



# SAN FRANCISCO SECTION NEWSLETTER



## Meeting Details:

- **Tuesday, July 12<sup>th</sup>**
- Sinbad's, San Francisco
- 6:00pm – Cocktail Hour
- 7:00pm – Dinner
- 8:00pm – Speaker
- \$35 members, \$15 students, \$40 non-members

**Reservations Due By NOON, FRIDAY, July 8<sup>th</sup>!**

## SECTION OFFICERS - 2004-2005

### Chair

Patrick Drumm  
Earth Focus Geological Services  
510-794-7495  
chair@aegsf.org

### Vice-Chair

Bill Godwin  
MACTEC  
707-793-3841  
vice-chair@aegsf.org

### Treasurer

Sachiko Tanikawa  
Exponet  
510-208-2025  
treasurer@aegsf.org

### Secretary

Janine Weber-Band  
EnviroVision, Inc.  
925-356-2998  
secretary@aegsf.org

## Committee Chairs

### Membership Chair

Corinne Stewart  
membership\_chair@aegsf.org

### Short Course Chair

Ernest Solomon  
650-948-3528  
shortcourse\_chair@aegsf.org

### Field Trip Chair

Phil Johnson  
Cotton, Shires & Associates  
408-354-5542  
fieldtrip\_chair@aegsf.org

### CCGO Liaison

Seena Hoose  
Santa Clara Valley Water District  
ccgo@aegsf.org

## JULY 2005 PROGRAM

H. Gary Greene, Moss Landing Marine Labs

### ***MECHANISMS AND DATING OF SUBMARINE LANDSLIDES ALONG THE CALIFORNIA CONTINENTAL MARGIN AND THEIR TSUNAMI GENERATING POTENTIAL***

Recent evaluation of multibeam bathymetric and geophysical data and in situ submersible/ROV observations of mass wasting features along the California continental margin indicate landslides are frequent, varied, and result from a multitude of failure mechanisms. These landslides consist of thin sediment flows, debris flows, down-dropped blocks, rotational slumps, rock falls, and rock avalanches. No single mechanism appears to be responsible for the failures mapped along the margin. In fact, the failures of most landslides can be explained by the combination of mechanisms and many scars are the result of multiple failure events. Several landslides we have examined lie in the vicinity of hydrocarbon reservoirs or in areas where offshore extension of fresh water aquifers crop out on the seafloor. Other landslides are located in close proximity to major active fault zones, while others are associated with submarine canyons and gullies. Some landslide deposits located along the distal edge of a narrow continental shelf and upper slope, such as along the Big Sur coast, result from terrestrial derived mass movement. Therefore, we infer that one or more of the following mechanisms produce landslides along the California continental margin: increase pore pressures from fluid flow, earthquakes, tectonic elevation and tilting (oversteepening), sediment accumulation on gentle to steep slopes, wall undercutting in submarine canyons, and heavy terrestrial mass movement.

We have initiated dating of many of the landslides by (1) comparing the differences in morphology (i.e., comparison of sharp-relief morphologies considered youthful with subtle morphologies that appear older in age), (2) measurement of sediment-thickness accumulated behind slump blocks and related to known sedimentation rates, and (3) stratigraphic correlation of youngest sediment disturbed by slide mass using seismic reflection profiles, cores, and drill-hole data. Selected landslides have been used to model possible resultant tsunamis in a fashion that predicts areas where tsunami deposits may be located on land and where zones of potential tsunamigenic landslides exist offshore.

### **Author Biography**

H. Gary Greene obtained a BS degree with a major in Paleontology from Long Beach State University in 1966, a MS degree in Geophysics and Marine Sciences from San Jose State University and Moss Landing Marine Labs (MLML) in 1969 and a PhD in Marine Geology from Stanford University in 1977. He retired from the US Geological Survey in 1994 after 28 years of service to become Director of MLML. Presently he is Professor of Geological Oceanography at MLML and heads up the Center for Habitat Studies at that institute. He is also a quarter-time senior research scientist with the Monterey Bay Aquarium Research Institute where he studies submarine canyon geological processes such as mass wasting events and their potential to generate tsunamis. Dr. Greene is a pioneer in mapping potential marine benthic habitats and is working on standardizing a methodology that can be used to compare and contrast deep-water marine habitats throughout the world.

**Committee Chairs**

Legislative Chair  
Julian C. Isham  
legislative\_chair@aegsf.org

Publications Chair  
**YOUR NAME HERE!**  
publications\_chair@aegsf.org

Awards Chair  
Keil Albert  
Geoconsultants, Inc.  
awards\_chair@aegsf.org

Past Chair  
Corinne Stewart  
Pacific Geotechnical  
past\_chair@aegsf.org

Student Liaison  
Gus Raggambi  
rgmbig@yahoo.com

Newsletter Editor  
Maile Smith  
Weiss Associates  
newsletter\_editor@aegsf.org

Webmaster  
Craig Reid  
Upp Geotechnology  
webmaster@aegsf.org

The AEG San Francisco Section Newsletter is a monthly publication of the San Francisco Section of the AEG.

For more information, visit [www.aegsf.org](http://www.aegsf.org).

**Submittals:**  
Deadline is the 20th of each month for the following issue. Contact Maile Smith by email ([newsletter\\_editor@aegsf.org](mailto:newsletter_editor@aegsf.org)) for submittal. All submittals are subject to editing for space considerations. Employment notices are free if brief.

**Address changes:**  
Please submit to Section Secretary, Janine Weber-Band ([secretary@aegsf.org](mailto:secretary@aegsf.org)).

**Advertisements:**  
The newsletter's circulation is about 360 within northern California.

Use these low rates to expand your market:  
business card: \$15 / month  
1/4 page: \$30 / month  
1/2 page: \$60 / month

**CHAIR'S MESSAGE**

The Chair's Message will return next month.

Pat  
Chair, AEG San Francisco Section

**JULY SECTION MEETING DETAILS**

The July Section Meeting will be held at Sinbad's restaurant, Pier 2, Embarcadero Street (cross street: Mission), San Francisco, California, 415-781-2555. Please enter through the main door and proceed to your left.

**Directions**

From 101 North - Exit I-80 East towards Bay Bridge/Oakland. Continue for about 1/2 mile and take the 7th Street exit towards Downtown. Bear left on 7th Street. After approximately 1/2 mile, turn right on Mission Street. Continue until Embarcadero Street.

From 80 West (Bay Bridge) - Take the Harrison Street exit towards Embarcadero. Continue on Fremont Street for 1/2 mile. Turn right on Mission Street. Continue until Embarcadero Street.

*FAX or e-mail your reservation to Sachiko Tanikawa.*

*Reservation Form Located on the Last Page of the Newsletter*

***No-shows and late cancellations will be charged.***

**SPONSORSHIP**

Sponsor a Section Meeting or become a Section Corporate Sponsor! Donate to the Section and receive free advertisement each month, recognition at Section Meetings, and more! Contact Patrick Drumm at [chair@aegsf.org](mailto:chair@aegsf.org) for more information on sponsorship.

***Thank You to the Corporate Sponsors of  
the AEG San Francisco Section!***

**Applied Geomechanics – Santa Cruz**

**Exponent Failure Analysis – Menlo Park**

**Upp Geotechnology – San Jose**

**AEG SF PUBLICATIONS CHAIR VACANCY**

We currently have a vacancy for Publications Chair. This commitment involves bringing assorted books and AEG publications to Monthly meetings, collecting money from sale of these publications, and occasionally assisting members who cannot attend the meetings with mail shipments of publications. Prerequisite is that you have an interest in sharing and distributing important geologic knowledge, attend at least 1/2 of the monthly meetings our arrange for a surrogate attendee and have wheels to bring 1-2 boxes of books

Bill Godwin  
Publications Chair, AEG San Francisco Section

**JUNE SECTION MEETING NOTES**

June section meeting notes will be in next month's newsletter.

Janine Weber-Band  
Secretary, AEG San Francisco Section

**MEMBER UPDATES AND OTHER NEWS**

**CALIFORNIA HAS A NEW STATE GEOLOGIST**

The California Geological Survey (CGS) is pleased to announce the John G. Parrish, Ph.D., was appointed the new California State Geologist in April 2005.

The State Geologist is the chief administrator of CGS within the Department of Conservation.

candidates at their July 15, 2005 meeting in Sacramento. For a copy of the CCGO letter to BGG, see [www.ccco.org](http://www.ccco.org).

**SOIL TECTONICS**  
**Glenn Borchardt, Ph.D.**  
 Principal Soil Scientist

510.654.1619  
 fax: 510.655.0018  
 cell: 510.205.4562

P.O. Box 5335  
 Berkeley CA 94705-0335  
[gborchardt@usa.net](mailto:gborchardt@usa.net)

[www.soiltectonics.com](http://www.soiltectonics.com)  
 Certified Professional Soil Scientist No. 24836

**SB 228 PASSES**

SB 228 (Figueroa) Board for Geologists and Geophysicists: sunset date—Summary: Existing law, the Geologist and Geophysicist Act, provides for the regulation of geologists and geophysicists by the Board for Geologists and Geophysicists, in the Department of Consumer Affairs. Under existing law, the provisions creating the board and authorizing the board to appoint an executive officer will become inoperative on July 1, 2006, and will be repealed as of January 1, 2007. This bill would instead make these provisions inoperative and repealed on July 1, 2011 and January 1, 2012, respectively. This bill contains other related provisions.

Thanks to the tremendous efforts of the three AEG sections and other CCGO members, S228 has passed. Thank you to all who wrote letters, phoned your legislators, and attended the meeting, and special thanks to our legislative analyst, Judy Wolen!

**NEW CD ON RIDGE-TOP SPREADING**

The California Geological Survey recently released a 2-set CD on ridge-top spreading in California, a collection of seven papers edited by Earl Hart. The contents are posted on the CGS website ([www.conserv.ca.gov/cgs/](http://www.conserv.ca.gov/cgs/)) under Recent Releases.

**NEW HAZARDS MAPS AVAILABLE**

Santa Clara County has a new set of Hazard Maps available to the public on their website. Go to [www.sccplanning.org](http://www.sccplanning.org) and click on maps-GIS to access the information.

**AEG San Francisco Section Thanks our Academic Sponsor!**

**San Jose State University**

**San Jose, California**

**CCGO UPDATE**

**CCGO SUPPORTS FOCUS GROUP TO REVIEW CALIFORNIA-SPECIFIC EXAM**

The California Specific Exam (CSE) tests new applicants for Professional Geology Registration in California on the knowledge unique to geologic practice in California. Some opponents indicate that a state-specific test, which is not required in all states, is irrelevant and ineffective, while proponents find that there are definite "competencies and knowledge unique to practice in California."

In a letter to Craig Copelan, Board of Geologists and Geophysicists (BGG) Board President, Jason Preece, President of CCGO, and Charles Nestle, CCGO Vice-President, strongly support the Department of Consumer Affairs recommendations that the CSE be evaluated by a focus group consisting of subject matter experts and facilitated by a test development expert. CCGO believes that most, if not all, of the writers of the letters and emails received by the BGG in support of or against the CSE have never seen the exam, and therefore the validity of their positions is questionable.

During its May 20<sup>th</sup> meeting, the BGG unanimously voted to form the focus group, and an announcement will go out soon to solicit candidates. Only individuals who are licensed as PGs will be considered (the specialty licenses CEG and CHG are acceptable, since a PG is required before the specialty license can be earned). The two-day workshop for the focus group is scheduled for October 6-7, 2005. The BGG will select up to nine



**(925) 294-8449**  
[californiageotec@cs.com](mailto:californiageotec@cs.com)

**GEOLOGIC DRILLING, SAMPLING AND TESTING  
 ATV DRILL RIG-EXTREME ACCESS CAPABILITIES  
 CERTIFIED NUCLEAR GAUGE OPERATORS  
 FAULT INVESTIGATION, SHORING & SCRAPING  
 ACI CERTIFIED**

**FUN WITH GEOSCIENCE TRIVIA**

(from GSA Connection)

1. What term is given to the enrichment of an ore body by normal weathering processes?
2. What term is given to the upper surface of a layer of ground water?
3. In what type of rock (sedimentary, igneous, metamorphic) would you find porphyroblastic structures?

Answers on Page 5.

**OTHER MEETING ANNOUNCEMENTS**

**UPCOMING AEG SF SECTION MEETINGS**

- August 9, 2005—J. Webber, Tectonics in the Delta, Scott's

**AEG ANNUAL MEETING**

Plan to attend the 48<sup>th</sup> Annual AEG Meeting, "Under the Neon", at the Flamingo Las Vegas Hotel in Las Vegas, Nevada, September 17-25, 2005.

For more information on the annual meeting, visit [www.aegweb.org](http://www.aegweb.org).

**NORTHERN CALIFORNIA GEOLOGICAL SOCIETY**

The NCGS typically meets the last Wednesday of each month in Orinda at the Masonic Center, 9 Altarinda Road. There is a social period at 6:30 pm, and at 7:00 pm a talk (no dinner). To reserve, leave your name and phone number at 925-424-3669 or [danday94@pacbell.net](mailto:danday94@pacbell.net). Cost is \$5 per regular member; \$1 per student member.

***Thank You!***

**Gregg Drilling & Testing, Inc.**

***An Outstanding Corporate Sponsor of  
the AEG San Francisco Section!***

**SHORT COURSES**

**ITRC SHORT COURSE**

**MTBE & TBA—Comprehensive Site Assessment and Successful Groundwater Remediation, August 10-12, San Francisco**

Groundwater contamination from fossil derived fuels is widespread throughout the United States. A wealth of scientific information and conventional technology are available to treat conventional fuel hydrocarbons like benzene, toluene, ethylbenzene, and xylenes (BTEX). Substantially less is known about fuel constituents such as methyl-tert-butyl ether (MTBE) and tert-butyl alcohol

**Ellis GeoSpatial**

**James Ellis, Ph.D. Remote Sensing & GIS**

- **Airborne/Satellite Image Processing**
- **Environmental/Geological Mapping**
- **GIS Deliverables with Metadata/Attributes**

[jellis@ellis-geospatial.com](mailto:jellis@ellis-geospatial.com)

Tele/Fax 925-280-0720

[www.ellis-geospatial.com](http://www.ellis-geospatial.com)

State of California Registered Geologist Certificate No. 7391  
Veteran-Owned Small Business (Vietnam Era), OSBCR #29164

(TBA) and other oxygenates which are often added to gasoline to increase octane ratings and to reduce harmful, air polluting combustion by products.

This comprehensive two-day course introduces students to a variety of MTBE and TBA contaminated groundwater topics including: chemical, physical and biological characteristics; characterization; site assessment; remediation technologies; and case studies. The MTBE team has assembled a top-notch group of instructors offering both theoretical and practical information about MTBE and TBA in groundwater.

Students can expect to increase their understanding of groundwater related site characterization and remediation issues, especially as it relates to regulator acceptance and successful application of innovative technology.

To be placed on the mailing list to receive information about additional courses, please e-mail [itrc@wpi.biz](mailto:itrc@wpi.biz).

**GRA SEMINAR**

**DNAPL Source Zone Characterization—December 7-8, 2005, San Francisco**

Effective and efficient DNAPL source zone remediation involves not only difficult technical issues, but policy challenges as well. This symposium, the 15<sup>th</sup> in the GRA's popular Contaminants in Groundwater Series, will focus on DNAPL source zones and the technical and regulatory challenges faced by professionals working at these sites. Symposium sessions will cover a variety of topics. The deadline for submitting an abstract for a paper or poster presentation is August 26, 2005. Please feel free to contact Bettina Longino at 510-663-4213 if you have any questions. For more information, please visit [www.grac.org](http://www.grac.org).

**EARTH IMAGING GEOLOGIC SERVICES**

**530.295.9272**

- fault and landslide imaging
- hydrogeologic studies
- landfill and sump imaging
- UST and utility location
- bedrock/aggregate imaging
- concealed well location

*Custom ground geophysical surveys utilizing GPR, magnetometer, gravimeter, and seismic reflection*

RG No. 6589, CEG No. 1224, RPG No. 945

*Affordable rates from experienced professionals*

**AEG ANNUAL MEETING SHORT COURSES**

Short courses at the 2005 AEG Annual Meeting include:

- Aquifer Testing
- Paleoseismic Investigations
- Engineering Geophysics Workshop
- GIS for Geologic Mapping
- Review Course for ASBOG Test

For Short Course information and submittals, please contact:

Ernest Solomon  
Short Course Chair, AEG San Francisco Section

**FIELD TRIPS**

**PGS Guidebooks**

The Peninsula Geological Society has posted guidebooks from their recent field trips, including Panoche and Tumey Hills (2004), White-Inyo Range (2002), Mount Shasta and the Klamath Mountains (2001), Big Sur (2000), and the Northern Sierra Nevada (1982). The guidebooks can be downloaded from [www.diggles.com/pgs/](http://www.diggles.com/pgs/).

**Upcoming NCGS Field Trips**

Fossil Overpressurized Zone on the East Side of the Diablo Range, Fall 2005: Mel Erskine, Consultant.

1906 San Francisco Earthquake Centennial, April 18, 2006: The Northern California Geological Society will be participating in the centennial observance of the San Francisco 1906 Earthquake. We are currently finalizing our contributions to the observance and the events will also be posted to the website of the 1906 Earthquake Centennial Alliance. The full set of events range from professional meetings, an SSA professional conference, multiple museum exhibits, as well as commissioned music to be played by the Contra Costa Wind Symphony, (and much more). Please visit the website if you have not done so to see what is planned by the alliance: <http://www.06centennial.org/>

Point Lobos to Point Reyes, April 29 - 30, 2006: Evidence of ~180 km offset of the San Gregorio and Northern San Andreas Faults, led by Kathleen Burnham, Consultant.

The NCGS has posted photos and comprehensive field trip reviews for many of their recent field trips. Visit [www.ncgeolsoc.org](http://www.ncgeolsoc.org) for more information.

For Field Trip information and submittals, please contact:  
Phil Johnson  
Field Trip Chair, AEG San Francisco Section

**EMPLOYMENT OPPORTUNITIES**

*Please note: AEG provides the following employment notices as a courtesy but does not necessarily endorse these services or companies nor does it take responsibility for actions pursuant to these notices.*

**Senior-Level Seismic Geologist**

The Seismic Hazards Group of URS Corporation based in Oakland, California, has an opening for a senior-level seismic geologist. The successful candidate will be involved in the seismic hazard evaluations of critical and important facilities worldwide. Minimum requirements are a Masters or PhD degree in geology with an emphasis on seismic geology or paleoseismology; a minimum of 5 years work experience either professional, academic, or research; a strong publication record; and strong verbal and written English communication skills. Salary is negotiable based on qualifications.

Interested applicants please go to [www.urscorp.com/careers](http://www.urscorp.com/careers) to submit your resume and profile. URS is an equal opportunity employer.

**Senior Staff Geologist/Engineer**

Performs a variety of office and field tasks requiring excellent communication, writing, and organizational skills, scheduling fieldwork for multiple projects, preparing and reviewing workplans and investigation reports, including QA/QC of analytical results, preparation of maps, cross sections and hydrographs for conceptual or numerical models, data interpretation and report writing. The field tasks require geologic and environmental skills, including detailed geologic logging of core and soil samples; collection of soil, ground water and soil vapor samples for chemical analysis; and, installation and development of monitoring and extraction wells. Requires BS in Geology, Hydrogeology, Engineering or related field, 3 to 5 years of experience in environmental field investigations. Position based in our Emeryville, California office, with field projects primarily in the greater SF Bay Area.

Apply to [jobs@weiss.com](mailto:jobs@weiss.com). Include your resume and cover letter in the body of your message, as attachments will be deleted. Please see Careers section at [www.weiss.com](http://www.weiss.com) for a complete listing of our current job openings.

**ANSWERS TO GEOSCIENCE TRIVIA**

1. Supergene
2. Water table
3. Metamorphic

Maile Smith  
c/o Weiss Associates  
350 East Middlefield Road  
Mountain View, California 94043

**AEG San Francisco Section – July Newsletter  
Monthly Section Meeting – Tuesday, July 12<sup>th</sup>  
Sinbad’s – San Francisco**

***CHECK OUT THE AEG SF SECTION WEBSITE AT WWW.AEGSF.ORG!***

---

**RESERVATION FORM**

AEG San Francisco Section Meeting • Tuesday, July 12, 2005 • 6:00 pm • Sinbad’s, San Francisco  
**Reservation Deadline: 12:00 PM, FRIDAY, JULY 8<sup>TH</sup>**

SEND RESERVATION FORM TO **SACHIKO TANIKAWA**  
FAX: **510-268-5099** or E-MAIL: **TREASURER@AEGSF.ORG**

*Please include “AEG SF Reservation” in subject line • Include entrée choice • This reservation form can be completed electronically.*

Do not send payment – check or cash at the door – make checks payable to AEG SF SECTION

Dinner and Meeting Cost: \$35 – members \$15 – student members \$40 – non-members

***No shows and late cancellations will be charged!***

NAME \_\_\_\_\_ COMPANY \_\_\_\_\_

TELEPHONE NO. \_\_\_\_\_ NO. OF PEOPLE \_\_\_\_\_

PLEASE CHOOSE ENTREE(S):                      Chicken                       Fish                       Vegetarian

---

**PERMANENT RESERVATION FORM**

AEG San Francisco Section monthly dinner meetings are typically the 2<sup>nd</sup> Tuesday of each month.

I will attend and make payment for each meeting. If I am unable to attend, I agree to fax or mail a cancellation notice to Sachiko Tanikawa by NOON the Friday before the meeting or I will be charged for the meeting.

NAME \_\_\_\_\_ COMPANY \_\_\_\_\_

TELEPHONE NO. \_\_\_\_\_ NO. OF PEOPLE \_\_\_\_\_

BILLING ADDRESS \_\_\_\_\_

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_ ENTRÉE(S) \_\_\_\_\_