



Orleans Breaking News

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**Alarm sounded too late as N.O. swamped
Slow response left city in lurch**

By John McQuaid
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Hurricane Katrina devastated New Orleans with a double blow when it made landfall Aug. 29. First, storm surge waters from the east rapidly swamped St. Bernard Parish and eastern New Orleans before the eye of the storm had passed the city about 9 a.m. Within hours, surge waters collapsed city canal floodwalls and began to "fill the bowl," while top officials continued to operate for a full day under the mistaken belief that the danger had passed.

A rough reconstruction of the flooding based on anecdotal accounts, interviews and computer modeling shows that the huge scale of the overlapping floods - one fast, one slow - should have been clear to some officials by mid-afternoon Monday, when city representatives confirmed that the 17th Street Canal floodwall had been breached.

At that point areas to the east were submerged from the earlier flooding, trapping thousands, while gradually rising waters stretched from the Lakefront across to Mid-City and almost to the Central Business District.

Federal officials have referred to the levee breaches as a separate and much later event from the flooding to the east, and said that they were unaware of the gravity of the problem until Tuesday, suggesting valuable response time was lost.

"It was midday Tuesday that I became aware of the fact that there was no possibility of plugging the (17th Street Canal) gap and that essentially the lake was going to start to drain into the city. I think that second catastrophe really caught everybody by surprise," Homeland Security Secretary Michael Chertoff said Sunday, adding that he thought the breach had occurred Monday night or Tuesday morning. By that time, flooding from at least one of the two breached canals already had been under way all day Monday, evidence shows.

Even on Tuesday, as still-rising waters covered most of New Orleans, FEMA official Bill Lokey sounded a reassuring note in a Baton Rouge briefing.

"I don't want to alarm everybody that, you know, New Orleans is filling up like a bowl," Lokey said. "That's just not happening."

Once a levee or floodwall is breached by a hurricane storm surge, engineers say, it often widens and cannot quickly be sealed. Storm surge waters in Lake Pontchartrain may take a day or more to subside, so they keep pouring into the city - most of which lies below sea level - until the levels inside and outside the levee are equal.

Experts familiar with the hurricane risks in the New Orleans area said they were stunned that no one had conveyed the information about the breaches or made clear to upper-level officials the grave risk they posed, or made an effort to warn residents about the threat after storm winds subsided Monday afternoon.

"I'm shocked. I don't understand why the response wasn't instantaneous," said Louisiana State University geology professor Greg Stone, who studies coastal storm surge dynamics.

"They should have been monitoring this and informed people all the way to the top, (and) then they should have warned people," said Ivor Van Heerden, who uses computer models at the LSU Hurricane Center to study storm surges and provided officials in the Louisiana Office of Emergency Preparedness headquarters with data indicating the potential for flooding that could result from Katrina.

The storm approached the coast early Monday, the easterly winds from its northern quadrant pumping a rising surge into the marshy Lake Borgne area east of St. Bernard. There, two hurricane levees come together into a large V-shape. Storm surge researchers say that point acts as a giant funnel: Water pouring into the confined area rises up - perhaps as much as 20 feet in this case - and is funneled between the levees all the way into New Orleans.

The water likely topped the levees along the north side adjacent to eastern New Orleans, which average only 14 or 15 feet, according to the Army Corps of Engineers' New Orleans project manager Al Naomi.

The surge reached the Industrial Canal before dawn and quickly overflowed on both sides, the canal-lockmaster reported to the Corps. At some point not long afterward, Corps officials believe a barge broke loose and crashed through the floodwall, opening a breach that accelerated flooding into the Lower Ninth Ward and St. Bernard Parish.

The floodwaters moved quickly.

By around 8 a.m., authorities reported rising water on both sides of the Industrial Canal, in St. Bernard and eastern New Orleans. The Coast Guard reported sighting residents on rooftops in the Upper Ninth Ward. "Water is inundating everywhere," in St. Bernard, Parish Council Chairman Joey DiFatta said.

At 9 a.m., there was 6 to 8 feet of water in the Lower 9th Ward, state officials said. Less than two hours later, most of St. Bernard was a lake 10 feet deep. "We know people were up in the attics hollering for help," state Sen. Walter Boasso, R-Arabi, said that morning. By 11 a.m., water was covering Interstate 10 at a low point near the high-rise over the Industrial Canal.

Sometime Monday morning, the 17th Street Canal levee burst when storm surge waters pressed against it and possibly topped it, Corps officials said. Col. Richard P. Wagenaar, the corps's site commander at 17th Street, told The Washington Post that a police officer called him Monday morning to tell him about it. He told the Post he couldn't get to the site.

Naomi said he thinks the breach occurred in the mid- or late-morning after the hurricane's eye had passed east of the city. By that time, north winds would have pushed storm surge water in Lake Pontchartrain south against the hurricane levees and into the canals. Then the wind shifted to the west.

"As I remember it the worst of the storm had passed when we got word the floodwall had collapsed," he said. "It could have been when we were experiencing westerly winds in the aftermath of the storm, which would have been pushing water against it."

Naomi and other Corps officials say they think the water in the canal topped the levee on the Orleans Parish side, weakening its structure on the interior side and causing its collapse. However, Van Heerden said he does not believe the water was high enough in the lake to top the 14-foot wall and that the pressure caused a "catastrophic structural failure."

It's unclear when floodwalls in the London Avenue canal were breached, but Naomi said it may have been about the same time.

Once the floodwalls failed, water - then at about 8 feet or higher in the lake - began to pour into New Orleans from the west, beginning the full-scale nightmare emergency managers and other officials most feared. At 10 a.m., reporters from The Times-Picayune saw water rising over I-10 where it dips beneath the railway trestle south and east of the canal.

Naomi said that he thinks Corps officials had communicated the information about the breaches to the Baton Rouge Office of Emergency Preparedness

"It was disseminated. It went to our OEP in Baton Rouge, to the state, FEMA, the Corps," Naomi said. "The people in the field knew it. The people here (in Corps offices) in Louisiana and Mississippi knew it. I don't know how communication worked in those agencies."

Officials at the OEP could not be reached for comment. New Orleans officials were also aware of the 17th Street Canal breach and publicly confirmed it at 2 p.m. Around the same time, The Times-Picayune reported 4 feet of water in one Lakeview neighborhood.

An hour later, Terry Ebbert, head of New Orleans' emergency operations, listed Treme and Lakeview as among the areas hardest hit by the flooding. Ebbert said there would be casualties because many people were calling emergency workers saying they were trapped on rooftops, in trees and attics. In some cases, he said, authorities lost contact with people pleading for help.

As the day wore on, the flood crept east and south and made its way across the city, penetrating neighborhood after neighborhood.

At 3 p.m. Times-Picayune reporters found it was knee-deep under the Jefferson Davis overpass near Xavier University. A Mid-City couple stranded there said their home was surrounded by 5 feet of water. An hour later, the I-10 dip under the railroad overpass was under 15 feet of water.

George Saucier, the CEO of Lindy Boggs Medical Center south of City Park, told The Times-Picayune that water from the 17th Street breach had flowed into Bayou St. John and overflowed its banks, then followed streets like sluices on its way south, where it was starting to flood the hospital's basement.

By late afternoon, people stranded on I-10 near the Industrial Canal could see residents on rooftops stretching across Lower 9th Ward.

As night fell Monday, many outside of New Orleans breathed a sigh of relief believing the city had been largely spared the worse. But thousands were stranded from the Lower Ninth Ward, across St. Bernard and south to the east bank of Plaquemines Parish. And waters continued to rise overnight throughout central New Orleans. By dawn, they stretched all the way from east to west and into Uptown, and were coursing through the Central Business District. As TV helicopters flew over the city and beamed out pictures of the flooding, the extent of the catastrophe was clear.

That flooding would complicate evacuation efforts in New Orleans for days.