

December 2016 Meeting Announcement



“Innovative Modification to Improve Resilience of the Los Angeles Aqueduct after the next San Andreas Earthquake”

Dr. Jeff Keaton

Amec Foster Wheeler

Wednesday, December 14th, 2016

Location: Pinnacle Peak Steakhouse, Colton, CA

See speaker & meeting details on pages 3 - 4

RSVP to aeginland@gmail.com by **5:00pm, Monday December 12th, 2016.**

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Thanks to Holly Nichols of the Department of Water Resources, and her supporting cast, for her presentation “Seismic Remediation of Perris Dam – Design Concept and Update on Construction Progress” at our November meeting. We always appreciate hearing about projects in our own backyard, so to speak. From my perspective, as with any project of this size, it was interesting to see how the original data is used to come up with the plan and then, how the plan is modified based on conditions encountered in the field during construction.

I'll keep the Chair's Message short and to the point this month. As we move closer to the end of the month, I hope we all have happy holidays and a joyous new year wherever our endeavors take us.

Look forward to seeing you at this month's meeting, Wednesday, December 14th, at Pinnacle Peak in Colton where we feature Dr. Jeff Keaton of AMEC Foster Wheeler with his presentation, “Innovative Modification to Improve Resilience of the Los Angeles Aqueduct after the next San Andreas Fault Earthquake”. Seems I remember a variation of this scenario being a question on the old CEG, and possibly RG (now PG), registration exams.

Greg K. Johnson, Chair
AEG-Inland Empire Chapter

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“Innovative Modification to Improve Resilience of the Los Angeles Aqueduct after the next San Andreas Earthquake”

ABSTRACT

The original Los Angeles Aqueduct crosses the San Andreas Fault in the Elizabeth Tunnel, driven in 1907 to 1911 through eight km of granitic and gneissic rock using timber sets and concrete lining. The second Los Angeles Aqueduct, completed in 1970, crosses the fault utilizing the same tunnel. Viable earthquake damage mitigation alternatives pose significant challenges and none have been implemented. In 2012, the City of Los Angeles undertook engineering studies for installing a high-density polyethylene (HDPE) pipe inside the existing tunnel with the objective of improved likelihood for delivering water after an earthquake on the San Andreas Fault. The pipe is intended to survive a modest displacement or tunnel roof collapse. Construction records indicate moderate rock quality within the San Andreas Fault; poor rock quality was logged south of the fault zone below a "crushed granitic rock" unit mapped by the California Geological Survey. A narrow linear valley marks the recently active fault trace. HDPE pipe sections must be installed incrementally during brief periods of aqueduct system shutdown. The initial pipe section will be placed across the fault zone; subsequent pipe sections will extend the enhancement through the poor rock quality zone, and ultimately to the upstream portal which would allow pumping for pressurized flow. These seismic enhancements could improve the likelihood that at least some water is delivered to LA's nearly 4 million people who receive water that passes through the Elizabeth Tunnel

SPEAKER BIOGRAPHY

Jeffrey R. Keaton specializes in quantifying hazardous natural processes for siting and design of all types of facilities in all geologic environments. He has degrees in Geological Engineering from University of Arizona, (Geotechnical) Engineering from UCLA, and Geology from Texas A&M University. He has been employed by consulting firms for over 45 years, and in Amec Foster Wheeler's Los Angeles office of since July 2005 where he is a Principal Engineering Geologist. He is registered as both an Engineer and a Geologist, He hold the Envision™ Sustainability Professional (ENV SP) credential from the *Institute for Sustainable Infrastructure*; he is a Fellow of ASCE and a member of its *Committee on Sustainability* and chair of its *Strategic Communications Subcommittee*. He also is chair of the *Sustainability in Geotechnical Engineering Committee* of ASCE's *Geo-Institute*. He serves on the editorial board of *Engineering Sustainability*, which is published by the *Institution of Civil Engineers* in the U.K.

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Debbie Kunath, 2012;

Frank Jordan, 2005, 2011;

Douglass Johnston, 2010;

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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/chapter/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 DECEMBER MEETING DETAILS

Date/Time	Wednesday, December 14, 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, December 12, 2016 Individuals who RSVP but do not attend may be charged if the final attendance does not meet the restaurant guarantee.

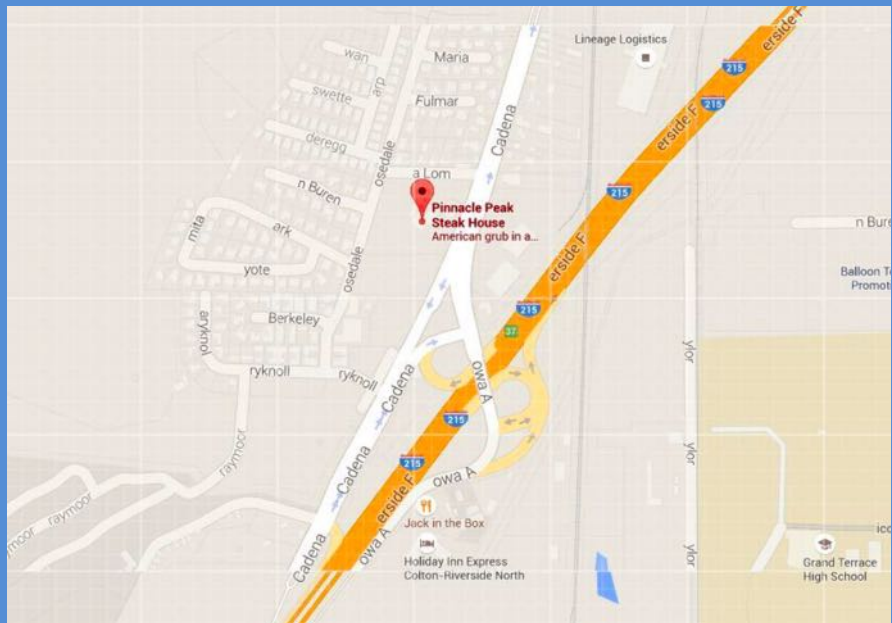
DIRECTIONS TO THE MEETING LOCATION

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: December Meeting TBA

For more information visit: <http://www.aegsc.org/>

AEG-Inland Empire Section: December 14, 2016 (Wednesday). *“Innovative Modification to Improve Resilience of the Los Angeles Aquaduct after the next San Andreas Earthquake”*
Dr. Jeff Keaton, Amec Foster Wheeler.

For more information visit: <http://www.aegsc.org/chapters/inlandempire/>

ASCE: (Orange County Branch). December 15, 2016 (Thursday) ASCE OC Branch Luncheon - Wilshire Grand Tower.

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). December 20, 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: December 14, 2016 (Wednesday). Sacramento Branch: Holiday Mixer and Raffle

For more info, visit www.grac.org/

IGS: December 7, 2016 (Wednesday). *“Mastodons of Unusual Size: What do we really know about California Mastodons?”* Dr. Alton Dooley, Jr.

<http://www.inlandgeo.org/>

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

SCGS: December 2016, Meeting TBD. For more info visit:

<http://www.southcoastgeo.org/meetings.shtml>.

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

SDAG: December 13, 2016 (Tuesday) The 2016 SDAG Monthly Meeting *“Research Updates from the San Diego Natural History Museum”* Dr. Tom Deméré

For more info visit: <http://www.sandiegogeologists.org/Meetings.html>

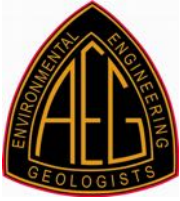
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You will find value at both Annual Meetings and Specialty Conferences and in the technical knowledge and continuing education you receive at these meetings.

[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.

2016 Monthly Speaker Schedule

Meeting Date	Guest Speaker	Title of Presentation
Wednesday, December 14, 2016	Dr. Jeff Keaton - AMEC Foster Wheeler	<i>Innovative Modification to Improve Resilience of the Los Angeles Aqueduct after the next San Andreas Fault Earthquake</i>
Wednesday, January 18, 2016	Dr. Norman Meek - California State University at San Bernardino	<i>Pleistocene Uplift of the Cady Mountains</i>





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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