

# Aftershock proves more deadly

*New Zealand -- Shallow temblor near city on workday multiplies impact.*

**Alicia Chang, Associated Press, 2-23-11**

LOS ANGELES - The latest New Zealand earthquake was a deadly combination of distance, depth and timing.

While weaker than the one that rocked the area last September, it did more damage and cost lives, primarily because of its location.

Tuesday's magnitude-6.3 quake was centered about 3 miles from the populated hub of Christchurch, toppling buildings, killing dozens and trapping others. It was also only about 3 miles deep and occurred during the middle of a workday when commercial buildings were filled with employees.

The jolt "is squarely beneath the city itself," said seismologist Egill Hauksson of the California Institute of Technology. "All the old historic buildings are being shaken more violently than they were built to withstand."

Scientists classified it as an aftershock of the powerful magnitude-7 that struck last Sept. 4.

No one died in that early morning quake - which was 11 times stronger - mainly because it was centered farther away, about 30 miles west of the city center. It was also twice as deep as Tuesday's aftershock. Shallower quakes tend to be more damaging.

While New Zealand has strict building codes, Christchurch has a number of pre-World War II buildings that were badly damaged by the September quake, which also triggered landslides.

Another reason why this latest quake was more deadly is because buildings that were previously weakened by ground shaking were more likely to suffer damage

or even collapse this time around, said Tom Jordan, who heads the Southern California Earthquake Center.

Many cities on the U.S. West Coast face similar seismic risks, experts say.

The West Coast has similar soil as New Zealand, which can turn to mush during an earthquake and worsen damage done by shaking, said Robert Yeats, professor emeritus of geology at Oregon State University.

"New Zealand has some of the most progressive building codes in the world. They are better prepared for an earthquake like this than many U.S. cities would be," Yeats said in a statement.

Since September, about half a dozen aftershocks greater than magnitude-5 have rattled Christchurch.