

## Current Watches and Warnings

A **Hurricane Warning** is in effect from Morgan City, Louisiana (LA) to the Mississippi/Alabama border; Lake Pontchartrain, Lake Maurepas, and Metropolitan New Orleans

A **Storm Surge Warning** is in effect from the mouth of the Atchafalaya River to Navarre, Florida (FL); Lake Borgne, Lake Pontchartrain, Pensacola Bay and Mobile Bay

A **Tropical Storm Warning** is in effect from the Mississippi/Alabama border to Walton/Bay County Line, FL

## Current Details from the National Hurricane Center (NHC)

**COORDINATES:** 29.2° north, 90.6° west

**LOCATION:** 65 miles (100 kilometers) south-southwest of New Orleans, Louisiana

**MOVEMENT:** north-northeast at 24 mph (39 kph)

**WINDS:** 110 mph (175 kph) with gusts to 130 mph (215 kph)

**RADIUS OF TROPICAL STORM-FORCE WINDS:** 150 miles (240 kilometers)

**RADIUS OF HURRICANE-FORCE WINDS:** 35 miles (55 kilometers)

**MINIMUM CENTRAL PRESSURE:** 970 millibars

**SAFFIR-SIMPSON SCALE RANKING\*:** Category 2

**2<sup>nd</sup> LANDFALL LOCATION:** United States (near Cocodrie, Louisiana)

**2<sup>nd</sup> LANDFALL TIMEFRAME:** approximately 4:00 PM local time October 28 (21:00 UTC)

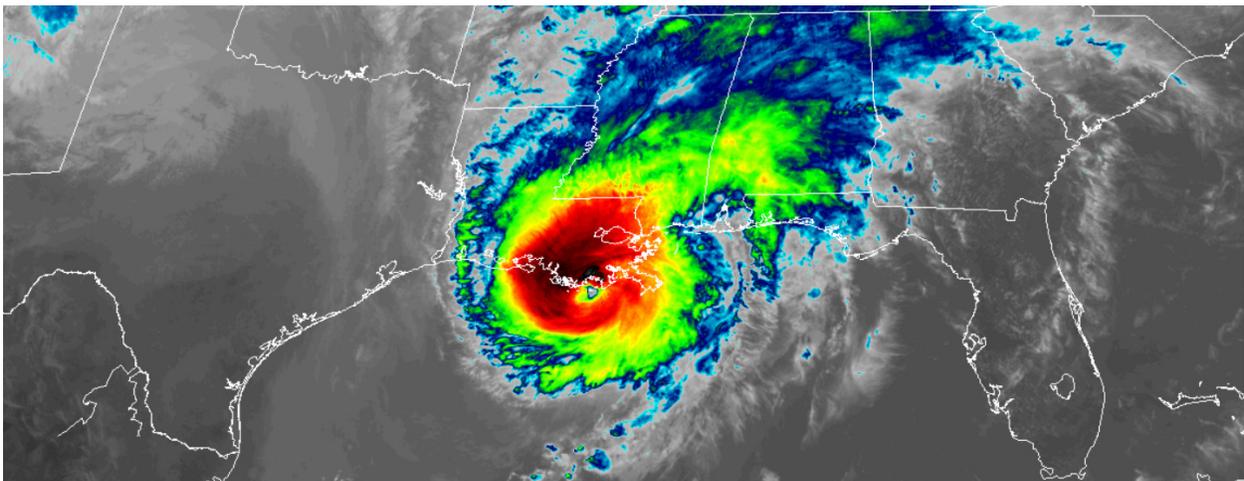
**2<sup>nd</sup> LANDFALL INTENSITY:** 110 mph (175 kph) – Category 2

**1<sup>st</sup> LANDFALL LOCATION:** near Ciudad Chemuyil, Mexico (Yucatan Peninsula)

**1<sup>st</sup> LANDFALL TIMEFRAME:** approximately 11:00 PM local time October 26 (04:00 UTC October 27)

**1<sup>st</sup> LANDFALL INTENSITY:** 80 mph (130 kph) – Category 1

## Latest Satellite Picture



Source: NOAA / NASA / Colorado State University (RAAMB)

# Discussion

Hurricane Zeta, located approximately 65 miles (100 kilometers) south-southwest of New Orleans, Louisiana, is currently tracking north-northeast at 24 mph (39 kph). The center of Zeta is currently in the Terrebone Bay area of Louisiana and is making landfall near the town of Cocodrie. This makes Louisiana the first state on record in the United States to record five separate named storm landfalls (including three hurricanes) in a single season. Zeta has rapidly intensified this afternoon and is nearly a major hurricane. Although the hurricane has been traversing over marginally warm ocean waters, it has intensified by 20 mph (30 kph) in the past 6 hours. It is possible that this intensification can be at least partly attributable to Zeta's interaction with an upper-level trough located a few hundred miles to the west-northwest. The current NHC intensity estimate of 110 mph (175 kph) is based on a blend of data taken by an Air Force Reserve Hurricane Hunter aircraft.

Since the center will be moving over land from this point forward, a weakening trend should soon begin. The official NHC intensity forecast suggests that Zeta will quickly decay and become embedded within the previously noted trough within the next 24 hours. This will occur as the frontogenesis process occurs while approaching the U.S. East Coast. Given these parameters, the NHC shows an extratropical cyclone at that point and beyond. After 48 hours, the forecast models show the low becoming elongated and absorbed into the frontal zone.

Zeta has turned toward the north-northeast and the forward speed is increasing. The cyclone should accelerate north-northeastward ahead of the noted trough through tonight. The system should then move even faster toward the northeast, ahead of the trough, and across the southeastern and eastern United States on Thursday. Post-Tropical Zeta should move east-northeastward, in the mid-level westerlies, into the Atlantic Friday morning.

Given Zeta's acceleration after landfall, strong winds are likely to spread well inland over the southeastern U.S. overnight and early Thursday.

## Key Messages from the National Hurricane Center

1. A life-threatening storm surge is beginning along portions of the northern Gulf Coast, with the highest inundation expected to occur somewhere between Port Fourchon, Louisiana, and Dauphin Island, Alabama, especially along the Mississippi coast. Overtopping of local, non-federal levee systems is possible within southeastern Louisiana outside of the Hurricane and Storm Damage Risk Reduction System.
2. Extremely dangerous hurricane conditions are spreading across portions of the Hurricane Warning area along the southeastern Louisiana coast and will spread to the Mississippi coast this evening. Tropical storm conditions will spread into portions of the Tropical Storm Warning area along the Alabama and far western Florida Panhandle coasts in the next few hours.
3. Strong, damaging wind gusts, which could cause tree damage and power outages, will spread well inland across portions of southeastern Mississippi, Alabama, northern Georgia, the Carolinas, and southeastern Virginia tonight and Thursday due to Zeta's fast forward speed. Wind gusts could be especially severe across the southern Appalachian Mountains on Thursday.
4. Through Thursday, heavy rainfall is expected from portions of the central U.S. Gulf Coast into the Mid-Mississippi Valley, Ohio Valley, southern to central Appalachians, and Mid-Atlantic States near and in advance of Zeta. This rainfall will lead to flash, urban, small stream, and minor river flooding.

### Additional Information

**STORM SURGE:** Along the northern Gulf Coast, the combination of a dangerous storm surge and the tide will cause normally dry areas near the coast to be flooded by rising waters moving inland from the shoreline. The water could reach the following heights above ground somewhere in the indicated areas if the peak surge occurs at the time of high tide:

*Mouth of the Pearl River to MS/AL border: 7-11 feet*

*MS/AL border to Dauphin Island, AL: 6-9 feet*

*Port Fourchon, LA to the Mouth of the Mississippi River: 6-9 feet*

*Mouth of the Mississippi River to the Mouth of the Pearl River, including Lake Borgne: 5-7 feet*

*Mouth of the Atchafalaya River to Port Fourchon, LA: 4-6 feet*

*Mobile Bay: 4-6 feet*

*Lake Pontchartrain: 4-6 feet*

*Dauphin Island AL to AL/FL border: 3-5 feet*

*AL/FL border to Navarre, FL, including Pensacola Bay: 2-4 feet*

*Intracoastal City, LA to the Mouth of the Atchafalaya River, including Vermilion Bay: 1-3 feet*

*Lake Maurepas: 1-3 feet*

*Navarre, FL to Yankeetown, FL, including Choctawhatchee Bay and Saint Andrew Bay: 1-3 feet*

Overtopping of local levees outside of the Hurricane and Storm Damage Risk Reduction System is possible where local inundation values may be higher than those shown above.

The deepest water will occur along the immediate coast near and to the right of the landfall location, where the surge will be accompanied by large and destructive waves. Surge-related flooding depends on the relative timing of the surge and the tidal cycle, and can vary greatly over short distances.

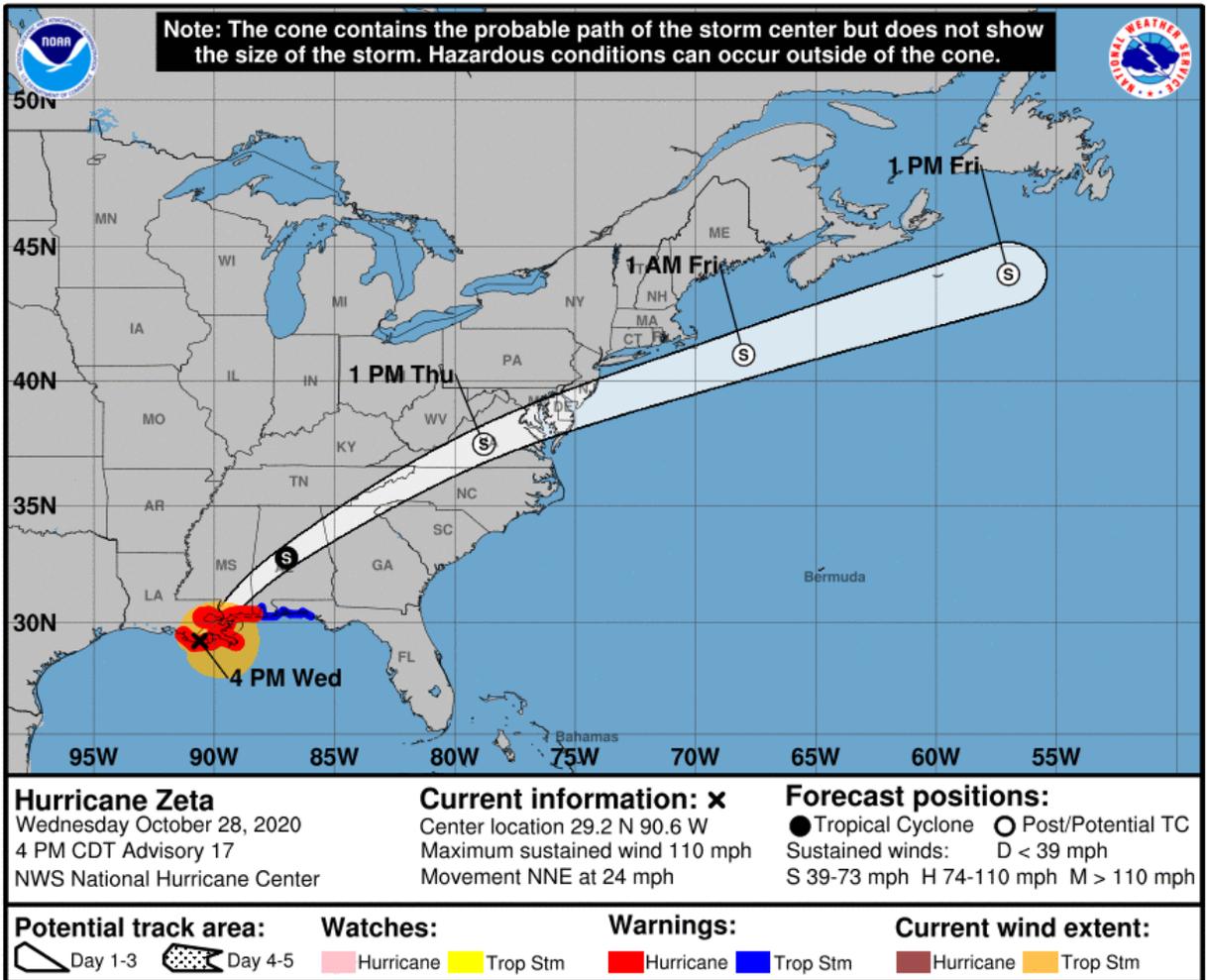
**WIND:** Hurricane or Tropical Storm conditions are expected within the Warning area on the northern Gulf Coast later this afternoon, with tropical storm conditions already occurring. Tropical storm conditions are also likely beginning within the Tropical Storm Warning area on the northern Gulf Coast.

Damaging winds, especially in gusts, will spread well inland across portions of southeastern Mississippi, Alabama, and northern Georgia this evening through early Thursday morning, and into the Carolinas and southeastern Virginia on Thursday. Wind gusts could be especially severe across the southern Appalachian Mountains on Thursday.

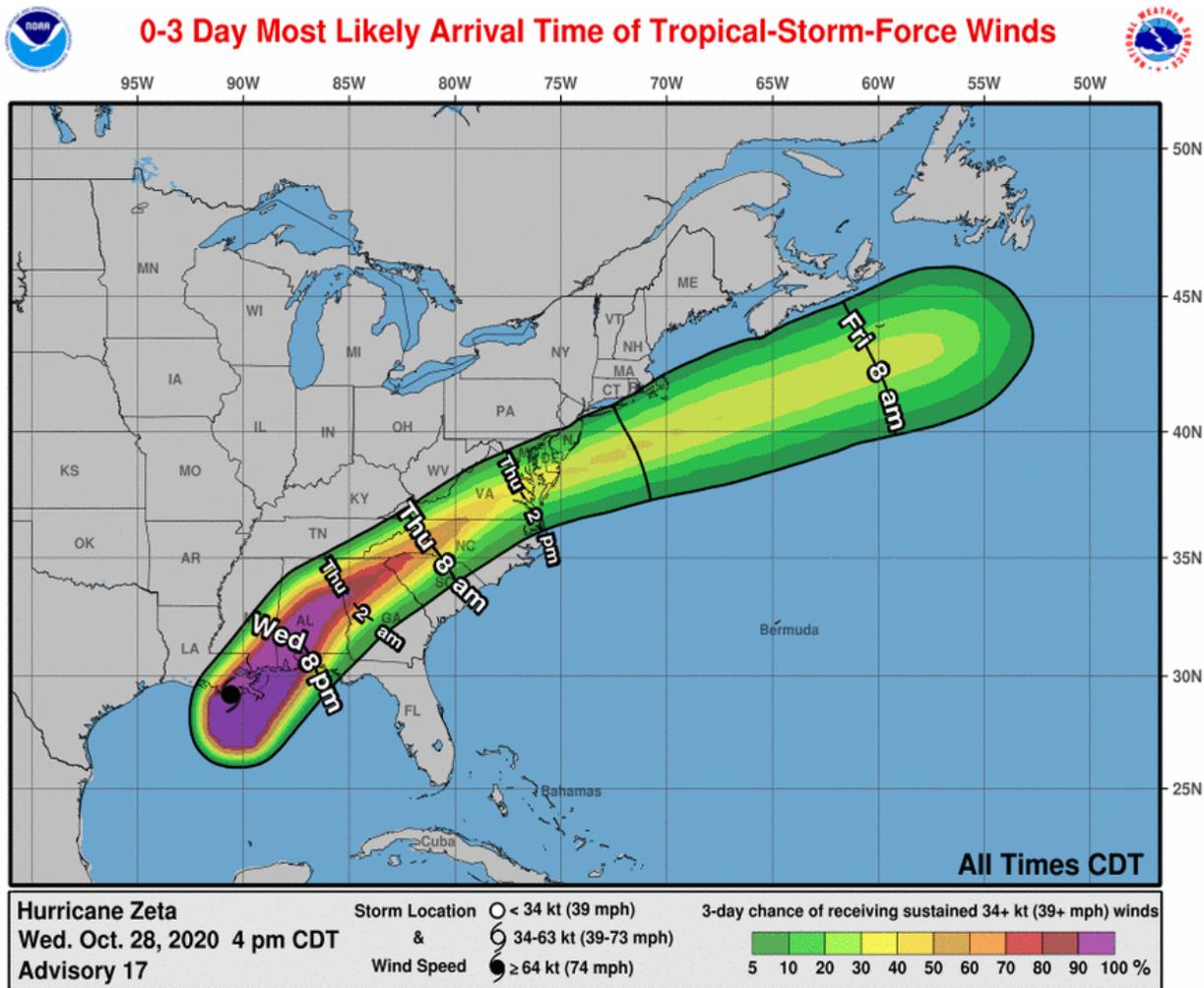
**RAINFALL:** Areas of heavy rainfall, both in advance of Zeta and along the track of Zeta, will impact areas from the central Gulf Coast to the Mid-Mississippi and Ohio Valleys, and eastward into the southern to central Appalachians and Mid-Atlantic today through Thursday. Rainfall totals of 2 to 4 inches with isolated amounts of 6 inches are expected across these areas, resulting in flash, urban, small stream, and minor river flooding.

**TORNADOES:** A few tornadoes are expected this afternoon through tonight over southeastern parts of Louisiana and Mississippi, southern Alabama, and the western Panhandle of Florida.

# National Hurricane Center (NHC) Forecast

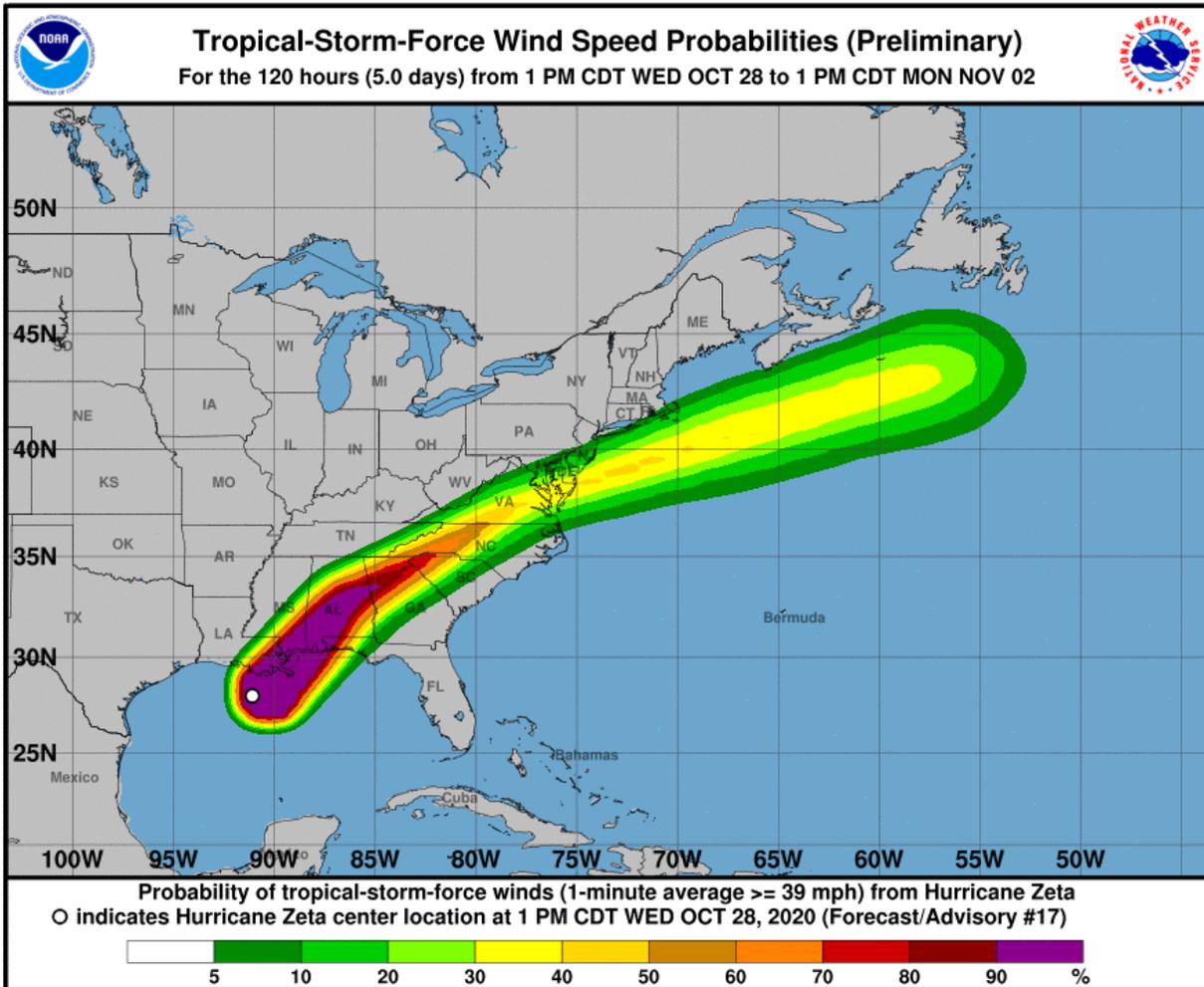


# Most Likely Arrival Time of Tropical Storm-Force Winds

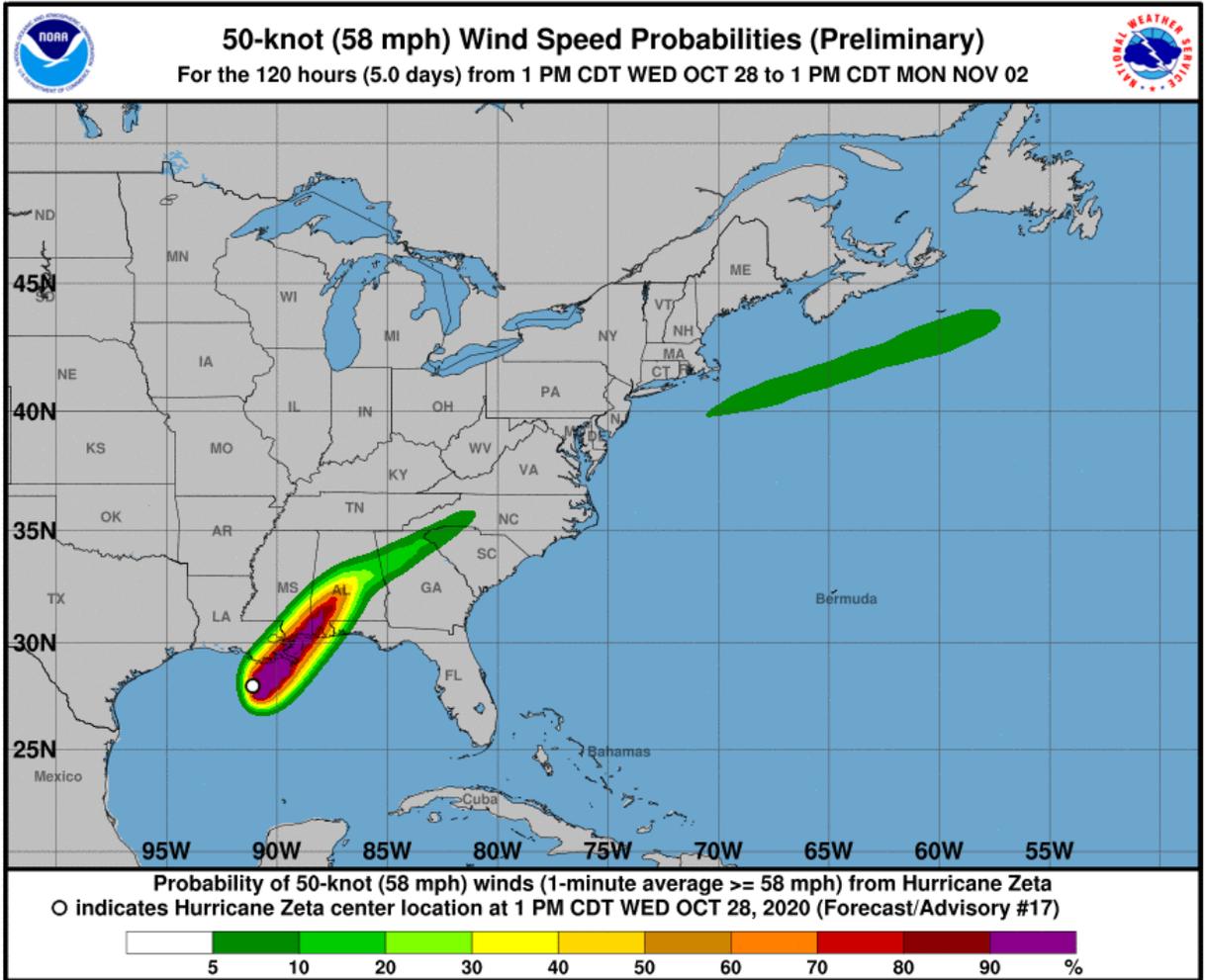


# National Hurricane Center: Wind Speed Probabilities

## Tropical Storm-Force Wind Probabilities ( $\geq 40$ mph (65 kph))



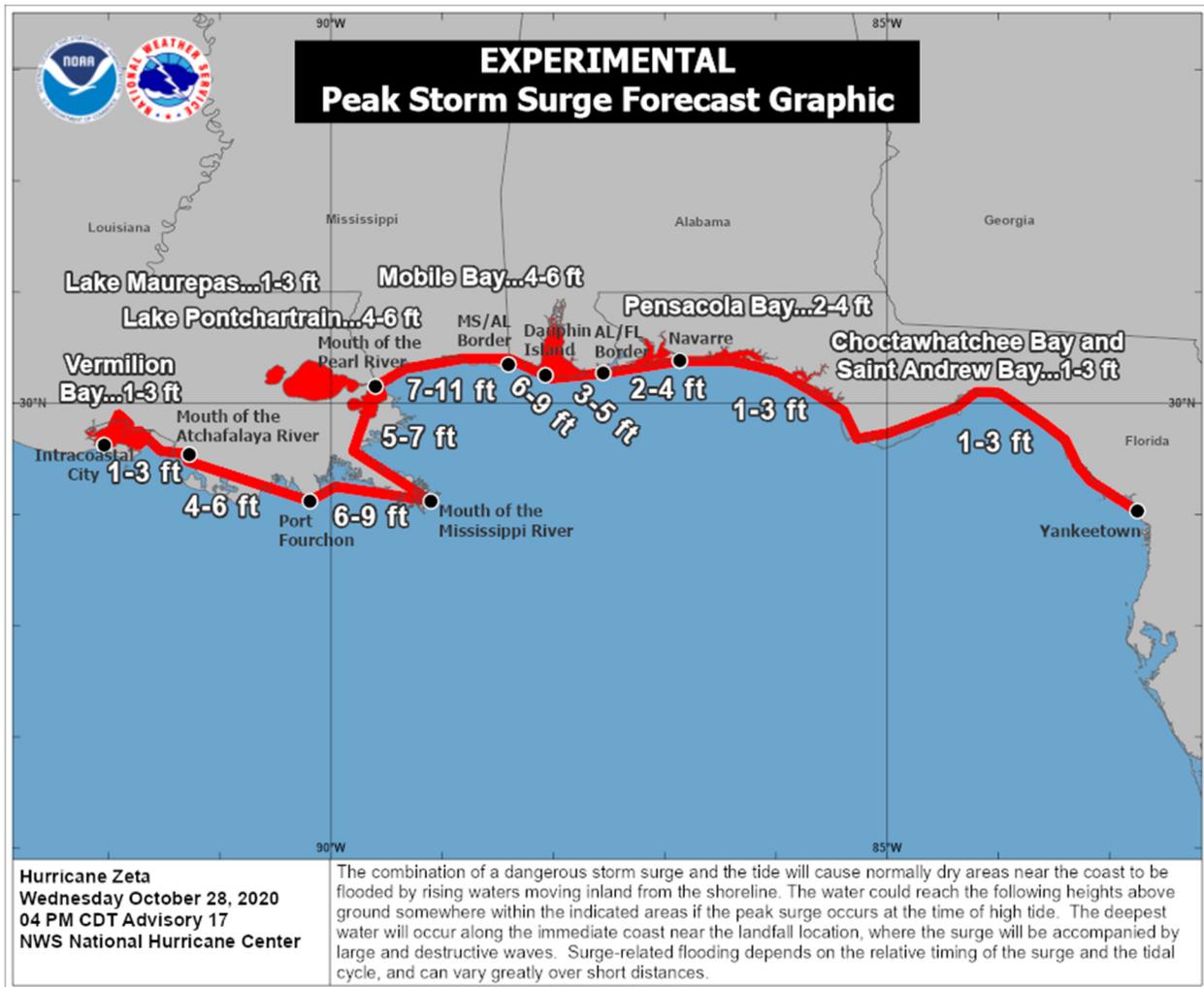
# Wind Probabilities ( $\geq 60$ mph (95 kph))



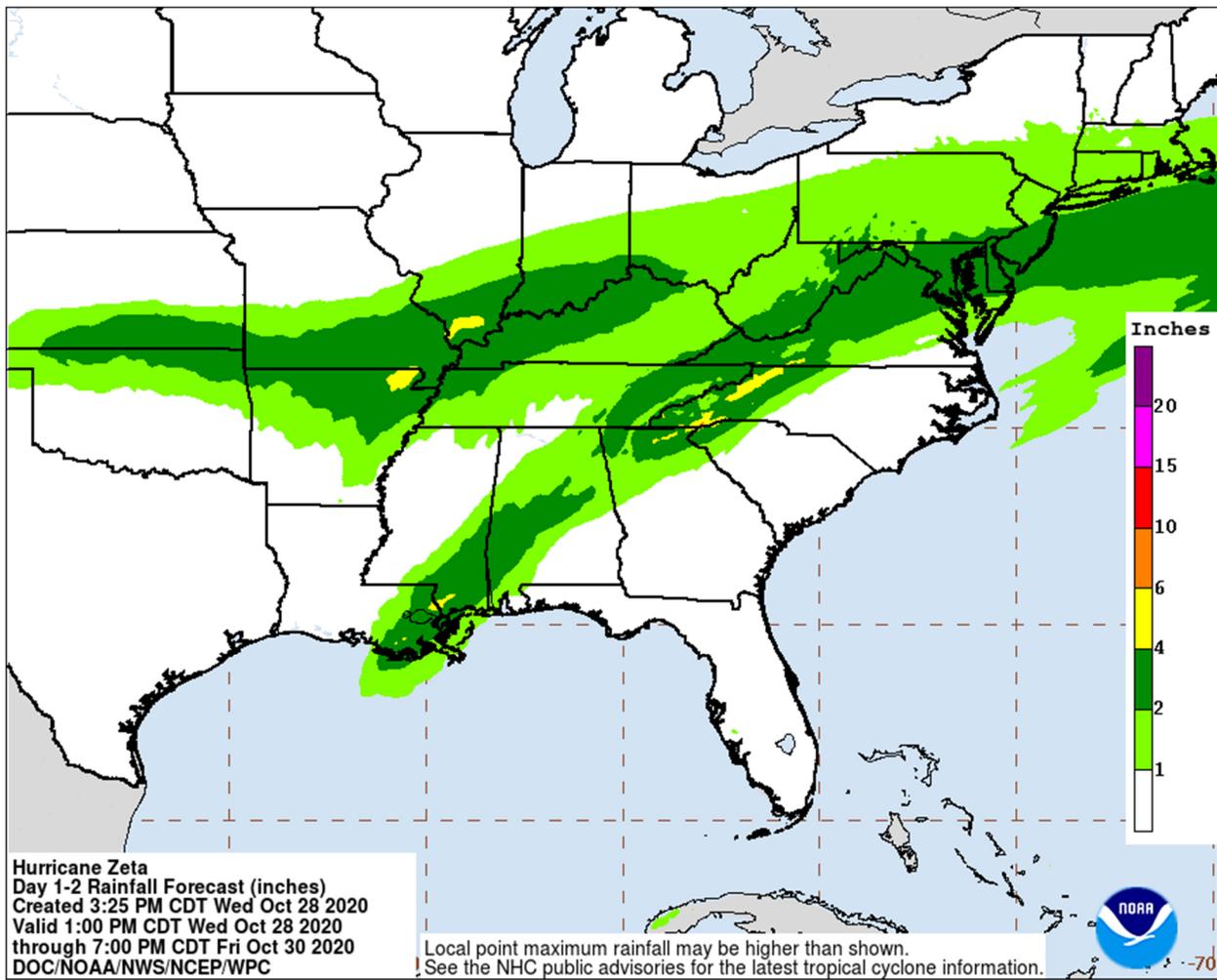
# Hurricane-Force Wind Probabilities ( $\geq 75$ mph (120 kph))



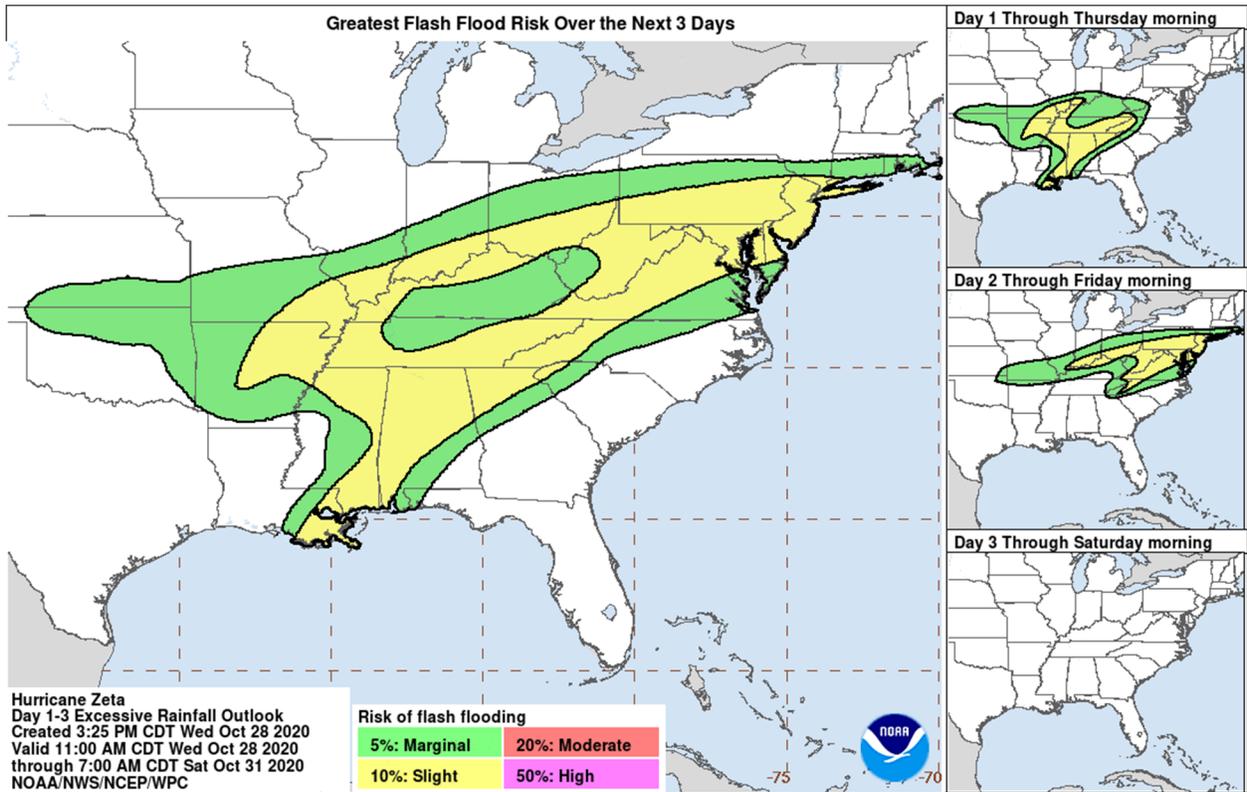
# National Hurricane Center: Storm Surge Inundation



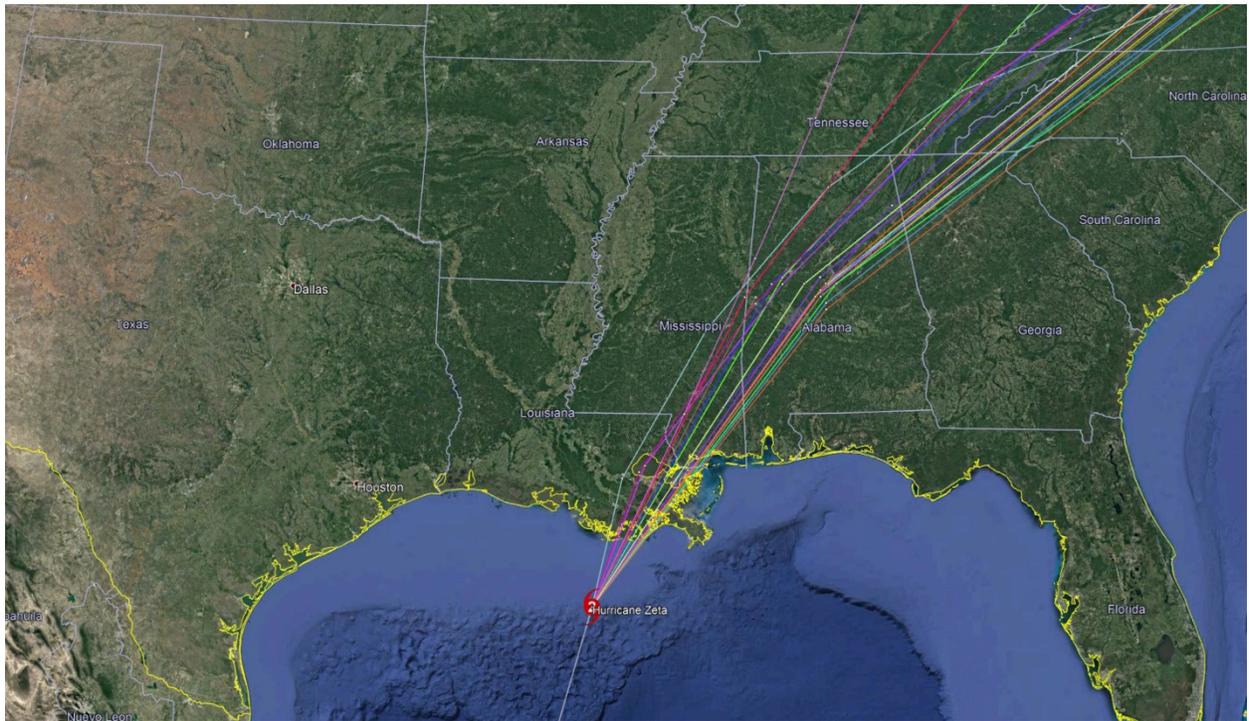
# Weather Prediction Center: Rainfall Potential



# Weather Prediction Center: Flash Flood Potential



## Current 'Spaghetti' Model Output Data



Source: NHC

## Additional Information and Update Schedule

Wind intensity forecasts and forecast track information can be found via the National Hurricane Center at [www.nhc.noaa.gov](http://www.nhc.noaa.gov)

**NEXT CAT ALERT:** Since rapid weakening is forecast after making landfall, this will be the final Cat Alert. Full preliminary details on impacts from Zeta will be found in this week's Weekly Cat Report.

## \*Tropical Cyclone Intensity Classifications for Global Basins

WIND SPEED			BASINS AND MONITORING BUREAU							
KTS <sup>1</sup>	MPH <sup>1</sup>	KPH <sup>1</sup>	NE Pacific, Atlantic	NW Pacific	NW Pacific	SW Pacific	Australia	SW Indian	North Indian	
			National Hurricane Center (NHC)	Joint Typhoon Warning Center (JTWC)	Japan Meteorological Agency (JMA)	Fiji Meteorological Service (FMS)	Bureau Of Meteorology (BOM)	Meteo-France (MF)	India Meteorological Department (IMD)	
30	35	55	Tropical Depression	Tropical Depression	Tropical Depression	Tropical Depression	Tropical Low	Tropical Depression	Deep Depression	
35	40	65	Tropical Storm	Tropical Storm	Tropical Storm	Cat. 1 Tropical Cyclone	Cat. 1 Tropical Cyclone	Moderate Tropical Storm	Cyclonic Storm	
40	45	75								
45	50	85								
50	60	95								
55	65	100			Severe Tropical Storm	Cat. 2 Tropical Cyclone	Cat. 2 Tropical Cyclone	Severe Tropical Storm		Severe Cyclonic Storm
60	70	110								
65	75	120	Cat. 1 Hurricane	Typhoon		Cat. 3 Severe Tropical Cyclone	Cat. 3 Severe Tropical Cyclone	Tropical Cyclone	Very Severe Cyclonic Storm	
70	80	130								
75	85	140								
80	90	150	Cat. 2 Hurricane		Typhoon		Cat. 4 Severe Tropical Cyclone	Cat. 4 Severe Tropical Cyclone		Intense Tropical Cyclone
85	100	160								
90	105	170								
95	110	175	Cat. 3 Major Hurricane		Typhoon					
100	115	185								
105	120	195								
110	125	205	Cat. 4 Major Hurricane		Super Typhoon					Super Cyclonic Storm
115	130	210								
120	140	220								
125	145	230								
130	150	240	Cat. 5 Major Hurricane	Super Typhoon						
135	155	250								
140	160	260								
>140	>160	>260	Cat. 5 Major Hurricane	Super Typhoon						

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