Association of Environmental and Engineering Geologists

AEG Inland Empire Chapter Newsletter

of the Southern California Section

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www.aegsc.org/chapters/inlandempire

June 2016 Meeting Announcement

"3D Hydrogeologic Framework Model of the Yucaipa Basin"

Geoff Cromwell & Greg Mendez

USGS

Wednesday, June 15th, 2016

Location: Pinnacle Peak Steakhouse, Colton, CA

See speaker & meeting details on pages 3 - 4

RSVP to aeginland@gmail.com by 5:00pm, Monday June 13th, 2016.

INSIDE

Chair's Message

Wow! Where to start? I think the annual joint meeting with AEG-IE, SME, and IGS on Tuesday, May 3rd went off without a hitch. At least, I didn't hear about concerns. We owe a hearty "Thank You" to Anne Rosinski of the California Geological Survey for her presentation on the workings of the California Earthquake Clearinghouse (CEC) and its future direction(s). I was unaware this program has been around since 1972 was instituted following the 1971 San Fernando/Sylmar earthquake. I was sitting in the back and because we were without a microphone (maybe something we can work on) to amplify Anne's voice, I missed a lot of the details. However, I didn't miss all of the details and I think one of the most important points of her talk was that she will be in southern California again in October for a SCEC meeting. Why is this important, because she also suggested she would be willing to offer a training session on how to use the CEC following a simulated earthquake in southern California. People I talked to after the meeting all thought this was a great opportunity, not only for AEG-IE and the other organizations, but also for anybody else interested in learning how the CEC is operated in response to natural disaster. Andy Robinson, Vice Chair South, will be keeping in contact with Anne regarding the timing and content. In addition, all 3 organizations owe a debt of gratitude to Andy for handling all of the details in getting Anne to be our speaker for the joint meeting. He handled it masterfully. Thank you, sir.

Our annual AEG-Inland Empire Spring Field Trip along portions of the San Jacinto Fault Zone was held on Saturday, April 30th. Weather was a little on the cool and cloudy side but, I'd rather have it that way, than 110° in blazing sun. We started off with a brief hike up Massacre Canyon, crossing the San Jacinto Fault proper to view some of the interesting geology (nice metamorphics and faulting) and got a history lesson on the naming of the canyon (the parties involved were not what you would think). Several stops were made to view the geomorphic expression of the active Casa Loma Fault through the San Jacinto/Hemet area with presentations by Janis Hernandez of the California Geological Survey (revised fault hazard mapping) and Lisa Battiato of GeoCon (fault trenching and high sedimentation rates). We ended the field trip at Park Hill in Hemet with a discussion about whether faults in this area should be zoned and presentation by Gary Rasmussen, whose fault trenches here in the 70's established the standard or precedent for future fault trench studies. Not bad for free. Our field trip conveners received some constructive criticism which we will evaluate for future field trips. The officers of the AEG-Inland Empire Chapter want to thank the field trip coordinators, Mike Cook of Kleinfelder, and Mark Spykerman and Dale Hamelehle of EarthSystems, and their companies, for the donation of personnel, time and materials that allowed us to be able to provide this field trip at no charge.

The Riverside, Inyo, Mono, and San Bernardino (RIMS) 2016 Inland Science Fair occurred on April 5, 2016. Approximately 800 projects from 22 categories of science were presented by individual students and student teams from grades 6th through 12th. Each project was judged by volunteers from education, science, and industry. The AEG-Inland Empire Chapter's Vice Chairs Andrew Robinson and Jeff Fitzsimmons participated as judges, assigned to the category of Earth and Planetary Sciences. The top two projects from each category of science were invited to exhibit at the 65th Annual California State Science Fair held at the California Science Center, University of Southern California's Los Angeles Campus on May 22 and 23, 2016. For more information about the RIMS2016 Inland Science Fair: http://www.rcoe.us/newsroom/2016/04/01/nearly-800-science-projects-to-debut-at-rims-inland-science-engineering-fair/. For more information on the 65th Annual California State Science Fair: http://www.usc.edu/CSSF/

Last, but not least, the GSA Cordilleran Section meeting in Ontario, April 4th – 6th. The 3 booths we secured for our organization along with IGS and SME were made into one giant booth (no partitions) and, in my opinion, it worked out great. We even had enough room for the San Diego Geological Society (formerly SD Association of Geologists, SDAG) to join us at the last minute. Plenty of room for all. I think the most important thing to come out of this, aside from the talks and poster sessions, is that we connected with a large number of students and re-connected with several local colleges and universities, namely Mt. San Antonio Community College (Mt. SAC) and Loma Linda University. Well worth the minimal amount of effort and a huge bang for the buck.

Our June meeting (the last one before we move into our summer hiatus) features Mr. Greg Mendez of the USGS Water Resources office out of San Diego. He will speak on progress being made with his colleagues to create a groundwater flow model for the Yucaipa area. They have a geologic framework model and would like the input from local geologists (that's us) and students to, in his words, "make sure we're not missing something". He is presenting it to our group for feedback, so put on your thinking caps, dust of your old reports, and clear your throat. This is a unique and rare opportunity which I'm not sure has happened before. Hope to see you at Pinnacle Peak in Colton on Wednesday, June 15th.

Greg Johnson
Chair, AEG-Inland Empire Chapter

Geoff Cromwell & Greg Mendez
US Geological Survey

"3D Hydrogeologic Framework Model of the Yucaipa Basin"

ABSTRACT

Hydrogeologic evaluation of the Yucaipa Basin is essential for local water districts to manage groundwater resources. Previous hydrologic and geologic investigations of the area provide information on hydrogeologic conditions, but there is no comprehensive study that describes the hydrogeology of the subsurface throughout the entire basin. The Yucaipa Basin is located in a geologically complex region between the northwest-southeast trending San Andreas fault zone and the ancestral Banning fault. Several northeast-southwest oriented dip-slip faults run through the Yucaipa Basin, providing structural relief between the sediment-filled Yucaipa graben and uplifted Mesozoic crystalline rocks that form the Crafton Hills. Several of these faults have been identified as barriers to groundwater flow within the sedimentary units of the graben. Quaternary alluvial and wash deposits comprise a relatively thin upper layer of sediments in the Yucapia Basin, which are underlain by the upper member of the San Timoteo Formation (Pleistocene and Pliocene) and older sedimentary formations. In this study, we compile available geologic and geophysical information to construct a 3D hydrogeologic framework model of the Yucaipa Basin. The distribution of subsurface geology is constrained by regional depth-to-basement gravity studies and lithologic information from 401 borehole driller's logs. We reduce the original 16 lithologic types identified in the driller's logs to three textural categories (fines, sands, and gravels), and model their subsurface extent throughout the basin. In general, our preliminary results show an expected grain-size distribution with gravels deposited proximal to high topographic relief areas, sands deposited in wash areas, and fines furthest downstream. This observation is consistent with current topographic and tectonic conditions. We will examine these textural distributions in the context of the geologic history of the area, and discuss possible hydrogeologic implications of our findings.

SPEAKER BIOGRAPHIES

Geoff Cromwell

Geoff is a geologist for the U.S. Geological Survey (USGS) in San Diego, California. His research background is in geologic framework modeling and paleomagnetism. He has worked with the USGS for the last five years constructing comprehensive geologic framework models in southern California. Geoff received his Ph.D. in Earth Sciences from Scripps Institution of Oceanography at U.C. San Diego.

Greg Mendez

Greg is a hydrologist for the U.S. Geological Survey (USGS) in San Diego, California. His scientific background is in analysis of surficial and groundwater resources in southern California. He has worked for the USGS for 25 years conducting research on a variety of environmental issues. He has been working in the Yucaipa area since 1998 studying the chemical and physical properties of the groundwater subbasins. A project web page describes the Yucaipa Hydrogeology and has links to other resources (http://ca.water.usgs.gov/yucaipa/). He completed a B.S. in Mechanical Engineering from New Mexico State University.

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The AEG Inland Empire Chapter *Newsletter is a monthly publication of the Inland Empire Chapter of the Southern California Section, Association of Environmental and Engineering Geologists. For more information visit the Chapter website:* *http://www.aegsc.org/chapters/inlandempire.*

Submittals: Deadline, 25th of the month. Employment notices, job position announcements, and advertisements can be posted for a minimal fee. *Newsletter circulation exceeds 300 people in greater inland areas of Southern California, and elsewhere.*

E-Mail Address changes:
aeginland@gmail.com

AEG-IE JUNE MEETING DETAILS

Date/Time
Wednesday, June 15, 2016.
Social hour 5:30 - 6:30
Dinner 6:30 - 7:15
Announcements 7:15 -7:30
Talk and Q&A 7:30 - 8:30

Location
Pinnacle Peak
2533 La Cadena Drive South
Colton, CA 92324

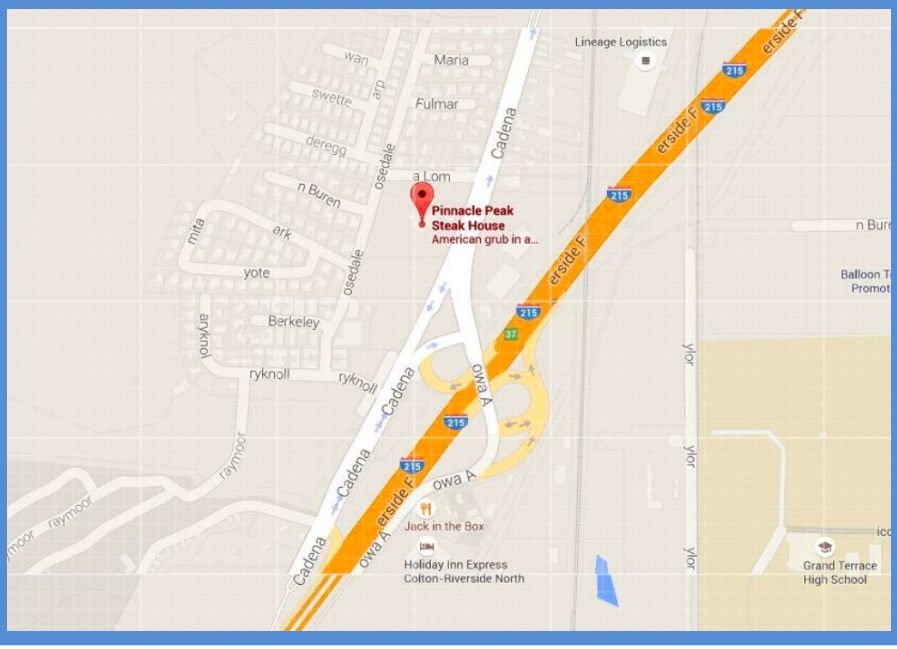
Cost
$25 with RSVP
$10 per student with RSVP and proof of valid student ID
$30 for walk-ins without RSVP

RSVP
aeginland@gmail.com
Deadline is COB Monday, June 13, 2016
Individuals who RSVP but do not attend may be charged if the final attendance does not meet the restaurant guarantee.

DIRECTIONS TO THE MEETING LOCATION

Directions: From I-215 Heading South:
1. Exit Barton Road and merge onto La Crosse Ave
2. Turn Right onto Barton Road
3. Turn slight Left onto La Cadena Drive South
4. Destination on right. (2533 La Cadena Drive South).

Directions: From I-215 Heading North:
1. Exit South Iowa Avenue.
2. Turn Right onto South Iowa Avenue
3. Continue onto La Cadena Drive South
4. Make a U-Turn at West La Loma Street
5. Destination on right. (2533 La Cadena Drive South).



OTHER MEETINGS

AEG-Southern California Section: June Meeting TBA
For more information visit: http://www.aegsc.org/

AEG-Inland Empire Section: June 15, 2016 (Wednesday). "3D hydrogeologic framework model of the Yucaipa Basin" Geoff Cromwell & Greg Mendez, USGS.
For more information visit: http://www.aegsc.org/chapters/inlandempire/

ASCE: (Orange County Branch). June 2, 2016 (Thursday) "OC EWRI Presents Concept of Using a Reversible Lane for A Sediment Bypass Channel Around Prado Reservoir" @Dave and Busters Irvine Spectrum. June 10, 2016 (Friday). 2016 ASCE OC Golf Tournament.
For more info visit: http://www.asceoc.org/

ASCE: (San Bernardino-Riverside County Branch). No meeting, for more info visit: http://www.asce-sbriv.org/asce_new/calendar.html.

ASCE: (San Diego County Branch). June 27, 2016 (Tuesday). Monthly Luncheon. For more info visit: http://www.asce-sd.org/

EERI: (San Diego). TBD. For more info, visit: http://sandiego.eeri.org/

GRA: June 8, 2016 (Wednesday). Sacramento Branch: "Quality of Groundwater Used for Public Drinking Water Supplies in California" Dr. Miranda Fram, Geochemist. June 15, 2016 (Wednesday) San Francisco Branch: "California Climate, Groundwater, and Their Interrelated Future" Bruce Daniels, Soquel Creek Water District.
For more info, visit www.grac.org/

IGS: June 8, 2016 (Wednesday) " Ames/Reche Groundwater Storage and Recovery Program" Speaker: Marina West, General Manager and Chief Engineer of the Bighorn-Desert View Water Agency.
http://www.inlandgeo.org/

LA Basin: April 2016 Meeting TBD. For more info visit: http://www.labgs.org/

SCGS: June 8 2016, (Wednesday) Joint Meeting with SDAG. For more info visit: http://www.southcoastgeo.org/meetings.shtml.

SME: TBD. For more info visit: http://mine-engineer.com/socalmining/

SDAG: June 8, 2016 (Wednesday). Joint Meeting with SCGS.
Annual Field Trip, 2016: *TBD*
For more info visit: http://www.sandiegogeologists.org/Meetings.html

YOUR AEG OFFICERS

2015-2016

Chair	Greg Johnson	LA County DPW
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AEG MEMBER BENEFITS

- **Conferences** -
  You will find value at both Annual Meetings and Specialty Conferences and in the technical knowledge and continuing education you receive at these meetings. (More Info)

- **Networking Opportunities -**
  With over 3000 members, AEG provides you with access to a wide network of Environmental and Engineering geology professionals at both our local section meetings and at national conferences. (More Info)

- **Publications -**
  AEG News, the Environmental & Engineering Geoscience Journal, and the *AEG Insider* contain relevant geoscientific information, updates on AEG activities, and engaging scientific interest stories. (AEG News)(AEG Insider)

With benefits like these, of course you want to be part of AEG! We encourage you to spread the word – talk to your co-workers, classmates and friends about AEG and all it has to offer.

REMEMBER:

- Student Membership is **FREE**!
- Graduating student receive their first year of full membership for FREE as our Graduation Gift to you (Contact us at aeg@aegweb.org to receive your gift)

If you already have become a member – **thank you!** Full members receive discounted registration for Annual Meetings and Specialty Conferences.

If you have any questions regarding your membership status or would like to join, please call one of our officers.

AEG-Inland Empire Chapter

2015-2016 Monthly Speaker Schedule

Meeting Date	Guest Speaker	Title of Presentation
Wednesday, October 21, 2015	**Dr. Jonathan C. Matti -** Geologist, U.S. Geological Survey	*The San Andreas Fault system in the Inland Empire region: What is known and what remains to be known*
Thursday, November 12, 2015	**Dr. Norman Meek** - Chair of the Department of Geography and Environmental Studies, CSUSB	*How (In)Effective is the Headward Erosion Process*
Wednesday, December 09, 2015	**Dr. Jeff Keaton** - Principal Engineering Geologist, AMEC Foster Wheeler, Los Angeles, CA	*Earthquake Ground Motion for Design of Hoover Dam Bypass Bridge*
Thursday, January 21, 2016	**Dr. Peter Robertson** - Technical/Management Advisor Gregg Drilling and Testing, Inc. Signal Hill, California	*An Introduction to the CPT for geotechnical and geo-environmental applications*
Wednesday, February 17, 2016	**Dr. Sally McGill** - Chair of the Department of Geologic Sciences, CSUSB	*Distribution of fault slip across the Pacific-North America plate boundary in southern California: Recent results from geologic and geodetic studies*
Wednesday, March 16, 2016	**Dr. David Oglesby** - Chair of the Department of Earth Sciences, UCR	*Chasing Rainbows -or- What Can Surface Slip Tell Us About Fault Connectivity at Depth*
Thursday, April 21, 2016	**Jerome De Graff** - Jahns Lecturer	*Fire,earth & rain: emergency response for wildfire-induced landslide hazards*
Tuesday May 3,2016	**Anne Rosinski** - Senior Engineering Geologist California Geological Survey	California Earthquake Clearinghouse
June 2016	**Geoff Cromwell & Greg Mendez**- U.S. Geological Survey	*3D hydrogeologic framework model of the Yucaipa Basin*

Employment Opportunity

Senior Project Manager

EnSafe Inc., a rapid growing environmental services firm, is seeking a Senior Project Manager (Geologist or Engineer). This position will be based out of our Concord, California (Bay Area) office and will focus on leading our California presence, providing technical guidance to our clients, and generating additional business opportunities. Specific responsibilities will include:

- Project Management: Providing project oversight to existing, large scale client initiatives.
- Leading: Providing guidance and mentoring to existing staff (office and remote).
- Technical Expertise: Consulting experience on RCRA and CERCLA projects, specifically Superfund projects.

To be successful in this position, our ideal candidate will have the following:

- Minimum of BS in Engineering or Geologist (MS preferred);
- Appropriate credentials (PE or PG);
- 10-15 years of experience as a consultant, working on large, complex private sector clients, specifically in the California market;
- Previous experience and comfort working with California Regulatory agencies;
- Strong financial acumen;
- Previous management and leadership of a geographically dispersed employee population;
- Business development familiarity and comfort (from opportunity identification through RFP submittal);
- Excellent communication skills (oral and written); and
- Ability to travel to other areas of California.

https://workforcenow.adp.com/jobs/apply/posting.html?client=ensafe&jobId=97956&lang=en_US&source=CC4

EEO/AA

OPPORTUNITY TO VOLUNTEER

California Earthquake Clearinghouse

Would you like to help out in the event of a damaging earthquake? With your expertise emergency responders can effectively manage earthquake response without the risk of butting heads or micromanaging responders. This is one of the goals of The California Earthquake Clearinghouse and they are expanding into our area. The CEC looking for geologists, engineers and other professionals to help coordinate earthquake field investigations as well as share their knowledge with emergency responders and the engineering and scientific communities. Benefit from shared information, situational awareness, FEMA training and limited liability coverage training. You can find a more detailed history of the CEC, events they have responded to and reasoning behind its creation here:
Www.californiaeqclearinghouse.org

Interested? Additional Questions?
Contact
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