

Shake Rattle and Roll



Why Train on Earthquake Preparedness

- Hayward fault the most urbanized fault in the US
- San Andreas fault is “locked, loaded and ready to go”



Objectives

- Sharing our stories and experiences
 - Napa as a good case study
 - Ridgecrest/Trona reminder and new data point
- The nuts, bolts and spackle of a disaster
- Earthquake preparation steps
- Survival hacks for a comfortable apocalypse

Commonalities

- Type – shallow strike slip
- Surface ruptures
- Damage to infrastructure
- Frayed nerves
- Risk to life/fatality
 - 1 fatality in each
- Costs



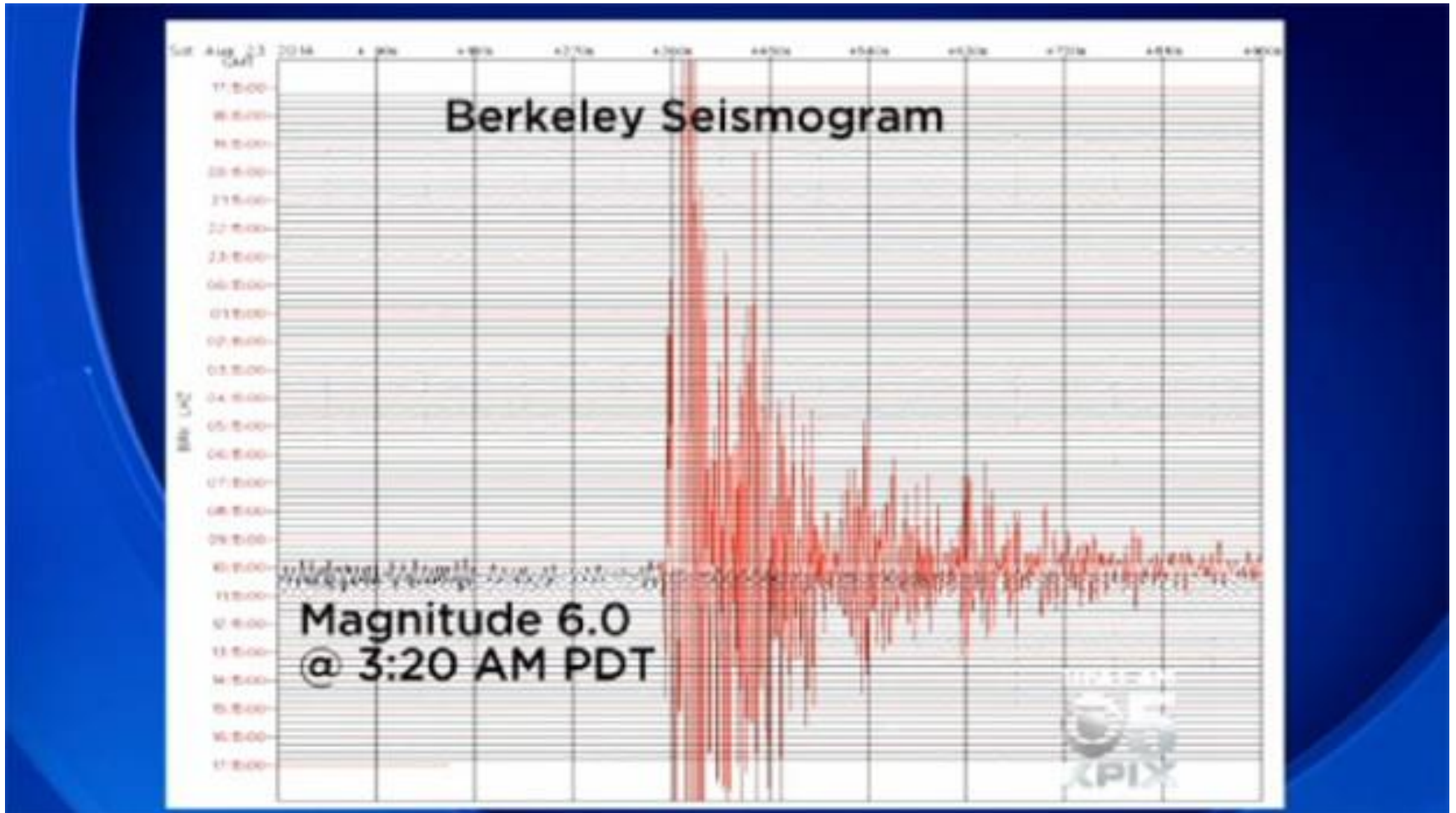
Differences

- Ridgecrest

- Very active seismic area
- Even though rural area – very high costs (Naval Air Base - China Lake – \$5.2 billion)
- The first shake was a foreshock, not the main quake (6.4 and then 7.1)
- 12 times bigger, 44 times stronger (energy released)

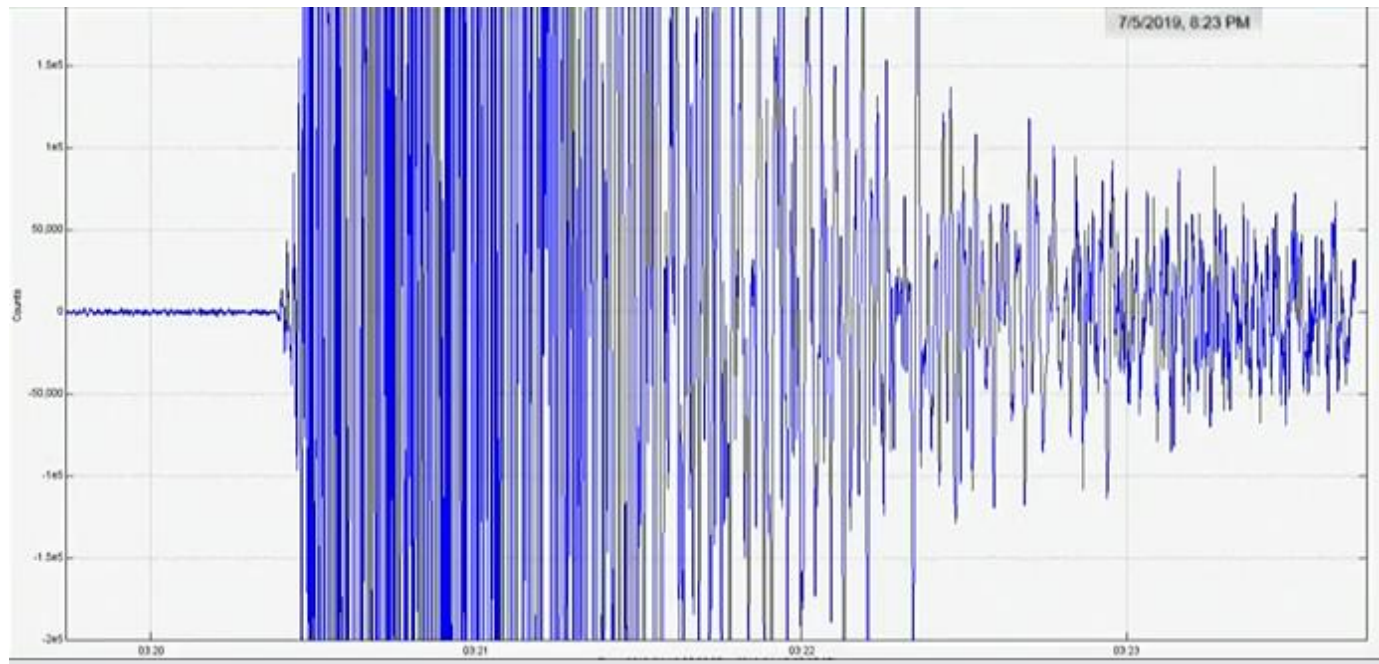


Napa 0320 Hours – where are you?

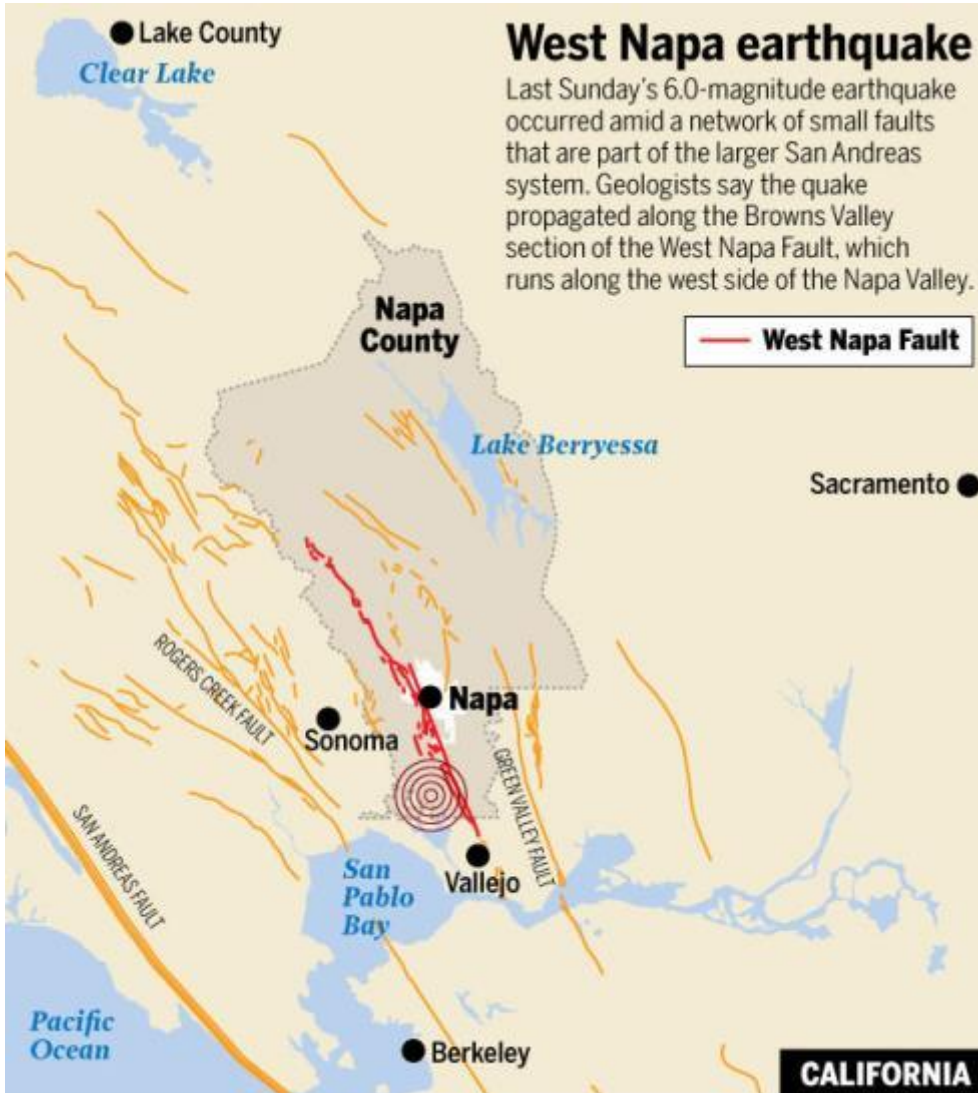


Ridgecrest Seismogram

- Rock around the clock
 - 6.4 on July 4 at 10:33 am
 - 5.4 on July 5 at 4:08 am
 - 7.1 on July 5 at 8:19 pm



What You See, Hear, And Feel

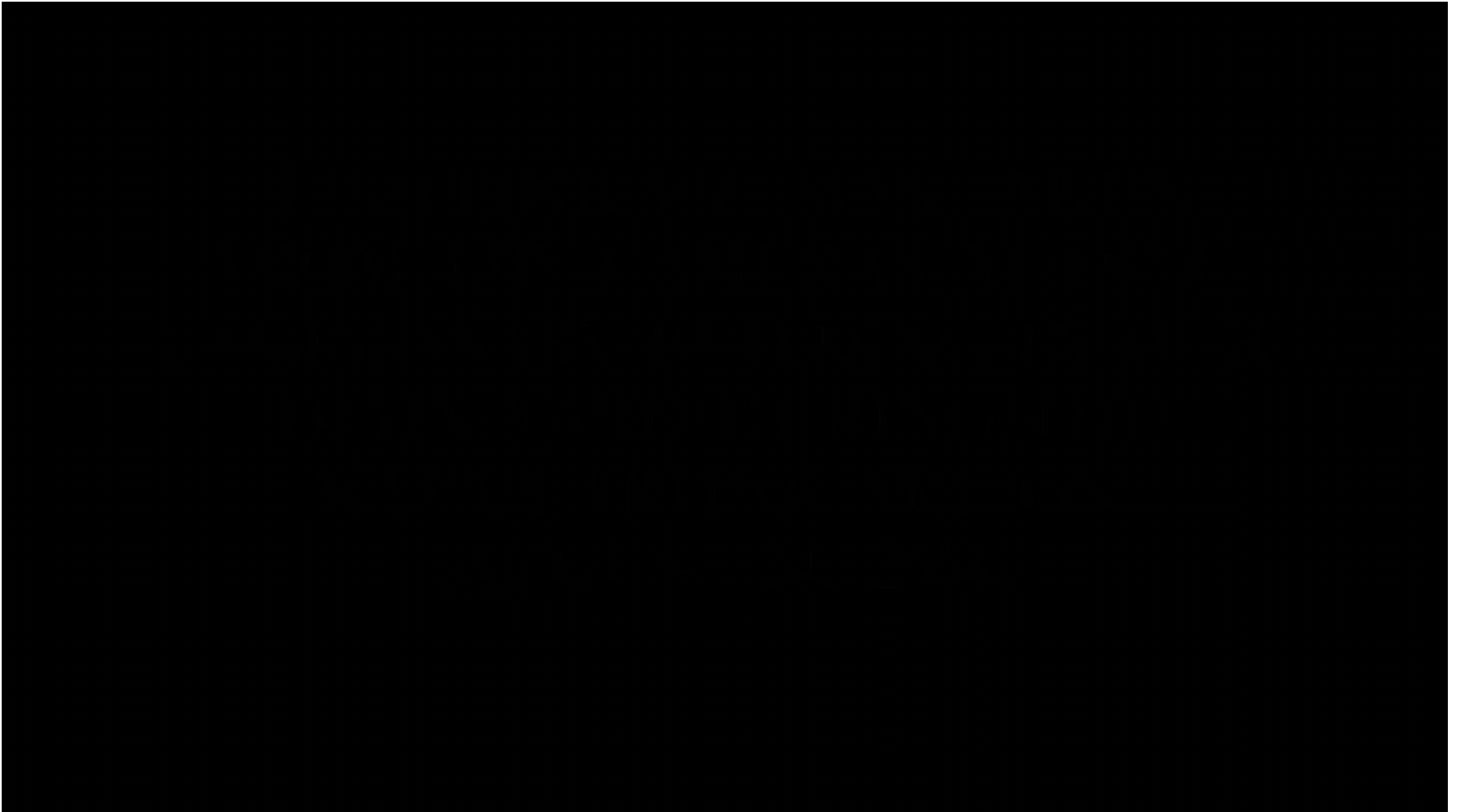


SOURCE: USGS.gov

NAPA VALLEY REGISTER

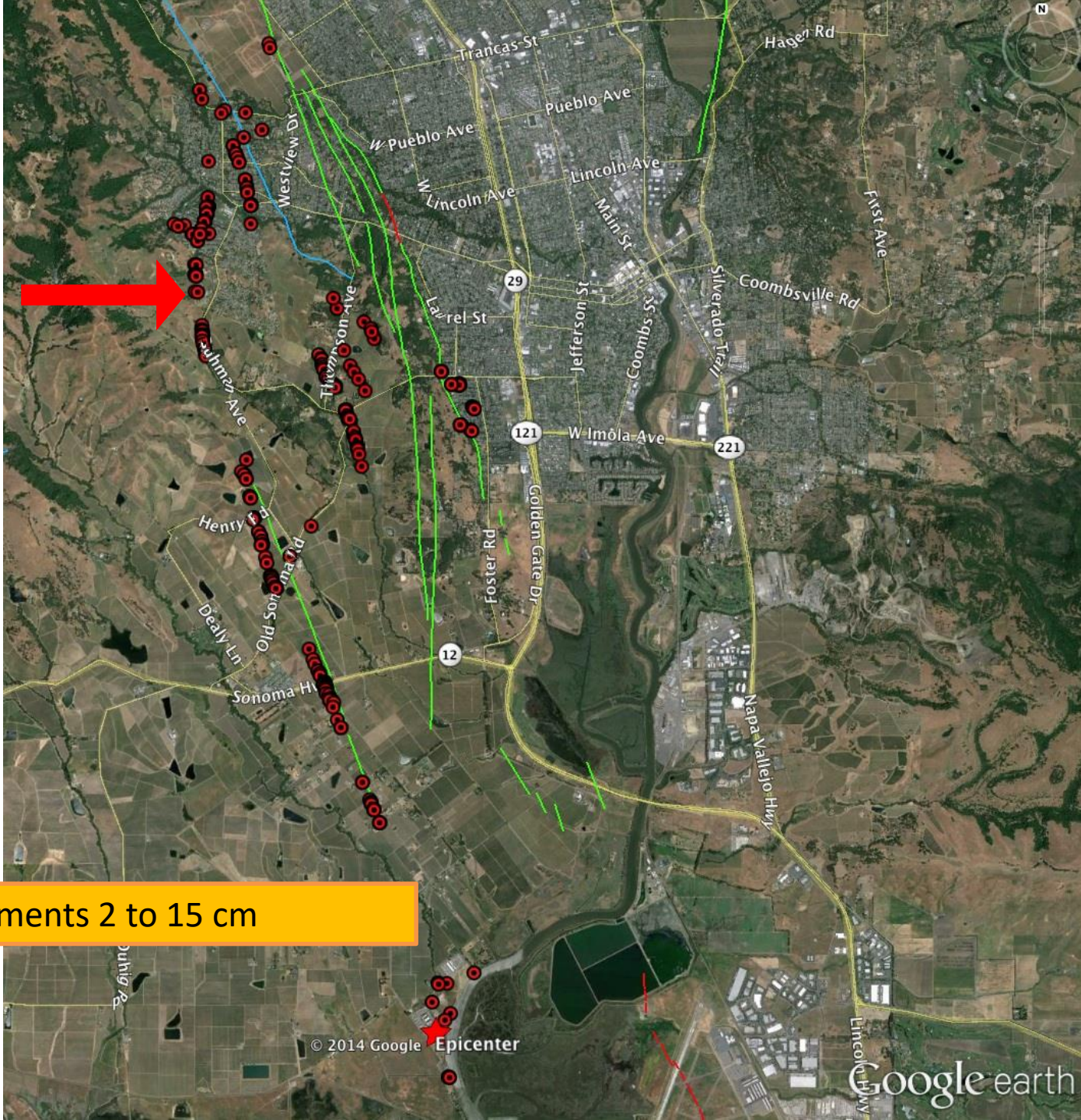
- 25-30 seconds long
- Hold on and hope
- Violent shake from strike-slip quake
- VERY loud

Earthquake Sound, Feel & Flash



- Stay where you are until the shaking stops.
 - Don't run outside.
 - Don't get in a doorway.
- Drop to the ground (before the earthquake drops you!)
- Cover your head and neck with your arms.
- Hold on to any sturdy covering so you move with it until the shaking stops. Stay put until the shaking stops.





Movements 2 to 15 cm

© 2014 Google Epicenter

Google earth

Ridgecrest Earth Movements



Sotiris Valkaniotis / Google Earth / DigitalGlobe

Ridgecrest Earth Movements



Ridgecrest Earth Movements



Cleanup Starts at Home



Cleanup Starts at Home







Cabinet and Drawer Fasteners



Furniture and TV Straps





UNSAFE

**DO NOT ENTER OR OCCUPY
(THIS PLACARD IS NOT A DEMOLITION ORDER)**

This structure has been inspected, found to be seriously damaged and is unsafe to occupy, as described below:
Irreparable damage, impact of storm, severe water damage

Date 8/15/11

Time 12:20 PM

This facility was inspected under emergency conditions for:
ADSD
(Jurisdiction)

Inspector ID / Agency
810221 ADSD

Do not enter, except as specifically authorized in writing by jurisdiction. Entry may result in death or injury.

Facility Name and Address:
2100 E. Main Street, St. Louis, MO 63103



Insurance?

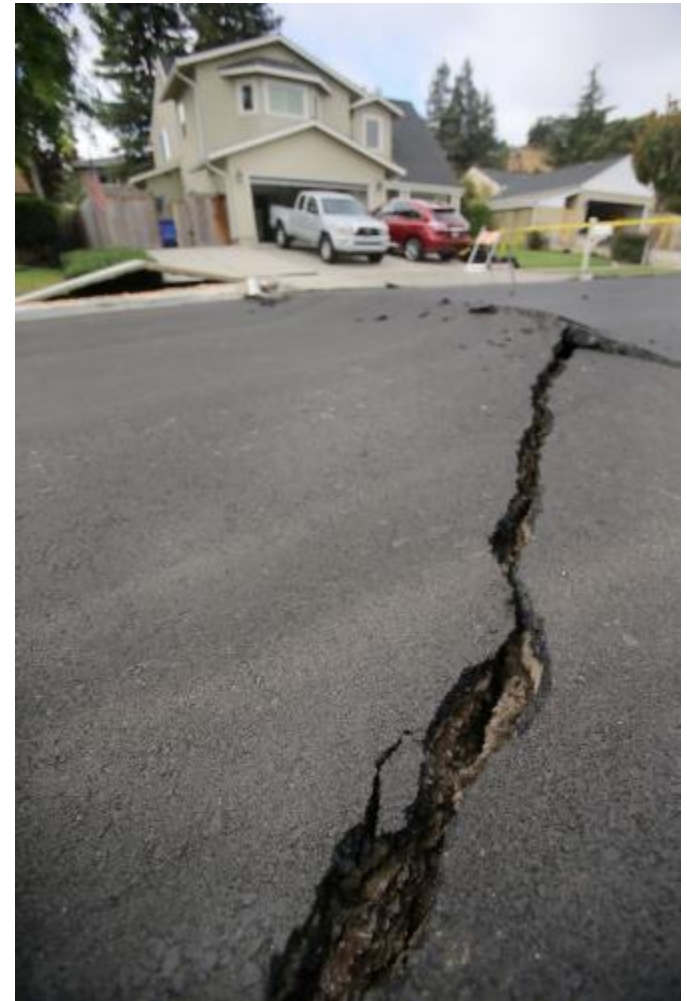
- High deductibles / Lots of exclusions
- YES, I had it and I am going to keep it
 - No payout on over \$84,000 in damage
 - I'm keeping it in case of total loss/loss of use (10 months for my neighbor)
 - NEW options for deductibles, discounts for retrofits
 - Currently offering grants for retrofit



Cleanup at School



Transportation Woes







SR178 in the Canyon





Chevron



Where Are You Working Today?



Where Are You Shopping Today?



Disaster Management



Napa County Emergency Operations Center (EOC) and temporary NEW EOC

Disaster Management



State of California Emergency Operations Center (EOC)

Geological Survey



Mutual Aid



Hospitals and Injuries



Debris and Trash



Debris and Trash Piles



Disaster Relief



FEMA

U.S. Small Business Administration

SBA

Your Small Business Resource



- An inspection on Monday and the homeowner or business grant funded before Friday

Disaster Fatigue



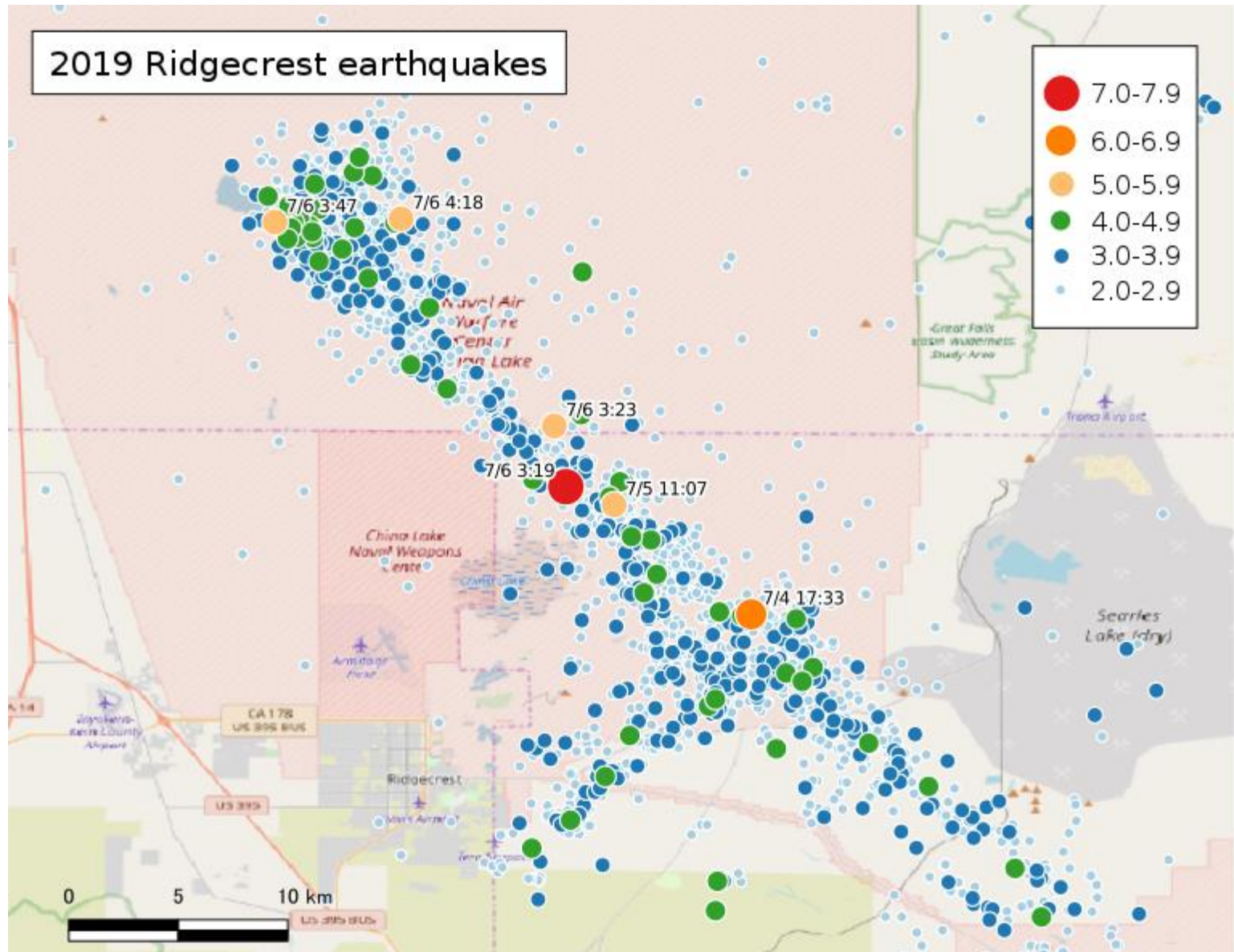
Mental health professionals canvassing Napa neighborhoods

Tweets, Posts, Drones



- Cellular and text worked
- Disaster via social media

Disaster Fatigue



Short Power Outage, Repeated Water Outages



2000 water breaks initially

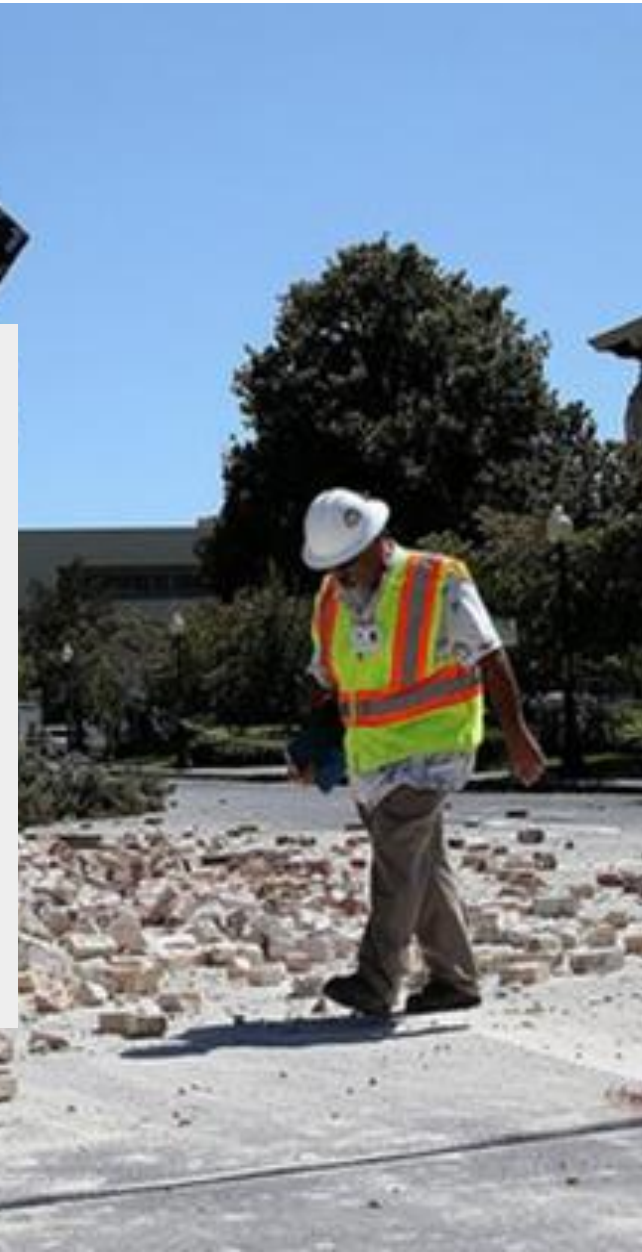


Recovery



Facility Skeletons Revealed

- Building inspections and opening
- Asbestos Containing Materials
- Chemical storage
- Cleanup – training and supplies
- Safety concerns
- Cal/OSHA



PERSONAL PLANNING

- Work obligations – Disaster Service Worker
- School/church/work plans
- Know & Participate: Community Disaster Plans
 - Office of Emergency Services
 - Shelter locations
 - Community Emergency Response Teams (CERT)



Communications

- Family contacts – cell and landline
- WhatsApp
- Community Warning System – register at SCC and at home if you live outside the County!

<https://www.sccgov.org/sites/oes/alertscc/Pages/home.aspx>

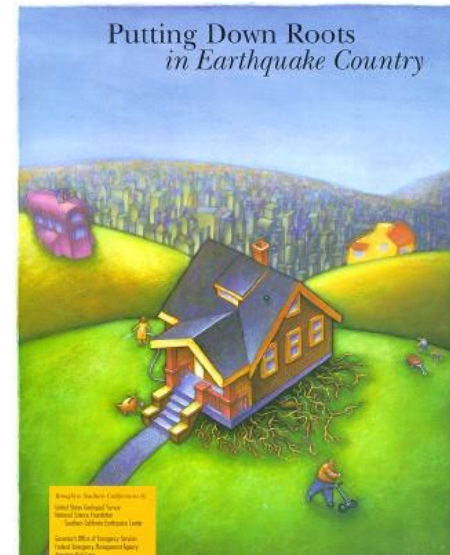


- Earthquake Warning Systems

Your Easy Action Item List

- BOLT furniture and TVs
- Place shoes/flashlight in BAG under your bed
- Heavy items secured to or off of the walls/shelves
- Nothing OVER your bed
- Store water for drinking & flushing toilets
- Cash on hand (small bills)
- Keep car fueled
- Gather supplies
- Communication plan

www.earthquakecountry.org



Your Shopping List

- Food and water supply
- Batteries and solar chargers
- Furniture and TV straps
- Buckets
- Charged dust buster
- Dust broom & pan
- Cleaning wipes
- Hand sanitizer
- What do you already have?





COMMUNICATION

- When They Say 72 Hours...



Noretta on [July 8, 2019 at 7:56 PM](#)

I am arranging some water to come on Wednesday, where is best place for delivery?

Reply



[County of San Bernardino](#) on [July 9, 2019 at 1:06 PM](#)

There are a variety of churches in Trona that are opening back up to provide these services and accept these donations. We are working on compiling a list that is appropriate for the public now. As soon as we have it ready to post we will put it here.

Reply



Dwain Smith on [July 8, 2019 at 2:25 PM](#)

why did it take the county so long to even get bottled water to us here in trona, Red cross did not show up in Trona till Sunday ? I guess you took care of everyone else first . We need porta podies on the street corners not in front of the high school was that so your people would have a place to go?

Reply



[County of San Bernardino](#) on [July 8, 2019 at 3:08 PM](#)

Hi Dwain, the County responded immediately following the earthquakes with water and port o potties at the High School. We are currently evaluating alternative locations for more port o potties throughout Trona. Please call the emergency operations center if you need additional assistance at (909) 356-3998. Take care and call us if you need help.

Reply



[County of San Bernardino](#) on [July 8, 2019 at 4:23 PM](#)

Dwain, The County is looking for the 10 best places in Trona to locate portable toilets. Please provide suggestions in the form of actual addresses. Thank you!

Reply



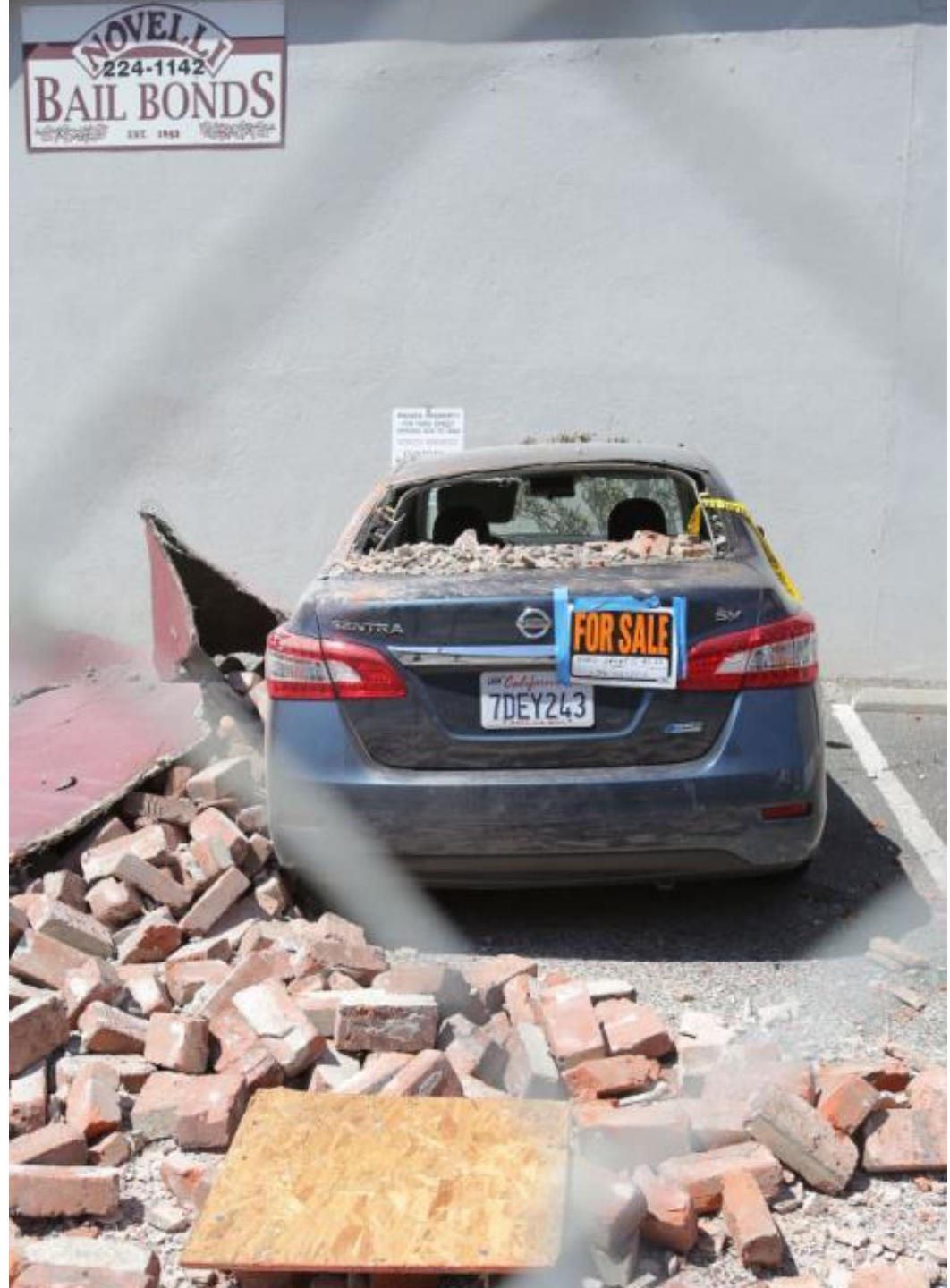
Dwain Smith on [July 8, 2019 at 6:31 PM](#)

Business / Entity Planning

- Business Continuity Plan
 - Prioritize Operations
 - Redundancies – Buildings and Equipment
- Mutual Aid Agreements / Read Contracts
- Coordinate Stakeholders & Players
- Training
 - Incident Command System
 - Exercises
- Understand FEMA Guidelines (\$\$\$)



A Sense of
Community
... and
HUMOR







In Summary

- Prepare now
- Brace for disaster fatigue
- Be thankful for the mutual aid and emergency responders – the system is **WORKING!**



Resources

- [Ready.gov/earthquakes](https://www.ready.gov/earthquakes)
- [CalOES.ca.gov](https://www.caloes.ca.gov)
- [Earthquakecountry.org](https://www.earthquakecountry.org)
- [Shakeout.org](https://www.shakeout.org)
- [SF72.org](https://www.sf72.org)
- Great Video – “Ready or Not For Chance” by Prepare California