

## Current Watches and Warnings

A **Hurricane Warning** is in effect from Tulum to Dzilam, Mexico; Cozumel

A **Tropical Storm Warning** is in effect for the Cayman Islands, including Little Cayman and Cayman Brac; Cuba (Province of Pinar del Rio); Isle of Youth; Punta Herrero to Tulum, Mexico; Dzilam to Progreso, Mexico

A **Tropical Storm Watch** is in effect for Cuba (Province of La Habana)

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

**COORDINATES:** 18.2° north, 82.6° west

**LOCATION:** 320 miles (520 kilometers) east-southeast of Cozumel, Mexico

**MOVEMENT:** west-northwest at 16 mph (26 kph)

**WINDS:** 115 mph (185 kph) with gusts to 140 mph (220 kph)

**RADIUS OF TROPICAL STORM-FORCE WINDS:** 90 miles (150 kilometers)

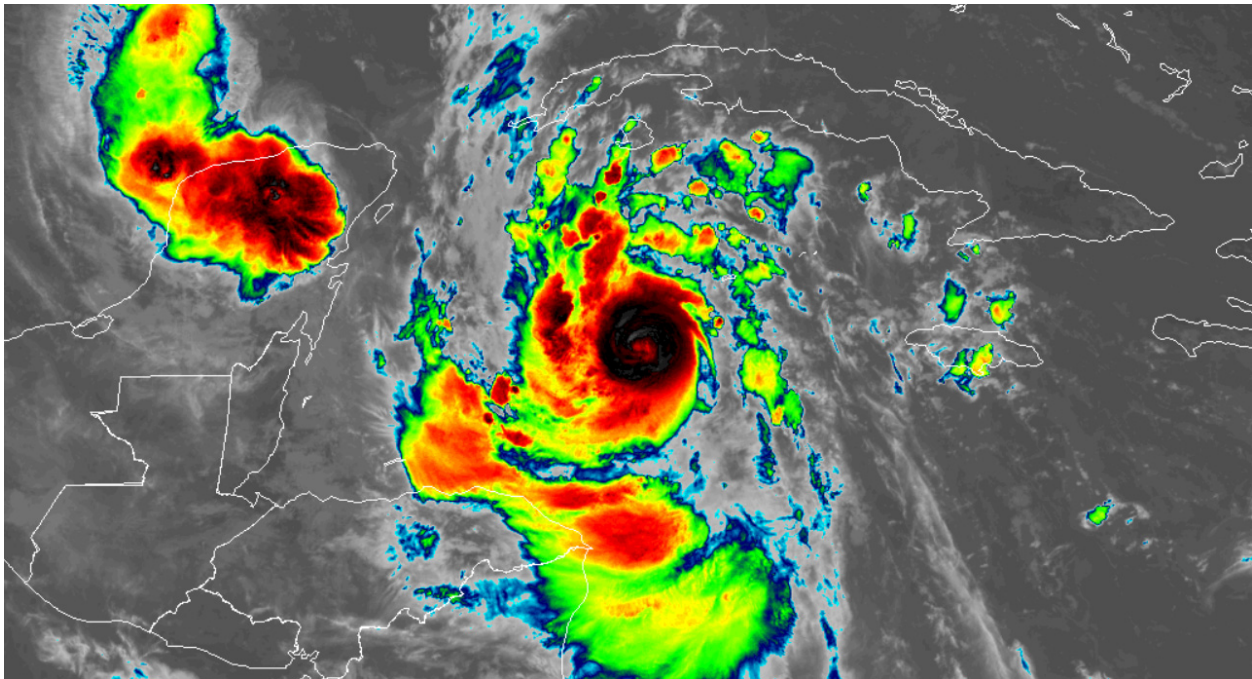
**RADIUS OF HURRICANE-FORCE WINDS:** 25 miles (35 kilometers)

**MINIMUM CENTRAL PRESSURE:** 955 millibars

**SAFFIR-SIMPSON SCALE RANKING\*:** Category 3

**24-HOUR LANDFALL POTENTIAL:** HIGH (Mexico's Yucatan Peninsula; near Cancun)

## Latest Satellite Picture



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

# Discussion

Hurricane Delta, located approximately 320 miles (520 kilometers) east-southeast of Cozumel, Mexico, is currently tracking west-northwest at 16 mph (26 kph). Satellite imagery and recent NOAA Hurricane Hunter aircraft data show that Delta has become a symmetric and compact hurricane. The aircraft reported a tiny pinhole eye feature, which has started to become more evident in both satellite imagery and Doppler radar from the Cayman Islands. The minimum central pressure has continued to steadily fall, with the latest data supporting a pressure of 955 millibars. The plane has reported believable surface-adjusted winds just above 115 mph (185 kph), so the NHC has set this as the initial advisory. Thus, Delta has become the third major hurricane (Category 3+) of the 2020 Atlantic Hurricane Season. Delta's explosive intensification – including a recent increase of 65 mph (100 kph) – marked the strongest rapid intensification in a 24-hour period for an October hurricane in the Atlantic Ocean since Wilma (2005).

As noted, Delta has continued to rapidly strengthen during the past 24 hours as environmental conditions of low vertical wind shear, deep warm waters, and sufficient mid-level moisture are expected to support additional rapid intensification through today. The only reason that the strengthening could slow down is if a difficult-to-predict eyewall replace cycle begins. The SHIPS Rapid Intensification Index continues to indicate a high likelihood of at least an additional 30 to 35 mph (50 to 55 kph) of intensity increase before the system reaches the northeastern portion of the Yucatan Peninsula. Given that, the NHC intensity forecast is above the various intensity aids and call for Delta to be an extremely dangerous Category 4 hurricane when it nears the Yucatan. Some reduction in intensity is likely when Delta moves over land, but the environmental conditions over the southern Gulf of Mexico are expected to support re-strengthening, and the NHC intensity forecast shows a second peak in 48 to 72 hours. Increasing southwesterly shear and cooler shelf waters near the northern Gulf Coast are expected to cause some reduction in wind speed, but Delta is still expected to be a dangerous hurricane when it nears the northern Gulf Coast.

Delta is moving west-northwestward, and a mid-level ridge of high pressure that extends westward across Florida and the northeastern Gulf of Mexico should continue to steer Delta west-northwestward to northwestward during the next couple of days. As the hurricane nears the western portion of the ridge it should slow down. By Day 3 a developing trough over the south-central United States is expected to cause Delta to turn northward toward the northern Gulf Coast. The forecast model track guidance is tightly clustered through 48 hours, but there is still a fair amount of spread thereafter regarding the timing and details of the northward turn. The ECMWF (European model) and its ensemble mean are well west of the bulk of the remainder of the guidance. The NHC track lies near the rest of the multi-model consensus.

## Key Messages from the National Hurricane Center

1. Extremely dangerous storm surge and hurricane conditions are expected within portions of the northern Yucatan Peninsula of Mexico beginning tonight, and a Hurricane Warning is in effect.
2. Heavy rainfall will affect portions of the Cayman Islands, western Cuba and the northern Yucatan Peninsula through midweek. This rainfall could lead to significant flash flooding and mudslides. The potential for heavy rain and flash flooding will increase across portions of the central Gulf Coast, Tennessee Valley, and southeastern United States as Delta moves inland later this week.
3. There is an increasing likelihood of life-threatening storm surge and dangerous hurricane-force winds, especially along the coasts of Louisiana and Mississippi, beginning on Friday. Residents in these areas should ensure they have their hurricane plan in place and monitor updates to the forecast.

### Additional Information

**STORM SURGE:** An extremely dangerous storm surge will raise water levels by as much as 6 to 9 feet above normal tide levels along coast of the Yucatan Peninsula within the Hurricane Warning area, near and to right of where the center makes landfall. Near the coast, the surge will be accompanied by large and destructive waves.

**WIND:** Tropical storm conditions are expected in portions of the Cayman Islands today. In the Yucatan Peninsula, hurricane conditions are expected in the warning area early Wednesday, with tropical storm conditions beginning later today or tonight. Tropical storm conditions are expected in the Tropical Storm Warning area tonight and Wednesday. In Cuba, tropical storm conditions are expected tonight in the warning area and possible in the watch area near the same time.

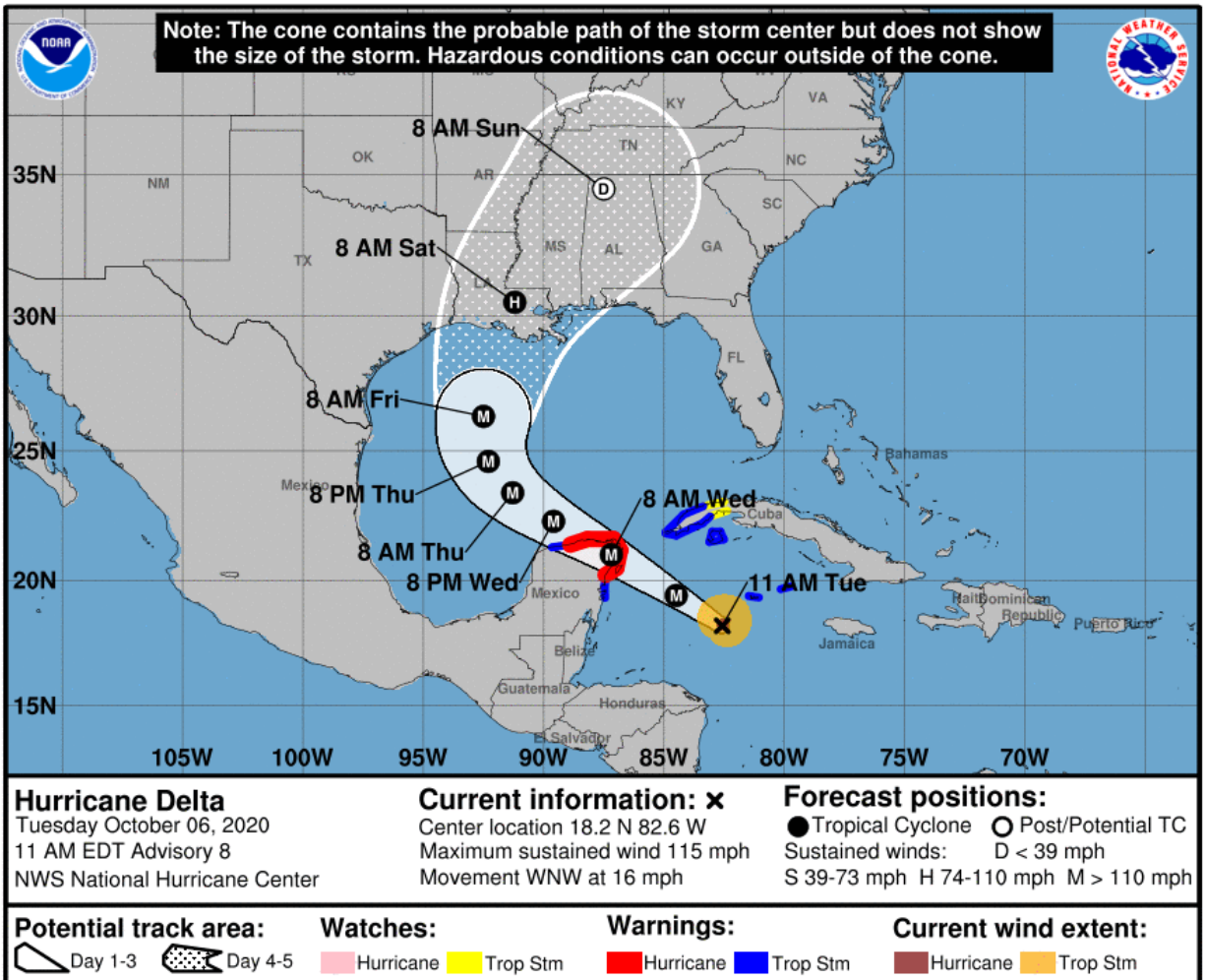
**RAINFALL:** Delta is expected to produce 4 to 6 inches of rain, with isolated maximum totals of 10 inches, across portions of the northern Yucatan Peninsula through midweek. This rainfall may result in areas of significant flash flooding.

Over the next few days, Delta is expected to produce 2 to 4 inches of rain, with isolated higher amounts, across portions of the Cayman Islands and western Cuba. This rainfall may result in areas of flash flooding and mudslides.

Later this week, Delta is expected to bring heavy rainfall and flash and urban flooding to portions of the central Gulf Coast, Tennessee Valley, and southeastern United States.

**SURF:** Swells generated by Delta will affected land areas around the northwestern Caribbean Sea for the next day or so. These swells are likely to cause life-threatening surf and rip current conditions.

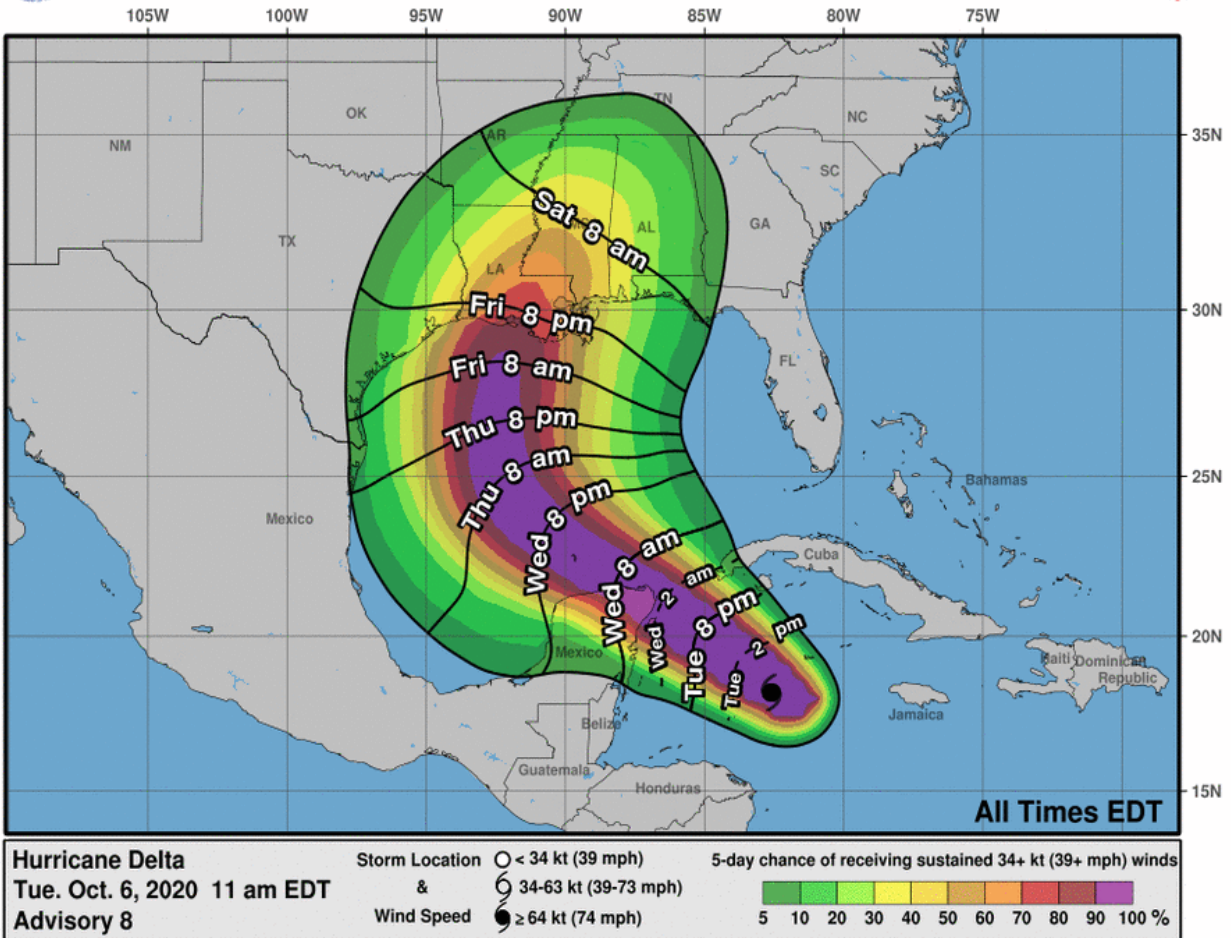
# National Hurricane Center (NHC) Forecast



# Most Likely Arrival Time of Tropical Storm-Force Winds

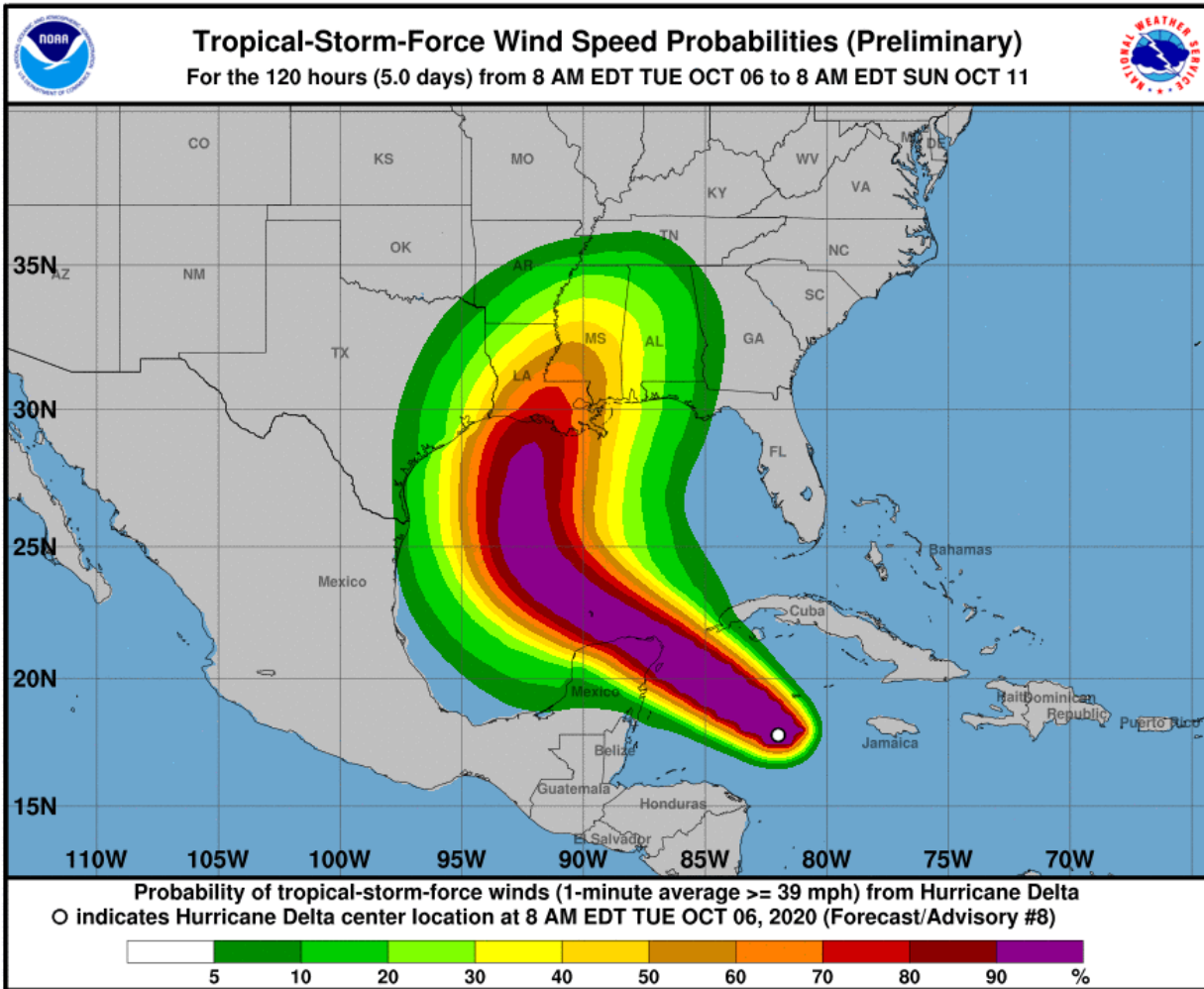


## Most Likely Arrival Time of Tropical-Storm-Force Winds



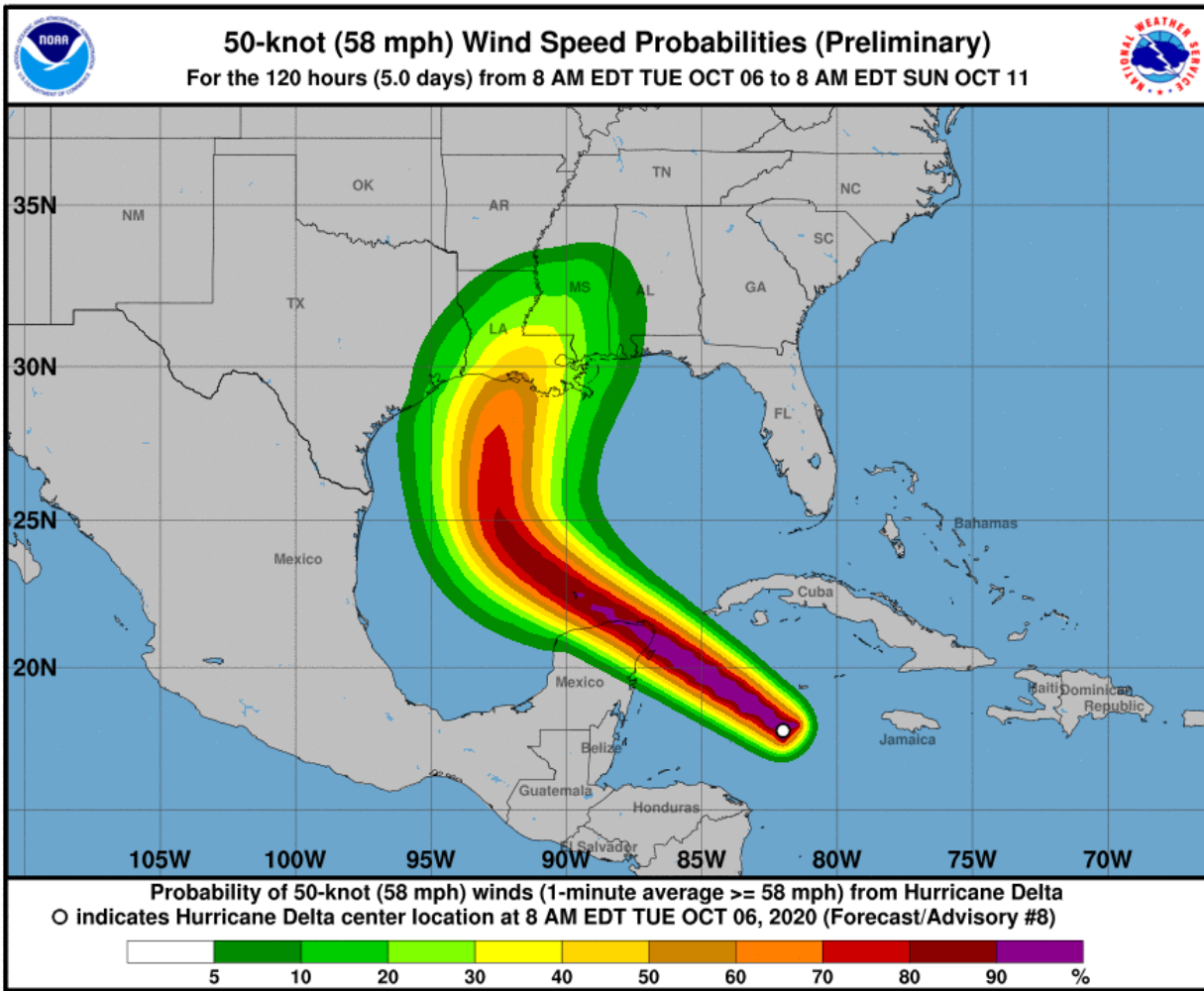
# National Hurricane Center: Wind Speed Probabilities

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





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

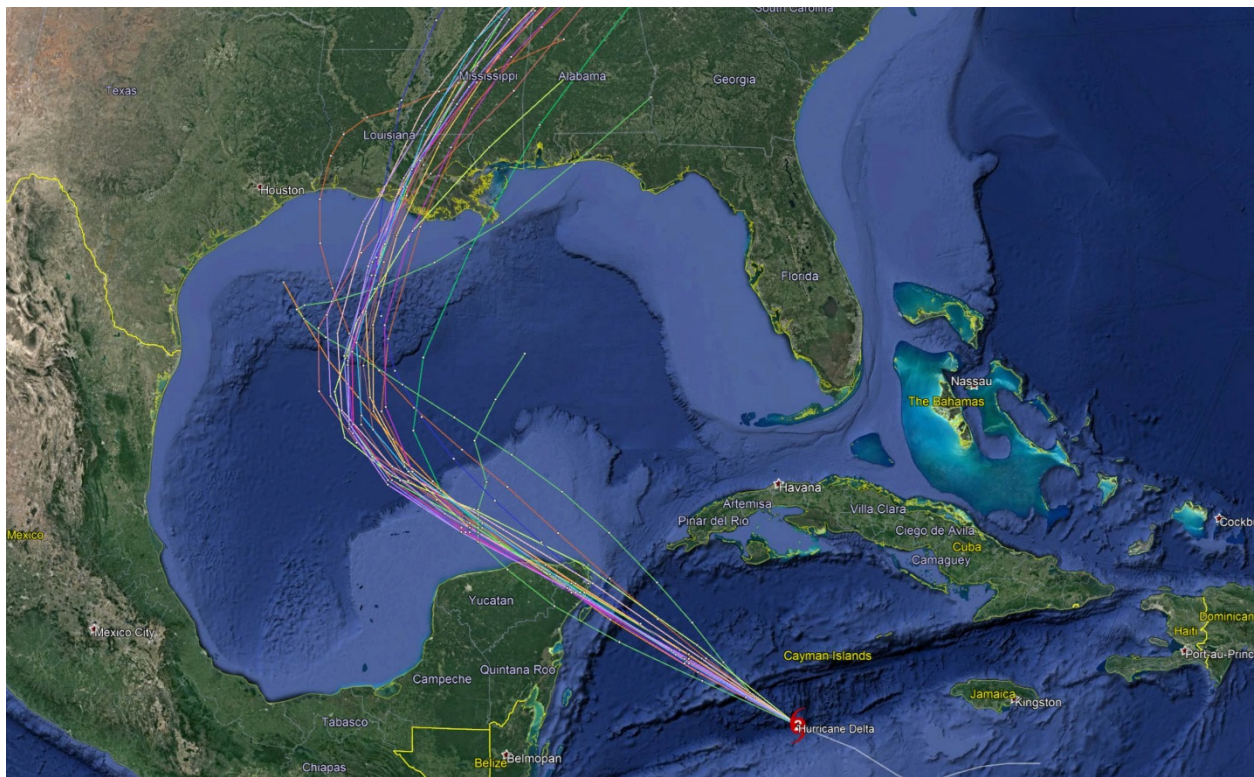


# Hurricane-Force Wind Probabilities ( $\geq 75$ mph (120 kph))





## 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:** Wednesday morning after 10:00 AM Central Time (15:00 UTC).

## \*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							
60	70	110							
65	75	120	Cat. 1 Hurricane	Typhoon	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							
85	100	160	Cat. 2 Hurricane						
90	105	170							
95	110	175							
100	115	185	Cat. 3 Major Hurricane						
105	120	195							
110	125	205							
115	130	210							
120	140	220	Cat. 4 Major Hurricane	Super Typhoon					
125	145	230							
130	150	240							
135	155	250							
140	160	260							
>140	>160	>260	Cat. 5 Major Hurricane						
						Cat. 5 Severe Tropical Cyclone	Cat. 5 Severe Tropical Cyclone	Very Intense Tropical Cyclone	Super Cyclonic Storm

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