



AEG Sacramento Section Newsletter

A Joint Holiday Meeting for both GRA and AEG will be held on: Wednesday, December 15, 2010

Location: Aviator's Restaurant, Sacramento Executive Airport
6151 Freeport Blvd., Sacramento, CA.

Keynote Speaker: **Dr. David Osleger**, UC Davis, Dept. of Geology

Topic: Severe storms, drought and climate change
Inferred from Lake Tahoe sediment cores

Agenda: 5:30–6:30pm – Social hour
6:30–7:30pm – Dinner and raffle
7:30–8:30pm – Keynote Speaker – Dr. David Osleger
8:30–8:45pm – Questions and Response

Meeting Cost: \$30 members (with RSVP) and \$35 non-members

There will be a \$3 surcharge for late or no RSVP

\$10 students (no surcharge for student walk-ins)

The FIRST 5 students to RSVP are free.

Raffle tickets will also be on sale at the door for a host of fantastic prizes.

The tickets cost \$1 each, 6 for \$5, 12 for \$10, and 25 for \$20.

Proceeds will be split between AEG and GRA.

You may RSVP by going to -- <http://www.aegsacto.org> or by sending an email to: Tim.McCrink@conservation.ca.gov

MEETING LOCATION

Aviator's Restaurant within Sacramento Executive Airport.

6151 Freeport Blvd., Sacramento, CA.

The Aviator's Restaurant at Executive Airport is located within the aircraft Terminal Building.

Plenty of free parking

AVIATOR'S Restaurant



6151 Freeport Blvd. Sacramento, CA 95822

(916) 424-1728



Chairman's Message – December 2010

Greetings everyone! It has been a great year for AEG and especially for the Sacramento Section, with the ascension of our own Bruce Hilton to the Presidency. Bruce is already off to a great start and things are buzzing on the national level. The annual meeting in Charleston was very well attended, and the board meeting that followed was infused with optimism despite the tough economic times we are enduring. Details will be coming to you in the next AEG Newsletter.

Our traditional joint holiday meeting with GRA, including the ever-popular gift-raffle fund raiser, will feature Dr. David Osleger of U.C. Davis with a great talk on the paleoenvironment of Lake Tahoe. Please bring a raffle gift to the meeting! Popular items include bottles of wine, 6 or 12-packs of beer (microbrews are hugely popular), mineral specimens, publications, corporate swag items, gift baskets, etc. etc.

This coming Spring we will be presenting a workshop on Drilling and Sampling Technologies, which will include updates from vendors on the latest advances in these technologies, plus downhole instrumentation, mobile analytical laboratory capabilities, and many other topics. There will be a parking lot filled with drill rigs, mobile labs, and other equipment for you to climb around on, manned by the operators to answer your questions. We will be running technical talks throughout the day, and a catered breaks and a lunch is planned. Stay tuned for more information as plans firm up for this great workshop.

You will soon be seeing a ballot for election of section officers for the next two years. Please be sure to vote and return the ballot quickly. I will be leaving the Chair's position beginning Jan. 1 as I take my position on the Board of Directors of the AEG Foundation. As many of you know, I am very focused on the involvement of students in AEG, and being elected to the Foundation Board is an honor I gratefully accept.

It has been my pleasure to serve you as your acting Chair these past few months, and I look forward to seeing you all at our meetings in 2011.

Regards,
Eric Chase

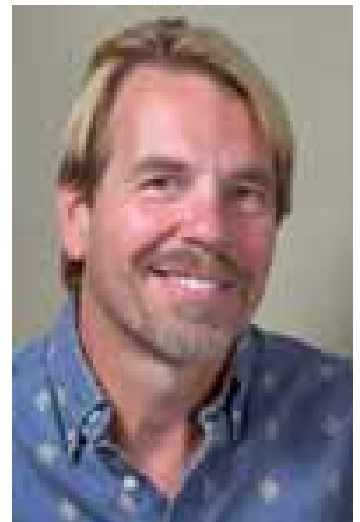
Abstract for talk to AEG Sacramento Section - Dec. 15, 2010

Severe storms, drought and climate change inferred from Lake Tahoe sediment cores

Dr. David Osleger, Lecturer SOE & Vice-Chair, Department of Geology
University of California, Davis: daosleger@ucdavis.edu

Two sediment cores from the deep floor of Lake Tahoe provide insight into the past 7000 years of precipitation in the Sierra Nevada and surrounding region. Measurements of the grain size of sediment in the cores indicate active deposition through turbidity currents, which may be triggered by earthquakes or by severe storms affecting runoff into the surrounding watershed. Analyses of the magnetic and geochemical properties of the sediment, constrained by radiocarbon dates, suggest that turbidity currents were likely derived from the rapid influx of sediment and organic debris from the watershed triggered by high-intensity storms. We correlated broad patterns in the Tahoe cores with climate proxies from 1) elsewhere in the Tahoe basin, 2) closed lakes of the western Great Basin and 3) the San Francisco bay estuary. The reasonable degree of temporal overlap between climatic events in each region reveals apparent trends in severe storm frequency in the Sierra Nevada and a measure of long-term regional paleo-precipitation over the last 7000 years. Paleoclimate studies such as this one from Lake Tahoe provide a baseline of natural variability that can be used for comparative purposes to assess current and future changes in California's climate.

Speaker Bio: Dr. Osleger specializes in stratigraphy and sedimentology applied to paleoenvironments, paleoceanography and paleolimnology. Research interests include orbital stratigraphy, sea-level history, carbonate platform evolution, petrophysical heterogeneity of hydrocarbon reservoirs, lacustrine sedimentation and paleoclimatology. Current projects include the relationship between Sr isotopic content of the oceans and sea-level chronology, the global climatic significance of episodes of oceanic anoxia recorded in Cretaceous carbonates of northeastern Mexico, and the paleoclimate history of the High Sierra as deduced from Lake Tahoe sediment cores.



AEG Sacramento Section Fall Field Trip

On Saturday, October 16, 2010 we held our Sacramento Section fall field trip, which included a tour of the L.L. Anderson Dam Spillway Modification Project site at French Meadows Reservoir, Placer County, California. Participants learned about hard rock excavation using blasting and mechanical methods, installation of rock bolts/dowels, and rock foundation treatment/grouting. The Placer County Water Agency (PCWA) is enlarging the spillway to accommodate potentially large flow flows and was gracious enough to lead the tour, along with representatives of MWH, Kiewit Infrastructure West, and Neil's Controlled Blasting.

As an added bonus, Nate Manley (AEG Sacramento Section member) led a tour of several stops while we passed through his MS thesis area near Foresthill, California. Nate focused on explaining deformation and slope stability issues in the Shoe Fly Complex and showed us superb naturally occurring asbestos outcrops.

Here are a few photos from the field trip courtesy of David Von Aspen (Sacramento County geologist) and John Mattson (PCWA). Our thanks for their generosity.







AEG Sacramento Section Event Calendar – 2010

January 26th Sudwerk, Davis	Speakers: Gerald Montgomery, Interwest Consulting Group and Kim Schwab, Central Valley Regional Water Quality Control Board: New Stormwater requirements and management techniques.
January 27 Sacramento	BPELS Board Meeting
February 23rd Aviator, Sacramento Executive Airport	Speaker: Dave Wagner, California Geological Survey: The Oak Creek Debris and Mudflow, July 12, 2008 - Inyo County, California
March 30th (Mon) Aviator, Sacramento Executive Airport	Speaker: Will Arcand, State Mining and Geology Board Roles of the Engineering Geologist Under California's Surface Mining and Reclamation Act of 1975 (SMARA)
April 27th (Tue) Sudwerk, Davis	AEG's Annual Student night. Speakers: Student Speakers TBD and Dr. Greg Stock, Park Geologist, Yosemite National Park: New Tools for Understanding and Mitigating Rockfall Hazards in Yosemite National Park
May 1-2	Spring Field Trip to Yosemite National Park - view current research on rock fall, glaciers, and floods)
May 15-19	AEG North Central Section Short Course: A New World in Geophysics
May 25th Aviator, Sacramento Executive Airport	AEG Foundation Fund Drive Speaker: Duane Kreuger, AEG National President: Environmental consulting - where we are and where we are going.
June 18-19	2010 AEG San Francisco Section Short Course: Glen Borchardt's SOIL STRATIGRAPHY for TRENCH LOGGING: For more information please go to: http://www.aegsf.org/short_course.html WHEN: Friday and Saturday, June 18 (Classroom) and 19th (Fieldtrip-Point Pinole Regional Shoreline),

[AEG Sacramento Section Event Calendar – 2010 \(continued\)](#)

June 29th aviator, Sacramento Executive Airport	Speaker: Mark Stanley, Kleinfelder: Sacramento Levees – Ongoing Improvements Challenges and Evolving Levee Design
July 22 Radisson Hotel, Sacramento	Deep Foundations Institute Technical Lectures Use of Slurry Walls for Cut-Offs (watch the DFI website for more details: www.dfi.org)
July 27th	No Meeting
August 31st Aviator, Sacramento Executive Airport	Speaker: Dr. Roy J. Shlemon A Proposed Mid-Holocene Age Definition for Hazardous Faults in California
September 18	NCGS Fieldtrip: Geology and Tectonics of the Smartville Complex, NW Sierra Nevada, California, Field Trip Leader: Dr. Elridge Moores
September 16-19	Friends of the Pleistocene Fieldtrip, The four-day trip will be led by Dr. Steve Wesnousky at UNR. For additional information visit: http://neotectonics.seismo.unr.edu/0_FOP2010/FOP2010.html
September 20-25	AEG 2010 Annual Meeting, Charleston, South Carolina http://www.aegweb.org/files/public/2010_Annual_Meeting_Brochure.pdf
October 26th Aviator, Sacramento Executive Airport	Joint meeting with Geolnstitute Speaker: Dr. Paul Marinos, AEG/GSA 2010 Richard H. Jahns Distinguished Lecturer in Engineering Geology
November	No Meeting
December 15th Aviator, Sacramento Executive Airport	Annual Joint AEG/GRA holiday meeting Speaker: Dr. David Osleger: Severe storms, drought and climate change inferred from Lake Tahoe sediment cores

LIST OF AVAILABLE PUBLICATIONS
AEG SACRAMENTO SECTION
SPRING 2010

Note: All suggested donation amounts are for section members in good standing.

* Suggested donation (S.D.) amounts do not include postage/shipping/handling
 Non-members should contact the Section Chair as to prices and availability.

1. "Quaternary Geology of the Sacramento Area", Guidebook for March 2000 Field Trip; Trip Leaders Dr. Roy Shlemon, Dr. Tim Horner, and Dr. Joan Florsheim; 38 pages with two color photomicrographs plus appendices covering Quaternary channels; economic implications; Pleistocene channels of both the American and Cosumnes Rivers; Stratigraphic settings; Topographic inversions; Fracture Traces. **Suggested Donation (S.D.): \$10 ***
2. "Engineering Geology Practice In Northern California"; AEG Special Publication 12, Published 2001, Editors Horacio Ferriz and Robert Anderson, 658 pages, 7 Sections: 1. Overview of Northern California Geology/Groundwater Resources; 2. Landslides; 3. Faults; 4. Facilities; 5. Tunnels & Transportation; 6. Residential; 7. Kaleidoscope **Suggested Donation (S.D.): \$70 ***
3. "Auburn Damsite Field Trip"; CD Compilation for 2002 Field Trip; Trip Leaders Joel Sturm and Wendell Carlson of USBR and Brent Smith of PCWA; CD includes Field Trip Introduction; contacts list; 11 PDF articles covering damsite investigation, geohazards and regional geology; 3 PowerPoint presentations of damsite evolution including rare aerial photos; 2 large USBR geologic compilations drum-scanned as JPG's with legend and rock explanations/descriptions (pdf's). **Suggested Donation (S.D.): \$15 ***
4. "Wine & Rocks 2004 Field Trip", Guidebook for Spring 2004 Field Trip through Sierra foothills of Sacramento, El Dorado, and Amador Counties; Field Trip Leaders George Wheeldon & David Sederquist; Guidebook includes Road Log; Overview of the Geology (Rocks) including 4 black-and-white geologic map excerpts and 4 color excerpts courtesy of CDMG; 1990 reprint of AAPG Field guide of the Mother Lode Mines in the Sierra Nevada; Wines Section includes background descriptions and wine offerings of 5 Amador/El Dorado County Wineries. **(S.D.): \$20 ***
5. "Geographic Information Systems (GIS) for Practicing Geologists", 2005 Professional Development Workshop; Ringed Binder with tabbed sections presenting talks by 11 Speakers from State and Federal Agencies, Private Consulting Firms, Universities, and Software Vendors. Print-outs and 2 CD's provide practical examples and applications of GIS techniques to common geologic mapping and hazards evaluation projects. Techniques to store, manipulate and analyze spatial data for geologic applications are described in detail for various projects. Software packages and the capabilities are also explained. **Suggested Donation (S.D.): \$20 ***
6. AEG – GRA 1995 Field Trip Guidebook, CD Compilation of Field Trip Guidebook for Joint Annual Meeting, held in Sacramento, CA; 4 Subject Sections, 28 PDF Papers total with graphics: 1. Flood Hazards & Protection Measures for the Sacramento Area; 2. Geology & Geotechnical Aspects of the Lone Formation; 3. Geology & Engineering Geology of the Sacramento Valley to Napa Valley; 4. Geology of the Sacramento Area, Foothills, & Sierra Nevada Mtns. **(S.D.): \$20 ***
7. Schlemon Conference 2008 Field Trip Guide CD Compilation of Field Trip Guidebook for Conference held in Folsom, CA; Conference theme was "Overview of Naturally Occurring Hazardous Geologic Substances"; Trip through the Sierra foothills included geologic stops in Amador, El Dorado, Placer, and Nevada Counties showcasing potential radon, naturally occurring asbestos, lignite, chromite, copper, gold (cyanide), arsenopyrite (arsenic) in tailings, cadmium, lead, mercury, barium, cobalt, nickel, selenium, and zinc. **Suggested Donation (S.D.): \$10 ***
8. "Engineering Geology and Geologic Hazards in the Pit River Area, Eastern Shasta County, California."; CD Compilation of 2009 Summer Field Trip Guidebook; Editors Kelly Tilford and Eric Chase; Field trip focused on Modoc Plateau, Cascade Range, and Basin & Range along the Pit River near Burney, California. The trip included case studies of slope stability, paleoseismicity and recent construction challenges. **Suggested Donation (S.D.): \$10 ***

AEG Sacramento Section – Publications Order Form Spring 2010

(Section Members in Good Standing Only*)

<u>Summary Description</u> (details in List of Available Publications)	<u>Suggested Donation*</u>	<u>Quantity</u>
"Quaternary Geology of the Sacramento Area", Guidebook for March 2000 Field Trip	\$10	_____
"Engineering Geology Practice In Northern California"; AEG Special Publication 12, Published 2001, 658 pages	\$70	_____
"Auburn Damsite Field Trip"; CD Compilation for 2002 Field Trip; 11 PDF Articles, 3 PPT, 2 geologic maps	\$15	_____
"Wine & Rocks 2004 Field Trip", Guidebook with maps for Spring 2004 Field Trip through 3 Sierra Foothill Counties	\$20	_____
"GIS for Practicing Geologists", Ringed Binder and 2 CD's for Spring 2005 Workshop: examples, techniques, software	\$20	_____
"AEG – GRA 1995 Field Trip Guidebook", CD Compilation of Field Trip Guidebook for Joint Annual Meeting in Sacramento, CA: 26 PDF Papers graphics, maps	\$20	_____
"Schlemon Conference 2008 Field Trip Guide", CD Compilation of Naturally Occurring Geologic Hazardous Substances	\$10	_____
"Pit River 2009 Field Trip Guide", CD Compilation of Engineering Geology and Geologic Hazards, Eastern Shasta County	\$10	_____
Order Total**		\$ _____

**Postage/Shipping/Handling \$ _____

Member Name _____ Member will pick up _____
Initials date

**** Suggested Donation Amounts do not include postage/shipping/handling**

AEG Special Publication 12: P/S/H is currently \$13

All other available publications, P/S/H is \$6 each

Note: Pick-up at AEG Sac Section Meeting waives P/S/H

* Proceeds from donations tendered by A.E.G. members are used to fund annual academic scholarship awards for deserving Geosciences Students in the greater Sacramento area.

Mail order form with quantities indicated and
check for correct amount, including appropriate
P/S/H to:

Tim McCrink
AEG Sac Section Treasurer
c/o California Geological Survey
801 K Street, MS 12-31
Sacramento, CA 95814-3531
Tim.McCrink@conservation.ca.gov

AEG Member Contact Information:

Preferred phone number: () _____

E-mail address: _____

Address (ship): _____

Newsletter Advertising

Eighth Page (Business Card) - 2-in high by 3.5-in wide

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Full Page - 8-inches high by 7-inches wide

Advertisements may be full color and include logos and other artwork. The digital format specifications and advertising rate structure are currently being developed and will be included in the next newsletter. Questions regarding advertising may be directed to Garry Maurath, gmaurath@urscorp.com, 916-679-2002

Initial advertising rates are based on advertising in either a single issue of the newsletter or all four issues over a one-year period. In the future the newsletter will be published on a quarterly basis.

Advertisement Size	Cost per Issue	Cost per 4 qtr issues.
Eighth Page	\$50	\$150
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Half Page	\$150	\$450
Full Page	\$250	\$750

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Section website: www.aegsacto.org