

# NORTHERN CALIFORNIA GEOLOGICAL SOCIETY



## NCGS FIELD TRIP IN COMMEMORATION OF 1906 EARTHQUAKE CENTENNIAL

### TRACING THE HAYWARD FAULT – A POTENTIAL DISASTER AREA

**Saturday April 15, 2006**

**Leaders: Dr. Joyce Blueford, Math Science Nucleus, Fremont  
Dr. Mitchell Craig, CSU East Bay, Hayward**

The Hayward fault is a major branch of the San Andreas Fault system in northern California. Many geomorphic features that are indicative of active movement on the Hayward fault have been destroyed by urbanization. This field trip will center on two segments of the Hayward Fault where surface features can still be observed. The first part will center on the Fremont area near Tule Ponds and the second part will look at the Hayward area.

Tule Ponds at Tyson Lagoon has been a site of fresh water for at least the last 3700 years. This sag pond outlines the trace of the Hayward fault zone in this area. Observations of brittle deformation and liquefaction features in trenches just north of this area indicate there may have been 6-8 large earthquakes during the last 2000 years (Lienkaemper et al., 2002). Participants will be able to see a peel of one of the trenches to observe stratigraphic features. After walking along the two traces of the Hayward Fault, we will walk south of Tule Ponds to observe evidence of movement along Walnut Ave. The walk will continue toward Lake Elizabeth to observe other geomorphic and structural features.

We will leave Fremont and drive north along Mission Blvd. to Hayward. For most of this stretch, the active trace of the fault runs parallel to Mission Blvd. and is seldom more than a quarter mile away from the road. Abundant geomorphic evidence of the fault can be seen from the road, including linear ridges that block stream drainages. At Palisade St., creep of the fault has caused offset of sidewalk and curbing. At Spring Dr., the fault acts as a groundwater barrier and has created a natural spring. At Hayward Memorial Park, a stone wall built in the 1930s has been offset by fault creep. In downtown Hayward we will follow the active trace of the fault on foot and observe evidence of fault creep in offset sidewalk curbs, offset walls of buildings, and en-echelon cracks of asphalt pavement. The wall of one brick building is being pulled apart at its base but is still connected at its top. The old Hayward City Hall sits astride the active trace and has been damaged by fault creep. San Lorenzo Creek, which crosses the Hayward fault in downtown Hayward, has evidently been offset approximately one mile by accumulated slip and creep along the fault.

**THIS FIELD TRIP WILL BE LIMITED TO 30 PEOPLE.**

\*\*\*\*\* **Field Trip Logistics** \*\*\*\*\*

**Time & Departure:** April 15, 2006, 8:30 am (sharp), at MSN, Fremont..

**Cost:** \$35/person

\*\*\*\*\***REGISTRATION FORM (Hayward Fault Field Trip)**\*\*\*\*\*

Name: \_\_\_\_\_ E-mail: \_\_\_\_\_

Address: \_\_\_\_\_ Phone (day): \_\_\_\_\_ Phone (evening): \_\_\_\_\_

Lunch: Regular: \_\_\_\_\_ Vegetarian: \_\_\_\_\_ (Please check one) Check Amount: \_\_\_\_\_

Please mail a check made out to NCGS to: **Tridib Guha**  
**5016 Gloucester Lane,**  
**Martinez, CA 94553**

**Carpool and vanpool is a must for this fieldtrip. Please let us know if you can drive and NCGS can reimburse your gasoline expenses.**

Questions: e-mail: [tridibguha@sbcglobal.net](mailto:tridibguha@sbcglobal.net) Phone: (925) 370-0685 (evening - PREFERRED) (925) 363-1999 (day – emergency)