Current Watches and Warnings

A *Hurricane Warning* is in effect from Port Mansfield to Sargent, Texas

A *Tropical Storm Warning* is in effect from north of Sargent to High Island, Texas

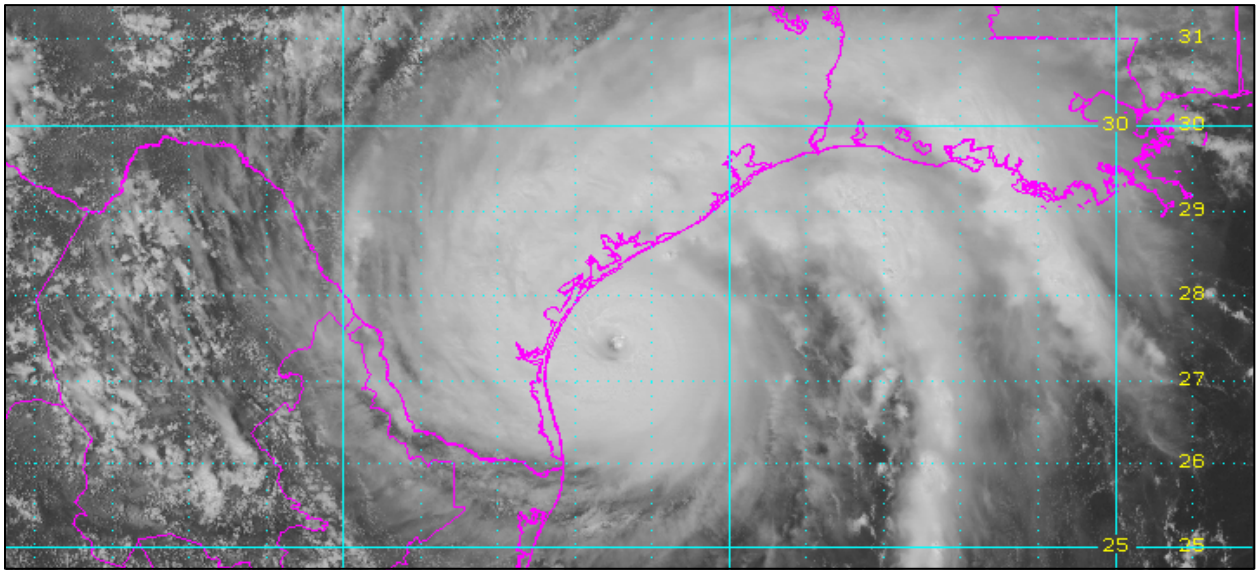
A *Storm Surge Warning* is in effect from Port Mansfield to High Island, Texas

Current Details from the National Hurricane Center (NHC)

COORDINATES: 27.5° north, 96.5° west
LOCATION: 60 miles (95 kilometers) east-southeast of Corpus Christi, Texas
MOVEMENT: northwest at 10 mph (17 kph)
WINDS: 125 mph (205 kph) with gusts to 155 mph (250 mph)
RADIUS OF TROPICAL STORM-FORCE WINDS: 140 miles (220 kilometers)
RADIUS OF HURRICANE-FORCE WINDS: 35 miles (55 kilometers)
MINIMUM CENTRAL PRESSURE: 941 millibars
SAFFIR-SIMPSON SCALE RANKING*: Category 3 Hurricane

FORECAST LANDFALL LOCATION: near Corpus Christi, Texas
FORECAST LANDFALL TIMEFRAME: Friday evening (August 25)
ECONOMIC AND INSURED LOSS POTENTIAL: HIGH

Latest Satellite Picture



Source: NOAA

Discussion

Hurricane Harvey, located approximately 60 miles (95 kilometers) east-southeast of Corpus Christi, Texas, is currently tracking northwest at 10 mph (17 kph). Despite its concentric eyewall structure, Harvey's winds have increased during the day. NOAA and Air Force Reserve Hurricane Hunter planes have measured winds at varying heights of Harvey's atmosphere that justifies the NHC estimating maximum surface winds of 125 mph (205 kph). This wind speed makes Harvey a high-end Category 3 hurricane, and very close to Category 4 intensity (130 to 155 mph). Harvey's central pressure has also continued to fall, and the latest estimate based on dropsonde data is 941 millibars.

Harvey still has not slowed down, and the initial estimate remains towards the northwest. Based on the NHC forecast track, Harvey is expected to make landfall along the middle Texas coast tonight. After that, the track models insist that the hurricane will slow down considerably during the next 24 hours, and it is likely to move very little between 36 and 120 hours. In fact, there has been a somewhat notable change in the model guidance, with very few of the models showing Harvey lifting out toward the northeast by the end of the 5-day forecast period. As a result, the NHC track forecast has been pulled back a bit and keeps Harvey near or just inland of the Texas coast through the middle of next week. This slow motion only exacerbates the heavy rainfall and flooding threat across southern and southeastern Texas. The updated forecast rain totals suggest that there could be catastrophic flooding.

Harvey may continue to strengthen during the last 6 to 12 hours before landfall, but regardless it is expected to make landfall at major hurricane strength. This would mark the first US major hurricane landfall (Category 3+) since Wilma in October 2005. Gradual weakening is anticipated after the center moves inland, but Harvey's slow motion will keep a significant portion of its circulation over water, which may slow the weakening rate. As a result, the NHC intensity forecast shows that Harvey could maintain tropical storm strength for the entire 5-day forecast period due to its proximity to the northwestern Gulf of Mexico.

<u>Key Messages from the National Hurricane Center</u>

1. Harvey will make landfall tonight, bringing life-threatening storm surge, rainfall, and wind hazards to portions of the Texas coast. Tropical-storm-force winds have moved onshore in portions of the warning areas and conditions will continue to deteriorate as the eye of Harvey approaches the middle Texas coast tonight.

2. A Storm Surge Warning is in effect for much of the Texas coast. Life-threatening storm surge flooding could reach heights of 6 to 12 feet above ground level at the coast between the north entrance of the Padre Island National Seashore and Sargent. For a depiction of areas at risk, see the Storm Surge Watch/Warning Graphic at hurricanes.gov. Due to the slow motion of Harvey and a prolonged period of onshore flow, water levels will remain elevated for several days.

3. Catastrophic and life-threatening flooding is expected across the middle and upper Texas coast from heavy rainfall of 15 to 30 inches, with isolated amounts as high as 40 inches, through Wednesday.

Additional Information from the National Hurricane Center

RAINFALL: Harvey is expected to produce total rain accumulations of 15 to 30 inches and isolated maximum amounts of 40 inches over the middle and upper Texas coast through next Wednesday. During the same time period Harvey is expected to produce total rain accumulations of 5 to 15 inches in far south Texas and the Texas Hill Country over through southwest and central Louisiana. Rainfall of this magnitude will cause catastrophic and life-threatening flooding.

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 is expected to reach the following heights above ground if the peak surge occurs at the time of high tide:

North Entrance Padre Island National Seashore to Sargent, Texas: 6 to 12 feet
Sargent to Jamaica Beach, Texas: 5 to 8 feet
Port Mansfield to North Entrance Padre Island National Seashore, Texas: 3 to 5 feet
Jamaica Beach to High Island, Texas: 2 to 4 feet
Mouth of the Rio Grande to Port Mansfield, Texas: 1 to 3 feet
High Island, Texas to Morgan City, Louisiana: 1 to 3 feet

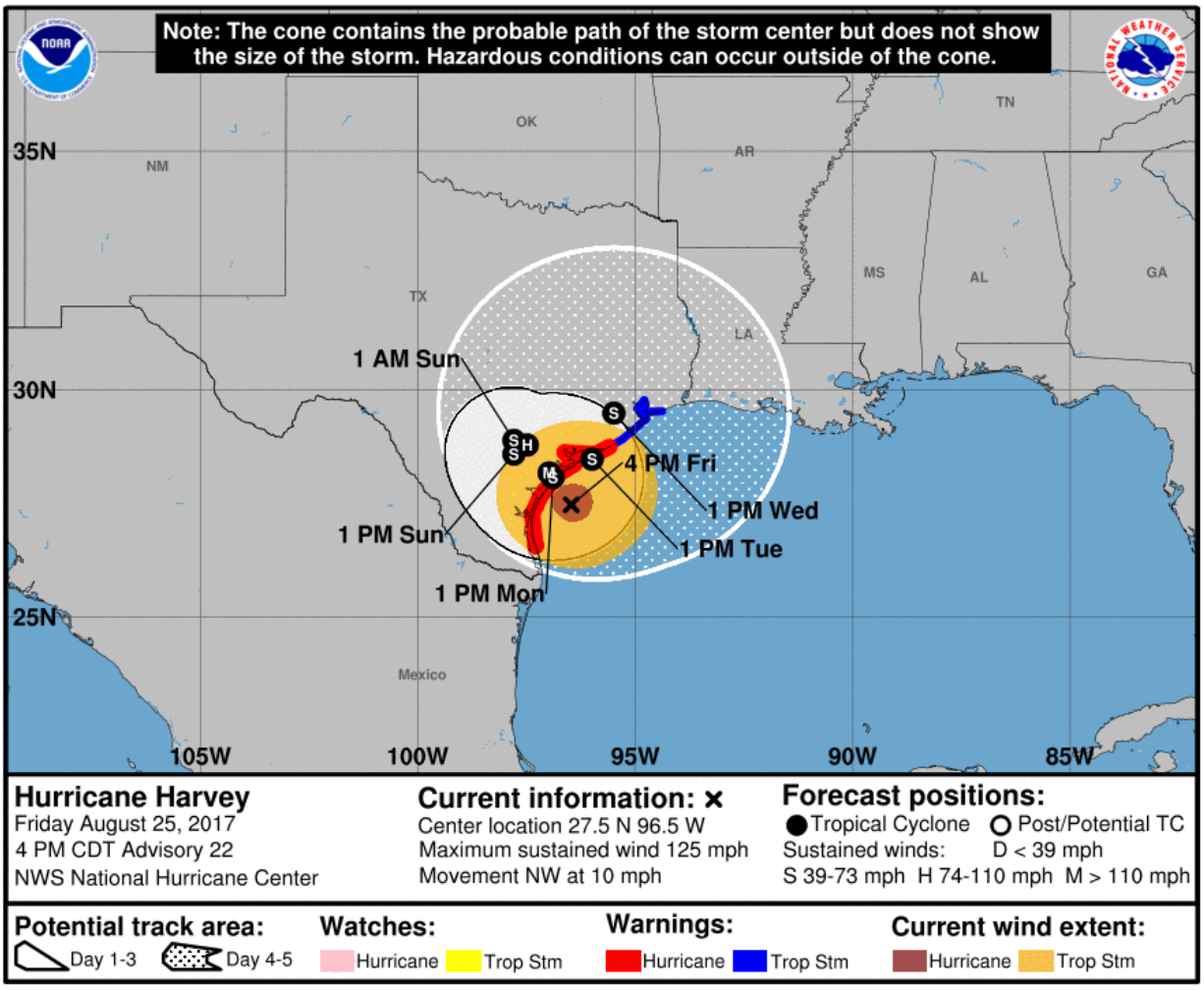
The deepest water will occur along the immediate coast near and to the northeast of the landfall location, where the surge will be accompanied by large and destructive waves. Surge-related flooding depends on the relative timing of the surge and the tidal cycle, and can vary greatly over short distances.

WIND: Tropical storm conditions are occurring in portions of the hurricane and tropical storm warning areas, and hurricane conditions are expected to begin within the hurricane warning area in the next few hours. Tropical storm conditions are likely to persist along portions of the coast through at least Sunday.

SURF: Swells generated by Harvey are affecting the Texas, Louisiana, and northeast Mexico coasts. These swells are likely to cause life-threatening surf and rip current conditions.

TORNADOES: A few tornadoes are possible through Saturday near the middle and upper Texas coast into far southwestern Louisiana.

National Hurricane Center Forecast



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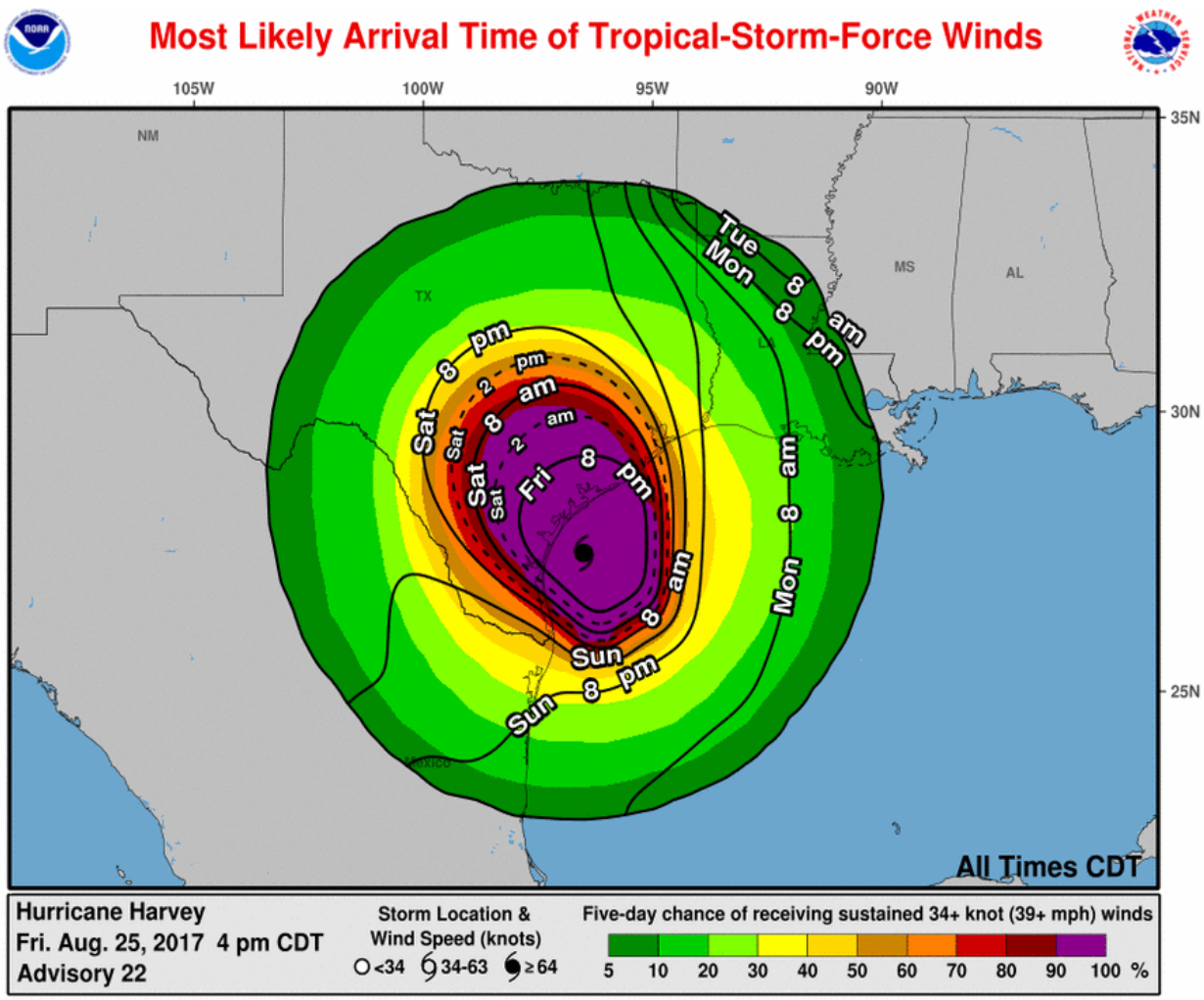
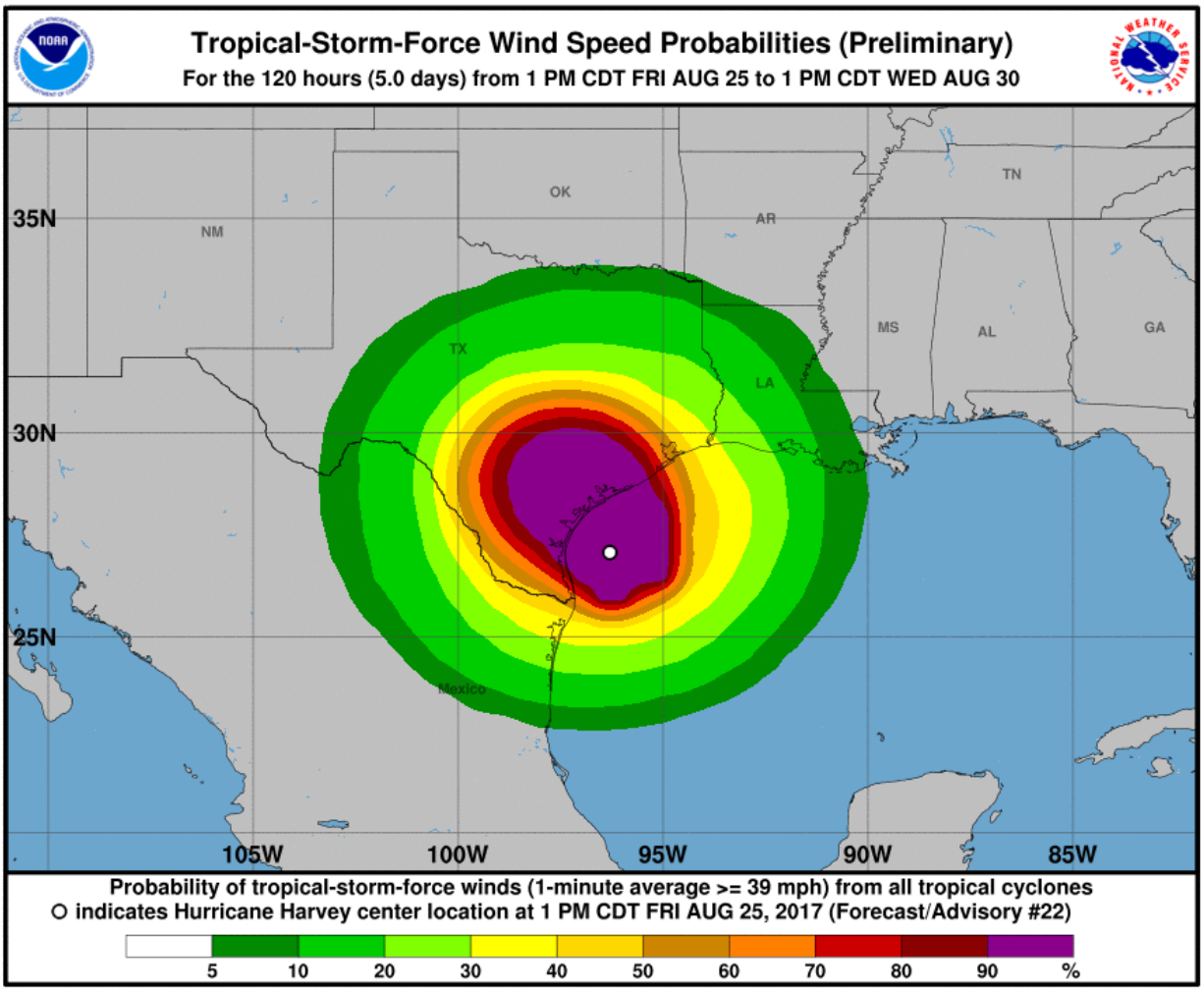
Most Likely Arrival Time of Tropical Storm-Force Winds

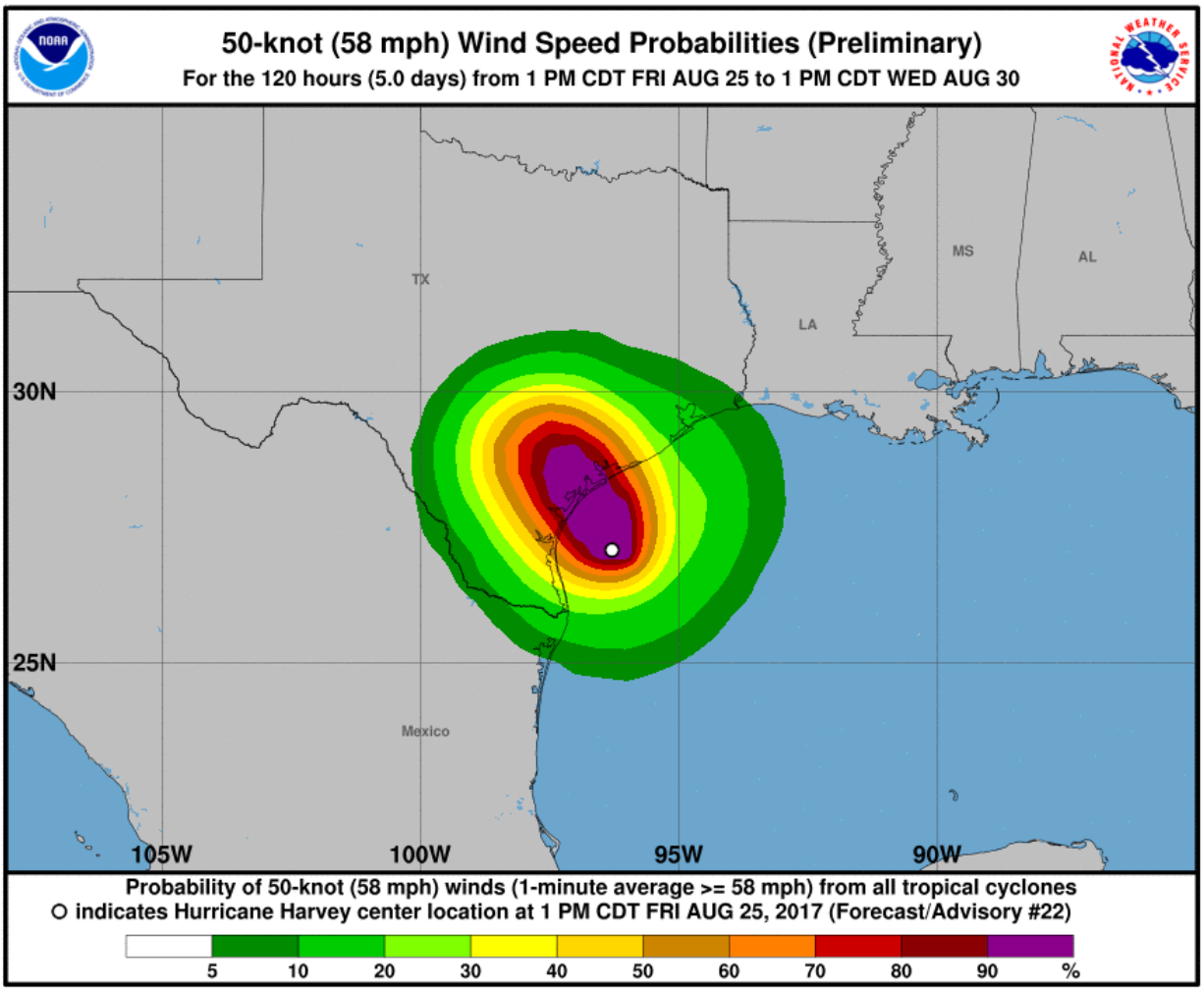


National Hurricane Center (NHC): Wind Speed Probabilities

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

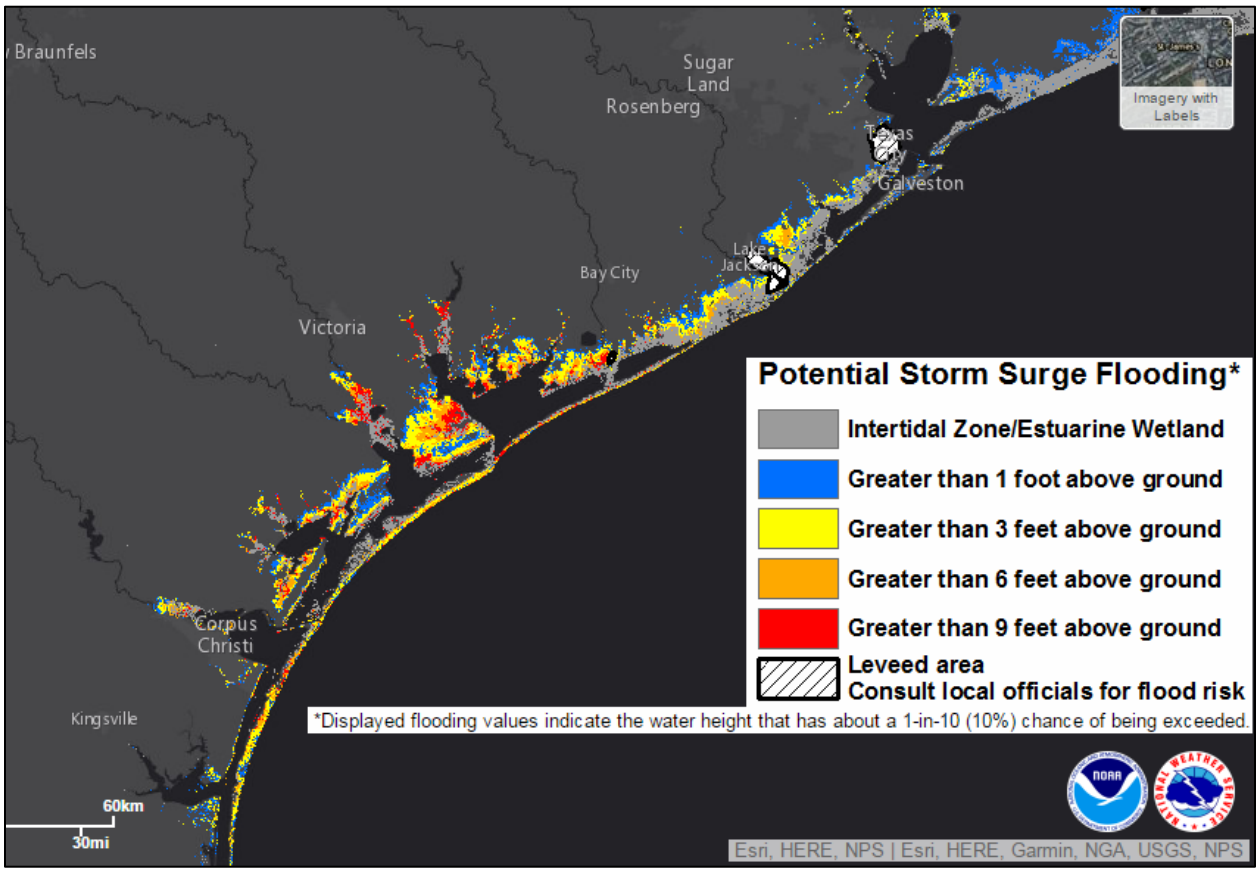


Wind Probabilities (≥60 mph (95 kph))

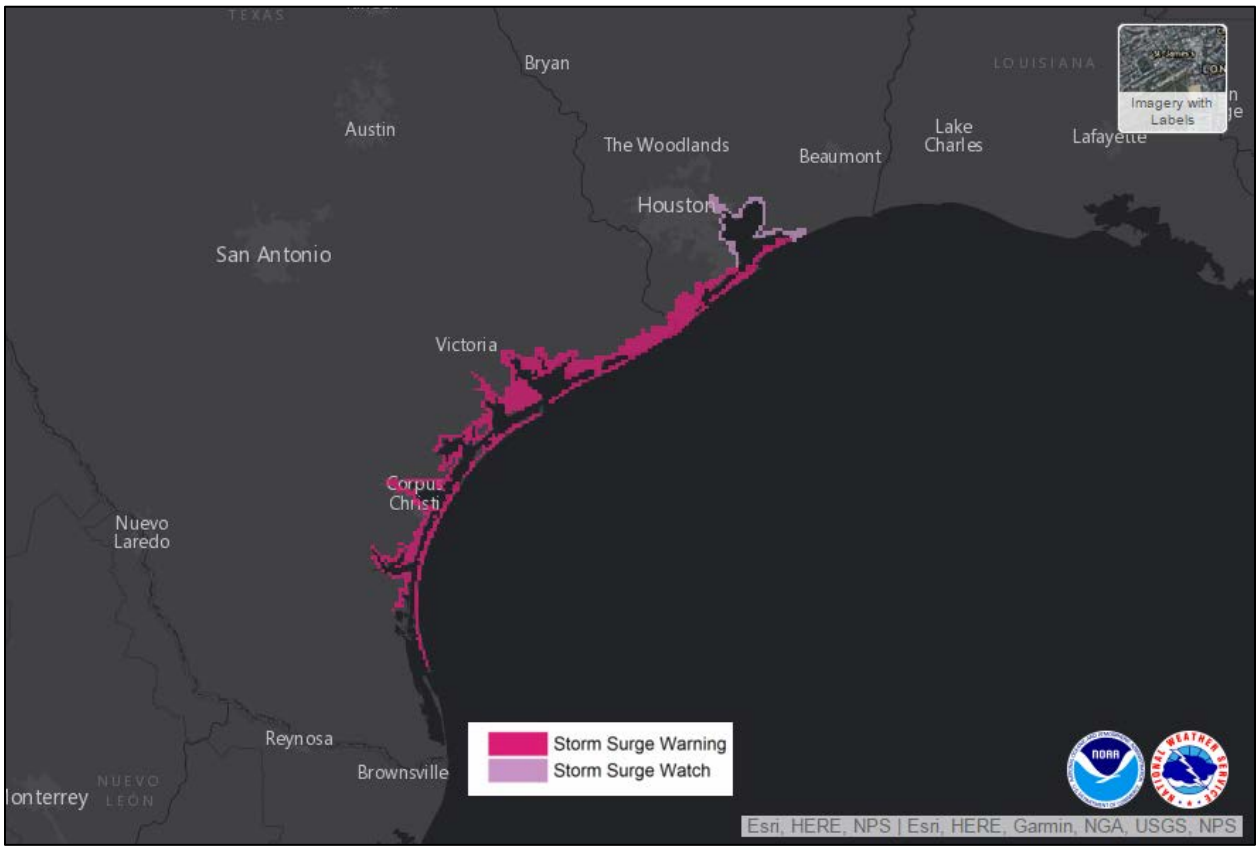


Hurricane-Force Wind Probabilities (≥75 mph (120 kph))

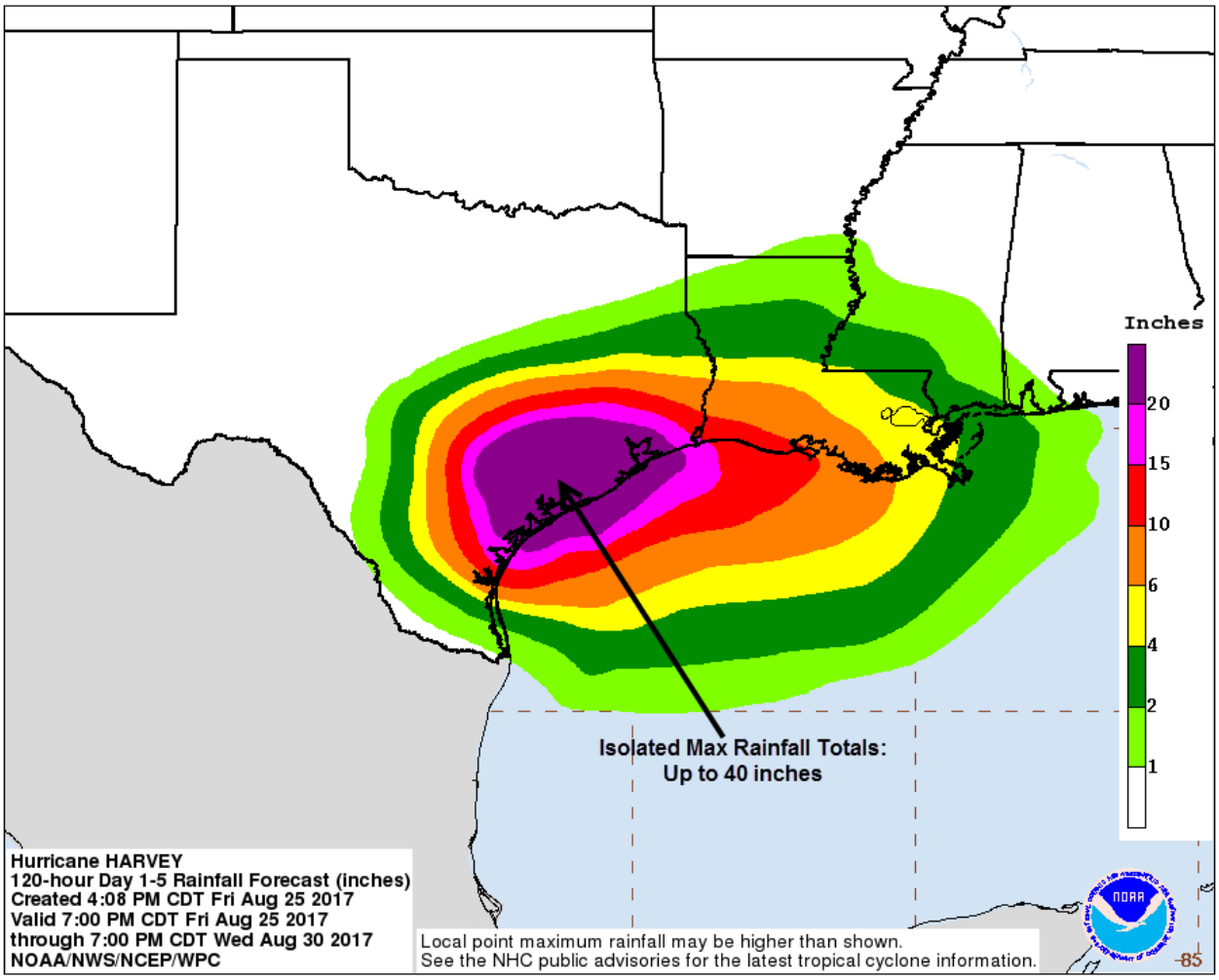
NHC: Storm Surge Inundation Graphic



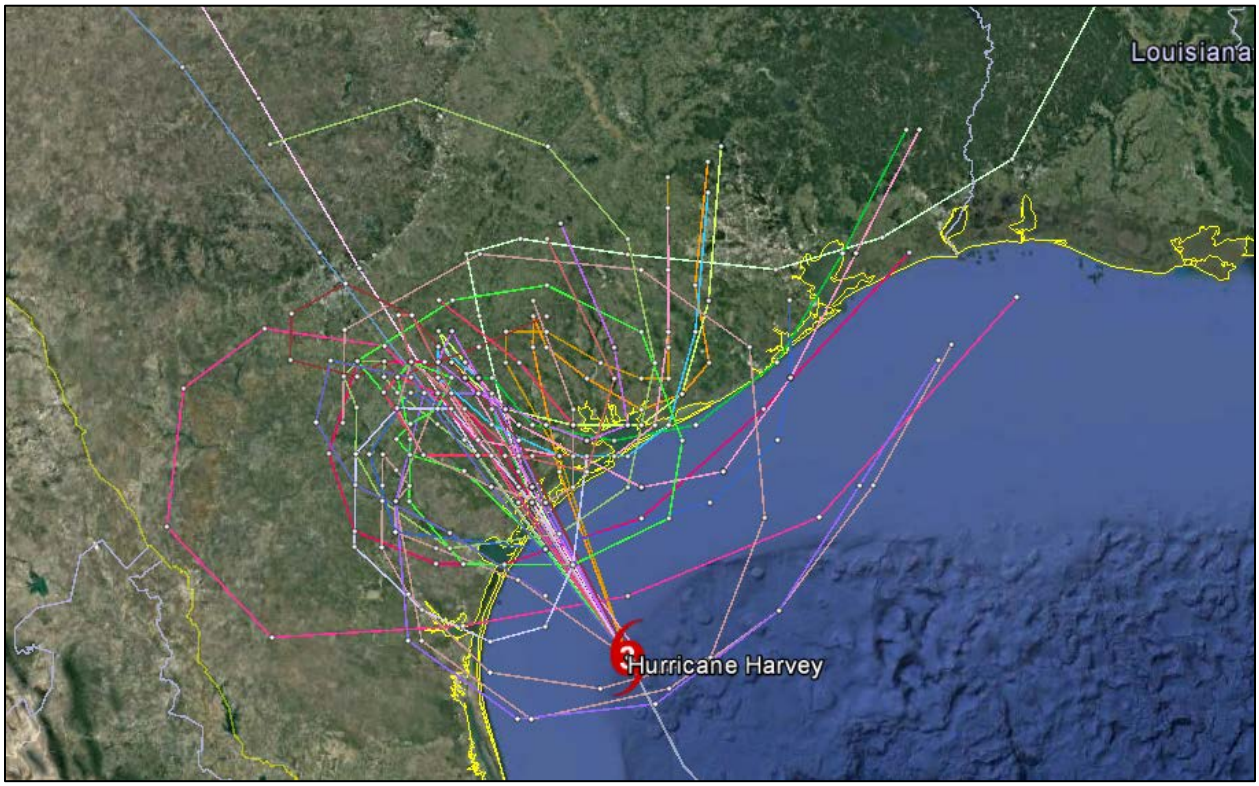
NHC: Storm Surge Watch/Warning Graphic



Weather Prediction Center: Rainfall Potential



Current 'Spaghetti' Model Output Data



Source: NHC/Tropical Atlantic

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

NEXT CAT ALERT: Friday evening after 10:00 PM CDT (03:00 UTC Saturday).

*Tropical Cyclone Intensity Classifications for Global Basins

<table>
<tr><th colspan="3">WIND SPEED</th><th colspan="7">BASINS AND MONITORING BUREAU</th></tr>
<tr><th rowspan="2">KTS[1]</th><th rowspan="2">MPH[1]</th><th rowspan="2">KPH[1]</th><th>NE Pacific, Atlantic</th><th>NW Pacific</th><th>NW Pacific</th><th>SW Pacific</th><th>Australia</th><th>SW Indian</th><th>North Indian</th></tr>
<tr><th>National Hurricane Center (NHC)</th><th>Joint Typhoon Warning Center (JTWC)</th><th>Japan Meteorological Agency (JMA)</th><th>Fiji Meteorological Service (FMS)</th><th>Bureau Of Meteorology (BOM)</th><th>Meteo-France (MF)</th><th>India Meteorological Department (IMD)</th></tr>
<tr><td>30</td><td>35</td><td>55</td><td>Tropical Depression</td><td>Tropical Depression</td><td>Tropical Depression</td><td>Tropical Depression</td><td>Tropical Low</td><td>Tropical Depression</td><td>Deep Depression</td></tr>
<tr><td>35</td><td>40</td><td>65</td><td rowspan="6">Tropical Storm</td><td rowspan="6">Tropical Storm</td><td rowspan="3">Tropical Storm</td><td rowspan="3">Cat. 1 Tropical Cyclone</td><td rowspan="3">Cat. 1 Tropical Cyclone</td><td rowspan="3">Moderate Tropical Storm</td><td rowspan="3">Cyclonic Storm</td></tr>
<tr><td>40</td><td>45</td><td>75</td></tr>
<tr><td>45</td><td>50</td><td>85</td></tr>
<tr><td>50</td><td>60</td><td>95</td><td rowspan="3">Severe Tropical Storm</td><td rowspan="3">Cat. 2 Tropical Cyclone</td><td rowspan="3">Cat. 2 Tropical Cyclone</td><td rowspan="3">Severe Tropical Storm</td><td rowspan="3">Severe Cyclonic Storm</td></tr>
<tr><td>55</td><td>65</td><td>100</td></tr>
<tr><td>60</td><td>70</td><td>110</td></tr>
<tr><td>65</td><td>75</td><td>120</td><td rowspan="4">Cat. 1 Hurricane</td><td rowspan="9">Typhoon</td><td rowspan="15">Typhoon</td><td rowspan="4">Cat. 3 Severe Tropical Cyclone</td><td rowspan="4">Cat. 3 Severe Tropical Cyclone</td><td rowspan="4">Tropical Cyclone</td><td rowspan="9">Very Severe Cyclonic Storm</td></tr>
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<tr><td>75</td><td>85</td><td>140</td></tr>
<tr><td>80</td><td>90</td><td>150</td></tr>
<tr><td>85</td><td>100</td><td>160</td><td rowspan="3">Cat. 2 Hurricane</td><td rowspan="3">Cat. 4 Severe Tropical Cyclone</td><td rowspan="3">Cat. 4 Severe Tropical Cyclone</td><td rowspan="6">Intense Tropical Cyclone</td></tr>
<tr><td>90</td><td>105</td><td>170</td></tr>
<tr><td>95</td><td>110</td><td>175</td></tr>
<tr><td>100</td><td>115</td><td>185</td><td rowspan="4">Cat. 3 Major Hurricane</td></tr>
<tr><td>105</td><td>120</td><td>195</td></tr>
<tr><td>110</td><td>125</td><td>205</td><td rowspan="6">Cat. 5 Severe Tropical Cyclone</td><td rowspan="6">Cat. 5 Severe Tropical Cyclone</td></tr>
<tr><td>115</td><td>130</td><td>210</td></tr>
<tr><td>120</td><td>140</td><td>220</td><td rowspan="4">Cat. 4 Major Hurricane</td><td rowspan="6">Very Intense Tropical Cyclone</td><td rowspan="6">Super Cyclonic Storm</td></tr>
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<tr><td>130</td><td>150</td><td>240</td><td rowspan="4">Super Typhoon</td></tr>
<tr><td>135</td><td>155</td><td>250</td></tr>
<tr><td>140</td><td>160</td><td>260</td><td rowspan="2">Cat. 5 Major Hurricane</td></tr>
<tr><td>>140</td><td>>160</td><td>>260</td></tr>
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About Aon Benfield

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