



Newsletter

Inland Empire Chapter News

Southern California Section, Association of Environmental and Engineering Geologists

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April 13, 2006. (07-Apr-06)

Vol. 2, No. 4

- - - Field Trip: Indio Hills Saturday 22-April-2006, Watch for Details and Notices - - -

Artificial recharge through a thick, heterogenous unsaturated zone along the Oro Grande Wash, western Mojave Desert, California

Wednesday 19-April-2006

5:30 - 6:30	Geologist Orientation	Restaurant Bar
6:30 - 7:15	Dinner	Banquet Room
7:15 - 8:45	Meeting	Banquet Room

NOTE CHANGE =>

Hungry Hunter, Temecula

(Meeting Cost with Tax//Gratuity \$19 to \$25)

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

(RSVP/Directions below)

Dear AEG Members:

Meeting location details and directions are found inside this Newsletter, as well as other news potentially of interest to you.

RSVP Please by close of business 13-Apr-06

Send e-Mail RSVP to Rick Gundry at rick.gundry@verizon.net, by COB 13th-Apr,

or call RSVP message at (951) 924-6756.

This Month's Speaker:

*John A. Izbicki, Research Hydrologist,
U.S. Geological Survey*

Abstract

Ground-water levels in the regional aquifer in the western part of the Mojave Desert near Victorville, California, are declining as a result of pumping in excess of recharge. An experiment was done to determine the feasibility of infiltrating artificial-recharge water from ponds through the thick, heterogeneous unsaturated zone underlying

this area. A site along Oro Grande Wash was selected to recharge highly permeable deposits near the water table, while avoiding impermeable caliche located away from the wash and fine-grained deposits associated with the distal part of the Victorville fan. About 470 acre-ft of water was infiltrated through a 1-acre pond between October 1, 2002, and September 30, 2003. Maximum infiltration rates were as great as 800 gal/min. Downward movement of artificial-recharge water to the water table about 400 ft below land surface was monitored at an instrumented borehole adjacent to the pond using heat-dissipation probes and advanced tensiometers emplaced at selected depths within the borehole, and electromagnetic logs collected through a 2-inch-diameter well installed within the borehole. Infiltrated water initially moved downward at a rate of 3 ft/d, although a small quantity of water moved in advance of the main wetting front at a rate as great as 6 ft/d. The downward rate of movement slowed to less than 0.3 ft/d by January 2003 as the wetting front spread laterally in the subsurface. Subsequent applications of water in December 2004 and November 2005 moved downward at faster rates and the wetting front arrived at the water table in December 2005. Chloride, nitrate, and other soluble salts were that were leached from the unsaturated zone moved downward with the recharge water. Simulation results from ground-water flow models predict that if 2,000 acre-ft of water is recharged annually for 20 years, water levels will rise more than 30 ft beneath the recharge site, benefiting more than 10 public supply wells.

Speaker Biography

John Izbicki attended West Virginia University, Penn State University, and obtained a Ph.D. from the University of California Riverside in 2000. Dr. Izbicki worked as a hydrologist for the U.S. Geological Survey for 25 years and spent the last 15 years in southern California. While in California, he has focused on studies designed to apply environmental tracers to further the understanding of physical hydrologic processes. These studies addressed issues related to seawater intrusion and brine invasion, natural and artificial recharge processes, stormwater and beach contamination, well-bore hydraulics, and the occurrence and distribution of trace elements in desert environments.

Chapter President's Message

Greetings to environmental and engineering geologists of the Inland Empire.

Interest in the Inland Empire Chapter of AEG continues to grow. Over 50 geologists attended the joint meeting with the Inland Geological Society in March. Dr. Jason Saleeby presented a fascinating talk about the evaluation of the deep crust and upper mantle beneath southern California. Our thanks go to Dr. Saleeby for his presentation and IGS for co-hosting the event. Continuing geology education short courses continue to be co-sponsored by AEG Inland Empire and the Inland Geological Society in cooperation with the Department of Earth Sciences, University of California, Riverside. A short course on GIS applications in geology and groundwater studies was held at the University on March 4th, and more courses are being planned. AEG Inland Empire continues to offer opportunities for professional growth and fellowship in venues that are accessible to geologists throughout the Inland Empire. I look forward to the continued success of these events.

Cordially,
Gary Wallace
AEG Inland Empire Chapter
2006 President

- Treasurer's Report

We now have 14 Petras Sponsors. We received a contribution of \$100 each from two new Petras Sponsors, thanks to Matt Hawley, Lawson & Associates Geotechnical Consulting, Inc., and Glenn Borchardt (See information, below about Petras Sponsors.). Chapter account balance at the end of this Quarter is \$2,132.90.

Thanks

Thanks to the 49 or so Professionals (includes several students) attending this joint AEG and Inland Geological Society March 2, 2006 Meeting in Ontario, as follows:

Dr. Jason Saleeby (Spkr), Margaret Gooding, Dixie Lass, Frank Jordan, Richard Jordan, Sharon Jordan, Delores Jordan, Debi Jordan, Laurie Jordan, Gary Wallace, Justin Kovalski, Matt Hawley, Ernie Roumeles, Eric Patschull, Mark Spycerman, Dick Brown, Jeff Keaton, Steve Jacobs, Dave Jones, Mike Cook, Janis Hernandez, Doug Cook, Richard Orr, Zack Freeman, Rick Gundry, Mark Doerschlag, Tianna Rasmussen, Venessa Fara, Steve Mains, Patrice Copeland, John Schweiber, Phuong Kim Chau, Joan Fryxell, Larry Monroe, Joe Montgomery, Paul Theriault, Dave Gaddie, Chris Bingley, Chad Welke, Kevin Mass, Jeff Fitzsimmons, Pat McNamara, Ken Schulte, Dennis Bohme, Mark McClarty, Greg Middleton, David Perry, Austin Marshall, Lnda Rouse, and Holly Hanke There were about an equal spread of AEG and IGS Members, many of which are Members or attenders of both organizations. Some came quite a long distance to attend [Carlsbad, Santa Ana, Seal Beach, Simi Valley, Stanton, Barstow, Needles, Temecula, San Diego]. (Insufficient information to list company names or Cities/towns - ed.)

Three students attended the talk-only from California State University, San Bernardino. Some other students (unidentified) attended and paid their way (CSUSB and CSF), and two students were assisted in meeting cost, one each from California State University Fullerton, and California State University San Bernardino. IGS and AEG covered the students cost for the meeting.

GIS Applications in Geology and Groundwater Studies [report]

Fifty-two (52) individuals participated in the one-day, Saturday, March 4, 2006, "GIS Applications in Geology and Groundwater Studies" short course convened at UC-Extension in Riverside. That included the speakers and we believe there were 46 paid attenders. This was a good turn-out, so look for details for the next short course if you would like it to convene Saturday May 20 regarding regulatory issues that all of us geologists and geophysicists face in some aspects of our work. If you have interest in the course please contact the Newsletter Editor to pass on to IGS and to UC-Riverside Department of Earth Sciences., as we will be reviewing whether or not to continue these sorts of short courses – so you input would be valuable to hear from you.

Serving professionals in Ground-Water, Environmental and Engineering Geology



Future Meetings

MAY Wednesday MAY 17, 2006 Colton
- Pinnacle Peak (BBQ & steakhouse)

"History of Petroleum in California"
— **Stephen Testa, Executive Officer,**
California State Mining and Geology Board

JUNE Thursday JUN 22, 2006 Temecula
- (location to be decided)

"Late Quaternary deformation and sedimentation history, Coachella fan area located between the Mecca Hills and Indio Hills, and northeast of the San Andreas fault, eastern Coachella Valley, California."

— Dr. Miles D. Kenney, Senior Project Geologist,
Petra Geotechnical, Inc., San Diego, California.

JULY Wednesday JULY 19, 06 Corona
- Claim Jumper, Corona

**Richard H. Jahns AEG/GSA Distinguished
Lecturer in Engineering Geology**
"Rockfall Analysis and Mitigation"

— Jerry D. Higgins, Ph.D., P.G., Associate Professor
of Engineering Geology, Colorado School of Mines,
Golden, Colorado

AUG Thursday AUGUST 17, 2006, Temecula
- California Grill, Temecula

"Advanced Aquifer test analysis with the general well function"

— Dr. Tom Perina, PG, CHG, Senior Hydrogeologist,
CH2MHill, Riverside, California

SEP Wednesday 20, 2006, Riverside
– Location (tba)

"The Physics of Interacting Faults"

— Dr. David Oglesby, Assistant Professor of
Geophysics, Department of Earth Sciences, University
of California, Riverside, Riverside, California.

AEG Inland Empire Chapter Seeks Speaker Topics and Speakers

Informative and interesting talk topics and speakers on subjects in the earth sciences have been a highlight and purpose of regular monthly meetings of the AEG Inland Empire Chapter since last Spring, when available. Local and regional topics and speaker programs are essential for a group that meets monthly, for the most part that are comprised of local or regional professionals and experts.

Currently, the AEG Inland Empire Chapter is seeking suggestions for future talk topics and suggestions for potential speakers. Your suggestions and ideas are important, so that we can cover a cross-section of subjects and interests that you would like to hear and learn about.

AEG Inland Empire is soliciting your suggestions for topics and speakers for throughout the coming year and following, as follows:

- Request a Topic
- Suggest Speaker contact information
- Suggest the reason for the Topic
- Suggest Other Topics/Speakers
- Suggest a Speaker
- Other requests

Please forward your ideas and suggestions to SMathis@leightongeo.com or DCook@sladdenengineering.com; or contact rick.gundry@verizon.net

AEG is proud to co-sponsor the 100th Anniversary Earthquake Conference

100th Anniversary Earthquake Conference Commemorating the 1906 San Francisco Earthquake

Many of you may already know about the subject conference but if not and/or if you might want details, some more information is provided here for you. The AEG is one of a tremendous number of national and international organization that are co-sponsors.

Information can be found through the national Home-Page for the Association of Environmental and Engineering Geologists by clicking on that subject in the right column of the home-page: <http://www.aegweb.org>

The conference will be held in San Francisco at The Muscone Center, April 18-22, 2006.

All conference details and registration can be ascertained from the home-page of the Earthquake Engineering Research Institute (EERI) by clicking on a notice in the left column:

<http://www.1906eqconf.org/>
<http://www.eeri.org/>



Geology Continuing Education Series



University of California, Riverside -
UC - Extension Center

Quarterly One-Day Short Courses are focused to geologically-related subjects of interest to the southern California community. Some will be centered on particular geologic issues, and some will be aligned with specific geologic applications to a variety of earth sciences issues and problems. Speakers are comprised primarily of experts from professional services industries and government, and from academic institutions. Courses presided by a coordinating instructor.

We are continuing to provide these courses for communication and dialogue among students, teachers, educators and professionals alike in discussions and learning about various geologic problems and issues in southern California. In the same venue will be a forum for exchange of information and cross-fertilization between professionals, educators, teachers and students.

The cost employed is structured at a low cost to all, and also to provide qualified students an opportunity for free short courses upon enrollment, attendance, and successful completion.

We are seeking your input (suggestions/ideas) for future topics planned next year and any suggested speakers for those topics, as follows;

- Groundwater Issues and Problems in the Inland Empire;
- Seismologic, Faulting and Fault Investigation;
- Edge-cutting Frontiers of Geologic Interest.

We would also like to hear your suggestions/ideas concerning topics/problems involving geologic hazards issues; engineering geology and geotechnical issues; economic/mining geology and mineral resources issues; environmental and contaminant hydrogeology issues; groundwater and water rights issues; flood and debris issues; hill-side development and alluvium fan development issues; and land-planning and land use issues in the context of earth-science issues and problems. Please feel free to add to the list and let us know (as indicated below).

Inland Geological Society and AEG Inland Empire Chapter in cooperation with the Department of Earth Sciences, University of California, Riverside, are Co-sponsoring the on-going Geology Continuing Education Series Quarterly over the next few years. Our collective interest is to provide an opportunity for certain specialized and focused education, and generate interest and participation in learning and discussion and communication participation by students, consultants, business, industry, government, individuals, and academic institutions and researchers.

If you have questions, comments, suggestions or ideas, please contact Phuong Chau or Rick Gundry, Program Chairpersons: (PChau@LeightonGeo.com or Rick.Gundry@verizon.net).

Watch for information for the upcoming 20-May 2006 topic: "Regulatory Issues" :

Short Course Saturday 20-May-2006

The Spring Quarter Short Course will be on regulatory issues that we all face in our work daily or from time to time, or at the most opportune time when are not ready. The final details are coming to a head, but here is a good view of the types of speakers/subjects that should be expected, as follows:

- CAL Santa Ana Regional Water Quality Control Board - John Buderrick
- CAL EPA - DOHS/DTSC - Alfredo Zonoria
- Fed BLM Steve Kupferman (former RivCntyGeologist)
- Riv Cnty Geologist Dave Jones
- CAL BGG Paul Sweeney
- CAL SMGB Steve Testa
- Cal Geol. Surv., Janis Hernandez

Meeting Location

The meeting site is located in the City of Temecula West of I-215 on Jefferson Avenue at Winchester Road..

Note Change: Hungry Hunter
27600 Jefferson Avenue
Temecula, CA
(951) 694-1475

Directions to Meeting

Proceeding South on I-15 or I-215 to Temecula, after Freeways merge, prepare very soon to EXIT at Winchester Road and turn right at end of off-ramp on Winchester Road to head west briefly to turn immediately left. At Jefferson Avenue, turn left to proceed south immediate to turn **left** to parking area for **Hungry Hunter**.

Proceeding North on I-215 to Temecula watch for Winchester Road and EXIT, to turn Left (west) on Winchester Road. Cross over freeway preparing to turn left. At Jefferson Avenue (the first left) turn left proceeding south for immediate turn **left** into parking area for **Hungry Hunter**.

RSVP PLEASE – == == == ==)))>>>

RSVP Please: send **RSVP** to Rick Gundry at rick.gundry@verizon.net by Thursday close of business 6-Apr-06, or call RSVP (951) 924-6756 to leave message. **IMPORTANT!** Thanks.

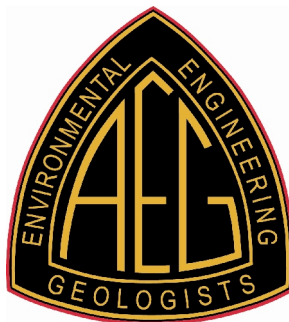
Officer Contact Information, AEG Inland Empire Chapter (SoCal Section):

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Mike Cook Secretary	MCook@kleinfelder.com	(909) 557-1463

Mailing address (other telephone/e-Mail address see letterhead) P. O. Box 8944 Moreno Valley, CA 92552-8944

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"Petras" is a Latin term for a large rock edifice, monolith or massif of strength (eg., Rock of Gibraltar), as different to "petros", a term for a rock or stone, something one can pick up. It can mean something like a cornerstone, such as one set for the foundation of a building – something strong and set first from which a foundation is built for a larger structure needing the strength.



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Glenn Borchardt, SOIL TECTONICS, Berkeley, California

We are continuing to seek sponsors in our inaugural year, as we only were a figment of imagination late last March 2005, continuing on though end AEG Fiscal End-ofYear.(Jun)

The distinguishing point is donations that recognize interest and generosity building foundational financial support to the Inland Empire Chapter in this inaugural year. And, ones that certainly take an immediate, bold and positive step. A solid contribution or donation if \$50.00 or more is **Petras Sponsor**. Other, smaller donations are requested, and are as important. All donors will be recognized. New categories of Sponsors are **Silver Petras Sponsor** (\$250 or more); **Gold Petras Sponsor** (\$500 or more); and **Platinum Petras Sponsor** (\$1,000 or more).

If you would like to make a foundational donation, please send them to the address listed in this Newsletter. If you have any questions please contact me, Rick Gundry