

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

"Connecting Professionals, Practice, and the Public."

NEWSLETTER – February 2009

******NEW Officers!******

Chair - Peter Thams, thams.peter@gmail.com, 805-493-0663
Vice Chair – Dave Perry, dlperry@mactec.com, 323-889-5326
Treasurer - Jon Relyea, jon@radiusmaps.net, 800-554-3205
Secretary – Gregory Sena, gsema@dpw.lacounty.gov, 626-458-4923

Visit the Southern California Section Website: www.aegsc.org

Newsletter Editor – Steve Varnell, svarnell@fugro.com, 805-650-7000

Meeting Date: *Tuesday, February 10th*****

- ***Location:** Steven’s Steak House, 5332 Stevens Place, Commerce, California
- 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 jon@radiusmaps.net or call 800-554-3205.
- Speaker:** Jeffrey R. Keaton, Ph.D., P.E., P.G., F.ASCE, F.GSA, Senior Principal Engineering Geologist, MACTEC Engineering and Consulting, Inc.
- Topic:** Guidelines for Evaluating Scour at Bridge Foundations on Rock: Status of NCHRP Project 24-29

Abstract:

The essence of National Cooperative Highway Research Program Project 24-29 is geotechnical site characterization in scour-relevant terms for use by hydraulic engineers. The project goal is to develop guidelines for evaluating scour at bridge foundations on rock that can be integrated with the procedures of Federal Highway Administration Hydraulic Engineering Circular No. 18 (HEC-18). Rock scour in natural open channels appears to be related to five processes: 1) physical and chemical weathering that prepares rock surfaces for subsequent scour, 2) dissolution of soluble rocks, 3) cavitation 4) erosion and abrasion of degradable rocks, and 5) quarrying and plucking of jointed hard rocks. The definition of 'rock' for scour purposes is just as problematic as the definition of rock for other engineering applications. The physical properties of rock material can range from strong soil to much stronger than the best concrete. Benchmark materials being considered for rock in the context of scour are concrete and mortar. Rock with characteristics less than that of mortar might be highly susceptible to scour when exposed to the normal range of stream flows during the life of a bridge. Quantifying the rate of rock scour is a challenge because it appears to be governed by a threshold hydraulic loading condition below which no scour occurs, but above which scour losses accumulate.

Five bridge sites representing a range of conditions were visited in 2008. Conditions evaluated consist of 1) over-consolidated ice-contact glacial till protected by a boulder armor, I-90 at Schoharie Creek, Montgomery County, New York, 2) Oligocene limestone, I-10 at Chipola River, Jackson County, Florida, 3) slaking Oligocene siltstone, SR-22 at Mill Creek, Polk County, Oregon, 4) stratified Jurassic sandstone and claystone forming a knickpoint and plunge pool, SR-262 at Montezuma Creek, San Juan County, Utah, and 5) Cretaceous siltstone, SR-273 at Sacramento River, Shasta County, California. A USGS stream gage on Schoharie Creek, New York, was also visited; this gage is in slabby Paleozoic sandstone.

Hydraulic loading conditions are being expressed in terms of stream power which can be accumulated over the life of a bridge structure. A probability-weighted approach has been developed for representing a statistically average year in terms of scour using data from Schoharie Creek in New York. NCHRP Project 24-29 activities include field, laboratory, and modeling studies to refine the approach to quantifying rock scour at bridge sites.

Speaker:

Jeffrey R. Keaton is a Senior Principal Engineering Geologist in the Los Angeles office of MACTEC Engineering and Consulting, Inc. He specializes in quantifying hazardous natural processes for use in design and risk analysis. He has written numerous articles regarding engineering geology mapping, applied geomorphology, debris flows, landslides, collapsible soils, subsidence, fault rupture, earthquake-induced liquefaction, earthquake ground motion, and case histories.

BS Geological Engineering from the University of Arizona (1971)

MS Engineering (Geotechnical) from the University of California, Los Angeles (1972)

PhD Geology from Texas A&M University (1988)

Professional Engineer in California, Utah, Alaska, and Arizona

Professional Geologist in California, Arizona, and Utah

Engineering Geologist in California and Washington.

Keaton is active in a number of professional societies. He is past president of AEG. Currently, he is chair of IAEG (International Association for Engineering Geology and the Environment) Commission No 1, *Engineering Geological Characterisation and Visualisation*, and a member of Commission No 19, *3D Terrestrial Laser Scanning Technology in the Geosciences*.

Chair Column

Peter Thams

Greetings Southern California Section and thanks to all who attended January's dinner meeting at Victorio's Ristorante in North Hollywood! Although our speaker had to cancel at the last minute, it was a lively meeting and a good start to the new year. January's meeting served to "kickoff" the committee to develop a Residential Geologic Evaluation Guideline for Ownership Transfer, the RGE Committee. Committee Chair Harry Audell and members Kerry Cato, Bob Hollingsworth and Joe Cota met to discuss what a buyer should learn from the geologist in a property transfer. We are looking forward to seeing a draft of the proposed guidelines in a few months. Also, new section officers were installed at the meeting. I am honored to assume the role of Chair, Dave Perry of MACTEC is your new Vice Chair, Jon Relyea of Earth Resources is Treasurer, and Greg Sena with the County of Los Angeles is your new Secretary. Steve Varnell will continue as our newsletter editor and Kerry Cato the webmaster. Roz Munro will continue to advise and be active as Immediate Past Chair.

This is an exciting time for AEG and for the professions of environmental and engineering geology. Although we're currently mired in a sluggish and uncertain economic environment, the future looks bright for the profession. Practitioners at all levels will be needed to meet the added challenges of infrastructure development and global warming to the standard realities of keeping large populations safe in a seismically active region. However, even as the need for trained and licensed professionals in the geosciences becomes increasingly evident, the Board for Geologist and Geophysicists (BGG) continues to be caught up in efforts to make government more efficient through elimination and/or consolidation of boards, bureaus and commissions. These efforts are largely political and have been successfully challenged in the past. The most recent attempt has been in the state budget process where elements of the defeated California Performance Review (CPR) were revived as bargaining chips in the negotiations to resolve the current crisis. The Governor has again proposed consolidation of the BGG with the State Mining and Geology Board (SMGB) and, although representatives of this Section and the Sacramento Section have visited with legislative staff to lobby against the measure, the outcome is uncertain at the time of this writing. What is certain is that, as relative newcomers to professional practice, geologists do not enjoy the same level of acceptance as other professions and that the public at large is uncertain about what we do or why it's important.

AEG is the leading advocate for geologists engaged in professional practice and, as members, your participation is essential to keeping the association strong and active. The section currently has openings on several committees, and all ideas for fieldtrips, short courses, and student outreach are welcome. The easiest way to participate and stay informed is to attend monthly dinner meetings. We will be making a two-month return to Steven's Steakhouse, but will continue to hold meetings at Victorio's in North Hollywood and other venues more friendly to members in outlying areas. This month, Jeff Keaton will be speaking on scour at bridge foundations. We also hope to have updates on the BGG/SMGB consolidation measure and other issues related to a recent appointment to the BGG at the February meeting – please come. In March, we will have the Jahn's Lecturer, Ed Medley, in a joint meeting with ASCE.

Last but not least...the 2009 Shlemon Specialty Conference: Investigation, Risk Analysis, and Mitigation of Surface Faulting will be held February 19 and 20 in Palm Desert. Information on this conference can be found at www.aegweb.org.

Announcement

Charles Nestle

The 2008 County of Los Angeles Building Code (Title 26) was expected to be available in technical book stores around the end of March. The new code may also be accessed at either of the following links: <http://www.bpcnet.com/codes/lacounty/> or <http://ordlink.com/codes/lacounty/index.htm>. Click on: "Title 26. Building Code."

Public Service Announcement

Charles Nestle

ZIP-A-DIPs Are Still Available!

How many of you have given up trying to find replacement for your faded and warped Zip-A-Dips? Zip-A-Dips are available from Don and Jeannine Lamar, who have lived in retirement in Reno for the past six years. Jeannine said that they don't plan on having any more made when they exhaust the present supply of Zip-A-Dips. She said, "It sure is nice to know that some geologists are still using ZADs."

Order your Zip-A-Dip by phone: (775) 322-5344. The price for 1 is \$4.00, or order 2-10 for \$3.50 ea., 11-49 for 3.00 ea., and 50+ for \$2.50 ea.

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.

**Company & Employment Advertising
Newsletter (includes SoCal website posting)**

	<u>Month</u>	<u>Year</u>
▪ Business Card	\$10	\$100
▪ ¼ Page	\$20	\$200
▪ ⅓ Page	\$30	\$300
▪ ½ Page	\$35	\$350
▪ Full Page	\$50	\$500

SoCal website posting only

\$20/month

* The deadline for submitting an advertisement for next month's newsletter is Friday, February 27th.

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.

2009 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.

*****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

EMPLOYMENT OPPORTUNITIES & ADVERTISING



LGC Valley, Inc.

LGC Valley, Inc.

2045 Royal Avenue, Ste. 125
Simi Valley, CA 93065

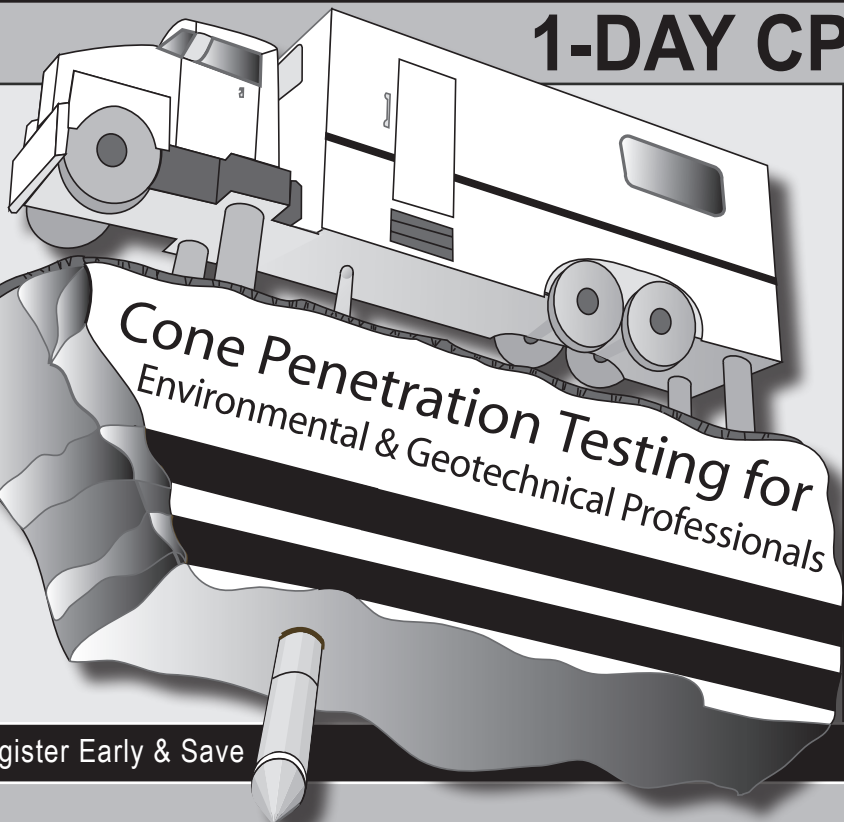
Tele: (805) 579-3434 Fax: (805) 579-3435

Email: kesmond@lgcgeo.com

Website: www.lgcgeo.com

Please look to our website for the latest opportunities. All inquiries will be held in the utmost confidence. We look forward to hearing from you.

1-DAY CPT SHORT COURSE



Cone Penetration Testing for
Environmental & Geotechnical Professionals

SOUTHERN CALIFORNIA:

Friday - FEBRUARY 27, 2009
Huntington Beach

NORTHERN CALIFORNIA:

Friday - MARCH 6, 2009
Concord

For more information visit:
www.greggdrilling.com

Register Early & Save

Earn Professional Development Hours (PDH's)

• **ON-LINE REGISTRATION NOW AVAILABLE** •

Go to www.greggdrilling.com/seminars.htm to enroll on-line today.

It's fast, easy and secure.

Presented by:

GREGG

Phone: (562) 427-6899

Stephen Varnell, P.G.
Fugro West, Inc.
4820 McGrath St., Suite 100
Ventura, CA 93003
805-650-7000
svarnell@fugro.com