

# ASSOCIATION OF ENGINEERING GEOLOGISTS

SOUTHERN CALIFORNIA SECTION

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

March 1995

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**THIS MONTH'S MEETING**

Joint meeting with the Los Angeles Section - ASCE  
Wednesday, March 15, 1995

**Reassessment of the St. Francis Dam Failure**  
*presented by*  
**Dr. J. David Rogers**

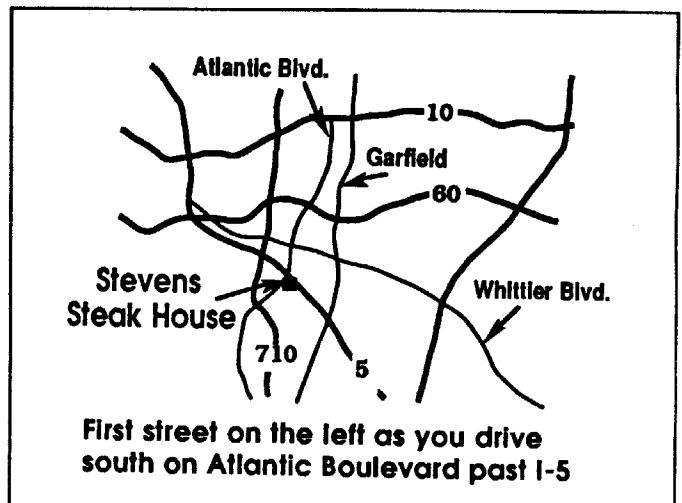
Reservations: Dr. G. Hossein Bahmanyar, TT&I ph: 818/700-1122  
by 12:00 noon, Monday, March 13 fax: 818/700-0500

Cost: \$20.00 (Free with valid student I.D.)

Location: Steven's Steak House  
5332 Stevens Place, City of Commerce

5:30 Social Hour  
6:30 Dinner  
7:45 Program

Map to Meeting



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 April newsletter: March 17**

## MARCH PROGRAM

### REASSESSMENT OF THE ST. FRANCIS DAM FAILURE

by  
Dr. J. David Rogers

*Rogers/Pacific, Inc. and  
Department of Civil Engineering UC Berkeley*

**S**t. Francis Dam was a curved gravity dam approximately 210 feet high which failed catastrophically upon its first full filling on March 12/13, 1928. The resulting flood enveloped most of what is now the Magic Mountain/Newhall Ranch/Castaic Junction area before flowing down the Santa Clara River valley, flooding Fillmore and Santa Paula before discharging into the Pacific at Ventura, some 69 miles downstream. The flood waters drowned between 450 and 600 persons, making it the worst American civil engineering disaster of the 20th century. No less than 13 different boards of inquiry were formed to study the disaster. The most notable of these investigative bodies was that convened by the Governor of California, which made one site visit, convened for several days and issued a report on the 6th day which blamed the tragedy on piping of the foundation along the ancient San Francisquito fault, cutting through the dam's right abutment.

Dr. Rogers will discuss a reassessment of the dam failure utilizing modern forensic techniques and suggest that the dam's demise was much more complicated than previously thought. The dam site appears to have been shaped by ancient paleolandslides developed within the Pelona Schist. A great deal of unpublished physical evidence suggests that the dam initially failed on its left abutment, not along the San Francisquito fault (right abutment). Recently-discovered information on the post-failure positions of displaced blocks from the dam also shows that pieces of the left abutment were found furthest downstream, not those from the right abutment. Forensic reconstruction of the dam's displaced blocks, flood hydrograph, and the final resting places of the various pieces will be presented to support these new conclusions.  $\phi$

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## AEG AWARDS

Over the years, the AEG has established several awards to recognize outstanding members or individuals in the profession. These awards include:

- **Marliave Scholar** - Established in 1968 in honor of Elmer C. Marliave, a founding member of the association, this award is given to outstanding students in Engineering Geology or Geological Engineering who have demonstrated ability and scholarship, have the potential to contribute to the profession, and/or are active in professional or student societies. Candidates for this award need to submit an application and an essay to the Academic and Student Affairs Committee Manager. The topic of the essay is changed yearly, as advertised in the AEGNEWS. Deadline

for submittal of applications is **March 1** of the year for which the award is given.

- **Claire P. Holdredge Award** - Established in 1962 in honor of Claire P. Holdredge, a founding member and first president of the AEG. This award is presented for a publication by an AEG **Member(s)** that is judged to be an outstanding contribution to the Engineering Geology profession. The publication should have been written within the 5 previous years of granting the award. Nominations are made by the membership-at-large to the Awards Committee, and are due to the Awards Committee Manager by **May 15**. The award, which is not necessarily conferred annually, consists of an engraved plaque presented at the Annual Banquet.
- **AEG Publication Award** - Established in 1968, this award is presented to the person who has written the most outstanding paper published in an AEG Publication during the fiscal year. The award consists of a framed certificate given at the Annual Banquet.
- **Richard H. Jahns Distinguished Lecturer in Engineering Geology** - Co-sponsored by the Engineering Geology Division of the GSA, this award established in 1988, provides funds for a distinguished Engineering Geologist to present an annual series of lectures at academic institutions. The purpose of these lectures is to increase awareness of students about careers in Engineering Geology. The award is presented at the Annual Banquet preceding the award year, and consists of a framed certificate and an honorarium.
- **Floyd T. Johnson Service Award** - This award was established in 1982 in honor of the first Executive Director of the AEG. The award is presented to a **Member** for outstanding active and faithful service to the Association over a minimum of 9 years. Board members are not eligible until one year after leaving office. Nominations are made by the membership-at-large, and must be endorsed by 3 Members having different Section affiliations. The nominations are to be submitted to the Awards Committee Manager by **May 15**. The award consists of an engraved plaque presented at the Annual Banquet.
- **Douglas R. Piteau Outstanding Young Member Award** - Established in 1985, this award is presented to a **Member or Associate Member** who is age 35 or under, that has excelled either singly or in combination, in the areas of Technical Accomplishment, Service to the Association, and Service to the Engineering Geology Profession. Each Section, at its discretion, chooses an individual deserving of the award, and nominates the individual to the Awards Committee. All nominations must be presented to the Committee by **March 31** of the award year. The Committee selects a candidate from the nominees for the President's confirmation. The award consists of an engraved plaque presented at the Annual Banquet.

- Student Professional Paper - The AEG may confer annually two awards at the Annual Meeting to **student members** in good standing in undergraduate and/or graduate divisions. The award is made for papers of merit prepared in the style of the AEG Bulletin. Topics worthy of publication may range from literature searches to original work. Candidate papers must be submitted to the Academic and Student Affairs Manager by **June 1**. The award in each category includes a cash prize, certificates to the student members and their academic institutions, and publication of the unedited paper in the March issue of the AEG Bulletin.

For most of these awards, recipients first need to be nominated. We would like to see deserving members of the Southern California Section recognized more often for their achievements in our profession. If you would like to propose a fellow AEG member for any of these awards, please let Tania Gonzalez, Section Secretary, know (c/o Leighton and Associates, Inc., 17781 Cowan, Irvine, CA 92714, phone: 714-250-1421, fax: 250-1114). I will then prepare the necessary paperwork and obtain additional supporting signatures, if needed. Notice above the deadlines for submittal of nominees. φ



## POLITICAL SCENE

SENATE BILL No. 2036

Introduced by Senator McCorquodale  
(Coauthor: Assembly Member Snyder)

February 25, 1994 (Amended August 26, 1994)

This bill amends portions of the Business and Professions Code, and portions of the Government Code, relating to licensing professionals. Some sections are reproduced here:

### DIVISION 1.2. LEGISLATIVE SUNSET REVIEW COMMITTEE

473.4. (a) The Joint Legislative Sunset Review Committee shall evaluate and determine whether a board or regulatory program has demonstrated a public need for the continued existence of the board or regulatory program implements based on the following factors and minimum standards of performance:

(items 1 through 8 deleted)

(9) Whether complaint, investigation, powers to intervene, and disciplinary procedures adequately protect the public and whether final dispositions of complaints, investigations, restraining orders, and disciplinary actions are in the public interest; or if it is, instead, self-serving to the profession, industry, or individuals being regulated by the board.

(10) Whether the scope of practice of the regulated profession or

occupation contributes to the highest utilization of personnel and whether entry requirements encourage affirmative action.

(11) Whether administrative and statutory changes are necessary to improve board operations to enhance the public interest.

(b) The joint Legislative Sunset Review Committee shall consider alternatives to placing responsibilities and jurisdiction of the board under the Department of Consumer Affairs.

(c) Nothing in this section precludes any board from submitting other appropriate information to the Joint Legislative Sunset Review Committee.

473.5. The Joint Legislative Sunset Review Committee shall report its findings and recommendations to the department for its review, and, within 60 days of receiving the report, the department shall report its findings and recommendations, which shall incorporate the findings and recommendations of the Joint Legislative Sunset Review Committee, to the Legislature during the next year of the regular session that follows the hearings described in Section 473.3. The report shall include whether each board or function scheduled for repeal shall be terminated, continued, or reestablished, and whether its functions should be revised. If the committee or the department deems it advisable, the report may include proposed bills to carry out its recommendations.

SEC.46. Section 6710 of the Business and Professions Code is amended to read:

6710. There is in the Department of Consumer Affairs a State Board of Registration for Professional Engineers and Land Surveyors, which consists of 13 members.

This section shall become inoperative on July 1, 1998, and, as of January 1, 1999, is repealed, unless a later enacted statute, which becomes effective on or before January 1, 1999, deletes or extends the dates on which it becomes inoperative and is repealed.

SEC.47. Section 6714 of the Business and Professions Code is amended to read:

6714. The board shall appoint an executive officer at a salary to be fixed and determined by the board with the approval of the Director of Finance.

This section shall become inoperative on July 1, 1998, and, as of January 1999, is repealed, unless a later enacted statute, which becomes effective on or before January 1, 1999, deletes or extends the dates on which it becomes inoperative and is repealed.

SEC.55. Section 7801 of the Business Professions Code is amended to read:

7801. "Board," as used in this chapter, means the State Board of Registration for Geologists and Geophysicists.

This section shall become inoperative on July 1, 1997, and, as of January 1, 1998, is repealed, unless a later enacted statute, which becomes effective on or before January 1, 1998, deletes or extends the dates on which it becomes inoperative and is repealed.

SEC.56. Section 7815.5 of the Business and Professions Code is amended to read:

7815.5. The board may appoint a person exempt from civil service who shall be designated as an executive officer and who shall exercise the powers and perform the duties delegated by the board and vested in him or her by this chapter.

This section shall become inoperative on July 1, 1997, and as of January 1, 1998, is repealed, unless a later statute, which becomes effective on or before January 1, 1998, deletes or extends the dates on which it becomes inoperative and is repealed.

SEC.67. Section 9148.10 of the Government Code is amended to read:

9148.10. Any state board or category of licensed professional under this article shall be subject to the following:

(a) The Joint Legislative Budget Committee shall establish criteria and review processes for the operational review of each state board or category of licensed professional. The criteria and review process shall include, but not be limited to, all of the following:

(1) An assessment of whether the initial problem or condition which led to establishment of the state board or category of licensed professional being reviewed still exists to such a degree as to require the continued existence of that agency or category of licensed professional.

(2) An assessment of other similar conditions which have arisen and the manner in which they have been addressed.

(3) An assessment of the agency's or licensing category's current and original scope of authority and functions, and the justification for any change.

(4) A full cost-benefit analysis of the state board's or licensing category's operation on a year-by-year basis since its establishment or prior review under this article.

(b) The committee shall identify all state boards or categories of licensed professionals subject to review under this article and establish a schedule for review of these state boards or categories of licensed professionals. In no case shall any state board or category of licensed professional be allowed to operate for more than eight years after the initial date of its enactment without being subject to review under this article.

SEC.68. Section 33.5 of this bill incorporates amendments to section 4800 of the Business and Professions Code proposed by both this bill and SB 1821. It shall only become operative if (1) both bills are enacted and become effective on January 1, 1995, (2) each bill amends Section 4800 of the Business and Professional Code, and (3) this bill is enacted after SB 1821, in which case Section 33 of this bill shall not become operative.  $\phi$

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## JOB OPPORTUNITIES

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*Employment ads are placed in this newsletter free of charge as a service to our readers. We also accept ads from people looking for work in engineering geology and related fields. Ads run one (1) issue. Contact the newsletter editor for further details.*

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**AGRA Earth & Environmental** is accepting applications for the position of Geotechnical Engineer. The applicant must have 3 to 5 years experience, very good verbal and writing skills, be a registered P.E., or have passed the EIT and be very close to registration and have an M.S. in Geotechnical Engineering. If interested contact:

Bill Gordon  
AGRA Earth & Environmental  
4137 South 500 West  
Salt Lake City, UT 84123  
ph: 801-266-0720 fax:801-266-0727

**Fugro West, Inc.** is currently accepting applications for staff level geotechnical positions in Ventura, Santa Barbara, and Santa Maria. Positions require one to three years experience and MSCE. Duties will primarily relate to participation on land geotechnical projects, but may periodically include environmental investigations and marine geotechnical studies. Candidates must be willing to travel and execute field work. Above-average written and verbal communication skills are required. Responses and resumes should be mailed or faxed to:

Attn: Geotechnical Group  
Fugro West, Inc.  
5855 Olivas Park Drive  
Ventura, CA 93003

Fax: (805) 650-7010

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## MEETINGS, ETCETERA

AEG Monthly Meeting schedule (due to our continuing problem of attempting to locate a relatively noise-free venue for our meetings, the locations cited are subject to change)

April 11	Airtel Hotel, Van Nuys
May 9	Luminaria's
June 13	Steven's Steak House
July 20	Murrieta Hot Springs - joint meeting with IGS & SDAG
August 8	Luminaria's
September	11 Revere House, Tustin - joint meeting with SCGS
October	NO MEETING - because all of you will be at the National Meeting
November 14	Airtel Hotel, Van Nuys
December 12	Luminaria's - joint meeting with AIPG - CA Section

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The following seminars are scheduled at CSUN in Science 1202 at 12:00 noon, Wednesdays, and are sponsored by the Department of Geological Sciences and the CSUN Geology Club. Refreshments will be served.

March 1	Tanya Atwater, Dept. of Geological Sciences, UC Santa Barbara, <b>A half billion years of plate tectonics in the western United States.</b> Note: this talk held in SS122.
March 8	Gordon Goles, Dept. of Geological Sciences, University of Oregon, <b>Deformational effects of the passage of the North American Plate over the Yellowstone Plume.</b>

March 15 Dorothy Stout, Dept. of Geology, Cypress College, **Geology goes Hollywood.**

March 29 David Archibald, Dept. of Biology, San Diego State University, **Dinosaur extinction: myths, models, and facts.**

## LETTERS

We are asking for assistance to find contributors of short articles and news information for the Bulletin of the Mineralogical Society of Southern California (MSSC). The MSSC Bulletin Editor is interested in not only in specimen mineral information, but also information on economic mineralogy, geologic exploration, mining engineering, some topics in metallurgy or mineral processing, and significant minerals information that should be communicated to the varied minerals specialists that receive the Bulletin. In turn, MSSC would further communicate this information to other minerals organizations, professional earth sciences organizations, schools, and libraries.

In particular, the MSSC needs articles that discuss individual mineral deposits, including: the geology, structure, mineralogy, petrology, etc.; mineral activities and mineral economic news in southern California for individual deposits.

The MSSC Editor is extremely interested in publishing topics not only limited to specimen minerals, but wishes to disseminate information coverage that includes economic minerals and economic geology subjects. The future of mineral specimen collectors and economic minerals access, exploration, development, acquisition, and exploitation are a common ground. This is because of the current regulatory and legislative incongruence that exist in today's society.

Whatever impacts the medium and large scale mining infrastructures have, there would at least be double the impact to the small miner and the individual mineral specimen collector. There are so many large and medium sized economic mineral companies that cannot afford the price to pay for the permitting systems that there is seemingly a new void of their presence in the USA continental West. No doubt individual mineral specimen collectors in the west and small miners, if they haven't seen this yet will, essentially be exterminated. Therefore, it is in the best of interests that educators, mineral companies, small miners, and mineral collectors have a common forum under which to communicate information.

Those interested in submitting news information to the Bulletin, for submission of short articles for publication, or in scheduling a 50-minute talk to the members of MSSC should contact:

William L. Rader  
Mineralogical Society of Southern California  
808 4th Street, Apt. 315  
Santa Monica, CA 90403-1231 310-395-5745.

Richard R. Gundry  
President, Friends of Mineralogy  
Southern California Section

## FIELD TRIP!

A field trip entitled "Engineering Geology of Thrust Faulting in the Northwestern Los Angeles Basin Area" is planned for September, 1995 with a tentative date of September 6. We are interested in papers and/or field trip stops regarding the northern San Fernando Valley, Simi Valley, and southwestern Soledad Basin areas. Papers and proposed field trip stops for topics related to the engineering geologic aspects of thrust faulting in these areas will be accepted until July 1. We particularly encourage topics regarding the January 17, 1994 Northridge earthquake, but are not limiting the trip to this event. Papers and proposed stops should be submitted to: Kim Bishop, Dept. of Geology, California State University, Los Angeles, 5151 State University Drive, Los Angeles, CA 90032. Phone: 818-343-2149.  $\phi$



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## GEOQUOTE OF THE MONTH

Heard on the street:

"What is the sum of two and two?"

Geotechnical Engineer:	"Precisely 4.0"
Geological Engineer:	"Four"
Engineering Geologist:	"About four"
Research Geologist:	"4.000"
Engineering Geophysicist:	"Somewhere between 3.0 and 5.0"
Research Geophysicist:	"4.0000000"
Environmental Lawyer:	"What number do you want?"
Client:	"Why does it cost so much?"
Bid-shopping client:	"Can't you do it for less?"

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