



TROPICAL UPDATE



11:00 AM EDT

Monday, August 16, 2021

Tropical Storm Fred

This update is intended for government and emergency response officials, and is provided for informational and situational awareness purposes only. Forecast conditions are subject to change based on a variety of environmental factors. For additional information, or for any life safety concerns with an active weather event please contact your County Emergency Management or Public Safety Office, local National Weather Service forecast office, or visit the National Hurricane Center website at www.hurricanes.gov.

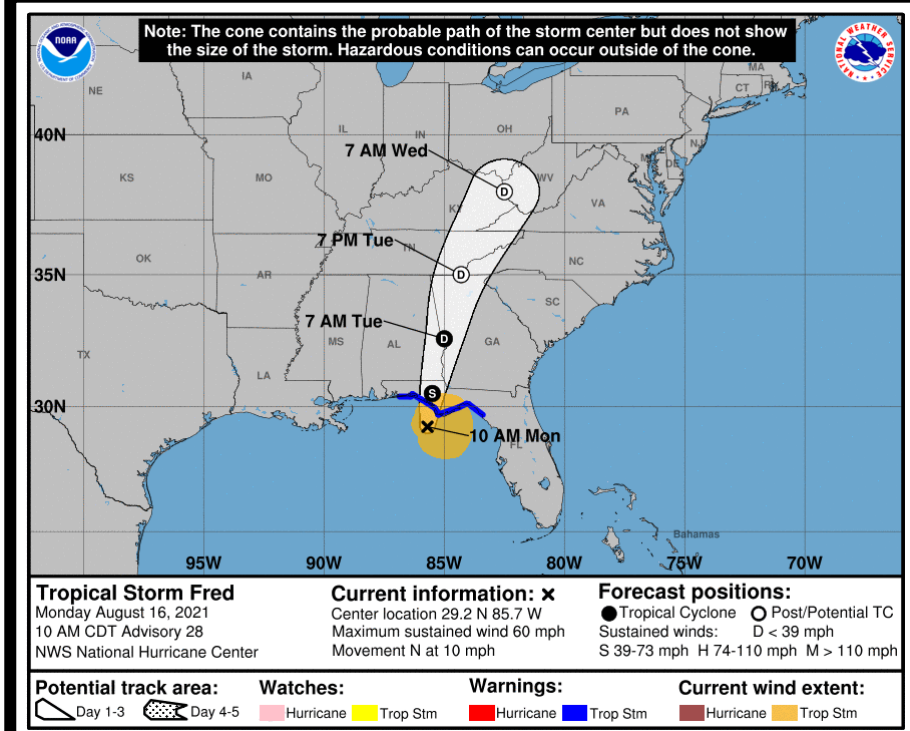


Tropical Storm Fred

5 AM ET Monday: Florida Threats & Changes Since Last Packet

	MINIMAL	LOW	MODERATE	HIGH	EXTREME
WINDS					
STORM SURGE					
FLASH FLOODING					
TORNADOES					
	LOW	MODERATE	HIGH		
RIP CURRENTS					

National Hurricane Center Map



Overview/Recent Changes:

IMPACTS EXTEND WELL EAST OF THE CONE

Tropical Storm Warnings extended east into Jefferson and Taylor County. Winds moving onshore and inland now. Fred is strengthening as it approaches the coast and will likely be a strong tropical storm at landfall. Storm surge has begun in Apalachee Bay, and will peak this evening at high tide from 3-5'.

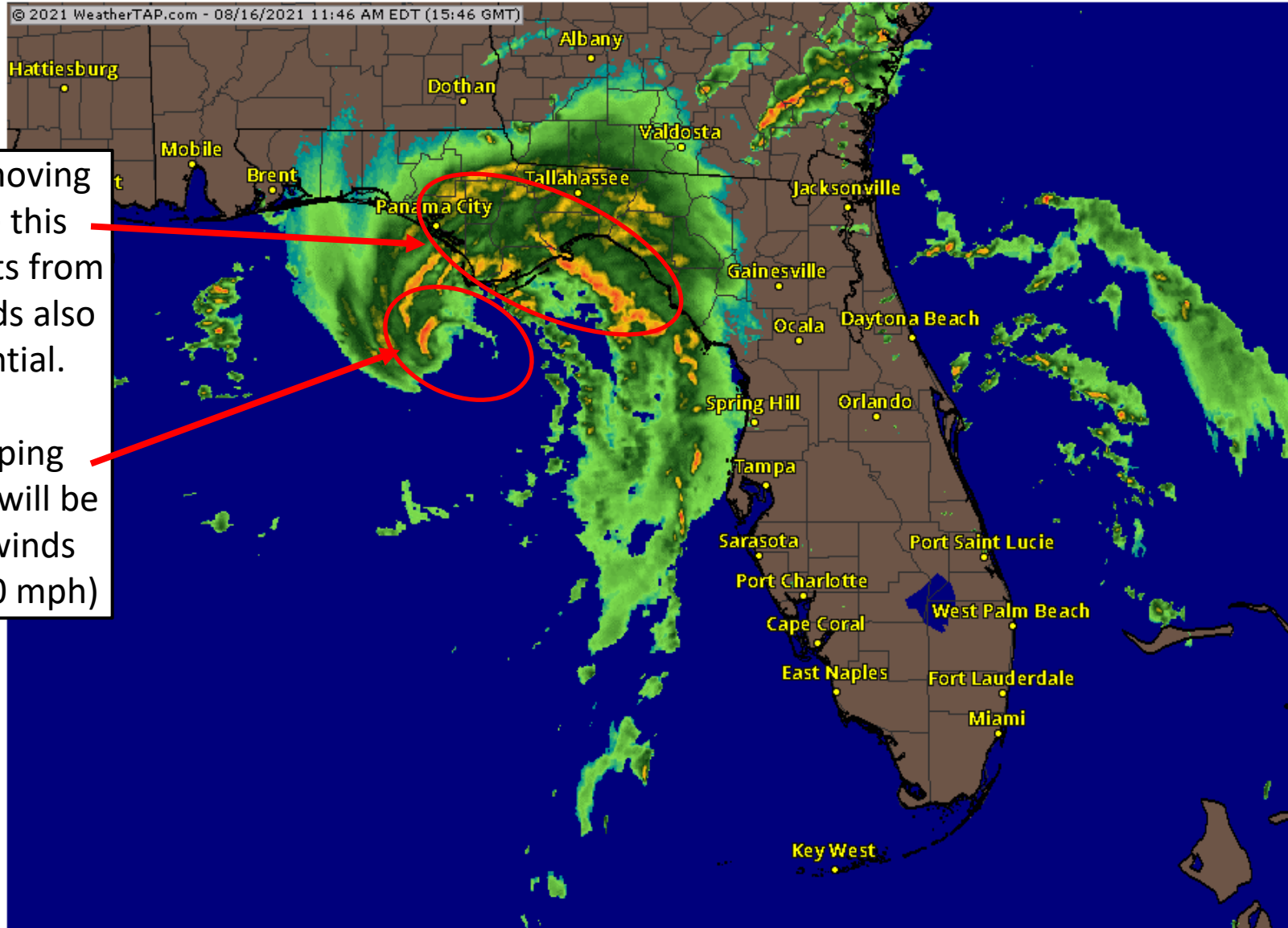


Current Florida Radar

As of 11:45 AM ET

Outer rain bands are moving across the Panhandle this morning producing gusts from 40-55 mph. These bands also have a tornado potential.

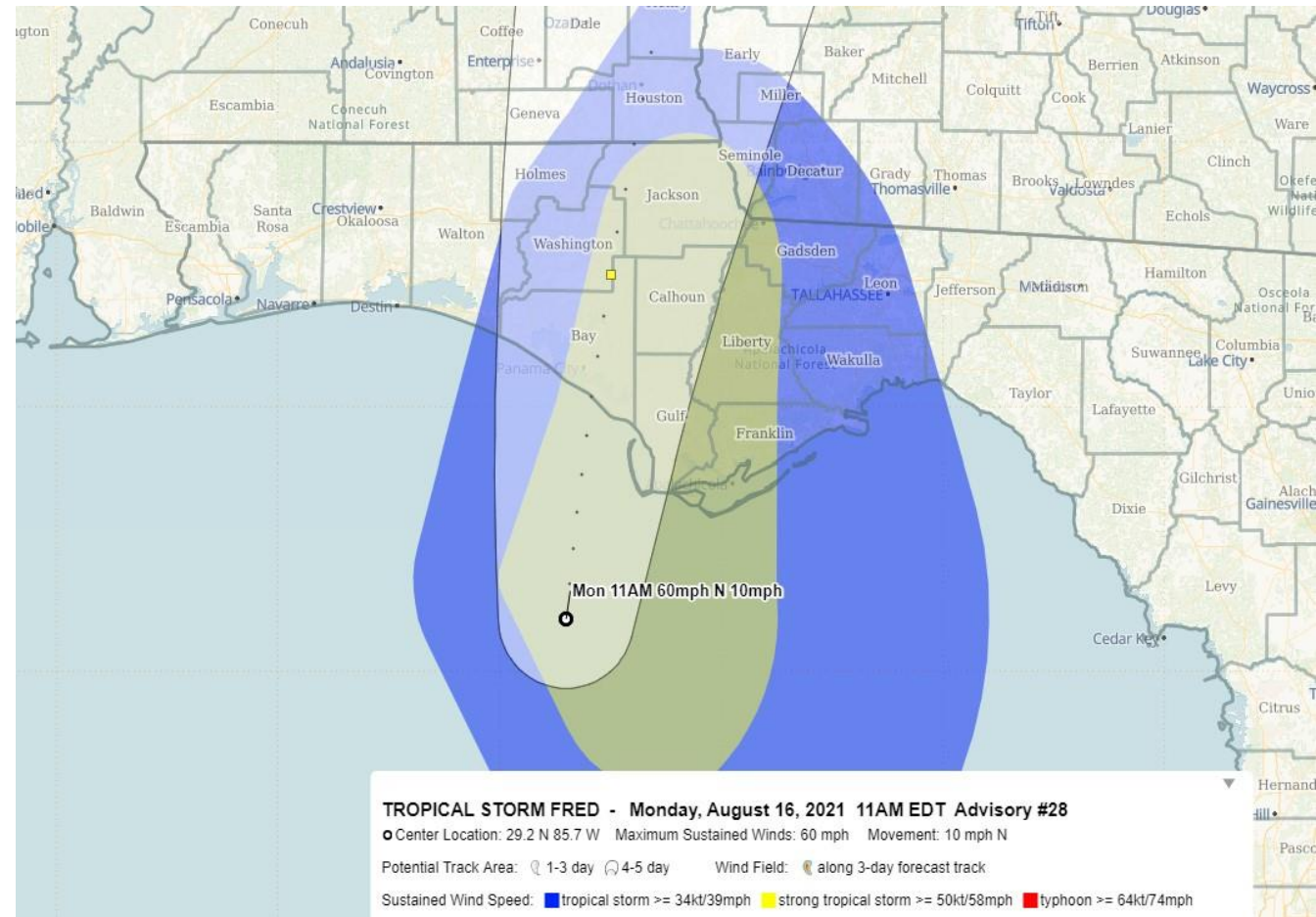
An eye wall is developing around the center and will be where the strongest winds occurs (sustained 50-60 mph)





Official Forecast Track for Fred

From the National Hurricane Center



- The center of Fred is located about 55 miles south of Apalachicola, Florida.
- Maximum sustained winds are around 60 mph with higher gusts, and Fred is moving to the north at 10 mph.
- Fred will make landfall late this afternoon in the Florida Panhandle (likely Bay or Gulf County) with maximum sustained winds around 65 mph.
- Fred is lopsided, with most of the impacts (wind, rain, tornadoes, and surge) on the eastern side of the storm. **These impacts will extend well outside of the cone.**
- Tropical storm force winds extend out about 115 miles to the east of the center.



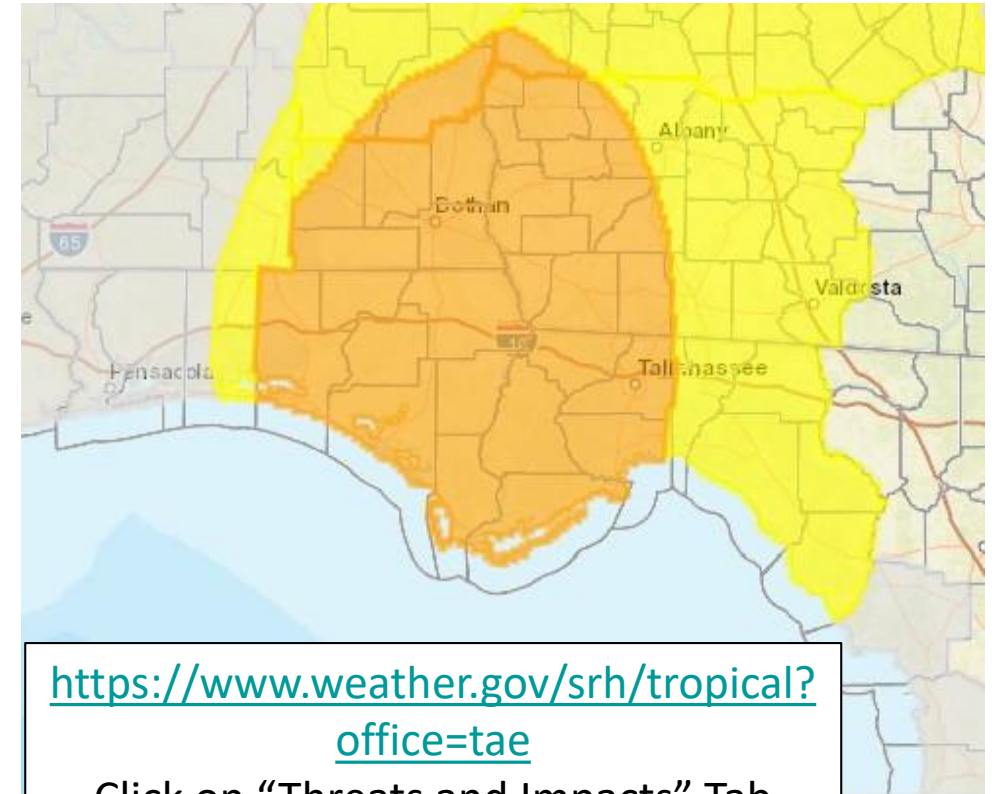
Damaging Wind Threat Overview

Tropical Storm Fred

The greatest wind threat is along the immediate coast of the Panhandle, but some winds will extend inland at and east of where the center makes landfall.

Sustained winds from 40-60 mph are possible in the orange area, with gusts as high as 70-75 mph.

Wind gusts from 40-50 mph are possible into the eastern Big Bend in the yellow shaded area.



Wind Threat
Potential for wind greater than 110 mph
Potential for wind 74 to 110 mph
Potential for wind 58 to 73 mph
Potential for wind 39 to 57 mph
Wind less than 39 mph

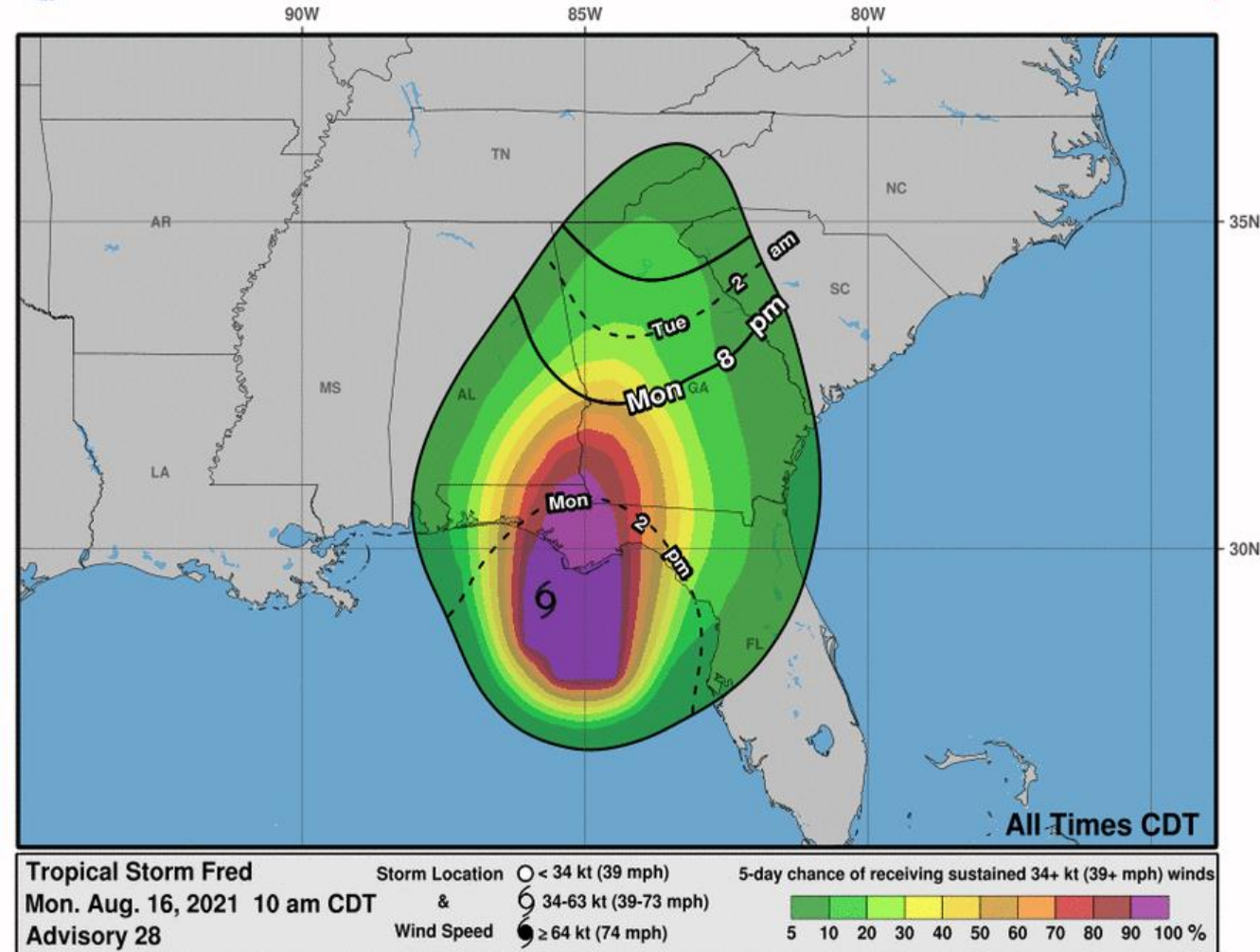


Time of Arrival & Wind Speed Probabilities

Most Likely Time of Arrival of Tropical Storm Force Winds (>39 mph)



Most Likely Arrival Time of Tropical-Storm-Force Winds



City	Chance for TS Winds	Changes Since Last Packet
Cedar Key	14%	+8%
Tallahassee	82%	+53%
Apalachicola	99%	ONGOING
Panama City	99%	+14%
Destin	50%	+14%
Pensacola	13%	+6%
Jacksonville	8%	+2%

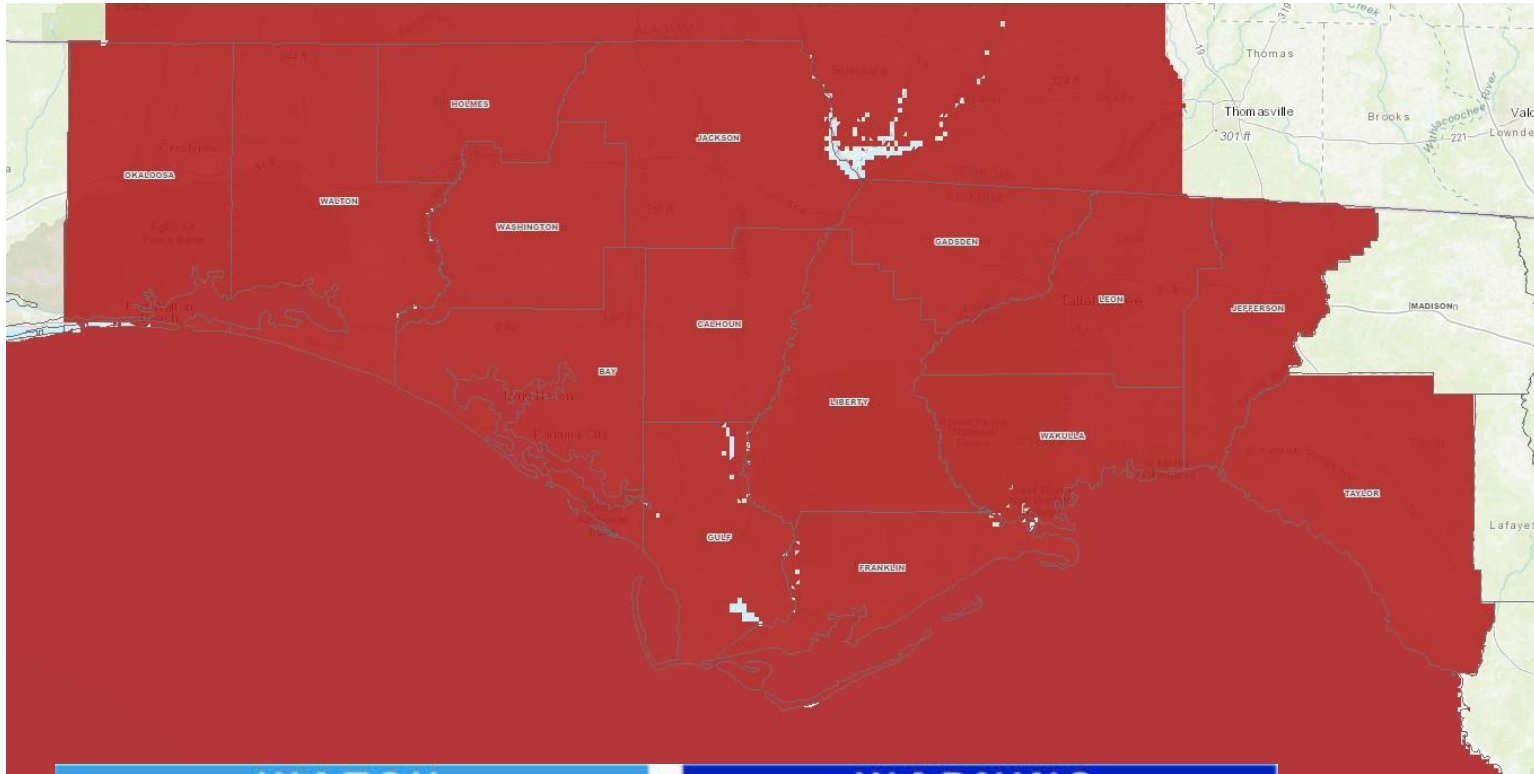
The chance of tropical storm force winds is very high in the eastern Panhandle and western Big Bend! Winds are almost a guarantee in the purple areas.

All preparations should be rushed to completion as tropical storm force winds are moving inland this morning.

The odds of strong tropical storm force winds (>58 mph) along the coast is now 40-60%!! (and 10-20% inland)



Active Tropical Watches/Warnings



WATCH

Tropical storm and/or hurricane conditions are POSSIBLE in the "watch area"

Issued up to 48 hours in advance of the onset of tropical storm force winds

WARNING

Tropical storm and/or hurricane conditions are EXPECTED in the "warning area"

Issued up to 36 hours in advance of the onset of tropical storm force winds

- **Tropical Storm Warnings** are in effect for the Florida Panhandle and western Big Bend.
- Bay, Calhoun, Franklin, Gadsden, Gulf, Holmes, Jackson, **Jefferson**, Leon, Liberty, Okaloosa, **Taylor**, Wakulla, Walton, and Washington

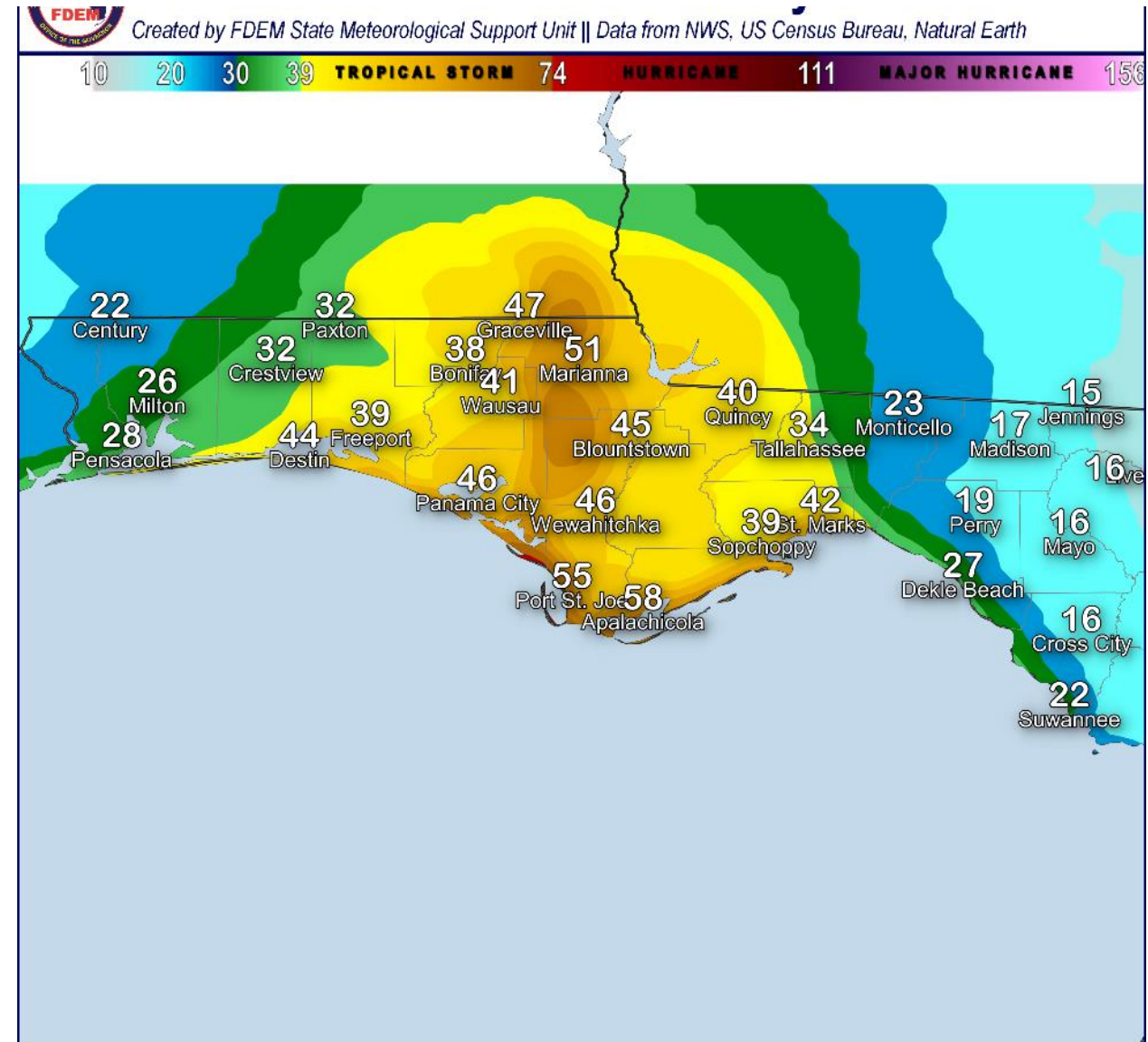


Forecast Winds Today

Exact wind gusts will vary in time, magnitude, and location

Winds will begin increasing this morning in the Panhandle, with gusts into tropical storm strength across Northwest Florida throughout the day. Some wind gusts near 70 mph are possible in the Apalachicola area and inland toward the tri-state area.

Wind gusts will decrease overnight, but remain breezy along the coast.





Surge Watches and Warnings

In Effect Until Further Notice

Tropical Storm Fred
Advisory 025 Issued: 4:00 PM CDT Sun Aug 15



https://www.nhc.noaa.gov/refresh/graphics_at1+shtml/153159.shtml?inundation#contents

P-Surge Interactive Map

Storm Surge Warnings are in effect for the Big Bend, from Franklin County to Levy County (Indian Pass to Yankeetown).

Storm Surge Warning

There is a **danger of life-threatening inundation** from rising water moving inland from the shoreline generally **within 36 hours**.

Promptly follow evacuation and other instructions from local officials.

Storm Surge Watch

There is a **possibility of life-threatening inundation** from rising water moving inland from the shoreline generally **within 48 hours**.

Promptly follow evacuation and other instructions from local officials.





Storm Surge Threat Overview

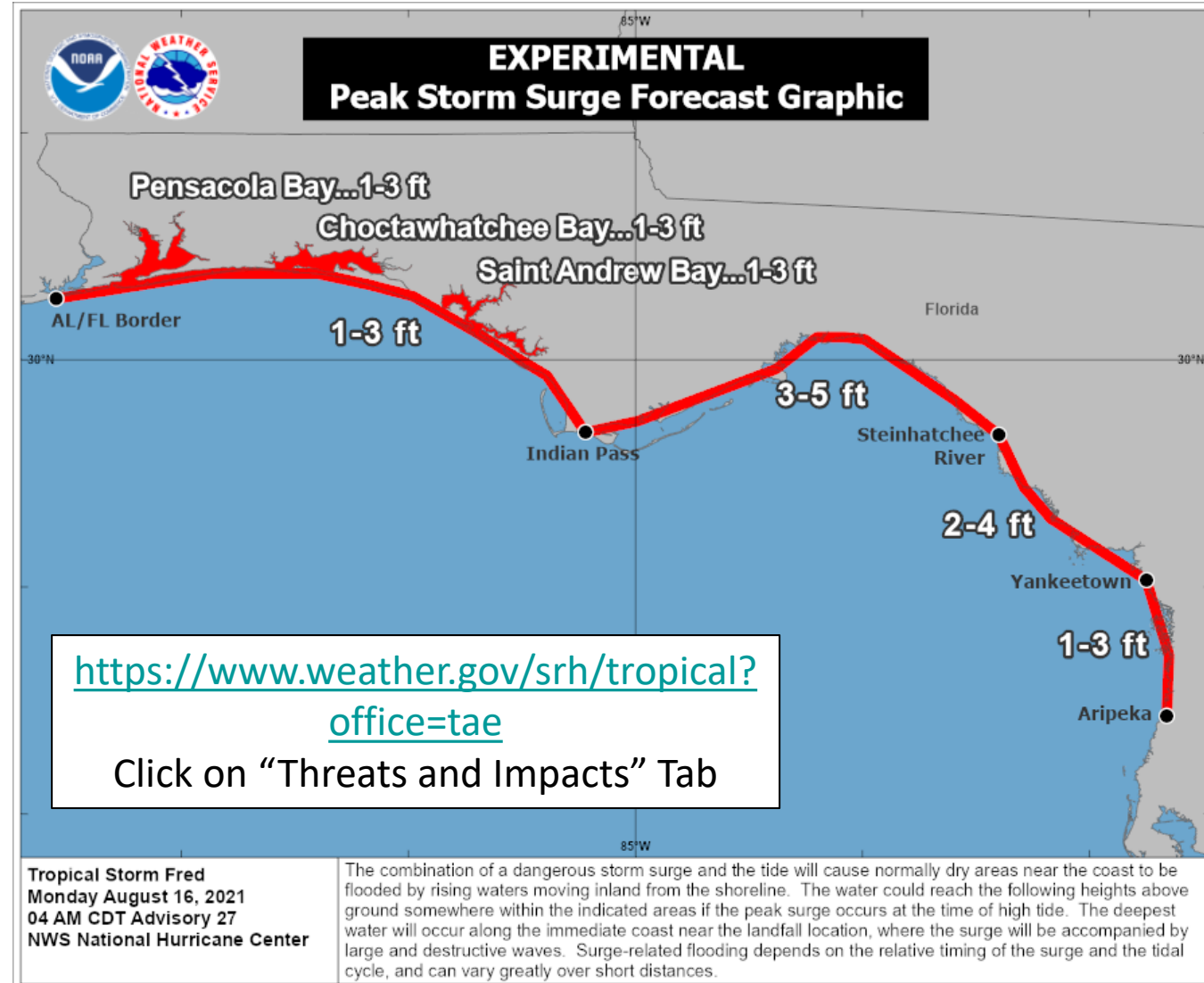
Tropical Storm Fred

Storm surge impacts are expected to be low in the Panhandle, with values less than 3' at this time.

Higher surge is now forecast in Apalachee Bay of 3-5' due to the eastward shift in track and a large wind field.

Surge values also increased further east, from the Steinhatchee River to Yankeetown where values of 2-4' are now expected.

1-3' is possible further south along the Nature Coast

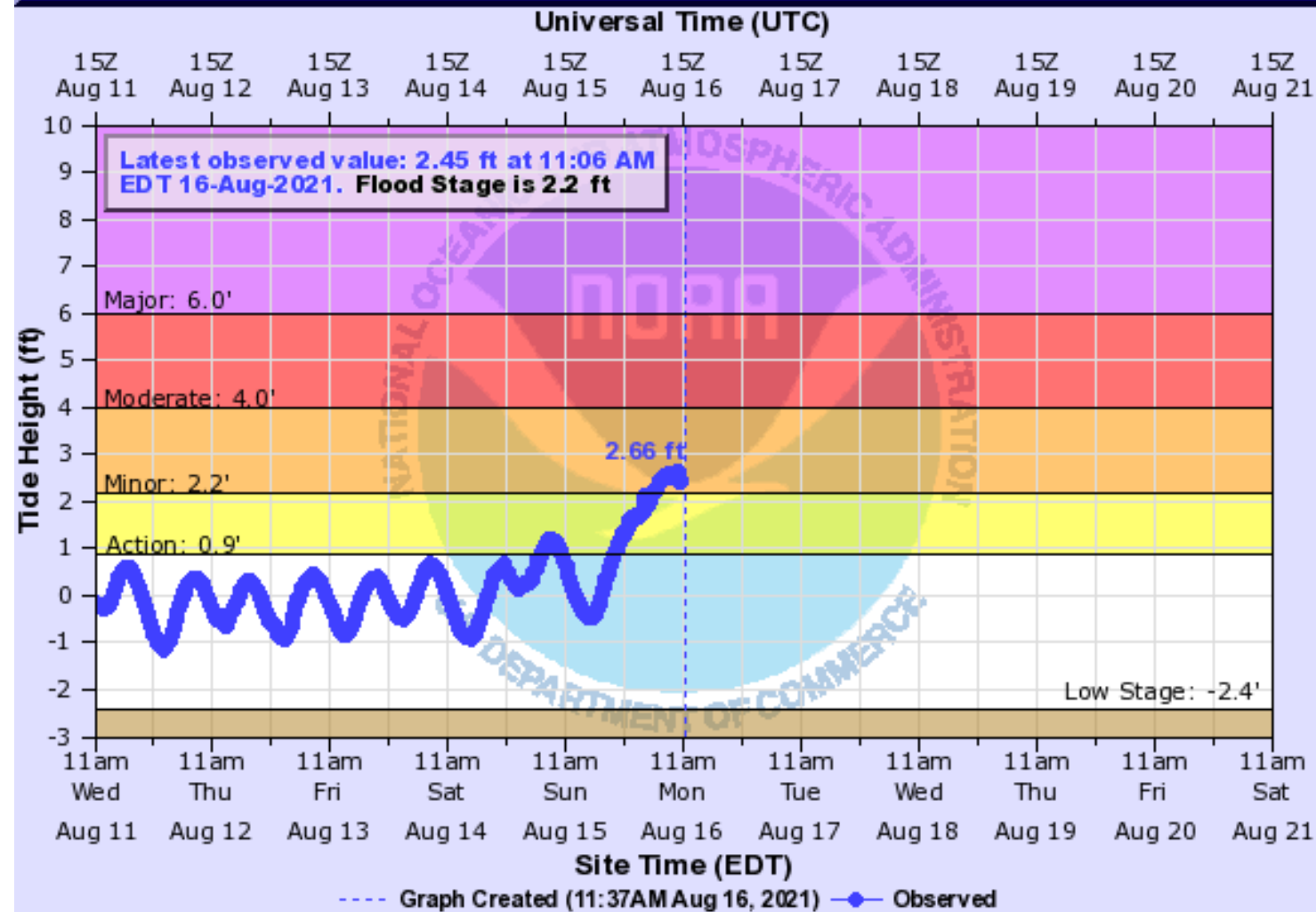




Gulf of Mexico at Apalachicola

[Hydrograph Link](#)

GULF OF MEXICO TIDE GAUGE AT APALACHICOLA (IN MHHW)



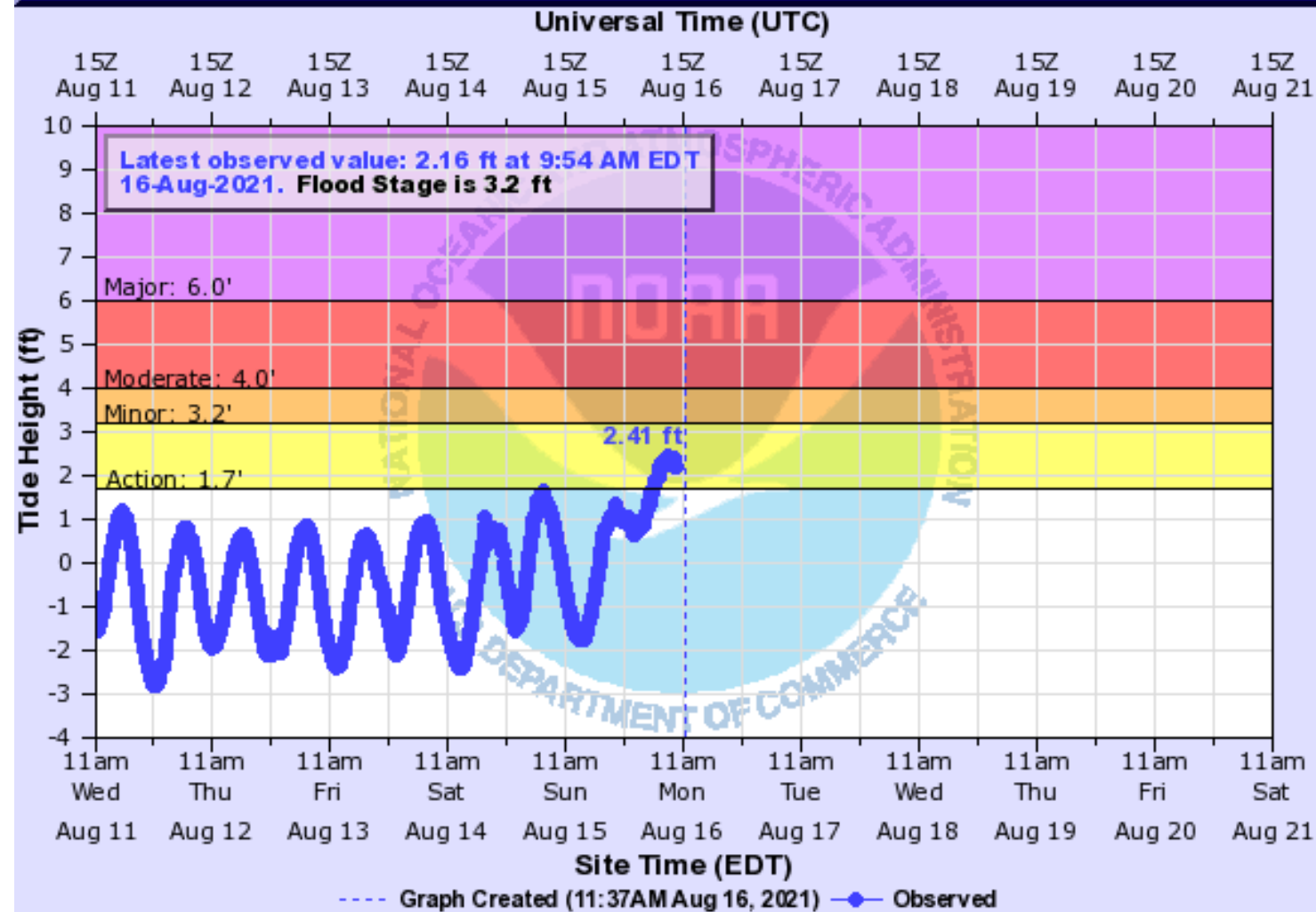
- 5 In Apalachicola, US-98 is subject to flooding near the airport. Flooding continues to extend inland affecting areas primarily along Bay Avenue, east of Market Street and north of Apalachicola along the river at Waddell Road and Bay City Road. In Eastpoint, Patton Drive floods at this level. Areas along East Bay Drive and Rose Drive begin to flood. Around Indian Lagoon, structures not elevated flood, with water levels up to 2 feet deep. Indian Pass Road is impassible.
- 4 The St George Island Causeway near Eastpoint begins to flood and is subject to closure above this level. In Apalachicola, areas between Market Street and the waterfront flood with a water depth up to 2 feet. Bay Avenue begins to flood, with structures not elevated impacted. North of Apalachicola, areas along Waddell Road and Bay City Road near the river begin to flood. In Gulf County, flooding begins to affect the backyards of some residences on the south side of Indian Lagoon
- 3 In Apalachicola, water floods backyards of residences on Bay Avenue. Market Street floods near the Orman House State Park. In Gulf County, Indian Pass Road begins to flood at this level.
- 2.7 In Apalachicola, Water Street floods as well as the Battery Park under the John Gorrie Bridge. In Eastpoint, low lying areas near the causeway begin to flood at this level.
- 2.2 In Gulf County, water will overwash SR-30E at the Stump Hole. Backyards of residences on the north side of Indian Pass Lagoon will begin to flood. Water approaches Indian Pass Road on the west side of the Lagoon.
- 1.9 The boat ramp at the city docks in Apalachicola will flood.



Gulf of Mexico at Shell Point

[Hydrograph Link](#)

GULF OF MEXICO TIDE GAUGE AT SHELL POINT (IN MHHW)

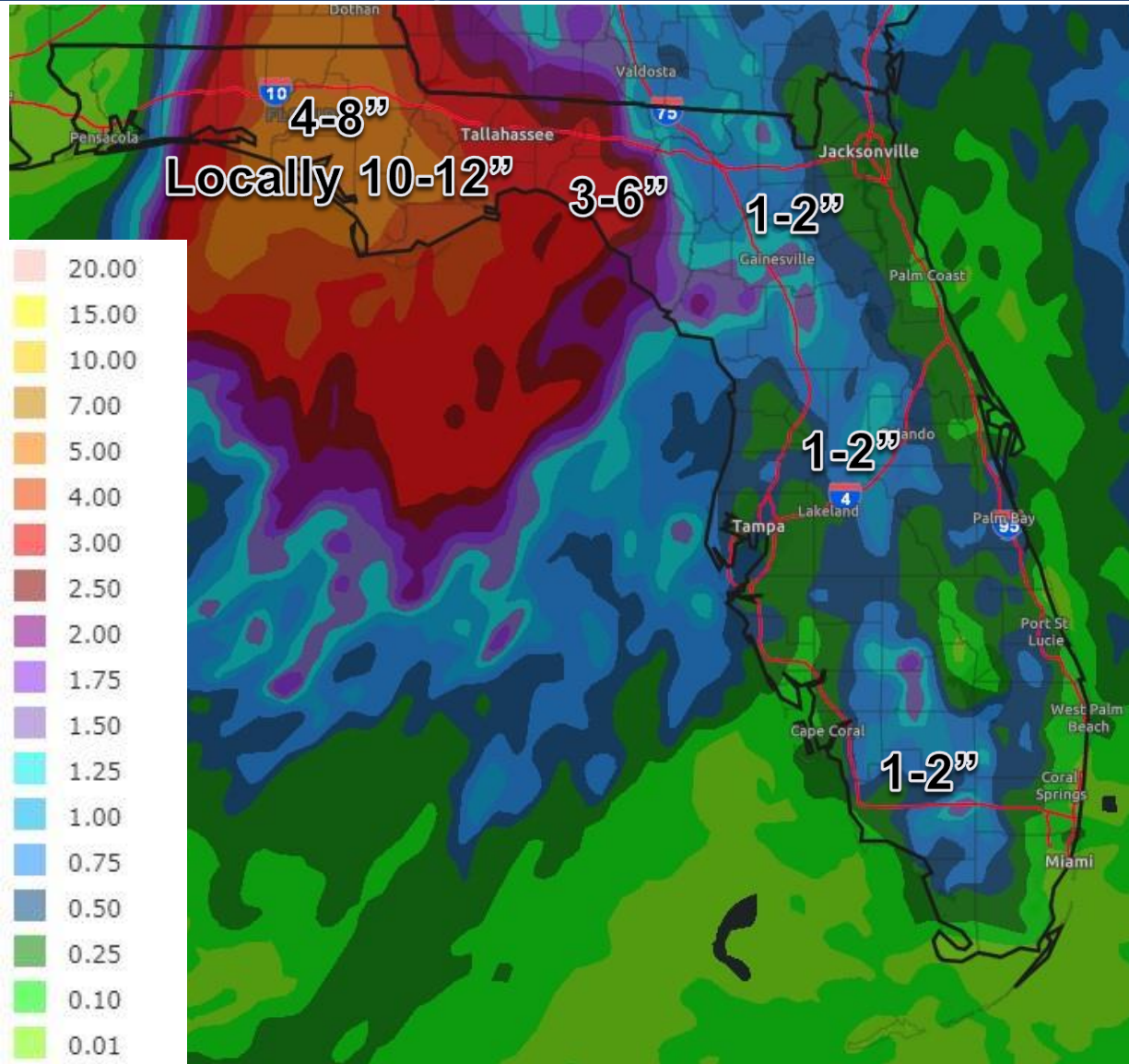


- 5 Much of Shell Point and Live Oak Island are flooded by water 1 to 2 feet deep. Structures not elevated flood at this level.
- 4 Water floods yards of homes in Shell Point. Structures not elevated are subject to flooding above this level. Shell Point Road begins to flood south of Kornegay Way, restricting access to the area.
- 3.5 Live Oak Island Road begins to flood near Creek Road.
- 3.2 Water will reach the top of the canals at Shell Point. Water will wash under homes on the south side of Beatty Taff Drive.



Rainfall Totals Next 48 Hours

Ending 8 AM ET Wednesday



The main threat to Florida from Fred will be heavy rainfall.

The heavy rain threat will move into the Panhandle and western Big Bend throughout the day. Rainfall will gradually end tonight, but some trailing rain bands may continue in the Big Bend.

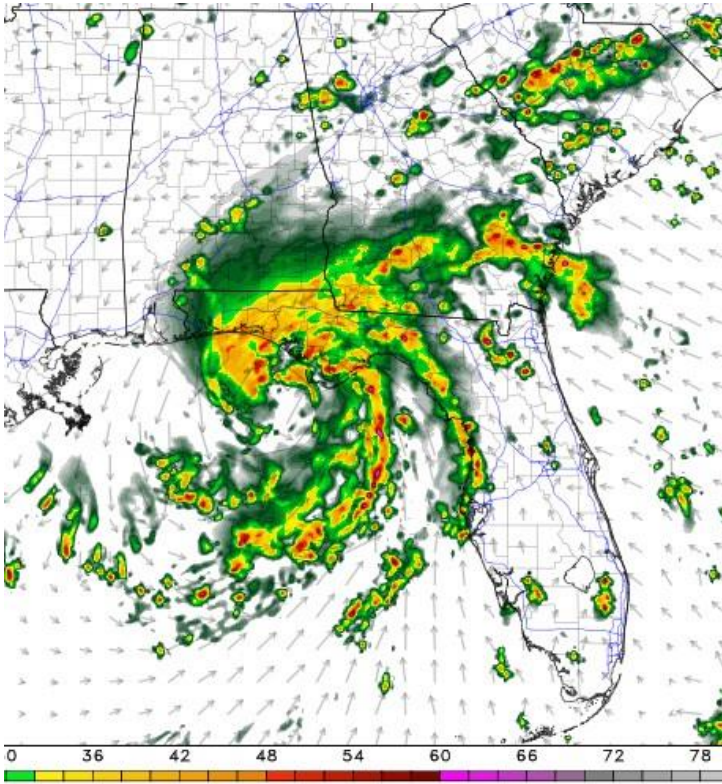
Isolated totals in the Panhandle could be as high as 12", with widespread totals of 4-8" and a widespread 3-6" in the Big Bend.

These amounts may lead to flash flooding, riverine flooding, and any gusty winds may allow for shallow-rooted or weak trees to fall.

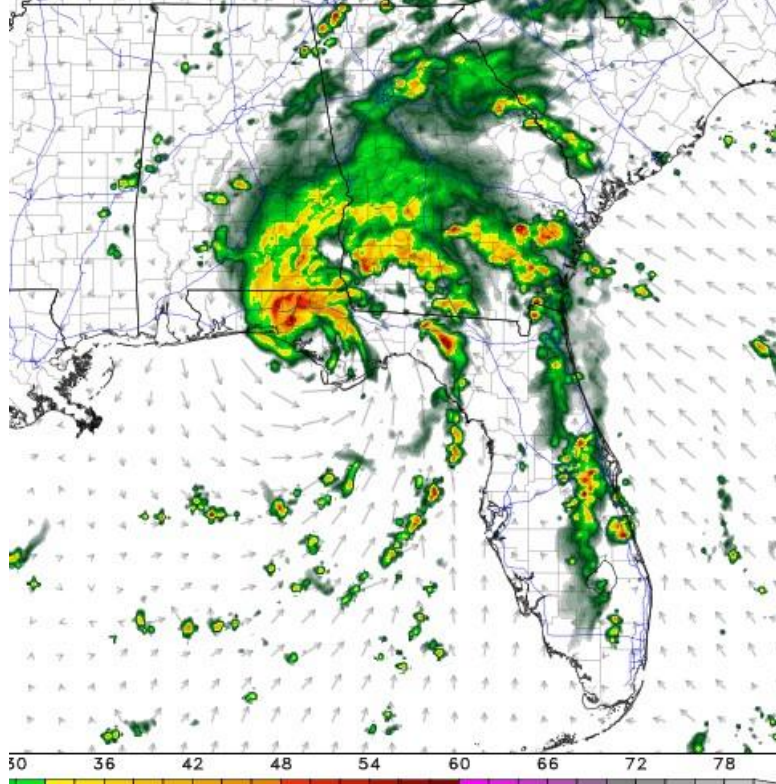


Model Forecast Radar

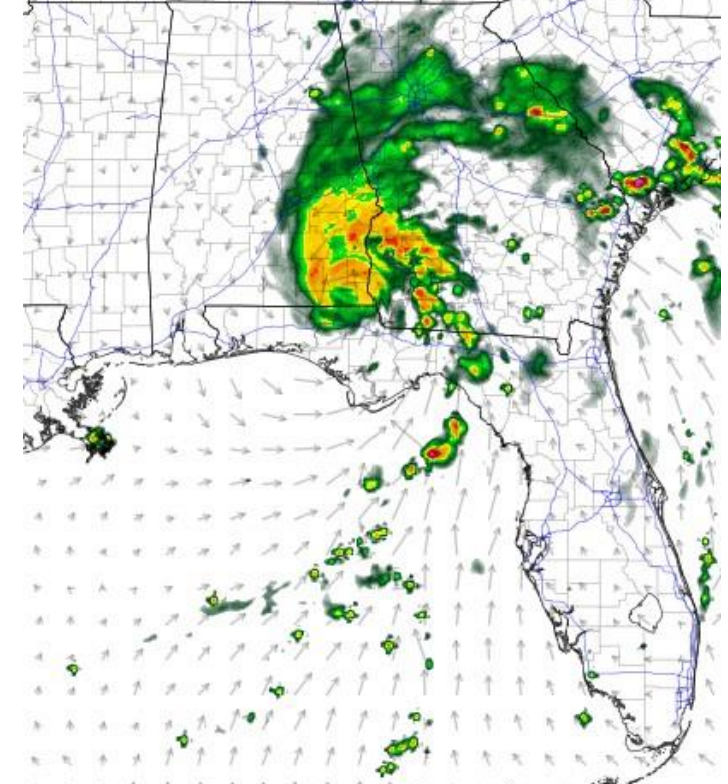
*****Only Model Guidance – Time & Position Will Vary*****



Monday Afternoon



Monday Evening



Midnight

Conditions will deteriorate Monday afternoon as Fred nears the coast. Tornadic rain bands may impact as far east as the Nature Coast/NE FL. Fred moves inland Monday night with improving conditions after midnight as Fred moves inland into Alabama and Georgia. Trailing rain bands will linger into the Big Bend.



Flash Flood Outlooks

From the Weather Prediction Center

Today & Tonight

MARGINAL (MRGL)

Isolated flash
floods possible

Localized and
primarily affecting
places that can
experience rapid
runoff with heavy
rainfall.

SLIGHT (SLGT)

Scattered flash
floods possible

Mainly localized. Most
vulnerable are urban
areas, roads, small
streams and washes.
Isolated significant
flash floods possible.

MODERATE (MDT)

Numerous flash
floods likely

Numerous flash
flooding events with
significant events
possible. Many
streams may flood,
potentially affecting
larger rivers.

Risk of rainfall exceeding flash flood guidance
within 25 miles of a point to the right of a line

HIGH: > 50%

SLGT: 10%-20%

MDT: 20%-50%

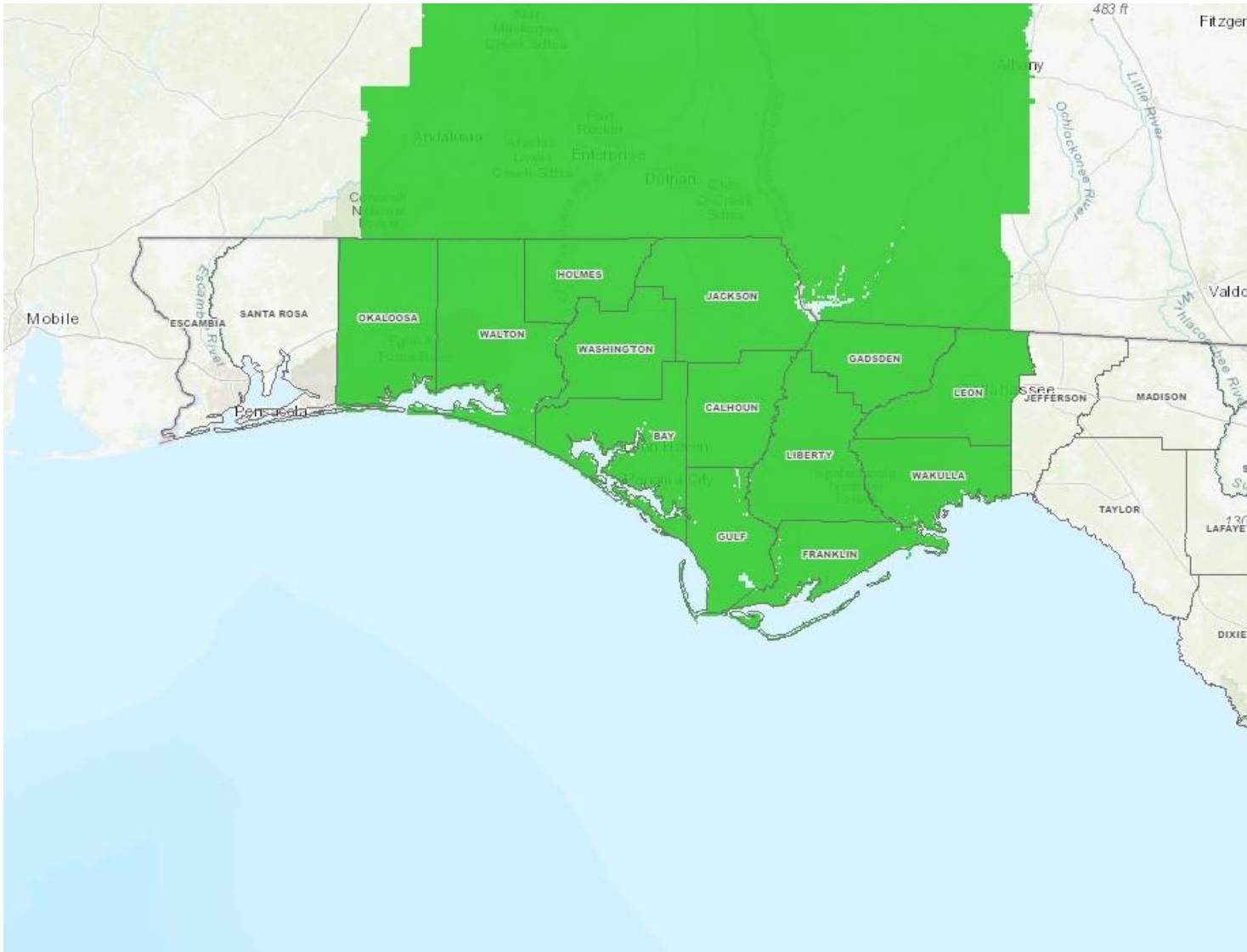
MRGL: 5%-10%

Tuesday

Heavy rainfall will move into the Panhandle and Big Bend this morning and continue into the evening. This heavy rainfall may cause urban and flash flooding, along with river flooding. Some trailing rain bands will keep an isolated flash flood threat through Tuesday, especially in the sensitive areas of Taylor and Dixie County. ***The Moderate Flood Threat Area Has Expanded East***



Active Flood Watches - NWS



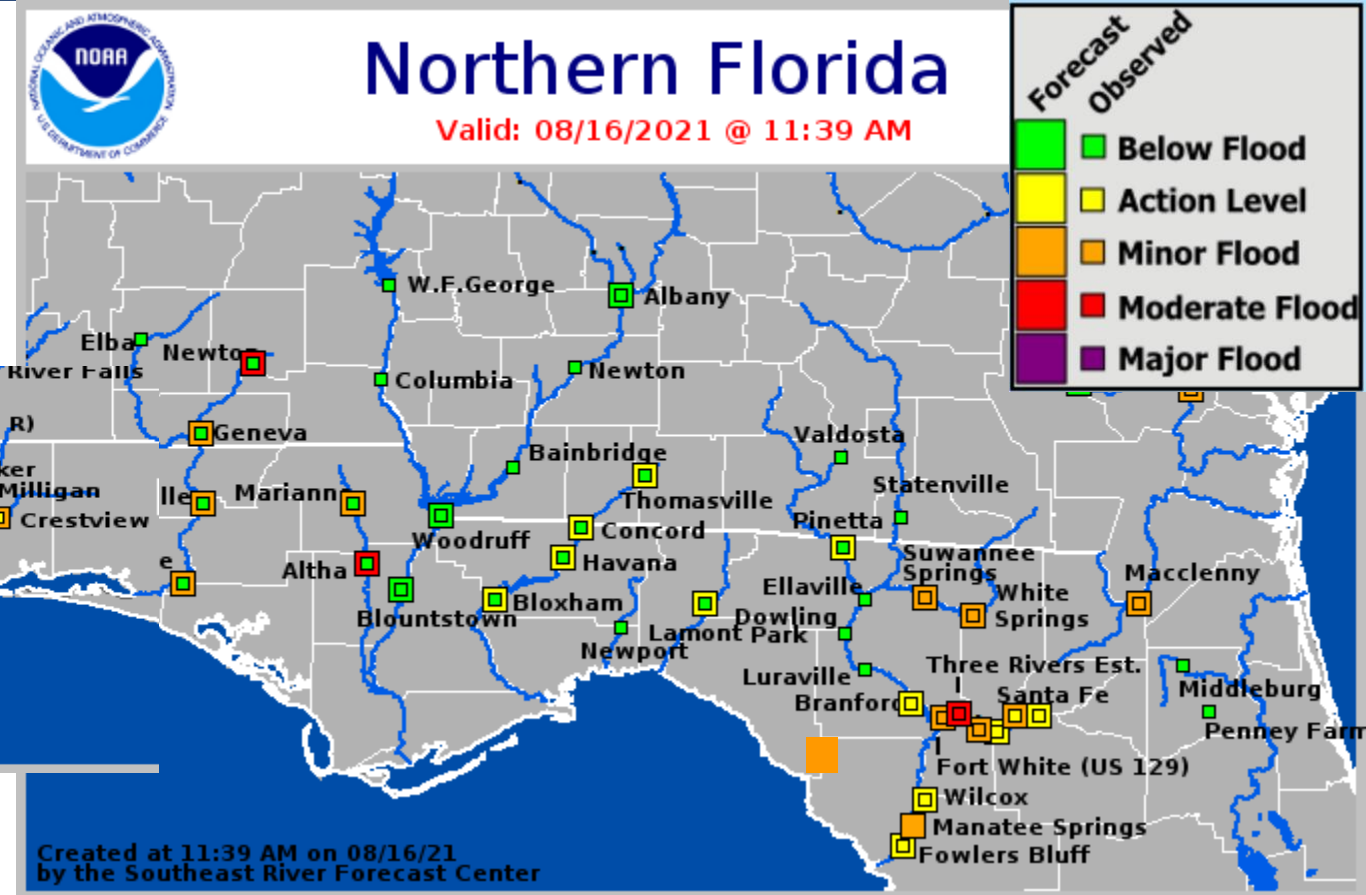
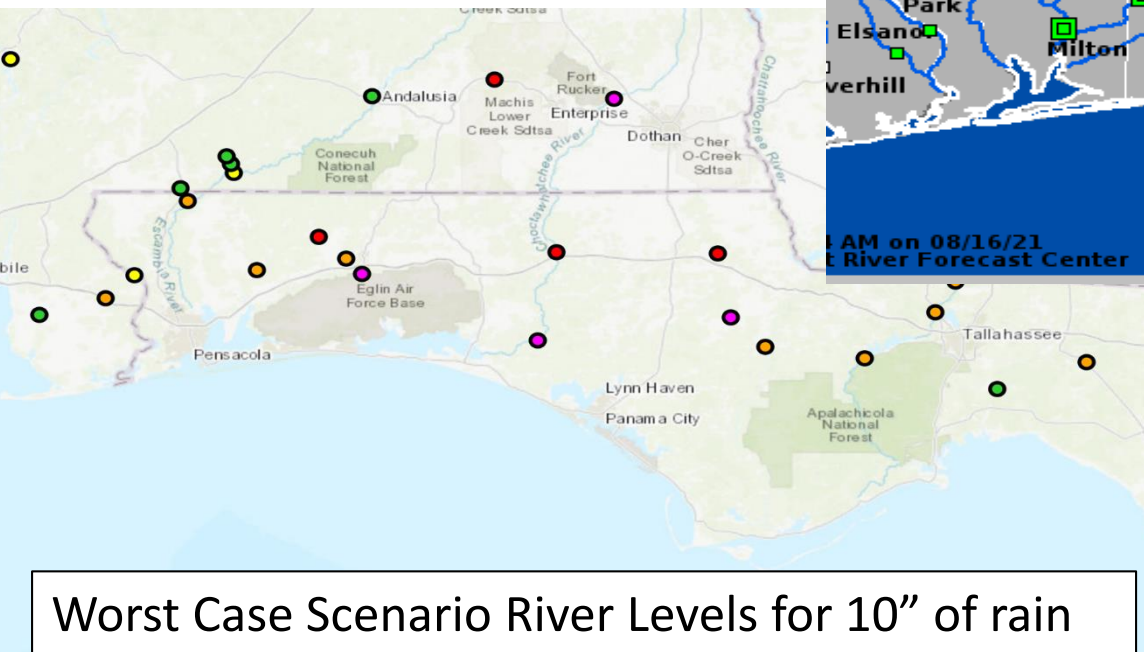
- **Flash Flood Watch** until Tuesday afternoon for the Panhandle.



Current & Forecast River Flooding

Southeast River Forecast Center

Extensive river flooding will continue across Northeast Florida this week. Heavy rain could fall on rivers already in minor to moderate flood stage which could prolong or worsen flooding. Minor flooding is ongoing along the West Coast as well. **Minor to moderate flooding is also possible in the Panhandle, but rivers here are starting out lower than those in the rest of the state.**



More details on river levels available at the [Southeast River Forecast Center website](#).



Tornado Watch

From the Storm Prediction Center

Tornado Watch

Valid Until
8:00 PM EDT Monday
August 16, 2021

Threat Information



TORNADOES

A few Tornadoes
Possible



HAIL

No Hail Expected



WIND

Isolated Gusts
Up To 70 MPH Possible

Potential Exposure



Population: 995,188
Schools: 339
Hospitals: 32



Tornado Watch #441

Until 8 PM ET / 7 PM CT

Isolated tornadoes will be possible in the outer bands of Fred in the Panhandle, Big Bend, and into the Nature Coast and Northeast Florida.

Additional watches could be issued later today or tonight.



Key Messages

From the National Hurricane Center



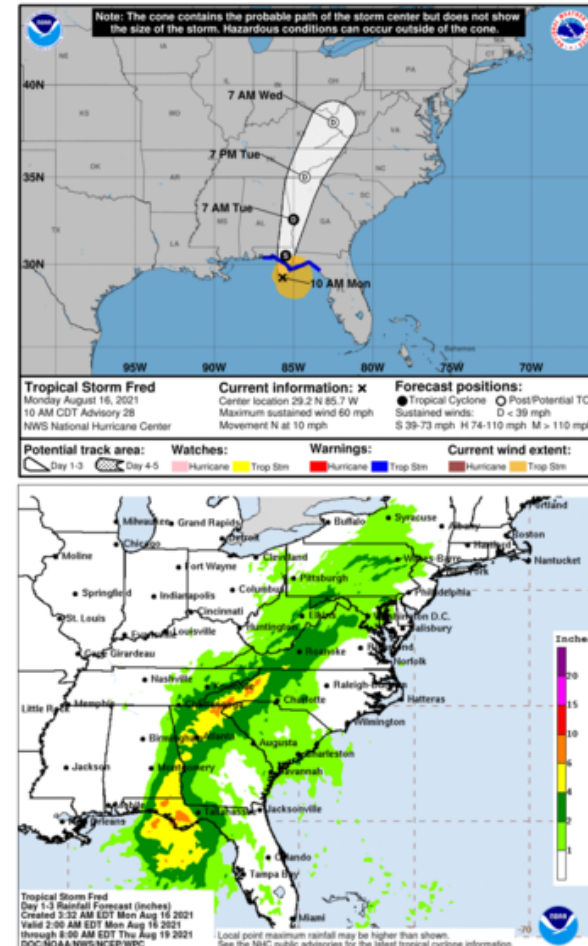
Key Messages for Tropical Storm Fred Advisory 28: 10:00 AM CDT Mon Aug 16, 2021



1. Through Tuesday, heavy rainfall may lead to flash, urban, small stream, and isolated river flooding impacts across the Southeast. By the middle of the week as Fred lifts north and inland, heavy rainfall and flooding will impact the southern and central Appalachians, the Piedmont of the Southeast and Mid-Atlantic. Landslides are possible across the mountains of North Carolina and Blue Ridge Escarpment on Tuesday.

2. Dangerous storm surge inundation is expected along portions of the coast of the Florida Panhandle and the Florida Big Bend region. Preparations to protect life and property should be rushed to completion in the Storm Surge Warning area.

3. Tropical storm conditions are occurring in the warning area and will spread farther inland later today and tonight across portions of the Florida Panhandle, southwestern Georgia, and southeastern Alabama.



For more information go to hurricanes.gov



Overall Summary

Tropical Storm Fred:

- The center of Fred is located about 55 miles south of Apalachicola, Florida.
- Maximum sustained winds are around 60 mph with higher gusts, and Fred is moving to the north at 10 mph.
- Fred will make landfall late this afternoon in the Florida Panhandle (likely Bay or Gulf County) with maximum sustained winds around 65 mph.
- Fred is lopsided, with most of the impacts (wind, rain, tornadoes, and surge) on the eastern side of the storm. **These impacts will extend well outside of the cone.**
- Tropical storm force winds extend out about 115 miles to the east of the center.

Florida Outlook:

- **Tropical Storm Warnings** have been issued for the Panhandle: Bay, Calhoun, Franklin, Gadsden, Gulf, Holmes, Jackson, Jefferson, Leon, Liberty, Okaloosa, Taylor, Wakulla, Walton, and Washington County.
- Sustained winds of 40-60 mph are possible in the warning areas, with gusts from 60-70 mph Monday evening and Monday night as a worst case scenario.
- **Storm Surge Warnings** are now in effect for coastal portions of Dixie, Franklin, Jefferson, Levy, Taylor, and Wakulla. Storm surge of 3-5' is expected from Indian Pass to the Steinhatchee River, with 2-4' further east to Yankeetown. 1-3' is expected across the rest of the Florida Panhandle and Nature Coast.
- *Apalachicola is currently experiencing gusts from 30-55 mph and storm surge of about 2.5'.*
- The main threat to Florida from Fred is heavy rainfall. A widespread 4-8" of rain with localized totals of 12" is anticipated across the Panhandle and western Big Bend. **Flash Flood Watches** are in effect for this region until Tuesday evening.
- Widespread minor to moderate river flooding will continue this week in Northeast Florida, and may develop in the Panhandle based on current forecasts. In areas that see more than 10" of rain, moderate to major flooding can't be ruled out!
- Isolated tornadoes are also possible in the Panhandle, Big Bend, and Northeast Florida today. A **Tornado Watch** is in effect until 8 PM ET.
- High surf (8-12') in the Panhandle will cause beach erosion. Dangerous rip currents are expected at all Florida beaches today.
- Other than some squally weather in the Keys on Wednesday, Grace is not expected to impact Florida. The track has trended south- away from South Florida.
- Tropical Depression Eight near Bermuda poses no threat to Florida over the next 5 days, but swells from the system could impact Northeast Florida beaches.

Another briefing packet will be issued this afternoon with the 5 PM advisory. For the latest information on the tropics, please visit the National Hurricane Center website at www.hurricanes.gov.



TROPICAL UPDATE



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State Meteorological Support Unit

Florida Division of Emergency Management

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