

**Meeting Details:**

- Tuesday, March 16th, 2010
- Sinbad's, San Francisco
- 6 p.m.- Cocktail Hour
- 7 p.m.- Dinner
- 8 p.m.- Speaker
- \$40 members, \$50 non-member, \$20 student

RESERVATIONS DUE BY NOON,
March 15TH!!

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Position open
Please contact Jared Pratt at
chair@aegsf.org if you are
interested in volunteering.

MARCH 2010 PROGRAM**OBSERVED GROUND FAILURE MECHANISMS -
JANUARY 12, 2010 HAITIAN EARTHQUAKE**

JEFF BACHHUBER, CEG, FUGRO-WLA & DON WELLS, CEG, GEOMATRIX

ABSTRACT:

A team of geologists and engineers organized under Geo-Engineering Extreme Events Reconnaissance (GEER) made a trip to the island of Hispaniola to observe the effects of the Magnitude 7.0 earthquake that recently struck portions of the country of Haiti. The January 12, 2010, Haiti earthquake occurred in the boundary region separating the Caribbean plate and the North America plate. This plate boundary is dominated by left-lateral strike slip motion and compression, and accommodates about 20 mm/yr. slip, with the Caribbean plate moving eastward with respect to the North America plate. The location and focal mechanism of the earthquake are consistent with the event having occurred as left-lateral strike slip faulting on the Enriquillo-Plantain Garden fault system. At least 112,405 people were killed, 196,595 injured, 800,000 to 1 million displaced and severe to extreme damage occurred in the Port-au-Prince area. Curiously, there was no observed fault rupture exposed at the surface. Secondary (observed) effects included liquefaction, lateral spreading, landslides and extensive structural damage both in Port-au-Prince and outlying urban areas. Preliminary findings and observations are presented in this talk through financial support from the University of Texas, and will eventually be included in a formal report by the GEER participants. The presentation will focus on preliminary observations regarding surface fault rupture along the Enriquillo-Plantain Garden fault, coastal uplift recorded by elevated living coral, coastal liquefaction/lateral spread failures in delta fan deposits, and possible correlations between geologic conditions and density of structural failure.

SPEAKER BIOGRAPHIES:

Mr. Jeff Bachhuber, CEG, is a Senior Principal engineering geologist and Vice President of Geotechnical Services with Fugro-William Lettis & Associates, Inc. Mr. Bachhuber's professional experience is concentrated on managing and performing engineering geology/geotechnical services for major civil projects in the United States and abroad. Mr. Bachhuber participated in research of seismic ground motion effects, including reconnaissance and NEHRP studies of the 1999 Kocaeli earthquake in Turkey, and preparation of NEHRP-funded liquefaction and amplified ground shaking maps of Puerto Rico. He has conducted numerous other studies on lifeline and critical structures (pipelines, nuclear power plants and tunnels) susceptible to strong ground shaking.

Mr. Donald Wells, CEG, is a Senior Geologist with AMEC Geomatrix. He is highly experienced in engineering geology, geologic hazards and ground motion hazards assessment, for buildings, infrastructure, and lifelines projects worldwide. He has

(continued on next page)

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

For more information, visit www.aegsf.org.

Submittals:
 Deadline is the 20th of each month for the following issue. Contact Marina Mascorro by email (mmascorro@cottonshires.com) for submittal. All submittals are subject to editing for space considerations. Employment notices are free if brief.

Address changes:
 Please submit to Section Secretary, Jeana Lopez at secretary@aegsf.org

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conducted extensive research on fault ruptures, and has participated in reconnaissance investigations of numerous earthquakes, including the 1989 Loma Prieta, 1992 Landers, 1994 Mindoro , Philippines , and 1999 Chi Chi, Taiwan earthquakes.

This month's newsletter was compiled by Marina Mascorro (Newsletter Editor) and Sachiko Tanikawa (Section Treasurer). If you would like to pitch in by volunteering as newsletter editor, or even as a newsletter assistant, please let us know. Hopefully, we can keep these newsletters alive – member participation will be a key for this section's success. Thanks!

IN THIS ISSUE...

- [Message from the Chair](#)
- [AEG meeting notes](#)
- [AEG announcements, field trips and other news](#)
- [Upcoming short courses and conferences](#)

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

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CHAIR'S MESSAGE

The San Francisco section officers of AEG, along with the Sacramento and Southern California section officers, have been busy trying to stay abreast of the activity related to the abolishment of the Board of Geologists and Geophysicists (BGG) and our assimilation into the Board for Professional Engineers and Land Surveyors (BPELS). During numerous trips to Sacramento we have been able to meet with legislators and lobbyists to discuss avenues for gaining the needed representation for our geoscience professionals. New legislation is in the works to add the titles of Geologists and Geophysicists to the BPELS name and one board seat to be filled by either a geologist or geophysicist. Although seemingly agreeable, much opposition has been encountered as we have spoken to those drafting the bill regarding having two seats on BPELS. We still hold out hope for creating a new independent board for geologists and geophysicists in the future. Please feel free to keep us informed of your opinions on this matter so we can further represent and convey your concerns to the political powers. Stay informed by visiting the California Professional Geologist's website at: <http://californiapg.ning.com/>.

On the home front, we are introducing new ways to support your section. In addition to advertising, your company, organization, or campus can participate by sponsoring the San Francisco section. Sponsorship and advertisement is a very important way for your AEG section to continue to provide excellent speakers, field trips, short courses and special functions. [Please visit our newly designed website for more information \(http://www.aegsf.org/\)](http://www.aegsf.org/). [Please visit our sponsors and advertisers tab for more information.](#)

Jared Pratt
 Section Chair

UPCOMING TALKS-

- **March 16th – Jeff Bachhuber, Observed Ground Failure Mechanisms, Haitan Earthquake, January 12, 2010**
- **April 13th – Student Night**
- **May 11th- Dr. Paul Marinos, 2010 Jahns Distinguished Lecturer (Topic TBD)**
- **June 8th- Dr. John Wakabayashi, CSU Fresno (Topic TBD)**
- **July 13th- Jordana Jackson- Bay Bridge Seismic Retrofit Project**

Participation in a professional organization is a valuable and rewarding activity. Being an active member helps you to develop contacts and friendships with people who have the same passion for geology as you do. Coming to meetings and receiving the publications gives you access to new developments in the industry. Please encourage all the geologists you know and work with to join AEG and participate. For more information on joining the AEG, please visit the AEG national headquarters' website at <http://www.aegweb.org/j4a/pages/index.cfm?pageID=3327>

If you or one of your colleagues are interested in volunteering as an officer or one of the committee chairs for the San Francisco Section, please contact our Chair, Jared Pratt, at chair@aegsf.org. Thank you!

FUN WITH GEOSCIENCE TRIVIA

(from GSA Connection, answers on page 5)

1. Geyserite, fiorite, tufa and travertine are all examples of what materials?
2. How many points are there on a standard compass needle?
3. What is the common name for Limulidae?

MEMBER UPDATES AND OTHER NEWS**Section Meetings**

The Bay Area has been experiencing ample rainfall over the past few months. Although a little soggy, we

have had some great monthly dinner meetings with fantastic speakers, food and beverages. In addition to our monthly meetings, all of the California sections have been busy trying to keep informed of the activities related to the elimination of the Board for Geologists and Geophysicists (BGG) and the transfer of duties and responsibilities to the Board for

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Professional Engineers and Land Surveyors (PELS). This was a big blow to the geologic and geophysical community in California at the end of last year. Currently, while attempting to regain our independent board, we are striving to obtain representation within PEELS and maintain the high standards that were enlisted by the BGG and their committees.

In November we had our joint meeting with the San Francisco Chapter of the Geo Institute. David Crouthamel and Erin Hohenshelt, of Jacob's Associates, discussed the rehabilitation of the California Park Hill Tunnel. The tunnel rehabilitation is the first phase of the establishing the Cloverdale to Larkspur commuter rail corridor between Sonoma and Marin Counties. The project was fraught with construction mysteries and challenges that required the specialty contractors, engineers, inspectors and municipalities to work together for quick, sound solutions.

Hans AbramsonWard of AMEC Geomatrix presented a compelling discussion of the work done to assess the potential of surface fault rupture at the Briones Dam during our December dinner meeting. The zoned earthfill embankment was constructed in 1964 at which time traces of the then considered non-active Pinole fault were observed. Current work has indicated that the fault is conditionally active. Mr. AbramsonWard presented their work showing the absence of activity of the Pinole fault within the last 35,000 years. The work was heavily reviewed and ultimately the California Division of Safety of Dams concurred with Mr. AbramsonWard and the dam remains in-place to impound more than 60,000 acre-feet.

In January we were fortunate to have Greg Stock, the first-ever Park Geologist at Yosemite National Park, speak regarding the rockfall history of the valley and mitigation measures taken to protect the public in the park. Mr. Stock has employed new tools such as LiDAR, high resolution photography, seismic monitoring, cosmogenic dating and simulation software to assess the hazards and recommend precautionary and mitigation measures in the valley. Recommendations by

(continued on next page)

Mr. Stock for protective measures included closing part of the widely visited Curry Village which was instituted by the park.

In the coming months we are looking forward to having Jeff Bachhuber of Fugro-William Lettis and Associates as well as the distinguished Jahns Lectuer, Dr. Paul Marinos. We are excited to be having a short course presented by Glenn Borchardt in June on soil stratigraphy for trench logging. Please stay tuned for more information regarding this course and all the rousing activities here in the Section by the Bay.

BOARD FOR GEOLOGISTS AND GEOPHYSICISTS

For those who are trying to stay abreast of the latest actions regarding the elimination of the BGG, here are a couple of informative links to visit:

http://www.leginfo.ca.gov/pub/09-10/bill/asm/ab_0001-0050/abx4_20_bill_20090728_chaptered.pdf

You will be taken directly to AB 20 4X. The section regarding the BRGG and the Board of Engineers and Land Surveyors can be found on page 19, SEC.40.

Do you blog? If not, you might want to start. The following is a link to a forum discussing possible actions regarding AB 20 4X:

<http://californiapg.ning.com/>

PUBLICATIONS

Section Newsletter is published every 3rd month. If you are interested in contributing to the quarterly newsletter, you may do so by forwarding information in electronic format (.pdf, .jpg, .tif, .doc, .xls) to your newsletter editor, Marina Mascorro (editor@aegsf.org).



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AEG NEWS is published six times a year, with the regular four issues of the NEWS, #1-4, published March, June, September and December, respectively. The *Annual Report and Directory* issue is published in January. The *Annual Meeting Program and Abstracts* issue is published in July. Subscriptions for Association members, which includes all six issues of

the AEG NEWS, are included in annual membership dues. Non-member annual subscription is \$40.00, and includes only the four regular issues (#1-4) of the NEWS. Back issues of the AEG NEWS are \$10 each. Please contact our Publications Chair, Jim Newman at publications_chair@aegsf.org

Contributions to the AEG News can include articles, advertisements or news of the home front. For submittals for the National AEG News, please forward any contributions to Jared Pratt, Section chair at chair@aegsf.org

CCGO ANNOUNCEMENTS

To view the CCGO 2009 Annual Report, please visit <http://www.ccco.org/2009annualreport.pdf>

What is CCGO? The California Council of Geoscience Organizations (CCGO) was formed in 1997 to advocate the use of sound geologic knowledge and practice by proposing, reviewing, and monitoring statutes, regulations, and public policies. Our [Mission and Goals](#) reflect our beliefs.

NEWSLETTER ENTRIES

We welcome your suggestions for content of future newsletters. These include announcements (of a geoscience nature), job postings, legislation or current events (again of a geoscience nature), or an occasional good (but clean) joke or comic. Please send to Marina Mascorro [editor@aegsf.org].

OTHER MEETING ANNOUNCEMENTS

2010 ASSOCIATION OF ENVIRONMENTAL AND ENGINEERING GEOLOGISTS 53RD ANNUAL MEETING

September 20-25, 2010, Francis Marion Hotel, Charleston, South Carolina

For more information, please visit:

<http://aegweb.org/i4a/pages/index.cfm?pageID=4565/>

FIFTH INTERNATIONAL CONFERENCE ON RECENT ADVANCES IN GEOTECHNICAL EARTHQUAKE ENGINEERING AND SOIL DYNAMICS

May 24-29, 2010, Marriot Mission Valley, San Diego, California

[Registration is now open](#) for the Fifth International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics will be held in San Diego, California, May 24-29, 2010, at the Marriott Mission Valley Hotel.

We anticipate participation of professionals from 40 or more countries from around the world to present their recent research findings. The exchange of information during the conference will advance the state of the art and practice in several areas and will give definitive direction to future work.

Earthquake, civil, structural and geotechnical engineers, geologists, scientists, teachers, builders, contractors and other professionals worldwide are invited to attend and join in the discussion at this conference.

For more information, please visit:

<http://conference.mst.edu/5geoeqconf2010/>

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. Cost is \$5 per regular member; \$1 per student member.

ANSWERS TO GEOSCIENCE TRIVIA

1. Sinter
2. Two (N&S)
3. Horseshoe Crabs



SHORT COURSES

AEGSF PRESENTS "SOIL STRATIGRAPHY FOR TRENCH LOGGING"

June 18 and 19, 2010, Preservation Park, Oakland

Glenn Borchardt, Ph.D (Principal Soil Scientist at Soil Tectonics, Berkeley, CA) and the San Francisco Section of AEG are pleased to announce a short

course, "Soil Stratigraphy for Trench Logging". The course will be presented June 18 and 19 at Preservation Park in Oakland, California. Friday June 18 consists of classroom lectures and Saturday June 19 is a field trip to exposures at Point Pinole Regional Shoreline. This course was very popular when given at the 2004 AEG Great Basin Section Meeting. Don't miss out! Please email an expression of interest to George Ford (george@aisconstruction.com) and he'll email a brochure with registration information. The course is subject to cancellation if attendance is insufficient to cover costs, so let us know early that you are interested.

*For Short Course information and submittals, please contact George Ford, AIS Construction
Short Course Chair, AEG San Francisco Section*

FIELD TRIPS:

*For Field Trip information and submittals, please contact: Phil Johnson (fieldtrip_chair@aegsf.org)
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. You can also see other employment opportunities on our website at aegsf.org.

CALIFORNIA GEOLOGICAL SURVEY HIRING ENGINEERING GEOLOGISTS

CGS is currently hiring an Engineering Geologist with the Geologic Mapping Program. CGS gets most of its funding through special funds and contracts, not the general fund. Announcements are posted on the State Personnel Board's "VPOS" web site (<http://jobs.spb.ca.gov/vvpos>), under "Engineering Geologist". That position is listed as within the Department of Conservation. See the web page for the full job description and application instructions. Please note that to be hired by the state, a candidate must pass and place in the highest three ranks on a civil service exam. The Engineering Geologist exam, jointly developed by the Department of Conservation and the Department of Water Resources, is an online qualifications appraisal. It is possible to take the exam at the same time you send in an application, but both steps are required. The online application and "supplemental questionnaire" (exam) are at this web page. <http://jobs.ca.gov/CASPB/sup/BulPreview.asp?R1=095699&R2=00103756&R3=9PB02>

If you would like to list your employment opportunity in this newsletter, please submit a brief description to Marina Mascorro (editor@aegsf.org). For posting on our website, contact Craig Reid (webmaster@aegsf.org)

May Section Meeting Details – Tuesday, March 16th 2010
Presentation by Jeff Bachhuber of Fugro-William Lettis and Associates and Don Wells of AMEC-Geomatrix

Restaurant: Sinbad's, Pier 2 Embarcadero, San Francisco
Date and Time: Tuesday, March 16th, 2010 at 6:00 p.m.
Cost: \$40 AEG members, \$50 non-members, \$20 Students

Driving Directions: From the Bay Bridge, take the Fremont Street Exit and then Folsom Street Ramp. Go left on Folsom Street, then left onto the Embarcadero (Herb Caen Way). Sinbad's is on the right.

From BART: Exit the Embarcadero Station; walk up Market Street toward the Ferry Building (less than 1/2 a mile). Cross Embarcadero, Sinbad's is to the right of the historic Ferry Building.

Parking will be Challenging! \$4 valet parking is available or you can park at a meter somewhere on a side street off the Embarcadero.

Please RSVP by noon, Monday March 15th.

Fax or e-mail your reservation to Sachiko Tanikawa (fax: 866-400-4068 or treasurer@aegsf.org) with the following:

- 1) Your name
- 2) Your phone number

E-mail is preferred, as you will receive a confirmation e-mail from Sachiko Tanikawa. Please arrive on time. Thank you.

RESERVATION FORM

AEG San Francisco Section Meeting • Tuesday March 16th • 6:00 pm • Sinbad's
San Francisco

Reservation Deadline: 12:00 PM, March 15th

SEND RESERVATION FORM TO **SACHIKO TANIKAWA**
FAX: **866-400-4068** or E-MAIL: treasurer@aegsf.org

Do not send payment – check or cash at the door – make checks payable to AEG SF SECTION
Dinner and Meeting Cost: \$40 – members, \$50 – non-members, \$20 – students

No shows and late cancellations will be charged!

NAME _____ COMPANY _____
TELEPHONE NO. _____ NO. OF PEOPLE _____

PERMANENT RESERVATION FORM

AEG San Francisco Section monthly dinner meetings are typically the 2nd 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 Monday before the meeting or I will be charged for the meeting.

NAME _____ COMPANY _____
TELEPHONE NO. _____ NO. OF PEOPLE _____
BILLING ADDRESS _____
SIGNATURE _____ DATE _____