

✓ Quake not a trigger

By JOHN ROBINSON
Sentinel staff writer

12-13-89
SANTA CRUZ — Fears that a major earthquake on the Hayward section of the San Andreas Fault will be triggered by the Santa Cruz quake are not founded on scientific data, and are only one of only several public misconceptions on the nature of earthquakes, a top earthquake scientist said Tuesday at UC Santa Cruz.

Karen McNally, a UCSC seismologist said that while a 7.0-magnitude quake has even odds of hitting the San Francisco Bay Area in the next 30 years, it will not be as a result of the Santa Cruz quake, and

there is no hard data to link two such quakes.

"It is a research idea only," she said. "I would not even raise it to the level of a theory."

In 1865 a quake of about 7.0 magnitude was centered in the Santa Cruz area. Three years later, a quake of similar magnitude struck on the Hayward section, which has led to speculation that a quake on the Hayward fault area is imminent.

"No physical model says that should happen again," she said.

Another misconception is that the Oct.

17 quake was the "big one." It was not, she said.

The so-called big one is a quake of 8.0 or larger magnitude, which McNally said has a 10 percent or less chance of hitting the Santa Cruz area.

"We do not expect a big one in Northern California in the next 30 years," she said. "We will continue to have quakes that cause damage, however," she said. A quake in the Hayward area could still cause major damage in the Santa Cruz area, but McNally said it would be nowhere near as intense here as the Oct. 17 quake.

Please see TRIGGER — A14

Trigger/ No quake link seen

Continued from Page A1

McNally and other scientists have identified sections of the San Andreas Fault which are under stress and due to shift, and a prime area is the Hayward section.

Earthquake forecasting is an inexact science, McNally said. She has, however, demonstrated an uncanny ability to predict where major quakes will strike, and she began setting up seismic monitoring devices in the Santa Cruz mountains last summer.

"Seismologists tend to sneak away from the word prediction," she said. "We might be wrong."

After two 5.0-magnitude shocks were recorded in this area, McNally and other scientists issued a quake warning to Santa Cruz officials and other San Francisco Bay

area cities.

Santa Cruz began reviewing emergency plans and stockpiling supplies, even though the quake did not hit immediately. Oakland Mayor Lionel Wilson credited the warning with saving lives as emergency crews were ready to react.

McNally said that while scientists can offer forecasts, they are not yet close to being able to predict quakes to within days, weeks or even months.

McNally will be setting up her instruments in Costa Rica next, where she believes the next major temblor will hit.

McNally and other scientists are still studying the Oct. 17 quake and gaining an understanding of the effect of past quakes on the local

geography.

Scientists have long known that the scenic coastal terraces of the north Santa Cruz coast area have risen from the sea.

"What we didn't know," McNally said, "is that they rise in bursts during earthquakes."

She suspects that the Santa Cruz coastal areas, as well as the mountains, rose slightly during the quake. According to preliminary studies, mountains along the summit rose about a half-meter. The amount of rise lessens with distance from the fault, and according to diagrams, the coastal areas of Santa Cruz rose from .15 meters to .25 meters.

Scientists are waiting for precise tidal measurements to determine the change in coastal elevations.