# THE ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS

**Connecting Professionals, Practice and the Public** 

SOUTHERN CALIFORNIA S E C T I O N

## **NEWSLETTER – Nov 2011**

SOUTHERN CALIFORNIA S E C T I O N

## **OFFICERS**

Chair - Peter Thams, <u>thams.peter@gmail.com</u>, 805-493-0663 Vice Chair – Vacant Treasurer – Dave Perry, <u>david.perry@amec.com</u>, 323-889-5326 Secretary – Gregory Sena, <u>gsena@dpw.lacounty.gov</u>, 626-458-4923 Newsletter Editor – Christy Confar, <u>cconfar@groupdelsol.com</u>, 805-300-1025

Greetings, AEG Southern California Section Member!

At the current time, the AEG SoCal Board is looking for volunteers to join the Board in various positions. Please contact Dave Perry or Peter Thams, contact information is shown above.

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

Upcoming AEG Meeting Date: \*\*\*Tuesday, November 8, 2011\*\*\*

Meeting Location: Cisco's Restaurant, 925 South Westlake Boulevard, Westlake Village, CA (805) 778-1191

Meeting Time: 6pm Social Hour, 7pm Dinner, 7:45pm Presentation

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

\*Reservations: Please email Dave Perry at <u>david.perry@amec.com</u> or call (323) 889-5326

Speaker: David L. Perry, CEG; AMEC Environment and Infrastructure, Inc.

Topic: Subsurface Characterization at LADWP Headworks Reservoir Site, City of Los Angeles

#### Chair's Column

Stay tuned until the December newsletter for updates from our Chair, Peter Thams.

#### AEG Shlemon Conference Summary

#### By Pancho Garza

In October, the AEG President, **Jenn Bauer**, came to visit the Arizona Section and participate in the 2011 Shlemon Conference. Prior to attending the conference, she had a full docket of meetings including an informal meeting with the Arizona Section officers and a visit to the 2014 Annual meeting venue. Additionally, Jenn gave a presentation attempting to raise awareness about the Geology profession. She was able to relay her experience in North Carolina supplemented as well by Arizona projects to a group of 80 Mesa Community College (MCC) students. This was the first time the AEG Arizona Section had worked with MCC and we were excited to see the presentation was standing room only. Jenn was aided during the question and answer period by local Arizonans **Ken Fergason**, AEG Secretary, and **Pancho Garza**, Arizona Section Chair, and by **Deb Green** who was also in attendance from New Mexico.

The Shlemon conference titled 'Opportunities for Alternative Energy Development in Arizona and the Southwest- Geologic/Hydrologic Considerations' was held in Tempe, Arizona on October 27-28th. The conference planning committee comprised of local AEG members including Gregg Mitchell, Ken Fergason, and Pancho Garza, in coordination with the Arizona Land Subsidence Group (ASLG) put together a terrific program. The conference consisted of all day conference on the first day followed by a field trip to local sites of geologic interest the next day.

The Conference has proven to be of great interest with over 100 attendees for the conference. Regional interest was quite apparent as attendees traveled from California, Colorado, Nevada, New Mexico, and Utah. The group consisted of consultants, contractors, state agencies, and energy developers. An exhibition hall consisting of 11 companies was set up immediately outside the main hall. The Conference program included talks by the Arizona State Geologist, Arizona State Land Department, Arizona Department of Water Resources, United States Geological Survey, Salt River Project, professors from Arizona State University (ASU), and local consultants. All of the talks focused on specific geologic and hydrologic considerations in Arizona and the Southwest within the context of alternative energy development. The all-day

conference was followed immediately by a mixer in the exhibit hall which allowed the attendees to mingle and discuss the day's events.

The following day 40 attendees participated in an all-day field trip. The field trip included various stops such as local subsidence and earth fissure areas, flood control structure, energy substation, and hydro-generation facility. The informal field presentations discussed the basics of earth fissure formation, use of geophysical tools, and land subsidence impacts. Additionally, the field trip included field demonstrations of seismic refraction and refraction micro-tremor (ReMi) technology by Mike Rucker of AMEC.

Overall, the conference and field trip were well attended and a great success! We would like to thank all the attendees, presenters, and exhibitors for contributing to a wonderful event.

## Additional Notes on the Shlemon Conference

## By Christy Confar

I attended the Shlemon Conference described by Pancho above. The conference topics included technical discussion of land subsidence, earth fissures, drainage, seismic hazards, debris flows/mud flows, sinks/sink holes, and alluvial fan hazards on alternative energy development projects in the southwest and geotechnical considerations. Many of the alternative energy development projects including transmission lines, wind facilities, and solar facilities can be impacted by such geologic hazards, in part, due to the large acreages of land on which they are developed. These concerns affect Arizona, as well as other southwestern states including California, where there are areas of developable land and suitable conditions for development of alternative energy facilities. Much of the technical discussions focused on solar facilities including mirrors/concentrators, photo-voltaic, and solar chimneys.

For additional information, the following documents are available:

- 1. The Arizona Land Subsidence Group (ASLG) has recently published Suggested Guidelines for Investigating Land Subsidence and Earth Fissure Hazards in Arizona in August 2011. The guidelines can be downloaded at <u>http://repository.azgs.az.gov/uri\_gin/azgs/dlio/1272</u>
- 2. The Arizona Department of Water Resources has published regional land subsidence maps, which can be downloaded at <a href="http://www.azwater.gov/azdwr/hydrology/geophysics/landsubsidenceinarizona.htm">http://www.azwater.gov/azdwr/hydrology/geophysics/landsubsidenceinarizona.htm</a>.

- 3. AEG maintains additional information on land subsidence. Visit <u>http://www.aegweb.org/i4a/pages/index.cfm?pageid=4076#references</u> for more information.
- 4. Electronic copies of the technical presentations from the Shlemon Conference are available contact Christy Confar, <u>cconfar@groupdelsol.com</u> 805-300-1025.

#### **BPELSG Announcements**

Visit <u>http://www.geology.ca.gov/</u> for news, meeting announcements, notices, and exam information. The following recent notices have been posted:

NOTICED OCTOBER 28, 2011 – GEOLOGIST & GEOPHYSICISTS TECHNICAL ADVISORY COMMITTEE MEETING – NOVEMBER 8, 2011. <u>http://www.pels.ca.gov/about\_us/meetings/11-11\_gg\_tac\_agenda.pdf</u>. Click the link for the Official Notice & Agenda for the Meeting of the Geologist and Geophysicist Technical Advisory Committee Meeting to be held on November 8, 2011, in Sacramento.

#### AEG K-12 Education Committee

AEG members across the country have recently formed an ad-hoc committee focused on the promotion of earth sciences education for grades K-12. Currently, the committee is in the strategic planning phase and includes 32 members. This committee is also coordinating with GSA and AGI, which have been working towards seeking possible federal funding for earth science education initiatives. The committee meets via conference call/GoTo Meeting on the first Friday of each month. The next meeting is scheduled for Friday November 4, 2011. Please contact Christy Confar cconfar@groupdelsol.com 805-300-1025 if you are interested in participating in this committee.

#### October Speaker

Mr. Perry is a Senior Engineering Geologist at AMEC Environment and Infrastructure in Los Angeles. He has 26 years of experience on geologic investigations for design and construction monitoring of infrastructure projects throughout California. A majority of these projects have been engineering geology studies for dams, tunnels, water storage reservoirs, water and sewer pipelines, highway and subway-rail structures, educational institutions, commercial facilities, sanitary landfills, and land development. He has performed numerous fault-rupture-hazard studies in southern California and Washington. Major infrastructure projects include the light rail/subway tunnels for the Los Angeles Metropolitan Transit Authority and the Emergency Water Storage Reservoir Project) for the San Diego County Water Authority.

Mr. Perry is the current treasurer of the AEG Southern California section. He received his Bachelors degree in Geological Sciences from the University of California at Santa Barbara and completed graduate studies in geology at Cal State Los Angeles.

## Subsurface Characterization at LADWP Headworks Reservoir Site, City of Los Angeles

# **PERRY**, David, L., CEG, <u>david.perry@amec.com</u>, AMEC Environment and Infrastructure, Inc., 5628 East Slauson Avenue, Los Angles, California 90040

The proposed Headworks Reservoir is part of the Silver Lake Reservoir Complex Replacement Project, which will be constructed on approximately 12 acres within the Headworks Spreading Grounds, located in the southeastern San Fernando Valley area of Los Angeles, California. The Headworks Reservoir will consist of two structurally-separate reinforced concrete water storage structures surrounded by earthen embankments, with combined capacity of about 110 million gallons. The geologic units underlying the project site consists of artificial fill, recent to Holocene age alluvial deposits, and variably weathered quartz diorite / granodiorite that is cut by intrusive mafic dikes. This presentation provides a description of geotechnical exploration and testing methods for site characterization. Subsurface exploration consisted of rotary wash and continuous dry-core borings, Becker Penetration Test (BPT) soundings, sonic core borings, ground-water monitoring wells, close-range terrestrial photogrammetry and logging of deep test trenches, large-diameter ring density tests, suspension P-S wave velocity testing, and spectral analysis of surface waves (SASW).

The advantages of supplementing rotary-wash borings with samples collected at 3- foot depth intervals with continuous dry core and sonic core borings will be presented. Due to the presence of thick sandy gravel lenses in the alluvial deposits beneath the site, BPT soundings in addition to conventional SPT testing was performed for liquefaction evaluation. In-situ density testing was conducted at 3-foot depth intervals in a 20-foot deep test trench using large (3- and 6-foot) diameter rings where gravel and cobbles were encountered. SASW and suspension logging was performed to characterize the shear wave velocity of the alluvial deposits and bedrock. An excellent correlation in shear wave velocity profiles was observed between several of the SASW surveys and suspension logging. Laboratory testing consisted of two and three-point direct shear tests, consolidation tests, triaxial unconsolidated-undrained tests, Atterberg limits tests, and over 80 grain size analyses. The laboratory test program was needed to characterize the alluvial deposits for liquefaction evaluation and soil-structure interaction analyses.

## Help Students! Help AEG!

Are you trying to **increase student involvement** with your Section/Chapter? Have you been looking for a way to reach out to students? Are the costs or lack of ideas standing in your way? Well, SYPSC wants to help you! The Student and Young Professional Support Committee (SYPSC) can help you – why not try the **Visiting Professionals Program** (VPP)?

The objective of the VPP is to provide college students with first-hand information on what life is like for environmental and engineering geologists. Through this volunteer program, you (as individuals or a group) can visit college geology departments – make presentations on case histories, or host a career Question & Answer session, or facilitate a field methods workshop, or create your own activity! This is a fantastic way to spread the word about the profession and AEG, and have a great time doing it! A number of AEG Sections have participated in the VPP Program, including the Carolinas Section and Washington Section, reaching out to students from coast to coast.

The SYPSC **offers funding** to reimburse you for your travel and related activity expenses. We are also able to assist you with finding contact information for the college or university you wish to visit and help you with ideas for activities.

Or, you're searching for a way to help students but there isn't a college or university nearby? Well, SYPSC can help you with that too, we are always looking for volunteers! The SYPSC works on programs that help undergrads and graduate students learn about AEG, and younger professional members make the transition from student to professional. The time commitment is very reasonable, one-hour monthly conference calls and some contributions of your time and energy towards committee action items. That's it! And you'll help make a big difference for students and young professionals in AEG.

Please contact Serin Duplantis (<u>serin.duplantis@gmail.com</u>) or Nichole Wendlandt (<u>nwendlandt@gfnet.com</u>), SYPSC Co-Chairs, for more information or to join!

## **CAREER OPPORTUNITY**

## **Staff Engineering Geologist – 2 to 4 Years Experience**

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Langan offers integrated engineering and environmental services for both public and private sector clients at sites located throughout the United States and abroad.

Langan is seeking an energetic, highly motivated and responsible Staff Engineering Geologist for a position in our Irvine, CA office. We are seeking candidates with two to four years of related engineering geology and geotechnical consulting experience. The successful candidate will assist with projects in the field and office. Responsibilities include but are not limited to: planning and conducting engineering geologic and geotechnical engineering field investigations; geotechnical site characterizations; landslide investigations; fault location and seismic hazard assessments; data analysis and report preparation. This is a tremendous growth opportunity for an ambitious candidate in the field of geologic and geotechnical consulting.

## Requirements

- B.S. degree in Engineering Geology, M.S. degree in Engineering Geology preferred;
- Geologist in Training certificate;
- Experience with a variety of engineering geologic and geotechnical engineering investigations in California;
- Experience with geologic mapping and observation of grading during construction;
- Strong attention to detail with excellent analytical and judgment capabilities;
- Demonstrated ability to follow direction and work independently and in a team environment;
- Excellent verbal and written communication skills, as well as organization and multitasking skills;
- Working knowledge of computers, AutoCAD and GIS experience a plus; and,
- Availability to work overtime.

We provide our staff with the opportunity to direct their own career path. If you are a highly motivated self-starter, we can offer you challenge, responsibility, and an environment to grow your career!

We offer employees competitive compensation packages; company paid medical, dental, and vision coverage; life insurance, short- and long-term disability insurance; 401(k) with company match; educational reimbursement; extensive training; and much more!

#### Please send resume, cover letter, and salary requirements with Job REF # IR-RPF-746 to careers@langan.com or fax 415-274-3704.

No agencies, please.

Please visit <u>www.langan.com</u> for other career opportunities.

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## MORE CAREER OPPORTUNITIES

Additional career opportunities in California are also posted on AEG's national website on the Careers page at

http://careers.aegweb.org/jobs#/results/filter=%28state\_province%3Acalifornia%29&resultsPer Page=100&showMoreOptions=true&selectedTab=bti-facets-discipline&view=single\_\_\_\_\_

## Chapter Meetings

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

#### Central Coast:

Inland Empire:

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.

## YEAR 2011 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, Dave Perry.

## **2011 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 <u>www.aegweb.org</u>. You can renew your membership online. Please update your membership if you wish to continue to receive future issues of the newsletter.

If you would like to post an ad in the newsletter, please contact Christy Confar at <u>cconfar@groupdelsol.com</u>. Advertisement rates are shown in the box below.

Company & Em <u>Newsletter (includ</u>		•
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■ <sup>1</sup> / <sub>3</sub> Page	\$30	\$300
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#### AD DIMENSIONS / FILE SPECIFICATIONS

#### Logo Ad 160 x 60 px

(Proportions are fixed; actual size is dependent on monitor resolution)

STATIC (Ad displays continuously) File Dimensions: 160w x 60h pixels File Type\*: GIF, JPG (Animation is not supported for logo ads) Max File Size: 50k

Colors: RGB

STATIC

(Ad displays continuously)

File Dimensions:

190w x 240h pixels

File Type\*: GIF, JPG

Max File Size: 150k

Max Animation

Colors: RGB

Length: 5 seconds

#### LOGO AD

#### ROTATING

(Ad will be looped with up to 4 additional ads, each displaying for 5 seconds) **File Dimensions:** 160w x 60h pixels

File Type\*: GIF, JPG (Animation is not supported for logo ads)

Max File Size: 50k Colors: RGB

SKYSCRAPER AD

#### ROTATING

(Ad will be looped with up to 4 additional ads, each displaying for 5 seconds)

File Dimensions: 190w x 240h pixels

File Type\*: GIF, JPG

Max File Size: 150k

Max Animation Length: 5 seconds Colors: RGB

Skyscraper Ad 190 x 240 px

(Proportions are fixed; actual size is dependent on monitor resolution)

\*All animated images must be in GIF format only.



## **ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS**

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#### SEND ALL AD MATERIAL TO:

Becky Roland, Chief Operating Officer PO Box 460518 • Denver, CO 80246 phone (303) 757-2926 • fax (303) 757-2969 aeg@aegweb.org

\* The deadline for submitting an advertisement for next month's newsletter is November 30.

Christy L. Confar, P.G., R.E.A. Principal Geologist Del Sol Group 1710 N. Moorpark Road, Suite 226 Thousand Oaks, CA 91360 mobile - 805.300.1025 fax – 805.532.2280 cconfar@groupdelsol.com