



ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS
Southern California Section
"Connecting Professionals, Practice, and the Public."

NEWSLETTER – May 2010

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Visit the Southern California Section Website: www.aegsc.org

Newsletter Editor – Shant Minas, shant@aessoil.com, 818-552-6000

Upcoming AEG Meeting Date: *May 12, 2010*****

Meeting Location: Fox Sports Grill

30970 Russell Ranch Road, Westlake Village, CA 91362

Meeting Time: 6pm Social Hour, 7pm Dinner, 7:30pm Presentation

Cost: \$30 per person with reservations, \$35 without reservations, \$15 with a valid Student ID.

Reservations: Please call or email Dave Perry at dlperry@mactec.com or call 323-889-5326

Speaker: Frank Denison

Topic: A Review of the Literature on Site Effects and Structural Focusing at the I-5 and H 14 bridges in the San Fernando Valley from the January 17, 1994 Northridge Earthquake.

****** Greetings, AEG members! We are proud to present eminent geologist Frank Denison this month for an important presentation and meeting. See you at Fox Sports Grill, and perhaps we can catch a few playoff games afterward on the big screen! ******

May 12 Speaker: Frank Denison, P.G., C.E.G.

Engineering Geologist

A Review of the Literature on Site Effects and Structural Focusing at the I-5 and H-14 bridges in the San Fernando Valley from the January 17, 1994 Northridge Earthquake.

Frank E. Denison, 867 Hartglen Avenue, Westlake, CA 91361, 818-889-7806, and James E. Slosson, Van Nuys, CA 91411, (818) 376-6540.

We reviewed subsurface geological/geophysical studies published studies in the BSSA, GSA and other scientific publications from 1996 to February 2003, on site effects and structural focusing of earthquake energy from the 1994 Northridge Earthquake. It was the consensus of several researchers that there were subsurface structural features in the San Fernando Valley that focused and, or amplified the January 17, 1994, earthquake waves causing heavily damage zones that were controlled by the geological structures.

We then reviewed the subsurface geology of the San Fernando Valley with respect to the structural geologic features that are located below the known red tag areas of the San Fernando Valley both in the 1994 Northridge Earthquake and also in the 1971 San Fernando/Sylmar Earthquake to look for similar patterns of earthquake damage due to structural focusing of earthquake waves.

We focused on the damage to the connector bridges at the I-5 and the Highway 14 that have failed twice, first in the 1971 San Fernando/Sylmar earthquake, and the second time during the 1994 Northridge earthquake. The interchange is located on a northwest-trending syncline at a segment boundary. The acceleration was measured up 1.8g with geophysical instruments located along the bridge.

Frank is an eminent southern California-based engineering geologist, having worked at several large and small consulting companies, and has published several papers on topics of regional engineering-geologic interest. He is also a staple at the national AEG meetings, where he frequently makes technical presentations.

May 2010 AEG Announcements: from Duane T. Kreuger, AEG President

1. 2010 Shelmon Conference. The Conference starts May 13 and runs through May 15, 2010 in Galveston, Texas. Click the links for [Registration forms](#), [abstract information](#) and [venue information](#).

2. 2010 Annual Meeting in Charleston, South Carolina; September 20-25. The registration forms are now available. Also, the new deadline for submittal of abstracts is April 15th, 2010. [Click here](#) for details of Technical Sessions, Symposia, Field Trips, Short Courses and Social Events.

3. E-publishing update. The Journal of Environmental & Engineering Geoscience will be available to Members electronically soon. Look for more details in the coming month. Also, the Editors of the Journal want your technical papers and peer-reviewed articles for publication! Please contact [Abdul Shakoor](#) if you need more information.

4. Student Members. Student Members are now eligible for complimentary AEG Membership for 2011. The Student Member does not receive paper copies of the publications, but they will be available electronically.

5. The 2010 Mid Year Board of Directors (BOD) Meeting was just held on May 1st and 2nd in St. Louis, Missouri. Please look for a summary report of the BOD Meeting in one of the next issues of the AEG NEWS.

6. American Geological Institute (AGI) Congressional Visit Days (CVDs) are September 15 & 16, 2010. AEG encourages Members and other geoscience professionals to attend one of the scheduled CVDs and talk to our elected officials about the importance of engineering geology. [Click here](#) for more information.

7. AEG Announces new Advertising/Sponsorship/Exhibitor Packages. Our standard advertising-sponsorship & meeting exhibitor plans and rates are still valid. However, in an attempt to bundle some or all of the various opportunities, we have created different levels for our vendors and potential vendors who for instance may run a full page ad in the AEG *NEWS* and exhibit at an Annual Meeting. See page 3 of your March AEG *NEWS* or contact [AEG Headquarters](#) for more information.

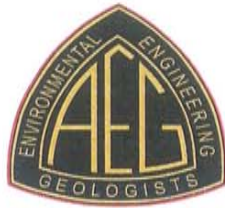
AEG North Central Section Short Course May 18-19, 2010

A New World in Geophysics

About the Course

Sponsored by the North Central Section of the Association of Environmental and Engineering Geologists, the short course is designed for practicing Civil Engineers, Geologists, Engineering Geologists, Archaeologists, Law Enforcement Investigators, Consultants, Owners, Managers and others responsible for development or evaluation of site characterization studies that might benefit from the application of modern geophysical methods. Many of us were exposed to geophysics during our undergraduate or graduate studies, which may have been completed many years ago now. There has been much progress in geophysics since your undergraduate studies. This course will bring you up-to-date with the latest developments in geophysical methods for land, water, and subsurface characterization. In addition to providing the student with the working knowledge of each of the available geophysical tools, pitfalls in subcontracting geophysical services will be presented. After you complete this course, you will be an informed consumer of geophysical services and be capable of scoping and applying the correct geophysical methods to solve your particular problem. Course participants will earn 2.0 hours of Continuing Education Credit.

Please see attachment below for more information.



Association of Environmental & Engineering Geologists

NORTH CENTRAL SECTION

"Serving Professionals in Engineering, Environmental and Groundwater Geology Since 1957"

New World in Geophysics

About the Course

Sponsored by the North Central Section of the Association of Environmental and Engineering Geologists, the short course is designed for practicing Civil Engineers, Geologists, Engineering Geologists, Archaeologists, Law Enforcement Investigators, Consultants, Owners, Managers, and others responsible for development or evaluation of site characterization studies that might benefit from the application of modern geophysical methods. Many of us were exposed to geophysics during our undergraduate or graduate studies, which may have been completed many years ago now. There has been much progress in geophysics since your undergraduate studies. This course will bring you up-to-date with the latest developments in geophysical methods for land, water, and subsurface characterization. In addition to providing the student with a working knowledge of each of the available geophysical tools, pitfalls in subcontracting geophysical services will be presented. After you complete this course, you will be an informed consumer of geophysical services and be capable of scoping and applying the correct geophysical methods to solve your particular problem. Course participants will earn 2.0 hours of Continuing Education Credit.

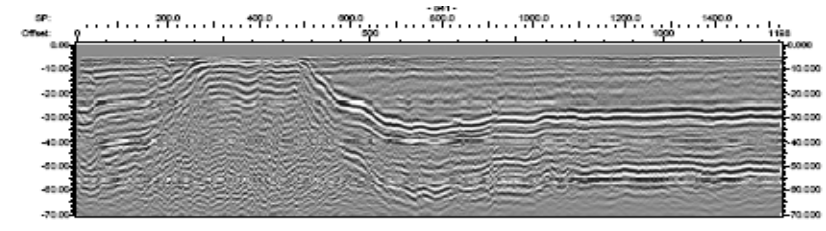
The Course Schedule

Day 1 - Methods Discussion

Morning session: Introduction (overview of topics)

- Seismic refraction
- Seismic reflection
- Seismic surface waves (MASW)
- Resistivity
- SP, IP
- EM, VLF
- GPR
- Gravity
- Magnetics
- Borehole
- Water-borne
- Airborne

Afternoon session: Outdoor Stations with Field Demonstrations



Day 2 - Applications and Limitations

Morning Session:

Exploration approach (scope of work - phased and sequential surveys, need multiple methods)

Client / contractor / geophysicist interaction

Limitations and pitfalls (noise sources, geometry, tomographic artifacts, smoothing)

Specific Applications -

- Karst (resistivity, refraction tomography, MASW, GPR, gravity?)

- Buried fracture mapping

- Depth to bedrock (refraction and reflection, MASW)

- Groundwater contaminant plume mapping

- Buried tanks, utilities, UXO

- Site characterization / brownfields

- Archaeology and forensics

- Downhole characterization (fractures, voids, glacial sediments, shear-wave surveys, water flow)

- Structures (existing infrastructure characterization - rebar, drain tiles)

- Water-borne geophysics

- Landfills

- Underground mines and voids / subsidence risk

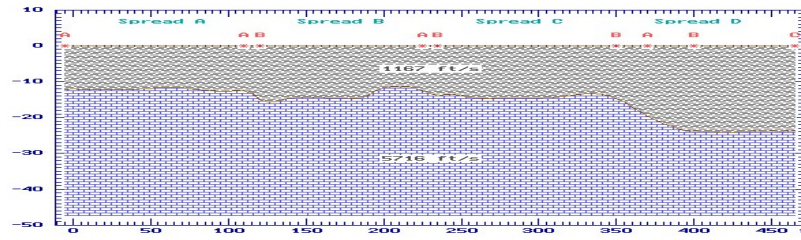
- Wetlands

- Alternative energy

- Carbon-dioxide sequestration

- Ore bodies and mines, industrial minerals

Afternoon session: Stations with Data Interpretation/Data Reduction Demonstrations



About the Course Instructors-

The course is taught by geophysics experts who are experienced with daily application of a wide range of geophysical tools for a variety of purposes.

Dr. Philip Carpenter- Dr. Carpenter is Professor of Environmental Geophysics, Engineering Geology, and Seismology at Northern Illinois University in DeKalb, Illinois. He received a PhD in Geoscience from New Mexico Institute of Mining and Technology in 1984. He has worked in oil/gas exploration at Chevron USA, Inc. and Mobil Oil. This was followed by employment in the seismology group at Los Alamos National Laboratory in New Mexico, where he did research on methods of detecting underground nuclear tests. He then joined NIU where he has been employed for over 20 years. Dr. Carpenter's research interests include: (1) Environmental geophysics: noninvasive detection of pollution from landfills and hazardous waste sites, both in the U.S. and China; (2) geophysical surveys over karst areas; (3) earthquakes and ambient ground vibrations in the Midwestern U.S.

Dr. Timothy Larson- Dr. Larson is Senior Geophysicist with the Illinois State Geological Survey (ISGS) under the administration of the University of Illinois at Urbana-Champaign. He received a PhD in geology from that university in 1990. Since 1980 he has worked for the ISGS as a geologist and geophysicist. His major research interests include: hydrogeophysical research and case studies; research and case studies using primarily resistivity and seismic refraction techniques but also EM, GPR, and gravity; seismicity of Illinois and neotectonics

of the Central U.S.; shallow seismic reflection studies; studies of shallow heat and moisture flow; and crustal studies of McMurdo Sound, Antarctica.

Dr. Ahmed Ismail- Dr. Ismail is a Geophysicist with the Illinois State Geological Survey (ISGS) under the administration of the University of Illinois at Urbana-Champaign. He received a PhD in applied geophysics from the University of Missouri-Rolla in 2003. Dr. Ismail worked as a researcher with the National Research Institute of Astronomy and Geophysics, Cairo, Egypt, from late 2003-early 2005; as a post-doctoral research assistant at the University of Missouri-Rolla from 2005-early 2006; and in his present position with ISGS since 2006. Publications he has co-authored include: *Misleading Interpretation of Shallow Seismic Methods, Three Case Studies from MASW, P-Wave Reflection and SH-Wave Reflection Surveys* (Symposium on the Application of Geophysics to Engineering and Environmental Problems, 2009); *Near Surface Characterization of a Geotechnical Site, North East Missouri, Using Shear Wave Velocity Measurements* (Near Surface Geophysics Journal, European Association of Geoscientists & Engineers, 2007); *Ground-Penetrating Radar: A Tool for Monitoring Bridge Scour* (Environmental and Engineering Geosciences, 2007); *Imaging glacial sediments and underlying bedrock in Illinois using surface wave data acquired by a land streamer* (Highway Geophysics - NDE Conference, St. Louis, Missouri, December, 2006).





About the Morton Arboretum-

The Morton Arboretum is an outdoor museum of trees and other plants from around the world. The 16 miles of hiking trails have been carefully planned to enhance your experiences on the grounds. These trails lead you through plant collections, natural areas, and other scenic landscapes. Several trails are paved, but most are wood-chipped.

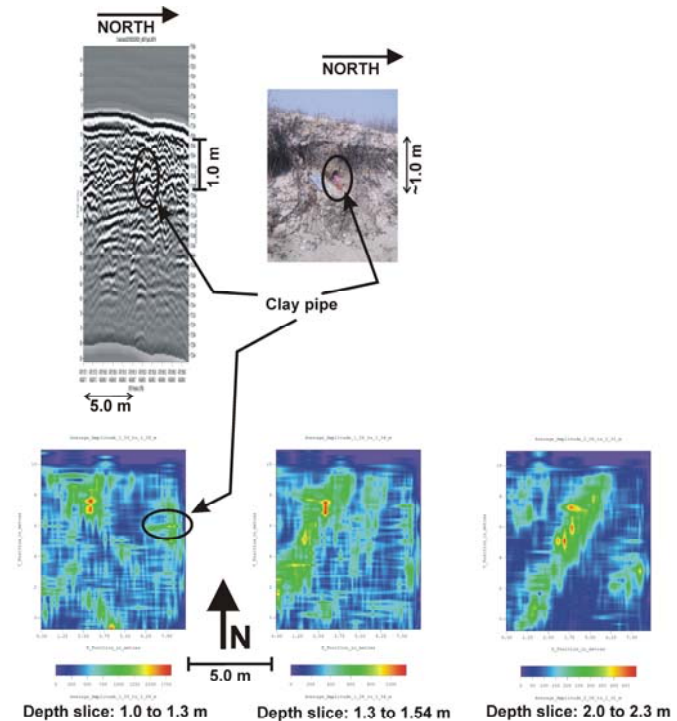
Have you ever seen a majestic tree reflected in a clear pond? Have you listened carefully to the vibrato of frogs coming from silent lakes and marshes? Water is an integral part of the Arboretum—not only because it nourishes the trees and grassy areas around it, but because it nourishes people, too. Sit quietly beside Lake Marmo, Meadow Lake, or Sterling Pond. Reflect on the natural beauty you see there. The lakes, ponds, marshes, and rivers throughout the Arboretum attract birds, animals, wildflowers, and nature lovers.

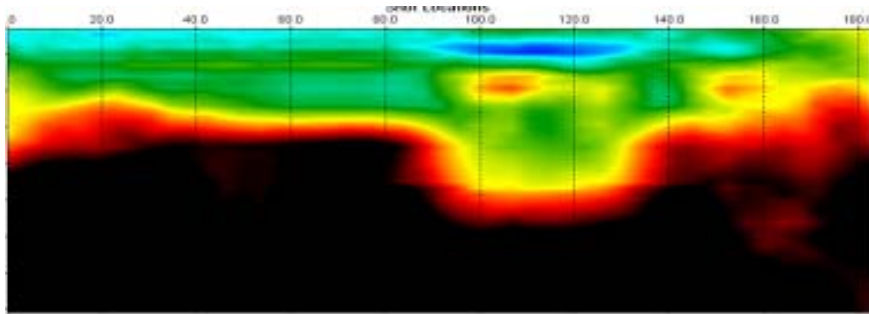
Schulenberg Prairie is one of the oldest planted prairies in the Midwest. It's lush with flowering plants from April through October, resplendent with asters and

grasses in September and October and alive with migrating birds in November and December. Schulenberg Prairie is home to at least 500 different plant species. Be sure to stop at the Prairie Visitor Station.

About the Meeting Space-

The short course will be held in the Founder's Room at the Thornhill Education Center on the Arboretum grounds. The Founder's Room, with its ornate bookcases, marble fireplace, intimate alcove, and stained glass windows, is a visual step back into the early 20th century.





Where to Stay-

www.stayinlisle.com

Visitor information about Lisle, Illinois and the surrounding area.

Hilton Lisle/Naperville

3003 Corporate West Drive, Lisle, IL 60532

Phone: 630-505-0900

Fax: 630-505-8948

From the Arboretum, take Route 53 to Warrenville Road and turn right. Go 1.5 miles west. The hotel is on the left.

Hyatt Lisle

1400 Corporate Drive, Lisle, IL 60532

Phone: 630-852-1234

Fax: 630-852-1260

From the Arboretum, drive south on Route 53 just past Warrenville Road and turn right.

Marriott Hickory Ridge Conference Center

1195 Summerhill Drive, Lisle, IL 60532

Phone: 630-971-5000

Fax: 630-971-6956

From the Arboretum, drive south on Route 53 for about three miles and turn right on Summerhill Drive. The hotel provides complimentary transportation within a five-mile radius, which includes The Morton Arboretum and the Lisle Metra Train Station. Transportation must be pre-arranged.

Wyndham Lisle-Chicago Hotel

3000 Warrenville Road, Lisle, IL 60532

Phone: 630-505-1000

From the Arboretum, take Route 53 to Warrenville Road and turn right. Go about 1.5 miles, and the hotel is on the right.

Taxi Services in Lisle

It is about a five-minute cab ride between the train station in Lisle and the Arboretum. A few local taxi services are:

- American Taxi at 630-920-9480
- A M Regional Taxi at 630-971-8888
- My Chauffeur Limo Service at 847-376-6169
- DuPage Limo Service at 630-941-3080 or 800-426-9890

Accessibility

All buildings and paved garden paths and trails are accessible to strollers and wheelchairs.

Registration Form

Please make checks payable to "AEG North Central Section". If you sign up for Continuing Education Credits you will be mailed a certificate after completion of the course and will earn 2.0 CEU credits. If you are not registering online, you may mail the form and a check to:

AEG North Central Section (c/o Dr. Kevin Richards)
1530 Willow St.
Lake Forest, IL 60045

Registration Form
AEG North Central Section Short Course
New World in Geophysics
May 18-19, 2010

1. Tuition Fees/Donations:

- \$_____ Corporate Sponsor** (Platinum Level \$1000, Gold Level \$500)
\$_____ AEG Members (\$350)
\$_____ Professional (Early Registration* \$350, Other \$450)
\$_____ Student (Early Registration* \$100, Other \$125)
\$_____ Continuing Education Credit Certificate (2.0 hours - \$5)
\$_____ New AEG Member (\$75 for new member dues plus \$275 for Tuition = \$350 total)
\$_____ Total

**Corporate Sponsorships are also available. Sponsor contributions will be used to cover the costs of the course and for activities for Geo-science Students in the North Central Section area. Your sponsorship will be recognized in future course advertisements, the AEG Newsletter, at an AEG Section Meeting, and on course materials. In appreciation of your donation, tuition fees are waived for Corporate Sponsors under the following schedule; Platinum Sponsors - up to 4 short course attendees, Gold Sponsors up to 2 short course attendees.

*We have extended the due date for Early Registration. Please mail your registration forms by January 31, 2010 to receive the discounted early registration fee.

2. Please complete for each registrant:

Name: _____

Position: _____

Company/Firm: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____

Email Address: _____



_____ I need special accommodations. Please contact me.

For further information on the benefits of AEG Membership, please go to <http://www.aegweb.org>

Chapter Meetings

Inland Empire:

For the latest information and updates, please visit <http://www.aegsc.org/chapters/inlandempire/>

Central Coast:

For the latest information and updates, please visit <http://www.aegsc.org/chapters/centralcoast/>

San Diego:

For the latest information and updates, please visit <http://www.aegsc.org/chapters/extremesocal/>

National Business Donation

- **Platinum** - \$1,000
- **Gold** - \$500
- **Silver** - \$250

Company name, address and contact information are presented in AEG News and section receives 10% of donation. A national donation does not yield a line in our local section newsletter.

**Company & Employment Advertising
Newsletter (includes SoCal website posting)**

	<u>Month</u>	<u>Year</u>
▪ Business Card	\$10	\$100
▪ ¼ Page	\$20	\$200
▪ ⅓ Page	\$30	\$300
▪ ½ Page	\$35	\$350
▪ Full Page	\$50	\$500

SoCal website posting only

\$20/month

AEG offers two ways to increase your company's visibility for under \$100 per year. Each *Annual Report and Directory* and each issue of *Environmental & Engineering Geoscience* includes the Professional Index. Available only to AEG members, this is a great way to promote your company. For \$80 per year, you can be included in both the Directory and Journal.

Many of our members use this index to find colleagues to assist with projects or to recommend their services to others. Don't miss your chance to be included in the *2010 Annual Report and Directory*. Reservations are due by December 31 to secure your listing.

Pricing is:

\$30 – *Annual Report and Directory*

\$60 – *Environmental & Engineering Geoscience*

\$80 – Both publications

You can order online at

<https://aegweb.org/i4a/forms/form.cfm?id=23&pageid=4837&showTitle=1>

or call Cathy Wilson at 303-757-2926.

* The deadline for submitting an advertisement for next month's newsletter is May 26.

YEAR 2010 CONTRIBUTORS NEEDED

Contributions from corporations and individual members are greatly appreciated. Contributors will be listed in our newsletter throughout the year and can post their logo or business card in the newsletter if so desired. Please mail contributions made out to **AEG** to our section treasurer, Dave Perry.

2010 MEMBERSHIP RENEWAL

For those of you who have not yet renewed **(the deadline was November 1)**, are unsure about your membership status, or did not receive your membership dues statement, please contact AEG Headquarters at www.aegweb.org. You can renew your membership online. Please update your membership if you wish to continue to receive future issues of the newsletter.

*****NOTICE: Proposed New AEG Publication*****

WHO'S WHO in SO CALIFORNIA ENGINEERING GEOLOGY
The Evolution of Engineering Geology in Southern California

Have you ever wondered "Whatever happened to___?" or "I've heard of ___, who is he?"

The undersigned have decided to try to prepare an internet publication with the above title, which will include biographies of engineering geologists in southern California. We would like you to share your biography (autobiography) with other EGs. If you have worked on an interesting project, others would like to know about it.

If we limit each autobiography to 3 pages of text, plus photos, this publication would be more than 1,000 pages long. Therefore, we plan to utilize a proposed new AEG Foundation internet website, where there is no limit to total pages, and we can use color photos. Also, this new website will be available for no-charge access, worldwide, thus spreading the word on the history and evolution of engineering geology, and southern California's immense contribution.

We suggest (not require) three criteria for inclusion: 1. That you are a CA licensed CEG; 2. That you are now or once were a member of AEG; 3. That you have enough years of professional experience to relate one or more significant projects you have worked on. We believe there are more than 250 such EGs in southern California. This will be an evolving internet site where new autobiographies can be added.

We will also include Memorial biographies of past notable geologists in southern California. So far, we have identified 30, including John Buwalda, Ian Campbell, Tom Dibblee, Rollin Eckis, Perry Ehlig, Richard Jahns, John Mann, F.L. Ransome, Charles Richter, Dottie & Marty Stout, Gene Waggoner. Biographies of 14 of these notable geologists were published for the recent AEG Annual Meeting, in "History of the Association's First 50 Years," available from AEG HQ, contact Julie Keaton or Becky Roland.

Here is a CHECKLIST FOR YOUR AUTOBIOGRAPHY:

Complete NAME, address, phone, email; BIRTH DATE and place; UNIVERSITY(s) attended, major(s), degree(s), year(s); MILITARY service; FIRMS/AGENCIES you worked for; up to 3 significant PROJECTS you worked on; possibly relate a serious or humorous INCIDENT; a MENTOR you may wish to acknowledge; professional SOCIETIES, HONORS, AWARDS; HOBBIES; up to 5 PUBLICATIONS; PHOTOS of yourself and of projects (scanned images preferred).

So, if you wish to be included in this new internet publication, prepare your autobiography and email it with photos to: allen@hatheway.net and in the Subject box, type: So. Cal. Geologist. Or mail it to Allen Hatheway, 10256 Stoltz Dr., Rolla, MO 65401. Please, no more than 3 pages of text, single-spaced, Times New Roman, 12 pt.

Please pass this notice on to those you may know who no longer get this Newsletter.

In the spirit of camaraderie, we thank you,

Richard Proctor
 Allen Hatheway
 David Rogers
 Larry Cann
 Bob Lynn

EMPLOYMENT OPPORTUNITIES & ADVERTISING

The California Geological Survey is hiring engineering geologists.


CGS needs to recruit and hire new engineering geologists to maintain staffing levels as staff retires or moves on. This may not be the obvious time to look for a job with the state, but CGS gets most of its funding through special funds and contracts, not the general fund. When CGS needs to hire, an announcement is posted on the State Personnel Board's "VPOS" web site (<http://jobs.spb.ca.gov/wvpos>). Searching for "Engineering Geologist" there will find the positions that the State is now accepting applications for. Those currently include a position in CGS's Geologic Mapping Program. That position is listed as within the Department of Conservation. See the web page for the full job description and application instructions. Please note that to be hired by the state, a candidate must pass and place in the highest three ranks on a civil service exam. The Engineering Geologist exam, jointly developed by the Department of Conservation and the Department of Water Resources, is an online qualifications appraisal. It is possible to take the exam at the same time you send in an application, but both steps are required. The online application and "supplemental questionnaire" (exam) are at this web page.

<http://jobs.ca.gov/CASPB/sup/BulPreview.asp?R1=095699&R2=00103756&R3=9PB02>

http://jobs.spb.ca.gov/wvpos/more_info.cfm?recno=415797

Chris Wills
Supervising Engineering Geologist
California Geological Survey
801 K St. MS 12-32
Sacramento, CA 95814-3531

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It's a protractor...
It's the fastest apparent dip calculator!



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Company & Employment Advertising <u>Newsletter (includes SoCal website posting)</u>		
	<u>Month</u>	<u>Year</u>
▪ Business Card	\$10	\$100
▪ 1/4 Page	\$20	\$200
▪ 1/3 Page	\$30	\$300
▪ 1/2 Page	\$35	\$350
▪ Full Page	\$50	\$500
<u>SoCal website posting only</u>		
\$20/month		

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