

Mapping the Santa Monica Fault presents unique challenges

Sanden Totten, KPCC (Southern California Public Radio), 7-3-14

State geologists this week started work on mapping a potentially dangerous fault that spans several Westside communities from the ocean to Beverly Hills, and pin-pointing it will likely be a challenge.

Known as the Santa Monica Fault, this rupture is documented in government and academic research says Tim McCrink, a geologist with the California Geological Survey.

He says CGS will gather that information and use it to compile a single state map that will serve as an official document for developers looking to build in the area.

"We're taking a fresh look at it using new information," McCrink said.

The state maps certain faults because some can rupture to the surface during a quake, creating a visible break in the ground. Buildings and roads atop such faults could be torn in two.

CGS maps create a legal buffer zone around these ruptures limiting where new structures can be built. Normally they must be set back 50 feet from either side of the rupture.

The trouble with the Santa Monica Fault, say McCrink, is that it may not create a clean break in the ground but it can still shift the land in a very dangerous way.

"It seems to be associated with broad zones of deformation. One side may go up relative to the other over a zone of 50 feet, 20 feet wide," he said.

That means, rather than producing an easily traceable crack in the ground, it may create small hills during a major temblor.

It's unclear what this means for developers who may want to build near the fault. McCrink says it's an issue CGS will need to address when it releases the official map of the fault.

A preliminary version of the map is expected sometime next spring.