



ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS
Southern California Section

"Connecting Professionals, Practice, and the Public."

NEWSLETTER – April 2007

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Meeting Date: **Tuesday, April 10**
(Joint Meeting with South Coast Geological Society)

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 at the door, \$15 for students with a valid Student ID

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

Speaker: **Bruce A. Schell, PG, CEG**

Topic: **FEASIBILITY OF TUNNELING TO COMPLETE THE 710 FREEWAY FROM INTERSTATE 10 IN ALHAMBRA TO INTERSTATE 210 IN PASADENA**

Abstract:

The master plan for the Southern California freeway system calls for extending the 710 freeway from Interstate 10 (San Bernardino Freeway) in Monterey Park, through Alhambra, South Pasadena, and Pasadena to the Foothill (210) and Ventura (134) freeways in Pasadena. The master plan for this connection was drawn up several decades ago. The State (Caltrans) already owns most of the property along an alignment, but some locals have objected citing the negative impacts on traffic, air quality, and historic buildings. Meanwhile, the surface streets in the region are abuzz with the roar of heavy traffic and commonly are clogged in the morning and evening rush hours when local residents try to find a way to work or back home. As a possible alternative to the surface roadway, the Metropolitan Transit Authority is studying the feasibility of closing the gap by constructing a tunnel.

No specific plans have been made as to the type of tunnel or to the location of the alignment. The tunnel would be about 4.5 miles long with a possible midpoint exit/entrance in the Huntington Drive area near the Alhambra and South Pasadena border. A likely depth for the tunnel would be on the order of about 100 to 200 feet. The tunnel may consist of two parallel tunnel borings (one for each direction of traffic) with two to four travel lanes each. The approximate diameter of the bores would be about 50 feet. Another alternative might be a double-deck roadway within one tunnel. Recent experience and advances in tunneling technology indicate that such a tunnel could be completed using a tunnel boring machine.

To date, investigations for the tunnel include various environmental and socioeconomic studies, and literature studies of the geological, seismological, and geotechnical setting along the alignment. These were followed by a very preliminary subsurface geotechnical investigation which included coreholes and laboratory testing. Although very preliminary, these investigations provide insight into the geology of an area without many previous deep geotechnical borings.

The talk will focus on the technical issues of tunneling through the area. The completed investigations and results will be discussed. The challenges for this tunnel venture include 1) tunneling through a wide variety of geological formations such as nonindurated, Quaternary-age, fluvial and fan alluvium; soft and hard, folded, bedded, Tertiary sedimentary rocks; Tertiary volcanics, and Mesozoic-age plutonic rocks; 2) ground water; and 3) earthquake- and fault-rupture design. In particular, the tunnel will go through the Raymond (Hill), York Boulevard, and Eagle Rock faults, as well as many other smaller discontinuities.

Speaker:

Bruce A. Schell is a consulting geologist who has been practicing independently since 1988. Prior to that, he was Principal Geoscientist at the Earth Technology Corporation. He is licensed in the state of California as a Professional Geologist (PG) and a Certified Engineering Geologist (CEG). He is the Engineering Geologist on the California State Hospital and Building Safety Board and is Chair of the Instrumentation Committee for installing earthquake ground-motion sensors in California hospitals. Bruce's academic history includes a Bachelor of Science from California State University, Northridge and graduate studies at University of Southern California and California State University, Los Angeles. Mr. Schell's consulting practice involves geological investigations for government agencies, other geotechnical firms, land developers, insurance companies, law firms, and property owners. Typical investigations comprise evaluating geological and seismological hazards such as earthquakes, earthquake probabilities, fault rupture, liquefaction, landslides, hydrology as well as routine site characterization and environmental assessments. His investigations typically employ the disciplines of geomorphology, Quaternary geology, seismology, paleoseismology, rock mechanics, and geophysics.

These investigations have been applied to a wide variety of engineering projects throughout the world such as tunnels, bridges, dams, waste repositories, military facilities, power plants, pipelines, offshore oil platforms, ports, and residential/commercial developments. Mr. Schell's work and research have been published in several scientific journals.

Report on the CCGO Legislative Drive-In on March 15, 2007

Charles Nestle

The Eighth Annual California Council of Geoscience Organizations (CCGO) Sacramento Legislative Drive-In was held on March 15, 2007. CCGO is a nonprofit mutual benefit corporation formed in 1997 by the three California Sections of AEG, AIPG, and AAPG to advocate the use of sound geologic knowledge and practice by proposing, reviewing, and monitoring statutes, regulations, and public policy. In addition to the founding organizations, CCGO member organizations include AWG, CGEA, Central Coast Geological Society, Davenport Geological Society, GRA, and the Monterey Bay Geological Society. There are also numerous business members.

The CCGO delegates participating this year included current CCGO President, Charles Nestle (AEG, Southern California Section), Marcia Kiese (AEG, Sacramento Section), Betsy Mathieson (AEG, San Francisco Section), and Jim Jacobs (AIPG, California Section).

The first meeting was with David Beeby of the State Mining and Geology Board (SMGB). Mr. Beeby discussed the fact that many urban areas in California have only about a decade or so of aggregate currently permitted for mining, and permitting new gravel quarries is a 5 to 10 year process. As aggregate supplies are depleted, significant increases in the cost of cement and aggregate-related raw materials will occur as transportation costs increase (approximately double each 30 miles). These costs will not only increase the base cost of residential construction, but the projects to be funded by the voter-approved major infrastructure improvement bonds will likely see an escalation of costs that were not anticipated. The CGS has a new Aggregate Availability map of California available for download on their web site (or purchase if you don't have a big plotter). This map shows known supplies and permitted quantities (a fraction of what's available). There are approximately four billion tons of aggregate permitted, and a need for 50 billion tons. Without funding to locate additional sources, and without streamlining the permitting process for known resources, California will be paying through the nose for transportation costs to haul in aggregate from who knows where. Meanwhile, Santa Clarita has spent \$7-9 million of local taxpayer dollars fighting against the permitting of a local aggregate quarry.

The CCGO delegation later met with State Geologist, Dr. John Parrish. He showed the delegation some recently produced maps, mostly related to hazard mapping projects. He noted that although the CGS is known throughout the world for its state-of-the-art hazard mapping program, staff, facilities and projects, state funding has not kept up with the needs of the CGS to provide this important information to the people of California. In fact, California is near the bottom of the list *internationally* in funding for resource mapping.

Later the CCGO delegates met with George Dunfield and Rick Rempel (recently hired Executive Officer) of the Board for Geologists and Geophysicists (BGG). The delegates heard of the improvements and updates that are occurring at the BGG as a result of the recent board member appointments and replacement of the Executive Officer (all of which I've written about previously).

After lunch the CCGO delegation met with Andrew Medina (legislative aide to Assembly member Mike Eng – Assembly member of the Sunset Committee) regarding professional and business issues for geologists and the upcoming BGG Sunset Review. We met with consultant Carroll Mortensen, chief

consultant for the Assembly Committee on Environmental Safety and Toxic Materials under Assembly member Jared Huffman. As Mr. Huffman is proposing carbon sequestration, we discussed some potential side effects that should be evaluated prior to injecting large volumes of carbon dioxide into the ground. Ms. Mortensen asked us, as geologists, our opinion of the global warming debate. We very diplomatically pointed out that although the science doesn't necessarily support the conclusion that humans are responsible for global climate change (remember Milankovitch?), reducing potentially toxic levels of any gas in the atmosphere may be a benefit to the general health of the population. We also pointed out that studying ways to mitigate the potential impacts of global climate change on infrastructure, the food chain, agriculture, population centers, etc. could be a much more productive use of time and resources.

G.V. Ayers and Bill Gage of the Business & Professions Committee (Senator Mark Ridley-Thomas) discussed the upcoming Sunset Review Process for the BGG. These two gentlemen have been with the Sunset Review staff for years under Senator Figueroa, and to Senator Thomas' credit, were retained. They had great news to offer: that the sunset period would be extended to eight years (rather than six), and that they were trying to have the upcoming sunset review delayed or extended as well. We'll be watching for legislation impacting this process because until it's signed anything can happen.

The CCGO delegation met with Christine Robertson, an aide to Assembly member Sam Blakeslee (former geoscientist with a PhD in Geophysics), to discuss BGG status, and funding for the SMGB and CGS. We provided her with a copy of the CGS' Aggregate Availability map and discussed the threat of increased costs to the taxpayers if no new local sources of aggregate are identified and permitted. She clearly understood the problem, and we suggested she contact Dr. Parrish for more detailed information.

We met briefly with Sonia Diaz, an assistant with Senator Sheila Kuehl to discuss SB 68, the Senator's proposal to clean up language governing the SMGB. I discussed this bill at the last AEG Section meeting after having been told the day before that someone in the DCA had attempted to insert language that would have allowed the DCA to appoint any licensed geologist they wanted to the position of State Geologist. Currently the SMGB recommends candidates from which the DCA must choose. Changing that process would have made the State Geologist essentially a political appointment. We strongly recommended that this amendment not be included in the bill, and that there would likely be significant opposition if it were. We were told that several people had informed them of this, and that this proposed amendment would not be included.

Very late in the day I met with Antonette Sorrick, Governor's Appointments Secretary (Deputy Director of Board Relations) to discuss the recent and future appointments to the BGG. Antonette and Karla Diringer (Deputy Appointments Secretary) were responsible for selecting the recent appointees to the BGG and, therefore, deserve much of the credit for the 180-degree change in management and performance of the Board. By the way, the next BGG meeting will be in the Los Angeles area May 18, and I encourage anyone who can to attend.

One final note: For those who would have liked to attend, I apologize for not getting the word out. We'll do better next year. The CCGO delegation established and renewed our contacts with key legislators associated with the professional and business committees (BGG issues), as well as environmental and funding issues (CGS and SMGB issues). We listened to their concerns and in turn explained what geologists do and how our profession helps with a variety of important aspects to modern life, including human health & safety, natural resources, environmental protection, infrastructure, and education. We act as a conduit for information between agencies and the legislature (sometimes protocol prevents or discourages certain agencies from directly contacting others). Establishing and building relationships with key legislators opens the door to communication, so that issues that affect us as geologists get heard, and hopefully we have some impact.

Save the Date: The 2nd Annual AEG Southern California Section Golf Tournament is tentatively scheduled for Friday, July 13th at Los Verdes Golf Course in Rancho Palos Verdes. 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 the latest information and updates, please visit <http://www.aegsc.org/chapters/centralcoast/>

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/>

*****NOTICE: AEG Short Course*****

AEG Members,
Information on our Spring 2007 Short Course on Rock Slope Stability can be found at <http://devaegweb.i4a.com/files/public/RockSlope.pdf>.

This Course will feature four national experts in rock slope stability analysis and mitigation of rock slope hazards. The workshop will fill up quickly, being limited to 60 attendees.

Please make your course reservations as indicated on the flyer as soon as possible.

Thanks,
Eric D. Chase, P.G., C.E.G., C.HG.
AEG Sacramento Section Chair

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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	<u>Month</u>	<u>Year</u>
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SoCal website posting only

\$20/month

* The deadline for submitting an advertisement for next month's newsletter is Monday, April 30th.

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.

*****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. We will give a presentation on many of these notable geologists at AEG's 50th Anniversary Annual Meeting in September in Los Angeles.

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



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Ninyo & Moore offers a competitive salary, excellent benefits and an opportunity for professional growth. Please visit our website for complete and detailed job descriptions and to submit your resume in confidence at www.ninyoandmoore.com/careers or mail to our corporate office at 5710 Ruffin Road, San Diego, CA 92123, Attention: Human Resources. EOE

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.

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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.

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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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OF ENGINEERING GEOLOGISTS**

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STAFF & PROJECT LEVEL GEOLOGISTS:

Candidates should possess a BS or higher degree and have experience in public works, commercial and/or residential projects. Duties include performing geologic investigations, field observation and data collection during site construction operations, office analysis, proposal and technical report preparation, and project management.

SENIOR ENGINEERING GEOLOGIST:

Candidates must possess CEG registration and have experience in public works, commercial and residential projects. Duties include managing geologic investigations and construction operations, office analysis, proposal and technical report preparation, supervising/mentoring staff, and business development.

Stephen Varnell
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