



## Seismic Warning Systems Testimonials

### Emergency Services

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#### Palm Springs Fire Department

On October 31, 2001, an earthquake of magnitude 5.1 on the Richter scale was successfully detected by the QuakeGuard™ system and fire station doors were automatically opened.

*"The recently installed seismic warning system at the headquarters fire station in Palm Springs successfully activated and opened the apparatus room doors, and turned on the lights and radios during last night's 5.1 Anza earthquake. Reports this morning from the personnel that were on duty stated that it was really nice to have been able to get in their trucks to move them out of the station, and know that the doors were opened and would not be a hindrance.*

*When the sleeping firefighters were awakened by the earthquake on October 31<sup>st</sup> at 11:56PM, they were surprised to find the lights in the dorm were on, the alert tone was warning them, and when they got to the trucks to pull them out, the doors were fully opened."*

Blake Goetz, Fire Chief, Palm Springs Fire Department

#### Paso Robles Fire Department

QuakeGuard™ performed in the December 22nd, 2003 6.5 magnitude San Simeon quake. Distance from epicenter was about 20 miles. Statement January 8, 2004.

*"Seven firefighters and I were in the apparatus bay completing training. We heard the earthquake alarm siren go off and the station's bay doors automatically opening. There was an approximately 1-3 second gap between the siren and the beginning of the earthquake. We immediately exited the building via the roll-up doors.*

*During our exit from the building we noted that the apparatus bay doors were violently shaking in their tracks and that the engine and truck were swaying back and forth. Some of the firefighters had the impression that the aerial truck would hit the wall of the apparatus bay. In our opinion, the automatic opening of the apparatus bay doors and the alarm were beneficial."*

Kevin Taylor, Battalion Chief, Paso Robles Fire Department



#### Temecula Fire Department

QuakeGuard records and filters earthquakes of lower magnitudes: no false positive alerts.

*"Right at about quarter to six in the evening, the head engineer installing our new QuakeGuard system asked to please ask my men not to fool with the newly installed seismic sensors. I looked past the fire rig across the station and told him that nobody was nearby.*

*We later found out that there had been a 3.7 quake at that exact time and that the system had successfully detected it as a warning level seismic activity and had recorded it, but had not fully triggered the system since it didn't register as a dangerous quake."*

Greg Adams, Captain, Station 84, Temecula, CA

*"This is another tool in our arsenal to enhance public safety in the city."*

Howard Windsor, Fire Chief, Temecula, CA



## Calistoga Fire Department

*"We were one of the first Fire Departments with this technology and the only community to have it connected to a public warning siren. We were originally concerned about the possibility of a false alarm. Our fire station is located on a street which receives regular rumbling from big trucks, and we often feel minor quakes from the "Geysers" in Lake County. After 3 years in operation we have never had a false alarm."*

Gary Kraus, Calistoga Fire Chief

Calistoga made nationwide news by being the first city to provide a general public earthquake alert by connecting QuakeGuard to a massive WWII siren, pictured right.



## Vallejo Fire Department

*"It will surely allow the Fire Department to utilize their equipment to do whatever they need to do during an earthquake...The most important thing is to get the equipment outside stations in the event the station is damaged."*

David Kleinschmidt, Assistant City Engineer, Vallejo

*"Anytime we can get an early warning for something like an earthquake it will be beneficial to us."*

Bill Tweedy, Vallejo Fire Department Spokesman

## Albany Fire Department

*"We bought into it...In the event of the earthquake that is enough of a shake (to) bend or warp the apparatus doors, it will open the doors for us, so we're ready to go."*

Jay Jorgensen, Fire Captain, Albany CA

Albany Fire Department installation pictured at right.



## Palm Springs Fire Department

QuakeGuard's advanced technology resists man-made vibrations and still reacts to earthquakes.

*"After the installation our first seismic warning system at the headquarters fire station located at Palm Springs International Airport, we undertook an extensive fire station expansion. Being only 300 yards from the main runway, I was pleased to see that the earthquake monitor had not accidentally activated from the noise and vibration from arriving and departing aircraft since being installed one year before. Now came the real test. As the contractors demolished parts of the apparatus room and brought in heavy equipment to break apart the concrete apron that was up to 20" thick in some areas, the station was almost uninhabitable due to the constant noise, earthquake-like vibrations and shaking, and pounding of huge concrete breakers. I felt certain that we would encounter activation of the seismic monitoring system on the first day. To my surprise, the system did not trigger or activate itself in any way during the two week demolition as I would have expected. George Dickson and staff at Seismic Warning Systems assured me that these were not the type of vibrations and waves that their sensors would act upon. To this day, I am still amazed that the system did not initiate the process of opening our apparatus room doors, turn on the lights, and announce that seismic motion had been detected over the station intercom speakers. Based on this experience and the actual activation of the system during a 5.1 earthquake on October 31, 2001, the City Council has authorized the installation of four additional seismic warning systems. The citizens of Palm Springs will be better protected by the installation of the Seismic Warning System in each of its 5 fire stations."*

Blake G. Goetz C.E.M., Fire Chief, Palm Springs Fire Department



## CDF / Riverside County Fire Department

*“Because we are in an area that is very susceptible to earthquakes, we needed to ensure that if we have a major seismic event we can get our equipment and personnel out of the fire station quickly. Our services are critical during a major disaster and we need to be able to provide emergency services to the many communities we serve.*

*The benefit of QuakeGuard is that this system can detect and warn us of an imminent seismic event, allowing us to get our equipment and personnel safely out of the station to be able to respond to provide assistance within our communities.*

*We were impressed with the way this system has performed in the City of Palm Springs, and we felt that the system has been proven to be reliable and accurate in detecting seismic events.”*

Ignacio C. Otero, Assistant Chief, Riverside County Fire Department

## Residential

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### Chino Hills “Smart Home”

*“I am a “hi tech” kind of guy and have experienced a few major earthquakes in the L.A. and Santa Cruz areas, and being caught in that unpredictable situation is the most helpless I have ever felt in my life. For the next quake that I experience, I want my home to be prepared before the destructive shaking starts, and knowing that my home will “adjust” to this situation will comfort me immensely. My QuakeGuard home will have complete backup power throughout, the gas will be automatically shut off to prevent a fire, and there will be emergency lights and an audible warning over the speaker system to remind me to “duck and cover” until the shaking stops. Of course, I’m not looking forward to the next Big One, but I will be less anxious as I await this inevitable occurrence and more prepared after it happens.”*

Gary McLaughlin, Chino Hills, CA

## Schools

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### Baymonte Christian School

*“The QuakeGuard early earthquake warning system is important both in the event of a quake, and for earthquake safety training at Baymonte. The QuakeGuard alarm has a distinctive tone and will be used in our regular earthquake emergency training drills. Teachers will instruct the classes in how to prepare for the shock, safety measures, when it is safe to emerge, and how to reassemble. The alarm will help differentiate our earthquake response from our fire alarm response drills, which call for very different behavior. One of our issues is that we are close to the San Andreas fault, and California is always expecting the next quake. Our school buildings are well-built for seismic damage mitigation, so the key dangers are environmental: the possibility of lights coming down, and sheetrock or plaster detaching and falling. I have personally experienced a significant quake, and the natural tendency even for adults is to go to the window and observe the rolling....which is the very last place you should be, near a large expanse of glass! ‘Duck and cover’ drills with QuakeGuard will help protect the children and their teachers.”*

Steve Patterson, Principal, Baymonte Christian



## Schools and Architecture

*“California’s school children are taught to drop, cover and hold in the event of an earthquake. However, if they wait until the strong motion waves arrive, it may be too late for children to protect themselves. Earthquake early warning systems using P-wave technology in our schools can provide the critical time necessary for students and staff to get under protective covering BEFORE the buildings begin to suffer*



*damage that could injure students and staff. All public schools should be equipped with early warning P-wave detectors such as QuakeGuard, to prevent or reduce injuries.”*

Gary L. McGavin, AIA, Department of Architecture, Cal Poly, Pomona CA  
Past member, California Seismic Safety Commission

## Milpitas Christian Schools

*“The physical safety and well being of the children is of the highest priority here at Milpitas Christian Schools. Because of our location close to the Hayward and Calaveras faults and the style of construction of this building with its extensive exposure to large windows, it seems wise to take advantage of every safety advance possible. The additional seconds of warning time provided by this system, when combined with our standard earthquake drills, will help to prevent potentially serious injuries. I am pleased to be the first school in the Silicon Valley to implement the QuakeGuard system. The school response to an earthquake is different from a fire drill. With the distinctive tone and verbal warning provided by QuakeGuard, the teachers and students will have the training and emotional security to know that everything humanly possible has been done to ensure their safety.”*

Ken Van Meter, Superintendent of Milpitas Christian Schools



## Industry spokespeople

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### State of California Seismic Safety Commission

*“Every second of advance warning can, with adequate pre-earthquake preparedness training, translate directly into the reduction of lives lost, injuries, and property damage.”*

Richard McCarthy, Executive Director, California Seismic Safety Commission

Richard McCarthy and George Dickson, CEO of Seismic Warning, pictured at right.



### Risk Assessment and Mitigation

*“The old saying is that an ounce of prevention is worth a pound of cure. Certainly, in the public sector, earthquake preparedness is critical to the preservation of physical and economic development in cities and towns. Communities which have prepared properly for earthquakes and other risks will suffer the least, both in the immediate aftermath of the emergency and long term. Earthquake preparedness is a critical area of investment for municipalities, especially in California. Municipalities should have a plan that integrates government and the business community, covering schools, emergency response systems, hospitals, and public utilities.”*

Steve Maggi, President, Aanko Technologies, Inc.

### University of British Columbia

*“The results of the tests showed, in general, that QuakeGuard is sensitive enough to detect small vertical ground motions, thereby providing a warning time before the arrival of more damaging horizontal motions produced by earthquakes. Warning time will allow users enough time to take precautionary action in the event of an upcoming seismic shaking. The warning time will depend, of course, on the earthquake type, the epicentral and focal distances, and the geological conditions of the site where the device is to be installed.”*

Dr. Carlos E. Ventura, UBC Earthquake Research Laboratories