

# **Davis is not immune: Are you ready for a big quake?**

**Dave Ryan, The Davis Enterprise, 9-2-14**

In California, science, safety and surety can be upended in seconds.

The 6.0 earthquake near American Canyon early on the morning of Aug. 24 was on a previously unknown fault, plus other faults that scientists thought were inactive.

While unknown faults are just that, Yolo County and Solano County are ripe with faults that are thought to be inactive. But, as one 1.6 million-year-old fault near Napa that suddenly re-awakened last week proved, anything can happen. Worse, there is one active fault just north of Woodland.

Prior to last week, speculation about the next Northern California earthquake in the media centered on the Hayward fault, well-known and well-populated along the East Bay.

But faults farther inland have been responsible for damage in the past, as well as temblors between 5.8 and 6.8 magnitude in the past 150 years along a complex zone of faults at the western portion of the lower Sacramento Valley — what's called the Coast Range-Sierran Block Boundary, or CRSBB. This from a geology analysis by Michael Brandon and Associates, a huge multi-state land surveying company.

According to the Yolo County Operational Area Multi-Jurisdictional Hazard Mitigation Plan and historical records, on April 19, 1892, a 6.9-magnitude earthquake centered near Vacaville and Winters caused damage not only in those two cities, but in Davis, Woodland and other areas.

While scientists had pegged the fault in that earthquake to be along the Midland Fault, one that extends into the county a short distance near Winters, the 1892 Vacaville-Winters earthquake is now believed to have sprung from the CRSBB. The last known earthquake from the CRSBB happened in Coalinga in 1983, a 6.5-magnitude shaker.

In Yolo County, the Dunnigan Hills faults north of Woodland alongside Interstate 5, plus the Hunting Creek Fault in far northern Napa County near the Yolo County border, present — at a glance — the most local known and immediate earthquake dangers to Davis and other areas around the county.

## **Blind thrust faults**

But those are only the faults we know about. There are many faults in the inland region that are what scientists call “blind thrust” faults, because they cannot be seen from the air like the San Andreas Fault.

What's more, unknown, potentially active blind thrust faults can't really be discovered by looking at geological evidence, according to Michael Brandman and Associates.

The Yolo hazard mitigation plan pegs the likelihood of a significant earthquake affecting Yolo County as between 1 and 10 percent chance within a year's time, or a quake happening every 11 to 100 years.

So what does this mean for Davis? A major earthquake can grind the local public infrastructure to a halt, cause natural gas to leak, water mains to break and fires to start, leaving homes uninhabitable.

Coincidentally, the Davis City Council is looking at the city's disaster plans on Tuesday, getting information on emergency officials' work to update old plans, pursue grant opportunities and find ways to use volunteers in disaster preparedness and response operations.

### **Emergency kit**

Regardless, local emergency officials and the American Red Cross recommend that residents have an emergency kit capable of sustaining everyone in your household for up to three days without outside help.

When most people think of packing an emergency kit, they reach for canned foodstuffs, but the Federal Emergency Management Administration recommends that you think hard about water, at minimum at least one gallon per person per day for at least a three-day supply. This is not only for drinking but sanitation.

Food is next on the list: three days of non-perishable food for everyone in your household. Also key is a battery-powered or hand-cranked radio and a National Oceanic and Atmospheric Administration-approved weather radio with tone alerts and extra batteries for anything powered by them.

Other bare-bones, basic items include:

- \* Flashlights
- \* Whistle to signal for help
- \* Dust mask to help filter contaminated air and plastic sheeting and duct tape to shelter in place
- \* Moist towelettes, garbage bags and plastic ties for personal sanitation
- \* Wrench or pliers to turn off utilities
- \* Can opener
- \* Local maps in printed form
- \* A supply of any important medications

It's also a good idea to place all your important documents, especially insurance information, in a disaster-safe box that can withstand at least some flooding and fire.

## **Drop and take cover**

Of course, surviving to the point where you will need to use the kit is critical.

According to the Red Cross, the old adage of standing in a door frame is no longer good advice. You should drop to the ground, take cover and hold on to something, trying your best to protect your head and torso. Getting under a desk or table, and hanging on to one of its legs, is one example.

Stay inside until the shaking stops, don't use elevators to get out of a building and be aware that building alarms and fire sprinkler systems frequently go off during an earthquake, so be ready for a chaotic environment.

If you're outside and the shaking starts, first find a clear spot away from power lines and buildings, but also trees and streetlights, drop to the ground and wait until the shaking stops.

As many of us spend time in vehicles, the Red Cross advises motorists to pull over to a clear location on the side of the road and stop, with your seatbelt fastened until the shaking stops. Also, get away from bridges and overpasses.

In the recent Napa quake, drivers who didn't know to stop were rewarded with flat tires and were stranded.

## **Red Cross app**

Of course, cell phones will be in use at least for a short period of time after a quake, allowing folks to use the latest in disaster safety technology: the Red Cross earthquake app.

It's free, available for iPhone and Android, and is available in English or Spanish. Why an app? One feature allows you to quickly tell your friends and loved ones that you're safe with one touch via social media outlets.

It also has information on how to create a disaster kit, how to create a family emergency plan and the locations of any nearby Red Cross shelters. The app can also be found at [redcross.org/mobileapps](http://redcross.org/mobileapps). More information on earthquake safety can be found at the Red Cross website, [redcross.org/earthquake](http://redcross.org/earthquake).

## **Safety at home**

Pacific Gas & Electric Co. urges you to identify your gas shutoff valve before an earthquake strikes.

"The shutoff valve is normally near your gas meter and will require the use of a 12- to 15-inch adjustable pipe or crescent wrench or other suitable tool," a PG&E statement said.

PG&E also advises not turning your gas back on after you shut it off. Contact PG&E so utility workers can perform a safety check and relight any pilot lights that may have gone out. Also, know which of your appliances use gas and where the shutoffs are.

To better avoid any fire or shock mishaps, turn off your electricity by throwing the main electric switch.

Once outside in a safe area during an earthquake, if you had smelled gas in your building or see a downed power line, use your phone to call 911 and PG&E at 1-800-743-5000.

### **Relief efforts**

Relief efforts are a big part of post-quake rebuilding. Donations for American Canyon, Napa and Vallejo, which were hard-hit last week, can go to the Red Cross or Napa Valley Community Foundation through the Napa Valley Vintners at [www.napavintners.com](http://www.napavintners.com).

Media have focused in some instances on fallen wine and wine barrels, but in a statement given to the Napa Valley Register, the group president and chief executive, Linda Reiff, said the effects were widespread in the community.

“I think every single person in Napa has felt the effects of the earthquake, and our industry has also been hit very hard,” she said. “but today is not about our industry, but about the community.”