
Hurricane Rita

September 20–24, 2005

Situation Paper



ABOVE: Hurricane Rita on Sept. 21, 2005

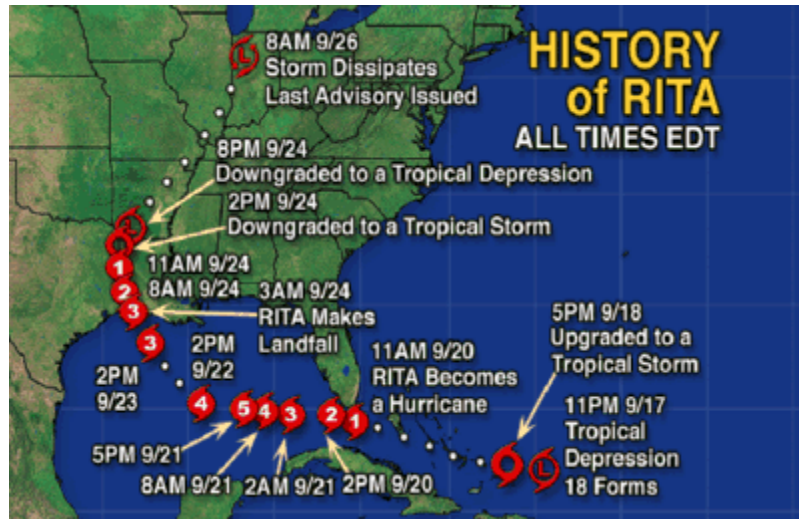
Prepared by Crawford & Company
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September 28, 2005

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Rita's position in the 2005 Atlantic hurricane season

The 17th named tropical storm of the season; the ninth hurricane; the fifth major hurricane; the second category 5 hurricane.



Source: AccuWeather.com

Pre-landfall intensity

Rita was the strongest measured hurricane to enter the Gulf of Mexico and the third most intense hurricane ever recorded in the Atlantic Basin. On September 21 at 11:00 p.m. EDT (300 GMT), the National Hurricane Center reported Rita's sustained winds at 175 mph (280 km/h) with an estimated minimum pressure of 897 millibars.

Landfall facts

When: September 24, 2005, at 03:38 EDT (07:38 GMT)

Where: Sabine Pass, Texas, and Johnson's Bayou, Louisiana.

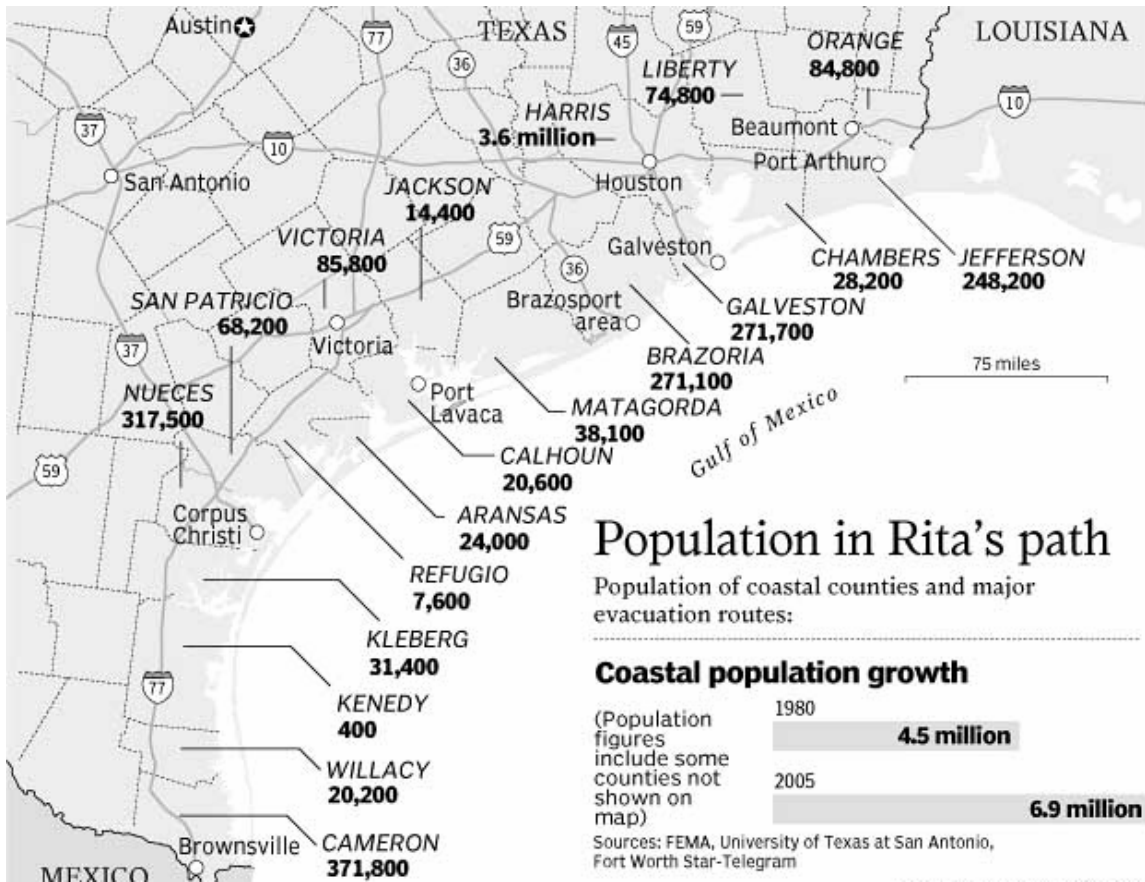
Strength: Category 3 hurricane with windspeeds of 120 mph (190 km/h) and a storm surge of 10 feet (3 m).

(On Tuesday, September 20, Hurricane Rita moved through the Florida Straits as a category two storm, causing little damage to south Florida or the Florida Keys.)

Deaths

As of 11:00 pm EDT on September 26 (0300 GMT September 27), six deaths have been directly attributed to Rita. One death resulted from a hurricane-related tornado in Mississippi; two drownings in Florida caused by strong currents; and three by fallen trees in Texas.

Deaths indirectly caused by Rita include five deaths in Beaumont, Texas, caused by carbon monoxide poisoning from using a generator indoors; the remainder were caused by accidents in the evacuation, including 23 fatalities from a bus fire in Texas.



Source: Knight Ridder Tribune

Evacuations

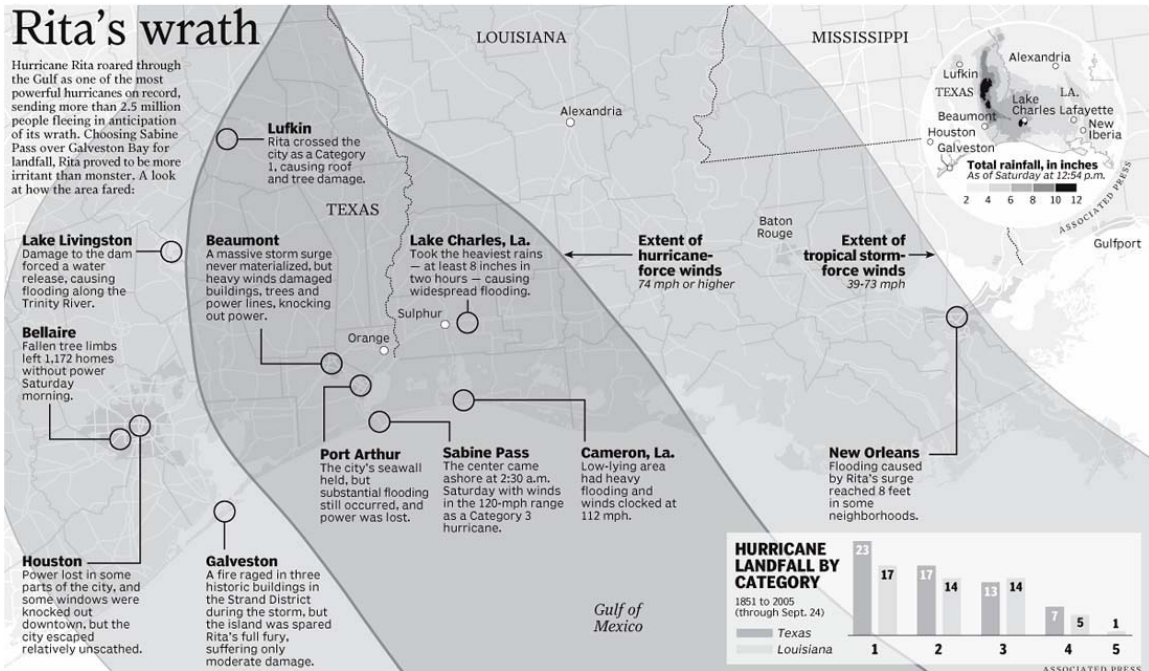
Florida: More than 340,000 people were under voluntary or mandatory evacuation orders in Florida. The Keys evacuation covered 40,000 people living from below Marathon to Key West. Visitors were ordered to clear out of the entire length of the low-lying Keys. Voluntary evacuation orders were posted for some 134,000 Miami-Dade residents who live in coastal areas such as Miami Beach and Key Biscayne.

Louisiana: On September 21, mandatory evacuations were in effect for all of Calcasieu and Cameron Parishes; Acadia Parish south of Highway 92; Iberia Parish south of Highways 90 and 14; Jefferson Davis Parish south of Interstate 10 and all other low-lying areas; Saint Mary Parish south of the Intracoastal Canal; Vermilion Parish south of Highway 14 and residents of mobile homes or special medical needs.

Texas (population in parentheses): On September 21, mandatory evacuations were in effect for Aransas, Calhoun, Chambers (26,031), Galveston (261,000), Goliad, Jackson, Jefferson (249,000), Kleberg, Liberty (70,154), Nueces (313,645), Newton (15,072), Orange (84,966), and Wharton counties; the southern two-thirds of Matagorda County (39,000); and parts of Harris and Brazoria Counties (308,000).

Damage Associated With Hurricane Rita

Although damage caused by Hurricane Rita was not as extensive as had been feared several days prior to landfall, damage was substantial in the coastal areas of southwestern Louisiana and extreme southeastern Texas. Southwestern Louisiana experienced local storm surges of 15 to 20 feet (4.5-6.1 m) Damage in coastal parishes was extensive.



Texas

Beaumont

Beaumont suffered high winds, downed trees, significant property damage, and flooding in some areas, particularly downtown.

Houston

For the most part, Houston seems to have escaped major damage, apart from extensive loss of power. However, some windows blew out of some downtown skyscrapers, and some trees and signals are down.

North of Houston

Lake Livingston sustained substantial damage from 117 mph (187 km/h) wind and resulting waves to its two-mile wide (3.2 km) dam, and had to conduct an emergency discharge in order to lessen pressure on the dam. Repairs to the dam are expected to take months to complete.

Port Arthur: A number of neighborhoods suffered minor flooding, with about a foot to two feet of water rising near doorsteps in some areas. Some storefronts were torn apart, and bricks from those buildings litter several streets. The port appeared to suffer very little damage, though the roof of one warehouse had been torn off.

Louisiana

Cameron Parish:

Louisiana's largest parish (although lightly populated with only 10,000 residents, the vast majority of whom were evacuated) was heavily damaged with the communities of Holly Beach, Hackberry and Cameron being essentially destroyed. Reports indicate that 100 percent of the homes in Cameron Parish were damaged, and 80 percent are total losses.

Lake Charles:

Lake Charles experienced major flooding and extensive damage to its regional airport.

Terrebonne Parish:

Initial assessment show nearly 9,900 homes in the parish were severely damaged. Virtually every levee was breached.

New Orleans:

On Friday, September 23, prior to landfall the next day, rising water due to Hurricane Rita was pouring through breaches in a patched levee in New Orleans' already hard-hit Lower Ninth Ward. By approximately 7:00 P.M. EDT (2300 GMT), water had begun gushing through another leak in the patched London Avenue Canal into the surrounding Gentilly neighborhood. Some pumping stations were abandoned. As of Saturday night, September 24, water from a 150-foot (45 m) gap in the Industrial Canal levee had some areas of the Ninth Ward under eight feet (2.4 m) of water. Large areas of St. Bernard Parish, just outside city limits, were flooded again.



Vermilion Parish:

Following Rita, some 1,000 people were stranded by local flooding.

Mississippi

Several tornadoes from Rita's outer bands affected the state. At least 40 homes and an industrial plant were damaged from one tornado in Humphreys County in central Mississippi, in which one person was killed.

Another unconfirmed tornado was reported in Bolivar County.

A tornado touched down on Mississippi State University's campus. MSU officials do not have specific damage assessments available; however, they do note there was significant damage to some buildings.

Ports and refineries

Ports

The U.S. Coast Guard reported no significant damage from Hurricane Rita to the Houston Ship Channel, a key conduit for crude oil, petroleum products and chemicals. As of Monday afternoon, the U.S. Coast Guard had reopened the Houston Ship Channel to barge and deeper-draft traffic, with some restrictions: Vessels are allowed to transit the channel in daylight hours; vessels with draft of more than 35 feet (10.5 m) are barred.

Refineries

No reports emerged of long-term damage to major U.S. refining and shipping capacities in Houston, Texas City, or Beaumont, Texas. Power outages may have the greatest related effect. Initial reports from industry sources suggest that even in the worst-hit areas of Lake Charles, Hurricane Rita's damage was light relative to that caused by Katrina.

Refineries directly impacted by the storm include:

Calcasieu Refining, Lake Charles, Louisiana, 324,300 Barrels per day (b/d)

Damage: Power and phones are out, some wind damage, control room and administration building are okay. Assessment continues.

Estimated repair time: no report

Citgo Petroleum (Petroleos de Venezuela), Lake Charles, Louisiana, 310,000 b/d

Damage: minor damage, stripped away insulation from cooling towers

Estimated repair time: no report

ConocoPhillips, Lake Charles, Louisiana, 250,000 b/d

Damage: wind damage

Estimated repair time: no report

ExxonMobil, Beaumont, Texas 348,000 b/d

Damage: initial assessments do not indicate significant damage

Estimated repair time: no report

Motiva Enterprises (Royal Dutch Shell & Saudi Refining), Port Arthur, Texas, 285,000 b/d

Damage: minor damage, cooling water-tower

Estimated repair time: no report

Total SA, Port Arthur, Texas, 180,000 b/d

Damage: no report

Estimated repair time: no report

Valero, Port Arthur, Texas, 250,000 b/d

Damage: two cooling towers and a flare stack

Estimated repair time: two weeks to a month

Power outages

In Rita's aftermath, well over 2 million electric customers were estimated without power. In Louisiana, 700,000 homes lost power in 41 of the state's 64 parishes. As of Tuesday, September 27, energy company Entergy reported nearly 460,000 customers still without power in Texas, Louisiana, Mississippi, and Arkansas. (The figure does not include 156,300 customers still unable to receive service following Hurricane Katrina.)

Entergy expects to be able to restore power to customers who can accept power in Arkansas, Mississippi, North Louisiana and the Baton Rouge area by Wednesday, Sept. 28. Some Texas customers may be restored by midweek, but Entergy expects a long and difficult restoration.

Airports

George Bush Intercontinental Airport, Houston, TX, resumed normal operations on September 25.

William P. Hobby Airport, Houston, TX, resumed normal operations on September 25.

Ellington Field, Houston, TX, resumed normal operations on September 25.

Southeast Texas Regional Airport, Beaumont, TX, suffered extensive damage to its terminal area. The Texas National Guard has been deployed to the airport to set up temporary flight operations.

Lake Charles Regional Airport, Lake Charles, LA, suffered extensive damage, including the collapse of its terminal building and damage to the airport's radar and antennae.

About the affected areas

Lake Charles, Louisiana

The city of **Lake Charles**, the parish seat of Calcasieu Parish, has a total population of 71,757. The city is a major petrochemical refining center, gaming center with five riverboat casinos, and home to McNeese State University. It is a port on a deepwater channel to the Gulf of Mexico. The median income for a household in the city is \$30,774, and the median income for a family is \$37,774. Males have a median income of \$33,005 versus \$21,041 for females. The per capita income for the city is \$17,922. 19.6% of the population and 16.3% of families are below the poverty line. Out of the total population, 26.6% of those under the age of 18 and 13.6% of those 65 and older are living below the poverty line.



Cameron Parish

Cameron Parish, population 9,991, has 3,592 households and 2,704 families residing in the parish. The population density is eight residents per square mile (three per square km). There are 5,336 housing units at an average density of four per square mile (two per square km). The median income for a household in the parish is \$34,232, and the median income for a family is \$39,663. Males have a median income of \$31,167 versus \$19,113 for females. The per capita income for the parish is \$15,348. 12.30% of the population and 9.10% of families are below the poverty line.



Terrebonne Parish

Terrebonne Parish's population is 104,503 The parish seat is Houma. The parish has been run by the Terrebonne Parish Consolidated Government since it absorbed the powers of the City of Houma. There are 104,503 people, 35,997 households, and 27,393 families residing in the parish. There are 35,997 households out of which 39.20% have children under the age of 18 living with them. The median income for a household in the parish is \$35,235, and the median income for a family is \$39,912. Males have a median income of \$34,869 versus \$20,705 for females. The per capita income for the parish is

\$16,051.



Beaumont, Texas

Beaumont is a city and county seat of Jefferson County within the Beaumont-Port Arthur metropolitan area. The city has a population of 113,866. With Port Arthur and Orange, it forms the Golden Triangle, a major industrial area on the Gulf Coast. There are 44,361 households and 29,100 families residing in the city. The median income for a household in the city is \$32,559, and the median income for a family is \$40,825. Males have a median income of \$35,861 versus \$24,255 for females. The per capita income for the city is \$18,632.

To report a claim or for further information, please contact:

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