Newsletter

Inland Empire Chapter News

Southern California Section, Association of Environmental and Engineering Geologists

Editor: Rick Gundry rick.gundry@verizon.net (951) 924-6756

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2008 GSA/AEG Jahns Distinguished Lecturer in Engineering Geology

" Earthquake Hazards and Risk in the Pacific Northwest "

Wednesday 16-January-2008

5:00 - 6:00	Geologist Orientation	Banquet Room/Bar
6:00 - 6:30	Registration, Intro Meeting	Banquet Room
6:30 - 7:30	Dinner Meeting	Banquet Room
7:40 - 8:40	Lecture Presentation	Banquet Room

Kellogg West Conference Center and Lodge, Cal Poly Pomona University

(Meeting Cost $30, Students $15, includes taxes and gratuity/room fee)

(Fund-raising donation suggested is $5.00, or more)

(***RSVP & Directions below***)

* Cal Poly Geology Club & AEG Joint Meeting, w/ Geotechnical Club *

Meeting Details (see inside)
RSVP Due by COB 10-Jan -08-
Send Name, Company/Affiliation to LBattiato@kleinfelder.com or call (909) 793-2691, Kleinfelder West. State "AEG Meeting" and Specify Meal Selection.

Chapter Officers

Chairman
Mike Cook
Kleinfelder West, Inc.
(909) 557-1463
MCook@kleinfelder.com

Vice Chair North
-- Vacant Position
Contact Mike Cook if interested in becoming a Chapter Officer

Vice Chair South
Mitch Bornyasz
Leighton Group
(951) 252-8926
MBornyasz@leightongroup.com

This Month's Speaker :

Dr. John J. Clague, Shrum Research Professor
CRC Chair in Natural Hazard Research
Department of Earth Sciences, Simon Frasier University, Burnaby, British Colombia, Canada

Abstract

Ten moderate to large earthquakes (moment magnitude, M_w, 6-7.5) have struck southwest British Columbia and adjacent Washington State in the last 130 years, most recently in 2003 near Olympia, Washington. Some of the earthquakes occurred on faults within the crust of North America. Other historic earthquakes have had much deeper sources, in the Juan de Fuca plate, which is subducting beneath North America at the Cascadia subduction zone. Geological and geophysical evidence demonstrates that a third, much larger (M_w 8-9) type of earthquake has occurred in this region at the boundary between the Juan de Fuca and North America plates. These plate-boundary, or 'subduction,' earthquakes are much rarer than M_w 6-7 crustal and interplate

events, but by virtue of their size affect a much larger area. The last great plate-boundary earthquake, in January 1700 exceeded M_w 9 and produced a tsunami similar to the one that devastated coasts bordering the Indian Ocean in December 2004.

Future quake damage in the Pacific Northwest will result from fire, strong ground motions, tsunamis, landslides, liquefaction, and possibly coseismic land-level change. Considerable progress has been made in recent years in identifying potentially active faults where earthquakes can be expected and ground accelerations are likely to be highest. The intensity of ground shaking, however, is critically depending on local geology and topography and can vary by a factor of three or four over relatively short distances. High-frequency seismic waves generated by Cascadia plate-boundary earthquakes attenuate over the 100-150 km that they travel from their source to major cities in the Pacific Northwest, thus ground accelerations at Vancouver, Seattle, and Portland would be less those of a strong local quake. The shaking of a great earthquake, however, would last much longer (up to 2-3 minutes) than that of a large local quake. A Cascadia plate-boundary earthquake would generate a large tsunami that would strike Vancouver Island and the Pacific coasts of Washington, Oregon, and northern California soon after the shaking stops. Seismic microzonation mapping and geological studies have identified areas in and around major cities in the Pacific Northwest that are susceptible to liquefaction. A great plate-boundary earthquake might cause part or the entire Pacific coast from central Vancouver Island to northernmost California to subside 1 m or more, resulting in some flooding of low-lying areas. Coseismic uplift or subsidence might also occur within the epicentral area of a large crustal earthquake.

Biographical Sketch

John J. Clague is Shrum Professor of Science at Simon Fraser University and Emeritus Scientist, Geological Survey of Canada. He has published over 300 papers in more than 30 journals on a range of earth science disciplines, including glacial geology, geomorphology, stratigraphy, sedimentology, and natural hazards. John and his graduate students are currently conducting research on natural hazards and late Holocene climate change in western Canada. His other principle professional interest is improving public awareness of earth science by making relevant geoscience information available to students, teachers, and the general public. John is a Fellow of the Royal Society of Canada, former President of the Geological Association of Canada, Past-President of the International Union for Quaternary Research, and recipient of the Royal Society of Canada's Bancroft Award and the Association of Professional Engineers and Geoscientists of British Columbia's 2001 and 2005 *Innovation* Editorial Board Award.

John received degrees, as follows: A.B. *magnum cum laude,* 1967, Occidental College, Los Angeles, California; M.A., Geology, 1969, University of California, Berkeley, California; and, Ph.D. Geology, 1973, University of British Columbia, Vancouver, B.C
[For more information, see www.sfu.ca/~jclague]

COMMENTS FROM THE CHAIR

Well another year has come and gone! I hope everyone enjoyed the Holidays and are all now prepared for the coming year. Our December meeting was a small group but we enjoyed the company and the very interesting talk prepared by Dr. David Bowman from Cal State Fullerton. We may have an encore presentation once new data is collected from the most recent large events in the Sumatra area. Dr. Bowman also discussed their Department's very active Geology Club and has requested us working class to present talks at there campus meetings. Topics could include what it means to be a professional geologist, what does it take to become registered, interesting projects, or focus skills needed in the profession following graduation. For more information contact Dr. David Bowman directly at the Department of Geological Sciences, California State University, Fullerton. If you contact Dave and will be a presenter please let the AEG Board know so we can make an announcement in the Newsletter.

Please note that future RSVP's to attend monthly meetings can be completed by either sending an email to lbattiato@kleinfelder.com or calling Kleinfelder West Inc., Redlands at 909-793-2691 and leave your name and company with the receptionist.

And remember, a Geologist is someone who plans extra time on trips to investigate road cuts along the way.

Mike Cook
Chapter Chairman
AEG Southern California Section
Inland Empire Chapter

THANKS

Thanks to five (5) professionals that attended the December Meeting in Corona, as follows:

Dr. David Bowman (Speaker), California State University, Fullerton; Mike Cook, Kleinfelder West, Redlands; Dave Gaddie, Riverside County; Stephen Tien, Geologist; Lisa Battiatto, Kleinfelder West, Temecula.

GSA/AEG Jahns Distuinguished Lectuership in Engineering Geology

The Richard H. Jahns Distinguished Lecturer in Engineering Geology Award was established in 1988 by the Association of Environmental and Engineering Geologists in co-sponsorship with the Engineering Geology Division of the Geological Society of America. The purpose is to present a lecture at a number of academic institutions to increase the awareness of students about careers in engineering geology. The Distinguished Lectureship is named in honor of Dr. Richard H. Jahns (1915-1983), an engineering geologist who had a diverse and distinguished career in academia, consulting, and government.

Dr. John J. Clague has been named the 2008 Jahns Distinguished Lecturer, as announced at the recent September 2007 50th Annual Meeting of the AEG in Los Angeles.

(Editors Note: as you all know, Richard H. Jahns' career involved more of southern California than most of us have likely witnessed.)

Three-Day Lecture series in Inland Empire (2008 Jahns Distinguished Lecturer)

The AEG Inland Empire Chapter assisted initiate and facilitate AEG/GSA (Engineering Geology Division) Outreach to local Universities: Dr. John J. Clague will be visiting three local area southern California Universities to present special topic Lectures to student clubs the week of January 13-17, 2007, as follows:

Tuesday, 15-Jan-08, 4 pm
Hewett Earth Sciences Club
Department of Earth Sciences
University of California, Riverside
Riverside, California.

Wednesday, 16-Jan-08, 1 pm
Geology Club
Department of Geology
California State University, San Bernardino.
San Bernardino, California

Thursday, 17-Jan-08, NOON,
Geology Club
Cal Poly University Pomona
Pomona, California

Meeting Details and Location (Jan 16th)

Advance RSVP is required by Thursday 10-Jan-08. E-Mail RSVP to Lbattiato@kleinfelder.com or Call Kleinfelder West at (909) 793-2691. Leave name, company and specify meal selection (See below)

Seating is limited up to 60-63 max RSVP Count. Late RSVP is subject to NO placement at meeting and NO food service, or otherwise per our Contract with Kellogg West Catering.

Meeting Venue

Banquet Dinner Venue (Working Dinner)

*Menu Choices
Choice of Meal main course* required with RSV

- Main course entry selections (***Choose one for RSVP**)

* Breast of Chicken with Rosemary Cream Sauce
* Tri-Tip with Peppercorn Sauce
* Salmon: Teriyaki Soy Glazed Salmon

- Standard items/amenities/acouterments for all meals
- No Host Bar with Bar Attendant
  Cocktails, Wine, Imported Beer, Domestic Beer, Sodas, Bottled Water

Location:.

West Kellogg Conference Center
Dining Room 'A'
Cal Poly University Pomona
3801 West Temple Avenue, Bldg. 76
Pomona, CA 91768
(909) 869-2251 / (909) 869-3096

Directions to Meeting.

NOTE: Additional directions from major routes to Temple Avenue are indicated below the following local area directions:

EXIT: Temple Avenue from Hywy 57 Freeway. Turn West towards Cal Poly Campus. At University Drive TURN RIGHT onto the campus. Watch for a **sign** on the Right. It directs you to "KELLOGG WEST" and the "Collins School of Hospitality Management." TURN RIGHT to the top of the hill to Parking Lot "L".

Future Meetings

FEB Wednesday February 20th 2008, Moreno Valley
– – "Tsunamis and Earthquake Dynamics"
Dr. David Oglesby, Professor of Geophysics, University of California, Riverside, Riverside, CA

MAR Wednesday Mar 20th 2008, Redlands
– – "Engineering Geophysics"
Anthony Martin, Geophysicist, Geovision Geophysical Consulting, Corona, California

APR Wednesday April 16th, 2008, Temecula

– – "Rotating Crust along the San Andreas Plate Boundary"
Dr. Nate Onderdonk, Associate Professor of Geology, Department of Geological Sciences, California State University, Long Beach, Long Beach, California

FIELD TRIPS

Details are forthcoming. If you have ideas for field trips, short (part-day) please forward to Mike Cook and Mark Spykerman

Continuing Education Ongoing Short Course

"An Introduction to Landslides or Mass Wasting"
An Online course
AIPG Accredited (3.5 CEU's)
rgfont@geosciencedm.com,
slbishop@geosciencedm.com
www.geodm.com Robert Font, Ph.D.

Inland Empire Chapter Officers and Section/National Contact Information

AEG Inland Empire Chapter, 1220 Research Drive, Suite B, Redlands, CA, 92374
http://www.aegsc.org/chapters/inlandempire

AEG Southern California Section Web-site
http://www.aegsc.org/

Association of Environmental and Engineering Geologists (Headquarters)
http://www.aegweb.org

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