

ASSOCIATION OF ENGINEERING GEOLOGISTS

SOUTHERN CALIFORNIA SECTION

"Serving Professionals in Engineering, Environmental and Ground-Water Geology Since 1957"

December 1994

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This Newsletter is provided as part of your membership in the Association of Engineering Geologists. If you are not a member of AEG and would like to subscribe to this newsletter, send check or money order in the amount of \$35.00 (\$15.00 for full-time students), made out to "AEG Southern California Section", to the newsletter editor (see address on back page).

Deadline for submittal to the January newsletter: **December 23**

THIS MONTH'S MEETING

December 13, 1994

A New Approach to Probabilistic Earthquake Hazard Assessment developed by the Southern California Earthquake Center

presented by

Dr. Tom Henyey

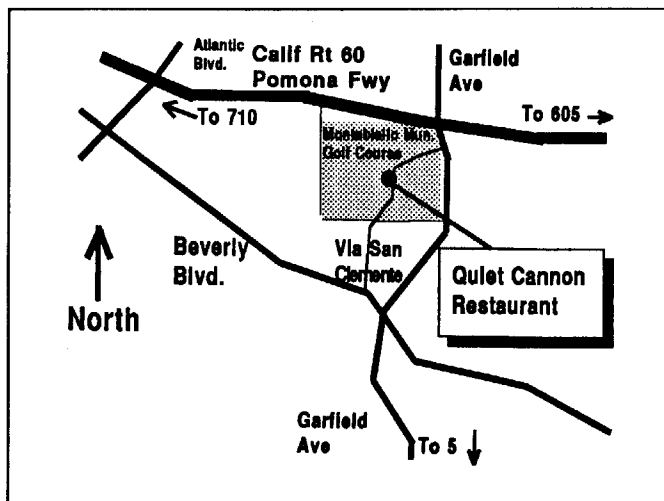
Reservations must be made by Friday, November 4
by calling GeoSoils at (818) 785-2158
(leave your name and the number of people in your party)

Cost: \$20.00
(full time students \$10.00)

The Quiet Cannon
901 N. Via San Clemente
Montebello

6:00 Social Hour
7:00 Dinner
8:00 Program

Map to Meeting



A New Approach to Probabilistic Earthquake Hazard Assessment

Thomas L. Henyey

*Department of Geological Sciences, University of Southern California
University Park, Los Angeles, CA 90089-0740*

A new approach to probabilistic earthquake hazard assessment developed by the Southern California Earthquake Center will be presented. The method divides southern California into 65 seismotectonic zones and integrates fault slip rates and dates of prehistoric earthquakes from paleoseismology, regional seismicity from the southern California earthquake catalogue, and strain rates measured by the new global positioning satellite system (GPS) into a master model of regional earthquake potential. Interestingly, the model suggests that over the last 150 years, southern California has experienced fewer earthquakes than the geologic norm, and that we now have an earthquake deficit. Finally, coupling the regional earthquake potential with established attenuation relationships, exceedance probabilities can be calculated throughout southern California. In addition to the San Andreas fault zone, the southern Transverse Ranges between San Bernardino and Santa Barbara is a region of relatively high seismic hazard.



Geophysical Union, and Seismological Society of America.

Dr. Henyey's major research interests include fault zone structure/mechanics and crustal structure/tectonics. His Ph.D. work at Caltech and early research at the University of Southern California dealt with the thermomechanics of the San Andreas fault and the thermal regime of southwestern North America. Important papers by Henyey and Wasserburg (1971) and Brune, Henyey, and Roy (1969) used the results of heat-flow observations to estimate the magnitude of shear stress on the San Andreas fault. Later thermal studies were applied to tectonic problems of the continental margin of southwestern U.S. and the Gulf of California.

With the advent of the National Earthquake Hazard Reduction Program, Dr. Henyey's research activities were directed toward the development and deployment of strain instrumentation or the detection of earthquake precursors. Both piezomagnetic and downhole fluid pore pressure approaches were investigated. The research led to Dr. Henyey's participation, as co-principal investigator, in the Cajon Pass Deep Scientific Borehole to investigate the *in-situ* shear stress and thermal regime on the San Andreas fault at seismogenic depths.

Dr. Henyey's most recent research has dealt with the application of reflection seismology to crustal structure and evolution in southwestern U.S. He is coordinator for the CALCRUST consortium. CALCRUST has acquired its own seismic reflection data and is also reprocessing a large body of existing industry data in California and Arizona. CALCRUST has been a component of the National Science Foundation's Continental Dynamics Program since its inception.

In 1991, after chairing the Department of Geological Sciences at USC for two years, Dr. Henyey assumed the role of Executive Director of the Southern California Earthquake Center — a new NSF Science and Technology Center with primary funding from the NSF and the USGS, and supplemental funding from FEMA, Caltrans, and the County and City of Los Angeles. In this position, Dr. Henyey coordinates a program focused on earthquake hazard analysis and technology transfer in southern California involving more than 50 scientists at 15 institutions.

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Dr. Henyey earned an A.B. in Geophysics from UC Berkeley in 1962, and a Ph.D. in Geophysics from Caltech in 1968. His professional experience began at Caltech as a Research Assistant from 1966-1967; a Teaching Assistant from 1967-1968; and a Research Fellow in 1968. He then moved to USC as an Assistant Professor of Geological Sciences (1968-1974), as an Associate Professor of Geological Sciences (1974-1981), as Professor of Geological Sciences (1981 to present); and chaired the Department of Geological Sciences from 1989 to 1991. During his time at USC, Dr. Henyey took two Sabbatical leaves: at U.C. Santa Barbara in the spring of 1976; and at DSIR, New Zealand in the summer and fall of 1982.

Dr. Henyey is a Consultant to the Research Committee of the California Seismic Safety Commission. He is a member of the USGS NEHRP scientific review panel, DOSECC Board of directors, PASSCAL Standing Committee, SCEPP Policy Advisory Committee, ad hoc planning committee for 1994 SSA annual meeting, AGU Committee of 50, American

CHAIRPERSON'S COLUMN

by Robert A. Larson

About 60 people attended our November meeting at the Airtel Plaza Hotel in Van Nuys. Tom Dibblee and Helmut Ehrenspeck each talked for an hour on the geology of the Santa Monica Mountains. Tom presented an overview of the geology as represented on his maps. Helmut discussed the Conejo Volcanics and showed us various facies of the volcanic suite that had not been recognized before. Both talks were well illustrated with numerous slides.

I represented the Section as well as the California Section of the AIPG at the Board of Registration for Geologists meeting on November 18 at the Holiday Inn by LAX. For the first time in a long time all the Board members were present. Mr. John Barna was recently appointed as a new public member and this was his first meeting. The new executive officer of the Board is Mr. Dalton Pollard. The office manager is Denise Pellerin. A limited number of copies of the Directory of Registered Geologists, Registered Geophysicists, and Certified Engineering Geologists (1993) are available from the Board and can be requested by calling (916) 445-1920.

John Williams, Chairman of the Board's exam committee provided a report on recent activities. The 1994 exam was given to about 900 people; 700 took the R.G., 200 took the C.E.G., and 25 took the G.P. exam. These exams are now being graded and should be returned to the Board by early December. The next Board meeting is presently scheduled for February 3, 1995 in San Francisco, so those of you who took the exam should get your results back shortly after that.

After all appeals had been satisfied for the 1993 exam, the pass rate was 30% for the R.G., 26% for the C.E.G., and 22% for the G.P. The next exam in southern California is tentatively scheduled for March 27-28, 1995 in Riverside. An exit poll is now taken at each exam. The results of the poll are being looked at seriously by the entire Board, so anyone taking the exam should take the time to thoughtfully complete the poll.

I offered several suggestions and concerns of our members to the Board. These included: 1) the need for better communica-

tion with the State's geological societies, including when and where the Board meetings will be held; 2) the need for better communication with and involvement of the public in Board meetings and activities (I was the only member of the public at the meeting); 3) the desire of people who want to review their exams when they have failed the registration test and scored below 65%; 4) the need of registration applicants for explanatory information on the way exams are graded and scored; 5) assurance that the Board is making checks on applicant's references (they say they are); and 6) whether or not enforcement activities against unregistered regulatory reviewers is occurring (the Board cannot discuss specific activities).

Many of our members have complained about unqualified regulatory reviewers. Senate Concurrent Resolution (SCR) 45, which was passed last year, is one step in addressing this issue, at least for state employees. However, this does not address the problem at the local level of cities and counties. The issue includes the question of whether the practice of regulatory review of geology and/or engineering reports constitutes a regulated practice under state law and if it is, why agency employees are allowed to practice without a license. I believe now is the time to force the issue. We can do this if our members are willing to file complaints against individual unregistered reviewers for unlicensed practice. I know many of you find this distasteful, but it is the only way to initiate enforcement action, and ultimately improve the situation.

Included in this newsletter are complaint forms from the Boards of Registration for Geologists and for Engineers. These forms may be copied. If you know of a regulatory reviewer who is not licensed, please file a complaint. I suggest that as many review sheets as possible, signed by the unregistered reviewer, be sent with the complaint form. With the upcoming sunseting of the Boards, everyone will be watching their enforcement activities. If we flood the Boards with complaints they will have to address the issue. If you are not willing to send in a complaint, than you should never voice a complaint again against unqualified

reviewers. Now is the time to act.

On the legislative front, the Republicans won big and government will certainly change. The 1995-96 legislative session will convene officially on December 5, 1994 to swear in the new members and the actual business will begin on January 3, 1995. Our Section needs to start contacting the legislators in January, so start writing letters now so that they will be ready. The next newsletter should have a new roster of legislators for your use.

SB 2036, Senator McCorquodale's sunseting bill was passed and signed into law (and the Senator lost reelection). This law will make the Board and the position of executive officer inoperative on July 1, 1997 and repealed on January 1, 1998. It is my understanding that registration of geologists will then be under the control of the Director of the Department of Consumer Affairs and that person may eliminate registration or alter it in a fashion many of us will not like. The organization that has pushed this legislation through is the Center for Public Interest Law (CPIL) and their supervising attorney is Julie D'Angelo. Interestingly, the CPIL has not sought the sunseting of the State Bar in this bill.

In order to keep the Board, additional legislation must be passed by the deadlines stated above. The Board is required to make a report to a committee of three Assemblypersons and three Senators in September, 1995 and defend itself at public hearings that will be held October-December, 1995. The contents of the report are outlined in the bill and they are extensive. The Board has set up an ad hoc committee, chaired by Seena Hoose, consisting of John Lindblom, John Williams, Don Halinger, Ray Seiple, John Larson, Frank Kreese, and Dalton Pollard. We will need to support the Board at the scheduled hearings.

AB 2530, which would have allowed geologists to obtain water well data, was vetoed by the Governor on September 29. Apparently we are to clean up ground water contamination without the well data. In this case the law protects a few water users who don't want you to know what they are doing, while limiting data needed to clean up the resource.

In October, I attended the annual meetings of AEG, AIPG, and GSA. It was interesting to see the contrast between the organizations. At the AIPG advisory board meetings, registration of geologists was the main topic of discussion. In the last 5 years or so, it appears that many AIPG members have realized the benefits of state registration and many of their Sections are very active in promoting bills through their legislature. They are much more active as a group politically than AEG is. Missouri was successful in passing a registration law, but Texas and Washington were not.

You have all received your dues statements by now. Please pay promptly. The second mailing for dues costs many thousands of dollars and is not really necessary if everyone would send dues in when they received the notice. If you have a change of address or phone number, please send the information to our newsletter editor as well as national headquarters.

Next year's annual meeting is in Sacramento and the Sacramento Section is looking for volunteers. If you would like to help, please call James Parsons at (916) 424-4950.

I hope all of you have a Merry Christmas and a very Happy New Year. ϕ

FROM THE EDITOR

I would like to thank Norm Tilford, Jay Smith, and Buzz Spellman for their input regarding Henry Neel's article *The History of the Registration of Geologists in California* reprinted in last month's newsletter. Particular thanks go to Buzz Spellman for extracting from the archives a copy of the original article published in the May, 1979 newsletter of the "California Section - Association of Professional Geological Scientists formerly American Institute of Professional Geologists." The introduction to the article by Joseph W. Fusso, Jr., Cal-Section President, is as follows:

"Fellow APGS Members:

Reading the legislative task force reports on recommendations of eliminating the State Board of registration for Geologists and Geophysicists (SBRGG), it is striking how little was said regarding why the Board was

created in the first place! I asked Mr. Henry H. Neel, past National President, to write a document which would historically examine how SBRGG evolved and why.

This newsletter is dedicated to this history. Read and study it.

Howard T. Anderson, Past President, APGS Cal-Section, has been working hard to have the SBRGG exempted from AB 46 and reinstatement of budgeting in SB 190. Give him some help. Write your favorite Senator/Assemblyman. NOW!"

Mr. Neel concluded the article by stating: *"I wish to acknowledge the generous help of Wes Bruer, Bob Paschall, Glenn Brown, John Curran and Lowell Redwine in the preparation of this article."*

*Henry H. Neel
May, 1979*

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Isn't it interesting that 15 years later the threat of elimination of the SBRGG is back (see Chairperson's Column). Mr. Fusso's comments are as appropriate now as they were then.

The names of members paid through the 1995 calendar year are beginning to trickle in to the So. Cal. Section Secretary. Please be advised that if your name is not on the list (due to non-renewal of membership, non-payment of section dues, or someone's error) you will no longer receive this newsletter. ϕ

NEWS

PUBLIC SAFETY - GEOTECHNICAL EXPLORATION EXCAVATIONS

Please be advised that appropriate safety measures must be followed to protect the public relative to temporary excavations, such as trenches and borings made during geotechnical investigations. All current codes applicable to providing safety measures for geotechnical explorations, such as barriers, cover, backfills, etc., must be implemented, inclusive of the Los Angeles County Code, Chapter 11.48, and State of California, Title 8, Construction Safety Orders.

This may seem obvious to many of you, however, there have been a few accidents recently involving open excavations for geotechnical exploration. The most serious involved a boy who fell into a boring after he removed a plywood cover that was weighted with only a few rocks. It is obviously in everyone's best interest to try to prevent this type of accident. ϕ

REQUEST FOR QUALIFICATIONS (RFQ) PROFESSIONAL SERVICES DURING 2 YEAR PERIOD

The Public Works Department, Santa Barbara County, is inviting all firms to submit a Statement of Qualifications for any of the following areas of service:

Engineering
Roadway & Structures
Traffic
Geotechnical
Flood Control
Construction Support
Materials Testing
Planning
Transportation
Solid Waste
Water Resources
Hazardous Materials

Interested firms may receive the RFQ by writing: County of Santa Barbara Public Works Department, 123 East Anapamu Street, Santa Barbara, CA 93101, Attn: Robert Ooley, Contract Coordinator, or by E-Mail to "ooley@sbarbara.mhs.compu-serve.com". A conference to discuss this RFQ will be held on December 5, 1994 at 2 pm in the Supervisors Conference Room, 105 East Anapamu Street, 4th Floor, Santa Barbara, CA. Statement of Qualifications must be received at the Public Works Department no later than 5 pm PST on Friday, December 23, 1994. ϕ

VOLUNTEERS REQUESTED

The Office of Statewide Health Planning and Development has requested that our Section propose one nominee to serve on the Hospital Building Safety Board as the "Engineering Geologist" representative, effective January 1, 1995. The nominee

must have knowledge and/or experience in the hospital design and construction industry, be able to attend quarterly meetings, and serve on committees. The appointment is for four years. Time is short. If you would like to volunteer, please send your resume to me so that it reaches me on or before December 10, 1994. Robert A. Larson, 6416 Woodley Avenue, #5, Van Nuys, CA 91406-6418.

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MEETINGS, FIELD TRIPS, ETC.

DECEMBER

- 5 **South Coast Geological Society Monthly Meeting: Poster Session - Christmas Meeting and Raffle!** Please call Alan Pace at (714) 458-7414 with your poster session title. Please bring donations to this meeting for the raffle! Revere House, 901 First Street, Tustin, CA. For reservations call Leighton and Associates at (714) 250-1421.

JANUARY

- 26-27 **Advanced Environmental Laws and Regulations**, short course, Orlando FL. Government Institutes, Inc., Suite 200, 4 Research Place, Rockville, MD 20850. Phone (301) 921-2345, fax (301) 921-0373.

FEBRUARY

- 20-21 **Environmental Site Assessments**, Short Course, Orlando, FL. Government Institutes, Inc., Suite 200, 4 Research Place, Rockville, MD 20850. Phone (301) 921-2345, fax (301) 921-0373.

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LOST/NOT FOUND

A checked bag containing all my field gear may have been stolen at L.A. International Airport Sunday, November 13, 1994. The bag contains my Brunton, boots, vest, hammer, and associated equipment. If you see anything like this at a flea market, pawn shop, etc., please buy it and I will gratefully reimburse you! Also, report the seller if you can. Call James Falls @ (408) 275-1336 (work); (510) 745-8435 (home). Thank You!

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ANNOUNCEMENTS

In case you missed it in the last newsletter, Alan Kropp & Associates is performing research on earthquake-induced movements of fills under NSF Grant CMS-9416510. Geotechnical consultants with site-specific data from either the 1989 Loma Prieta earthquake or the 1994 Northridge earthquake are encouraged to contact Alan Kropp, principal investigator, or David McMahon, project engineer, at (510) 841-5095. Any information provided is confidential; call for details. This is important work that may, ultimately, affect grading codes [editor's opinion]. Preliminary results of the data collection will be presented and published in the spring.

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DID YOU KNOW...

If all AEG Members paid their dues on receipt of the first notice, AEG would save over \$2,000.00 a year in additional mailing costs? To which program would YOU assign the savings?

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Charles Nestle
AEG Newsletter Editor
6224 W. 82nd Street
Los Angeles, CA 90045-2901

Place
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FIRST CLASS POSTAGE

 Please Recycle

GEOQUOTE OF THE MONTH

HELP! I've run out of quotes for this section of the newsletter! I DO have a collection of amusing typos and errant statements from consultant's reports, but I would just hate to have to use those here. So send in your suggestions right away.

Ed.

WRITE TO THE NEWSLETTER EDITOR

If you have a suggestion for "Geoquote of the Month", or if you have any news items, short articles (or long if space is available), commentary, suggestions, gripes, complaints, book reviews, software reviews, or whatever, and you would like to share them with your colleagues via the AEG Southern California Section Newsletter, send it to the Newsletter Editor at the address below, or on the internet at ctnestle@aol.com. Longer works are preferred on floppy disk, formatted by any DOS or Windows-based word processor (If you have a MAC, please save your work as an ASCII file or in a DOS format that I can retrieve). Diskettes will be

returned if requested. Please include your phone number in case I have a question.



If you are not a member of AEG and would like to subscribe to this newsletter, send check or money order in the amount of \$35.00 (\$15.00 Full-Time Students), made out to "AEG Southern California Section" to the address below. For information about joining AEG call any of the people listed on the first page of this newsletter. Please consider joining the Association of Engineering Geologists. We need you!

What specifically do you want the Board to accomplish?

I declare under penalty of perjury, that the information contained in this complaint (and the attached pages) is true and correct to the best of my knowledge and belief.

Signature _____ Date _____

The California Board of Registration for Geologists and Geophysicists examines and licenses geologists and geophysicists. The Board also regulates Engineering Geologists.

Anyone practicing these professions must be licensed by the Board.

The Board has authority to investigate complaints of violations of the Geologist and Geophysicist Act, such as fraud, incompetence and/or negligence, practicing without a license.

Enforcement actions include, but are not limited to, license suspensions, license revocations, fines, referral to the district attorney for criminal prosecution.

What specifically do you want the Board to accomplish?

I declare under penalty of perjury, that the information contained in this complaint (and the attached pages) is true and correct to the best of my knowledge and belief.

Signature _____ **Date** _____