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## **Major Quake Could Be Worse Than Katrina**

- By ERICA WERNER, Associated Press Writer Thursday, September 15, 2005

As many as 18,000 people dead. More than \$250 billion in damages. Hundreds of thousands of people left homeless. That's not the latest estimate of Hurricane Katrina's toll on the Gulf Coast. That's a worst-case scenario if a major earthquake were to hit Los Angeles.

The figures are hypothetical, from a model published in May by government researchers studying the Puente Hills fault under the city. Scientists warn that there's little doubt a major quake will hit California in coming years or decades, though many scenarios are not as disastrous as Puente Hills.

As was the case with Katrina, experts say the federal government hasn't done enough to prepare.

"There's not enough money to carry out the research and implementation programs that need to be put into place," said Susan Tubbesing, executive director of the Earthquake Engineering Research Institute in Oakland, Calif. "If funds were available, if these were higher priorities, these kinds of things could be addressed now — before an earthquake."

California has been hit by significant quakes about every 15 years over the past century. Experts say there's a better-than 60 percent chance that a quake with a magnitude around 6.7 will hit Southern California or the Bay Area within decades.

"The reality is when you have a disaster of that proportion, you need the federal government," Los Angeles Mayor Antonio Villaraigosa said Wednesday in Washington, where he was meeting with federal officials. "I think the question is, is the federal government prepared to provide the resources that we need? I think that, clearly, by what we've seen in Louisiana, the jury's out."

Just as Katrina exposed a failure to sufficiently strengthen the levees around New Orleans, experts say a big quake in California, Washington state or the Mississippi Valley could reveal that too little was done to make buildings, bridges and roads earthquake-proof.

"There's very little mitigation going on, and it's because it's so expensive to do, just like it was so expensive to fix the levees," said Chris Poland, head of Degenkolb Engineers in San Francisco. "So I think we would have the same reaction: Why didn't we fix those buildings? Why didn't we fix the infrastructure?"

Congress created the National Earthquake Hazards Reduction Program in 1977 after a series of major quakes in Alaska, California and China. The goal was to reduce the loss of life and property by funding research on how buildings and structures respond to earthquakes, improving building codes, and conducting earthquake models along different fault lines.

But funding for the program has been essentially flat for more than a decade.

About \$125 million was allocated in 2005 — a decline of more than 30 percent in real dollars from its first 1978 budget of \$67 million, according to House Science Committee budget figures.

In California, where earthquake risk is highest, the U.S. Geological Survey has about 140 employees working on earthquake issues under the joint federal program, down from more than 300 a decade ago, said William Ellsworth, chief scientist with the earthquake hazards team at USGS in Menlo Park, Calif.

"We have greatly reduced the number of people we have doing research, we have had to cut way back on field investigation programs, we've had to work smarter with less," Ellsworth said.

According to some experts, earthquake readiness has been hurt by the same shift of focus from natural disasters to terrorism that's being partly blamed for the bungled response to Katrina.

In 2003, when Congress moved FEMA to the Department of Homeland Security, lawmakers also moved the lead agency role for the earthquake program from FEMA to the National Institute of Standards and Technology. But they never gave NIST any money to perform its new leadership role.

"Right now you have a program that probably has appropriated somewhere around \$130 million per year, and we don't have a lead agency to supervise or manage it," said Tom O'Rourke, a professor of civil and environmental engineering at Cornell University.

Michael Buckley, deputy director of FEMA's mitigation division, denied there had been a decreased focus on disaster preparedness or mitigation, and said FEMA's work on earthquake preparedness has led to successes such as improved building code recommendations.

"From my perspective, we're holding our own pretty well, certainly are very busy, and I expect that that would be the trend here in the future," Buckley said.

California has instituted new building codes and spent billions to shore up old structures in the wake of the Loma Prieta earthquake of 1989 and the Northridge earthquake of 1994, which, before Katrina, was the nation's costliest natural disaster with \$40 billion in losses.

But many older buildings still need upgrades, including some 900 hospital buildings in California, and scientists would like to do more research to learn more about how to build structures that can withstand earthquakes.

A key network of seismographs USGS is installing around the country is lagging — only 563 of a planned 7,050 machines have been put in place, mainly because funding has stuck far behind planned levels. For example, Congress authorized \$35 million for the network in 2005, but appropriated only \$8 million.

Experts contend that spending on mitigation reaps huge dividends. They point out that retrofitted roads and buildings survived the Northridge earthquake, while others that hadn't been retrofitted did not.

Some experts fear Americans have become complacent about earthquake risks because it's been more than 10 years since the Northridge quake. "What happens is people forget and people lose interest in the seismic networks," said Jeroen Tromp, director of the Caltech Seismological Laboratory in Pasadena, Calif. "And then how do you stay alive? How do you generate enough funding to do more than just keep your head above water?"