Summer’s Here . . .

and that means longer field hours and vacations. It also means that this will be our last monthly meeting until August. So before we break for the summer, why not take a little time to relax with friends, enjoy a few beers and some great food, and even learn a bit about GIS-Based Digital Photogrammetry from Tim McCrink of the California Geological Survey.

Section Meeting Date: Tuesday, June 30, 2008

Meeting Location: Sudwerks in Davis, 2001 Second Street, adjacent to I-80: get off at Richards, turn right, right on 5th, then right on L St; left on Second St to Sudwerks, under the Pole Line Rd bridge superstructure fronting I-80 Fwy.

Meeting Schedule: 5:30 - 6:30 Sign-In and Social Hour
6:30 - 7:30 Dinner and Announcements
7:30 - 8:30 Speaker Talk
8:30 - 8:45 Questions and Answers

Please RSVP by 4:00PM Monday June 29, 2009
GIS-Based Digital Photogrammetry for Geologic and Hazard Mapping

Tim McCrink, California Geological Survey

Abstract:
The U.S. Department of Agriculture’s 2005 National Agricultural Imagery Program (NAIP) collected 1-meter imagery for California to prepare statewide, color orthophotography similar to the digital orthophoto quarter quads (DOQQ) prepared by the USGS in the 1990’s. The contractors who collected the imagery used a Leica Geosystems ADS40 airborne digital sensor that simultaneously records five bands of imagery in various combinations at different look angles. Digital stereo imagery is an intermediate product of preparing ortho-rectified images from the ADS40 sensor.

Beginning in 2005, the California Geological Survey (CGS) undertook an evaluation of the NAIP ADS40 stereo imagery for application to landslide inventory and other geologic mapping applications, considering image resolution for identifying various geomorphic and cultural features, special imagery characteristics, and horizontal and vertical accuracies. In 2008 CGS completed the purchase of the statewide stereo imagery, likely the first such purchase in the nation. This purchase was contingent on development of specialized commercial photogrammetric and GIS software applications, and development of massive data storage and large image transfer capabilities at CGS.

This presentation will discuss the main characteristics of the imagery and the technological hurdles addressed prior to CGS’ data purchase. Also presented will be the significant findings of the imagery evaluation, the advantages of using a photogrammetric GIS for geomorphic feature collection, and some of the challenges still remaining to fully integrate this imagery into CGS programs.

Tim McCrink

Tim McCrink is a Senior Engineering Geologist with the California Geological Survey, where he supervises the earthquake-induced landslide mapping unit in the Seismic Hazards Mapping Program. Prior to joining CGS in 1988, Tim worked in mineral and petroleum exploration and as an engineering geologist for a geotechnical consulting firm. He earned a B.A. in Geology from Fairleigh Dickinson University in New Jersey, and a M.S. in Geology from the New Mexico Institute of Mining and Technology. Tim is a Certified Engineering Geologist in California.
review by Robert H. Sydnor, CHG 6, CEG 968, LM-AEG, M-ASCE, M-GSA

available in both paperback format ($47.00) or downloadable pdf ($41.00)

The National Academy of Sciences realized that a comprehensive book was needed for urban stormwater management and the science of erosion in the urban environment.

Here in California we have considerable regulations from the State Regional Water Control Boards that are enforced at the city and county level on newly graded tracts, residential parcels, and commercial sites. Yet many AEG members lack the full background information to comply with the intent of these regulations. Stormwater management is not typically taught in academia. This book fulfills that need, and provides comprehensive updated information.

The book is organized into six chapters: 1, Introduction; 2, The Challenge of Regulating Stormwater; 3, Hydrologic, Geomorphic, and Biological Effects of Urbanization on Watersheds; 4, Monitoring and Modeling; 5, Stormwater Management Approaches; and 6, Innovative Stormwater Management and Regulatory Permitting. In the appendix there is a useful list of acronyms and glossary of technical terms.

This treatise carefully explains the history of the National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act (CWA), with emphasis on the 1987 amendment, §402(p), that brought storm water under the control of NPDES. For urban tracts with earth grading, that meant in 1987 we engineering geologists and geotechnical engineers began systematic use of sandbags, debris basins, rolls of coir, hydroseeding, and related devices....with a comprehensive blueprint plan as part of the grading plans. Prior to 1987, various counties simply told the developer to "winterize" the grading operations from November through March; specific erosion-control plans were vague and varied from county to county. This 2009 treatise greatly expands on earlier guidelines on how to approach various kinds of erosion in the urban environment, and many different strategies are explained.

The National Academy of Sciences devised an integrated team of 14 authors that includes geologists, civil engineers, biologists, toxicologists, fluvial geomorphologists, grading contractors, professors, and regulators. This provides a balanced and integrated approach to stormwater management. Each chapter is replete with abundant references to journal articles, textbooks, laws, and regulations

This 2009 book is recommended to AEG and ASCE members as a up-to-date comprehensive treatise at a reasonable price by a high-level authority. This National Academy book will be welcomed by practicing engineering geologists who may be able to save their clients money by using cost-effective erosion devices and monitoring plans. Professors and regulators will also rely on this authoritative treatise.
Engineering Geology and Geologic Hazards in the Pit River Area of Eastern Shasta County California.

AEG Sacramento Section 2009
Summer Field Trip

Co-Leaders-
Bill Page- PG&E
Tom Sawyer- Piedmont Geoscience
Scott Lewis- Caltrans
Kelly Tilford- HDR
Eric Chase- HDR

Save the Dates! The AEG Sacramento Section is hosting a fieldtrip on the week-end of July 25th and 26th, 2009. The trip will focus on the unique geologic setting of the Pit River canyon near Burney in eastern Shasta County, where it cuts through the intersection of the Modoc Plateau, Cascade Range, Basin and Range, and enters the Klamath Mountains. The trip will include case studies of slope stability, paleoseismicity and very recent and timely construction challenges that engineering geologists from the Sacramento Section have faced in the region in the last several years. Real-world insights on the tectonic setting and its effects on construction of critical facilities, as well as the volcanic stratigraphy of the Modoc Plateau will be covered.

The unique aspects of the groundwater cycle within the basin will also be addressed, including results of an isotopic study in the vicinity of Burney Falls State Park. It will be prime trout fishing season on the meccas of Hat Creek and the Pit River, so bring your rods and artificial lures if you choose to add to your fun on the trip.

Group camping has been reserved at Hat Creek Group Campground Friday and Saturday nights. Saturday evening will be the main social event. Attendees are responsible for their own meals Friday night and Sunday morning.

Contact Pete Holland at holland@vectoreng.com for more information and to reserve your space.
REGISTRATION FORM:  Engineering Geology and Geologic Hazards in the Pit River Area.

Name: ______________________________________________________________
Address: ______________________________________________________________________
Phone: ___________ E- mail: _________________________________

Fees    How Many    Amount Enclosed
AEG Member   $45    ____    $ _____________
AEG Non- Member $55    ____    $ _____________
*Children (8 to 18) $25    ____    $ _____________

Total Enclosed $ _____________

I can help with carpooling or vans:  Yes  No

Please e- mail this form to Pete Holland at holland@vectoreng.com to reserve your space. Please mail this form along with the appropriate fees by July 10th to AEG Treasurer Pete Holland at:

Pete Holland
AEG Sacramento Section Treasurer
143E Spring Hill Drive
Grass Valley, CA  95945

Checks should be made out to AEG Sacramento Section.

We are going to start offering advertising space in our monthly newsletters. The following advertising formats will be offered.

Eighth Page (Business Card Size) - 2- inches high by 3.5- inches wide
Quarter Page - 4- inches high by 3.5- inches wide
Half Page - 4- inches high by 7- inches wide
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 either John Pfeiffer or Garry Maurath.
June 2009 AEG Meeting
Facsimile Transmittal Sheet
(or e-mail to the address below)

To: Lisa Breckenridge (Wallace-Kuhl & Associates, Inc.)
   email: LBreckenridge@wallace-kuhl.com
Phone: (916) 372-1434
Fax: (916) 290-5429   From: _________________________________

Or You Can Sign Up Online at: www.aegsacto.org

Subject: June AEG Sacramento Section Meeting

Date: Tuesday, June 30th, 2008

Place: Sudwerks in Davis
For directions, please see Page 1
RSVP’s are encouraged and appreciated.

Please RSVP by 4:00PM Monday, June 29, 2009

Time: 5:30 - 6:30 PM - Sign In and Social Hour
       6:30 - 7:30 PM - Dinner and Announcements
       7:30 - 8:30 PM - Speaker Talk and Slide Show
       8:30 - 8:45 PM - Questions and Answers

On the Menu: Chicken Picatta
              Vegetable Lasagna
              Vegetables
              Mashed Potatoes
              Garden Salad

Cost: $29 member (w/ RSVP) $33 nonmember and walk-ins
      Students: First five to RSVP are FREE, then $10 with RSVP,
                 Student walk-ins are $15.

Notes: Alcoholic beverages are available for those 21 and over on a cash basis.
**AEG Sacramento 2009**

**Event Calendar**

<table>
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<tr>
<th>Date</th>
<th>Event</th>
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<tr>
<td>January 29th</td>
<td>No Meeting</td>
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| February 24th | Dr. Elmund Medley, AEG/GSA 2009 Richard H. Jahns Distinguished Lecturer  
The Comforts of Ignorance and the Benefits of Arrogance - Lessons of the Failure Kind for the Geopractitioner. |
| March 11th (Wed) | Mark Molinari, AEG President                                            
Practical Applications of Airborne LiDAR Data for Environmental and Engineering Geology Projects |
| April 28th    | AEG’s Annual Student Night, Special Student Guest Speakers            
Christopher Kemp (Fresno State) & Steven Poletski (Sacramento State) |
| May 26th      | Jeff Wright, Rebecca Domingo-Neumann, and Brenda Saldana of the California Air Resources Board will present:  
Potential Changes to Air Resources Board Asbestos Test Method 435 and Corresponding Revisions to the Airborne Toxic Control Measures |
| June 30th     | Tim McCrink, California Geological Survey                             
GIS-Based Digital Photogrammetry for Geologic and Hazard Mapping |
| July          | No Meeting                                                            |
| August 25th   | Greg Stock, Park Geologist, Yosemite National Park                     
New Tools for Understanding and Mitigating Rock Fall Hazards in Yosemite NP |
| September 21st-26th | AEG National Meeting, South Lake Tahoe, California                  |
| October 27th  | TBA                                                                   |
| November      | No Meeting                                                            |
| December      | Joint AEG/GRA holiday meeting                                         |
Committee Chairs

Meeting/General Chairs
Imo Hinton, BHilton@kleinfelder.com
Gary Luoc, luoc@geoconinc.com

Field Trips
David Bieber, bieber@geoconinc.com

Field Trip Guidebook Editors
Peter Holland, holland@vtec.com
Stephen Testa, stesta@goldsmith.com

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Trinda.Bedrosian@conservation.ca.gov

Hospitality Area and Guest Tours
Sandy Hilton, shilton@folsom.ca.gov
Leigh Luoc, luoc@geoconinc.com
Sean Walker Bieber, suerfarm@wildblue.net

Moderators
Tim McCrink, tmccrink@conserv.ca.gov

Outstanding Environmental & Engineering Geologic Project
Kelly Tilford, kelly.tilford@deverearl.com

Poster Sessions
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Sponsors
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Student Coordination
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Gary Norris, Norris@asu.edu

Teacher's Workshop
Leigh Luoc, luoc@geoconinc.com

Technical Program and Symposia
Bill Frasier, tfrazier@water.ca.gov

Meetings Manager
Heather Skidmore, meetings@aegweb.org

AEG•2009
ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS

LAKE TAHOE – AN EPOCH EVENT

Stateline, Nevada and
South Lake Tahoe, California
Harrah's Hotel & Casino
September 21 – 26, 2009

Come and enjoy all that the Lake Tahoe area has to offer!

AEG•2009 features short courses, field trips, technical sessions, symposia, and more!

Come to Lake Tahoe in 2009!

Meeting Hotel
Located near crystal clear waters and majestic mountains, Harrah's Lake Tahoe is a AAA Four-Diamond Award winning, 18-story hotel that is as impressive as the lake itself. Harrah's features seven exceptional restaurants, a magnificent swimming pool, luxurious spa, and a first-rate casino. The beauty of the Sierra Nevada and this wonderful lake make Harrah's Lake Tahoe the destination of choice.

ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS

52nd ANNUAL MEETING

Stateline, Nevada and
South Lake Tahoe, California
Harrah's Hotel & Casino
September 21 – 26, 2009

For more information:
www.aegweb.org
AEG·2009

About Lake Tahoe ....
Located at 6,200 feet above sea level, magnificient Lake Tahoe is a paradise for lovers of the outdoors. Golf at championship courses, jet ski around the lake on a waverunner, hike and lake famous trails and do everything in between. Explore the complex and varied geology, as Lake Tahoe is a geologists' havan formed by faulting, volcanic activity, and many glacial epochs.

Join us for a week of education, networking, and fun at Lake Tahoe!

LAKE TAHOE – AN EPOCH EVENT

♦ Technical Program
In conjunction with the meeting theme Lake Tahoe – An Epoch Event, the technical program (September 23, 24 & 25, 2009) will focus on:
Geologic Hazards
- Earthquakes, seismic hazards and their mitigation
- Paleoseismology and Faulting
- Landsliding and their mitigation
- Subsidence and subsidence due to withdrawal

Geologic Characterizations
- Rock mass Characterization, rock mechanics
- Soil Characterization, expansive soils, liquefaction
- Construction Materials investigations

Geologic Studies for Engineering Structures
- Dams
- Tunnels
- Levees
- Transportation
- Lifelines
- Forensic Studies of Failures

Geologic Hazards
- Contaminant geology and its remediation
- Mining reclamation
- Naturally occurring environmental hazards and their remediation

Geological and Resource Protection
- Groundwater Resource Characterization, conjunctive use
- Coastal Geology
- Surficial Geology, watershed restoration, wetlands, sedimentation, erosion
- Fluvial geomorphology

Geologic Investigations and Reporting
- Field investigations, mapping
- Geophysics
- Computer applications, GIS
- Geo-visualizations techniques

Professional Education and Practice
- History of engineering Geology
- Future of Engineering Geology
- Business of EG practice
- Regulatory practice
- Geologic education
- Professional registration

♦ Field Trips
- Wine and Geology of the Motherlode (9-21)
- Geohazards of the Tahoe Basin and Carson Front of the Sierra (9-22)
- Quaternary Geology of the Lake Tahoe Basin (9-22 and 9-26)
- Galena Creek Bridge (9-26)
- Martin Creek Dam (9-26)

♦ Short Courses
- Field Geological Mapping Using GIS & Tablet PCs
- 3D Laser Scanning For Rock Engineering Design & Geotechnical Monitoring
- Seismic Site Response Evaluations
- Introduction to Rockfall Analysis & Mitigation

♦ Teachers’ Workshop
The Teachers’ Workshop “Lake Tahoe Rocks” will be held on Saturday, Sept. 26, 2009 from 8 am-5 pm. Cost is $40. Participants will learn about the forces that formed Lake Tahoe, the forces still at work today, in the context of the Nevada State Science standards, influenced by pedagogically supported engagement strategies. You will participate in a morning field trip, followed by an afternoon classroom session, which will include a sack lunch. 0.5 Nevada state recertification credits may be available...

♦ Guest Tours
- Around the Lake Tour
- Lake Tahoe Boat Cruise
- Virginia City/Carson City
- Vikingsholm/Tallac Historic Sites

♦ Special Event
Edgewood Tahoe Golf Course: Edgewood Tahoe is the ideal lakeside setting for receptions with stunning mountain surroundings, onsite fine dining and elegant venues. Edgewood Tahoe features a stunning deck, facing directly out onto the waters of Lake Tahoe, and white sandy beaches of the lakeshore, making Edgewood Tahoe an ideal location for our reception.
Perhaps the most spectacular advantage of Edgewood Tahoe’s unique setting in the dramatic sunsets. As Mark Twain once said, Lake Tahoe “...is the fairest view the whole earth affords.”

♦ Program with Abstracts
Non-members, if you would like to receive a copy of the AEG2009 Program with Abstracts, contact Heather Skladnowski at 309-380-6450 or nncisipac@aegweb.org .
NOTE: Program and schedule are subject to change.

Symposia

1 Geologic Considerations for Dams: Brian Greene and Brian Greene
2 New Uses of Geomorphology in Engineering: Geology Keith Kelson
3 Long Run-Out Landslides and Rock Avalanches: Mike Hart and Phil Shaller
4 Groundwater Resources in California, Quality and Supply: John Woodling
5 Digital and Electronic Technology in Engineering: Geology Bill Haneberg
6 Environmental/Engineering Geology in Mining Practice: Steve Testa
7 Earthquake Hazard of the Sierra Nevada Range: Craig dePolo, Thomas L. Sawyer, William Bryant