Partners, the [Public friendly briefing](#) has been updated and below are attached images. Although the tornado watch is cancelled, we still want to encourage folks to shelter within shelter as the eyewall moves across the counties of SE GA.

3 files ▾

Major Hurricane Idalia
 Jacksonville Weather Forecast
 11 AM Advisory Wednesday
 Issued August 30, 2023 11:04 AM

NE FL & SE GA Key Points

Idalia has made landfall and the eye is tracking to the NE across SE GA.

HUNKER DOWN NOW

Potential Hazards

- Flooding Rainfall SE GA
- Coastal Density Current
- Tropical Storm / Hurricane Winds

REMAIN IN YOUR SHELTER

Hurricane Idalia Potential Impacts
 Impacts Anticipated Through Wednesday Night

Wind	Storm Surge	Flooding Rain	Tornado
<ul style="list-style-type: none"> Sheeped fish, outages and damage to mobile homes, especially along and near corridor and across Inland Southeast GA 	<ul style="list-style-type: none"> 2-4 ft agl SE GA Coast 1-3 ft agl NE FL Coast & St. Johns River Basin High risk of rip currents 	<ul style="list-style-type: none"> 34 inches, isolated 13 inches Potential for flash urban and rural flooding Streams will flood and rivers may overflow their banks Some road washouts 	<ul style="list-style-type: none"> Tornadoes possible near SE GA coast afternoon

Wind Potential
 Hurricane Idalia

Hurricane Warning Locations West of U.S.-301 & Inland Southeast GA
Hurricane Watch Glynn & Camden Counties
Tropical Storm Warning Northeast FL Counties East of U.S.-301, Coastal SE GA

Hurricane Force winds (> 74 mph):
 Suwannee River Valley & SE GA through the Afternoon
 Hurricane force winds possible offshore of SE GA Coast

Tropical Storm force winds (> 39 mph):
 NE FL: Through the afternoon
 SE GA: Into the evening hours

Impacts: Widespread fallen trees, power outages & damage to mobile homes, especially along and near corridor and across Inland Southeast GA



Pre-Event Planning

Coordinated Preparedness
Messaging (NWS, EMs & Media)

Reiterate Email & Webinar
information - Key Messages

Share "workflow"

During Event

Real-time imminent threat
messaging

Real-time storm damage reports

Short updates
(video capability)

Breakouts/Huddles

Post-Event

Survey information

Continued post-storm hazard
messaging & weather outlooks

Pre-Event Planning

During Event

Post-Event

NWS - Tallahassee - Karlela Rogachesk 8:55 AM
Good morning partners!

A multi-hazard high-impact weather event is expected on Wednesday Night and Thursday. Hazards to...

- Slight Risk (Level 2 of 5) of **Severe Thunderstorms**
 - Damaging Wind Gusts
 - Isolated Tornadoes Possible
- Moderate Risk (Level 3 of 4) of **Excessive Rainfall**. Flash flooding and minor river flooding possible.
- Strong winds outside of thunderstorms.
- Coastal and Marine Hazards
 - Minor coastal flooding possible from Apalachicola to Suwannee
 - High Surf Likely. Life-threatening Rip Currents Expected.
 - Gales Possible over the Gulf waters.

2 files ▾



Wednesday Night **Tallahassee, FL**
Severe Risk (Level 3 of 4) of Excessive Rainfall
Moderate Risk (Level 2 of 3) of Severe Thunderstorms
Flash Flooding Possible


Thursday **Tallahassee, FL**
Moderate Risk (Level 2 of 3) of Severe Thunderstorms
Flash Flooding Possible

Next Round of Severe Weather
Wednesday Night through Thursday
Severe Risk (Level 3 of 4) of Excessive Rainfall
Moderate Risk (Level 2 of 3) of Severe Thunderstorms
Flash Flooding Possible

Thursday
Damaging Wind Gusts
Brief Tornadoes Possible

NWS - Tallahassee - Israel Gonzalez 6:09 AM
KEVX Radar Update 5AM CT/6AM ET - Strong to **severe** storms are ongoing across favorable for damaging winds and tornadoes. Convection noticeably produced a plethora (gust) around Panama City/Tyndall area where a potent eastward velocity surge is evident **tornado** warning. This activity will continue to push east and sustain itself or intensify through the Bend, eastern Panhandle, and much of SW GA until 12PM CT/1PM ET. (edited)

2 files ▾




Tornado Watch
Valid Until 1:00 PM EDT Wednesday April 3, 2024

Threat Information


- TORNADOES**
A Couple Tornadoes Possible
- HAIL**
Isolated Hail Up To Ping Pong Size Possible
- WIND**
Damaging Storms Up To 70 MPH or Greater

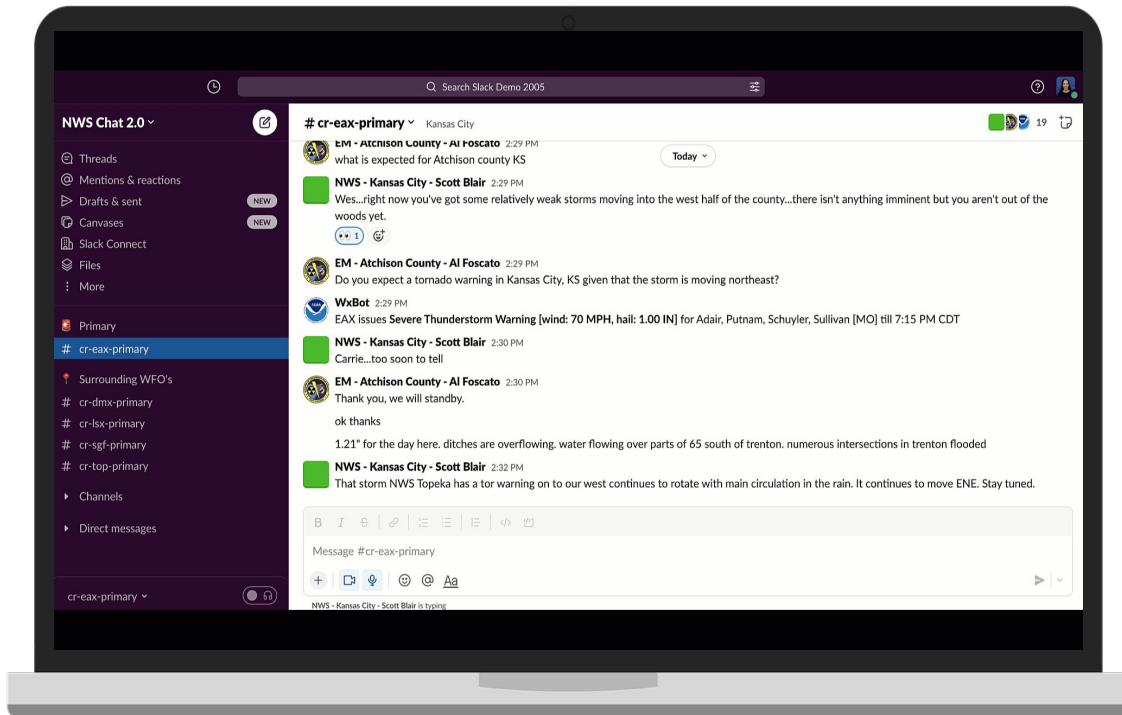
Potential Exposure
Population: 1,155,317
Structure: 417
Agriculture: 40



MEDIA - 95.5 WSB Radio Atlanta - Christina Edwards 7:47 AM
Good morning, **FFC!** I'm sure you will inundated with imagery, etc, but here is a <https://twitter.com/mckayWSB/status/1775487842967232748>

X (formerly Twitter)
Mark McKay 🌞🌤️ (@mckayWSB) on X
It's not a good morning in Conyers, Ga as the clean up is just now starting after overnight storms. @wsbradio #SkyCopter @wsbtv #CaptnCam (645 kB)





Who May Join?

1. Members of the emergency management (EM) community
2. Members of the water resources management (WRM) community
3. Government partners
4. Members of the Real-time Media.

Scan to Register



<https://partnerservices.nws.noaa.gov/registration>



- Email
- Texts

Alert Types

- Severe Weather
- Winter Weather
- Hydrology
- Fire Weather
- Marine Weather
- Coastal Hazards
- Tropical Weather
- Aviation
- Non-precipitation
- Civil Emergency
- Other

Alert Area

Area Type: Point County/Parish Custom Polygon Burn Scar

Interactive NWS Alert

New event: Tornado Warning for Chapin/Innis/Meal Columbia Area
Starts at 3:02 am EST Fri Nov 11 2022

Thunder cells at 415 am EST, Nov 11th 2022

NWS Alert User Alert Area

SCC017 063-075-079-110915
 /O.NEW.KCAE.TO.W.0019.221111T0822Z-221111T0915Z/
BULLETIN - EAS ACTIVATION REQUESTED
 Tornado Warning
 National Weather Service Columbia SC
 322 AM EST Fri Nov 11 2022
 The National Weather Service in Columbia has issued a
 * Tornado Warning for...
 Northwestern Calhoun County in central South Carolina...
 Central Lexington County in central South Carolina...
 North central Orangeburg County in central South Carolina...
 Central Richland County in central South Carolina...
 * Until 415 AM EST.
 * At 322 AM EST, a severe thunderstorm capable of producing a tornado
 was located 10 miles northwest of Brookdale, moving north at 40
 mph.
 HAZARD...Tornado.
 SOURCE...Radar indicated rotation.
 IMPACT...Flying debris will be dangerous to those caught without
 shelter. Mobile homes will be damaged or destroyed.
 Damage to roofs, windows, and vehicles will occur. Tree
 damage is likely.

<https://inws.ncep.noaa.gov/>



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