

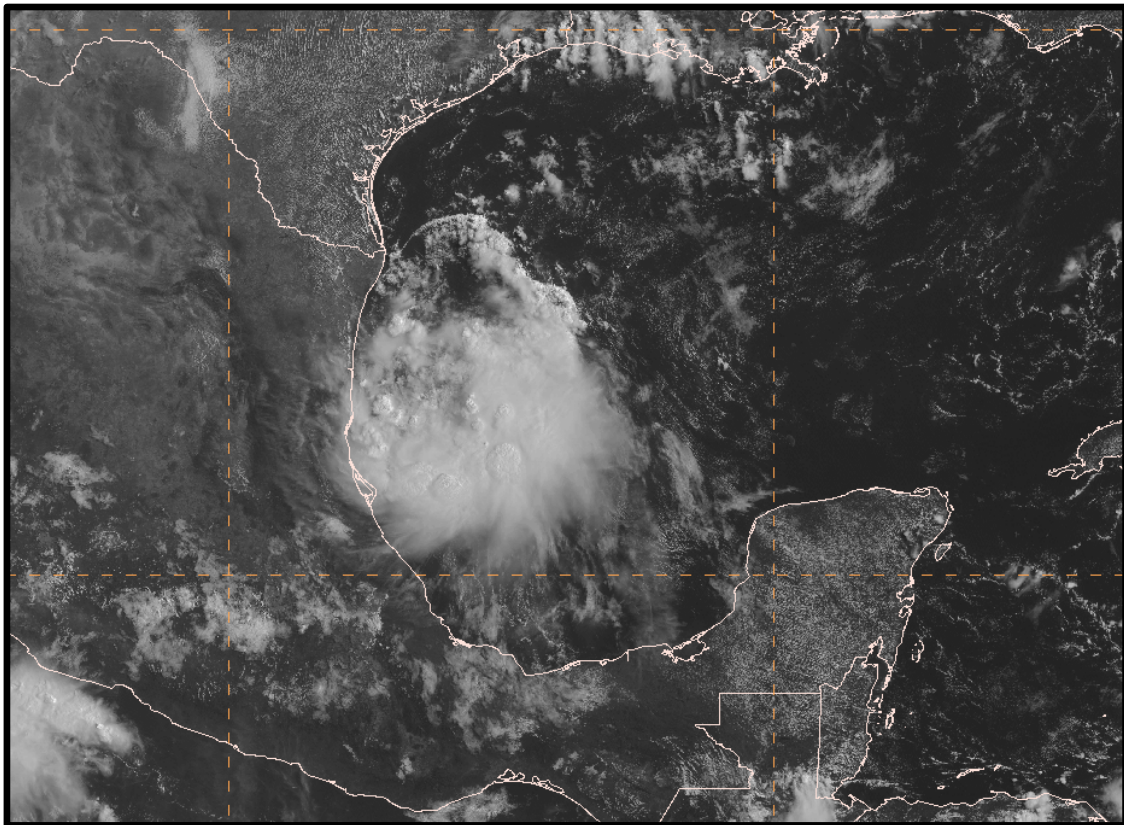


# NATIONAL HURRICANE CENTER TROPICAL CYCLONE REPORT

## POTENTIAL TROPICAL CYCLONE FOUR (AL042022)

19-21 August 2022

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National Hurricane Center  
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GOES-16 VISIBLE SATELLITE IMAGE OF POTENTIAL TROPICAL CYCLONE FOUR AT 1500 UTC 20 AUGUST 2022.

Potential Tropical Cyclone Four was a disturbance that tracked from the Yucatan Peninsula to the northeastern portion of mainland Mexico and failed to become a tropical cyclone.

# Potential Tropical Cyclone Four

19-21 AUGUST 2022

## SUMMARY

On 19 August 2022, the National Hurricane Center in coordination with the government of Mexico and the National Weather Service office in Brownsville, Texas, invoked the option to start advisories and issue tropical storm warnings for a disturbance over the southwestern Gulf of Mexico. At the time of initiating advisories at 2100 UTC 19 August, the disturbance was assessed to have an 80% chance of formation in the next 48 h and predicted to track toward the northeastern coast of Mexico in 24 to 36 h while strengthening to a tropical storm. Therefore, tropical storm warnings were issued at that time for a portion of the coast of northeastern Mexico and extreme southern Texas.

Satellite images showed that the system had a concentrated area of deep convection late on 19 August, and data from the Air Force Reserve Hurricane Hunters indicated that maximum winds were around 30 kt. However, the aircraft and earlier scatterometer data revealed that the disturbance did not have a well-defined center and resembled a surface trough. Although deep convection persisted into 20 August while the system moved northwestward across the western Gulf of Mexico (cover image), the low-level structure of the system failed to improve. Data from another reconnaissance mission by the Air Force Hurricane Hunters shortly after 1200 UTC 20 August indicated that despite a mid-level center apparent in visible satellite images, the low-level structure of the system was still disorganized. Deep convection decreased significantly later that day, and it is estimated that the trough moved inland over northeastern Mexico around 0000 UTC 21 August.

Since it became clear that the disturbance would not become a tropical cyclone or bring sustained tropical-storm-force winds to the Texas or Mexico coasts, advisories and tropical storm warnings were discontinued at 0300 UTC 21 August. A track of the disturbance, which follows the area of lowest pressure and low-level vorticity maximum, is given in Table 1 and illustrated in Figure 1. Coastal tropical storm warnings associated with the disturbance are provided in Table 2. There were no reports of significant impacts associated with the disturbance.



Table 1. Best track for Potential Tropical Cyclone Four, 19 – 21 August 2022.

Date/Time (UTC)	Latitude (°N)	Longitude (°W)	Pressure (mb)	Wind Speed (kt)	Stage
19 / 1800	20.2	93.7	1009	30	disturbance
20 / 0000	21.2	94.8	1009	30	"
20 / 0600	22.2	95.5	1010	30	"
20 / 1200	23.2	96.3	1010	30	"
20 / 1800	24.0	96.9	1010	30	"
21 / 0000	24.8	97.6	1010	30	"
21 / 0600					dissipated
19 / 1800	20.2	93.7	1009	30	minimum pressure and maximum wind



Table 2. Watch and warning summary for Potential Tropical Cyclone Four, 19 – 21 August 2022.

<b>Date/Time (UTC)</b>	<b>Action</b>	<b>Location</b>
<b>19 / 2100</b>	Tropical Storm Warning issued	Boca de Catan, Mexico to Port Mansfield, Texas
<b>21 / 0300</b>	Tropical Storm Warning discontinued	All

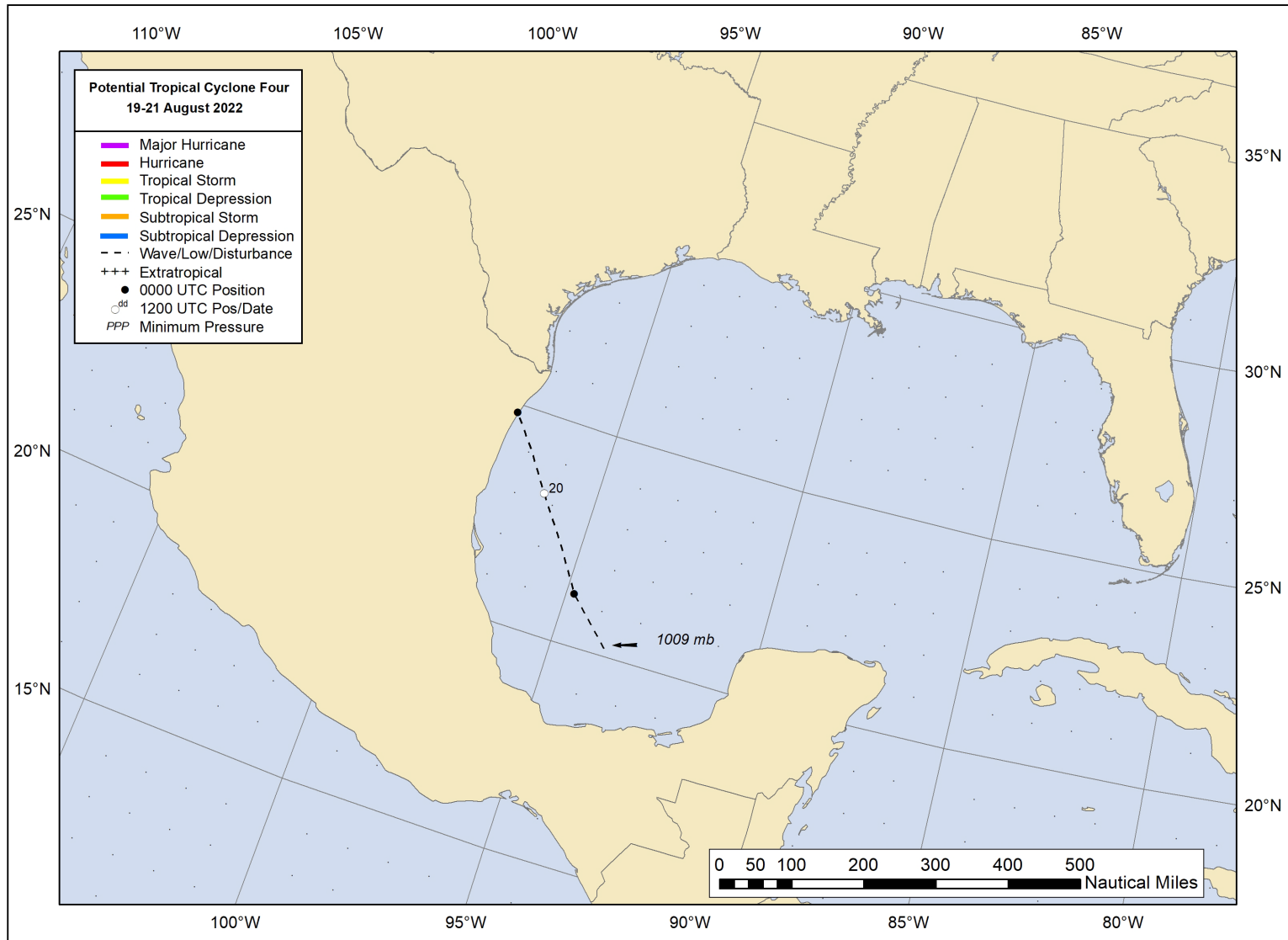


Figure 1. Best track positions for Potential Tropical Cyclone Four, 19 – 21 August 2022.