



## Division Chair's Message by Vince Cronin

Having just marked its 50<sup>th</sup> anniversary, the Engineering Geology Division can look back upon an admirable record of growth and achievement in service to our science and profession. Ultimately, we exist as a profession to serve the public.

One does not hear much in the mass media about the good, solid work that is done by engineering geologists in conjunction with clients and colleagues every day of the year. What we hear about are the failures, the disasters, the mistakes, the instances in which someone either failed to learn the lessons of past practice or simply chooses to ignore those lessons. I recently encountered a case in which a very expensive house was built with a large septic system on a steep slope with daylighted (out-of-slope) bedding. It is no surprise that it has begun to fail less than two years after construction. In another case, a series of houses were built on the terrace of a pre-existing coastal landslide whose toe is exposed to wave erosion. It is no surprise that failure is occurring.

Such failures inevitably cause harm to the people responsible for the problem, and to the rest of the profession as the public loses faith in our participation in designs to mitigate geologic hazards.

That is where a volunteer group like the Engineering Geology Division can play a positive role in the future evolution of our science and profession. First, we can (and do) publish case studies and reviews that articulate our experience with projects that are successful in mitigating analyzing failures. EGD's *Reviews in Engineering Geology* book series and the journal, *Environmental and Engineering Geosciences*, which is jointly published by GSA and the Association of Engineering Geologists, are our primary publication outlets through GSA. We also sponsor opportunities for oral and poster presentations at national and regional meetings of the GSA. Second, we can (and do) recognize and reward engineering geologists who provide exceptional service to our science and

profession. Third, we can (and do) reach out to talk about the work of engineering geology, through the Richard Jahns Lectureship and in countless other ways our individual members help inform the public: teaching in schools, public lectures and presentations, testimony before public agencies, interaction with the mass media and so on. Fourth, we can (and do) help to attract and develop the next generation of engineering geologists, through student subsidies to attend short courses and through research grants targeted to students working on topics in engineering geology.

We, as a group are deeply thankful for the people whose vision and hard work over these past 50 years have established such a

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positive set of traditions and functions through which the Engineering Geology Division can serve its members and the broader community. And we should be aware that it is up to us, individually and collectively, to continue this record of achievement and service in the present and to further develop the work of the Engineering Geology Division in the future.

#### Development of on-line resources

Thanks to Rick Giardino, we have established a preliminary toe-hold on the WEB, with a division Web page that is accessible through the GSA home page ([www.geosociety.org](http://www.geosociety.org)). It is time that we begin to systematically develop this resource for communicating with our membership and others.

Beyond providing basic information about the EGD, eventually I would like our Web resources to include links to college/university programs in engineering geology, access to sources of useful data and software, information about upcoming meetings, annotated references to useful papers and books as they are published, links to relevant affiliated organizations (AEG, AIPG, AGU, etc.), information on possible funding opportunities, and information on summer field geology programs that emphasize environmental or engineering geology. I would like to explore the possibility of posting job announcements on the Web, and perhaps even trying a (moderated?) bulletin board to facilitate discussion on current issues in engineering geology. We could develop or re-package material concerning geologic hazards that would be of use to students and educators in the K-12 range, so that students will arrive at college/university with an interest in pursuing geology in the public interest. Those of us who have participated in the development of organizational Web pages are well aware of the amount of work that the creation and maintenance of functional Web pages can take. Developing and maintaining Web resources for the EGD will require a handful of people to serve as the divisional "webmasters," as well as smaller contributions from many others who can help supply the content and suggest useful links. People who can offer assistance in one form or another toward the further development of the EGD's Web resources should contact me (Vince Cronin, [vcronin@csd.uwm.edu](mailto:vcronin@csd.uwm.edu), Department of Geosciences, University of Wisconsin-Milwaukee, PO Box 413, Milwaukee, WI 53201.)

#### Ethics

I had the opportunity to participate in Dave Stephenson's GSA Presidential Conference on Ethics in the Geosciences in July of 1997, at which a cross section of geoscientists joined with ethicists, lawyers, and others interested in scientific and professional ethics for extensive discussions. The American Geological Institute subsequently created an Ethics Steering Committee, whose goal (approximately stated) is

to facilitate the development of ethics guidelines or codes in the AGI's member organizations. Tom Holzer (former EGD Chair and current Jahns Lecturer) and I are members of this steering committee. All of this stems from a perceived need to do a better job promoting ethical practice throughout the geosciences.

Standards of ethical behavior and professional practice at one embody concepts that seem ancient and fundamental (e.g., you should tell the truth) and developing concepts that are the focus of honest debate. I believe that the focus of the EGD on matters of applied geology presents us with special opportunities and responsibilities concerning the development of geoscience ethics. In the coming year or two, I will be exploring effective ways that we can join with other groups with interests in applied geology to promote ethical behavior and practice through the applied geoscience community. We can, for example, make ethics resources (copies of codes, guidelines, essays, suggested reading lists) available through our divisional web resources. We can participate in on-going ethical discussions, such as those currently published in the AAPG Explorer and the AIPG in its column "Professional Ethics and Practice," which is currently being made Web accessible.

The development and maintenance of appropriate standards of professional and scientific ethics is a shared responsibility throughout the entire geosciences community. We intend that GSA's Engineering Geology Division will play an increasing role in meeting this community responsibility.

#### We need your help and input

It is probably fair to say that most of our 700+ members passively pay their divisional dues, hoping that some good will come of it, and this the extent of their participation in divisional affairs. (Until recent years, that description would certainly have fit me.) In the past, divisional activities have seemingly concentrated on its publications and a handful of events at the GSA Annual Meeting. In the future, I would like our division to provide expanded opportunities for learning, interaction, and presentation of scientific work through greater participation in sectional meetings, in joint ventures with the Association of Engineering Geologists, and through expanded on-line resources. In order to better serve the engineering geosciences community in these ways, we will need your help. As anyone who has worked in volunteer organizations can attest, it is far better (and easier) for a large number of people to work on something even if each person only contributes a little bit to the project. We simply cannot achieve our goals of making the EGD and ever more useful organization by relying on the work of a small handful of present and former Management Board members.

#### ***We need your help and input:***

Suggestions about current or proposed future

EGD projects are always gratefully received, and they can be directed to any member of the Management Board

Contributions toward the further development of the EGD Web resources would be particularly welcome

Nominations of people deserving recognition through the Division's Distinguished Practice Award or Meritorious Service Award, as well as nominations for publications to be honored with the Burwell Award

Volunteers for service on ad hoc and standing committees

Nominations for individuals to stand for election to the EGD Management Board

EGD representatives to serve as liaisons to help organize EGD sessions at regional GSA section meetings.

#### A final word

There have been several fitting memorials to long-time EGD member Norm Tilford, who was killed in an airplane accident on November 13, 1997. Norm was the editor of the *AEG Bulletin* and later *Environmental and Engineering Geosciences*, and was to be the new Executive Director of the Association of Engineering Geologists. Norm was also a former teacher of mine at Texas A&M University, and a friend of more than a dozen years. He did the things good teachers do: teach the basics, involve students in interesting current projects, challenge them with discussions of personal and professional ethics, provide an outstanding personal example, and assist them in every way he could as they sought to establish their own way in the world. I feel that Norm's students were exceptionally lucky to have had the experience of working with him, and that the engineering geology community in general owes him a great debt of gratitude for his service to us all.

I believe that the most fitting tribute we can offer in Norm's memory, and in the memory of other exceptional individuals we have been touched by, is to strive to embody what was best in them and pass it along to the next generation. If we have appreciated the many gifts they have given us, then we should honor them by passing those gifts along.

I look forward to hearing from many of you about ways that we can, together, contribute to the positive evolution of GSA's Engineering Geology Division and our profession.

## Interesting Sessions in Environmental and Engineering Geology Planned for Toronto Meeting

The 1998 GSA Annual Meeting in Toronto will be only the second meeting in Canada in the past 25 years. It will this provide a very special

opportunity for many American visitors to learn about the geology of southern Ontario and southern Quebec, as well as that of the northeastern United States.

The theme of the meeting is the "Assembly of the Continent." The theme has a dual interpretation. It expresses, first, the commonality of the lands we occupy and second, our hope and expectation that earth scientists will assemble from all areas of the continent, as well as from around the world.

For more information on the meeting, check out the home page for the meeting:  
<http://www.geosociety.org/cgi-bin/qryses.pl>

### **1) Engineering Geology Division Short Courses:**

a) Geotechnical and Environmental Applications of Time Domain Reflectometry by Kevin O'Connor, Geo TDR, Inc., Apple Valley, Minnesota

b) Phase I Environmental Assessments by Raymond Kimbrough, Tom Joiner & Associates, Inc., Tuscaloosa, Alabama

### **2) Field trips co-sponsored by the Engineering Geology Division**

We are sponsoring one field trip and co-sponsoring three others run by other divisions. Southern Ontario is a major population center and hydrology, environmental geology, engineering geology, geomorphology and Quaternary geology are important public as well as scientific concerns. Several field trips will provide an opportunity to discover the important results of the work done in response to these concerns. One of them will focus on the Oak Ridge moraine, a massive accumulation of mid-continental glacial sediments that dominate the north shore of Lake Ontario.

a) Hydrogeology of the Niagara Falls Area; Kent Novakowski, Canadian National Water Research Institute, Burlington, Ontario, Saturday, October 24, 1998

b) Visit to the Groundwater Experimental Field Sites at the Base Borden Research Site and Other Sites of Interest in the Waterloo area; Dave Rudolph, University of Waterloo, Waterloo, Ontario, Friday, October 30, 1998

c) Hydrogeology and Late Quaternary History of Point Pelee National Park, Ontario, Allan Crowe, Canada National Water Research Institute, Burlington, Ontario, Friday and Saturday, October 30-31, 1998

**3) Engineering Geology Division Symposium: Military Geology.** These are mainly invited speakers. Judi Ehlen is in charge of this. I do not have the date.

**4) Engineering Geology Division Theme Sessions (papers volunteered):**

a) October 27, 1998: El Nino 1997-1998: Effects on Earth Surface Processes (requested by Scott Burns and Vince Cronin); morning session; The El Nino of 1997-1998 is the most publicized El Nino event in history. Many people remember the last major event in 1982-1983 when extensive flooding and landslides occurred in various regions of North America. Are similar events happening during this present major climatic event?

b) October 28, 1998: Environmental and Engineering Geology in Quaternary Deposits (requested by Scott Burns and Paul Karrow); morning session; Quaternary surficial deposits are abundant in North America. Many environmental and engineering geology problems occur in these glacial, eolian, lacustrine, fluvial, and colluvial deposits. This theme session will focus on North American case histories from these areas.

c) October 29, 1998: Landslides and Transportation Systems (requested by Scott Burns and Jerry DeGraff); morning session; Transportation systems are important to humans. Landslides occur along railroads, waterways, and roads and cause disruption and even endangerment to human lives. This theme session will focus on case histories of landslides along these important routes in North America.

### **Student Alert!**

The Engineering Geology Division will continue its practice of subsidizing students attending Division-sponsored short course at the GSA annual meeting. The first five students registering for either **Phase I Environmental Site Assessments** or **Geotechnical and Environmental Applications of Time Domain Reflectometry** will be reimbursed \$50.00 after the GSA meeting. This offer is for students who are members of the Engineering Geology Division at the time of the annual meeting.

### **Proposed "Reviews in Engineering Geology" Volume on El Nino Related Problems**

Scott Burns and Vince Cronin are presiding over an oral session at the GSA Annual meeting in Toronto concerning problems related to the 1997-98 El Nino condition. They are interested in compiling a published record of these problems that will be useful to engineering geologists, public planners, and others who should now be in the process of preparing for such

climatic fluctuations in the future.

They would like to solicit ideas for papers on such items as evaluations of the effectiveness of past hazard mapping, case studies of different types of failures, and documented observations on the effect of El Nino on natural phenomena (surface streams, alluvial systems, ground waters, coastal erosion/deposition, variations in deltas, precipitation, storm intensities, vegetation growth that might contribute to worsened future fire-debris flow cycles, et cetera). Scott and Vince would like this to be an instrument through which we can learn our experiences during this unusual year.

If you have an idea for a contribution to this volume, please contact either Scott Burns (scott@ch1.ch.pdx.edu, Department of Geology, Portland State University, PO Box 751, Portland, OR 97207-0751) or Vince Cronin (vcronin@csd.uwm.edu, Department of Geosciences, University of Wisconsin-Milwaukee, PO Box 413, Milwaukee, WI 53201), preferably before November 1, 1998.

### **Annual Dues Reminder**

Please remember to check the dues for Engineering Geology Division on your GSA membership renewal this Fall. Better yet, recruit two colleagues to join the Division, too.

### **EGD Members in Colleges and Universities: We Have Some Homework for You**

We all know that the library budgets of many, if not all, colleges and universities have not been able to keep pace with the cost increases of books and journals, to say nothing of the explosive expansion of journal titles in recent years. We do not want the joint GSA/AEG journal publication *Environmental and Engineering Geosciences* to fall victim to library cutbacks. We believe that E&EG should be available (along with the other GSA journals) in the libraries of all colleges and universities where the geosciences or civil engineering are taught. Please take a few moments today to verify that your library subscribes to the GSA journals, especially *Environmental and Engineering Geosciences*. If not, please try to do something about it. The EGD officers and the GSA headquarters staff can help you with letters, phone calls and journal samples if necessary, but we need you as our local hero to get the ball rolling on behalf of EGD-GSA and the many students who will benefit from access to these publications.

### **1998 Richard H. Jahns**

## Distinguished Lecturer

The 1998 Richard H. Jahns Distinguished Lecturer is Dr. Thomas L. Holzer, Chief of the Branch of Engineering Seismology and Geology, U.S. Geological Survey, Menlo Park, California. He holds a BSE in Geological Engineering from Princeton, a M.S. (Hydrology) and Ph.D. (Geology) from Stanford. Dr. Holzer is a former student of Dick Jahns. This spring, he presented his lecture at various universities in the Midwest. In October, he will be in eastern Pennsylvania and the New England area. If you wish to have him speak to your group or find out when he may be speaking at a location near you, please contact him by one of the following methods: phone (650) 329-5637, fax (650) 329-5143, e-mail tholzer@usgs.gov.

The following is an abstract of Dr. Holzer's lecture:

Natural hazards in the United States from 1992 to 1996 cost on average about \$1 billion per week. Insurance and modifications to building codes are important tools for mitigating damage from natural hazards. For infrequent but costly hazards such as earthquakes, determining appropriate insurance premiums to charge is a challenging and vexing problem for both insurance companies and State regulators. Premiums that are too low can compromise an insurance vendor's business; however if premiums are too high, customers decline to buy insurance and thwart the mitigation strategy.

To help establish appropriate premium rates, insurers are increasingly turning to formal earthquake loss models. These models estimate future losses that must be offset with premiums. They start with a description of earthquake sources, predict ground shaking from each of these sources, and correlate ground shaking with damage to predict annualized losses for exposed buildings. To ensure credible results, Earth scientists must play a major role in developing and validating these models. Analyses by Earth scientists of the sensitivity of loss models to geologic and seismologic data also provide insight into the relative importance and economic value of these data.

*Note: Richard H. Jahns (1915-1983) was an engineering geologist who had a diverse and distinguished career in academia, consulting, and government. The Richard H. Jahns Distinguished Lectureship was established in 1989 by the Association of Engineering Geologists and Geological Society of America jointly to commemorate him and to promote awareness of engineering geology.*

**Urgent Message**  
As GSA annual dues come due,  
please take the time to recruit a

**student as a Division member. It will enhance their professional development and the profession.**

## AGI Makes Progress on "Earth Science Week"

Earlier this month, American Geological Institute (AGI) President Susan Landon wrote a letter to President Clinton, formally requesting a presidential proclamation for Earth Science week, scheduled for October 11-17, 1998. In addition, Senator Ron Wyden of Oregon is preparing a Senate proclamation. Both are expected to be announced later this summer. In the meantime, over a dozen state governors have issued proclamations with more being added each week. A list of proclamations, sample resolutions, and other information on Earth Science week is available at <http://www.earthsciweek.org>. If your state is not on the list, AGI is encouraging geoscientists to work with their state geological survey to pass a proclamation. Earth Science Week is part of AGI's 50<sup>th</sup> anniversary celebration and is an opportunity for our community to reach out to the public and show how Earth science contributes to their everyday lives. (from: David Applegate, AGI Legislative Affairs, June 1998 Monthly Update)

## Nominations for Burwell Award Sought

Nomination of papers for the E. B. Burwell, Jr., Award for 1999 are being sought by the Engineering Geology Division Burwell Award committee. The Burwell Award was established by the Division, in 1968, to honor the memory of one of the founding members of the Division and the first Chief geologist of the U. S. Army Corps of Engineers.

This award is made to the author or authors of a published paper of distinction that advances knowledge concerning principles or practice of engineering geology, or of related field of applied soil or rock mechanics where the role of geology is emphasized.

The paper that receives the award must (1) deal with engineering geology or a closely related field, and (2) have been published no more than 5 years prior to its selection.

There are no restrictions as to the publisher or publishing agency of the paper. The author or authors of the selected paper need not be a member(s) of the Engineering Geology Division or of the Geological Society of America and need not be a resident(s) or citizen(s) of the United States.

Please send nominations with supporting letter to either Vince Cronin (vcronin@csd.uwm.edu, Department of Geosciences, University of Wisconsin-Milwaukee, PO Box 413, Milwaukee, WI 53201) or Scott Burns (scott@ch1.ch.pdx.edu,

Department of Geology, Portland State University, PO Box 751, Portland, OR 97207-0751). They will forward the nomination to the EGD Burwell Award committee.

## **Proposed Change in the Division Secretary Position**

For many years, the Engineering Geology Division has functioned with a Management Board composed of an At-Large Member, a Secretary, a Chair-elect, and a Past Chair. An individual Management Board member would begin at one end of the pipeline, spend one year in each position, and exit the other end of the pipeline. This system is clearly intended to provide board members with a broad experience concerning EGD matters, and a 1-year term of office in most Management Board positions is undoubtedly a good provision.

On the other hand, it has been noted by more than one former or current board member that the current system also means that board members are perennial rookies in a given position.

We think it would improve the overall stability and operation of the EGD if the person serving as Secretary remain in that position for more than one year, to manage the routine business of the division. Other divisions within GSA have successfully implemented similar measures. To test how this idea might work for the EGD, it will be proposed that the Secretary elected to serve in 1999-2000 will be asked to serve in that position while the progression of the other positions will be from At-Large Member to Chair-Elect to Chair to Past Chair. It is hoped that the Secretary position will be filled in the future by individuals who have already passed through the other Management Board positions.

## Nominees Needed for 1999 EGD Awards

It is not too early to be thinking of individuals to nominate for Distinguished Practice Award and Meritorious Service Award in 1999. The nomination and selection process usually takes place from December to April for awards being presented at the Annual Meeting that Fall. While you are attending the Annual Meeting and seeing colleagues, hearing presentations, and being involved with GSA business, keep in mind whether there is someone deserving of recognition among those you are meeting and talking with at the meeting (or among those you wish were present but were unable to attend).

EGD presents the Distinguished Practice Award to recognize outstanding individuals for their continuing contributions to the technical and/or professional stature of engineering geology. A nominee need not be a member of the Engineering Geology Division but must have made a major contribution to engineering geology in North America. The nomination consists of filing the nominee's resume and a

brief statement of the technical and/or professional contributions that form the basis for the candidate's nomination.

The Meritorious Service Award recognizes outstanding efforts on behalf of the Division by one of its members. This can be for sustained activities over a period of time or for a single significant action. A letter nominating an individual should include the basis for their deserving this recognition.

Nominations for both the Distinguished Practice Award and the Meritorious Service Award should be directed to the Division Chair.

### **Deadline for *The Engineering Geologist*: December 15, 1998**

As the new editor for the EGD newsletter, I am requesting contributions to the next issue. Please send items to me via e-mail (Word preferred), diskette, or regular mail. Send to: Jerry DeGraff, 5339 N. Orchard Ave., Fresno, CA 93710 or e-mail: Fishlake@Worldnet.att.net

## 1998 EGD Management Board

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## Biographies of Candidates for Division Officers

### Chair

#### **SCOTT BURNS**

Currently a Professor of Geology at Portland State University where he is beginning his 9<sup>th</sup> year of teaching. He has been teaching full-time at the university level for 27 years and has taught in Switzerland, New Zealand, Washington, Colorado and Louisiana before coming back to Oregon where he grew up. His main interests are in engineering and environmental geology, soils, Quaternary Geology and geomorphology. He is a registered geologist in Oregon and is a member of GSA, AEG, IAEG, NAGT, SSSA, AMQUA, and Sigma XI. He is past president of the Oregon Soil Science Society and is current chair of the Oregon section of AEG. He was a Kellogg National Leadership Fellow from 1990-93 with the Kellogg Foundation.

Scott has BS and MS degrees from Stanford University and a Ph.D. from the University of Colorado. He is a part-time private consultant in engineering geology. He is an author and co-author on over 90 publications. His current research interests are in landslide inventory and susceptibility maps, earthquake hazard maps, radon and heavy mineral hazard maps, soil development, and loess. He and his wife, Glenda, have been married for 24 years and have three children, Lisa, Doug and Tracy. **Previous GSA Service:** Mem.-at-large EGD Management Bd., 96, EGD Secretary, 97, Vice-Chair/Chair-Elect, 98; Chair, Burwell Award Comm, 96-97.

### Vice-Chair and Chair-Elect

#### **ROBERT A. LARSON**

**Prof. Exp.,** Geol. Nevada Resources, Inc., 80-81; Staff Eng. Geol., Slosson and Assoc., 81-86; Senior Eng. Geol., Calif. GeoSystems, Inc., 86-87; Eng. Geol., Los Angeles Co. Dept. Public Works, 87-present; **Pers. Data,** b. Glendale, CA 1-14-56. **Educ.,** UCLA, B.Sc. Geology, 79; CSUN, M.Sc., (with distinction), 95. **Other Positions and Service:** Chair, So. Calif. Sect., AEG, 95-96, Pres., Calif. Sect., AIPG, 96, Member, Prof. Affairs Comm., Calif. State Board of Reg. For Geol. and Geophy., 95-present; member, Landslide Working Group, Seismic Hazard Mapping Act Advisory Comm., Calif. State

Min, and Geol. Board, 96-97; Member, Geosciences Policy Focus Group, California-at-Risk Update, Calif. Seismic Safety comm., 96-97; Reg. Geol., CA, AZ, OR, ID; Cert. Eng. Geol., CA, OR; Cert. Hydrogeol., CA; Chartered Geol., GS, **Mem.:** GSA (Fellow), AEG, IAEG, AIPG, AMQUA, AGU, SSA, EERI, ICBO, GS (London). **Previous GSA Service:** Members-at-Large, EGD Management Bd., 97; EGD Secretary, 98; EGD Newsletter Editor 1997; Member, Burwell Award Comm., 1997; Co-editor, EGD Reviews in Eng. Geol. #11, 1997; Symposium convener, 1994, Cordilleran Sec. Meet.

### Secretary

#### **DUANE A. EVERSOLE**

**Prof. Exp:** Geophys., Cont. Geophy. Co, 59-60; Geol. Nebr. Dept. of Roads, 60-74; Res. Geol., Nebr. Geol. Sur., 74-present; Assoc. Dir, and Assoc. Prf. Nebr. Geol. Sur., 91-present. **Pers. Data:** b. Grand Island, NE, 5-6-36; m. 57, c. 2. **Educ.:** Univ. Nebr., B.Sc. geology, M.Sc. geology, 77. **Mem.:** GSA, AEG, Sigma XI. **Other Positions and Service:** Nat. Assoc. State Boards Geology (ASBOG); Nebr. Water Well Stds. And Contr. License Board; Reg. Geol., Wyo; Co-founder and Ex. Dir., Shallow Exploration Drillers Clinic, 65-present; **Res.:** Nebr. landslides, Geol. Mapping; Eng. Geol; Geothermal Energy, Environmental Geol., Mineral resources. **Previous GSA Service:** Eng. Geol. Div. Awards Comm., 91-93, Chair, 92-93.

### Member-At-Large

#### **DAVID J. VERARDO**

Currently the GSA Congressional Science Fellow (1997-98), Verardo received his Ph.D. in earth and environmental science in 1992 from the City University of New York and his B.A. in geology from Long Island University. He is actively engaged in climate research as well as a professional practice in engineering geology. Verardo is a registered professional geologist and a member of the Geological Society of America, the Association of Engineering Geologists, and the American Geophysical Union.