

## **About that New Yorker article ...**

Lori Dengler/For the Times-Standard

Posted: August 2, 2015

I had no intentions of writing anything when the New Yorker's Cascadia earthquake article ("The Really Big One," July 20) came out. My assessment? Nothing new here. Then the emails with "Should I move" and "I am really frightened" in the subject line began to roll in.

There is nothing in the New Yorker article that we haven't known or been saying for decades. We've been aware of the CSZ threat since the 1980s and my HSU Geology colleagues Gary Carver and Bud Burke (both emeritus professors) were in the thick of the pioneering paleoseismic work that showed we had a much larger earthquake threat than offshore magnitude 7s. After the Cape Mendocino Earthquake of 1992, the California Geological Survey did a detailed study of the likely effects of a Cascadia earthquake in Humboldt and Del Norte Counties. The Times-Standard headline of Dec. 31, 1994 read "State Studies Effect of Titanic Quake." More studies followed and by the mid-2000s, the consensus of earthquake researchers and emergency planners was that a magnitude 9 Cascadia quake had to be planned for.

I don't have any disagreement with the assertion in the New Yorker article that the Cascadia threat is real and we need to address it. I do have problems in the way the article presents the threat and its clear intention to sensationalize and engender fear in those who read it.

A Cascadia rupture is not "long overdue." We don't have a good enough or long enough record of past earthquakes to define the pattern of occurrence. The last great Cascadia earthquake was over 300 years ago but they do not go off like clockwork and can be as close as 200 or a far apart as 800 years. A magnitude 8.5 to 9.1 earthquake on the CSZ is a credible threat and we need to prepare and plan for it. It could happen this afternoon or in another 50 years or more, and calling it "overdue" to ramp up fear won't make any difference.

There is no way to predict in detail what a particular CSZ earthquake will do. When it comes to ground shaking, current California codes should do a good job of making sure that structures built to modern codes (post-1970s) will stand up in either a San Andreas or Cascadia earthquake. I am sure that unreinforced masonry buildings are much more likely to

collapse in a Cascadia or other earthquake — and one action we should do now is reinforce them or shut their doors.

A Cascadia earthquake will shake for a long time — probably well over a minute. And while I can't be sure about how strong it is likely to be in Humboldt or Del Norte counties, I am pretty sure that it will be stronger here than in Oregon, Washington or British Columbia. That's because we are closer to the fault here (it heads further offshore to the north of us). And I would be very surprised if it didn't create "isolated islands of humanity" — by damaging bridges, triggering landslides and disrupting communication. Everyone should have food and water to be on your own for at least a week and longer in more rural areas.

Fear is a very poor motivator for taking sustained and meaningful action. What works? Making the message positive, such as "By preparing, I have control over what will happen to me and my family." What doesn't work is fear. We like to avoid subjects that make us fearful, and if earthquake preparedness brings with it images of catastrophe, it is pushed from our thoughts.

We live in a beautiful place that has been sculpted by the natural forces around us — including earthquakes, landslides, floods and storms. They won't go away by ignoring them and the problems they bring won't be solved by sensationalistic journalism. If you would like a copy of our preparedness magazine, "Living on Shaky Ground," please leave a message at 707-826-6019, or come by the Earthquake-Tsunami Room at the Humboldt County Fair (Aug. 20 to Aug. 30) for a more thorough presentation about Cascadia earthquakes and things we can do to make our families and communities more resilient.