

Not My Fault: A video remembrance of the Cape Mendocino earthquakes

Lori Dengler/For the Times-Standard

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Why commemorate events of the past? One, five, ten-year or more anniversary attention is a relatively modern phenomenon. When I was researching the impacts of the 1906 earthquake in Humboldt County, I was surprised to see no mention of it in regional newspapers in April 1907, or 1911. It wasn't until 1956 when I found a column in the Ferndale Enterprise noting the fifty-year anniversary.

There are a number of reasons for remembering disasters. While media attention may be a 20th century phenomena, all cultures mark past traumas in some way. When I was studying the 2011 tsunami in Japan, many people pointed out the tsunami stones in the Tohoku region that marked the extent of tsunami flooding in 1891 or 1933. The oral history of Native Peoples includes many accounts of past floods, eruptions, earthquakes, or other events and World Renewal Ceremonies include rituals to keep the community safe from future disasters.

There is a difference between disasters that cause great loss of life and ones that caused lesser impacts. The 1992 Cape Mendocino earthquake sequence fortunately falls into the latter category. At more than \$60 million in property losses, it is the most expensive historic earthquake disaster, but injuries were mostly minor, and everyone recovered. There still reasons why it is worthy of a look back.

We've had thirty years of relative seismic quiet since 1992. Eight earthquakes of at least magnitude 6 have struck the North Coast since then including two in the magnitude 7 range, but only the January 10, 2010, was close enough to populated areas to cause major damage. Many new residents have moved here who have never experienced a strong temblor. Remembering 1992 is a way to remind new and older residents alike that we do live in the most seismically active region of the coterminous United States, and it is worth your while to put some thought into preparing for the next strong earthquake before it strikes.

The 1992 earthquakes marked several important turning points in our understanding of earthquake hazards. It

produced the strongest ground shaking ever recorded in a California quake at that time. It initiated the approach to intensity studies that would become the USGS "Did You Feel It" site. It produced the first near source tsunami in the Cascadia region leading to the National Tsunami Hazard Mitigation program. And it illuminated the complexity and hazard of the Mendocino triple junction region and started earth scientists thinking about how different fault systems can be connected.

We thought long and hard about how best to remember the 1992 quakes. Five years ago, on the occasion of birthday number 25, we hosted a community gathering at the Wharfinger in Eureka. Over a hundred people were in attendance and we featured short talks by scientists and community members about what happened and how it affected our fields. We even had a birthday cake featuring the Humboldt seismogram record in frosting.

We wanted to do something different this year, to use the experiences of 1992 to focus forward rather than back and reach a wider audience. The COVID situation was still uncertain, so it made sense to do something easily accessed by anyone no matter where there were. Web pages and video content were the answer.

The Redwood Coast Tsunami Work Group has been a part of California's Earthquake Country Alliance (ECA) since 2009 and ECA has provided some annual grant funding ever since then. These funds have supported a variety of projects including Public Service Announcements on KEET, interns, and developing outreach materials. With the thirty-year anniversary around the corner, a virtual field trip to the site of the 1992 earthquakes seemed a good idea.

Completing the task was a big challenge. I was fortunate in knowing who to turn to. Thomas Dunklin was an undergrad in the Humboldt Geology program in the late 80s and had spent much of his time after graduation living in Petrolia. Thomas was a research assistant on several reconnaissance studies of the 1992 earthquakes, measuring coastal uplift and mapping out landslides and fissures. In the years after the earthquakes, he became a videographer focusing on the North Coast environment. Much of his work has involved salmonid restoration projects and his underwater filming is spectacular. There was no question in my mind that Thomas was the only person capable of making the kind of video I had in mind.

We started the project over a year ago and at first, didn't associate it with the anniversary. I was just thinking a video introduction to the triple junction would be useful. It was

supposed to be finished last year but delays in paperwork, weather, and a really ambitious set of goals set our timetable back and, before we knew it, the anniversary date was just around the corner.

The delay proved a blessing. Thomas used the anniversary to frame the video, and it suddenly made a lot more sense. We would focus on what happened thirty years ago and how understanding those earthquakes could help people understand the triple junction region and motivate preparedness actions before the next quake strikes.

Thomas makes a number of points in the video, and one of the first is that the triple junction is not a point, but rather a complex region. He added Tanya Atwater's animation of how the triple junction first formed 30-million years ago and then moved slowly north, growing the San Andreas fault at the same time. He found other animations to illustrate earth structure and seismicity. The final icing is his extraordinary drone footage giving a unique birds-eye tour of the triple junction region where three separate, but related faults thirty years ago changed the coastline and brought new insights to our understanding of one of the most unusual geologic spots on the planet.

The final cut far exceeded my expectations. See if you agree with me:

<https://rctwg.humboldt.edu/capemendo92>

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