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Magnitude 6.5 earthquake shakes California, kills two

BY BRIAN SKOLOFF

PASO ROBLES – A magnitude-6.5 earthquake ripped through Central California wine country Monday, killing at least 2 people as it brought down old downtown buildings in Paso Robles and rocked the state from Los Angeles to San Francisco. Firefighters dug through debris in front of a row of stores in the small San Luis Obispo County town, about 20 miles east of the epicenter, that appeared to be hardest hit by the jolt. The 11:16 a.m. quake hurled the roof of the town's 1892 clock tower building into a street, crushing a row of parked cars.

"It started out sounding like a freight train going by. Then I realized it was a quake," said Nick Sherwin, 61, who operated Pan Jewelers in the building. He said he had ordered five employees and eight customers out but "the big jolt hit" when he was about 10 feet from the door.

Two people were confirmed dead in Paso Robles by early afternoon, said Ron Alsop, emergency services coordinator in the largely rural county of about 250,000 people. A third person was missing there, he said. Alsop earlier reported a third death, but said he later received conflicting information.

"My roof basically jumped onto the street and landed on cars with people in them," Sherwin said as he watched firefighters recover the bodies. The cars "are crushed like little toys, nothing left."

The main shock at 11:16 a.m. was centered 10.7 miles north of coastal Cambria and was immediately followed by at least five aftershocks of magnitude larger than 3.3. The largest, an estimated magnitude-4.7, hit at 11:26 a.m., according to preliminary data from the U.S. Geological Survey.

The quake rocked the federal courthouse in San Francisco, 165 miles to the northwest of the epicenter. Upper floors in that building swayed for about 30 seconds. It was felt as a sustained rolling motion in downtown Los Angeles, 185 miles southeast. It was also felt in much of the Central Valley.

Several people were also reported hurt by falling barrels at a winery, San Luis Obispo County authorities said.

Firefighters were searching debris along a block of collapsed buildings in the town of 25,000 about 20 miles east of the epicenter. Cars were also crushed by the collapse.

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Firefighters responded to a fire within Cambria, but it was unclear if it was related to the quake, said fire information spokesman Gilbert Portillo.

"Everything else seems to be little things, like medical aid and some gas leaking," Portillo added.

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Other than Paso Robles, damage appeared minor elsewhere in the region.

Approximately 10,000 homes and businesses were without power in the San Luis Obispo area, said John Nelson, spokesman for Pacific Gas and Electric.

Phone service became spotty as the system quickly overloaded.

"It was pretty sharp," said Sharyn Conn, receptionist at the oceanside Cypress Cove Inn in Cambria. "It really went on and on. I just got everyone under the door frames and rode it out."

Cambria is a town of 6,200 on the northern coast of San Luis Obispo County, where some 250,000 people live. The area's major landmark is Hearst Castle at San Simeon, the estate of the late publisher William Randolph Hearst.

Hearst Castle reported no obvious damage and no injuries, but was evacuated, said Roy Stearns, spokesman for the state Department of Parks and Recreation.

"Their first quick review, they didn't see anything serious," said Stearns. But a crew was being organized to go through each of the castle's 150 rooms to look more carefully.

The only known damage was a blown transformer in the campground below the hill, Stearns said.

The quake was felt in the control room of the Diablo Canyon nuclear power plant operated by Pacific Gas & Electric. Nelson said there appeared to be no damage to the plant and that it was functioning normally, but officials will conduct a "walkthrough" to determine if there was any damage.

The quake occurred on the Oceanic fault zone, which runs from north of San Simeon southeast to the Santa Lucia Range, mountains being pushed upward by such quakes, said seismologist David Oppenheimer with the U.S. Geological Survey in Menlo Park.

The quake likely pushed the range farther upward.

The area is crisscrossed with multiple thrust faults, said Lucy Jones, scientist in charge of the U.S. Geological Survey office in Pasadena

In an earthquake on a thrust fault, one block is pushed upward against another block, as if moving up a ramp. Monday's quake was the same general type of quake as 1994's Northridge earthquake, said Tom Heaton, professor of earthquake engineering at the California Institute of Technology.

"This probably shook strong enough you would expect all kinds of damage to the contents of houses," Heaton said. He added landslides were also possible.

Superintendent Pamela Martens of the Coast Unified School District in Cambria said school was adjourned for the holidays and there were no reports of injuries among staff.

"Right now we're seeing things off the shelf and all over the place. Computers are down," she said.

Tad Weber, managing editor of The Tribune in San Luis Obispo about 30 miles southeast of Cambria, said he was in a meeting when "all of a sudden there was a jolting and we look up and see the building swaying. I dove under a desk to wait it out. At first we thought it was a heavy truck but it just kept going. We all called our families and they were all OK."

Aftershocks rattled central California Tuesday as crews tallied damage from a magnitude-6.5 earthquake that killed two people, injured dozens and badly damaged the business district of this wine country town.

Gov. Arnold Schwarzenegger toured downtown Paso Robles, where both fatalities occurred when Monday's 11:16 a.m. quake toppled a 19th century building with a landmark clock tower, and declared a state of emergency in San Luis Obispo County.

"At 11 a.m. yesterday this was an American main street, alive with energy. ... Today this is a site of devastation. But we will come together once again as Californians and as neighbors. We will rebuild this town square," Schwarzenegger said.

People from San Francisco to Los Angeles were shaken by Monday's quake, the first to cause fatalities in the state since a magnitude-6.7 temblor hit Northridge in 1994.

In Paso Robles, about 20 miles east of the epicenter, the bodies of two women were pulled from under the roof the clock tower building, which pitched into the street and crushed a row of parked cars.

The main shock was centered in a sparsely populated area about 11 miles north of the coastal town of Cambria. It was followed Monday and early Tuesday by more than 90 aftershocks larger than 3.0, the biggest of which was estimated at 4.7, according to the U.S. Geological Survey. There were seven aftershocks of 4.0 to 4.6 on Tuesday morning.

The state Office of Emergency Services said there was a 90 percent or greater probability that aftershocks of 5.0 magnitude or greater would follow in the next week.

By Monday night, search and rescue crews in Paso Robles had combed all seriously damaged buildings and were confident they had found all the quake's victims, though the owner of one car crushed in the rubble had still not been found.

"We're out of rescue mode and now it's just going to be general debris removal," said Battalion Chief Scott Hall of the Ventura County Fire Department.

Mayor Frank Mecham said Tuesday that 82 downtown buildings had been identified for possible damage and recommended for further inspection. He predicted the economic impact of the quake on the city of 25,000 would be "significant."

"This downtown has been a very vital element to this community," he said.

"All we're waiting for is the governor to declare an emergency. Then we'll be asking for federal assistance."

The bodies of Jennifer Myrick, 20, of Atascadero, and Marilyn Zafuto, 55, of Paso Robles, were found on the street outside a dress shop on Monday.

"It appeared as though they were trying to get away," Paso Robles police Sgt. Bob Adams said.

A young boy suffered a broken arm and another person received minor injuries when a bakery collapsed, while citywide there were reports of about 40 minor injuries, said Adams.

Light rain fell Tuesday morning as crews were to resume clearing debris in the downtown area, much of which remained off-limits to the public.

The quake shook the Hearst Castle in San Simeon, the estate of the legendary publisher William Randolph Hearst. The castle reported no injuries and no immediate signs of any serious damage. It was scheduled to be open Tuesday.

The quake also shook the federal courthouse in San Francisco, 165 miles to the northwest of the epicenter, and sent the building's upper floors swaying for about 30 seconds. People in downtown Los Angeles, 185 miles southeast, felt a sustained rolling motion.

In Paso Robles, residents described a scene of falling bricks, collapsing ceilings and panicked Christmas shoppers.

The historic clock tower structure, sometimes called the Acorn Building, was made of wood and unreinforced masonry, Adams said -- a type of construction no longer allowed under modern building codes.

Marilyn Curry watched the buildings collapse from her law firm across the street, then ran to a city park where people were frantically searching for others they knew.

"There were people shouting outside 'Oh my God, Oh my God,'" she said. "Everybody was just shaking, then we were all just grabbing onto each other. There was a lot of hugging going on."

Other than Paso Robles, damage appeared minor elsewhere in the region known for wineries and horse ranches. A worker at Wild Horse Winery in Templeton suffered minor injuries when barrels fell on her, authorities said.

About 75,000 homes and businesses in San Luis Obispo and Santa Barbara counties initially lost power after the quake, said Pacific Gas & Electric spokesman Bill Roake. By Tuesday morning, power was restored to all but 1,600 customers, he said.

The quake was felt in the control room of the Diablo Canyon nuclear power plant operated by PG&E. Nelson said that there appeared to be no damage to the plant and that it was functioning normally.

The quake struck in a known fault zone on a series of faults that run parallel to the San Andreas Fault, said Lucy Jones, scientist in charge of the U.S. Geological Survey office in Pasadena.

The last one of a similar size in the area was in 1952, said Ross Stein of the USGS in Menlo Park.

"This probably shook strong enough you would expect all kinds of damage to the contents of houses," said Tom Heaton, professor of earthquake engineering at the California Institute of Technology. He added that landslides were also possible.

Monday's quake was the state's most powerful since 1999, when a nonfatal magnitude-7.1 temblor struck the desert near Joshua Tree.

The 1994 Northridge quake hit a densely populated area near Los Angeles and killed 72 people, injured 9,000 and caused an estimated \$15.3 billion in insured losses.

Rebuilding Bam

March 2, 2004—Last December, the ancient city of Bam, in southern Iran, was hit by an earthquake that killed more than 43,000 of the 100,000 residents and injured another 25,000. The city also lost 85 percent of its buildings and a 2,000-year-old citadel, Argo-e-Bam, when the quake struck at 5:30 on the morning of December 26, while most people were still asleep. Total damage was estimated at US\$1.5 billion. Housing was hit worst, with damages reaching more than \$700 million. Agriculture, commerce and manufacturing—key economic sectors in Bam—are expected to sustain combined losses totaling approximately \$300 million.

Hedi Larbi has just returned from Iran where he was a member of the Bank's team working with Iranian authorities to help design a post-recovery strategy. Mr. Larba, sector manager in Urban and Transport Sectors for the Middle East and North Africa region, spoke with DevNews about what he saw and how recovery efforts, which Iranian authorities say will take 24 to 36 months, are proceeding.

What has been the Bank's role in Bam's post-recovery?

The Iranian authorities requested our assistance for damage assessment and planning of reconstruction program. A Bank multi-sectoral team went to Bam to carry out a comprehensive damage assessment with them.

We prepared a thorough damage assessment report that details losses in all areas—the impact on the economic sector, infrastructure, social services, etc., and estimates the costs of reconstruction. We shared this report with the authorities who are now reviewing it. Nous avons préparé un rapport d'évaluation détaillée des pertes subies dans tous les domaines notamment l'impact sur le secteur économique, les infrastructures, les services sociaux etc., et des estimations des coûts de reconstruction. Nous avons transmis ce rapport aux autorités qui l'examinent actuellement. Now we are assembling a multi-sectoral team to prepare the reconstruction program alongside the authorities on the scope and implementation arrangement for recovery and reconstruction. The team just left for Bam, where they will stay there until March 20 or so. They will agree with the authorities on the scope of reconstruction. They'll outline a program, as well as its costing and financing.

Then, we'll put in place appropriate institutional arrangements to help the authorities implement the program expeditiously. So after the team returns from Bam, we'll prepare an emergency loan that we plan to negotiate in May.

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Observations

Geographic situation of city or region	Specific words (vocabulary)	Physical effects of the earthquake	Human consequences of the earthquake
City 1			
City 2			
Differences observed :			
Observations about the image :			