

Maps show where tsunami floods would hit state

David Perlman, San Francisco Chronicle, 12-18-09

When major earthquakes strike along the Aleutian island chain in Alaska, they could trigger tsunamis sweeping down along the California coast and threatening many low-lying regions with disaster, including parts of San Francisco.

The danger has long been known, but Thursday a team of state scientists and emergency management specialists announced they have completed an updated series of 135 "inundation maps" covering shoreline areas in the state's 30 coastal counties and every harbor and inlet that could be threatened.

The maps reveal in detail just how far large tsunamis might send ocean waters rushing inland to threaten beaches and coastal towns. They also indicate evacuation routes that lead to higher ground. The maps are being released online today by the California Emergency Management Agency.

They were displayed in San Francisco Thursday at the American Geophysical Meeting in Moscone Center.

The maps show that a major tsunami generated by the largest conceivable Alaskan quake might cause waves to run 19 feet up on the shores of San Francisco's perimeter neighborhoods, covering portions of the Marina district and the Embarcadero, for example.

At Point Reyes, the waves could run up 23 feet; in Sausalito, 12 feet; in Richmond, 11 feet; and at Mare Island, 5 feet.

The 1964 Alaskan quake, with a record magnitude of 9.2, unleashed the largest known tsunami to have reached the California coast, said state geologist John Parrish.

The tsunami killed 11 people in Crescent City, caused \$7.5 million in damages, and sent waves ranging from 7 to 21 feet high between Crescent City and Monterey.

"The danger is always present, and it could be worse," Parrish said.

The new inundation maps were prompted by a magnitude 7.1 quake that struck Papua New Guinea in 1998 and unleashed a tsunami that killed more than 3,000 people, Parrish said.

They were prepared by scientists in Parrish's California Geological Survey, along with the University of Southern California's Tsunami Research Center, headed by Costas Synolakis, and the National Oceanic and Atmospheric Administration's West Coast and Alaska Tsunami Warning Center, headed by Paul M. Whitmore.

Vicki Hennessy, director of San Francisco's Department of Emergency Management, said her department has begun distributing printed doorknob hangers in English and Chinese, headlined "Be Tsunami Ready" and displaying a map of the city's western tsunami inundation zone that covers all of Ocean Beach east to 46th avenue, the zoo, and all of Lake Merced.

The state's new inundation maps can be viewed at www.conservation.ca.gov/cgs.