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SOUTHERN
CALIFORNIA
SECTION

NEWSLETTER – August 2012

SOUTHERN
CALIFORNIA
SECTION

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Greetings, AEG Southern California Section Member! Please join us for the upcoming SoCal Section Meeting.

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

Upcoming AEG Meeting Date: *****Tuesday, August 14, 2012*****

Meeting Location: Stevens Steak House, 5332 Stevens Place, Commerce, CA (323) 723-9856

Meeting Time: 6:00pm Social Hour, 7:00pm Dinner, 7:45pm Presentation

Cost: \$30 per person with reservations for AEG/EERI members, \$35 without reservations, \$15 with a valid Student ID.

***Reservations:** Please contact David Perry at david.perry@amec.com or 323-889-5300 x326 by Friday, August 10th

Speaker: Mr. Richard Slade, Upper Los Angeles River Area (ULARA) Watermaster

Topic: Watermastering the ULARA Groundwater Basins

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Chair's Column

By David Perry

As we approach the dog days of summer, the Southern California Section will be busy hosting meetings in August and September, leading up to the National Meeting in Salt Lake City. Traditionally, we have not held a September meeting to allow a brief respite for the Annual Meeting. However, the great success of the past several meetings, due in large part to the outstanding speakers who have graciously accepted our invitations and our fortune to have the return of the dynamic Jahns lecturer, Dr. Scott Burns, to southern California favors a break in tradition. Thanks to Christy Confar, who was instrumental in coordinating Scott Burn's visit to our Section.

I strongly encourage those who may still be undecided to attend the Annual Meeting. Flights to Salt Lake City are only about two hours or less from southern California and relatively inexpensive. The early registration for the Annual Meeting has been extended to August 17th. Field trips are filling up quickly. Some may be wondering when the Annual Meeting with Abstracts will be published. I have been informed that it will be available on the National website in a couple weeks. As a cost saving measure, the executive council decided to have hard copies of the Annual Meeting with Abstracts available to meeting attendees; whereas, others will have access to the electronic copy only. This and several other cost saving measures are being considered due to anticipated revenue adjustments for 2012. I hope to discuss this in brief at the August meeting.

Our section officers have been in contact with several drilling companies, environmental service suppliers, and equipment vendors who have expressed interest in either sponsoring or advertising in our Section Newsletter. If you know of a supplier or vendor who may be interested in this, please have them contact one of our Officers or Newsletter Editor, Christy Confar.

Please join us on August 14th to hear our ULARA Watermaster, Richard Slade, present on Watermastering the ULARA Groundwater Basins. This is THE groundwater presentation that you will not want to miss if you are involved in any engineering geology, groundwater, or

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environmental work in the San Fernando Valley, Sylmar, Glendale-Verdugo, or Eagle Rock basin areas. A detailed abstract of Mr. Slade's presentation is available below.

June Meeting Summary

By Edmond Lee

AEG Southern California Section held its June meeting at Steven's Steakhouse in the City of Commerce. Distinguished speaker, Dr. Egill Hauksson presented his topic on "The Goldilocks Seismicity of Southern California." Dr. Hauksson is a Senior Research Associate in Geophysics, at the California Institute of Technology and is the project lead for the Southern California Seismic Network.

Dr. Hauksson provided an in-depth presentation on the current standards for recording earthquakes and proposed additional parameters which may be used to better understand and, hopefully, predict where and when earthquakes may occur. The current parameters used to record earthquakes include the date & time, longitude & latitude, and magnitude. The new parameters utilized by Dr. Hauksson include the distance to the nearest late Quaternary fault, stress drop, heat flow, and the GPS strain rate.

Dr. Hauksson's research compiled real-time data from 1981 to 2011 from about 450 SCSN stations and compared the focal depths of earthquakes with the fault distances. The data indicated that eighty percent of earthquakes occurred at shallow depths, between 0-11 kilometers and within 5 kilometers to the principle slip surface. The spread of earthquakes showed that fault zones narrowed with depth. Shallow and small earthquakes are spread out from the principle slip surface while deep and large earthquakes remain close.

The difference in the energy to trigger earthquakes was also studied in comparing the stress drop associated with earthquakes. The stress drops are small for earthquakes near the principle slip surface. Less energy is required to trigger an earthquake closer to a principle slip surface and more energy is required to trigger one farther away. Earthquakes in the Los Angeles Basin tended to have high stress drops.

Heat flow and strain rates were also analyzed among the many earthquakes recorded by the SCSN stations. The heat flow through the crust is controlled by the crustal thickness and the

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Moho depth. The crustal thickness controls the depth of isotherms and affects the seismogenic depth. A large concentration of the earthquakes (about 75%) occurred at a heat flow range between 50-100 mW/m². The number of earthquakes decreased at 500 mW/m² and 900 mW/m². The amount of earthquakes was also relatively small at a heat flow range between 0-50 mW/m². The strain rate also affects the seismicity of an area. A low strain rate leads to longer fault healing times. Higher heat flow leads to quicker healing. The seismicity associated with high strain rates is closer to big faults.

Dr. Hauksson concluded interestingly that earthquakes tended to favor areas with an average heat flow and an average shear strain rate. Not too hot, not too cold, not too hard and not too soft, but just right.

August Speaker

Mr. Richard Slade, who is President & Principal Groundwater Geologist for Richard C. Slade & Associates LLC, Consulting Groundwater Geologists (RCS), has a 45-year career in groundwater, dating from 1967. He has a BA degree in Geology from UCLA (January 1966) and an MS degree from USC in Engineering Geology (1974). His professional licenses include a PG and CEG in California.

His career began in 1967 in the Geology/Hydrology section of MWD (from 1967-1970) and thereafter he was a senior groundwater geologist with a private consulting firm from 1970-1983. The RCS company was founded in 1983 to provide groundwater consulting services to cities, water districts, A&Es, law firms, and vineyards/wineries throughout the state. The company currently has a staff of six, and operates out of an office in Studio City.

In January 2009, Mr. Slade was selected by the Los Angeles County Superior Court as the third Watermaster of the Upper Los Angeles River Area (ULARA) since the January 1979 date of the Final Judgment in the case of City of Los Angeles vs. City of San Fernando, et. al.

Speaker Abstract

Watermastering the ULARA Groundwater Basins

Situated in a semi-arid region of southern California, the Upper Los Angeles River Area (ULARA) is a major water supply source for the City of Los Angeles metropolitan area. This has caused long-term legal battles over water rights which ultimately culminated in the 1979 Superior Court adjudication of the area in the case of City of Los Angeles vs. City of San Fernando, et al. As the cumulative result of this case, the Court upheld the Pueblo Water Rights of the City of Los Angeles to all water in the ULARA groundwater basins that is derived from precipitation (infiltration of direct rainfall plus surface water runoff).

The Court's Final Judgment (January 1979) includes provisions and stipulations regarding water rights, storage of water, stored water credits, and arrangements for physical solution water for certain parties as recommended by the Supreme Court. A separate stipulation was filed in Superior Court appointing a ULARA Watermaster, to oversee water usage and basin issues. The author is the 3rd Court-appointed ULARA Watermaster since the Final Judgment of 1979.

The 328,500-acre ULARA area encompasses the entire watershed of the Los Angeles River and its tributaries above (north of) the point in the river near the junction of the Los Angeles River and the Arroyo Seco (see attached vicinity map following this abstract). Four groundwater basins and their adjoining hill and mountain areas comprise ULARA; from largest to smallest in surface area, these four groundwater basins are known as the San Fernando, the Sylmar, the Verdugo and the Eagle Rock basins. Groundwater recharge to these basins occurs via the following sources: deep percolation from direct rainfall; infiltration of surface water runoff; and infiltration of a portion of the water that is imported and delivered for use within these basins. Artificial recharge also occurs in the San Fernando Basin via the use of spreading basins whenever excess rainfall and runoff are available.

Significant challenges in ULARA over the long-term will continue to be: the accumulation of stored water credits in the San Fernando Basin; ongoing contamination of groundwater in the San Fernando, Verdugo and Sylmar basins; elevated concentrations of nitrate in the groundwater in Sylmar Basin; and the need to increase recharge into the local groundwater

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basins by different methods, at different locations and depths, and by using different sources of water. This need for increased recharge is particularly important for the San Fernando Basin.

Groundwater contamination from volatile organic compounds (VOCs) and hexavalent chromium continues to be a serious problem for water-supply in the eastern portion of the San Fernando Basin. The cities of Burbank, Glendale and Los Angeles continue to enlist the assistance of key regulatory agencies including the United States Environmental Protection Agency (USEPA), the Regional Water Quality Control Board – Los Angeles (LARWQCB), and the State Department of Toxic Substances Control (DTSC) to help expedite the cleanup of the contaminated soils and aquifers within San Fernando Basin. Pumping of excessive concentrations of chromium by certain wells and limitations of existing treatment facilities to treat those excessive concentrations have also become more recent problems. In addition, various gasoline components continue to impact and/or threaten municipal-supply water wells owned by the Crescenta Valley Water District in the Verdugo Basin. In the Sylmar Basin, nitrate concentrations have been increasing in recent years in wells operated by the City of San Fernando; Los Angeles has one well that has been impacted by TCE in this basin.

An ongoing activity of the Watermaster continues to be the review and the approval/denial of the possible plans for infiltration of stormwater collected at all new development and/or redevelopment projects within the San Fernando Basin portion that lies within the City of Los Angeles. These stormwater collection plans, as prepared by the engineer for the developer, are part of the Standard Urban Stormwater Mitigation Plan (SUSMP) program of the LARWQCB.

Tonight's talk will focus on the basic history of the adjudication, typical Watermaster duties, the local surface and subsurface groundwater conditions in the watershed and in the 4 groundwater basins which comprise ULARA, and typical water level and water quality problems in those groundwater basins.

UPPER LOS ANGELES RIVER AREA LOS ANGELES COUNTY, CALIFORNIA

2010-11 WATER YEAR

OCTOBER 1, 2010 – SEPTEMBER 30, 2011



MAY 2012

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2011-2012 AEG Jahns Lecturer – Dr. Scott Burns will be in So Cal on September 4th!

By Christy Confar

Dr. Scott Burns was a graduate professor of mine at Portland State University, and he has also been named the 2011-2012 Richard H. Jahns Distinguished Lecturer in Engineering Geology. Scott is coming to southern California on September 4th right after Labor Day. Keep your calendar open and please join us for a night of great geology talk, food, drinks, and fun.

Dr. Burns' selected presentation for the September 4th lecture is titled "**Urban Landslides – Challenges to Forensic Engineering Geologists**": Each year landslides cause 25-50 deaths and on the average \$3.5 billion in damage in the United States. Many of these landslides occur in urban settings. Figuring out what caused these landslides and also how to prevent them in urban settings can be a challenge to forensic engineering geologists and geotechnical engineers. The talk will focus on lessons learned from case histories in urban settings, focusing on homes hit by landslides, homes that moved down the slope on landslides, reactivation of ancient landslides, triggers such as precipitation and earthquakes, and vacant lots. Development of susceptibility maps, especially using LiDAR imagery, will be included. Different mitigation methods including different types of dewatering devices, walls, and freezing of the soil will be mentioned. In importance of lack of insurance for landslides on normal homeowner policies has great significance.

Stay tuned for our next newsletter and/or email blast that will provide more details on Dr. Burns, the topic of his talk, and the meeting location. Please visit <http://rock.geosociety.org/egd/Jahns2011-2012.html> for more information on Dr. Burns.

Annual 55th AEG National Meeting

ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS 55th ANNUAL MEETING
Salt Lake City, Utah
Hilton Salt Lake City Center September 15-23, 2012

Nestled in the heart of the downtown business and entertainment district and only eight miles from the Salt Lake International Airport, the Hilton Salt Lake City Center enjoys the most convenient location in the Salt Lake Valley. This AAA Four-Diamond hotel is loaded with

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amenities and is situated within three city blocks of over 60 restaurants, two shopping malls, historic Temple Square, and the Genealogy Research Center. The surrounding Wasatch Mountains offer adventure, excitement and beauty. Numerous canyons around the valley offer splendid fall hiking and unrivaled biking for all ages. The snowcapped mountains embraced by the warm colors of the fall foliage make Utah the destination.

Click on the following link for more information on the meeting, to register for the meeting, and get conference information: <http://www.aegweb.org/home/professionals/meetings-and-events/aeg-annual-meeting/2012-salt-lake-city>.

BPESLG Announcements

Visit <http://www.geology.ca.gov/> for news, meeting announcements, notices, and exam information.

Visit http://www.bpelsg.ca.gov/about_us/public_participation.shtml for public participation opportunities including meeting schedules, rulemaking notices, and opportunities to comment on draft regulations.

Visit <http://www.bpelsg.ca.gov/online.shtml> for online services including address changes, file a complaint, license lookup, and renewals.

ANNOUNCED JUNE 8, 2012 - FALL EXAMINATION ANNOUNCEMENT - The California Specific Examination will be administered as a Computer Based Test (CBT) on October 9, 2012; the Certified Engineering Geologist, Certified Hydrogeologist and the Professional Geophysicist Examinations will be administered as Computer Based Tests (CBT) on October 10, 2012. All candidates will receive a letter from the CBT vendor with instructions on when and how to schedule their examination once all applications have been reviewed and approved (there is no online link for this announcement).

ANNOUNCED MAY 3, 2012 - INFORMATION REGARDING RENEWAL FEES – Click on the following link for more information: http://www.bpelsg.ca.gov/licensees/renewal_fees.pdf.

ANNOUNCED MAY 2, 2012 - INFORMATION REGARDING NEW EXAMINATION FEES - New examination fees for geologists are now in effect. Click the above link for more information. Click on the following link for more information: http://www.pels.ca.gov/applicants/new_fees.pdf.

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Other Meetings

South Coast Geological Society 2012 Field Trip, October 12 through 14, 2012. The South Coast Geological Society is looking eastward towards the Palm Springs area, the San Jacinto Mountains and the northern Coachella Valley for their 2012 Field Trip. They are currently seeking papers for the Guidebook that will be published in support of this trip. Papers addressing topics related to geology, tectonics, engineering geology, hydrogeology, hydrology, Quaternary geology, paleontology, environmental issues, geomorphology, and archaeology of the eastern Inland Empire, San Jacinto Mountains, the northern Coachella Valley and surrounding areas. The trip is going to be conducted October 12, 13 and 14th.

More information on the field trip is available on the SCGS website at <http://www.southcoastgeo.org/>

CAREER OPPORTUNITIES

Current career opportunities in California are posted on our section website at <http://aegsc.org/jobs/>.

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&resultsPerPage=100&showMoreOptions=true&selectedTab=bti-facets-discipline&view=single.



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Chapter Meetings

Inland Empire:

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

Central Coast:

The Central Coast Chapter is not currently active. If you are interested in reactivating this chapter, please contact the Section Chair, David Perry, at david.perry@amec.com.

San Diego:

The San Diego Chapter is not currently active. If you are interested in reactivating this chapter, please contact the Section Chair, David Perry, at david.perry@amec.com.

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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(Ad displays continuously)

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160w x 60h pixels

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

Max File Size: 50k

Colors: RGB

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

Skyscraper Ad
190 x 240 px

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STATIC

(Ad displays continuously)

File Dimensions:
190w x 240h pixels

File Type*: GIF, JPG
Max File Size: 150k

Max Animation Length:
5 seconds

Colors: RGB

ROTATING

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

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190w x 240h pixels

File Type*: GIF, JPG
Max File Size: 150k

Max Animation Length:
5 seconds

Colors: RGB

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



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Skyscraper	Home Page	<input type="checkbox"/> Year	<input type="checkbox"/> 6 Mo.	Rotating	\$500	\$300	\$ _____
Logo*	Home Page	<input type="checkbox"/> Year	<input type="checkbox"/> 6 Mo.	Rotating	\$200	\$120	\$ _____
Skyscraper	Secondary Page (All)	<input type="checkbox"/> Year	<input type="checkbox"/> 6 Mo.	Rotating	\$250	\$150	\$ _____
Skyscraper	Secondary Pg. (1 specific pg.)	<input type="checkbox"/> Year	<input type="checkbox"/> 6 Mo.	Static	\$150	\$90	\$ _____
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▪ ⅓ Page	\$50	\$400
▪ ½ Page	\$55	\$450
▪ Full Page	\$70	\$550

AEG SoCal website posting only

\$20/month or \$200/year

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AEG Member Benefits

PUBLICATIONS

- National newsletter *AEG NEWS*
- National peer-reviewed *JOURNAL OF ENVIRONMENTAL & ENGINEERING GEOSCIENCE*, co-published with the Geological Society of America

WEBSITES

- National Website
- Southern California Section and Chapter Websites

MEETINGS

- Monthly Southern California Section Meeting
- Monthly Inland Empire Chapter Meeting

INFORMATION

- Regulatory updates
- Licensure updates from the Board of Professional Engineers & Land Surveyors

CONTINUING EDUCATION & SKILL DEVELOPMENT

- Chapter sponsored annual Short Course
- Chapter sponsored annual Field Trip

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* The deadline for submitting an advertisement for next month's newsletter is August 31, 2012.

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