

Schools Practice What to Do When the Earth Moves Under Your Feet Case Study – A Community-wide Earthquake Drill in California

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No matter how well we reduce the risks associated with natural hazards, we also need skills to take care of ourselves and help each other out when disaster strikes. Immediately after a major earthquake damages buildings or a cyclone causes flooding, it can be days until food, water, and shelter from outside the area reaches those affected. People are often on their own for several days. The speed of later recovery depends on the ability that survivors have to organize themselves and to help each other.

Drills and simulations are essential for training and practice. Handbooks, web-sites, manuals and specially-trained teams exist around the world. But just reading about these things and leaving them to others isn't enough. Drills often reach only a small population, perhaps one school or one building at a time. Until now. A new method is gaining popularity for mass public education for disaster preparation, while keeping it local. Just as Iran has pioneered national school earthquake drills, so too have cities and Japan and a whole region in California pioneered in *community-wide earthquake drills*.

At 10am on 13 November 2008, Southern California rocked — to a pretend earthquake designed to get people to act for real. The Great Southern California ShakeOut was the largest earthquake drill in U.S. history.

5.5 million people participated, including almost 4 million students in kindergarten through grade 12. To make it seem as real as possible, a scientifically-developed practice scenario suggested that a magnitude 7.8 earthquake would rock the area for two minutes. Participants in the ShakeOut rang bells, shouted “Earthquake” and began by taking the ‘earthquake position’ Drop, Cover and Hold-on. Most participating schools followed with a full building evacuation and student accounting. Many enacted a full simulation, using the common *incident command system* to organize themselves. Schools’ disaster management plans were put into practice to see where the weak spots lay. Meanwhile, international researchers from four continents looked on, seeking lessons to share with colleagues around the world.

The ShakeOut was organized by Earthquake Country Alliance (ECA). The international school safety observation team was assembled by Risk RED (Risk Reduction Education for Disasters) in cooperation with Western Washington University’s Institute for Global and Community Resilience and the international Coalition for Global School Safety and Disaster Prevention Education. Support came from ECA and ProVention Consortium.

The team provided a *School Disaster Resilience & Readiness Checklist* along with *School Drill Model and Templates* including *Self-evaluation forms* based on good practices by Los Angeles Unified School Districts and other school districts around California. A *School Disaster Preparedness Survey* and *School Post-Drill Evaluation Survey* were implemented to aggregate self-evaluation observations by participating schools. These resources and the full report on *School Disaster Readiness: Lessons from the first Great Southern California ShakeOut* can be found at: <http://www.shakeout.org/schools> .

With 75 years of public policy leadership to support school safety, new school construction standards in California are higher than those for regular buildings. Non-structural mitigation measures, such as fastening heavy furniture and appliances to the walls and floors, began twenty years ago and are now mandatory. While this progress is reassuring and laudable, four areas of concern remain:

- Private schools are not required to meet these construction standards.
- 7,537 school buildings in California constructed before 1978 are of questionable safety.
- Portable classrooms, which may account for 1/3 of all classrooms in California, may be hazardous if not properly supported and fastened.
- Non-structural mitigation measures require consistent application to be effective.

The surveys, observations, and post-drill debriefings showed the ShakeOut to be a major success. The international research team reported on the impressive seriousness and conscientiousness with which school leadership, staff, and students approached the drill. They also highlighted the tremendous learning that comes from long-term engagement in drills and the discoveries and innovative solutions that emerge from reflection and action after each drill.

It was encouraging to see the wide extent of knowledge and skills for safety – yet everyone recognized that there's still a long way to go. Almost all school staff members were aware that they are mandated disaster service workers and almost all have disaster committees and disaster plans. Yet less than one-third involve parents and less than one-fifth involve students and other community members. Schools notify parents about disaster drills, but most don't encourage staff or students to prepare at home, forfeiting this powerful learning opportunity and failing to transfer knowledge from children to their parents.

Similarly, schools have fire extinguishers, smoke detectors, clearly marked evacuation routes, and first aid supplies, but many lack emergency water and food supplies, emergency lighting and shelter and supplies for children with special needs. Many school staff have first aid training, know how to turn off utilities, can use a fire extinguisher, and are familiar with student release procedures. Weaker areas are training in use of incident command systems, off-site evacuation plans, backing-up educational records, education continuity plans, transportation planning for students on school buses, and plans to safely reunite children with their parents.

The ShakeOut turned theory into practice, showing how local solutions to disasters can be scaled up to teach and learn from the mass public. The event was so successful that it is now to become an annual event in California. The next one is scheduled for October 15, 2009.

Get involved! Let us know if you are planning a community-wide disaster response drill in your area! riskred@riskred.org . Let's make this the *Great Worldwide Shakeout* for 2015.