



**ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS**  
***Southern California Section***

*"Connecting Professionals, Practice, and the Public."*

***NEWSLETTER – October 2009***

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Newsletter Editor – Stephen Varnell, [svarnell@fugro.com](mailto:svarnell@fugro.com), 805-650-7000

**Meeting Date: \*\*\*Tuesday, October 13th\*\*\***

**\*\*\*Location:** **Victorio’s Ristorante: 10901 Victory Blvd., North Hollywood, CA 91606**

**Time:** 6:00 p.m.-Social Hour; 7:00 p.m.-Dinner; 7:45 p.m.-Presentation

**Cost:** \$30 per person with reservations, \$35 without reservations, \$15 with a valid Student ID.

**Reservations:** Please e-mail Jon Relyea at [jonrelyea@gmail.com](mailto:jonrelyea@gmail.com) or call 818-521-9730

**Speaker:** **Stephen L. Varnell, P.G., C.E.G., Project Geologist, Fugro West, Inc.**

**Topic:** **Geologic Studies and Seismic Source Model for a Proposed New Ocean Outfall, San Pedro Shelf, California**

**Abstract:**

Coauthors: Phillip J. Hogan, Fugro West Inc., Patrick Smith, Fugro West Inc., Thomas W. McNeilan, Fugro Atlantic, and Robert Dame, Fugro West, Inc.

The Sanitation Districts of Los Angeles County (Districts) are evaluating the feasibility of a new tunnel and ocean outfall for its Joint Outfall System. Fugro performed offshore geotechnical and seismic survey campaigns for the project between 2004 and 2008. Based on these new data, we describe structural and stratigraphic conditions on the Palos Verdes (PV) and San Pedro (SP) Shelves and adjacent slopes.

The offshore stratigraphy consists of a sequence of Cenozoic marine strata overlying Mesozoic basement rocks consisting of Catalina Schist. Soil and rock units present beneath portions of the shelf and slope in the survey area include: 1) Catalina Schist, 2) Monterey Formation, 3) Malaga Mudstone, 4) Fernando Formation, 5) Late Pleistocene sediments, and 6) Holocene sediments. Miocene basaltic intrusions are found within the lower Monterey Formation.

The PV Anticlinorium (PVA) dominates the structure of the Project Area. The PVA extends onshore and offshore for approximately 30 miles, from Santa Monica Bay to SP Bay, and is associated with a broad zone of uplift adjacent to the Palos Verdes Fault Zone (PVFZ). The PVFZ is an inverted Miocene normal fault that has been reactivated as a transpressional structure in the Plio-Pleistocene (Brankman and Shaw, 2009). We interpret the PVA as a broad hanging-wall anticline above the southwest-dipping PVFZ. Our current seismic source model, including segmentation of the PVFZ is presented.

Shorter faults, such as the Cabrillo fault and other faults on the continental shelf and slope to the southwest of the Project Area are considered secondary structures related to the PVFZ, PVA, and a deep basal decollement underlying the southern LA Basin and SP Shelf. The Cabrillo fault and numerous other short faults may have formed as bending moment faults as a consequence of folding during uplift of the PVA concurrent with shortening across the LA Basin.

Potentially active and inactive southwest-dipping reverse faults are present beneath the SP Slope, creating a stable buttress against slope failures. This appears to have resulted in relatively stable bedding conditions on the outer SP Shelf and Slope. Potential fault rupture and seismicity present geohazard challenges to the project. Geohazards will be mitigated through appropriate engineering design of the facilities.

**Speaker:**

Stephen Varnell is a project geologist in the Marine Geohazards Group in the Nearshore division of Fugro West, Inc. in Ventura, California. He specializes in marine geology, geohazards, and geophysical data interpretation for large infrastructure projects such as oil and gas facilities, pipelines, ports and harbors. He has a B.S. in Earth Sciences from U.C. San Diego, and an M.S. in Earth Sciences with an emphasis on marine geology from U.C. San Diego that was completed in conjunction with the Scripps Institution of Oceanography. He has over 8 years of geologic consulting experience, including over 4 years at Fugro West, and 4 years at LGC Valley, Inc., where he worked for former AEG Southern California Section Chair Matthew Hawley. Stephen is a licensed Professional Geologist in the state of California, and a Certified Engineering Geologist in California as well. He is also the Newsletter Editor for the Southern California Section of AEG.

<b>Chair Column</b>
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Peter Thams

Hello again Section. We are back in action this month after being dark in September. Please join us at Victorio's in North Hollywood, where Stephen Varnell will be presenting his work on a proposed new ocean outfall on the San Pedro Shelf, California. It was a busy September dealing with various issues related to the elimination of the Board for Geologists and Geophysicists (BGG), attending the AEG Annual Meeting, and the AEG Board of Directors meeting. I will try to touch on all of these and provide updates on actions in progress.

### **Elimination of the Board for Geologists and Geophysicists**

Over the past several weeks, we have been canvassing membership and consulting with attorneys, legislative analysts and lobbyists to determine the best approach to deal with the elimination of the BGG by the legislation AB 4X 20. The overwhelming response received from membership was in favor of pursuing an injunction against the implementation of the legislation. We also learned from membership response that, although most members were offended by the manner in which the legislation was passed and its deficiencies with regard to representation of geoscientists, many people are open to a reorganization of the BGG, including merging with the Board for Professional Engineers and Land Surveyors (BPELS) under the right circumstances. Advice from our lobbyist and our legislative analyst suggests that maintaining the status quo with a stand-alone BGG may not be feasible in the existing political climate and that we should be open to alternatives.

Based on this feedback and advice, a plan has been developed to proceed on parallel paths that pursue an injunction against the provisions of AB 4x 20 that relate to the BGG, while seeking advice and support from legislators on forming a board that represents all disciplines it regulates and has the resources to fulfill its mission. To these ends, the mutual benefit non-profit corporation California Association of Professional Geologists (CAPG) has been formed to file the injunction. Documents of incorporation for CAPG were finalized on October 6. The attorneys are finalizing the pleadings for the injunction and will be proceeding by the end of this week.

Leslie Bruce our legislative analyst has been in contact and arranged meetings with legislators and the Governors staff. So far we have sent letters to Senator Denise Ducheny, who has historically supported the BGG, and will be meeting with her near the end of the month. A mid-month meeting with the senator was postponed due to another extraordinary session of legislature being called. A letter has been sent to former DCA Director Charlene Zettel and we are attempting to schedule a meeting with her. Ms. Zettel was recently appointed District Director of the Governor's office in San Diego. We are currently scheduled to meet with Assemblyman Mike Eng on Sunday, October 11<sup>th</sup> for a lunch appointment arranged by former BGG member Cecilia Yu. Shant Minas, a concerned member of our Section, has arranged for us to meet with Assemblyman Paul Krekorian on Wednesday October 14<sup>th</sup>.

We are also working with BPELS on operational issues. Along with our lobbyist, Judy Wolen, representatives from the three California Sections met with Dave Brown, the new Executive Officer of BPELS, Board Member Patrick Tami, the Licensed Surveyor professional member, and two staff members of BPELS, Mike Donelson and Joanne Arnold. We learned that BPELS is working on a transition plan and intends to create a group dedicated to implementing the Geologists and Geophysicists Act (Act) that will be relatively independent (and detachable in the event the Board is reformed or moved down the road), while still answering to the Board. They

intend to keep existing committees and are performing a workforce study to determine the appropriate number of staff for the workload. There is a placeholder in the budget request for next year – they will ask for additional funds as needed. Beyond the two personnel years allocated in AB4X 20 it is unlikely that additional staff will be available before mid 2010, assuming next year's budget is passed by then. BPELS is intending to send out a fact sheet advising licenses of the transition sometime in November. The Executive Officer and Board Member Tami indicated they will be holding a town hall-type meeting to address concerns, and have both offered to attend events such as AEG dinner meetings to answer questions. The NoCal sections may have taken them up on their offer. All in all, the meeting with BPELS went well and it was encouraging to note that they were working on the transition in a spirit of good will. The next BPELS meeting is scheduled for November 18<sup>th</sup> and 19<sup>th</sup> at the Mission Inn in Riverside. Please feel free to attend and express any concerns you have.

Since BPELS is being so cooperative and outgoing, do we still need to file an injunction? Yes. Unfortunately, we can't rely on the good will of a few individuals; we need full standing in the statutes. In fact, we are probably doing BPELS and legislature a favor by filing this action, whether they know it and recognize it or not. By stopping this action we're saving BPELS a good deal of unnecessary extra work at a time when they are burdened with furloughs and administering their own exams. And we will be giving legislature a chance to correct their mistake and do the right thing to protect the health, welfare and safety of the public. There may be a legislator or two that are offended by the action because they thought they had snuck one by, but on the whole I think legislators will respond positively (keeping in mind that they acted with a budget-gun to their head) when they understand all the implications of the bill, and may be grateful for a chance to make adjustments.

I'll take this opportunity to thank all of you who have generously contributed to the political action fund so far. I have not gotten around to sending receipts, but will soon and I appreciate your patience. We are still a long way from our goal, so if you have not contributed please do so right away. The section has contributed as much as it can and we have gotten some significant help from our national organization, however, ***we cannot sustain this effort without your help!*** If we lose this opportunity we may not get another and we will have to live with whatever is cobbled together by well-meaning persons whose hands are tied. Donations can be sent to:

AEGSC Political Action Fund  
1772-J East Avenida De Los Arboles, PMB #304  
Thousand Oaks, CA 91362

### **AEG Annual Meeting: Lake Tahoe – An Epoch Event**

I wasn't able to make it to the Annual Meeting in Tahoe until Friday, so what I can tell you first-hand is limited. I do know the weather was as spectacular as the scenery and, by all accounts, the meeting went well. In terms of numbers, all estimates were exceeded; registration was around 575 persons and room sales exceeded the guaranteed number by double. AEG national expects to realize a profit from the event. The technical sessions, field trips, and short courses were said to have been well attended. The biggest criticism was the size of the rooms for the technical sessions, which in many cases were packed to overflowing. The small room size was blamed on the construction of a new Chinese restaurant last winter that cut available space in half and created a real challenge for the event organizers. Congratulations to the Sacramento Section, who hosted the event. The meeting next year is in Charleston, South Carolina, followed by Anchorage, Alaska in 2011, both should be great venues.

### **AEG Board of Directors Meeting**

The AEG Board of Directors (BOD) is comprised of the Chair from each Section and the Executive Council (EC) consisting of the President, Vice-President, Treasurer, Secretary, and Immediate Past President. There are approximately thirty persons on the BOD and it meets twice a year; the weekend following the Annual Meeting at that venue and a mid-year meeting in a City convenient to the current President. The mid-year meeting in May will be in St. Louis, Missouri, where our current President Duane Kreuger resides. In the interest of time (running late with this column), and since I haven't received the meeting minutes summary and have to work from my own notes, I will only be hitting a couple of the highlights of the BOD meeting in Tahoe. I will, however, try to cover all the important topics in upcoming newsletters as I get more time and have a chance to review the minutes summary.

**Joint Task Force on Areas of Practice (JTFAP):** The JTFAP was a topic of great concern to many of our members leading up to the mid-year meeting last spring (mid-April) in Seattle. The JTFAP was on the Agenda for a vote to accept or reject. Many people felt that insufficient time had been allowed for review by membership and that feedback for the membership of the other societies should also be taken into account before a vote was held. The American Society of Civil Engineers-Geotechnical Institute (ASCE) opened a comment period just prior to the Seattle meeting that extended to June (or later), and the American Institute of Professional Geologists (AIPG) did not submit the draft document for review by their membership at all, so feedback from these societies was not available.

At that meeting it was decided that the document as written had serious flaws, to the point that it could not be easily edited, and it would be prudent to wait until ASCE was able to comment on the document. It was thought that if ASCE rejected the document, AEG would reject it as well, and that if, on the other hand, ASCE wanted to move forward AEG should be part of the process. AEG President, Mark Molinari, was directed to coordinate with ASCE to determine whether or not to move forward, and if so, to empanel a committee to review and process comments from membership to be presented at a forum for discussion at the Annual Meeting in Lake Tahoe.

A forum was held in Lake Tahoe, but was poorly attended, which as it turned out may have been due as much to being poorly noticed as to lack of interest. Interest in the issue was certainly not as strong as it had been earlier in the year – I was unable to attend. In the discussion during the BOD meeting it was learned that a major objection from ASCE was that the JTFAP had not incorporated the findings of the ASCE document *Civil Engineering Body of Knowledge for the 21<sup>st</sup> Century (BOK2)*, and it was presented to us that perhaps a better approach for the JTFAP would be to start over and develop a document for geologists along the lines of BOK2, that could be used by educators to set curricula for accreditation and to assist licensing bodies in the evaluation of candidates. This idea was well received and the EC was, again, directed to coordinate with ASCE and see if this might be a workable solution. One problem is that AIPG still wants to move forward with the flawed document. Hopefully, ASCE will reject the JTFAP as written in favor of the BOK2 approach, leaving AIPG alone on the issue. If that does not happen AEG may have to redline the document per comments from membership, and we know already that the wordage we want to see is unlikely to be acceptable to ASCE, putting us back where we started. I will follow this issue and give you an update next month.

**Membership and Committees:** AEG picked 30 new members at the Annual Meeting in Tahoe, which is great but we know that there are many geologists practicing out there that are not members and we'd like to change that. There is power in numbers and we need to get that message out. We also need to be looking to the future and reaching out to students, sponsoring

them at meetings, starting student chapters, etc. We are looking for volunteers to sit on committees such as a Membership Committee and a Student Outreach Committee. Please consider donating your time to advance your profession. You may contact me with any offers to volunteer, or ideas on how to reach students or increase membership.

I'm going to stop here – if you've read this far, I'll pour you a beer (it's included in the price) at Victorio's on Tuesday. See you there!

### **Chapter Meetings**

**Inland Empire:**

For the latest information and updates, please visit <http://www.aegsc.org/chapters/inlandempire/>

**Central Coast:**

For the latest information and updates, please visit <http://www.aegsc.org/chapters/centralcoast/>

**San Diego:**

For the latest information and updates, please visit <http://www.aegsc.org/chapters/extremesocal/>

**National Business Donation**

- **Platinum** - \$1,000
- **Gold** - \$500
- **Silver** - \$250

Company name, address and contact information are presented in AEG News and section receives 10% of donation. A national donation does not yield a line in our local section newsletter.

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\* The deadline for submitting an advertisement for next month's newsletter is Friday, October 30th.

**YEAR 2009 CONTRIBUTORS NEEDED**

Contributions from corporations and individual members are greatly appreciated. Contributors will be listed in our newsletter throughout the year and can post their logo or business card in the newsletter if so desired. Please mail contributions made out to **AEG** to our section treasurer, Jon Relyea.

**2010 MEMBERSHIP RENEWAL**

For those of you who have not yet renewed (**the deadline is November 1**), are unsure about your membership status, or did not receive your membership dues statement, please contact AEG Headquarters at [www.aegweb.org](http://www.aegweb.org). You can renew your membership online. Please update your membership if you wish to continue to receive future issues of the newsletter.



**\*\*\*NOTICE: Proposed New AEG Publication\*\*\***

**WHO'S WHO in SO CALIFORNIA ENGINEERING GEOLOGY**  
**The Evolution of Engineering Geology in Southern California**

Have you ever wondered "Whatever happened to\_\_\_?" or "I've heard of \_\_\_, who is he?"

The undersigned have decided to try to prepare an internet publication with the above title, which will include biographies of engineering geologists in southern California. We would like you to share your biography (autobiography) with other EGs. If you have worked on an interesting project, others would like to know about it.

If we limit each autobiography to 3 pages of text, plus photos, this publication would be more than 1,000 pages long. Therefore, we plan to utilize a proposed new AEG Foundation internet website, where there is no limit to total pages, and we can use color photos. Also, this new website will be available for no-charge access, worldwide, thus spreading the word on the history and evolution of engineering geology, and southern California's immense contribution.

We suggest (not require) three criteria for inclusion: 1. That you are a CA licensed CEG; 2. That you are now or once were a member of AEG; 3. That you have enough years of professional experience to relate one or more significant projects you have worked on. We believe there are more than 250 such EGs in southern California. This will be an evolving internet site where new autobiographies can be added.

We will also include Memorial biographies of past notable geologists in southern California. So far, we have identified 30, including John Buwalda, Ian Campbell, Tom Dibblee, Rollin Eckis, Perry Ehlig, Richard Jahns, John Mann, F.L. Ransome, Charles Richter, Dottie & Marty Stout, Gene Waggoner. Biographies of 14 of these notable geologists were published for the recent AEG Annual Meeting, in "History of the Association's First 50 Years," available from AEG HQ, contact Julie Keaton or Becky Roland.

Here is a CHECKLIST FOR YOUR AUTOBIOGRAPHY:

Complete NAME, address, phone, email; BIRTH DATE and place; UNIVERSITY(s) attended, major(s), degree(s), year(s); MILITARY service; FIRMS/AGENCIES you worked for; up to 3 significant PROJECTS you worked on; possibly relate a serious or humorous INCIDENT; a MENTOR you may wish to acknowledge; professional SOCIETIES, HONORS, AWARDS; HOBBIES; up to 5 PUBLICATIONS; PHOTOS of yourself and of projects (scanned images preferred).

So, if you wish to be included in this new internet publication, prepare your autobiography and email it with photos to: allen@hatheway.net and in the Subject box, type: So. Cal. Geologist. Or mail it to Allen Hatheway, 10256 Stoltz Dr., Rolla, MO 65401. Please, no more than 3 pages of text, single-spaced, Times New Roman, 12 pt.

Please pass this notice on to those you may know who no longer get this Newsletter.

In the spirit of camaraderie, we thank you,

Richard Proctor  
 Allen Hatheway  
 David Rogers  
 Larry Cann  
 Bob Lynn

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<p><b>Please Contact: Jonathan Relyea</b>  <b>(818) 521-9730, jonrelyea@gmail.com</b></p>

If you would like to post an ad in the newsletter, please contact Steve Varnell at [svarnell@fugro.com](mailto:svarnell@fugro.com). Advertisement rates are shown in the box below.

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▪ 1/4 Page	\$20	\$200
▪ 1/3 Page	\$30	\$300
▪ 1/2 Page	\$35	\$350
▪ Full Page	\$50	\$500
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