



US Army Corps
of Engineers
New Orleans District

News Release

Public Affairs Office, 7400 Leake Avenue
<http://www.mvn.usace.army.mil/hps/>

CONTACT:

Lu Christie Tel: 504-862-1836
LTC Greg Bishop Tel: 202-761-0014

U.S. ARMY CORPS OF ENGINEERS RELEASES NEW ORLEANS RISK ANALYSIS

NEW ORLEANS – (June 20, 2007) – Today the U.S. Army Corps of Engineers released the prototype risk assessment for the hurricane protection system in the New Orleans, La., vicinity. This comprehensive risk analysis was developed by the Interagency Performance Evaluation Task Force (IPET) as part of their mission to study the effects of Hurricane Katrina on the protection system.

The innovative risk assessment provides information on the vulnerability of the protection system as it existed June 1, 2007. Future risk analysis work using these new modeling tools will look at the next level of protection (100-year storm elevations) for the protection system that will be provided in the coming years.

These prototype risk products profile pre-Katrina and current protection system conditions. This shows the dynamics of risk and the effects of system improvements on risk and vulnerability. The risk products already show risk reductions in some areas from repairs and improvements to the protection system.

This risk information will be useful for officials and the public to make their own informed decisions. The risk products for the 100-year elevation levels of the protection system will be done later this summer by the New Orleans District using the IPET risk models.

The IPET risk analysis employs the most advanced physics, mathematics, engineering, hydrological, geological and meteorological knowledge available. It incorporates three main factors when determining risk: hazard (probability of hurricanes, their surge and waves), the protection system (performance of levees, floodwalls, and other structures) and consequences (loss of life or property).

Incorporating the hazard into the risk assessment involved modeling the chances of many possible future hurricanes. The IPET factored the chances by using a suite of 152 different possible future hurricanes that might hit the Louisiana coast, ranging in severity from 50-year storms (2 percent annual chance of occurring) to 5,000-year storms (.02 percent annual chance of occurring). To achieve this modeling feat, an entirely new advanced hurricane modeling method was developed by the IPET, the Corps of Engineers, the Federal Emergency Management Agency, the National Oceanographic and Atmospheric Administration, universities and private industry.

The hurricane modeling provided critical water levels (storm surge and waves) about hazard for future storm events. These water levels were then applied to New Orleans' 350-mile hurricane protection system to determine reliability factors. More than 135 reaches of floodwalls and levees, representative of uniform areas of the system, and 350 specific structures (gates, transition points, pump stations and other features) were profiled in the protection system model. Information on elevation, design, construction, maintenance, soil foundations, soil erosion and other factors was incorporated into the structural data to determine the overtopping, overtopping and erosion breaching, foundation failure, and other parameters of the protection system performance. These factors gave the reliability and potential flooding aspects of the protection system.

– MORE –

This information was then applied to pre-Katrina population and property values to determine risk for loss of life and economic losses for the entire region by natural drainage basins in the area parishes. Annualized risk for flooding (water depths) was also computed for these areas based on hurricane hazard, structural reliability, and ground elevation.

Risk modeling can be developed into a variety of products, such as maps, graphics and other information. This information displays risk elements by sub-basin, basin, or region:

- Probability of inundation (getting your feet wet, to deep water flooding);
- Risk to populations or property;
- Relative risk by parish (county);
- Principal sources of risk from breaching, overtopping, flooding from a transition point or special feature, etc.; and
- Specific sources of risk (i.e., a gate, transition point or structure).

The first set of publicly-released risk products on June 20 is prototype drafts that will receive additional detailed technical review and public comment.

Peer review panels from the American Society of Civil Engineers and the National Academies' National Research Council will complete technical reviews, as they have for all the IPET analyses, reports and findings.

The Corps of Engineers has already solicited comments from local officials and the public from a series of presentations of the draft risk products during the last six weeks to ensure the risk products are useful and effective.

Samples of the risk products, interactive map links, and other information can be accessed at <http://NOLArisk.usace.army.mil> or at <https://IPET.wes.army.mil>.

###
