#### **Current Watches and Warnings**

A Storm Surge Warning is in effect from Port Bolivar, Texas to Sabine Pass, including Galveston Bay

A Tropical Storm Warning is in effect from High Island, Texas to Cameron, Louisiana

A Storm Surge Watch is in effect from Sabine Pass to Cameron, Louisiana

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

COORDINATES: 29.6° north, 95.3° west

LOCATION: 10 miles (15 kilometers) southeast of Houston, Texas

**MOVEMENT:** northeast at 6 mph (9 kph)

**WINDS:** 45 mph (75 kph) with gusts to 60 mph (95 kph)

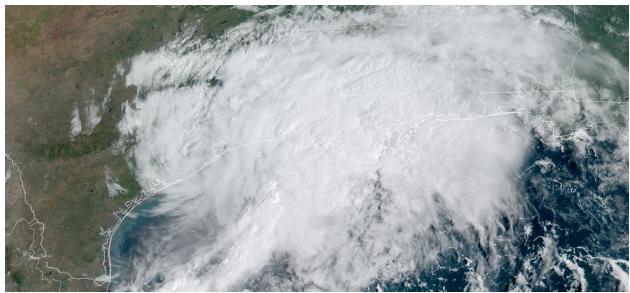
RADIUS OF TROPICAL STORM-FORCE WINDS: 140 miles (220 kilometers)

MINIMUM CENTRAL PRESSURE: 1002 millibars SAFFIR-SIMPSON SCALE RANKING: Tropical Storm

**LANDFALL LOCATION:** near Sargent Beach, Texas (United States) **LANDFALL INTENSITY:** 75 mph (120 kph) – Category 1 Hurricane

LANDFALL TIMEFRAME: approximately 12:30 AM local time (05:30 UTC) September 14

#### Latest Satellite Picture



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



#### Discussion

Tropical Storm Nicholas, located approximately 10 miles (15 kilometers) southeast of Houston, Texas, is currently tracking northeast at 6 mph (9 kph). Doppler radar data from Houston and Lake Charles, along with surface observations, indicate that Nicholas has continued to weaken while moving farther inland. The storm made landfall just after midnight as a 75 mph (120 kph) Category 1 hurricane near Sargent Beach, Texas. The strongest winds recently reported near the Texas and Louisiana coasts have been nearly 40 mph (65 kph) at a station near Sabine Pass, Texas. The strongest winds over water south of southwestern Louisiana are based on Doppler radar. Based on these wind data, the NHC has lowered the initial intensity to 45 mph (75 kph). The estimated central pressure of 1002 millibars is based on nearby surface observations in the Houston metropolitan area.

Further weakening is expected as Nicholas moves farther inland due to frictional effects of land, entrainment of very dry mid-level air from the southern Plains, and increasing southwesterly to westerly wind shear. The latter condition is expected to cause the low- and upper-level circulation to decouple in about 24 hours, which will accelerate the weakening process. Nicholas is now expected to become a tropical depression by tonight and degenerate into a remnant low by late Wednesday.

Nicholas is now moving northeastward at a slower forward speed. The cyclone should gradually turn toward the east-northeast by tonight and move eastward more slowly on Wednesday and Thursday. It is possible that Nicholas could stall over southwestern or central Louisiana as the low-level steering flow collapses. The new NHC track forecast is similar to but slightly slower than the previous advisory tack.

Although the winds associated with Nicholas will be weakening, heavy rainfall and a significant flash flood risk will continue along the Gulf Coast during the next couple of days.

#### Key Messages from the National Hurricane Center

- 1. Heavy rainfall will impact areas from the upper coast of Texas, across Louisiana, southern Mississippi, far southern Alabama and the western Florida Panhandle through Thursday. Significant rainfall amounts are expected, potentially resulting in areas of life-threatening flash and urban flooding across these areas. Minor to isolated major river flooding is also possible in smaller river basins and urban areas.
- 2. There is the danger of life-threatening storm surge inundation along the coast of Texas from Port Bolivar to Sabine Pass. Residents in these areas should follow any advice given by local officials.
- 3. Tropical storm conditions are expected to continue along the Louisiana coast into this afternoon. Tropical storm conditions in the warning area across the upper Texas coast will diminish this afternoon as Nicholas moves farther to the northeast.

#### Additional Information

RAINFALL: Nicholas is expected to produce additional rainfall of 5 to 10 inches from the upper Texas coastal area into central to southern Louisiana, far southern Mississippi, far southern Alabama, and the western Florida Panhandle through Thursday, with isolated storm totals of 20 inches across southern Louisiana. Life-threatening flash flooding impacts, especially in urbanized metropolitan areas, are possible across these regions.

Widespread minor to isolated major river flooding is expected across portions of the upper Texas Gulf Coast and southern Louisiana and Mississippi.

STORM SURGE: 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:

Port Bolivar, TX to Cameron, LA including Galveston Bay: 2-4 feet Port Aransas, TX to Port Bolivar, TX: 1-3 feet Aransas Bay, San Antonio Bay, and Matagorda Bay: 1-3 feet Cameron, LA to Intracoastal City, LA: 1-3 feet Sabine Lake and Calcasieu Lake: 1-3 feet

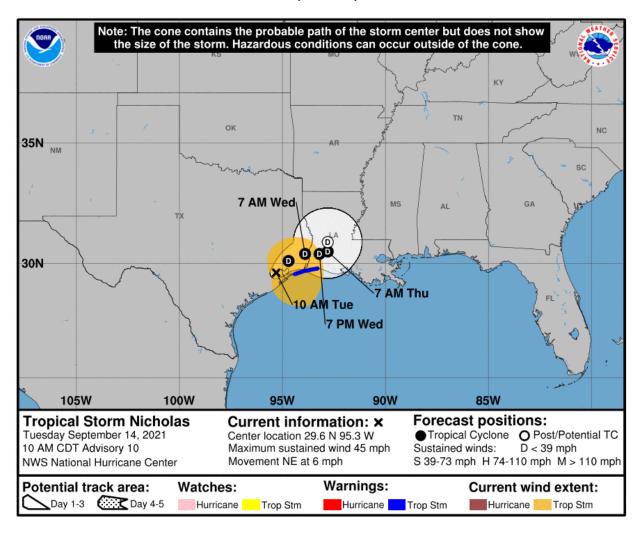
The deepest water will occur along the immediate coast in areas of onshore winds, where the surge will be accompanied by large and dangerous waves. Surge-related flooding depends on the relative timing of the surge and the tidal cycle and can vary greatly over short distances.

WIND: Tropical storm conditions are expected to continue along the Louisiana coast into this afternoon. Tropical storm conditions in the warning area across the upper Texas coast will diminish this afternoon as Nicholas moves farther to the northeast.

TORNADOES: A tornado or two will be possible today into tonight across southern Louisiana.

SURF: Swells generated by Nicholas will continue affecting portions of the northwest Gulf coast today. These swells are likely to cause life-threatening surf and rip current conditions.

#### National Hurricane Center (NHC) Forecast

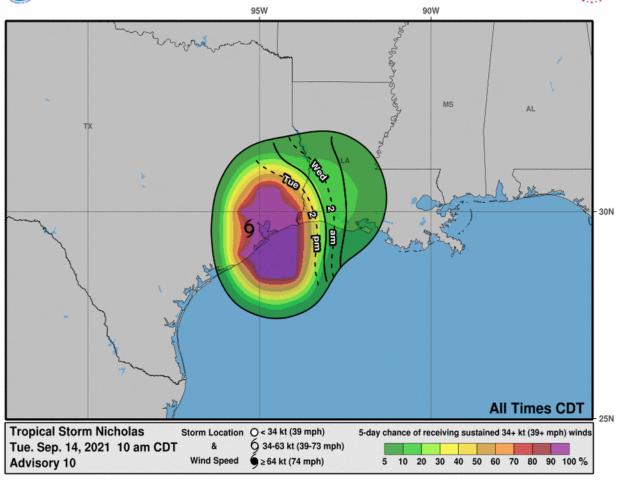


## Most Likely Arrival Time of Tropical Storm-Force Winds



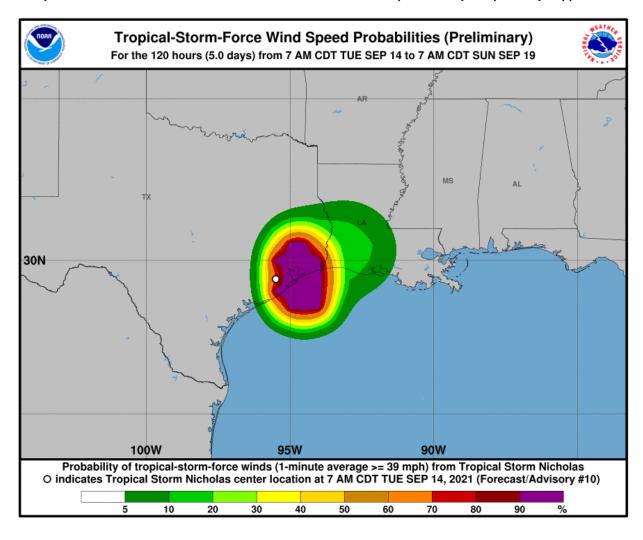
#### **Most Likely Arrival Time of Tropical-Storm-Force Winds**



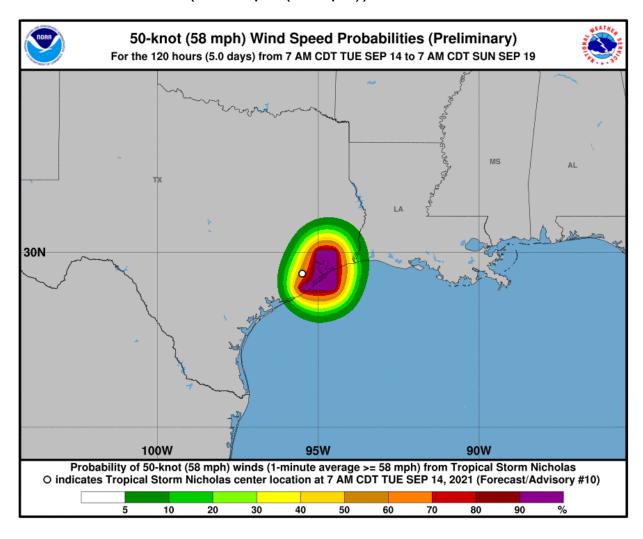


## National Hurricane Center: Wind Speed Probabilities

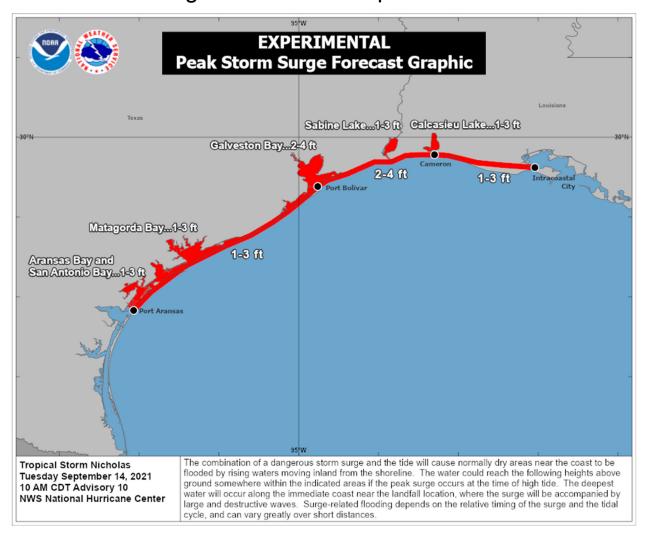
Tropical Storm-Force Wind Probabilities (≥40 mph (65 kph))



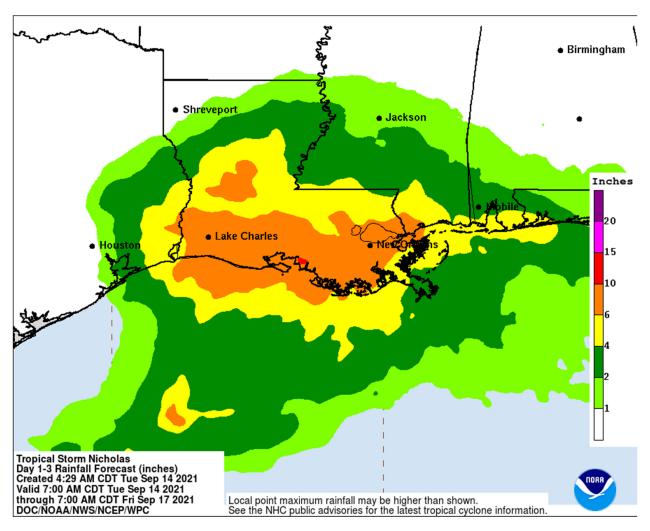
## Wind Probabilities (≥60 mph (95 kph))



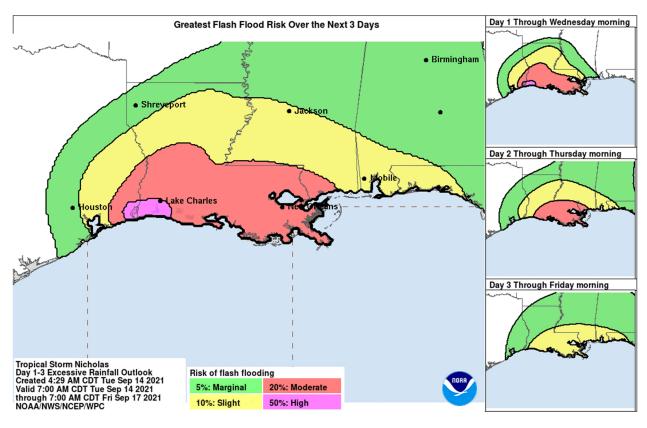
## NHC: Storm Surge Inundation Graphic



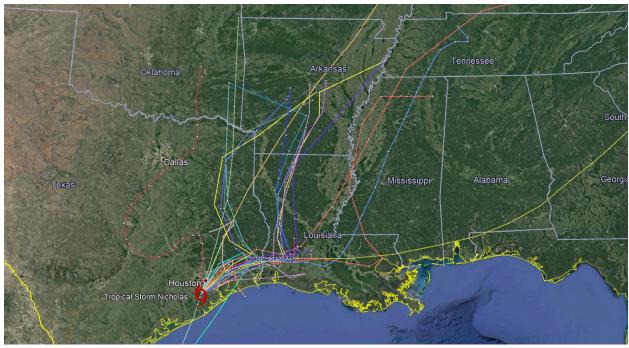
## Weather Prediction Center: Rainfall Potential



## 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 <a href="https://www.nhc.noaa.gov">www.nhc.noaa.gov</a>

**NEXT CAT ALERT**: Since landfall has occurred and continued degradation will continue as Nicholas moves further inland, this will be the final Cat Alert. Full details will be found in this week's Weekly Cat Report.

# Tropical Cyclone Intensity Classifications for Global Basins

WIND SPEED			BASINS AND MONITORING BUREAU						
КТ	МРН	КРН	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			Severe Tropical Storm	Cat. 2 Tropical Cyclone	Cat. 2 Tropical Cyclone	Severe Tropical Storm	Severe Cyclonic Storm
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				Cat. 4 Severe Tropical Cyclone	Cat. 4 Severe Tropical Cyclone	Intense Tropical Cyclone	
95	110	175							
100	115	185	Cat. 3 Major Hurricane Cat. 4 Major Hurricane						
105	120	195							
110	125	205				Cat. 5 Severe Tropical Cyclone	Cat. 5 Severe Tropical Cyclone		
115	130	210							
120	140	220						Very Intense Tropical Cyclone	Super Cyclonic Storm
125	145	230							
130	150	240		Super Typhoon					
135	155	250							
140	160	260	Cat. 5 Major Hurricane						
>140	>160	>260							

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