

EQ - 1989 - Geological

# Geologists pinpoint epicenter of quake

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STAFF WRITER

Geologists now believe the Oct. 17 earthquake that devastated Santa Cruz County had its epicenter about 11½ miles below the earth's surface in the middle of the Forest of Nisene Marks State Park, between Aptos Creek and White's Lagoon.

Although the quake was caused by slippage of the San Andreas fault, the epicenter lies only three miles from Aptos Village because the San Andreas Fault slopes at a 70° degree angle towards Monterey Bay.

But a smaller aftershock that occurred Oct. 18 and measured 6.0 on the Richter scale was centered near Corralitos on the Zayante Fault.

As of 7 a.m. Wednesday, UCSC seismologists had recorded 77 aftershocks of 3.0 magnitude or larger — strong enough to be felt by most people in the county.

The Corralitos shock, which caused heavy damage to St. Patrick's Catholic Church spire and closed the Pajaro River Bridge from Watsonville to Pajaro, was the first recorded quake on the Zayante Fault. Until now, many geologists considered the Zayante to be a dormant fault since there was no evidence of recent activity on it.

Dr. Karen McNally, director of the UC-Santa Cruz Richter Seismological Lab, told reporters at a press conference yesterday afternoon that scientists from all over the world have agreed that the Oct. 17 quake's magnitude should be upgraded from the original estimates of 6.9 to 7.1 — a shock with about 20 times more energy than originally thought.

Computer plots of the main quake and the swarm of smaller aftershocks that followed it generally occurred along a 30-mile stretch of the San Andreas Fault

between Loma Prieta and Hollister. But there is a smaller group of shocks that occurred beneath the Pajaro Valley on the Zayante Fault.

But was last week's quake the big one?

No, said McNally and Dr. Gary Griggs, professor of earth sciences at UCSC and a consulting geologist for Santa Cruz County. A truly big quake, on the magnitude of the 8.3 quake that hit San Francisco in 1906, probably will not occur on the section of the San Andreas that runs through Santa Cruz County.

Geologists divide the San Andreas into several segments, rating each on its destructive potential. The segment that slipped last week has long been considered capable of only a 6.5-7.0 quake — just about what it produced.

The same prediction is made for the segment between High-

way 17 and San Francisco. The big one would probably occur on the segment between San Francisco and Marin County, Griggs and McNally told reporters.

Griggs said Santa Cruz County has probably seen its worst quake.

"Based on what happened in Santa Cruz in 1906 with the epicenter farther north and what happened last week," he said, "this is about the most intense shaking we should have."

Griggs said last week's quake will probably prompt an overhaul of the county's Uniform Building Code — the set of rules that govern the construction of buildings throughout Santa Cruz County and throughout most of California.

Still, Griggs said, today's homes are pretty safe.

"It was encouraging that no one died in their homes (Oct. 17)," said Griggs.

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