

## News Release

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Leslie Gordon

(650) 329-4006

lgordon@usgs.gov

Stephanie Hanna

(206) 331-0335

shanna@usgs.gov

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# ***The Hayward Fault Exposed!* The 1906 Centennial Alliance and USGS to Host an "Earthquake Fault Exhibit" to Educate Public About Earthquake Hazards**

The 1906 Centennial Alliance and the U.S. Geological Survey (USGS) will host "The Hayward Fault Exposed! – An Interpretive Viewing and Educational Exhibit" along the Hayward Fault from Saturday April 29 through June at Central Park in Fremont, California, near the intersection of Sailway Drive and Paseo Padre Parkway.

The fault exhibit features a 15 feet deep excavation exposing the Hayward fault below the surface as it crosses Central Park. The fault is easily visible within the sediments at this location and visitors are encouraged to descend a staircase to meet the Hayward fault "face to face." The walls of the excavation are sloped at about 45 degrees for safety reasons, resulting in a comfortable open space for viewing the fault at the bottom of the staircase.

"Being able to put your finger on a small crack in the soils and know that is where a big earthquake broke the ground is amazing," said Heidi Stenner, a USGS paleoseismologist and project leader for the exhibit. "Seeing up close the fault that produced the big Hayward fault earthquake of 1868 is a great reminder that we live on top of or very near an active fault."

This unusual and unique exhibit is open to the public on weekends from 10 A.M. until 3 P.M. and by appointment on weekdays by visiting <http://1906centennial.org/activities/trench> and submitting a request. Appointment requests for docent-led school and other group tours are encouraged. The exhibit will be appropriate for children of all ages.

The exhibit reoccupies a site first studied in 1987 by Jim Lienkaemper, a paleoseismologist at the USGS and Glenn Borchardt, a geologist at the California Geological Survey. "We sited the exhibit here because the faulting is so striking that everyone can immediately tell that they are looking at a major fault that has experienced a lot of movement," said Lienkaemper, who is helping to organize the exhibit.

"The expected magnitude 6.7 to 7 earthquake along the Hayward fault can have devastating effects because of the great number of homes, schools, hospitals, and other critical structures near the fault," said Mary Lou Zoback, Chair of the Steering Committee of the 1906 Earthquake Centennial Alliance,

and a USGS scientist. "We cannot prevent earthquakes, so our ultimate goal is to increase public awareness of the hazard and to be prepared to handle it."

David Schwartz, a USGS earthquake geologist, notes that there are two permanent fault museums in Japan, one that crosses the fault responsible for the great 1891 Nobi earthquake and a second, opened in 2000, that crosses the fault that caused the 1995 Kobe earthquake. "The Kobe fault," Schwartz said, "is a twin of the Hayward. There are no fault museums in the United States so the Fremont exhibit is a truly unique opportunity for people of the Bay Area to get a first hand view of a great active fault and learn more about how it works."

Annabell Holland, Fremont's Parks & Recreation Director, notes that "while our community has a keen awareness of the Hayward Fault, the exhibit will bring Fremont much closer to its reality and hopefully a greater awareness of its awesome potential to impact both our lives and those of Californians around us."

"We proudly refer to Fremont's Central Park as our 'gem,'" said Holland. "its setting will provide a very special stage to showcase this 'up close and personal' look at the Hayward Fault – a very significant and internationally recognized natural phenomenon – right in our own back yard."

The last significant earthquake on the Hayward fault occurred on October 21st, 1868, which struck without warning, and was responsible for 5 fatalities, 30 injuries and extensive damage to San Francisco and San Jose, as well as communities in between. This earthquake, which was known as the great San Francisco earthquake until 1906, had an estimated magnitude of 7.

Excavations along the Hayward fault have shown that earthquakes occur regularly on the Hayward fault about every 150 years give or take 25 years. The last big earthquake on the Hayward fault was 137 years ago in 1868. The 2003 Working Group Report on Earthquake Probabilities in the Bay Area assigned a 27%, or 1 in 4, probability of a magnitude 6.7 or greater earthquake on the Hayward/Rodgers Creek Fault in the next 30 years, the highest in the area.

The fault exhibit is a project of the 1906 Earthquake Centennial Alliance, and is sponsored by *Swiss Re* and *Risk Management Solutions*. Technical design and assistance for the fault exhibit was provided by the U. S. Geological Survey, Menlo Park and *Geomatrix Consultants, Inc.*, Oakland.

The 1906 Centennial Alliance was formed to increase public awareness of seismic hazard and promote earthquake preparedness and mitigation and to explore the ways in which this major natural disaster affected the personal lives, culture, economy and development of Northern California. For more information visit <http://1906centennial.org/>

In commemoration of the 1906 Earthquake Centennial, Swiss Re produced "A shake in insurance history – The 1906 San Francisco Earthquake." The 48 page publication recounts the formidable event in its historical context and describes how it ushered in a wealth of scientific and engineering research, challenged existing risk perceptions, accelerated insurance evolution and spurred the development of hazard mitigation and management techniques. A copy of the report can be downloaded from <http://www.swissre.com>. To order a printed version, please send an e-mail request to [publications@swissre.com](mailto:publications@swissre.com).

The Red Cross, the Association of Bay Area Government, BART, the USGS, and many other groups will have displays featuring earthquake information and preparedness. For more information on the trench exhibit visit <http://1906centennial.org/activities/trench>.

In March 2006, the USGS released a new digital map of the Hayward fault that can be downloaded and viewed using Google Earth™ mapping service. This website can be accessed at: [http://quake.wr.usgs.gov/research/geology/hf\\_map/](http://quake.wr.usgs.gov/research/geology/hf_map/) or <http://pubs.usgs.gov/ds/2006/177/>.

Other 1906 earthquake related websites and educational resources by the USGS can be viewed at: <http://earthquake.usgs.gov/1906/>.

The USGS serves the nation by providing reliable scientific information to: describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life.

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