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Summary

- Harvey is still a Tropical Storm with 40 mph winds and moving very slow (3 mph) to the Southeast.
- It is now moving back into the Gulf and now will maintain its strength for a longer period of time.
- There has been a shift to the east on the path, taking it to the east of Houston and near Beaumont.
- The flood threat is spreading farther east into Louisiana. Additional rainfall amounts of 5 to 15 inches expected in south-central Louisiana.
- Most of Houston has received 20-25 inches of rain in 48 hours with another 15-20 additional inches possible.
- Some are now calling it an 800-year storm.
- 150,000 homes are without power and the storm has caused at least five (5) fatalities.
- 3,000 rescues have been conducted with many more stranded.
- Additional evacuation orders are expected.

Evacuations (9 AM CDT Aug. 28)

**Texas Mandatory Evacuations:**
City of La Grange, Bay City, City of Wharton, Baffin Bay, Loyola Beach, Ingleside, City of San Patricio, Calhoun County, A&M Corpus Christi, Aransas County, San Patricio County, Refugio County, City of Aransas Pass, City of Port Aransas, City of Rockport, City of Ingleside, City of Refugio, Brazoria County, Matagorda County, City of Palacios, City of Victoria, Victoria County, Jackson County

**Texas Voluntary Evacuations:**
Guadalupe County: Guadalupe River, San Marcos River, Cibolo Creek and Geronimo Creek, Jackson County, Cedar Point, Sabine Pass, Smith Point, Seabrook, Nassau Bay, La Porte, Taylor Lake Village, Shoreacres, Bolivar Peninsula, Clear Lake Shores, El Campo, Alice, Kleberg County, City of El Lago, City of Galveston, Galveston County, City of S. Padre Island, City of Port Arthur, City of Corpus Christi, City of Ricardo, City of Riveria, City of Kingsville, City of W. Columbia, City of Richwood, City of Beeville, Bee County, Bay City, Mustang Island, Padre Island, City of San Patriciow City of Seabrook, Jamaica Beach

Summary

It is still a named storm, even after over 48 hours after landfall. It is currently the longest a Texas landfall has remained named storm since 1971. The amount of rainfall will likely be the highest ever recorded in Texas.

Harvey is moving back into the Gulf of Mexico, where it will pick up moisture before moving back on land and head northeast toward Beaumont. It will create at least 4 more days of rain.

- It is expected that 30,000 people will need shelters.
- Dallas has been preparing for 5,000 evacuees.
- Houston's George Bush Intercontinental and William P. Hobby airports are closed until further notice.
- Hospitals in the Houston area are being evacuated due to flooding and power disruptions.
- FEMA has 5,000 employees working on the storm and believes it will be in the area for years.
- 3,000 national and state guard troops are deployed. Another 1,000 will arrive today.
Rain Update

- In the last 2 days, many parts of Houston have received 20-25 inches of rain.
- Houston is experiencing 340 high water spots (up from 140 on 8/27).
- Some reservoirs and dams are beginning to start controlled releases, ahead of schedule, as rainfall will likely exceed specifications.
- Water is beginning to cover the downtown area and entering buildings.
- Water levels on Cypress Creek near Interstate 45 will possibly top the levee by Monday morning.
- Record flooding in Harris County has been observed at Brays Bayou, Upper Buffalo Bayou, Horsepen Creek, Little Cedar Bayou, Willow Spring Bayou, Armand Bayou, Turkey Creek, Beamer Ditch, Berry Bayou.
- Significant flooding is reported on the middle and lower Clear Creek.

Rainfall Totals

- 30.56 inches near Pasadena (Forest Oaks)
- 28.73 inches near Dayton
- 27.32 inches near Baytown
- 25.16 inches in Sugarland
- 24.47 inches at Houston Hobby Airport
- 22.41 inches at Houston Intercontinental Airport
- 19.04 inches at Houston Clover Field
- 13.92 inches in College Station
- 10.41 inches in Galveston
- 10.17 inches at Galveston/Scholes
- 9.37 inches near Victoria
- 8.62 inches near Hackberry, Louisiana
- 7.96 inches at Austin-Bergstrom International Airport
- 5.49 inches at Lake Charles, Louisiana
- 3.82 inches near Corpus Christi

Insurance Impacts

- Harvey’s cost could mount to a $24bn flood loss alone.
- For reference, Katrina resulted in more than $15 billion in flood-insurance claims, paid for by the National Flood Insurance Program (NFIP), but is estimated to have created 105 to 125bn in total loses. This is due to the large share of victims lacking adequate insurance.
- Estimates indicate Allstate could incur $500m of pretax catastrophe losses, shaving 89c off earnings per share.
Advice – Restarting Business Activities

- Implement security procedures at damaged facilities to protect undamaged property.
- Establish regular communication to government officials to obtain approvals for resuming occupancy of the building or to reconstruct the facility.
- If the facility or equipment is not safe or requires repairs, review options to work from home, identify leased space and rent or lease equipment.
- Prepare to open with reduced hours, limited services and review options on how to work with employees on compensation expectations.
- Contact your telephone and internet provider to identify any telecommunications changes or planned outages.
- Contact your IT support to seek advice on restoring computer systems.
- Notify customers of your availability. They may frequently assume the worst after seeing media images. The more information you can give customers, the higher the chances they will continue to purchase from you.
  - When will you re-open.
  - When can you take orders/calls and start deliveries/shipments.
- Review any needed changes in marketing strategy and target market changes as the number of customers may have increased or decreased.
- Replace all filters on equipment. Dust, debris and chemicals may clog ventilation systems.
- Have the fire and smoke alarms in the building cleaned and tested.
- Work with your suppliers and vendors. They may be able to provide critical machinery or software and establish alternative billing options.
  - You may need to identify new or alternative suppliers based on supply chain disruptions.
- Prepare to support employees with vans and carpooling, on-site day care and flexible scheduling.
- Review the business records and identify records, files and communications that may have been lost. It is important to note that critical hard copy records that have been damaged by water, may be able to be restored using a restoration service.
- Request copies of records that may have been lost or damaged beyond repair.
- Contact your company’s sources of funding for restoration activities, beginning with your insurance advisor or insurance carriers for property, business income/extra expense and workers compensation information. Also, call your financial institutions to activate any pre-arranged secured line of credit and access any funds set aside for emergencies.
- Monitor competitor activity as some may re-open and some may not. This can provide new opportunities.
- Review the need to develop response plans for future disruptive events like natural disasters.

For Additional Information:

US National Hurricane Center:
www.nhc.noaa.gov

US Federal Emergency Management Agency:
http://www.ready.gov/hurricanes

EE.UU. FEMA - En Español:

Hurricane Season “Know Before You Go”:
http://travel.state.gov/content/passports/english/emergencies/natural-disasters/HurricaneSeason.html
**Predicted Path**

**Green Line** – 30 to 50 mph winds

- **TD – Sept 2, 1 AM CDT**
- **TD – Sept 1, 1 AM CDT**
- **TS – Aug 31, 1 AM CDT**
- **TS – Aug 30, 1 AM CDT**
- **TS – Aug 28, 1 PM CDT**
- **TS – Aug 29, 1 AM CDT**
Houston Road Closures (More Than Doubled from 140 on 8/27 to 340 on 8/28)
Texas Power Outage Areas - 150,000 customers impacted (Down from 180,000 on 8/27)
Current Watches and Warnings

- Tropical Storm Warning
- Flash Flood Watch
- Airial Flood Warning
- Tornado Watch
Rainfall Totals Over The Last 48 Hours
Predicted Quantitative Rainfall Over Next 5 days
Addicks and Barker Dams (Houston)

- Houston has two main systems: the Addicks and Barker dams and reservoirs, built in the 1930s.
- Addicks and Barker are also in the middle of a $75 million safety upgrade.
- Releases being monitored and are expected to submerge roadways and perhaps some homes immediately adjacent to the reservoirs.
- If the rain continues to fall at its current pace, it is likely that water will go over the uncontrolled spillways at the ends of both dams.
- Neighborhoods located on the north and west boundaries of the Addicks and Barker reservoirs are subject to street flooding and home flooding.
- Residents adjacent to the reservoirs need to be vigilant because the water in the reservoirs is rising rapidly.
Houston River Flooding and Rain Forecast

Purple Indicates – Major Flooding