

What have engineers learned from Katrina?

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Five years after Hurricane Katrina devastated New Orleans, James N. Jensen, PhD, University at Buffalo professor of civil, structural and environmental engineering, says that probably the biggest lesson learned from that disaster was that municipalities and citizens now take orders to evacuate much more seriously.

Jensen was one of six UB researchers that visited the Gulf Coast soon after Katrina hit, as part of a National Science Foundation-funded reconnaissance mission organized by UB's Multidisciplinary Center for Earthquake Engineering Research. Research into "extreme events" and disaster mitigation/ response is a strategic strength of the university identified in the UB 2020 strategic plan.

"By the time Hurricane Rita hit not long after Katrina, there was something like a 95 percent evacuation rate," Jensen recalls. "People had really gotten the message."

During his visit to New Orleans in October 2005, Jensen and colleague Pavani Ram, MD, UB assistant professor of social and [preventive medicine](#), met with public-health officials and with managers from wastewater treatment plants.

While he said that drinking water was restored by about 10 weeks after Katrina, one major problem persisted as a result of the loss of pressure of water distribution systems, due to shifting, waterlogged houses and empty cars on flooded streets that knocked down fire hydrants.

"They estimated that as many as 1,000 or more breaks occurred in the water distribution pipes due to the damaged fire hydrants," says Jensen, "and the loss of pressure that resulted lead to contaminating the water in those pipes."

Another issue, one that could complicate hurricanes this season, is the problem posed by the potential loss of vegetation in wetlands due to the Gulf oil spill.

"If oil kills the vegetation in those wetlands, then you lose the buffer that that vegetation provided," Jensen explains.

One thing really surprised Jensen about his visit to New Orleans after hurricanes Katrina and Rita.

"Pretty much to a person, once people found out I was from Buffalo, they all expressed the same sentiment," he says: "Even though they were living through the aftermath of these two horrible hurricanes, they told me they could never live in a place that has blizzards."

Provided by University at Buffalo

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