

Engineers: New Orleans' Levees Need Further Improvements

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GEI Consultants, Inc., a national water resources, geotechnical, environmental and ecological science and engineering firm, announced May 13 that firm Principal *R. Lee Wooten, P.E.*, a civil engineer with geotechnical concentration, recently co-led a team of civil engineers to New Orleans, La., to assess levee performance following Hurricane Gustav.

Wooten was also the principal author of the group's report, *Reconnaissance of the New Orleans Hurricane and Storm Damage Risk Reduction System after Hurricane Gustav*," which was published in February 2009.

The reconnaissance team was sponsored by the National Science Foundation (NSF) through the Geoengineering Extreme Events Reconnaissance (GEER) Association, and was hosted in New Orleans by the U.S. Army Corps of Engineers (USACE), New Orleans District and the Mississippi Valley Division. Wooten was joined by fellow engineers Robert B. Gilbert, Ph.D. (co-team leader, The University of Texas at Austin), P.E.; William F. Marcuson, III, Ph.D., P.E. (W.F. Marcuson III & Associates, Inc.); Leslie F. Harder, Jr., Ph.D., P.E., G.E. (HDR Incorporated); and Peter G. Nicolson, Ph.D., P.E. (University of Hawaii at Manoa).

The team toured nine sites along the Mississippi River Gulf Outlet, the Gulf Inter-coastal Waterway, and the Inner Harbor Navigational Canal, as well as a non-federal back levee in Plaquemines Parish. Their observations, along with data collected from the Corps and news sources, form the basis of the report.

The team concluded that the federal levees around New Orleans performed well under the surge and wave stresses generated by Gustav, but that, even with improvement to the levees, southern Louisiana remains vulnerable to hurricane flooding. The report notes that storm surges larger than those created by Gustav and Katrina should be anticipated and that bringing the hurricane protection system up to a level appropriate for protection of the New Orleans area will take years, if not decades, to achieve.

"The recent major improvements to the hurricane protection system around New Orleans by the U.S. Army Corps of Engineers since Katrina prevented major damage from the Gustav storm surge. Further improvements to the levee systems and flood controls in Louisiana and nationwide are needed to protect urban areas like New Orleans from larger future storms," said Wooten.