

Comprehensive quake info a must

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who has seen the epicenter of a major earthquake within days of its hitting knows that California scientific priorities have lately been seriously skewed

Put these recent events together: First, the state Legislature passes and Gov. Jerry Brown signs a measure for the development of a comprehensive statewide earthquake early warning system. Estimated initial cost: \$80 million

Here is a report detailing how the state's effort to map all of its significant earthquake faults has slowed to a stop. This began just after the 1971 Sylmar temblor, which destroyed a veterans hospital, among other things. That quake occurred on a fault no one previously knew existed and for 20 years mapping was suspended. With 534 maps published detailing active faults

As of 1991, reports the Los Angeles Times, just 23 more maps have been drawn, none between 2004 and 2008 because of budget cuts. About 300 more faults must be mapped

Recently it is reported that a multi-campus team of University of California scientists funded by the National Science Foundation has identified about 1,500 of the most apparently quake-vulnerable buildings in Los Angeles County, using public records and a walking survey

But, the academics won't give their list to the mayor so he can start doing something about it. Because they can't be sure all buildings on their list are really at risk, the scientists fear they could face lawsuits from building owners if they finger structures that are actually sound—something only an on-site assessment can determine

The question arising from these three almost simultaneous autumn developments: How do you create a comprehensive warning system if you don't know where the faults lie? And how do you warn the people if you don't know what buildings they're in?

For the comprehensive warning system legislative sponsor, Democratic state Sen. Alex Padilla of Los Angeles, insists that knowing the precise locations of all faults is "very important," it's still not crucial to early warnings. "Once waves emanate from the epicenter, waves go out," the MIT mechanical engineering graduate says. "Energy travels faster than the actual shaking, so depending on how far you are from the epicenter, you might get 15 and 60 seconds warning, as they do in Japan. That can be crucial if you're a surgeon in an operating room."

for anyone who hasn't seen the sheer power of a major earthquake up close to understand how urgent the problem is. California has seen no big quakes in major population areas in almost 20 years, creating a false sense of security.

Information is needed. The comprehensive warning system should be online within two years. Padilla is confident it can operate even without some key information. But adding that information can help prevent casualties and a lot of damage. So we need to know where quakes might strike and who is most at risk.

Seismic hazard maps drawn since 1971 give far more information than anyone had before then. But the biggest earthquakes of the last 40 years have come in unanticipated places, generally along unmapped faults. So even with a comprehensive warning system, all information on possibly unsafe buildings must be checked out, no matter what legislative action it takes.

Without adequate information, the good done by warnings could be minimized. Warnings must be issued as precisely as possible and that can be done if lawmakers both state and federal forget partisanship and concentrate on saving lives.