



# Tropical Storm Beryl Briefing

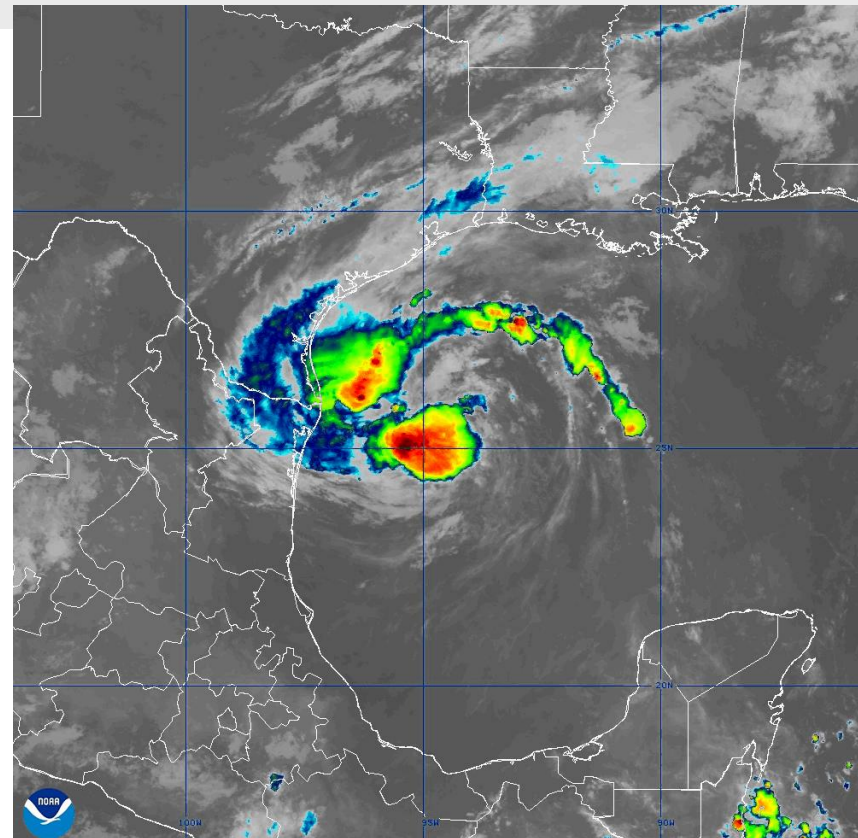
11 AM Sunday, July 7th, 2024

NWS Houston/Galveston



# Situation Overview

- Tropical Storm Beryl continues to track NW across the Gulf toward the Texas coast with the expected landfall near or just east of Matagorda Bay.
- Currently a 60 mph tropical storm, Beryl is forecast to make landfall as an 85 mph hurricane (Cat 1). Best to prepare for 1 category higher as rapid intensification possible prior to landfall.
- Tropical Storm Warnings now for all inland counties previously uncovered. Other wind-related watches/warnings unchanged.
- Flood Watch expanded to include entire forecast area.
- No changes to storm surge related watches and warnings.
- Rainfall forecast amounts unchanged: 5 to 10 inches are expected with local amounts up to 15 inches where the heaviest rainfall occurs.
- Rip currents and elevated seas are likely.
- Possibly a few tornadoes in bands starting this afternoon.



07 Jul 2024 09:50Z - NOAA/NESDIS/STAR - GOES-East - Band 11 - AL022024



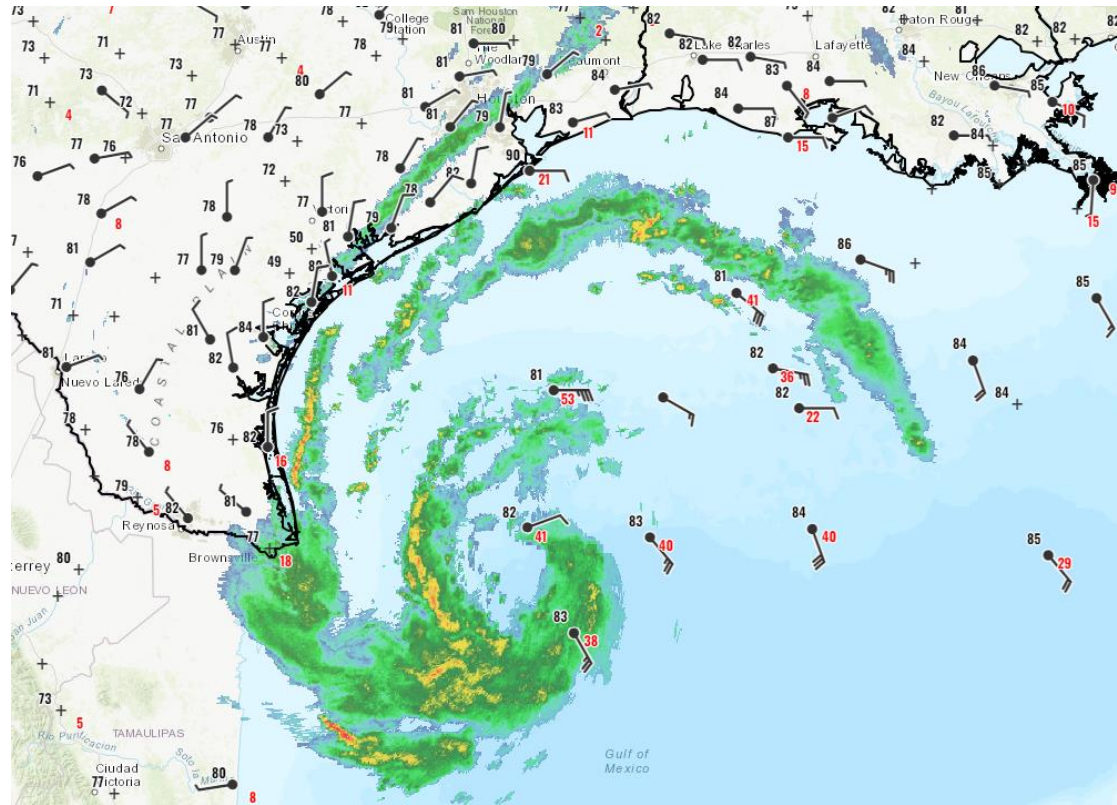
# Latest Radar/Observations

## Beryl

Tropical Storm with partially closed eyewall and spiral bands visible on radar, satellite.

TS force winds extend well away from center (wind gusts shown in red).

Larger wind field and eastward nudge to track suggest larger area of impact and increased storm surge.



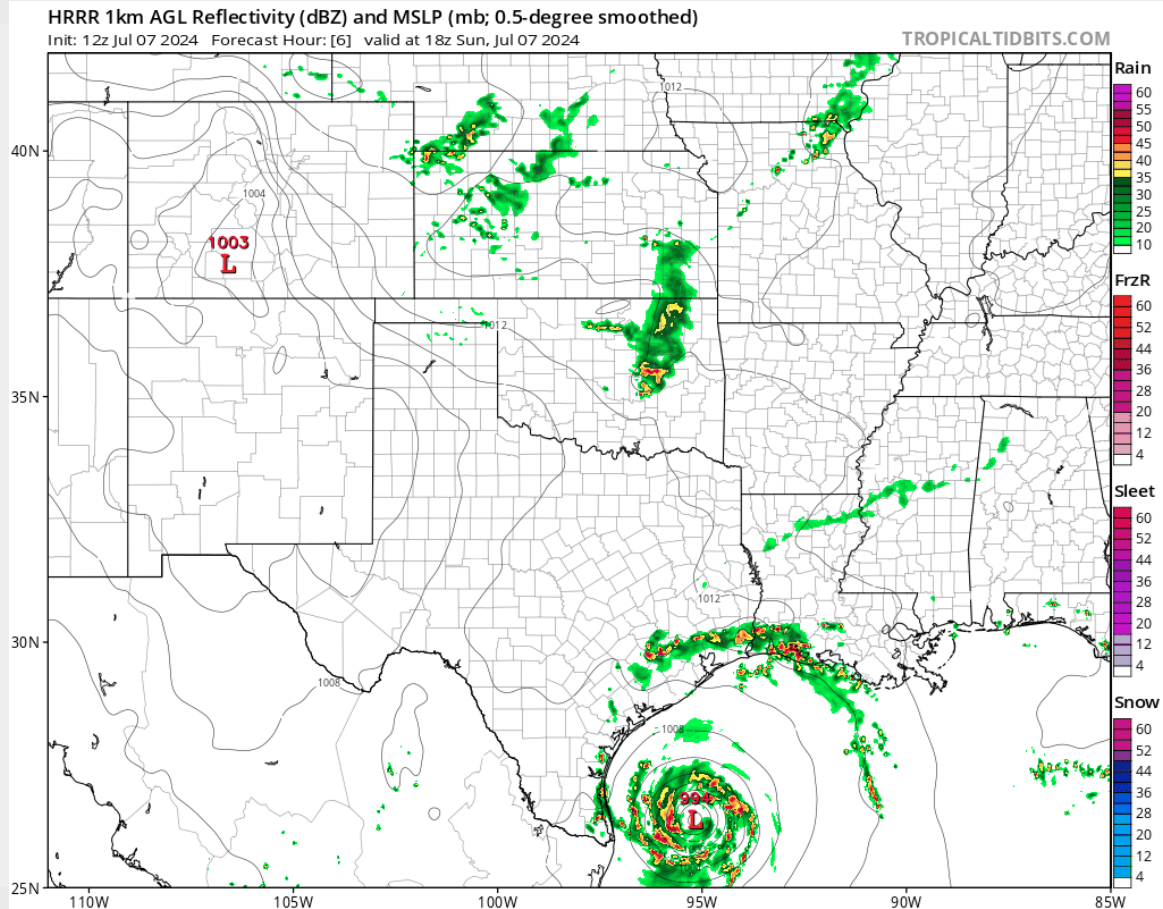


# Rainfall Timing (DO NOT FOCUS ON DETAILS)

Model forecasted radar from 12Z HRRR model for this afternoon through midnight Monday night.

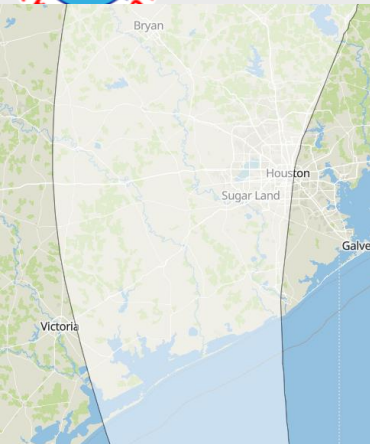
Important not to focus on details (including track) but gives a sense of the timing, structure, banding.

High, potentially damaging winds around center, gusty winds, brief tornadoes potentially in the bands. Heavy downpours, flash flooding.

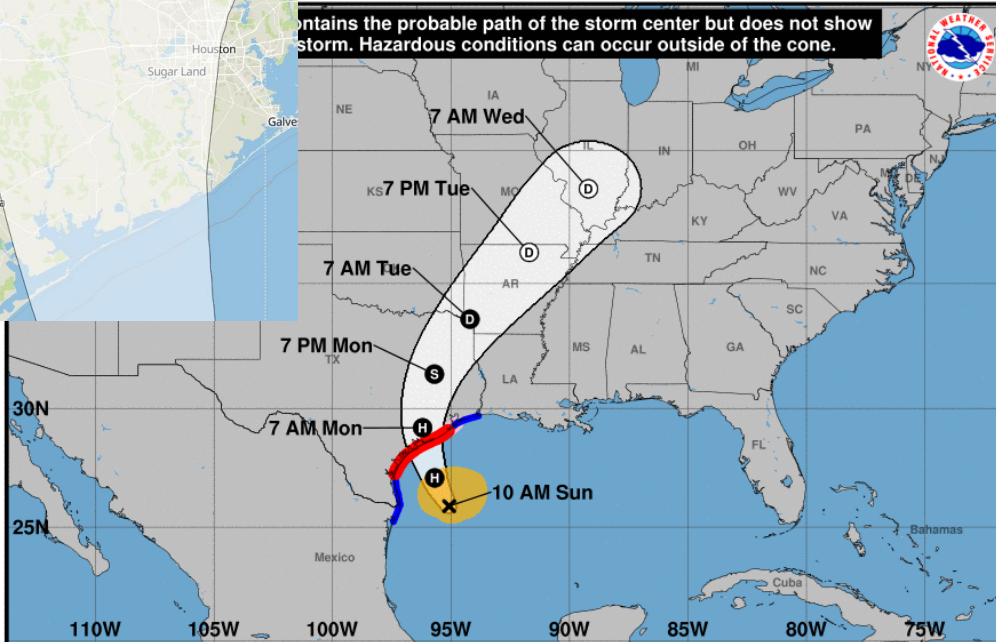




# Tropical Storm Beryl



contains the probable path of the storm center but does not show storm. Hazardous conditions can occur outside of the cone.



### Tropical Storm Beryl

Sunday July 07, 2024  
10 AM CDT Advisory 36  
NWS National Hurricane Center

### Current information: x

Center location 25.9 N 95.1 W  
Maximum sustained wind 65 mph  
Movement NW at 10 mph

### Forecast positions:

● Tropical Cyclone ○ Post/Potential TC  
Sustained winds: D < 39 mph  
S 39-73 mph H 74-110 mph M > 110 mph

### Potential track area:

Day 1-3

Day 4-5

### Watches:

Hurricane Trop Stm

### Warnings:

Hurricane Trop Stm

### Current wind field estimate:

Hurricane Trop Stm

- Slight shift eastward compared to yesterday for potential landfall location – now possibly in Matagorda County.
- **Hurricane Warnings** (red) from Baffin Bay to San Luis Pass.
- **Tropical Storm Warnings** (blue) from San Luis Pass to High Island.
- **Hurricane Watch** (shown in pink) and **TS Warning** together from San Luis Pass through Galveston Island.
- Confidence in track continues to increase but changes could still occur. Stay tuned!
- Note: The cone only shows the probable path of the storm center – impacts will be felt well outside the cone.



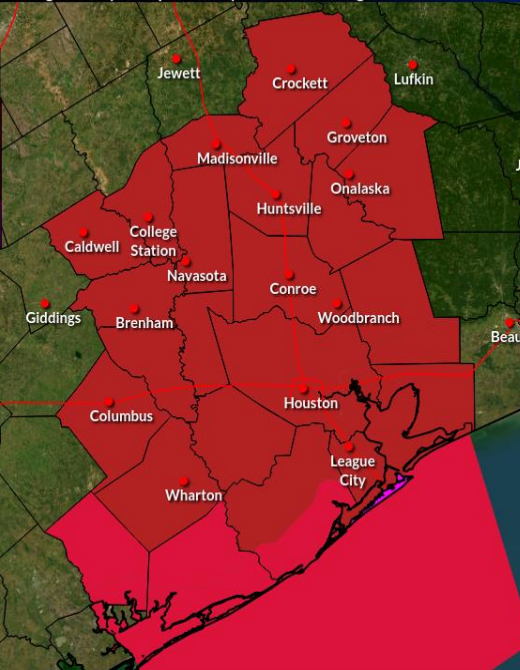
# Watches and Warnings

## Maps Showing Various Wind and Surge Flooding Related Warnings and Watches

### Tropical Storm Beryl - Hazards

Strong Winds | Heavy Rainfall | Coastal Flooding

Weather Forecast Office  
Houston/Galveston TX  
Issued Jul 07, 2024 10:33 AM CDT



#### HURRICANE WARNING

Sustained winds of 75 - 85+ mph with higher gusts are expected tonight into Monday.

#### TROPICAL STORM WARNING

Sustained winds of 39 to 73 mph with higher gusts are expected tonight into Monday.

#### HURRICANE WATCH

Sustained winds of 74 - 85 mph are possible.

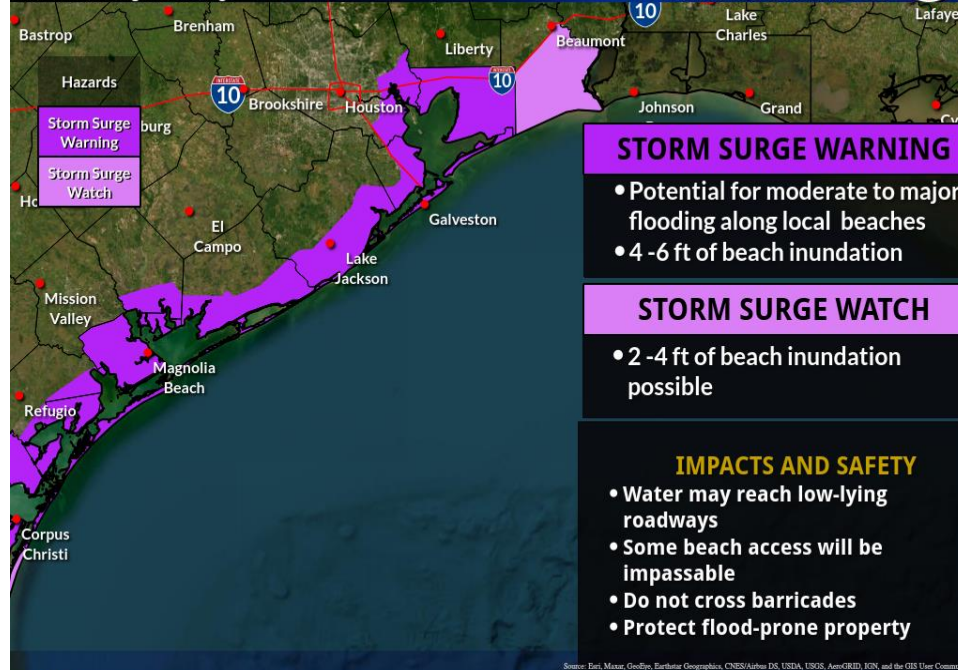
- Warnings and Watches are in effect through Monday.
- Be prepared and follow local official's guidance.

Source: Eri, Manz, GeoByz, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

### Tropical Storm Beryl - Hazards

Life-Threatening Storm Surge

Weather Forecast Office  
Houston/Galveston TX  
Issued Jul 06, 2024 10:29 PM CDT



Hazards  
Storm Surge Warning  
Storm Surge Watch

#### STORM SURGE WARNING

- Potential for moderate to major flooding along local beaches
- 4 - 6 ft of beach inundation

#### STORM SURGE WATCH

- 2 - 4 ft of beach inundation possible

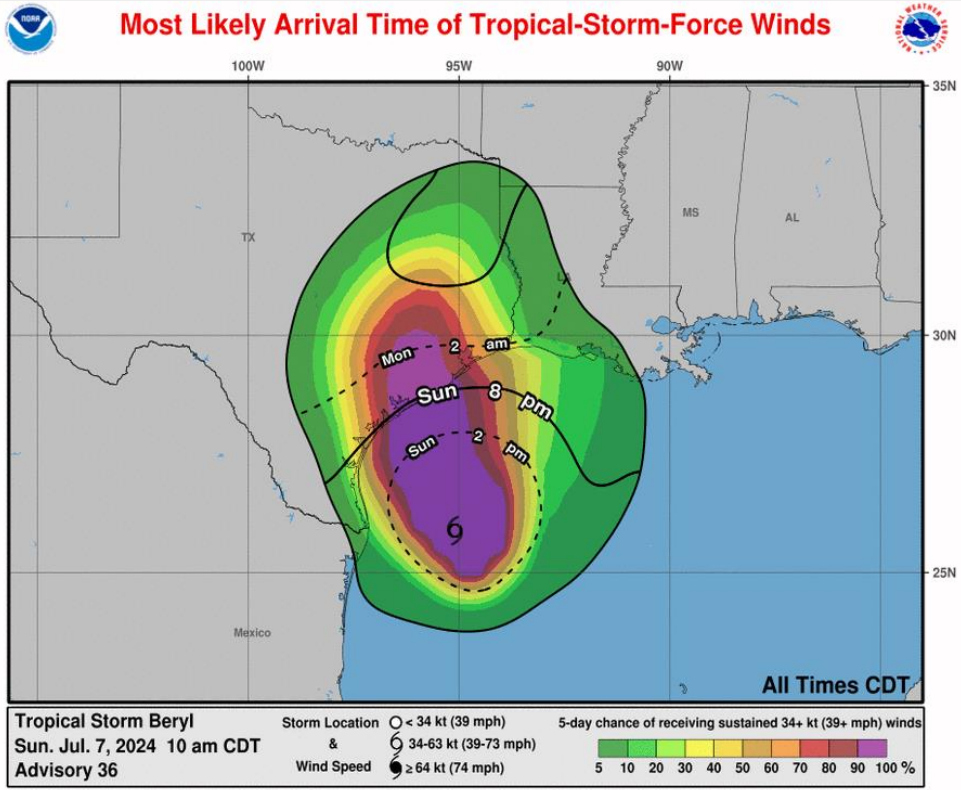
#### IMPACTS AND SAFETY

- Water may reach low-lying roadways
- Some beach access will be impassable
- Do not cross barricades
- Protect flood-prone property

Source: Eri, Manz, GeoByz, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



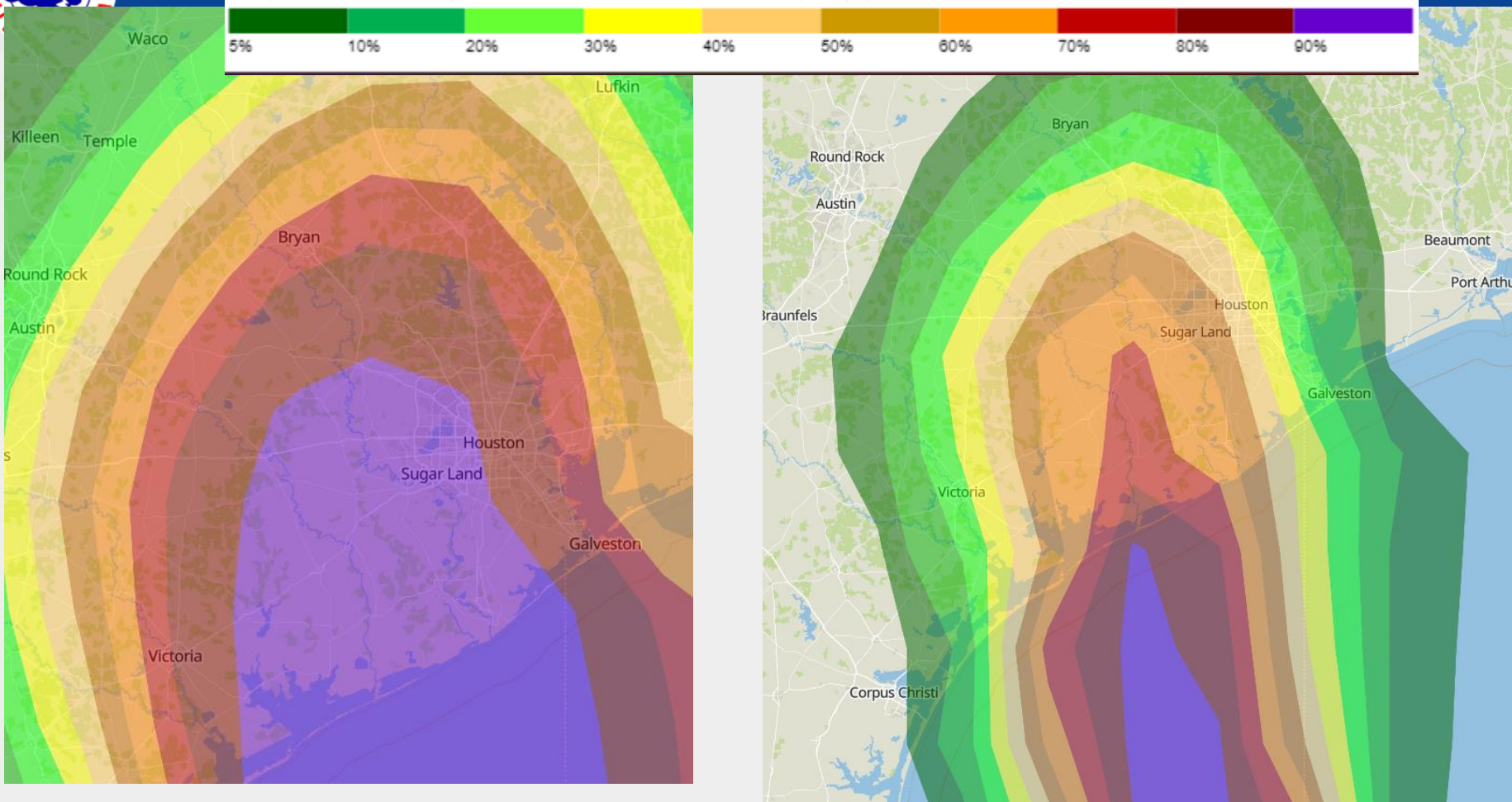
# Most Likely Time of Arrival of TS Force Winds



- Most likely time of arrival of TS force winds will be this evening at the coast, overnight inland
- Note the high probabilities cover a large area and extend well inland! Storm is larger than forecast yesterday morning, wind probabilities reflect that.



# Wind Speed Point Probabilities: Sustained >39 mph left, >58 mph right





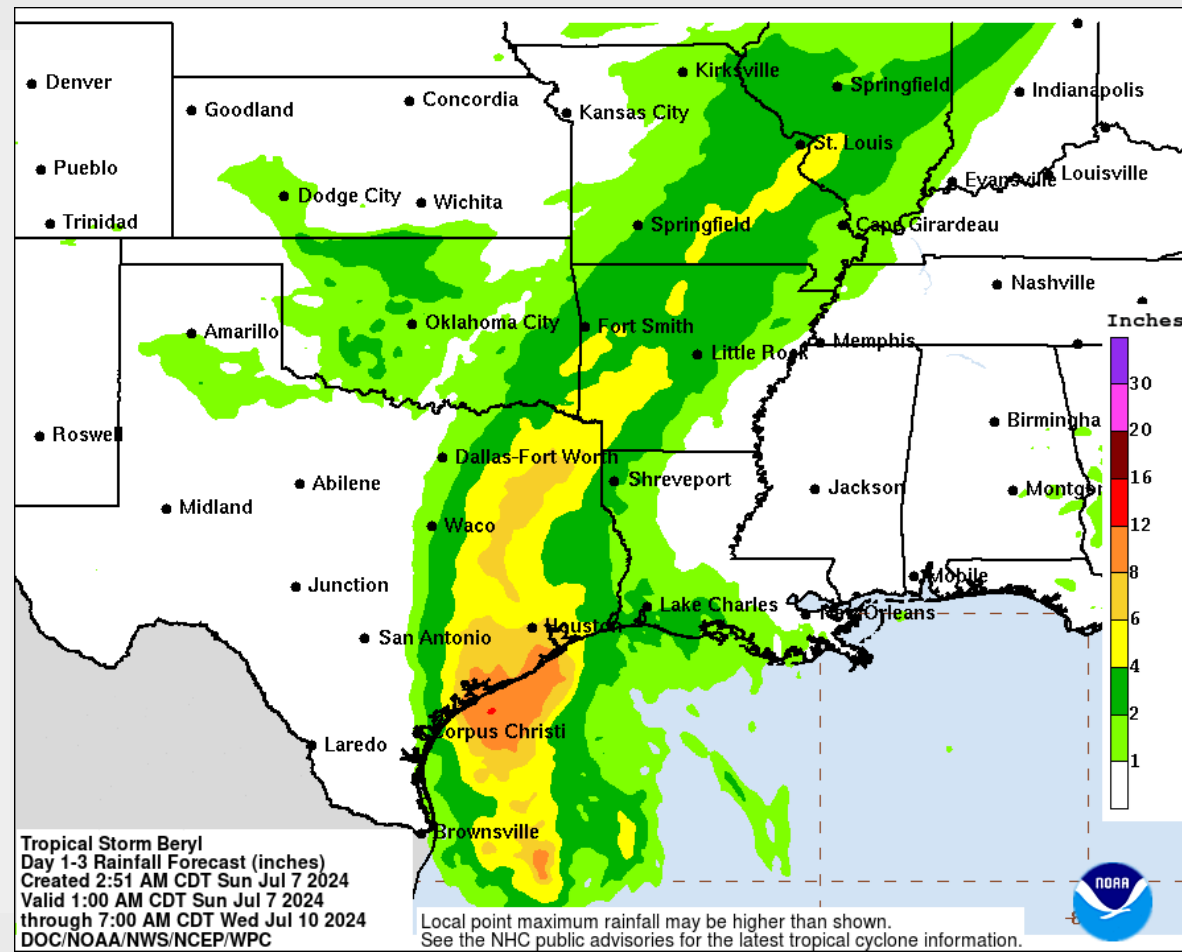


# Rainfall Forecast

**Storm total rainfall amounts of 5 to 10 inches with localized higher amounts expected. Beginning today (some bands already ongoing).**

**Period of heaviest rain tonight into Tuesday.**

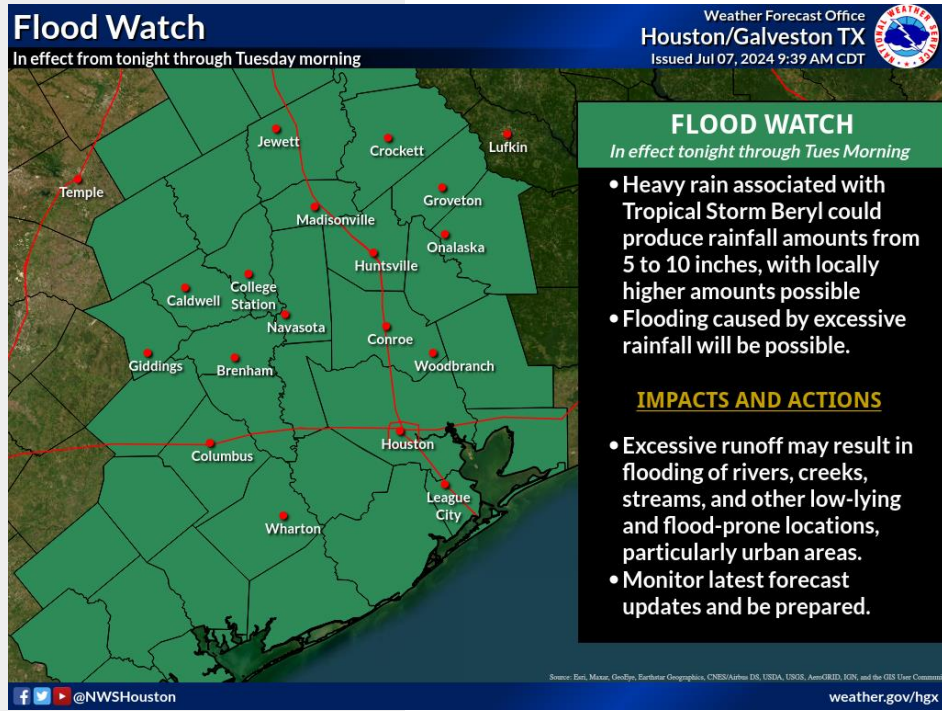
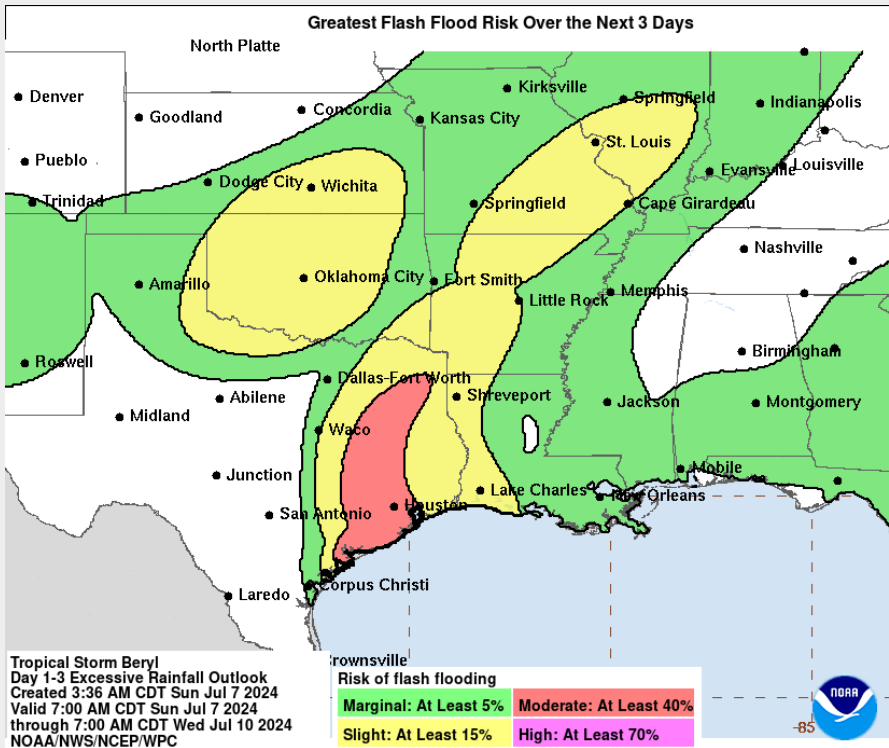
**The heaviest band will be generally near or right of the center track.**





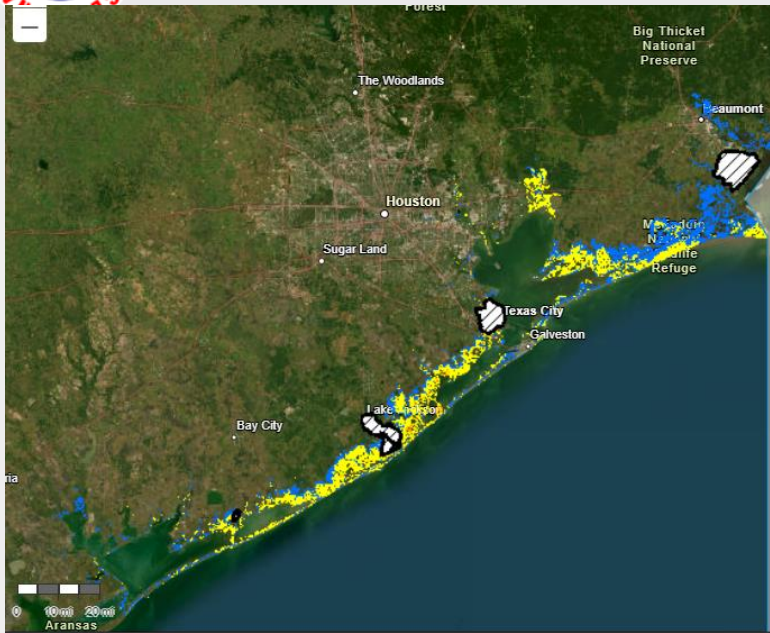
# Excessive Rainfall Outlook/Flood Watch

Main heavy rain/flash flood threat will be tonight into Tuesday for the local area. Risk rated as Moderate for western counties which will be closer to the track, highest rainfall.





# Potential Storm Surge Flooding, Peak Surge Above Ground

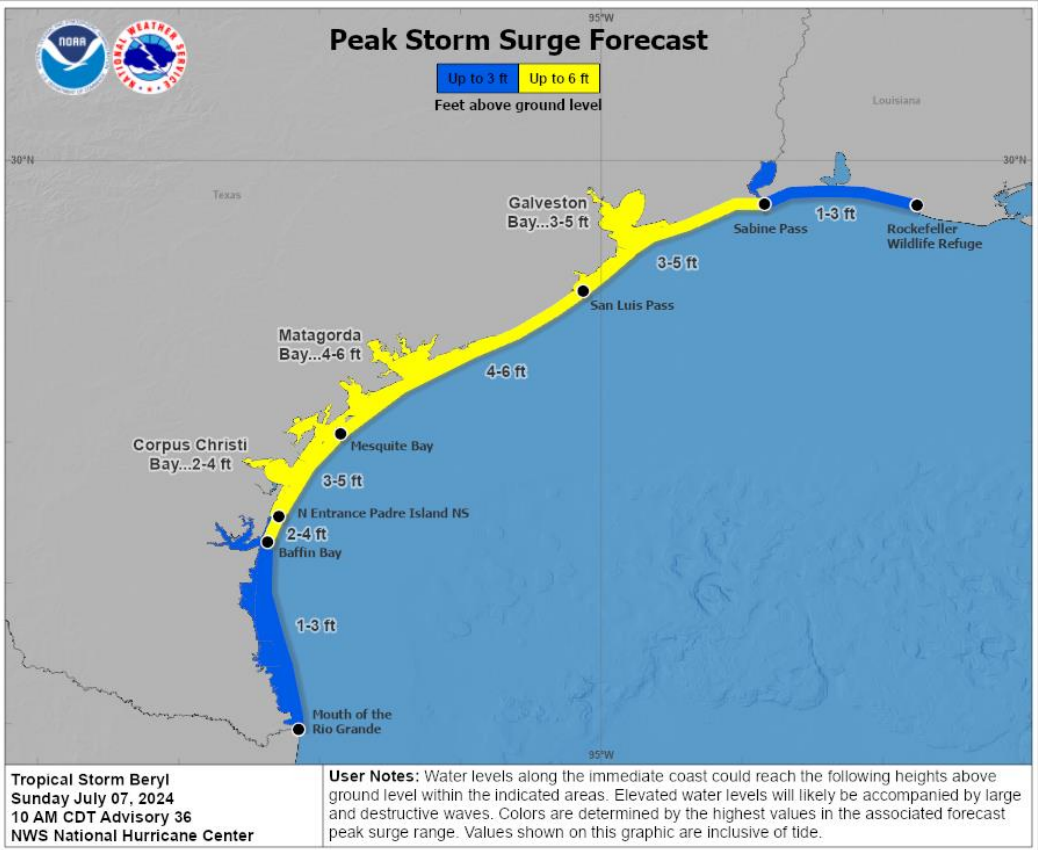


## Potential Storm Surge Flooding\*

- Intertidal Zone/Estuarine Wetland
- Greater than 1 foot above ground
- Greater than 3 feet above ground
- Greater than 6 feet above ground
- Greater than 9 feet above ground
- Leveed area
- Consult local officials for flood risk

### Map Layer Options:

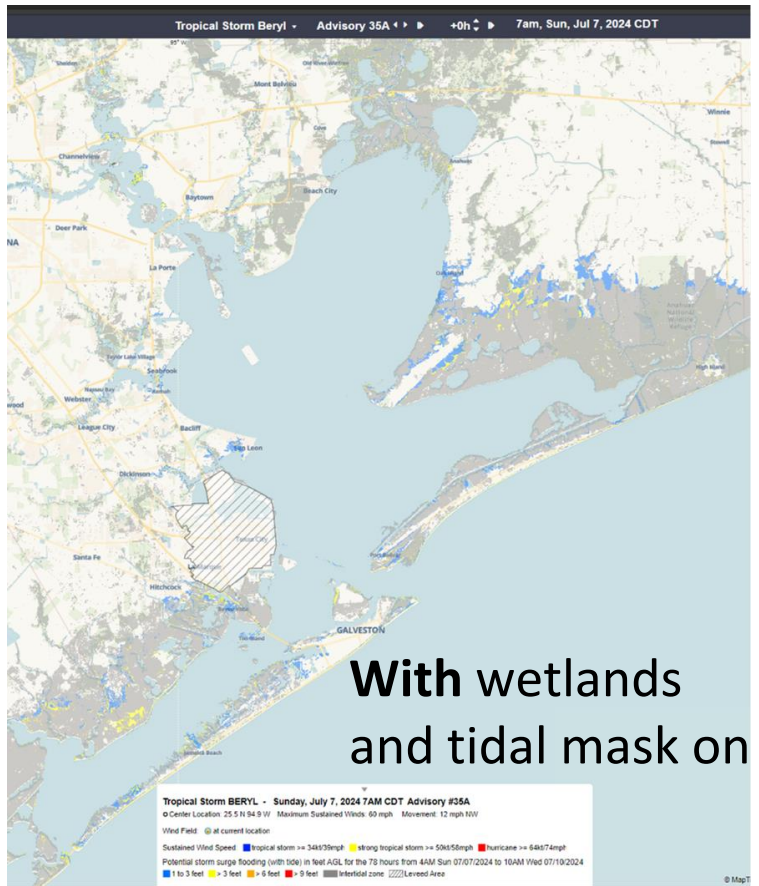
Inundation Layer Only  Inundation with Intertidal Layer





# Potential Storm Surge Inundation

## Tropical Storm Beryl - Galveston Bay

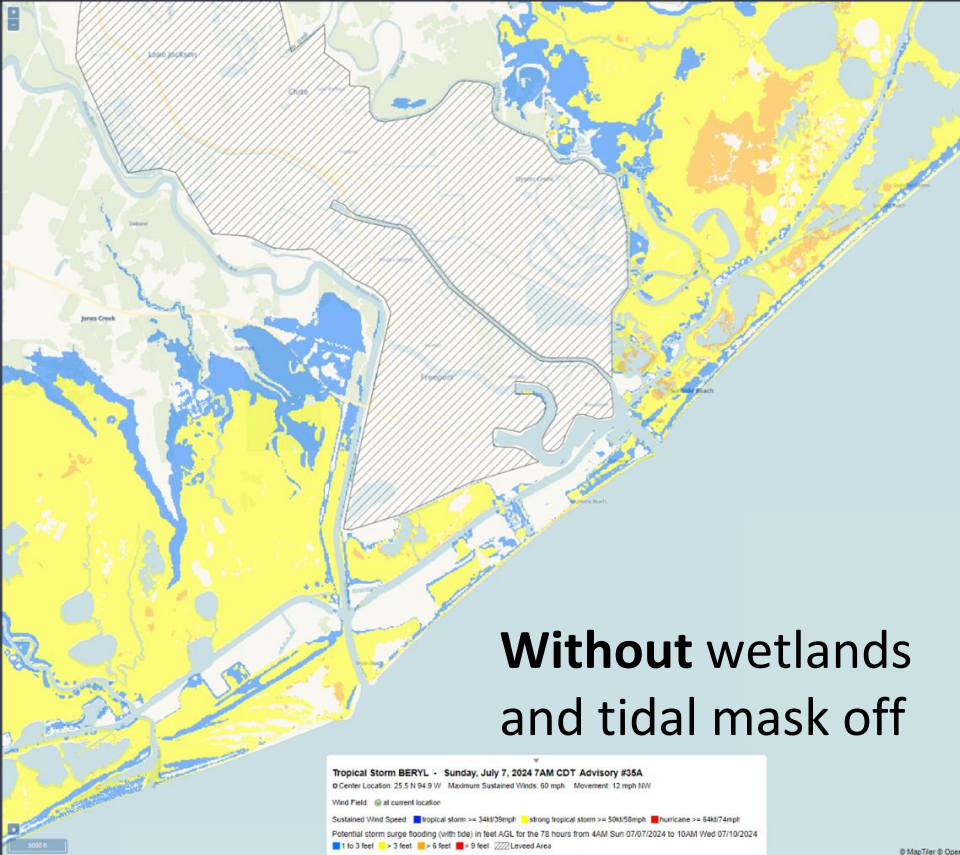




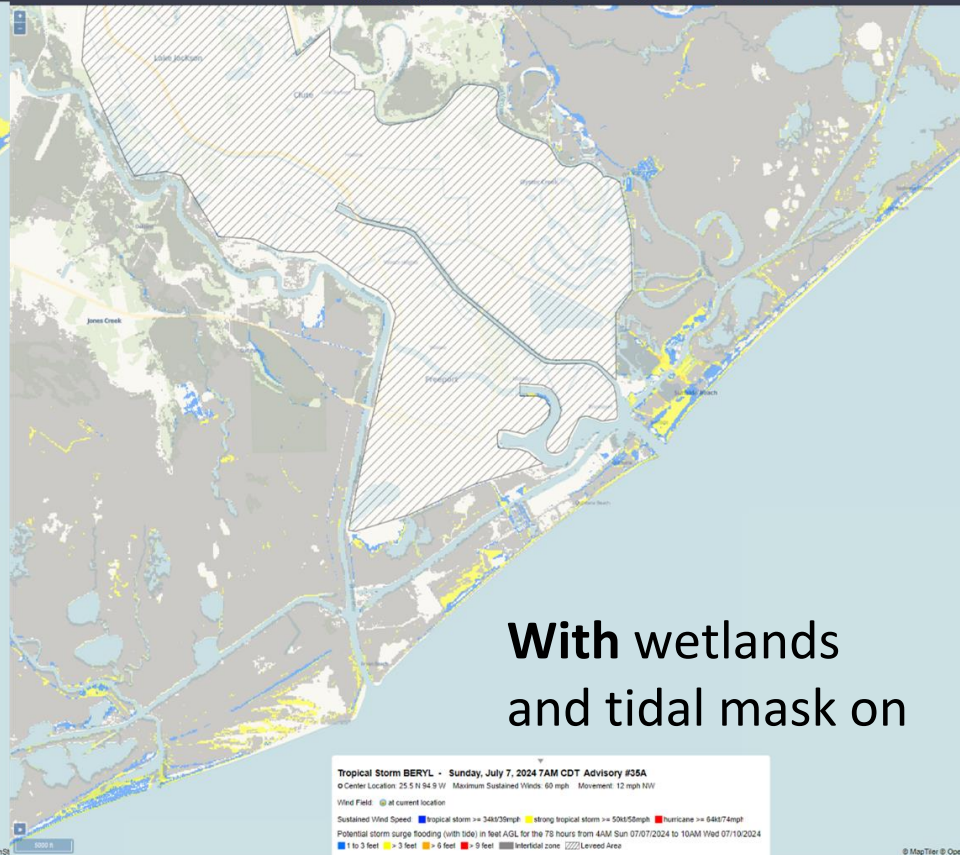
# Potential Storm Surge Inundation

## Tropical Storm Beryl - Freeport

Tropical Storm Beryl - Advisory 35A 7am, Sun, Jul 7, 2024 CDT



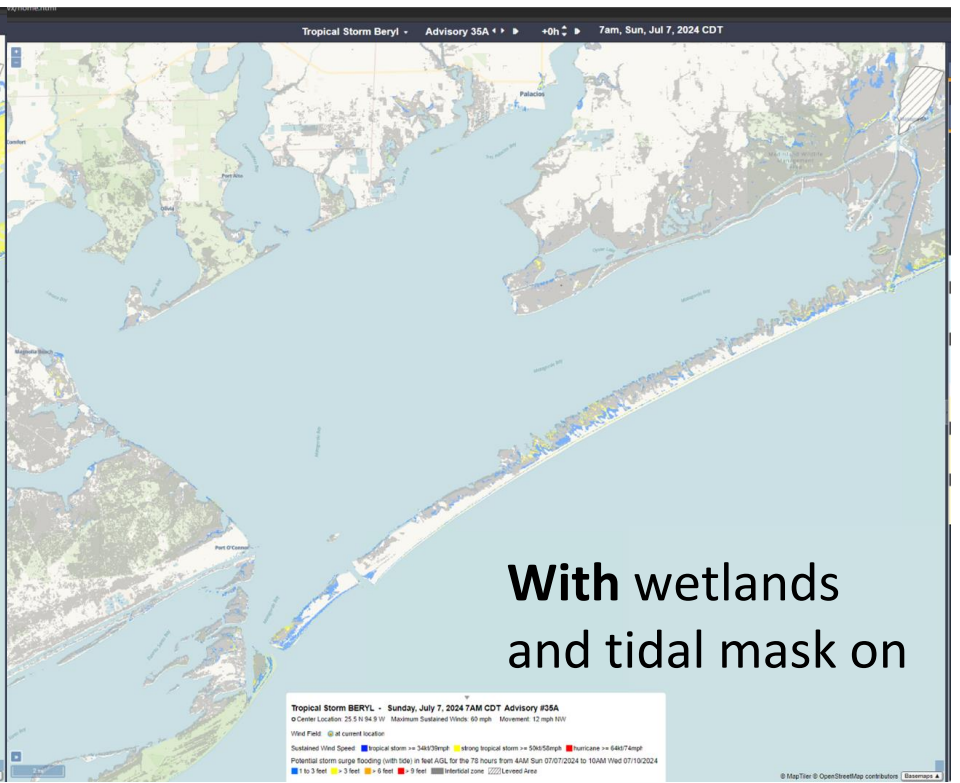
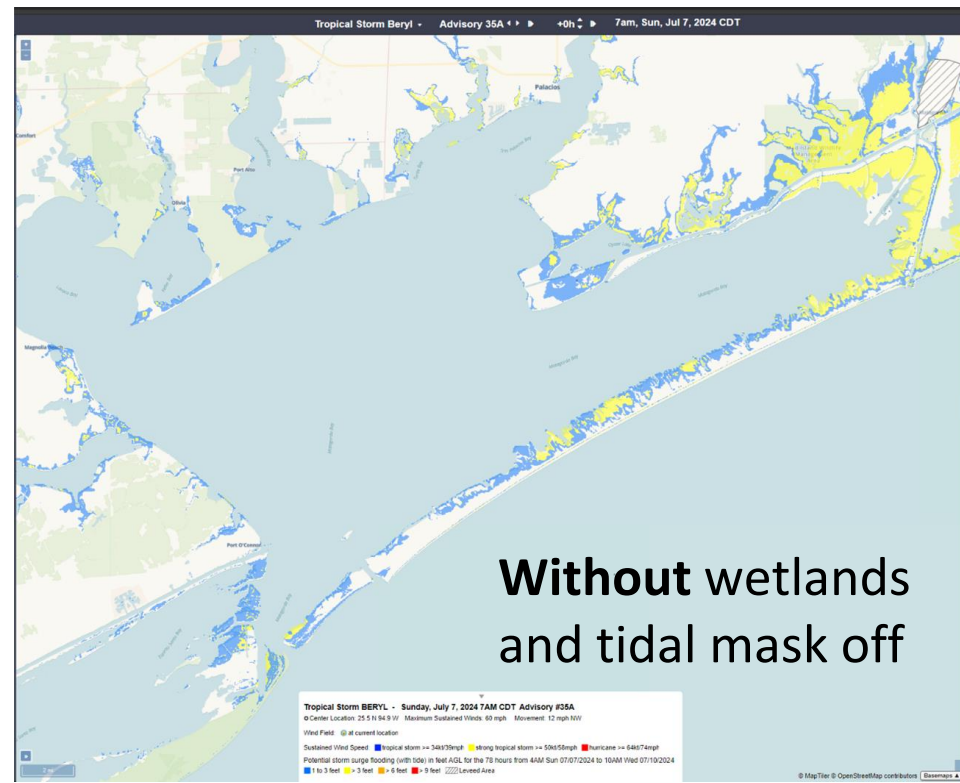
Tropical Storm Beryl - Advisory 35A 7am, Sun, Jul 7, 2024 CDT





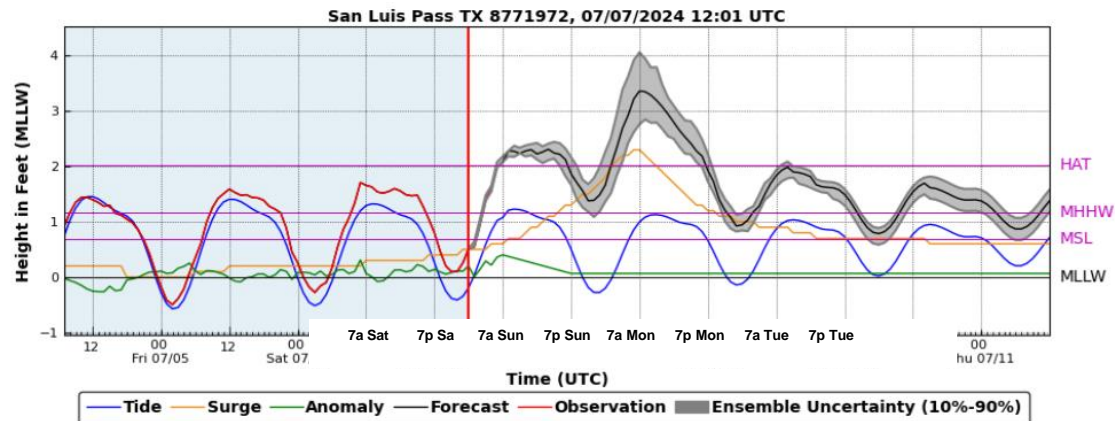
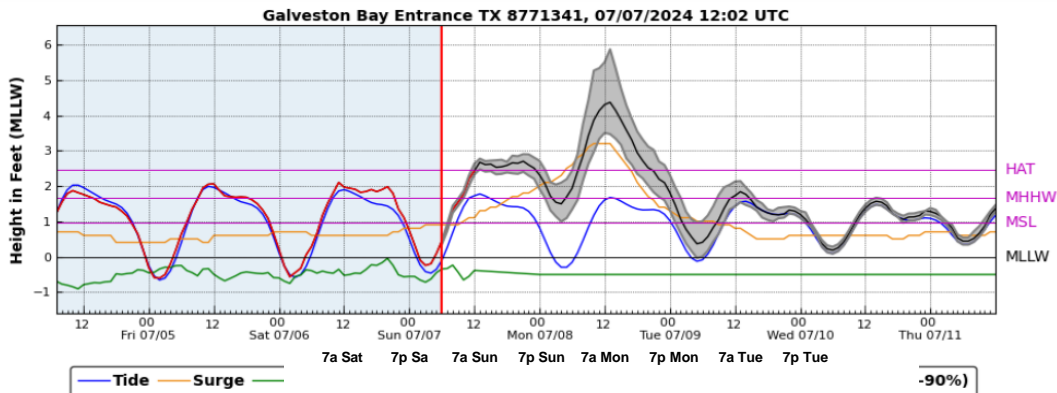
# Potential Storm Surge Inundation

## Tropical Storm Beryl - Matagorda Bay





# Tide Forecast – Probabilistic Model (PETSS)

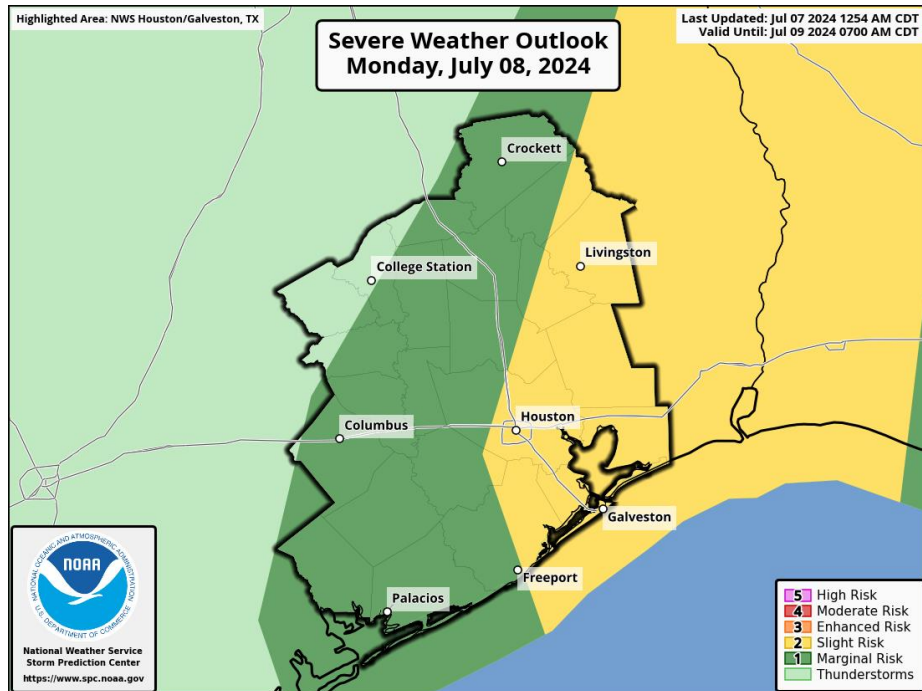
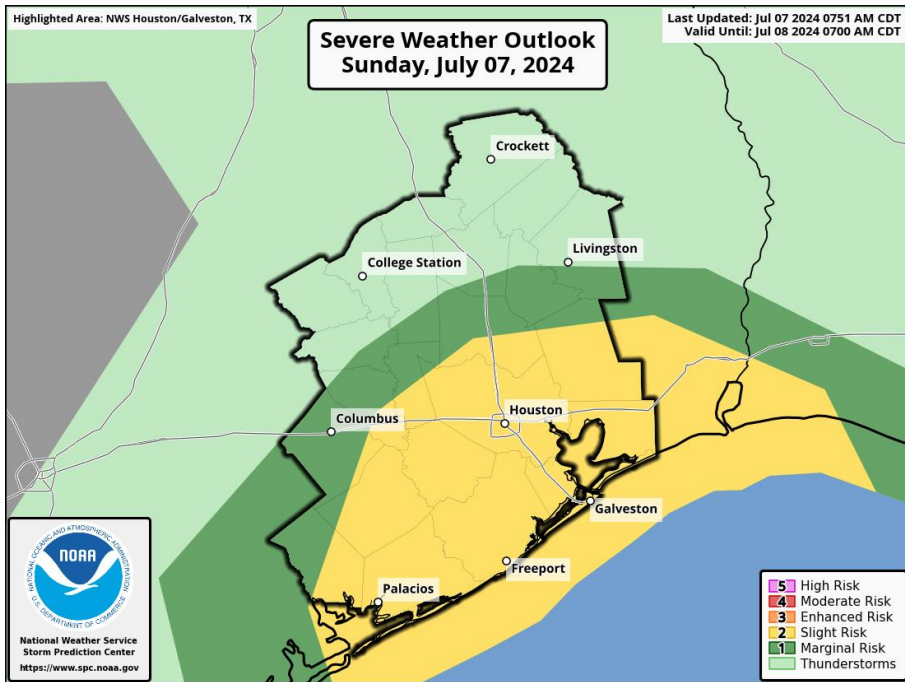


- Water levels shown are relative to MLLW. Note the values up to 6 feet above MLLW around Galveston Bay.
- Elevated tides are expected today, but the highest water levels are expected on Monday.
- Graphics are meant to show timing. For peak values refer to National Hurricane Center guidance which is superior for this type of storm.



# Tornado Risk

Brief tornadoes possible in spiral bands this afternoon through Monday.



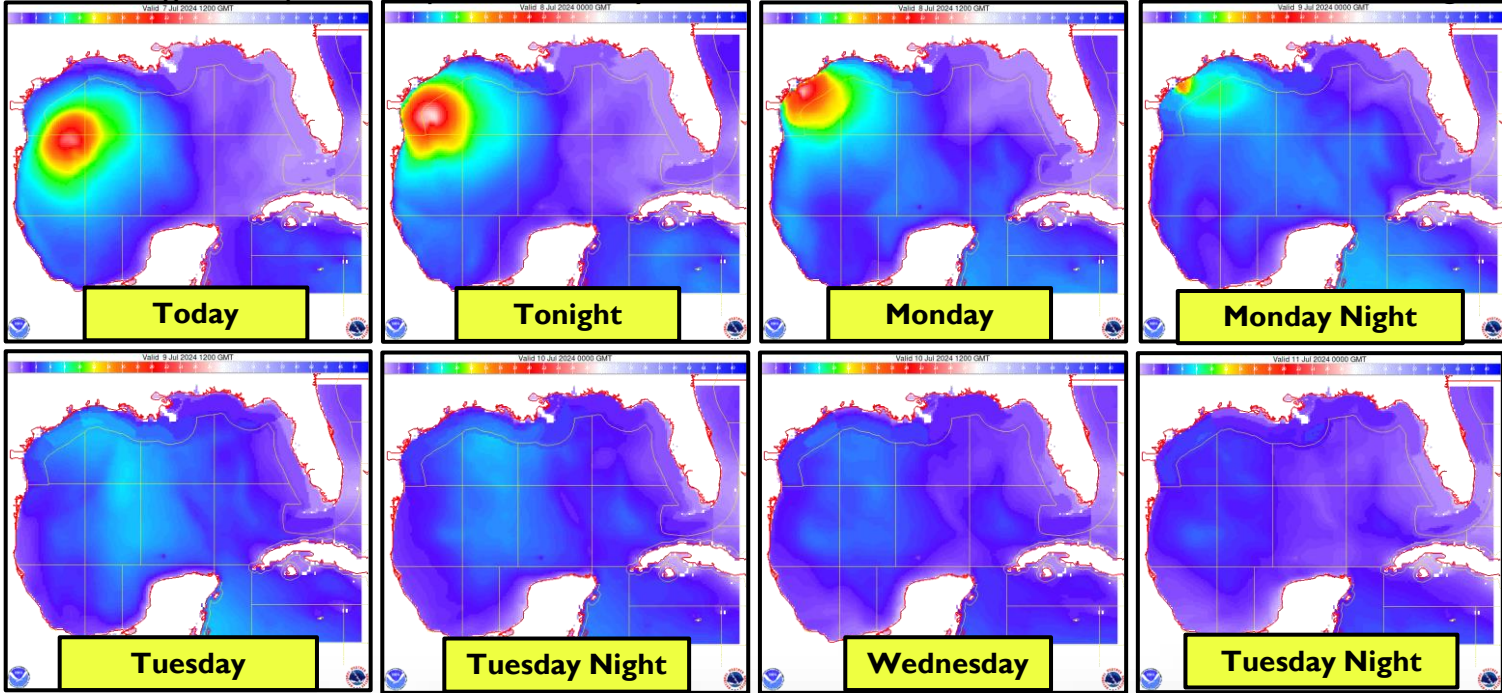




# Forecast Wave Heights: Gulf of Mexico

See <http://www.hurricanes.gov> for the latest on the tropics or any active storms

Offshore wave heights of up to 30 ft possible as Beryl nears the Texas Coastal Bend and South Texas on tonight and Monday.





# For Marine Planning Purposes...

Tropical Storm Beryl

## Seas:

- ❑ Arrival of 6+ foot seas: **within 20 nm this morning**
- ❑ Arrival of 15+ foot seas: **this afternoon >20 nm offshore, within 20 nm tonight**
- ❑ Peak seas: 20-30 feet near mid-Texas coast.
- ❑ Potential improvement (seas < 6 feet nearshore): **Tuesday morning**

## Winds:

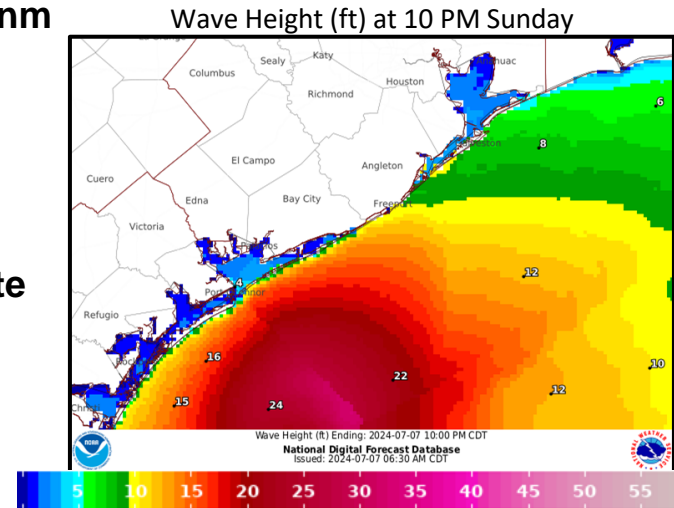
- ❑ Onset of sustained TS winds (34kt+): **this evening for mid coast, late evening/early tonight for upper coast.**
- ❑ Onset of hurricane force winds (64kt+): **Monday night for mid coast**
- ❑ Potential improvement (winds <30 kt): Speeds decreasing **late afternoon/eve Monday for coast.**

## Coastal flooding / surge:

- ❑ Water levels will likely begin to **rise on today, peaking Monday morning.**

## Beach:

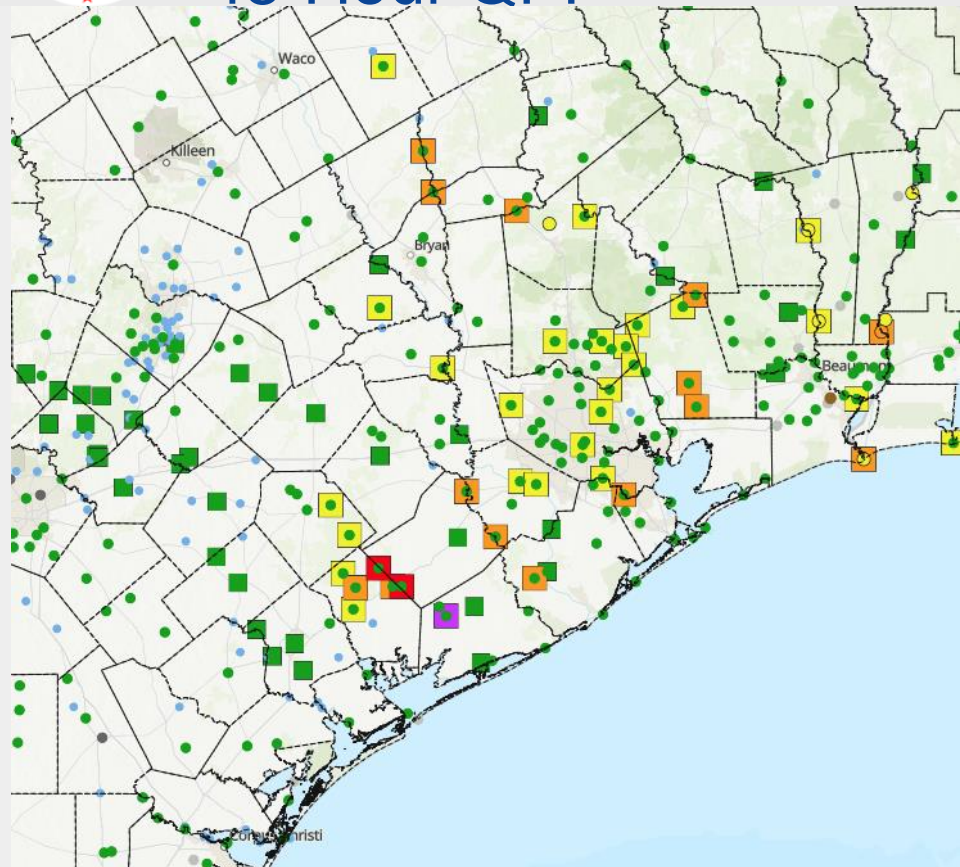
- ❑ Increasing surf and threat for dangerous rip currents: **beginning today.**





# River Forecasts

## 48-Hour QPF



River flooding expected to begin early tomorrow morning and extend into late week.

Focus is on Lavaca/Navidad, Tres Palacios, and San Bernard Rivers.

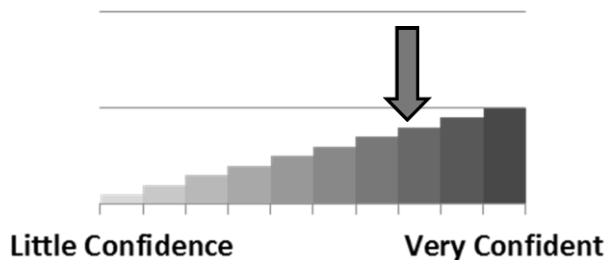
Need to monitor tributaries of Brazos and Trinity Rivers, as well as San Jacinto River/Houston Bayous for any training.



# Key Take-Aways

- Track forecast for Beryl has shifted slightly eastward with a potential landfall along Matagorda County, but shifts in the track remain possible.
- Beryl is a tropical storm now, but forecast to strengthen to a category one hurricane before landfall. Best practice is to plan for one category higher (Category 2).
- A Flood Watch is now in effect for the entire forecast area for tonight through Tuesday. For wind-related warnings, the tropical storm warning has been expanded to include all inland counties previously unwarned. Hurricane Warnings remain in effect for Jackson, Matagorda and Coastal Brazoria with a Hurricane Watch for Galveston Island.
- Isolated tornadoes will be possible starting this afternoon through Monday.

## Forecast Confidence



**Confidence increasing in track and intensity forecasts but changes may still occur. Small shifts could mean significant changes to forecast. Rapid intensification is possible prior to landfall, now within 18 hours. Stay tuned for updates!**



# Local Resources

Next Briefings:  
July 7th, 5:00 PM and 10:30 PM CDT  
Method: Webinar and Email



**Web:** [weather.gov/houston](http://weather.gov/houston)



**Phone:** 281-337-5074



**E-mail:** [sr-hgx.nws@noaa.gov](mailto:sr-hgx.nws@noaa.gov)



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