Inland Geological Society

Inside this Issue:

This Meeting:
Wednesday
April 5th

Time:
Social: 6:00pm
Dinner: 7:00pm
Lecture: 7:30pm

Location:
Riverside Metropolitan Museum
(Directions Pg. 5)

Coming to Dinner?
Please RSVP:
By Monday 4/3
(951) 782-3295
food@inlandgeo.org
or
dlass@waterboards.ca.gov

April Speaker
"Dealing with Uncertainty Regarding the Chemistry of Drinking Water Wells – an Example from the City of Riverside"
Dr. Matt Werner
Sr. Project Director, Earth Tech
Long Beach, Ca.

As engineering geologists we have learned—and readily accept—that there is inherent internal variability in the characteristics of geologic media. We're not talking about laboratory error, here; we're talking about spatial differences in property values that are just intrinsic to every formation, deposit, and aquifer. We can accept and understand this; yet, we struggle continuously with how to give our colleagues, "the engineers" the "one number" they always seem to want. Should we give them the "one number" that we think would support an adequately conservative design (how conservative should that be), or should we give them a "plus/minus" or a "from/to" value? And just how much plus or minus should we add to be safe?

Groundwater retailers face the same problem. When groundwater is blended (like whiskey or wine grapes) its potability can be improved by diluting undesirable characteristics. Two non-potable flows, with different undesirable characteristics, can be blended to yield potable water. But groundwater has the same issues of intrinsic variability as other geologic (continued on Page 2)

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Speaker's Abstract (Continued from 1)

media—concentrations go up and down over time. Minute-by-minute sampling of continuous feedstock flows is impossible, so what "one number" does one use for designing the blends, knowing that the number must be adequately conservative that the resulting water must never fail potability standards?

In Southern California, we can expect to see more water blending as population growth taxes our available groundwater resources. This presentation looks at the nature of variability in groundwater chemistry and several methods to characterize it for use in potable water blending.

About the Speaker

Matt Werner began his career in 1973 in the Central Appalachians and Newark Basin evaluating seismic and fault hazards for nuclear generating stations and foundation conditions for pipe- and power-lines. He was transferred to California in 1978 to manage fault hazard studies for a proposed LNG off-loading facility at Point Conception. After changing firms in 1979, he led field teams evaluating geologic conditions and hazards at MX missile deployment areas in the Basin and Range. From 1981 to 1985 his focus was on tectonic, geomechanical and hydrogeologic conditions around mined openings proposed to house spent nuclear fuel in salt domes in the Gulf Coastal Plain. Between 1986 and 1992, he managed geologic mapping, drilling, seismic and geomechanical characterization to support Title I design of a proposed 50-mile tunnel for a Superconducting Super Collider in the chalk/marl of central Texas. For the next three years he mapped and tested abandoned homestead water wells in the Antelope Basin. In 2000, following a two-year stint writing successful proposals for government contracts and a three-year stint managing the firm's Honolulu office, he returned to California and more technical endeavors. For the past six years he has evaluated groundwater conditions in the Bunker Hill Basin, with particular emphasis on groundwater use by the City of Riverside. Matt has a PhD from Penn State and is a California CEG and CHg. He is a Senior Project Director with 26-years of seniority at Earth Tech.

Inland Geological Society

Upcoming IGS Talks

Tuesday, May 16th
"SHOWCASE Special Topics: Student's Presentations: talks and posters",
A JOINT MEETING WITH THE SOUTHERN CALIFORNIA SECTION OF THE SOCIETY OF MINING, METALLURGY AND EXPLORATION
Dr. Erik Melchiorre, Associate Professor of Geology, Department of Geology,
Cal State San Bernardino.

June 7, 2006 (Wednesday)
Dr. Tom Perina, PG, CHG,
CH2MHill, Riverside, California,
"Aquifer test analysis with the general well function"

July 6, 2006 (Thursday)
Steve Testa, PG, CPG,
Consultant and Executive Officer,
California State Mining and Geology Board,
Sacramento, California,
"Early History of the California Geological Survey: Conflicts between William P. Blake and Josiah D. Whitney, and the Fate of the First California Geological Survey"

Aug 2, 2006 (Wednesday)
Dr. Don Prothero,
Paleontology – Talk TBA

Sept 7, 2006 (Thursday)
Bruce Sibbett, PG, CHG,
Shaw Environmental, Inc.,
San Bernardino, California,
"Ascension Island, in search of equatorial heat, a Geothermal Adventure"

Oct 4, 2006 (Wednesday)
Arthur R. (Dick) Brown, Consulting Engineering Geologist/Dibblee Foundation
"Tom Dibblee, Field Geology's Grand Master"

Nov 9, 2006 (Thursday)
Maggie Gooding,
LSA Associates, Riverside, California
GIS – Talk TBA

Dec 6, 2006 (Wednesday)
Dr. Michael McKibben, Professor of Geology, Department of Earth Sciences, University of California, Riverside
"Arsenic in Groundwater"

www.inlandgeo.org

Aquifer Test Analysis Talks

Dr. Tom Perina, of CH2MHill, will offer differing in technical detail and complexity two talks, in June and August 2006. The introductory talk will be presented during a meeting of the Inland Geological Society in Riverside on June 7, and the second, more technical presentation, will be presented at an Association of Engineering Geologists (AEG) Inland Empire Chapter August 16 meeting:

> ***"Aquifer test analysis with the general well function"*** (June @ IGS Meeting, Riverside) will cover basics of aquifer test analysis with classical methods, and introduction to the CH2MHill well function solution. Brush up on the basics!
>
> ***"Advanced aquifer test analysis with the general well function"*** (August @ AEG Meeting, Temecula) will provide extensive detail with the CH2MHill well function solution and specialized interpretation techniques, with detailed comparisons to classical techniques and interpretations.

Consider attending both meetings regardless of your expertise!

For future information about the more advanced course hosted by AEG, see the AEG Newsletter. To request a copy of the AEG Newsletter, contact Rick Gundry: rick.gundry@verizon.net, or visit http://www.aegsc.org/chapters/inlandempire/ in July.

Geology Continuing Education Series

University of California, Riverside – UC Extension Center

The Geology Continuing Education Series will continue to offer quarterly, one-day short courses, focused on Southern California geologic topics. Topics cover a broad range of geologic topics and applications. Speakers are comprised of experts from professional services industries, government, and academic institutions.

Inland Geological Society and AEG Inland Empire Chapter are working in cooperation with the Department of Earth Sciences, University of California, Riverside, to co-sponsor the on-going short course series quarterly over the next few years. The goal of the series is to provide an opportunity for specialized and focused education, as well as generate interest and foster cross-spectrum communication between students, consultants, business, industry, government, and academic institutions. If you have questions, comments, suggestions or ideas, please contact Phuong Chau (PChau@Leightongeo.com) or Rick Gundry (Rick.Gundry@verizon.net), Program Chairpersons.

Speakers at the May 20th, 2006 Course May Include:

- John Broderick, Santa Ana Regional Water Quality Control Board
- Dave Jones, County Geologist, Riverside County
- Paul Sweeney, Executive Officer, Ca Board of Geologists and Geophysicists
- Alfred Zonoria, CAL-EPA (DOHS-DTSC)
- Steve Kupferman, Geologist U.S. Bureau of Land Management (formerly Riv. Cnty Geol.)
- Steve Testa, Executice Officer, Ca State Mining and Geology Board
- Janis Hernandez, California Geological Survey.

Stay Tuned!!

Other Announcements:

Conference
2006 Ground Water Summit,
April 23-26, 2006, www.ngwa.com
San Antonio, Texas

Conference
100th Anniversary Earthquake Conference
Commemorating the 1906 San Francisco Earthquake: April 18-22, 2006
San Francisco, Ca. The Moscone Center
www.1906eqconf.org

Meeting
AEG Inland Empire Chapter,
Wednesday, April 19, 2006
"*Artificial recharge through a thick, heterogenious unsaturated zone along the Oro Grande Wash, western Mojave Desert, California*"
Dr. John A. Izbicki, Research Hydrologist, U.S. Geological Survey, San Diego.
@California Grill, Temecula, e-Mail or call RSVP by COB 6-April-06
rick.gundry@verizon.net, (951) 924-6756.

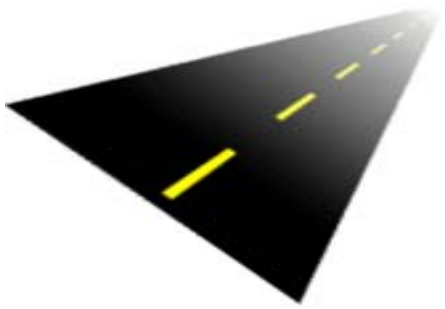
Meeting
AEG Inland Empire Chapter
Wednesday, July 19, 2006:
AEG/GSA 2006 Richard Jahns Distinguished Lecturer in Engineering Geology
"Rock-fall Analysis and Mitigation"
Jerry D. Higgins, PhD, PG, Associate Professor of Engineering Geology, Department of Geology and Engineering Geology, Colorado School of Mines, Golden, Colorado.

Desert Symposium
Theme: Dinosaur Track Ways
Field Trip: Utah and California
Desert Studies Center, Zzyzx, California
April 21-22, 2006
Field Trip April 23-25, 2006
For more info, contact:
William Presch (714-278 2215, wpresch@fullerton.edu)

Employment Opportunity
Petra Geotechnical is currently seeking experienced engineering geologists for our Costa Mesa, Ontario and Palm Desert offices. Please contact Linda Becker, Human Resources Manager, at 714/549-8921 or submit your resume by email to lbecker@petra-inc.com

Directions to the IGS Meeting:

Riverside Metropolitan Museum is located at 3580 Mission Inn Avenue, on the southeast corner of Mission Inn Avenue and Orange Street, in downtown Riverside, across the street from the Mission Inn and the Riverside Public Library.



From 91 North:
Exit University Avenue,
Proceed straight to Mission Inn Ave,.
Turn Left (West) onto Mission Inn Ave,
Museum will be on left.

From 91 South:
Exit Mission Inn Avenue,
Turn Right (West),
Museum will be on left.

Inland Geological Society

2006 MEMBERSHIP DUES

PLEASE REMIT THIS FORM WITH DUES PAYMENT

Name: _____

Job Title / Company: _____

E-mail address: _____

☐ Home address: _____

_____

Phone Number: ( ) _____

☐ Business address (if different than above):

_____

_____

_____

Phone Number: ( ) _____

MEMBERSHIP DUES:

_____ $15.00 for e-mail newsletter (best deal in town)

_____ **$20.00 for paper newsletter.** If you opt to receive a paper newsletter, please indicate which address you prefer to receive your newsletter by checking the appropriate box.

_____ **$ 5.00 for Students**

Please indicate: ____ New ____ Renewal _____ Educational Org/Sister Society

Payment for dues and/or T-shirts may be made by cash, check or money order.
Please make your check or money order out to: INLAND GEOLOGICAL SOCIETY

T-SHIRT ORDER: $15.00 Please indicate size:
___ Medium ___ Large ___ X-Large ____XXL ____ XXXL

(Note: Dues are required to receive a monthly newsletter and are renewable in January of each calendar year. New regular members may pay pro-rata for remaining months of the year: $20.00/12 months x the number of remaining months in the year). Dues may be paid at the monthly meetings, or send your payment and this membership form to: STEVE MAINS, IGS MEMBERSHIP CHAIR, 6447 JAGUAR DRIVE, RIVERSIDE, CA 92506-4651
(951) 780-5636 or Watermains@aol.com

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