

Alex Padilla: California should build earthquake early warning system

By Alex Padilla Special to the Mercury News
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The next California earthquake is not a matter of if, but when. We also recognize that we may, in our lifetime, experience "the big one." That became more ominous last year when the California Institute of Technology and the Japan Agency for Marine-Earth Science and Technology published a study concluding, for the first time, that a statewide mega-quake involving both the Los Angeles and San Francisco metropolitan areas may be possible.

One way to reduce injuries is to provide advance warning of an earthquake. California presently has a demonstration earthquake early-warning system called the California Integrated Seismic Network, which functions as a research tool. We should expand this system and provide earthquake warnings to all Californians. A fully developed system would process data from a statewide network of sensors, detect the strength and the progression of an earthquake, alert the public within seconds and provide tens of seconds' advanced warning before damaging ground shaking is felt.

Last year, I authored a bill that required California to build an earthquake early-warning system. Gov. Jerry Brown signed my bill into law. California law now requires the Office of Emergency Services, in collaboration with the California Seismic Safety Commission, California Institute of Technology, the California Geological Survey, the University of California at Berkeley, the United States Geological Survey, and others, to develop a comprehensive statewide earthquake early-warning system.

A fully realized system will cost about \$80 million. It would be worth every penny. A statewide earthquake early-warning system would provide Californians critical seconds to take cover, assist loved ones or pull their vehicles to the side of the road. It would also provide time to bring trains safely to a stop, power down critical infrastructure and even pause surgery. The science is sound, and the technology is proven. Japan, Mexico and China all have systems that work. More than 50 million Japanese received early warnings via an app on their cell phones prior to the massive 9.0 Tohoku, Japan, quake in 2011. Millions more downloaded the app after the quake so they could receive early warnings prior to strong aftershocks.

California should make an emergency appropriation to put a similar system in place. There is no reason for California to wait. We appropriate money for a variety of state projects. This one will actually save lives and address one of the most serious threats facing our state.

Mexico funded its earthquake early-warning system after 10,000 people were killed in the Mexico City quake of 1985. Japan funded its system after 6,000 people died in the Great Hanshin Earthquake of 1995. And China funded its system after 80,000 people were killed in the Sichuan Earthquake of 2008. We should learn from these examples and not wait until thousands of Californians are killed in an earthquake to fund an earthquake early-warning system.

Sen. Alex Padilla graduated from MIT with a degree in mechanical engineering. He represents District 20 in the California Senate. He wrote this article for this newspaper.