

## **Not My Fault: Preparedness takes a village and some great assistants**

Lori Dengler/For the Times-Standard  
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I've been working on earthquake outreach since the mid-1980s. Like many things, I accidentally fell into it. My research areas had been rock mechanics and shallow seismic refraction. I had to leave rock mechanics behind when I came to Humboldt. Just couldn't pursue it without the equipment I had access to in grad school or as a postdoc. Humboldt had earthquakes and you didn't need fancy equipment to study their impacts.

In 1981, the California legislature funded Lawrence Hall of Science to develop an earthquake curriculum. Called the California Earthquake Education Project (CALEEP), the legislature passed the California Earthquake Education Act of 1984 to provide three years of funding to disseminate it in California schools. The CSU System was provided a small grant for campuses to establish six regional earthquake education centers for teacher training.

I liked what I had seen of the curriculum and it seemed like something worth trying. I knew very little about K-12 education at the time, but we threw a hat into the ring and were awarded one of the centers. It was a very modest grant (\$5000) and we were only required to hold at least one annual workshop for teachers over the next three years.

The grant ran out in 1987 and the legislature authorized additional support for the program. Governor George Deukmejian vetoed the appropriation on October 1st, 1987. Even the M5.9 Whittier-Narrows earthquake (\$300 million in damages, 8 deaths) in Southern California on the same day wasn't enough to convince the governor it was worth continuing. A few of the trained teachers incorporated aspects of the program into their classes, but CALEEP was never widely adopted and, without support, it withered away.

The CSU earthquake centers disappeared as well, with one exception. HEEC, the Humboldt Earthquake Education Center, continues to this day. There were several reasons for our survival. We offered CALEEP training as continuing development course so it didn't require additional resources as long as a sufficient number of students and area teachers enrolled. We had experienced widely felt earthquakes in 1986, 87, 90 and

91 and regional interest in earthquakes was high. And, unlike the other five regional CSU CALEEP centers, were isolated from major government or university seismic research centers. People wanted earthquake information and we seemed to be the only ones in town.

With strong earthquakes came requests for talks and field trips. I began to meet people in emergency response agencies. HSU was slightly more flush in the late 80s and I was fortunate that the department and college dean recognized value in our slowly expanding outreach efforts and gave me a few units compensation for HEEC activities.

1992 was the game changer. The M9.2 Cape Mendocino earthquake sequence caused at least \$60 million in damages, injured over 350, produced a modest tsunami and resulted in a federal disaster declaration. It focused the interest of both the scientists and the State's emergency management system on the North Coast.

With interest comes the potential for support. I was able to get a NSF grant to study the shaking pattern of the 7.2 and the two major aftershocks. FEMA funded a study of the potential impacts of a bigger earthquake on the Cascadia subduction zone and, for the first time ever, included tsunami inundation. Suddenly HEEC was no longer offering a few classes and giving a few talks. We were at the table in the discussions of how to study and address the potential tsunami hazard.

1992 was also the turning point in getting assistance. The grant allowed me to hire Kathy Moley, a grad student in the Geology Department. Kathy became my right hand for the next six years, helping me to write the first edition of our earthquake-tsunami preparedness magazine *On Shaky Ground*. She supervised our first assessment survey of attitudes and actions towards preparedness and helped with the first County Fair room. And she helped with the formation of the Redwood Coast Tsunami Work Group in 1996.

When Kathy became a geologist for Pacific Watershed Associates, I found another wonderful assistant in Judy Warren. Judy had worked with Red Cross in the Bay Area before moving to the North Coast in the early 2000s and was eager to jump into outreach efforts on the North Coast. She worked with me for about a decade, expanding outreach efforts and helping with the 2nd and 3rd editions of the *Shaky Ground* magazines.

For the past seven years I have relied on Kerry Sherin as both my right and left hand and sometimes my legs as well. In 2012 she took over organizing our Earthquake-

Tsunami room exhibits at the Humboldt County Fair, each year polishing up a new theme. She was there to guide the tsunami debris boat into the room in 2014 and introduced Ellie, the inflatable earthquake denial elephant, in 2018. She took on a leadership role in the Redwood Coast Tsunami Work Group and was our representative to the State's Earthquake Country Alliance.

Kerry is now headed to the east coast for the next chapter in her life. All of us in the Redwood Coast Tsunami Work Group are give her a standing ovation and yell out THANK YOU for all of your great work.

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