

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

"Connecting Professionals, Practice, and the Public."

NEWSLETTER – March 2007

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Meeting Date: **Tuesday, March 13 (Joint Meeting with ASCE)**

Location: Steven's Steak House, 5332 Stevens Place, Commerce, California

Time: 5:30 p.m.-Social Hour; 6:30 p.m.-Dinner; 7:30 p.m.-Presentation

Cost: \$30 per person with reservations, \$35 at the door, \$15 for students with a valid Student ID

Reservations: Please call Peter Thams at (805) 644-7976 or email pthams@wcenviro.com

Speaker: **Jeffrey R. Keaton, PhD, PE, PG, F.ASCE**
Senior Principal Engineering Geologist
MACTEC Engineering and Consulting, Inc.

Topic: **Shaking Things Up with a Modified 'Active Fault' Definition:
A Case History of a School Site near the 1971 San Fernando Fault**

Abstract:

A site on the hanging-wall block approximately 300 m away from the main trace of the 1971 San Fernando fault rupture (Sylmar segment) experienced strong ground shaking and minor surface faulting. An elementary school occupied the site at the time of the earthquake and two single-story wood-frame buildings were damaged by displacements of about 7.5 cm in their slab-on-grade foundations. A structural engineering evaluation conducted within days of the earthquake concluded that the damage did not present a collapse hazard. The buildings were repaired and returned to service. The San Fernando fault, including the minor faults at the school site, was included in a state-designated fault-rupture-hazard zone. Post-earthquake geologic mapping documented four faults on the school site with a maximum slip of 2 cm right-lateral and 5 cm down-to-the-north.

The school district undertook a program in 2005 to evaluate several schools located with state-designated fault-rupture-hazard zones, including the one damaged in 1971. Three trenches excavated in gravelly fluvial deposits intersected four minor fault projections; geologic evidence of one fault was found. The lack of geologic evidence along three faults suggests that the 1971 displacements may have been first-time ruptures. Future ruptures of similar magnitude were considered to be possible virtually anywhere on the site.

New school buildings in California are prohibited from being constructed within 50 feet of active (Holocene) faults. Therefore, new buildings cannot be built at the school site and substantial remodeling of existing buildings cannot be done even though the wood-frame structural systems received full-scale seismic testing in 1971.

The current definition of 'active fault' in California is based solely on age of most recent displacement without regard to the amount of displacement. Salt Lake County, Utah, defines an active fault as "A fault displaying evidence of greater than four inches of displacement along one or more of its traces during Holocene time (about 10,000 years ago to the present)." Guidelines for evaluating and mitigating seismically induced landslides in California (SR117) have gotten away from a simple factor-of-safety approach and recognized that "Newmark displacements of 0 to 10 cm are unlikely to correspond to serious landslide movement and damage." Now may be a reasonable time for a modification of the 'active fault' definition to include a minimum displacement, which would be consistent with seismic landslide movements. Reasonable fault-rupture-hazard mitigation might allow some categories of structures to be build closer than 50 feet from well-defined active faults with acceptable displacements, at least in certain geologic settings.

Speaker:

Jeffrey R. Keaton is a Senior Principal Engineering Geologist in the Los Angeles office of MACTEC Engineering and Consulting, Inc. His education consists of a BS degree in Geological Engineering from the University of Arizona (1971), a MS degree in Engineering (Geotechnical) from the University of California, Los Angeles (1972), and a PhD degree in Geology from Texas A&M University (1988). He is registered as a Professional Engineer in California, Utah, Alaska, and Arizona. He is also registered as a Professional Geologist in California, Arizona, and Utah, and certified as an Engineering Geologist in California and Washington.

Keaton was employed by Dames & Moore in Los Angeles (1970-1979) and Salt Lake City (1979-1988). He was employed by Sergent, Hauskins & Beckwith (which became AGRA Earth & Environmental, and then AMEC Earth & Environmental) in Salt Lake City (1988-1996), Phoenix (1996-2001), and Anaheim (2001-2005). He joined MACTEC in July 2005.

Keaton is a Fellow of the American Society of Civil Engineers and the Geological Society of America. He is beginning a three-year appointment as a member of the Geo-Institute Technical Coordination Council. He served as Chairman of the Utah Section of the Association of Engineering Geologists (AEG) in 1980-1982 and was the President of AEG in 1992-1993. He was Chairman of the Engineering Geology Division of the Geological Society of America in 1989-1990. He served as Chairman of the Transportation Research Board Committee on Engineering Geology (A2L05) from 1991 to 1997, as Chairman of TRB Committee on Exploration and Classification of Earth Materials (A2L01) from 1997 to 2002, and as Chairman of TRB Subcommittee on Scour Research (A2L05-2) from 1996 to 2002. In 2002, he became the Chairman of TRB Section L, housing the seven committees that deal with Geology and Properties of Earth Materials. Keaton was one of the 11 members of TRB Task Force A2T61 which produced TRB Special Report 247 *Landslides: Investigation and Mitigation* in 1996; Keaton was principal author of Chapter 9, *Surface Observation and Geologic Mapping*, and Chapter 16, *Important Considerations in Slope Design*. He was selected for the 1999 Professional Fellowship in Earthquake Engineering by the Earthquake Engineering Research Institute and Federal Emergency Management Agency for his proposed research on synthetic ground motions from normal-faulting earthquakes.

Keaton also is a member of American Geophysical Union, Earthquake Engineering Research Institute, Seismological Society of America, and the Society for Mining, Metallurgy, and Exploration (SME). He participates in the Accreditation Board for Engineering and Technology (ABET) through SME, making accreditation visits to undergraduate programs in geological engineering.

Keaton specializes in quantifying hazardous natural processes for use in design and risk analysis. He has written numerous articles regarding engineering geology mapping, debris flows, landslides, collapsible soils, subsidence, fault rupture, earthquake-induced liquefaction, earthquake ground motion, and case histories.

Chair Column

Roz Munro

Greetings All. We had a very good turnout for our February meeting at Airtel in Van Nuys. Special thanks to Joe Cota and Hugh Robertson. It was great to see everyone. We will do it again. We have an annual joint meeting with South Coast Geological Society in Santa Ana. I'd like to get some suggestions for venues in other geographic locations as well. The hurdle is finding a meeting place. We had to guarantee 30 dinners at Airtel. Stevens is flexible and will accommodate all comers at no extra charge, more dinners or fewer.

I am looking for volunteers to help with So Cal's Section History tack board for the 50th Anniversary History at the AEG-2007 annual meeting. Here are the guidelines from Julie Keaton:

"Each Section is invited to display their history through a poster display at AEG's 50th Anniversary to be held September 24 through 29, 2007 at the Sheraton Universal Hotel in Los Angeles, California. The following "guidelines" are suggested ones:

1. Your display will start Wednesday morning, September 26 at 8:00am through 11:30am on Friday, September 28.
2. Your display board will be 8 feet wide and 4 feet high.
3. Push pins will be available at the Registration Desk.

4. These poster boards will be displayed along the hallway to Studio Rooms I through IV, where four of the five technical sessions will be held.
5. Julie Keaton can provide your Section Chair history from 1957 through 2006.
6. For any other history AEG might have, please contact Becky Roland at our HQ office (broland@aegweb.org).
7. The history can be displayed as one long poster display or individual 8½" X 11" papers.
8. Some written history, possibly listing all the past Section Chairs and when and how the Section was created (and by whom – if one particular person instigated the creation of the Section) is appropriate.
9. Pictures of different activities your Section has hosted over the years, including: yearly student presentations, field trips, special events, etc. Even just pictures of regular Section meetings would be good.
10. History of the establishment of student chapters, if applicable.
11. History of the establishment of any Chapters in your Section, if applicable."

If you are interested in helping, please contact me. I encourage anyone who has pictures, milestone events or anything that would be of interest in our section history to provide what you can. It doesn't need to be a large time commitment.

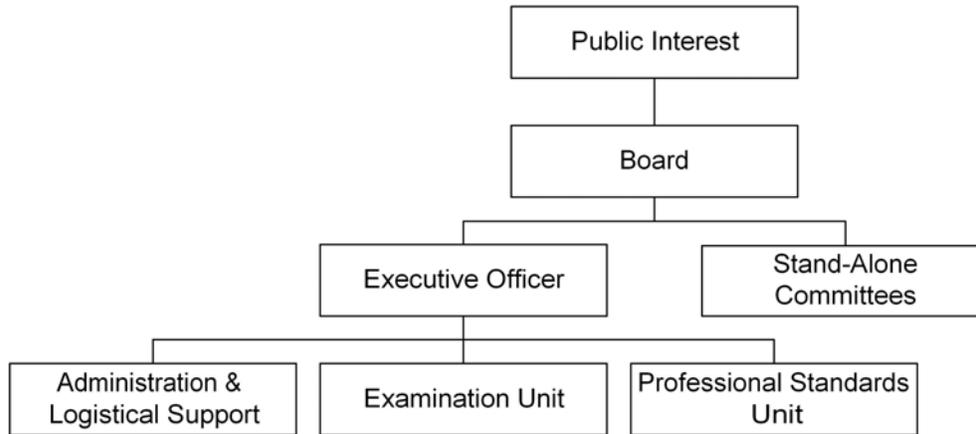
Report on the Board for Geologists and Geophysicists Meeting February 16, 2007

Charles Nestle

Possibly the most important event of the February 16 Board meeting occurred following the last agenda item – closed session to address "personnel matters." Board president Bill Black announced that the Board had voted to offer Rick Rempel the job of permanent Executive Officer, and that Rick had accepted. Rick has initiated an amazing number of structural improvements to the Board during his five weeks as "interim" Executive Officer, including regular revisions to the web site, establishing a table of organization for the Board, initiating updating the Board's strategic plan (vintage 2002), changing the meeting location to a more professional setting, identifying core functional inefficiencies, reanalyzing the Board's budget over the past 10 years and projecting 10 years into the future, etc. Clearly, choosing Rick on December 22 for the position of interim EO was the correct decision, as was the decision to offer him the permanent position.

The meeting was held in a hearing room at the offices of the Department of Consumer Affairs that has a traditional layout with the Board members in chairs on an elevated dais and the Executive Officer seated with the Board's attorney at a table on a lower level and to the side. This setting provides for the symbolic change in status of the Executive Officer from equal to or more important than the Board members to one of service to the Board. Rather than running the meeting, as the previous E.O. had, Rick spoke only when appropriate or when requested to. For the first time since I've been attending these meetings the Board members were clearly in charge.

Rick presented the following organizational chart that describes the relative status of Board personnel and functions. This is apparently the first time the Board has had an organizational chart.



BUDGET REPORT

Budget reports prepared by Department of Consumer Affairs analysts based on data provided to them by the Executive Officer are presented to the Board during their regular meetings. Reports presented to the Board over the last 10 years have indicated a very healthy budget. Two budget analysts from the DCA presented their budget analysis based on current data provided by Mr. Rempel. For the first time that anyone can remember the Board is in the red financially. During his first five weeks on the job, Mr. Rempel went through financial data back through the 97-98 fiscal year and found that the Board has been in the red since FY 03-04, and the “months in reserve” have been decreasing since at least FY 97-98. It appears that financial data provided to the DCA by the previous E.O. may not have been as accurate as one might expect. A discussion of ways to increase revenue in the short term without creating a surplus in the future was discussed. The Board instructed the current E.O. to provide a trend analysis to attempt to predict the Board’s financial future.

ENFORCEMENT COMPLAINTS

There have been an increasing number of complaints filed with the Board since November: 62% environmental geology (soils contamination, groundwater), 23% engineering geology (slope stability, faulting, other), and 15% general geology (economic, groundwater, geophysics).

EXAM APPLICANT EVALUATION

For the first time in recent memory, exam applications are receiving a technical review rather than administrative. It was presented that not one exam applicant has been rejected in the past 10 years. Thirty percent of the applications for the March exam were scrutinized (insufficient time to review them all), and 18-20% of those were found to lack sufficient qualifying experience and/or education and/or reference letters submitted were not accurate (i.e. work stated to be responsible charge was actually technician-level work). All future applications will receive a thorough technical review.

SECTION 7847 RECIPROCAL LICENSE APPLICATIONS

Two of the recent appointees to the Board, Richard Blake and James Ashby were tasked with evaluating all of the current §7847 applications. Previously, the Executive Officer and a staff member

reviewed these applications. All but one of the current applications (23±) were rejected; the one approved was for the PG license only.

Presented during the meeting were the following conclusions from the Board's study of applications for and licenses issued under §7847:

- 1) About 20 of the current applicants had taken the CSE, but did not pass. Many of these 20 were educated in California, work in California, and have always been in California, and were allegedly directed to apply under this Section (more on this a little later in the report).
- 2) Approximately 66 licenses have been granted under §7847.
- 3) The number of months of professional work stated on applications had mathematical errors (too few, and were not caught by the Board staff member checking this information).
- 4) Letters of recommendation from supervisors detailed tech-level work (drafting, nuke gauge, sand cone, etc.), rather than professional level work.
- 5) Several of the applicant's letters were nearly word-for-word identical, suggesting the possibility that applicants were provided a form letter, or were otherwise coached.

Following a long discussion including significant input from the Board's attorney, Gary Duke, the Board took the following actions:

- 1) Accept the recommendation to approve the single §7847 applicant.
- 2) Revise the code language to eliminate the words "without written examination."
- 3) Accept the ASBOG exam taken on or after the Fall of 1999 (when California began offering that exam) along with the California-Specific Exam for licensure as a PG.
- 4) Applicants having passed the ASBOG prior to the Fall of 1999 will be required to take the current ASBOG and the CSE.
- 5) Extend the moratorium on accepting §7847 applications until adoption of the revised code language (1-1/2 to 2 yrs).

Two §7847 applicants attended the meeting to enquire as to the status of the review. One gentleman from Huntington Beach testified that he came to the meeting to get answers because he wasn't getting any when he'd called the Board (last time he'd called, the previous E.O. was still there). He stated that he'd been licensed in Georgia for the past 20-30 years (I didn't write down the number stated), had moved here, taken the CSE and missed it by one question. He stated that he had no idea what was going on and was simply following the instructions of the Executive Officer to apply for an exemption, and later by a staff member to apply for the CSE. He mentioned both by name. This is the first direct testimony confirming to the Board that what I have alleged in my letters to the Board and in newsletter columns is correct. He also stated that he had only just that morning learned what was going on by reading my Section News column in the September and December issues of AEG NEWS that were on the seat next to me. He complained to the Board that he should have learned what was going on from the Board, rather than from my columns. Several of the Board members apologized and explained that there was much to be done to repair past mismanagement.

LEGISLATIVE COMMITTEE REPORT

Board president Bill Black, members Jim Ashby and Rick Blake, and E.O. Rick Rempel attended a "meet and greet" organized by the DCA, where they were introduced to DCA personnel, Senator Mark-Ridley Thomas (Los Angeles), Business and Professions Committee members, and others involved with sunset legislation. Senator Thomas has replaced termed-out Senator Figueroa on the Joint Committee for Boards Commissions and Consumer Protection (formerly Joint Legislative Sunset Review Committee).

Charlene Zettel, former Director of the Department of Consumer Affairs, has been appointed to the San Diego Regional Airport Authority Governing Board, where she served as a Board member from 2002 until her appointment to the DCA in 2004. No word yet on who will be replacing Ms. Zettel at the DCA.

SUNSET COMMITTEE REPORT

The Board's sunset committee (Jim Ashby and Shirley Husar) will meet with Senator Thomas and Assemblyperson Mike Eng to discuss sunset issues. The committee will work with Rick Rempel to have a draft sunset report ready for the May Board meeting. This report must be completed and submitted to the legislature by September 1, 2007.

I chose this time to present copies of the September and December issues of AEG NEWS to the Board members for their use. Both of these issues contain articles by Robert Tepel on why licensure by the State is preferable to private certification. The information in these articles should be of great value in preparing the sunset report by assisting the Board in providing logical arguments in support of extending the sunset date. It was suggested to me that presenting the entire copy, rather than a PDF of the articles, would also help the public members further understand the industry that they regulate. The Board members were genuinely pleased to receive these, and requested future issues. Additional copies will be provided to various legislators in the months ahead. Thanks to Becky Roland, AEG Chief Staff Executive, for so graciously, and speedily, providing these copies.

EXAMINATION COMMITTEE REPORT

The examination committee, at the direction of the Board, will focus on building the California Specific Examination question bank in order to administer two exams yearly, one in northern California, and one in southern California, beginning in 2008.

TECHNICAL ADVISORY COMMITTEE REPORT

The Board moved to extend the expiring terms of Joe Mello, Tom Crosby, Martin Miele, and Kris Vyverberg (subject to their agreeing to stay on).

The TAC will have a draft proposal for a Continuing Competency program for the Board's consideration during the May meeting.

ENFORCEMENT OVERSIGHT COMMITTEE

Tony Sawyer, recently retired from the TAC, was appointed to the enforcement oversight committee.

The revised CCR, Title 16, §3065 "Code of Professional Standards" was approved with additional amendments discussed during the meeting. The "final" revised code is expected to receive final approval during the May meeting.

NEXT BOARD MEETING – MAY 18, 2007 – LOS ANGELES

The next BGG meeting will be in Los Angeles at a location as yet to be determined. Locations considered include: the Ronald Reagan library, the Hilton Hotel across the street from the Burbank airport, or something closer to LAX. More details will be provided, as they are known.

Save the Date: The 2nd Annual AEG Southern California Section Golf Tournament is tentatively scheduled for Monday, May 21st. More details to follow...

Chapter Meetings

Inland Empire:

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

Central Coast:

Monthly meetings will take place on the last Wednesday of every month at Rusty's Pizza in Goleta. Social hour begins at 6 pm, the meeting begins at 7pm.

For more information or to be added to the CA Central Coast Chapter email list, please contact Robert Urban via email at robert_urban@urscorp.com.

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.

Company & Employment Advertising Newsletter (includes SoCal website posting)

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▪ ⅓ Page	\$30	\$300
▪ ½ Page	\$35	\$350
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SoCal website posting only

\$20/month

* The deadline for submitting an advertisement for next month's newsletter is Monday, April 2nd.

YEAR 2007 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, Peter Thams.

2007 MEMBERSHIP RENEWAL

For those of you who have not yet renewed **(the deadline was November 1)**, are unsure about your membership status, or did not receive your membership dues statement, please contact AEG Headquarters at 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.

EMPLOYMENT OPPORTUNITIES & ADVERTISING



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MACTEC Engineering and Consulting, Inc., a leading national geotechnical and environmental firm, is seeking Staff and Project Engineering Geologists for the Los Angeles office Geotechnical Division.

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Career Opportunity for Engineering Geologists

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Applied Earth Sciences is a leading geotechnical, environmental and geologic engineering firm in southern California, with a perennially large volume of projects. We are seeking qualified professionals to join our dynamic team of engineers and scientists for our Los Angeles and Fresno offices.

CERTIFIED ENGINEERING GEOLOGIST: Position requires CEG registration and 7-10 years professional experience in residential, commercial, and public works projects. Strong candidate will have demonstrable track record in hillside geology, slope failures/landslides, private disposal system design, environmental, and fault studies. Excellent report writing skills necessary. Supervision of project geologists.

PROJECT GEOLOGIST: BS & 2-5 years experience in commercial/industrial, public/civil works, and residential projects required. Tasks include research, field exploration, analysis & calculations, proposals and client interface, generating reports. Multifaceted work alongside principals. Work towards RG & CEG certification recommended.

GEOTECHNICAL ENGINEER: Position requires Civil Registration and work towards GE Reg. Candidate will have BS/MS and 5-7 years experience in foundation design, slope stability, shoring design, calculations, report writing, and project management.

ENVIRONMENTAL ENGINEER: Candidate will have BS and 3-5 years experience in site assessments, contamination investigation, and remediation consulting. Strong candidate will have exceptional teamwork and project management skills and report writing ability. CAD ability recommended.

AES offers excellent pay, benefits, and bonuses commensurate with experience and opportunity for growth. Apply by emailing resume to shant@aessoil.com or fax to 818-337-7215.



Sierra Geotechnical Services Inc., a geotechnical engineering and materials testing firm, is currently seeking qualified candidates for the following positions in our Mammoth Lakes and Bishop offices.

Staff Engineer

Candidate must have 2 to 3 years experience. BS required. Must have experience in foundation design, calculations, report writing, construction inspection, and project management. CAD ability recommended.

Laboratory Technician

Lab responsibilities will include monitoring and completing various soil tests, preparation and compression of concrete cylinders, filling out reports, etc... Previous experience preferred

Materials Testing Technician

Material Testing Technicians will be responsible for field testing work on soils and concrete. Candidate must have at least 1 year experience in grading inspection and/or concrete sampling. Nuclear gauge certification and/or ACI certification preferable. Candidates must have a good driving record and a valid Drivers License since you will be operating a company vehicle.

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